WALTER
Engineering Kompetenz

Turning, drilling,
threading, milling

Product Innovations catalog
Edition 2019

_PERFORMANCE AND RELIABILITY EXTEND YOUR PERSPECTIVE.

Product Innovations catalog

Walter product innovations

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A – Turning

ISO turning – A1

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Technical information – A1/A2

Turning	Cutting data	96
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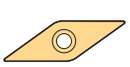
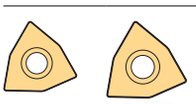
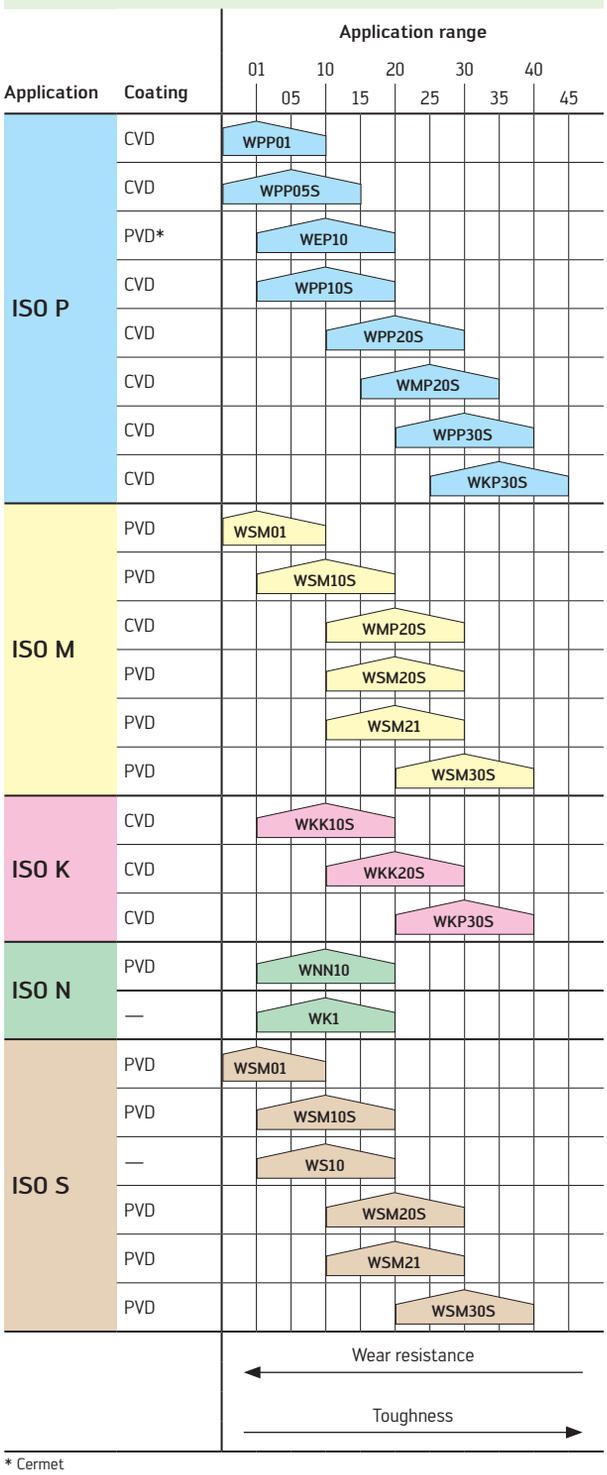
Product range overview of indexable inserts and cutting tool materials: ISO turning – Carbides

Indexable inserts

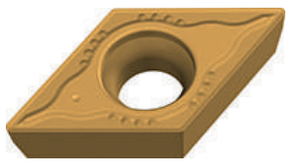
Insert shape		Description	Page
Wiper	**C**	Negative basic shape	10
		Positive basic shape 7°	26
		Positive basic shape 11°	28
Wiper	**D**	Negative basic shape	14
		Positive basic shape 7°	30
		Positive basic shape 11°	32
	R	Negative basic shape	16
		Positive basic shape 7°	33
	S	Negative basic shape	17
		Positive basic shape 7°	34
		Positive basic shape 11°	35
	T	Negative basic shape	19
		Positive basic shape 7°	36
		Positive basic shape 11°	38
	**V**	Negative basic shape	21
		Positive basic shape 5°/7°	40
 Wiper	**W**	Negative basic shape	22
		Positive basic shape 7°	42

Cutting tool materials: Carbide

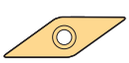


* Cermet

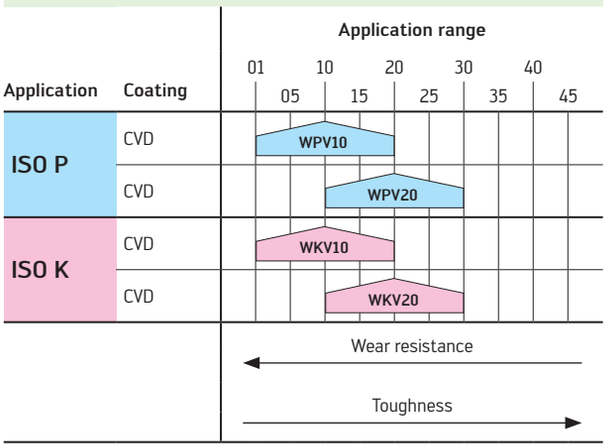
Product range overview of indexable inserts and cutting tool materials: ISO turning – Perform line carbides



Indexable inserts

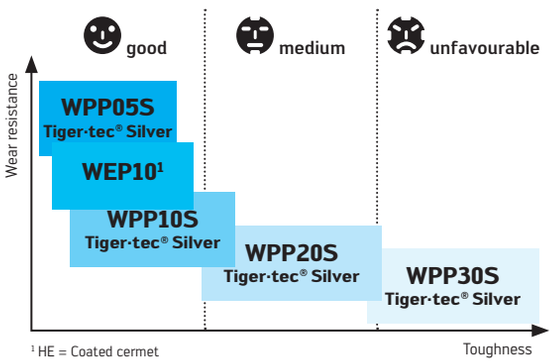
Insert shape		Description	Page
	C	Negative basic shape	13
		Positive basic shape 7°	29
	D	Negative basic shape	16
		Positive basic shape 7°	32
	S	Negative basic shape	18
	T	Negative basic shape	20
		Positive basic shape 7°	39
	**V**	Negative basic shape	21
		Positive basic shape 5°/7°	41
	W	Negative basic shape	24

Cutting tool materials: Perform line carbide



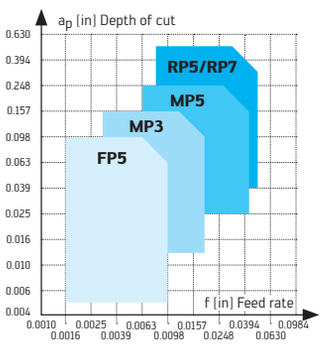
Product range overview of indexable inserts for ISO turning: Tiger·tec® Silver grades and geometries

Machining steel ISO P



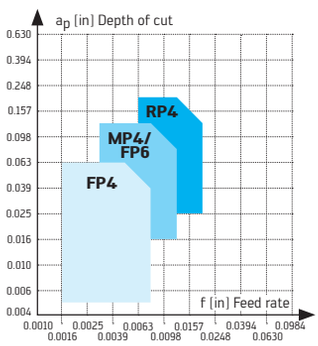
¹ HE = Coated cermet

Negative basic shape



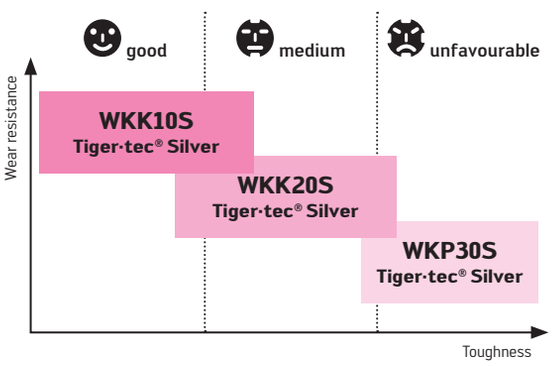
MP5: For universal machining
RP5: For universal machining
RP7: For interrupted cuts, cast skin/forged skin

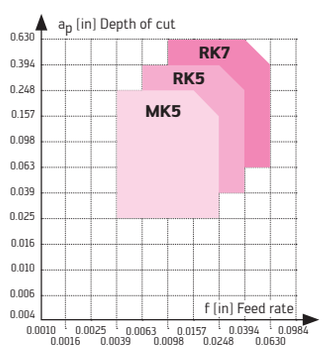
Positive basic shape

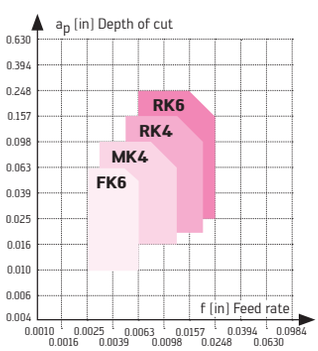


MP4: For universal machining, copy turning
FP6: For semi-finishing operations

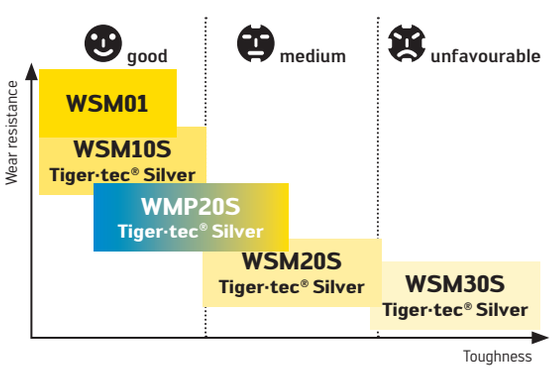
Cast iron machining ISO K

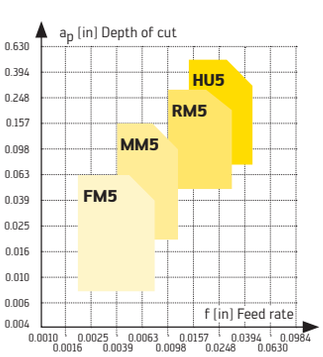


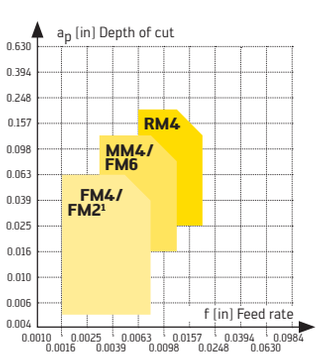




Stainless steel ISO M

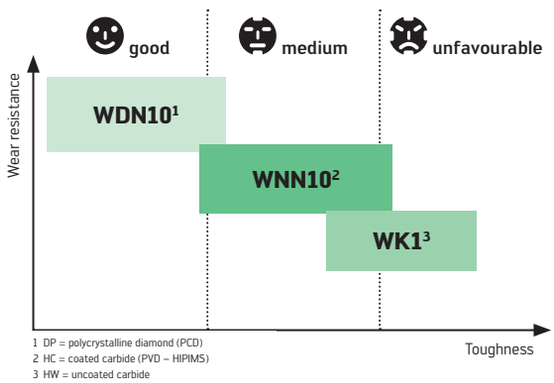






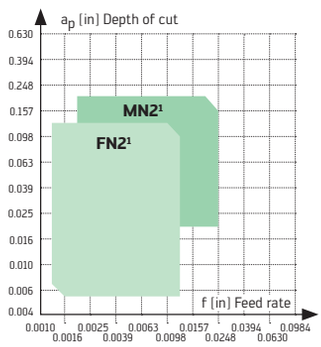
MM4: For universal machining, copy turning
FM6: For semi-finishing operations
¹ Circumference fully ground

NF metals ISO N



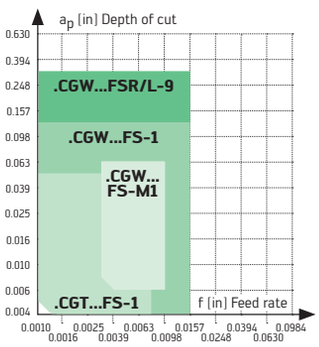
1 DP = polycrystalline diamond (PCD)
2 HC = coated carbide (PVD – HIPIMS)
3 HW = uncoated carbide

Positive basic shape
Carbide

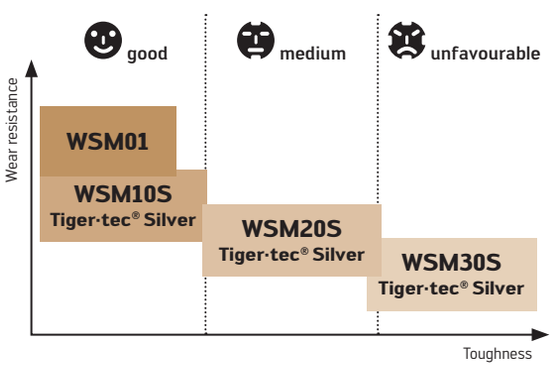


¹ Circumference fully ground

Positive basic shape
PCD

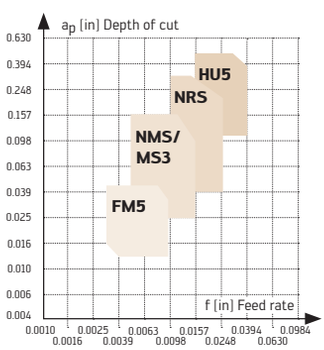


ISO S high-temperature alloys and titanium alloys



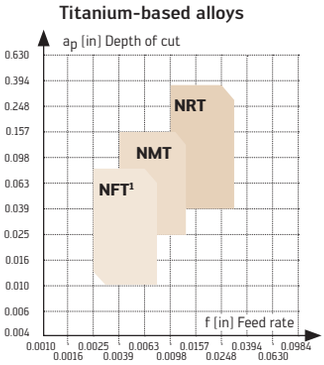
Negative basic shape

Ni, Co and Fe-based alloys



NMS: For universal machining
MS3: For low cutting pressure

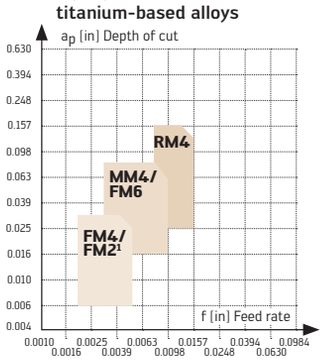
Titanium-based alloys



¹ Circumference fully ground

Positive basic shape

Ni, Co, Fe and titanium-based alloys



MM4: For universal machining, copy turning
FM6: For semi-finishing operations
¹ Circumference fully ground

Product range overview of indexable inserts for ISO turning: Perform line

Designation key

Simple geometry designation:

M	V	5
1	2	3

1: Chip breaking range – e.g. F = Finish, M = Medium, R = Rough machning
2: Versatile materials
3: Feed/chip breaking range

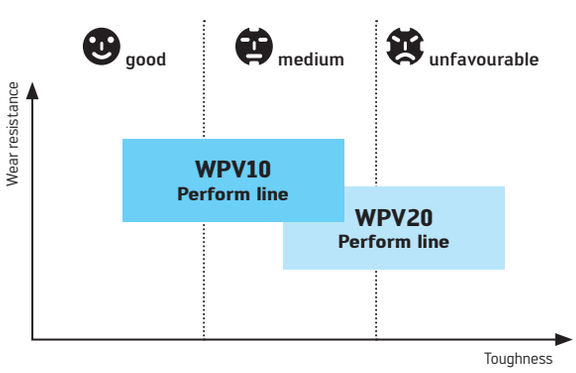
Simple grade designation:

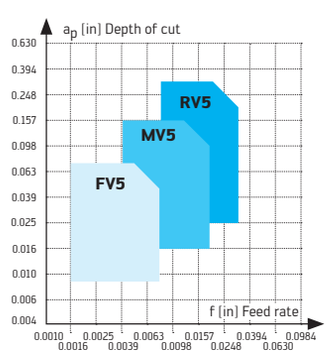
W	P	V	20
1	2	3	4

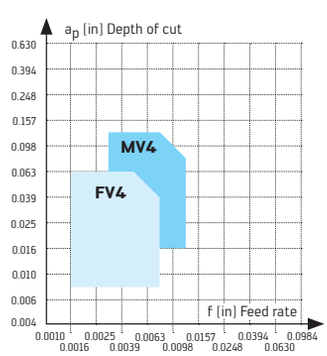
1: Walter
2: First primary application – e.g. P = ISO P
3: Second primary application, "Versatile"
4: ISO application range - e.g. 10 = harder, 20 = tougher

Grades and geometries

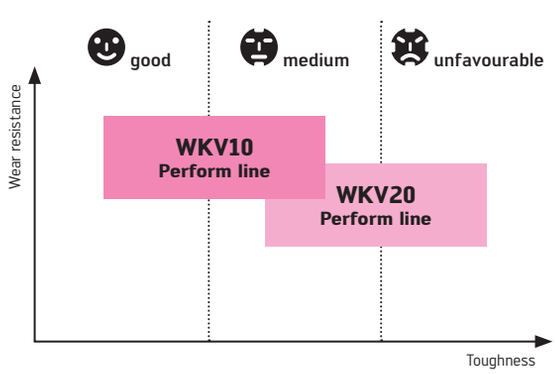
Machining steel ISO P

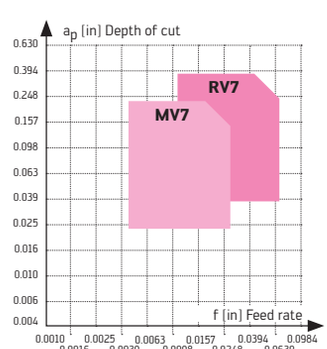






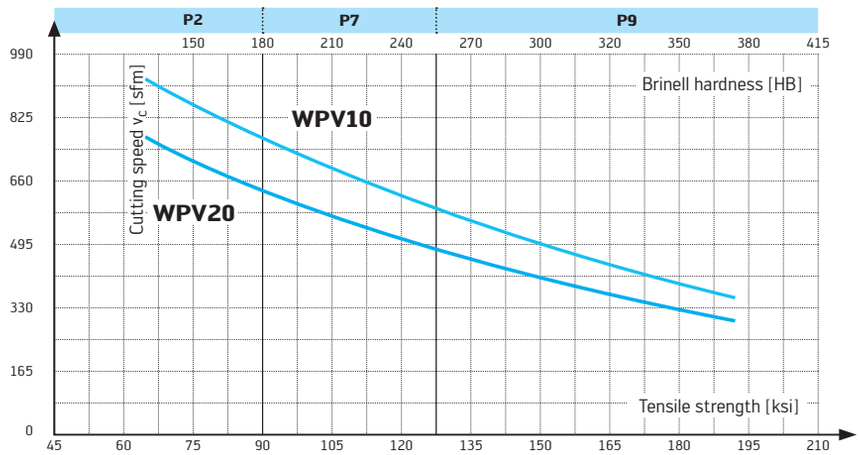
Cast iron machining ISO K





Cutting speeds

Cutting speed selection based on tensile strength/hardness:



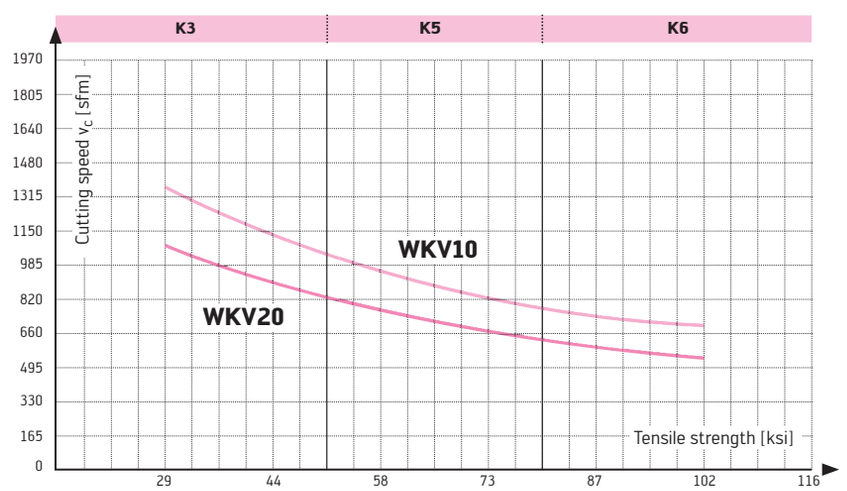
Basis: f = 0.013 inch

Machining steel ISO P

Cutting speed range for selected materials:

ISO material group	Material	Tensile strength	Brinell hardness	Cutting speed	
				WPV10	WPV20
P2	AISI 1015 (St37), ASTM 1045	72,500 psi	150 HB	620 - 790 - 1120 sfm	525 - 650 - 920 sfm
P7	ASTM A295 (52100), AISI 4140	116,030 psi	240 HB	425 - 590 - 650 sfm	330 - 490 - 590 sfm
P9	ASTM A322	181,300 psi	370 HB	260 - 425 - 460 sfm	230 - 330 - 425 sfm

Cutting speed selection for ISO K materials based on tensile strength:



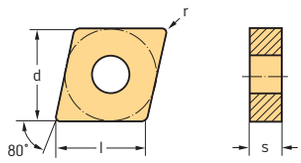
Basis: f = 0.013 inch

Cutting speed range for selected materials:

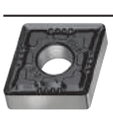
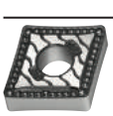
ISO material group	Material	Tensile strength	Brinell hardness	Cutting speed	
				WKV10	WKV20
K3	GG-25 (FC250)	36 ksi	180 HB	885–**1180**–1835 sfm	690–**985**–1640 sfm
K5	GGG-40 (FCD400)	58 ksi	155 HB	690–**885**–1215 sfm	525–**722**–950 sfm
K6	GGG-70 (FCD700)	102 ksi	265 HB	560–**690**–885 sfm	425–**560**–690 sfm

For indexable inserts with positive basic shape, the cutting speed should be reduced by approximately 10%

Negative rhombic 80°
CNMG / CNGG / CNMA / CNMM
Tiger·tec® Silver



Indexable inserts

	ANSI designation	Designation	r in	f in	a_p in	P HC WPP01	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
Wiper	CNMG431-NF	CNMG120404-NF	0.016	0.004–0.016	0.016–0.079	☺		☺	😐						😐							😐		
	CNMG432-NF	CNMG120408-NF	0.031	0.006–0.022	0.020–0.118	☺		☺	😐						😐							😐		
	CNMG431-NFT	CNMG120404-NFT	0.016	0.003–0.007	0.016–0.059										😐							😐		😐
	CNMG432-NFT	CNMG120408-NFT	0.031	0.004–0.008	0.020–0.079										😐							😐		😐
	CNMG4(3)0.5-FM5	CNMG120402-FM5	0.008	0.001–0.004	0.004–0.039								☺	😐						☺	😐		
	CNMG431-FM5	CNMG120404-FM5	0.016	0.002–0.006	0.008–0.059						😐	😐	☺	😐						☺	😐		
	CNMG432-FM5	CNMG120408-FM5	0.031	0.003–0.008	0.016–0.059						😐	😐	☺	😐						☺	😐		
	CNMG433-FM5	CNMG120412-FM5	0.047	0.004–0.010	0.020–0.079									😐							😐		
Wiper	CNMG432-NM	CNMG120408-NM	0.031	0.008–0.022	0.031–0.118			☺	😐					😐		☺	😐				😐		
	CNMG433-NM	CNMG120412-NM	0.047	0.010–0.028	0.059–0.157			☺	😐					😐		☺	😐				😐		
	CNMG431-MS3	CNMG120404-MS3	0.016	0.005–0.010	0.024–0.118								☺	☺	😐	😣				☺	☺	😐	😣	😐
	CNMG432-MS3	CNMG120408-MS3	0.031	0.006–0.012	0.031–0.118			☺	😐				☺	☺	😐	😣				☺	☺	😐	😣	
	CNGG4(3)0.2-MS3	CNGG120401-MS3	0.004	0.001–0.002	0.008–0.098								☺							☺				
	CNGG4(3)0.5-MS3	CNGG120402-MS3	0.008	0.002–0.005	0.016–0.098								☺							☺				
	CNGG431-MS3	CNGG120404-MS3	0.016	0.004–0.010	0.024–0.118								☺							☺				
	CNGG432-MS3	CNGG120408-MS3	0.031	0.005–0.012	0.031–0.118								☺							☺				
	CNMG432-NMT	CNMG120408-NMT	0.031	0.005–0.012	0.031–0.157										😐							😐		😐
	CNMG433-NMT	CNMG120412-NMT	0.047	0.006–0.013	0.039–0.157										😐							😐		😐
	CNMG431-NMS	CNMG120404-NMS	0.016	0.004–0.009	0.024–0.098								☺	☺	😐	😣				☺	☺	😐	😣	
	CNMG432-NMS	CNMG120408-NMS	0.031	0.005–0.013	0.031–0.138								☺	☺	😐	😣				☺	☺	😐	😣	
	CNMG433-NMS	CNMG120412-NMS	0.047	0.006–0.014	0.039–0.138									☺	😐						☺	😐		
	CNMG321-MP3	CNMG090304-MP3	0.016	0.002–0.008	0.013–0.087			☺	😐														
	CNMG322-MP3	CNMG090308-MP3	0.031	0.004–0.011	0.024–0.118			☺	😐	😣													
	CNMG431-MP3	CNMG120404-MP3	0.016	0.003–0.009	0.013–0.098			☺	😐	😣													
	CNMG432-MP3	CNMG120408-MP3	0.031	0.005–0.013	0.024–0.126		☺	☺	😐	😣													
	CNMG433-MP3	CNMG120412-MP3	0.047	0.006–0.016	0.031–0.138		☺	☺	😐	😣													

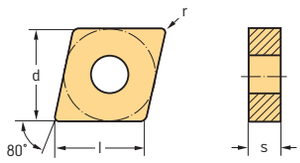
See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

☺ 😐 😣 / ★ New addition to the product range

Negative rhombic 80°
CNMG / CNGG / CNMA / CNMM

Tiger·tec® Silver

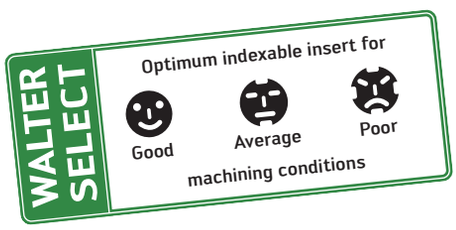


Indexable inserts

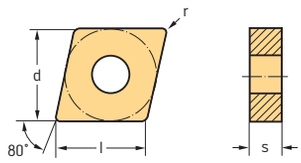
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP01	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	CNMG431-MM5	CNMG120404-MM5	0.016	0.004–0.008	0.020–0.118						☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG432-MM5	CNMG120408-MM5	0.031	0.006–0.013	0.031–0.118						☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG433-MM5	CNMG120412-MM5	0.047	0.006–0.014	0.031–0.138						☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG434-MM5	CNMG120416-MM5	0.063	0.006–0.016	0.039–0.157										☹	☒						☹	☒	
	CNMG542-MM5	CNMG160608-MM5	0.031	0.006–0.014	0.031–0.177						☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG543-MM5	CNMG160612-MM5	0.047	0.007–0.016	0.031–0.177						☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG544-MM5	CNMG160616-MM5	0.063	0.008–0.018	0.039–0.177										☹	☒						☹	☒	
	CNMG322-MK5	CNMG090308-MK5	0.031	0.004–0.008	0.008–0.118												☺	☹						
	CNMG431-MK5	CNMG120404-MK5	0.016	0.006–0.010	0.024–0.197												☺	☹						
	CNMG432-MK5	CNMG120408-MK5	0.031	0.010–0.020	0.031–0.197												☺	☹	☒					
	CNMG433-MK5	CNMG120412-MK5	0.047	0.012–0.020	0.047–0.197												☺	☹	☒					
	CNMG434-MK5	CNMG120416-MK5	0.063	0.014–0.020	0.059–0.197												☺	☹						
	CNMG542-MK5	CNMG160608-MK5	0.031	0.010–0.020	0.031–0.276												☺	☹						
	CNMG543-MK5	CNMG160612-MK5	0.047	0.012–0.024	0.047–0.276												☺	☹	☒					
	CNMG544-MK5	CNMG160616-MK5	0.063	0.014–0.024	0.059–0.276												☺	☹	☒					
	CNMG643-MK5	CNMG190612-MK5	0.047	0.012–0.026	0.047–0.315												☺	☹						
	CNMG644-MK5	CNMG190616-MK5	0.063	0.014–0.031	0.059–0.315												☺	☹						
	CNMG432-NRT	CNMG120408-NRT	0.031	0.007–0.014	0.039–0.236										☹							☹		☹
	CNMG433-NRT	CNMG120412-NRT	0.047	0.008–0.016	0.047–0.236										☹							☹		☹
	CNMG543-NRT	CNMG160612-NRT	0.047	0.011–0.022	0.059–0.295										☹							☹		☹
	CNMG644-NRT	CNMG190616-NRT	0.063	0.014–0.028	0.079–0.354										☹							☹		☹
	CNMG432-NRS	CNMG120408-NRS	0.031	0.006–0.014	0.039–0.157						☹	☹	☺	☺	☹	☒				☺	☺	☹	☒	
	CNMG433-NRS	CNMG120412-NRS	0.047	0.007–0.016	0.047–0.157						☹	☹	☺	☺	☹	☒				☺	☺	☹	☒	
	CNMG543-NRS	CNMG160612-NRS	0.047	0.008–0.018	0.047–0.256						☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG544-NRS	CNMG160616-NRS	0.063	0.009–0.020	0.059–0.256									☺	☹						☺	☹		
	CNMG642-NRS	CNMG190608-NRS	0.031	0.008–0.018	0.039–0.315									☺	☹						☺	☹		
	CNMG643-NRS	CNMG190612-NRS	0.047	0.009–0.020	0.047–0.335									☺	☹						☺	☹		
	CNMG432-RM5	CNMG120408-RM5	0.031	0.008–0.016	0.047–0.197			☺	☹		☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG433-RM5	CNMG120412-RM5	0.047	0.010–0.020	0.059–0.197			☺	☹		☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG434-RM5	CNMG120416-RM5	0.063	0.012–0.022	0.079–0.197										☹	☒						☹	☒	
	CNMG542-RM5	CNMG160608-RM5	0.031	0.009–0.018	0.047–0.276									☺	☹	☒					☺	☹	☒	
	CNMG543-RM5	CNMG160612-RM5	0.047	0.010–0.024	0.059–0.276			☺	☹		☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG544-RM5	CNMG160616-RM5	0.063	0.012–0.026	0.079–0.276			☺	☹		☹	☹			☹	☒						☹	☒	
	CNMG643-RM5	CNMG190612-RM5	0.047	0.010–0.024	0.059–0.315						☹	☹		☺	☹	☒					☺	☹	☒	
	CNMG644-RM5	CNMG190616-RM5	0.063	0.012–0.031	0.079–0.315						☹	☹		☺	☹	☒					☺	☹	☒	

See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide



Negative rhombic 80°
CNMG / CNGG / CNMA / CNMM
Tiger·tec® Silver



Indexable inserts

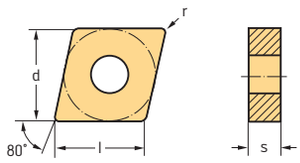
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP01	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	CNMA431-RK5	CNMA120404-RK5	0.016	0.006–0.010	0.024–0.197												☺	😐						
	CNMA432-RK5	CNMA120408-RK5	0.031	0.010–0.020	0.031–0.197								☺				☺	😐		☺				
	CNMA433-RK5	CNMA120412-RK5	0.047	0.012–0.020	0.047–0.197												☺	😐						
	CNMA434-RK5	CNMA120416-RK5	0.063	0.014–0.028	0.059–0.197												☺	😐						
	CNMA543-RK5	CNMA160612-RK5	0.047	0.014–0.028	0.047–0.276												☺	😐						
	CNMA544-RK5	CNMA160616-RK5	0.063	0.014–0.031	0.059–0.276												☺	😐						
	CNMA643-RK5	CNMA190612-RK5	0.047	0.012–0.026	0.047–0.315												☺	😐						
	CNMA644-RK5	CNMA190616-RK5	0.063	0.014–0.031	0.059–0.315												☺	😐						
	CNMA646-RK5	CNMA190624-RK5	0.094	0.016–0.035	0.098–0.315													😐						
	CNMM433-HU5	CNMM120412-HU5	0.047	0.012–0.028	0.059–0.276			☺	😐		😐	😐			😐	😵						😐	😵	
	CNMM543-HU5	CNMM160612-HU5	0.047	0.014–0.028	0.059–0.354			☺	😐		😐	😐			😐	😵						😐	😵	
	CNMM544-HU5	CNMM160616-HU5	0.063	0.016–0.031	0.079–0.354			☺	😐		😐	😐			😐	😵						😐	😵	
	CNMM643-HU5	CNMM190612-HU5	0.047	0.014–0.028	0.059–0.394			☺	😐		😐	😐			😐	😵						😐	😵	
	CNMM644-HU5	CNMM190616-HU5	0.063	0.016–0.035	0.079–0.394			☺	😐		😐	😐			😐	😵						😐	😵	

See the ISO 1832 designation key for dimensions

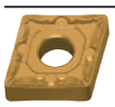
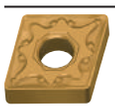
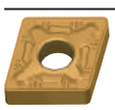
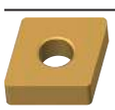
HC = Coated carbide
HW = Uncoated carbide

☺ 😐 😵 / ★ New addition to the product range

Negative rhombic 80°
CNMG Perform / CNMA Perform

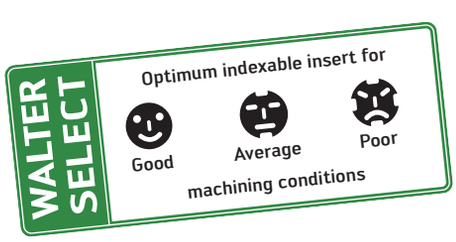


Indexable inserts

	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	K HC WKV10	K HC WKV20	S HC WSM10S	S HC WSM20S	S HC WSM30S
	CNMG431-FV5	CNMG120404-FV5	0.016	0.002– 0.008	0.008–0.059						☻	☻												
	CNMG432-FV5	CNMG120408-FV5	0.031	0.003–0.010	0.016–0.079						☻	☻												
	CNMG431-MV5	CNMG120404-MV5	0.016	0.004–0.008	0.020–0.138						☻	☻												
	CNMG432-MV5	CNMG120408-MV5	0.031	0.006–0.013	0.031–0.157						☻	☻												
	CNMG433-MV5	CNMG120412-MV5	0.047	0.006–0.016	0.031–0.157						☻	☻												
	CNMG543-MV5	CNMG160612-MV5	0.047	0.008–0.018	0.031–0.197						☻	☻												
	CNMG432-MV7	CNMG120408-MV7	0.031	0.008–0.018	0.031–0.197						☻	☻								☻	☻			
	CNMG433-MV7	CNMG120412-MV7	0.047	0.010–0.020	0.047–0.197						☻	☻								☻	☻			
	CNMG434-MV7	CNMG120416-MV7	0.063	0.012–0.022	0.059–0.197															☻	☻			
	CNMG543-MV7	CNMG160612-MV7	0.047	0.010–0.020	0.047–0.276															☻	☻			
	CNMG544-MV7	CNMG160616-MV7	0.063	0.012– 0.022	0.059–0.276						☻	☻								☻	☻			
	CNMG643-MV7	CNMG190612-MV7	0.063	0.012–0.024	0.047–0.315						☻	☻												
	CNMG432-RV5	CNMG120408-RV5	0.031	0.008–0.016	0.039–0.197						☻	☻												
	CNMG433-RV5	CNMG120412-RV5	0.047	0.010–0.022	0.039–0.197						☻	☻												
	CNMG543-RV5	CNMG160612-RV5	0.047	0.010–0.022	0.079–0.236						☻	☻												
	CNMG544-RV5	CNMG160616-RV5	0.063	0.014–0.024	0.079–0.236						☻	☻												
	CNMA432-RV7	CNMA120408-RV7	0.031	0.010–0.020	0.031–0.197															☻	☻			
	CNMA433-RV7	CNMA120412-RV7	0.047	0.012– 0.022	0.047–0.197															☻	☻			
	CNMA434-RV7	CNMA120416-RV7	0.063	0.014–0.028	0.059–0.197															☻	☻			

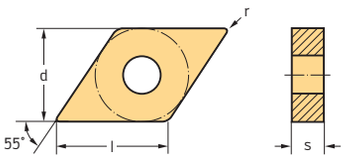
See the ISO 1832 designation key for dimensions

HC = Coated carbide

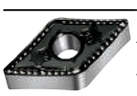


Negative rhombic 55°
DNMG / DNGG / DNMM

Tiger·tec® Silver



Indexable inserts

	ANSI designation	Designation	r in	f in	a_p in	P HC WPP01	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
Wiper	DNMG332-NF	DNMG110408-NF	0.031	0.006–0.020	0.020–0.079	●		●							◐							◐		
	DNMG432-NF	DNMG150408-NF	0.031	0.006–0.020	0.020–0.118	●		●																
	DNMG442-NF	DNMG150608-NF	0.031	0.006–0.020	0.020–0.118	●		●							◐							◐		
	DNMG431-NFT	DNMG150404-NFT	0.016	0.002–0.006	0.016–0.059										◐							◐		◐
	DNMG441-NFT	DNMG150604-NFT	0.016	0.002–0.006	0.016–0.059										◐							◐		◐
	DNMG442-NFT	DNMG150608-NFT	0.031	0.003–0.007	0.020–0.079										◐							◐		◐
	DNMG331-FM5	DNMG110404-FM5	0.016	0.002–0.006	0.008–0.039						◐	◐		●	◐					●	●			
	DNMG332-FM5	DNMG110408-FM5	0.031	0.003–0.008	0.016–0.059						◐	◐		●	◐					●	●			
	DNMG431-FM5	DNMG150404-FM5	0.016	0.002–0.006	0.008–0.059						◐	◐		●	◐					●	●			
	DNMG432-FM5	DNMG150408-FM5	0.031	0.003–0.008	0.016–0.059									●	◐					●	●			
	DNMG44(0.5)-FM5	DNMG150602-FM5	0.008	0.001–0.004	0.004–0.039									●	◐					●	●			
	DNMG441-FM5	DNMG150604-FM5	0.016	0.002–0.006	0.008–0.059						◐	◐		●	◐					●	●			
	DNMG442-FM5	DNMG150608-FM5	0.031	0.003–0.008	0.016–0.059						◐	◐		●	◐					●	●			
	DNMG110408-MS3	DNMG110408-MS3	0.031	0.005–0.012	0.031–0.098								●	●		✖				●	●		✖	
	DNMG431-MS3	DNMG150404-MS3	0.016	0.005–0.010	0.024–0.098								●	●						●	●			
	DNMG432-MS3	DNMG150408-MS3	0.031	0.006–0.012	0.031–0.098			●					●	●		✖				●	●		✖	
	DNMG441-MS3	DNMG150604-MS3	0.016	0.005–0.010	0.024–0.098								●	●						●	●			
	DNMG442-MS3	DNMG150608-MS3	0.031	0.006–0.012	0.031–0.098				◐				●	●		✖				●	●		✖	
	DNGG4(3)0.5-MS3	DNGG150402-MS3	0.008	0.002–0.005	0.016–0.079								●							●				
	DNGG431-MS3	DNGG150404-MS3	0.016	0.004–0.010	0.024–0.098								●							●				
	DNGG432-MS3	DNGG150408-MS3	0.031	0.005–0.012	0.031–0.098								●							●				
	DNMG331-NMT	DNMG110404-NMT	0.016	0.003–0.009	0.016–0.098										◐							◐		
	DNMG332-NMT	DNMG110408-NMT	0.031	0.005–0.011	0.024–0.126										◐							◐		
	DNMG432-NMT	DNMG150408-NMT	0.031	0.005–0.011	0.024–0.157										◐							◐		◐
	DNMG442-NMT	DNMG150608-NMT	0.031	0.005–0.011	0.024–0.157									●	◐						●	◐		◐
	DNMG443-NMT	DNMG150612-NMT	0.047	0.006–0.012	0.031–0.157																			◐
	DNMG431-NMS	DNMG150404-NMS	0.016	0.004–0.009	0.024–0.098									●	◐						●	◐		
	DNMG432-NMS	DNMG150408-NMS	0.031	0.004–0.012	0.031–0.138								●	●	◐					●	●	◐		
	DNMG441-NMS	DNMG150604-NMS	0.016	0.004–0.009	0.024–0.098								●	●	◐					●	●	◐		
	DNMG442-NMS	DNMG150608-NMS	0.031	0.004–0.012	0.031–0.138								●	●	◐	✖				●	●	◐	✖	
	DNMG331-MM5	DNMG110404-MM5	0.016	0.004–0.007	0.020–0.079						◐	◐		●	◐	✖					●	◐	✖	
	DNMG332-MM5	DNMG110408-MM5	0.031	0.006–0.010	0.031–0.118						◐	◐		●	◐	✖					●	◐	✖	
	DNMG431-MM5	DNMG150404-MM5	0.016	0.004–0.007	0.020–0.098						◐	◐		●	◐	✖					●	◐	✖	
	DNMG432-MM5	DNMG150408-MM5	0.031	0.006–0.010	0.031–0.118						◐	◐		●	◐	✖					●	◐	✖	
	DNMG433-MM5	DNMG150412-MM5	0.047	0.007–0.012	0.031–0.118										◐							◐		
	DNMG441-MM5	DNMG150604-MM5	0.016	0.004–0.007	0.020–0.098						◐	◐		●	◐	✖					●	◐	✖	
	DNMG442-MM5	DNMG150608-MM5	0.031	0.006–0.010	0.031–0.118						◐	◐		●	◐	✖					●	◐	✖	
	DNMG443-MM5	DNMG150612-MM5	0.047	0.007–0.012	0.031–0.118						◐	◐		●	◐	✖					●	◐	✖	

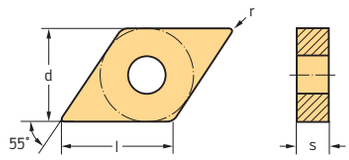
See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

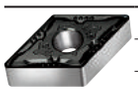
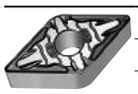
● ◐ ✖ / ★ New addition to the product range

Negative rhombic 55°
DNMG / DNGG / DNMM

Tiger·tec® Silver

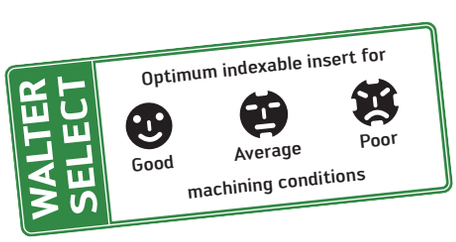


Indexable inserts

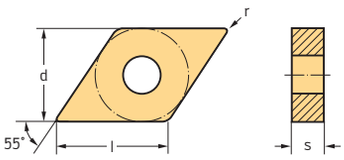
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP01	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	DNMG432-NRS	DNMG150408-NRS	0.031	0.005–0.013	0.039–0.157						●	●		●	●						●	●		
	DNMG442-NRS	DNMG150608-NRS	0.031	0.005–0.013	0.039–0.157						●	●		●	●						●	●		
	DNMG443-NRS	DNMG150612-NRS	0.047	0.006–0.014	0.047–0.157									●	●						●	●		
	DNMG332-RM5	DNMG110408-RM5	0.031	0.008–0.016	0.047–0.138						●	●			●	●						●	●	
	DNMG333-RM5	DNMG110412-RM5	0.047	0.010–0.020	0.059–0.138						●	●			●	●						●	●	
	DNMG432-RM5	DNMG150408-RM5	0.031	0.008–0.016	0.047–0.157						●	●			●	●						●	●	
	DNMG442-RM5	DNMG150608-RM5	0.031	0.008–0.016	0.047–0.157						●	●		●	●	●					●	●	●	
	DNMG443-RM5	DNMG150612-RM5	0.047	0.010–0.020	0.059–0.157						●	●			●	●						●	●	
	DNMM442-HU5	DNMM150608-HU5	0.031	0.010–0.018	0.039–0.197				●		●	●			●	●						●	●	
	DNMM443-HU5	DNMM150612-HU5	0.047	0.012–0.020	0.059–0.197				●		●	●			●	●						●	●	

See the ISO 1832 designation key for dimensions

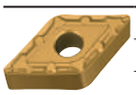
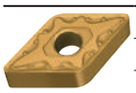
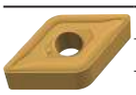
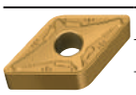
HC = Coated carbide
HW = Uncoated carbide



Negative rhombic 55°
DNMG Perform



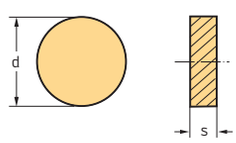
Indexable inserts

	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	K HC WKV10	K HC WKV20	S HC WSM10S	S HC WSM20S	S HC WSM30S
	DNMG331-FV5	DNMG110404-FV5	0.016	0.002–0.008	0.008–0.059						☺	😐												
	DNMG332-FV5	DNMG110408-FV5	0.031	0.003–0.010	0.016–0.079						☺	😐												
	DNMG432-FV5	DNMG150408-FV5	0.031	0.003–0.010	0.016–0.079						☺	😐												
	DNMG441-FV5	DNMG150604-FV5	0.016	0.002–0.008	0.008–0.059						☺	😐												
	DNMG442-FV5	DNMG150608-FV5	0.031	0.003–0.010	0.016–0.079						☺	😐												
	DNMG332-MV5	DNMG110408-MV5	0.031	0.006–0.013	0.031–0.118						☺	😐												
	DNMG432-MV5	DNMG150408-MV5	0.031	0.006–0.013	0.031–0.138						☺	😐												
	DNMG442-MV5	DNMG150608-MV5	0.031	0.006–0.013	0.031–0.138						☺	😐												
	DNMG433-MV7	DNMG150412-MV7	0.047	0.010–0.018	0.047–0.197														☺	😐			
	DNMG442-MV7	DNMG150608-MV7	0.031	0.008–0.018	0.031–0.197						☺	😐							☺	😐			
	DNMG443-MV7	DNMG150612-MV7	0.047	0.010–0.018	0.047–0.197						☺	😐							☺	😐			
	DNMG442-RV5	DNMG150608-RV5	0.031	0.006–0.016	0.039–0.177						☺	😐											
	DNMG443-RV5	DNMG150612-RV5	0.047	0.008–0.020	0.039–0.177						☺	😐											

See the ISO 1832 designation key for dimensions

HC = Coated carbide

Negative round
RNMG / RNMA
Tiger·tec® Silver



Indexable inserts

	ANSI designation	Designation	d in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	RNMG43-RP5	RNMG120400-RP5	0.500	0.008–0.024	0.047–0.197			😐													😐
	RNMA43-RK5	RNMA120400-RK5	0.500	0.006–0.024	0.047–0.157											😐					

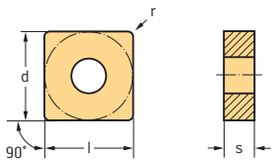
See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

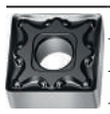
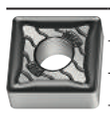
☺ 😐 ☹ / ★ New addition to the product range

Negative square
SNMG / SNMM

Tiger·tec® Silver

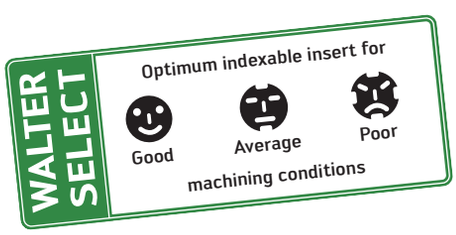


Indexable inserts

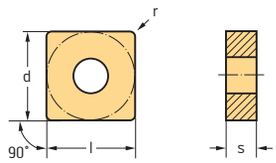
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	SNMG432-FM5	SNMG120408-FM5	0.031	0.003–0.008	0.016–0.059							☺	😐					☺	😐		
	SNMG433-FM5	SNMG120412-FM5	0.047	0.004–0.010	0.020–0.079					😐	😐	☺	😐					☺	😐		
	SNMG431-MM5	SNMG120404-MM5	0.016	0.004–0.007	0.020–0.079								😐	☹					😐	☹	
	SNMG432-MM5	SNMG120408-MM5	0.031	0.006–0.010	0.031–0.118					😐	😐	☺	😐	☹				☺	😐	☹	
	SNMG433-MM5	SNMG120412-MM5	0.047	0.007–0.012	0.031–0.138					😐	😐	☺	😐	☹				☺	😐	☹	
	SNMG322-MK5	SNMG090308-MK5	0.031	0.004–0.008	0.008–0.118										☺	😐					
	SNMG432-MK5	SNMG120408-MK5	0.031	0.010–0.020	0.031–0.197										☺	😐					
	SNMG433-MK5	SNMG120412-MK5	0.047	0.012–0.020	0.047–0.197										☺	😐	☹				
	SNMG434-MK5	SNMG120416-MK5	0.063	0.014–0.020	0.059–0.197										☺	😐					
	SNMG543-MK5	SNMG150612-MK5	0.047	0.012–0.024	0.047–0.276										☺	😐					
	SNMG544-MK5	SNMG150616-MK5	0.063	0.014–0.024	0.059–0.276										☺	😐					
	SNMG643-MK5	SNMG190612-MK5	0.047	0.012–0.026	0.047–0.315										☺	😐					
	SNMG644-MK5	SNMG190616-MK5	0.063	0.014–0.031	0.059–0.315										☺	😐					
	SNMG433-NRT	SNMG120412-NRT	0.047	0.010–0.020	0.031–0.236								😐						😐		😐
	SNMG543-NRT	SNMG150612-NRT	0.047	0.012–0.024	0.039–0.295								😐						😐		😐
	SNMG544-NRT	SNMG150616-NRT	0.063	0.014–0.028	0.047–0.295								😐						😐		
	SNMG644-NRT	SNMG190616-NRT	0.063	0.016–0.031	0.059–0.354																😐
	SNMG432-NRS	SNMG120408-NRS	0.031	0.008–0.016	0.031–0.197							☺	😐	☹				☺	😐	☹	
	SNMG433-NRS	SNMG120412-NRS	0.047	0.009–0.018	0.039–0.197							☺	😐	☹				☺	😐	☹	
	SNMG544-NRS	SNMG150616-NRS	0.063	0.009–0.022	0.047–0.276							☺	😐					☺	😐		
	SNMG643-NRS	SNMG190612-NRS	0.047	0.009–0.022	0.039–0.354							☺	😐					☺	😐		
	SNMG644-NRS	SNMG190616-NRS	0.063	0.011–0.024	0.047–0.354							☺	😐					☺	😐		
	SNMG432-RM5	SNMG120408-RM5	0.031	0.008–0.016	0.047–0.197					😐	😐		😐	☹					😐	☹	
	SNMG433-RM5	SNMG120412-RM5	0.047	0.010–0.020	0.059–0.197					😐	😐		😐	☹					😐	☹	
	SNMG434-RM5	SNMG120416-RM5	0.063	0.012–0.022	0.079–0.197								😐	☹					😐	☹	
	SNMG543-RM5	SNMG150612-RM5	0.047	0.010–0.024	0.059–0.276					😐	😐		😐	☹					😐	☹	
	SNMG544-RM5	SNMG150616-RM5	0.063	0.012–0.022	0.079–0.276					😐	😐		😐	☹					😐	☹	
	SNMG643-RM5	SNMG190612-RM5	0.047	0.010–0.024	0.059–0.315					😐	😐		😐	☹					😐	☹	
	SNMG644-RM5	SNMG190616-RM5	0.063	0.012–0.031	0.079–0.315					😐	😐		😐	☹					😐	☹	
	SNMM433-HU5	SNMM120412-HU5	0.047	0.012–0.028	0.059–0.276			😐		😐	😐		😐	☹					😐	☹	
	SNMM543-HU5	SNMM150612-HU5	0.047	0.014–0.028	0.059–0.354			😐		😐	😐		😐	☹					😐	☹	
	SNMM643-HU5	SNMM190612-HU5	0.047	0.014–0.031	0.059–0.394		☺	😐		😐	😐		😐	☹					😐	☹	
	SNMM644-HU5	SNMM190616-HU5	0.063	0.016–0.039	0.079–0.394		☺	😐		😐	😐		😐	☹					😐	☹	
	SNMM866-HU5	SNMM250924-HU5	0.094	0.020–0.047	0.098–0.472			😐		😐	😐		😐	☹					😐	☹	

See the ISO 1832 designation key for dimensions

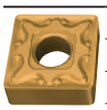
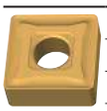
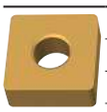
HC = Coated carbide
HW = Uncoated carbide



Negative square
SNMG Perform / SNMA Perform



Indexable inserts

	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	K HC WKV10	K HC WKV20	S HC WSM10S	S HC WSM20S	S HC WSM30S
	SNMG432-MV5	SNMG120408-MV5	0.031	0.006–0,32	0.031–0.157						😊	😐												
	SNMG432-MV7	SNMG120408-MV7	0.031	0.010–0.020	0.031–0.197															😊	😐			
	SNMG433-MV7	SNMG120412-MV7	0.047	0.012–0.020	0.047–0.197															😊	😐			
	SNMG543-MV7	SNMG150612-MV7	0.047	0.012–0.024	0.047–0.276															😊	😐			
	SNMA433-RV7	SNMA120412-RV7	0.047	0.012–0.024	0.047–0.197															😊	😐			

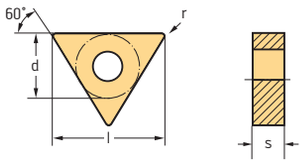
See the ISO 1832 designation key for dimensions

HC = Coated carbide

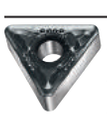
😊😐😠 / ★ New addition to the product range

Negative triangular 60°
TNMG

Tiger·tec® Silver



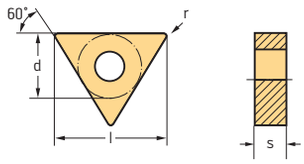
Indexable inserts

	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	TNMG331-FM5	TNMG160404-FM5	0.016	0.002–0.006	0.008–0.039					●	●		●	●						●	●		
	TNMG332-FM5	TNMG160408-FM5	0.031	0.003–0.008	0.016–0.059					●	●		●	●						●	●		
	TNMG333-FM5	TNMG160412-FM5	0.047	0.004–0.010	0.020–0.098								●	●						●	●		
	TNMG321-MS3	TNMG160304-MS3	0.016	0.005–0.010	0.024–0.118			●															
	TNMG322-MS3	TNMG160308-MS3	0.031	0.006–0.012	0.031–0.118			●	●														
	TNMG331-MS3	TNMG160404-MS3	0.016	0.005–0.010	0.024–0.118			●				●							●				
	TNMG332-MS3	TNMG160408-MS3	0.031	0.006–0.012	0.031–0.118		●	●				●	●						●	●			
	TNMG431-MS3	TNMG220404-MS3	0.016	0.005–0.010	0.024–0.118			●				●							●				
	TNMG432-MS3	TNMG220408-MS3	0.031	0.006–0.012	0.031–0.118			●	●			●	●						●	●			
	TNMG331-NMT	TNMG160404-NMT	0.016	0.003–0.008	0.024–0.118									●							●		●
	TNMG332-NMT	TNMG160408-NMT	0.031	0.005–0.012	0.039–0.157									●							●		●
	TNMG331-NMS	TNMG160404-NMS	0.016	0.004–0.009	0.024–0.098							●	●	●	●				●	●	●	●	
	TNMG332-NMS	TNMG160408-NMS	0.031	0.004–0.012	0.031–0.138							●	●	●	●				●	●	●	●	
	TNMG331-MM5	TNMG160404-MM5	0.016	0.004–0.007	0.020–0.079					●	●		●	●	●					●	●	●	
	TNMG332-MM5	TNMG160408-MM5	0.031	0.006–0.010	0.031–0.118					●	●		●	●	●					●	●	●	
	TNMG333-MM5	TNMG160412-MM5	0.047	0.007–0.012	0.031–0.138					●	●		●	●	●					●	●	●	
	TNMG334-MM5	TNMG160416-MM5	0.063	0.008–0.014	0.039–0.157									●							●		
	TNMG333-NRS	TNMG160412-NRS	0.047	0.010–0.020	0.059–0.177								●	●						●	●		
	TNMG332-RM5	TNMG160408-RM5	0.031	0.008–0.016	0.047–0.157					●	●		●	●	●					●	●	●	
	TNMG333-RM5	TNMG160412-RM5	0.047	0.010–0.020	0.059–0.157					●	●			●	●						●	●	
	TNMG432-RM5	TNMG220408-RM5	0.031	0.008–0.016	0.047–0.157					●	●		●	●	●					●	●	●	
	TNMG433-RM5	TNMG220412-RM5	0.047	0.010–0.022	0.059–0.197					●	●			●	●						●	●	

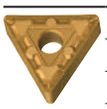
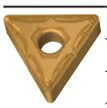
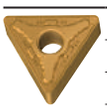
See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

Negative triangular 60°
TNMG Perform

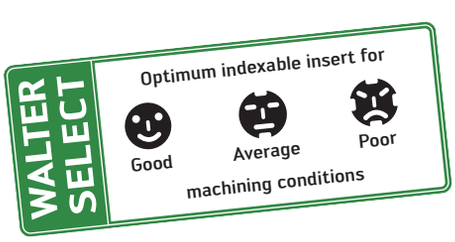


Indexable inserts

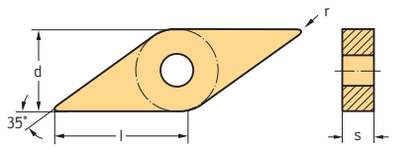
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	K HC WKV10	K HC WKV20	S HC WSM10S	S HC WSM20S	S HC WSM30S
	TNMG331-FV5	TNMG160404-FV5	0.016	0.002–0.008	0.006–0.059						☻	😠												
	TNMG332-FV5	TNMG160408-FV5	0.031	0.003–0.010	0.016–0.079						☻	😠												
	TNMG331-MV5	TNMG160404-MV5	0.016	0.004–0.008	0.020–0.138						☻	😠												
	TNMG332-MV5	TNMG160408-MV5	0.031	0.006–0.013	0.031–0.138						☻	😠												
	TNMG332-MV7	TNMG160408-MV7	0.031	0.008–0.018	0.031–0.197														☻	😠				
	TNMG333-MV7	TNMG160412-MV7	0.047	0.010–0.018	0.047–0.197														☻	😠				
	TNMG332-RV5	TNMG160408-RV5	0.031	0.006–0.016	0.039–0.177						☻	😠												

See the ISO 1832 designation key for dimensions

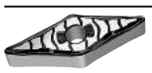
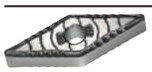
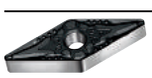
HC = Coated carbide



Negative rhombic 35°
VNMG / VNGG
Tiger·tec® Silver



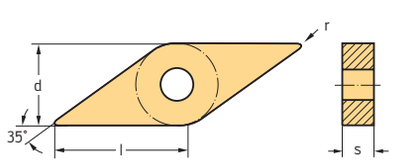
Indexable inserts

	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	VNMG331-NFT	VNMG160404-NFT	0.016	0.002–0.006	0.008–0.059									●						●		●
	VNMG332-NFT	VNMG160408-NFT	0.031	0.003–0.007	0.012–0.079									●						●		●
	VNMG3(3)0.5-FM5	VNMG160402-FM5	0.008	0.001–0.004	0.004–0.039								●	●						●	●	
	VNMG331-FM5	VNMG160404-FM5	0.016	0.002–0.006	0.008–0.039								●	●						●	●	
	VNMG332-FM5	VNMG160408-FM5	0.031	0.003–0.008	0.016–0.059								●	●						●	●	
	VNMG331-FP5	VNMG160404-FP5	0.016	0.002–0.009	0.004–0.059		●	●														
	VNMG332-FP5	VNMG160408-FP5	0.031	0.003–0.010	0.008–0.079		●	●														
	VNMG333-FP5	VNMG160412-FP5	0.047	0.005–0.011	0.012–0.098		●	●														
	VNMG331-MS3	VNMG160404-MS3	0.016	0.004–0.008	0.024–0.098				●			●	●						●	●		
	VNMG332-MS3	VNMG160408-MS3	0.031	0.005–0.010	0.031–0.098				●			●	●						●	●		
	VNGG3(3)0.2-MS3	VNGG160401-MS3	0.004	0.001–0.002	0.008–0.079							●							●			
	VNGG3(3)0.5-MS3	VNGG160402-MS3	0.008	0.002–0.005	0.016–0.079							●							●			
	VNGG331-MS3	VNGG160404-MS3	0.016	0.004–0.008	0.024–0.079							●							●			
	VNMG331-NMS	VNMG160404-NMS	0.016	0.003–0.006	0.020–0.059								●	●						●	●	
	VNMG332-NMS	VNMG160408-NMS	0.031	0.004–0.009	0.031–0.087								●	●						●	●	
	VNMG331-MM5	VNMG160404-MM5	0.016	0.004–0.007	0.020–0.079					●	●		●	●	●					●	●	●
	VNMG332-MM5	VNMG160408-MM5	0.031	0.006–0.010	0.031–0.118					●	●		●	●	●					●	●	●

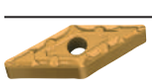
See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

Negative rhombic 35°
VNMG Perform



Indexable inserts

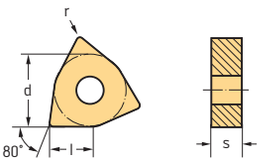
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM10S	S HC WSM20S	S HC WSM30S
	VNMG331-FV5	VNMG160404-FV5	0.016	0.002–0.008	0.008–0.059						●	●										
	VNMG332-FV5	VNMG160408-FV5	0.031	0.003–0.010	0.016–0.079						●	●										

See the ISO 1832 designation key for dimensions

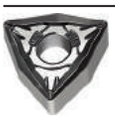
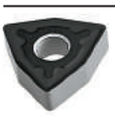
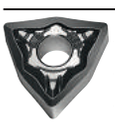
HC = Coated carbide

Negative Trigon 80°
WNMG

Tiger·tec® Silver



Indexable inserts

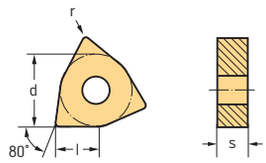
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP01	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
Wiper	WNMG331-NF	WNMG060404-NF	0.016	0.004–0.016	0.016–0.079	●		●							●							●		
	WNMG332-NF	WNMG060408-NF	0.031	0.006–0.020	0.020–0.118	●		●							●							●		
	WNMG431-NF	WNMG080404-NF	0.016	0.008–0.016	0.016–0.079	●		●							●							●		
	WNMG432-NF	WNMG080408-NF	0.031	0.010–0.022	0.020–0.118	●		●							●							●		
	WNMG433-NF	WNMG080412-NF	0.047	0.010–0.028	0.031–0.118			●																
	WNMG331-FM5	WNMG060404-FM5	0.016	0.002–0.006	0.008–0.039									●	●						●	●		
	WNMG332-FM5	WNMG060408-FM5	0.031	0.003–0.008	0.016–0.059									●	●						●	●		
	WNMG431-FM5	WNMG080404-FM5	0.016	0.002–0.006	0.008–0.059						●	●		●	●						●	●		
	WNMG432-FM5	WNMG080408-FM5	0.031	0.003–0.008	0.016–0.059						●	●		●	●						●	●		
	WNMG433-FM5	WNMG080412-FM5	0.047	0.004–0.010	0.020–0.079									●	●						●	●		
 Wiper	WNMG332-NM	WNMG060408-NM	0.031	0.008–0.022	0.031–0.118			●									●							
	WNMG333-NM	WNMG060412-NM	0.047	0.010–0.022	0.059–0.157			●									●							
	WNMG432-NM	WNMG080408-NM	0.031	0.008–0.022	0.031–0.118			●	●						●		●	●				●		
	WNMG433-NM	WNMG080412-NM	0.047	0.010–0.028	0.059–0.157			●	●						●		●	●				●		
	WNMG431-MS3	WNMG080404-MS3	0.016	0.005–0.010	0.024–0.118								●	●		●				●	●		●	
	WNMG432-MS3	WNMG080408-MS3	0.031	0.006–0.012	0.031–0.118								●	●		●				●	●		●	
	WNMG432-NMT	WNMG080408-NMT	0.031	0.005–0.012	0.031–0.157										●							●		●
	WNMG433-NMT	WNMG080412-NMT	0.047	0.006–0.013	0.039–0.157																			●
	WNMG332-NMS	WNMG060408-NMS	0.031	0.004–0.012	0.031–0.118									●	●						●	●		
	WNMG431-NMS	WNMG080404-NMS	0.016	0.004–0.009	0.024–0.098								●	●	●	●				●	●	●	●	
	WNMG432-NMS	WNMG080408-NMS	0.031	0.005–0.013	0.031–0.138								●	●	●	●				●	●	●	●	
	WNMG331-MM5	WNMG060404-MM5	0.016	0.004–0.007	0.020–0.079						●	●		●	●	●					●	●	●	
	WNMG332-MM5	WNMG060408-MM5	0.031	0.006–0.010	0.031–0.098						●	●		●	●	●					●	●	●	
	WNMG333-MM5	WNMG060412-MM5	0.047	0.007–0.012	0.031–0.118										●	●						●	●	
	WNMG431-MM5	WNMG080404-MM5	0.016	0.004–0.008	0.020–0.118						●	●		●	●	●					●	●	●	
	WNMG432-MM5	WNMG080408-MM5	0.031	0.006–0.013	0.031–0.118						●	●		●	●	●					●	●	●	
	WNMG433-MM5	WNMG080412-MM5	0.047	0.006–0.014	0.031–0.138						●	●		●	●	●					●	●	●	
	WNMG434-MM5	WNMG080416-MM5	0.063	0.006–0.016	0.039–0.157										●	●						●	●	
	WNMG542-MM5	WNMG100608-MM5	0.031	0.007–0.016	0.031–0.177										●	●						●	●	
	WNMG543-MM5	WNMG100612-MM5	0.047	0.008–0.018	0.031–0.177										●	●						●	●	

See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

Negative Trigon 80°
WNMG

Tiger·tec® Silver

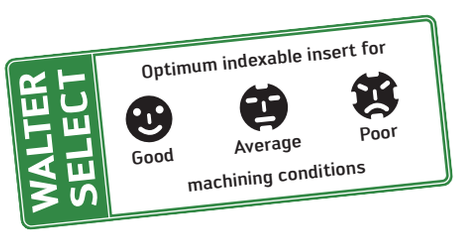


Indexable inserts

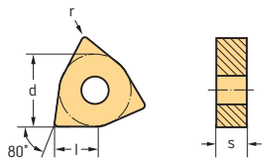
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP01	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	WNMG331-MK5	WNMG060404-MK5	0.016	0.006–0.010	0.024–0.157												☺	😐						
	WNMG332-MK5	WNMG060408-MK5	0.031	0.008–0.016	0.031–0.157												☺	😐						
	WNMG333-MK5	WNMG060412-MK5	0.047	0.006–0.018	0.024–0.157												☺	😐						
	WNMG431-MK5	WNMG080404-MK5	0.016	0.006–0.010	0.024–0.197												☺	😐						
	WNMG432-MK5	WNMG080408-MK5	0.031	0.008–0.018	0.047–0.197												☺	😐	☹					
	WNMG433-MK5	WNMG080412-MK5	0.047	0.009–0.020	0.059–0.197												☺	😐	☹					
	WNMG434-MK5	WNMG080416-MK5	0.063	0.010–0.022	0.079–0.197												☺	😐						
	WNMG542-MK5	WNMG100608-MK5	0.031	0.010–0.020	0.031–0.276												☺	😐						
	WNMG543-MK5	WNMG100612-MK5	0.047	0.012–0.024	0.047–0.276												☺	😐						
	WNMG544-MK5	WNMG100616-MK5	0.063	0.014–0.024	0.059–0.276												☺	😐						
	WNMG432-NRS	WNMG080408-NRS	0.031	0.006–0.014	0.039–0.157						😐	😐	☺	☺	😐	☹				☺	☺	😐	☹	
	WNMG433-NRS	WNMG080412-NRS	0.047	0.007–0.016	0.047–0.157						😐	😐	☺	☺	😐	☹				☺	☺	😐	☹	
	WNMG332-RM5	WNMG060408-RM5	0.031	0.008–0.016	0.047–0.138						😐	😐			😐	☹						😐	☹	
	WNMG432-RM5	WNMG080408-RM5	0.031	0.008–0.016	0.047–0.177			☺	😐		😐	😐		☺	😐	☹					☺	😐	☹	
	WNMG433-RM5	WNMG080412-RM5	0.047	0.010–0.020	0.059–0.177			☺	😐		😐	😐		☺	😐	☹					☺	😐	☹	
	WNMG432-RP7	WNMG080408-RP7	0.031	0.006–0.018	0.039–0.197			☺	😐	☹									☹					
	WNMG433-RP7	WNMG080412-RP7	0.047	0.008–0.018	0.059–0.197			☺	😐	☹									☹					
	WNMG542-RP7	WNMG100608-RP7	0.031	0.012–0.020	0.031–0.236				😐	☹														
	WNMG543-RP7	WNMG100612-RP7	0.047	0.014–0.024	0.047–0.236			☺	😐	☹														
	WNMG544-RP7	WNMG100616-RP7	0.063	0.016–0.024	0.059–0.236				😐	☹														

See the ISO 1832 designation key for dimensions

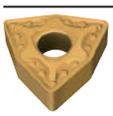
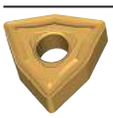
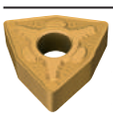
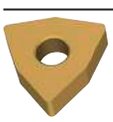
HC = Coated carbide
HW = Uncoated carbide



Negative Trigon 80°
WNMG Perform / WNMA Perform



Indexable inserts

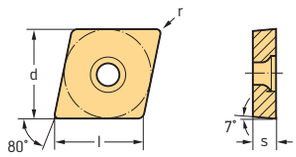
	ANSI designation	Designation	r in	f in	a_p in	P HC WPP05S	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	K HC WKP30S	K HC WKV10	K HC WKV20	S HC WSM10S	S HC WSM20S	S HC WSM30S
	WNMG432-FV5	WNMG080408-FV5	0.031	0.003–0.010	0.016–0.079						●	●												
	WNMG332-MV5	WNMG060408-MV5	0.031	0.006–0.013	0.031–0.118						●	●												
	WNMG431-MV5	WNMG080404-MV5	0.016	0.004–0.008	0.020–0.138						●	●												
	WNMG432-MV5	WNMG080408-MV5	0.031	0.006–0.013	0.031–0.157						●	●												
	WNMG433-MV5	WNMG080412-MV5	0.047	0.007–0.016	0.031–0.157						●	●												
	WNMG432-MV7	WNMG080408-MV7	0.031	0.008–0.018	0.047–0.197						●	●								●	●			
	WNMG433-MV7	WNMG080412-MV7	0.047	0.010–0.020	0.059–0.197						●	●								●	●			
	WNMG432-RV5	WNMG080408-RV5	0.031	0.008–0.016	0.039–0.197						●	●												
	WNMG433-RV5	WNMG080412-RV5	0.047	0.010–0.022	0.039–0.197						●	●												
	WNMA432-RV7	WNMA080408-RV7	0.031	0.008–0.018	0.047–0.197															●	●			
	WNMA433-RV7	WNMA080412-RV7	0.047	0.010–0.020	0.059–0.197															●	●			

See the ISO 1832 designation key for dimensions

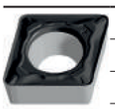
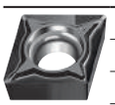
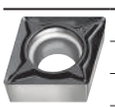
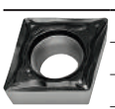
HC = Coated carbide

● ● ● / ★ New addition to the product range

Positive rhombic 80°
CCMT / CCGT
Tiger·tec® Silver



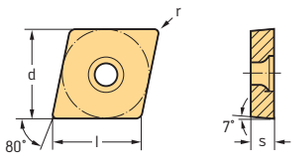
Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP01	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	CCMT2(1.5)1-PF	CCMT060204-PF	0.254	0.016	0.002–0.012	0.012–0.079		●	●	●						●	●						●	●
	CCMT2(1.5)2-PF	CCMT060208-PF	0.254	0.031	0.004–0.014	0.012–0.079			●	●						●							●	
	CCMT3(2.5)1-PF	CCMT09T304-PF	0.381	0.016	0.003–0.012	0.012–0.118		●	●	●						●	●						●	●
Wiper	CCMT3(2.5)2-PF	CCMT09T308-PF	0.381	0.031	0.005–0.018	0.012–0.118		●	●	●						●	●						●	●
	CCGT2(1.5)0.2-FN2	CCGT060201-FN2	0.254	0.004	0.001–0.002	0.005–0.059														●				
	CCGT2(1.5)0.5-FN2	CCGT060202-FN2	0.254	0.008	0.002–0.005	0.006–0.079														●				
	CCGT2(1.5)1-FN2	CCGT060204-FN2	0.254	0.016	0.003–0.010	0.008–0.098														●				
	CCGT3(2.5)0.2-FN2	CCGT09T301-FN2	0.381	0.004	0.001–0.002	0.005–0.059														●				
	CCGT3(2.5)0.5-FN2	CCGT09T302-FN2	0.381	0.008	0.002–0.005	0.006–0.079														●				
	CCGT3(2.5)1-FN2	CCGT09T304-FN2	0.381	0.016	0.003–0.010	0.008–0.098														●				
	CCGT3(2.5)2-FN2	CCGT09T308-FN2	0.381	0.031	0.004–0.012	0.010–0.118														●				
	CCGT431-FN2	CCGT120404-FN2	0.508	0.016	0.003–0.010	0.008–0.118														●				
	CCGT432-FN2	CCGT120408-FN2	0.508	0.031	0.004–0.012	0.010–0.138														●				
	CCGT2(1.5)0.2-FM2	CCGT060201-FM2	0.254	0.004	0.001–0.002	0.004–0.059										●							●	
	CCGT2(1.5)0.5-FM2	CCGT060202-FM2	0.254	0.008	0.002–0.005	0.008–0.079								●		●					●		●	
	CCGT2(1.5)1-FM2	CCGT060204-FM2	0.254	0.016	0.003–0.010	0.008–0.098								●		●					●		●	
	CCGT3(2.5)0.2-FM2	CCGT09T301-FM2	0.381	0.004	0.001–0.002	0.004–0.059										●							●	
	CCGT3(2.5)0.5-FM2	CCGT09T302-FM2	0.381	0.008	0.002–0.005	0.008–0.079								●		●					●		●	
	CCGT3(2.5)1-FM2	CCGT09T304-FM2	0.381	0.016	0.003–0.010	0.008–0.098								●	●	●					●	●	●	
	CCGT3(2.5)2-FM2	CCGT09T308-FM2	0.381	0.031	0.004–0.012	0.012–0.118								●	●	●					●	●	●	
	CCGT431-FM2	CCGT120404-FM2	0.508	0.016	0.003–0.010	0.008–0.118										●							●	
	CCGT432-FM2	CCGT120408-FM2	0.508	0.031	0.004–0.012	0.010–0.138										●							●	
	CCMT2(1.5)0.5-FP4	CCMT060202-FP4	0.254	0.008	0.002–0.005	0.004–0.039	●		●	●														
	CCMT2(1.5)1-FP4	CCMT060204-FP4	0.254	0.016	0.002–0.006	0.004–0.059	●		●	●														
	CCMT2(1.5)2-FP4	CCMT060208-FP4	0.254	0.031	0.003–0.008	0.004–0.059			●	●														
	CCMT3(2.5)0.5-FP4	CCMT09T302-FP4	0.381	0.008	0.002–0.005	0.004–0.039	●		●	●														
	CCMT3(2.5)1-FP4	CCMT09T304-FP4	0.381	0.016	0.002–0.006	0.004–0.059	●		●	●														
	CCMT3(2.5)2-FP4	CCMT09T308-FP4	0.381	0.031	0.003–0.008	0.004–0.059	●		●	●														
	CCMT431-FP4	CCMT120404-FP4	0.508	0.016	0.002–0.006	0.004–0.059			●	●														
	CCMT432-FP4	CCMT120408-FP4	0.508	0.031	0.003–0.008	0.004–0.059			●	●														
	CCMT2(1.5)1-FM6	CCMT060204-FM6	0.254	0.016	0.003–0.010	0.012–0.063										●	●						●	●
	CCMT2(1.5)2-FM6	CCMT060208-FM6	0.254	0.031	0.005–0.012	0.020–0.063										●							●	
	CCMT3(2.5)1-FM6	CCMT09T304-FM6	0.381	0.016	0.003–0.010	0.012–0.079										●	●						●	●
	CCMT3(2.5)2-FM6	CCMT09T308-FM6	0.381	0.031	0.005–0.013	0.020–0.079										●	●						●	●
	CCMT432-FM6	CCMT120408-FM6	0.508	0.031	0.005–0.013	0.020–0.098										●	●						●	●

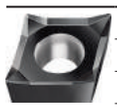
See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

Positive rhombic 80°
CCMT / CCGT
Tiger·tec® Silver

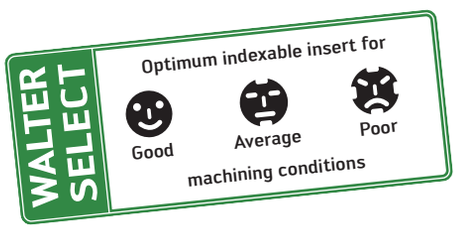


Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP01	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	CCGT2(1.5)0.2-MN2	CCGT060201-MN2	0.254	0.004	0.001–0.002	0.020–0.059														☺				
	CCGT2(1.5)0.5-MN2	CCGT060202-MN2	0.254	0.008	0.002–0.005	0.020–0.079								☺						☺	☺			
	CCGT2(1.5)1-MN2	CCGT060204-MN2	0.254	0.016	0.003–0.010	0.024–0.118								☺						☺	☺			
	CCGT3(2.5)0.2-MN2	CCGT09T301-MN2	0.381	0.004	0.001–0.002	0.020–0.059														☺				
	CCGT3(2.5)0.5-MN2	CCGT09T302-MN2	0.381	0.008	0.002–0.005	0.020–0.079								☺						☺	☺			
	CCGT3(2.5)1-MN2	CCGT09T304-MN2	0.381	0.016	0.003–0.010	0.024–0.157								☺						☺	☺			
	CCGT3(2.5)2-MN2	CCGT09T308-MN2	0.381	0.031	0.004–0.014	0.031–0.157								☺						☺	☺			
	CCGT4(3)0.5-MN2	CCGT120402-MN2	0.508	0.008	0.002–0.005	0.020–0.079														☺				
	CCGT431-MN2	CCGT120404-MN2	0.508	0.016	0.003–0.010	0.024–0.197														☺				
	CCGT432-MN2	CCGT120408-MN2	0.508	0.031	0.004–0.014	0.031–0.197														☺				
	CCMT2(1.5)1-MM4	CCMT060204-MM4	0.254	0.016	0.003–0.008	0.016–0.079						😐	😐		😐	😐	😐					😐	😐	😐
	CCMT2(1.5)2-MM4	CCMT060208-MM4	0.254	0.031	0.005–0.010	0.020–0.079						😐	😐			😐							😐	
	CCMT3(2.5)1-MM4	CCMT09T304-MM4	0.381	0.016	0.003–0.010	0.016–0.118						😐	😐		😐	😐	😐					😐	😐	😐
	CCMT3(2.5)2-MM4	CCMT09T308-MM4	0.381	0.031	0.005–0.013	0.020–0.118						😐	😐		😐	😐	😐					😐	😐	😐
	CCMT431-MM4	CCMT120404-MM4	0.508	0.016	0.005–0.010	0.016–0.138						😐	😐			😐							😐	
	CCMT432-MM4	CCMT120408-MM4	0.508	0.031	0.005–0.013	0.020–0.138						😐	😐		😐	😐						😐	😐	
	CCGT2(1.5)1-MM4	CCGT060204-MM4	0.254	0.016	0.003–0.008	0.016–0.079								☺		😐					☺		😐	
	CCGT2(1.5)2-MM4	CCGT060208-MM4	0.254	0.031	0.005–0.010	0.020–0.079								☺		😐					☺		😐	
	CCGT3(2.5)1-MM4	CCGT09T304-MM4	0.381	0.016	0.003–0.010	0.016–0.118								☺		😐					☺		😐	
	CCGT3(2.5)2-MM4	CCGT09T308-MM4	0.381	0.031	0.005–0.013	0.020–0.118								☺		😐					☺		😐	
	CCGT432-MM4	CCGT120408-MM4	0.508	0.031	0.005–0.013	0.020–0.138										😐							😐	

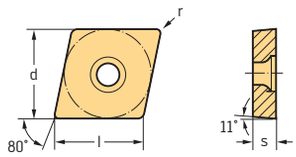
See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

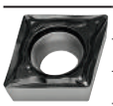
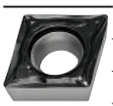


Positive rhombic 80°
CPMT / CPGT / CPMW

Tiger·tec® Silver



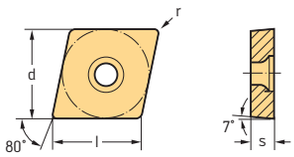
Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	CPMT1.8(1.5)1-FM4	CPMT050204-FM4	0.219	0.016	0.002–0.006	0.004–0.059				●	●			●						●	
	CPMT2(1.5)1-FM4	CPMT060204-FM4	0.254	0.016	0.002–0.006	0.004–0.059				●	●			●						●	
	CPMT3(2.5)1-FM4	CPMT09T304-FM4	0.381	0.016	0.002–0.006	0.004–0.059				●	●			●						●	
	CPMT3(2.5)2-FM4	CPMT09T308-FM4	0.381	0.031	0.003–0.008	0.004–0.059				●	●			●						●	
	CPMT1.8(1.5)1-FP4	CPMT050204-FP4	0.219	0.016	0.002–0.006	0.004–0.059	●														
	CPMT2(1.5)1-FP4	CPMT060204-FP4	0.254	0.016	0.002–0.006	0.004–0.059	●														
	CPMT3(2.5)1-FP4	CPMT09T304-FP4	0.381	0.016	0.002–0.006	0.004–0.059	●														
	CPMT3(2.5)2-FP4	CPMT09T308-FP4	0.381	0.031	0.003–0.008	0.004–0.059	●														
	CPMT1.5(2.1)1-MM4	CPMT04T104-MM4	0.187	0.016	0.002-0.006	0.012-0.059								●						●	
	CPMT2(1.5)1-MM4	CPMT060204-MM4	0.254	0.016	0.003–0.008	0.016–0.079								●						●	
	CPMT2(1.5)2-MM4	CPMT060208-MM4	0.254	0.031	0.005–0.010	0.020–0.079								●						●	
	CPMT3(2.5)1-MM4	CPMT09T304-MM4	0.381	0.016	0.003–0.010	0.016–0.118								●						●	
	CPMT3(2.5)2-MM4	CPMT09T308-MM4	0.381	0.031	0.005–0.013	0.020–0.118								●						●	
	CPGT1.8(1.5)1-MM4	CPGT050204-MM4	0.219	0.016	0.003–0.008	0.016–0.059								●						●	
	CPGT2(1.5)0.2-MM4	CPGT060201-MM4	0.254	0.004	0.002–0.005	0.004–0.079						●						●			
	CPGT2(1.5)0.5-MM4	CPGT060202-MM4	0.254	0.008	0.002–0.006	0.008–0.079						●						●			
	CPGT2(1.5)1-MM4	CPGT060204-MM4	0.254	0.016	0.003–0.008	0.016–0.079						●		●				●		●	
	CPGT2(1.5)2-MM4	CPGT060208-MM4	0.254	0.031	0.005–0.010	0.020–0.079						●		●				●		●	
	CPGT3(2.5)0.2-MM4	CPGT09T301-MM4	0.381	0.004	0.002–0.008	0.004–0.118						●						●			
	CPGT3(2.5)1-MM4	CPGT09T304-MM4	0.381	0.016	0.003–0.010	0.016–0.118						●		●				●		●	
	CPGT3(2.5)2-MM4	CPGT09T308-MM4	0.381	0.031	0.005–0.013	0.020–0.118						●		●				●		●	
	CPMT1.5(1.2)1-MP4	CPMT04T104-MP4	0.187	0.016	0.002-0.006	0.012-0.059		●													
	CPMT2(1.5)1-MP4	CPMT060204-MP4	0.254	0.016	0.003–0.008	0.016–0.079		●													
	CPMT2(1.5)2-MP4	CPMT060208-MP4	0.254	0.031	0.005–0.010	0.020–0.079		●													
	CPMT3(2.5)1-MP4	CPMT09T304-MP4	0.381	0.016	0.003–0.010	0.016–0.118		●													
	CPMT3(2.5)2-MP4	CPMT09T308-MP4	0.381	0.031	0.005–0.013	0.020–0.118		●													
	CPMW1.8(1.5)1-RK6	CPMW050204-RK6	0.219	0.016	0.005–0.010	0.016–0.098						●					●	●			
	CPMW2(1.5)1-RK6	CPMW060204-RK6	0.254	0.016	0.005–0.010	0.016–0.098											●				
	CPMW3(2.5)1-RK6	CPMW09T304-RK6	0.381	0.016	0.005–0.010	0.016–0.118											●				
	CPMW3(2.5)2-RK6	CPMW09T308-RK6	0.381	0.031	0.006–0.014	0.020–0.157											●				

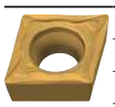
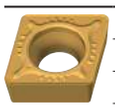
See the ISO 1832 designation key for dimensions

HC = Coated carbide

Positive rhombic 80°
CCMT Perform

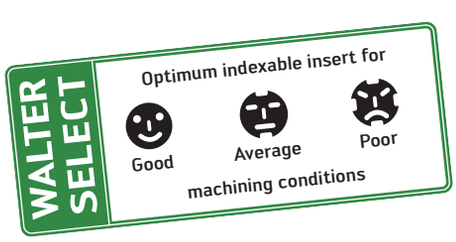


Indexable inserts

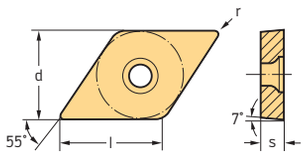
	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM10S	S HC WSM20S	S HC WSM30S
	CCMT060204-FV4	CCMT060204-FV4	0.254	0.016	0.002–0.006	0.004–0.059					☺	☹									
	CCMT09T304-FV4	CCMT09T304-FV4	0.381	0.016	0.002–0.006	0.004–0.059					☺	☹									
	CCMT09T308-FV4	CCMT09T308-FV4	0.381	0.031	0.003–0.008	0.004–0.059					☺	☹									
	CCMT060204-MV4	CCMT060204-MV4	0.254	0.016	0.004–0.010	0.016–0.098					☺	☹									
	CCMT09T304-MV4	CCMT09T304-MV4	0.381	0.016	0.004–0.010	0.016–0.118					☺	☹									
	CCMT09T308-MV4	CCMT09T308-MV4	0.381	0.031	0.006–0.013	0.024–0.118					☺	☹									
	CCMT120408-MV4	CCMT120408-MV4	0.508	0.031	0.006–0.014	0.024–0.138					☺	☹									

See the ISO 1832 designation key for dimensions

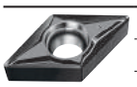
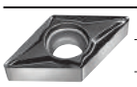
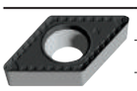
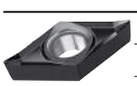
HC = Coated carbide



Positive rhombic 55°
DCMT / DCGT
Tiger·tec® Silver



Indexable inserts

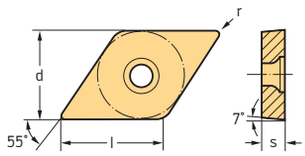
	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP01	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
Wiper	DCMT2(1.5)1-PF	DCMT070204-PF	0.305	0.016	0.002–0.010	0.012–0.079		☺	☺	😐						😐	😣						😐	😣
	DCMT2(1.5)2-PF	DCMT070208-PF	0.305	0.031	0.002–0.010	0.012–0.079										😐	😣						😐	😣
	DCMT3(2.5)1-PF	DCMT11T304-PF	0.458	0.016	0.003–0.012	0.012–0.118		☺	☺	😐						😐	😣						😐	😣
	DCMT3(2.5)2-PF	DCMT11T308-PF	0.458	0.031	0.005–0.016	0.012–0.118		☺	☺	😐						😐	😣						😐	😣
	DCGT2(1.5)0.2-FN2	DCGT070201-FN2	0.305	0.004	0.001–0.002	0.005–0.059														☺				
	DCGT2(1.5)0.5-FN2	DCGT070202-FN2	0.305	0.008	0.002–0.005	0.006–0.079														☺				
	DCGT2(1.5)1-FN2	DCGT070204-FN2	0.305	0.016	0.003–0.010	0.008–0.098														☺				
	DCGT3(2.5)0.2-FN2	DCGT11T301-FN2	0.458	0.004	0.001–0.002	0.005–0.059														☺				
	DCGT3(2.5)0.5-FN2	DCGT11T302-FN2	0.458	0.008	0.002–0.005	0.006–0.079														☺				
	DCGT3(2.5)1-FN2	DCGT11T304-FN2	0.458	0.016	0.003–0.010	0.008–0.098														☺				
	DCGT3(2.5)2-FN2	DCGT11T308-FN2	0.458	0.031	0.004–0.012	0.010–0.118														☺				
	DCGT2(1.5)0.2-FM2	DCGT070201-FM2	0.305	0.004	0.001–0.002	0.004–0.059										😐							😐	
	DCGT2(1.5)0.5-FM2	DCGT070202-FM2	0.305	0.008	0.002–0.005	0.008–0.079								☺	☹	😐					☺	☹	😐	
	DCGT2(1.5)1-FM2	DCGT070204-FM2	0.305	0.016	0.003–0.010	0.008–0.098								☺	☹	😐					☺	☹	😐	
	DCGT3(2.5)0.2-FM2	DCGT11T301-FM2	0.458	0.004	0.001–0.002	0.004–0.059										😐							😐	
	DCGT3(2.5)0.5-FM2	DCGT11T302-FM2	0.458	0.008	0.002–0.005	0.008–0.079								☺	☹	😐					☺	☹	😐	
	DCGT3(2.5)1-FM2	DCGT11T304-FM2	0.458	0.016	0.003–0.010	0.008–0.098								☺	☺	😐					☺	☺	😐	
	DCGT3(2.5)2-FM2	DCGT11T308-FM2	0.458	0.031	0.004–0.012	0.012–0.118								☺	☺	😐					☺	☺	😐	
	DCMT2(1.5)0.5-FP4	DCMT070202-FP4	0.305	0.008	0.002–0.005	0.004–0.039	☺		☺	😐														
	DCMT2(1.5)1-FP4	DCMT070204-FP4	0.305	0.016	0.002–0.006	0.004–0.059	☺		☺	😐														
	DCMT2(1.5)2-FP4	DCMT070208-FP4	0.305	0.031	0.003–0.008	0.004–0.059			☺	😐														
	DCMT3(2.5)0.5-FP4	DCMT11T302-FP4	0.458	0.008	0.002–0.005	0.004–0.039	☺		☺	😐														
	DCMT3(2.5)1-FP4	DCMT11T304-FP4	0.458	0.016	0.002–0.006	0.004–0.059	☺		☺	😐														
	DCMT3(2.5)2-FP4	DCMT11T308-FP4	0.458	0.031	0.003–0.008	0.004–0.059	☺		☺	😐														
	DCMT2(1.5)1-FM6	DCMT070204-FM6	0.305	0.016	0.003–0.010	0.012–0.063										😐	😣						😐	😣
	DCMT3(2.5)1-FM6	DCMT11T304-FM6	0.458	0.016	0.003–0.010	0.012–0.079										😐	😣						😐	😣
	DCMT3(2.5)2-FM6	DCMT11T308-FM6	0.458	0.031	0.005–0.013	0.024–0.079										😐	😣						😐	😣
 Wiper	DCMT3(2.5)1-PM	DCMT11T304-PM	0.458	0.016	0.005–0.016	0.020–0.157			☺	😐						😐		☺	😐				😐	
	DCMT3(2.5)2-PM	DCMT11T308-PM	0.458	0.031	0.006–0.020	0.020–0.157			☺	😐						😐		☺	😐				😐	
	DCGT2(1.5)0.2-MN2	DCGT070201-MN2	0.305	0.004	0.001–0.002	0.020–0.059														☺				
	DCGT2(1.5)0.5-MN2	DCGT070202-MN2	0.305	0.008	0.002–0.005	0.020–0.079								☺						☺	☺			
	DCGT2(1.5)1-MN2	DCGT070204-MN2	0.305	0.016	0.003–0.010	0.024–0.098								☺						☺	☺			
	DCGT3(2.5)0.2-MN2	DCGT11T301-MN2	0.458	0.004	0.001–0.002	0.020–0.059														☺				
	DCGT3(2.5)0.5-MN2	DCGT11T302-MN2	0.458	0.008	0.002–0.005	0.020–0.079								☺						☺	☺			
	DCGT3(2.5)1-MN2	DCGT11T304-MN2	0.458	0.016	0.003–0.010	0.024–0.118								☺						☺	☺			
	DCGT3(2.5)2-MN2	DCGT11T308-MN2	0.458	0.031	0.004–0.012	0.031–0.138								☺						☺	☺			

See the ISO 1832 designation key for dimensions

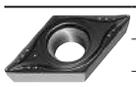
HE = Coated cermet
HC = Coated carbide

☺ 😐 😣 / ★ New addition to the product range

Positive rhombic 55°
DCMT / DCGT
Tiger·tec® Silver

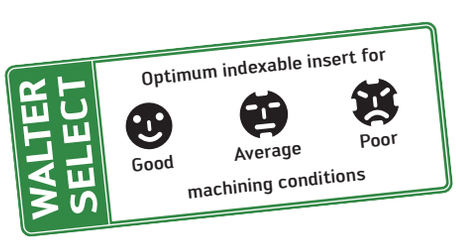


Indexable inserts

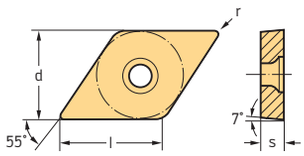
	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP01	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	DCMT2(1.5)1-MM4	DCMT070204-MM4	0.305	0.016	0.003–0.008	0.016–0.079						●	●		●	●	●					●	●	●
	DCMT2(1.5)2-MM4	DCMT070208-MM4	0.305	0.031	0.005–0.010	0.020–0.079						●	●		●	●						●	●	
	DCMT3(2.5)0.5-MM4	DCMT11T302-MM4	0.458	0.008	0.002–0.005	0.004–0.039										●	●						●	●
	DCMT3(2.5)1-MM4	DCMT11T304-MM4	0.458	0.016	0.003–0.010	0.016–0.118						●	●		●	●	●					●	●	●
	DCMT3(2.5)2-MM4	DCMT11T308-MM4	0.458	0.031	0.005–0.013	0.020–0.118						●	●		●	●	●					●	●	●
	DCMT3(2.5)3-MM4	DCMT11T312-MM4	0.458	0.047	0.006–0.014	0.020–0.118										●							●	
	DCGT2(1.5)1-MM4	DCGT070204-MM4	0.305	0.016	0.003–0.008	0.016–0.079								●		●					●		●	
	DCGT11T302-MM4	DCGT11T302-MM4	0.458	0.008	0.002–0.005	0.008–0.079								●		●					●		●	
	DCGT3(2.5)1-MM4	DCGT11T304-MM4	0.458	0.016	0.003–0.010	0.016–0.118								●	●	●					●	●	●	
	DCGT3(2.5)2-MM4	DCGT11T308-MM4	0.458	0.031	0.005–0.013	0.020–0.118								●	●	●					●	●	●	

See the ISO 1832 designation key for dimensions

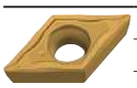
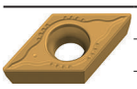
HE = Coated cermet
HC = Coated carbide



Positive rhombic 55°
DCMT Perform



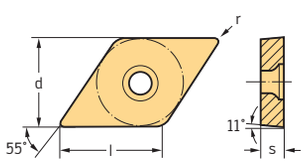
Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM10S	S HC WSM20S	S HC WSM30S
	DCMT070204-FV4	DCMT070204-FV4	0.305	0.016	0.002–0.006	0.004–0.059					☺	☺									
	DCMT11T302-FV4	DCMT11T302-FV4	0.458	0.008	0.002–0.005	0.004–0.039					☺	☺									
	DCMT11T304-FV4	DCMT11T304-FV4	0.458	0.016	0.002–0.006	0.004–0.059					☺	☺									
	DCMT11T308-FV4	DCMT11T308-FV4	0.458	0.031	0.003–0.008	0.004–0.059					☺	☺									
	DCMT11T304-MV4	DCMT11T304-MV4	0.458	0.016	0.004–0.010	0.016–0.118					☺	☺									
	DCMT11T308-MV4	DCMT11T308-MV4	0.458	0.031	0.006–0.013	0.024–0.118					☺	☺									

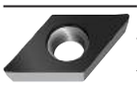
See the ISO 1832 designation key for dimensions

HC = Coated carbide

Positive rhombic 55°
DPMT / DPGT / DPMW
Tiger·tec® Silver



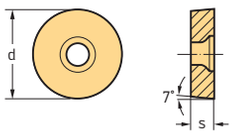
Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	DPMT2(1.5)1-FM4	DPMT070204-FM4	0.305	0.016	0.002–0.006	0.004–0.059				😐	😐			😐						😐	
	DPMT3(2.5)1-FM4	DPMT11T304-FM4	0.458	0.016	0.002–0.006	0.004–0.059				😐	😐			😐						😐	
	DPMT3(2.5)2-FM4	DPMT11T308-FM4	0.458	0.031	0.003–0.008	0.004–0.059				😐	😐			😐						😐	
	DPMT2(1.5)1-FP4	DPMT070204-FP4	0.305	0.016	0.002–0.006	0.004–0.059	☺														
	DPMT3(2.5)1-FP4	DPMT11T304-FP4	0.458	0.016	0.002–0.006	0.004–0.059	☺														
	DPMT3(2.5)2-FP4	DPMT11T308-FP4	0.458	0.031	0.003–0.008	0.004–0.059	☺														
	DPMT2(1.5)1-MM4	DPMT070204-MM4	0.305	0.016	0.003–0.008	0.016–0.079						☺		😐				☺		😐	
	DPMT3(2.5)1-MM4	DPMT11T304-MM4	0.458	0.016	0.003–0.010	0.016–0.118						☺		😐				☺		😐	
	DPMT3(2.5)2-MM4	DPMT11T308-MM4	0.458	0.031	0.005–0.013	0.020–0.118						☺		😐				☺		😐	
	DPMW3(2.5)2-RK6	DPMW11T308-RK6	0.458	0.031	0.006–0.014	0.020–0.157											😐				

See the ISO 1832 designation key for dimensions

HC = Coated carbide

Positive round
RCGT



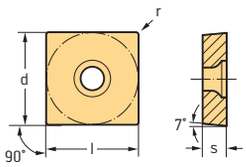
Indexable inserts

	ANSI designation	Designation	d in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM10S	S HC WSM20S	S HC WSM30S
		RCGT0602M0-MN2	0.236	0.004–0.022	0.024–0.098											☻			
		RCGT0803M0-MN2	0.315	0.005–0.024	0.028–0.118											☻			
		RCGT10T3M0-MN2	0.394	0.006–0.028	0.031–0.157											☻			
		RCGT1204M0-MN2	0.472	0.007–0.031	0.039–0.197											☻			
	RCGT43-MN2	RCGT120400-MN2	0.500	0.007–0.031	0.039–0.197											☻			

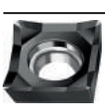
See the ISO 1832 designation key for dimensions

HC = Coated carbide

Positive square
SCGT / SCMT
Tiger·tec® Silver



Indexable inserts

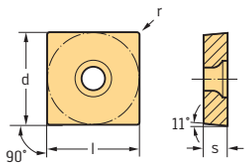
	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	SCGT3(2,5)1-FN2	SCGT09T304-FN2	0.375	0.016	0.003–0.010	0.008–0.098												●				
	SCGT3(2.5)2-FN2	SCGT09T308-FN2	0.375	0.031	0.004–0.012	0.010–0.118												●				
	SCGT432-FN2	SCGT120408-FN2	0.500	0.031	0.004–0.012	0.012–0.118												●				
	SCGT3(2.5)1-FM2	SCGT09T304-FM2	0.375	0.016	0.003–0.010	0.008–0.098								◐						◐		
	SCGT3(2.5)2-FM2	SCGT09T308-FM2	0.375	0.031	0.004–0.012	0.012–0.118								◐						◐		
	SCGT432-FM2	SCGT120408-FM2	0.500	0.031	0.004–0.012	0.012–0.118								◐						◐		
	SCMT2(1.5)1-FM4	SCMT060204-FM4	0.250	0.016	0.002–0.006	0.004–0.059				◐	◐			◐						◐		
	SCMT3(2.5)1-FM4	SCMT09T304-FM4	0.375	0.016	0.002–0.006	0.004–0.059				◐	◐			◐	●					◐	●	
	SCMT3(2.5)2-FM4	SCMT09T308-FM4	0.375	0.031	0.002–0.007	0.004–0.071				◐	◐			◐	●					◐	●	
	SCMT120404-FM4	SCMT120404-FM4	0.500	0.016	0.002–0.006	0.004–0.059								◐	●					◐	●	
	SCMT432-FM4	SCMT120408-FM4	0.500	0.031	0.002–0.007	0.004–0.071								◐	●					◐	●	
	SCMT2(1.5)1-FP4	SCMT060204-FP4	0.250	0.016	0.002–0.006	0.004–0.059	●															
	SCMT3(2.5)1-FP4	SCMT09T304-FP4	0.375	0.016	0.002–0.006	0.004–0.059	●	◐														
	SCMT3(2.5)2-FP4	SCMT09T308-FP4	0.375	0.031	0.002–0.007	0.004–0.071	●	◐														
	SCMT431-FP4	SCMT120404-FP4	0.500	0.016	0.002–0.006	0.004–0.059	●	◐														
	SCMT432-FP4	SCMT120408-FP4	0.500	0.031	0.002–0.007	0.004–0.071	●	◐														
	SCMT433-FP4	SCMT120412-FP4	0.500	0.047	0.005–0.013	0.012–0.071	●	◐														
	SCMT3(2.5)1-FM6	SCMT09T304-FM6	0.375	0.016	0.003–0.010	0.012–0.079									●							●
	SCMT3(2.5)2-FM6	SCMT09T308-FM6	0.375	0.031	0.005–0.012	0.020–0.079								◐	●						◐	●
	SCMT432-FM6	SCMT120408-FM6	0.500	0.031	0.005–0.013	0.020–0.098								◐	●						◐	●
	SCGT3(2.5)1-MN2	SCGT09T304-MN2	0.375	0.016	0.003–0.010	0.024–0.157						●						●	●			
	SCGT3(2.5)2-MN2	SCGT09T308-MN2	0.375	0.031	0.004–0.014	0.028–0.157						●						●	●			
	SCGT432-MN2	SCGT120408-MN2	0.500	0.031	0.004–0.016	0.031–0.236												●				
	SCMT3(2.5)1-NM4	SCMT09T304-MM4	0.375	0.016	0.003–0.010	0.016–0.118				◐	◐											
	SCMT3(2.5)1-MM4	SCMT09T304-MM4	0.375	0.016	0.003–0.010	0.016–0.118							●	◐	●					●	◐	●
	SCMT3(2.5)2-MM4	SCMT09T308-MM4	0.375	0.031	0.005–0.013	0.020–0.118				◐	◐		●	◐	●					●	◐	●
	SCMT432-MM4	SCMT120408-MM4	0.500	0.031	0.005–0.013	0.020–0.138				◐	◐			◐							◐	
	SCGT3(2.5)1-MM4	SCGT09T304-MM4	0.375	0.016	0.003–0.010	0.016–0.118								◐							◐	
	SCGT3(2.5)1-MM4	SCGT09T304-MM4	0.375	0.016	0.003–0.010	0.016–0.118						●							●			
	SCGT3(2.5)2-MM4	SCGT09T308-MM4	0.375	0.031	0.005–0.013	0.020–0.118						●		◐					●		◐	
	SCGT432-MM4	SCGT120408-MM4	0.500	0.031	0.005–0.013	0.020–0.138						●		◐					●		◐	

See the ISO 1832 designation key for dimensions

HC = Coated carbide

Positive square
SPMT / SPGT / SPMW

Tiger·tec® Silver

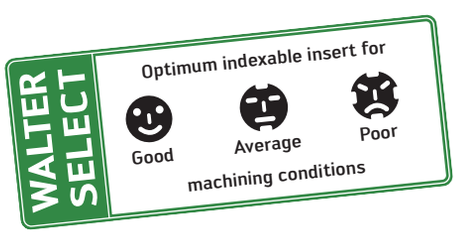


Indexable inserts

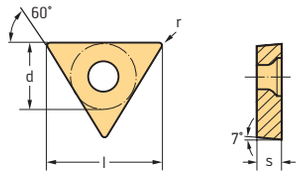
ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
SPMT432-FP4	SPMT120408-FP4	0.500	0.031	0.002–0.007	0.004–0.071	☺														
SPMT3(2.5)1-MM4	SPMT09T304-MM4	0.375	0.016	0.003–0.010	0.016–0.118								😐						😐	
SPMT3(2.5)2-MM4	SPMT09T308-MM4	0.375	0.031	0.005–0.013	0.020–0.118								😐						😐	
SPGT3(2.5)1-MM4	SPGT09T304-MM4	0.375	0.016	0.003–0.010	0.016–0.118								😐						😐	
SPGT3(2.5)2-MM4	SPGT09T308-MM4	0.375	0.031	0.005–0.013	0.020–0.118								😐						😐	
SPMT3(2.5)1-MP4	SPMT09T304-MP4	0.375	0.016	0.003–0.010	0.016–0.118		😐													
SPMT3(2.5)2-MP4	SPMT09T308-MP4	0.375	0.031	0.005–0.013	0.020–0.118		😐													
SPGT3(2.5)1-MP4	SPGT09T304-MP4	0.375	0.016	0.003–0.010	0.016–0.118	☺	😐													
SPGT3(2.5)1-MP4	SPGT09T304-MP4	0.375	0.016	0.003–0.010	0.016–0.118	☺	😐													
SPMT3(2.5)1-MK4	SPMT09T304-MK4	0.375	0.016	0.003–0.010	0.016–0.118											😐				
SPMT3(2.5)2-MK4	SPMT09T308-MK4	0.375	0.031	0.005–0.013	0.020–0.118											😐				
SPGT3(2.5)1-MK4	SPGT09T304-MK4	0.375	0.016	0.003–0.010	0.016–0.118											😐				
SPGT3(2.5)2-MK4	SPGT09T308-MK4	0.375	0.031	0.005–0.013	0.020–0.118											😐				
SPMW3(2.5)1-RK6	SPMW09T304-RK6	0.375	0.016	0.005–0.010	0.016–0.118											😐				
SPMW3(2.5)2-RK6	SPMW09T308-RK6	0.375	0.031	0.006–0.014	0.024–0.157						☺					😐	☺			
SPMW432-RK6	SPMW120408-RK6	0.500	0.031	0.006–0.016	0.024–0.197											😐				

See the ISO 1832 designation key for dimensions

HC = Coated carbide



Positive triangular 60°
TCGT / TCMT
Tiger·tec® Silver



Indexable inserts

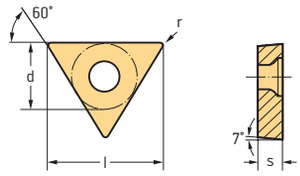
	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM21	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	TCGT1.2(1.2)0.2-FN2	TCGT06T101-FN2	0.261	0.004	0.001–0.002	0.005–0.059														●				
	TCGT1.2(1.2)0.5-FN2	TCGT06T102-FN2	0.261	0.008	0.002–0.005	0.006–0.079														●				
	TCGT1.2(1.2)1-FN2	TCGT06T104-FN2	0.261	0.016	0.003–0.010	0.008–0.098														●				
	TCGT1.8(1.5)0.5-FN2	TCGT090202-FN2	0.369	0.008	0.002–0.005	0.006–0.079														●				
	TCGT1.8(1.5)1-FN2	TCGT090204-FN2	0.369	0.016	0.003–0.010	0.008–0.098														●				
	TCGT2(1.5)0.5-FN2	TCGT110202-FN2	0.423	0.008	0.002–0.005	0.006–0.079														●				
	TCGT2(1.5)1-FN2	TCGT110204-FN2	0.423	0.016	0.003–0.010	0.008–0.098														●				
	TCGT3(2.5)1-FN2	TCGT16T304-FN2	0.650	0.016	0.003–0.010	0.008–0.098														●				
	TCGT3(2.5)2-FN2	TCGT16T308-FN2	0.650	0.031	0.004–0.012	0.010–0.118														●				
	TCGT1.2(1.2)0.2-FM2	TCGT06T101-FM2	0.261	0.004	0.001–0.002	0.004–0.059										✖								
	TCGT1.2(1.2)0.5-FM2	TCGT06T102-FM2	0.261	0.008	0.002–0.005	0.008–0.079										✖								
	TCGT1.2(1.2)1-FM2	TCGT06T104-FM2	0.261	0.016	0.003–0.010	0.008–0.098							●			✖					●			
	TCGT1.8(1.5)0.5-FM2	TCGT090202-FM2	0.369	0.008	0.002–0.005	0.008–0.079									◐								◐	
	TCGT1.8(1.5)1-FM2	TCGT090204-FM2	0.369	0.016	0.003–0.010	0.008–0.098									◐								◐	
	TCGT2(1.5)0.2-FM2	TCGT110201-FM2	0.423	0.004	0.001–0.002	0.004–0.059									◐								◐	
	TCGT2(1.5)0.5-FM2	TCGT110202-FM2	0.423	0.008	0.002–0.005	0.008–0.079							●		◐						●		◐	
	TCGT2(1.5)1-FM2	TCGT110204-FM2	0.423	0.016	0.003–0.010	0.008–0.098							●		◐						●		◐	
	TCGT3(2.5)0.5-FM2	TCGT16T302-FM2	0.650	0.008	0.002–0.005	0.008–0.079									◐								◐	
	TCGT3(2.5)1-FM2	TCGT16T304-FM2	0.650	0.016	0.003–0.010	0.008–0.098							●		◐						●		◐	
	TCGT3(2.5)2-FM2	TCGT16T308-FM2	0.650	0.031	0.004–0.012	0.012–0.118							●		◐						●		◐	
	TCMT1.2(1.2)0.5-FM4	TCMT06T102-FM4	0.261	0.008	0.001–0.004	0.004–0.039										✖								
	TCMT1.2(1.2)01-FM4	TCMT06T104-FM4	0.261	0.016	0.002–0.007	0.004–0.039										✖								
	TCMT1.8(1.5)0.5-FM4	TCMT090202-FM4	0.369	0.008	0.002–0.005	0.004–0.039								●	◐		✖					●	◐	✖
	TCMT1.8(1.5)1-FM4	TCMT090204-FM4	0.369	0.016	0.002–0.006	0.004–0.059								●	◐		✖					●	◐	✖
	TCMT1.8(1.5)2-FM4	TCMT090208-FM4	0.369	0.031	0.003–0.008	0.004–0.059								●	◐							●	◐	
	TCMT2(1.5)0.5-FM4	TCMT110202-FM4	0.423	0.008	0.002–0.005	0.004–0.039								●	◐		✖					●	◐	✖
	TCMT2(1.5)1-FM4	TCMT110204-FM4	0.423	0.016	0.002–0.006	0.004–0.059					◐	◐		●	◐		✖					●	◐	✖
	TCMT2(1.5)2-FM4	TCMT110208-FM4	0.423	0.031	0.003–0.008	0.004–0.059								●	◐		✖					●	◐	✖
	TCMT3(2.5)0.5-FM4	TCMT16T302-FM4	0.650	0.008	0.002–0.005	0.004–0.039								●	◐		✖					●	◐	✖
	TCMT3(2.5)1-FM4	TCMT16T304-FM4	0.650	0.016	0.002–0.006	0.004–0.059					◐	◐		●	◐		✖					●	◐	✖
	TCMT3(2.5)2-FM4	TCMT16T308-FM4	0.650	0.031	0.003–0.008	0.004–0.059					◐	◐		●	◐		✖					●	◐	✖

See the ISO 1832 designation key for dimensions

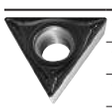
HE = Coated cermet
HC = Coated carbide

Positive triangular 60°
TCGT / TCMT

Tiger·tec® Silver

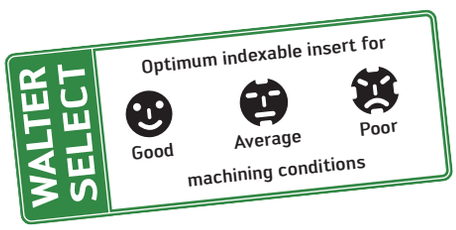


Indexable inserts

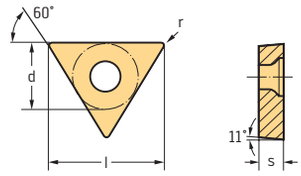
	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM21	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	TCMT1.2(1.2)0.5-FP4	TCMT06T102-FP4	0.261	0.008	0.001–0.004	0.004–0.039			☺															
	TCMT1.2(1.2)1-FP4	TCMT06T104-FP4	0.261	0.016	0.002–0.007	0.004–0.039	☺		☺															
	TCMT1.8(1.5)0.5-FP4	TCMT090202-FP4	0.369	0.008	0.002–0.005	0.004–0.039			☺															
	TCMT1.8(1.5)1-FP4	TCMT090204-FP4	0.369	0.016	0.002–0.006	0.004–0.059	☺	☺	☺															
	TCMT1.8(1.5)2-FP4	TCMT090208-FP4	0.369	0.031	0.003–0.008	0.004–0.059			☺															
	TCMT2(1.5)0.5-FP4	TCMT110202-FP4	0.423	0.008	0.002–0.005	0.004–0.039		☺	☺															
	TCMT2(1.5)1-FP4	TCMT110204-FP4	0.423	0.016	0.002–0.006	0.004–0.059	☺	☺	☺															
	TCMT2(1.5)2-FP4	TCMT110208-FP4	0.423	0.031	0.003–0.008	0.004–0.059		☺	☺															
	TCMT3(2.5)0.5-FP4	TCMT16T302-FP4	0.650	0.008	0.002–0.005	0.004–0.039			☺															
	TCMT3(2.5)1-FP4	TCMT16T304-FP4	0.650	0.016	0.002–0.006	0.004–0.059		☺	☺															
	TCMT3(2.5)2-FP4	TCMT16T308-FP4	0.650	0.031	0.003–0.008	0.004–0.059	☺	☺	☺															
	TCMT2(1.5)1-FM6	TCMT110204-FM6	0.423	0.016	0.003–0.010	0.012–0.063									☺		☹						☺	☹
	TCMT2(1.5)2-FM6	TCMT110208-FM6	0.423	0.031	0.005–0.012	0.020–0.063									☺		☹						☺	☹
	TCMT3(2.5)1-FM6	TCMT16T304-FM6	0.650	0.016	0.003–0.010	0.012–0.079									☺		☹						☺	☹
	TCMT3(2.5)2-FM6	TCMT16T308-FM6	0.650	0.031	0.005–0.013	0.020–0.098									☺								☺	
	TCGT2(1.5)0.2-MN2	TCGT110201-MN2	0.423	0.004	0.001–0.002	0.020–0.059														☺				
	TCGT2(1.5)0.5-MN2	TCGT110202-MN2	0.423	0.008	0.002–0.005	0.024–0.079														☺				
	TCGT2(1.5)1-MN2	TCGT110204-MN2	0.423	0.016	0.003–0.010	0.024–0.118							☺							☺	☺			
	TCGT3(2.5)0.5-MN2	TCGT16T302-MN2	0.650	0.008	0.002–0.005	0.020–0.079														☺				
	TCGT3(2.5)1-MN2	TCGT16T304-MN2	0.650	0.016	0.003–0.010	0.024–0.157							☺							☺	☺			
	TCGT3(2.5)2-MN2	TCGT16T308-MN2	0.650	0.031	0.004–0.014	0.031–0.157							☺							☺	☺			
	TCGT1.8(1.5)1-MM4	TCGT090204-MM4	0.369	0.016	0.003–0.008	0.016–0.079									☺								☺	
	TCGT2(1.5)1-MM4	TCGT110204-MM4	0.423	0.016	0.003–0.008	0.016–0.079							☺		☺						☺		☺	
	TCGT2(1.5)2-MM4	TCGT110208-MM4	0.423	0.031	0.005–0.012	0.020–0.079							☺		☺						☺		☺	
	TCGT3(2.5)1-MM4	TCGT16T304-MM4	0.650	0.016	0.003–0.010	0.016–0.118									☺								☺	
	TCGT3(2.5)2-MM4	TCGT16T308-MM4	0.650	0.031	0.005–0.013	0.020–0.118									☺								☺	
	TCMT1.8(1.5)1-MP4	TCMT090204-MP4	0.369	0.016	0.003–0.008	0.016–0.079		☺	☺															
	TCMT1.8(1.5)2-MP4	TCMT090208-MP4	0.369	0.031	0.005–0.010	0.020–0.079		☺	☺															
	TCMT2(1.5)1-MP4	TCMT110204-MP4	0.423	0.016	0.003–0.008	0.016–0.079		☺	☺															
	TCMT2(1.5)2-MP4	TCMT110208-MP4	0.423	0.031	0.005–0.012	0.020–0.079		☺	☺															
	TCMT3(2.5)1-MP4	TCMT16T304-MP4	0.650	0.016	0.003–0.010	0.016–0.118		☺	☺															
	TCMT3(2.5)2-MP4	TCMT16T308-MP4	0.650	0.031	0.005–0.013	0.020–0.118		☺	☺															
	TCMT432-MP4	TCMT220408-MP4	0.866	0.031	0.005–0.013	0.020–0.138			☺															

See the ISO 1832 designation key for dimensions

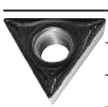
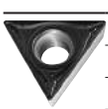
HE = Coated cermet
HC = Coated carbide



Positive triangular 60°
TPMT / TPGT / TPMW / TPMR / TPGN
Tiger·tec® Silver



Indexable inserts

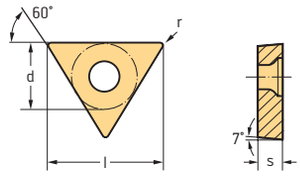
	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S	HW WS10
	TPMT2(1.5)1-FM4	TPMT110204-FM4	0.433	0.016	0.002–0.006	0.004–0.059				😐	😐			😐					😐		
	TPMT3(2.5)1-FM4	TPMT16T304-FM4	0.650	0.016	0.002–0.006	0.004–0.059				😐	😐			😐					😐		
	TPMT2(1.5)1-FP4	TPMT110204-FP4	0.433	0.016	0.002–0.006	0.004–0.059	🙂															
	TPMT3(2.5)1-FP4	TPMT16T304-FP4	0.650	0.016	0.002–0.006	0.004–0.059	🙂															
	TPGT2(1.5)1-MM4	TPGT110204-MM4	0.433	0.016	0.003–0.008	0.016–0.079						🙂		😐				🙂		😐		
	TPGT2(1.5)2-MM4	TPGT110208-MM4	0.433	0.031	0.005–0.012	0.020–0.079						🙂		😐				🙂		😐		
	TPGT3(2.5)1-MM4	TPGT16T304-MM4	0.650	0.016	0.003–0.010	0.016–0.118						🙂		😐				🙂		😐		
	TPGT3(2.5)2-MM4	TPGT16T308-MM4	0.650	0.031	0.005–0.013	0.020–0.118						🙂		😐				🙂		😐		
	TPMT1.8(1.5)1-MP4	TPMT090204-MP4	0.390	0.016	0.003–0.008	0.016–0.079		😐														
	TPMT2(1.5)1-MP4	TPMT110204-MP4	0.433	0.016	0.003–0.008	0.016–0.079		😐														
	TPMT2(1.5)2-MP4	TPMT110208-MP4	0.433	0.031	0.005–0.012	0.020–0.079		😐														
	TPMT3(2.5)1-MP4	TPMT16T304-MP4	0.650	0.016	0.003–0.010	0.016–0.118		😐														
	TPMT3(2.5)2-MP4	TPMT16T308-MP4	0.650	0.031	0.005–0.013	0.020–0.118		😐														
	TPMT432-MP4	TPMT220408-MP4	0.866	0.031	0.006-0.013	0.020-0.137		😐														
	TPMT1.8(1.5)1-MK4	TPMT090204-MK4	0.390	0.016	0.003–0.008	0.016–0.079											😐					
	TPMT1.8(1.5)2-MK4	TPMT090208-MK4	0.390	0.031	0.005–0.008	0.020–0.079											😐					
	TPMT2(1.5)1-MK4	TPMT110204-MK4	0.433	0.016	0.003–0.008	0.016–0.079											😐					
	TPMT2(1.5)2-MK4	TPMT110208-MK4	0.433	0.031	0.005–0.012	0.020–0.079											😐					
	TPMT3(2.5)1-MK4	TPMT16T304-MK4	0.650	0.016	0.003–0.010	0.016–0.118											😐					
	TPMT3(2.5)2-MK4	TPMT16T308-MK4	0.650	0.031	0.005–0.013	0.020–0.118											😐					
	TPMW2(1.5)1-RK6	TPMW110204-RK6	0.433	0.016	0.005–0.010	0.016–0.098											😐					
	TPMW2(1.5)2-RK6	TPMW110208-RK6	0.433	0.031	0.006–0.012	0.024–0.118											😐					
	TPMW3(2.5)1-RK6	TPMW16T304-RK6	0.650	0.016	0.005–0.010	0.016–0.118											😐					
	TPMW3(2.5)2-RK6	TPMW16T308-RK6	0.650	0.031	0.006–0.014	0.024–0.157											😐					
	TPMR222	TPMR110308	0.433	0.031	0.006–0.012	0.024–0.118											😐					
	TPMR2.5(2)2	TPMR130308	0.541	0.031	0.006-0.012	0.024-0.118		😐														
	TPMR321	TPMR160304	0.650	0.016	0.005–0.010	0.016–0.118		😐														
	TPMR322	TPMR160308	0.650	0.031	0.006–0.012	0.024–0.157		😐														
	TPGN1.8(1.5)1	TPGN090204	0.379	0.016	0.004–0.007	0.016–0.079											😐					
	TPGN1.8(1.5)2	TPGN090208	0.379	0.031	0.005–0.008	0.031–0.079											😐					
	TPGN222	TPGN110308	0.433	0.031	0.005–0.008	0.031–0.079								😐			😐			😐		
	TPGN3(2.5)1	TPGN160304	0.650	0.016	0.004–0.010	0.016–0.118		😐	😵					😐			😐			😐		😐
	TPGN3(2.5)2	TPGN160308	0.650	0.031	0.005–0.016	0.031–0.118		😐	😵					😐			😐			😐		😐
	TPGN431	TPGN220404	0.866	0.016	0.004–0.010	0.016–0.157		😐									😐					
	TPGN432	TPGN220408	0.866	0.031	0.005–0.012	0.031–0.157		😐									😐					

See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

😐😵 / ★ New addition to the product range

Positive triangular 60°
TCMT Perform

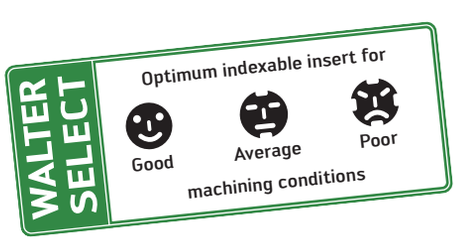


Indexable inserts

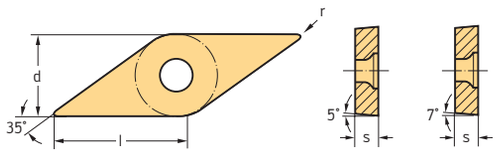
	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM10S	S HC WSM20S	S HC WSM30S
	TCMT110204-MV4	TCMT110204-MV4	0.433	0.031	0.004–0.010	0.016–0.079					☺	☹									
	TCMT16T304-MV4	TCMT16T304-MV4	0.650	0.016	0.004–0.010	0.016–0.118					☺	☹									
	TCMT16T308-MV4	TCMT16T308-MV4	0.650	0.031	0.005–0.013	0.020–0.118					☺	☹									

See the ISO 1832 designation key for dimensions

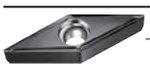
HC = Coated carbide



Positive rhombic 35°
VCGT / VCMT / VBMT
Tiger·tec® Silver



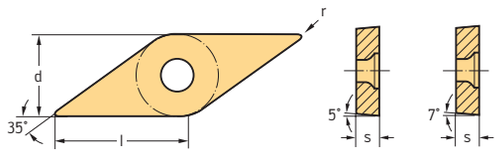
Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	VCGT2(2)0.2-FN2	VCGT110301-FN2	0.436	0.004	0.001–0.002	0.005–0.059													●				
	VCGT2(2)0.5-FN2	VCGT110302-FN2	0.436	0.008	0.002–0.005	0.006–0.079													●				
	VCGT221-FN2	VCGT110304-FN2	0.436	0.016	0.003–0.010	0.008–0.098													●				
	VCGT3(3)0.5-FN2	VCGT160402-FN2	0.654	0.008	0.002–0.005	0.006–0.079													●				
	VCGT331-FN2	VCGT160404-FN2	0.654	0.016	0.003–0.010	0.008–0.098													●				
	VCGT332-FN2	VCGT160408-FN2	0.654	0.031	0.004–0.012	0.010–0.118													●				
	VCGT2(2)0.2-FM2	VCGT110301-FM2	0.436	0.004	0.001–0.002	0.004–0.059									●							●	
	VCGT2(2)0.5-FM2	VCGT110302-FM2	0.436	0.008	0.002–0.005	0.008–0.079							●		●					●		●	
	VCGT221-FM2	VCGT110304-FM2	0.436	0.016	0.003–0.010	0.008–0.098							●	●	●					●	●	●	
	VCGT3(3)0.5-FM2	VCGT160402-FM2	0.654	0.008	0.002–0.005	0.008–0.079							●		●					●		●	
	VCGT331-FM2	VCGT160404-FM2	0.654	0.016	0.003–0.010	0.008–0.098							●	●	●					●	●	●	
	VCGT332-FM2	VCGT160408-FM2	0.654	0.031	0.004–0.012	0.012–0.118								●	●						●	●	
	VCMT2(2)0.5-FP4	VCMT110302-FP4	0.436	0.008	0.002–0.005	0.004–0.039	●	●	●														
	VCMT221-FP4	VCMT110304-FP4	0.436	0.016	0.002–0.006	0.004–0.059	●	●	●														
	VCMT3(3)0.5-FP4	VCMT160402-FP4	0.654	0.008	0.002–0.005	0.004–0.039	●	●	●														
	VCMT331-FP4	VCMT160404-FP4	0.654	0.016	0.002–0.006	0.004–0.059	●	●	●														
	VCMT332-FP4	VCMT160408-FP4	0.654	0.031	0.003–0.008	0.004–0.059	●	●	●														
	VBMT221-FM6	VBMT110304-FM6	0.436	0.016	0.003–0.008	0.012–0.063								●	●	●					●	●	●
	VBMT222-FM6	VBMT110308-FM6	0.436	0.031	0.005–0.012	0.020–0.063								●	●	●					●	●	●
	VBMT331-FM6	VBMT160404-FM6	0.654	0.016	0.003–0.010	0.012–0.079								●	●	●					●	●	●
	VBMT332-FM6	VBMT160408-FM6	0.654	0.031	0.005–0.012	0.024–0.098								●	●	●					●	●	●
	VBMT333-FM6	VBMT160412-FM6	0.654	0.047	0.006–0.012	0.039–0.098								●	●	●					●	●	●
	VCGT2(2)0.2-MN2	VCGT110301-MN2	0.436	0.004	0.001–0.002	0.020–0.059													●				
	VCGT2(2)0.5-MN2	VCGT110302-MN2	0.436	0.008	0.002–0.005	0.020–0.079													●				
	VCGT221-MN2	VCGT110304-MN2	0.436	0.016	0.003–0.010	0.024–0.098													●				
	VCGT222-MN2	VCGT110308-MN2	0.436	0.031	0.004–0.014	0.031–0.118													●				
	VCGT2.5(2)0.2-MN2	VCGT130301-MN2	0.516	0.004	0.001–0.002	0.020–0.059													●				
	VCGT2.5(2)0.5-MN2	VCGT130302-MN2	0.516	0.008	0.002–0.005	0.020–0.079													●				
	VCGT2.5(2)1-MN2	VCGT130304-MN2	0.516	0.016	0.003–0.010	0.024–0.118													●				
	VCGT331-MN2	VCGT160404-MN2	0.654	0.016	0.003–0.010	0.024–0.138							●						●	●			
	VCGT332-MN2	VCGT160408-MN2	0.654	0.031	0.004–0.014	0.031–0.138							●						●	●			
	VCGT333-MN2	VCGT160412-MN2	0.654	0.047	0.004–0.018	0.039–0.138													●				
	VBMT221-MM4	VBMT110304-MM4	0.436	0.016	0.003–0.008	0.016–0.059					●	●		●	●						●	●	
	VBMT222-MM4	VBMT110308-MM4	0.436	0.031	0.005–0.010	0.020–0.059								●	●						●	●	
	VBMT331-MM4	VBMT160404-MM4	0.654	0.016	0.003–0.008	0.016–0.079					●	●		●	●	●					●	●	●
	VBMT332-MM4	VBMT160408-MM4	0.654	0.031	0.005–0.012	0.020–0.079					●	●		●	●	●					●	●	●
	VBMT333-MM4	VBMT160412-MM4	0.654	0.047	0.005–0.013	0.020–0.079								●	●						●	●	

See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

Positive rhombic 35°
VCGT / VCMT / VBMT
Tiger·tec® Silver



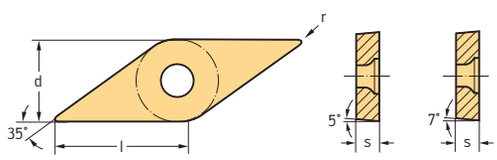
Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	VCGT2(2)0.5-MM4	VCGT110302-MM4	0.436	0.008	0.002–0.005	0.008–0.059							☺		😐					☺		😐	
	VCGT221-MM4	VCGT110304-MM4	0.436	0.016	0.003–0.008	0.016–0.059							☺		😐					☺		😐	
	VCGT3(3)0.5-MM4	VCGT160402-MM4	0.654	0.008	0.002–0.005	0.008–0.079							☺		😐					☺		😐	
	VCGT331-MM4	VCGT160404-MM4	0.654	0.016	0.003–0.008	0.016–0.079							☺		😐					☺		😐	
	VCGT332-MM4	VCGT160408-MM4	0.654	0.031	0.005–0.012	0.020–0.079							☺		😐					☺		😐	
	VBMT221-MK4	VBMT110304-MK4	0.436	0.016	0.003–0.008	0.016–0.059											☺	😐					
	VBMT222-MK4	VBMT110308-MK4	0.436	0.031	0.005–0.010	0.020–0.059											☺	😐					
	VBMT331-MK4	VBMT160404-MK4	0.654	0.016	0.003–0.008	0.016–0.079											☺	😐					
	VBMT332-MK4	VBMT160408-MK4	0.654	0.031	0.005–0.012	0.020–0.079											☺	😐					
	VBMT333-MK4	VBMT160412-MK4	0.654	0.047	0.005–0.013	0.020–0.079											☺	😐					

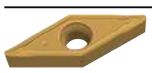
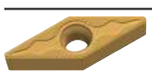
See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

Positive rhombic 35°
VCMT Perform / VBMT Perform

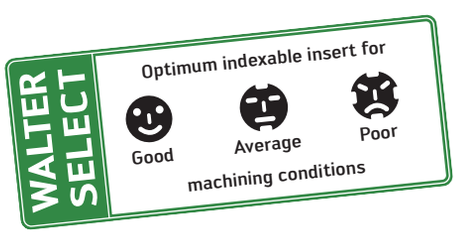


Indexable inserts

	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	P HC WPV10	P HC WPV20	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	S HC WSM10S	S HC WSM20S	S HC WSM30S
	VCMT221-FV4	VCMT110304-FV4	0.436	0.016	0.002–0.006	0.004–0.059					☺	😐									
	VCMT331-FV4	VCMT160404-FV4	0.654	0.016	0.002–0.006	0.004–0.059					☺	😐									
	VCMT332-FV4	VCMT160408-FV4	0.654	0.031	0.003–0.008	0.004–0.059					☺	😐									
	VBMT331-MV4	VBMT160404-MV4	0.654	0.016	0.004–0.010	0.016–0.079					☺	😐									
	VBMT332-MV4	VBMT160408-MV4	0.654	0.031	0.006–0.012	0.020–0.079					☺	😐									

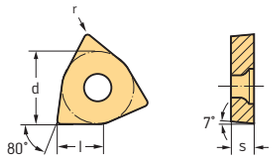
See the ISO 1832 designation key for dimensions

HC = Coated carbide

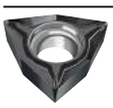
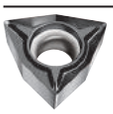
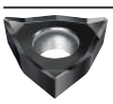


Positive Trigon 80°
WCGT

Tiger·tec®



Indexable inserts

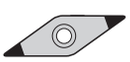
	ANSI designation	Designation	l in	r in	f in	a_p in	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM21	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM10S	S HC WSM20S	S HC WSM30S
	WCGT020102-FN2	WCGT020102-FN2	0.106	0.008	0.002–0.005	0.008–0.059												☻			
	WCGT020104-FN2	WCGT020104-FN2	0.106	0.016	0.003–0.079	0.008–0.059												☻			
	WCGT1.8(1.5)0.5-FN2	WCGT030202-FN2	0.154	0.008	0.002–0.005	0.006–0.079												☻			
	WCGT1.8(1.5)1-FN2	WCGT030204-FN2	0.154	0.016	0.003–0.010	0.008–0.098												☻			
	WCGT2(1.5)0.5-FN2	WCGT040202-FN2	0.171	0.008	0.002–0.005	0.006–0.079												☻			
	WCGT2(1.5)1-FN2	WCGT040204-FN2	0.171	0.016	0.003–0.010	0.008–0.098												☻			
	WCGT3(2.5)1-FN2	WCGT06T304-FN2	0.257	0.016	0.003–0.010	0.008–0.098												☻			
	WCGT3(2.5)2-FN2	WCGT06T308-FN2	0.257	0.031	0.004–0.012	0.010–0.118												☻			
	WCGT1.8(1.5)0.5-FM2	WCGT030202-FM2	0.154	0.008	0.002–0.005	0.008–0.079								☻							
	WCGT1.8(1.5)1-FM2	WCGT030204-FM2	0.154	0.016	0.003–0.010	0.008–0.098								☻							
	WCGT2(1.5)0.5-FM2	WCGT040202-FM2	0.171	0.008	0.002–0.005	0.008–0.079								☻							
	WCGT2(1.5)1-FM2	WCGT040204-FM2	0.171	0.016	0.003–0.010	0.008–0.098								☻							
	WCGT1.8(1.5)0.5-MN2	WCGT030202-MN2	0.154	0.008	0.002–0.005	0.020–0.059												☻			
	WCGT1.8(1.5)1-MN2	WCGT030204-MN2	0.154	0.016	0.003–0.008	0.024–0.059												☻			
	WCGT2(1.5)1-MN2	WCGT040204-MN2	0.171	0.016	0.003–0.010	0.024–0.098												☻			
	WCGT3(2.5)0.5-MN2	WCGT06T302-MN2	0.257	0.008	0.002–0.005	0.024–0.079												☻			
	WCGT3(2.5)1-MN2	WCGT06T304-MN2	0.257	0.016	0.003–0.010	0.024–0.118												☻			
	WCGT431-MN2	WCGT080404-MN2	0.342	0.016	0.003–0.010	0.024–0.157												☻			
	WCGT432-MN2	WCGT080408-MN2	0.342	0.031	0.004–0.014	0.031–0.157												☻			

See the ISO 1832 designation key for dimensions

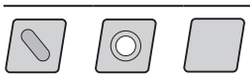
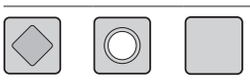
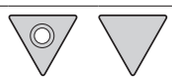
HC = Coated carbide

Product range overview of indexable inserts and cutting tool materials: ISO turning – CBN/PCD/ceramic

CBN indexable inserts

Insert shape		Description	Page
	C	Negative basic shape	48
		Positive basic shape 7°	52
	D	Negative basic shape	49
		Positive basic shape 7°	53
	S	Negative basic shape	50
	T	Negative basic shape	50
	V	Negative basic shape	51
		Positive basic shape 5°	54
		Positive basic shape 7°	54
	W	Negative basic shape	51

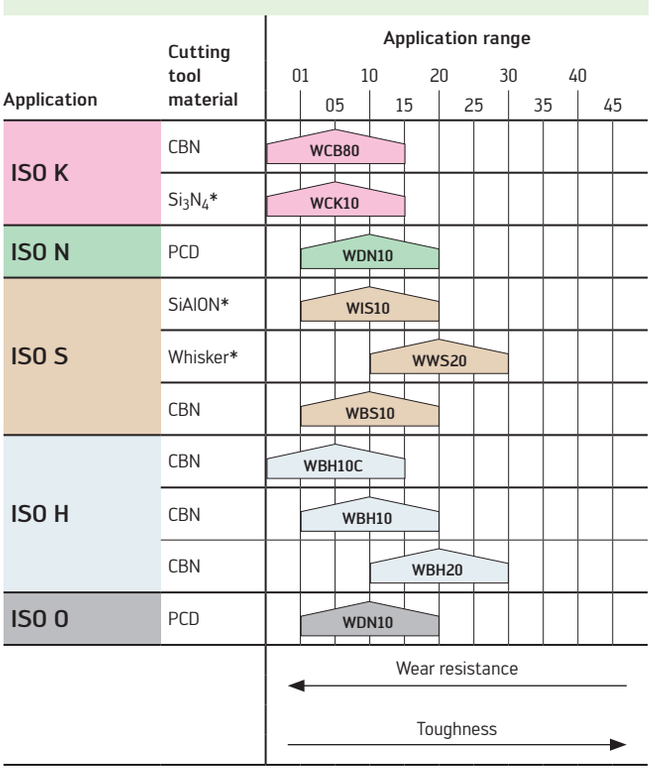
Ceramic indexable inserts

Insert shape		Description	Page
	C	Negative basic shape	57
	D	Negative basic shape	58
	S	Negative basic shape	58
	T	Negative basic shape	59
	W	Negative basic shape	59

PCD indexable inserts

Insert shape		Description	Page
	C	Positive basic shape 11°	55
	D	Positive basic shape 11°	55
	S	Positive basic shape 11°	56
	T	Positive basic shape 11°	56

Cutting tool materials: CBN, PCD, ceramic



* Ceramic

Designation key for CBN / cermet / ceramic / PCD cutting tool materials – Turning

Example:

W	B	H	10	C
Walter	1	2	3	4

1 – Cutting tool material

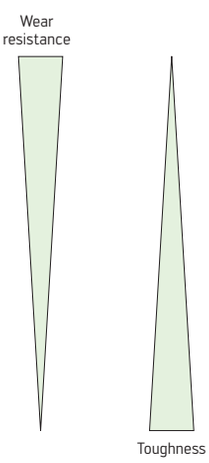
B	CBN
C	Si_3N_4 ceramic
D	Diamond
E	Cermet
I	SiAlON ceramic
W	Whisker-reinforced ceramic

2 – Primary application

P	Steel
M	Stainless steel
K	Cast iron
N	NF metals
S	Materials with difficult cutting properties
H	Hard materials

3 – ISO application range

01
05
10
20
21
23
30
32
33
43



4 – Coating

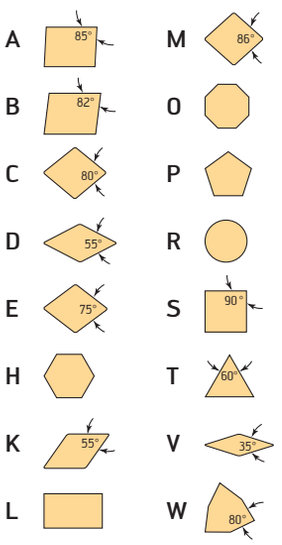
C	Coated

Designation key in accordance with ANSI / ISO 1832 for indexable inserts for turning – INCH

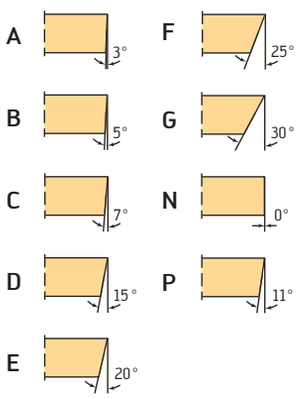
Example: Ceramic indexable inserts

C	N	G	N	4	3	2	T	010	20
1	2	3	4	5	6	7	8	11	12

1 Insert shape

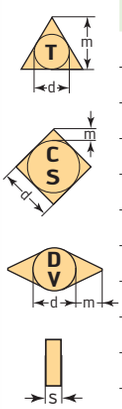


2 Clearance angle



3 Tolerances

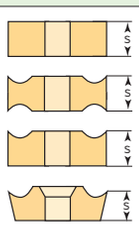
Permissible deviation in inch for



	d	m	s
A	± 0.0010	± 0.0002	± 0.0010
C	± 0.0010	± 0.0005	± 0.0010
E	± 0.0010	± 0.0010	± 0.0010
F	± 0.0005	± 0.0002	± 0.0010
G	± 0.0010	± 0.0010	± 0.0051
H	± 0.0005	± 0.0005	± 0.0010
J[1]	± 0.002–0.006[2]	± 0.0002	± 0.0010
K[1]	± 0.002–0.006[2]	± 0.0005	± 0.0010
L[1]	± 0.002–0.006[2]	± 0.0005	± 0.0010
M	± 0.002–0.006[2]	± 0.003–0.008[2]	± 0.0005
N	± 0.002–0.006[2]	± 0.003–0.008[2]	± 0.0010
U	± 0.003–0.010[2]	± 0.005–0.015[2]	± 0.002-0.005

[1] Inserts with ground planar cutting edges
[2] Depending on the insert size (see ISO standard 1832)

6 Insert thickness s = inch



symbol		thickness	
inch	mm	inch	mm
.5 (1)	—	1/32	0.79
.6	T0	0.40	1.00
1 (2)	01	1/16	1.59
1.2	T1	5/64	1.98
1.5 (3)	02	3/32	2.38
2	03	1/8	3.18
2.5	T3	5/32	3.97
3	04	3/16	4.76
3.5	05	7/32	5.56
4	06	1/4	6.35
5	07	5/16	7.94
6	09	3/8	9.52
7	11	7/16	11.11
8	12	1/2	12.70

Note: Inch sizes in parentheses for "alternate symbols" (under 1/4 inch IC)

7 Corner radius

inch	mm	inch	mm
0	01	.004	0.1
.5	02	.008	0.2
1	04	.015	0.4
2	08	.031	0.8
3	12	.047	1.2
4	16	.062	1.6
5	20	.078	2.0
6	24	.093	2.4
7	28	.109	2.8
8	32	.125	3.2
—	00	round insert (in)	
—	M0	round insert (mm)	

R

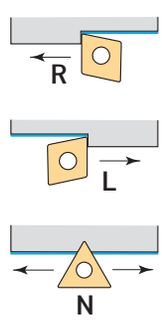
M0 for diameter inch sizes converted to mm
00 for diameter in metric sizes

8 Edge formation

9 Cutting edge preparation

S Small
M Medium

10 Cutting direction



Example: CBN indexable insert

C	N	G	A	4	3	2	T	M	.	–	MW	.	2
1	2	3	4	5	6	7	8	9	10		13	14	15

4 Machining and fastening features

A		N	
B	β = 70–90°	Q	β = 40–60°
C	β = 70–90°	R	
F		T	β = 40–60°
G		U	β = 40–60°
H	β = 70–90°	W	β = 40–60°
J	β = 70–90°	X	Drawing or precise description of the indexable insert is required
M			

5 Size

inch	IC		metric cutting edge length						
	in	mm	C	D	R	S	T	V	W
1.2 (5)	5/32	3.97	S4	04	03	03	06	—	02
1.5 (6)	3/16	4.76	04	05	04	04	08	08	S3
1.8 (7)	7/32	5.56	05	06	05	05	09	09	03
—	.236	6.00	—	—	06	—	—	—	—
2	1/4	6.35	06	07	06	06	11	11	04
2.5	5/16	7.94	08	09	07	07	13	13	05
—	.315	8.00	—	—	08	—	—	—	—
3	3/8	9.52	09	11	09	09	16	16	06
—	.394	10.00	—	—	10	—	—	—	—
3.5	7/16	11.11	11	13	11	11	19	19	07
—	.472	12.00	—	—	12	—	—	—	—
4	1/2	12.70	12	15	12	12	22	22	08
4.5	9/16	14.29	14	17	14	14	24	24	09
5	5/8	15.88	16	19	15	15	27	27	10
—	.630	16.00	—	—	16	—	—	—	—
5.5	11/16	17.46	17	21	17	17	30	30	11
6	3/4	19.05	19	23	19	19	33	33	13
—	.787	20.00	—	—	20	—	—	—	—
7	7/8	22.22	22	27	22	22	38	38	15
—	.984	25.00	—	—	25	—	—	—	—
8	1	25.40	25	31	25	25	44	44	17
10	1 1/4	31.75	32	38	31	31	54	54	21
—	1.260	32.00	—	—	32	—	—	—	—

11 Chamfer width inch

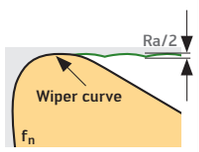
010 = 0.004
020 = 0.008
025 = 0.010
070 = 0.028
150 = 0.059
200 = 0.079

12 Chamfer angle

15 = 15°
20 = 20°

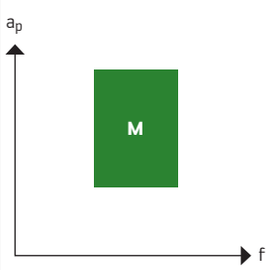
13 Wiper cutting edge

W Wiper



MW Wiper – medium feed

14 Chip breaking area

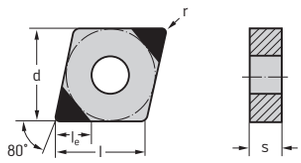


M Medium machining

15 Number of cutting edges / version

1	single	
2	double	
3	triple	
4	quadruple	
⋮		
9	strip	
0	full-face	
S	solid	

CBN – Negative rhombic 80°
CNGA



Indexable inserts

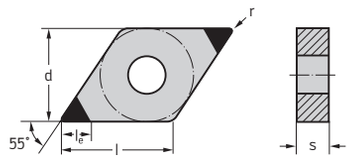
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
Wiper	CNGA431TM-MW2	CNGA120404TM-MW2	2	0.110	0.016	0.002–0.008	0.004–0.020					☺	☺		
	CNGA432TM-MW2	CNGA120408TM-MW2	2	0.106	0.031	0.002–0.010	0.004–0.039					☺	☺		
	CNGA433TM-MW2	CNGA120412TM-MW2	2	0.110	0.047	0.002–0.012	0.004–0.039					☺	☺		
	CNGA431EM-2	CNGA120404EM-2	2	0.110	0.016	0.002–0.008	0.004–0.020				☺				
	CNGA432EM-2	CNGA120408EM-2	2	0.106	0.031	0.002–0.010	0.004–0.039				☺				
Chipbreaker	CNGA431TM-M2	CNGA120404TM-M2	2	0.110	0.016	0.002–0.008	0.004–0.020						☺		
	CNGA432TM-M2	CNGA120408TM-M2	2	0.106	0.031	0.002–0.010	0.004–0.039						☺		
	CNGA433TM-M2	CNGA120412TM-M2	2	0.110	0.047	0.002–0.012	0.004–0.039						☺		
	CNGA431TM-2	CNGA120404TM-2	2	0.110	0.016	0.002–0.008	0.004–0.020					☺	☺	😐	
	CNGA432TM-2	CNGA120408TM-2	2	0.106	0.031	0.002–0.010	0.004–0.039					☺	☺	😐	
	CNGA433TM-2	CNGA120412TM-2	2	0.110	0.047	0.002–0.012	0.004–0.039					☺	☺	😐	

See the ISO 1832 designation key for dimensions

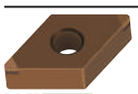
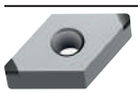
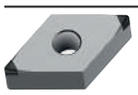
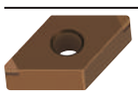
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

☺ 😐 ☹ / ★ New addition to the product range

CBN – Negative rhombic 55°
DNGA

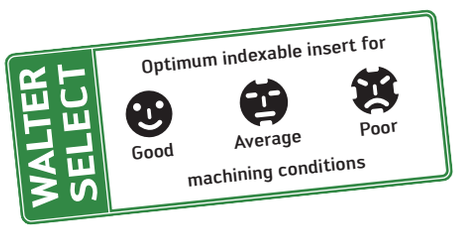


Indexable inserts

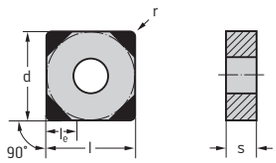
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
 Wiper	DNGA531TM-MW2	DNGA150404TM-MW2	2	0.114	0.016	0.002–0.008	0.004–0.020					☺	☺		
	DNGA541TM-MW2	DNGA150604TM-MW2	2	0.114	0.016	0.002–0.008	0.004–0.020					☺	☺		
	DNGA532TM-MW2	DNGA150408TM-MW2	2	0.110	0.031	0.002–0.010	0.004–0.039					☺	☺		
	DNGA542TM-MW2	DNGA150608TM-MW2	2	0.110	0.031	0.002–0.010	0.004–0.039					☺	☺		
	DNGA543TM-MW2	DNGA150612TM-MW2	2	0.110	0.047	0.002–0.012	0.004–0.039					☺	☺		
	DNGA531EM-2	DNGA150404EM-2	2	0.114	0.016	0.002–0.008	0.004–0.020				☺				
	DNGA532EM-2	DNGA150408EM-2	2	0.110	0.031	0.002–0.010	0.004–0.039				☺				
 Chipbreaker	DNGA531TM-M2	DNGA150404TM-M2	2	0.114	0.016	0.002–0.008	0.004–0.020						☺		
	DNGA541TM-M2	DNGA150604TM-M2	2	0.114	0.016	0.002–0.008	0.004–0.020						☺		
	DNGA532TM-M2	DNGA150408TM-M2	2	0.110	0.031	0.002–0.010	0.004–0.039						☺		
	DNGA542TM-M2	DNGA150608TM-M2	2	0.110	0.031	0.002–0.010	0.004–0.039						☺		
	DNGA543TM-M2	DNGA150612TM-M2	2	0.110	0.047	0.002–0.012	0.004–0.039						☺		
	DNGA531TM-2	DNGA150404TM-2	2	0.114	0.016	0.002–0.008	0.004–0.020					☺	☺	😐	
	DNGA541TM-2	DNGA150604TM-2	2	0.114	0.016	0.002–0.008	0.004–0.020					☺	☺	😐	
	DNGA532TM-2	DNGA150408TM-2	2	0.110	0.031	0.002–0.010	0.004–0.039					☺	☺	😐	
	DNGA542TM-2	DNGA150608TM-2	2	0.110	0.031	0.002–0.010	0.004–0.039					☺	☺	😐	
	DNGA543TM-2	DNGA150612TM-2	2	0.110	0.047	0.002–0.012	0.004–0.039					☺	☺	😐	

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content



CBN – Negative square
SNGA



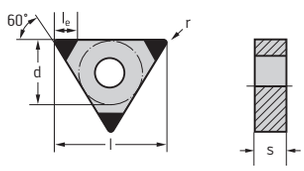
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	SNGA432TM-4	SNGA120408TM-4	4	0.110	0.031	0.002-0.012	0.004–0.039							☻	
	SNGA433TM-4	SNGA120412TM-4	4	0.110	0.047	0.002-0.012	0.004–0.039							☻	

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

CBN – Negative triangular 60°
TNGA



Indexable inserts

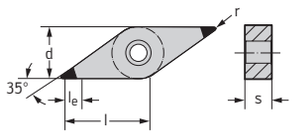
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	TNGA331TM-3	TNGA160404TM-3	3	0.118	0.016	0.002–0.008	0.004–0.020					☻	☻	☻	
	TNGA332TM-3	TNGA160408TM-3	3	0.110	0.031	0.002–0.008	0.004–0.020					☻	☻	☻	

See the ISO 1832 designation key for dimensions

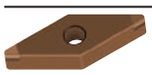
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

☻ ☻ ☻ / ★ New addition to the product range

CBN – Negative rhombic 35°
VNGA



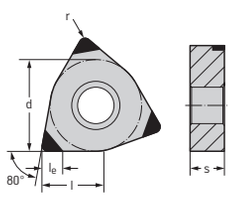
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	VNGA331TM-2	VNGA160404TM-2	2	0.118	0.016	0.002–0.008	0.004-0.020					☻	☻	☻	
	VNGA332TM-2	VNGA160408TM-2	2	0.118	0.031	0.002–0.008	0.004-0.020					☻	☻	☻	

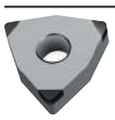
See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

CBN – Negative Trigon 80°
WNGA

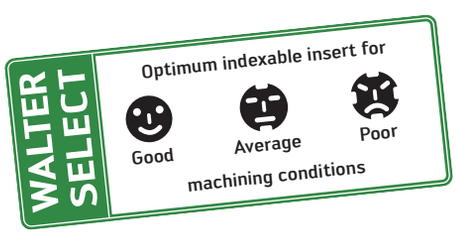


Indexable inserts

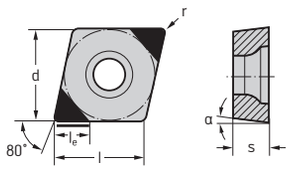
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	WNGA432TM-3	WNGA080408TM-3	3	0.110	0.031	0.002–0.010	0.004-0.039						☻	☻	

See the ISO 1832 designation key for dimensions

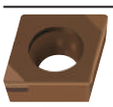
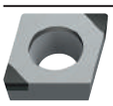
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content



CBN – Positive rhombic 80°
CCGW



Indexable inserts

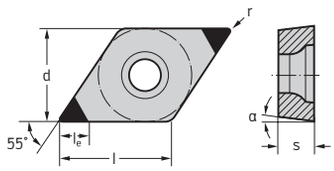
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
 Wiper	CCGW3(2.5)1TS-MW2	CCGW09T304TS-MW2	2	0.110	0.016	7°	0.002–0.008	0.004–0.020					☺	☺		
	CCGW3(2.5)2TM-MW2	CCGW09T308TM-MW2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020					☺	☺		
	CCGW2(1.5)0.5EM-2	CCGW060202EM-2	2	0.110	0.008	7°	0.002–0.006	0.004–0.012				☺				
	CCGW2(1.5)1EM-2	CCGW060204EM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.012				☺				
	CCGW3(2.5)1EM-2	CCGW09T304EM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.020				☺				
	CCGW3(2.5)2EM-2	CCGW09T308EM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020				☺				
	CCGW2(1.5)0.5TS-2	CCGW060202TS-2	2	0.110	0.008	7°	0.002–0.006	0.004–0.012					☺	☺		
	CCGW2(1.5)1TM-2	CCGW060204TM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.012					☺	☺	😐	
	CCGW2(1.5)2TM-2	CCGW060208TM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020					☺	☺	😐	
	CCGW3(2.5)1TM-2	CCGW09T304TM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.020					☺	☺	😐	
	CCGW3(2.5)2TM-2	CCGW09T308TM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020					☺	☺	😐	

See the ISO 1832 designation key for dimensions

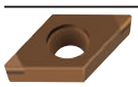
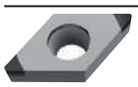
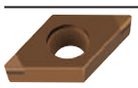
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

☺ 😐 ☹ / ★ New addition to the product range

CBN – Positive rhombic 55°
DCGW

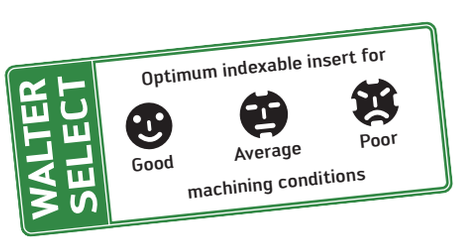


Indexable inserts

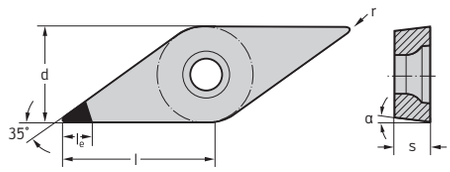
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	DCGW2(1.5)0.5TM-2	DCGW070202TM-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.012							☹	
	DCGW2(1.5)1TM-2	DCGW070204TM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.012					☺	☺	☹	
	DCGW2(1.5)2TM-2	DCGW070208TM-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020					☺	☺	☹	
	DCGW3(2.5)0.5TM-2	DCGW11T302TM-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.020							☹	
	DCGW3(2.5)1TM-2	DCGW11T304TM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.020					☺	☺	☹	
	DCGW3(2.5)2TM-2	DCGW11T308TM-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020					☺	☺	☹	
	DCGW2(1.5)0.5EM-2	DCGW070202EM-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.012				☺				
	DCGW2(1.5)1EM-2	DCGW070204EM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.012				☺				
	DCGW3(2.5)1EM-2	DCGW11T304EM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.020				☺				
	DCGW3(2.5)2EM-2	DCGW11T308EM-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020				☺				
	DCGW2(1.5)0.5TS-2	DCGW070202TS-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.012					☺	☺		
	DCGW3(2.5)0.5TS-2	DCGW11T302TS-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.020					☺	☺		

See the ISO 1832 designation key for dimensions

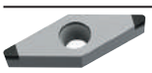
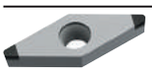
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content



CBN – Positive rhombic 35°
VBGW



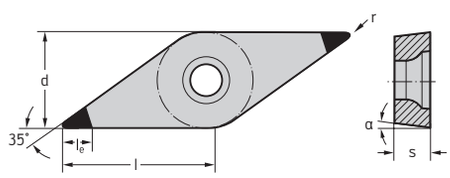
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K BH WCB80	K BH WCK10	K CN WDN10	N DP WBS10	S BH WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	VBGW331TS-2	VBGW160404TS-2	2	0.118	0.016	5°	0.002–0.008	0.004–0.020						☻		
	VBGW332TS-2	VBGW160408TS-2	2	0.118	0.031	5°	0.002–0.010	0.004–0.020						☻		
	VBGW331TM-2	VBGW160404TM-2	2	0.118	0.016	5°	0.002–0.008	0.004–0.020						☻	☹	
	VBGW332TM-2	VBGW160408TM-2	2	0.118	0.031	5°	0.002–0.010	0.004–0.020						☻	☹	

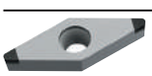
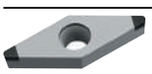
See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

CBN – Positive rhombic 35°
VCGW



Indexable inserts

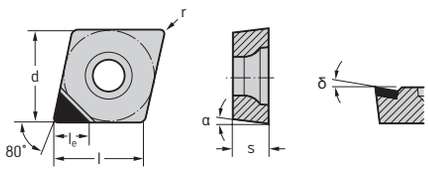
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K BH WCB80	K BH WCK10	K CN WDN10	N DP WBS10	S BH WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	VCGW331TS-2	VCGW160404TS-2	2	0.118	0.016	7°	0.002–0.008	0.004–0.020						☻		
	VCGW332TS-2	VCGW160408TS-2	2	0.118	0.031	7°	0.002–0.010	0.004–0.020						☻		
	VCGW331TM-2	VCGW160404TM-2	2	0.118	0.016	7°	0.002–0.008	0.004–0.020						☻		
	VCGW332TM-2	VCGW160408TM-2	2	0.118	0.031	7°	0.002–0.010	0.004–0.020						☻		
	VCGW3(2.5)0.5EM-2	VCGW11T302EM-2	2	0.134	0.008	7°	0.002–0.006	0.004–0.012				☻				
	VCGW3(2.5)1EM-2	VCGW11T304EM-2	2	0.118	0.016	7°	0.002–0.008	0.004–0.012				☻				
	VCGW331EM-2	VCGW160404EM-2	2	0.118	0.016	7°	0.002–0.008	0.004–0.020				☻				
	VCGW332EM-2	VCGW160408EM-2	2	0.118	0.031	7°	0.002–0.010	0.004–0.020				☻				

See the ISO 1832 designation key for dimensions

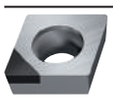
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

☻☹☠ / ★ New addition to the product range

PCD – Positive rhombic 80°
CPGW



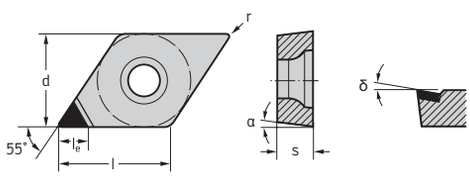
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	δ	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	CPGW1.8(1.5)1FS-1	CPGW050204FS-1	1	0.118	0.016	11°	0°	0.001–0.010	0.004–0.098			☺					☺
	CPGW2(1.5)1FS-1	CPGW060204FS-1	1	0.138	0.016	11°	0°	0.001–0.010	0.004–0.118			☺					☺
	CPGW3(2.5)1FS-1	CPGW09T304FS-1	1	0.157	0.016	11°	0°	0.001–0.010	0.004–0.138			☺					☺
	CPGW3(2.5)2FS-1	CPGW09T308FS-1	1	0.157	0.031	11°	0°	0.001–0.015	0.004–0.138			☺					☺
	CPGW432FS-1	CPGW120408FS-1	1	0.157	0.031	11°	0°	0.001–0.015	0.004–0.138			☺					☺

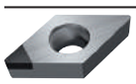
See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

PCD – Positive rhombic 55°
DPGW

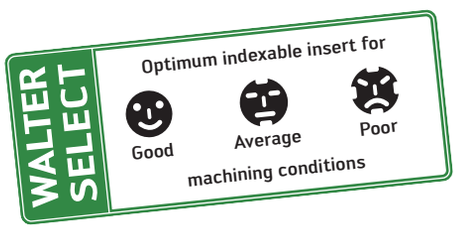


Indexable inserts

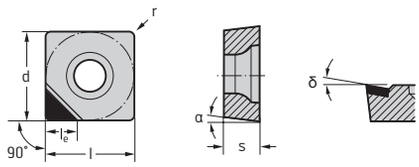
	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	δ	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	DPGW2(1.5)1FS-1	DPGW070204FS-1	1	0.138	0.016	11°	0°	0.001–0.010	0.004–0.118			☺					☺
	DPGW3(2.5)1FS-1	DPGW11T304FS-1	1	0.157	0.016	11°	0°	0.001–0.010	0.004–0.138			☺					☺
	DPGW3(2.5)2FS-1	DPGW11T308FS-1	1	0.157	0.031	11°	0°	0.001–0.015	0.004–0.138			☺					☺

See the ISO 1832 designation key for dimensions

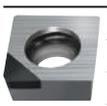
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content



PCD – Positive square
SPGW



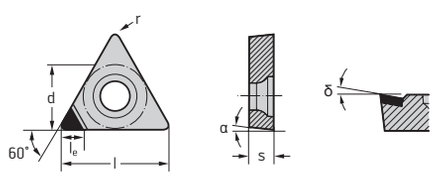
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	a_p mm	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	SPGW3(2.5)2FS-1	SPGW09T308FS-1	1	0.157	0.031	11°	0°	0.001–0.015	0.004–0.138			☺					☺

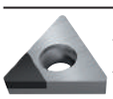
See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

PCD – Positive triangular 60°
TPGW



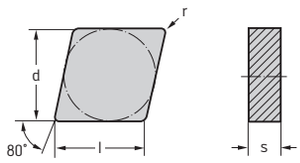
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	a_p mm	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	TPGW2(1.5)1FS-1	TPGW110204FS-1	1	0.165	0.016	11°	0°	0.001–0.010	0.004–0.138			☺					☺
	TPGW2(1.5)2FS-1	TPGW110208FS-1	1	0.157	0.031	11°	0°	0.001–0.015	0.004–0.138			☺					☺
	TPGW3(2.5)1FS-1	TPGW16T304FS-1	1	0.165	0.016	11°	0°	0.001–0.010	0.004–0.138			☺					☺
	TPGW3(2.5)2FS-1	TPGW16T308FS-1	1	0.157	0.031	11°	0°	0.001–0.015	0.004–0.138			☺					☺

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

Ceramic – Negative rhombic 80°
CNGN / CNGA / CNGX

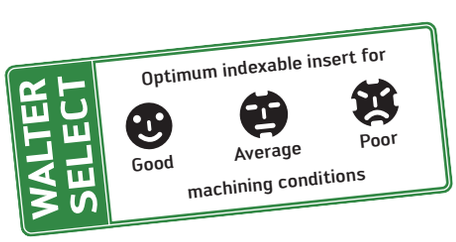


Indexable inserts

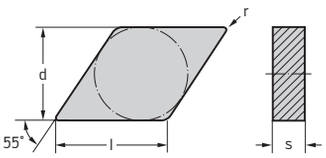
	ANSI Designation	Designation	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	S CN WIS10	S CR WWS20	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	CNGN432T01020	CNGN120408T01020	0.031	0.004–0.009	0.004–0.142						☻				
	CNGN432T02020	CNGN120408T02020	0.031	0.004–0.016	0.004–0.236		☻								
	CNGN433T01020	CNGN120412T01020	0.047	0.004–0.013	0.004–0.142						☻				
	CNGN433T02020	CNGN120412T02020	0.047	0.004–0.024	0.004–0.236		☻								
	CNGN434T02020	CNGN120416T02020	0.063	0.004–0.024	0.004–0.236		☻								
	CNGN452T01020	CNGN120708T01020	0.031	0.004–0.009	0.004–0.142					☻	☻				
	CNGN453T01020	CNGN120712T01020	0.047	0.004–0.013	0.004–0.142					☻	☻				
	CNGN453T02020	CNGN120712T02020	0.047	0.004–0.024	0.004–0.236		☻								
	CNGN454T01020	CNGN120716T01020	0.063	0.004–0.017	0.004–0.142					☻	☻				
	CNGN454T02020	CNGN120716T02020	0.063	0.004–0.024	0.004–0.236		☻								
	CNGA432T02020	CNGA120408T02020	0.031	0.004–0.016	0.004–0.236		☻								
	CNGA433T02020	CNGA120412T02020	0.047	0.004–0.024	0.004–0.236		☻								
	CNGA434T02020	CNGA120416T02020	0.063	0.004–0.024	0.004–0.236		☻								
	CNGX453T02020	CNGX120712T02020	0.047	0.004–0.024	0.004–0.236		☻								
	CNGX553T02020	CNGX160712T02020	0.047	0.004–0.024	0.004–0.315		☻								
	CNGX454T02020	CNGX120716T02020	0.063	0.004–0.024	0.004–0.236		☻								
	CNGX554T02020	CNGX160716T02020	0.063	0.004–0.024	0.004–0.315		☻								

See the ISO 1832 designation key for dimensions

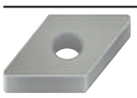
BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
CR = Reinforced ceramic
BL = CBN with low CBN content



Ceramic – Negative rhombic 80°
DNGA



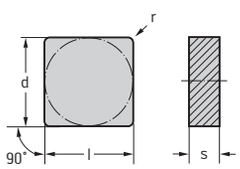
Indexable inserts

	ANSI Designation	Designation	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	DNGA442T02020	DNGA150608T02020	0.031	0.004–0.016	0.004–0.197		☺						
	DNGA443T02020	DNGA150612T02020	0.047	0.004–0.024	0.004–0.197		☺						

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

Ceramic – Negative square
SNGN / SNGA / SNGX



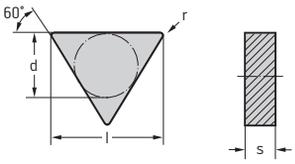
Indexable inserts

	ANSI Designation	Designation	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	S CN WIS10	S CR WWS20	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	SNGN433T02020	SNGN120412T02020	0.047	0.004–0.024	0.004–0.197		☺								
	SNGN434T02020	SNGN120416T02020	0.063	0.004–0.024	0.004–0.197		☺								
	SNGN452T01020	SNGN120708T01020	0.031	0.004–0.009	0.004–0.142						☹				
	SNGN453T01020	SNGN120712T01020	0.047	0.004–0.013	0.004–0.142					☺	☹				
	SNGN453T02020	SNGN120712T02020	0.047	0.004–0.024	0.004–0.197		☺								
	SNGN454T01020	SNGN120716T01020	0.063	0.004–0.017	0.004–0.142						☹				
	SNGN454T02020	SNGN120716T02020	0.063	0.004–0.024	0.004–0.197		☺								
	SNGA432T02020	SNGA120408T02020	0.031	0.004–0.016	0.004–0.197		☺								
	SNGA433T02020	SNGA120412T02020	0.047	0.004–0.024	0.004–0.197		☺								
	SNGA434T02020	SNGA120416T02020	0.063	0.004–0.031	0.004–0.197		☺								
	SNGX453T02020	SNGX120712T02020	0.047	0.004–0.024	0.004–0.197		☺								
	SNGX454T02020	SNGX120716T02020	0.063	0.004–0.024	0.004–0.197		☺								
	SNGX553T02020	SNGX150712T02020	0.047	0.004–0.024	0.004–0.276		☺								

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
CR = Reinforced ceramic
BL = CBN with low CBN content

Ceramic – Negative triangular 60°
TNGN / TNGA



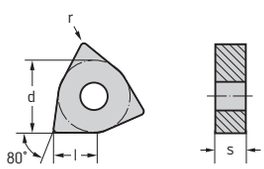
Indexable inserts

	ANSI Designation	Designation	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	TNGN333T02020	TNGN160412T02020	0.047	0.004-0.024	0.004-0.197		☺						
	TNGN334T02020	TNGN160416T02020	0.063	0.004-0.024	0.004-0.197		☺						
	TNGA332T02020	TNGA160408T02020	0.031	0.004-0.016	0.004-0.197		☺						
	TNGA333T02020	TNGA160412T02020	0.047	0.004-0.024	0.004-0.197		☺						

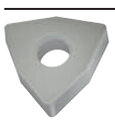
See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

Ceramic – Negative Trigon 80°
WNGA

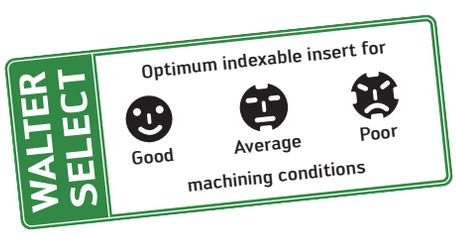


Indexable inserts

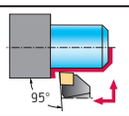
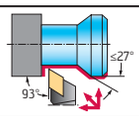
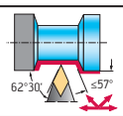
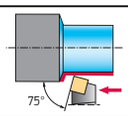
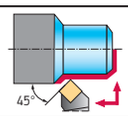
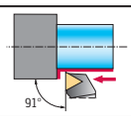
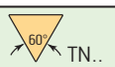
	ANSI Designation	Designation	r in	f in	a_p in	K BH WCB80	K CN WCK10	N DP WDN10	S BH WBS10	H BL WBH10C	H BL WBH10	H BL WBH20	O DP WDN10
	WNGA432T02020	WNGA080408T02020	0.031	0.004–0.016	0.004–0.197		☺						
	WNGA433T02020	WNGA080412T02020	0.047	0.004–0.024	0.004–0.197		☺						

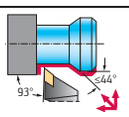
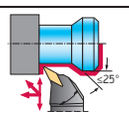
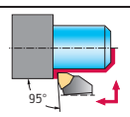
See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
CN = Silicon nitride Si_3N_4
DP = Polycrystalline diamond
BL = CBN with low CBN content

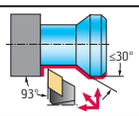
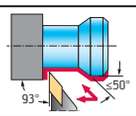
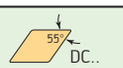
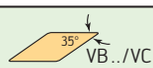


Walter Turn turning tools product range overview – External machining
Square-shank turning toolholders – Negative basic shape

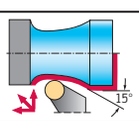
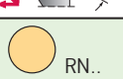
Machining						
Type						
Designation	**DCLN...-P**	**DDJN...-P**	**DDPN**	**DSBN...-P**	**DSSN...-P**	**DTGN...-P**
Approach angle κ	95°	93°	62° 30'	75°	45°	91°
Clamping system	Clamp	Clamp	Clamp	Clamp	Clamp	Clamp
Coolant supply	Precision cooling	Precision cooling	External	Precision cooling	Precision cooling	Precision cooling
Shank size h [mm]	20–32	20–25		25	25	
Shank size h [inch]	0.750–1.000	0.750–1.000	0.750–1.250			0.750–1.000
Page	64	66	68	69	70	71

Machining			
Type			
Designation	**DVJN...-P**	**DVTN**	**DWLN...-P**
Approach angle κ	93°	117,5°	95°
Clamping system	Clamp	Clamp	Clamp
Coolant supply	Precision cooling	External	Precision cooling
Shank size h [mm]	20–25		20–25
Shank size h [inch]	0.750–1.000	0.750–1.250	0.750–1.000
Page	72	74	75

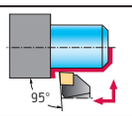
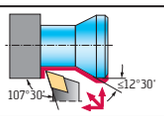
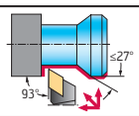
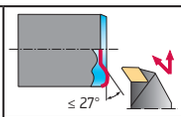
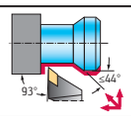
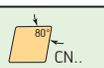
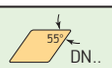
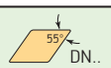
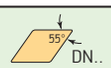
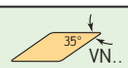
Walter Turn turning tools product range overview – External machining
Square-shank turning toolholders – Positive basic shape

Machining		
Type		
Designation	**DDJC...-P**	**DVJB...-P**
Approach angle κ	93°	93°
Clamping system	Clamp	Clamp
Coolant supply	Precision cooling	Precision cooling
Shank size h [mm]	20–25	20–25
Shank size h [inch]		
Page	77	78

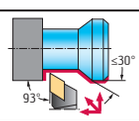
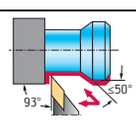
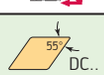
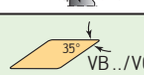
Walter Turn turning tools product range overview – External machining
Square-shank turning toolholders – Ceramic indexable inserts

Machining	
Type	
Designation	**CRSN...-P**
Approach angle κ	0°
Clamping system	Clamp
Coolant supply	Precision cooling
Shank size h [mm]	25
Shank size h [inch]	
Page	79

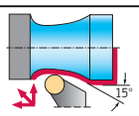
Walter Turn turning tools product range overview – External machining
Walter Capto™ turning toolholders – Negative basic shape

Machining					
Type					
Designation	**C...-DCLN...-P**	**C...-DDHN...-P**	**C...-DDJN...-P**	**C...-DDUN...-P**	**C...-DVJN...-P**
Lead angle κ	95°	107,5°	93°	93°	93°
Clamping system	Clamp	Clamp	Clamp	Clamp	Clamp
Coolant supply	Precision cooling	Precision cooling	Precision cooling	Precision cooling	Precision cooling
Walter Capto™ size	C4–C8	C6	C4–C8	C6	C4–C6
Insert size l [mm]	12–16	15	11–15	15	16
Page	80	81	82	83	84

Walter Turn turning tools product range overview – External machining
Walter Capto™ turning toolholders – Positive basic shape

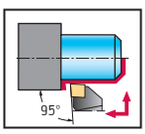
Machining		
Type		
Designation	**C...-DDJC...-P**	**C...-DVJB...-P**
Lead angle κ	93°	93°
Clamping system	Clamp	Clamp
Coolant supply	Precision cooling	Precision cooling
Walter Capto™ size	C4–C5	C4–C8
Insert size l [mm]	11	16
Page	85	86

Walter Turn turning tools product range overview – External machining
Walter Capto™ turning toolholders – Ceramic indexable inserts

Machining	
Type	RN..
Designation	**C...-CRSN...-P**
Approach angle κ	0°
Clamping system	Clamp
Coolant supply	Precision cooling
Walter Capto™ size	C6
Insert size l [mm]	12
Page	87

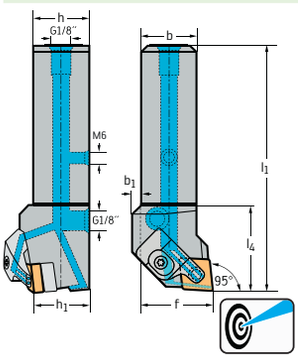
Shank tool – Rigid clamping
DCLN...-P mm
Walter Turn

– Precision cooling



CN . .

Tool



Designation		h = h1 mm	b mm	b1 mm	f mm	l1 mm	l4 mm	γ	λs	Type
DCLNR/L2020X12-P	12	20	20	10	25	115	38.5	-6°	-6°	CN .. 1204 ..
DCLNR/L2525X12-P	12	25	25	4	32	130	38.5	-6°	-6°	
DCLNR/L2525X16-P	16	25	25	12	32	135	43.5	-6°	-6°	CN .. 1606 ..
★ DCLNR/L3232X16-P	16	32	32	6	40	147	43.5	-6°	-7°	

Measured with master insert: CN .. 120408 / CN .. 160612
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DCLNR2020X12-P/ordering example. left-hand tool: DCLNL2020X12-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type	CN .. 1204 ..	CN .. 1606 ..
Shim	AP301-CN12	AP302-CN16
Screw for shim Tightening torque	FS1461 (Torx 15IP) 2.5 Nm	FS1463 (Torx 20IP) 5.0 Nm
Left clamp	PK265L	PK267
Right clamp	PK265R	PK267
Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm	FS1474 (Torx 20IP) 6.4 Nm
Pressure spring	FS2188	FS2298
G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)	FS2288 (SW 3)
Torx key	FS1465 (Torx 15IP)	FS1464 (Torx 20IP)

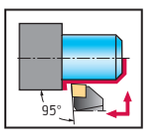
Accessories

Type	CN .. 1204 ..	CN .. 1606 ..
Left clamp set (standard assembly parts)	PK265L-SET	PK267-SET
Right clamp set (standard assembly parts)	PK265R-SET	PK267-SET

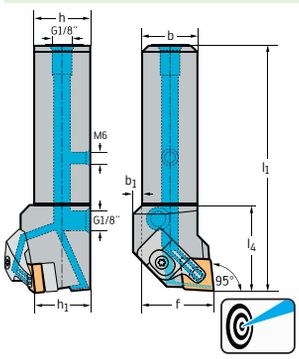
/ ★ New addition to the product range

Shank tool – Rigid clamping
DCLN...-P inch
Walter Turn

– Precision cooling



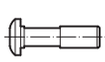
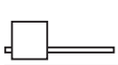
Tool



Designation	in	h = h1 Inch	b Inch	b1 Inch	f Inch	l1 Inch	l4 Inch	γ	λs	Type
DCLNR/L124B-P	0.500	0.750	0.750	0.394	1.000	4.500	1.575	-6°	-6°	CN .. 43 . CN .. 1204 ..
DCLNR/L164D-P	0.500	1.000	1.000	0.157	1.250	6.000	1.516	-6°	-6°	
DCLNR/L165D-P	0.625	1.000	1.000	0.472	1.250	6.000	1.713	-6°	-6°	CN .. 54 . CN .. 1606 ..

Measured with master insert: CN .. 432 / CN .. 543
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DCLNR124B-P/ordering example. left-hand tool: DCLNL124B-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	CN .. 43 . CN .. 1204 ..	CN .. 54 . CN .. 1606 ..
	Shim	AP301-CN12	AP302-CN16
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 22 in lb	FS1463 (Torx 20IP) 44 in lb
	Left clamp	PK265L	PK267
	Right clamp	PK265R	PK267
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb	FS1474 (Torx 20IP) 57 in lb
	Pressure spring	FS2188	FS2298
	G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)	FS1464 (Torx 20IP)

Accessories

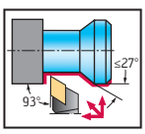
	Type	CN .. 43 . CN .. 1204 ..	CN .. 54 . CN .. 1606 ..
	Left clamp set (standard assembly parts)	PK265L-SET	PK267-SET
	Right clamp set (standard assembly parts)	PK265R-SET	PK267-SET

Shank tool – Rigid clamping

DDJN...-P mm

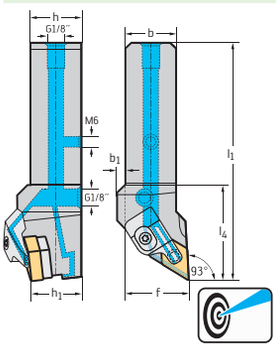
Walter Turn

– Precision cooling



DN . .

Tool



Designation		h = h1 mm	b mm	b1 mm	f mm	l1 mm	l4 mm	γ	λs	Type
DDJNR/L2020X11-P	11	20	20	6	25	125	48.5	-6°	-7°	DN .. 1104 ..
DDJNR/L2525X11-P	11	25	25	3	32	140	48.5	-6°	-7°	
DDJNR/L2020X15-P	15	20	20	7	25	125	48.5	-6°	-7°	DN .. 1506 ..
DDJNR/L2525X15-P	15	25	25	3	32	140	48.5	-6°	-7°	

Measured with master insert: DN .. 110408 / DN .. 150608
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DDJNR2020X11-P/ordering example. left-hand tool: DDJNL2020X11-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

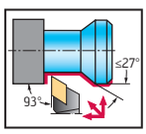
Type	DN .. 1104 ..	DN .. 1506 ..
Shim	AP305-DN11	AP304-DN15
Screw for shim Tightening torque	FS1462 (Torx 9IP) 1.5 Nm	FS1461 (Torx 15IP) 2.5 Nm
Left clamp	PK261L	PK265L
Right clamp	PK261R	PK265R
Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm	FS1473 (Torx 15IP) 3.9 Nm
Pressure spring	FS2188	FS2188
G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)	FS2288 (SW 3)
Torx key	FS1465 (Torx 15IP)	FS1465 (Torx 15IP)

Accessories

Type	DN .. 1104 ..	DN .. 1506 ..
Left clamp set (standard assembly parts)	PK261L-SET	PK265L-SET
Right clamp set (standard assembly parts)	PK261R-SET	PK265R-SET
Shim for DN .. 1504 ..		AP304-DN1504

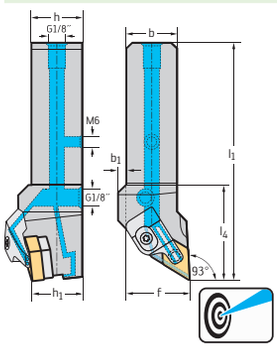
Shank tool – Rigid clamping
DDJN...-P inch
Walter Turn

– Precision cooling



DN . .

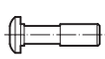
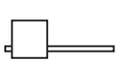
Tool



Designation	in	h = h1 Inch	b Inch	b1 Inch	f Inch	l1 Inch	l4 Inch	γ	λs	Type
DDJNR/L163D-P	0.375	1.000	1.000	0.118	1.250	6.000	1.909	-6°	-7°	DN .. 33 . DN .. 1104 ..
DDJNR/L124B-P	0.500	0.750	0.750	0.276	1.000	4.500	1.969	-6°	-7°	DN .. 43 . DN .. 1504 ..
DDJNR/L164D-P	0.500	1.000	1.000	0.118	1.250	6.000	1.909	-6°	-7°	

Measured with master insert: DN .. 332 / DN .. 432
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DDJNR163D-P/ordering example. left-hand tool: DDJNL163D-P
Bodies and assembly parts are included in the scope of delivery.

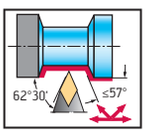
Assembly parts

	Type	DN .. 33 . DN .. 1104 ..	DN .. 43 . DN .. 1504 ..
	Shim	AP305-DN11	AP304-DN1504
	Screw for shim Tightening torque	FS1462 (Torx 9IP) 13 in lb	FS1461 (Torx 15IP) 22 in lb
	Left clamp	PK261L	PK265L
	Right clamp	PK261R	PK265R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb	FS1473 (Torx 15IP) 35 in lb
	Pressure spring	FS2188	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP / SW 3.5)	FS1465 (Torx 15IP / SW 3.5)

Accessories

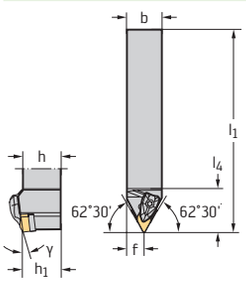
	Type	DN .. 33 . DN .. 1104 ..	DN .. 43 . DN .. 1504 ..
	Left clamp set (standard assembly parts)	PK261L-SET	PK265L-SET
	Right clamp set (standard assembly parts)	PK261R-SET	PK265R-SET
	Shim for DN .. 1506 ..		AP304-DN15

Shank tool – Rigid clamping
DDPN inch
Walter Turn



DN . . DN . .

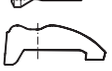
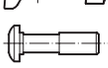
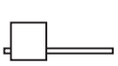
Tool



Designation	in	h = h_1 Inch	b Inch	f Inch	l_1 Inch	l_4 Inch	γ	λ_s	Type
DDPNN124B	0.500	0.750	0.750	0.375	4.500	1.610	-5°	-9°	DN .. 43 . DN .. 1504 ..
DDPNN164D	0.500	1.000	1.000	0.500	6.000	1.610	-5°	-9°	
DDPNN204D	0.500	1.250	1.250	0.625	6.000	1.610	-5°	-9°	

Measured with master insert: DN .. 432
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
Bodies and assembly parts are included in the scope of delivery.

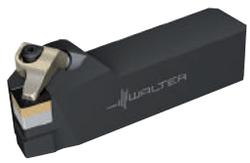
Assembly parts

	Type	DN .. 43 . DN .. 1504 ..
	Shim	AP304-DN1504
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 22 in lb
	Clamp	PK241
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb
	Pressure spring	FS1470
	Pin	RS117
	Torx key	FS1465 (Torx 15IP)

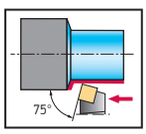
Accessories

	Type	DN .. 43 . DN .. 1504 ..
	Clamp set (standard assembly parts)	PK241-SET
	Carbide clamp set Insert with drilled hole	PK245-SET
	Carbide clamp set Insert without drilled hole	PK254-SET
	Shim for DN .. 1504 ..	AP304-DN1504
	Shim for DN .. 1507 ..	AP412-DN1507

Shank tool – Rigid clamping
DSBN...-P mm
Walter Turn



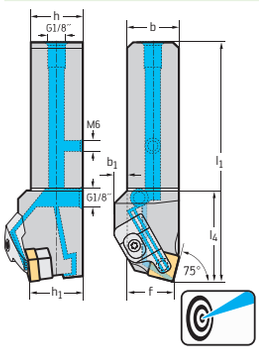
– Precision cooling



SN . .

Tool

Designation		h = h_1 mm	b mm	b_1 mm	f mm	l_1 mm	l_4 mm	γ	λ_s	Type
DSBNR/L2525X12-P	12	25	25	7	22	135	43.5	-6°	-6°	SN .. 1204 ..



Measured with master insert: SN .. 120408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DSBNR2525X12-P/ordering example. left-hand tool: DSBNL2525X12-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

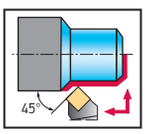
Type	SN .. 1204 ..
Shim	AP308-SN12
Screw for shim Tightening torque	FS1461 (Torx 15IP) 2.5 Nm
Left clamp	PK265L
Right clamp	PK265R
Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
Pressure spring	FS2188
G 1/8" threaded plug	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)
Torx key	FS1465 (Torx 15IP)

Accessories

Type	SN .. 1204 ..
Left clamp set (standard assembly parts)	PK265L-SET
Right clamp set (standard assembly parts)	PK265R-SET

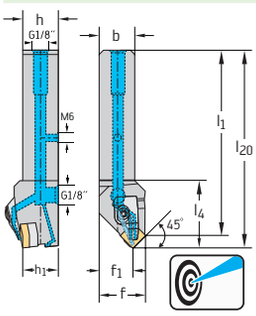
Shank tool – Rigid clamping
DSSN...-P mm
Walter Turn

– Precision cooling



SN . .

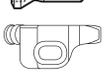
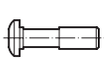
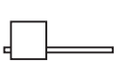
Tool



Designation		h = h_1 mm	b mm	b_1 mm	f mm	l_1 mm	l_4 mm	γ	$λ_s$	Type
DSSNR/L2525X12-P	12	25	25	0	23.7	138.7	48	-8°	0°	SN .. 1204 ..

Measured with master insert: SN .. 120408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle $λ_s$. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DSSNR2525X12-P/ordering example. left-hand tool: DSSNL2525X12-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

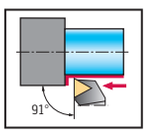
	Type	SN .. 1204 ..
	Shim	AP308-SN12
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 2.5 Nm
	Left clamp	PK265L
	Right clamp	PK265R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)

Accessories

	Type	SN .. 1204 ..
	Left clamp set (standard assembly parts)	PK265L-SET
	Right clamp set (standard assembly parts)	PK265R-SET

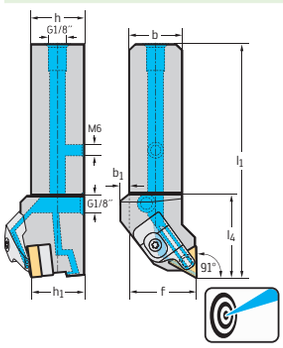
Shank tool – Rigid clamping
DTGN...-P inch
Walter Turn

– Precision cooling



TN . .

Tool



Designation	inch	h = h1 Inch	b Inch	b1 Inch	f Inch	l1 Inch	l4 Inch	γ	λs	Type
DTGNR/L123B-P	0.375	0.750	0.750	0.000	1.000	4.500	1.516	-6°	-6°	TN .. 33 . TN .. 1604 ..
DTGNR/L163D-P	0.375	1.000	1.000	0.000	1.250	6.000	1.520	-6°	-6°	

Measured with master insert: TN .. 332
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
Ordering example. right-hand tool: DTGNR123B-P/ordering example. left-hand tool: DTGNL123B-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

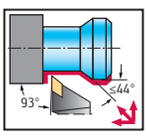
Type	TN .. 33 . TN .. 1604 ..
Shim	AP321-TN16
Screw for shim Tightening torque	FS1462 (Torx 9IP) 13 in lb
Left clamp	PK261L
Right clamp	PK261R
Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb
Pressure spring	FS2188
G 1/8" threaded plug	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)
Torx key	FS1465 (Torx 15IP)

Accessories

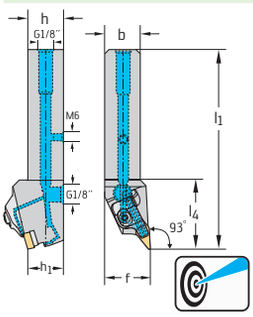
Type	TN .. 33 . TN .. 1604 ..
Left clamp set (standard assembly parts)	PK261L-SET
Right clamp set (standard assembly parts)	PK261R-SET

Shank tool – Rigid clamping
DVJN...-P mm
Walter Turn

– Precision cooling



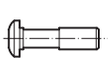
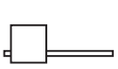
Tool



Designation		h = h_1 mm	b mm	b_1 mm	f mm	l_1 mm	l_4 mm	γ	λ_s	Type
DVJNR/L2020X16-P	16	20	20	4	25	125	48.5	-4°	-13°	VN .. 1604 ..
DVJNR/L2525X16-P	16	25	25	0	32	140	48	-4°	-13°	

Measured with master insert: VN .. 160408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
Ordering example. right-hand tool: DVJNR2020X16-P/ordering example. left-hand tool: DVJNL2020X16-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

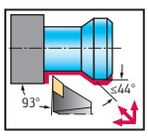
	Type	VN .. 1604 ..
	Shim	AP312-VN16
	Screw for shim Tightening torque	FS1467 (Torx 15IP) 3.0 Nm
	Left clamp	PK261L
	Right clamp	PK261R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)

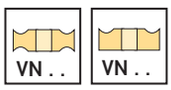
Accessories

	Type	VN .. 1604 ..
	Left clamp set (standard assembly parts)	PK261L-SET
	Right clamp set (standard assembly parts)	PK261R-SET

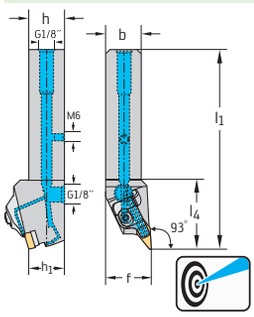
Shank tool – Rigid clamping
DVJN...-P inch
Walter Turn

– Precision cooling





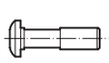
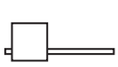
Tool



Designation	in	h = h1 Inch	b Inch	b1 Inch	f Inch	l1 Inch	l4 Inch	γ	λs	Type
DVJNR/L123B-P	0.375	0.750	0.750	0.157	1.000	4.496	1.906	-4°	-13°	VN .. 33 . VN .. 1604 ..
DVJNR/L163D-P	0.375	1.000	1.000	0.000	1.250	5.996	1.906	-4°	-13°	

Measured with master insert: VN .. 332
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DVJNR123B-P/ordering example. left-hand tool: DVJNL123B-P
Bodies and assembly parts are included in the scope of delivery.

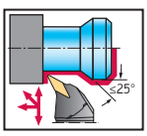
Assembly parts

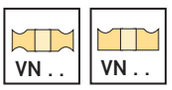
	Type	VN .. 33 . VN .. 1604 ..
	Shim	AP312-VN16
	Screw for shim Tightening torque	FS1467 (Torx 15IP) 27 in lb
	Left clamp	PK261L
	Right clamp	PK261R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb
	Pressure spring	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)

Accessories

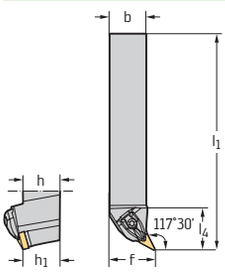
	Type	VN .. 33 . VN .. 1604 ..
	Left clamp set (standard assembly parts)	PK261L-SET
	Right clamp set (standard assembly parts)	PK261R-SET

Shank tool – Rigid clamping
DVTN inch
Walter Turn





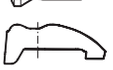
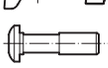
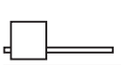
Tool



Designation	in	h = h1 Inch	b Inch	f Inch	l1 Inch	l4 Inch	γ	λs	Type
DVTNR/L123B	0.375	0.750	0.750	1.000	4.500	1.543	-4°	-13°	VN .. 33 . VN .. 1604 ..
DVTNR/L163D	0.375	1.000	1.000	1.250	6.000	1.544	-4°	-13°	
DVTNR/L203D	0.375	1.250	1.250	1.500	6.000	1.544	-4°	-13°	

Measured with master insert: VN .. 160408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
Ordering example. right-hand tool: DVTNR123B/ordering example. left-hand tool: DVTNL123B
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

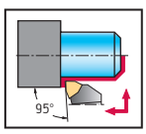
	Type	VN .. 33 . VN .. 1604 ..
	Shim	AP312-VN16
	Screw for shim Tightening torque	FS1467 (Torx 15IP) 27 in lb
	Clamp	PK244
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb
	Pressure spring	FS1470
	Pin	RS117
	Torx key	FS1465 (Torx 15IP)

Accessories

	Type	VN .. 33 . VN .. 1604 ..
	Clamp set (standard assembly parts)	PK244-SET

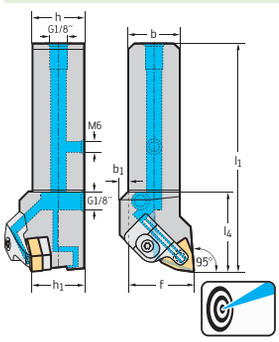
Shank tool – Rigid clamping
DWLN...-P mm
Walter Turn

– Precision cooling



WN . .

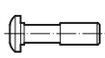
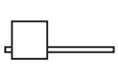
Tool



Designation		h = h1 mm	b mm	b1 mm	f mm	l1 mm	l4 mm	γ	λs	Type
DWLNR/L2020X08-P	8	20	20	0	25	120.0	43.5	-7°	-6°	WN .. 0804 ..
DWLNR/L2525X08-P	8	25	25	0	32	135.0	43.5	-7°	-6°	

Measured with master insert: WN .. 080408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DWLNR2020X08-P/ordering example. left-hand tool: DWLNL2020X08-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

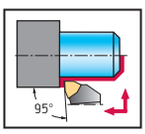
	Type	WN .. 0804 ..
	Shim	AP307-WN08
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 2.5 Nm
	Left clamp	PK266L
	Right clamp	PK266R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)

Accessories

	Type	WN .. 0804 ..
	Left clamp set (standard assembly parts)	PK266L-SET
	Right clamp set (standard assembly parts)	PK266R-SET

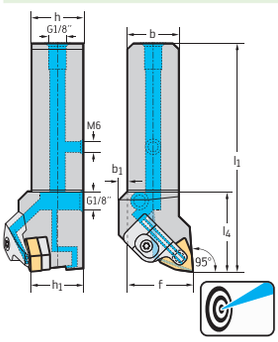
Shank tool – Rigid clamping
DWLN...-P inch
Walter Turn

– Precision cooling



WN . .

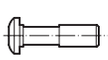
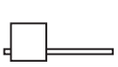
Tool



Designation	in	h = h1 Inch	b Inch	b1 Inch	f Inch	l1 Inch	l4 Inch	γ	λs	Type
DWLNR/L124B-P	0.500	0.750	0.750	0.000	1.000	4.500	1.713	-6°	-6°	WN .. 43 . WN .. 0804 ..
DWLNR/L164D-P	0.500	1.000	1.000	0.000	1.250	6.000	1.713	-7°	-6°	

Measured with master insert: WN .. 432
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
Ordering example. right-hand tool: DWLNR124B-P/ordering example. left-hand tool: DWLNL124B-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

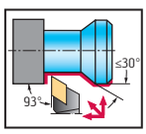
	Type	WN .. 43 . WN .. 0804 .. 0.750
	Shim	AP307-WN08
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 22 in lb
	Left clamp	PK266L
	Right clamp	PK266R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb
	Pressure spring	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)

Accessories

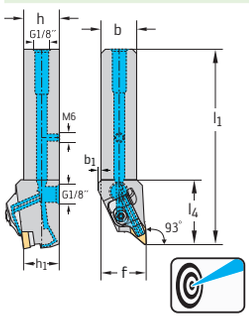
	Type	WN .. 43 . WN .. 0804 ..
	Left clamp set (standard assembly parts)	PK266L-SET
	Right clamp set (standard assembly parts)	PK266R-SET

Shank tool – Rigid clamping
DDJC...-P mm
Walter Turn

– Precision cooling



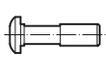
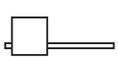
Tool



Designation		h = h_1 mm	b mm	b_1 mm	f mm	l_1 mm	l_4 mm	γ	λ_s	Type
DDJCR/L2020X11-P	11	20	20	6	25	125	48.5	-3°	-7°	DC .. 11T3 ..
DDJCR/L2525X11-P	11	25	25	0	32	140	48.5	-3°	-7°	

Measured with master insert: DC .. 11T308
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DDJCR2020X11-P/ordering example. left-hand tool: DDJCL2020X11-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

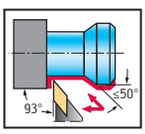
	Type	DC .. 11T3 ..
	Shim for radius	AP315-DC1108 r ≤ 0.8 mm
	Screw for shim	FS2068 (SW 3.5)
	Left clamp	PK261L
	Right clamp	PK261R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)

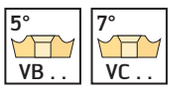
Accessories

	Type	DC .. 11T3 ..
	Left clamp set (standard assembly parts)	PK261L-SET
	Right clamp set (standard assembly parts)	PK261R-SET

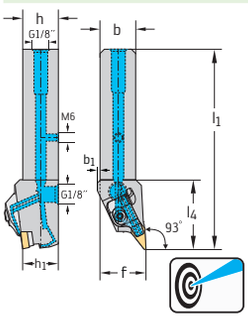
Shank tool – Rigid clamping
DVJB...-P mm
Walter Turn

– Precision cooling





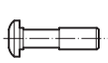
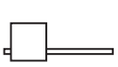
Tool



Designation		h = h_1 mm	b mm	b_1 mm	f mm	l_1 mm	l_4 mm	γ	λ_s	Type
DVJBR/L2020X16-P	16	20	20	4	25	125	48.5	-2°	-7°	VB .. 1604 .. VC .. 1604 ..
DVJBR/L2525X16-P	16	25	25	0	32	140	48.5	-2°	-7°	

Measured with master insert: VB .. 160408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: DVJBR2020X16-P/ordering example. left-hand tool: DVJBL2020X16-P
Bodies and assembly parts are included in the scope of delivery.

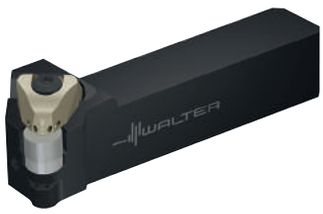
Assembly parts

	Type	VB .. 1604 .. VC .. 1604 ..
	Shim	AP312-VN16
	Screw for shim Tightening torque	FS1467 (Torx 15IP) 3.0 Nm
	Left clamp	PK261L
	Right clamp	PK261R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP)

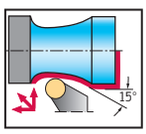
Accessories

	Type	VB .. 1604 .. VC .. 1604 ..
	Left clamp set (standard assembly parts)	PK261L-SET
	Right clamp set (standard assembly parts)	PK261R-SET

Shank tool – Rigid clamping
CRSN...-P mm
Walter Turn

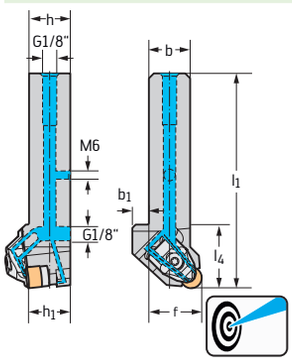


– Precision cooling
– For ceramic indexable inserts



RN . .

Tool



Designation		h = h1 mm	b mm	b1 mm	f mm	l1 mm	l4 mm	γ	λs	Type
★ CRSNR/L2525X12-P	12	25	25	10	32	130	38.5	-6°	-6°	RN .. 1207 ..

Measured with master insert: RN .. 120700
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
For the connection set for coolant supply with G1/8" thread. see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: CRSNR2525X12-P/ordering example. left-hand tool: CRSNL2525X12-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type	RN .. 1207 ..
Shim	AP418-RN1207
Screw for shim Tightening torque	FS2241 (Torx 20) 5.0 Nm
Clamp	PK268
Screw for clamp Tightening torque	FS1474 (Torx 20IP) 6.4 Nm
Pressure spring	FS2298
G 1/8" threaded plug	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)
Torx key	FS1464 (Torx 20IP)

Accessories

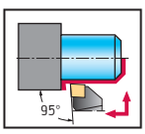
Type	RN .. 1207 ..
Clamp set (standard assembly parts)	PK268-SET

/ ★ New addition to the product range

Turning toolholders – Rigid clamping
C...-DCLN...-P mm

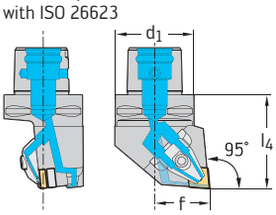
Walter Turn

– Precision cooling
– Walter Capto™



Tool

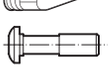
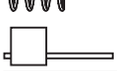
Walter Capto™ in accordance with ISO 26623



Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
C4-DCLNR/L-27050-12-P	12	C4	27	50	-6°	-6°	CN .. 1204 ..
C5-DCLNR/L-35060-12-P	12	C5	35	60	-6°	-6°	
C6-DCLNR/L-45065-12-P	12	C6	45	65	-6°	-6°	
C8-DCLNR/L-55080-12-P	12	C8	55	80	-6°	-6°	
★ C5-DCLNR/L-35060-16-P	16	C5	35	60	-6°	-6°	CN .. 1606 ..
C6-DCLNR/L-45065-16-P	16	C6	45	65	-6°	-6°	
★ C8-DCLNR/L-55080-16-P	16	C8	55	80	-6°	-6°	

Measured with master insert: CN .. 120408 / CN .. 160612
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C4-DCLNR-27050-12-P/ordering example. left-hand tool: C4-DCLNL-27050-12-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	CN .. 1204 ..	CN .. 1606 ..
	Shim	AP301-CN12	AP302-CN16
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 2.5 Nm	FS1463 (Torx 20IP) 5.0 Nm
	Clamp	PK255	PK267
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm	FS1474 (Torx 20IP) 6.4 Nm
	Pressure spring	FS2188	FS2298
	Torx key	FS1465 (Torx 15IP)	FS1464 (Torx 20IP)

Accessories

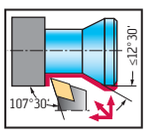
	Type	CN .. 1204 ..	CN .. 1606 ..
	Clamp set (standard assembly parts)	PK255-SET	PK267-SET

😊😐☹ / ★ New addition to the product range

Turning toolholders – Rigid clamping
C...-DDHN...-P mm

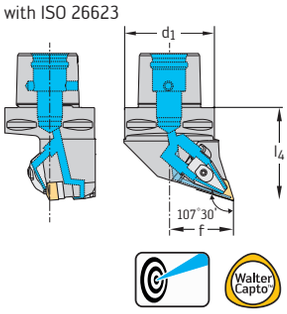
Walter Turn

– Precision cooling
– Walter Capto™



Tool

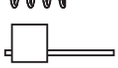
Walter Capto™ in accordance with ISO 26623



Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
C6-DDHNR/L-45065-15-P	15	C6	45	65	-6°	7°	DN .. 1506 ..

Measured with master insert: DN .. 150608
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C6-DDHNR-45065-15-P/ordering example. left-hand tool: C6-DDHNL-45065-15-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	DN .. 1506 ..
	Shim	AP304-DN15
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 2.5 Nm
	Clamp	PK256
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	Torx key	FS1465 (Torx 15IP)

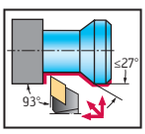
Accessories

	Type	DN .. 1506 ..
	Clamp set (standard assembly parts)	PK256-SET
	Shim for DN .. 1504 ..	AP304-DN1504

Turning toolholders – Rigid clamping
C...-DDJN...-P mm

Walter Turn

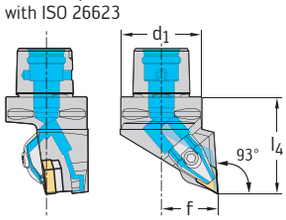
– Precision cooling
– Walter Capto™



DN . .

Tool

Walter Capto™ in accordance with ISO 26623



Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
C4-DDJNR/L-27055-11-P	11	C4	27	55	-6°	-7°	DN .. 1104 ..
C4-DDJNR/L-27055-15-P	15	C4	27	55	-6°	-7°	DN .. 1506 ..
C5-DDJNR/L-35060-15-P	15	C5	35	60	-6°	-7°	
C6-DDJNR/L-45065-15-P	15	C6	45	65	-6°	-7°	
C8-DDJNR/L-55080-15-P	15	C8	55	80	-6°	-7°	

Measured with master insert: DN .. 110408 / DN .. 150608
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C4-DDJNR-27055-11-P/ordering example. left-hand tool: C4-DDJNL-27055-11-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type	DN .. 1104 ..	DN .. 1506 ..
Shim	AP305-DN11	AP304-DN15
Screw for shim Tightening torque	FS1462 (Torx 9IP) 1.5 Nm	FS1461 (Torx 15IP) 2.5 Nm
Clamp	PK255	PK256
Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm	FS1473 (Torx 15IP) 3.9 Nm
Pressure spring	FS2188	FS2188
Torx key	FS1465 (Torx 15IP)	FS1465 (Torx 15IP)

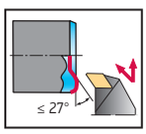
Accessories

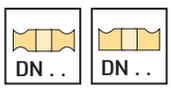
Type	DN .. 1104 ..	DN .. 1506 ..
Clamp set (standard assembly parts)	PK255-SET	PK256-SET
Shim for DN .. 1504 ..		AP304-DN1504

Turning toolholders – Rigid clamping
C...-DDUN...-P mm

Walter Turn

– Precision cooling
– Walter Capto™

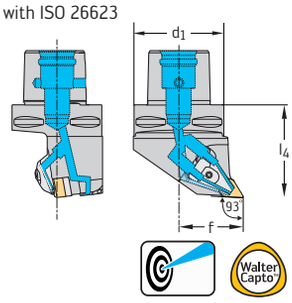




Tool

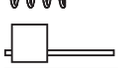
Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
C6-DDUNR/L-45065-15-P	15	C6	45	65	-7°	-6°	DN .. 1506 ..

Walter Capto™ in accordance with ISO 26623



Measured with master insert: DN .. 150608
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C6-DDUNR-45065-15-P/ordering example. left-hand tool: C6-DDUNL-45065-15-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	DN .. 1506 ..
	Shim	AP304-DN15
	Screw for shim Tightening torque	FS1461 (Torx 15IP) 2.5 Nm
	Clamp	PK256
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	Torx key	FS1465 (Torx 15IP)

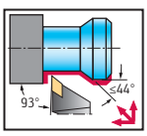
Accessories

	Type	DN .. 1506 ..
	Clamp set (standard assembly parts)	PK256-SET
	Shim for DN .. 1504 ..	AP304-DN1504

Turning toolholders – Rigid clamping
C...-DVJN...-P mm

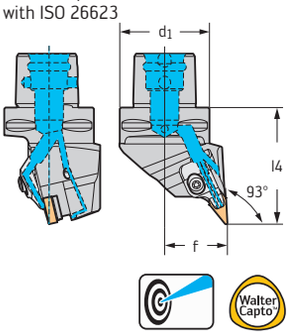
Walter Turn

– Precision cooling
– Walter Capto™



Tool

Walter Capto™ in accordance with ISO 26623



Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
★ C4-DVJNR/L-27062-16-P	16	C4	27	62	-4°	-13°	VN .. 1604 ..
★ C5-DVJNR/L-35065-16-P	16	C5	35	65	-4°	-13°	
★ C6-DVJNR/L-45065-16-P	16	C6	45	65	-4°	-13°	

Measured with master insert: VN .. 160408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C4-DVJNR-27062-16-P/ordering example. left-hand tool: C4-DVJNL-27062-16-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type	VN .. 1604 ..
Shim	AP312-VN16
Screw for shim Tightening torque	FS1467 (Torx 15IP) 3.0 Nm
Left clamp	PK261L
Right clamp	PK261R
Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
Pressure spring	FS2188
Torx key	FS1465 (Torx 15IP)

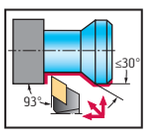
Accessories

Type	VN .. 1604 ..
Left clamp set	PK261L-SET
Right clamp set	PK261R-SET

/ ★ New addition to the product range

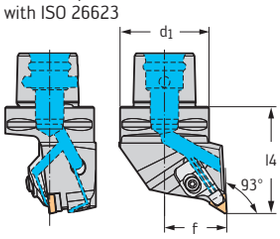
Turning toolholders – Rigid clamping
C...-DDJC...-P mm
Walter Turn

– Precision cooling
– Walter Capto™



Tool

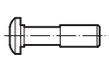
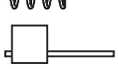
Walter Capto™ in accordance with ISO 26623



Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
★ C4-DDJCR/L-27050-11-P	11	C4	27	50	-3°	-7°	DC .. 11T3 ..
★ C5-DDJCR/L-35060-11-P	11	C5	35	60	-3°	-7°	

Measured with master insert: DC .. 11T308
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C4-DDJCR-27050-11-P/ordering example. left-hand tool: C4-DDJCL-27050-11-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	DC .. 11T3 ..
	Shim for radius	AP315-DC1108 r ≤ 0.8 mm
	Screw for shim	FS2068 (SW 3.5)
	Left clamp	PK261L
	Right clamp	PK261R
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
	Pressure spring	FS2188
	Torx key	FS1465 (Torx 15IP)

Accessories

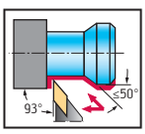
	Type	DC .. 11T3 ..
	Left clamp set (standard assembly parts)	PK261L-SET
	Right clamp set (standard assembly parts)	PK261R-SET

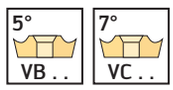
/ ★ New addition to the product range

Turning toolholders – Rigid clamping
C...-DVJB...-P mm

Walter Turn

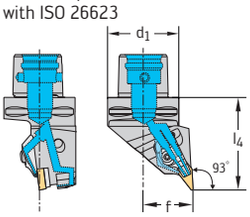
– Precision cooling
– Walter Capto™





Tool

Walter Capto™ in accordance with ISO 26623



Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
C4-DVJBR/L-27062-16-P	16	C4	27	62	-2°	-7°	VB .. 1604 .. VC .. 1604 ..
C5-DVJBR/L-35065-16-P	16	C5	35	65	-2°	-7°	
C6-DVJBR/L-45065-16-P	16	C6	45	65	-2°	-7°	
C8-DVJBR/L-55080-16-P	16	C8	55	65	-2°	-7°	

Measured with master insert: VB .. 160408
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C4-DVJBR-27062-16-P/ordering example. left-hand tool: C4-DVJBL-27062-16-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

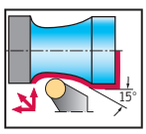
Type	VB .. 1604 .. VC .. 1604 ..
Shim	AP312-VN16
Screw for shim Tightening torque	FS1467 (Torx 15IP) 3.0 Nm
Left clamp	PK261L
Right clamp	PK261R
Screw for clamp Tightening torque	FS1473 (Torx 15IP) 3.9 Nm
Pressure spring	FS2188
Torx key	FS1465 (Torx 15IP)

Accessories

Type	VB .. 1604 .. VC .. 1604 ..
Left clamp set (standard assembly parts)	PK261L-SET
Right clamp set (standard assembly parts)	PK261R-SET

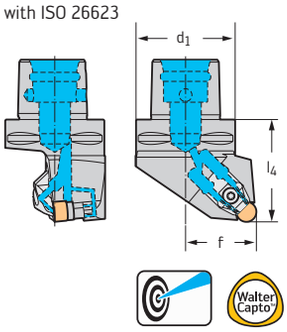
Turning toolholders – Rigid clamping
C...-CRSN...-P mm
Walter Turn

– Precision cooling
– For ceramic indexable inserts



Tool

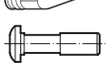
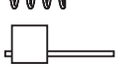
Walter Capto™ in accordance with ISO 26623



Designation		d_1	f mm	l_4 mm	γ	λ_s	Type
★ C6-CRSNR/L-45065-12-P	12	C6	45	65	-6°	-6°	RN .. 1207 ..

Measured with master insert: RN .. 120700
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example. right-hand tool: C6-CRSNR-45065-12-P/ordering example. left-hand tool: C6-CRSNL-45065-12-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

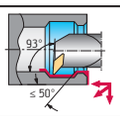
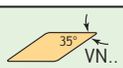
	Type	RN .. 1207 ..
	Shim	AP418-RN1207
	Screw for shim Tightening torque	FS2241 (Torx 20) 5.0 Nm
	Clamp	PK268
	Screw for clamp Tightening torque	FS1474 (Torx 20IP) 6.4 Nm
	Pressure spring	FS2298
	Torx key	FS1464 (Torx 20IP)

Accessories

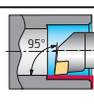
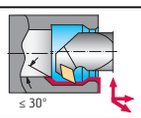
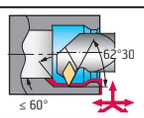
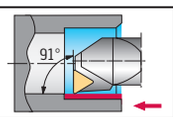
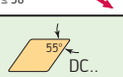
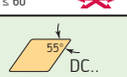
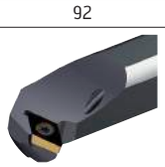
	Type	RN .. 1207 ..
	Clamp set (standard assembly parts)	PK268-SET

★ New addition to the product range

Walter Turn turning tools product range overview – Internal machining
Boring bars – Negative basic shape

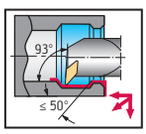
Machining	
Type	
Designation	**A...-DVUN**
Approach angle κ	93°
Clamping system	Clamp
Coolant supply	Internal
Boring bar diameter d_1 [mm]	
Boring bar diameter d_1 [inch]	1.250–1.500
Page	89

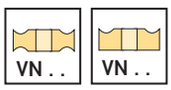
Walter Turn turning tools product range overview – Internal machining
Boring bars – Positive basic shape

Machining					
Type					
Designation	**A...-SCLP / E...-SCLP**	**A...-SDUC...-X**	**A...-SDXC...-X**	**A...-STFC / E...-STFC**	**A2140-W**
Approach angle κ	95°	93°	62,5°	91°	
Clamping system	Screw	Screw	Screw	Screw	
Coolant supply	Internal	Internal	Internal	Internal	Axial
Boring bar diameter d_1 [mm]			25		25–40
Boring bar diameter d_1 [inch]	0.313–1.000	1.000–1.250		0.313–1.500	
Page	90	91	92	93	94
					

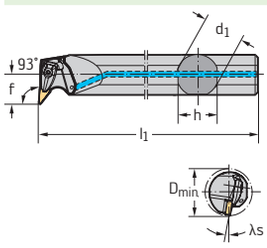
Boring bar – Rigid clamping
A...-DVUN inch
Walter Turn

– A = Steel version with internal cooling





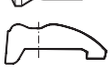
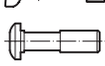
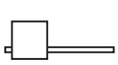
Tool



Designation	in	D_{min} Inch	d_1 Inch	f Inch	h Inch	l_1 Inch	γ	λ_s	Type
A20T-DVUNR/L3	0.375	1.705	1.250	1.000	1.181	12.000	-6°	-9°	VN .. 33 . VN .. 1604 ..
A24T-DVUNR/L3	0.375	2.000	1.500	1.125	1.374	12.000	-6°	-8°	

Measured with master insert: VN .. 332
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s. see "Technical information – ISO turning"
Ordering example. right-hand tool: A20T-DVUNR3/ordering example. left-hand tool: A20T-DVUNL3
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	VN .. 1604 ..
	Shim	AP312-VN16
	Screw for shim Tightening torque	FS1467 (Torx 15IP) 27 in lbs
	Clamp	PK244
	Screw for clamp Tightening torque	FS1473 (Torx 15IP) 35 in lb
	Pressure spring	FS1470
	Pin	RS117
	Torx key	FS1465 (Torx 15IP)

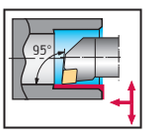
Accessories

	Type	VN .. 1604 ..
	Clamp set (standard assembly parts)	PK244-SET

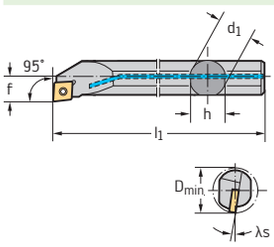
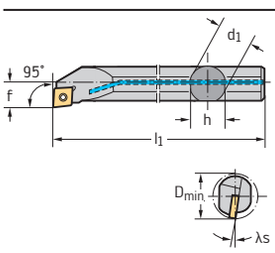
Boring bar – Screw clamping
A...-SCLP / E...-SCLP inch

Walter Turn

– A = Steel version with internal cooling
– E = Solid carbide version with internal cooling

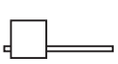


Tool

	Designation	in	D_{min} Inch	d_1 Inch	f Inch	h Inch	l_1 Inch	γ	λ_s	Type
	A05K-SCLPR/L2	0.250	0.413	0.313	0.219	0.272	5.000	0°	-9°	CP .. 2(1.5) . CP .. 0602 ..
	A06M-SCLPR/L2	0.250	0.480	0.375	0.250	0.336	6.000	4°	-6,5°	
	A08M-SCLPR/L2	0.250	0.598	0.500	0.312	0.460	6.000	6°	-2,6°	
	A10R-SCLPR/L2	0.250	0.772	0.625	0.406	0.562	8.000	0°	5°	
	A12S-SCLPR/L3	0.375	0.929	0.750	0.500	0.709	10.000	0°	-6,3°	CP .. 3(2.5) . CP .. 09T3 ..
	A16T-SCLPR/L3	0.375	1.201	1.000	0.639	0.906	14.173	6°	1°	
	E06M-SCLPR/L2	0.250	0.480	0.375	0.250	0.359	6.000	4°	-7°	CP .. 2(1.5) . CP .. 0602 ..
	E08R-SCLPR/L2	0.250	0.598	0.500	0.312	0.484	8.000	6°	-3°	

Measured with master insert: CP.. 2(1.5)1 / CP .. 3(2.5)2
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
Ordering example, right-hand tool: A05K-SCLPR2/ordering example, left-hand tool: A05K-SCLPL2
Bodies and assembly parts are included in the scope of delivery.

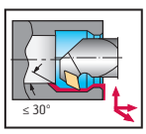
Assembly parts

	Type D_{min} [Inch]	CP .. 2 . CP .. 0602 .. 0.413	CP .. 2 . CP .. 0602 .. 0.480–0.598	CP .. 2 . CP .. 0602 .. 0.772	CP .. 3 . CP .. 09T3 .. 0.929	CP .. 3 . CP .. 09T3 .. 1.201
	Clamping screw for insert Tightening torque	FS2187 (Torx 7IP) 8 in lb	FS2066 (Torx 7IP) 8 in lb	FS2061 (Torx 7IP) 8 in lb	FS2062 (Torx 15IP) 27 in lb	FS2063 (Torx 15IP) 27 in lb
	Torx key	FS1490 (Torx 7IP)	FS1490 (Torx 7IP)	FS1490 (Torx 7IP)	FS1465 (Torx 15IP)	FS1465 (Torx 15IP)

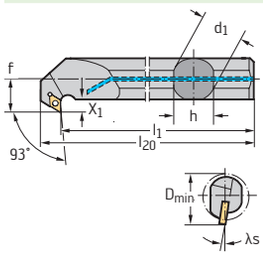
Boring bar – Screw clamping
A...-SDUC...-X inch

Walter Turn

– A = Steel version with internal cooling
– Reverse copy boring bar



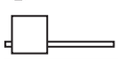
Tool



Designation	in	D_{min} Inch	d_1 Inch	f Inch	h Inch	l_1 Inch	l_{20} Inch	γ	λ_s	Type
A16T-SDUCR/L2-X	0.250	1.299	1.000	0.750	0.906	12.000	12.480	0°	-0.9°	DC .. 2(1.5) . DC .. 0702 ..
A20T-SDUCR/L3-X	0.375	1.579	1.250	0.875	1.181	12.000	12.610	0°	-7.5°	DC .. 3(2.5) . DC .. 11T3 ..

Measured with master insert: DC .. 2(1.5)1 / DC .. 3(2.5)2
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
Ordering example, right-hand tool: A16T-SDUCR2-X/ordering example, left-hand tool: A16T-SDUCL2-X
Bodies and assembly parts are included in the scope of delivery.

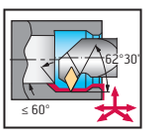
Assembly parts

	Type	DC .. 2(1.5) . DC .. 0702 ..	DC .. 3(2.5) . DC .. 11T3 ..
	Clamping screw for insert Tightening torque	FS2061 (Torx 7IP) 8 in lb	FS2062 (Torx 15IP) 27 in lb
	Torx key	FS1490 (Torx 7IP)	FS1465 (Torx 15IP)

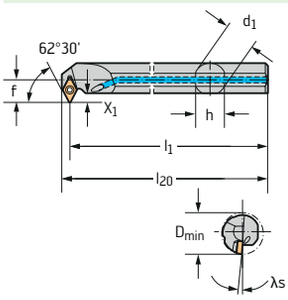
Boring bar – Screw clamping
A...-SDXC...-X mm

Walter Turn

– A = Steel version with internal cooling
– Forwards/reverse copy boring bar



Tool



Designation		D_{min} mm	d_1 mm	f mm	h mm	l_1 mm	l_{20} mm	γ	λ_s	Type
A25T-SDXCR/L11-X	11	32	25	17	23	300	306	-2°	-3°	DC .. 11T3 ..

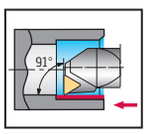
Measured with master insert: DC .. 11T308
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
Ordering example, right-hand tool: A25T-SDXCR11-X/ordering example, left-hand tool: A25T-SDXCL11-X
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

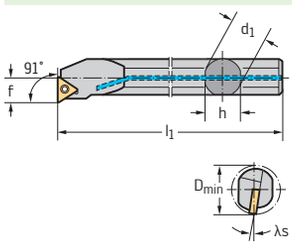
	Type	DC .. 11T3 ..
	Clamping screw for insert Tightening torque	FS2062 (Torx 15IP) 3.0 Nm
	Torx key	FS1465 (Torx 15IP)

Boring bar – Screw clamping
A...-STFC / E...-STFC inch
Walter Turn

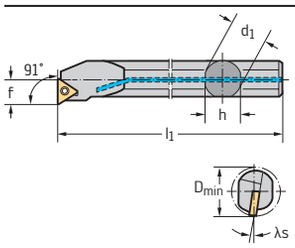
– A = Steel version with internal cooling
– E = Solid carbide version with internal cooling



Tool



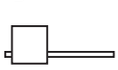
Designation	D_{min} Inch	d_1 Inch	f Inch	h Inch	l_1 Inch	γ	λ_s	Type
A06M-STFCR/L2	0.250	0.500	0.375	0.250	0.336	6.000	0°	-10,1°	TC .. 2(1 . 5) . TC .. 1102 ..
A08M-STFCR/L2	0.250	0.598	0.500	0.312	0.460	6.000	0°	-7,2°	
A10R-STFCR/L2	0.250	0.772	0.625	0.406	0.562	8.000	0°	-4,7°	
A12S-STFCR/L2	0.250	0.929	0.750	0.500	0.709	10.000	0°	-3,2°	
A16T-STFCR/L3	0.375	1.201	1.000	0.640	0.906	12.000	0°	-3,8°	TC .. 3(2 . 5) . TC .. 16T3 ..
A20T-STFCR/L3	0.375	1.469	1.250	0.765	1.181	12.000	0°	-8,7°	
A24T-STFCR/L3	0.375	1.760	1.500	0.890	1.374	12.000	0°	-6,8°	



E06M-STFCR/L1.8	0.219	0.500	0.375	0.264	0.359	6.000	0°	-9,5°	TC .. 1.8(1.5) . TC .. 0902 ..
E08R-STFCR/L1.8	0.219	0.630	0.500	0.349	0.460	8.000	0°	-7°	
E10R-STFCR/L2	0.250	0.772	0.625	0.406	0.609	8.000	0°	-6°	TC .. 2(1.5) . TC .. 1102 ..
E12S-STFCR/L2	0.250	0.929	0.750	0.500	0.734	10.000	0°	-4°	
E16T-STFCR/L3	0.375	1.201	1.000	0.640	0.984	12.000	0°	-4°	TC .. 3(2.5) . TC .. 16T3 ..

Measured with master insert: TC .. 2(1.5)1 / TC .. 3(2.5)2 / TC .. 1.8(1.5)1 / TC .. 2(1.5)0
For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
Ordering example, right-hand tool: A06M-STFCR2/ordering example, left-hand tool: A06M-STFCL2
Bodies and assembly parts are included in the scope of delivery.

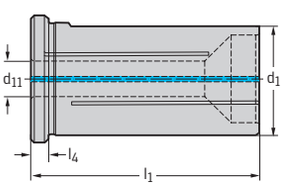
Assembly parts

Type D_{min} [Inch]	TC .. 1.8(1.5) . TC .. 0902 .. 0.500–0.630	TC ..2(1.5) . TC .. 1102 .. 0.500–0.598	TC .. 2(1.5) . TC .. 1102 .. 0.772–0.929	TC .. 3(2.5) . TC .. 16T3 .. 1.201	TC .. 3(2.5) . TC .. 16T3 .. 1.469–1.760
Clamping screw for insert Tightening torque	FS2149 (Torx 7IP) 8 in lbs	FS2067 (Torx 7IP) 8 in lbs	FS2061 (Torx 7IP) 8 in lbs	FS2063 (Torx 15IP) 27 in lbs	FS2060 (Torx 15IP) 27 in lbs
 Torx key	FS1490 (Torx 7IP)	FS1490 (Torx 7IP)	FS1490 (Torx 7IP)	FS1465 (Torx 15IP)	FS1465 (Torx 15IP)
Shim for radius					AP317-TC1612 r ≤ 0.047 in
Clamping screw for shim					FS2068 (SW 3.5)

Boring bar adaptor
A2140-W mm

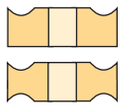
– With Weldon shank in accordance with DIN 9766
– Self-centring for cylindrical round shank

Tool	Designation	d_1 mm	d_{11} mm	l_1 mm	l_4 mm	kg
Parallel shank with surface in accordance with ISO 9766	A2140-W25-R06-061	25	6	61	5	0,2
	A2140-W25-R08-061	25	8	61	5	0,2
	A2140-W25-R10-061	25	10	61	5	0,2
	A2140-W25-R12-061	25	12	61	5	0,2
	A2140-W25-R16-061	25	16	61	5	0,1
	A2140-W32-R06-065	32	6	65	5	0,3
	A2140-W32-R08-065	32	8	65	5	0,3
	A2140-W32-R10-065	32	10	65	5	0,3
	A2140-W32-R12-065	32	12	65	5	0,3
	A2140-W32-R16-065	32	16	65	5	0,3
	A2140-W32-R20-065	32	20	65	5	0,2
	A2140-W40-R06-075	40	6	75	5	0,6
	A2140-W40-R08-075	40	8	75	5	0,6
	A2140-W40-R10-075	40	10	75	5	0,6
	A2140-W40-R12-075	40	12	75	5	0,6
	A2140-W40-R16-075	40	16	75	5	0,6
	A2140-W40-R20-075	40	20	75	5	0,6
	A2140-W40-R25-075	40	25	75	5	0,5



Comment: Groove for self-centring is present on all Walter Turn boring bars with fully rounded shank (-R) dia. 6–25 mm.

Cutting data for turning inserts – Negative basic shape
Carbide grades



= Cutting data for wet machining
= Dry machining is possible.

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group [1]			Cutting material grades Starting values for cutting speed v_c [sfm] HC WSM01 f [inch/rev]		
									0.004	0.008	0.020
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	63	P1	●●	●	790	750	
		C > 0.25... ≤ 0.55%	Annealed	190	93	P2	●●	●	620	520	
		C > 0.25... ≤ 0.55%	Heat-treated	210	103	P3	●●	●	520	430	
		C > 0.55%	Annealed	190	93	P4	●●	●	490	430	
		C > 0.55%	Heat-treated	300	146	P5	●●	●	460	330	
		Free-machining steel (short-chipping)	Annealed	220	109	P6	●●	●	690	620	
	Low-alloy steel	Annealed		175	86	P7	●●	●	490	430	
		Heat-treated		285	139	P8	●●	●	430	260	
		Heat-treated		380	186	P9	●●	●	330	230	
		Heat-treated		430	215	P10	●●	●	260	200	
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11	●●	●	460	390	
		Hardened and tempered		300	146	P12	●●	●	390	300	
		Hardened and tempered		380	186	P13	●●	●	230	160	
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	●●	●	660	590	
		Martensitic, heat-treated		330	161	P15	●●	●	490	390	
M	Stainless steel	Austenitic, quench hardened		200	99	M1	●●	●	820	620	390
		Austenitic, precipitation hardened (PH)		300	146	M2	●●	●	490	430	
		Austenitic/ferritic, duplex		230	113	M3	●●	●	520	460	330
K	Malleable cast iron	Ferritic		200	58	K1	●●	●			
		Pearlitic		260	102	K2	●●	●			
	Grey cast iron	Low tensile strength		180	29	K3	●●	●			
		High tensile strength/austenitic		245	51	K4	●●	●			
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	●●	●			
		Pearlitic		265	102	K6	●●	●			
	GGV (CGI)			230	58	K7	●●	●			
N	Wrought aluminium alloys	Not hardenable		30	—	N1			9840	7870	5910
		Hardenable, hardened		100	49	N2			2950	2360	1180
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3			3150	1770	1180
		≤ 12% Si, hardenable, hardened		90	45	N4			1970	1180	790
		> 12% Si, not hardenable		130	66	N5					
	Magnesium-based alloys [3]			70	36	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7			2360	1570	1050
		Brass, bronze, red brass		90	45	N8			1570	1180	980
		Cu alloys, short-chipping		110	55	N9			1120	790	520
		High-tensile, Ampco		300	146	N10					
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1	●●	●	330	230	
			Hardened	280	136	S2	●●	●	260	200	
		Ni- or Co-based	Annealed	250	122	S3	●●	●	260	200	
			Hardened	350	171	S4	●●	●	230	160	
			Cast	320	157	S5	●●	●	200	130	
	Titanium alloys	Pure titanium		200	99	S6	●●	●			
		α and β alloys, hardened		375	183	S7	●●	●	230	160	
		β alloys		410	203	S8	●●	●	160	130	
	Tungsten alloys			300	146	S9					
	Molybdenum alloys			300	146	S10					
H	Hardened steel	Hardened and tempered		50 HRC	—	H1	●	●●	160		
		Hardened and tempered		55 HRC	—	H2	●	●●	130		
		Hardened and tempered		60 HRC	—	H3	●	●●			
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4	●	●●			
O	Thermoplastics	Without abrasive fillers				O1					
	Thermosets	Without abrasive fillers				O2					
	Plastic, glass-fibre-reinforced	GFRP				O3					
	Plastic, carbon-fibre-reinforced	CFRP				O4					
	Plastic, aramid-fibre-reinforced	AFRP				O5					
	Graphite (technical)			80 Shore		O6					

●● Recommended application (the specified cutting data is regarded as starting values for the recommended application)
● Possible application

Note: If dry machining is possible, the tool life is reduced by 20–30% on average.

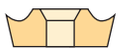
[1] The classification of the machining groups can be found from page A 682 onwards in the Walter General Catalog 2018.
[3] Water-miscible coolants must not be used when machining magnesium alloys.

	Cutting material grades																					
	Starting values for cutting speed v_c [sfm]																					
	HC																					
	WSM10S			WSM20S			WSM30S			WPV10			WPV20			WKV10			WKV20		
	f [inch/rev]			f [inch/rev]			f [inch/rev]			f [inch/rev]			f [inch/rev]			f [inch/rev]			f [inch/rev]		
	0.004	0.012	0.020	0.004	0.012	0.020	0.004	0.012	0.020	0.004	0.016	0.024	0.004	0.016	0.024	0.004	0.016	0.024	0.004	0.016	0.024
	890	820		750	720		720	660		1410	1050	820	1180	890	720				1570	1180	920
	690	620		590	520		520	490		1120	790	660	920	660	520				560	490	490
	590	520		490	430		430	360		850	660	560	690	560	460				460	390	390
	590	520		460	430		430	390		920	660	520	790	560	430				430	390	390
										720	520	520	590	430	390				820	590	590
	790	720		660	590		590	520		1310	920	750	1080	790	590				590	560	560
	560	490		460	390		390	330		1020	750	660	850	660	520				430	360	360
										620	490	430	520	390	330				690	560	490
										460	330	260	390	260	230				460	360	300
										230	160								230	200	
	560	490		430	360		360	300		920	660	430	790	520	330				390	330	330
										660	390	330	520	330	260				520	430	390
										200	160								260	230	
	660	590	490	620	560	460	560	490	390	750	590	520	620	520	390						
	560	390	360	460	360	330	360	330	260	520	390	330	430	300	230						
	850	690	430	790	560	360	660	460	300	820	590	390	660	490	300						
	520	460		460	390		360	300		490	430		390	330							
	560	490	360	490	430	300	430	360	230	520	430	330	390	360	260						
										850	560	430	750	590	430	1120	790	560	890	590	460
										720	460	330	660	490	300	980	660	430	790	490	330
										1540	920	660	1350	690	520	1840	1210	890	1640	950	690
										850	590	390	660	490	300	1180	790	560	890	620	430
										920	660	490	690	520	390	1210	890	690	950	690	520
										660	490	390	520	390	300	890	690	560	690	520	430
										790	520	430				950	590				
	330	210		300	200		260	160													
	260	180		230	160		200	130													
	260	180		230	160		200	100													
	230	150		200	130		160	100													
	200	110		160	100		130	70													
				230	150	130															
				130	100	80															
																160					
																130					
																100					
																130					

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

HC = Coated carbide
CN = Silicon nitride Si3N4

Cutting data for turning inserts – Positive basic shape
Carbide grades



= Cutting data for wet machining
= Dry machining is possible.

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group [1]			Cutting material grades Starting values for cutting speed v_c [sfm] HE WEP10 f [inch/rev] 0.004	0.008	0.012
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	63	P1	●●	●	980	820	660
		C > 0.25... ≤ 0.55%	Annealed	190	93	P2	●●	●	750	660	590
		C > 0.25... ≤ 0.55%	Heat-treated	210	103	P3	●●	●	690	590	490
		C > 0.55%	Annealed	190	93	P4	●●	●	720	660	590
		C > 0.55%	Heat-treated	300	146	P5	●●	●	590	490	
		Free-machining steel (short-chipping)	Annealed	220	109	P6	●●	●	750	660	590
	Low-alloy steel	Annealed		175	86	P7	●●	●	690	590	490
		Heat-treated		285	139	P8	●●	●	490	430	360
		Heat-treated		380	186	P9	●●	●			
		Heat-treated		430	215	P10	●●	●			
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11	●●	●	520	460	430
		Hardened and tempered		300	146	P12	●●	●			
		Hardened and tempered		380	186	P13	●●	●			
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	●●	●			
		Martensitic, heat-treated		330	161	P15	●●	●			
M	Stainless steel	Austenitic, quench hardened		200	99	M1	●●	●	690	620	520
		Austenitic, precipitation hardened (PH)		300	146	M2	●●	●	490	430	360
		Austenitic/ferritic, duplex		230	113	M3	●●	●	520	460	360
K	Malleable cast iron	Ferritic		200	58	K1	●●	●	720	660	590
		Pearlitic		260	102	K2	●●	●	620	560	490
	Grey cast iron	Low tensile strength		180	29	K3	●●	●	1380	1280	1180
		High tensile strength/austenitic		245	51	K4	●●	●	720	660	590
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	●●	●	790	720	660
		Pearlitic		265	102	K6	●●	●	560	460	430
	GGV (CGI)			230	58	K7	●●	●	720	590	560
N	Wrought aluminium alloys	Not hardenable		30	—	N1	●●	●			
		Hardenable, hardened		100	49	N2	●●	●			
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3	●●	●			
		≤ 12% Si, hardenable, hardened		90	45	N4	●●	●			
		> 12% Si, not hardenable		130	66	N5					
	Magnesium-based alloys [3]			70	36	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7	●●	●			
		Brass, bronze, red brass		90	45	N8	●●	●			
		Cu alloys, short-chipping		110	55	N9	●●	●			
		High-tensile, Ampco		300	146	N10					
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1	●●	●			
			Hardened	280	136	S2	●●	●			
		Ni- or Co-based	Annealed	250	122	S3	●●	●			
			Hardened	350	171	S4	●●	●			
			Cast	320	157	S5	●●	●			
	Titanium alloys	Pure titanium		200	99	S6	●●	●			
		α and β alloys, hardened		375	183	S7	●●	●			
		β alloys		410	203	S8	●●	●			
	Tungsten alloys			300	146	S9					
	Molybdenum alloys			300	146	S10					
H	Hardened steel	Hardened and tempered		50 HRC	—	H1	●	●●			
		Hardened and tempered		55 HRC	—	H2	●	●●			
		Hardened and tempered		60 HRC	—	H3	●	●●			
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4	●	●●			
O	Thermoplastics	Without abrasive fillers				O1					
	Thermosets	Without abrasive fillers				O2					
	Plastic, glass-fibre-reinforced	GFRP				O3					
	Plastic, carbon-fibre-reinforced	CFRP				O4					
	Plastic, aramid-fibre-reinforced	AFRP				O5					
	Graphite (technical)			80 Shore		O6					

●● Recommended application (the specified cutting data is regarded as starting values for the recommended application)
● Possible application

Note: If dry machining is possible, the tool life is reduced by 20–30% on average.

[1] The classification of the machining groups can be found from page A 682 onwards in the Walter General Catalog 2018.
[3] Water-miscible coolants must not be used when machining magnesium alloys.

	Cutting material grades											
	Starting values for cutting speed v_c [sfm]											
	HC											
	WSM01			WNN10			WPV10			WPV20		
	f [inch/rev]			f [inch/rev]			f [inch/rev]			f [inch/rev]		
	0.004	0.008	0.016	0.004	0.008	0.016	0.004	0.008	0.016	0.004	0.008	0.016
	790	750		750	690		1310	1150	980	1080	980	820
	620	520		560	490		1050	920	750	890	790	620
	520	430		430	390		790	690	660	620	560	520
	490	430		460	390		920	850	820	790	720	660
	460	330					620	520	520	520	430	390
	690	620		590	520		1180	1120	1080	1020	920	890
	490	430		390	330		950	890	850	820	750	690
	430	260					520	460	430	430	390	330
	330	230					330	260	260	260	230	160
	260	200					230	160		160	130	
	460	390		430	330		920	820	790	750	660	620
	390	300					560	520	460	460	390	330
	230	160					200	160		160	130	
	660	590					790	720	690	560	520	460
	490	390					330	260	260	260	260	200
	820	620	390	660	590							
	490	430		460	390							
	520	460	330	490	430							
							750	660	620	660	590	520
							660	560	520	560	490	430
							1410	1310	1180	1280	1180	1150
							750	660	620	560	490	430
							790	720	660	620	520	490
							560	490	430	430	360	300
							750	620	560			
	9840	7870	5910	9840	7870	5910						
	2950	2360	1180	2950	2360	1180						
	3150	1770	1180	3150	1770	1180						
	1970	1180	790	1970	1180	790						
	2360	1570	1050	2360	1570	1050						
	1570	1180	980	1570	1180	980						
	1120	790	520	1120	790	520						
	330	230		260	200							
	260	200		200	160							
	260	200		200	160							
	230	160		160	130							
	200	130		130	100							
				720	660	520						
	230	160		230	160							
	160	130		130	100							
	160											
	130											
				1310	1310							
				980	980							
				1970	1970							

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

HC = Coated carbide
HE = Coated cermet

Cutting data for turning inserts – Negative and positive basic shape CBN/PCD/ceramic

= Cutting data for wet machining
= Dry machining is possible

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group [1]	Cutting material grades					
							Starting values for cutting speed v_c [sfm]					
							CBN					
									BL WBH10C			
									f [inch/rev]			
									0.002	0.006	0.008	
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	63	P1						
		C > 0.25%... ≤ 0.55%	Annealed	190	93	P2						
		C > 0.25%... ≤ 0.55%	Heat-treated	210	103	P3						
		C > 0.55%	Annealed	190	93	P4						
		C > 0.55%	Heat-treated	300	146	P5						
		Free-machining steel (short-chipping)	Annealed	220	109	P6						
	Low-alloy steel	Annealed		175	86	P7						
		Heat-treated		285	139	P8						
		Heat-treated		380	186	P9						
		Heat-treated		430	215	P10						
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11						
		Hardened and tempered		300	146	P12						
		Hardened and tempered		380	186	P13						
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14						
		Martensitic, heat-treated		330	161	P15						
M	Stainless steel	Austenitic, quench hardened		200	99	M1						
		Austenitic, precipitation hardened (PH)		300	146	M2						
		Austenitic/ferritic, duplex		230	113	M3						
K	Malleable cast iron	Ferritic		200	58	K1	●●	●				
		Pearlitic		260	102	K2	●●	●				
	Grey cast iron	Low tensile strength		180	29	K3	●●	●				
		High tensile strength/austenitic		245	51	K4	●●	●				
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	●●	●				
		Pearlitic		265	102	K6	●●	●				
	GGV (CGI)			230	58	K7						
N	Wrought aluminium alloys	Not hardenable		30	—	N1						
		Hardenable, hardened		100	49	N2						
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3						
		≤ 12% Si, hardenable, hardened		90	45	N4						
		> 12% Si, not hardenable		130	66	N5						
	Magnesium alloys			70	36	N6						
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7						
		Brass, bronze, red brass		90	45	N8						
		Cu alloys, short-chipping		110	55	N9						
		High-tensile, Ampco		300	146	N10						
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1						
			Hardened	280	136	S2						
		Ni- or Co-based	Annealed	250	122	S3	●●	●				
			Hardened	350	171	S4	●●	●				
			Cast	320	157	S5	●●	●				
	Titanium alloys	Pure titanium		200	99	S6						
		α and β alloys, hardened		375	183	S7						
		β alloys		410	203	S8						
	Tungsten alloys			300	146	S9						
	Molybdenum alloys			300	146	S10						
H	Hardened steel	Hardened and tempered		50 HRC	—	H1	●	●●	980	820	720	
		Hardened and tempered		55 HRC	—	H2	●	●●	920	750	660	
		Hardened and tempered		60 HRC	—	H3	●	●●	820	660	590	
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4	●	●●	820	660	590	
O	Thermoplastics	Without abrasive fillers				O1						
	Thermosets	Without abrasive fillers				O2						
	Plastic, glass-fibre-reinforced	GFRP				O3						
	Plastic, carbon-fibre-reinforced	CFRP				O4						
	Plastic, aramid-fibre-reinforced	AFRP				O5						
	Graphite (technical)			80 Shore		O6						

●● Recommended application (the specified cutting data is regarded as starting values for the recommended application)
● Possible application

[1] The classification of the machining groups can be found from page A 682 onwards in the Walter General Catalog 2018.

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

Cutting material grades												
Starting values for cutting speed v_c [sfm]												
CBN										Ceramic		
BL WBH10			BH WBH20			BH WBS10			CN WCK10			
f [inch/rev]			f [inch/rev]			f [inch/rev]			f [inch/rev]			
0.002	0.006	0.008	0.002	0.006	0.008	0.002	0.006	0.008	0.002	0.006	0.008	
										1150	980	820
										820	660	660
										3280	2620	2300
										2620	2300	1970
										1640	1310	1150
										820	660	660
										1150	980	820
						920	720	660				
						920	720	660				
						920	720	660				
980	820	720	820	660	590							
920	750	660	720	590	490							
820	660	590	660	490	390							
820	660	590	660	490	390							

BH = CBN with high CBN content
BL = CBN with low CBN content
CN = Silicon nitride Si_3N_4
CR = Reinforced ceramic
DP = Polycrystalline diamond

Cutting tool material application chart

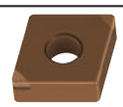
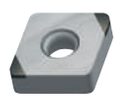
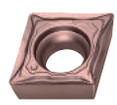
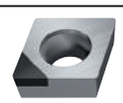
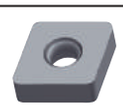
Carbide

Walter grade designation	Standard designation	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Application range 01 05 10 15 20 25 30 35 40 45	Coating method	Coating composition	Indexable insert example
WPV10	HC – P 10	●●								CVD	TiCN + Al_2O_3 + TiN	
	HC – M 20	●										
	HC – K 20		●									
WPV20	HC – P 20	●●								CVD	TiCN + Al_2O_3 + TiN	
	HC – M 30		●									
	HC – K 30			●								
WKV10	HC – K 10			●●						CVD	TiCN + Al_2O_3 + TiN	
	HC – P 10	●										
	HC – H 30						●					
WKV20	HC – K 20			●●						CVD	TiCN + Al_2O_3 + TiN	
	HC – P 20	●										
WSM01	HC – M 01		●●							PVD	TiAlN (HIPIMS)	
	HC – S 01					●●						
	HC – P 10	●										
	HC – N 10				●							
	HC – H 20						●					
WSM21	HC – M 20		●●							PVD	TiAlN	
	HC – S 20					●●						
	HC – P 20	●●										
WNN10	HC – N 10				●●					PVD	TiAlN (HIPIMS)	
	HC – P 01	●										
	HC – M 01		●									

HC = Coated carbide
HW = Uncoated carbide

●● Primary application
● Additional application

CBN/cermet/PCD/ceramic

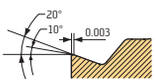
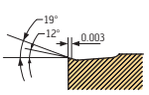
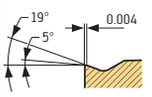
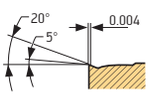
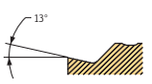
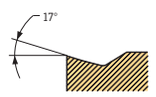
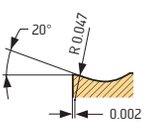
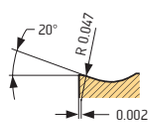
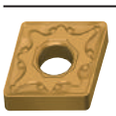
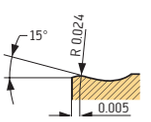
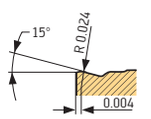
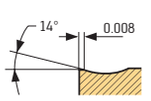
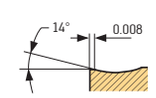
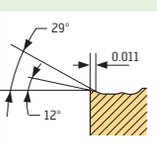
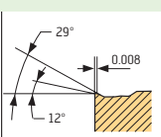
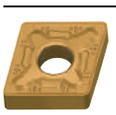
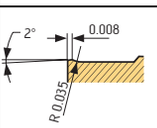
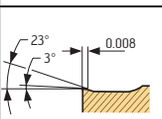
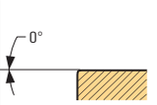
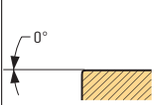
Walter grade designation	Standard designation	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Application range 01 05 10 15 20 25 30 35 40 45	Coating method	Cutting tool material	Indexable insert example
WBH10C	BL – H 05						●●			PVD	CBN + TiAlSiN	
WBH10	BL – H 10						●●			–	CBN	
WBH20	BL – H 20						●●			–	CBN	
WBS10	BH – S 10					●●				–	CBN	
WEP10	HE – P 10	●●								PVD	TiCN + TiAlN	
	HE – M 10		●									
	HE – K 10			●								
WDN10	DP – N 20				●●					–	PCD	
	DP – O 20							●●				
WCK10	CN – K 10			●●						–	Si_3N_4 ceramic	
WIS10	CN – S 10					●●				–	SiAlON ceramic	
WWS20	CR – S 20					●●				–	Whisker ceramic	
	CR – H 20						●					

BH = CBN with high CBN content
BL = CBN with low CBN content
CN = Silicon nitride Si_3N_4
CR = Reinforced ceramic
DP = Polycrystalline diamond

●● Primary application
● Additional application

Geometry overview of turning inserts – Negative basic shape

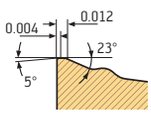
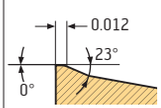
Finishing operation

Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	FM5 – Finishing stainless materials and high-temperature alloys – Finishing long-chipping steel materials – Curved cutting edge for cutting pressure reduction	•	••			••					0.004–0.177	0.002–0.020
	FV5 – Finishing steel materials – Can also be used in semi-finishing	••	•	•							0.008–0.079	0.002–0.010
Medium machining												
	MS3 – For unstable or thin-walled components – Low cutting forces thanks to sharp cutting edge design – Circumference precision-ground – Circumference precision-sintered	•	•		•	••					0.008–0.118	0.001–0.012
	MM5 – Universal geometry for stainless materials and for high-temperature alloys – Machining long-chipping steels	•	••			••					0.020–0.177	0.004–0.018
	**MV5** – Universal geometry for steel materials – Wide range of applications	••	•	•							0.020–0.197	0.004–0.018
	MV7 – Universal geometry for cast iron workpieces – Machining steel materials with higher strength	•		••							0.031–0.315	0.008–0.024
Roughing operation												
	RM5 – Roughing operations in stainless materials and high-temperature alloys		••			••					0.047–0.315	0.008–0.031
	**RV5** – Roughing steel materials – Roughing ductile cast iron	••		•							0.039–0.236	0.006–0.024
	RV7 – Universal geometry for cast iron workpieces			••				•			0.031–0.197	0.008–0.028

•• Primary application
• Additional application

Comment: Sectional views show CNMG120408 . .
or CNMA 120408 . .

Roughing operations – Single-sided indexable inserts

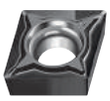
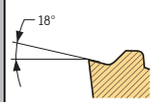
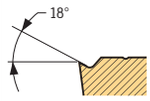
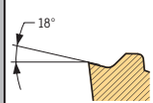
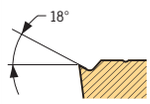
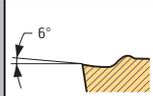
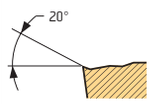
Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	HU5 – Universal, single sided roughing insert – Open chip breaker groove design for reduced heat development – Low cutting forces due to curved cutting edge	●	●●	●		●●					0.098–0.394	0.012–0.039

●● Primary application
● Additional application

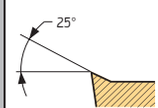
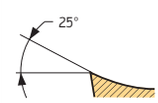
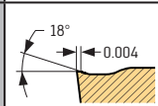
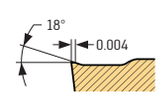
Comment: Sectional views show SNMM190616 . .

Geometry overview of turning inserts – Positive basic shape

Finishing operation

Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	**FN2** – Finishing insert with circumference fully ground – Low cutting forces – Machining long, small diameter shafts with a tendency to vibrate	●●	●●	●	●●	●●					0.005–0.177	0.001–0.018
	FM2 – Finishing insert with circumference fully ground – Low cutting forces – Machining long, small diameter shafts with a tendency to vibrate	●●	●●	●	●●	●●					0.005–0.177	0.001–0.018
	FV4 – Universal finishing indexable insert – Excellent chip control – Can also be used for precision boring	●●	●	●		●					0.004–0.098	0.002–0.008

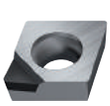
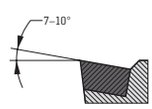
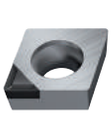
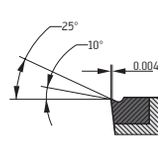
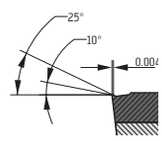
Medium machining

Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	MN2 – Universal indexable insert for non-ferrous metallic materials – Sharp cutting edge with circumference fully ground – Polished rake face – Precision finishing on steel and stainless materials	●	●		●●	●					0.020–0.236	0.001–0.031
	MV4 – Machining long-chipping materials – Can be used universally in a wide range of applications	●●	●	●		●					0.016–0.138	0.004–0.014

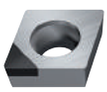
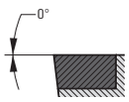
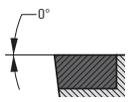
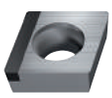
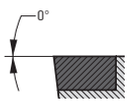
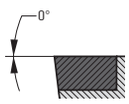
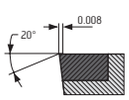
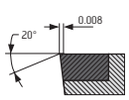
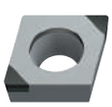
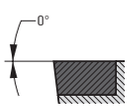
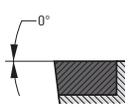
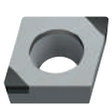
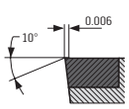
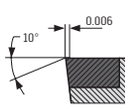
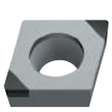
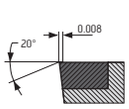
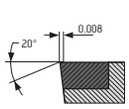
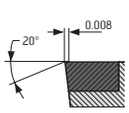
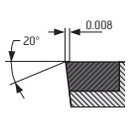
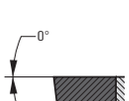
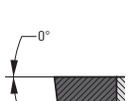
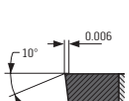
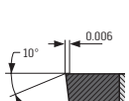
●● Primary application
● Additional application

Comment: Sectional views show CCMT09T308 . .
or CCGT09T308 . .

Geometry overview of turning inserts – Positive basic shape CBN/PCD

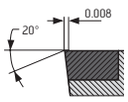
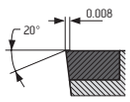
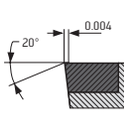
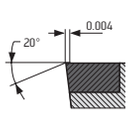
Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	**. CGT . . . FS-1** – PCD finishing insert with circumference fully ground in G tolerance – Extremely low cutting forces due to 7°–10° rake angle – Extremely high surface quality				●●	●		●●	—		0.002–0.059	0.001–0.015
	**. CGT . . . FS-M1** – PCD indexable insert with circumference fully ground in G tolerance – Excellent chip control thanks to laser-generated chip-breaker geometry – Finishing to medium machining				●●	●		●●			0.004–0.118	0.003–0.008

Geometry overview of turning inserts – Positive basic shape CBN/PCD (cont.)

Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	**. CGW . . . FS-1** – PCD indexable insert with circumference fully ground in G tolerance – Universal PCD indexable insert with 0° rake angle – Maximum repeat accuracy				●●	●		●●			0.002–0.138	0.001–0.015
	**. CGW . . . FSL/R-9** – PCD indexable insert with circumference fully ground in G tolerance – Cutting edge with guide pad – Maximum depth of cut and shoulder machining				●●	●		●●			0.002–0.354	0.001–0.015
	. CGW. . TM-MW2 – CBN indexable insert with circumference fully ground in G tolerance – Universal CBN indexable insert with chamfered cutting edge – Effective wiper geometry for the best surfaces						●●				0.004–0.020	0.002–0.012
	**. CGW. . EM2** – CBN indexable insert with circumference fully ground – Rounded cutting edge for minimum cutting forces – Machining high-temperature alloys					●●					0.004–0.079	0.002–0.008
	**. CGW. . TS2** – CBN indexable insert with circumference fully ground in G tolerance – Universal CBN indexable insert with chamfered cutting edge – Finishing operations in hardened steel						●●				0.004–0.020	0.002–0.010
	**. CGW. . TM2** – CBN indexable insert with circumference fully ground in G tolerance – Universal CBN indexable insert with chamfered cutting edge – Machining of hardened steel						●●				0.004–0.020	0.002–0.010
	CNG..TM-MW2 – CBN indexable insert with circumference fully ground in G tolerance – CBN indexable insert with chamfered cutting edge – Effective wiper geometry for the best surfaces						●●				0.004–0.020	0.002–0.012
	CNG..EM2 – CBN indexable insert with circumference fully ground in G tolerance – Rounded cutting edge for minimum cutting forces – Machining high-temperature alloys					●●					0.004–0.079	0.002–0.008
	CNG..TS2 – CBN indexable insert with circumference fully ground in G tolerance – Universal CBN indexable insert with chamfered cutting edge – Finishing operations in hardened steel						●●				0.004–0.020	0.002–0.010

●● Primary application
● Additional application

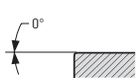
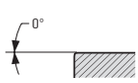
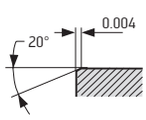
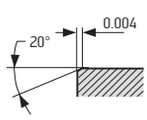
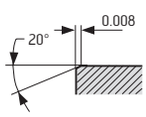
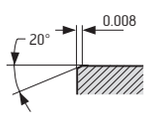
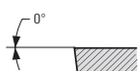
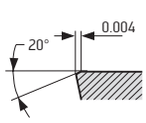
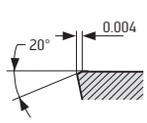
Geometry overview of turning inserts – Positive basic shape CBN/PCD (cont.)

Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	CNG..TM2 – CBN indexable insert with circumference fully ground in G tolerance – Universal CBN indexable insert with chamfered cutting edge – Machining of hardened steel						••				0.004–0.020	0.002–0.010
 Chipbreaker	**CNG..TM-M2** – CBN indexable insert with circumference fully ground in G tolerance – CBN indexable insert with chamfered cutting edge – Effective chip formation for hard machining						••				0.004–0.020	0.002–0.010

•• Primary application
• Additional application

Geometry overview of turning inserts Ceramic

Ceramic

Geometry	Remarks/field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	Corner radius section	a_p [in]	f [in]
	. . . E – Ceramic indexable insert with circumference fully ground – Rounded cutting edge for minimum cutting forces – Machining high-temperature alloys					••					0.004–0.295	0.004–0.197
	. . . T01020 – Ceramic indexable insert with circumference fully ground – Chamfered cutting edge for maximum stability for medium machining to roughing operations – Machining high-temperature alloys					••	•				0.004–0.197	0.004–0.018
	. . . T02020 – Ceramic indexable insert with circumference fully ground – Chamfered cutting edge for maximum stability for medium machining to roughing operations – Machining cast iron			••							0.004–0.236	0.004–0.016
	. . . E – Ceramic indexable insert with circumference fully ground – Rounded cutting edge for minimum cutting forces – Machining high-temperature alloys					••					0.004–0.142	0.004–0.013
	. . . T01020 – Ceramic indexable insert with circumference fully ground – Chamfered cutting edge for maximum stability for medium machining to roughing operations – Machining high-temperature alloys					••					0.004–0.142	0.004–0.013

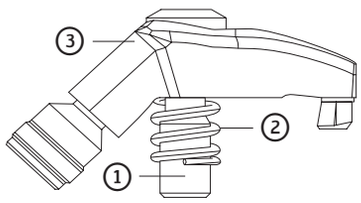
•• Primary application
• Additional application

Assembly parts and accessories for Walter Turn rigid clamping with precision cooling

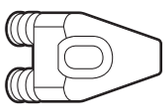
Standard clamps for tools with precision cooling

Application

for indexable inserts with drilled hole

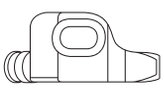


Version

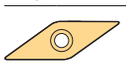


Walter Capto

Right

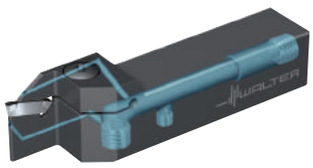


Left

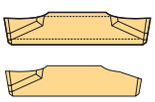
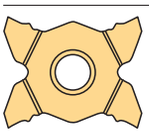
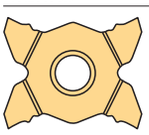
Set	PK255 set	PK256 set	PK264 set	PK267 set	PK268 set	PK261R/L set	PK265R/L set	PK266R/L set
① Clamp screw	FS1473 (Torx 15IP)	FS1473 (Torx 15IP)	FS1474 (Torx 20IP)	FS1474 (Torx 20IP)	FS1474 (Torx20IP)	FS1473 (Torx 15IP)	FS1473 (Torx 15IP)	FS1473 (Torx 15IP)
② Pressure spring	FS2188	FS2188	FS2298	FS2298	FS2298	FS2188	FS2188	FS2188
③ Clamp	PK255	PK256	PK264	PK267	PK268	PK261R/L	PK265R/L	PK266R/L
Type	**Size**							
	CN . 4 . . CN . . 12 . .		CN . 5 . . CN . . 19 . .	CN . 5 CN . . 16 . .		CN . 5 . . CN . . 12 . .	CN . 4 . . CN . . 12 . . [1]	
	DN . 3 . . DN . . 11 . .	DN . 4 . . DN . . 15 . .				DN . 3 . ./DC . 3.. DN . . 11 . . /DC . . 11 . .	DN . 4 . . DN . . 15 . .	
					RN . 4 . . RN . N12 . .			
	SN . 4 . . SN . . 12 . .					SN . . 4 . . SN . . 12 . .	SN . 4 . . SN . . 12 . . [1]	
	TN . 3 . . TN 16 . . /TC 16T3 . .					TN . 3 . ./TC . 3 . . TN . . 16 . ./TC . . 16T3 . .		
	VB . 33 . . VB . . 1604 . .					VB . 33 . . VB . . 1604 . .		
	WN . 4 . . WN . . 08 . .							WN . 4 . . WN . . 08 . .

[1] First choice

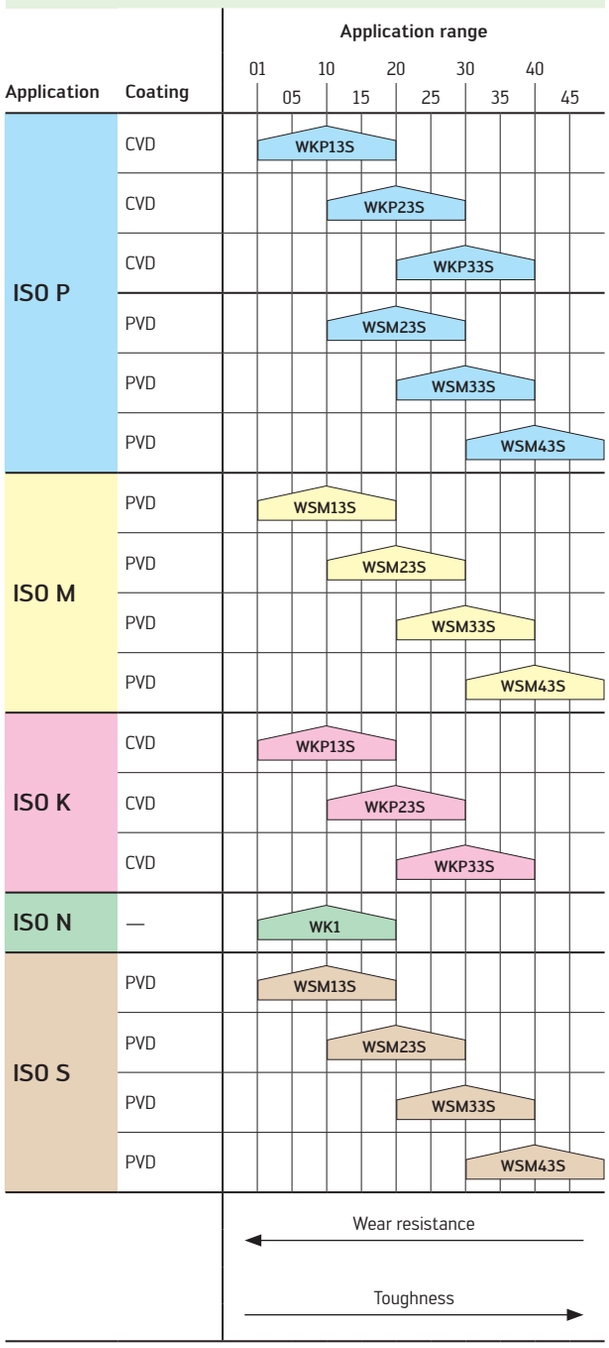
Product range overview of cutting inserts and cutting tool materials: Grooving



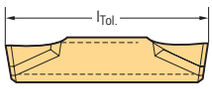
Cutting inserts

Insert shape	Description	Page
Parting off/grooving		
 **GX**	Walter Cut GX grooving inserts, double-edged/ single-edged	112
SX	Walter Cut SX grooving inserts, single-edged	118
 **MX**	Walter Cut MX grooving inserts, four-edged	120
Recessing		
GX	Walter Cut GX grooving inserts, double-edged	115
Semi-finished parts/ blanks		
 **MX**	Walter Cut MX grooving inserts, four-edged	120

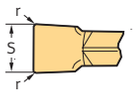
Cutting tool materials: Carbide



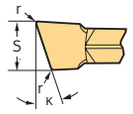
Grooving and parting off
GX cutting inserts
Tiger·tec® Silver



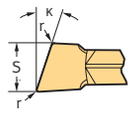
GX...N



GX...R



GX...L



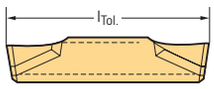
Cutting inserts

	Designation	s mm	s in	r in	κ	l in	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	N HW WK1	S HC WSM23S	S HC WSM33S	S HC WSM43S
	GX16-1E200N02-CK8	2	0.079	0.008		0.654	0.001–0.004	±0.0008	±0.0012									●			
	GX16-2E300N02-CK8	3	0.118	0.008		0.654	0.003–0.008	±0.0008	±0.0012									●			
	GX24-2E300N02-CK8	3	0.118	0.008		0.969	0.003–0.008	±0.0008	±0.0012									●			
	GX24-3E400N02-CK8	4	0.157	0.008		0.969	0.004–0.009	±0.0008	±0.0012									●			
	GX16-1E200N00-CF5	2	0.079	0.000		0.654	0.001–0.004	±0.0008	±0.0020			●	●		●	●				●	●
	GX16-1E200N02-CF5	2	0.079	0.008		0.654	0.001–0.004	±0.0020	±0.0059		●	●	●	●	●	●			●	●	●
	GX16-1E200R/L6-CF5	2	0.079	0.008	6°	0.654	0.001–0.004	±0.0020	±0.0059			●	●		●	●				●	●
	GX16-1E200R/L7-CF5	2	0.079	0.000	7°	0.646	0.001–0.004	±0.0020	±0.0059			●			●					●	
	GX16-1E200R/L15-CF5	2	0.079	0.000	15°	0.646	0.001–0.004	±0.0020	±0.0059			●			●					●	
	GX16-1E250N02-CF5	2.5	0.098	0.008		0.654	0.002–0.006	±0.0020	±0.0059			●	●		●	●				●	●
	GX16-1E250R/L6-CF5	2.5	0.098	0.008	6°	0.654	0.001–0.004	±0.0020	±0.0059			●			●					●	
	GX16-2E300N02-CF5	3	0.118	0.008		0.654	0.003–0.008	±0.0020	±0.0059		●	●	●	●	●	●			●	●	●
	GX16-2E300R/L6-CF5	3	0.118	0.008	6°	0.654	0.001–0.007	±0.0020	±0.0059			●			●					●	
	GX16-2E300R/L7-CF5	3	0.118	0.000	7°	0.654	0.001–0.005	±0.0020	±0.0059			●			●					●	
	GX16-2E300R/L15-CF5	3	0.118	0.000	15°	0.654	0.001–0.005	±0.0020	±0.0059			●			●					●	
	GX24-1E200N02-CF5	2	0.079	0.008		0.945	0.001–0.004	±0.0020	±0.0059		●	●	●	●	●	●			●	●	●
	GX24-1E250N02-CF5	2.5	0.098	0.008		0.945	0.002–0.006	±0.0020	±0.0059			●	●		●	●				●	●
	GX24-2E300N00-CF5	3	0.118	0.000		0.969	0.001–0.007	±0.0008	±0.0020			●	●		●	●				●	●
	GX24-2E300N02-CF5	3	0.118	0.008		0.945	0.003–0.008	±0.0020	±0.0059		●	●	●	●	●	●			●	●	●
	GX24-2E300R/L6-CF5	3	0.118	0.008	6°	0.969	0.001–0.007	±0.0020	±0.0059			●	●		●	●				●	●
	GX24-3E400N02-CF5	4	0.157	0.008		0.945	0.004–0.009	±0.0020	±0.0059		●	●	●	●	●	●			●	●	●
	GX24-3E400R/L6-CF5	4	0.157	0.008	6°	0.969	0.004–0.007	±0.0020	±0.0059			●			●					●	
	GX24-3E500N03-CF5	5	0.197	0.012		0.945	0.004–0.010	±0.0020	±0.0059			●	●		●	●				●	●
	GX34-2E300N03-CF5	3	0.118	0.012		1.339	0.003–0.008	±0.0020	±0.0059		●	●	●	●	●	●			●	●	●
	GX34-2E300R/L6-CF5	3	0.118	0.012	6°	1.339	0.001–0.007	±0.0020	±0.0059			●			●					●	
	GX34-3E400N04-CF5	4	0.157	0.016		1.339	0.004–0.009	±0.0020	±0.0059		●	●	●	●	●	●			●	●	●

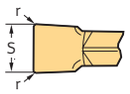
l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in
Parting off with diameters up to 1.26 in(32 mm) is possible with GX16 inserts (l = 16.6 mm)

HC = Coated carbide
HW = Uncoated carbide

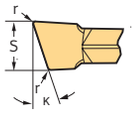
Grooving and parting off
GX cutting inserts
Tiger·tec® Silver



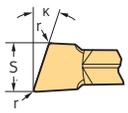
GX...N



GX...R



GX...L



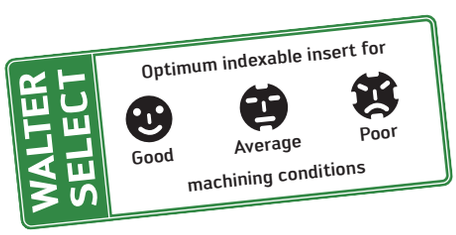
A2

Cutting inserts

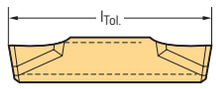
	Designation	s mm	s in	r in	κ	l in	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	N HW WK1	S HC WSM23S	S HC WSM33S	S HC WSM43S
	GX16-1E200N02-CE4	2	0.079	0.008		0.654	0.002–0.006	±0.0020	±0.0059		☺	😐	☹	☺	😐	☹			☺	😐	☹
	GX16-1E200R/L6-CE4	2	0.079	0.008	6°	0.654	0.001–0.004	±0.0020	±0.0059			😐	☹		😐	☹				😐	☹
	GX16-1E250N02-CE4	2.5	0.098	0.008		0.654	0.003–0.007	±0.0020	±0.0059			😐	☹		😐	☹				😐	☹
	GX16-1E250R/L6-CE4	2.5	0.098	0.008	6°	0.654	0.002–0.004	±0.0020	±0.0059			😐			😐					😐	
	GX16-2E300N02-CE4	3	0.118	0.008		0.654	0.004–0.012	±0.0020	±0.0059		☺	😐	☹	☺	😐	☹			☺	😐	☹
	GX16-2E300R/L6-CE4	3	0.118	0.008	6°	0.654	0.004–0.010	±0.0020	±0.0059			😐			😐					😐	
	GX24-1E200N02-CE4	2	0.079	0.008		0.945	0.002–0.006	±0.0020	±0.0059	☺	☺	😐	☹	☺	😐	☹	😐		☺	😐	☹
	GX24-1E250N02-CE4	2.5	0.098	0.008		0.945	0.003–0.007	±0.0020	±0.0059	☺		😐	☹		😐	☹	😐			😐	☹
	GX24-2E300N02-CE4	3	0.118	0.008		0.945	0.004–0.012	±0.0020	±0.0059	☺	☺	😐	☹	☺	😐	☹	😐		☺	😐	☹
	GX24-2E300R/L6-CE4	3	0.118	0.008	6°	0.969	0.004–0.010	±0.0020	±0.0059	☺		😐	☹		😐	☹	😐			😐	☹
	GX24-3E400N03-CE4	4	0.157	0.012		0.945	0.004–0.013	±0.0020	±0.0059	☺	☺	😐	☹	☺	😐	☹	😐		☺	😐	☹
	GX24-3E400R/L6-CE4	4	0.157	0.008	6°	0.969	0.004–0.010	±0.0020	±0.0059			😐	☹		😐	☹				😐	☹
	GX24-3E500N03-CE4	5	0.197	0.012		0.945	0.004–0.014	±0.0020	±0.0059	☺		😐	☹		😐	☹	😐			😐	☹
	GX24-4E600N03-CE4	6	0.236	0.012		0.945	0.004–0.016	±0.0020	±0.0059	☺		😐	☹		😐	☹	😐			😐	☹
	GX34-2E300R6-CE4	3	0.118	0.012	6°	1.339	0.004–0.010	±0.0020	±0.0059			😐			😐					😐	
	GX34-2E300N03-CE4	3	0.118	0.012		1.339	0.004–0.012	±0.0020	±0.0059	☺		😐	☹		😐	☹	😐			😐	☹
	GX34-2E300L6-CE4	3	0.118	0.012	6°	1.339	0.004–0.010	±0.0020	±0.0059			😐			😐					😐	
	GX34-3E400N04-CE4	4	0.157	0.016		1.339	0.004–0.013	±0.0020	±0.0059	☺		😐			😐		😐			😐	
	GX16-1E200N02-GD6	2	0.079	0.008		0.630	0.001–0.004	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX16-1E250N02-GD6	2.5	0.098	0.008		0.630	0.002–0.007	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX16-2E300N03-GD6	3	0.118	0.012		0.630	0.003–0.007	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX16-3E400N04-GD6	4	0.157	0.016		0.630	0.004–0.009	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX16-3E500N04-GD6	5	0.197	0.016		0.630	0.004–0.010	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX24-2E300N03-GD6	3	0.118	0.012		0.945	0.003–0.007	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX24-3E400N04-GD6	4	0.157	0.016		0.945	0.004–0.009	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX24-3E500N04-GD6	5	0.197	0.016		0.945	0.004–0.010	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX24-4E600N05-GD6	6	0.236	0.020		0.945	0.006–0.012	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX34-2E300N03-GD6	3	0.118	0.012		1.339	0.003–0.008	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	
	GX34-3E400N04-GD6	4	0.157	0.016		1.339	0.004–0.009	±0.0020	±0.0059		☺	😐		☺	😐				☺	😐	

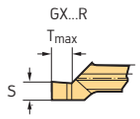
l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in
Parting off with diameters up to 1.26 in(32 mm) is possible with GX16 inserts (l = 16.6 mm)

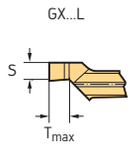
HC = Coated carbide
HW = Uncoated carbide



Grooving and parting off
GX cutting inserts
Tiger·tec® Silver







A 2

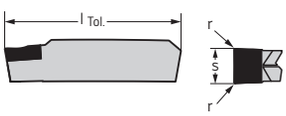
Cutting inserts

	Designation	s mm	s in	r in	T_{max} in	l in	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM23S	S HC WSM33S	S HC WSM43S
	GX09-1E100R/L00-GD8	1	0.039	0	0.045	0.354	0.002–0.004	±0.0008	±0.0008		☺			☺				☺		
	GX09-1E120R/L00-GD8	1.2	0.047	0	0.053	0.354	0.002–0.004	±0.0008	±0.0008		☺			☺				☺		
	GX09-1E140R/L00-GD8	1.4	0.055	0	0.060	0.354	0.002–0.004	±0.0008	±0.0008		☺			☺				☺		
	GX16-2E100R/L00-GD8	1	0.039	0	0.045	0.630	0.002–0.004	±0.0008	±0.0008		☺			☺				☺		
	GX16-2E120R/L00-GD8	1.2	0.047	0	0.053	0.630	0.002–0.004	±0.0008	±0.0008		☺			☺				☺		
	GX16-2E140R/L00-GD8	1.4	0.055	0	0.060	0.630	0.002–0.004	±0.0008	±0.0008		☺			☺				☺		

l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in
Cutting insert can be used in G15... / NCCE / NCNE / NCCI tools
With other tools. adapt support to the cutting insert profile
Further cutting inserts for circlip grooves: GX...UF8 / MX22...GD8 / MX22...CF5

HC = Coated carbide

PCD – Grooving and parting off
GX cutting inserts



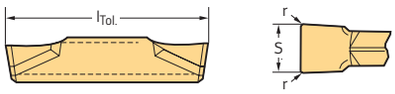
Cutting inserts

	Designation	s mm	s in	r in	l in	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM33S	P HC WSM43S	M HC WSM33S	M HC WSM43S	N DP WDN10	K HC WKP23S	S HC WSM33S	S HC WSM43S	S DP WDN10
	GX16-1F200N02FS-F1	2	0.079	0.008	0.630	0.001–0.004	±0.0008	±0.0008						☺				☺
	GX24-2F300N02FS-F1	3	0.118	0.008	0.945	0.002–0.007	±0.0008	±0.0008						☺				☺
	GX24-2F318N02FS-F1	3.18	0.125	0.008	0.945	0.002–0.007	±0.0008	±0.0008						☺				☺
	GX24-3F400N02FS-F1	4	0.157	0.008	0.945	0.002–0.009	±0.0008	±0.0008						☺				☺
Chipbreaker	GX24-3F475N02FS-F1	4.75	0.187	0.008	0.945	0.002–0.010	±0.0008	±0.0008						☺				☺
	GX24-3F500N02FS-F1	5	0.197	0.008	0.945	0.002–0.010	±0.0008	±0.0008						☺				☺
	GX24-4F600N02FS-F1	6	0.236	0.008	0.945	0.002–0.011	±0.0008	±0.0008						☺				☺

l_{Tol} = Repeat accuracy when changing indexable insert

HC = Coated carbide
DP = Polycrystalline diamond

Grooving and recessing
GX cutting inserts
Tiger·tec® Silver



A2

Cutting inserts

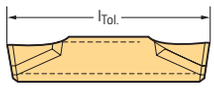
	Designation	s mm	s in	r in	l in	f in	a_p in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM23S	S HC WSM33S	S HC WSM43S
	GX09-0E170N01-UF8	1.7	0.067	0.004	0.354	0.002–0.006	0.012–0.031	±0.0008	±0.0012		☺			☺				☺		
	GX09-0E196N01-UF8	1.96	0.077	0.004	0.354	0.002–0.006	0.012–0.031	±0.0008	±0.0012		☺			☺				☺		
	GX09-1E225N01-UF8	2.25	0.089	0.004	0.354	0.002–0.008	0.012–0.039	±0.0008	±0.0012		☺			☺				☺		
	GX09-1E275N01-UF8	2.75	0.108	0.004	0.354	0.002–0.009	0.012–0.051	±0.0008	±0.0012		☺			☺				☺		
	GX09-2E325N01-UF8	3.25	0.128	0.004	0.354	0.003–0.010	0.016–0.059	±0.0008	±0.0012		☺			☺				☺		
	GX16-0E160N01-UF8	1.6	0.063	0.004	0.630	0.002–0.007	0.012–0.039	±0.0008	±0.0012		☺			☺				☺		
	GX16-0E170N01-UF8	1.7	0.067	0.004	0.630	0.002–0.007	0.012–0.039	±0.0008	±0.0012		☺			☺				☺		
	GX16-0E185N01-UF8	1.85	0.073	0.004	0.630	0.002–0.009	0.012–0.039	±0.0008	±0.0012		☺			☺				☺		
	GX16-0E196N01-UF8	1.96	0.077	0.004	0.630	0.002–0.009	0.012–0.047	±0.0008	±0.0012		☺			☺				☺		
	GX16-1E200N02-UF8	2	0.079	0.008	0.630	0.002–0.009	0.012–0.047	±0.0008	±0.0012		☺			☺				☺		
	GX16-1E225N01-UF8	2.25	0.089	0.004	0.630	0.002–0.009	0.012–0.051	±0.0008	±0.0012		☺			☺				☺		
	GX16-1E239N02-UF8	2.39	0.094	0.008	0.630	0.002–0.009	0.012–0.051	±0.0008	±0.0012		☺			☺				☺		
	GX16-1E275N01-UF8	2.75	0.108	0.004	0.630	0.002–0.009	0.012–0.051	±0.0008	±0.0012		☺			☺				☺		
	GX16-2E300N02-UF8	3	0.118	0.008	0.630	0.003–0.010	0.016–0.059	±0.0008	±0.0012		☺			☺				☺		
	GX16-2E318N02-UF8	3.18	0.125	0.008	0.630	0.003–0.010	0.016–0.063	±0.0008	±0.0012		☺			☺				☺		
	GX16-2E325N01-UF8	3.25	0.128	0.004	0.630	0.003–0.010	0.016–0.063	±0.0008	±0.0012		☺			☺				☺		
	GX16-3E400N04-UF8	4	0.157	0.016	0.630	0.004–0.012	0.035–0.087	±0.0008	±0.0012		☺			☺				☺		
	GX16-3E425N02-UF8	4.25	0.167	0.008	0.630	0.004–0.012	0.020–0.087	±0.0008	±0.0012		☺			☺				☺		
	GX16-3E525N02-UF8	5.25	0.207	0.008	0.630	0.004–0.014	0.035–0.102	±0.0008	±0.0012		☺			☺				☺		
	GX24-1E239N02-UF8	2.39	0.094	0.008	0.945	0.002–0.009	0.012–0.051	±0.0008	±0.0012		☺			☺				☺		
	GX24-1E275N01-UF8	2.75	0.108	0.004	0.945	0.002–0.009	0.012–0.051	±0.0008	±0.0012		☺			☺				☺		
	GX24-2E300N02-UF8	3	0.118	0.008	0.945	0.003–0.010	0.016–0.059	±0.0008	±0.0012		☺			☺				☺		
	GX24-2E300N04-UF8	3	0.118	0.016	0.945	0.003–0.010	0.016–0.059	±0.0008	±0.0012		☺			☺				☺		
	GX24-2E318N02-UF8	3.18	0.125	0.008	0.945	0.003–0.010	0.016–0.063	±0.0008	±0.0012		☺			☺				☺		
	GX24-2E325N01-UF8	3.25	0.128	0.004	0.945	0.003–0.010	0.016–0.063	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E400N02-UF8	4	0.157	0.008	0.945	0.004–0.012	0.012–0.087	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E400N04-UF8	4	0.157	0.016	0.945	0.004–0.012	0.020–0.087	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E425N02-UF8	4.25	0.167	0.008	0.945	0.004–0.012	0.020–0.087	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E475N05-UF8	4.75	0.187	0.020	0.945	0.004–0.012	0.024–0.094	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E500N02-UF8	5	0.197	0.008	0.945	0.004–0.014	0.012–0.102	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E500N04-UF8	5	0.197	0.016	0.945	0.004–0.014	0.024–0.102	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E500N08-UF8	5	0.197	0.031	0.945	0.004–0.014	0.035–0.102	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E525N02-UF8	5.25	0.207	0.008	0.945	0.004–0.014	0.035–0.102	±0.0008	±0.0012		☺			☺				☺		
	GX24-3E556N05-UF8	5.56	0.219	0.020	0.945	0.004–0.014	0.024–0.110	±0.0008	±0.0012		☺			☺				☺		
	GX24-4E600N02-UF8	6	0.236	0.008	0.945	0.004–0.014	0.012–0.126	±0.0008	±0.0012		☺			☺				☺		
	GX24-4E600N04-UF8	6	0.236	0.016	0.945	0.004–0.014	0.024–0.126	±0.0008	±0.0012		☺			☺				☺		
	GX24-4E600N08-UF8	6	0.236	0.031	0.945	0.004–0.014	0.035–0.126	±0.0008	±0.0012		☺			☺				☺		
	GX24-4E635N04-UF8	6.35	0.250	0.016	0.945	0.004–0.014	0.024–0.134	±0.0008	±0.0012		☺			☺				☺		
	GX24-4E635N08-UF8	6.35	0.250	0.031	0.945	0.004–0.014	0.035–0.134	±0.0008	±0.0012		☺			☺				☺		
	GX30-5E800N08-UF8	8	0.315	0.031	1.181	0.005–0.016	0.039–0.165	±0.0008	±0.0012		☺			☺				☺		

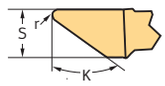
l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in

HC = Coated carbide

Grooving and recessing
GX cutting inserts

Tiger·tec® Silver





A 2

Cutting inserts

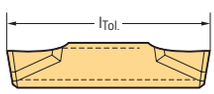
	Designation	s mm	s in	r in	κ	l in	f in	a_p in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM23S	S HC WSM33S	S HC WSM43S
	GX24-2E280R02-VG7	2.8	0.110	0.200	50°	0.945	0.002–0.004	0.008–0.079	±0.0020	±0.0059		●	●		●	●			●	●	
	GX24-2E280R04-VG7	2.8	0.110	0.016	50°	0.945	0.003–0.010	0.008–0.098	±0.0020	±0.0059		●	●		●	●			●	●	

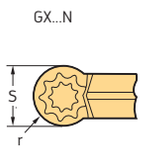
l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in
Cutting insert can be used in G15... tools
With other tools. adapt support to the cutting insert profile

HC = Coated carbide

Grooving and copy turning
GX cutting inserts

Tiger·tec® Silver





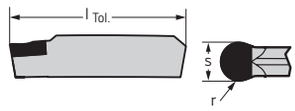
Cutting inserts

	Designation	s mm	s in	r in	l in	f in	a_p in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM13S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM13S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM13S	S HC WSM23S	S HC WSM33S	S HC WSM43S
	GX09-1E200N10-RF8	2	0.079	0.039	0.354	0.002-0.007	0.004-0.039	±0.0008	±0.0008			●				●					●		
	GX09-1E239N12-RF8	2.39	0.094	0.047	0.354	0.002-0.008	0.008-0.047	±0.0008	±0.0008			●				●					●		
	GX16-1E200N10-RF8	2	0.079	0.039	0.630	0.003-0.010	0.004-0.039	±0.0020	±0.0020		●	●			●	●				●	●		
	GX16-1E239N12-RF8	2.39	0.094	0.047	0.630	0.003-0.011	0.008-0.047	±0.0008	±0.0008			●				●					●		
	GX16-2E300N15-RF8	3	0.118	0.059	0.630	0.004-0.012	0.004-0.059	±0.0008	±0.0008		●	●			●	●				●	●		
	GX16-3E400N20-RF8	4	0.157	0.079	0.630	0.005-0.018	0.004-0.079	±0.0008	±0.0008			●				●					●		
	GX16-3E500N25-RF8	5	0.197	0.098	0.630	0.006-0.004	0.008-0.098	±0.0008	±0.0008			●				●					●		
	GX16-4E600N30-RF8	6	0.236	0.118	0.630	0.006-0.022	0.004-0.118	±0.0008	±0.0008			●				●					●		
	GX24-2E300N15-RF8	3	0.118	0.059	0.945	0.004-0.012	0.004-0.059	±0.0008	±0.0008		●	●			●	●				●	●		
	GX24-2E318N16-RF8	3.18	0.125	0.063	0.945	0.004-0.012	0.004-0.059	±0.0008	±0.0008			●				●					●		
	GX24-3E400N20-RF8	4	0.157	0.079	0.945	0.005-0.018	0.004-0.079	±0.0008	±0.0008		●	●			●	●				●	●		
	GX24-3E475N24-RF8	4.75	0.187	0.094	0.945	0.006-0.020	0.004-0.091	±0.0008	±0.0008			●				●					●		
	GX24-3E500N25-RF8	5	0.197	0.098	0.945	0.006-0.020	0.004-0.098	±0.0008	±0.0008		●	●			●	●				●	●		
	GX24-4E600N30-RF8	6	0.236	0.118	0.945	0.006-0.022	0.004-0.118	±0.0008	±0.0008		●	●			●	●				●	●		
	GX24-4E635N32-RF8	6.35	0.250	0.125	0.945	0.006-0.022	0.004-0.118	±0.0008	±0.0008			●				●					●		
	GX30-5E800N40-RF8	8	0.315	0.157	1.181	0.007-0.024	0.008-0.157	±0.0008	±0.0008		●	●			●	●				●	●		

l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in

HC = Coated carbide

PCD – Grooving and copy turning
GX cutting inserts



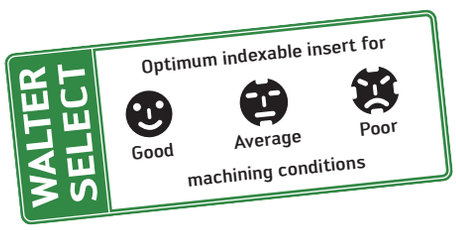
Cutting inserts

Chipbreaker

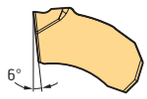
Designation	s mm	s in	r in	l in	f in	a_p in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM33S	P HC WSM43S	M HC WSM33S	M HC WSM43S	N DP WDN10	K HC WKP23S	S HC WSM33S	S HC WSM43S	S DP WDN10
GX16-1F200N10FS-M1	2	0.079	0.004	0.630	0.002–0.010	0.004	±0.0008	±0.0008						☺				☺
GX24-2F300N15FS-M1	3	0.118	0.006	0.945	0.002–0.012	0.004	±0.0008	±0.0008						☺				☺
GX24-2F318N16FS-M1	3.18	0.125	0.006	0.945	0.002–0.012	0.004	±0.0008	±0.0008						☺				☺
GX24-3F400N20FS-M1	4	0.157	0.008	0.945	0.002–0.014	0.004	±0.0008	±0.0008						☺				☺
GX24-3F475N24FS-M1	4.75	0.187	0.009	0.945	0.002–0.016	0.004	±0.0008	±0.0008						☺				☺
GX24-3F500N25FS-M1	5	0.197	0.010	0.945	0.002–0.016	0.004	±0.0008	±0.0008						☺				☺
GX24-4F600N30FS-M1	6	0.236	0.012	0.945	0.002–0.020	0.004	±0.0008	±0.0008						☺				☺
GX30-5F800N40FS-M1	8	0.315	0.016	1.181	0.002–0.024	0.004	±0.0008	±0.0008						☺				☺

l_{Tol} = Repeat accuracy when changing indexable insert

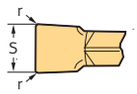
HC = Coated carbide
DP = Polycrystalline diamond



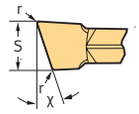
Grooving and parting off
SX cutting inserts
Tiger·tec® Silver



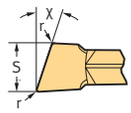
SX...N



SX...R



SX...L



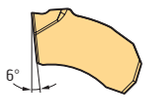
Cutting inserts

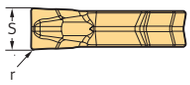
	Designation	s mm	s in	r in	κ	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	N HW WK1	S HC WSM23S	S HC WSM33S	S HC WSM43S
	SX-2E200N02-CK8	2	0.079	0.008		0.001–0.004	±0.0008	±0.0020									●			
	SX-3E300N02-CK8	3	0.118	0.008		0.003–0.008	±0.0008	±0.0020									●			
	SX-4E400N02-CK8	4	0.157	0.008		0.004–0.009	±0.0008	±0.0020									●			
	SX-5E500N04-CK8	5	0.197	0.016		0.004–0.010	±0.0008	±0.0020									●			
	SX-6E600N04-CK8	6	0.236	0.016		0.004–0.012	±0.0008	±0.0020									●			
	SX-1E150N01-CF6	1.5	0.059	0.006		0.001–0.004	±0.0020	±0.0039			◐	✖		◐	✖				◐	✖
	SX-2E200N02-CF6	2	0.079	0.008		0.001–0.004	±0.0020	±0.0039			◐	✖		◐	✖				◐	✖
	SX-3E300N02-CF6	3	0.118	0.008		0.001–0.008	±0.0020	±0.0039			◐	✖		◐	✖				◐	✖
	SX-1E150N01-CE4	1.5	0.059	0.006		0.001–0.004	±0.0020	±0.0039			◐	✖		◐	✖				◐	✖
	SX-1E150R/L6-CE4	1.5	0.059	0.006	6°	0.001–0.003	±0.0020	±0.0039			◐			◐					◐	
	SX-2E200N02-CE4	2	0.079	0.008		0.002–0.006	±0.0020	±0.0039	●	●	◐	✖	●	◐	✖	◐		●	◐	✖
	SX-2E200R/L6-CE4	2	0.079	0.008	6°	0.002–0.004	±0.0020	±0.0039			◐			◐					◐	
	SX-2E260N03-CE4	2.6	0.102	0.012		0.002–0.007	±0.0020	±0.0039		●	◐	✖	●	◐	✖			●	◐	✖
	SX-3E300N02-CE4	3	0.118	0.008		0.004–0.012	±0.0020	±0.0039	●	●	◐	✖	●	◐	✖	◐		●	◐	✖
	SX-3E300R/L6-CE4	3	0.118	0.008	6°	0.004–0.008	±0.0020	±0.0039	●		◐	✖		◐	✖	◐			◐	✖
	SX-3E310N03-CE4	3.1	0.122	0.012		0.004–0.012	±0.0020	±0.0039	●		◐	✖		◐	✖	◐			◐	✖
	SX-4E400N02-CE4	4	0.157	0.008		0.004–0.013	±0.0020	±0.0039	●	●	◐	✖	●	◐	✖	◐		●	◐	✖
	SX-4E400R/L6-CE4	4	0.157	0.008	6°	0.004–0.009	±0.0020	±0.0039	●		◐	✖		◐	✖	◐			◐	✖
	SX-4E410N03-CE4	4.1	0.161	0.012		0.004–0.013	±0.0020	±0.0039	●		◐	✖		◐	✖	◐			◐	✖
	SX-4E480N03-CE4	4.8	0.189	0.012		0.004–0.014	±0.0020	±0.0039			◐	✖		◐	✖				◐	✖
	SX-5E500N04-CE4	5	0.197	0.016		0.004–0.014	±0.0020	±0.0039	●	●	◐	✖	●	◐	✖	◐		●	◐	✖
	SX-5E500R/L6-CE4	5	0.197	0.016	6°	0.004–0.010	±0.0020	±0.0039			◐			◐					◐	
	SX-6E600N04-CE4	6	0.236	0.016		0.004–0.016	±0.0020	±0.0039	●		◐	✖		◐	✖	◐			◐	✖
	SX-6E600R/L6-CE4	6	0.236	0.016	6°	0.004–0.012	±0.0020	±0.0039			◐			◐					◐	
	SX-8E800N08-CE4	8	0.315	0.031		0.008–0.0205	±0.0020	±0.0039	●		◐	✖		◐	✖	◐			◐	✖
	SX-10E1000N08-CE4	10	0.394	0.031		0.010–0.0240	±0.0020	±0.0039	●		◐	✖		◐	✖	◐			◐	✖

l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in

HC = Coated carbide
HW = Uncoated carbide

Grooving and recessing
SX cutting inserts





Tiger·tec® Silver

A2

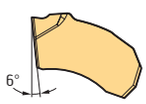
Cutting inserts

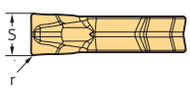
	Designation	s mm	s in	r in	l in	f in	a_p in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM33S	P HC WSM43S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM33S	S HC WSM43S
	SX-8E800N08-UF4	8	0.315	0.031	0.685	0.007–0.022	0.035–0.157	±0.0020	±0.0039	☺	😐	☹	😐	☹	😐	😐	☹

l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in

HC = Coated carbide

Slitting
SX cutting inserts





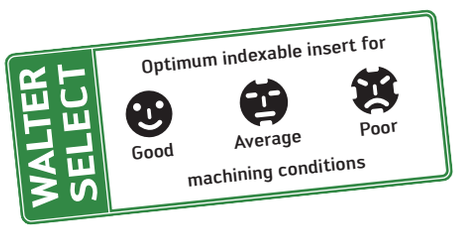
Tiger·tec® Silver

Cutting inserts

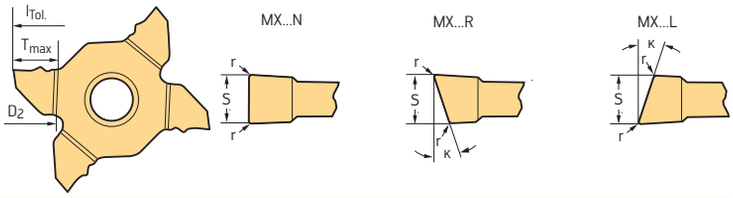
	Designation	s mm	s in	r mm	f mm	S_{Tol} mm	l_{Tol} mm	P HC WKP23S	P HC WSM33S	P HC WSM43S	M HC WSM33S	M HC WSM43S	K HC WKP23S	N HW WK1	S HC WSM33S	S HC WSM43S
	SX-1E150N01-SK8	1.5	0.059	0.004	0.001–0.003	±0.0008	±0.0020							☺		
	SX-2E200N02-SK8	2	0.079	0.008	0.002–0.004	±0.0008	±0.0020							☺		
	SX-3E300N02-SK8	3	0.118	0.008	0.002–0.006	±0.0008	±0.0020							☺		
	SX-4E400N02-SK8	4	0.157	0.008	0.002–0.008	±0.0008	±0.0020							☺		
	SX-5E500N04-SK8	5	0.197	0.016	0.002–0.010	±0.0008	±0.0020							☺		
	SX-6E600N04-SK8	6	0.236	0.016	0.002–0.012	±0.0008	±0.0020							☺		
	SX-1E150N01-SF5	1.5	0.059	0.006	0.001–0.004	±0.0020	±0.0039		😐	☹	😐	☹			😐	☹
	SX-2E200N02-SF5	2	0.079	0.008	0.002–0.006	±0.0020	±0.0039		😐	☹	😐	☹			😐	☹
	SX-3E300N02-SF5	3	0.118	0.008	0.003–0.008	±0.0020	±0.0039		😐	☹	😐	☹			😐	☹
	SX-4E400N02-SF5	4	0.157	0.008	0.004–0.009	±0.0020	±0.0039		😐	☹	😐	☹			😐	☹
	SX-5E500N04-SF5	5	0.197	0.016	0.004–0.010	±0.0020	±0.0039		😐	☹	😐	☹			😐	☹

l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in

HC = Coated carbide
HW = Uncoated carbide



Grooving and parting off
MX cutting inserts
Tiger·tec® Silver



A2

Cutting inserts

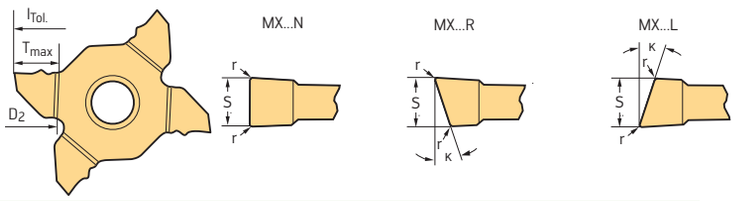
	Designation	s mm	s in	r in	κ	T_{max} in	D_2 in	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM23S	S HC WSM33S	S HC WSM43S
	MX22-2E100N01-GD8	1	0.039	0.004		0.138	5.118	0.001–0.002	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E120N01-GD8	1.2	0.047	0.004		0.079		0.001–0.003	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E140N01-GD8	1.4	0.055	0.004		0.079		0.001–0.003	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E150N01-GD8	1.5	0.059	0.004		0.197	5.118	0.001–0.004	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E157N02-GD8	1.57	0.062	0.008		0.118		0.001–0.004	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E170N02-GD8	1.7	0.067	0.008		0.118		0.001–0.004	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E185N02-GD8	1.85	0.073	0.008		0.118		0.002–0.004	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E196N02-GD8	1.96	0.077	0.008		0.118		0.002–0.004	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E200N02-GD8	2	0.079	0.008		0.236	3.937	0.002–0.004	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E224N02-GD8	2.24	0.088	0.008		0.236	3.937	0.002–0.005	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E239N02-GD8	2.39	0.094	0.008		0.236	3.937	0.002–0.006	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E275N02-GD8	2.75	0.108	0.008		0.236	3.937	0.002–0.006	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E300N02-GD8	3	0.118	0.008		0.236	3.937	0.002–0.006	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E318N02-GD8	3.18	0.125	0.008		0.236	3.937	0.002–0.006	±0.0008	±0.0012		☻			☻				☻		
	MX22-2E325N02-GD8	3.25	0.128	0.008		0.236	3.937	0.002–0.006	±0.0008	±0.0012		☻			☻				☻		

l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in
For information on T_{max} with diameters larger than D_2. see "Technical information – Grooving"

HC = Coated carbide

☻☻☻ / ★ New addition to the product range

Grooving and parting off
MX cutting inserts
Tiger·tec® Silver



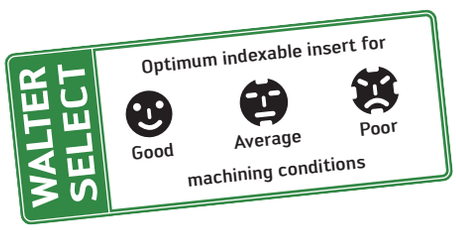
A2

Cutting inserts

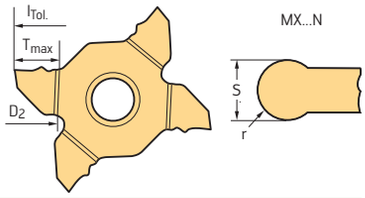
Designation	s mm	s in	r in	κ	T_{max} in	D_2 in	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM23S	S HC WSM33S	S HC WSM43S
MX22-2E080R/L5-CF5	0.8	0.031	0.002	5°	0.063	5.118	0.0008–0.0016	±0.008	±0.012		☺			☺				☺		
MX22-2E080N01-CF5	0.8	0.031	0.004		0.063	5.118	0.0008–0.0020	±0.008	±0.012		☺			☺				☺		
MX22-2E100R/L10-CF5	1	0.039	0.002	10°	0.138	5.118	0.0008–0.0016	±0.008	±0.012		☺			☺				☺		
MX22-2E100N01-CF5	1	0.039	0.004		0.138	5.118	0.0012–0.0028	±0.008	±0.012		☺			☺				☺		
MX22-2E104N01-CF5	1.04	0.041	0.004		0.079		0.0012–0.0028	±0.008	±0.012		☺			☺				☺		
MX22-2E120N01-CF5	1.2	0.047	0.004		0.079		0.0012–0.0031	±0.008	±0.012		☺			☺				☺		
MX22-2E140N01-CF5	1.4	0.055	0.004		0.079		0.0012–0.0035	±0.008	±0.012		☺			☺				☺		
MX22-2E147N01-CF5	1.47	0.058	0.004		0.098		0.0012–0.0035	±0.008	±0.012		☺			☺				☺		
MX22-2E150R/L10-CF5	1.5	0.059	0.002	10°	0.197	5.118	0.0012–0.0024	±0.008	±0.012		☺			☺				☺		
MX22-2E150N01-CF5	1.5	0.059	0.004		0.197	5.118	0.0012–0.0039	±0.008	±0.012		☺			☺				☺		
MX22-2E157N02-CF5	1.57	0.062	0.008		0.118		0.0016–0.0047	±0.008	±0.012		☺			☺				☺		
MX22-2E170N02-CF5	1.7	0.067	0.008		0.118		0.0016–0.0047	±0.008	±0.012		☺			☺				☺		
MX22-2E185N02-CF5	1.85	0.073	0.008		0.118		0.0016–0.0047	±0.008	±0.012		☺			☺				☺		
MX22-2E196N02-CF5	1.96	0.077	0.008		0.118		0.0016–0.0047	±0.008	±0.012		☺			☺				☺		
MX22-2E200R/L6-CF5	2	0.079	0.004	6°	0.236	3.937	0.0016–0.0047	±0.008	±0.012		☺			☺				☺		
MX22-2E200N02-CF5	2	0.079	0.008		0.236	3.937	0.0016–0.0055	±0.008	±0.012		☺			☺				☺		
MX22-2E224N02-CF5	2.24	0.088	0.008		0.236	3.937	0.0016–0.0063	±0.008	±0.012		☺			☺				☺		
MX22-2E239N02-CF5	2.39	0.094	0.008		0.236	3.937	0.0016–0.0063	±0.008	±0.012		☺			☺				☺		
MX22-2E250N02-CF5	2.5	0.098	0.008		0.236	3.937	0.0016–0.0063	±0.008	±0.012		☺			☺				☺		
MX22-2E275N02-CF5	2.75	0.108	0.008		0.236	3.937	0.0016–0.0063	±0.008	±0.012		☺			☺				☺		
MX22-2E300N02-CF5	3	0.118	0.008		0.236	3.937	0.0016–0.0063	±0.008	±0.012		☺			☺				☺		
MX22-2E318N02-CF5	3.18	0.125	0.008		0.236	3.937	0.0016–0.0063	±0.008	±0.012		☺			☺				☺		
MX22-2E325N02-CF5	3.25	0.128	0.008		0.236	3.937	0.0016–0.0063	±0.008	±0.012		☺			☺				☺		
MX22-4E400N02-CF5	4	0.157	0.008		0.236	3.937	0.0039–0.0079	±0.008	±0.012		☹			☹				☹		
MX22-4E400N04-CF5	4	0.157	0.016		0.236	3.937	0.0039–0.0079	±0.008	±0.012		☹			☹				☹		
MX22-4E425N02-CF5	4.25	0.167	0.008		0.236	3.937	0.0039–0.0079	±0.008	±0.012		☹			☹				☹		
MX22-4E480N06-CF5	4.8	0.189	0.024		0.236	3.937	0.0039–0.0098	±0.008	±0.012		☹			☹				☹		
MX22-4E500N02-CF5	5	0.197	0.008		0.236	3.937	0.0039–0.0098	±0.008	±0.012		☹			☹				☹		
MX22-4E500N04-CF5	5	0.197	0.016		0.236	3.937	0.0039–0.0098	±0.008	±0.012		☹			☹				☹		
MX22-4E525N02-CF5	5.25	0.207	0.008		0.236	3.937	0.0039–0.0098	±0.008	±0.012		☹			☹				☹		
MX22-4E556N02-CF5	5.56	0.219	0.008		0.236	3.937	0.0039–0.0110	±0.008	±0.012		☹			☹				☹		

l_{Tol} = Repeat accuracy when changing indexable insert
Radius tolerance r_{Tol} = ±0.002 in
For information on T_{max} with diameters larger than D_2, see "Technical information – Grooving"

HC = Coated carbide



Grooving and parting off
MX cutting inserts
Tiger·tec® Silver



A 2

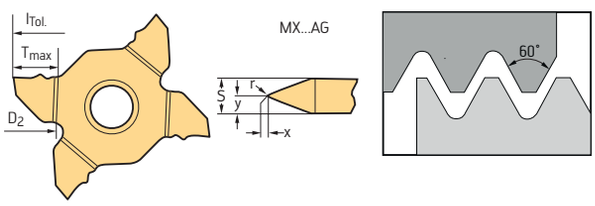
Cutting inserts

	Designation	s mm	s in	r in	κ	T_{max} in	D_2 in	f in	S_{Tol} in	l_{Tol} in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM23S	S HC WSM33S	S HC WSM43S
	MX22-2E157N08-RF5	1.57	0.062	0.031		0.118	5.118	0.002–0.005	±0.0008	±0.0012		😀			😀				😀		
	MX22-2E200N10-RF5	2	0.079	0.039		0.236	3.937	0.002–0.006	±0.0008	±0.0012		😀			😀				😀		
	MX22-2E239N12-RF5	2.39	0.094	0.047		0.236	3.937	0.002–0.007	±0.0008	±0.0012		😀			😀				😀		
	MX22-2E300N15-RF5	3	0.118	0.059		0.236	3.937	0.002–0.008	±0.0008	±0.0012		😀			😀				😀		
	MX22-2E318N16-RF5	3.18	0.125	0.063		0.236	3.937	0.002–0.008	±0.0008	±0.0012		😀			😀				😀		
	MX22-4E400N20-RF5	4	0.157	0.079		0.236	3.937	0.0004–0.009	±0.0008	±0.0012		😐			😐				😐		
	MX22-4E480N24-RF5	4.8	0.189	0.094		0.236	3.937	0.0004–0.010	±0.0008	±0.0012		😐			😐				😐		
	MX22-4E500N25-RF5	5	0.197	0.098		0.236	3.937	0.002–0.010	±0.0008	±0.0012		😐			😐				😐		

l_{Tol} = Repeat accuracy when changing indexable inserts
Radius tolerance r_{Tol} = ±0.002 in
For T_{max} with diameters greater than D_2, see „Technical information – Grooving"

HC = Coated carbide

External thread – Partial profile 60°
MX cutting inserts
Tiger·tec® Silver



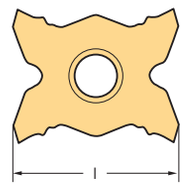
Thread turning inserts

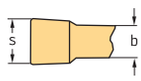
	Designation	Pitch P mm	Pitch (TPI) Inch	r mm	r in	X mm	X in	Y mm	Y in	P HC WKP23S	P HC WSM23S	P HC WSM33S	P HC WSM43S	M HC WSM23S	M HC WSM33S	M HC WSM43S	K HC WKP23S	S HC WSM23S	S HC WSM33S	S HC WSM43S
	MX22-2E-EN-A60	0.50–1.50	48–16	0.05	0.002	0.05	0.002	1.68	0.066		😀			😀				😀		
	MX22-4E-EN-AG60	0.50–3.00	48–8	0.08	0.003	0.08	0.003	2.83	0.111		😐	😡		😐	😡			😐	😡	

HC = Coated carbide

😀😐😡 / ★ New addition to the product range

Semi-finished blanks for special profiles
MX cutting inserts





Blanks for special profiles

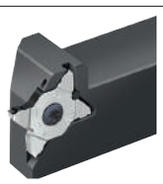
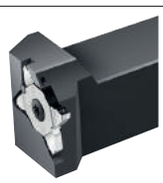
	Designation	s mm	s in	b mm	b in	l mm	l in	P HC WKP23S	P HC WSM33S	P HC WSM43S	P HF WMG30	M HC WSM33S	M HC WSM43S	M HF WMG30	K HC WKP23S	S HC WSM33S	S HC WSM43S	S HF WMG30
	MX22-2E335N	3.35	0.132	3.35	0.132	23.2	0.913				●			●				●
	MX22-4E565N	5.65	0.222	5.65	0.222	23.2	0.913				●			●				●

Grade WMG30 has the ISO application ranges P20, M20 and S20

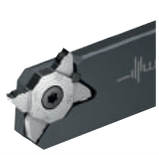
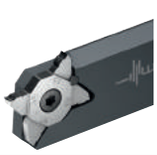
HC = Coated carbide
HF = Uncoated fine-grained carbide

Walter Cut grooving tools product range overview
Shank tools / parting blades / boring bars / Walter Capto™ groove turning holders

Shank tools for grooving, parting off and recessing

Machining						
Type						
Designation	**G3011**	**G3011...-P**	**G3021...-P**	**G1011**	**G1011...-P**	**G2012**
Insert width s [mm]	0.5–3.25	0.5–5.56	0.5–5.56	2–8	2–8	1.5–3
Cutting depth T_{max} [mm]	6	6	6	8–32	12–33	15–33
Coolant supply	External	Precision cooling	Precision cooling	External	Precision cooling	External
Shank size h [mm]	10–12	12–25	20–25	12–32	16–32	12–25
Shank size h [inch]	-	0.750–1.000	1.000	0.500–1.000	0.750–1.000	0.500–1.000
						
Page	136	137	139	125	126	133

Parting blades for grooving and parting off

Machining					
Type					
Designation	**G3041**	**G3041...C**	**G1041...-P**	**G1041...C-P**	**G2042...-P**
Insert width s [mm]	0.5–3.25	0.5–3.25	2–4	2–4	2–4
Cutting depth T_{max} [mm]	6	6	16–33	16–32	26–33
Coolant supply	External	External	Precision cooling	Precision cooling	Precision cooling
Shank size h4 [mm]	26	26	26–32	26–32	26–23
Shank size h4 [inch]	1.024	1.024	1.024–1.260	1.024–1.260	1.024–1.260
					
Page	141	142	129	130	135

Boring bars for internal grooving

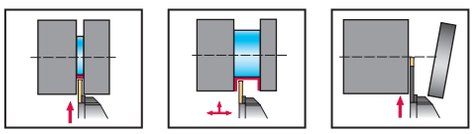
Machining	
Type	
Designation	**G1221...-P**
Insert width s [mm]	0,8–6
Cutting depth T_{max} [mm]	4–12
Coolant supply	Precision cooling
Shank size d_1 [mm]	16–40
Shank size d_1 [inch]	0.625–1.500
Page	131

Walter Capto™ groove turning holders for grooving, parting off and recessing

Machining	
Type	
Designation	**G3011...C...-P**
Insert width s [mm]	0.5–5.56
Cutting depth T_{max} [mm]	6
Coolant supply	Precision cooling
Walter Capto™ size	C3–C6
Page	143

Shank tool – Radial grooving
G1011 inch
Walter Cut

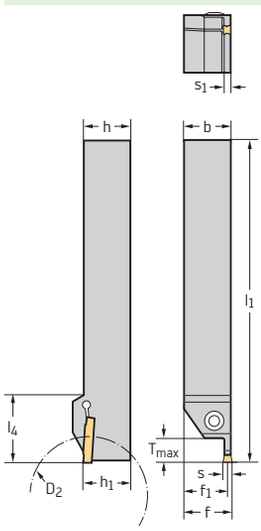
– Screw clamping



A2

Tool

Designation	s Inch	T_{max} Inch	D_2 Inch	$h = h_1$ Inch	b Inch	f_1 Inch	l_1 Inch	l_4 Inch	s_1 Inch	Type
G1011.16R/L-4T32GX24	0.157	1.260		1.000	1.000	0.933	6.496	2.165	0.134	GX24-3E4 .. GX24-3F4 ..



For information on T_{max} with diameters larger than D_2, see "Technical information – Grooving"
$f = f_1 + s/2$
Ordering example, right-hand tool: G1011.16R-4T32GX24/ordering example, left-hand tool: G1011.16L-4T32GX24
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

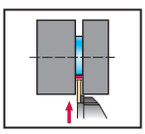
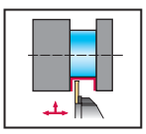
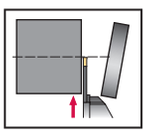
$h = h_1$ [Inch]	1.000
Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 44 in lbs
Torx key	FS1464 (Torx 20IP)

Shank tool – Radial grooving
G1011...-P mm

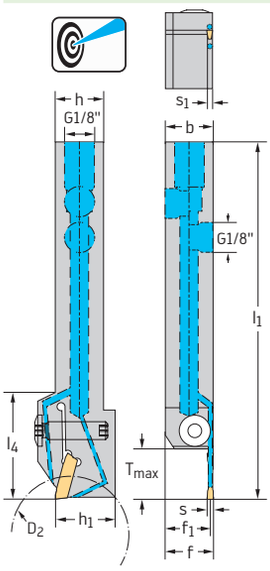
Walter Cut

A2

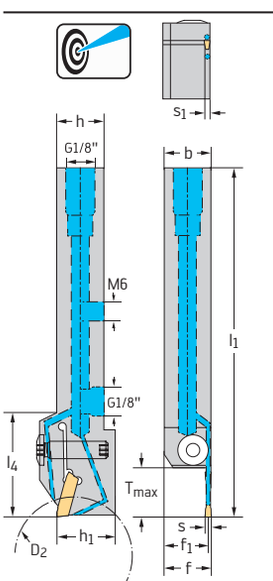
– Screw clamping
– Precision cooling

Tool



Designation	s mm	s in	T_{max} mm	D_2 mm	$h = h_1$ mm	b mm	f_1 mm	l_1 mm	l_4 mm	s_1 mm	Type
G1011.1212R/L-2T12GX16-P	2	0.079	12		12	12	11.2	120	31.5	1.6	GX16-1E2 .. GX16-1F2 ..
G1011.1616R/L-2T15GX16-P			15		16	16	15.2	120	35.5	1.6	
G1011.1616R/L-2T21GX24-P			21	80	16	16	15.3	120	40	1.6	GX24-1E2 ..
G1011.1616R/L-3T15GX16-P	3	0.118	15		16	16	14.9	120	35.5	2.2	GX16-2E3 ..
★ G1011.1616R/L-3T12GX24-P			12		16	16	14.8	120	31.5	2.4	GX24-2E .. GX24-2F3 ..
G1011.1616R/L-3T21GX24-P			21	80	16	16	14.8	120	40	2.4	
G1011.1616R/L-4T12GX24-P	4	0.157	12		16	16	14.3	120	35	3.4	GX24-3E4 .. GX24-3F4 ..

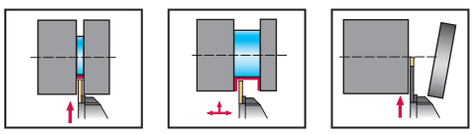


Designation	s mm	s in	T_{max} mm	D_2 mm	$h = h_1$ mm	b mm	f_1 mm	l_1 mm	l_4 mm	s_1 mm	Type
G1011.2020R/L-2T15GX16-P	2	0.079	15		20	20	19.2	120	35.5	1.6	GX16-1E2 .. GX16-1F2 ..
G1011.2020R/L-2T21GX24-P			21	80	20	20	19.2	125	40	1.6	GX24-1E2 ..
★ G1011.2525R/L-2T21GX24-P			21		25	25	24.2	130	40	1.5	
G1011.2020R/L-3T15GX16-P	3	0.118	15		20	20	18.9	120	35.5	2.2	GX16-2E3 ..
★ G1011.2020R/L-3T12GX24-P			12		20	20	18.8	120	31.5	2.4	GX24-2E .. GX24-2F3 ..
G1011.2020R/L-3T21GX24-P			21	80	20	20	18.8	125	40	2.4	
★ G1011.2525R/L-3T12GX24-P			12		25	25	23.8	125	35	2.4	
G1011.2525R/L-3T21GX24-P			21	80	25	25	23.8	130	40	2.4	
G1011.2020R/L-3T33GX34-P			33	140	20	20	18.8	140	53	2.4	GX34-2E3 ..
G1011.2525R/L-3T33GX34-P			33	140	25	25	23.8	145	53	2.4	
G1011.2020R/L-4T12GX24-P	4	0.157	12		20	20	18.3	120	35	3.4	GX24-3E4 .. GX24-3F4 ..
G1011.2020R/L-4T21GX24-P			21		20	20	18.3	125	40	3.4	
G1011.2525R/L-4T12GX24-P			12		25	25	23.3	125	35	3.4	
G1011.2525R/L-4T21GX24-P			21		25	25	23.3	130	40	3.4	
G1011.2525R/L-4T32GX24-P			32		25	25	23.3	145	55	3.4	
G1011.2020R/L-4T33GX34-P			33	140	20	20	18.4	140	53	3.3	GX34-3E4 ..
G1011.2525R/L-4T33GX34-P			33	140	25	25	23.4	145	53	3.3	
G1011.2020R/L-5T12GX24-P	5	0.197	12		20	20	17.9	120	35	4.2	GX24-3E5 .. GX24-3F5 ..
G1011.2020R/L-5T21GX24-P			21		20	20	17.9	125	40	4.2	

$f = f_1 + s/2$
For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G1011.1212R-2T12GX16-P/ordering example, left-hand tool: G1011.1212L-2T12GX16-P
Bodies and assembly parts are included in the scope of delivery.

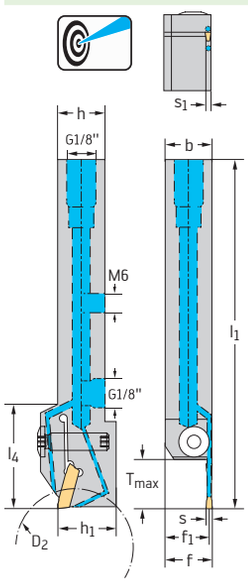
Shank tool – Radial grooving
G1011...-P mm
Walter Cut

– Screw clamping
– Precision cooling



A2

Tool



Designation	s mm	s in	T_{max} mm	D_2 mm	$h = h_1$ mm	b mm	f_1 mm	l_1 mm	l_4 mm	s_1 mm	Type
G1011.2525R/L-5T12GX24-P	5	0.197	12		25	25	22.9	125	35	4.2	GX24-3E5 .. GX24-3F5 ..
G1011.2525R/L-5T21GX24-P			21		25	25	22.9	130	40	4.2	
G1011.2525R/L-5T32GX24-P			32	120	25	25	22.9	145	55	4.2	
G1011.2525R/L-6T12GX24-P	6	0.236	12		25	25	22.4	125	35	5.2	GX24-4 .. GX24-4F6 ..
G1011.2525R/L-6T21GX24-P			21		25	25	22.4	130	40	5.2	
G1011.2525R/L-6T32GX24-P			32		25	25	22.4	145	55	5.2	
G1011.2525R/L-8T28GX30-P	8	0.315	28		25	25	22	145	55	6.1	GX30-5E8 .. GX30-5F8 ..
G1011.3225R/L-8T28GX30-P			28		32	25	22	145	55	6.1	

$f = f_1 + s/2$
For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G1011.1212R-2T12GX16-P/ordering example, left-hand tool: G1011.1212L-2T12GX16-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

$h = h_1$ [mm] / T_{max} [mm]	12 / 12	16 / 12–21	20 / 12	20 / 15–21	20-25 / 33	25 / 12–32	25 / 21	32 / 28
Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm	M06X025 ISO4762 12.9 (SW 5) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm
G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)
M6 threaded plug			FS2288 (SW 3)	FS2288 (SW 3)	FS2288 (SW 3)	FS2288 (SW 3)	FS2288 (SW 3)	FS2288 (SW 3)
Torx key	FS1464 (Torx 20IP)	FS1464 (Torx 20IP)	FS1464 (Torx 20IP)	FS1464 (Torx 20IP)		FS1464 (Torx 20IP)	FS1464 (Torx 20IP)	FS1464 (Torx 20IP)
ISO 2936 key				ISO2936-5 (SW 5)	ISO2936-5 (SW 5)		ISO2936-5 (SW 5)	

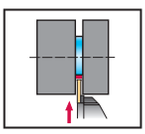
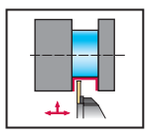
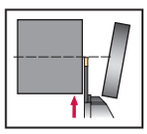
/ ★ New addition to the product range

Shank tool – Radial grooving
G1011...-P inch

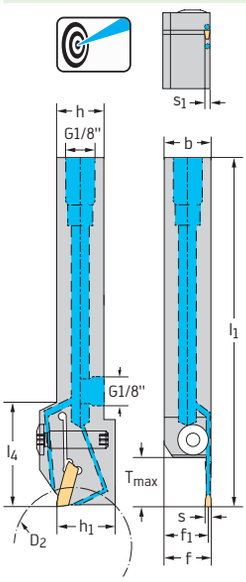
Walter Cut

A2

– Screw clamping
– Precision cooling

Tool



Designation	s Inch	T_{max} Inch	D_2 Inch	$h = h_1$ Inch	b Inch	f_1 Inch	l_1 Inch	l_4 Inch	s_1 Inch	Type
G1011.12R/L-2T15GX16-P	0.079	0.591		0.750	0.750	0.719	5.906	1.398	0.063	GX16-1E2 .. GX16-1F2 ..
G1011.16R/L-2T15GX16-P		0.591		1.000	1.000	0.969	5.906	1.398	0.063	
G1011.12R/L-3T15GX16-P	0.118	0.591		0.750	0.750	0.707	5.906	1.398	0.087	GX16-2E3 ..
G1011.12R/L-3T21GX24-P		0.827	3.150	0.750	0.750	0.701	5.906	1.575	0.094	GX24-2E .. GX24-2F3 ..
★ G1011.16R/L-3T12GX24-P		0.472		1.000	1.000	0.953	5.906	1.575	0.094	
G1011.16R/L-3T21GX24-P		0.827	3.150	1.000	1.000	0.953	5.906	1.575	0.094	
G1011.12R/L-3T33GX34-P		1.299	5.512	0.750	0.750	0.703	5.906	2.087	0.094	GX34-2E3 ..
G1011.16R/L-3T33GX34-P		1.299	5.512	1.000	1.000	0.953	5.906	2.087	0.094	
G1011.12R/L-4T12GX24-P	0.157	0.472		0.750	0.750	0.685	5.906	1.378	0.134	GX24-3E4 .. GX24-3F4 ..
G1011.12R/L-4T21GX24-P		0.827		0.750	0.750	0.685	5.906	1.575	0.134	
G1011.16R/L-4T12GX24-P		0.472		1.000	1.000	0.933	5.709	1.378	0.134	
G1011.16R/L-4T21GX24-P		0.827		1.000	1.000	0.933	5.906	1.575	0.134	
G1011.16R/L-4T32GX24-P		1.260		1.000	1.000	0.933	5.906	2.165	0.134	
G1011.12R/L-4T33GX34-P		1.299	5.512	0.750	0.750	0.685	5.906	2.087	0.130	GX34-3E4 ..
G1011.16R/L-4T33GX34-P		1.299	5.512	1.000	1.000	0.937	5.906	2.087	0.130	
G1011.12R/L-5T21GX24-P	0.197	0.827		0.750	0.750	0.669	5.906	1.575	0.165	GX24-3E5 .. GX24-3F5 ..
G1011.16R/L-5T12GX24-P		0.472		1.000	1.000	0.917	5.709	1.378	0.165	
G1011.16R/L-5T21GX24-P		0.827		1.000	1.000	0.917	5.906	1.575	0.165	
G1011.16R/L-5T32GX24-P		1.260		1.000	1.000	0.917	5.906	2.165	0.165	
G1011.16R/L-6T12GX24-P	0.236	0.472		1.000	1.000	0.898	5.709	1.378	0.205	GX24-4 .. GX24-4F6 ..
G1011.16R/L-6T21GX24-P		0.827		1.000	1.000	0.898	5.906	1.575	0.205	
G1011.16R/L-6T32GX24-P		1.260		1.000	1.000	0.898	5.906	2.165	0.205	

$f = f_1 + s/2$
For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G1011.12R-2T15GX16-P/ordering example, left-hand tool: G1011.12L-2T15GX16-P
Bodies and assembly parts are included in the scope of delivery.

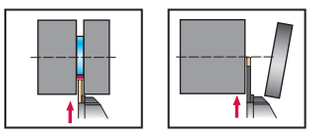
Assembly parts

$h = h_1$ [Inch] T_{max} [Inch]	0.750 0.472–0.827	0.750-1.000 1.299	1.000 0.472–1.260
Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 44 in lbs	M06X025 ISO4762 12.9 (SW 5) 44 in lbs	FS2118 (Torx 20IP) 44 in lbs
G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)
M6 threaded plug		FS2288 (SW 3)	
Torx key	FS1464 (Torx 20IP)		FS1464 (Torx 20IP)
ISO 2936 key		ISO2936-5 (SW 5)	

Reinforced parting blade
G1041...-P mm

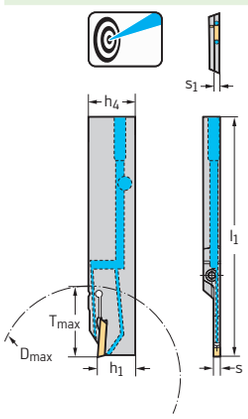
Walter Cut

– Screw clamping
– Precision cooling



A2

Tool



Designation	s mm	s in	T_{max} mm	D_{max} mm	h_4 mm	l_1 mm	h_1 mm	s_1 mm	Type
G1041.26R/L-2T16GX16-P	2	0.079	16	32	26	110	21	1.5	GX16-1E2 .. GX16-1F2 ..
G1041.26R/L-3T23GX24-P	3	0.118	23	46	26	110	21	2.2	GX24-2E .. GX24-2F3 ..
G1041.32R/L-3T23GX24-P			23	46	32	110	24.6	2.2	
G1041.32R/L-3T32GX24-P			32	65	32	110	24.6	2.2	
G1041.32R/L-3T33GX34-P			33	65	32	110	24.6	2.4	GX34-2E3 ..
G1041.32R/L-4T32GX24-P	4	0.157	32	65	32	110	24.6	3.1	GX24-3E4 .. GX24-3F4 ..
G1041.32R/L-4T33GX34-P			33	65	32	110	24.6	3.3	GX34-3E4 ..

Ordering example. right-hand tool: G1041.26R-2T16GX16-P/ordering example. left-hand tool: G1041.26L-2T16GX16-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	h_4 [mm]	26-32
	Clamping screw for grooving insert Tightening torque	FS2164 (Torx 15IP) 3.5 Nm

Accessories

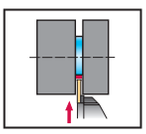
	h_4 [mm]	26-32
	Screwdriver for grooving insert	FS1485 (Torx 15IP)

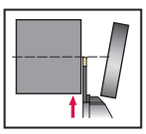
Reinforced parting blade – Contra
G1041...C-P mm

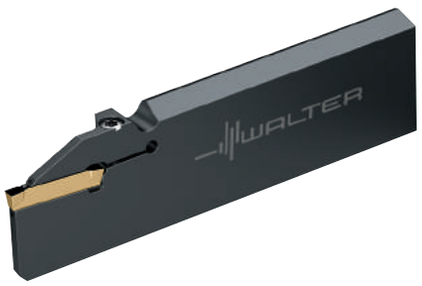
Walter Cut

A2

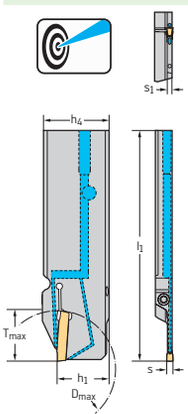
– Screw clamping
– Precision cooling







Tool



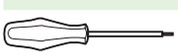
Designation	s mm	s in	T_{max} mm	D_{max} mm	h_4 mm	l_1 mm	h_1 mm	s_1 mm	Type
G1041.26R/L-2T16GX16C-P	2	0.079	16	32	26	110	21	1.5	GX16-1E2 .. GX16-1F2 ..
G1041.32R/L-2T23GX24C-P			23	46	32	110	24.6	1.5	GX24-1E2 ..
G1041.26R/L-3T23GX24C-P	3	0.118	23	46	26	110	21	2.2	GX24-2E .. GX24-2F3 ..
G1041.32R/L-3T23GX24C-P			23	46	32	110	24.6	2.2	
G1041.32R/L-3T32GX24C-P			32	65	32	110	24.6	2.2	
G1041.32R/L-3T33GX34C-P			33	65	32	110	24.6	2.4	GX34-2E3 ..
G1041.32R/L-4T32GX24C-P	4	0.157	32	65	32	110	24.6	3.1	GX24-3E4 .. GX24-3F4 ..
G1041.32R/L-4T33GX34C-P			33	65	32	110	24.6	3.3	GX34-3E4 ..

Ordering example, right-hand tool: G1041.26R-2T16GX16C-P/ordering example, left-hand tool: G1041.26L-2T16GX16C-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	h_4 [mm]	26-32
	Clamping screw for grooving insert Tightening torque	FS2164 (Torx 15IP) 3.5 Nm

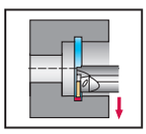
Accessories

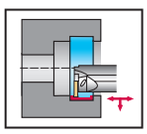
	h_4 [mm]	26-32
	Screwdriver for grooving insert	FS1485 (Torx 15IP)

Boring bar – Internal grooving
G1221...-P mm

Walter Cut

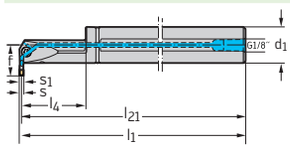
– Screw clamping
– Precision cooling

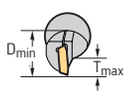




A2

Tool





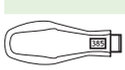
Designation	s mm	s in	T_{max} mm	D_{min} mm	d_1 mm	f mm	l_4 mm	l_{21} mm	s_1 mm	Type
G1221-16QR/L-2T04-GX09-P	2–2.5	0.079-0.098	4	16	16	12.6	29.3	179.3	1.4	GX09- . E ..
G1221-20QR/L-2T06-GX09-P			6	20	20	16.6	36.3	179.3	1.4	
G1221-25RR/L-2T08-GX16-P			8	25	25	21.1	45.2	199.3	1.5	GX16-1E2 .. GX16-1F2 ..
G1221-20QR/L-3T06-GX09-P	2.5–3	0.098-0.118	6	20	20	16.6	35.9	179.0	2.1	GX09-2E3 ..
G1221-25RR/L-3T08-GX16-P	3	0.118	8	25	25	21.1	44.9	199.0	2.1	GX16-2E3 ..
G1221-32SR/L-3T10-GX16-P			10	32	32	26.6	57.9	249.0	2.1	
★ G1221-40TR/L-3T12-GX24-P			12	40	40	32.6	72.0	298.9	2.1	GX24-2E .. GX24-2F3 ..
G1221-32SR/L-4T10-GX16-P	4	0.157	10	32	32	26.6	57.4	248.5	3.1	GX16-3E ..
★ G1221-40TR/L-4T12-GX24-P			12	40	40	32.6	71.5	298.4	3.1	GX24-3E ..
★ G1221-40TR/L-5T12-GX24-P	5–6	0.197-0.236	12	40	40	32.6	71.1	298.1	3.8	GX24-4E ..

$l_1 = l_{21} + s/2$
Ordering example, right-hand tool: G1221-16QR-2T04-GX09-P/ordering example, left-hand tool: G1221-16QL-2T04-GX09-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	D_{min} [mm]	16	20	25	32	40
	Clamping screw for grooving insert Tightening torque	FS1453 (Torx 15IP) 3.5 Nm	FS2081 (Torx 15IP) 4.0 Nm	FS1495 (Torx 20IP) 5.0 Nm	FS2089 (Torx 25IP) 5.0 Nm	FS2089 (Torx 25IP) 5.0 Nm
	Threaded plug	M02X002 ISO 4026 (SW 0.9)	M03X003 ISO 4026 (SW 1.5)	M03X003 ISO 4026 (SW 1.5)	M03X003 ISO 4026 (SW 1.5)	M02X002 ISO 4026 (SW 0.9)
	O-ring	O-RING 11X2	O-RING 15X2	O-RING 20X2	O-RING 27X2	O-RING 34X2
	Screwdriver	FS1485 (Torx 15IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)	FS1487 (Torx 25IP)

Accessories

	D_{min} [mm]	16-20	25	32-40
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2016 (Torx 25IP)

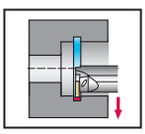
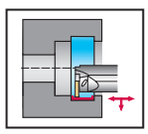
/ ★ New addition to the product range

Boring bar – Internal grooving
G1221...-P inch

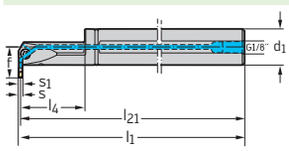
Walter Cut

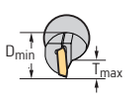
A 2

– Screw clamping
– Precision cooling

Tool

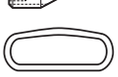




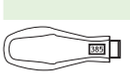
Designation	s Inch	T_{max} Inch	D_{min} Inch	d_1 Inch	f Inch	l_4 Inch	l_{21} Inch	s_1 Inch	Type
G1221.10QR/L-2T04-GX09-P	0.079–0.098	0.157	0.625	0.625	0.492	1.154	7.059	0.055	GX09- . E ..
G1221.12QR/L-2T06-GX09-P		0.236	0.750	0.750	0.634	1.429	7.059	0.055	
G1221.16RR/L-2T08-GX16-P		0.315	1.000	1.000	0.839	1.780	7.844	0.059	GX16-1E2 .. GX16-1F2 ..
G1221.12QR/L-3T06-GX09-P	0.118	0.236	0.750	0.750	0.634	1.413	7.045	0.083	GX09-2E3 ..
G1221.16RR/L-3T08-GX16-P		0.315	1.000	1.000	0.839	1.768	7.833	0.083	GX16-2E3 ..
G1221.20SR/L-3T10-GX16-P		0.394	1.250	1.250	1.043	2.280	9.801	0.083	
G1221.20SR/L-4T10-GX16-P	0.157	0.394	1.250	1.250	1.043	2.260	9.781	0.122	GX16-3E ..
★ G1221-24TR/L-4T12-GX24-P		0.472	1.500	1.500	1.244	2.813	11.750	0.122	GX24-3E .. GX24-4E ..
★ G1221-24TR/L-5T12-GX24-P	0.197–0.236	0.472	1.500	1.500	1.244	2.799	11.736	0.150	

$l_1 = l_{21} + s/2$
Ordering example, right-hand tool: G1221.10QR-2T04-GX09-P/ordering example, left-hand tool: G1221.10QL-2T04-GX09-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

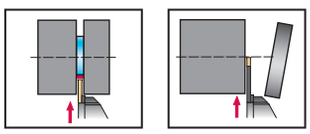
	D_{min} [Inch]	0.625	0.750	1.000	1.250
	Clamping screw for grooving insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs	FS2081 (Torx 15IP) 35 in lbs	FS1495 (Torx 20IP) 44 in lbs	FS2089 (Torx 25IP) 44 in lbs
	Threaded plug	M02X002 ISO 4026 (SW 0.9)	M03X003 ISO 4026 (SW 1.5)	M03X003 ISO 4026 (SW 1.5)	M03X003 ISO 4026 (SW 1.5)
	O-ring	O-RING 11X2	O-RING 15X2	O-RING 20X2	O-RING 27X2
	Screwdriver	FS1485 (Torx 15IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

Accessories

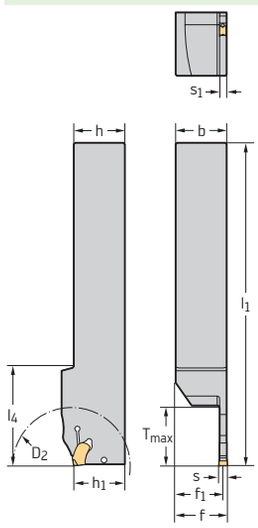
	D_{min} [Inch]	0.625-0.750	1.000	1.250
	Torque screwdriver, digital Tightening torque	FS2248 9-53 in lbs	FS2248 9-53 in lbs	FS2248 9-53 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2016 (Torx 25IP)

Shank tool – Radial grooving
G2012 mm
Walter Cut

– Self-clamping system



Tool

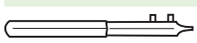


Designation	s mm	s in	T_{max} mm	D_2 mm	$h = h_1$ mm	b mm	f_1 mm	l_1 mm	l_4 mm	s_1 mm	Type
G2012.1212R/L-1.5T15SX	1.5	0.059	15	38	12	12	11.4	120	25	1.2	SX-1E1 ..
G2012.1616R/L-1.5T15SX			15	38	16	16	15.4	120	25	1.2	
G2012.2020R/L-1.5T15SX			15	38	20	20	19.4	120	25	1.2	
G2012.2525R/L-2T26SX	2	0.079	26	52	25	25	24.2	146	36	1.6	SX-2E2 ..
G2012.2525R/L-3T33SX	3	0.118	33	65	25	25	23.8	150	43	2.5	SX-3E3 ..

$f = f_1 + s/2$

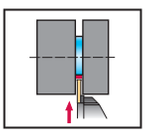
Ordering example, right-hand tool: G2012.1212R-1.5T15SX/ordering example, left-hand tool: G2012.1212L-1.5T15SX

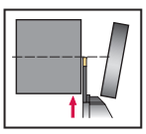
Accessories

	$h = h_1$ [mm]	12-20	25
	Mounting wrench for grooving insert	FS2249	FS1494

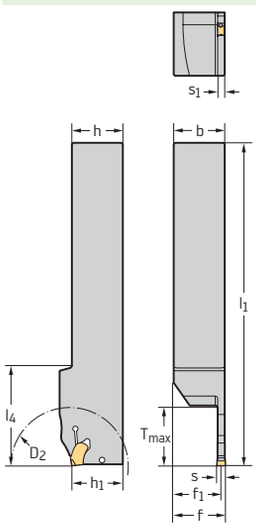
Shank tool – Radial grooving
G2012 inch
Walter Cut

– Self-clamping system





Tool

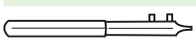


Designation	s Inch	T_{max} Inch	D_2 Inch	$h = h_1$ Inch	b Inch	f_1 Inch	l_1 Inch	l_4 Inch	s_1 Inch	Type
G2012.08R/L-1.5T15SX		0.591	1.496	0.500	0.500	0.476	4.724	0.984	0.047	
G2012.10R/L-1.5T15SX	0.059	0.591	1.496	0.625	0.625	0.602	4.724	0.984	0.047	SX-1E1 ..
G2012.12R/L-1.5T15SX		0.591	1.496	0.750	0.750	0.726	4.724	0.984	0.047	
G2012.16R/L-2T26SX	0.079	1.024	2.047	1.000	1.000	0.969	5.748	1.417	0.061	SX-2E2 ..
G2012.16R/L-3T33SX	0.118	1.299	2.559	1.000	1.000	0.952	5.906	1.693	0.096	SX-3E3 ..

$f = f_1 + s/2$

Ordering example, right-hand tool: G2012.08R-1.5T15SX/ordering example, left-hand tool: G2012.08L-1.5T15SX

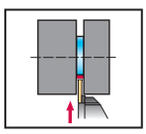
Accessories

	$h = h_1$ [Inch]	0.500-0.750	1.000
	Mounting wrench for grooving insert	FS2249	FS1494

Reinforced parting blade
G2042...R/L...-P mm

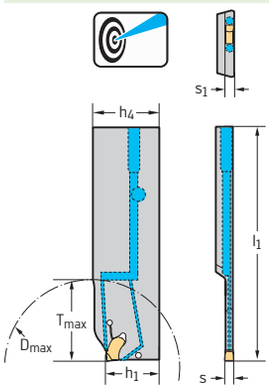
Walter Cut

– Self-clamping system
– Precision cooling



A2

Tool



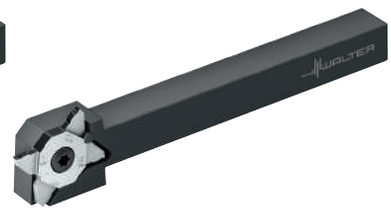
Designation	s mm	s in	T_{max} mm	D_{max} mm	h_4 mm	l_1 mm	h_1 mm	s_1 mm	Type
G2042.32R/L-2T26SX-P	2	0.079	26	52	32	110	24.7	1.6	SX-2E2 ..
G2042.26R/L-3T33SX-P	3	0.118	33	65	26	110	21	2.4	SX-3E3 ..
G2042.32R/L-3T33SX-P			33	65	32	110	24.7	2.4	
G2042.32R/L-4T33SX-P	4	0.157	33	65	32	110	24.7	3.4	SX-4E4 ..

Ordering example, right-hand tool: G2042.32R-2T26SX-P/ordering example, left-hand tool: G2042.32L-2T26SX-P

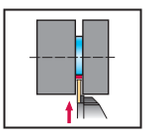
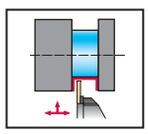
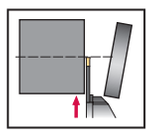
Accessories

h_4 [mm]	26-32
Mounting wrench for grooving insert	FS1494

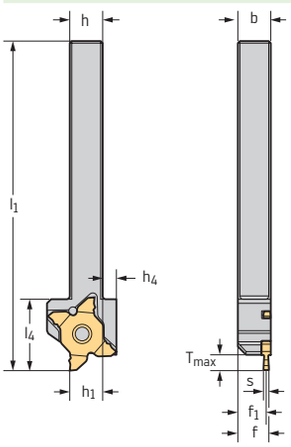
Shank tool – Radial grooving
G3011 mm
Walter Cut



– Screw clamping

Tool



Designation	s mm	s in	T_{max} mm	$h = h_1$ mm	b mm	f_1 mm	l_1 mm	h_4 mm	l_4 mm	Type
G3011-1010R/L-MX22-2	0.8–3.25	0.031-0.128	6	10	10	8.3	120	7	28	MX22-2E ..
G3011-1212R/L-MX22-2			6	12	12	10.3	120	5	26	

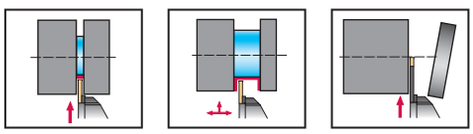
$f = f_1 + s/2$
For information on the maximum cutting depth T_{max}, see "Cutting inserts"
Ordering example, right-hand tool: G3011-1010R-MX22-2/ordering example, left-hand tool: G3011-1010L-MX22-2
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	$h = h_1$ [mm]	10-12
	Clamping screw for grooving insert	FS2570
	Torx key	FS2572

Shank tool – Radial grooving
G3011...-P mm
Walter Cut

– Screw clamping
– Precision cooling



MX

A2

Tool

Designation	s mm	s in	T_{max} mm	h = h_1 mm	b mm	f_1 mm	l_1 mm	l_4 mm	Type
G3011-1212R/L-MX22-2-P	0.8–3.25	0.031-0.128	6	12	12	10.3	120	26	MX22-2E ..
G3011-1616R/L-MX22-2-P			6	16	16	14.3	120	26	
G3011-1616R/L-MX22-4-P	4–5.65	0.157-0.222	6	16	16	13.2	120	26	MX22-4E ..
G3011-2020R/L-MX22-2-P	0.8–3.25	0.031-0.128	6	20	20	18.3	125	26	MX22-2E ..
G3011-2525R/L-MX22-2-P			6	25	25	23.3	125	26	
G3011-2020R/L-MX22-4-P	4–5.65	0.157-0.222	6	20	20	17.2	125	26	MX22-4E ..
G3011-2525R/L-MX22-4-P			6	25	25	22.2	125	26	

$f = f_1 + s/2$
For information on the maximum cutting depth T_{max}, see "Cutting inserts"
For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G3011-1212R-MX22-2-P/ordering example, left-hand tool: G3011-1212L-MX22-2-P
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

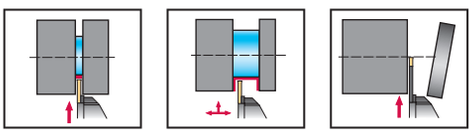
h = h_1 [mm] s [mm]	12-16 0.8–3.25	16 4–5.65	20 0.8–3.25	20 4–5.65	25 0.8–3.25/4–5.65
Clamping screw for grooving insert	FS2570	FS2571	FS2570	FS2571	FS2571
G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)
M6 threaded plug			FS2288 (SW 3)	FS2288 (SW 3)	FS2288 (SW 3)
Torx key	FS2572	FS2572	FS2572	FS2572	FS2572

Shank tool – Radial grooving
G3011...-P inch

Walter Cut

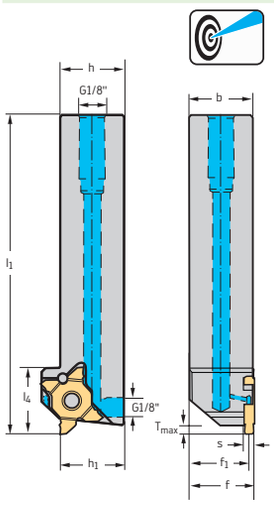
A2

– Screw clamping
– Precision cooling



MX

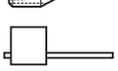
Tool



Designation	s Inch	T_{max} Inch	h = h_1 Inch	b Inch	f Inch	l_4 Inch	l_{21} Inch	Type
G3011.12R/L-MX22-2-P	0.031–0.128	0.236	0.750	0.750	0.684	1.024	5.906	MX22-2E ..
G3011.16R/L-MX22-2-P		0.236	1.000	1.000	0.934	1.024	5.906	
G3011.12R/L-MX22-4-P	0.157–0.222	0.236	0.750	0.750	0.639	1.024	5.906	MX22-4E ..
G3011.16R/L-MX22-4-P		0.236	1.000	1.000	0.889	1.024	5.794	

$f = f_1 + s/2$
For information on the maximum cutting depth T_{max}, see "Cutting inserts"
For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G3011.12R-MX22-2-P/ordering example, left-hand tool: G3011.12L-MX22-2-P
Bodies and assembly parts are included in the scope of delivery.

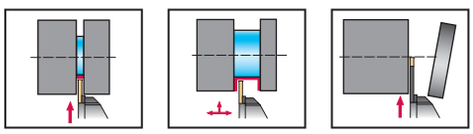
Assembly parts

	h = h_1 [Inch] s [Inch]	0.750 0.031–0.128	0.750 0.157–0.222	1.000 0.031–0.128/0.157–0.222
	Clamping screw for grooving insert	FS2570	FS2571	FS2571
	G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)
	Torx key	FS2572	FS2572	FS2572

Shank tool – Radial grooving
G3021...-P mm

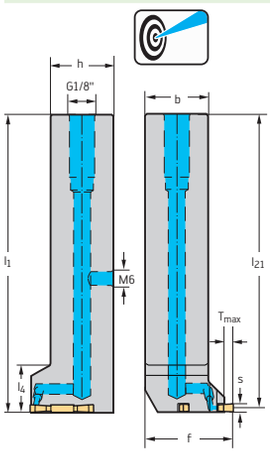
Walter Cut

– Screw clamping
– Precision cooling



A2

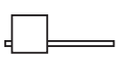
Tool



Designation	s mm	s in	T_{max} mm	h = h_1 mm	b mm	f mm	l_4 mm	l_{21} mm	Type
G3021-2020R/L-MX22-2-P	0.8–3.25	0.031-0.128	6	20	20	30	19	123.3	MX22-2E ..
G3021-2525R/L-MX22-2-P			6	25	25	35	19	123.3	
G3021-2525R/L-MX22-4-P	4–5.65	0.157-0.222	6	25	25	35	19	124.5	MX22-4E ..

$l_1 = l_{21} + s/2$
For information on the maximum cutting depth T_{max}, see "Cutting inserts"
For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G3021-2020R-MX22-2-P/ordering example, left-hand tool: G3021-2020L-MX22-2-P
Bodies and assembly parts are included in the scope of delivery.

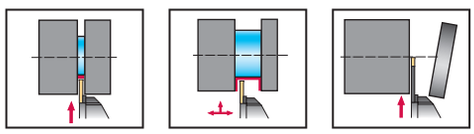
Assembly parts

	h = h_1 [mm] s [mm]	20 0.8–3.25	25 0.8–3.25	25 4–5.65
	Clamping screw for grooving insert	FS2570	FS2571	FS2571
	G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)	FS2288 (SW 3)	
	Torx key	FS2572	FS2572	FS2572

Shank tool – Radial grooving
G3021...-P inch

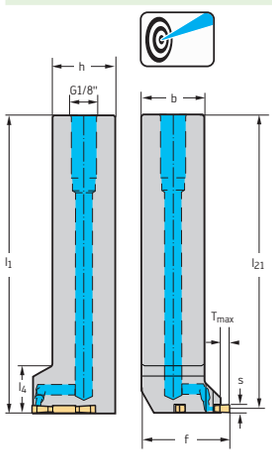
Walter Cut

– Screw clamping
– Precision cooling



MX

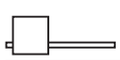
Tool



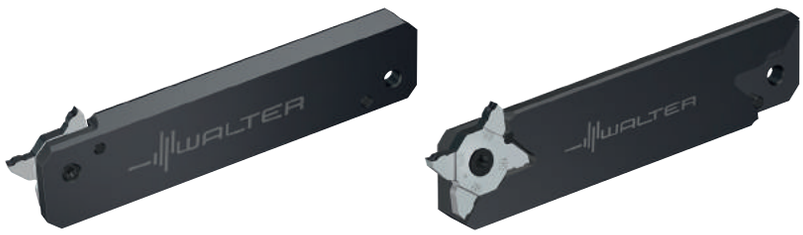
Designation	s Inch	T_{max} Inch	h = h_1 Inch	b Inch	f Inch	l_4 Inch	l_{21} Inch	Type
G3021.16R/L-MX22-2-P	0.031–0.128	0.236	1.000	1.000	1.394	0.748	5.842	MX22-2E ..
G3021.16R/L-MX22-4-P	0.157–0.222	0.236	1.000	1.000	1.394	0.748	5.794	MX22-4E ..

$l_1 = l_{21} + s/2$
For information on the maximum cutting depth T_{max}, see "Cutting inserts"
For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G3021.16R-MX22-2-P/ordering example, left-hand tool: G3021.16L-MX22-2-P
Bodies and assembly parts are included in the scope of delivery.

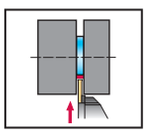
Assembly parts

	h = h_1 [Inch]	1.000
	Clamping screw for grooving insert	FS2571
	G 1/8" threaded plug	FS2258 (SW 5)
	Torx key	FS2572

Reinforced parting blade
G3041 mm
Walter Cut

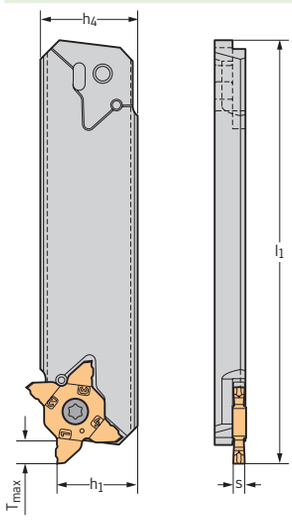


– Screw clamping



MX

Tool



Designation	s mm	s in	T_{max} mm	h_4 mm	l_1 mm	h_1 mm	Type
★ G3041.26R/L-MX22-2	0.8–3.25	0.031-0.128	6	26	110	21	MX22-2E ..

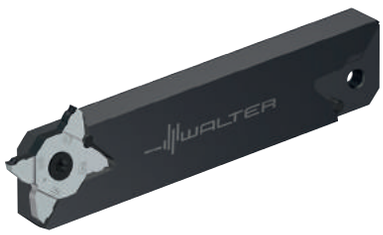
Ordering example, right-hand tool: G3041.26R-MX22-2/ordering example, left-hand tool: G3041.26L-MX22-2
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	h_4 [mm]	26
	Clamping screw for grooving insert	FS2574
	Torx key	FS2572

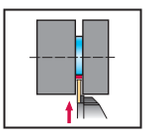
Reinforced parting blade – Contra
G3041...C mm

Walter Cut

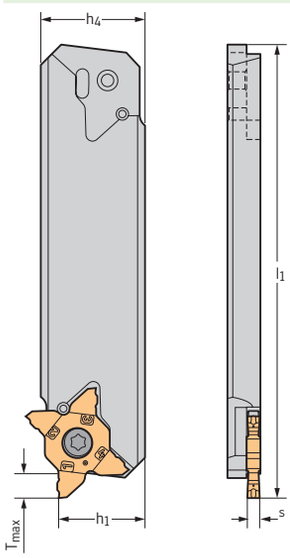


A2

– Screw clamping



Tool



Designation	s mm	s mm	T_{max} mm	h_4 mm	l_1 mm	h_1 mm	Type
★ G3041.26R/L-MX22-2C	0.8–3.25	0.031-0.128	6	26	110	21	MX22-2E ..

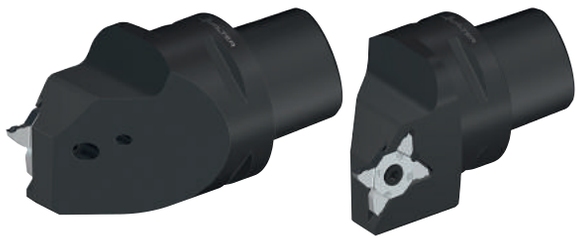
Ordering example, right-hand tool: G3041.26R-MX22-2C/ordering example, left-hand tool: G3041.26L-MX22-2C
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

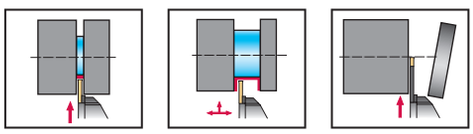
	h_4 [mm]	26
	Clamping screw for grooving insert	FS2574
	Torx key	FS2572

/ ★ New addition to the product range

Groove turning holders – Radial grooving
C...-G3011...-P mm



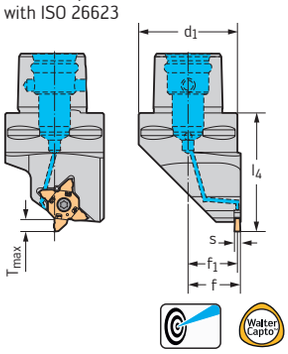
– Walter Capto™
– Screw clamping



MX

Tool

Walter Capto™ in accordance with ISO 26623



Designation	s mm	s in	T_{max} mm	d_1	f_1 mm	l_4 mm	Type
★ G3011-C3R/L-MX22-2-P	0.8–3.25	0.031-0.128	6	C3	20	45	MX22-2E ..
★ G3011-C4R/L-MX22-2-P			6	C4	20	60	
★ G3011-C5R/L-MX22-2-P			6	C5	25	60	
★ G3011-C6R/L-MX22-2-P			6	C6	32	65	
★ G3011-C4R/L-MX22-4-P	4–5.65	0.157-0.222	6	C4	20	60	MX22-4E ..
★ G3011-C5R/L-MX22-4-P			6	C5	25	60	
★ G3011-C6R/L-MX22-4-P			6	C6	32	65	

$f = f_1 + s/2$
For information on the maximum cutting depth T_{max}, see "Cutting inserts"
The maximum recommended coolant pressure is 150 bar (2175 psi)
Ordering example, right-hand tool: G3011-C3R-MX22-2-P/ordering example, left-hand tool: G3011-C3L-MX22-2-P
Bodies and assembly parts are included in the scope of delivery.

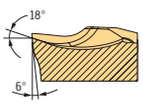
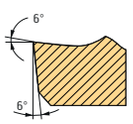
Assembly parts

	s [mm]	0.8–3.25/4–5.65
	Clamping screw for grooving insert	FS2571
	Torx key	FS2572

/ ★ New addition to the product range

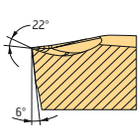
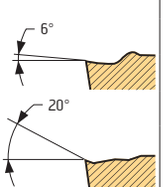
Geometry overview of cutting inserts:

GX system: Grooving and parting off

Geometry	Remarks / field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	View of main cutting edge	s [in]	f [in]
	CK8 – Grooving and parting off operations – Light to moderate feeds – Good chip control – Low burr/centre pip formation – Polished rake face		•		••	•					0.079 0.098 0.118 0.157 0.197	0.002–0.006 0.002–0.006 0.003–0.008 0.004–0009 0.004–0.010
	GD8 – For DIN 471 circlip grooves with the tolerance class H13 – For precision grooving – Extremely soft cutting action – Light to moderate feeds	••	•	•	•	•					0.039 0.059 0.079 0.098 0.118	0.001–0.002 0.001–0.004 0.002–0.004 0.002–0.006 0.002–0.006

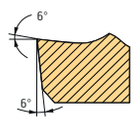
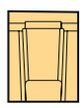
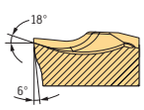
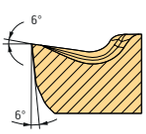
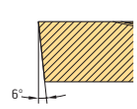
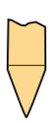
•• Primary application
• Additional application

GX system: Grooving, parting off and recessing

Geometry	Remarks / field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	View of main cutting edge	s [in]	a_p [in]	f [in]
	UF8 – All grooving operations – Excellent chip control – Low to average feed range – For DIN 471 circlip grooves with the tolerance class H13	••	••	•	••	••					0.063 0.079 0.118 0.157 0.197 0.236 0.315	0.012–0.039 0.012–0.047 0.016–0.059 0.012–0.087 0.012–0.102 0.012–0.126 0.039–0.165	0.002–0.007 0.002–0.009 0.003–0.009 0.003–0.012 0.004–0.138 0.004–0.138 0.005–0.016
	VG7 – For finishing operations on the rear side of a component, particularly on multi-spindle machines – Enormous savings on material compared to standard ISO indexable inserts – Optimum chip breaking for finishing operations	••	••	•	••	••					 0.110 	 0.008–0.098 	 0.002–0.010

•• Primary application
• Additional application

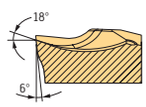
MX system: Cutting inserts for grooving and parting off

Geometry	Remarks / field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	View of main cutting edge	s [in]	f [in]
	GD8 – For DIN 471 circlip grooves with the tolerance class H13 – For precision grooving – Extremely soft cutting action – Light to moderate feeds	●●	●	●	●	●					0.039	0.001–0.002
											0.059	0.001–0.004
											0.079	0.002–0.004
											0.098	0.002–0.006
											0.118	0.002–0.006
	CF5 – Grooving and parting off operations – Light to moderate feeds – Excellent chip control – Low burr/centre pip formation	●●	●●	●	●	●●					0.039	0.001–0.003
											0.059	0.001–0.004
											0.079	0.002–0.006
											0.098	0.002–0.006
											0.118	0.002–0.006
	RF5 – For full radius grooves – Circumference fully ground – For low to moderate feeds	●●	●●	●	●	●●					0.079	0.002–0.006
											0.098	0.002–0.007
											0.118	0.002–0.008
	AG60 – For thread turning operations where space is limited – Thread turning with the same basic holder – 60° partial profile external thread – Pitch range 0.5–3.0 mm	●●	●●	●	●	●●					0.132	–
											0.222	–

Additional shapes via Walter Xpress

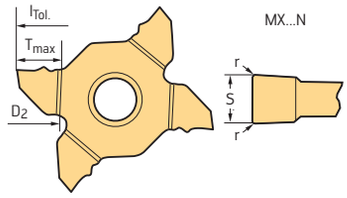
●● Primary application
● Additional application

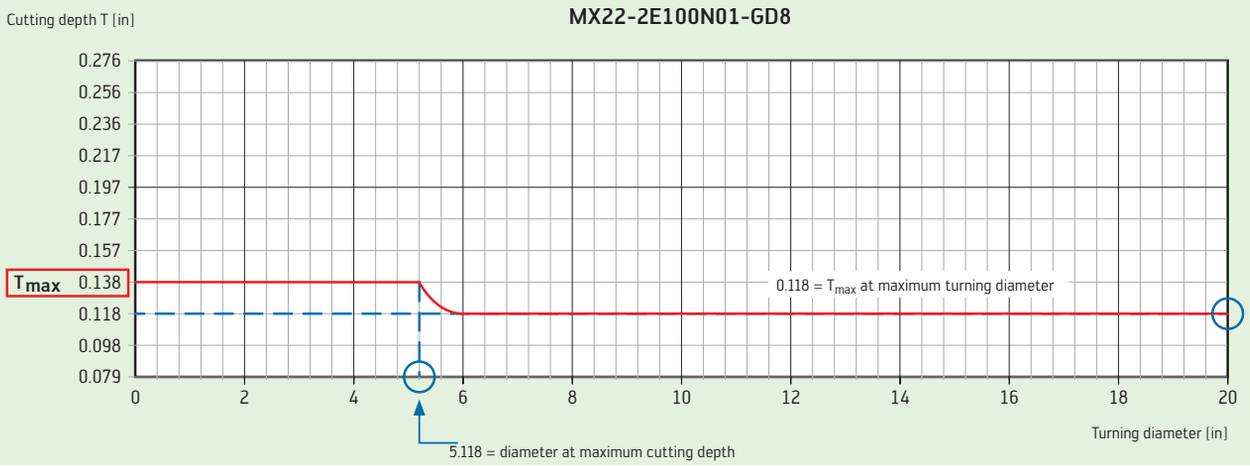
SX system: Grooving and parting off

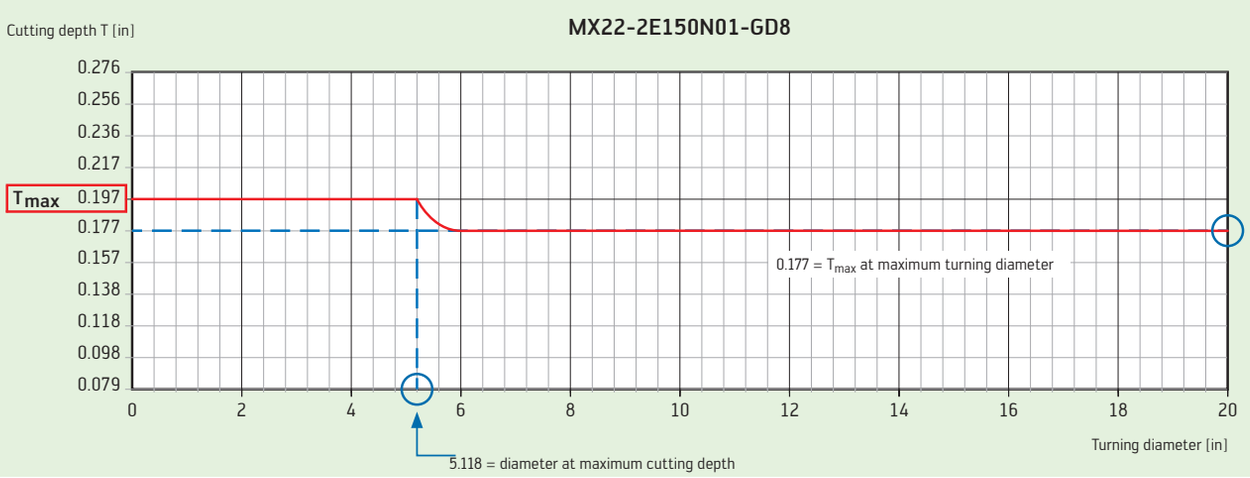
Geometry	Remarks/ field of applications	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Main cutting edge section	View of main cutting edge	s [in]	f [in]
	CK8 – Grooving and parting off operations – Light to moderate feeds – Good chip control – Low burr/centre pip formation – Polished rake face				●●	●					0.079	0.002–0.006
											0.098	0.002–0.006
											0.118	0.003–0.008
											0.157	0.004–0.009
											0.197	0.004–0.010

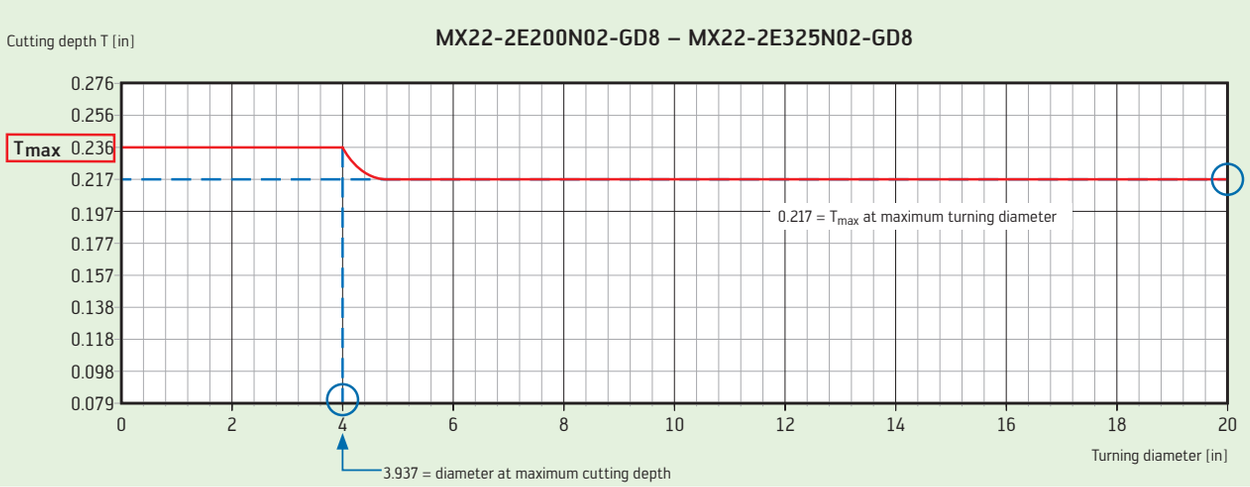
●● Primary application
● Additional application

Application information:
Cutting depths depending on turning diameter









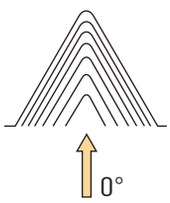
Application information:
Standard values for thread turning with Walter Cut MX

Feed types and their influence on machining

Radial feed

Recommended for:

– Short-chipping materials
– Hard materials

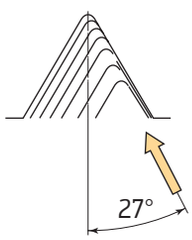


– Formation of V-shaped chips
– Both cutting edges engaged
– High cutting temperature
– Even indexable insert wear on both flanks
– Suitable for small pitches

Feed via flank 27°–29°

Recommended for:

– Pitches greater than 1.5 mm or 16 TPI
– The manufacture of trapezoidal threads

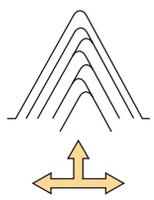


– Good chip formation
– Formation of helical chips
– One cutting edge engaged
– Chips are guided away from the thread
– Thread flanks with excellent surface quality

Alternating feed

Recommended for:

– Steep pitches
– Long-chipping materials



– Good chip formation
– Formation of flat helical chips
– Both cutting edges are evenly engaged, ensuring even wear

Standard values for the number of radial infeeds for each thread turning pass on manual lathes

The recommended cutting passes are only to be regarded as standard values. They were determined under good operating conditions with medium-strength steel materials. In the case of high-strength steel materials, the number of feeds must be increased. It is important to reduce the initial threading cuts in this case.

External machining, metric 60°

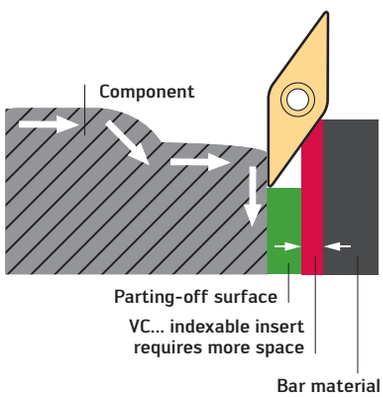
No. of feeds	Pitch [mm]											
	0.5	0.6	0.7	0.75	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0
Total depth [mm]	**0.34**	**0.40**	**0.47**	**0.50**	**0.54**	**0.67**	**0.80**	**0.94**	**1.14**	**1.28**	**1.58**	**1.89**
16												
15												
14												
13												
12												0.08
11												0.10
10											0.08	0.11
9											0.11	0.12
8									0.08	0.08	0.11	0.12
7									0.10	0.11	0.12	0.13
6							0.08	0.08	0.10	0.12	0.13	0.14
5						0.08	0.10	0.12	0.12	0.14	0.15	0.16
4	0.07	0.07	0.07	0.07	0.08	0.11	0.11	0.14	0.14	0.16	0.17	0.18
3	0.07	0.08	0.10	0.11	0.12	0.13	0.14	0.17	0.17	0.18	0.20	0.21
2	0.09	0.11	0.14	0.15	0.16	0.16	0.17	0.21	0.21	0.24	0.24	0.26
1	0.11	0.14	0.16	0.17	0.18	0.19	0.20	0.22	0.22	0.25	0.27	0.28

Radial infeed [mm] ← Reduce the cutting speed

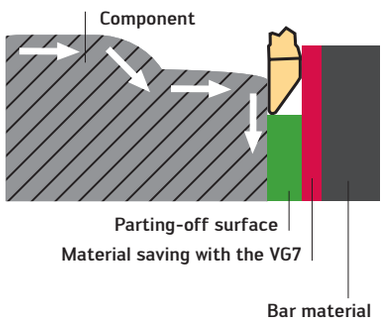
Application information:
Reverse turning with Walter Cut GX-VG7

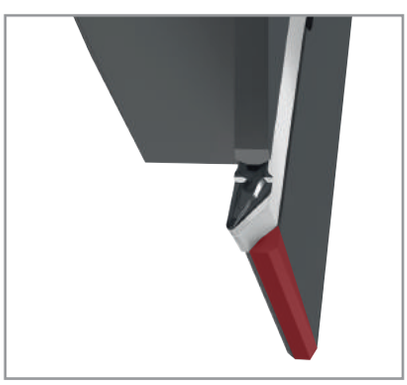
Walter Cut GX-VG7
Area of application for reverse turning
Instead of using a VC.. finishing insert

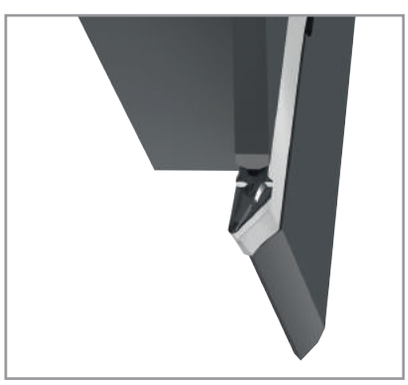
Example of a VC... indexable insert (35°)



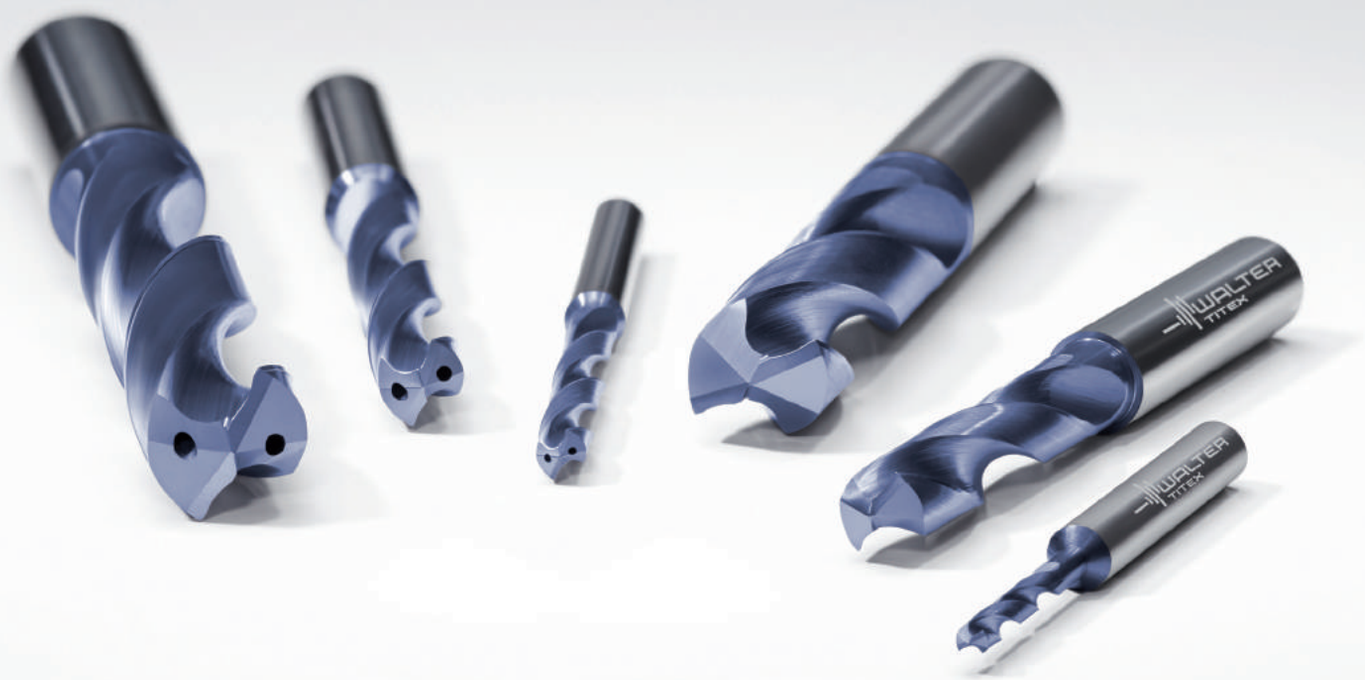
GX24-2E280R02-VG7 WSM33S







Cutting inserts can be used in G15.../NCCE/NCNE/NCCI tools
With other tools, e.g. G1011, adapt support to the cutting insert profile.


WALTER
TITEX
WALTER
TITEX

B – Drilling

Solid drilling – B1

Solid carbide drilling and reaming tools	Product range overview	151
	Designation key	152
	Solid carbide drills with internal coolant	153
	Solid carbide drills without internal coolant	175
Indexable inserts for drilling	Indexable inserts for drilling	193
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HSS drilling and reaming tools	Product range overview	254
	HSS drills	255

Technical information – B1

Solid carbide drilling and reaming tools	Cutting data	258
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Drilling tools with indexable inserts	Cutting data	266
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HSS drilling and reaming tools	Cutting data	279

Counterboring and precision boring – B2

Indexable inserts for counterboring and precision boring	Product range overview	280
	Indexable inserts for counterboring and precision boring tools	281
Tools for counterboring and precision boring	Product range overview	287
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Cartridges	Product range overview	341
	Walter precision boring cartridges	342

Technical information – B2

Counterboring and precision boring tools	Cutting data	348

Product range overview of solid carbide drilling tools
Solid carbide drills with internal coolant

Machining					
Drilling depth	**3 × D_c**	**3 × D_c**	**5 × D_c**	**8 × D_c**	**12 × D_c**
Designation	**DC260 Advance**	**DC160 Advance**	**DC160 Advance**	**DC160 Advance**	**DC160 Advance**
Standard	Walter	DIN 6537 K	DIN 6537 L	Walter	Walter
Dia. range [mm]	3.3–14	3–20	3–25	3–20	3–20
Page	153	154	161	169	172

Product range overview of solid carbide drilling and reaming tools
Solid carbide drills without internal coolant

Machining				
Drilling depth	**3 × D_c**	**3 × D_c**	**5 × D_c**	
Designation	**DC260 Advance**	**DC160 Advance**	**DC160 Advance**	**DC150 Perform**
Standard	Walter	DIN 6537 K	DIN 6537 L	DIN 6537 L
Dia. range [mm]	3.3–14.5	3–20	3–25	3–20
Page	175	176	183	190

Designation key for Walter Titex solid drills

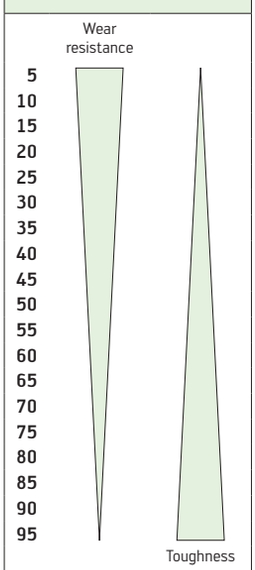
D	C	1	70	–	16	–	03.000	A	1	–	W	J	30	EJ
1	2	3	4	5	6		7	8	9		Grade			

1	2	3	4	5
Tool group	**Generation**	**Tool type**	**Tool type**	**1. Delimiters**
D Drilling		1 Cylindrical drill 2 Chamfer drills	10 Type N Perform 33 Supreme micro drill 30 Advance micro drill 50 Universal Perform 60 Universal Advance 70 ISO P; ISO K Supreme	– Metric . Inch

6	7	8	9
Drilling depth	**Cutting diameter**	**Shank type**	**Cooling**
03 ≈ 3 × D_c in accordance with DIN 6537 short 05 ≈ 5 × D_c in accordance with DIN 6537 long or in accordance with Walter standard 08 ≈ 8 × D_c in accordance with Walter standard in accordance with DIN 338 12 ≈ 12 × D_c in accordance with Walter standard 16 ≈ 16 × D_c in accordance with Walter standard 20 ≈ 20 × D_c in accordance with Walter standard 25 ≈ 25 × D_c in accordance with Walter standard 30 ≈ 30 × D_c in accordance with Walter standard		A DIN 6535 HA parallel shank F DIN 6535 HE parallel shank U Parallel shank D Parallel shank DIN 6535 HB/ DIN 6535 HE	0 External coolant 1 Axial internal coolant

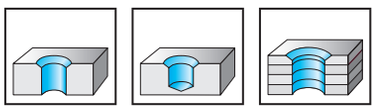
Grade designation key for solid carbide and HSS cutting tool materials

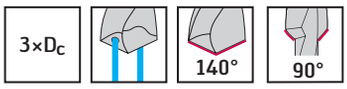
W	J	30	EJ
Walter	1	2	3

1	2	3
Substrate	**Application range**	**Coating**
Solid carbide J HSS Z		EJ TiAlN (AlCrN) RE TiAlN TA TiAlN EL AlCrN ER AlCrN point coating UU Uncoated ET TiSiAlCrN/AlTiN EU TiSiAlCrN/AlTiN point coating AJ TiN point coating

Solid carbide chamfer drills with coolant-through DC260 Advance

– Step length in accordance with DIN 8378
– For threaded core hole drilling





	P	M	K	N	S	H	O
WJ30ET	●●	●	●●	●●	●●	●	●

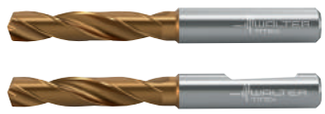
B1

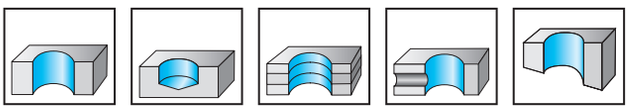
	Designation	For thread	D_c m7 mm	D_c m7 in	d_{10} h7 mm	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
Shank DIN 6535 HA	DC260-03-03.300A1-	M 4	3.3	0.1299	5	11	66	28	36	6	
	DC260-03-04.200A1-	M 5	4.2	0.1654	6	14	66	28	36	6	
	DC260-03-05.000A1-	M 6	5	0.1969	8	17	79	41	36	8	
	DC260-03-06.800A1-	M 8	6.8	0.2677	10	21	89	47	40	10	
	DC260-03-08.500A1-	M 10	8.5	0.3346	12	26	102	55	45	12	
	DC260-03-10.200A1-	M 12	10.2	0.4016	14	30	107	60	45	14	
	DC260-03-12.000A1-	M 14	12	0.4724	16	35	115	65	48	16	
	DC260-03-14.000A1-	M 16	14	0.5512	18	39	123	73	48	18	
Shank DIN 6535 HE	DC260-03-03.300F1-	M 4	3.3	0.1299	5	11	66	28	36	6	
	DC260-03-04.200F1-	M 5	4.2	0.1654	6	14	66	28	36	6	
	DC260-03-05.000F1-	M 6	5	0.1969	8	17	79	41	36	8	
	DC260-03-06.800F1-	M 8	6.8	0.2677	10	21	89	47	40	10	
	DC260-03-08.500F1-	M 10	8.5	0.3346	12	26	102	55	45	12	
	DC260-03-10.200F1-	M 12	10.2	0.4016	14	30	107	60	45	14	
	DC260-03-12.000F1-	M 14	12	0.4724	16	35	115	65	48	16	
	DC260-03-14.000F1-	M 16	14	0.5512	18	39	123	73	48	18	

Ordering example for the WJ30ET grade: DC260-03-03.300A1-WJ30ET

/ ★ New addition to the product range

Solid carbide drills with coolant-through
DC160 Advance

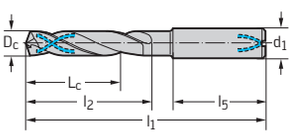




3×D_c | DIN 6537 K | 140°

	P	M	K	N	S	H	O
WJ30ET	●●	●	●●	●●	●●	●	●

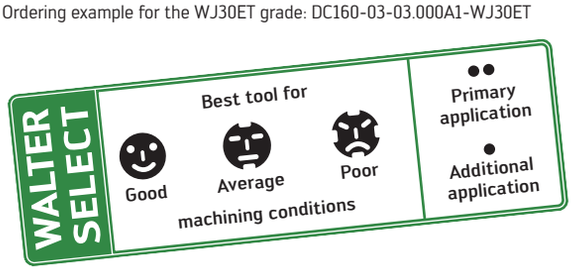
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-03-03.000A1-	3	0.1181		14	62	20	36	6	●
DC160-03-03.100A1-	3.1	0.1220		14	62	20	36	6	●
DC160-03-03.175A1-	3.175	0.1250	1/8"	14	62	20	36	6	●
DC160-03-03.200A1-	3.2	0.1260		14	62	20	36	6	●
DC160-03-03.250A1-	3.25	0.1280		14	62	20	36	6	●
DC160-03-03.300A1-	3.3	0.1299		14	62	20	36	6	●
DC160-03-03.400A1-	3.4	0.1339		14	62	20	36	6	●
DC160-03-03.500A1-	3.5	0.1378		14	62	20	36	6	●
DC160-03-03.572A1-	3.572	0.1406	9/64"	14	62	20	36	6	●
DC160-03-03.600A1-	3.6	0.1417		14	62	20	36	6	●
DC160-03-03.650A1-	3.65	0.1437		14	62	20	36	6	●
DC160-03-03.700A1-	3.7	0.1457		14	62	20	36	6	●
DC160-03-03.800A1-	3.8	0.1496		17	66	24	36	6	●
DC160-03-03.900A1-	3.9	0.1535		17	66	24	36	6	●
DC160-03-03.969A1-	3.969	0.1563	5/32"	17	66	24	36	6	●
DC160-03-04.000A1-	4	0.1575		17	66	24	36	6	●
DC160-03-04.100A1-	4.1	0.1614		17	66	24	36	6	●
DC160-03-04.200A1-	4.2	0.1654		17	66	24	36	6	●
DC160-03-04.300A1-	4.3	0.1693		17	66	24	36	6	●
DC160-03-04.366A1-	4.366	0.1719	11/64"	17	66	24	36	6	●
DC160-03-04.400A1-	4.4	0.1732		17	66	24	36	6	●
DC160-03-04.500A1-	4.5	0.1772		17	66	24	36	6	●
DC160-03-04.600A1-	4.6	0.1811		17	66	24	36	6	●
DC160-03-04.650A1-	4.65	0.1831		17	66	24	36	6	●
DC160-03-04.700A1-	4.7	0.1850		17	66	24	36	6	●
DC160-03-04.763A1-	4.763	0.1875	3/16"	20	66	28	36	6	●
DC160-03-04.800A1-	4.8	0.1890		20	66	28	36	6	●
DC160-03-04.900A1-	4.9	0.1929		20	66	28	36	6	●
DC160-03-05.000A1-	5	0.1969		20	66	28	36	6	●
DC160-03-05.100A1-	5.1	0.2008		20	66	28	36	6	●
DC160-03-05.159A1-	5.159	0.2031	13/64"	20	66	28	36	6	●
DC160-03-05.200A1-	5.2	0.2047		20	66	28	36	6	●
DC160-03-05.300A1-	5.3	0.2087		20	66	28	36	6	●
DC160-03-05.400A1-	5.4	0.2126		20	66	28	36	6	●
DC160-03-05.500A1-	5.5	0.2165		20	66	28	36	6	●
DC160-03-05.550A1-	5.55	0.2185		20	66	28	36	6	●
DC160-03-05.556A1-	5.556	0.2187	7/32"	20	66	28	36	6	●
DC160-03-05.600A1-	5.6	0.2205		20	66	28	36	6	●
DC160-03-05.700A1-	5.7	0.2244		20	66	28	36	6	●
DC160-03-05.800A1-	5.8	0.2283		20	66	28	36	6	●
DC160-03-05.900A1-	5.9	0.2323		20	66	28	36	6	●
DC160-03-05.953A1-	5.953	0.2344	15/64"	20	66	28	36	6	●
DC160-03-06.000A1-	6	0.2362		20	66	28	36	6	●

Ordering example for the WJ30ET grade: DC160-03-03.000A1-WJ30ET

Continued



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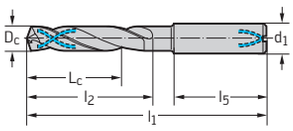
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-03-06.100A1-	6.1	0.2402		24	79	34	36	8	●
DC160-03-06.200A1-	6.2	0.2441		24	79	34	36	8	●
DC160-03-06.300A1-	6.3	0.2480		24	79	34	36	8	●
DC160-03-06.350A1-	6.35	0.2500	1/4"	24	79	34	36	8	●
DC160-03-06.400A1-	6.4	0.2520		24	79	34	36	8	●
DC160-03-06.500A1-	6.5	0.2559		24	79	34	36	8	●
DC160-03-06.600A1-	6.6	0.2598		24	79	34	36	8	●
DC160-03-06.700A1-	6.7	0.2638		24	79	34	36	8	●
DC160-03-06.747A1-	6.747	0.2656	17/64"	24	79	34	36	8	●
DC160-03-06.800A1-	6.8	0.2677		24	79	34	36	8	●
DC160-03-06.900A1-	6.9	0.2717		24	79	34	36	8	●
DC160-03-07.000A1-	7	0.2756		24	79	34	36	8	●
DC160-03-07.100A1-	7.1	0.2795		29	79	41	36	8	●
DC160-03-07.144A1-	7.144	0.2813	9/32"	29	79	41	36	8	●
DC160-03-07.200A1-	7.2	0.2835		29	79	41	36	8	●
DC160-03-07.300A1-	7.3	0.2874		29	79	41	36	8	●
DC160-03-07.400A1-	7.4	0.2913		29	79	41	36	8	●
DC160-03-07.500A1-	7.5	0.2953		29	79	41	36	8	●
DC160-03-07.541A1-	7.541	0.2969	19/64"	29	79	41	36	8	●
DC160-03-07.550A1-	7.55	0.2972		29	79	41	36	8	●
DC160-03-07.600A1-	7.6	0.2992		29	79	41	36	8	●
DC160-03-07.700A1-	7.7	0.3031		29	79	41	36	8	●
DC160-03-07.800A1-	7.8	0.3071		29	79	41	36	8	●
DC160-03-07.900A1-	7.9	0.3110		29	79	41	36	8	●
DC160-03-07.938A1-	7.938	0.3125	5/16"	29	79	41	36	8	●
DC160-03-08.000A1-	8	0.3150		29	79	41	36	8	●
DC160-03-08.100A1-	8.1	0.3189		35	89	47	40	10	●
DC160-03-08.200A1-	8.2	0.3228		35	89	47	40	10	●
DC160-03-08.300A1-	8.3	0.3268		35	89	47	40	10	●
DC160-03-08.334A1-	8.334	0.3281	21/64"	35	89	47	40	10	●
DC160-03-08.400A1-	8.4	0.3307		35	89	47	40	10	●
DC160-03-08.500A1-	8.5	0.3346		35	89	47	40	10	●
DC160-03-08.600A1-	8.6	0.3386		35	89	47	40	10	●
DC160-03-08.700A1-	8.7	0.3425		35	89	47	40	10	●
DC160-03-08.731A1-	8.731	0.3437	11/32"	35	89	47	40	10	●
DC160-03-08.800A1-	8.8	0.3465		35	89	47	40	10	●
DC160-03-08.900A1-	8.9	0.3504		35	89	47	40	10	●
DC160-03-09.000A1-	9	0.3543		35	89	47	40	10	●
DC160-03-09.100A1-	9.1	0.3583		35	89	47	40	10	●
DC160-03-09.128A1-	9.128	0.3594	23/64"	35	89	47	40	10	●
DC160-03-09.200A1-	9.2	0.3622		35	89	47	40	10	●
DC160-03-09.300A1-	9.3	0.3661		35	89	47	40	10	●
DC160-03-09.400A1-	9.4	0.3701		35	89	47	40	10	●
DC160-03-09.500A1-	9.5	0.3740		35	89	47	40	10	●
DC160-03-09.525A1-	9.525	0.3750	3/8"	35	89	47	40	10	●
DC160-03-09.550A1-	9.55	0.3760		35	89	47	40	10	●
DC160-03-09.600A1-	9.6	0.3780		35	89	47	40	10	●
DC160-03-09.700A1-	9.7	0.3819		35	89	47	40	10	●
DC160-03-09.800A1-	9.8	0.3858		35	89	47	40	10	●
DC160-03-09.900A1-	9.9	0.3898		35	89	47	40	10	●
DC160-03-09.922A1-	9.922	0.3906	25/64"	35	89	47	40	10	●
DC160-03-10.000A1-	10	0.3937		35	89	47	40	10	●
DC160-03-10.100A1-	10.1	0.3976		40	102	55	45	12	●
DC160-03-10.200A1-	10.2	0.4016		40	102	55	45	12	●
DC160-03-10.300A1-	10.3	0.4055		40	102	55	45	12	●
DC160-03-10.319A1-	10.319	0.4063	13/32"	40	102	55	45	12	●
DC160-03-10.400A1-	10.4	0.4094		40	102	55	45	12	●
DC160-03-10.500A1-	10.5	0.4134		40	102	55	45	12	●
DC160-03-10.600A1-	10.6	0.4173		40	102	55	45	12	●
DC160-03-10.700A1-	10.7	0.4213		40	102	55	45	12	●
DC160-03-10.716A1-	10.716	0.4219	27/64"	40	102	55	45	12	●

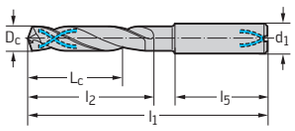
Ordering example for the WJ30ET grade: DC160-03-03.000A1-WJ30ET

Continued

● / ★ New addition to the product range

Continued

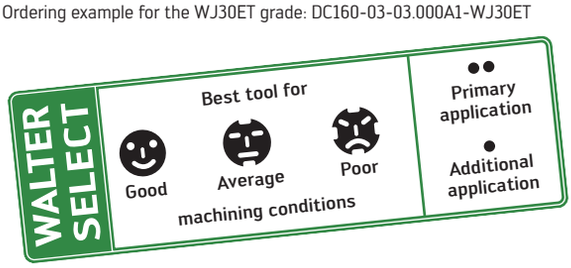
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-03-10.800A1-	10.8	0.4252		40	102	55	45	12	☹
DC160-03-10.900A1-	10.9	0.4291		40	102	55	45	12	☹
DC160-03-11.000A1-	11	0.4331		40	102	55	45	12	☹
DC160-03-11.100A1-	11.1	0.4370		40	102	55	45	12	☹
DC160-03-11.113A1-	11.113	0.4375	7/16"	40	102	55	45	12	☹
DC160-03-11.200A1-	11.2	0.4409		40	102	55	45	12	☹
DC160-03-11.300A1-	11.3	0.4449		40	102	55	45	12	☹
DC160-03-11.400A1-	11.4	0.4488		40	102	55	45	12	☹
DC160-03-11.500A1-	11.5	0.4528		40	102	55	45	12	☹
DC160-03-11.509A1-	11.509	0.4531	29/64"	40	102	55	45	12	☹
DC160-03-11.550A1-	11.55	0.4547		40	102	55	45	12	☹
DC160-03-11.600A1-	11.6	0.4567		40	102	55	45	12	☹
DC160-03-11.700A1-	11.7	0.4606		40	102	55	45	12	☹
DC160-03-11.800A1-	11.8	0.4646		40	102	55	45	12	☹
DC160-03-11.900A1-	11.9	0.4685		40	102	55	45	12	☹
DC160-03-11.906A1-	11.906	0.4687	15/32"	40	102	55	45	12	☹
DC160-03-12.000A1-	12	0.4724		40	102	55	45	12	☹
DC160-03-12.100A1-	12.1	0.4764		43	107	60	45	14	☹
DC160-03-12.200A1-	12.2	0.4803		43	107	60	45	14	☹
DC160-03-12.250A1-	12.25	0.4823		43	107	60	45	14	☹
DC160-03-12.300A1-	12.3	0.4843		43	107	60	45	14	☹
DC160-03-12.303A1-	12.303	0.4844	31/64"	43	107	60	45	14	☹
DC160-03-12.400A1-	12.4	0.4882		43	107	60	45	14	☹
DC160-03-12.500A1-	12.5	0.4921		43	107	60	45	14	☹
DC160-03-12.600A1-	12.6	0.4961		43	107	60	45	14	☹
DC160-03-12.700A1-	12.7	0.5000	1/2"	43	107	60	45	14	☹
DC160-03-12.750A1-	12.75	0.5020		43	107	60	45	14	☹
DC160-03-12.800A1-	12.8	0.5039		43	107	60	45	14	☹
DC160-03-12.900A1-	12.9	0.5079		43	107	60	45	14	☹
DC160-03-13.000A1-	13	0.5118		43	107	60	45	14	☹
DC160-03-13.100A1-	13.1	0.5157		43	107	60	45	14	☹
DC160-03-13.200A1-	13.2	0.5197		43	107	60	45	14	☹
DC160-03-13.300A1-	13.3	0.5236		43	107	60	45	14	☹
DC160-03-13.400A1-	13.4	0.5276		43	107	60	45	14	☹
DC160-03-13.494A1-	13.494	0.5313	17/32"	43	107	60	45	14	☹
DC160-03-13.500A1-	13.5	0.5315		43	107	60	45	14	☹
DC160-03-13.600A1-	13.6	0.5354		43	107	60	45	14	☹
DC160-03-13.700A1-	13.7	0.5394		43	107	60	45	14	☹
DC160-03-13.800A1-	13.8	0.5433		43	107	60	45	14	☹
DC160-03-13.900A1-	13.9	0.5472		43	107	60	45	14	☹
DC160-03-14.000A1-	14	0.5512		43	107	60	45	14	☹
DC160-03-14.100A1-	14.1	0.5551		45	115	65	48	16	☹
DC160-03-14.200A1-	14.2	0.5591		45	115	65	48	16	☹
DC160-03-14.288A1-	14.288	0.5625	9/16"	45	115	65	48	16	☹
DC160-03-14.300A1-	14.3	0.5630		45	115	65	48	16	☹
DC160-03-14.400A1-	14.4	0.5669		45	115	65	48	16	☹
DC160-03-14.500A1-	14.5	0.5709		45	115	65	48	16	☹
DC160-03-14.600A1-	14.6	0.5748		45	115	65	48	16	☹
DC160-03-14.700A1-	14.7	0.5787		45	115	65	48	16	☹
DC160-03-14.750A1-	14.75	0.5807		45	115	65	48	16	☹
DC160-03-14.800A1-	14.8	0.5827		45	115	65	48	16	☹
DC160-03-15.000A1-	15	0.5906		45	115	65	48	16	☹
DC160-03-15.100A1-	15.1	0.5945		45	115	65	48	16	☹
DC160-03-15.200A1-	15.2	0.5984		45	115	65	48	16	☹
DC160-03-15.300A1-	15.3	0.6024		45	115	65	48	16	☹
DC160-03-15.500A1-	15.5	0.6102		45	115	65	48	16	☹
DC160-03-15.600A1-	15.6	0.6142		45	115	65	48	16	☹

Ordering example for the WJ30ET grade: DC160-03-03.000A1-WJ30ET

Continued



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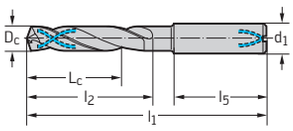
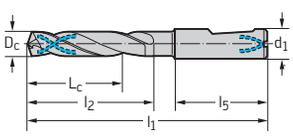
	Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
Shank DIN 6535 HA	DC160-03-15.700A1-	15.7	0.6181		45	115	65	48	16	
	DC160-03-15.800A1-	15.8	0.6220		45	115	65	48	16	
	DC160-03-15.875A1-	15.875	0.6250	5/8"	45	115	65	48	16	
	DC160-03-15.900A1-	15.9	0.6260		45	115	65	48	16	
	DC160-03-16.000A1-	16	0.6299		45	115	65	48	16	
	DC160-03-16.100A1-	16.1	0.6339		51	123	73	48	18	
	DC160-03-16.200A1-	16.2	0.6378		51	123	73	48	18	
	DC160-03-16.300A1-	16.3	0.6417		51	123	73	48	18	
	DC160-03-16.400A1-	16.4	0.6457		51	123	73	48	18	
	DC160-03-16.500A1-	16.5	0.6496		51	123	73	48	18	
	DC160-03-16.600A1-	16.6	0.6535		51	123	73	48	18	
	DC160-03-16.700A1-	16.7	0.6575		51	123	73	48	18	
	DC160-03-16.750A1-	16.75	0.6594		51	123	73	48	18	
	DC160-03-16.800A1-	16.8	0.6614		51	123	73	48	18	
	DC160-03-17.000A1-	17	0.6693		51	123	73	48	18	
	DC160-03-17.200A1-	17.2	0.6772		51	123	73	48	18	
	DC160-03-17.300A1-	17.3	0.6811		51	123	73	48	18	
	DC160-03-17.500A1-	17.5	0.6890		51	123	73	48	18	
	DC160-03-17.600A1-	17.6	0.6929		51	123	73	48	18	
	DC160-03-17.700A1-	17.7	0.6969		51	123	73	48	18	
	DC160-03-17.800A1-	17.8	0.7008		51	123	73	48	18	
	DC160-03-18.000A1-	18	0.7087		51	123	73	48	18	
	DC160-03-18.200A1-	18.2	0.7165		55	131	79	50	20	
	DC160-03-18.500A1-	18.5	0.7283		55	131	79	50	20	
	DC160-03-18.700A1-	18.7	0.7362		55	131	79	50	20	
	DC160-03-18.800A1-	18.8	0.7402		55	131	79	50	20	
	DC160-03-19.000A1-	19	0.7480		55	131	79	50	20	
	DC160-03-19.050A1-	19.05	0.7500	3/4"	55	131	79	50	20	
	DC160-03-19.500A1-	19.5	0.7677		55	131	79	50	20	
	DC160-03-19.700A1-	19.7	0.7756		55	131	79	50	20	
	DC160-03-19.800A1-	19.8	0.7795		55	131	79	50	20	
	DC160-03-20.000A1-	20	0.7874		55	131	79	50	20	
Shank DIN 6535 HE	DC160-03-03.000F1-	3	0.1181		14	62	20	36	6	
	DC160-03-03.100F1-	3.1	0.1220		14	62	20	36	6	
	DC160-03-03.200F1-	3.2	0.1260		14	62	20	36	6	
	DC160-03-03.250F1-	3.25	0.1280		14	62	20	36	6	
	DC160-03-03.300F1-	3.3	0.1299		14	62	20	36	6	
	DC160-03-03.400F1-	3.4	0.1339		14	62	20	36	6	
	DC160-03-03.500F1-	3.5	0.1378		14	62	20	36	6	
	DC160-03-03.600F1-	3.6	0.1417		14	62	20	36	6	
	DC160-03-03.650F1-	3.65	0.1437		14	62	20	36	6	
	DC160-03-03.700F1-	3.7	0.1457		14	62	20	36	6	
	DC160-03-03.800F1-	3.8	0.1496		17	66	24	36	6	
	DC160-03-03.900F1-	3.9	0.1535		17	66	24	36	6	
	DC160-03-04.000F1-	4	0.1575		17	66	24	36	6	
	DC160-03-04.100F1-	4.1	0.1614		17	66	24	36	6	
	DC160-03-04.200F1-	4.2	0.1654		17	66	24	36	6	
	DC160-03-04.300F1-	4.3	0.1693		17	66	24	36	6	
	DC160-03-04.400F1-	4.4	0.1732		17	66	24	36	6	
	DC160-03-04.500F1-	4.5	0.1772		17	66	24	36	6	
	DC160-03-04.600F1-	4.6	0.1811		17	66	24	36	6	
	DC160-03-04.650F1-	4.65	0.1831		17	66	24	36	6	
	DC160-03-04.700F1-	4.7	0.1850		17	66	24	36	6	
	DC160-03-04.800F1-	4.8	0.1890		20	66	28	36	6	
	DC160-03-04.900F1-	4.9	0.1929		20	66	28	36	6	
	DC160-03-05.000F1-	5	0.1969		20	66	28	36	6	
	DC160-03-05.100F1-	5.1	0.2008		20	66	28	36	6	
	DC160-03-05.200F1-	5.2	0.2047		20	66	28	36	6	
	DC160-03-05.300F1-	5.3	0.2087		20	66	28	36	6	
	DC160-03-05.400F1-	5.4	0.2126		20	66	28	36	6	
	DC160-03-05.500F1-	5.5	0.2165		20	66	28	36	6	

Ordering example for the WJ30ET grade: DC160-03-03.000A1-WJ30ET

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B1

/ ★ New addition to the product range

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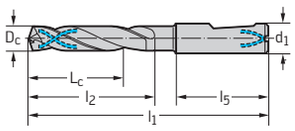
Shank DIN 6535 HE



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-03-05.550F1-	5.55	0.2185		20	66	28	36	6	●
DC160-03-05.600F1-	5.6	0.2205		20	66	28	36	6	●
DC160-03-05.700F1-	5.7	0.2244		20	66	28	36	6	●
DC160-03-05.800F1-	5.8	0.2283		20	66	28	36	6	●
DC160-03-05.900F1-	5.9	0.2323		20	66	28	36	6	●
DC160-03-06.000F1-	6	0.2362		20	66	28	36	6	●
DC160-03-06.100F1-	6.1	0.2402		24	79	34	36	8	●
DC160-03-06.200F1-	6.2	0.2441		24	79	34	36	8	●
DC160-03-06.300F1-	6.3	0.2480		24	79	34	36	8	●
DC160-03-06.400F1-	6.4	0.2520		24	79	34	36	8	●
DC160-03-06.500F1-	6.5	0.2559		24	79	34	36	8	●
DC160-03-06.600F1-	6.6	0.2598		24	79	34	36	8	●
DC160-03-06.700F1-	6.7	0.2638		24	79	34	36	8	●
DC160-03-06.800F1-	6.8	0.2677		24	79	34	36	8	●
DC160-03-06.900F1-	6.9	0.2717		24	79	34	36	8	●
DC160-03-07.000F1-	7	0.2756		24	79	34	36	8	●
DC160-03-07.100F1-	7.1	0.2795		29	79	41	36	8	●
DC160-03-07.200F1-	7.2	0.2835		29	79	41	36	8	●
DC160-03-07.300F1-	7.3	0.2874		29	79	41	36	8	●
DC160-03-07.400F1-	7.4	0.2913		29	79	41	36	8	●
DC160-03-07.500F1-	7.5	0.2953		29	79	41	36	8	●
DC160-03-07.550F1-	7.55	0.2972		29	79	41	36	8	●
DC160-03-07.600F1-	7.6	0.2992		29	79	41	36	8	●
DC160-03-07.700F1-	7.7	0.3031		29	79	41	36	8	●
DC160-03-07.800F1-	7.8	0.3071		29	79	41	36	8	●
DC160-03-07.900F1-	7.9	0.3110		29	79	41	36	8	●
DC160-03-08.000F1-	8	0.3150		29	79	41	36	8	●
DC160-03-08.100F1-	8.1	0.3189		35	89	47	40	10	●
DC160-03-08.200F1-	8.2	0.3228		35	89	47	40	10	●
DC160-03-08.300F1-	8.3	0.3268		35	89	47	40	10	●
DC160-03-08.400F1-	8.4	0.3307		35	89	47	40	10	●
DC160-03-08.500F1-	8.5	0.3346		35	89	47	40	10	●
DC160-03-08.600F1-	8.6	0.3386		35	89	47	40	10	●
DC160-03-08.700F1-	8.7	0.3425		35	89	47	40	10	●
DC160-03-08.800F1-	8.8	0.3465		35	89	47	40	10	●
DC160-03-08.900F1-	8.9	0.3504		35	89	47	40	10	●
DC160-03-09.000F1-	9	0.3543		35	89	47	40	10	●
DC160-03-09.100F1-	9.1	0.3583		35	89	47	40	10	●
DC160-03-09.200F1-	9.2	0.3622		35	89	47	40	10	●
DC160-03-09.300F1-	9.3	0.3661		35	89	47	40	10	●
DC160-03-09.400F1-	9.4	0.3701		35	89	47	40	10	●
DC160-03-09.500F1-	9.5	0.3740		35	89	47	40	10	●
DC160-03-09.550F1-	9.55	0.3760		35	89	47	40	10	●
DC160-03-09.600F1-	9.6	0.3780		35	89	47	40	10	●
DC160-03-09.700F1-	9.7	0.3819		35	89	47	40	10	●
DC160-03-09.800F1-	9.8	0.3858		35	89	47	40	10	●
DC160-03-09.900F1-	9.9	0.3898		35	89	47	40	10	●
DC160-03-10.000F1-	10	0.3937		35	89	47	40	10	●
DC160-03-10.100F1-	10.1	0.3976		40	102	55	45	12	●
DC160-03-10.200F1-	10.2	0.4016		40	102	55	45	12	●
DC160-03-10.300F1-	10.3	0.4055		40	102	55	45	12	●
DC160-03-10.400F1-	10.4	0.4094		40	102	55	45	12	●
DC160-03-10.500F1-	10.5	0.4134		40	102	55	45	12	●
DC160-03-10.600F1-	10.6	0.4173		40	102	55	45	12	●
DC160-03-10.700F1-	10.7	0.4213		40	102	55	45	12	●
DC160-03-10.800F1-	10.8	0.4252		40	102	55	45	12	●
DC160-03-10.900F1-	10.9	0.4291		40	102	55	45	12	●

Ordering example for the WJ30ET grade: DC160-03-03.000A1-WJ30ET

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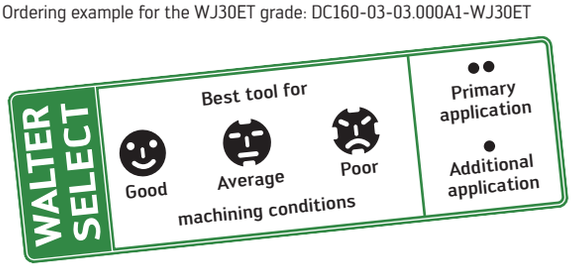

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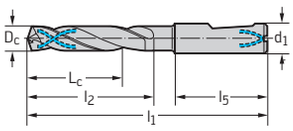
Shank DIN 6535 HE



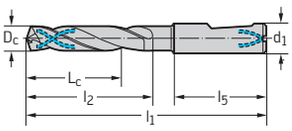
Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-03-11.000F1-	11	0.4331		40	102	55	45	12	☺
DC160-03-11.100F1-	11.1	0.4370		40	102	55	45	12	☺
DC160-03-11.200F1-	11.2	0.4409		40	102	55	45	12	☺
DC160-03-11.300F1-	11.3	0.4449		40	102	55	45	12	☺
DC160-03-11.400F1-	11.4	0.4488		40	102	55	45	12	☺
DC160-03-11.500F1-	11.5	0.4528		40	102	55	45	12	☺
DC160-03-11.550F1-	11.55	0.4547		40	102	55	45	12	☺
DC160-03-11.600F1-	11.6	0.4567		40	102	55	45	12	☺
DC160-03-11.700F1-	11.7	0.4606		40	102	55	45	12	☺
DC160-03-11.800F1-	11.8	0.4646		40	102	55	45	12	☺
DC160-03-11.900F1-	11.9	0.4685		40	102	55	45	12	☺
DC160-03-12.000F1-	12	0.4724		40	102	55	45	12	☺
DC160-03-12.100F1-	12.1	0.4764		43	107	60	45	14	☺
DC160-03-12.200F1-	12.2	0.4803		43	107	60	45	14	☺
DC160-03-12.250F1-	12.25	0.4823		43	107	60	45	14	☺
DC160-03-12.300F1-	12.3	0.4843		43	107	60	45	14	☺
DC160-03-12.400F1-	12.4	0.4882		43	107	60	45	14	☺
DC160-03-12.500F1-	12.5	0.4921		43	107	60	45	14	☺
DC160-03-12.600F1-	12.6	0.4961		43	107	60	45	14	☺
DC160-03-12.700F1-	12.7	0.5000	1/2"	43	107	60	45	14	☺
DC160-03-12.750F1-	12.75	0.5020		43	107	60	45	14	☺
DC160-03-12.800F1-	12.8	0.5039		43	107	60	45	14	☺
DC160-03-12.900F1-	12.9	0.5079		43	107	60	45	14	☺
DC160-03-13.000F1-	13	0.5118		43	107	60	45	14	☺
DC160-03-13.100F1-	13.1	0.5157		43	107	60	45	14	☺
DC160-03-13.200F1-	13.2	0.5197		43	107	60	45	14	☺
DC160-03-13.300F1-	13.3	0.5236		43	107	60	45	14	☺
DC160-03-13.400F1-	13.4	0.5276		43	107	60	45	14	☺
DC160-03-13.500F1-	13.5	0.5315		43	107	60	45	14	☺
DC160-03-13.600F1-	13.6	0.5354		43	107	60	45	14	☺
DC160-03-13.700F1-	13.7	0.5394		43	107	60	45	14	☺
DC160-03-13.800F1-	13.8	0.5433		43	107	60	45	14	☺
DC160-03-13.900F1-	13.9	0.5472		43	107	60	45	14	☺
DC160-03-14.000F1-	14	0.5512		43	107	60	45	14	☺
DC160-03-14.100F1-	14.1	0.5551		45	115	65	48	16	☺
DC160-03-14.200F1-	14.2	0.5591		45	115	65	48	16	☺
DC160-03-14.300F1-	14.3	0.5630		45	115	65	48	16	☺
DC160-03-14.400F1-	14.4	0.5669		45	115	65	48	16	☺
DC160-03-14.500F1-	14.5	0.5709		45	115	65	48	16	☺
DC160-03-14.600F1-	14.6	0.5748		45	115	65	48	16	☺
DC160-03-14.700F1-	14.7	0.5787		45	115	65	48	16	☺
DC160-03-14.750F1-	14.75	0.5807		45	115	65	48	16	☺
DC160-03-14.800F1-	14.8	0.5827		45	115	65	48	16	☺
DC160-03-15.000F1-	15	0.5906		45	115	65	48	16	☺
DC160-03-15.100F1-	15.1	0.5945		45	115	65	48	16	☺
DC160-03-15.200F1-	15.2	0.5984		45	115	65	48	16	☺
DC160-03-15.300F1-	15.3	0.6024		45	115	65	48	16	☺
DC160-03-15.500F1-	15.5	0.6102		45	115	65	48	16	☺
DC160-03-15.600F1-	15.6	0.6142		45	115	65	48	16	☺
DC160-03-15.700F1-	15.7	0.6181		45	115	65	48	16	☺
DC160-03-15.800F1-	15.8	0.6220		45	115	65	48	16	☺
DC160-03-15.900F1-	15.9	0.6260		45	115	65	48	16	☺
DC160-03-16.000F1-	16	0.6299		45	115	65	48	16	☺
DC160-03-16.100F1-	16.1	0.6339		51	123	73	48	18	☺
DC160-03-16.200F1-	16.2	0.6378		51	123	73	48	18	☺
DC160-03-16.300F1-	16.3	0.6417		51	123	73	48	18	☺
DC160-03-16.400F1-	16.4	0.6457		51	123	73	48	18	☺
DC160-03-16.500F1-	16.5	0.6496		51	123	73	48	18	☺
DC160-03-16.600F1-	16.6	0.6535		51	123	73	48	18	☺
DC160-03-16.700F1-	16.7	0.6575		51	123	73	48	18	☺
DC160-03-16.750F1-	16.75	0.6594		51	123	73	48	18	☺

Ordering example for the WJ30ET grade: DC160-03-03.000A1-WJ30ET

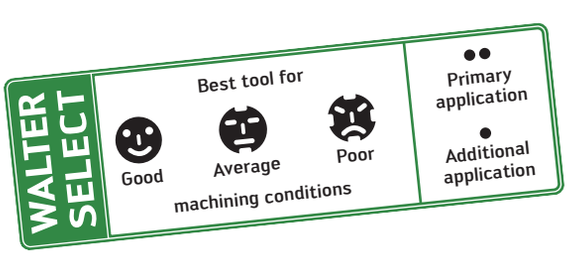
Continued

☺ / ★ New addition to the product range

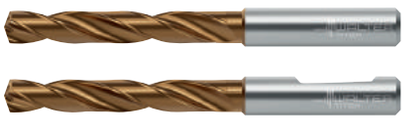
Continued

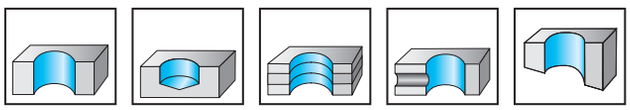
	Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
Shank DIN 6535 HE	DC160-03-16.800F1-	16.8	0.6614		51	123	73	48	18	●
	DC160-03-17.000F1-	17	0.6693		51	123	73	48	18	●
	DC160-03-17.200F1-	17.2	0.6772		51	123	73	48	18	●
	DC160-03-17.300F1-	17.3	0.6811		51	123	73	48	18	●
	DC160-03-17.500F1-	17.5	0.6890		51	123	73	48	18	●
	DC160-03-17.600F1-	17.6	0.6929		51	123	73	48	18	●
	DC160-03-17.700F1-	17.7	0.6969		51	123	73	48	18	●
	DC160-03-17.800F1-	17.8	0.7008		51	123	73	48	18	●
	DC160-03-18.000F1-	18	0.7087		51	123	73	48	18	●
	DC160-03-18.200F1-	18.2	0.7165		55	131	79	50	20	●
	DC160-03-18.500F1-	18.5	0.7283		55	131	79	50	20	●
	DC160-03-18.700F1-	18.7	0.7362		55	131	79	50	20	●
	DC160-03-18.800F1-	18.8	0.7402		55	131	79	50	20	●
	DC160-03-19.000F1-	19	0.7480		55	131	79	50	20	●
	DC160-03-19.500F1-	19.5	0.7677		55	131	79	50	20	●
	DC160-03-19.700F1-	19.7	0.7756		55	131	79	50	20	●
	DC160-03-19.800F1-	19.8	0.7795		55	131	79	50	20	●
	DC160-03-20.000F1-	20	0.7874		55	131	79	50	20	●

Ordering example for the WJ30ET grade: DC160-03-03.000A1-WJ30ET



Solid carbide drills with coolant-through DC160 Advance





5×D_c | DIN 6537 L | 140°

	P	M	K	N	S	H	O
WJ30ET	●●	●	●●	●●	●●	●	●

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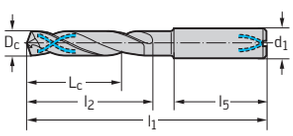
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-05-03.000A1-	3	0.1181		23	66	28	36	6	●
DC160-05-03.100A1-	3.1	0.1220		23	66	28	36	6	●
DC160-05-03.175A1-	3.175	0.1250	1/8"	23	66	28	36	6	●
DC160-05-03.200A1-	3.2	0.1260		23	66	28	36	6	●
DC160-05-03.250A1-	3.25	0.1280		23	66	28	36	6	●
DC160-05-03.300A1-	3.3	0.1299		23	66	28	36	6	●
DC160-05-03.400A1-	3.4	0.1339		23	66	28	36	6	●
DC160-05-03.500A1-	3.5	0.1378		23	66	28	36	6	●
DC160-05-03.572A1-	3.572	0.1406	9/64"	23	66	28	36	6	●
DC160-05-03.600A1-	3.6	0.1417		23	66	28	36	6	●
DC160-05-03.650A1-	3.65	0.1437		23	66	28	36	6	●
DC160-05-03.700A1-	3.7	0.1457		23	66	28	36	6	●
DC160-05-03.800A1-	3.8	0.1496		29	74	36	36	6	●
DC160-05-03.900A1-	3.9	0.1535		29	74	36	36	6	●
DC160-05-03.969A1-	3.969	0.1563	5/32"	29	74	36	36	6	●
DC160-05-04.000A1-	4	0.1575		29	74	36	36	6	●
DC160-05-04.100A1-	4.1	0.1614		29	74	36	36	6	●
DC160-05-04.200A1-	4.2	0.1654		29	74	36	36	6	●
DC160-05-04.300A1-	4.3	0.1693		29	74	36	36	6	●
DC160-05-04.366A1-	4.366	0.1719	11/64"	29	74	36	36	6	●
DC160-05-04.400A1-	4.4	0.1732		29	74	36	36	6	●
DC160-05-04.500A1-	4.5	0.1772		29	74	36	36	6	●
DC160-05-04.600A1-	4.6	0.1811		29	74	36	36	6	●
DC160-05-04.650A1-	4.65	0.1831		29	74	36	36	6	●
DC160-05-04.700A1-	4.7	0.1850		29	74	36	36	6	●
DC160-05-04.763A1-	4.763	0.1875	3/16"	35	82	44	36	6	●
DC160-05-04.800A1-	4.8	0.1890		35	82	44	36	6	●
DC160-05-04.900A1-	4.9	0.1929		35	82	44	36	6	●
DC160-05-05.000A1-	5	0.1969		35	82	44	36	6	●
DC160-05-05.100A1-	5.1	0.2008		35	82	44	36	6	●
DC160-05-05.159A1-	5.159	0.2031	13/64"	35	82	44	36	6	●
DC160-05-05.200A1-	5.2	0.2047		35	82	44	36	6	●
DC160-05-05.300A1-	5.3	0.2087		35	82	44	36	6	●
DC160-05-05.400A1-	5.4	0.2126		35	82	44	36	6	●
DC160-05-05.500A1-	5.5	0.2165		35	82	44	36	6	●
DC160-05-05.550A1-	5.55	0.2185		35	82	44	36	6	●
DC160-05-05.556A1-	5.556	0.2187	7/32"	35	82	44	36	6	●
DC160-05-05.600A1-	5.6	0.2205		35	82	44	36	6	●
DC160-05-05.700A1-	5.7	0.2244		35	82	44	36	6	●
DC160-05-05.800A1-	5.8	0.2283		35	82	44	36	6	●
DC160-05-05.900A1-	5.9	0.2323		35	82	44	36	6	●
DC160-05-05.953A1-	5.953	0.2344	15/64"	35	82	44	36	6	●
DC160-05-06.000A1-	6	0.2362		35	82	44	36	6	●

Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

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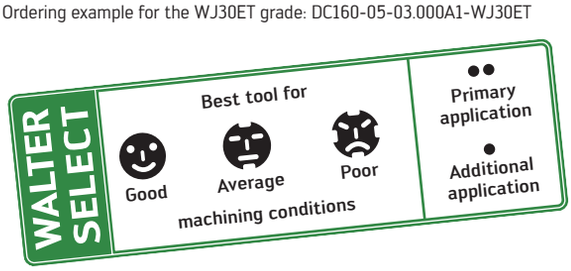

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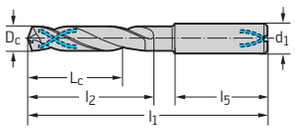
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-05-06.100A1-	6.1	0.2402		43	91	53	36	8	
DC160-05-06.200A1-	6.2	0.2441		43	91	53	36	8	
DC160-05-06.300A1-	6.3	0.2480		43	91	53	36	8	
DC160-05-06.350A1-	6.35	0.2500	1/4"	43	91	53	36	8	
DC160-05-06.400A1-	6.4	0.2520		43	91	53	36	8	
DC160-05-06.500A1-	6.5	0.2559		43	91	53	36	8	
DC160-05-06.600A1-	6.6	0.2598		43	91	53	36	8	
DC160-05-06.700A1-	6.7	0.2638		43	91	53	36	8	
DC160-05-06.747A1-	6.747	0.2656	17/64"	43	91	53	36	8	
DC160-05-06.800A1-	6.8	0.2677		43	91	53	36	8	
DC160-05-06.900A1-	6.9	0.2717		43	91	53	36	8	
DC160-05-07.000A1-	7	0.2756		43	91	53	36	8	
DC160-05-07.100A1-	7.1	0.2795		43	91	53	36	8	
DC160-05-07.144A1-	7.144	0.2813	9/32"	43	91	53	36	8	
DC160-05-07.200A1-	7.2	0.2835		43	91	53	36	8	
DC160-05-07.300A1-	7.3	0.2874		43	91	53	36	8	
DC160-05-07.400A1-	7.4	0.2913		43	91	53	36	8	
DC160-05-07.500A1-	7.5	0.2953		43	91	53	36	8	
DC160-05-07.541A1-	7.541	0.2969	19/64"	43	91	53	36	8	
DC160-05-07.550A1-	7.55	0.2972		43	91	53	36	8	
DC160-05-07.600A1-	7.6	0.2992		43	91	53	36	8	
DC160-05-07.700A1-	7.7	0.3031		43	91	53	36	8	
DC160-05-07.800A1-	7.8	0.3071		43	91	53	36	8	
DC160-05-07.900A1-	7.9	0.3110		43	91	53	36	8	
DC160-05-07.938A1-	7.938	0.3125	5/16"	43	91	53	36	8	
DC160-05-08.000A1-	8	0.3150		43	91	53	36	8	
DC160-05-08.100A1-	8.1	0.3189		49	103	61	40	10	
DC160-05-08.200A1-	8.2	0.3228		49	103	61	40	10	
DC160-05-08.300A1-	8.3	0.3268		49	103	61	40	10	
DC160-05-08.334A1-	8.334	0.3281	21/64"	49	103	61	40	10	
DC160-05-08.400A1-	8.4	0.3307		49	103	61	40	10	
DC160-05-08.500A1-	8.5	0.3346		49	103	61	40	10	
DC160-05-08.600A1-	8.6	0.3386		49	103	61	40	10	
DC160-05-08.700A1-	8.7	0.3425		49	103	61	40	10	
DC160-05-08.731A1-	8.731	0.3437	11/32"	49	103	61	40	10	
DC160-05-08.800A1-	8.8	0.3465		49	103	61	40	10	
DC160-05-08.900A1-	8.9	0.3504		49	103	61	40	10	
DC160-05-09.000A1-	9	0.3543		49	103	61	40	10	
DC160-05-09.100A1-	9.1	0.3583		49	103	61	40	10	
DC160-05-09.128A1-	9.128	0.3594	23/64"	49	103	61	40	10	
DC160-05-09.200A1-	9.2	0.3622		49	103	61	40	10	
DC160-05-09.300A1-	9.3	0.3661		49	103	61	40	10	
DC160-05-09.400A1-	9.4	0.3701		49	103	61	40	10	
DC160-05-09.500A1-	9.5	0.3740		49	103	61	40	10	
DC160-05-09.525A1-	9.525	0.3750	3/8"	49	103	61	40	10	
DC160-05-09.550A1-	9.55	0.3760		49	103	61	40	10	
DC160-05-09.600A1-	9.6	0.3780		49	103	61	40	10	
DC160-05-09.700A1-	9.7	0.3819		49	103	61	40	10	
DC160-05-09.800A1-	9.8	0.3858		49	103	61	40	10	
DC160-05-09.900A1-	9.9	0.3898		49	103	61	40	10	
DC160-05-09.922A1-	9.922	0.3906	25/64"	49	103	61	40	10	
DC160-05-10.000A1-	10	0.3937		49	103	61	40	10	
DC160-05-10.100A1-	10.1	0.3976		56	118	71	45	12	
DC160-05-10.200A1-	10.2	0.4016		56	118	71	45	12	
DC160-05-10.300A1-	10.3	0.4055		56	118	71	45	12	
DC160-05-10.319A1-	10.319	0.4063	13/32"	56	118	71	45	12	
DC160-05-10.400A1-	10.4	0.4094		56	118	71	45	12	
DC160-05-10.500A1-	10.5	0.4134		56	118	71	45	12	
DC160-05-10.600A1-	10.6	0.4173		56	118	71	45	12	
DC160-05-10.700A1-	10.7	0.4213		56	118	71	45	12	
DC160-05-10.716A1-	10.716	0.4219	27/64"	56	118	71	45	12	

Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

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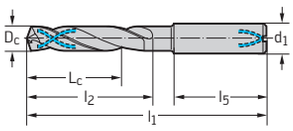
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-05-10.800A1-	10.8	0.4252		56	118	71	45	12	☹
DC160-05-10.900A1-	10.9	0.4291		56	118	71	45	12	☹
DC160-05-11.000A1-	11	0.4331		56	118	71	45	12	☹
DC160-05-11.100A1-	11.1	0.4370		56	118	71	45	12	☹
DC160-05-11.113A1-	11.113	0.4375	7/16"	56	118	71	45	12	☹
DC160-05-11.200A1-	11.2	0.4409		56	118	71	45	12	☹
DC160-05-11.300A1-	11.3	0.4449		56	118	71	45	12	☹
DC160-05-11.400A1-	11.4	0.4488		56	118	71	45	12	☹
DC160-05-11.500A1-	11.5	0.4528		56	118	71	45	12	☹
DC160-05-11.509A1-	11.509	0.4531	29/64"	56	118	71	45	12	☹
DC160-05-11.550A1-	11.55	0.4547		56	118	71	45	12	☹
DC160-05-11.600A1-	11.6	0.4567		56	118	71	45	12	☹
DC160-05-11.700A1-	11.7	0.4606		56	118	71	45	12	☹
DC160-05-11.800A1-	11.8	0.4646		56	118	71	45	12	☹
DC160-05-11.900A1-	11.9	0.4685		56	118	71	45	12	☹
DC160-05-11.906A1-	11.906	0.4687	15/32"	56	118	71	45	12	☹
DC160-05-12.000A1-	12	0.4724		56	118	71	45	12	☹
DC160-05-12.100A1-	12.1	0.4764		60	124	77	45	14	☹
DC160-05-12.200A1-	12.2	0.4803		60	124	77	45	14	☹
DC160-05-12.250A1-	12.25	0.4823		60	124	77	45	14	☹
DC160-05-12.300A1-	12.3	0.4843		60	124	77	45	14	☹
DC160-05-12.303A1-	12.303	0.4844	31/64"	60	124	77	45	14	☹
DC160-05-12.400A1-	12.4	0.4882		60	124	77	45	14	☹
DC160-05-12.500A1-	12.5	0.4921		60	124	77	45	14	☹
DC160-05-12.600A1-	12.6	0.4961		60	124	77	45	14	☹
DC160-05-12.700A1-	12.7	0.5000	1/2"	60	124	77	45	14	☹
DC160-05-12.750A1-	12.75	0.5020		60	124	77	45	14	☹
DC160-05-12.800A1-	12.8	0.5039		60	124	77	45	14	☹
DC160-05-12.900A1-	12.9	0.5079		60	124	77	45	14	☹
DC160-05-13.000A1-	13	0.5118		60	124	77	45	14	☹
DC160-05-13.100A1-	13.1	0.5157		60	124	77	45	14	☹
DC160-05-13.200A1-	13.2	0.5197		60	124	77	45	14	☹
DC160-05-13.300A1-	13.3	0.5236		60	124	77	45	14	☹
DC160-05-13.400A1-	13.4	0.5276		60	124	77	45	14	☹
DC160-05-13.494A1-	13.494	0.5313	17/32"	60	124	77	45	14	☹
DC160-05-13.500A1-	13.5	0.5315		60	124	77	45	14	☹
DC160-05-13.600A1-	13.6	0.5354		60	124	77	45	14	☹
DC160-05-13.700A1-	13.7	0.5394		60	124	77	45	14	☹
DC160-05-13.800A1-	13.8	0.5433		60	124	77	45	14	☹
DC160-05-13.900A1-	13.9	0.5472		60	124	77	45	14	☹
DC160-05-14.000A1-	14	0.5512		60	124	77	45	14	☹
DC160-05-14.100A1-	14.1	0.5551		63	133	83	48	16	☹
DC160-05-14.200A1-	14.2	0.5591		63	133	83	48	16	☹
DC160-05-14.288A1-	14.288	0.5625	9/16"	63	133	83	48	16	☹
DC160-05-14.300A1-	14.3	0.5630		63	133	83	48	16	☹
DC160-05-14.400A1-	14.4	0.5669		63	133	83	48	16	☹
DC160-05-14.500A1-	14.5	0.5709		63	133	83	48	16	☹
DC160-05-14.600A1-	14.6	0.5748		63	133	83	48	16	☹
DC160-05-14.700A1-	14.7	0.5787		63	133	83	48	16	☹
DC160-05-14.750A1-	14.75	0.5807		63	133	83	48	16	☹
DC160-05-14.800A1-	14.8	0.5827		63	133	83	48	16	☹
DC160-05-14.900A1-	14.9	0.5866		63	133	83	48	16	☹
DC160-05-15.000A1-	15	0.5906		63	133	83	48	16	☹
DC160-05-15.100A1-	15.1	0.5945		63	133	83	48	16	☹
DC160-05-15.200A1-	15.2	0.5984		63	133	83	48	16	☹
DC160-05-15.300A1-	15.3	0.6024		63	133	83	48	16	☹
DC160-05-15.400A1-	15.4	0.6063		63	133	83	48	16	☹

Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

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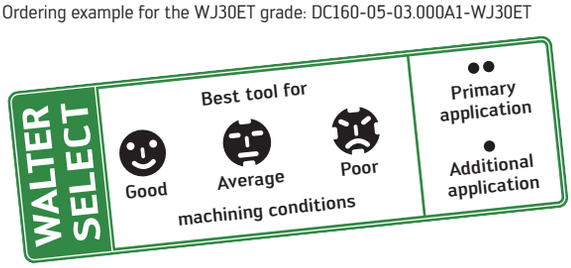

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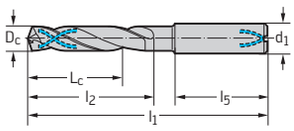
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-05-15.500A1-	15.5	0.6102		63	133	83	48	16	●
DC160-05-15.600A1-	15.6	0.6142		63	133	83	48	16	●
DC160-05-15.700A1-	15.7	0.6181		63	133	83	48	16	●
DC160-05-15.800A1-	15.8	0.6220		63	133	83	48	16	●
DC160-05-15.875A1-	15.875	0.6250	5/8"	63	133	83	48	16	●
DC160-05-15.900A1-	15.9	0.6260		63	133	83	48	16	●
DC160-05-16.000A1-	16	0.6299		63	133	83	48	16	●
DC160-05-16.100A1-	16.1	0.6339		71	143	93	48	18	●
DC160-05-16.200A1-	16.2	0.6378		71	143	93	48	18	●
DC160-05-16.300A1-	16.3	0.6417		71	143	93	48	18	●
DC160-05-16.400A1-	16.4	0.6457		71	143	93	48	18	●
DC160-05-16.500A1-	16.5	0.6496		71	143	93	48	18	●
DC160-05-16.600A1-	16.6	0.6535		71	143	93	48	18	●
DC160-05-16.700A1-	16.7	0.6575		71	143	93	48	18	●
DC160-05-16.750A1-	16.75	0.6594		71	143	93	48	18	●
DC160-05-16.800A1-	16.8	0.6614		71	143	93	48	18	●
DC160-05-16.900A1-	16.9	0.6654		71	143	93	48	18	●
DC160-05-17.000A1-	17	0.6693		71	143	93	48	18	●
DC160-05-17.100A1-	17.1	0.6732		71	143	93	48	18	●
DC160-05-17.200A1-	17.2	0.6772		71	143	93	48	18	●
DC160-05-17.300A1-	17.3	0.6811		71	143	93	48	18	●
DC160-05-17.400A1-	17.4	0.6850		71	143	93	48	18	●
DC160-05-17.500A1-	17.5	0.6890		71	143	93	48	18	●
DC160-05-17.600A1-	17.6	0.6929		71	143	93	48	18	●
DC160-05-17.700A1-	17.7	0.6969		71	143	93	48	18	●
DC160-05-17.800A1-	17.8	0.7008		71	143	93	48	18	●
DC160-05-17.900A1-	17.9	0.7047		71	143	93	48	18	●
DC160-05-18.000A1-	18	0.7087		71	143	93	48	18	●
DC160-05-18.100A1-	18.1	0.7126		77	153	101	50	20	●
DC160-05-18.200A1-	18.2	0.7165		77	153	101	50	20	●
DC160-05-18.300A1-	18.3	0.7205		77	153	101	50	20	●
DC160-05-18.400A1-	18.4	0.7244		77	153	101	50	20	●
DC160-05-18.500A1-	18.5	0.7283		77	153	101	50	20	●
DC160-05-18.600A1-	18.6	0.7323		77	153	101	50	20	●
DC160-05-18.700A1-	18.7	0.7362		77	153	101	50	20	●
DC160-05-18.800A1-	18.8	0.7402		77	153	101	50	20	●
DC160-05-18.900A1-	18.9	0.7441		77	153	101	50	20	●
DC160-05-19.000A1-	19	0.7480		77	153	101	50	20	●
DC160-05-19.050A1-	19.05	0.7500	3/4"	77	153	101	50	20	●
DC160-05-19.100A1-	19.1	0.7520		77	153	101	50	20	●
DC160-05-19.200A1-	19.2	0.7559		77	153	101	50	20	●
DC160-05-19.300A1-	19.3	0.7598		77	153	101	50	20	●
DC160-05-19.400A1-	19.4	0.7638		77	153	101	50	20	●
DC160-05-19.500A1-	19.5	0.7677		77	153	101	50	20	●
DC160-05-19.600A1-	19.6	0.7717		77	153	101	50	20	●
DC160-05-19.700A1-	19.7	0.7756		77	153	101	50	20	●
DC160-05-19.800A1-	19.8	0.7795		77	153	101	50	20	●
DC160-05-19.900A1-	19.9	0.7835		77	153	101	50	20	●
DC160-05-20.000A1-	20	0.7874		77	153	101	50	20	●
DC160-05-20.500A1-	20.5	0.8071		86	166	108	56	25	●
DC160-05-21.000A1-	21	0.8268		86	166	108	56	25	●
DC160-05-21.500A1-	21.5	0.8465		86	166	108	56	25	●
DC160-05-22.000A1-	22	0.8661		86	166	108	56	25	●
DC160-05-22.500A1-	22.5	0.8858		91	173	115	56	25	●
DC160-05-23.000A1-	23	0.9055		91	173	115	56	25	●
DC160-05-23.500A1-	23.5	0.9252		91	173	115	56	25	●
DC160-05-24.000A1-	24	0.9449		91	173	115	56	25	●
DC160-05-24.500A1-	24.5	0.9646		97	180	122	56	25	●
DC160-05-25.000A1-	25	0.9843		97	180	122	56	25	●

Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

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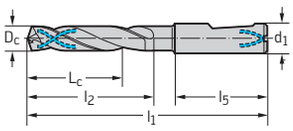
Shank DIN 6535 HE



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-05-03.000F1-	3	0.1181		23	66	28	36	6	☹
DC160-05-03.100F1-	3.1	0.1220		23	66	28	36	6	☹
DC160-05-03.200F1-	3.2	0.1260		23	66	28	36	6	☹
DC160-05-03.250F1-	3.25	0.1280		23	66	28	36	6	☹
DC160-05-03.300F1-	3.3	0.1299		23	66	28	36	6	☹
DC160-05-03.400F1-	3.4	0.1339		23	66	28	36	6	☹
DC160-05-03.500F1-	3.5	0.1378		23	66	28	36	6	☹
DC160-05-03.600F1-	3.6	0.1417		23	66	28	36	6	☹
DC160-05-03.650F1-	3.65	0.1437		23	66	28	36	6	☹
DC160-05-03.700F1-	3.7	0.1457		23	66	28	36	6	☹
DC160-05-03.800F1-	3.8	0.1496		29	74	36	36	6	☹
DC160-05-03.900F1-	3.9	0.1535		29	74	36	36	6	☹
DC160-05-04.000F1-	4	0.1575		29	74	36	36	6	☹
DC160-05-04.100F1-	4.1	0.1614		29	74	36	36	6	☹
DC160-05-04.200F1-	4.2	0.1654		29	74	36	36	6	☹
DC160-05-04.300F1-	4.3	0.1693		29	74	36	36	6	☹
DC160-05-04.400F1-	4.4	0.1732		29	74	36	36	6	☹
DC160-05-04.500F1-	4.5	0.1772		29	74	36	36	6	☹
DC160-05-04.600F1-	4.6	0.1811		29	74	36	36	6	☹
DC160-05-04.650F1-	4.65	0.1831		29	74	36	36	6	☹
DC160-05-04.700F1-	4.7	0.1850		29	74	36	36	6	☹
DC160-05-04.800F1-	4.8	0.1890		35	82	44	36	6	☹
DC160-05-04.900F1-	4.9	0.1929		35	82	44	36	6	☹
DC160-05-05.000F1-	5	0.1969		35	82	44	36	6	☹
DC160-05-05.100F1-	5.1	0.2008		35	82	44	36	6	☹
DC160-05-05.200F1-	5.2	0.2047		35	82	44	36	6	☹
DC160-05-05.300F1-	5.3	0.2087		35	82	44	36	6	☹
DC160-05-05.400F1-	5.4	0.2126		35	82	44	36	6	☹
DC160-05-05.500F1-	5.5	0.2165		35	82	44	36	6	☹
DC160-05-05.550F1-	5.55	0.2185		35	82	44	36	6	☹
DC160-05-05.600F1-	5.6	0.2205		35	82	44	36	6	☹
DC160-05-05.700F1-	5.7	0.2244		35	82	44	36	6	☹
DC160-05-05.800F1-	5.8	0.2283		35	82	44	36	6	☹
DC160-05-05.900F1-	5.9	0.2323		35	82	44	36	6	☹
DC160-05-06.000F1-	6	0.2362		35	82	44	36	6	☹
DC160-05-06.100F1-	6.1	0.2402		43	91	53	36	8	☹
DC160-05-06.200F1-	6.2	0.2441		43	91	53	36	8	☹
DC160-05-06.300F1-	6.3	0.2480		43	91	53	36	8	☹
DC160-05-06.400F1-	6.4	0.2520		43	91	53	36	8	☹
DC160-05-06.500F1-	6.5	0.2559		43	91	53	36	8	☹
DC160-05-06.600F1-	6.6	0.2598		43	91	53	36	8	☹
DC160-05-06.700F1-	6.7	0.2638		43	91	53	36	8	☹
DC160-05-06.800F1-	6.8	0.2677		43	91	53	36	8	☹
DC160-05-06.900F1-	6.9	0.2717		43	91	53	36	8	☹
DC160-05-07.000F1-	7	0.2756		43	91	53	36	8	☹
DC160-05-07.100F1-	7.1	0.2795		43	91	53	36	8	☹
DC160-05-07.200F1-	7.2	0.2835		43	91	53	36	8	☹
DC160-05-07.300F1-	7.3	0.2874		43	91	53	36	8	☹
DC160-05-07.400F1-	7.4	0.2913		43	91	53	36	8	☹
DC160-05-07.500F1-	7.5	0.2953		43	91	53	36	8	☹
DC160-05-07.550F1-	7.55	0.2972		43	91	53	36	8	☹
DC160-05-07.600F1-	7.6	0.2992		43	91	53	36	8	☹
DC160-05-07.700F1-	7.7	0.3031		43	91	53	36	8	☹
DC160-05-07.800F1-	7.8	0.3071		43	91	53	36	8	☹
DC160-05-07.900F1-	7.9	0.3110		43	91	53	36	8	☹
DC160-05-08.000F1-	8	0.3150		43	91	53	36	8	☹
DC160-05-08.100F1-	8.1	0.3189		49	103	61	40	10	☹

Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

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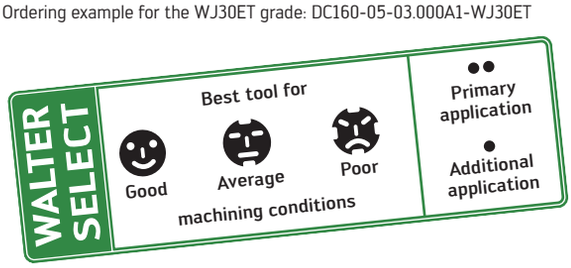

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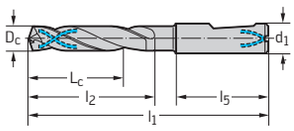
Shank DIN 6535 HE



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-05-08.200F1-	8.2	0.3228		49	103	61	40	10	●
DC160-05-08.300F1-	8.3	0.3268		49	103	61	40	10	●
DC160-05-08.400F1-	8.4	0.3307		49	103	61	40	10	●
DC160-05-08.500F1-	8.5	0.3346		49	103	61	40	10	●
DC160-05-08.600F1-	8.6	0.3386		49	103	61	40	10	●
DC160-05-08.700F1-	8.7	0.3425		49	103	61	40	10	●
DC160-05-08.800F1-	8.8	0.3465		49	103	61	40	10	●
DC160-05-08.900F1-	8.9	0.3504		49	103	61	40	10	●
DC160-05-09.000F1-	9	0.3543		49	103	61	40	10	●
DC160-05-09.100F1-	9.1	0.3583		49	103	61	40	10	●
DC160-05-09.200F1-	9.2	0.3622		49	103	61	40	10	●
DC160-05-09.300F1-	9.3	0.3661		49	103	61	40	10	●
DC160-05-09.400F1-	9.4	0.3701		49	103	61	40	10	●
DC160-05-09.500F1-	9.5	0.3740		49	103	61	40	10	●
DC160-05-09.550F1-	9.55	0.3760		49	103	61	40	10	●
DC160-05-09.600F1-	9.6	0.3780		49	103	61	40	10	●
DC160-05-09.700F1-	9.7	0.3819		49	103	61	40	10	●
DC160-05-09.800F1-	9.8	0.3858		49	103	61	40	10	●
DC160-05-09.900F1-	9.9	0.3898		49	103	61	40	10	●
DC160-05-10.000F1-	10	0.3937		49	103	61	40	10	●
DC160-05-10.100F1-	10.1	0.3976		56	118	71	45	12	●
DC160-05-10.200F1-	10.2	0.4016		56	118	71	45	12	●
DC160-05-10.300F1-	10.3	0.4055		56	118	71	45	12	●
DC160-05-10.400F1-	10.4	0.4094		56	118	71	45	12	●
DC160-05-10.500F1-	10.5	0.4134		56	118	71	45	12	●
DC160-05-10.600F1-	10.6	0.4173		56	118	71	45	12	●
DC160-05-10.700F1-	10.7	0.4213		56	118	71	45	12	●
DC160-05-10.800F1-	10.8	0.4252		56	118	71	45	12	●
DC160-05-10.900F1-	10.9	0.4291		56	118	71	45	12	●
DC160-05-11.000F1-	11	0.4331		56	118	71	45	12	●
DC160-05-11.100F1-	11.1	0.4370		56	118	71	45	12	●
DC160-05-11.200F1-	11.2	0.4409		56	118	71	45	12	●
DC160-05-11.300F1-	11.3	0.4449		56	118	71	45	12	●
DC160-05-11.400F1-	11.4	0.4488		56	118	71	45	12	●
DC160-05-11.500F1-	11.5	0.4528		56	118	71	45	12	●
DC160-05-11.550F1-	11.55	0.4547		56	118	71	45	12	●
DC160-05-11.600F1-	11.6	0.4567		56	118	71	45	12	●
DC160-05-11.700F1-	11.7	0.4606		56	118	71	45	12	●
DC160-05-11.800F1-	11.8	0.4646		56	118	71	45	12	●
DC160-05-11.900F1-	11.9	0.4685		56	118	71	45	12	●
DC160-05-12.000F1-	12	0.4724		56	118	71	45	12	●
DC160-05-12.100F1-	12.1	0.4764		60	124	77	45	14	●
DC160-05-12.200F1-	12.2	0.4803		60	124	77	45	14	●
DC160-05-12.250F1-	12.25	0.4823		60	124	77	45	14	●
DC160-05-12.300F1-	12.3	0.4843		60	124	77	45	14	●
DC160-05-12.400F1-	12.4	0.4882		60	124	77	45	14	●
DC160-05-12.500F1-	12.5	0.4921		60	124	77	45	14	●
DC160-05-12.600F1-	12.6	0.4961		60	124	77	45	14	●
DC160-05-12.700F1-	12.7	0.5000	1/2"	60	124	77	45	14	●
DC160-05-12.750F1-	12.75	0.5020		60	124	77	45	14	●
DC160-05-12.800F1-	12.8	0.5039		60	124	77	45	14	●
DC160-05-12.900F1-	12.9	0.5079		60	124	77	45	14	●
DC160-05-13.000F1-	13	0.5118		60	124	77	45	14	●
DC160-05-13.100F1-	13.1	0.5157		60	124	77	45	14	●
DC160-05-13.200F1-	13.2	0.5197		60	124	77	45	14	●
DC160-05-13.300F1-	13.3	0.5236		60	124	77	45	14	●
DC160-05-13.400F1-	13.4	0.5276		60	124	77	45	14	●
DC160-05-13.500F1-	13.5	0.5315		60	124	77	45	14	●
DC160-05-13.600F1-	13.6	0.5354		60	124	77	45	14	●
DC160-05-13.700F1-	13.7	0.5394		60	124	77	45	14	●
DC160-05-13.800F1-	13.8	0.5433		60	124	77	45	14	●

Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

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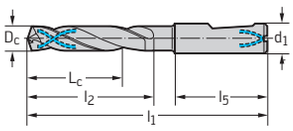
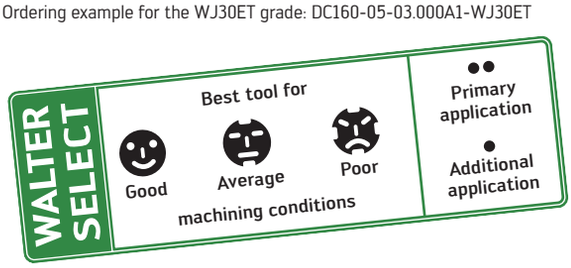
Shank DIN 6535 HE



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-05-13.900F1-	13.9	0.5472		60	124	77	45	14	●
DC160-05-14.000F1-	14	0.5512		60	124	77	45	14	●
DC160-05-14.100F1-	14.1	0.5551		63	133	83	48	16	●
DC160-05-14.200F1-	14.2	0.5591		63	133	83	48	16	●
DC160-05-14.300F1-	14.3	0.5630		63	133	83	48	16	●
DC160-05-14.400F1-	14.4	0.5669		63	133	83	48	16	●
DC160-05-14.500F1-	14.5	0.5709		63	133	83	48	16	●
DC160-05-14.600F1-	14.6	0.5748		63	133	83	48	16	●
DC160-05-14.700F1-	14.7	0.5787		63	133	83	48	16	●
DC160-05-14.750F1-	14.75	0.5807		63	133	83	48	16	●
DC160-05-14.800F1-	14.8	0.5827		63	133	83	48	16	●
DC160-05-14.900F1-	14.9	0.5866		63	133	83	48	16	●
DC160-05-15.000F1-	15	0.5906		63	133	83	48	16	●
DC160-05-15.100F1-	15.1	0.5945		63	133	83	48	16	●
DC160-05-15.200F1-	15.2	0.5984		63	133	83	48	16	●
DC160-05-15.300F1-	15.3	0.6024		63	133	83	48	16	●
DC160-05-15.400F1-	15.4	0.6063		63	133	83	48	16	●
DC160-05-15.500F1-	15.5	0.6102		63	133	83	48	16	●
DC160-05-15.600F1-	15.6	0.6142		63	133	83	48	16	●
DC160-05-15.700F1-	15.7	0.6181		63	133	83	48	16	●
DC160-05-15.800F1-	15.8	0.6220		63	133	83	48	16	●
DC160-05-15.900F1-	15.9	0.6260		63	133	83	48	16	●
DC160-05-16.000F1-	16	0.6299		63	133	83	48	16	●
DC160-05-16.100F1-	16.1	0.6339		71	143	93	48	18	●
DC160-05-16.200F1-	16.2	0.6378		71	143	93	48	18	●
DC160-05-16.300F1-	16.3	0.6417		71	143	93	48	18	●
DC160-05-16.400F1-	16.4	0.6457		71	143	93	48	18	●
DC160-05-16.500F1-	16.5	0.6496		71	143	93	48	18	●
DC160-05-16.600F1-	16.6	0.6535		71	143	93	48	18	●
DC160-05-16.700F1-	16.7	0.6575		71	143	93	48	18	●
DC160-05-16.750F1-	16.75	0.6594		71	143	93	48	18	●
DC160-05-16.800F1-	16.8	0.6614		71	143	93	48	18	●
DC160-05-16.900F1-	16.9	0.6654		71	143	93	48	18	●
DC160-05-17.000F1-	17	0.6693		71	143	93	48	18	●
DC160-05-17.100F1-	17.1	0.6732		71	143	93	48	18	●
DC160-05-17.200F1-	17.2	0.6772		71	143	93	48	18	●
DC160-05-17.300F1-	17.3	0.6811		71	143	93	48	18	●
DC160-05-17.400F1-	17.4	0.6850		71	143	93	48	18	●
DC160-05-17.500F1-	17.5	0.6890		71	143	93	48	18	●
DC160-05-17.600F1-	17.6	0.6929		71	143	93	48	18	●
DC160-05-17.700F1-	17.7	0.6969		71	143	93	48	18	●
DC160-05-17.800F1-	17.8	0.7008		71	143	93	48	18	●
DC160-05-17.900F1-	17.9	0.7047		71	143	93	48	18	●
DC160-05-18.000F1-	18	0.7087		71	143	93	48	18	●
DC160-05-18.100F1-	18.1	0.7126		77	153	101	50	20	●
DC160-05-18.200F1-	18.2	0.7165		77	153	101	50	20	●
DC160-05-18.300F1-	18.3	0.7205		77	153	101	50	20	●
DC160-05-18.400F1-	18.4	0.7244		77	153	101	50	20	●
DC160-05-18.500F1-	18.5	0.7283		77	153	101	50	20	●
DC160-05-18.600F1-	18.6	0.7323		77	153	101	50	20	●
DC160-05-18.700F1-	18.7	0.7362		77	153	101	50	20	●
DC160-05-18.800F1-	18.8	0.7402		77	153	101	50	20	●
DC160-05-18.900F1-	18.9	0.7441		77	153	101	50	20	●
DC160-05-19.000F1-	19	0.7480		77	153	101	50	20	●
DC160-05-19.100F1-	19.1	0.7520		77	153	101	50	20	●
DC160-05-19.200F1-	19.2	0.7559		77	153	101	50	20	●
DC160-05-19.300F1-	19.3	0.7598		77	153	101	50	20	●

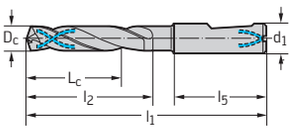
Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

Continued



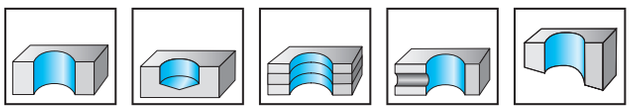
Continued

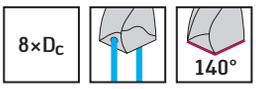
	Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
Shank DIN 6535 HE	DC160-05-19.400F1-	19.4	0.7638		77	153	101	50	20	●
	DC160-05-19.500F1-	19.5	0.7677		77	153	101	50	20	●
	DC160-05-19.600F1-	19.6	0.7717		77	153	101	50	20	●
	DC160-05-19.700F1-	19.7	0.7756		77	153	101	50	20	●
	DC160-05-19.800F1-	19.8	0.7795		77	153	101	50	20	●
	DC160-05-19.900F1-	19.9	0.7835		77	153	101	50	20	●
	DC160-05-20.000F1-	20	0.7874		77	153	101	50	20	●
	DC160-05-20.500F1-	20.5	0.8071		86	166	108	56	25	●
	DC160-05-21.000F1-	21	0.8268		86	166	108	56	25	●
	DC160-05-21.500F1-	21.5	0.8465		86	166	108	56	25	●
	DC160-05-22.000F1-	22	0.8661		86	166	108	56	25	●
	DC160-05-22.500F1-	22.5	0.8858		91	173	115	56	25	●
	DC160-05-23.000F1-	23	0.9055		91	173	115	56	25	●
	DC160-05-23.500F1-	23.5	0.9252		91	173	115	56	25	●
	DC160-05-24.000F1-	24	0.9449		91	173	115	56	25	●
	DC160-05-24.500F1-	24.5	0.9646		97	180	122	56	25	●
	DC160-05-25.000F1-	25	0.9843		97	180	122	56	25	●



Ordering example for the WJ30ET grade: DC160-05-03.000A1-WJ30ET

Solid carbide drills with coolant-through DC160 Advance

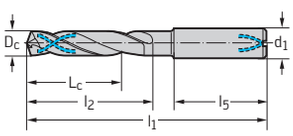




	P	M	K	N	S	H	O
WJ30ET	●●	●	●●	●●	●●	●	●

B1

Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-08-03.000A1-	3	0.1181		28	74	34	36	6	●
DC160-08-03.100A1-	3.1	0.1220		28	74	34	36	6	●
DC160-08-03.175A1-	3.175	0.1250	1/8"	28	74	34	36	6	●
DC160-08-03.200A1-	3.2	0.1260		28	74	34	36	6	●
DC160-08-03.300A1-	3.3	0.1299		28	74	34	36	6	●
DC160-08-03.400A1-	3.4	0.1339		28	74	34	36	6	●
DC160-08-03.500A1-	3.5	0.1378		28	74	34	36	6	●
DC160-08-03.572A1-	3.572	0.1406	9/64"	28	74	34	36	6	●
DC160-08-03.600A1-	3.6	0.1417		28	74	34	36	6	●
DC160-08-03.700A1-	3.7	0.1457		28	74	34	36	6	●
DC160-08-03.800A1-	3.8	0.1496		37	85	45	36	6	●
DC160-08-03.900A1-	3.9	0.1535		37	85	45	36	6	●
DC160-08-03.969A1-	3.969	0.1563	5/32"	37	85	45	36	6	●
DC160-08-04.000A1-	4	0.1575		37	85	45	36	6	●
DC160-08-04.100A1-	4.1	0.1614		37	85	45	36	6	●
DC160-08-04.200A1-	4.2	0.1654		37	85	45	36	6	●
DC160-08-04.300A1-	4.3	0.1693		37	85	45	36	6	●
DC160-08-04.366A1-	4.366	0.1719	11/64"	37	85	45	36	6	●
DC160-08-04.400A1-	4.4	0.1732		37	85	45	36	6	●
DC160-08-04.500A1-	4.5	0.1772		37	85	45	36	6	●
DC160-08-04.600A1-	4.6	0.1811		37	85	45	36	6	●
DC160-08-04.700A1-	4.7	0.1850		37	85	45	36	6	●
DC160-08-04.763A1-	4.763	0.1875	3/16"	48	97	57	36	6	●
DC160-08-04.800A1-	4.8	0.1890		48	97	57	36	6	●
DC160-08-04.900A1-	4.9	0.1929		48	97	57	36	6	●
DC160-08-05.000A1-	5	0.1969		48	97	57	36	6	●
DC160-08-05.100A1-	5.1	0.2008		48	97	57	36	6	●
DC160-08-05.159A1-	5.159	0.2031	13/64"	48	97	57	36	6	●
DC160-08-05.200A1-	5.2	0.2047		48	97	57	36	6	●
DC160-08-05.300A1-	5.3	0.2087		48	97	57	36	6	●
DC160-08-05.400A1-	5.4	0.2126		48	97	57	36	6	●
DC160-08-05.500A1-	5.5	0.2165		48	97	57	36	6	●
DC160-08-05.556A1-	5.556	0.2187	7/32"	48	97	57	36	6	●
DC160-08-05.600A1-	5.6	0.2205		48	97	57	36	6	●
DC160-08-05.700A1-	5.7	0.2244		48	97	57	36	6	●
DC160-08-05.800A1-	5.8	0.2283		48	97	57	36	6	●
DC160-08-05.900A1-	5.9	0.2323		48	97	57	36	6	●
DC160-08-05.953A1-	5.953	0.2344	15/64"	48	97	57	36	6	●
DC160-08-06.000A1-	6	0.2362		48	97	57	36	6	●
DC160-08-06.100A1-	6.1	0.2402		55	106	66	36	8	●
DC160-08-06.200A1-	6.2	0.2441		55	106	66	36	8	●
DC160-08-06.300A1-	6.3	0.2480		55	106	66	36	8	●
DC160-08-06.350A1-	6.35	0.2500	1/4"	55	106	66	36	8	●
DC160-08-06.400A1-	6.4	0.2520		55	106	66	36	8	●
DC160-08-06.500A1-	6.5	0.2559		55	106	66	36	8	●
DC160-08-06.600A1-	6.6	0.2598		55	106	66	36	8	●
DC160-08-06.700A1-	6.7	0.2638		55	106	66	36	8	●

Ordering example for the WJ30ET grade: DC160-08-03.000A1-WJ30ET

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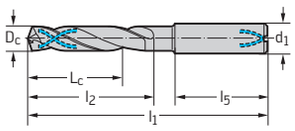
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-08-06.747A1-	6.747	0.2656	17/64"	55	106	66	36	8	☺
DC160-08-06.800A1-	6.8	0.2677		55	106	66	36	8	☺
DC160-08-06.900A1-	6.9	0.2717		55	106	66	36	8	☺
DC160-08-07.000A1-	7	0.2756		55	106	66	36	8	☺
DC160-08-07.100A1-	7.1	0.2795		64	116	76	36	8	☺
DC160-08-07.144A1-	7.144	0.2813	9/32"	64	116	76	36	8	☺
DC160-08-07.200A1-	7.2	0.2835		64	116	76	36	8	☺
DC160-08-07.300A1-	7.3	0.2874		64	116	76	36	8	☺
DC160-08-07.400A1-	7.4	0.2913		64	116	76	36	8	☺
DC160-08-07.500A1-	7.5	0.2953		64	116	76	36	8	☺
DC160-08-07.541A1-	7.541	0.2969	19/64"	64	116	76	36	8	☺
DC160-08-07.600A1-	7.6	0.2992		64	116	76	36	8	☺
DC160-08-07.700A1-	7.7	0.3031		64	116	76	36	8	☺
DC160-08-07.800A1-	7.8	0.3071		64	116	76	36	8	☺
DC160-08-07.900A1-	7.9	0.3110		64	116	76	36	8	☺
DC160-08-07.938A1-	7.938	0.3125	5/16"	64	116	76	36	8	☺
DC160-08-08.000A1-	8	0.3150		64	116	76	36	8	☺
DC160-08-08.100A1-	8.1	0.3189		80	139	95	40	10	☺
DC160-08-08.200A1-	8.2	0.3228		80	139	95	40	10	☺
DC160-08-08.300A1-	8.3	0.3268		80	139	95	40	10	☺
DC160-08-08.334A1-	8.334	0.3281	21/64"	80	139	95	40	10	☺
DC160-08-08.400A1-	8.4	0.3307		80	139	95	40	10	☺
DC160-08-08.500A1-	8.5	0.3346		80	139	95	40	10	☺
DC160-08-08.600A1-	8.6	0.3386		80	139	95	40	10	☺
DC160-08-08.700A1-	8.7	0.3425		80	139	95	40	10	☺
DC160-08-08.731A1-	8.731	0.3437	11/32"	80	139	95	40	10	☺
DC160-08-08.800A1-	8.8	0.3465		80	139	95	40	10	☺
DC160-08-08.900A1-	8.9	0.3504		80	139	95	40	10	☺
DC160-08-09.000A1-	9	0.3543		80	139	95	40	10	☺
DC160-08-09.100A1-	9.1	0.3583		80	139	95	40	10	☺
DC160-08-09.128A1-	9.128	0.3594	23/64"	80	139	95	40	10	☺
DC160-08-09.200A1-	9.2	0.3622		80	139	95	40	10	☺
DC160-08-09.300A1-	9.3	0.3661		80	139	95	40	10	☺
DC160-08-09.400A1-	9.4	0.3701		80	139	95	40	10	☺
DC160-08-09.500A1-	9.5	0.3740		80	139	95	40	10	☺
DC160-08-09.525A1-	9.525	0.3750	3/8"	80	139	95	40	10	☺
DC160-08-09.600A1-	9.6	0.3780		80	139	95	40	10	☺
DC160-08-09.700A1-	9.7	0.3819		80	139	95	40	10	☺
DC160-08-09.800A1-	9.8	0.3858		80	139	95	40	10	☺
DC160-08-09.900A1-	9.9	0.3898		80	139	95	40	10	☺
DC160-08-09.922A1-	9.922	0.3906	25/64"	80	139	95	40	10	☺
DC160-08-10.000A1-	10	0.3937		80	139	95	40	10	☺
DC160-08-10.100A1-	10.1	0.3976		96	163	114	45	12	☺
DC160-08-10.200A1-	10.2	0.4016		96	163	114	45	12	☺
DC160-08-10.300A1-	10.3	0.4055		96	163	114	45	12	☺
DC160-08-10.319A1-	10.319	0.4063	13/32"	96	163	114	45	12	☺
DC160-08-10.400A1-	10.4	0.4094		96	163	114	45	12	☺
DC160-08-10.500A1-	10.5	0.4134		96	163	114	45	12	☺
DC160-08-10.600A1-	10.6	0.4173		96	163	114	45	12	☺
DC160-08-10.700A1-	10.7	0.4213		96	163	114	45	12	☺
DC160-08-10.716A1-	10.716	0.4219	27/64"	96	163	114	45	12	☺
DC160-08-10.800A1-	10.8	0.4252		96	163	114	45	12	☺
DC160-08-10.900A1-	10.9	0.4291		96	163	114	45	12	☺
DC160-08-11.000A1-	11	0.4331		96	163	114	45	12	☺
DC160-08-11.100A1-	11.1	0.4370		96	163	114	45	12	☺
DC160-08-11.113A1-	11.113	0.4375	7/16"	96	163	114	45	12	☺
DC160-08-11.200A1-	11.2	0.4409		96	163	114	45	12	☺

Ordering example for the WJ30ET grade: DC160-08-03.000A1-WJ30ET

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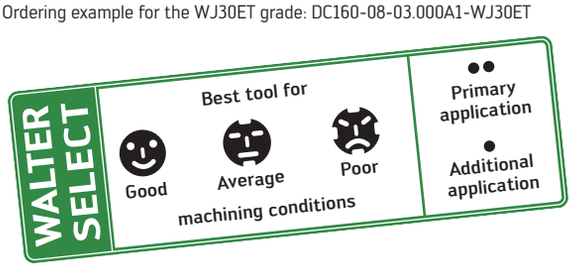

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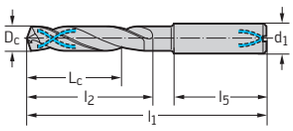
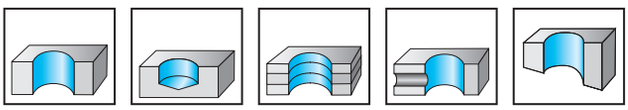
Shank DIN 6535 HA

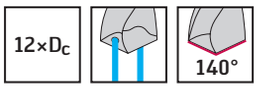


Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-08-11.300A1-	11.3	0.4449		96	163	114	45	12	●
DC160-08-11.400A1-	11.4	0.4488		96	163	114	45	12	●
DC160-08-11.500A1-	11.5	0.4528		96	163	114	45	12	●
DC160-08-11.509A1-	11.509	0.4531	29/64"	96	163	114	45	12	●
DC160-08-11.600A1-	11.6	0.4567		96	163	114	45	12	●
DC160-08-11.700A1-	11.7	0.4606		96	163	114	45	12	●
DC160-08-11.800A1-	11.8	0.4646		96	163	114	45	12	●
DC160-08-11.900A1-	11.9	0.4685		96	163	114	45	12	●
DC160-08-11.906A1-	11.906	0.4687	15/32"	96	163	114	45	12	●
DC160-08-12.000A1-	12	0.4724		96	163	114	45	12	●
DC160-08-12.303A1-	12.303	0.4844	31/64"	119	182	133	45	14	●
DC160-08-12.500A1-	12.5	0.4921		119	182	133	45	14	●
DC160-08-12.700A1-	12.7	0.5000	1/2"	119	182	133	45	14	●
DC160-08-13.000A1-	13	0.5118		119	182	133	45	14	●
DC160-08-13.494A1-	13.494	0.5313	17/32"	119	182	133	45	14	●
DC160-08-13.500A1-	13.5	0.5315		119	182	133	45	14	●
DC160-08-14.000A1-	14	0.5512		119	182	133	45	14	●
DC160-08-14.288A1-	14.288	0.5625	9/16"	136	204	152	48	16	●
DC160-08-14.500A1-	14.5	0.5709		136	204	152	48	16	●
DC160-08-15.000A1-	15	0.5906		136	204	152	48	16	●
DC160-08-15.500A1-	15.5	0.6102		136	204	152	48	16	●
DC160-08-15.875A1-	15.875	0.6250	5/8"	136	204	152	48	16	●
DC160-08-16.000A1-	16	0.6299		136	204	152	48	16	●
DC160-08-16.500A1-	16.5	0.6496		153	223	171	48	18	●
DC160-08-17.000A1-	17	0.6693		153	223	171	48	18	●
DC160-08-17.500A1-	17.5	0.6890		153	223	171	48	18	●
DC160-08-18.000A1-	18	0.7087		153	223	171	48	18	●
DC160-08-18.500A1-	18.5	0.7283		170	244	190	50	20	●
DC160-08-19.000A1-	19	0.7480		170	244	190	50	20	●
DC160-08-19.050A1-	19.05	0.7500	3/4"	170	244	190	50	20	●
DC160-08-19.500A1-	19.5	0.7677		170	244	190	50	20	●
DC160-08-20.000A1-	20	0.7874		170	244	190	50	20	●

Ordering example for the WJ30ET grade: DC160-08-03.000A1-WJ30ET

Solid carbide drills with coolant-through DC160 Advance





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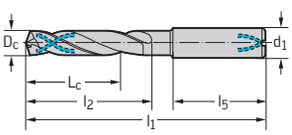
	P	M	K	N	S	H	O
WJ30EU	●●	●	●●	●●	●●	●	●

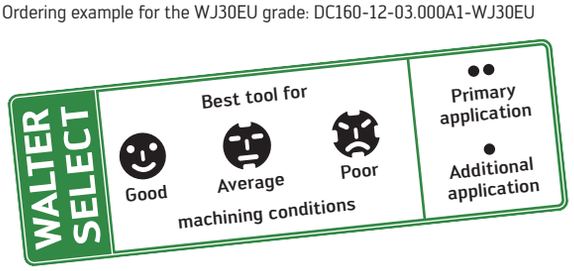
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30EU
DC160-12-03.000A1-	3	0.1181		48	92	54	36	6	●
DC160-12-03.100A1-	3.1	0.1220		48	92	54	36	6	●
DC160-12-03.175A1-	3.175	0.1250	1/8"	48	92	54	36	6	●
DC160-12-03.200A1-	3.2	0.1260		48	92	54	36	6	●
DC160-12-03.300A1-	3.3	0.1299		48	92	54	36	6	●
DC160-12-03.400A1-	3.4	0.1339		48	92	54	36	6	●
DC160-12-03.500A1-	3.5	0.1378		48	92	54	36	6	●
DC160-12-03.572A1-	3.572	0.1406	9/64"	48	92	54	36	6	●
DC160-12-03.600A1-	3.6	0.1417		48	92	54	36	6	●
DC160-12-03.700A1-	3.7	0.1457		48	92	54	36	6	●
DC160-12-03.800A1-	3.8	0.1496		56	102	64	36	6	●
DC160-12-03.900A1-	3.9	0.1535		56	102	64	36	6	●
DC160-12-03.969A1-	3.969	0.1563	5/32"	56	102	64	36	6	●
DC160-12-04.000A1-	4	0.1575		56	102	64	36	6	●
DC160-12-04.100A1-	4.1	0.1614		56	102	64	36	6	●
DC160-12-04.200A1-	4.2	0.1654		56	102	64	36	6	●
DC160-12-04.300A1-	4.3	0.1693		56	102	64	36	6	●
DC160-12-04.366A1-	4.366	0.1719	11/64"	56	102	64	36	6	●
DC160-12-04.400A1-	4.4	0.1732		56	102	64	36	6	●
DC160-12-04.500A1-	4.5	0.1772		56	102	64	36	6	●
DC160-12-04.600A1-	4.6	0.1811		56	102	64	36	6	●
DC160-12-04.700A1-	4.7	0.1850		56	102	64	36	6	●
DC160-12-04.763A1-	4.763	0.1875	3/16"	74	121	83	36	6	●
DC160-12-04.800A1-	4.8	0.1890		74	121	83	36	6	●
DC160-12-04.900A1-	4.9	0.1929		74	121	83	36	6	●
DC160-12-05.000A1-	5	0.1969		74	121	83	36	6	●
DC160-12-05.100A1-	5.1	0.2008		74	121	83	36	6	●
DC160-12-05.159A1-	5.159	0.2031	13/64"	74	121	83	36	6	●
DC160-12-05.200A1-	5.2	0.2047		74	121	83	36	6	●
DC160-12-05.300A1-	5.3	0.2087		74	121	83	36	6	●
DC160-12-05.400A1-	5.4	0.2126		74	121	83	36	6	●
DC160-12-05.500A1-	5.5	0.2165		74	121	83	36	6	●
DC160-12-05.550A1-	5.55	0.2185		74	121	83	36	6	●
DC160-12-05.556A1-	5.556	0.2187	7/32"	74	121	83	36	6	●
DC160-12-05.600A1-	5.6	0.2205		74	121	83	36	6	●
DC160-12-05.700A1-	5.7	0.2244		74	121	83	36	6	●
DC160-12-05.800A1-	5.8	0.2283		74	121	83	36	6	●
DC160-12-05.900A1-	5.9	0.2323		74	121	83	36	6	●
DC160-12-06.000A1-	6	0.2362		74	121	83	36	6	●
DC160-12-06.100A1-	6.1	0.2402		98	148	110	36	8	●
DC160-12-06.200A1-	6.2	0.2441		98	148	110	36	8	●
DC160-12-06.300A1-	6.3	0.2480		98	148	110	36	8	●
DC160-12-06.350A1-	6.35	0.2500	1/4"	98	148	110	36	8	●

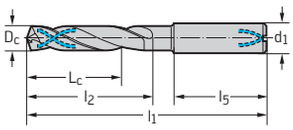
Ordering example for the WJ30EU grade: DC160-12-03.000A1-WJ30EU

Continued



Continued

Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30EU
DC160-12-06.400A1-	6.4	0.2520		98	148	110	36	8	
DC160-12-06.500A1-	6.5	0.2559		98	148	110	36	8	
DC160-12-06.600A1-	6.6	0.2598		98	148	110	36	8	
DC160-12-06.700A1-	6.7	0.2638		98	148	110	36	8	
DC160-12-06.747A1-	6.747	0.2656	17/64"	98	148	110	36	8	
DC160-12-06.800A1-	6.8	0.2677		98	148	110	36	8	
DC160-12-06.900A1-	6.9	0.2717		98	148	110	36	8	
DC160-12-07.000A1-	7	0.2756		98	148	110	36	8	
DC160-12-07.100A1-	7.1	0.2795		98	148	110	36	8	
DC160-12-07.144A1-	7.144	0.2813	9/32"	98	148	110	36	8	
DC160-12-07.200A1-	7.2	0.2835		98	148	110	36	8	
DC160-12-07.300A1-	7.3	0.2874		98	148	110	36	8	
DC160-12-07.400A1-	7.4	0.2913		98	148	110	36	8	
DC160-12-07.500A1-	7.5	0.2953		98	148	110	36	8	
DC160-12-07.541A1-	7.541	0.2969	19/64"	98	148	110	36	8	
DC160-12-07.800A1-	7.8	0.3071		98	148	110	36	8	
DC160-12-07.900A1-	7.9	0.3110		98	148	110	36	8	
DC160-12-07.938A1-	7.938	0.3125	5/16"	98	148	110	36	8	
DC160-12-08.000A1-	8	0.3150		98	148	110	36	8	
DC160-12-08.100A1-	8.1	0.3189		123	180	138	40	10	
DC160-12-08.200A1-	8.2	0.3228		123	180	138	40	10	
DC160-12-08.300A1-	8.3	0.3268		123	180	138	40	10	
DC160-12-08.400A1-	8.4	0.3307		123	180	138	40	10	
DC160-12-08.500A1-	8.5	0.3346		123	180	138	40	10	
DC160-12-08.600A1-	8.6	0.3386		123	180	138	40	10	
DC160-12-08.700A1-	8.7	0.3425		123	180	138	40	10	
DC160-12-08.731A1-	8.731	0.3437	11/32"	123	180	138	40	10	
DC160-12-08.800A1-	8.8	0.3465		123	180	138	40	10	
DC160-12-09.000A1-	9	0.3543		123	180	138	40	10	
DC160-12-09.128A1-	9.128	0.3594	23/64"	123	180	138	40	10	
DC160-12-09.200A1-	9.2	0.3622		123	180	138	40	10	
DC160-12-09.300A1-	9.3	0.3661		123	180	138	40	10	
DC160-12-09.500A1-	9.5	0.3740		123	180	138	40	10	
DC160-12-09.525A1-	9.525	0.3750	3/8"	123	180	138	40	10	
DC160-12-09.600A1-	9.6	0.3780		123	180	138	40	10	
DC160-12-09.700A1-	9.7	0.3819		123	180	138	40	10	
DC160-12-09.800A1-	9.8	0.3858		123	180	138	40	10	
DC160-12-09.922A1-	9.922	0.3906	25/64"	123	180	138	40	10	
DC160-12-10.000A1-	10	0.3937		123	180	138	40	10	
DC160-12-10.100A1-	10.1	0.3976		140	206	158	45	12	
DC160-12-10.200A1-	10.2	0.4016		140	206	158	45	12	
DC160-12-10.300A1-	10.3	0.4055		140	206	158	45	12	
DC160-12-10.319A1-	10.319	0.4063	13/32"	140	206	158	45	12	
DC160-12-10.400A1-	10.4	0.4094		140	206	158	45	12	
DC160-12-10.500A1-	10.5	0.4134		140	206	158	45	12	
DC160-12-10.716A1-	10.716	0.4219	27/64"	140	206	158	45	12	
DC160-12-10.800A1-	10.8	0.4252		140	206	158	45	12	
DC160-12-11.000A1-	11	0.4331		140	206	158	45	12	
DC160-12-11.100A1-	11.1	0.4370		140	206	158	45	12	
DC160-12-11.113A1-	11.113	0.4375	7/16"	140	206	158	45	12	
DC160-12-11.200A1-	11.2	0.4409		140	206	158	45	12	
DC160-12-11.500A1-	11.5	0.4528		140	206	158	45	12	
DC160-12-11.509A1-	11.509	0.4531	29/64"	140	206	158	45	12	
DC160-12-11.700A1-	11.7	0.4606		140	206	158	45	12	
DC160-12-11.800A1-	11.8	0.4646		140	206	158	45	12	
DC160-12-11.906A1-	11.906	0.4687	15/32"	140	206	158	45	12	
DC160-12-12.000A1-	12	0.4724		140	206	158	45	12	
DC160-12-12.100A1-	12.1	0.4764		168	230	182	45	14	
DC160-12-12.200A1-	12.2	0.4803		168	230	182	45	14	
DC160-12-12.300A1-	12.3	0.4843		168	230	182	45	14	
DC160-12-12.303A1-	12.303	0.4844	31/64"	168	230	182	45	14	

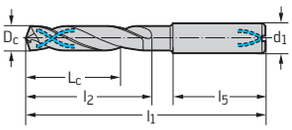
Ordering example for the WJ30EU grade: DC160-12-03.000A1-WJ30EU

Continued

/ ★ New addition to the product range

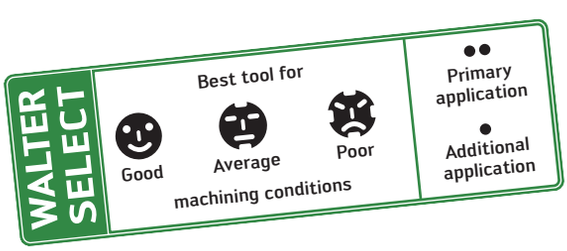
Continued

Shank DIN 6535 HA



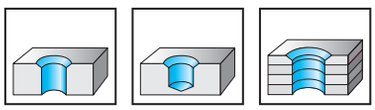
Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30EU
DC160-12-12.500A1-	12.5	0.4921		168	230	182	45	14	☹
DC160-12-12.600A1-	12.6	0.4961		168	230	182	45	14	☹
DC160-12-12.700A1-	12.7	0.5000	1/2"	168	230	182	45	14	☹
DC160-12-13.000A1-	13	0.5118		168	230	182	45	14	☹
DC160-12-13.494A1-	13.494	0.5313	17/32"	168	230	182	45	14	☹
DC160-12-13.500A1-	13.5	0.5315		168	230	182	45	14	☹
DC160-12-14.000A1-	14	0.5512		168	230	182	45	14	☹
DC160-12-14.288A1-	14.288	0.5625	9/16"	192	260	208	48	16	☹
DC160-12-14.500A1-	14.5	0.5709		192	260	208	48	16	☹
DC160-12-15.000A1-	15	0.5906		192	260	208	48	16	☹
DC160-12-15.500A1-	15.5	0.6102		192	260	208	48	16	☹
DC160-12-15.875A1-	15.875	0.6250	5/8"	192	260	208	48	16	☹
DC160-12-16.000A1-	16	0.6299		192	260	208	48	16	☹
DC160-12-16.500A1-	16.5	0.6496		216	285	234	48	18	☹
DC160-12-17.000A1-	17	0.6693		216	285	234	48	18	☹
DC160-12-17.500A1-	17.5	0.6890		216	285	234	48	18	☹
DC160-12-18.000A1-	18	0.7087		216	285	234	48	18	☹
DC160-12-18.500A1-	18.5	0.7283		238	310	258	50	20	☹
DC160-12-19.000A1-	19	0.7480		238	310	258	50	20	☹
DC160-12-19.500A1-	19.5	0.7677		238	310	258	50	20	☹
DC160-12-20.000A1-	20	0.7874		238	310	258	50	20	☹

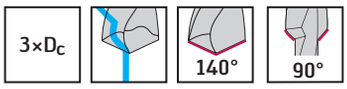
Ordering example for the WJ30EU grade: DC160-12-03.000A1-WJ30EU



Solid carbide chamfer drills
DC260 Advance

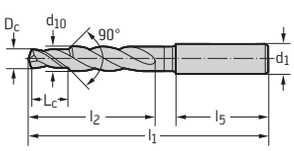
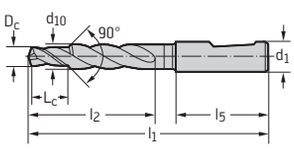
– Step length in accordance with DIN 8378
– For threaded core hole drilling





	P	M	K	N	S	H	O
WJ30ET	●●		●●	●	●	●	●

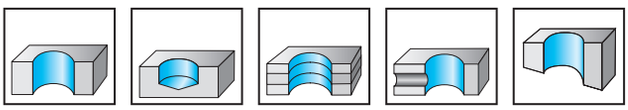
B1

	Designation	For thread	D_c m7 mm	D_c m7 in	d_{10} h7 mm	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
Shank DIN 6535 HA	DC260-03-03.300A0-	M 4	3.3	0.1299	5	11	66	28	36	6	●
	DC260-03-04.200A0-	M 5	4.2	0.1654	6	14	66	28	36	6	●
	DC260-03-05.000A0-	M 6	5	0.1969	8	17	79	41	36	8	●
	DC260-03-06.800A0-	M 8	6.8	0.2677	10	21	89	47	40	10	●
	DC260-03-08.500A0-	M 10	8.5	0.3346	12	26	102	55	45	12	●
	DC260-03-10.200A0-	M 12	10.2	0.4016	14	30	107	60	45	14	●
	DC260-03-12.000A0-	M 14	12	0.4724	16	35	115	65	48	16	●
	DC260-03-14.000A0-	M 16	14	0.5512	18	39	123	73	48	18	●
Shank DIN 6535 HE	DC260-03-03.300F0-	M 4	3.3	0.1299	5	11	66	28	36	6	●
	DC260-03-04.200F0-	M 5	4.2	0.1654	6	14	66	28	36	6	●
	DC260-03-05.000F0-	M 6	5	0.1969	8	17	79	41	36	8	●
	DC260-03-06.800F0-	M 8	6.8	0.2677	10	21	89	47	40	10	●
	DC260-03-07.000F0-	M 8 X 1	7	0.2756	10	21	89	47	40	10	●
	DC260-03-08.500F0-	M 10	8.5	0.3346	12	26	102	55	45	12	●
	DC260-03-09.000F0-	M 10 X 1	9	0.3543	12	26	102	55	45	12	●
	DC260-03-10.200F0-	M 12	10.2	0.4016	14	30	107	60	45	14	●
	DC260-03-10.500F0-	M 12 X 1.5	10.5	0.4134	14	30	107	60	45	14	●
	DC260-03-12.000F0-	M 14	12	0.4724	16	35	115	65	48	16	●
	DC260-03-12.500F0-	M 14 X 1.5	12.5	0.4921	16	35	115	65	48	16	●
	DC260-03-14.000F0-	M 16	14	0.5512	18	39	123	73	48	18	●
	DC260-03-14.500F0-	M 16 X 1.5	14.5	0.5709	18	39	123	73	48	18	●

Ordering example for the WJ30ET grade: DC260-03-03.300A0-WJ30ET

● / ★ New addition to the product range

Solid carbide twist drills
DC160 Advance

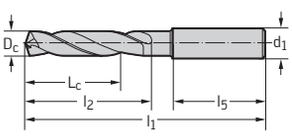


3×D_c | DIN 6537 K | 140°

	P	M	K	N	S	H	O
WJ30ET	●●		●●	●	●	●	●

B1

Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-03-03.000A0-	3	0.1181		14	62	20	36	6	●
DC160-03-03.100A0-	3.1	0.1220		14	62	20	36	6	●
DC160-03-03.175A0-	3.175	0.1250	1/8"	14	62	20	36	6	●
DC160-03-03.200A0-	3.2	0.1260		14	62	20	36	6	●
DC160-03-03.250A0-	3.25	0.1280		14	62	20	36	6	●
DC160-03-03.300A0-	3.3	0.1299		14	62	20	36	6	●
DC160-03-03.400A0-	3.4	0.1339		14	62	20	36	6	●
DC160-03-03.500A0-	3.5	0.1378		14	62	20	36	6	●
DC160-03-03.572A0-	3.572	0.1406	9/64"	14	62	20	36	6	●
DC160-03-03.600A0-	3.6	0.1417		14	62	20	36	6	●
DC160-03-03.650A0-	3.65	0.1437		14	62	20	36	6	●
DC160-03-03.700A0-	3.7	0.1457		14	62	20	36	6	●
DC160-03-03.800A0-	3.8	0.1496		17	66	24	36	6	●
DC160-03-03.900A0-	3.9	0.1535		17	66	24	36	6	●
DC160-03-03.969A0-	3.969	0.1563	5/32"	17	66	24	36	6	●
DC160-03-04.000A0-	4	0.1575		17	66	24	36	6	●
DC160-03-04.100A0-	4.1	0.1614		17	66	24	36	6	●
DC160-03-04.200A0-	4.2	0.1654		17	66	24	36	6	●
DC160-03-04.300A0-	4.3	0.1693		17	66	24	36	6	●
DC160-03-04.366A0-	4.366	0.1719	11/64"	17	66	24	36	6	●
DC160-03-04.400A0-	4.4	0.1732		17	66	24	36	6	●
DC160-03-04.500A0-	4.5	0.1772		17	66	24	36	6	●
DC160-03-04.600A0-	4.6	0.1811		17	66	24	36	6	●
DC160-03-04.650A0-	4.65	0.1831		17	66	24	36	6	●
DC160-03-04.700A0-	4.7	0.1850		17	66	24	36	6	●
DC160-03-04.763A0-	4.763	0.1875	3/16"	20	66	28	36	6	●
DC160-03-04.800A0-	4.8	0.1890		20	66	28	36	6	●
DC160-03-04.900A0-	4.9	0.1929		20	66	28	36	6	●
DC160-03-05.000A0-	5	0.1969		20	66	28	36	6	●
DC160-03-05.100A0-	5.1	0.2008		20	66	28	36	6	●
DC160-03-05.159A0-	5.159	0.2031	13/64"	20	66	28	36	6	●
DC160-03-05.200A0-	5.2	0.2047		20	66	28	36	6	●
DC160-03-05.300A0-	5.3	0.2087		20	66	28	36	6	●
DC160-03-05.400A0-	5.4	0.2126		20	66	28	36	6	●
DC160-03-05.500A0-	5.5	0.2165		20	66	28	36	6	●
DC160-03-05.550A0-	5.55	0.2185		20	66	28	36	6	●
DC160-03-05.556A0-	5.556	0.2187	7/32"	20	66	28	36	6	●
DC160-03-05.600A0-	5.6	0.2205		20	66	28	36	6	●
DC160-03-05.700A0-	5.7	0.2244		20	66	28	36	6	●
DC160-03-05.800A0-	5.8	0.2283		20	66	28	36	6	●
DC160-03-05.900A0-	5.9	0.2323		20	66	28	36	6	●
DC160-03-05.953A0-	5.953	0.2344	15/64"	20	66	28	36	6	●
DC160-03-06.000A0-	6	0.2362		20	66	28	36	6	●

Ordering example for the WJ30ET grade: DC160-03-03.000A0-WJ30ET

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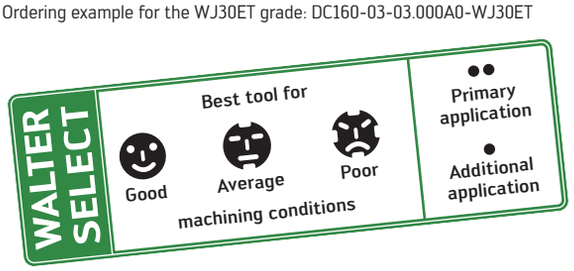

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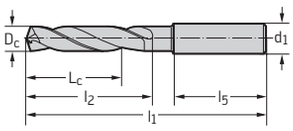
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-03-06.100A0-	6.1	0.2402		24	79	34	36	8	
DC160-03-06.200A0-	6.2	0.2441		24	79	34	36	8	
DC160-03-06.300A0-	6.3	0.2480		24	79	34	36	8	
DC160-03-06.350A0-	6.35	0.2500	1/4"	24	79	34	36	8	
DC160-03-06.400A0-	6.4	0.2520		24	79	34	36	8	
DC160-03-06.500A0-	6.5	0.2559		24	79	34	36	8	
DC160-03-06.600A0-	6.6	0.2598		24	79	34	36	8	
DC160-03-06.700A0-	6.7	0.2638		24	79	34	36	8	
DC160-03-06.747A0-	6.747	0.2656	17/64"	24	79	34	36	8	
DC160-03-06.800A0-	6.8	0.2677		24	79	34	36	8	
DC160-03-06.900A0-	6.9	0.2717		24	79	34	36	8	
DC160-03-07.000A0-	7	0.2756		24	79	34	36	8	
DC160-03-07.100A0-	7.1	0.2795		29	79	41	36	8	
DC160-03-07.144A0-	7.144	0.2813	9/32"	29	79	41	36	8	
DC160-03-07.200A0-	7.2	0.2835		29	79	41	36	8	
DC160-03-07.300A0-	7.3	0.2874		29	79	41	36	8	
DC160-03-07.400A0-	7.4	0.2913		29	79	41	36	8	
DC160-03-07.500A0-	7.5	0.2953		29	79	41	36	8	
DC160-03-07.541A0-	7.541	0.2969	19/64"	29	79	41	36	8	
DC160-03-07.550A0-	7.55	0.2972		29	79	41	36	8	
DC160-03-07.600A0-	7.6	0.2992		29	79	41	36	8	
DC160-03-07.700A0-	7.7	0.3031		29	79	41	36	8	
DC160-03-07.800A0-	7.8	0.3071		29	79	41	36	8	
DC160-03-07.900A0-	7.9	0.3110		29	79	41	36	8	
DC160-03-07.938A0-	7.938	0.3125	5/16"	29	79	41	36	8	
DC160-03-08.000A0-	8	0.3150		29	79	41	36	8	
DC160-03-08.100A0-	8.1	0.3189		35	89	47	40	10	
DC160-03-08.200A0-	8.2	0.3228		35	89	47	40	10	
DC160-03-08.300A0-	8.3	0.3268		35	89	47	40	10	
DC160-03-08.334A0-	8.334	0.3281	21/64"	35	89	47	40	10	
DC160-03-08.400A0-	8.4	0.3307		35	89	47	40	10	
DC160-03-08.500A0-	8.5	0.3346		35	89	47	40	10	
DC160-03-08.600A0-	8.6	0.3386		35	89	47	40	10	
DC160-03-08.700A0-	8.7	0.3425		35	89	47	40	10	
DC160-03-08.731A0-	8.731	0.3437	11/32"	35	89	47	40	10	
DC160-03-08.800A0-	8.8	0.3465		35	89	47	40	10	
DC160-03-08.900A0-	8.9	0.3504		35	89	47	40	10	
DC160-03-09.000A0-	9	0.3543		35	89	47	40	10	
DC160-03-09.100A0-	9.1	0.3583		35	89	47	40	10	
DC160-03-09.128A0-	9.128	0.3594	23/64"	35	89	47	40	10	
DC160-03-09.200A0-	9.2	0.3622		35	89	47	40	10	
DC160-03-09.300A0-	9.3	0.3661		35	89	47	40	10	
DC160-03-09.400A0-	9.4	0.3701		35	89	47	40	10	
DC160-03-09.500A0-	9.5	0.3740		35	89	47	40	10	
DC160-03-09.525A0-	9.525	0.3750	3/8"	35	89	47	40	10	
DC160-03-09.550A0-	9.55	0.3760		35	89	47	40	10	
DC160-03-09.600A0-	9.6	0.3780		35	89	47	40	10	
DC160-03-09.700A0-	9.7	0.3819		35	89	47	40	10	
DC160-03-09.800A0-	9.8	0.3858		35	89	47	40	10	
DC160-03-09.900A0-	9.9	0.3898		35	89	47	40	10	
DC160-03-09.922A0-	9.922	0.3906	25/64"	35	89	47	40	10	
DC160-03-10.000A0-	10	0.3937		35	89	47	40	10	
DC160-03-10.100A0-	10.1	0.3976		40	102	55	45	12	
DC160-03-10.200A0-	10.2	0.4016		40	102	55	45	12	
DC160-03-10.300A0-	10.3	0.4055		40	102	55	45	12	
DC160-03-10.319A0-	10.319	0.4063	13/32"	40	102	55	45	12	
DC160-03-10.400A0-	10.4	0.4094		40	102	55	45	12	
DC160-03-10.500A0-	10.5	0.4134		40	102	55	45	12	
DC160-03-10.600A0-	10.6	0.4173		40	102	55	45	12	
DC160-03-10.700A0-	10.7	0.4213		40	102	55	45	12	
DC160-03-10.716A0-	10.716	0.4219	27/64"	40	102	55	45	12	

Ordering example for the WJ30ET grade: DC160-03-03.000A0-WJ30ET

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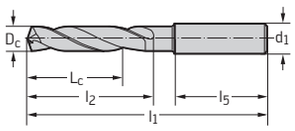
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-03-10.800A0-	10.8	0.4252		40	102	55	45	12	☹
DC160-03-10.900A0-	10.9	0.4291		40	102	55	45	12	☹
DC160-03-11.000A0-	11	0.4331		40	102	55	45	12	☹
DC160-03-11.100A0-	11.1	0.4370		40	102	55	45	12	☹
DC160-03-11.113A0-	11.113	0.4375	7/16"	40	102	55	45	12	☹
DC160-03-11.200A0-	11.2	0.4409		40	102	55	45	12	☹
DC160-03-11.300A0-	11.3	0.4449		40	102	55	45	12	☹
DC160-03-11.400A0-	11.4	0.4488		40	102	55	45	12	☹
DC160-03-11.500A0-	11.5	0.4528		40	102	55	45	12	☹
DC160-03-11.509A0-	11.509	0.4531	29/64"	40	102	55	45	12	☹
DC160-03-11.550A0-	11.55	0.4547		40	102	55	45	12	☹
DC160-03-11.600A0-	11.6	0.4567		40	102	55	45	12	☹
DC160-03-11.700A0-	11.7	0.4606		40	102	55	45	12	☹
DC160-03-11.800A0-	11.8	0.4646		40	102	55	45	12	☹
DC160-03-11.900A0-	11.9	0.4685		40	102	55	45	12	☹
DC160-03-11.906A0-	11.906	0.4687	15/32"	40	102	55	45	12	☹
DC160-03-12.000A0-	12	0.4724		40	102	55	45	12	☹
DC160-03-12.100A0-	12.1	0.4764		43	107	60	45	14	☹
DC160-03-12.200A0-	12.2	0.4803		43	107	60	45	14	☹
DC160-03-12.250A0-	12.25	0.4823		43	107	60	45	14	☹
DC160-03-12.300A0-	12.3	0.4843		43	107	60	45	14	☹
DC160-03-12.303A0-	12.303	0.4844	31/64"	43	107	60	45	14	☹
DC160-03-12.400A0-	12.4	0.4882		43	107	60	45	14	☹
DC160-03-12.500A0-	12.5	0.4921		43	107	60	45	14	☹
DC160-03-12.600A0-	12.6	0.4961		43	107	60	45	14	☹
DC160-03-12.700A0-	12.7	0.5000	1/2"	43	107	60	45	14	☹
DC160-03-12.750A0-	12.75	0.5020		43	107	60	45	14	☹
DC160-03-12.800A0-	12.8	0.5039		43	107	60	45	14	☹
DC160-03-12.900A0-	12.9	0.5079		43	107	60	45	14	☹
DC160-03-13.000A0-	13	0.5118		43	107	60	45	14	☹
DC160-03-13.100A0-	13.1	0.5157		43	107	60	45	14	☹
DC160-03-13.200A0-	13.2	0.5197		43	107	60	45	14	☹
DC160-03-13.300A0-	13.3	0.5236		43	107	60	45	14	☹
DC160-03-13.400A0-	13.4	0.5276		43	107	60	45	14	☹
DC160-03-13.494A0-	13.494	0.5313	17/32"	43	107	60	45	14	☹
DC160-03-13.500A0-	13.5	0.5315		43	107	60	45	14	☹
DC160-03-13.600A0-	13.6	0.5354		43	107	60	45	14	☹
DC160-03-13.700A0-	13.7	0.5394		43	107	60	45	14	☹
DC160-03-13.800A0-	13.8	0.5433		43	107	60	45	14	☹
DC160-03-13.900A0-	13.9	0.5472		43	107	60	45	14	☹
DC160-03-14.000A0-	14	0.5512		43	107	60	45	14	☹
DC160-03-14.100A0-	14.1	0.5551		45	115	65	48	16	☹
DC160-03-14.200A0-	14.2	0.5591		45	115	65	48	16	☹
DC160-03-14.288A0-	14.288	0.5625	9/16"	45	115	65	48	16	☹
DC160-03-14.300A0-	14.3	0.5630		45	115	65	48	16	☹
DC160-03-14.400A0-	14.4	0.5669		45	115	65	48	16	☹
DC160-03-14.500A0-	14.5	0.5709		45	115	65	48	16	☹
DC160-03-14.600A0-	14.6	0.5748		45	115	65	48	16	☹
DC160-03-14.700A0-	14.7	0.5787		45	115	65	48	16	☹
DC160-03-14.750A0-	14.75	0.5807		45	115	65	48	16	☹
DC160-03-14.800A0-	14.8	0.5827		45	115	65	48	16	☹
DC160-03-15.000A0-	15	0.5906		45	115	65	48	16	☹
DC160-03-15.100A0-	15.1	0.5945		45	115	65	48	16	☹
DC160-03-15.200A0-	15.2	0.5984		45	115	65	48	16	☹
DC160-03-15.300A0-	15.3	0.6024		45	115	65	48	16	☹
DC160-03-15.500A0-	15.5	0.6102		45	115	65	48	16	☹
DC160-03-15.600A0-	15.6	0.6142		45	115	65	48	16	☹

Ordering example for the WJ30ET grade: DC160-03-03.000A0-WJ30ET

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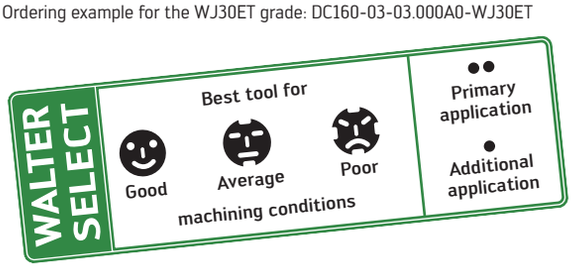

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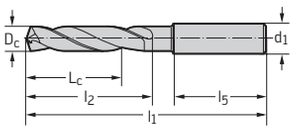
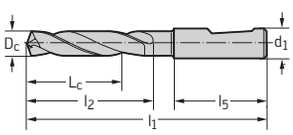
	Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
Shank DIN 6535 HA	DC160-03-15.700A0-	15.7	0.6181		45	115	65	48	16	
	DC160-03-15.800A0-	15.8	0.6220		45	115	65	48	16	
	DC160-03-15.875A0-	15.875	0.6250	5/8"	45	115	65	48	16	
	DC160-03-15.900A0-	15.9	0.6260		45	115	65	48	16	
	DC160-03-16.000A0-	16	0.6299		45	115	65	48	16	
	DC160-03-16.100A0-	16.1	0.6339		51	123	73	48	18	
	DC160-03-16.200A0-	16.2	0.6378		51	123	73	48	18	
	DC160-03-16.300A0-	16.3	0.6417		51	123	73	48	18	
	DC160-03-16.400A0-	16.4	0.6457		51	123	73	48	18	
	DC160-03-16.500A0-	16.5	0.6496		51	123	73	48	18	
	DC160-03-16.600A0-	16.6	0.6535		51	123	73	48	18	
	DC160-03-16.700A0-	16.7	0.6575		51	123	73	48	18	
	DC160-03-16.750A0-	16.75	0.6594		51	123	73	48	18	
	DC160-03-16.800A0-	16.8	0.6614		51	123	73	48	18	
	DC160-03-17.000A0-	17	0.6693		51	123	73	48	18	
	DC160-03-17.200A0-	17.2	0.6772		51	123	73	48	18	
	DC160-03-17.300A0-	17.3	0.6811		51	123	73	48	18	
	DC160-03-17.500A0-	17.5	0.6890		51	123	73	48	18	
	DC160-03-17.600A0-	17.6	0.6929		51	123	73	48	18	
	DC160-03-17.700A0-	17.7	0.6969		51	123	73	48	18	
	DC160-03-17.800A0-	17.8	0.7008		51	123	73	48	18	
	DC160-03-18.000A0-	18	0.7087		51	123	73	48	18	
	DC160-03-18.200A0-	18.2	0.7165		55	131	79	50	20	
	DC160-03-18.500A0-	18.5	0.7283		55	131	79	50	20	
	DC160-03-18.700A0-	18.7	0.7362		55	131	79	50	20	
	DC160-03-18.800A0-	18.8	0.7402		55	131	79	50	20	
	DC160-03-19.000A0-	19	0.7480		55	131	79	50	20	
	DC160-03-19.050A0-	19.05	0.7500	3/4"	55	131	79	50	20	
	DC160-03-19.500A0-	19.5	0.7677		55	131	79	50	20	
	DC160-03-19.700A0-	19.7	0.7756		55	131	79	50	20	
	DC160-03-19.800A0-	19.8	0.7795		55	131	79	50	20	
	DC160-03-20.000A0-	20	0.7874		55	131	79	50	20	
Shank DIN 6535 HE	DC160-03-03.000F0-	3	0.1181		14	62	20	36	6	
	DC160-03-03.100F0-	3.1	0.1220		14	62	20	36	6	
	DC160-03-03.200F0-	3.2	0.1260		14	62	20	36	6	
	DC160-03-03.250F0-	3.25	0.1280		14	62	20	36	6	
	DC160-03-03.300F0-	3.3	0.1299		14	62	20	36	6	
	DC160-03-03.400F0-	3.4	0.1339		14	62	20	36	6	
	DC160-03-03.500F0-	3.5	0.1378		14	62	20	36	6	
	DC160-03-03.600F0-	3.6	0.1417		14	62	20	36	6	
	DC160-03-03.650F0-	3.65	0.1437		14	62	20	36	6	
	DC160-03-03.700F0-	3.7	0.1457		14	62	20	36	6	
	DC160-03-03.800F0-	3.8	0.1496		17	66	24	36	6	
	DC160-03-03.900F0-	3.9	0.1535		17	66	24	36	6	
	DC160-03-04.000F0-	4	0.1575		17	66	24	36	6	
	DC160-03-04.100F0-	4.1	0.1614		17	66	24	36	6	
	DC160-03-04.200F0-	4.2	0.1654		17	66	24	36	6	
	DC160-03-04.300F0-	4.3	0.1693		17	66	24	36	6	
	DC160-03-04.400F0-	4.4	0.1732		17	66	24	36	6	
	DC160-03-04.500F0-	4.5	0.1772		17	66	24	36	6	
	DC160-03-04.600F0-	4.6	0.1811		17	66	24	36	6	
	DC160-03-04.650F0-	4.65	0.1831		17	66	24	36	6	
	DC160-03-04.700F0-	4.7	0.1850		17	66	24	36	6	
	DC160-03-04.800F0-	4.8	0.1890		20	66	28	36	6	
	DC160-03-04.900F0-	4.9	0.1929		20	66	28	36	6	
	DC160-03-05.000F0-	5	0.1969		20	66	28	36	6	
	DC160-03-05.100F0-	5.1	0.2008		20	66	28	36	6	
	DC160-03-05.200F0-	5.2	0.2047		20	66	28	36	6	
	DC160-03-05.300F0-	5.3	0.2087		20	66	28	36	6	
	DC160-03-05.400F0-	5.4	0.2126		20	66	28	36	6	
	DC160-03-05.500F0-	5.5	0.2165		20	66	28	36	6	

Ordering example for the WJ30ET grade: DC160-03-03.000A0-WJ30ET

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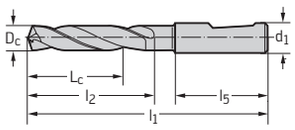
Shank DIN 6535 HE



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-03-05.550F0-	5.55	0.2185		20	66	28	36	6	☹
DC160-03-05.600F0-	5.6	0.2205		20	66	28	36	6	☹
DC160-03-05.700F0-	5.7	0.2244		20	66	28	36	6	☹
DC160-03-05.800F0-	5.8	0.2283		20	66	28	36	6	☹
DC160-03-05.900F0-	5.9	0.2323		20	66	28	36	6	☹
DC160-03-06.000F0-	6	0.2362		20	66	28	36	6	☹
DC160-03-06.100F0-	6.1	0.2402		24	79	34	36	8	☹
DC160-03-06.200F0-	6.2	0.2441		24	79	34	36	8	☹
DC160-03-06.300F0-	6.3	0.2480		24	79	34	36	8	☹
DC160-03-06.400F0-	6.4	0.2520		24	79	34	36	8	☹
DC160-03-06.500F0-	6.5	0.2559		24	79	34	36	8	☹
DC160-03-06.600F0-	6.6	0.2598		24	79	34	36	8	☹
DC160-03-06.700F0-	6.7	0.2638		24	79	34	36	8	☹
DC160-03-06.800F0-	6.8	0.2677		24	79	34	36	8	☹
DC160-03-06.900F0-	6.9	0.2717		24	79	34	36	8	☹
DC160-03-07.000F0-	7	0.2756		24	79	34	36	8	☹
DC160-03-07.100F0-	7.1	0.2795		29	79	41	36	8	☹
DC160-03-07.200F0-	7.2	0.2835		29	79	41	36	8	☹
DC160-03-07.300F0-	7.3	0.2874		29	79	41	36	8	☹
DC160-03-07.400F0-	7.4	0.2913		29	79	41	36	8	☹
DC160-03-07.500F0-	7.5	0.2953		29	79	41	36	8	☹
DC160-03-07.550F0-	7.55	0.2972		29	79	41	36	8	☹
DC160-03-07.600F0-	7.6	0.2992		29	79	41	36	8	☹
DC160-03-07.700F0-	7.7	0.3031		29	79	41	36	8	☹
DC160-03-07.800F0-	7.8	0.3071		29	79	41	36	8	☹
DC160-03-07.900F0-	7.9	0.3110		29	79	41	36	8	☹
DC160-03-08.000F0-	8	0.3150		29	79	41	36	8	☹
DC160-03-08.100F0-	8.1	0.3189		35	89	47	40	10	☹
DC160-03-08.200F0-	8.2	0.3228		35	89	47	40	10	☹
DC160-03-08.300F0-	8.3	0.3268		35	89	47	40	10	☹
DC160-03-08.400F0-	8.4	0.3307		35	89	47	40	10	☹
DC160-03-08.500F0-	8.5	0.3346		35	89	47	40	10	☹
DC160-03-08.600F0-	8.6	0.3386		35	89	47	40	10	☹
DC160-03-08.700F0-	8.7	0.3425		35	89	47	40	10	☹
DC160-03-08.800F0-	8.8	0.3465		35	89	47	40	10	☹
DC160-03-08.900F0-	8.9	0.3504		35	89	47	40	10	☹
DC160-03-09.000F0-	9	0.3543		35	89	47	40	10	☹
DC160-03-09.100F0-	9.1	0.3583		35	89	47	40	10	☹
DC160-03-09.200F0-	9.2	0.3622		35	89	47	40	10	☹
DC160-03-09.300F0-	9.3	0.3661		35	89	47	40	10	☹
DC160-03-09.400F0-	9.4	0.3701		35	89	47	40	10	☹
DC160-03-09.500F0-	9.5	0.3740		35	89	47	40	10	☹
DC160-03-09.550F0-	9.55	0.3760		35	89	47	40	10	☹
DC160-03-09.600F0-	9.6	0.3780		35	89	47	40	10	☹
DC160-03-09.700F0-	9.7	0.3819		35	89	47	40	10	☹
DC160-03-09.800F0-	9.8	0.3858		35	89	47	40	10	☹
DC160-03-09.900F0-	9.9	0.3898		35	89	47	40	10	☹
DC160-03-10.000F0-	10	0.3937		35	89	47	40	10	☹
DC160-03-10.100F0-	10.1	0.3976		40	102	55	45	12	☹
DC160-03-10.200F0-	10.2	0.4016		40	102	55	45	12	☹
DC160-03-10.300F0-	10.3	0.4055		40	102	55	45	12	☹
DC160-03-10.400F0-	10.4	0.4094		40	102	55	45	12	☹
DC160-03-10.500F0-	10.5	0.4134		40	102	55	45	12	☹
DC160-03-10.600F0-	10.6	0.4173		40	102	55	45	12	☹
DC160-03-10.700F0-	10.7	0.4213		40	102	55	45	12	☹
DC160-03-10.800F0-	10.8	0.4252		40	102	55	45	12	☹
DC160-03-10.900F0-	10.9	0.4291		40	102	55	45	12	☹

Ordering example for the WJ30ET grade: DC160-03-03.000A0-WJ30ET

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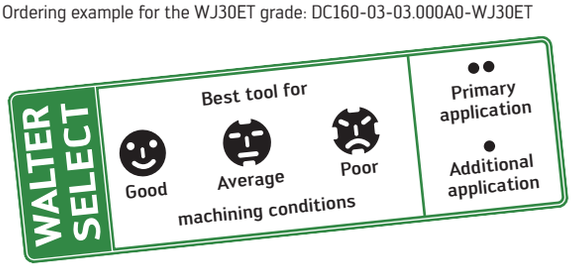

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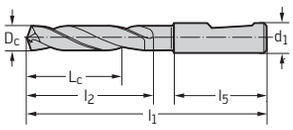
Shank DIN 6535 HE



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-03-11.000F0-	11	0.4331		40	102	55	45	12	●
DC160-03-11.100F0-	11.1	0.4370		40	102	55	45	12	●
DC160-03-11.200F0-	11.2	0.4409		40	102	55	45	12	●
DC160-03-11.300F0-	11.3	0.4449		40	102	55	45	12	●
DC160-03-11.400F0-	11.4	0.4488		40	102	55	45	12	●
DC160-03-11.500F0-	11.5	0.4528		40	102	55	45	12	●
DC160-03-11.550F0-	11.55	0.4547		40	102	55	45	12	●
DC160-03-11.600F0-	11.6	0.4567		40	102	55	45	12	●
DC160-03-11.700F0-	11.7	0.4606		40	102	55	45	12	●
DC160-03-11.800F0-	11.8	0.4646		40	102	55	45	12	●
DC160-03-11.900F0-	11.9	0.4685		40	102	55	45	12	●
DC160-03-12.000F0-	12	0.4724		40	102	55	45	12	●
DC160-03-12.100F0-	12.1	0.4764		43	107	60	45	14	●
DC160-03-12.200F0-	12.2	0.4803		43	107	60	45	14	●
DC160-03-12.250F0-	12.25	0.4823		43	107	60	45	14	●
DC160-03-12.300F0-	12.3	0.4843		43	107	60	45	14	●
DC160-03-12.400F0-	12.4	0.4882		43	107	60	45	14	●
DC160-03-12.500F0-	12.5	0.4921		43	107	60	45	14	●
DC160-03-12.600F0-	12.6	0.4961		43	107	60	45	14	●
DC160-03-12.700F0-	12.7	0.5000	1/2"	43	107	60	45	14	●
DC160-03-12.750F0-	12.75	0.5020		43	107	60	45	14	●
DC160-03-12.800F0-	12.8	0.5039		43	107	60	45	14	●
DC160-03-12.900F0-	12.9	0.5079		43	107	60	45	14	●
DC160-03-13.000F0-	13	0.5118		43	107	60	45	14	●
DC160-03-13.100F0-	13.1	0.5157		43	107	60	45	14	●
DC160-03-13.200F0-	13.2	0.5197		43	107	60	45	14	●
DC160-03-13.300F0-	13.3	0.5236		43	107	60	45	14	●
DC160-03-13.400F0-	13.4	0.5276		43	107	60	45	14	●
DC160-03-13.500F0-	13.5	0.5315		43	107	60	45	14	●
DC160-03-13.600F0-	13.6	0.5354		43	107	60	45	14	●
DC160-03-13.700F0-	13.7	0.5394		43	107	60	45	14	●
DC160-03-13.800F0-	13.8	0.5433		43	107	60	45	14	●
DC160-03-13.900F0-	13.9	0.5472		43	107	60	45	14	●
DC160-03-14.000F0-	14	0.5512		43	107	60	45	14	●
DC160-03-14.100F0-	14.1	0.5551		45	115	65	48	16	●
DC160-03-14.200F0-	14.2	0.5591		45	115	65	48	16	●
DC160-03-14.300F0-	14.3	0.5630		45	115	65	48	16	●
DC160-03-14.400F0-	14.4	0.5669		45	115	65	48	16	●
DC160-03-14.500F0-	14.5	0.5709		45	115	65	48	16	●
DC160-03-14.600F0-	14.6	0.5748		45	115	65	48	16	●
DC160-03-14.700F0-	14.7	0.5787		45	115	65	48	16	●
DC160-03-14.750F0-	14.75	0.5807		45	115	65	48	16	●
DC160-03-14.800F0-	14.8	0.5827		45	115	65	48	16	●
DC160-03-15.000F0-	15	0.5906		45	115	65	48	16	●
DC160-03-15.100F0-	15.1	0.5945		45	115	65	48	16	●
DC160-03-15.200F0-	15.2	0.5984		45	115	65	48	16	●
DC160-03-15.300F0-	15.3	0.6024		45	115	65	48	16	●
DC160-03-15.500F0-	15.5	0.6102		45	115	65	48	16	●
DC160-03-15.600F0-	15.6	0.6142		45	115	65	48	16	●
DC160-03-15.700F0-	15.7	0.6181		45	115	65	48	16	●
DC160-03-15.800F0-	15.8	0.6220		45	115	65	48	16	●
DC160-03-15.900F0-	15.9	0.6260		45	115	65	48	16	●
DC160-03-16.000F0-	16	0.6299		45	115	65	48	16	●
DC160-03-16.100F0-	16.1	0.6339		51	123	73	48	18	●
DC160-03-16.200F0-	16.2	0.6378		51	123	73	48	18	●
DC160-03-16.300F0-	16.3	0.6417		51	123	73	48	18	●
DC160-03-16.400F0-	16.4	0.6457		51	123	73	48	18	●
DC160-03-16.500F0-	16.5	0.6496		51	123	73	48	18	●
DC160-03-16.600F0-	16.6	0.6535		51	123	73	48	18	●
DC160-03-16.700F0-	16.7	0.6575		51	123	73	48	18	●
DC160-03-16.750F0-	16.75	0.6594		51	123	73	48	18	●

Ordering example for the WJ30ET grade: DC160-03-03.000A0-WJ30ET

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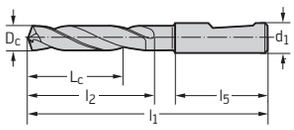
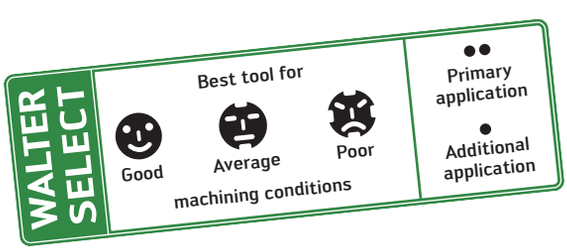
Shank DIN 6535 HE

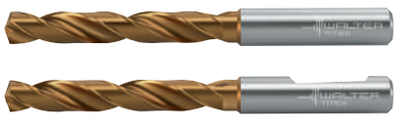


Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30ET
DC160-03-16.800F0-	16.8	0.6614		51	123	73	48	18	
DC160-03-17.000F0-	17	0.6693		51	123	73	48	18	
DC160-03-17.200F0-	17.2	0.6772		51	123	73	48	18	
DC160-03-17.300F0-	17.3	0.6811		51	123	73	48	18	
DC160-03-17.500F0-	17.5	0.6890		51	123	73	48	18	
DC160-03-17.600F0-	17.6	0.6929		51	123	73	48	18	
DC160-03-17.700F0-	17.7	0.6969		51	123	73	48	18	
DC160-03-17.800F0-	17.8	0.7008		51	123	73	48	18	
DC160-03-18.000F0-	18	0.7087		51	123	73	48	18	
DC160-03-18.200F0-	18.2	0.7165		55	131	79	50	20	
DC160-03-18.500F0-	18.5	0.7283		55	131	79	50	20	
DC160-03-18.700F0-	18.7	0.7362		55	131	79	50	20	
DC160-03-18.800F0-	18.8	0.7402		55	131	79	50	20	
DC160-03-19.000F0-	19	0.7480		55	131	79	50	20	
DC160-03-19.500F0-	19.5	0.7677		55	131	79	50	20	
DC160-03-19.700F0-	19.7	0.7756		55	131	79	50	20	
DC160-03-19.800F0-	19.8	0.7795		55	131	79	50	20	
DC160-03-20.000F0-	20	0.7874		55	131	79	50	20	

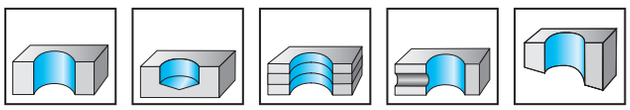
Ordering example for the WJ30ET grade: DC160-03-03.000A0-WJ30ET



Solid carbide twist drills
DC160 Advance



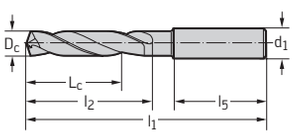
5×D_c | DIN 6537 L | 140°



	P	M	K	N	S	H	O
WJ30ET	●●		●●	●	●	●	●

B1

Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-05-03.000A0-	3	0.1181		23	66	28	36	6	●
DC160-05-03.100A0-	3.1	0.1220		23	66	28	36	6	●
DC160-05-03.175A0-	3.175	0.1250	1/8"	23	66	28	36	6	●
DC160-05-03.200A0-	3.2	0.1260		23	66	28	36	6	●
DC160-05-03.250A0-	3.25	0.1280		23	66	28	36	6	●
DC160-05-03.300A0-	3.3	0.1299		23	66	28	36	6	●
DC160-05-03.400A0-	3.4	0.1339		23	66	28	36	6	●
DC160-05-03.500A0-	3.5	0.1378		23	66	28	36	6	●
DC160-05-03.572A0-	3.572	0.1406	9/64"	23	66	28	36	6	●
DC160-05-03.600A0-	3.6	0.1417		23	66	28	36	6	●
DC160-05-03.650A0-	3.65	0.1437		23	66	28	36	6	●
DC160-05-03.700A0-	3.7	0.1457		23	66	28	36	6	●
DC160-05-03.800A0-	3.8	0.1496		29	74	36	36	6	●
DC160-05-03.900A0-	3.9	0.1535		29	74	36	36	6	●
DC160-05-03.969A0-	3.969	0.1563	5/32"	29	74	36	36	6	●
DC160-05-04.000A0-	4	0.1575		29	74	36	36	6	●
DC160-05-04.100A0-	4.1	0.1614		29	74	36	36	6	●
DC160-05-04.200A0-	4.2	0.1654		29	74	36	36	6	●
DC160-05-04.300A0-	4.3	0.1693		29	74	36	36	6	●
DC160-05-04.366A0-	4.366	0.1719	11/64"	29	74	36	36	6	●
DC160-05-04.400A0-	4.4	0.1732		29	74	36	36	6	●
DC160-05-04.500A0-	4.5	0.1772		29	74	36	36	6	●
DC160-05-04.600A0-	4.6	0.1811		29	74	36	36	6	●
DC160-05-04.650A0-	4.65	0.1831		29	74	36	36	6	●
DC160-05-04.700A0-	4.7	0.1850		29	74	36	36	6	●
DC160-05-04.763A0-	4.763	0.1875	3/16"	35	82	44	36	6	●
DC160-05-04.800A0-	4.8	0.1890		35	82	44	36	6	●
DC160-05-04.900A0-	4.9	0.1929		35	82	44	36	6	●
DC160-05-05.000A0-	5	0.1969		35	82	44	36	6	●
DC160-05-05.100A0-	5.1	0.2008		35	82	44	36	6	●
DC160-05-05.159A0-	5.159	0.2031	13/64"	35	82	44	36	6	●
DC160-05-05.200A0-	5.2	0.2047		35	82	44	36	6	●
DC160-05-05.300A0-	5.3	0.2087		35	82	44	36	6	●
DC160-05-05.400A0-	5.4	0.2126		35	82	44	36	6	●
DC160-05-05.500A0-	5.5	0.2165		35	82	44	36	6	●
DC160-05-05.550A0-	5.55	0.2185		35	82	44	36	6	●
DC160-05-05.556A0-	5.556	0.2187	7/32"	35	82	44	36	6	●
DC160-05-05.600A0-	5.6	0.2205		35	82	44	36	6	●
DC160-05-05.700A0-	5.7	0.2244		35	82	44	36	6	●
DC160-05-05.800A0-	5.8	0.2283		35	82	44	36	6	●
DC160-05-05.900A0-	5.9	0.2323		35	82	44	36	6	●
DC160-05-05.953A0-	5.953	0.2344	15/64"	35	82	44	36	6	●
DC160-05-06.000A0-	6	0.2362		35	82	44	36	6	●
DC160-05-06.100A0-	6.1	0.2402		43	91	53	36	8	●
DC160-05-06.200A0-	6.2	0.2441		43	91	53	36	8	●
DC160-05-06.300A0-	6.3	0.2480		43	91	53	36	8	●
DC160-05-06.350A0-	6.35	0.2500	1/4"	43	91	53	36	8	●

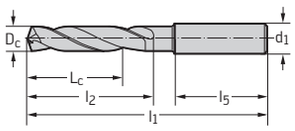
Ordering example for the WJ30ET grade: DC160-05-03.000A0-WJ30ET

Continued

● / ★ New addition to the product range

Continued

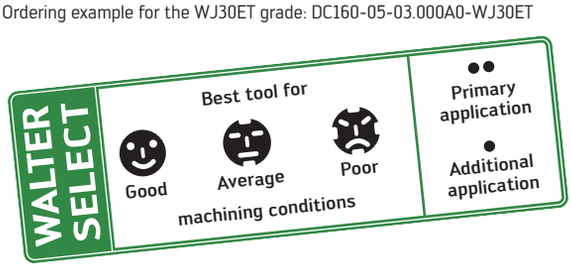
Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-05-06.400A0-	6.4	0.2520		43	91	53	36	8	●
DC160-05-06.500A0-	6.5	0.2559		43	91	53	36	8	●
DC160-05-06.600A0-	6.6	0.2598		43	91	53	36	8	●
DC160-05-06.700A0-	6.7	0.2638		43	91	53	36	8	●
DC160-05-06.747A0-	6.747	0.2656	17/64"	43	91	53	36	8	●
DC160-05-06.800A0-	6.8	0.2677		43	91	53	36	8	●
DC160-05-06.900A0-	6.9	0.2717		43	91	53	36	8	●
DC160-05-07.000A0-	7	0.2756		43	91	53	36	8	●
DC160-05-07.100A0-	7.1	0.2795		43	91	53	36	8	●
DC160-05-07.144A0-	7.144	0.2813	9/32"	43	91	53	36	8	●
DC160-05-07.200A0-	7.2	0.2835		43	91	53	36	8	●
DC160-05-07.300A0-	7.3	0.2874		43	91	53	36	8	●
DC160-05-07.400A0-	7.4	0.2913		43	91	53	36	8	●
DC160-05-07.500A0-	7.5	0.2953		43	91	53	36	8	●
DC160-05-07.541A0-	7.541	0.2969	19/64"	43	91	53	36	8	●
DC160-05-07.550A0-	7.55	0.2972		43	91	53	36	8	●
DC160-05-07.600A0-	7.6	0.2992		43	91	53	36	8	●
DC160-05-07.700A0-	7.7	0.3031		43	91	53	36	8	●
DC160-05-07.800A0-	7.8	0.3071		43	91	53	36	8	●
DC160-05-07.900A0-	7.9	0.3110		43	91	53	36	8	●
DC160-05-07.938A0-	7.938	0.3125	5/16"	43	91	53	36	8	●
DC160-05-08.000A0-	8	0.3150		43	91	53	36	8	●
DC160-05-08.100A0-	8.1	0.3189		49	103	61	40	10	●
DC160-05-08.200A0-	8.2	0.3228		49	103	61	40	10	●
DC160-05-08.300A0-	8.3	0.3268		49	103	61	40	10	●
DC160-05-08.334A0-	8.334	0.3281	21/64"	49	103	61	40	10	●
DC160-05-08.400A0-	8.4	0.3307		49	103	61	40	10	●
DC160-05-08.500A0-	8.5	0.3346		49	103	61	40	10	●
DC160-05-08.600A0-	8.6	0.3386		49	103	61	40	10	●
DC160-05-08.700A0-	8.7	0.3425		49	103	61	40	10	●
DC160-05-08.731A0-	8.731	0.3437	11/32"	49	103	61	40	10	●
DC160-05-08.800A0-	8.8	0.3465		49	103	61	40	10	●
DC160-05-08.900A0-	8.9	0.3504		49	103	61	40	10	●
DC160-05-09.000A0-	9	0.3543		49	103	61	40	10	●
DC160-05-09.100A0-	9.1	0.3583		49	103	61	40	10	●
DC160-05-09.128A0-	9.128	0.3594	23/64"	49	103	61	40	10	●
DC160-05-09.200A0-	9.2	0.3622		49	103	61	40	10	●
DC160-05-09.300A0-	9.3	0.3661		49	103	61	40	10	●
DC160-05-09.400A0-	9.4	0.3701		49	103	61	40	10	●
DC160-05-09.500A0-	9.5	0.3740		49	103	61	40	10	●
DC160-05-09.525A0-	9.525	0.3750	3/8"	49	103	61	40	10	●
DC160-05-09.550A0-	9.55	0.3760		49	103	61	40	10	●
DC160-05-09.600A0-	9.6	0.3780		49	103	61	40	10	●
DC160-05-09.700A0-	9.7	0.3819		49	103	61	40	10	●
DC160-05-09.800A0-	9.8	0.3858		49	103	61	40	10	●
DC160-05-09.900A0-	9.9	0.3898		49	103	61	40	10	●
DC160-05-09.922A0-	9.922	0.3906	25/64"	49	103	61	40	10	●
DC160-05-10.000A0-	10	0.3937		49	103	61	40	10	●
DC160-05-10.100A0-	10.1	0.3976		56	118	71	45	12	●
DC160-05-10.200A0-	10.2	0.4016		56	118	71	45	12	●
DC160-05-10.300A0-	10.3	0.4055		56	118	71	45	12	●
DC160-05-10.319A0-	10.319	0.4063	13/32"	56	118	71	45	12	●
DC160-05-10.400A0-	10.4	0.4094		56	118	71	45	12	●
DC160-05-10.500A0-	10.5	0.4134		56	118	71	45	12	●
DC160-05-10.600A0-	10.6	0.4173		56	118	71	45	12	●
DC160-05-10.700A0-	10.7	0.4213		56	118	71	45	12	●
DC160-05-10.716A0-	10.716	0.4219	27/64"	56	118	71	45	12	●

Ordering example for the WJ30ET grade: DC160-05-03.000A0-WJ30ET

Continued



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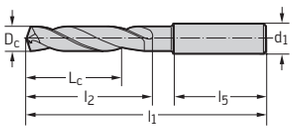
Shank DIN 6535 HA



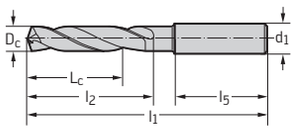
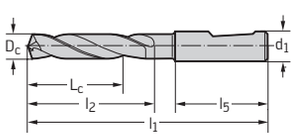
Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-05-10.800A0-	10.8	0.4252		56	118	71	45	12	☺
DC160-05-10.900A0-	10.9	0.4291		56	118	71	45	12	☺
DC160-05-11.000A0-	11	0.4331		56	118	71	45	12	☺
DC160-05-11.100A0-	11.1	0.4370		56	118	71	45	12	☺
DC160-05-11.113A0-	11.113	0.4375	7/16"	56	118	71	45	12	☺
DC160-05-11.200A0-	11.2	0.4409		56	118	71	45	12	☺
DC160-05-11.300A0-	11.3	0.4449		56	118	71	45	12	☺
DC160-05-11.400A0-	11.4	0.4488		56	118	71	45	12	☺
DC160-05-11.500A0-	11.5	0.4528		56	118	71	45	12	☺
DC160-05-11.509A0-	11.509	0.4531	29/64"	56	118	71	45	12	☺
DC160-05-11.550A0-	11.55	0.4547		56	118	71	45	12	☺
DC160-05-11.600A0-	11.6	0.4567		56	118	71	45	12	☺
DC160-05-11.700A0-	11.7	0.4606		56	118	71	45	12	☺
DC160-05-11.800A0-	11.8	0.4646		56	118	71	45	12	☺
DC160-05-11.900A0-	11.9	0.4685		56	118	71	45	12	☺
DC160-05-11.906A0-	11.906	0.4687	15/32"	56	118	71	45	12	☺
DC160-05-12.000A0-	12	0.4724		56	118	71	45	12	☺
DC160-05-12.100A0-	12.1	0.4764		60	124	77	45	14	☺
DC160-05-12.200A0-	12.2	0.4803		60	124	77	45	14	☺
DC160-05-12.250A0-	12.25	0.4823		60	124	77	45	14	☺
DC160-05-12.300A0-	12.3	0.4843		60	124	77	45	14	☺
DC160-05-12.303A0-	12.303	0.4844	31/64"	60	124	77	45	14	☺
DC160-05-12.400A0-	12.4	0.4882		60	124	77	45	14	☺
DC160-05-12.500A0-	12.5	0.4921		60	124	77	45	14	☺
DC160-05-12.600A0-	12.6	0.4961		60	124	77	45	14	☺
DC160-05-12.700A0-	12.7	0.5000	1/2"	60	124	77	45	14	☺
DC160-05-12.750A0-	12.75	0.5020		60	124	77	45	14	☺
DC160-05-12.800A0-	12.8	0.5039		60	124	77	45	14	☺
DC160-05-12.900A0-	12.9	0.5079		60	124	77	45	14	☺
DC160-05-13.000A0-	13	0.5118		60	124	77	45	14	☺
DC160-05-13.100A0-	13.1	0.5157		60	124	77	45	14	☺
DC160-05-13.200A0-	13.2	0.5197		60	124	77	45	14	☺
DC160-05-13.300A0-	13.3	0.5236		60	124	77	45	14	☺
DC160-05-13.400A0-	13.4	0.5276		60	124	77	45	14	☺
DC160-05-13.494A0-	13.494	0.5313	17/32"	60	124	77	45	14	☺
DC160-05-13.500A0-	13.5	0.5315		60	124	77	45	14	☺
DC160-05-13.600A0-	13.6	0.5354		60	124	77	45	14	☺
DC160-05-13.700A0-	13.7	0.5394		60	124	77	45	14	☺
DC160-05-13.800A0-	13.8	0.5433		60	124	77	45	14	☺
DC160-05-13.900A0-	13.9	0.5472		60	124	77	45	14	☺
DC160-05-14.000A0-	14	0.5512		60	124	77	45	14	☺
DC160-05-14.100A0-	14.1	0.5551		63	133	83	48	16	☺
DC160-05-14.200A0-	14.2	0.5591		63	133	83	48	16	☺
DC160-05-14.288A0-	14.288	0.5625	9/16"	63	133	83	48	16	☺
DC160-05-14.300A0-	14.3	0.5630		63	133	83	48	16	☺
DC160-05-14.400A0-	14.4	0.5669		63	133	83	48	16	☺
DC160-05-14.500A0-	14.5	0.5709		63	133	83	48	16	☺
DC160-05-14.600A0-	14.6	0.5748		63	133	83	48	16	☺
DC160-05-14.700A0-	14.7	0.5787		63	133	83	48	16	☺
DC160-05-14.750A0-	14.75	0.5807		63	133	83	48	16	☺
DC160-05-14.800A0-	14.8	0.5827		63	133	83	48	16	☺
DC160-05-15.000A0-	15	0.5906		63	133	83	48	16	☺
DC160-05-15.100A0-	15.1	0.5945		63	133	83	48	16	☺
DC160-05-15.200A0-	15.2	0.5984		63	133	83	48	16	☺
DC160-05-15.300A0-	15.3	0.6024		63	133	83	48	16	☺
DC160-05-15.500A0-	15.5	0.6102		63	133	83	48	16	☺
DC160-05-15.600A0-	15.6	0.6142		63	133	83	48	16	☺
DC160-05-15.700A0-	15.7	0.6181		63	133	83	48	16	☺
DC160-05-15.800A0-	15.8	0.6220		63	133	83	48	16	☺
DC160-05-15.875A0-	15.875	0.6250	5/8"	63	133	83	48	16	☺
DC160-05-15.900A0-	15.9	0.6260		63	133	83	48	16	☺

Ordering example for the WJ30ET grade: DC160-05-03.000A0-WJ30ET

Continued

☺☺☺ / ★ New addition to the product range

Continued

	Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
Shank DIN 6535 HA	DC160-05-16.000A0-	16	0.6299		63	133	83	48	16	☹
	DC160-05-16.100A0-	16.1	0.6339		71	143	93	48	18	☹
	DC160-05-16.200A0-	16.2	0.6378		71	143	93	48	18	☹
	DC160-05-16.300A0-	16.3	0.6417		71	143	93	48	18	☹
	DC160-05-16.400A0-	16.4	0.6457		71	143	93	48	18	☹
	DC160-05-16.500A0-	16.5	0.6496		71	143	93	48	18	☹
	DC160-05-16.600A0-	16.6	0.6535		71	143	93	48	18	☹
	DC160-05-16.700A0-	16.7	0.6575		71	143	93	48	18	☹
	DC160-05-16.750A0-	16.75	0.6594		71	143	93	48	18	☹
	DC160-05-16.800A0-	16.8	0.6614		71	143	93	48	18	☹
	DC160-05-17.000A0-	17	0.6693		71	143	93	48	18	☹
	DC160-05-17.200A0-	17.2	0.6772		71	143	93	48	18	☹
	DC160-05-17.300A0-	17.3	0.6811		71	143	93	48	18	☹
	DC160-05-17.500A0-	17.5	0.6890		71	143	93	48	18	☹
	DC160-05-17.600A0-	17.6	0.6929		71	143	93	48	18	☹
	DC160-05-17.700A0-	17.7	0.6969		71	143	93	48	18	☹
	DC160-05-17.800A0-	17.8	0.7008		71	143	93	48	18	☹
	DC160-05-18.000A0-	18	0.7087		71	143	93	48	18	☹
	DC160-05-18.200A0-	18.2	0.7165		77	153	101	50	20	☹
	DC160-05-18.500A0-	18.5	0.7283		77	153	101	50	20	☹
	DC160-05-18.700A0-	18.7	0.7362		77	153	101	50	20	☹
	DC160-05-18.800A0-	18.8	0.7402		77	153	101	50	20	☹
	DC160-05-19.000A0-	19	0.7480		77	153	101	50	20	☹
	DC160-05-19.050A0-	19.05	0.7500	3/4"	77	153	101	50	20	☹
	DC160-05-19.500A0-	19.5	0.7677		77	153	101	50	20	☹
	DC160-05-19.700A0-	19.7	0.7756		77	153	101	50	20	☹
	DC160-05-19.800A0-	19.8	0.7795		77	153	101	50	20	☹
	DC160-05-20.000A0-	20	0.7874		77	153	101	50	20	☹
	DC160-05-20.500A0-	20.5	0.8071		86	166	108	56	25	☹
	DC160-05-21.000A0-	21	0.8268		86	166	108	56	25	☹
	DC160-05-21.500A0-	21.5	0.8465		86	166	108	56	25	☹
	DC160-05-22.000A0-	22	0.8661		86	166	108	56	25	☹
	DC160-05-22.500A0-	22.5	0.8858		91	173	115	56	25	☹
	DC160-05-23.000A0-	23	0.9055		91	173	115	56	25	☹
	DC160-05-23.500A0-	23.5	0.9252		91	173	115	56	25	☹
	DC160-05-24.000A0-	24	0.9449		91	173	115	56	25	☹
	DC160-05-24.500A0-	24.5	0.9646		97	180	122	56	25	☹
	DC160-05-25.000A0-	25	0.9843		97	180	122	56	25	☹
Shank DIN 6535 HE	DC160-05-03.000F0-	3	0.1181		23	66	28	36	6	☹
	DC160-05-03.100F0-	3.1	0.1220		23	66	28	36	6	☹
	DC160-05-03.200F0-	3.2	0.1260		23	66	28	36	6	☹
	DC160-05-03.250F0-	3.25	0.1280		23	66	28	36	6	☹
	DC160-05-03.300F0-	3.3	0.1299		23	66	28	36	6	☹
	DC160-05-03.400F0-	3.4	0.1339		23	66	28	36	6	☹
	DC160-05-03.500F0-	3.5	0.1378		23	66	28	36	6	☹
	DC160-05-03.600F0-	3.6	0.1417		23	66	28	36	6	☹
	DC160-05-03.650F0-	3.65	0.1437		23	66	28	36	6	☹
	DC160-05-03.700F0-	3.7	0.1457		23	66	28	36	6	☹
	DC160-05-03.800F0-	3.8	0.1496		29	74	36	36	6	☹
	DC160-05-03.900F0-	3.9	0.1535		29	74	36	36	6	☹
	DC160-05-04.000F0-	4	0.1575		29	74	36	36	6	☹
	DC160-05-04.100F0-	4.1	0.1614		29	74	36	36	6	☹
	DC160-05-04.200F0-	4.2	0.1654		29	74	36	36	6	☹
	DC160-05-04.300F0-	4.3	0.1693		29	74	36	36	6	☹
	DC160-05-04.400F0-	4.4	0.1732		29	74	36	36	6	☹
	DC160-05-04.500F0-	4.5	0.1772		29	74	36	36	6	☹
	DC160-05-04.600F0-	4.6	0.1811		29	74	36	36	6	☹

Ordering example for the WJ30ET grade: DC160-05-03.000A0-WJ30ET

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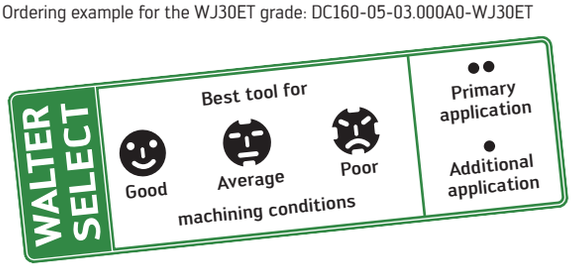

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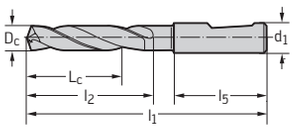
Shank DIN 6535 HE



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-05-04.650F0-	4.65	0.1831		29	74	36	36	6	
DC160-05-04.700F0-	4.7	0.1850		29	74	36	36	6	
DC160-05-04.800F0-	4.8	0.1890		35	82	44	36	6	
DC160-05-04.900F0-	4.9	0.1929		35	82	44	36	6	
DC160-05-05.000F0-	5	0.1969		35	82	44	36	6	
DC160-05-05.100F0-	5.1	0.2008		35	82	44	36	6	
DC160-05-05.200F0-	5.2	0.2047		35	82	44	36	6	
DC160-05-05.300F0-	5.3	0.2087		35	82	44	36	6	
DC160-05-05.400F0-	5.4	0.2126		35	82	44	36	6	
DC160-05-05.500F0-	5.5	0.2165		35	82	44	36	6	
DC160-05-05.550F0-	5.55	0.2185		35	82	44	36	6	
DC160-05-05.600F0-	5.6	0.2205		35	82	44	36	6	
DC160-05-05.700F0-	5.7	0.2244		35	82	44	36	6	
DC160-05-05.800F0-	5.8	0.2283		35	82	44	36	6	
DC160-05-05.900F0-	5.9	0.2323		35	82	44	36	6	
DC160-05-06.000F0-	6	0.2362		35	82	44	36	6	
DC160-05-06.100F0-	6.1	0.2402		43	91	53	36	8	
DC160-05-06.200F0-	6.2	0.2441		43	91	53	36	8	
DC160-05-06.300F0-	6.3	0.2480		43	91	53	36	8	
DC160-05-06.400F0-	6.4	0.2520		43	91	53	36	8	
DC160-05-06.500F0-	6.5	0.2559		43	91	53	36	8	
DC160-05-06.600F0-	6.6	0.2598		43	91	53	36	8	
DC160-05-06.700F0-	6.7	0.2638		43	91	53	36	8	
DC160-05-06.800F0-	6.8	0.2677		43	91	53	36	8	
DC160-05-06.900F0-	6.9	0.2717		43	91	53	36	8	
DC160-05-07.000F0-	7	0.2756		43	91	53	36	8	
DC160-05-07.100F0-	7.1	0.2795		43	91	53	36	8	
DC160-05-07.200F0-	7.2	0.2835		43	91	53	36	8	
DC160-05-07.300F0-	7.3	0.2874		43	91	53	36	8	
DC160-05-07.400F0-	7.4	0.2913		43	91	53	36	8	
DC160-05-07.500F0-	7.5	0.2953		43	91	53	36	8	
DC160-05-07.550F0-	7.55	0.2972		43	91	53	36	8	
DC160-05-07.600F0-	7.6	0.2992		43	91	53	36	8	
DC160-05-07.700F0-	7.7	0.3031		43	91	53	36	8	
DC160-05-07.800F0-	7.8	0.3071		43	91	53	36	8	
DC160-05-07.900F0-	7.9	0.3110		43	91	53	36	8	
DC160-05-08.000F0-	8	0.3150		43	91	53	36	8	
DC160-05-08.100F0-	8.1	0.3189		49	103	61	40	10	
DC160-05-08.200F0-	8.2	0.3228		49	103	61	40	10	
DC160-05-08.300F0-	8.3	0.3268		49	103	61	40	10	
DC160-05-08.400F0-	8.4	0.3307		49	103	61	40	10	
DC160-05-08.500F0-	8.5	0.3346		49	103	61	40	10	
DC160-05-08.600F0-	8.6	0.3386		49	103	61	40	10	
DC160-05-08.700F0-	8.7	0.3425		49	103	61	40	10	
DC160-05-08.800F0-	8.8	0.3465		49	103	61	40	10	
DC160-05-08.900F0-	8.9	0.3504		49	103	61	40	10	
DC160-05-09.000F0-	9	0.3543		49	103	61	40	10	
DC160-05-09.100F0-	9.1	0.3583		49	103	61	40	10	
DC160-05-09.200F0-	9.2	0.3622		49	103	61	40	10	
DC160-05-09.300F0-	9.3	0.3661		49	103	61	40	10	
DC160-05-09.400F0-	9.4	0.3701		49	103	61	40	10	
DC160-05-09.500F0-	9.5	0.3740		49	103	61	40	10	
DC160-05-09.550F0-	9.55	0.3760		49	103	61	40	10	
DC160-05-09.600F0-	9.6	0.3780		49	103	61	40	10	
DC160-05-09.700F0-	9.7	0.3819		49	103	61	40	10	
DC160-05-09.800F0-	9.8	0.3858		49	103	61	40	10	
DC160-05-09.900F0-	9.9	0.3898		49	103	61	40	10	
DC160-05-10.000F0-	10	0.3937		49	103	61	40	10	
DC160-05-10.100F0-	10.1	0.3976		56	118	71	45	12	
DC160-05-10.200F0-	10.2	0.4016		56	118	71	45	12	
DC160-05-10.300F0-	10.3	0.4055		56	118	71	45	12	

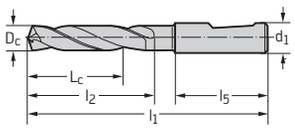
Ordering example for the WJ30ET grade: DC160-05-03.000A0-WJ30ET

Continued

/ ★ New addition to the product range

Continued

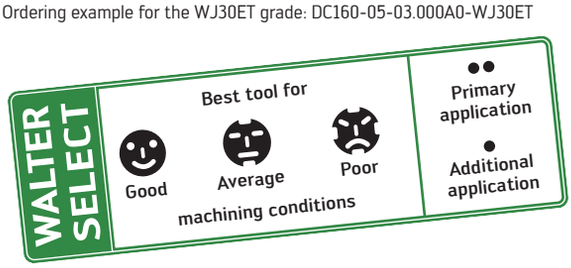
Shank DIN 6535 HE



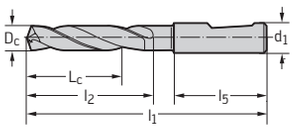
Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
DC160-05-10.400F0-	10.4	0.4094		56	118	71	45	12	●●
DC160-05-10.500F0-	10.5	0.4134		56	118	71	45	12	●●
DC160-05-10.600F0-	10.6	0.4173		56	118	71	45	12	●●
DC160-05-10.700F0-	10.7	0.4213		56	118	71	45	12	●●
DC160-05-10.800F0-	10.8	0.4252		56	118	71	45	12	●●
DC160-05-10.900F0-	10.9	0.4291		56	118	71	45	12	●●
DC160-05-11.000F0-	11	0.4331		56	118	71	45	12	●●
DC160-05-11.100F0-	11.1	0.4370		56	118	71	45	12	●●
DC160-05-11.200F0-	11.2	0.4409		56	118	71	45	12	●●
DC160-05-11.300F0-	11.3	0.4449		56	118	71	45	12	●●
DC160-05-11.400F0-	11.4	0.4488		56	118	71	45	12	●●
DC160-05-11.500F0-	11.5	0.4528		56	118	71	45	12	●●
DC160-05-11.550F0-	11.55	0.4547		56	118	71	45	12	●●
DC160-05-11.600F0-	11.6	0.4567		56	118	71	45	12	●●
DC160-05-11.700F0-	11.7	0.4606		56	118	71	45	12	●●
DC160-05-11.800F0-	11.8	0.4646		56	118	71	45	12	●●
DC160-05-11.900F0-	11.9	0.4685		56	118	71	45	12	●●
DC160-05-12.000F0-	12	0.4724		56	118	71	45	12	●●
DC160-05-12.100F0-	12.1	0.4764		60	124	77	45	14	●●
DC160-05-12.200F0-	12.2	0.4803		60	124	77	45	14	●●
DC160-05-12.250F0-	12.25	0.4823		60	124	77	45	14	●●
DC160-05-12.300F0-	12.3	0.4843		60	124	77	45	14	●●
DC160-05-12.400F0-	12.4	0.4882		60	124	77	45	14	●●
DC160-05-12.500F0-	12.5	0.4921		60	124	77	45	14	●●
DC160-05-12.600F0-	12.6	0.4961		60	124	77	45	14	●●
DC160-05-12.700F0-	12.7	0.5000	1/2"	60	124	77	45	14	●●
DC160-05-12.750F0-	12.75	0.5020		60	124	77	45	14	●●
DC160-05-12.800F0-	12.8	0.5039		60	124	77	45	14	●●
DC160-05-12.900F0-	12.9	0.5079		60	124	77	45	14	●●
DC160-05-13.000F0-	13	0.5118		60	124	77	45	14	●●
DC160-05-13.100F0-	13.1	0.5157		60	124	77	45	14	●●
DC160-05-13.200F0-	13.2	0.5197		60	124	77	45	14	●●
DC160-05-13.300F0-	13.3	0.5236		60	124	77	45	14	●●
DC160-05-13.400F0-	13.4	0.5276		60	124	77	45	14	●●
DC160-05-13.500F0-	13.5	0.5315		60	124	77	45	14	●●
DC160-05-13.600F0-	13.6	0.5354		60	124	77	45	14	●●
DC160-05-13.700F0-	13.7	0.5394		60	124	77	45	14	●●
DC160-05-13.800F0-	13.8	0.5433		60	124	77	45	14	●●
DC160-05-13.900F0-	13.9	0.5472		60	124	77	45	14	●●
DC160-05-14.000F0-	14	0.5512		60	124	77	45	14	●●
DC160-05-14.100F0-	14.1	0.5551		63	133	83	48	16	●●
DC160-05-14.200F0-	14.2	0.5591		63	133	83	48	16	●●
DC160-05-14.300F0-	14.3	0.5630		63	133	83	48	16	●●
DC160-05-14.400F0-	14.4	0.5669		63	133	83	48	16	●●
DC160-05-14.500F0-	14.5	0.5709		63	133	83	48	16	●●
DC160-05-14.600F0-	14.6	0.5748		63	133	83	48	16	●●
DC160-05-14.700F0-	14.7	0.5787		63	133	83	48	16	●●
DC160-05-14.750F0-	14.75	0.5807		63	133	83	48	16	●●
DC160-05-14.800F0-	14.8	0.5827		63	133	83	48	16	●●
DC160-05-15.000F0-	15	0.5906		63	133	83	48	16	●●
DC160-05-15.100F0-	15.1	0.5945		63	133	83	48	16	●●
DC160-05-15.200F0-	15.2	0.5984		63	133	83	48	16	●●
DC160-05-15.300F0-	15.3	0.6024		63	133	83	48	16	●●
DC160-05-15.500F0-	15.5	0.6102		63	133	83	48	16	●●
DC160-05-15.600F0-	15.6	0.6142		63	133	83	48	16	●●
DC160-05-15.700F0-	15.7	0.6181		63	133	83	48	16	●●
DC160-05-15.800F0-	15.8	0.6220		63	133	83	48	16	●●

Ordering example for the WJ30ET grade: DC160-05-03.000A0-WJ30ET

Continued



Continued

	Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h8 mm	WJ30ET
Shank DIN 6535 HE	DC160-05-15.900F0-	15.9	0.6260		63	133	83	48	16	
	DC160-05-16.000F0-	16	0.6299		63	133	83	48	16	
	DC160-05-16.100F0-	16.1	0.6339		71	143	93	48	18	
	DC160-05-16.200F0-	16.2	0.6378		71	143	93	48	18	
	DC160-05-16.300F0-	16.3	0.6417		71	143	93	48	18	
	DC160-05-16.400F0-	16.4	0.6457		71	143	93	48	18	
	DC160-05-16.500F0-	16.5	0.6496		71	143	93	48	18	
	DC160-05-16.600F0-	16.6	0.6535		71	143	93	48	18	
	DC160-05-16.700F0-	16.7	0.6575		71	143	93	48	18	
	DC160-05-16.750F0-	16.75	0.6594		71	143	93	48	18	
	DC160-05-16.800F0-	16.8	0.6614		71	143	93	48	18	
	DC160-05-17.000F0-	17	0.6693		71	143	93	48	18	
	DC160-05-17.200F0-	17.2	0.6772		71	143	93	48	18	
	DC160-05-17.300F0-	17.3	0.6811		71	143	93	48	18	
	DC160-05-17.500F0-	17.5	0.6890		71	143	93	48	18	
	DC160-05-17.600F0-	17.6	0.6929		71	143	93	48	18	
	DC160-05-17.700F0-	17.7	0.6969		71	143	93	48	18	
	DC160-05-17.800F0-	17.8	0.7008		71	143	93	48	18	
	DC160-05-18.000F0-	18	0.7087		71	143	93	48	18	
	DC160-05-18.200F0-	18.2	0.7165		77	153	101	50	20	
	DC160-05-18.500F0-	18.5	0.7283		77	153	101	50	20	
	DC160-05-18.700F0-	18.7	0.7362		77	153	101	50	20	
	DC160-05-18.800F0-	18.8	0.7402		77	153	101	50	20	
	DC160-05-19.000F0-	19	0.7480		77	153	101	50	20	
	DC160-05-19.500F0-	19.5	0.7677		77	153	101	50	20	
	DC160-05-19.700F0-	19.7	0.7756		77	153	101	50	20	
	DC160-05-19.800F0-	19.8	0.7795		77	153	101	50	20	
	DC160-05-20.000F0-	20	0.7874		77	153	101	50	20	
	DC160-05-20.500F0-	20.5	0.8071		86	166	108	56	25	
	DC160-05-21.000F0-	21	0.8268		86	166	108	56	25	
	DC160-05-21.500F0-	21.5	0.8465		86	166	108	56	25	
	DC160-05-22.000F0-	22	0.8661		86	166	108	56	25	
	DC160-05-22.500F0-	22.5	0.8858		91	173	115	56	25	
	DC160-05-23.000F0-	23	0.9055		91	173	115	56	25	
	DC160-05-23.500F0-	23.5	0.9252		91	173	115	56	25	
	DC160-05-24.000F0-	24	0.9449		91	173	115	56	25	
	DC160-05-24.500F0-	24.5	0.9646		97	180	122	56	25	
	DC160-05-25.000F0-	25	0.9843		97	180	122	56	25	

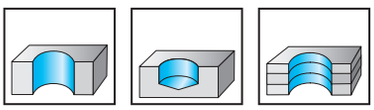
Ordering example for the WJ30ET grade: DC160-05-03.000A0-WJ30ET

B1

/ ★ New addition to the product range

Solid carbide twist drills
DC150 Perform

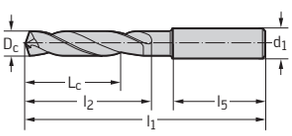
5×D_c | DIN 6537 L | 140°



	P	M	K	N	S	H	O
WJ30TA	●●	●	●●	●	●	●	●

B1

Shank DIN 6535 HA



Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30TA
DC150-05-03.000A0-	3	0.1181		23	66	28	36	6	●●
DC150-05-03.100A0-	3.1	0.1220		23	66	28	36	6	●●
DC150-05-03.175A0-	3.175	0.1250	1/8"	23	66	28	36	6	●●
DC150-05-03.200A0-	3.2	0.1260		23	66	28	36	6	●●
DC150-05-03.250A0-	3.25	0.1280		23	66	28	36	6	●●
DC150-05-03.300A0-	3.3	0.1299		23	66	28	36	6	●●
DC150-05-03.400A0-	3.4	0.1339		23	66	28	36	6	●●
DC150-05-03.500A0-	3.5	0.1378		23	66	28	36	6	●●
DC150-05-03.600A0-	3.6	0.1417		23	66	28	36	6	●●
DC150-05-03.650A0-	3.65	0.1437		23	66	28	36	6	●●
DC150-05-03.700A0-	3.7	0.1457		23	66	28	36	6	●●
DC150-05-03.800A0-	3.8	0.1496		29	74	36	36	6	●●
DC150-05-03.900A0-	3.9	0.1535		29	74	36	36	6	●●
DC150-05-03.969A0-	3.969	0.1563	5/32"	29	74	36	36	6	●●
DC150-05-04.000A0-	4	0.1575		29	74	36	36	6	●●
DC150-05-04.100A0-	4.1	0.1614		29	74	36	36	6	●●
DC150-05-04.200A0-	4.2	0.1654		29	74	36	36	6	●●
DC150-05-04.300A0-	4.3	0.1693		29	74	36	36	6	●●
DC150-05-04.366A0-	4.366	0.1719	11/64"	29	74	36	36	6	●●
DC150-05-04.400A0-	4.4	0.1732		29	74	36	36	6	●●
DC150-05-04.500A0-	4.5	0.1772		29	74	36	36	6	●●
DC150-05-04.600A0-	4.6	0.1811		29	74	36	36	6	●●
DC150-05-04.650A0-	4.65	0.1831		29	74	36	36	6	●●
DC150-05-04.700A0-	4.7	0.1850		29	74	36	36	6	●●
DC150-05-04.763A0-	4.763	0.1875	3/16"	35	82	44	36	6	●●
DC150-05-04.800A0-	4.8	0.1890		35	82	44	36	6	●●
DC150-05-04.900A0-	4.9	0.1929		35	82	44	36	6	●●
DC150-05-05.000A0-	5	0.1969		35	82	44	36	6	●●
DC150-05-05.100A0-	5.1	0.2008		35	82	44	36	6	●●
DC150-05-05.159A0-	5.159	0.2031	13/64"	35	82	44	36	6	●●
DC150-05-05.200A0-	5.2	0.2047		35	82	44	36	6	●●
DC150-05-05.300A0-	5.3	0.2087		35	82	44	36	6	●●
DC150-05-05.400A0-	5.4	0.2126		35	82	44	36	6	●●
DC150-05-05.500A0-	5.5	0.2165		35	82	44	36	6	●●
DC150-05-05.550A0-	5.55	0.2185		35	82	44	36	6	●●
DC150-05-05.556A0-	5.556	0.2187	7/32"	35	82	44	36	6	●●
DC150-05-05.600A0-	5.6	0.2205		35	82	44	36	6	●●
DC150-05-05.700A0-	5.7	0.2244		35	82	44	36	6	●●
DC150-05-05.800A0-	5.8	0.2283		35	82	44	36	6	●●
DC150-05-05.900A0-	5.9	0.2323		35	82	44	36	6	●●
DC150-05-05.953A0-	5.953	0.2344	15/64"	35	82	44	36	6	●●
DC150-05-06.000A0-	6	0.2362		35	82	44	36	6	●●
DC150-05-06.100A0-	6.1	0.2402		43	91	53	36	8	●●

Ordering example for the WJ30TA grade: DC150-05-03.000A0-WJ30TA

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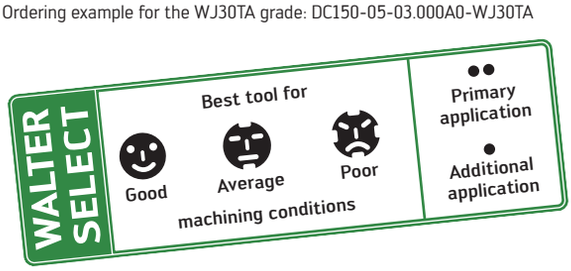

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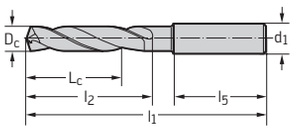
Shank DIN 6535 HA



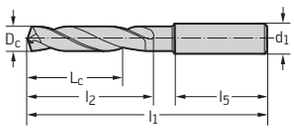
Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30TA
DC150-05-06.200A0-	6.2	0.2441		43	91	53	36	8	
DC150-05-06.300A0-	6.3	0.2480		43	91	53	36	8	
DC150-05-06.350A0-	6.35	0.2500	1/4"	43	91	53	36	8	
DC150-05-06.400A0-	6.4	0.2520		43	91	53	36	8	
DC150-05-06.500A0-	6.5	0.2559		43	91	53	36	8	
DC150-05-06.600A0-	6.6	0.2598		43	91	53	36	8	
DC150-05-06.700A0-	6.7	0.2638		43	91	53	36	8	
DC150-05-06.747A0-	6.747	0.2656	17/64"	43	91	53	36	8	
DC150-05-06.800A0-	6.8	0.2677		43	91	53	36	8	
DC150-05-06.900A0-	6.9	0.2717		43	91	53	36	8	
DC150-05-07.000A0-	7	0.2756		43	91	53	36	8	
DC150-05-07.100A0-	7.1	0.2795		43	91	53	36	8	
DC150-05-07.144A0-	7.144	0.2813	9/32"	43	91	53	36	8	
DC150-05-07.200A0-	7.2	0.2835		43	91	53	36	8	
DC150-05-07.300A0-	7.3	0.2874		43	91	53	36	8	
DC150-05-07.400A0-	7.4	0.2913		43	91	53	36	8	
DC150-05-07.500A0-	7.5	0.2953		43	91	53	36	8	
DC150-05-07.600A0-	7.6	0.2992		43	91	53	36	8	
DC150-05-07.700A0-	7.7	0.3031		43	91	53	36	8	
DC150-05-07.800A0-	7.8	0.3071		43	91	53	36	8	
DC150-05-07.900A0-	7.9	0.3110		43	91	53	36	8	
DC150-05-07.938A0-	7.938	0.3125	5/16"	43	91	53	36	8	
DC150-05-08.000A0-	8	0.3150		43	91	53	36	8	
DC150-05-08.100A0-	8.1	0.3189		49	103	61	40	10	
DC150-05-08.200A0-	8.2	0.3228		49	103	61	40	10	
DC150-05-08.300A0-	8.3	0.3268		49	103	61	40	10	
DC150-05-08.334A0-	8.334	0.3281	21/64"	49	103	61	40	10	
DC150-05-08.400A0-	8.4	0.3307		49	103	61	40	10	
DC150-05-08.500A0-	8.5	0.3346		49	103	61	40	10	
DC150-05-08.600A0-	8.6	0.3386		49	103	61	40	10	
DC150-05-08.700A0-	8.7	0.3425		49	103	61	40	10	
DC150-05-08.731A0-	8.731	0.3437	11/32"	49	103	61	40	10	
DC150-05-08.800A0-	8.8	0.3465		49	103	61	40	10	
DC150-05-08.900A0-	8.9	0.3504		49	103	61	40	10	
DC150-05-09.000A0-	9	0.3543		49	103	61	40	10	
DC150-05-09.100A0-	9.1	0.3583		49	103	61	40	10	
DC150-05-09.128A0-	9.128	0.3594	23/64"	49	103	61	40	10	
DC150-05-09.200A0-	9.2	0.3622		49	103	61	40	10	
DC150-05-09.300A0-	9.3	0.3661		49	103	61	40	10	
DC150-05-09.400A0-	9.4	0.3701		49	103	61	40	10	
DC150-05-09.500A0-	9.5	0.3740		49	103	61	40	10	
DC150-05-09.525A0-	9.525	0.3750	3/8"	49	103	61	40	10	
DC150-05-09.600A0-	9.6	0.3780		49	103	61	40	10	
DC150-05-09.700A0-	9.7	0.3819		49	103	61	40	10	
DC150-05-09.800A0-	9.8	0.3858		49	103	61	40	10	
DC150-05-09.900A0-	9.9	0.3898		49	103	61	40	10	
DC150-05-09.922A0-	9.922	0.3906	25/64"	49	103	61	40	10	
DC150-05-10.000A0-	10	0.3937		49	103	61	40	10	
DC150-05-10.100A0-	10.1	0.3976		56	118	71	45	12	
DC150-05-10.200A0-	10.2	0.4016		56	118	71	45	12	
DC150-05-10.300A0-	10.3	0.4055		56	118	71	45	12	
DC150-05-10.319A0-	10.319	0.4063	13/32"	56	118	71	45	12	
DC150-05-10.400A0-	10.4	0.4094		56	118	71	45	12	
DC150-05-10.500A0-	10.5	0.4134		56	118	71	45	12	
DC150-05-10.600A0-	10.6	0.4173		56	118	71	45	12	
DC150-05-10.700A0-	10.7	0.4213		56	118	71	45	12	
DC150-05-10.716A0-	10.716	0.4219	27/64"	56	118	71	45	12	
DC150-05-10.800A0-	10.8	0.4252		56	118	71	45	12	
DC150-05-11.000A0-	11	0.4331		56	118	71	45	12	
DC150-05-11.113A0-	11.113	0.4375	7/16"	56	118	71	45	12	
DC150-05-11.200A0-	11.2	0.4409		56	118	71	45	12	

Ordering example for the WJ30TA grade: DC150-05-03.000A0-WJ30TA

Continued

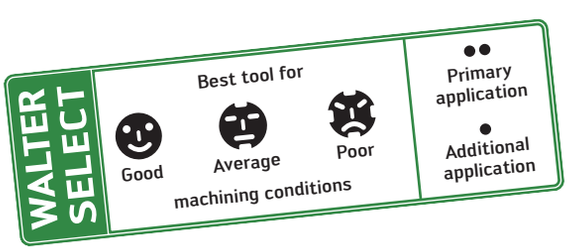
Continued

Shank DIN 6535 HA

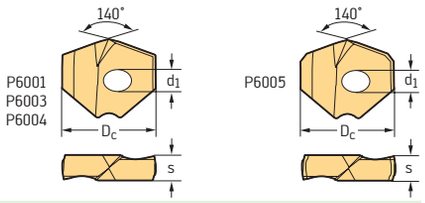


Designation	D_c m7 mm	D_c m7 in	D_c Inch/no.	L_c mm	l_1 mm	l_2 mm	l_5 mm	d_1 h6 mm	WJ30TA
DC150-05-11.500A0-	11.5	0.4528		56	118	71	45	12	☹
DC150-05-11.800A0-	11.8	0.4646		56	118	71	45	12	☹
DC150-05-11.906A0-	11.906	0.4687	15/32"	56	118	71	45	12	☹
DC150-05-12.000A0-	12	0.4724		56	118	71	45	12	☹
DC150-05-12.200A0-	12.2	0.4803		60	124	77	45	14	☹
DC150-05-12.300A0-	12.3	0.4843		60	124	77	45	14	☹
DC150-05-12.400A0-	12.4	0.4882		60	124	77	45	14	☹
DC150-05-12.500A0-	12.5	0.4921		60	124	77	45	14	☹
DC150-05-12.600A0-	12.6	0.4961		60	124	77	45	14	☹
DC150-05-12.700A0-	12.7	0.5000	1/2"	60	124	77	45	14	☹
DC150-05-13.000A0-	13	0.5118		60	124	77	45	14	☹
DC150-05-13.200A0-	13.2	0.5197		60	124	77	45	14	☹
DC150-05-13.494A0-	13.494	0.5313	17/32"	60	124	77	45	14	☹
DC150-05-13.500A0-	13.5	0.5315		60	124	77	45	14	☹
DC150-05-13.800A0-	13.8	0.5433		60	124	77	45	14	☹
DC150-05-14.000A0-	14	0.5512		60	124	77	45	14	☹
DC150-05-14.200A0-	14.2	0.5591		63	133	83	48	16	☹
DC150-05-14.288A0-	14.288	0.5625	9/16"	63	133	83	48	16	☹
DC150-05-14.500A0-	14.5	0.5709		63	133	83	48	16	☹
DC150-05-15.000A0-	15	0.5906		63	133	83	48	16	☹
DC150-05-15.500A0-	15.5	0.6102		63	133	83	48	16	☹
DC150-05-15.800A0-	15.8	0.6220		63	133	83	48	16	☹
DC150-05-16.000A0-	16	0.6299		63	133	83	48	16	☹
DC150-05-16.500A0-	16.5	0.6496		71	143	93	48	18	☹
DC150-05-17.000A0-	17	0.6693		71	143	93	48	18	☹
DC150-05-17.500A0-	17.5	0.6890		71	143	93	48	18	☹
DC150-05-18.000A0-	18	0.7087		71	143	93	48	18	☹
DC150-05-19.000A0-	19	0.7480		77	153	101	50	20	☹
DC150-05-19.500A0-	19.5	0.7677		77	153	101	50	20	☹
DC150-05-20.000A0-	20	0.7874		77	153	101	50	20	☹

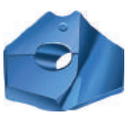
Ordering example for the WJ30TA grade: DC150-05-03.000A0-WJ30TA



Drill inserts
P6001 / P6003 / P6004 / P6005



Drill inserts

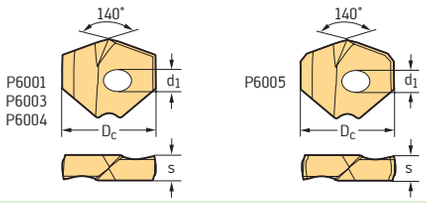
	Designation	Number of cutting edges	D_c mm	D_c in	Seat size	d_1 in	s in	P6001 P HC WPP45C	P6003 P HC WMP35	P6003 M HC WMP35	P6005 K HC WKK45C	P6004 N HC WNN25	P6003 S HC WMP35
P6001	P60..-D12,00R	2	12	0.472	A	0.118	0.142	●	●	●	●	●	●
	P60..-D12,10R	2	12.1	0.476	A	0.118	0.142	●	●	●	●		●
	P60..-D12,20R	2	12.2	0.480	A	0.118	0.142	●	●	●	●		●
	P60..-D12,30R	2	12.3	0.484	A	0.118	0.142	●	●	●	●		●
	P60..-D12,40R	2	12.4	0.488	A	0.118	0.142	●	●	●	●		●
	P60..-D12,50R	2	12.5	0.492	A	0.118	0.142	●	●	●	●	●	●
P6003	P60..-D12,60R	2	12.6	0.496	A	0.118	0.142	●	●	●	●		●
	P60..-D12,70R	2	12.7	0.500	A	0.118	0.142	●	●	●	●		●
	P60..-D12,80R	2	12.8	0.504	A	0.118	0.142	●	●	●	●		●
	P60..-D12,90R	2	12.9	0.508	A	0.118	0.142	●	●	●	●		●
	P60..-D12,95R	2	12.95	0.510	A	0.118	0.142	●	●	●	●		●
	P60..-D13,00R	2	13	0.512	A	0.118	0.142	●	●	●	●	●	●
P6004	P60..-D13,10R	2	13.1	0.516	A	0.118	0.142				●		
	P60..-D13,11R	2	13.11	0.516	A	0.118	0.142	●	●	●	●		●
	P60..-D13,20R	2	13.2	0.520	A	0.118	0.142	●	●	●	●		●
	P60..-D13,25R	2	13.25	0.522	A	0.118	0.142	●	●	●	●		●
	P60..-D13,30R	2	13.3	0.524	A	0.118	0.142	●	●	●	●		●
	P60..-D13,40R	2	13.4	0.528	A	0.118	0.142	●	●	●	●		●
P6005	P60..-D13,49R	2	13.49	0.531	A	0.118	0.142				●		
	P60..-D13,50R	2	13.5	0.531	A	0.118	0.142	●	●	●	●	●	●
	P60..-D13,60R	2	13.6	0.535	A	0.118	0.142	●	●	●	●		●
	P60..-D13,70R	2	13.7	0.539	A	0.118	0.142	●	●	●	●		●
	P60..-D13,80R	2	13.8	0.543	A	0.118	0.142	●	●	●	●		●
	P60..-D13,89R	2	13.89	0.547	A	0.118	0.142	●	●	●	●		●
	P60..-D13,90R	2	13.9	0.547	A	0.118	0.142				●		
	P60..-D14,00R	2	14	0.551	B	0.118	0.157	●	●	●	●	●	●
	P60..-D14,10R	2	14.1	0.555	B	0.118	0.157	●	●	●	●		●
	P60..-D14,20R	2	14.2	0.559	B	0.118	0.157	●	●	●	●		●
	P60..-D14,29R	2	14.29	0.563	B	0.118	0.157				●		
	P60..-D14,30R	2	14.3	0.563	B	0.118	0.157	●	●	●	●		●
	P60..-D14,40R	2	14.4	0.567	B	0.118	0.157	●	●	●	●		●
	P60..-D14,50R	2	14.5	0.571	B	0.118	0.157	●	●	●	●	●	●
	P60..-D14,60R	2	14.6	0.575	B	0.118	0.157	●	●	●	●		●
	P60..-D14,68R	2	14.68	0.578	B	0.118	0.157	●	●	●	●		●
	P60..-D14,70R	2	14.7	0.579	B	0.118	0.157				●		
	P60..-D14,80R	2	14.8	0.583	B	0.118	0.157	●	●	●	●	●	●
	P60..-D14,90R	2	14.9	0.587	B	0.118	0.157	●	●	●	●		●
	P60..-D15,00R	2	15	0.591	B	0.118	0.157	●	●	●	●	●	●
	P60..-D15,08R	2	15.08	0.594	B	0.118	0.157				●		
	P60..-D15,09R	2	15.09	0.594	B	0.118	0.157	●	●	●	●		●
	P60..-D15,10R	2	15.1	0.594	B	0.118	0.157				●		
	P60..-D15,20R	2	15.2	0.598	B	0.118	0.157	●	●	●	●		●
	P60..-D15,30R	2	15.3	0.602	B	0.118	0.157	●	●	●	●		●

Ordering example: P60.. -D13.00R is available as
P6003 in the WMP35 grade (ISO P, ISO M and ISO S): P6003-D13.00R WMP35 or as
P6001 in the WPP45C grade (ISO P): P6001-D13.00R WPP45C

HC = Coated carbide

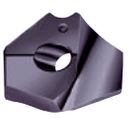
B1

Drill inserts
P6001 / P6003 / P6004 / P6005



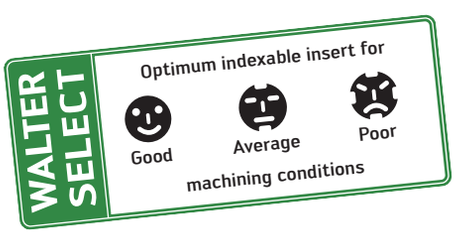
Drill inserts

B1

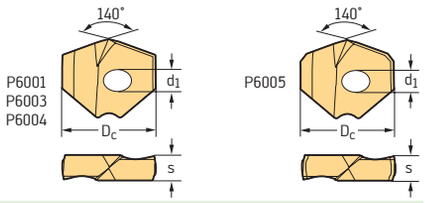
	Designation	Number of cutting edges	D_c mm	D_c in	Seat size	d_1 in	s in	P6001 P HC WPP45C	P6003 P HC WMP35	P6003 M HC WMP35	P6005 K HC WKK45C	P6004 N HC WNN25	P6003 S HC WMP35
P6001	P60..-D15,40R	2	15.4	0.606	B	0.118	0.157	☺	☹	☺	☹		☺
	P60..-D15,47R	2	15.47	0.609	B	0.118	0.157	☺	☹	☺	☹		☺
	P60..-D15,48R	2	15.48	0.609	B	0.118	0.157				☹		
	P60..-D15,50R	2	15.5	0.610	B	0.118	0.157	☺	☹	☺	☹	☺	☺
	P60..-D15,60R	2	15.6	0.614	B	0.118	0.157	☺	☹	☺	☹		☺
	P60..-D15,70R	2	15.7	0.618	B	0.118	0.157	☺	☹	☺	☹		☺
P6003	P60..-D15,80R	2	15.8	0.622	B	0.118	0.157	☺	☹	☺	☹		☺
	P60..-D15,87R	2	15,87	0.625	B	0.118	0.157	☺	☹	☺	☹		☺
	P60..-D15,88R	2	15,88	0.625	B	0.118	0.157				☹		
	P60..-D15,90R	2	15.9	0.626	B	0.118	0.157				☹		
	P60..-D16,00R	2	16	0.630	C	0.157	0.177	☺	☹	☺	☹	☺	☺
	P60..-D16,13R	2	16.13	0.635	C	0.157	0.177	☺	☹	☺	☹		☺
P6004	P60..-D16,26R	2	16.26	0.640	C	0.157	0.177	☺	☹	☺	☹		☺
	P60..-D16,27R	2	16.27	0.641	C	0.157	0.177				☹		
	P60..-D16,43R	2	16.43	0.647	C	0.157	0.177	☺	☹	☺	☹		☺
	P60..-D16,50R	2	16.5	0.650	C	0.157	0.177	☺	☹	☺	☹	☺	☺
	P60..-D16,66R	2	16.66	0.656	C	0.157	0.177	☺	☹	☺	☹	☺	☺
	P60..-D16,67R	2	16.67	0.656	C	0.157	0.177				☹		
P6005	P60..-D16,70R	2	16.7	0.657	C	0.157	0.177	☺	☹	☺	☹		☺
	P60..-D16,80R	2	16.8	0.661	C	0.157	0.177				☹		
	P60..-D17,00R	2	17	0.669	C	0.157	0.177	☺	☹	☺	☹	☺	☺
	P60..-D17,07R	2	17.07	0.672	C	0.157	0.177	☺	☹	☺	☹		☺
	P60..-D17,20R	2	17.2	0.677	C	0.157	0.177	☺	☹	☺	☹		☺
	P60..-D17,45R	2	17.45	0.687	C	0.157	0.177	☺	☹	☺	☹		☺
	P60..-D17,46R	2	17.46	0.687	C	0.157	0.177				☹		
	P60..-D17,50R	2	17.5	0.689	C	0.157	0.177	☺	☹	☺	☹	☺	☺
	P60..-D17,70R	2	17.7	0.697	C	0.157	0.177	☺	☹	☺	☹	☺	☺
	P60..-D17,80R	2	17.8	0.701	C	0.157	0.177				☹		
	P60..-D17,86R	2	17.86	0.703	C	0.157	0.177	☺	☹	☺	☹		☺
	P60..-D18,00R	2	18	0.709	D	0.157	0.197	☺	☹	☺	☹	☺	☺
	P60..-D18,24R	2	18.24	0.718	D	0.157	0.197	☺	☹	☺	☹		☺
	P60..-D18,26R	2	18.26	0.719	D	0.157	0.197				☹		
	P60..-D18,50R	2	18.5	0.728	D	0.157	0.197	☺	☹	☺	☹	☺	☺
	P60..-D18,65R	2	18.65	0.734	D	0.157	0.197	☺	☹	☺	☹	☺	☺
	P60..-D18,70R	2	18.7	0.736	D	0.157	0.197	☺	☹	☺	☹		☺
	P60..-D18,80R	2	18.8	0.740	D	0.157	0.197	☺	☹	☺	☹		☺
	P60..-D19,00R	2	19	0.748	D	0.157	0.197	☺	☹	☺	☹	☺	☺
	P60..-D19,05R	2	19.05	0.750	D	0.157	0.197	☺	☹	☺	☹		☺
	P60..-D19,20R	2	19.2	0.756	D	0.157	0.197	☺	☹	☺	☹		☺

Ordering example: P60.. -D13.00R is available as
P6003 in the WMP35 grade (ISO P, ISO M and ISO S): P6003-D13.00R WMP35 or as
P6001 in the WPP45C grade (ISO P): P6001-D13.00R WPP45C

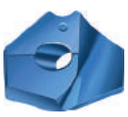
HC = Coated carbide



Drill inserts
P6001 / P6003 / P6004 / P6005



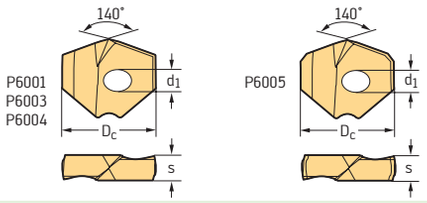
Drill inserts

	Designation	Number of cutting edges	D_c mm	D_c inches/ no.	Seat size	d_1 in	s in	P6001 P HC WPP45C	P6003 P HC WMP35	P6003 M HC WMP35	P6005 K HC WKK45C	P6004 N HC WNN25	P6003 S HC WMP35
P6001	P60..-D19,25R	2	19.25	0.758	D	0.157	0.197	●	●	●	●		●
	P60..-D19,30R	2	19.3	0.760	D	0.157	0.197	●	●	●	●		●
	P60..-D19,43R	2	19.43	0.765	D	0.157	0.197	●	●	●	●		●
	P60..-D19,45R	2	19.45	0.766	D	0.157	0.197				●		
	P60..-D19,50R	2	19.5	0.768	D	0.157	0.197	●	●	●	●	○	●
	P60..-D19,60R	2	19.6	0.772	D	0.157	0.197	●	●	●	●		●
P6003	P60..-D19,70R	2	19.7	0.776	D	0.157	0.197	●	●	●	●	○	●
	P60..-D19,80R	2	19.8	0.780	D	0.157	0.197				●		
	P60..-D19,84R	2	19.84	0.781	D	0.157	0.197	●	●	●	●	○	●
	P60..-D20,00R	2	20	0.787	E	0.197	0.217	●	●	●	●	○	●
	P60..-D20,20R	2	20.2	0.795	E	0.197	0.217	●	●	●	●		●
	P60..-D20,24R	2	20.24	0.797	E	0.197	0.217	●	●	●	●		●
P6004	P60..-D20,50R	2	20.5	0.807	E	0.197	0.217	●	●	●	●	○	●
	P60..-D20,62R	2	20.62	0.812	E	0.197	0.217	●	●	●	●		●
	P60..-D20,64R	2	20.64	0.813	E	0.197	0.217				●		
	P60..-D20,70R	2	20.7	0.815	E	0.197	0.217	●	●	●	●		●
	P60..-D21,00R	2	21	0.827	E	0.197	0.217	●	●	●	●	○	●
	P60..-D21,41R	2	21.41	0.843	E	0.197	0.217	●	●	●	●		●
P6005	P60..-D21,43R	2	21.43	0.844	E	0.197	0.217				●		
	P60..-D21,50R	2	21.5	0.846	E	0.197	0.217	●	●	●	●	○	●
	P60..-D21,70R	2	21.7	0.854	E	0.197	0.217	●	●	●	●	○	●
	P60..-D21,83R	2	21.83	0.859	E	0.197	0.217	●	●	●	●		●
	P60..-D22,00R	2	22	0.866	F	0.197	0.236	●	●	●	●	○	●
	P60..-D22,22R	2	22.22	0.875	F	0.197	0.236	●	●	●	●		●
	P60..-D22,23R	2	22.23	0.875	F	0.197	0.236				●		
	P60..-D22,42R	2	22.42	0.883	F	0.197	0.236	●	●	●	●		●
	P60..-D22,47R	2	22.47	0.885	F	0.197	0.236	●	●	●	●		●
	P60..-D22,50R	2	22.5	0.886	F	0.197	0.236	●	●	●	●	○	●
	P60..-D22,62R	2	22.62	0.891	F	0.197	0.236	●	●	●	●		●
	P60..-D22,70R	2	22.7	0.894	F	0.197	0.236	●	●	●	●		●
	P60..-D22,77R	2	22.77	0.896	F	0.197	0.236	●	●	●	●		●
	P60..-D23,00R	2	23	0.906	F	0.197	0.236	●	●	●	●	○	●
	P60..-D23,02R	2	23.02	0.906	F	0.197	0.236				●		
	P60..-D23,39R	2	23.39	0.921	F	0.197	0.236	●	●	●	●		●
	P60..-D23,50R	2	23.5	0.925	F	0.197	0.236	●	●	●	●	○	●
	P60..-D23,70R	2	23.7	0.933	F	0.197	0.236	●	●	●	●		●
	P60..-D23,80R	2	23.8	0.937	F	0.197	0.236	●	●	●	●		●
	P60..-D23,81R	2	23.81	0.937	F	0.197	0.236				●		
	P60..-D24,00R	2	24	0.945	G	0.197	0.256	●	●	●	●	○	●
	P60..-D24,21R	2	24.21	0.953	G	0.197	0.256	●	●	●	●		●
	P60..-D24,50R	2	24.5	0.965	G	0.197	0.256	●	●	●	●	○	●
	P60..-D24,59R	2	24.59	0.968	G	0.197	0.256	●	●	●	●		●
	P60..-D24,61R	2	24.61	0.969	G	0.197	0.256				●		

Ordering example: P60.. -D13.00R is available as
P6003 in the WMP35 grade (ISO P, ISO M and ISO S): P6003-D13.00R WMP35 or as
P6001 in the WPP45C grade (ISO P): P6001-D13.00R WPP45C

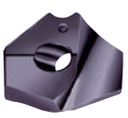
HC = Coated carbide

Drill inserts
P6001 / P6003 / P6004 / P6005



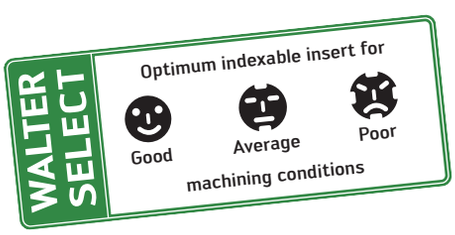
Drill inserts

B1

	Designation	Number of cutting edges	D_c mm	D_c inches/ no.	Seat size	d_1 in	s in	P6001 P HC WPP45C	P6003 P HC WMP35	P6003 M HC WMP35	P6005 K HC WKK45C	P6004 N HC WNN25	P6003 S HC WMP35
P6001	P60..-D24.70R	2	24.7	0.972	G	0.197	0.256	☺	☹	☺	☹		☺
	P60..-D25.00R	2	25	0.984	G	0.197	0.256	☺	☹	☺	☹	☺	☺
	P60..-D25.25R	2	25.25	0.994	G	0.197	0.256	☺	☹	☺	☹		☺
	P60..-D25.40R	2	25.4	1.000	G	0.197	0.256	☺	☹	☺	☹		☺
	P60..-D25.50R	2	25.5	1.004	G	0.197	0.256	☺	☹	☺	☹	☺	☺
	P60..-D25.65R	2	25.65	1.010	G	0.197	0.256	☺	☹	☺	☹		☺
P6003	P60..-D25.70R	2	25.7	1.012	G	0.197	0.256	☺	☹	☺	☹		☺
	P60..-D25.80R	2	25.8	1.016	G	0.197	0.256	☺	☹	☺	☹		☺
	P60..-D26.00R	2	26	1.024	H	0.236	0.280	☺	☹	☺	☹	☺	☺
	P60..-D26.25R	2	26.25	1.033	H	0.236	0.280	☺	☹	☺	☹		☺
	P60..-D26.50R	2	26.5	1.043	H	0.236	0.280	☺	☹	☺	☹	☺	☺
	P60..-D26.59R	2	26.59	1.047	H	0.236	0.280	☺	☹	☺	☹		☺
P6004	P60..-D27.00R	2	27	1.063	H	0.236	0.280	☺	☹	☺	☹	☺	☺
	P60..-D27.38R	2	27.38	1.078	H	0.236	0.280	☺	☹	☺	☹		☺
	P60..-D27.50R	2	27.5	1.083	H	0.236	0.280	☺	☹	☺	☹	☺	☺
	P60..-D27.78R	2	27.78	1.094	H	0.236	0.280	☺	☹	☺	☹		☺
	P60..-D28.00R	2	28	1.102	J	0.236	0.303	☺	☹	☺	☹	☺	☺
	P60..-D28.17R	2	28.17	1.109	J	0.236	0.303	☺	☹	☺	☹		☺
	P60..-D28.50R	2	28.5	1.122	J	0.236	0.303	☺	☹	☺	☹	☺	☺
P6005	P60..-D28.57R	2	28.57	1.125	J	0.236	0.303	☺	☹	☺	☹		☺
	P60..-D29.00R	2	29	1.142	J	0.236	0.303	☺	☹	☺	☹	☺	☺
	P60..-D29.37R	2	29.37	1.156	J	0.236	0.303	☺	☹	☺	☹		☺
	P60..-D29.50R	2	29.5	1.161	J	0.236	0.303	☺	☹	☺	☹	☺	☺
	P60..-D29.77R	2	29.77	1.172	J	0.236	0.303	☺	☹	☺	☹		☺
	P60..-D30.00R	2	30	1.181	K	0.236	0.315	☺	☹	☺	☹	☺	☺
	P60..-D30.15R	2	30.15	1.187	K	0.236	0.315	☺	☹	☺	☹		☺
	P60..-D30.50R	2	30.5	1.201	K	0.236	0.315	☺	☹	☺	☹	☺	☺
	P60..-D31.00R	2	31	1.220	K	0.236	0.315	☺	☹	☺	☹	☺	☺
	P60..-D31.50R	2	31.5	1.240	K	0.236	0.315	☺	☹	☺	☹	☺	☺
	P60..-D31.75R	2	31.75	1.250	K	0.236	0.315	☺	☹	☺	☹		☺
	P60..-D31.99R	2	31.99	1.259	K	0.236	0.315	☺	☹	☺	☹		☺
	P60..-D32.00R	2	32	1.260	L	0.236	0.327	☺	☹	☺	☹		☺
	P60..-D32.10R	2	32.1	1.264	L	0.236	0.327	☺	☹	☺	☹		☺
	P60..-D33.00R	2	33	1.299	L	0.236	0.327	☺	☹	☺	☹		☺
	P60..-D34.00R	2	34	1.339	M	0.236	0.339	☺	☹	☺	☹		☺
	P60..-D35.00R	2	35	1.378	M	0.236	0.339	☺	☹	☺	☹		☺
	P60..-D36.00R	2	36	1.417	N	0.236	0.350	☺	☹	☺	☹		☺
	P60..-D37.00R	2	37	1.457	N	0.236	0.350	☺	☹	☺	☹		☺
	P60..-D37.99R	2	37.99	1.496	N	0.236	0.350	☺	☹	☺	☹		☺

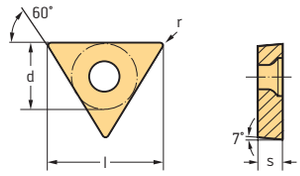
Ordering example: P60.. -D13.00R is available as
P6003 in the WMP35 grade (ISO P. ISO M and ISO S): P6003-D13.00R WMP35 or as
P6001 in the WPP45C grade (ISO P): P6001-D13.00R WPP45C

HC = Coated carbide



Positive triangular 60°
TCMT

Tiger·tec® Silver



Indexable inserts

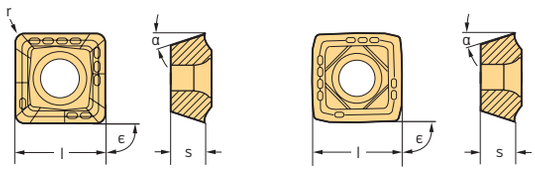
	Designation	l in	r in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	M HC WSM21	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM10S	S HC WSM20S	S HC WSM30S
	TCMT06T102-FM4	0.261	0.008										✕						
	TCMT06T104-FM4	0.261	0.016										✕						
	TCMT090202-FM4	0.369	0.008							☺	☺	✕					☺	☺	✕
	TCMT090204-FM4	0.369	0.016							☺	☺	✕					☺	☺	✕
	TCMT090208-FM4	0.369	0.031							☺	☺						☺	☺	
	TCMT110202-FM4	0.423	0.008							☺	☺	✕					☺	☺	✕
	TCMT110204-FM4	0.423	0.016					☺	☺	☺	☺	✕					☺	☺	✕
	TCMT110208-FM4	0.423	0.031							☺	☺	✕					☺	☺	✕
	TCMT16T302-FM4	0.650	0.008							☺	☺	✕					☺	☺	✕
	TCMT16T304-FM4	0.650	0.016					☺	☺	☺	☺	✕					☺	☺	✕
	TCMT16T308-FM4	0.650	0.031					☺	☺	☺	☺	✕					☺	☺	✕
	TCMT06T102-FP4	0.261	0.008			☺													
	TCMT06T104-FP4	0.261	0.016	☺		☺													
	TCMT090202-FP4	0.369	0.008			☺													
	TCMT090204-FP4	0.369	0.016	☺	☺	☺													
	TCMT090208-FP4	0.369	0.031			☺													
	TCMT110202-FP4	0.423	0.008		☺	☺													
	TCMT110204-FP4	0.423	0.016	☺	☺	☺													
	TCMT110208-FP4	0.423	0.031		☺	☺													
	TCMT16T302-FP4	0.650	0.008			☺													
	TCMT16T304-FP4	0.650	0.016		☺	☺													
	TCMT16T308-FP4	0.650	0.031	☺	☺	☺													
	TCMT090204-MP4	0.369	0.016		☺	☺													
	TCMT090208-MP4	0.369	0.031		☺	☺													
	TCMT110204-MP4	0.423	0.016		☺	☺													
	TCMT110208-MP4	0.423	0.031		☺	☺													
	TCMT16T304-MP4	0.650	0.016		☺	☺													
	TCMT16T308-MP4	0.650	0.031		☺	☺													
	TCMT220408-MP4	0.866	0.031			☺													

See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

B1

Square
P484..
Tiger·tec® Silver



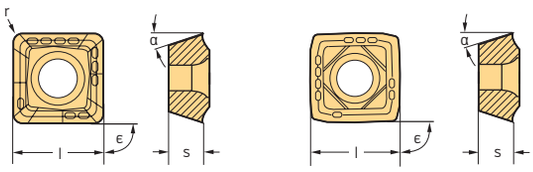
Indexable inserts

B1

	Designation	Number of cutting edges	l in	s in	r in	α	ε	P HC					M HC			K HC				N HC		S HC		
								WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45	WXP40	WSP45	WSP45S	WXP40
	P4840P-1R-A57	4	0.179	0.077	0.011	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-2R-A57	4	0.217	0.090	0.013	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-3R-A57	4	0.256	0.110	0.016	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-4R-A57	4	0.307	0.132	0.019	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-5R-A57	4	0.376	0.162	0.023	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-6R-A57	4	0.463	0.192	0.028	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-7R-A57	4	0.552	0.218	0.031	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-8R-A57	4	0.650	0.218	0.039	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4840P-1R-E57	4	0.179	0.077	0.011	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-2R-E57	4	0.217	0.090	0.013	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-3R-E57	4	0.256	0.110	0.016	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-4R-E57	4	0.307	0.132	0.019	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-5R-E57	4	0.376	0.162	0.023	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-6R-E57	4	0.463	0.192	0.028	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-7R-E57	4	0.552	0.218	0.031	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-8R-E57	4	0.650	0.218	0.039	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4840P-1R-E67	4	0.179	0.077	0.011	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4840P-2R-E67	4	0.217	0.090	0.013	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4840P-3R-E67	4	0.256	0.110	0.016	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4840P-4R-E67	4	0.307	0.132	0.019	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4840P-5R-E67	4	0.376	0.162	0.023	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4840P-6R-E67	4	0.463	0.192	0.028	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4840P-7R-E67	4	0.552	0.218	0.031	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4840P-8R-E67	4	0.650	0.218	0.039	11°	90°	☺	☺	☹			☹				☺	☹		☺		☹		
	P4841P-1R-A57	4	0.179	0.077	0.011	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-2R-A57	4	0.217	0.090	0.013	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-3R-A57	4	0.256	0.110	0.016	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-4R-A57	4	0.307	0.132	0.019	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-5R-A57	4	0.376	0.162	0.023	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-6R-A57	4	0.463	0.192	0.028	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-7R-A57	4	0.552	0.218	0.031	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-8R-A57	4	0.650	0.218	0.039	11°	90°	☺	☹	☹			☹				☺	☹				☹		
	P4841P-1R-E57	4	0.179	0.077	0.011	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4841P-2R-E57	4	0.217	0.090	0.013	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4841P-3R-E57	4	0.256	0.110	0.016	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4841P-4R-E57	4	0.307	0.132	0.019	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4841P-5R-E57	4	0.376	0.162	0.023	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4841P-6R-E57	4	0.463	0.192	0.028	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4841P-7R-E57	4	0.552	0.218	0.031	11°	90°	☺	☺	☹			☹				☺	☹				☹		
	P4841P-8R-E57	4	0.650	0.218	0.039	11°	90°	☺	☺	☹			☹				☺	☹				☹		

HC = Coated carbide

Square
P484..
Tiger·tec® Silver



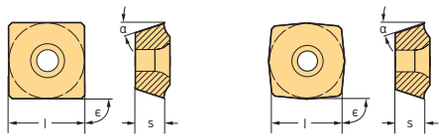
Indexable inserts

	Designation	Number of cutting edges	l mm	s mm	r mm	α	ε	P HC WKP25S	P HC WKP35S	P HC WSP45	P HC WSP45S	P HC WXP40	M HC WSP45	M HC WSP45S	M HC WXP40	K HC WAK15	K HC WKP25S	K HC WKP35S	K HC WXP40	N HC WSP45	N HC WXP40	S HC WSP45	S HC WSP45S	S HC WXP40
	P4841C-1R-A57	4	4.9	1.96	0.29	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-2R-A57	4	5.95	2.38	0.34	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-3R-A57	4	7	2.8	0.4	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-4R-A57	4	8.4	3.36	0.48	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-5R-A57	4	10.29	4.12	0.59	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-6R-A57	4	12.24	4.87	0.7	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-7R-A57	4	14.69	5.53	0.8	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-8R-A57	4	17.49	5.53	1	11°	90°		☺			☹			☹			☹	☹					☹
	P4841C-1R-E57	4	4.9	1.96	0.29	11°	90°		☺			☹			☹			☺	☹					☹
	P4841C-2R-E57	4	5.95	2.38	0.34	11°	90°		☺			☹			☹			☺	☹					☹
	P4841C-3R-E57	4	7	2.8	0.4	11°	90°		☺			☹			☹			☺	☹					☹
	P4841C-4R-E57	4	8.4	3.36	0.48	11°	90°		☺			☹			☹			☺	☹					☹
	P4841C-5R-E57	4	10.29	4.12	0.59	11°	90°		☺			☹			☹			☺	☹					☹
	P4841C-6R-E57	4	12.24	4.87	0.7	11°	90°		☺			☹			☹			☺	☹					☹
	P4841C-7R-E57	4	14.69	5.53	0.8	11°	90°		☺			☹			☹			☺	☹					☹
	P4841C-8R-E57	4	17.49	5.53	1	11°	90°		☺			☹			☹			☺	☹					☹
	P4840C-1R-E67	4	4.9	1.96	0.29	11°	90°		☺			☹			☹			☺	☹		☺			☹
	P4840C-2R-E67	4	5.95	2.38	0.34	11°	90°		☺			☹			☹			☺	☹		☺			☹
	P4840C-3R-E67	4	7	2.8	0.4	11°	90°		☺			☹			☹			☺	☹		☺			☹
	P4840C-4R-E67	4	8.4	3.36	0.48	11°	90°		☺			☹			☹			☺	☹		☺			☹
	P4840C-5R-E67	4	10.29	4.12	0.59	11°	90°		☺			☹			☹			☺	☹		☺			☹
	P4840C-6R-E67	4	12.24	4.87	0.7	11°	90°		☺			☹			☹			☺	☹		☺			☹
	P4840C-7R-E67	4	14.69	5.53	0.8	11°	90°		☺			☹			☹			☺	☹		☺			☹
	P4840C-8R-E67	4	17.49	5.53	1	11°	90°		☺			☹			☹			☺	☹		☺			☹

HC = Coated carbide

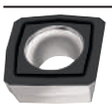
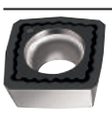
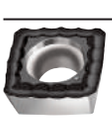
B1

Square
P284..

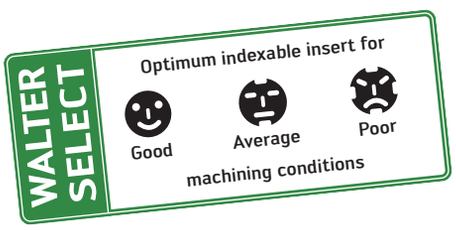


B1

Indexable inserts

	Designation	Number of cutting edges	l in	s in	α	ε	P HC					M HC			K HC				N HC	S HC			
							WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WK40	WK40	WSP45	WSP45S	WXP40
	P2840S-1N-A57	4	0.250	0.094	14°	90°	☺	😐		☹	☹		😐	☹		😐	☹	☹				☺	☹
	P2840S-2N-A57	4	0.307	0.125	14°	90°	☺	☹		☹	☹		😐	☹		😐	☹	☹				☺	☹
	P2840S-3N-A57	4	0.375	0.156	11°	96°	☺	☹		☹	☹		😐	☹		😐	☹	☹				☺	☹
	P2840S-4N-A57	4	0.433	0.156	11°	96°	☺	☹		☹	☹		😐	☹		😐	☹	☹				☺	☹
	P2840S-5N-A57	4	0.500	0.187	11°	96°	☺	☹		☹	☹		😐	☹		😐	☹	☹				☺	☹
	P2840S-6N-A57	4	0.591	0.187	11°	96°		☹									☹						
	P2840S-7N-A57	4	0.693	0.219	11°	96°		☹									☹						
	P2840S-1N-E67	4	0.250	0.094	14°	90°		☹		☹	☹		☹	☹			☹	☹	☹	☹		☹	☹
	P2840S-2N-E67	4	0.307	0.125	14°	90°		☹		☹	☹		☹	☹			☹	☹	☹	☹		☹	☹
	P2840S-3N-E67	4	0.375	0.156	11°	96°		☹		☹	☹		☹	☹			☹	☹	☹	☹		☹	☹
	P2840S-4N-E67	4	0.433	0.156	11°	96°		☹		☹	☹		☹	☹			☹	☹	☹	☹		☹	☹
	P2840S-5N-E67	4	0.500	0.187	11°	96°		☹		☹	☹		☹	☹			☹	☹	☹	☹		☹	☹
	P2840S-6N-E67	4	0.591	0.187	11°	96°		☹		☹			☹				☹		☹	☹		☹	
	P2840S-7N-E67	4	0.693	0.219	11°	96°		☹		☹			☹				☹		☹	☹		☹	
	P2841S-1N-A57	4	0.250	0.094	14°	90°	☺	😐		☹	☹	☺	☹			😐	☹	☹				☺	☹
	P2841S-2N-A57	4	0.307	0.125	14°	90°	☺	😐		☹	☹	☺	☹			😐	☹	☹				☺	☹
	P2841S-3N-A57	4	0.375	0.156	11°	96°	☺	😐		☹	☹	☺	☹			😐	☹	☹				☺	☹
	P2841S-4N-A57	4	0.433	0.156	11°	96°	☺	😐		☹	☹	☺	☹			😐	☹	☹				☺	☹
	P2841S-5N-A57	4	0.500	0.187	11°	96°	☺	😐		☹	☹	☺	☹			😐	☹	☹				☺	☹
	P2841S-6N-A57	4	0.591	0.187	11°	96°	☺	😐			☹		☹			😐	☹	☹					☹
	P2841S-7N-A57	4	0.693	0.219	11°	96°	☺	😐			☹		☹			😐	☹	☹					☹
	P2841S-1N-E57	4	0.250	0.094	14°	90°	☺	😐		☹	☹		☹	☹		😐	☹	☹				☹	☹
	P2841S-2N-E57	4	0.307	0.125	14°	90°	☺	😐		☹	☹		☹	☹		😐	☹	☹				☹	☹
	P2841S-3N-E57	4	0.375	0.156	11°	96°	☺	😐		☹	☹		☹	☹		😐	☹	☹				☹	☹
	P2841S-4N-E57	4	0.433	0.156	11°	96°	☺	😐		☹	☹		☹	☹		😐	☹	☹				☹	☹
	P2841S-5N-E57	4	0.500	0.187	11°	96°	☺	😐		☹	☹		☹	☹		😐	☹	☹				☹	☹
	P2841S-6N-E57	4	0.591	0.187	11°	96°		😐			☹			☹			☹	☹					☹
	P2841S-7N-E57	4	0.693	0.219	11°	96°		😐			☹			☹			☹	☹					☹
	P2841S-1N-E67	4	0.250	0.094	14°	90°		😐		☹	☹		☹	☹			☹	☹				☹	☹
	P2841S-2N-E67	4	0.307	0.125	14°	90°		😐		☹	☹		☹	☹			☹	☹				☹	☹
	P2841S-3N-E67	4	0.375	0.156	11°	96°		😐		☹	☹		☹	☹			☹	☹				☹	☹
	P2841S-4N-E67	4	0.433	0.156	11°	96°		😐		☹	☹		☹	☹			☹	☹				☹	☹
	P2841S-5N-E67	4	0.500	0.187	11°	96°		😐		☹	☹		☹	☹			☹	☹				☹	☹
	P2841S-6N-E67	4	0.591	0.187	11°	96°		😐			☹			☹			☹	☹					☹
	P2841S-7N-E67	4	0.693	0.219	11°	96°		😐			☹			☹			☹	☹					☹

HC = Coated carbide



Product range overview
Exchangeable-tip drills/indexable insert drills

Drilling depth	**2.5 × D_c**	**1.3 × D_c**	**3 × D_c**	**5 × D_c**	**7 × D_c**	**10 × D_c**
Designation	**D4240-02**	**D4140-01**	**D4140-03**	**D4140-05**	**D4140-07**	**D4140-10**
Dia. range [mm]	12–29.00	12–25.99	12–37.99	12–37.99	12–37.99	18–24.99
Dia. range [in]	–	0.792–0.984	0.472–1.457	0.472–1.457	0.472–1.457	–
Page	204	206	208	214	222	230

Drilling depth	**2 × D_c**	**3 × D_c**	**4 × D_c**	**5 × D_c**
Designation	**D4120-02**	**D4120-03**	**D4120-04**	**D4120-05**
Dia. range [mm]	14–42	14–42	17–42	17–42
Page	232	236	240	244

Drilling depth	**2 × D_c**	**3 × D_c**	**4 × D_c**
Designation	**D3120-02**	**D3120-03**	**D3120-04**
Dia. range [mm]	16–42	16–42	16–42
Page	248	250	252

Designation key for Walter drilling tools with indexable inserts

D	4	1	40	–	03	–	12.00	F16	–	A
1	2	3	4	5	6		7	8		9

1 – Tool group

D	Drilling

2 – Generation

3 – Tool type

1	Cylindrical drill
2	Chamfer drills
5	Chamfering tool

4 – Tool type

20	Indexable insert drill with square indexable insert
40	Indexable insert drill with P600x indexable insert
80	Compact chamfering tool

5 – 1. Delimiters

–	Metric
.	Inch

6 – Drilling depth/ chamfer angle

01	$1{,}3 \times D_c$
02	$2 \times D_c$ / $2{,}5 \times D_c$
03	$3 \times D_c$
04	$4 \times D_c$
05	$5 \times D_c$
07	$7 \times D_c$
10	$10 \times D_c$
45	45° chamfer angle

7 – Cutting diameter/clamping diameter of the chamfering tool

8 – Shank type and size, cylindrical

A=Cylindrical Shank

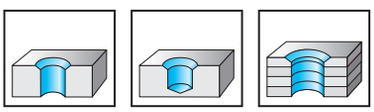
F=Parallel Shank with Clamping Surface

F13	0.500 inch	A13	0.500 inch
F15	0.625 inch	A15	0.625 inch
F19	0.750 inch	A19	0.750 inch
F26	1.000 inch	A26	1.000 inch
F31	1.250 inch	A31	1.250 inch
F38	1.500 inch	A38	1.500 inch
F12	12 mm	A12	12 mm
F16	16 mm	A16	16 mm
F20	20 mm	A20	20 mm
F25	25 mm	A25	25 mm
F32	32 mm	A32	32 mm
F40	40 mm	A40	40 mm

9 – Insert size/ interface size

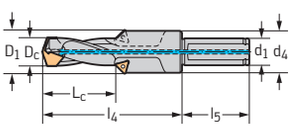
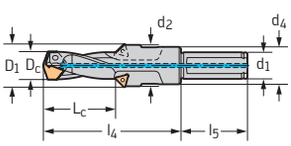
Solid drills
D4240-02 mm

D_c 12–29,99	2,5×D_c	90°	140°	Z=2



B1

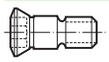
	P	M	K	N	S	H	O
D4240-02	●●	●●	●●	●●	●●		

Tool	Designation	D_c mm	D_1 mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of index-able inserts	Seat size	Type
Parallel shank with flat 	★ D4240-02-12.00F20-A	12	23.7	35.2	68	50	20	30	0.22	1 2	A	P600 . -D12, .. TC .. 11020 ..
	★ D4240-02-14.00F20-B	14	25.7	40.6	76	50	20	30	0.26	1 2	B	P600 . -D14, .. TC .. 11020 ..
	★ D4240-02-15.00F20-B	15	26.7	46.7	80	50	20	30	0.25	1 2	B	P600 . -D15, .. TC .. 11020 ..
	★ D4240-02-17.00F20-C	17	28.7	48.6	88	50	20	30	0.30	1 2	C	P600 . -D17, .. TC .. 11020 ..
	★ D4240-02-19.00F20-D	19	30.7	52.5	96	50	20	30	0.34	1 2	D	P600 . -D19, .. TC .. 11020 ..
Parallel shank with flat 	★ D4240-02-21.00F20-E	21	32.7	55.3	104	50	20	30	0.37	1 2	E	P600 . -D21, .. TC .. 11020 ..
	★ D4240-02-24.00F25-G	24	43.4	61.4	117	56	25	35	0.06	1 2	G	P600 . -D24, .. TC .. 16T3 ..
	★ D4240-02-26.00F25-H	26	45.4	66.7	125	56	25	35	0.68	1 2	H	P600 . -D26, .. TC .. 16T3 ..
	★ D4240-02-29.00F32-J	29	48.4	72.3	138	60	32	42	1.08	1 2	J	P600 . -D29, .. TC .. 16T3 ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

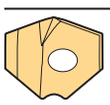
Assembly parts

	D_c [mm]	12	14–15	17	19	21	24	26	29
	Clamping screw for P600. drill insert Tightening torque	FS1396 (Torx 7IP) 1.2 Nm	FS1397 (Torx 8IP) 2.0 Nm	FS1398 (Torx 8IP) 2.0 Nm	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm	FS1403 (Torx 25IP) 5.5 Nm	FS1404 (Torx 25IP) 5.5 Nm
	Clamping screw for TC.. chamfering insert Tightening torque	FS2061 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS2063 (Torx 15IP) 3.0 Nm	FS2063 (Torx 15IP) 3.0 Nm	FS2063 (Torx 15IP) 3.0 Nm

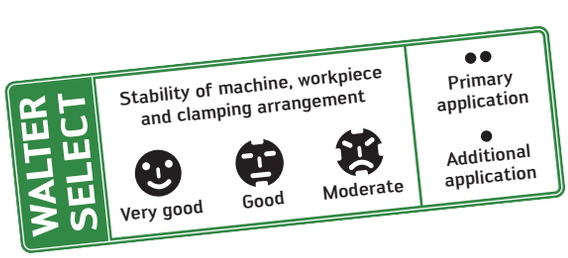
Accessories

	D_c [mm]	12	14–17	19	21–24	26–29
	Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2041 4.5–14 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

Drill inserts

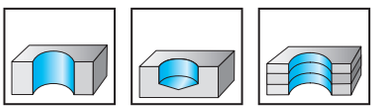
	Designation	D_c mm	Seat size	P	P HC	P HC	M HC	K	K HC	N HC	S HC
				WXP45	WPP45C	WMP35	WMP35	WXK25	WKK45C	WNN25	WMP35
	P6001-D..	12–29.77	A–J	●	●						
	P6003-D..	12–29.77	A–J			○	●				●
	P6004-D..	12–29.5	A–J							●	
	P6005-D..	12–29.77	A–J						○		
	P6002-D..	14–19	B–D					○			

HC = Coated carbide



Solid drills
D4140-01 mm

D_c 12–25,99	1,3×D_c	140°	Z=2

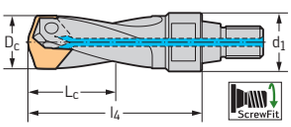


	P	M	K	N	S	H	O
D4140-01	●●	●●	●●	●●	●●		

B1

Tool

ScrewFit

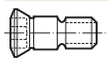


Designation	D_c mm	L_c mm	l_4 mm	d_1	Z	kg	No. of indexable inserts	Seat size	Type
★ D4140-01-12.00T14-A	12	18	47.6	T14	2	0.1	1	A	P600 . -D12, ..
★ D4140-01-13.00T14-A	13	19	49.9	T14	2	0.1	1	A	P600 . -D13, ..
★ D4140-01-14.00T14-B	14	21	52.2	T14	2	0.1	1	B	P600 . -D14, ..
★ D4140-01-15.00T18-B	15	22	54.5	T18	2	0.1	1	B	P600 . -D15, ..
★ D4140-01-16.00T18-C	16	24	56.8	T18	2	0.1	1	C	P600 . -D16, ..
★ D4140-01-17.00T18-C	17	25	59.1	T18	2	0.1	1	C	P600 . -D17, ..
★ D4140-01-18.00T18-D	18	27	61.4	T18	2	0.1	1	D	P600 . -D18, ..
★ D4140-01-19.00T22-D	19	28	63.7	T22	2	0.1	1	D	P600 . -D19, ..
★ D4140-01-20.00T22-E	20	30	66.0	T22	2	0.1	1	E	P600 . -D20, ..
★ D4140-01-21.00T22-E	21	31	68.3	T22	2	0.1	1	E	P600 . -D21, ..
★ D4140-01-22.00T22-F	22	33	71.6	T22	2	0.2	1	F	P600 . -D22, ..
★ D4140-01-23.00T28-F	23	34	73.9	T28	2	0.2	1	F	P600 . -D23, ..
★ D4140-01-24.00T28-G	24	36	76.2	T28	2	0.2	1	G	P600 . -D24, ..
★ D4140-01-25.00T28-G	25	37	78.6	T28	2	0.3	1	G	P600 . -D25, ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

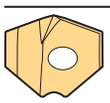
Assembly parts

	D_c [mm]	12–13	14–15	16–17	18–19	20–21	22–23	24–25
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 1.2 Nm	FS1397 (Torx 8IP) 2.0 Nm	FS1398 (Torx 8IP) 2.0 Nm	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1401 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm

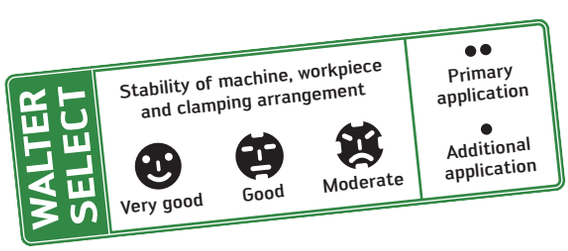
Accessories

	D_c [mm]	12–13	14–17	18–19	20–25
	Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

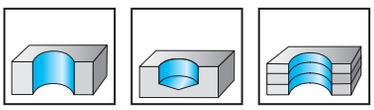
Drill inserts

	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–25.8	A–G	●●	●●						
	P6003-D..	12–25.8	A–G			○	●●				●●
	P6004-D..	12–25.5	A–G							●●	
	P6005-D..	12–25.8	A–G						○		
	P6002-D..	14–19	B–D					○			

HC = Coated carbide



Solid drills
D4140-03 mm



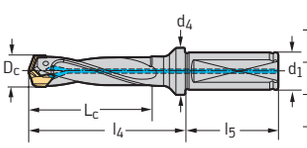
3×D_C | 140° | Z=2

	P	M	K	N	S	H	O
D4140-03	●●	●●	●●	●●	●●		

B1

Tool

Parallel shank with flat

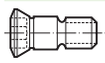


Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Seat size	Type
D4140-03-12.00F16-A	12	36	68	48	16	20	0.14	1	A	P600 . -D12, ..
D4140-03-13.00F16-A	13	41	72	48	16	20	0.15	1	A	P600 . -D13, ..
D4140-03-14.00F16-B	14	45	76	48	16	20	0.15	1	B	P600 . -D14, ..
D4140-03-15.00F16-B	15	48	80	48	16	20	0.16	1	B	P600 . -D15, ..
D4140-03-16.00F20-C	16	51	84	50	20	25	0.25	1	C	P600 . -D16, ..
D4140-03-17.00F20-C	17	54	88	50	20	25	0.24	1	C	P600 . -D17, ..
D4140-03-18.00F20-D	18	57	92	50	20	25	0.25	1	D	P600 . -D18, ..
D4140-03-19.00F20-D	19	61	96	50	20	25	0.26	1	D	P600 . -D19, ..
D4140-03-20.00F20-E	20	64	100	50	20	25	0.28	1	E	P600 . -D20, ..
D4140-03-21.00F20-E	21	67	104	50	20	25	0.3	1	E	P600 . -D21, ..
D4140-03-22.00F25-F	22	70	109	56	25	32	0.44	1	F	P600 . -D22, ..
D4140-03-23.00F25-F	23	73	113	56	25	32	0.46	1	F	P600 . -D23, ..
D4140-03-24.00F25-G	24	76	117	56	25	32	0.48	1	G	P600 . -D24, ..
D4140-03-25.00F25-G	25	80	121	56	25	32	0.50	1	G	P600 . -D25, ..
D4140-03-26.00F25-H	26	83	125	56	25	32	0.52	1	H	P600 . -D26, ..
D4140-03-27.00F25-H	27	86	129	56	25	32	0.53	1	H	P600 . -D27, ..
D4140-03-28.00F32-J	28	89	134	60	32	40	0.80	1	J	P600 . -D28, ..
D4140-03-29.00F32-J	29	92	138	60	32	40	0.86	1	J	P600 . -D29, ..
D4140-03-30.00F32-K	30	95	142	60	32	40	0.89	1	K	P600 . -D30, ..
D4140-03-31.00F32-K	31	99	146	60	32	40	0.92	1	K	P600 . -D31, ..
★ D4140-03-32.00F40-M	32	102	150	70	40	50	1.39	1	M	P600 . -D32, ..
★ D4140-03-33.00F40-M	33	105	154	70	40	50	1.46	1	M	P600 . -D33,0 ..
★ D4140-03-34.00F40-N	34	108	158	70	40	50	1.51	1	N	P600 . -D34,0 ..
★ D4140-03-35.00F40-N	35	111	162	70	40	50	1.58	1	N	P600 . -D35,0 ..
★ D4140-03-36.00F40-P	36	115	166	70	40	50	1.58	1	P	P600 . -D36,0 ..
★ D4140-03-37.00F40-P	37	118	170	70	40	50	1.66	1	P	P600 . -D37, ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

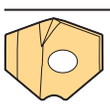
	D_c [mm]	12–13	14–15	16–17	18–19	20–21	22–23	24–25	26–27	28–33	34–37
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 1.2 Nm	FS1397 (Torx 8IP) 2.0 Nm	FS1398 (Torx 8IP) 2.0 Nm	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1401 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm	FS1403 (Torx 25IP) 5.5 Nm	FS1404 (Torx 25IP) 5.5 Nm	FS2159 (Torx 25IP) 5.5 Nm

Accessories

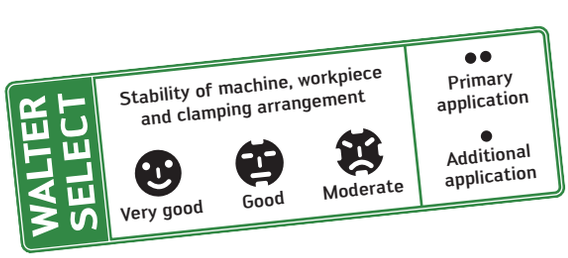
	D_c [mm]	12–13	14–17	18–19	20–25	26–37
	Torque T-handle Tightening torque					FS2041 4.5–14 Nm
	Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

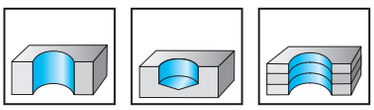
Drill inserts

	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–37.99	A–P	●	●						
	P6003-D..	12–37.99	A–P			◆	●				●
	P6004-D..	12–31.5	A–K							●	
	P6005-D..	12–37.99	A–P						◆		
	P6002-D..	14–19	B–D					◆			

HC = Coated carbide



Solid drills
D4140-03 inch



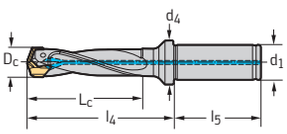
3×D_C | 140° | Z=2

	P	M	K	N	S	H	O
D4140-03	●●	●●	●●	●●	●●		

B1

Tool

Parallel shank with collar

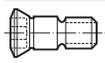


Designation	D_C Inch	L_C Inch	l_4 Inch	l_5 Inch	d_1 Inch	d_4 Inch	lbs	No. of indexable inserts	Type
★ D4140.03-12.00A15-A	0.472	1.496	2.677	1.890	0.625	0.787	0.48	1	P600 . -D12, ..
★ D4140.03-13.00A15-A	0.512	1.614	2.834	1.890	0.625	0.787	0.42	1	P600 . -D13, ..
★ D4140.03-14.00A15-B	0.551	1.772	2.992	1.890	0.625	0.787	0.44	1	P600 . -D14, ..
★ D4140.03-15.00A15-B	0.591	1.890	3.149	1.890	0.625	0.787	0.46	1	P600 . -D15, ..
★ D4140.03-16.00A19-C	0.630	2.008	3.308	2.031	0.750	0.984	0.51	1	P600 . -D16, ..
★ D4140.03-17.00A19-C	0.669	2.126	3.465	2.031	0.750	0.984	0.66	1	P600 . -D17, ..
★ D4140.03-18.00A19-D	0.709	2.244	3.622	2.031	0.750	0.984	0.55	1	P600 . -D18, ..
★ D4140.03-19.00A19-D	0.748	2.362	3.779	2.031	0.750	0.984	0.60	1	P600 . -D19, ..
★ D4140.03-20.00A19-E	0.787	2.480	3.937	2.031	0.750	0.984	0.64	1	P600 . -D20, ..
★ D4140.03-21.00A19-E	0.827	2.598	4.094	2.031	0.750	0.984	0.68	1	P600 . -D21, ..
★ D4140.03-22.00A26-F	0.866	2.756	4.292	2.281	1.000	1.260	1.04	1	P600 . -D22, ..
★ D4140.03-24.00A26-G	0.945	2.992	4.606	2.281	1.000	1.260	1.26	1	P600 . -D24, ..
★ D4140.03-26.00A26-H	1.024	3.268	4.921	2.281	1.000	1.260	1.32	1	P600 . -D26, ..
★ D4140.03-28.00A31-J	1.102	3.504	5.276	2.281	1.250	1.575	1.79	1	P600 . -D28, ..
★ D4140.03-30.00A31-K	1.181	3.740	5.591	2.281	1.250	1.575	1.96	1	P600 . -D30, ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

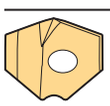
Assembly parts

	D_c [Inch]	0.472–0.512	0.551–0.591	0.630–0.669	0.709–0.748	0.787–0.827	0.866	0.945	1.024	1.102–1.181
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 11 in lbs	FS1397 (Torx 8IP) 18 in lbs	FS1398 (Torx 8IP) 18 in lbs	FS1399 (Torx 15IP) 35 in lbs	FS1400 (Torx 20IP) 44 in lbs	FS1401 (Torx 20IP) 44 in lbs	FS1402 (Torx 20IP) 44 in lbs	FS1403 (Torx 25IP) 49 in lbs	FS1404 (Torx 25IP) 49 in lbs

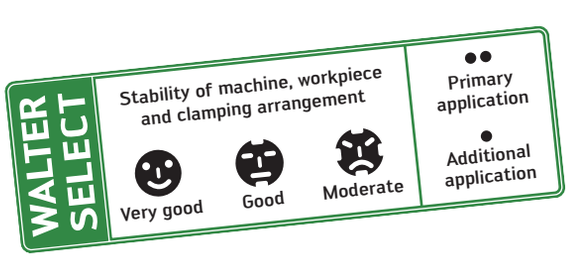
Accessories

	D_c [Inch]	0.472–0.512	0.551–0.669	0.709–0.748	0.787–0.945	1.024–1.181
	Torque T-handle Tightening torque					FS2042 40–124 in lbs
	Torque screwdriver, analogue Tightening torque	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

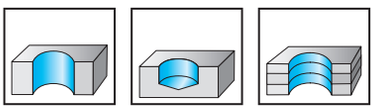
Drill inserts

	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–30.5	A–K	●●	●●						
	P6003-D..	12–30.5	A–K			●	●●				●●
	P6004-D..	12–30.5	A–K							●●	
	P6005-D..	12–30.5	A–K						●		
	P6002-D..	14–19	B–D					●			

HC = Coated carbide



Solid drills
D4140-03 inch



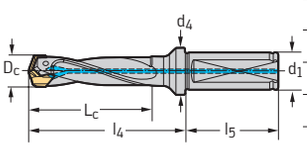
3×D_C | 140° | Z=2

	P	M	K	N	S	H	O
D4140-03	●●	●●	●●	●●	●●		

B1

Tool

Parallel shank with flat

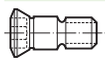


Designation	D_C Inch	L_C Inch	l_4 Inch	l_5 Inch	d_1 Inch	d_4 Inch	lbs	No. of indexable inserts	Type
D4140.03-12.00F15-A	0.472	1.496	2.677	1.890	0.625	0.787	0.31	1	P600 . -D12, ..
D4140.03-13.00F15-A	0.512	1.614	2.834	1.890	0.625	0.787	0.32	1	P600 . -D13, ..
D4140.03-14.00F15-B	0.551	1.772	2.992	1.890	0.625	0.787	0.32	1	P600 . -D14, ..
D4140.03-15.00F15-B	0.591	1.890	3.149	1.890	0.625	0.787	0.36	1	P600 . -D15, ..
D4140.03-16.00F19-C	0.630	2.008	3.307	2.031	0.750	0.984	0.49	1	P600 . -D16, ..
D4140.03-17.00F19-C	0.669	2.126	3.465	2.031	0.750	0.984	0.51	1	P600 . -D17, ..
D4140.03-18.00F19-D	0.709	2.244	3.622	2.031	0.750	0.984	0.54	1	P600 . -D18, ..
D4140.03-19.00F19-D	0.748	2.362	3.779	2.031	0.750	0.984	0.57	1	P600 . -D19, ..
D4140.03-20.00F19-E	0.787	2.520	3.937	2.031	0.750	0.984	0.60	1	P600 . -D20, ..
D4140.03-21.00F19-E	0.827	2.638	4.094	2.031	0.750	0.984	0.63	1	P600 . -D21, ..
D4140.03-22.00F26-F	0.866	2.756	4.291	2.281	1.000	1.260	1.00	1	P600 . -D22, ..
D4140.03-23.00F26-F	0.906	2.874	4.449	2.281	1.000	1.260	1.04	1	P600 . -D23, ..
D4140.03-24.00F26-G	0.945	2.992	4.607	2.281	1.000	1.260	1.08	1	P600 . -D24, ..
D4140.03-25.00F26-G	0.984	3.150	4.764	2.281	1.000	1.260	1.13	1	P600 . -D25, ..
D4140.03-26.00F26-H	1.024	3.268	4.921	2.281	1.000	1.260	1.18	1	P600 . -D26, ..
D4140.03-27.00F26-H	1.063	3.386	5.078	2.281	1.000	1.260	1.27	1	P600 . -D27, ..
D4140.03-28.00F31-J	1.102	3.504	5.276	2.281	1.250	1.575	1.71	1	P600 . -D28, ..
D4140.03-29.00F31-J	1.142	3.622	5.433	2.281	1.250	1.575	1.84	1	P600 . -D29, ..
D4140.03-30.00F31-K	1.181	3.740	5.591	2.281	1.250	1.575	1.90	1	P600 . -D30, ..
D4140.03-31.00F31-K	1.220	3.898	5.748	2.281	1.250	1.575	1.97	1	P600 . -D31, ..
★ D4140.03-32.00F31-M	1.260	4.016	5.905	2.281	1.250	1.575	2.20	1	P600 . -D32, ..
★ D4140.03-33.00F31-M	1.299	4.134	6.062	2.281	1.250	1.575	2.29	1	P600 . -D33,0 ..
★ D4140.03-34.00F38-N	1.339	4.252	6.221	2.688	1.500	1.969	3.04	1	P600 . -D34,0 ..
★ D4140.03-35.00F38-N	1.378	4.370	6.378	2.688	1.500	1.969	3.17	1	P600 . -D35,0 ..
★ D4140.03-36.00F38-P	1.417	4.528	6.536	2.688	1.500	1.969	3.06	1	P600 . -D36,0 ..
★ D4140.03-37.00F38-P	1.457	4.646	6.693	2.688	1.500	1.969	3.43	1	P600 . -D37, ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

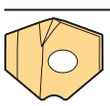
	D_c [Inch]	0.472–0.512	0.551–0.591	0.630–0.669	0.709–0.748	0.787–0.827	0.866–0.906	0.945–0.984	1.024–1.063	1.102–1.299	1.339–1.457
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 11 in lbs	FS1397 (Torx 8IP) 18 in lbs	FS1398 (Torx 8IP) 18 in lbs	FS1399 (Torx 15IP) 35 in lbs	FS1400 (Torx 20IP) 44 in lbs	FS1401 (Torx 20IP) 44 in lbs	FS1402 (Torx 20IP) 44 in lbs	FS1403 (Torx 25IP) 49 in lbs	FS1404 (Torx 25IP) 49 in lbs	FS2159 (Torx 25IP) 49 in lbs

Accessories

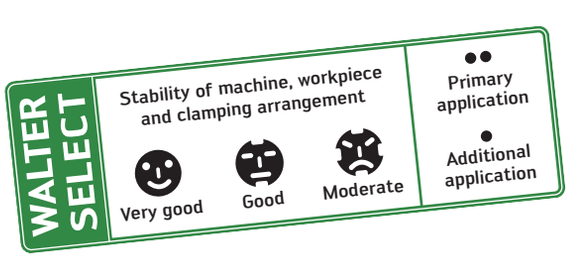
	D_c [Inch]	0.472–0.512	0.551–0.669	0.709–0.748	0.787–0.984	1.024–1.457
	Torque T-handle Tightening torque					FS2042 40–124 in lbs
	Torque screwdriver, analogue Tightening torque	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

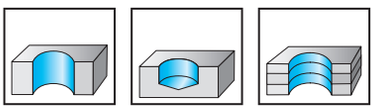
Drill inserts

	Designation	D_c mm	Seat size	P	P HC	P HC	M HC	K HC	K HC	N HC	S HC
				WXP45	WPP45C	WMP35	WMP35	WXK25	WKK45C	WNN25	WMP35
	P6001-D..	12–37.99	A–P	●●	●●						
	P6003-D..	12–37.99	A–P			●	●●				●●
	P6004-D..	12–31.5	A–K							●●	
	P6005-D..	12–37.99	A–P						●		
	P6002-D..	14–19	B–D					●			

HC = Coated carbide



Solid drills
D4140-05 mm



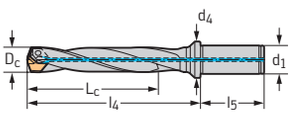
5×D_C | 140° | Z=2

	P	M	K	N	S	H	O
D4140-05	●●	●●	●●	●●	●		

B1

Tool

Parallel shank with collar

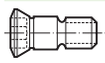


Designation	D_C mm	L_C mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Seat size	Type
★ D4140-05-12.00A16-A	12	62	92	48	16	20	0.23	1	A	P600 . -D12, ..
★ D4140-05-13.00A16-A	13	67	98	48	16	20	0.24	1	A	P600 . -D13, ..
★ D4140-05-14.00A16-B	14	73	104	48	16	20	0.25	1	B	P600 . -D14, ..
★ D4140-05-15.00A16-B	15	78	110	48	16	20	0.27	1	B	P600 . -D15, ..
★ D4140-05-16.00A20-C	16	83	116	50	20	25	0.28	1	C	P600 . -D16, ..
★ D4140-05-17.00A20-C	17	88	122	50	20	25	0.30	1	C	P600 . -D17, ..
★ D4140-05-18.00A20-D	18	93	128	50	20	25	0.32	1	D	P600 . -D18, ..
★ D4140-05-19.00A20-D	19	98	134	50	20	25	0.34	1	D	P600 . -D19, ..
★ D4140-05-20.00A20-E	20	104	140	50	20	25	0.37	1	E	P600 . -D20, ..
★ D4140-05-21.00A20-E	21	109	146	50	20	25	0.39	1	E	P600 . -D21, ..
★ D4140-05-22.00A25-F	22	114	153	56	25	32	0.58	1	F	P600 . -D22, ..
★ D4140-05-23.00A25-F	23	119	159	56	25	32	0.58	1	F	P600 . -D23, ..
★ D4140-05-24.00A25-G	24	124	165	56	25	32	0.63	1	G	P600 . -D24, ..
★ D4140-05-25.00A25-G	25	130	171	56	25	32	0.67	1	G	P600 . -D25, ..
★ D4140-05-26.00A25-H	26	135	177	56	25	32	0.73	1	H	P600 . -D26, ..
★ D4140-05-27.00A25-H	27	140	183	56	25	32	0.76	1	H	P600 . -D27, ..
★ D4140-05-28.00A32-J	28	145	190	60	32	40	1.05	1	J	P600 . -D28, ..
★ D4140-05-29.00A32-J	29	150	196	60	32	40	1.06	1	J	P600 . -D29, ..
★ D4140-05-30.00A32-K	30	155	202	60	32	40	1.17	1	K	P600 . -D30, ..
★ D4140-05-31.00A32-K	31	161	208	60	32	40	1.2	1	K	P600 . -D31, ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

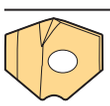
	D_c [mm]	12–13	14–15	16–17	18–19	20–21	22–23	24–25	26–27	28–31	32–37
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 1.2 Nm	FS1397 (Torx 8IP) 2.0 Nm	FS1398 (Torx 8IP) 2.0 Nm	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1401 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm	FS1403 (Torx 25IP) 5.5 Nm	FS1404 (Torx 25IP) 5.5 Nm	FS2159 (Torx 25IP) 5.5 Nm

Accessories

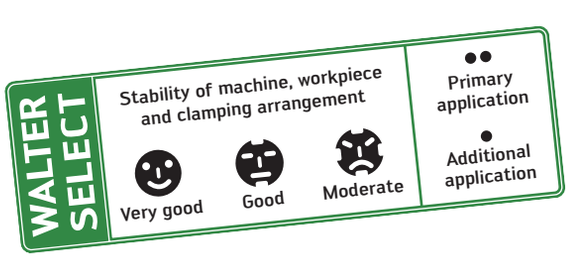
	D_c [mm]	12–13	14–17	18–19	20–25	26–37
	Torque T-handle Tightening torque					FS2041 4.5–14 Nm
	Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

Drill inserts

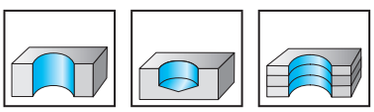
	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–31.99	A–K	●	●						
	P6003-D..	12–31.99	A–K			◉	●				●
	P6004-D..	12–31.5	A–K							●	
	P6005-D..	12–31.99	A–K						◉		
	P6002-D..	14–19	B–D					◉			

HC = Coated carbide



Solid drills
D4140-05 mm

5×D_C | 140° | Z=2

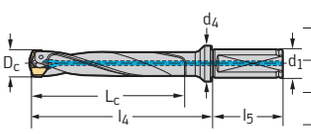


	P	M	K	N	S	H	O
D4140-05	●●	●●	●●	●●	●		

B1

Tool

Parallel shank with flat

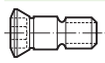


Designation	D_C mm	L_C mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Seat size	Type
D4140-05-12.00F16-A	12	62	92	48	16	20	0.15	1	A	P600 . -D12, ..
D4140-05-13.00F16-A	13	67	98	48	16	20	0.15	1	A	P600 . -D13, ..
D4140-05-14.00F16-B	14	73	104	48	16	20	0.17	1	B	P600 . -D14, ..
D4140-05-15.00F16-B	15	78	110	48	16	20	0.18	1	B	P600 . -D15, ..
D4140-05-16.00F20-C	16	83	116	50	20	25	0.26	1	C	P600 . -D16, ..
D4140-05-17.00F20-C	17	88	122	50	20	25	0.28	1	C	P600 . -D17, ..
D4140-05-18.00F20-D	18	93	128	50	20	25	0.29	1	D	P600 . -D18, ..
D4140-05-19.00F20-D	19	98	134	50	20	25	0.31	1	D	P600 . -D19, ..
D4140-05-20.00F20-E	20	104	140	50	20	25	0.3	1	E	P600 . -D20, ..
D4140-05-21.00F20-E	21	109	146	50	20	25	0.37	1	E	P600 . -D21, ..
D4140-05-22.00F25-F	22	114	153	56	25	32	0.53	1	F	P600 . -D22, ..
D4140-05-23.00F25-F	23	119	159	56	25	32	0.56	1	F	P600 . -D23, ..
D4140-05-24.00F25-G	24	124	165	56	25	32	0.59	1	G	P600 . -D24, ..
D4140-05-25.00F25-G	25	130	171	56	25	32	0.62	1	G	P600 . -D25, ..
D4140-05-26.00F25-H	26	135	177	56	25	32	0.65	1	H	P600 . -D26, ..
D4140-05-27.00F25-H	27	140	183	56	25	32	0.69	1	H	P600 . -D27, ..
D4140-05-28.00F32-J	28	145	190	60	32	40	0.97	1	J	P600 . -D28, ..
D4140-05-29.00F32-J	29	150	196	60	32	40	1.00	1	J	P600 . -D29, ..
D4140-05-30.00F32-K	30	155	202	60	32	40	1.06	1	K	P600 . -D30, ..
D4140-05-31.00F32-K	31	161	208	60	32	40	1.12	1	K	P600 . -D31, ..
★ D4140-05-32.00F40-M	32	166	214	70	40	50	1.58	1	M	P600 . -D32, ..
★ D4140-05-33.00F40-M	33	171	220	70	40	50	1.64	1	M	P600 . -D33,0 ..
★ D4140-05-34.00F40-N	34	176	226	70	40	50	1.77	1	N	P600 . -D34,0 ..
★ D4140-05-35.00F40-N	35	181	232	70	40	50	1.84	1	N	P600 . -D35,0 ..
★ D4140-05-36.00F40-P	36	187	238	70	40	50	1.75	1	P	P600 . -D36,0 ..
★ D4140-05-37.00F40-P	37	192	244	70	40	50	2	1	P	P600 . -D37, ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

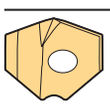
	D_c [mm]	12–13	14–15	16–17	18–19	20–21	22–23	24–25	26–27	28–31	32–37
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 1.2 Nm	FS1397 (Torx 8IP) 2.0 Nm	FS1398 (Torx 8IP) 2.0 Nm	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1401 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm	FS1403 (Torx 25IP) 5.5 Nm	FS1404 (Torx 25IP) 5.5 Nm	FS2159 (Torx 25IP) 5.5 Nm

Accessories

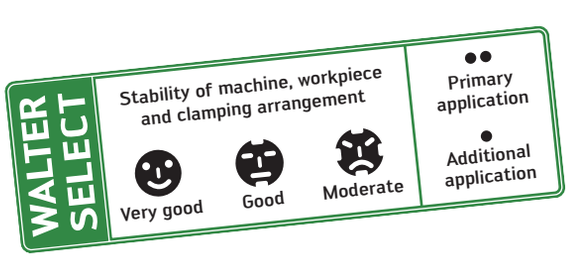
	D_c [mm]	12–13	14–17	18–19	20–25	26–37
	Torque T-handle Tightening torque					FS2041 4.5–14 Nm
	Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

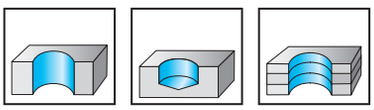
Drill inserts

	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–37.99	A–P	●●	●●						
	P6003-D..	12–37.99	A–P			●	●●				●●
	P6004-D..	12–31.5	A–K							●●	
	P6005-D..	12–37.99	A–P						●		
	P6002-D..	14–19	B–D					●			

HC = Coated carbide



Solid drills
D4140-05 inch



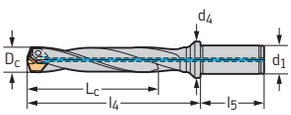
5×D_C | 140° | Z=2

	P	M	K	N	S	H	O
D4140-05	●●	●●	●●	●●	●		

B1

Tool

Parallel shank with collar

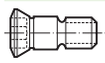


Designation	D_C Inch	L_C Inch	l_4 Inch	l_5 Inch	d_1 Inch	d_4 Inch	lbs	No. of indexable inserts	Type
★ D4140.05-12.00A15-A	0.472	2.441	3.622	1.890	0.625	0.787	0.49	1	P600 . -D12, ..
★ D4140.05-13.00A15-A	0.512	2.638	3.858	1.890	0.625	0.787	0.51	1	P600 . -D13, ..
★ D4140.05-14.00A15-B	0.551	2.874	4.094	1.890	0.625	0.787	0.55	1	P600 . -D14, ..
★ D4140.05-15.00A15-B	0.591	3.071	4.330	1.890	0.625	0.787	0.57	1	P600 . -D15, ..
★ D4140.05-16.00A19-C	0.630	3.268	4.567	2.031	0.750	0.984	0.61	1	P600 . -D16, ..
★ D4140.05-17.00A19-C	0.669	3.465	4.803	2.031	0.750	0.984	0.57	1	P600 . -D17, ..
★ D4140.05-18.00A19-D	0.709	3.661	5.039	2.031	0.750	0.984	0.66	1	P600 . -D18, ..
★ D4140.05-19.00A19-D	0.748	3.858	5.275	2.031	0.750	0.984	0.71	1	P600 . -D19, ..
★ D4140.05-20.00A19-E	0.787	4.094	5.512	2.031	0.750	0.984	0.77	1	P600 . -D20, ..
★ D4140.05-21.00A19-E	0.827	4.291	5.748	2.031	0.750	0.984	0.84	1	P600 . -D21, ..
★ D4140.05-22.00A26-F	0.866	4.488	6.024	2.281	1.000	1.260	1.21	1	P600 . -D22, ..
★ D4140.05-24.00A26-G	0.945	4.882	6.496	2.281	1.000	1.260	1.32	1	P600 . -D24, ..
★ D4140.05-26.00A26-H	1.024	5.315	6.968	2.281	1.000	1.260	1.54	1	P600 . -D26, ..
★ D4140.05-28.00A31-J	1.102	5.709	7.481	2.281	1.250	1.575	2.18	1	P600 . -D28, ..
★ D4140.05-30.00A31-K	1.181	6.102	7.953	2.281	1.250	1.575	2.43	1	P600 . -D30, ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

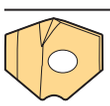
	D_c [Inch]	0.472–0.512	0.551–0.591	0.630–0.669	0.709–0.748	0.787–0.827	0.866	0.945	1.024	1.102–1.181
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 11 in lbs	FS1397 (Torx 8IP) 18 in lbs	FS1398 (Torx 8IP) 18 in lbs	FS1399 (Torx 15IP) 35 in lbs	FS1400 (Torx 20IP) 44 in lbs	FS1401 (Torx 20IP) 44 in lbs	FS1402 (Torx 20IP) 44 in lbs	FS1403 (Torx 25IP) 49 in lbs	FS1404 (Torx 25IP) 49 in lbs

Accessories

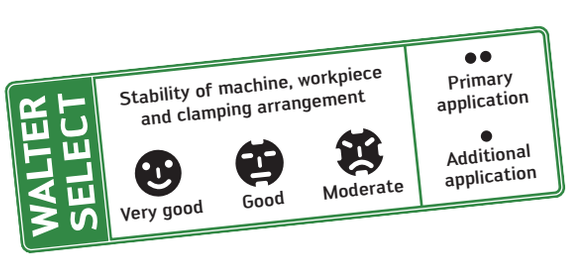
	D_c [Inch]	0.472–0.512	0.551–0.669	0.709–0.748	0.787–0.945	1.024–1.181
	Torque T-handle Tightening torque					FS2042 40–124 in lbs
	Torque screwdriver, analogue Tightening torque	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

Drill inserts

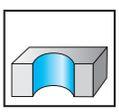
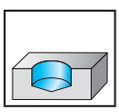
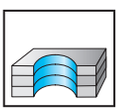
	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–30.5	A–K	●●	●●						
	P6003-D..	12–30.5	A–K			✕	●●				●●
	P6004-D..	12–30.5	A–K							●●	
	P6005-D..	12–30.5	A–K						✕		
	P6002-D..	14–19	B–D					✕			

HC = Coated carbide



Solid drills
D4140-05 inch

5×D_C | 140° | Z=2

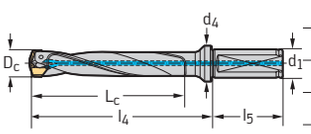




	P	M	K	N	S	H	O
D4140-05	●●	●●	●●	●●	●		

B1

Tool

Parallel shank with flat

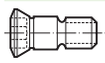


Designation	D_C Inch	L_C Inch	l_4 Inch	l_5 Inch	d_1 Inch	d_4 Inch	lbs	No. of indexable inserts	Type
D4140.05-12.00F15-A	0.472	2.441	3.622	1.890	0.625	0.787	0.34	1	P600 . -D12. ..
D4140.05-13.00F15-A	0.512	2.638	3.858	1.890	0.625	0.787	0.36	1	P600 . -D13. ..
D4140.05-14.00F15-B	0.551	2.874	4.094	1.890	0.625	0.787	0.38	1	P600 . -D14. ..
D4140.05-15.00F15-B	0.591	3.071	4.330	1.890	0.625	0.787	0.41	1	P600 . -D15. ..
D4140.05-16.00F19-C	0.630	3.268	4.567	2.031	0.750	0.984	0.55	1	P600 . -D16. ..
D4140.05-17.00F19-C	0.669	3.465	4.803	2.031	0.750	0.984	0.60	1	P600 . -D17. ..
D4140.05-18.00F19-D	0.709	3.661	5.039	2.031	0.750	0.984	0.62	1	P600 . -D18. ..
D4140.05-19.00F19-D	0.748	3.858	5.275	2.031	0.750	0.984	0.67	1	P600 . -D19. ..
D4140.05-20.00F19-E	0.787	4.094	5.512	2.031	0.750	0.984	0.75	1	P600 . -D20. ..
D4140.05-21.00F19-E	0.827	4.291	5.748	2.031	0.750	0.984	0.80	1	P600 . -D21. ..
D4140.05-22.00F26-F	0.866	4.488	6.024	2.281	1.000	1.260	1.19	1	P600 . -D22. ..
D4140.05-23.00F26-F	0.906	4.685	6.260	2.281	1.000	1.260	1.26	1	P600 . -D23. ..
D4140.05-24.00F26-G	0.945	4.882	6.496	2.281	1.000	1.260	1.32	1	P600 . -D24. ..
D4140.05-25.00F26-G	0.984	5.118	6.732	2.281	1.000	1.260	1.46	1	P600 . -D25. ..
D4140.05-26.00F26-H	1.024	5.315	6.968	2.281	1.000	1.260	1.46	1	P600 . -D26. ..
D4140.05-27.00F26-H	1.063	5.512	7.204	2.281	1.000	1.260	1.54	1	P600 . -D27. ..
D4140.05-28.00F31-J	1.102	5.709	7.481	2.281	1.250	1.575	2.08	1	P600 . -D28. ..
D4140.05-29.00F31-J	1.142	5.906	7.717	2.281	1.250	1.575	2.18	1	P600 . -D29. ..
D4140.05-30.00F31-K	1.181	6.339	7.953	2.281	1.250	1.575	2.28	1	P600 . -D30. ..
D4140.05-31.00F31-K	1.220	6.339	8.189	2.281	1.250	1.575	2.39	1	P600 . -D31. ..
★ D4140.05-32.00F31-M	1.260	6.535	8.425	2.281	1.250	1.575	2.58	1	P600 . -D32. ..
★ D4140.05-33.00F31-M	1.299	6.732	8.661	2.281	1.250	1.575	2.69	1	P600 . -D33.0 ..
★ D4140.05-34.00F38-N	1.339	6.929	8.898	2.688	1.500	1.969	3.48	1	P600 . -D34.0 ..
★ D4140.05-35.00F38-N	1.378	7.126	9.134	2.688	1.500	1.969	3.68	1	P600 . -D35.0 ..
★ D4140.05-36.00F38-P	1.417	7.362	9.370	2.688	1.500	1.969	3.81	1	P600 . -D36.0 ..
★ D4140.05-37.00F38-P	1.457	7.559	9.606	2.688	1.500	1.969	4.01	1	P600 . -D37. ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

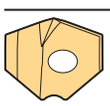
	D_c [Inch]	0.472–0.512	0.551–0.591	0.630–0.669	0.709–0.748	0.787–0.827	0.866–0.906	0.945–0.984	1.024–1.063	1.102–1.299	1.339–1.457
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 11 in lbs	FS1397 (Torx 8IP) 18 in lbs	FS1398 (Torx 8IP) 18 in lbs	FS1399 (Torx 15IP) 35 in lbs	FS1400 (Torx 20IP) 44 in lbs	FS1401 (Torx 20IP) 44 in lbs	FS1402 (Torx 20IP) 44 in lbs	FS1403 (Torx 25IP) 49 in lbs	FS1404 (Torx 25IP) 49 in lbs	FS2159 (Torx 25IP) 49 in lbs

Accessories

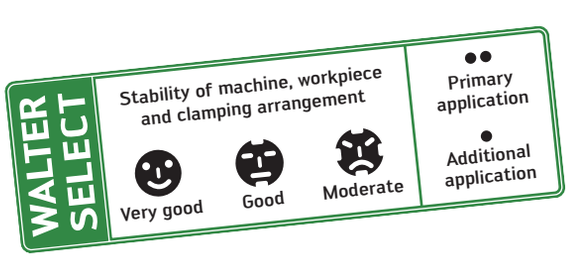
	D_c [Inch]	0.472–0.512	0.551–0.669	0.709–0.748	0.787–0.984	1.024–1.457
	Torque T-handle Tightening torque					FS2042 40–124 in lbs
	Torque screwdriver. analogue Tightening torque	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

Drill inserts

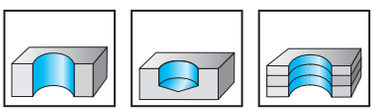
	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–37.99	A–P	●●	●●						
	P6003-D..	12–37.99	A–P			●	●●				●●
	P6004-D..	12–31.5	A–K							●●	
	P6005-D..	12–37.99	A–P						●		
	P6002-D..	14–19	B–D					●			

HC = Coated carbide



Solid drills
D4140-07 mm

7×D_C | 140° | Z=2

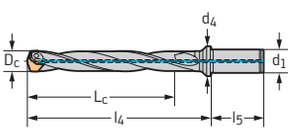


	P	M	K	N	S	H	O
D4140-07	●●	●	●●	●●	●		

B1

Tool

Parallel shank with collar

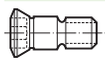


Designation	D_C mm	L_C mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Seat size	Type
★ D4140-07-12.00A16-A	12	86	116	48	16	20	0.24	1	A	P600 . -D12. ..
★ D4140-07-13.00A16-A	13	93	124	48	16	20	0.25	1	A	P600 . -D13. ..
★ D4140-07-14.00A16-B	14	101	132	48	16	20	0.27	1	B	P600 . -D14. ..
★ D4140-07-15.00A16-B	15	108	140	48	16	20	0.29	1	B	P600 . -D15. ..
★ D4140-07-16.00A20-C	16	115	148	50	20	25	0.34	1	C	P600 . -D16. ..
★ D4140-07-17.00A20-C	17	122	156	50	20	25	0.34	1	C	P600 . -D17. ..
★ D4140-07-18.00A20-D	18	133	164	50	20	25	0.38	1	D	P600 . -D18. ..
★ D4140-07-19.00A20-D	19	136	172	50	20	25	0.40	1	D	P600 . -D19. ..
★ D4140-07-20.00A20-E	20	144	180	50	20	25	0.44	1	E	P600 . -D20. ..
★ D4140-07-21.00A20-E	21	151	188	50	20	25	0.48	1	E	P600 . -D21. ..
★ D4140-07-22.00A25-F	22	158	197	56	25	32	0.65	1	F	P600 . -D22. ..
★ D4140-07-23.00A25-F	23	165	205	56	25	32	0.06	1	F	P600 . -D23. ..
★ D4140-07-24.00A25-G	24	172	213	56	25	32	0.76	1	G	P600 . -D24. ..
★ D4140-07-25.00A25-G	25	180	221	56	25	32	0.79	1	G	P600 . -D25. ..
★ D4140-07-26.00A25-H	26	187	229	56	25	32	0.85	1	H	P600 . -D26. ..
★ D4140-07-27.00A25-H	27	194	237	56	25	32	0.89	1	H	P600 . -D27. ..
★ D4140-07-28.00A32-J	28	201	246	60	32	40	1.20	1	J	P600 . -D28. ..
★ D4140-07-29.00A32-J	29	208	254	60	32	40	0.28	1	J	P600 . -D29. ..
★ D4140-07-30.00A32-K	30	215	262	60	32	40	1.36	1	K	P600 . -D30. ..
★ D4140-07-31.00A32-K	31	223	270	60	32	40	1.43	1	K	P600 . -D31. ..

Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

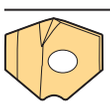
	D_c [mm]	12–13	14–15	16–17	18–19	20–21	22–23	24–25	26–27	28–31	32–37
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 1.2 Nm	FS1397 (Torx 8IP) 2.0 Nm	FS1398 (Torx 8IP) 2.0 Nm	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1401 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm	FS1403 (Torx 25IP) 5.5 Nm	FS1404 (Torx 25IP) 5.5 Nm	FS2159 (Torx 25IP) 5.5 Nm

Accessories

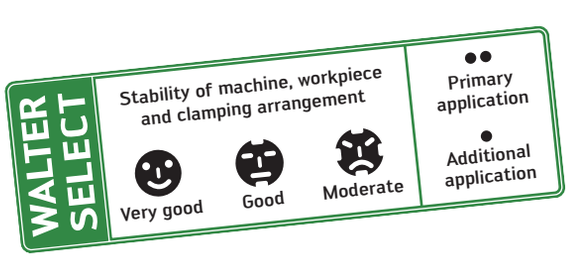
	D_c [mm]	12–13	14–17	18–19	20–25	26–37
	Torque T-handle Tightening torque					FS2041 4.5–14 Nm
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

Drill inserts

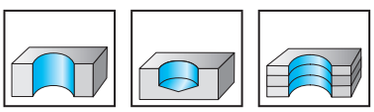
	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–31.99	A–K	☺	☺						
	P6003-D..	12–31.99	A–K			😐	☺				☺
	P6004-D..	12–31.5	A–K							☺	
	P6005-D..	12–31.99	A–K						😐		
	P6002-D..	14–19	B–D					😐			

HC = Coated carbide



Solid drills
D4140-07 mm

7×D_C | 140° | Z=2

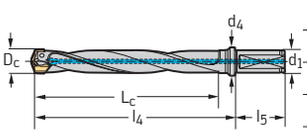


	P	M	K	N	S	H	O
D4140-07	●●	●	●●	●●	●		

B1

Tool

Parallel shank with flat

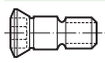


Designation	D_C mm	L_C mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Seat size	Type
D4140-07-12.00F16-A	12	86	116	48	16	20	0.16	1	A	P600 . -D12. ..
D4140-07-13.00F16-A	13	93	124	48	16	20	0.17	1	A	P600 . -D13. ..
D4140-07-14.00F16-B	14	101	132	48	16	20	0.19	1	B	P600 . -D14. ..
D4140-07-15.00F16-B	15	108	140	48	16	20	0.20	1	B	P600 . -D15. ..
D4140-07-16.00F20-C	16	115	148	50	20	25	0.30	1	C	P600 . -D16. ..
D4140-07-17.00F20-C	17	122	156	50	20	25	0.32	1	C	P600 . -D17. ..
D4140-07-18.00F20-D	18	126	164	50	20	25	0.34	1	D	P600 . -D18. ..
D4140-07-19.00F20-D	19	136	172	50	20	25	0.37	1	D	P600 . -D19. ..
D4140-07-20.00F20-E	20	144	180	50	20	25	0.39	1	E	P600 . -D20. ..
D4140-07-21.00F20-E	21	151	188	50	20	25	0.43	1	E	P600 . -D21. ..
D4140-07-22.00F25-F	22	158	197	56	25	32	0.6	1	F	P600 . -D22. ..
D4140-07-23.00F25-F	23	165	205	56	25	32	0.63	1	F	P600 . -D23. ..
D4140-07-24.00F25-G	24	172	213	56	25	32	0.68	1	G	P600 . -D24. ..
D4140-07-25.00F25-G	25	180	221	56	25	32	0.71	1	G	P600 . -D25. ..
D4140-07-26.00F25-H	26	187	229	56	25	32	0.80	1	H	P600 . -D26. ..
D4140-07-27.00F25-H	27	194	237	56	25	32	0.82	1	H	P600 . -D27. ..
D4140-07-28.00F32-J	28	201	246	60	32	40	1.11	1	J	P600 . -D28. ..
D4140-07-29.00F32-J	29	208	254	60	32	40	1.14	1	J	P600 . -D29. ..
D4140-07-30.00F32-K	30	215	262	60	32	40	1.24	1	K	P600 . -D30. ..
D4140-07-31.00F32-K	31	223	270	60	32	40	1.30	1	K	P600 . -D31. ..
★ D4140-07-32.00F40-M	32	230	278	70	40	50	1.80	1	M	P600 . -D32. ..
★ D4140-07-33.00F40-M	33	237	286	70	40	50	1.91	1	M	P600 . -D33.0 ..
★ D4140-07-34.00F40-N	34	244	294	70	40	50	2.1	1	N	P600 . -D34.0 ..
★ D4140-07-35.00F40-N	35	251	302	70	40	50	2.2	1	N	P600 . -D35.0 ..
★ D4140-07-36.00F40-P	36	259	310	70	40	50	2.33	1	P	P600 . -D36.0 ..
★ D4140-07-37.00F40-P	37	266	318	70	40	50	2.47	1	P	P600 . -D37. ..

Bodies and assembly parts are included in the scope of delivery.

★ New addition to the product range

Assembly parts

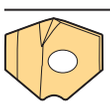
	D_c [mm]	12–13	14–15	16–17	18–19	20–21	22–23	24–25	26–27	28–31	32–37
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 1.2 Nm	FS1397 (Torx 8IP) 2.0 Nm	FS1398 (Torx 8IP) 2.0 Nm	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1401 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm	FS1403 (Torx 25IP) 5.5 Nm	FS1404 (Torx 25IP) 5.5 Nm	FS2159 (Torx 25IP) 5.5 Nm

Accessories

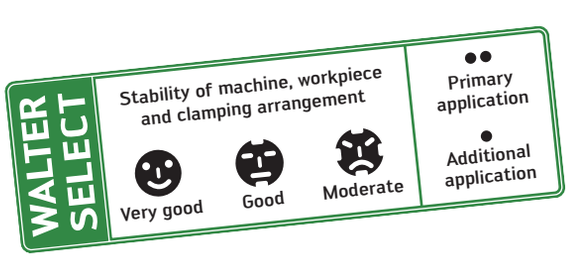
	D_c [mm]	12–13	14–17	18–19	20–25	26–37
	Torque T-handle Tightening torque					FS2041 4.5–14 Nm
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

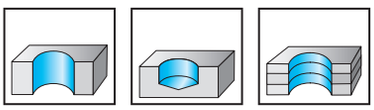
Drill inserts

	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–37.99	A–P	●	●						
	P6003-D..	12–37.99	A–P			◐	●				●
	P6004-D..	12–31.5	A–K							●	
	P6005-D..	12–37.99	A–P						◐		
	P6002-D..	14–19	B–D					◐			

HC = Coated carbide



Solid drills
D4140-07 inch



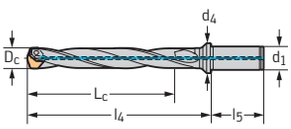
7×D_C | 140° | Z=2

	P	M	K	N	S	H	O
D4140-07	●●	●	●●	●●	●		

B1

Tool

Parallel shank with collar

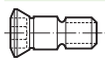


Designation	D_C Inch	L_C Inch	l_4 Inch	l_5 Inch	d_1 Inch	d_4 Inch	lbs	No. of indexable inserts	Type
★ D4140.07-12.00A15-A	0.472	3.386	4.567	1.890	0.625	0.787	0.51	1	P600 . -D12. ..
★ D4140.07-13.00A15-A	0.512	3.661	4.882	1.890	0.625	0.787	0.51	1	P600 . -D13. ..
★ D4140.07-14.00A15-B	0.551	3.976	5.196	1.890	0.625	0.787	0.60	1	P600 . -D14. ..
★ D4140.07-15.00A15-B	0.591	4.252	5.511	1.890	0.625	0.787	0.62	1	P600 . -D15. ..
★ D4140.07-16.00A19-C	0.630	4.528	5.827	2.031	0.750	0.984	0.68	1	P600 . -D16. ..
★ D4140.07-17.00A19-C	0.669	4.803	6.142	2.031	0.750	0.984	0.77	1	P600 . -D17. ..
★ D4140.07-18.00A19-D	0.709	5.079	6.457	2.031	0.750	0.984	0.75	1	P600 . -D18. ..
★ D4140.07-19.00A19-D	0.748	5.354	6.771	2.031	0.750	0.984	0.82	1	P600 . -D19. ..
★ D4140.07-20.00A19-E	0.787	5.669	7.086	2.031	0.750	0.984	0.88	1	P600 . -D20. ..
★ D4140.07-21.00A19-E	0.827	5.945	7.401	2.031	0.750	0.984	0.95	1	P600 . -D21. ..
★ D4140.07-22.00A26-F	0.866	6.220	7.756	2.281	1.000	1.260	1.39	1	P600 . -D22. ..
★ D4140.07-24.00A26-G	0.945	6.772	8.386	2.281	1.000	1.260	1.59	1	P600 . -D24. ..
★ D4140.07-26.00A26-H	1.024	7.362	9.016	2.281	1.000	1.260	1.83	1	P600 . -D26. ..
★ D4140.07-28.00A31-J	1.102	7.913	9.685	2.281	1.250	1.575	2.49	1	P600 . -D28. ..
★ D4140.07-30.00A31-K	1.181	8.465	10.315	2.281	1.250	1.575	2.87	1	P600 . -D30. ..

Bodies and assembly parts are included in the scope of delivery.

★ New addition to the product range

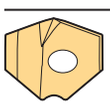
Assembly parts

	D_c [Inch]	0.472–0.512	0.551–0.591	0.630–0.669	0.709–0.748	0.787–0.866	0.945	1.024	1.102–1.181
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 11 in lbs	FS1397 (Torx 8IP) 18 in lbs	FS1398 (Torx 8IP) 18 in lbs	FS1399 (Torx 15IP) 35 in lbs	FS1400 (Torx 20IP) 44 in lbs	FS1402 (Torx 20IP) 44 in lbs	FS1403 (Torx 25IP) 49 in lbs	FS1404 (Torx 25IP) 49 in lbs

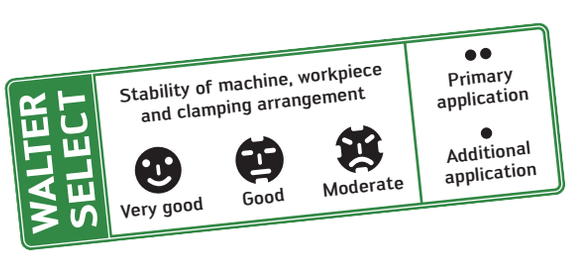
Accessories

	D_c [Inch]	0.472–0.512	0.551–0.669	0.709–0.748	0.787–0.945	1.024–1.181
	Torque T-handle Tightening torque					FS2042 40–124 in lbs
	Torque screwdriver. analogue Tightening torque	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

Drill inserts

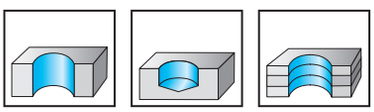
	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WXK25	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	12–30.5	A–K	☹	☹						
	P6003-D..	12–30.5	A–K			☹	☹				☹
	P6004-D..	12–30.5	A–K							☹	
	P6005-D..	12–30.5	A–K						☹		
	P6002-D..	14–19	B–D					☹			

HC = Coated carbide



Solid drills
D4140-07 inch

7×D_C | 140° | Z=2

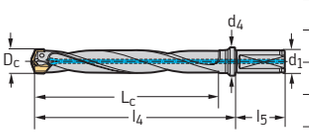


	P	M	K	N	S	H	O
D4140-07	●●	●	●●	●●	●		

B1

Tool

Parallel shank with flat

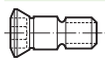


Designation	D_C Inch	L_C Inch	l_4 Inch	l_5 Inch	d_1 Inch	d_4 Inch	lbs	No. of indexable inserts	Type
D4140.07-12.00F15-A	0.472	3.386	4.567	1.890	0.625	0.787	0.37	1	P600 . -D12. ..
D4140.07-13.00F15-A	0.512	3.661	4.882	1.890	0.625	0.787	0.39	1	P600 . -D13. ..
D4140.07-14.00F15-B	0.551	3.976	5.197	1.890	0.625	0.787	0.42	1	P600 . -D14. ..
D4140.07-15.00F15-B	0.591	4.252	5.511	1.890	0.625	0.787	0.45	1	P600 . -D15. ..
D4140.07-18.00F19-D	0.630	5.079	6.457	2.031	0.750	0.984	0.73	1	P600 . -D16. ..
D4140.07-19.00F19-D	0.669	5.354	6.772	2.031	0.750	0.984	0.79	1	P600 . -D17. ..
D4140.07-20.00F19-E	0.709	5.669	7.086	2.031	0.750	0.984	0.86	1	P600 . -D18. ..
D4140.07-21.00F19-E	0.748	5.945	7.401	2.031	0.750	0.984	0.93	1	P600 . -D19. ..
D4140.07-22.00F26-F	0.787	6.220	7.755	2.281	1.000	1.260	1.35	1	P600 . -D20. ..
D4140.07-23.00F26-F	0.827	6.496	8.071	2.281	1.000	1.260	1.43	1	P600 . -D21. ..
D4140.07-24.00F26-G	0.866	6.772	8.386	2.281	1.000	1.260	1.52	1	P600 . -D22. ..
D4140.07-25.00F26-G	0.906	7.087	8.699	2.281	1.000	1.260	1.61	1	P600 . -D23. ..
D4140.07-16.00F19-C	0.945	4.528	5.827	2.031	0.750	0.984	0.62	1	P600 . -D24. ..
D4140.07-17.00F19-C	0.984	4.803	6.142	2.031	0.750	0.984	0.70	1	P600 . -D25. ..
D4140.07-26.00F26-H	1.024	7.362	9.016	2.281	1.000	1.260	1.78	1	P600 . -D26. ..
D4140.07-27.00F26-H	1.063	7.638	9.330	2.281	1.000	1.260	1.80	1	P600 . -D27. ..
D4140.07-28.00F31-J	1.102	7.913	9.685	2.281	1.250	1.575	2.38	1	P600 . -D28. ..
D4140.07-29.00F31-J	1.142	8.189	10.000	2.281	1.250	1.575	2.43	1	P600 . -D29. ..
D4140.07-30.00F31-K	1.181	8.465	10.315	2.281	1.250	1.575	2.84	1	P600 . -D30. ..
D4140.07-31.00F31-K	1.220	8.780	10.630	2.281	1.250	1.575	2.81	1	P600 . -D31. ..
★ D4140.07-32.00F31-M	1.260	9.055	10.945	2.281	1.250	1.575	3.06	1	P600 . -D32. ..
★ D4140.07-33.00F31-M	1.299	9.331	11.259	2.281	1.250	1.575	3.26	1	P600 . -D33.0 ..
★ D4140.07-34.00F38-N	1.339	9.606	11.575	2.688	1.500	1.969	4.08	1	P600 . -D34.0 ..
★ D4140.07-35.00F38-N	1.378	9.882	11.890	2.688	1.500	1.969	4.34	1	P600 . -D35.0 ..
★ D4140.07-36.00F38-P	1.417	10.197	12.205	2.688	1.500	1.969	4.54	1	P600 . -D36.0 ..
★ D4140.07-37.00F38-P	1.457	10.433	12.520	2.688	1.500	1.969	4.81	1	P600 . -D37. ..

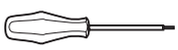
Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

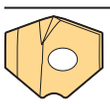
	D_c [Inch]	0.472–0.512	0.551–0.591	0.630–0.669	0.709–0.748	0.787–0.827	0.866–0.906	0.945–0.984	1.024–1.063	1.102–1.299	1.339–1.457
	Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 11 in lbs	FS1397 (Torx 8IP) 18 in lbs	FS1398 (Torx 8IP) 18 in lbs	FS1399 (Torx 15IP) 35 in lbs	FS1400 (Torx 20IP) 44 in lbs	FS1401 (Torx 20IP) 44 in lbs	FS1402 (Torx 20IP) 44 in lbs	FS1403 (Torx 25IP) 49 in lbs	FS1404 (Torx 25IP) 49 in lbs	FS2159 (Torx 25IP) 49 in lbs

Accessories

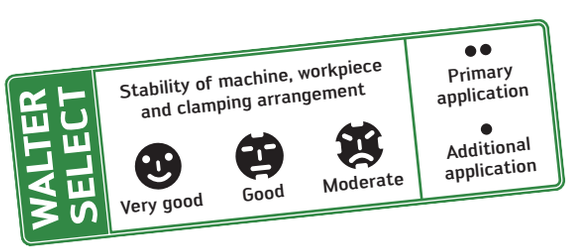
	D_c [Inch]	0.472–0.512	0.551–0.669	0.709–0.748	0.787–0.984	1.024–1.457
	Torque T-handle Tightening torque					FS2042 40–124 in lbs
	Torque screwdriver. analogue Tightening torque	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2049 (Torx 25IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1487 (Torx 25IP)

B1

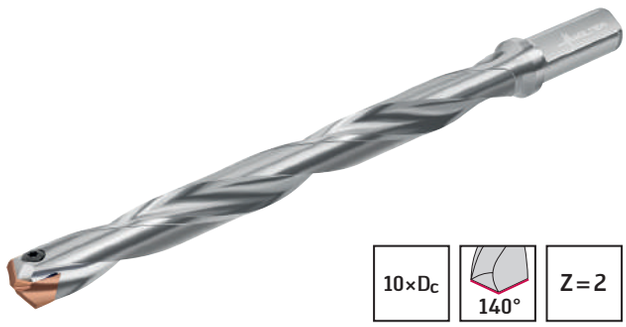
Drill inserts

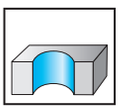
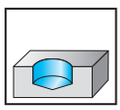
	Designation	D_c mm	Seat size	P			M	K		N	S				
					HC		HC	HC		HC	HC				
				WXP45	WPP45C	WMP35	WMP35	WXK25	WKK45C	WNN25	WMP35				
	P6001-D..	12–37.99	A–P	●	●										
	P6003-D..	12–37.99	A–P			◐	●				●				
	P6004-D..	12–31.5	A–K							●					
	P6005-D..	12–37.99	A–P						◐						
	P6002-D..	14–19	B–D					◐							

HC = Coated carbide



Solid drills
D4140-10 mm



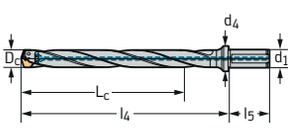
10×D_C | 140° | Z=2

	P	M	K	N	S	H	O
D4140-10	●●	●	●●	●●	●		

B1

Tool

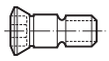
Parallel shank with flat



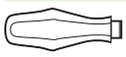
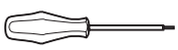
Designation	D_C mm	L_C mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Seat size	Type
D4140-10-18.00F20-D	18	183	218	50	20	25	0.40	1	D	P600 . -D18. ..
D4140-10-20.00F20-E	20	204	240	50	20	25	0.48	1	E	P600 . -D20. ..
D4140-10-22.00F25-F	22	224	263	56	25	32	0.71	1	F	P600 . -D22. ..
D4140-10-24.00F25-G	24	244	285	56	25	32	0.83	1	G	P600 . -D24. ..

Bodies and assembly parts are included in the scope of delivery.

Assembly parts

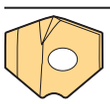
	D_c [mm]	18	20	22	24
	Clamping screw for drill insert Tightening torque	FS1399 (Torx 15IP) 4.0 Nm	FS1400 (Torx 20IP) 5.0 Nm	FS1401 (Torx 20IP) 5.0 Nm	FS1402 (Torx 20IP) 5.0 Nm

Accessories

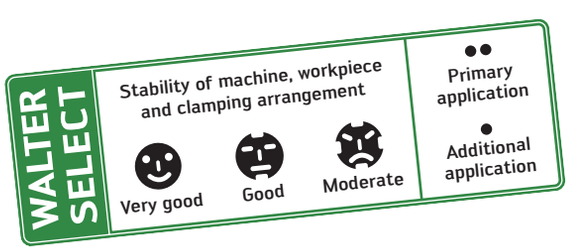
	D_c [mm]	18	20–24
	Torque screwdriver, analogue Tightening torque	FS2004 1.5–5.0 Nm	FS2004 1.5–5.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
	Screwdriver	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

B1

Drill inserts

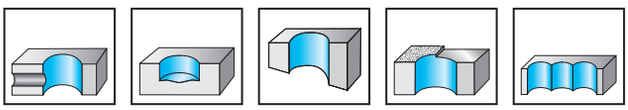
	Designation	D_c mm	Seat size	P HC WXP45	P HC WPP45C	P HC WMP35	M HC WMP35	K HC WKK45C	N HC WNN25	S HC WMP35
	P6001-D..	18–24.7	D–G	●●	●●					
	P6003-D..	18–24.7	D–G			○	●●			●●
	P6004-D..	18–24.5	D–G						●●	
	P6005-D..	18–24.7	D–G					○		

HC = Coated carbide



Solid drills
D4120-02 mm

2×D_c | Z=1



B1

	P	M	K	N	S	H	O
D4120-02	●●	●●	●●	●	●●		

Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
Parallel shank with flat	★ D4120-02-14.00F20-P41	14	28	48	50	20	25	0.24	1 1	
	★ D4120-02-15.00F20-P41	15	30	50	50	20	25	0.24	1 1	P484 . P-1R- .. P484 . C-1R- ..
	★ D4120-02-16.00F25-P41	16	32	57	56	25	35	0.47	1 1	
Parallel shank with flat	★ D4120-02-17.00F25-P42	17	34	59	56	25	35	0.43	1 1	
	★ D4120-02-18.00F25-P42	18	36	61	56	25	35	0.43	1 1	P484 . P-2R- .. P484 . C-2R- ..
	★ D4120-02-19.00F25-P42	19	38	63	56	25	35	0.42	1 1	
	★ D4120-02-20.00F25-P42	20	40	65	56	25	35	0.44	1 1	
Parallel shank with flat	★ D4120-02-21.00F25-P43	21	42	67	56	25	35	0.45	1 1	
	★ D4120-02-22.00F25-P43	22	44	69	56	25	35	0.47	1 1	P484 . P-3R- .. P484 . C-3R- ..
	★ D4120-02-23.00F25-P43	23	46	71	56	25	35	0.48	1 1	
	★ D4120-02-24.00F25-P43	24	48	73	56	25	35	0.48	1 1	
Parallel shank with flat	★ D4120-02-25.00F25-P44	25	50	75	56	25	35	0.51	1 1	
	★ D4120-02-26.00F32-P44	26	52	84	60	32	42	0.72	1 1	
	★ D4120-02-27.00F32-P44	27	54	86	60	32	42	0.78	1 1	P484 . P-4R- .. P484 . C-4R- ..
	★ D4120-02-28.00F32-P44	28	56	88	60	32	42	0.81	1 1	
	★ D4120-02-29.00F32-P44	29	58	90	60	32	42	0.81	1 1	
Parallel shank with flat	★ D4120-02-30.00F32-P45	30	60	92	60	32	42	0.84	1 1	
	★ D4120-02-31.00F32-P45	31	62	94	60	32	42	0.87	1 1	
	★ D4120-02-32.00F32-P45	32	64	96	60	32	42	0.88	1 1	P484 . P-5R- .. P484 . C-5R- ..
	★ D4120-02-33.00F32-P45	33	66	98	60	32	42	0.91	1 1	
	★ D4120-02-34.00F32-P45	34	68	100	60	32	42	0.94	1 1	
	★ D4120-02-35.00F32-P45	35	70	102	60	32	42	0.97	1 1	

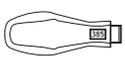
Bodies and assembly parts are included in the scope of delivery.

★ New addition to the product range

Assembly parts

	D_c [mm]	14–16	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2120 (Torx 6IP) 0.4 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

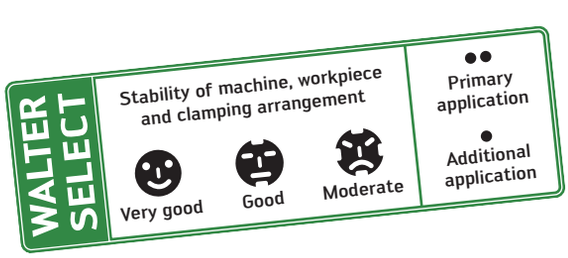
Accessories

	D_c [mm]	14–16	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque			FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

Indexable inserts

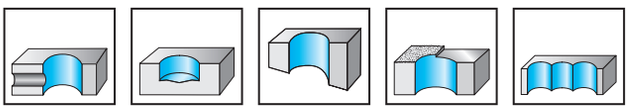
	Designation	Size	P HC					M HC			K HC				N HC		S HC		
			WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45	WXP40	WSP45	WSP45S	WXP40
	P4840P-.R-A57	1–5	☺	☹	☹			☹				☺	☹				☹		
	P4840P-.R-E57	1–5	☺	☺	☹			☹				☺	☹				☹		
	P4840P-.R-E67	1–5	☺	☺	☹			☹				☺	☹		☺		☹		
	P4841P-.R-A57	1–5	☺	☹	☹			☹				☺	☹				☹		
	P4841P-.R-E57	1–5	☺	☺	☹			☹				☺	☹				☹		
	P4840C-.R-E67	1–5		☺			☹			☹			☺	☹		☺			☹
	P4841C-.R-A57	1–5		☺			☹			☹			☹	☹					☹
	P4841C-.R-E57	1–5		☺			☹			☹			☺	☹					☹

HC = Coated carbide



Solid drills
D4120-02 mm

2×D_c | Z=1

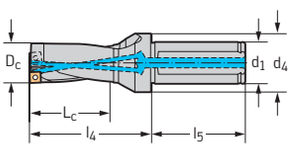


	P	M	K	N	S	H	O
D4120-02	●●	●●	●●	●	●●		

B1

Tool

Parallel shank with flat



Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
★ D4120-02-36.00F32-P46	36	72	104	60	32	42	0.96	1 1	P484 . P-6R- .. P484 . C-6R- ..
★ D4120-02-37.00F40-P46	37	74	114	70	40	50	1.48	1 1	
★ D4120-02-38.00F40-P46	38	76	116	70	40	50	1.52	1 1	
★ D4120-02-39.00F40-P46	39	78	118	70	40	50	1.55	1 1	
★ D4120-02-40.00F40-P46	40	80	120	70	40	50	1.45	1 1	
★ D4120-02-41.00F40-P46	41	82	122	70	40	50	1.68	1 1	
★ D4120-02-42.00F40-P46	42	84	124	70	40	50	1.73	1 1	

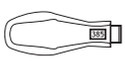
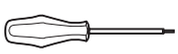
Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

	D_c [mm]	14–16	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2120 (Torx 6IP) 0.4 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

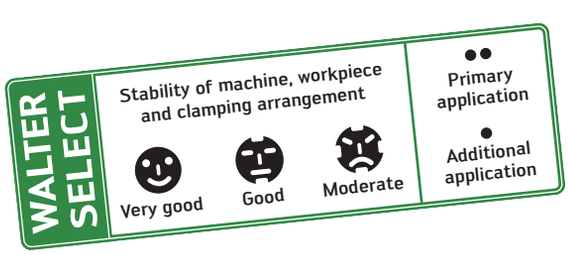
Accessories

	D_c [mm]	14–16	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque			FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

Indexable inserts

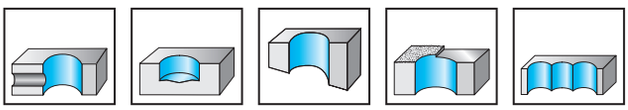
	Designation	Size	P HC					M HC			K HC				N HC		S HC		
			WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45	WXP40	WSP45	WSP45S	WXP40
	P4840P-.R-A57	6	●●	●●	●●			●●				●●	●●				●●		
	P4840P-.R-E57	6	●●	●●	●●			●●				●●	●●				●●		
	P4840P-.R-E67	6	●●	●●	●●			●●				●●	●●		●		●●		
	P4841P-.R-A57	6	●●	●●	●●			●●				●●	●●				●●		
	P4841P-.R-E57	6	●●	●●	●●			●●				●●	●●				●●		
	P4840C-.R-E67	6		●●			●●			●●			●●	●●		●			●●
	P4841C-.R-A57	6		●●			●●			●●			●●	●●					●●
	P4841C-.R-E57	6		●●			●●			●●			●●	●●					●●

HC = Coated carbide



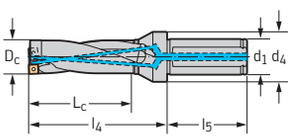
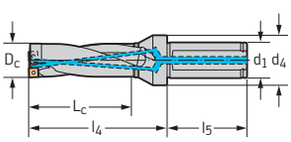
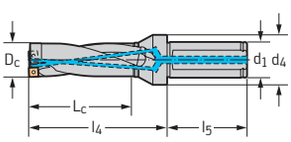
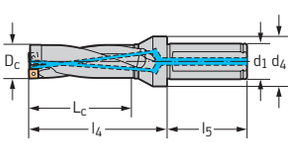
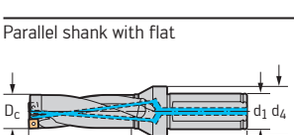
Solid drills
D4120-03 mm

3×D_c | Z=1



	P	M	K	N	S	H	O
D4120-03	●●	●●	●●	●	●●		

B1

Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
Parallel shank with flat 	★ D4120-03-14.00F20-P41	14	42	62	50	20	25	0.17	1 1	P484 . P-1R- .. P484 . C-1R- ..
	★ D4120-03-15.00F20-P41	15	45	65	50	20	25	0.25	1 1	
	★ D4120-03-16.00F25-P41	16	48	73	56	25	35	0.40	1 1	
Parallel shank with flat 	★ D4120-03-17.00F25-P42	17	51	76	56	25	35	0.35	1 1	P484 . P-2R- .. P484 . C-2R- ..
	★ D4120-03-18.00F25-P42	18	54	79	56	25	35	0.44	1 1	
	★ D4120-03-19.00F25-P42	19	57	82	56	25	35	0.46	1 1	
	★ D4120-03-20.00F25-P42	20	60	85	56	25	35	0.47	1 1	
Parallel shank with flat 	★ D4120-03-21.00F25-P43	21	63	88	56	25	35	0.39	1 1	P484 . P-3R- .. P484 . C-3R- ..
	★ D4120-03-22.00F25-P43	22	66	91	56	25	35	0.50	1 1	
	★ D4120-03-23.00F25-P43	23	69	94	56	25	35	0.52	1 1	
	★ D4120-03-24.00F25-P43	24	72	97	56	25	35	0.53	1 1	
Parallel shank with flat 	★ D4120-03-25.00F25-P44	25	75	100	56	25	35	0.43	1 1	P484 . P-4R- .. P484 . C-4R- ..
	★ D4120-03-26.00F32-P44	26	78	110	60	32	42	0.84	1 1	
	★ D4120-03-27.00F32-P44	27	81	113	60	32	42	0.87	1 1	
	★ D4120-03-28.00F32-P44	28	84	116	60	32	42	0.90	1 1	
	★ D4120-03-29.00F32-P44	29	87	119	60	32	42	0.92	1 1	
Parallel shank with flat 	★ D4120-03-30.00F32-P45	30	90	122	60	32	42	0.82	1 1	P484 . P-5R- .. P484 . C-5R- ..
	★ D4120-03-31.00F32-P45	31	93	125	60	32	42	0.95	1 1	
	★ D4120-03-32.00F32-P45	32	96	128	60	32	42	1	1 1	
	★ D4120-03-33.00F32-P45	33	99	131	60	32	42	1.03	1 1	
	★ D4120-03-34.00F32-P45	34	102	134	60	32	42	1.07	1 1	
	★ D4120-03-35.00F32-P45	35	105	137	60	32	42	1.12	1 1	

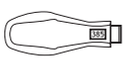
Bodies and assembly parts are included in the scope of delivery.

☻☻☻ / ★ New addition to the product range

Assembly parts

	D_c [mm]	14–16	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2120 (Torx 6IP) 0.4 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

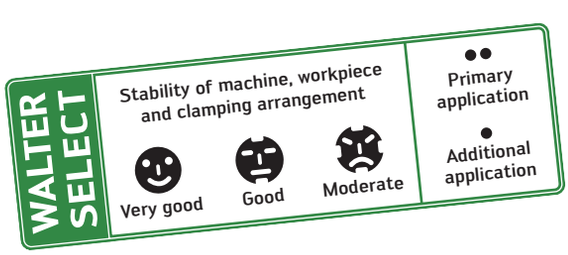
Accessories

	D_c [mm]	14–16	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque			FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

Indexable inserts

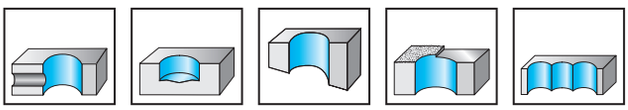
	Designation	Size	P HC					M HC			K HC				N HC		S HC		
			WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45	WXP40	WSP45	WSP45S	WXP40
	P4840P-.R-A57	1–5	●	●	●			●				●	●				●		
	P4840P-.R-E57	1–5	●	●	●			●				●	●				●		
	P4840P-.R-E67	1–5	●	●	●			●				●	●		●		●		
	P4841P-.R-A57	1–5	●	●	●			●				●	●				●		
	P4841P-.R-E57	1–5	●	●	●			●				●	●				●		
	P4840C-.R-E67	1–5		●			●			●			●	●		●			●
	P4841C-.R-A57	1–5		●			●			●			●	●					●
	P4841C-.R-E57	1–5		●			●			●			●	●					●

HC = Coated carbide



Solid drills
D4120-03 mm

3×D_c | Z=1

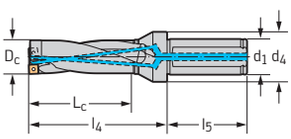


	P	M	K	N	S	H	O
D4120-03	●●	●●	●●	●	●●		

B1

Tool

Parallel shank with flat



Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
★ D4120-03-36.00F32-P46	36	108	140	60	32	42	1.02	1 1	P484 . P-6R- .. P484 . C-6R- ..
★ D4120-03-37.00F40-P46	37	111	151	70	40	50	1.68	1 1	
★ D4120-03-38.00F40-P46	38	114	154	70	40	50	1.75	1 1	
★ D4120-03-39.00F40-P46	39	117	157	70	40	50	1.80	1 1	
★ D4120-03-40.00F40-P46	40	120	160	70	40	50	1.86	1 1	
★ D4120-03-41.00F40-P46	41	123	163	70	40	50	1.92	1 1	
★ D4120-03-42.00F40-P46	42	126	166	70	40	50	1.95	1 1	

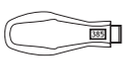
Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

	D_c [mm]	14–16	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2120 (Torx 6IP) 0.4 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

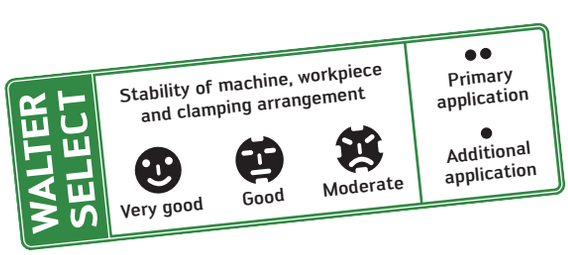
Accessories

	D_c [mm]	14–16	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque			FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

Indexable inserts

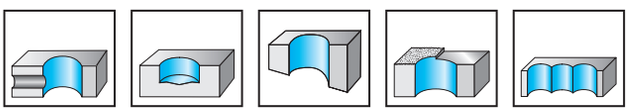
	Designation	Size	P HC					M HC			K HC				N HC		S HC		
			WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45	WXP40	WSP45	WSP45S	WXP40
	P4840P-.R-A57	6	●	●	●			●				●	●				●		
	P4840P-.R-E57	6	●	●	●			●				●	●				●		
	P4840P-.R-E67	6	●	●	●			●				●	●		●		●		
	P4841P-.R-A57	6	●	●	●			●				●	●				●		
	P4841P-.R-E57	6	●	●	●			●				●	●				●		
	P4840C-.R-E67	6		●			●			●			●	●		●			●
	P4841C-.R-A57	6		●			●			●			●	●					●
	P4841C-.R-E57	6		●			●			●			●	●					●

HC = Coated carbide



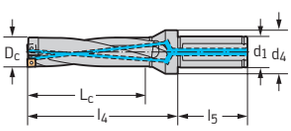
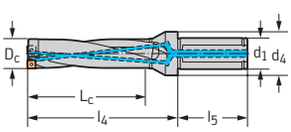
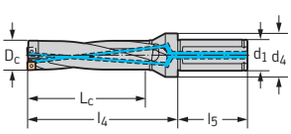
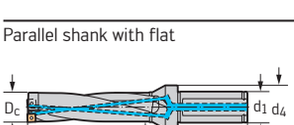
Solid drills
D4120-04 mm

4×D_c | Z=1



	P	M	K	N	S	H	O
D4120-04	●●	●	●●	●	●		

B1

Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
Parallel shank with flat 	★ D4120-04-17.00F25-P42	17	68	93	56	25	35	0.46	1 1	P484 . P-2R- .. P484 . C-2R- ..
	★ D4120-04-18.00F25-P42	18	72	97	56	25	35	0.49	1 1	
	★ D4120-04-19.00F25-P42	19	76	101	56	25	35	0.48	1 1	
	★ D4120-04-20.00F25-P42	20	80	105	56	25	35	0.50	1 1	
Parallel shank with flat 	★ D4120-04-21.00F25-P43	21	84	109	56	25	35	0.51	1 1	P484 . P-3R- .. P484 . C-3R- ..
	★ D4120-04-22.00F25-P43	22	88	113	56	25	35	0.53	1 1	
	★ D4120-04-23.00F25-P43	23	92	117	56	25	35	0.55	1 1	
	★ D4120-04-24.00F25-P43	24	96	121	56	25	35	0.59	1 1	
Parallel shank with flat 	★ D4120-04-25.00F25-P44	25	100	125	56	25	35	0.62	1 1	P484 . P-4R- .. P484 . C-4R- ..
	★ D4120-04-26.00F32-P44	26	104	136	60	32	42	0.89	1 1	
	★ D4120-04-27.00F32-P44	27	108	140	60	32	42	0.93	1 1	
	★ D4120-04-28.00F32-P44	28	112	144	60	32	42	0.97	1 1	
	★ D4120-04-29.00F32-P44	29	116	148	60	32	42	1.01	1 1	
Parallel shank with flat 	★ D4120-04-30.00F32-P45	30	120	152	60	32	42	1.02	1 1	P484 . P-5R- .. P484 . C-5R- ..
	★ D4120-04-31.00F32-P45	31	124	156	60	32	42	1.07	1 1	
	★ D4120-04-32.00F32-P45	32	128	160	60	32	42	1.10	1 1	
	★ D4120-04-33.00F32-P45	33	132	164	60	32	42	1.17	1 1	
	★ D4120-04-34.00F32-P45	34	136	168	60	32	42	1.18	1 1	
	★ D4120-04-35.00F32-P45	35	140	172	60	32	42	1.28	1 1	

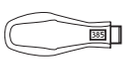
Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

	D_c [mm]	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

Accessories

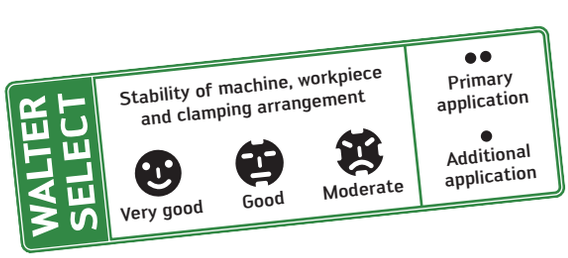
	D_c [mm]	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque		FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

B1

Indexable inserts

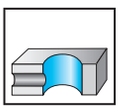
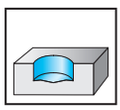
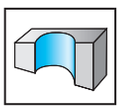
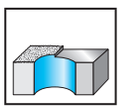
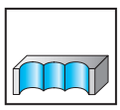
	Designation	Size	P HC WKP25S	P HC WKP35S	P HC WSP45	P HC WSP45S	P HC WXP40	M HC WSP45	M HC WSP45S	M HC WXP40	K HC WAK15	K HC WKP25S	K HC WKP35S	K HC WXP40	N HC WSP45	N HC WXP40	S HC WSP45	S HC WSP45S	S HC WXP40
	P4840P-.R-A57	2–5	●	●	●			●				●	●				●		
	P4840P-.R-E57	2–5	●	●	●			●				●	●				●		
	P4840P-.R-E67	2–5	●	●	●			●				●	●		●		●		
	P4841P-.R-A57	2–5	●	●	●			●				●	●				●		
	P4841P-.R-E57	2–5	●	●	●			●				●	●				●		
	P4840C-.R-E67	2–5		●			●			●			●	●		●				●
	P4841C-.R-A57	2–5		●			●			●			●	●						●
	P4841C-.R-E57	2–5		●			●			●			●	●						●

HC = Coated carbide



Solid drills
D4120-04 mm

4×D_c | Z=1

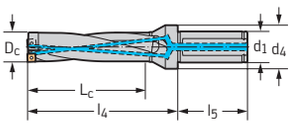






	P	M	K	N	S	H	O
D4120-04	●●	●	●●	●	●		

B1

Tool

Parallel shank with flat



Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
★ D4120-04-36.00F32-P46	36	144	176	60	32	42	1.26	1 1	P484 . P-6R- .. P484 . C-6R- ..
★ D4120-04-37.00F40-P46	37	148	188	70	40	50	1.86	1 1	
★ D4120-04-38.00F40-P46	38	152	192	70	40	50	1.93	1 1	
★ D4120-04-39.00F40-P46	39	156	196	70	40	50	2.05	1 1	
★ D4120-04-40.00F40-P46	40	160	200	70	40	50	2.07	1 1	
★ D4120-04-41.00F40-P46	41	164	204	70	40	50	2.21	1 1	
★ D4120-04-42.00F40-P46	42	168	208	70	40	50	2.23	1 1	

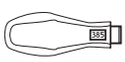
Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

	D_c [mm]	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

Accessories

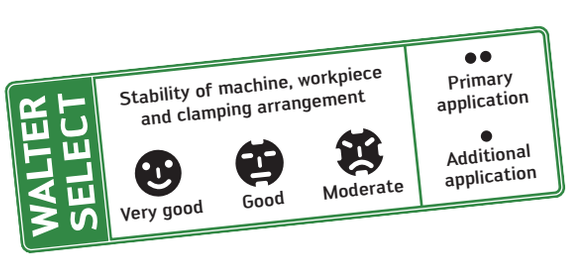
	D_c [mm]	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque		FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

B1

Indexable inserts

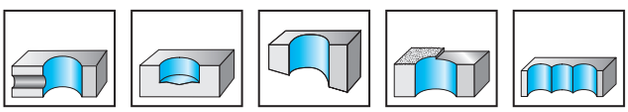
	Designation	Size	P HC					M HC			K HC				N HC		S HC		
			WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45	WXP40	WSP45	WSP45S	WXP40
	P4840P-.R-A57	6	●	●	●●			●●				●	●				●●		
	P4840P-.R-E57	6	○	●	●●			●●				●	●				●●		
	P4840P-.R-E67	6	○	●	●●			●●				●	●●		●		●●		
	P4841P-.R-A57	6	●	●●	●●			●●				●	●●				●●		
	P4841P-.R-E57	6	○	●	●●			●●				●	●●				●●		
	P4840C-.R-E67	6		○			●●			●●			○	●●		●			●●
	P4841C-.R-A57	6		●			●●			●●			●●	●●					●●
	P4841C-.R-E57	6		●			●●			●●			●●	●●					●●

HC = Coated carbide



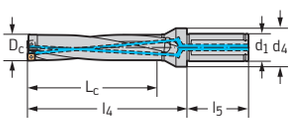
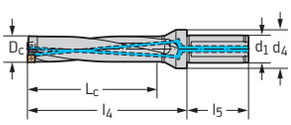
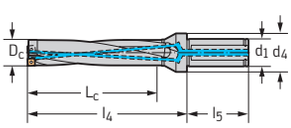
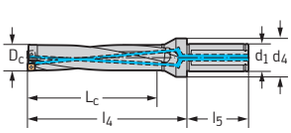
Solid drills
D4120-05 mm

5×D_c | Z=1



	P	M	K	N	S	H	O
D4120-05	●●		●●	●			

B1

Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
Parallel shank with flat 	★ D4120-05-17.00F25-P42	17	85	110	56	25	35	0.39	1 1	P484 . P-2R- .. P484 . C-2R- ..
	★ D4120-05-18.00F25-P42	18	90	115	56	25	35	0.47	1 1	
	★ D4120-05-19.00F25-P42	19	95	120	56	25	35	0.50	1 1	
	★ D4120-05-20.00F25-P42	20	100	125	56	25	35	0.52	1 1	
Parallel shank with flat 	★ D4120-05-21.00F25-P43	21	105	130	56	25	35	0.45	1 1	P484 . P-3R- .. P484 . C-3R- ..
	★ D4120-05-22.00F25-P43	22	110	135	56	25	35	0.58	1 1	
	★ D4120-05-23.00F25-P43	23	115	140	56	25	35	0.62	1 1	
	★ D4120-05-24.00F25-P43	24	120	145	56	25	35	0.63	1 1	
Parallel shank with flat 	★ D4120-05-25.00F25-P44	25	125	150	56	25	35	0.54	1 1	P484 . P-4R- .. P484 . C-4R- ..
	★ D4120-05-26.00F32-P44	26	130	162	60	32	42	0.97	1 1	
	★ D4120-05-27.00F32-P44	27	135	167	60	32	42	1.02	1 1	
	★ D4120-05-28.00F32-P44	28	140	172	60	32	42	1.06	1 1	
	★ D4120-05-29.00F32-P44	29	145	177	60	32	42	1.10	1 1	
Parallel shank with flat 	★ D4120-05-30.00F32-P45	30	150	182	60	32	42	1.01	1 1	P484 . P-5R- .. P484 . C-5R- ..
	★ D4120-05-31.00F32-P45	31	155	187	60	32	42	1.18	1 1	
	★ D4120-05-32.00F32-P45	32	160	192	60	32	42	1.23	1 1	
	★ D4120-05-33.00F32-P45	33	165	197	60	32	42	1.30	1 1	
	★ D4120-05-34.00F32-P45	34	170	202	60	32	42	1.37	1 1	
	★ D4120-05-35.00F32-P45	35	175	207	60	32	42	1.45	1 1	

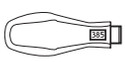
Bodies and assembly parts are included in the scope of delivery.

★ New addition to the product range

Assembly parts

	D_c [mm]	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

Accessories

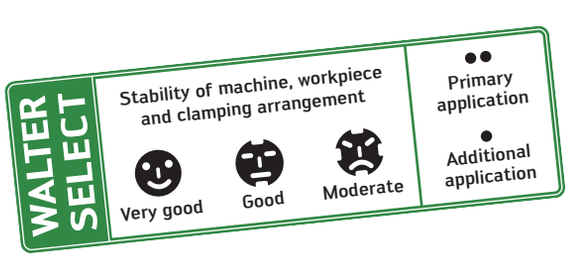
	D_c [mm]	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque		FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

B1

Indexable inserts

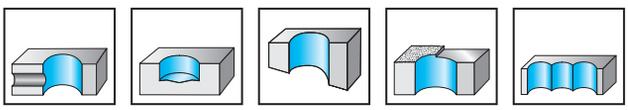
	Designation	Size	P HC					M HC			K HC				N HC		S HC		
			WKP25S	WKP35S	WSP45	WSP45S	WXP40	WSP45	WSP45S	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45	WXP40	WSP45	WSP45S	WXP40
	P4840P-.R-A57	2–5	●	●	●●			●●				●	●				●●		
	P4840P-.R-E57	2–5	◐	●	●●			●●				●	●				●●		
	P4840P-.R-E67	2–5	◐	●	●●			●●				●	●		○		●●		
	P4841P-.R-A57	2–5	●	●●	●●			●●				●	●●				●●		
	P4841P-.R-E57	2–5	◐	●	●●			●●				●	●●				●●		
	P4840C-.R-E67	2–5		◐			●●			●●			◐	●●		○			●●
	P4841C-.R-A57	2–5		●			●●			●●			●●	●●					●●
	P4841C-.R-E57	2–5		●			●●			●●			●●	●●					●●

HC = Coated carbide



Solid drills
D4120-05 mm

5×D_c | Z=1

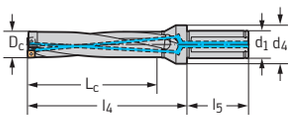


	P	M	K	N	S	H	O
D4120-05	●●		●●	●			

B1

Tool

Parallel shank with flat



Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
★ D4120-05-36.00F32-P46	36	180	212	60	32	42	1.32	1 1	P484 . P-6R- .. P484 . C-6R- ..
★ D4120-05-37.00F40-P46	37	185	225	70	40	50	1.45	1 1	
★ D4120-05-38.00F40-P46	38	190	230	70	40	50	2.02	1 1	
★ D4120-05-39.00F40-P46	39	195	235	70	40	50	2.09	1 1	
★ D4120-05-40.00F40-P46	40	200	240	70	40	50	2.17	1 1	
★ D4120-05-41.00F40-P46	41	205	245	70	40	50	2.26	1 1	
★ D4120-05-42.00F40-P46	42	210	250	70	40	50	2.37	1 1	

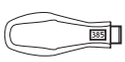
Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

	D_c [mm]	17–20	21–24	25–29	30–35	36–42
	Clamping screw for insert Tightening torque	FS2111 (Torx 7IP) 0.9 Nm	FS1454 (Torx 8IP) 1.2 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

Accessories

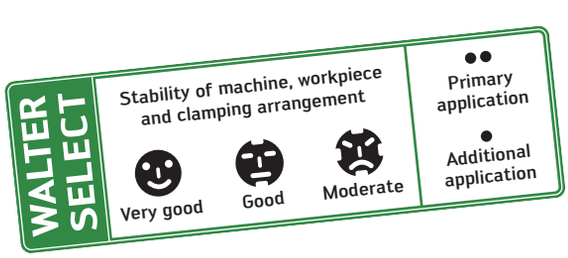
	D_c [mm]	17–20	21–24	25–29	30–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque		FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)

B1

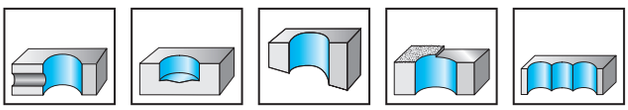
Indexable inserts

	Designation	Size	P HC WKP25S	P HC WKP35S	P HC WSP45	P HC WSP45S	P HC WXP40	M HC WSP45	M HC WSP45S	M HC WXP40	K HC WAK15	K HC WKP25S	K HC WKP35S	K HC WXP40	N HC WSP45	N HC WXP40	S HC WSP45	S HC WSP45S	S HC WXP40
	P4840P-.R-A57	6	●	●	●			●				●	●				●		
	P4840P-.R-E57	6	●	●	●			●				●	●				●		
	P4840P-.R-E67	6	●	●	●			●				●	●		●		●		
	P4841P-.R-A57	6	●	●	●			●				●	●				●		
	P4841P-.R-E57	6	●	●	●			●				●	●				●		
	P4840C-.R-E67	6		●			●			●			●	●		●			●
	P4841C-.R-A57	6		●			●			●			●	●					●
	P4841C-.R-E57	6		●			●			●			●	●					●

HC = Coated carbide



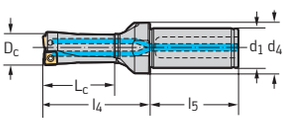
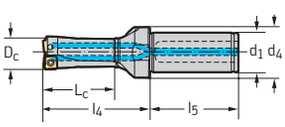
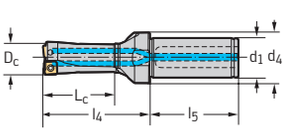
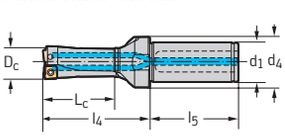
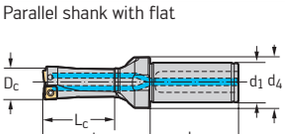
Solid drills
D3120-02 mm



D_c 16–42	2×D_c	Z=1

	P	M	K	N	S	H	O
D3120-02	●●	●	●●	●●	●		

B1

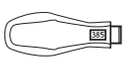
Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
Parallel shank with flat 	D3120-02-16.00F25-P21	16	32	57	56	25	32	0.30	2	P284 . S-1N- ..
	D3120-02-17.00F25-P21	17	34	59	56	25	32	0.31	2	
	D3120-02-18.00F25-P21	18	36	61	56	25	32	0.31	2	
	D3120-02-19.00F25-P21	19	38	63	56	25	32	0.32	2	
	D3120-02-20.00F25-P21	20	40	65	56	25	32	0.34	2	
Parallel shank with flat 	D3120-02-21.00F25-P22	21	42	67	56	25	32	0.36	2	P284 . S-2N- ..
	D3120-02-22.00F25-P22	22	44	69	56	25	32	0.35	2	
	D3120-02-23.00F25-P22	23	46	71	56	25	32	0.36	2	
	D3120-02-24.00F25-P22	24	48	73	56	25	32	0.37	2	
	D3120-02-25.00F25-P22	25	50	75	56	25	32	0.39	2	
Parallel shank with flat 	D3120-02-26.00F32-P23	26	52	84	60	32	40	0.62	2	P284 . S-3N- ..
	D3120-02-27.00F32-P23	27	54	86	60	32	40	0.68	2	
	D3120-02-28.00F32-P23	28	56	88	60	32	40	0.66	2	
	D3120-02-29.00F32-P23	29	58	90	60	32	40	0.69	2	
	D3120-02-30.00F32-P23	30	60	92	60	32	40	0.71	2	
Parallel shank with flat 	D3120-02-31.00F32-P24	31	62	94	60	32	40	0.69	2	P284 . S-4N- ..
	D3120-02-32.00F32-P24	32	64	96	60	32	40	0.72	2	
	D3120-02-33.00F32-P24	33	66	98	60	32	40	0.75	2	
	D3120-02-34.00F32-P24	34	68	100	60	32	40	0.78	2	
	D3120-02-35.00F32-P24	35	70	102	60	32	40	0.81	2	
	D3120-02-36.00F32-P24	36	72	104	60	32	40	0.85	2	
Parallel shank with flat 	D3120-02-37.00F40-P25	37	74	114	70	40	50	1.28	2	P284 . S-5N- ..
	D3120-02-38.00F40-P25	38	76	116	70	40	50	1.32	2	
	D3120-02-39.00F40-P25	39	78	118	70	40	50	1.36	2	
	D3120-02-40.00F40-P25	40	80	120	70	40	50	1.39	2	
	D3120-02-41.00F40-P25	41	82	122	70	40	50	1.44	2	
	D3120-02-42.00F40-P25	42	84	124	70	40	50	1.48	2	

Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	D_c [mm]	16–20	21–25	26–30	31–36	37–42
	Clamping screw for insert Tightening torque	FS1454 (Torx 8IP) 1.2 Nm	FS1456 (Torx 9IP) 2.0 Nm	FS2181 (Torx 15IP) 3.0 Nm	FS2119 (Torx 15IP) 3.0 Nm	FS2139 (Torx 20IP) 5.0 Nm

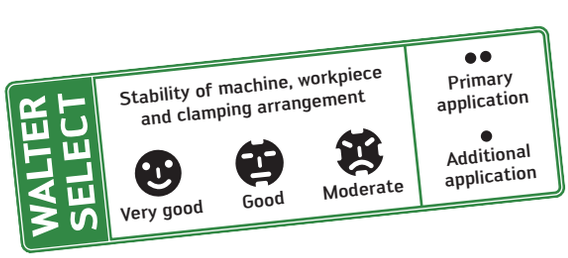
Accessories

	D_c [mm]	16–20	21–25	26–36	37–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
	Screwdriver	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

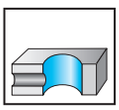
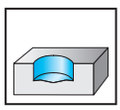
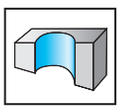
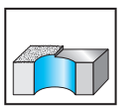
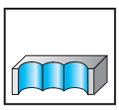
	Designation	Size	P HC WKP25S	P HC WKP35S	P HC WSP45	P HC WSP45S	P HC WXP40	M HC WSP45	M HC WSP45S	M HC WXP40	K HC WAK15	K HC WKP25S	K HC WKP35S	K HC WXP40	N HC WK40	S HC WK40	S HC WSP45	S HC WSP45S	S HC WXP40
	P2840S-.N-A57	1–5	●●	●		○	○		●●	○		●●	○	○				●●	○
	P2840S-.N-E67	1–5		○		○	○		○	○			○	○	○	○		○	○
	P2841S-.N-A57	1–5	●●	●		○	○	●●	○			●●	○	○				●●	○
	P2841S-.N-E57	1–5	●●	●		○	○	○	○			●●	○	○				○	○
	P2841S-.N-E67	1–5		●		○	○	○	○				○	○				○	○

HC = Coated carbide



Solid drills
D3120-03 mm

D_c 16–42	3×D_c	Z=1

	P	M	K	N	S	H	O
D3120-03	●●	●	●●	●●	●		

B1

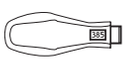
Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
Parallel shank with flat	D3120-03-16.00F25-P21	16	48	73	56	25	32	0.31	2	
	D3120-03-17.00F25-P21	17	51	76	56	25	32	0.32	2	
	D3120-03-18.00F25-P21	18	54	79	56	25	32	0.33	2	P284 . S-1N- ..
	D3120-03-19.00F25-P21	19	57	82	56	25	32	0.34	2	
	D3120-03-20.00F25-P21	20	60	85	56	25	32	0.40	2	
Parallel shank with flat	D3120-03-21.00F25-P22	21	63	88	56	25	32	0.36	2	
	D3120-03-22.00F25-P22	22	66	91	56	25	32	0.42	2	
	D3120-03-23.00F25-P22	23	69	94	56	25	32	0.37	2	P284 . S-2N- ..
	D3120-03-24.00F25-P22	24	72	97	56	25	32	0.42	2	
	D3120-03-25.00F25-P22	25	75	100	56	25	32	0.44	2	
Parallel shank with flat	D3120-03-26.00F32-P23	26	78	110	60	32	40	0.67	2	
	D3120-03-27.00F32-P23	27	81	113	60	32	40	0.74	2	
	D3120-03-28.00F32-P23	28	84	116	60	32	40	0.73	2	P284 . S-3N- ..
	D3120-03-29.00F32-P23	29	87	119	60	32	40	0.76	2	
	D3120-03-30.00F32-P23	30	90	122	60	32	40	0.84	2	
Parallel shank with flat	D3120-03-31.00F32-P24	31	93	125	60	32	40	0.78	2	
	D3120-03-32.00F32-P24	32	96	128	60	32	40	0.86	2	
	D3120-03-33.00F32-P24	33	99	131	60	32	40	0.86	2	P284 . S-4N- ..
	D3120-03-34.00F32-P24	34	102	134	60	32	40	0.9	2	
	D3120-03-35.00F32-P24	35	105	137	60	32	40	0.95	2	
	D3120-03-36.00F32-P24	36	108	140	60	32	40	1.00	2	
Parallel shank with flat	D3120-03-37.00F40-P25	37	111	151	70	40	50	1.43	2	
	D3120-03-38.00F40-P25	38	114	154	70	40	50	1.49	2	
	D3120-03-39.00F40-P25	39	117	157	70	40	50	1.64	2	P284 . S-5N- ..
	D3120-03-40.00F40-P25	40	120	160	70	40	50	1.60	2	
	D3120-03-41.00F40-P25	41	123	163	70	40	50	1.67	2	
	D3120-03-42.00F40-P25	42	126	166	70	40	50	1.83	2	

Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	D_c [mm]	16–20	21–25	26–30	31–36	37–42
	Clamping screw for insert Tightening torque	FS1454 (Torx 8IP) 1.2 Nm	FS1456 (Torx 9IP) 2.0 Nm	FS2181 (Torx 15IP) 3.0 Nm	FS2119 (Torx 15IP) 3.0 Nm	FS2139 (Torx 20IP) 5.0 Nm

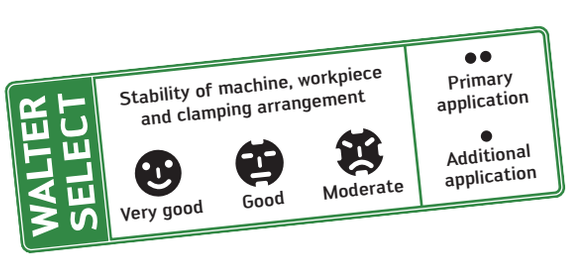
Accessories

	D_c [mm]	16–20	21–25	26–36	37–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
	Screwdriver	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

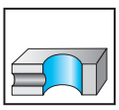
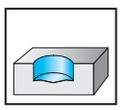
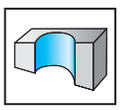
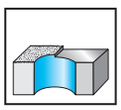
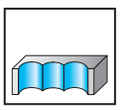
Indexable inserts

	Designation	Size	P HC WKP25S	P HC WKP35S	P HC WSP45	P HC WSP45S	P HC WXP40	M HC WSP45	M HC WSP45S	M HC WXP40	K HC WAK15	K HC WKP25S	K HC WKP35S	K HC WXP40	N HC WK40	S HC WK40	S HC WSP45	S HC WSP45S	S HC WXP40
	P2840S-.N-A57	1–5	●	●		●	●		●	●		●	●	●				●	●
	P2840S-.N-E67	1–5		●		●	●		●	●			●	●	●	●		●	●
	P2841S-.N-A57	1–5	●	●		●	●		●	●		●	●	●				●	●
	P2841S-.N-E57	1–5	●	●		●	●		●	●		●	●	●				●	●
	P2841S-.N-E67	1–5		●		●	●		●	●			●	●				●	●

HC = Coated carbide



Solid drills
D3120-04 mm

D_c 16–42	4×D_c	Z=1

	P	M	K	N	S	H	O
D3120-04	●●	●	●●	●●	●		

B1

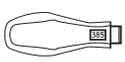
Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Type
Parallel shank with flat	D3120-04-16.00F25-P21	16	64	89	56	25	32	0.35	2	
	D3120-04-17.00F25-P21	17	68	93	56	25	32	0.33	2	
	D3120-04-18.00F25-P21	18	72	97	56	25	32	0.35	2	P284 . S-1N- ..
	D3120-04-19.00F25-P21	19	76	101	56	25	32	0.36	2	
	D3120-04-20.00F25-P21	20	80	105	56	25	32	0.38	2	
Parallel shank with flat	D3120-04-21.00F25-P22	21	84	109	56	25	32	0.38	2	
	D3120-04-22.00F25-P22	22	88	113	56	25	32	0.43	2	
	D3120-04-23.00F25-P22	23	92	117	56	25	32	0.43	2	P284 . S-2N- ..
	D3120-04-24.00F25-P22	24	96	121	56	25	32	0.46	2	
	D3120-04-25.00F25-P22	25	100	125	56	25	32	0.49	2	
Parallel shank with flat	D3120-04-26.00F32-P23	26	104	136	60	32	40	0.72	2	
	D3120-04-27.00F32-P23	27	108	140	60	32	40	0.76	2	
	D3120-04-28.00F32-P23	28	112	144	60	32	40	0.80	2	P284 . S-3N- ..
	D3120-04-29.00F32-P23	29	116	148	60	32	40	0.84	2	
	D3120-04-30.00F32-P23	30	120	152	60	32	40	0.88	2	
Parallel shank with flat	D3120-04-31.00F32-P24	31	124	156	60	32	40	0.86	2	
	D3120-04-32.00F32-P24	32	128	160	60	32	40	0.91	2	
	D3120-04-33.00F32-P24	33	132	164	60	32	40	0.96	2	P284 . S-4N- ..
	D3120-04-34.00F32-P24	34	136	168	60	32	40	1.09	2	
	D3120-04-35.00F32-P24	35	140	172	60	32	40	1.08	2	
	D3120-04-36.00F32-P24	36	144	176	60	32	40	1.15	2	
Parallel shank with flat	D3120-04-37.00F40-P25	37	148	188	70	40	50	1.59	2	
	D3120-04-38.00F40-P25	38	152	192	70	40	50	1.66	2	
	D3120-04-39.00F40-P25	39	156	196	70	40	50	1.74	2	P284 . S-5N- ..
	D3120-04-40.00F40-P25	40	160	200	70	40	50	1.89	2	
	D3120-04-41.00F40-P25	41	164	204	70	40	50	1.90	2	
	D3120-04-42.00F40-P25	42	168	208	70	40	50	1.99	2	

Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	D_c [mm]	16–20	21–25	26–30	31–36	37–42
	Clamping screw for insert Tightening torque	FS1454 (Torx 8IP) 1.2 Nm	FS1456 (Torx 9IP) 2.0 Nm	FS2181 (Torx 15IP) 3.0 Nm	FS2119 (Torx 15IP) 3.0 Nm	FS2139 (Torx 20IP) 5.0 Nm

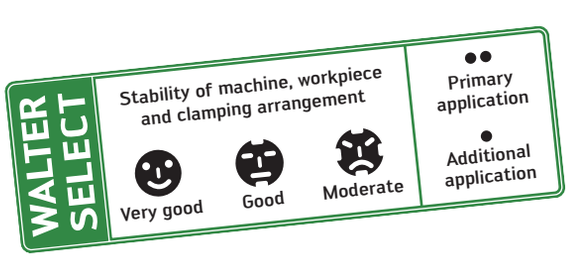
Accessories

	D_c [mm]	16–20	21–25	26–36	37–42
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
	Screwdriver	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

	Designation	Size	P HC WKP25S	P HC WKP35S	P HC WSP45	P HC WSP45S	P HC WXP40	M HC WSP45	M HC WSP45S	M HC WXP40	K HC WAK15	K HC WKP25S	K HC WKP35S	K HC WXP40	N HC WK40	S HC WK40	S HC WSP45	S HC WSP45S	S HC WXP40
	P2840S-.N-A57	1–5	●	●		●	●		●	●		●	●	●				●	●
	P2840S-.N-E67	1–5		●		●	●		●	●			●	●	●	●		●	●
	P2841S-.N-A57	1–5	●	●		●	●		●	●		●	●	●				●	●
	P2841S-.N-E57	1–5	●	●		●	●		●	●		●	●	●				●	●
	P2841S-.N-E67	1–5		●		●	●		●	●			●	●				●	●

HC = Coated carbide

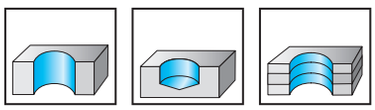


Product range overview
HSS drills

Machining		
Drilling depth	**~8 × D_c**	**Twist drill set**
Designation	**DA110 Perform**	**DA110 Perform**
Standard	DIN 338	DIN 338
Dia. range [mm]	1–16	1–10.5 1–13
Page	255	257

HSS twist drills
DA110 Perform

– Available as set
– Type N

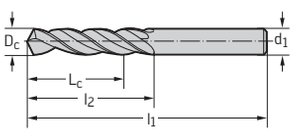


~8×D_c | DIN 338 | 118°

	P	M	K	N	S	H	O
WZ90AJ	●●	●	●●	●			●

B1

Parallel shank



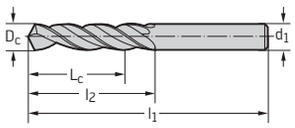
Designation	D_c h8 mm	D_c h8 in	L_c mm	l_1 mm	l_2 mm	d_1 f11 mm	WZ90AJ
DA110-08-01.000U0-	1	0.0394	10	34	12	1	⊗
DA110-08-01.100U0-	1.1	0.0433	12	36	14	1.1	⊗
DA110-08-01.200U0-	1.2	0.0472	14	38	16	1.2	⊗
DA110-08-01.300U0-	1.3	0.0512	14	38	16	1.3	⊗
DA110-08-01.400U0-	1.4	0.0551	15	40	18	1.4	⊗
DA110-08-01.500U0-	1.5	0.0591	15	40	18	1.5	⊗
DA110-08-01.600U0-	1.6	0.0630	17	43	20	1.6	⊗
DA110-08-01.700U0-	1.7	0.0669	17	43	20	1.7	⊗
DA110-08-01.800U0-	1.8	0.0709	19	46	22	1.8	⊗
DA110-08-01.900U0-	1.9	0.0748	19	46	22	1.9	⊗
DA110-08-02.000U0-	2	0.0787	20	49	24	2	⊗
DA110-08-02.100U0-	2.1	0.0827	20	49	24	2.1	⊗
DA110-08-02.200U0-	2.2	0.0866	23	53	27	2.2	⊗
DA110-08-02.300U0-	2.3	0.0906	23	53	27	2.3	⊗
DA110-08-02.400U0-	2.4	0.0945	26	57	30	2.4	⊗
DA110-08-02.500U0-	2.5	0.0984	26	57	30	2.5	⊗
DA110-08-02.600U0-	2.6	0.1024	26	57	30	2.6	⊗
DA110-08-02.700U0-	2.7	0.1063	28	61	33	2.7	⊗
DA110-08-02.800U0-	2.8	0.1102	28	61	33	2.8	⊗
DA110-08-02.900U0-	2.9	0.1142	28	61	33	2.9	⊗
DA110-08-03.000U0-	3	0.1181	28	61	33	3	⊗
DA110-08-03.100U0-	3.1	0.1220	30	65	36	3.1	⊗
DA110-08-03.200U0-	3.2	0.1260	30	65	36	3.2	⊗
DA110-08-03.300U0-	3.3	0.1299	30	65	36	3.3	⊗
DA110-08-03.400U0-	3.4	0.1339	33	70	39	3.4	⊗
DA110-08-03.500U0-	3.5	0.1378	33	70	39	3.5	⊗
DA110-08-03.600U0-	3.6	0.1417	33	70	39	3.6	⊗
DA110-08-03.700U0-	3.7	0.1457	33	70	39	3.7	⊗
DA110-08-03.800U0-	3.8	0.1496	36	75	43	3.8	⊗
DA110-08-03.900U0-	3.9	0.1535	36	75	43	3.9	⊗
DA110-08-04.000U0-	4	0.1575	36	75	43	4	⊗
DA110-08-04.100U0-	4.1	0.1614	36	75	43	4.1	⊗
DA110-08-04.200U0-	4.2	0.1654	36	75	43	4.2	⊗
DA110-08-04.300U0-	4.3	0.1693	39	80	47	4.3	⊗
DA110-08-04.400U0-	4.4	0.1732	39	80	47	4.4	⊗
DA110-08-04.500U0-	4.5	0.1772	39	80	47	4.5	⊗
DA110-08-04.600U0-	4.6	0.1811	39	80	47	4.6	⊗
DA110-08-04.700U0-	4.7	0.1850	39	80	47	4.7	⊗
DA110-08-04.800U0-	4.8	0.1890	44	86	52	4.8	⊗
DA110-08-04.900U0-	4.9	0.1929	44	86	52	4.9	⊗
DA110-08-05.000U0-	5	0.1969	44	86	52	5	⊗
DA110-08-05.100U0-	5.1	0.2008	44	86	52	5.1	⊗
DA110-08-05.200U0-	5.2	0.2047	44	86	52	5.2	⊗
DA110-08-05.300U0-	5.3	0.2087	44	86	52	5.3	⊗
DA110-08-05.400U0-	5.4	0.2126	48	93	57	5.4	⊗
DA110-08-05.500U0-	5.5	0.2165	48	93	57	5.5	⊗
DA110-08-05.600U0-	5.6	0.2205	48	93	57	5.6	⊗
DA110-08-05.700U0-	5.7	0.2244	48	93	57	5.7	⊗
DA110-08-05.800U0-	5.8	0.2283	48	93	57	5.8	⊗
DA110-08-05.900U0-	5.9	0.2323	48	93	57	5.9	⊗
DA110-08-06.000U0-	6	0.2362	48	93	57	6	⊗
DA110-08-06.100U0-	6.1	0.2402	52	101	63	6.1	⊗
DA110-08-06.200U0-	6.2	0.2441	52	101	63	6.2	⊗

Ordering example for the WZ90AJ grade: DA110-08-01.000U0-WZ90AJ

Continued

Continued

Parallel shank

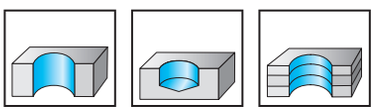


Designation	D_c h8 mm	D_c h8 in	L_c mm	l_1 mm	l_2 mm	d_1 f11 mm	WZ90AJ
DA110-08-06.300U0-	6.3	0.2480	52	101	63	6.3	●
DA110-08-06.400U0-	6.4	0.2520	52	101	63	6.4	●
DA110-08-06.500U0-	6.5	0.2559	52	101	63	6.5	●
DA110-08-06.600U0-	6.6	0.2598	52	101	63	6.6	●
DA110-08-06.700U0-	6.7	0.2638	52	101	63	6.7	●
DA110-08-06.800U0-	6.8	0.2677	57	109	69	6.8	●
DA110-08-06.900U0-	6.9	0.2717	57	109	69	6.9	●
DA110-08-07.000U0-	7	0.2756	57	109	69	7	●
DA110-08-07.100U0-	7.1	0.2795	57	109	69	7.1	●
DA110-08-07.200U0-	7.2	0.2835	57	109	69	7.2	●
DA110-08-07.300U0-	7.3	0.2874	57	109	69	7.3	●
DA110-08-07.400U0-	7.4	0.2913	57	109	69	7.4	●
DA110-08-07.500U0-	7.5	0.2953	57	109	69	7.5	●
DA110-08-07.600U0-	7.6	0.2992	62	117	75	7.6	●
DA110-08-07.700U0-	7.7	0.3031	62	117	75	7.7	●
DA110-08-07.800U0-	7.8	0.3071	62	117	75	7.8	●
DA110-08-07.900U0-	7.9	0.3110	62	117	75	7.9	●
DA110-08-08.000U0-	8	0.3150	62	117	75	8	●
DA110-08-08.100U0-	8.1	0.3189	62	117	75	8.1	●
DA110-08-08.200U0-	8.2	0.3228	62	117	75	8.2	●
DA110-08-08.300U0-	8.3	0.3268	62	117	75	8.3	●
DA110-08-08.400U0-	8.4	0.3307	62	117	75	8.4	●
DA110-08-08.500U0-	8.5	0.3346	62	117	75	8.5	●
DA110-08-08.600U0-	8.6	0.3386	66	125	81	8.6	●
DA110-08-08.700U0-	8.7	0.3425	66	125	81	8.7	●
DA110-08-08.800U0-	8.8	0.3465	66	125	81	8.8	●
DA110-08-08.900U0-	8.9	0.3504	66	125	81	8.9	●
DA110-08-09.000U0-	9	0.3543	66	125	81	9	●
DA110-08-09.100U0-	9.1	0.3583	66	125	81	9.1	●
DA110-08-09.200U0-	9.2	0.3622	66	125	81	9.2	●
DA110-08-09.300U0-	9.3	0.3661	66	125	81	9.3	●
DA110-08-09.400U0-	9.4	0.3701	66	125	81	9.4	●
DA110-08-09.500U0-	9.5	0.3740	66	125	81	9.5	●
DA110-08-09.600U0-	9.6	0.3780	71	133	87	9.6	●
DA110-08-09.700U0-	9.7	0.3819	71	133	87	9.7	●
DA110-08-09.800U0-	9.8	0.3858	71	133	87	9.8	●
DA110-08-09.900U0-	9.9	0.3898	71	133	87	9.9	●
DA110-08-10.000U0-	10	0.3937	71	133	87	10	●
DA110-08-10.100U0-	10.1	0.3976	71	133	87	10.1	●
DA110-08-10.200U0-	10.2	0.4016	71	133	87	10.2	●
DA110-08-10.300U0-	10.3	0.4055	71	133	87	10.3	●
DA110-08-10.400U0-	10.4	0.4094	71	133	87	10.4	●
DA110-08-10.500U0-	10.5	0.4134	71	133	87	10.5	●
DA110-08-10.700U0-	10.7	0.4213	76	142	94	10.7	●
DA110-08-10.800U0-	10.8	0.4252	76	142	94	10.8	●
DA110-08-11.000U0-	11	0.4331	76	142	94	11	●
DA110-08-11.100U0-	11.1	0.4370	76	142	94	11.1	●
DA110-08-11.300U0-	11.3	0.4449	76	142	94	11.3	●
DA110-08-11.500U0-	11.5	0.4528	76	142	94	11.5	●
DA110-08-11.800U0-	11.8	0.4646	76	142	94	11.8	●
DA110-08-12.000U0-	12	0.4724	87	151	101	12	●
DA110-08-12.100U0-	12.1	0.4764	87	151	101	12.1	●
DA110-08-12.200U0-	12.2	0.4803	87	151	101	12.2	●
DA110-08-12.500U0-	12.5	0.4921	87	151	101	12.5	●
DA110-08-13.000U0-	13	0.5118	87	151	101	13	●
DA110-08-13.500U0-	13.5	0.5315	94	160	108	13.5	●
DA110-08-13.700U0-	13.7	0.5394	94	160	108	13.7	●
DA110-08-14.000U0-	14	0.5512	94	160	108	14	●
DA110-08-14.500U0-	14.5	0.5709	99	169	114	14.5	●
DA110-08-15.000U0-	15	0.5906	99	169	114	15	●
DA110-08-15.500U0-	15.5	0.6102	104	178	120	15.5	●
DA110-08-16.000U0-	16	0.6299	104	178	120	16	●

Ordering example for the WZ90AJ grade: DA110-08-01.000U0-WZ90AJ

HSS – DA110 Perform twist drill – set
DA110-SET-1-10.5-WZ90AJ
DA110-SET-1-13-WZ90AJ

– Type N



~8×D_c | DIN 338 | | 118°

	P	M	K	N	S	H	O
WZ90AJ	●●	●	●●	●			

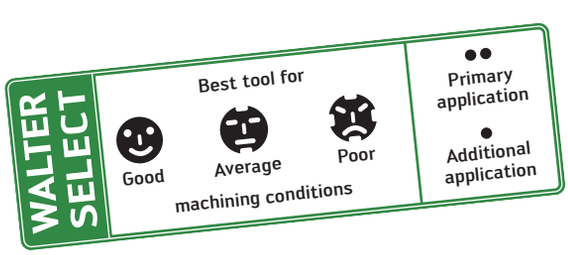
B1

	Designation	Sets Ø [mm]	Including core-hole drill [mm]	Pitch	Quantity
	DA110-SET-1-10.5-WZ90AJ	1.0–10.5	3.3 4.2 6.8 10.2	0.5	24

	Designation	Sets Ø [mm]	Pitch	Quantity
	DA110-SET-1-13-WZ90AJ	1.0–13.0	0.5	25

For the dimensions for the DA110 Perform twist drill, please see the ordering page.

Continued



Cutting data
Solid carbide drills with internal coolant

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

B1

= Wet machining (E = emulsion, O = oil)

= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

v_c = Cutting speed (sfm)
VRR = Feed rate chart from page 263 onwards

VCRR = v_c rate chart from page 262 onwards

* The classification of the machining groups can be found in the material group comparison table

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R_m N/mm²	Machining group *	Drilling depth: Designation	3 × Dc: DC260 Advance			
							Standard	Walter			
							Cooling	Internal coolant			
							Grade	WJ30ET			
							Dia. range [mm]	3.3–14			
								vc	VRR		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1		443	12	**E O**	
		C > 0.25... ≤ 0.55%	Annealed	190	640	P2		443	12	**E O**	
		C > 0.25... ≤ 0.55%	Heat-treated	210	710	P3		443	12	**E O**	
		C > 0.55%	Annealed	190	640	P4		443	10	**E O**	
		C > 0.55%	Heat-treated	300	1010	P5		367	10	**E O**	
		Free-machining steel (short-chipping)	Annealed	220	750	P6		515	12	**E O**	
	Low-alloy steel	Annealed		175	590	P7		443	12	**E O**	M
		Heat-treated		285	960	P8		331	10	**E O**	M
		Heat-treated		380	1280	P9		190	8	**E O**	M
		Heat-treated		430	1480	P10		207	6	**E O**	M
	High-alloyed steel and high-alloyed tool steel	Annealed		200	680	P11		289	10	**E O**	
		Hardened and tempered		300	1010	P12		367	10	**E O**	
		Hardened and tempered		380	1280	P13		171	8	**E O**	
	Stainless steel	Ferritic/martensitic, annealed		200	680	P14		404	12	**E O**	
		Martensitic, heat-treated		330	1110	P15		207	9	**E O**	
M	Stainless steel	Austenitic, quench hardened		200	680	M1		180	6	E O	
		Austenitic, precipitation hardened (PH)		300	1010	M2		161	6	E O	
		Austenitic/ferritic, duplex		230	780	M3		128	4	E O	
K	Malleable cast iron	Ferritic		200	400	K1		367	16	**E O**	M
		Pearlitic		260	700	K2		338	16	**E O**	M
	Grey cast iron	Low tensile strength		180	200	K3		443	16	**E O**	M
		High tensile strength/austenitic		245	350	K4		367	16	**E O**	M
	Cast iron with spheroidal graphite	Ferritic		155	400	K5		515	16	**E O**	M
		Pearlitic		265	700	K6		335	16	**E O**	M
	GGV (CGI)			230	400	K7		367	16	**E O**	M
N	Wrought aluminium alloys	Not hardenable		30	-	N1		1378	16	E O	
		Hardenable, hardened		100	340	N2		1378	16	E O	
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3		869	16	**E O**	M
		≤ 12% Si, hardenable, hardened		90	310	N4		771	16	**E O**	M
		> 12% Si, not hardenable		130	450	N5		640	16	**E O**	M
	Magnesium alloys			70	250	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	N7		607	8	**E O**	
		Brass, bronze, red brass		90	310	N8		551	10	**E O**	
		Cu alloys, short-chipping		110	380	N9		607	12	**E O**	
		High-tensile, Ampco		300	1010	N10		256	6	**E O**	
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1		141	4	E O	
			Hardened	280	940	S2		98	4	E O	
		Ni- or Co-based	Annealed	250	840	S3		108	5	E O	
			Hardened	350	1180	S4		43	4	E O	
			Cast	320	1080	S5		89	4	E O	
	Titanium alloys	Pure titanium		200	680	S6		171	6	**E O**	
		α and β alloys, hardened		375	1260	S7		125	4	**E O**	
		β alloys		410	1400	S8		108	4	**E O**	
	Tungsten alloys			300	1010	S9		151	5	E O	
	Molybdenum alloys			300	1010	S10		151	5	E O	
H	Hardened steel	Hardened and tempered		50 HRC	-	H1		141	3	**O E**	M
		Hardened and tempered		55 HRC	-	H2					
		Hardened and tempered		60 HRC	-	H3					
	Hardened cast iron	Hardened and tempered		55 HRC	-	H4					
O	Thermoplastics	Without abrasive fillers				O1		377	16	**E O**	
	Thermosets	Without abrasive fillers				O2					
	Plastic, glass-fibre-reinforced	GFRP				O3					
	Plastic, carbon-fibre-reinforced	CFRP				O4					
	Plastic, aramid-fibre-reinforced	AFRP				O5					
	Graphite (technical)			80 Shore		O6					

	3 × Dc				5 × Dc				8 × Dc				12 × Dc			
	DC160 Advance				**DC160 Advance**				**DC160 Advance**				**DC160 Advance**			
	DIN 6537 short				DIN 6537 long				Walter				Walter			
	Internal coolant				Internal coolant				Internal coolant				Internal coolant			
	WJ30ET				WJ30ET				WJ30ET				WJ30EU			
	3–20				3–25				3–20				3–20			
	vc	VRR			vc	VRR			vc	VRR			vc	VRR		
	443	12	**E O**		427	12	**E O**		407	12	**E O**		394	12	**E O**	
	443	12	**E O**		427	12	**E O**		407	10	**E O**		394	10	**E O**	
	443	12	**E O**		427	12	**E O**		407	10	**E O**		394	10	**E O**	
	443	10	**E O**		427	10	**E O**		407	10	**E O**		394	10	**E O**	
	367	10	**E O**		354	10	**E O**		338	10	**E O**		325	10	**E O**	
	515	12	**E O**		495	12	**E O**		472	12	**E O**		456	12	**E O**	
	443	12	**E O**	M	427	12	**E O**	M	407	12	**E O**	M	394	12	**E O**	M
	331	10	**E O**	M	318	10	**E O**	M	305	10	**E O**	M	295	10	**E O**	M
	190	8	**E O**	M	184	8	**E O**	M	177	8	**E O**	M	171	8	**E O**	M
	207	6	**E O**	M	197	6	**E O**	M	187	6	**E O**	M	180	6	**E O**	M
	289	10	**E O**		279	10	**E O**		266	9	**E O**		259	9	**E O**	
	367	10	**E O**		354	10	**E O**		338	10	**E O**		325	10	**E O**	
	171	8	**E O**		164	8	**E O**		157	7	**E O**		151	7	**E O**	
	404	12	**E O**		387	12	**E O**		371	12	**E O**		361	12	**E O**	
	207	9	**E O**		200	9	**E O**		190	9	**E O**		184	9	**E O**	
	180	6	E O		174	6	**E O**		167	6	**E O**		161	6	**E O**	
	161	6	E O		154	6	**E O**		148	6	**E O**		141	6	**E O**	
	128	4	E O		125	4	**E O**		121	4	**E O**		115	4	**E O**	
	367	16	**E O**	M	354	16	**E O**	M	338	16	**E O**	M	325	16	**E O**	M
	338	16	**E O**	M	322	16	**E O**	M	308	16	**E O**	M	299	16	**E O**	M
	443	16	**E O**	M	427	16	**E O**	M	407	16	**E O**	M	394	16	**E O**	M
	367	16	**E O**	M	354	16	**E O**	M	338	16	**E O**	M	325	16	**E O**	M
	515	16	**E O**	M	495	16	**E O**	M	472	16	**E O**	M	456	16	**E O**	M
	335	16	**E O**	M	322	16	**E O**	M	308	16	**E O**	M	299	16	**E O**	M
	367	16	**E O**	M	354	16	**E O**	M	338	16	**E O**	M	325	16	**E O**	M
	1378	16	E O		1312	16	**E O**		1247	16	**E O**		1181	16	**E O**	
	1378	16	E O		1312	16	**E O**		1247	16	**E O**		1181	16	**E O**	
	869	16	**E O**	M	820	16	**E O**	M	781	16	**E O**	M	705	16	**E O**	M
	771	16	**E O**	M	722	16	**E O**	M	686	16	**E O**	M	656	16	**E O**	M
	640	16	**E O**	M	591	16	**E O**	M	561	16	**E O**	M	525	16	**E O**	M
	607	8	**E O**		591	8	**E O**		561	8	**E O**		525	8	**E O**	
	551	10	**E O**		525	10	**E O**		499	10	**E O**		476	10	**E O**	
	607	12	**E O**		591	12	**E O**		561	12	**E O**		525	12	**E O**	
	256	6	**E O**		233	6	**E O**		223	6	**E O**		217	6	**E O**	
	141	4	E O		138	4	**E O**		131	4	**E O**		125	4	**E O**	
	98	4	E O		95	4	**E O**		92	4	**E O**		89	4	**E O**	
	108	5	E O		108	5	**E O**		105	5	**E O**		102	5	**E O**	
	43	4	E O		43	4	**E O**		43	4	**E O**		39	4	**E O**	
	89	4	E O		89	4	**E O**		85	4	**E O**		82	4	**E O**	
	171	6	**E O**		171	6	**E O**		164	6	**E O**		161	6	**E O**	
	125	4	**E O**		121	4	**E O**		118	4	**E O**		115	4	**E O**	
	108	4	**E O**		108	4	**E O**		105	4	**E O**		102	4	**E O**	
	151	5	E O		151	5	**E O**		144	5	**E O**		138	5	**E O**	
	151	5	E O		151	5	**E O**		144	5	**E O**		138	5	**E O**	
	141	3	**O E**	M	138	3	**O E**	M	131	3	**O E**		128	3	**O E**	
	377	16	**E O**		361	16	**E O**		344	16	**E O**		328	16	**E O**	

Cutting data
Solid carbide drills without internal coolant

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

B1

= Wet machining (E = emulsion, O = oil)

= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

v_c = Cutting speed (sfm)
VRR = Feed rate chart from page 263 onwards

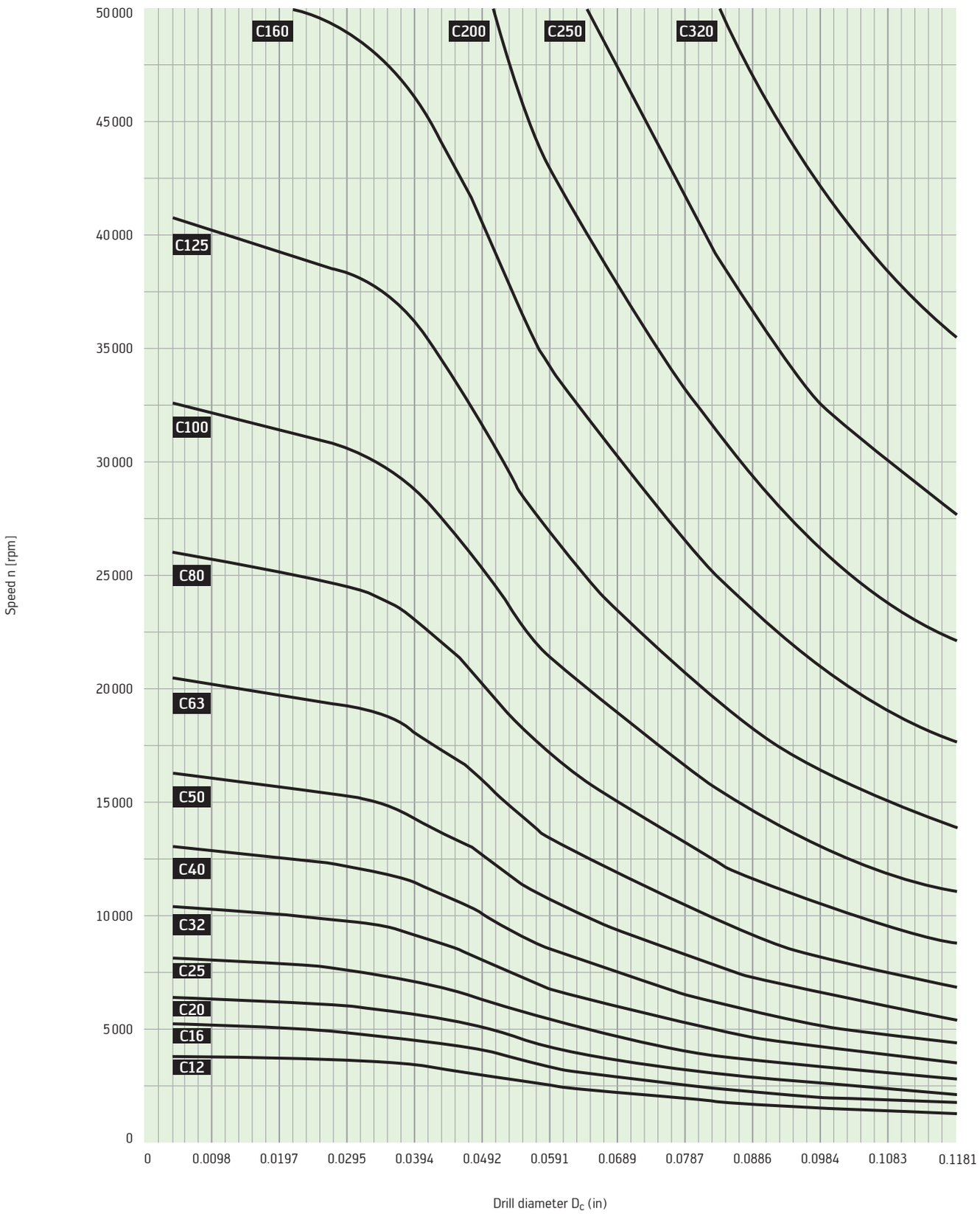
VCRR = v_c rate chart from page 262 onwards

* The classification of the machining groups can be found in the material group comparison table

Material group	Overview of the main material groups and code letters			Drilling depth			3 × Dc				
				Designation			DC260 Advance				
				Standard			Walter				
				Cooling			External coolant				
				Grade			WJ30ET				
				Dia. range [mm]			3.3–14.5				
				Brinell hardness HB	Tensile strength R_m N/mm²	Machining group *	vc	VRR			
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1	361	12	E O		
		C > 0.25... ≤ 0.55%	Annealed	190	640	P2	397	12	E O		
		C > 0.25... ≤ 0.55%	Heat-treated	210	710	P3	361	12	E O		
		C > 0.55%	Annealed	190	640	P4	361	10	E O		
		C > 0.55%	Heat-treated	300	1010	P5	256	10	E O		
		Free-machining steel (short-chipping)	Annealed	220	750	P6	361	12	E O		
	Low-alloy steel	Annealed		175	590	P7	397	12	E O		
		Heat-treated		285	960	P8	226	10	E O		
		Heat-treated		380	1280	P9	180	7	E O		
		Heat-treated		430	1480	P10	144	5	E O		
	High-alloyed steel and high-alloyed tool steel	Annealed		200	680	P11	256	9	E O		
		Hardened and tempered		300	1010	P12	256	10	E O		
		Hardened and tempered		380	1280	P13	144	7	E O		
	Stainless steel	Ferritic/martensitic, annealed		200	680	P14	325	12	E O		
		Martensitic, heat-treated		330	1110	P15	180	10	E O		
M	Stainless steel	Austenitic, quench hardened		200	680	M1					
		Austenitic, precipitation hardened (PH)		300	1010	M2					
		Austenitic/ferritic, duplex		230	780	M3					
K	Malleable cast iron	Ferritic		200	400	K1	289	16	E O		
		Pearlitic		260	700	K2	289	12	E O		
	Grey cast iron	Low tensile strength		180	200	K3	361	16	E O		
		High tensile strength/austenitic		245	350	K4	289	16	E O		
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	361	16	E O		
		Pearlitic		265	700	K6	289	12	E O		
	GGV (CGI)			230	400	K7	325	2	E O		
N	Wrought aluminium alloys	Not hardenable		30	-	N1					
		Hardenable, hardened		100	340	N2					
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	738	16	E O	M	
		≤ 12% Si, hardenable, hardened		90	310	N4	738	16	E O	M	
		> 12% Si, not hardenable		130	450	N5	623	12	E O	M	
	Magnesium alloys			70	250	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	N7	607	6	E O		
		Brass, bronze, red brass		90	310	N8	541	10	E O		
		Cu alloys, short-chipping		110	380	N9	673	16	E O		
		High-tensile, Ampco		300	1010	N10	223	5	E O		
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1					
			Hardened	280	940	S2					
		Ni- or Co-based	Annealed	250	840	S3					
			Hardened	350	1180	S4					
			Cast	320	1080	S5					
	Titanium alloys	Pure titanium		200	680	S6	115	5	E O		
		α and β alloys, hardened		375	1260	S7	89	3	E O		
		β alloys		410	1400	S8	72	3	E O		
	Tungsten alloys			300	1010	S9					
	Molybdenum alloys			300	1010	S10					
H	Hardened steel	Hardened and tempered		50 HRC	-	H1	98	3	O E		
		Hardened and tempered		55 HRC	-	H2					
		Hardened and tempered		60 HRC	-	H3					
	Hardened cast iron	Hardened and tempered		55 HRC	-	H4					
O	Thermoplastics	Without abrasive fillers				O1	361	16	E O		
	Thermosets	Without abrasive fillers				O2					
	Plastic, glass-fibre-reinforced	GFRP				O3					
	Plastic, carbon-fibre-reinforced	CFRP				O4					
	Plastic, aramid-fibre-reinforced	AFRP				O5					
	Graphite (technical)			80 Shore		O6					

	3 × Dc				5 × Dc				5 × Dc			
	DC160 Advance				**DC160 Advance**				**DC150 Perform**			
	DIN 6537 short				DIN 6537 long				DIN 6537 long			
	External coolant				External coolant				External coolant			
	WJ30ET				WJ30ET				WJ30TA			
	3–20				3–25				3–20			
	vc	VRR			vc	VRR			vc	VRR		
	361	12	**E O**		335	12	**E O**		266	12	**E O**	
	397	12	**E O**		367	12	**E O**		236	10	**E O**	
	361	12	**E O**		335	12	**E O**		236	10	**E O**	
	361	10	**E O**		335	10	**E O**		213	9	**E O**	
	256	10	**E O**		240	10	**E O**		167	8	**E O**	
	361	12	**E O**		335	12	**E O**		266	12	**E O**	
	397	12	**E O**		367	12	**E O**		236	12	**E O**	
	226	10	**E O**		213	10	**E O**		148	8	**E O**	
	180	7	**E O**		167	7	**E O**		108	6	**E O**	
	144	5	**E O**		135	5	**E O**		85	4	**E O**	
	256	9	**E O**		243	9	**E O**		187	9	**E O**	
	256	10	**E O**		243	10	**E O**		167	8	**E O**	
	144	7	**E O**		138	7	**E O**		125	6	**E O**	
	325	12	**E O**		308	12	**E O**		213	12	**E O**	
	180	10	**E O**		171	10	**E O**		167	8	**E O**	
									118	5	**E O**	
	289	16	**E O**		272	16	**E O**		213	16	**E O**	
	289	12	**E O**		272	12	**E O**		167	12	**E O**	
	361	16	**E O**		335	16	**E O**		266	16	**E O**	
	289	16	**E O**		272	16	**E O**		213	16	**E O**	
	361	16	**E O**		335	16	**E O**		236	16	**E O**	
	289	12	**E O**		272	12	**E O**		167	12	**E O**	
	325	2	**E O**		302	2	**E O**		187	12	**E O**	
									738	10	**E O**	M
									738	10	**E O**	M
	738	16	**E O**		673	16	**E O**	M	656	16	**E O**	M
	738	16	**E O**		673	16	**E O**	M	591	16	**E O**	M
	623	12	**E O**		574	12	**E O**	M	472	12	**E O**	M
	607	6	**E O**		574	6	**E O**		472	6	**E O**	
	541	10	**E O**		509	10	**E O**		413	10	**E O**	
	673	16	**E O**		623	16	**E O**		531	16	**E O**	
	223	5	**E O**		207	5	**E O**		197	5	**E O**	
	115	5	**E O**		108	5	**E O**		98	5	**E O**	
	89	3	**E O**		82	3	**E O**		66	3	**E O**	
	72	3	**E O**		66	3	**E O**		59	3	**E O**	
	98	3	**O E**		92	3	O E		66	3	**O E**	
	361	16	**E O**		344	16	E O		266	16	**E O**	
				L								
				L								
				L								
				L								
				L								

VCRR: Speed diagram
Solid carbide micro drills



VRR: Feed rate charts for solid carbide and HSS drilling and reaming tools

	Feed f [inch/rev] for diameter															
VRR	0.05 mm 0.0020 in	0.06 mm 0.0024 in	0.08 mm 0.0031 in	0.1 mm 0.0039 in	0.12 mm 0.0047 in	0.15 mm 0.0059 in	0.2 mm 0.0079 in	0.25 mm 0.0098 in	0.4 mm 0.016 in	0.5 mm 0.020 in	0.6 mm 0.024 in	0.8 mm 0.031 in	1 mm 0.039 in	1.2 mm 0.047 in	1.5 mm 0.059 in	2 mm 0.079 in
1	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00008	0.00008	0.0001	0.0001	0.0002	0.0002	0.0003
2	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00004	0.00008	0.0001	0.0001	0.0002	0.0002	0.0003	0.0003	0.0004	0.00004
3	0.00004	0.00004	0.00004	0.00004	0.00004	0.00008	0.00008	0.0001	0.0002	0.0002	0.0002	0.0003	0.0004	0.0005	0.0006	0.0008
4	0.00004	0.00004	0.00004	0.00004	0.00008	0.00008	0.0001	0.0001	0.0002	0.0003	0.0003	0.0004	0.00004	0.0006	0.0008	0.0011
5	0.00004	0.00004	0.00004	0.00008	0.00008	0.0001	0.0001	0.0002	0.0003	0.0003	0.0004	0.00004	0.0007	0.0008	0.0010	0.0013
6	0.00004	0.00004	0.00008	0.00008	0.00008	0.0001	0.0002	0.0002	0.0003	0.0004	0.0005	0.0006	0.0008	0.0009	0.0012	0.0016
7	0.00004	0.00004	0.00008	0.00008	0.0001	0.0002	0.0002	0.0002	0.0004	0.0005	0.0006	0.0007	0.0009	0.0011	0.0014	0.0019
8	0.00004	0.00008	0.00008	0.0001	0.0001	0.0002	0.0002	0.0003	0.0004	0.00004	0.0006	0.0008	0.0011	0.0013	0.0016	0.0021
9	0.00008	0.00008	0.00008	0.0001	0.0002	0.0002	0.0002	0.0003	0.0005	0.0006	0.0007	0.0009	0.0012	0.0014	0.0018	0.0024
10	0.00008	0.00008	0.0001	0.0001	0.0002	0.0002	0.0003	0.0003	0.00004	0.0007	0.0008	0.0011	0.0013	0.0016	0.0020	0.0026
12	0.00008	0.00008	0.0001	0.0002	0.0002	0.0002	0.0003	0.0004	0.0006	0.0008	0.0009	0.0013	0.0016	0.0019	0.0024	0.0031
16	0.0001	0.0001	0.0002	0.0002	0.0002	0.0003	0.0004	0.00004	0.0008	0.0011	0.0013	0.0017	0.0021	0.0025	0.0031	0.0043
20	0.0001	0.0002	0.0002	0.0003	0.0003	0.0004	0.00004	0.0007	0.0011	0.0013	0.0016	0.0021	0.0026	0.0031	0.0039	0.0051
25	0.0002	0.0002	0.0003	0.0003	0.0004	0.00004	0.0007	0.0008	0.0013	0.0017	0.0020	0.0026	0.0033	0.0039	0.0049	0.0066
30	0.0002	0.0002	0.0003	0.0004	0.0005	0.0006	0.0008	0.0010	0.0016	0.0020	0.0024	0.0031	0.0039	0.0047	0.0059	0.0079

	Feed f [inch/rev] for diameter														
VRR	2.5 mm 0.098 in	4 mm 0.157 in	5 mm 0.197 in	6 mm 0.236 in	8 mm 0.315 in	10 mm 0.394 in	12 mm 0.472 in	15 mm 0.591 in	20 mm 0.787 in	25 mm 0.984 in	40 mm 1.574 in	50 mm 1.969 in	60 mm 2.362 in	80 mm 3.150 in	100 mm 3.937 in
1	0.0003	0.0005	0.0007	0.0007	0.0008	0.0009	0.0010	0.0011	0.0013	0.0015	0.0019	0.0021	0.0023	0.0026	0.0030
2	0.0007	0.0011	0.0013	0.0015	0.0017	0.0019	0.0020	0.0023	0.0026	0.0030	0.0037	0.0043	0.0047	0.0051	0.0059
3	0.0010	0.0016	0.0020	0.0022	0.0025	0.0028	0.0030	0.0034	0.0039	0.0043	0.0055	0.0063	0.0067	0.0079	0.0087
4	0.0013	0.0021	0.0026	0.0029	0.0033	0.0037	0.0039	0.0047	0.0051	0.0059	0.0074	0.0083	0.0091	0.0106	0.0118
5	0.0016	0.0026	0.0033	0.0036	0.0043	0.0047	0.0051	0.0055	0.0067	0.0075	0.0094	0.0102	0.0114	0.0130	0.0146
6	0.0020	0.0031	0.0039	0.0043	0.0051	0.0055	0.0059	0.0067	0.0079	0.0087	0.0110	0.0126	0.0138	0.0157	0.0177
7	0.0023	0.0037	0.0047	0.0051	0.0069	0.0063	0.0071	0.0079	0.0091	0.0102	0.0130	0.0146	0.0157	0.0185	0.0205
8	0.0026	0.0043	0.0051	0.0059	0.0067	0.0075	0.0083	0.0091	0.0106	0.0118	0.0150	0.0165	0.0181	0.0209	0.0236
9	0.0030	0.0047	0.0059	0.0063	0.0075	0.0083	0.0091	0.0102	0.0118	0.0134	0.0165	0.0185	0.0205	0.0236	0.0264
10	0.0033	0.0051	0.0067	0.0071	0.0083	0.0094	0.0102	0.0114	0.0130	0.0146	0.0185	0.0209	0.0228	0.0264	0.0230
12	0.0039	0.0063	0.0079	0.0087	0.0098	0.0110	0.0122	0.0138	0.0157	0.0177	0.0224	0.0248	0.0272	0.0315	0.0350
16	0.0051	0.0083	0.0106	0.0114	0.0134	0.0150	0.0161	0.0181	0.0209	0.0236	0.0230	0.0331	0.0362	0.0421	0.0469
20	0.0067	0.0106	0.0130	0.0146	0.0165	0.0185	0.0205	0.0228	0.0264	0.0230	0.0370	0.0413	0.0453	0.0524	0.0587
25	0.0083	0.0130	0.0165	0.0181	0.0209	0.0232	0.0256	0.0283	0.0327	0.0366	0.0465	0.0520	0.0567	0.0657	0.0732
30	0.0098	0.0157	0.0197	0.0217	0.0248	0.0280	0.0303	0.0343	0.0394	0.0441	0.0555	0.0622	0.0681	0.0787	0.0882

Grade description

Coated carbide

Walter grade description	Standard designation	Materials P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Application range 01 05 10 15 20 25 30 35 40 45	Coating process	Coating composition	Tool example
WJ30EJ	HC – P 30	●●								PVD	Tinal/AlCrN multi-layer coating	
	HC – K 30			●●								
WJ30RE	HC – 30	●●	●●	●●	●●	●●	●	●●		PVD	Tinal multi-layer coating	
WJ30TA	HC – 30	●●	●●	●●	●●	●●	●	●●		PVD	Tinal multi-layer coating with post-treatment	
WJ30EL	HC – 30	●●		●●	●●	●	●	●		PVD	AlCrN single-layer coating	
WJ30ER	HC – 30	●●		●●	●●	●	●	●		PVD	AlCrN single-layer point coating	
WJ30ET	HC – 30	●●	●	●●	●●	●●	●	●		PVD	TiSiAlCrN/ AlTiN multi-layer coating	
WJ30EU	HC – 30	●●	●	●●	●●	●●	●	●		PVD	TiSiAlCrN/ AlTiN multi-layer coating point coating	
WJ30UU	HW – 30	●●	●●	●●	●●	●●		●●		Uncoated		

HC = Coated carbide
HW = Uncoated carbide

●● Primary application
● Additional application

Cutting data for D4240/D4140

B1

= Wet machining (E = emulsion, O = oil)

= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

v_c = Cutting speed
VRR = Feed rate chart - page 263

* The classification of the machining groups can be found in the material group comparison table

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group *	Drilling depth							
							Designation							
							Dia. range mm [in]							
							P6001 WPP45C				P6003 WMP35			
							vc	VRR			vc	VRR		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	400	7	E O		400	7	E O	
		C > 0.25 ... ≤ 0.55%	Annealed	190	93	P2	400	7	E O		400	7	E O	
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	103	P3	400	7	E O		400	7	E O	
		C > 0.55%	Annealed	190	93	P4	360	6	E O		360	6	E O	
		C > 0.55%	Heat-treated	300	146	P5	300	7	E O		300	7	E O	
		Free-machining steel (short-chipping)	Annealed	220	109	P6	400	7	E O		400	7	E O	
	Low-alloy steel	Annealed		175	86	P7	400	7	E O		400	7	E O	
		Heat-treated		285	139	P8	230	7	E O		230	7	E O	
		Heat-treated		380	186	P9	110	3	O E		110	3	O E	
		Heat-treated		430	215	P10								
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11	300	6	E O		300	6	E O	
		Hardened and tempered		300	146	P12	300	7	E O		300	7	E O	
		Hardened and tempered		380	186	P13	210	5	E O		210	5	E O	
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	330	7	E O		330	7	E O	
		Martensitic, heat-treated		330	161	P15	230	7	E O		230	7	E O	
M	Stainless steel	Austenitic, quench hardened		200	99	M1					230	4	E O	
		Austenitic, precipitation hardened (PH)		300	146	M2								
		Austenitic/ferritic, duplex		230	113	M3					110	5	E O	
K	Malleable cast iron	Ferritic		200	58	K1	400	8	E O		400	8	E O	
		Pearlitic		260	102	K2	400	8	E O		400	8	E O	
	Grey cast iron	Low tensile strength		180	29	K3	460	9	E O		460	9	E O	
		High tensile strength/austenitic		245	51	K4	460	9	E O		460	9	E O	
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	460	8	E O		460	8	E O	
		Pearlitic		265	102	K6	400	8	E O		400	8	E O	
	GGV (CGI)			230	58	K7	360	7	E O		360	7	E O	
N	Wrought aluminium alloys	Not hardenable		30	—	N1								
		Hardenable, hardened		100	49	N2								
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3								
		≤ 12% Si, hardenable, hardened		90	45	N4								
		> 12% Si, not hardenable		130	65	N5								
	Magnesium alloys			70	36	N6								
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7								
		Brass, bronze, red brass		90	45	N8								
		Cu alloys, short-chipping		110	55	N9								
		High-tensile, Ampco		300	146	N10								
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1					180	3	E O	
			Hardened	280	136	S2								
		Ni- or Co-based	Annealed	250	122	S3					110	5	E O	
			Hardened	350	171	S4					40	2	E O	
			Cast	320	157	S5					70	5	E O	
	Titanium alloys	Pure titanium		200	99	S6					230	4	E O	
		α and β alloys, hardened		375	183	S7					210	4	E O	
		β alloys		410	203	S8					210	3	E O	
	Tungsten alloys			300	146	S9					70	5	E O	
	Molybdenum alloys			300	146	S10					70	5	E O	
H	Hardened steel	Hardened and tempered		50 HRC	—	H1								
		Hardened and tempered		55 HRC	—	H2								
		Hardened and tempered		60 HRC	—	H3								
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4								
O	Thermoplastics	Without abrasive fillers				O1								
	Thermosets	Without abrasive fillers				O2								
	Plastic, glass-fibre-reinforced	GFRP				O3								
	Plastic, carbon-fibre-reinforced	CFRP				O4								
	Plastic, aramid-fibre-reinforced	AFRP				O5								
	Graphite (technical)			80 Shore		O6								

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

	2.5×D_c								1.3×D_c															
	D4240								D4140															
	12–29								12–25.8															
	P6004 WXK25				P6005 WKK45C				P6001 WPP45C				P6003 WMP35				P6004 WXK25				P6005 WKK45C			
	vc	VRR			vc	VRR			vc	VRR			vc	VRR			vc	VRR			vc	VRR		
									400	7	E O		400	7	E O									
									400	7	E O		400	7	E O									
									400	7	E O		400	7	E O									
									360	6	E O		360	6	E O									
									300	7	E O		300	7	E O									
									400	7	E O		400	7	E O									
									400	7	E O		400	7	E O									
									230	7	E O		230	7	E O									
									110	3	O E		110	3	O E									
									300	6	E O		300	6	E O									
									300	7	E O		300	7	E O									
									210	5	E O		210	5	E O									
									330	7	E O		330	7	E O									
									230	7	E O		230	7	E O									
													230	4	E O									
													110	5	E O									
					400	8	E O		400	8	E O		400	8	E O						400	8	E O	
					360	8	E O		400	8	E O		400	8	E O						360	8	E O	
					530	9	E O		460	9	E O		460	9	E O						530	9	E O	
					530	9	E O		460	9	E O		460	9	E O						530	9	E O	
					460	8	E O		460	8	E O		460	8	E O						460	8	E O	
					360	8	E O		400	8	E O		400	8	E O						360	8	E O	
					360	7	E O		360	7	E O		360	7	E O						360	7	E O	
	1050	16	E O														1050	16	E O					
	1050	16	E O														1050	16	E O					
	1310	9	E O	M													1310	9	E O	M				
	1050	9	E O	M													1050	9	E O	M				
	720	9	E O	M													720	9	E O	M				
	400	4	E O														400	4	E O					
	820	10	E O														820	10	E O					
	820	10	E O														820	10	E O					
	300	5	E O														300	5	E O					
													180	3	E O									
													110	5	E O									
													40	2	E O									
													70	5	E O									
													230	4	E O									
													210	4	E O									
													210	3	E O									
													70	5	E O									
													70	5	E O									

HC = Coated carbide

Cutting data for D4140

= Wet machining (E = emulsion, O = oil)

= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

v_c = Cutting speed
VRR = Feed rate chart - page 263

* The classification of the machining groups can be found in the material group comparison table

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group *	Drilling depth							
							Designation							
							Dia. range mm [in]							
							P6001 WPP45C				P6003 WMP35			
							vc	VRR			vc	VRR		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	360	7	E O		360	7	E O	
		C > 0.25 ... ≤ 0.55%	Annealed	190	93	P2	360	7	E O		360	7	E O	
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	103	P3	330	7	E O		330	7	E O	
		C > 0.55%	Annealed	190	93	P4	330	6	E O		330	6	E O	
		C > 0.55%	Heat-treated	300	146	P5	260	7	E O		260	7	E O	
		Free-machining steel (short-chipping)	Annealed	220	109	P6	360	7	E O		360	7	E O	
	Low-alloy steel	Annealed		175	86	P7	360	7	E O		360	7	E O	
		Heat-treated		285	139	P8	230	7	E O		230	7	E O	
		Heat-treated		380	186	P9	110	3	O E		110	3	O E	
		Heat-treated		430	215	P10								
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11	260	6	E O		260	6	E O	
		Hardened and tempered		300	146	P12	260	7	E O		260	7	E O	
		Hardened and tempered		380	186	P13	210	5	E O		210	5	E O	
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	300	7	E O		300	7	E O	
		Martensitic, heat-treated		330	161	P15	230	7	E O		230	7	E O	
M	Stainless steel	Austenitic, quench hardened		200	99	M1						4	E O	
		Austenitic, precipitation hardened (PH)		300	146	M2								
		Austenitic/ferritic, duplex		230	113	M3						5	E O	
K	Malleable cast iron	Ferritic		200	58	K1	360	8	E O		360	8	E O	
		Pearlitic		260	102	K2	360	8	E O		360	8	E O	
	Grey cast iron	Low tensile strength		180	29	K3	460	9	E O		460	9	E O	
		High tensile strength/austenitic		245	51	K4	400	9	E O		400	9	E O	
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	400	8	E O		400	8	E O	
		Pearlitic		265	102	K6	360	8	E O		360	8	E O	
	GGV (CGI)			230	58	K7	360	7	E O		360	7	E O	
N	Wrought aluminium alloys	Not hardenable		30	—	N1								
		Hardenable, hardened		100	49	N2								
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3								
		≤ 12% Si, hardenable, hardened		90	45	N4								
		> 12% Si, not hardenable		130	65	N5								
	Magnesium alloys			70	36	N6								
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7								
		Brass, bronze, red brass		90	45	N8								
		Cu alloys, short-chipping		110	55	N9								
		High-tensile, Ampco		300	146	N10								
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1					160	3	E O	
			Hardened	280	136	S2								
		Ni- or Co-based	Annealed	250	122	S3					90	5	E O	
			Hardened	350	171	S4					40	2	E O	
			Cast	320	157	S5					60	5	E O	
	Titanium alloys	Pure titanium		200	99	S6					210	4	E O	
		α and β alloys, hardened		375	183	S7					190	4	E O	
		β alloys		410	203	S8					190	3	E O	
	Tungsten alloys			300	146	S9					60	5	E O	
	Molybdenum alloys			300	146	S10					60	5	E O	
H	Hardened steel	Hardened and tempered		50 HRC	—	H1								
		Hardened and tempered		55 HRC	—	H2								
		Hardened and tempered		60 HRC	—	H3								
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4								
O	Thermoplastics	Without abrasive fillers				O1								
	Thermosets	Without abrasive fillers				O2								
	Plastic, glass-fibre-reinforced	GFRP				O3								
	Plastic, carbon-fibre-reinforced	CFRP				O4								
	Plastic, aramid-fibre-reinforced	AFRP				O5								
	Graphite (technical)			80 Shore		O6								

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

	3×D_c								5×D_c															
	D4140								D4140															
	12–37.99 [0.472-1.496]								12–37.99 [0.472-1.496]															
	P6004 WXK25				P6005 WKK45C				P6001 WPP45C				P6003 WMP35				P6004 WXK25				P6005 WKK45C			
	vc	VRR			vc	VRR			vc	VRR			vc	VRR			vc	VRR			vc	VRR		
									330	7	E O		330	7	E O									
									330	7	E O		330	7	E O									
									330	7	E O		330	7	E O									
									300	6	E O		300	6	E O									
									230	7	E O		230	7	E O									
									330	7	E O		330	7	E O									
									330	7	E O													
									210	7	E O		210	7	E O									
									110	3	O E		110	3	O E									
									260	6	E O		260	6	E O									
									230	7	E O		230	7	E O									
									210	5	E O		210	5	E O									
									300	7	E O		300	7	E O									
									230	7	E O		230	7	E O									
													210	4	E O									
													90	5	E O									
					360	8	E O		360	8	E O		360	8	E O						360	8	E O	
					330	8	E O		360	8	E O		360	8	E O						330	8	E O	
					530	9	E O		460	9	E O		460	9	E O						530	9	E O	
					460	9	E O		400	9	E O		400	9	E O						460	9	E O	
					400	8	E O		400	8	E O		400	8	E O						400	8	E O	
					330	8	E O		360	8	E O		360	8	E O						330	8	E O	
					330	7	E O		360	7	E O		360	7	E O						330	7	E O	
	820	16	E O														820	16	E O					
	820	16	E O														820	16	E O					
	1310	9	E O	M													1180	9	E O	M				
	1050	9	E O	M													1050	9	E O	M				
	660	9	E O	M													660	9	E O	M				
	360	4	E O														360	4	E O					
	720	10	E O														720	10	E O					
	720	10	E O														720	10	E O					
	260	5	E O														230	5	E O					
													160	3	E O									
													80	5	E O									
													30	2	E O									
													60	5	E O									
													210	4	E O									
													160	4	E O									
													160	3	E O									
													60	5	E O									
													60	5	E O									

HC = Coated carbide

Cutting data for D4140

= Wet machining (E = emulsion, O = oil)

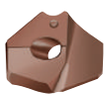
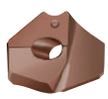
= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

v_c = Cutting speed
VRR = Feed rate chart - page 263

* The classification of the machining groups can be found in the material group comparison table

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group *	Drilling depth							
							Designation							
							Dia. range mm [in]							
							P6001 WPP45C				P6003 WMP35			
							vc	VRR			vc	VRR		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	330	7	E O		330	7	E O	
		C > 0.25 ... ≤ 0.55%	Annealed	190	93	P2	330	7	E O		330	7	E O	
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	103	P3	330	7	E O		330	7	E O	
		C > 0.55%	Annealed	190	93	P4	300	6	E O		300	6	E O	
		C > 0.55%	Heat-treated	300	146	P5	230	7	E O		230	7	E O	
		Free-machining steel (short-chipping)	Annealed	220	109	P6	330	7	E O		330	7	E O	
	Low-alloy steel	Annealed		175	86	P7	330	7	E O		330	7	E O	
		Heat-treated		285	139	P8	210	7	E O		210	7	E O	
		Heat-treated		380	186	P9	110	3	O E		110	3	O E	
		Heat-treated		430	215	P10								
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11	260	6	E O		260	6	E O	
		Hardened and tempered		300	146	P12	230	7	E O		230	7	E O	
		Hardened and tempered		380	186	P13	210	5	E O		210	5	E O	
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	300	7	E O		300	7	E O	
		Martensitic, heat-treated		330	161	P15	230	7	E O		230	7	E O	
M	Stainless steel	Austenitic, quench hardened		200	99	M1					205	4	E O	
		Austenitic, precipitation hardened (PH)		300	146	M2								
		Austenitic/ferritic, duplex		230	113	M3					90	5	E O	
K	Malleable cast iron	Ferritic		200	58	K1	360	8	E O		360	8	E O	
		Pearlitic		260	102	K2	360	8	E O		360	8	E O	
	Grey cast iron	Low tensile strength		180	29	K3	400	9	E O		400	9	E O	
		High tensile strength/austenitic		245	51	K4	400	9	E O		400	9	E O	
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	400	8	E O		400	8	E O	
		Pearlitic		265	102	K6	360	8	E O		360	8	E O	
	GGV (CGI)			230	58	K7	360	7	E O		360	7	E O	
N	Wrought aluminium alloys	Not hardenable		30	—	N1								
		Hardenable, hardened		100	49	N2								
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3								
		≤ 12% Si, hardenable, hardened		90	45	N4								
		> 12% Si, not hardenable		130	65	N5								
	Magnesium alloys			70	36	N6								
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7								
		Brass, bronze, red brass		90	45	N8								
		Cu alloys, short-chipping		110	55	N9								
		High-tensile, Ampco		300	146	N10								
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1					160	3	E O	
			Hardened	280	136	S2								
		Ni- or Co-based	Annealed	250	122	S3					80	5	E O	
			Hardened	350	171	S4					30	2	E O	
			Cast	320	157	S5					60	5	E O	
	Titanium alloys	Pure titanium		200	99	S6					210	4	E O	
		α and β alloys, hardened		375	183	S7					160	4	E O	
		β alloys		410	203	S8					160	3	E O	
	Tungsten alloys			300	146	S9					60	5	E O	
	Molybdenum alloys			300	146	S10					60	5	E O	
H	Hardened steel	Hardened and tempered		50 HRC	—	H1								
		Hardened and tempered		55 HRC	—	H2								
		Hardened and tempered		60 HRC	—	H3								
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4								
O	Thermoplastics	Without abrasive fillers				O1								
	Thermosets	Without abrasive fillers				O2								
	Plastic, glass-fibre-reinforced	GFRP				O3								
	Plastic, carbon-fibre-reinforced	CFRP				O4								
	Plastic, aramid-fibre-reinforced	AFRP				O5								
	Graphite (technical)			80 Shore		O6								

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

	7 × D_c								10 × D_c															
	D4140								D4140															
	12–37.99 [0.472-1.496]								18–24.7															
	P6004 WXK25				 P6005 WKK45C				P6001 WPP45C				P6003 WMP35				P6004 WXK25				 P6005 WKK45C			
	vc	VRR			vc	VRR			vc	VRR			vc	VRR			vc	VRR			vc	VRR		
									300	7	E O		300	7	E O									
									300	7	E O		300	7	E O									
									260	7	E O		260	7	E O									
									260	6	E O		260	6	E O									
									210	7	E O		210	7	E O									
									300	7	E O		300	7	E O									
													300	7	E O									
									180	7	E O		180	7	E O									
									110	3	O E		110	3	O E									
									210	6	E O		210	6	E O									
									210	7	E O		210	7	E O									
									210	5	E O		210	5	E O									
									230	7	E O		230	7	E O									
									180	7	E O		180	7	E O									
													160	4	E O									
													80	5	E O									
					360	8	E O		330	8	E O		330	8	E O						330	8	E O	
					330	8	E O		330	8	E O		330	8	E O						300	8	E O	
					460	9	E O		400	9	E O		400	9	E O						460	9	E O	
					460	9	E O		360	9	E O		360	9	E O						400	9	E O	
					400	8	E O		360	8	E O		360	8	E O						360	8	E O	
					330	8	E O		330	8	E O		330	8	E O						300	8	E O	
					330	7	E O		330	7	E O		330	7	E O						300	7	E O	
	720	16	E O														530	16	E O					
	720	16	E O														530	16	E O					
	1180	9	E O	M																				
	920	9	E O	M													660	9	E O	M				
	660	9	E O	M													590	9	E O	M				
	360	4	E O														330	4	E O					
	720	10	E O														660	10	E O					
	720	10	E O														660	10	E O					
	230	5	E O														210	5	E O					
													130	3	E O									
													70	5	E O									
													30	2	E O									
													50	5	E O									
													160	4	E O									
													150	4	E O									
													150	3	E O									
													50	5	E O									
													50	5	E O									

Cutting data for D4120

= Wet machining (E = emulsion, O = oil)

= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

* The classification of the machining groups can be found in the material group comparison table

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group *			Indexable insert geometry					
									Starting values for feed f [inch / rev]					
									A 57					
									Size 1	Size 2	Size 3	Size 4	Size 5 Size 6	Size 7 Size 8
									D_c [inch]					
									0.531– 0.646	0.650– 0.803	0.807– 0.961	0.965– 1.157	1.161– 1.669	1.673– 2.339
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	●●		0.002	0.002	0.002	0.004	0.005	0.005
		C > 0.25 ... ≤ 0.55%	Annealed	190	93	P2	●●		0.003	0.004	0.004	0.005	0.007	0.007
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	103	P3	●●		0.003	0.004	0.004	0.005	0.007	0.007
		C > 0.55%	Annealed	190	93	P4	●●		0.003	0.004	0.004	0.005	0.007	0.007,
		C > 0.55%	Heat-treated	300	146	P5	●●		0.003	0.004	0.004	0.005	0.007	0.007
		Free-machining steel (short-chipping)	Annealed	220	109	P6	●●	●	0.003	0.004	0.004	0.005	0.007	0.007,
	Low-alloy steel	Annealed		175	86	P7	●●		0.003	0.004	0.005	0.006	0.008	0.008
		Heat-treated		285	139	P8	●●		0.003	0.004	0.004	0.005	0.006	0.006
		Heat-treated		380	186	P9	●●		0.003	0.004	0.004	0.005	0.006	0.006
		Heat-treated		430	215	P10	●●		0.002	0.002	0.002	0.004	0.005	0.005
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11	●●		0.003	0.004	0.005	0.006	0.007	0.007
		Hardened and tempered		300	146	P12	●●		0.003	0.004	0.004	0.005	0.006	0.006
		Hardened and tempered		380	186	P13	●●		0.002	0.003	0.004	0.005	0.006	0.006
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	●●		0.003	0.004	0.004	0.005	0.006	0.006
		Martensitic, heat-treated		330	161	P15	●●		0.002	0.003	0.004	0.005	0.006	0.006
M	Stainless steel	Austenitic, quench hardened		200	99	M1	●●		0.002	0.003	0.003	0.004	0.005	0.006
		Austenitic, precipitation hardened (PH)		300	146	M2	●●		0.002	0.003	0.003	0.004	0.005	0.006
		Austenitic/ferritic, duplex		230	113	M3	●●		0.002	0.003	0.003	0.004	0.005	0.006
K	Malleable cast iron	Ferritic		200	58	K1	●●	●	0.004	0.005	0.006	0.007	0.009	0.009
		Pearlitic		260	102	K2	●●	●	0.003	0.004	0.004	0.006	0.007	0.008
	Grey cast iron	Low tensile strength		180	29	K3	●●	●	0.004	0.005	0.006	0.007	0.009	0.009
		High tensile strength/austenitic		245	51	K4	●●	●	0.003	0.004	0.005	0.006	0.008	0.008
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	●●	●	0.004	0.005	0.006	0.007	0.009	0.009
		Pearlitic		265	102	K6	●●		0.003	0.004	0.005	0.007	0.009	0.009
	GGV (CGI)			230	58	K7	●●	●	0.004	0.005	0.006	0.007	0.009	0.009
N	Wrought aluminium alloys	Not hardenable		30	—	N1								
		Hardenable, hardened		100	49	N2	●●							
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3	●●							
		≤ 12% Si, hardenable, hardened		90	45	N4	●●							
		> 12% Si, not hardenable		130	65	N5	●●	●						
	Magnesium alloys			70	36	N6	●●							
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7								
		Brass, bronze, red brass		90	45	N8	●●							
		Cu alloys, short-chipping		110	55	N9	●●	●						
		High-tensile, Ampco		300	146	N10	●●	●	0.002	0.003	0.003	0.004	0.005	0.006
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1	●●							
			Hardened	280	136	S2	●●							
		Ni- or Co-based	Annealed	250	122	S3	●●							
			Hardened	350	171	S4	●●							
			Cast	320	157	S5	●●							
	Titanium alloys	Pure titanium		200	99	S6								
		α and β alloys, hardened		375	183	S7	●●							
		β alloys		410	203	S8	●●							
	Tungsten alloys			300	146	S9	●●		0.002	0.002	0.002	0.004	0.004	0.005
	Molybdenum alloys			300	146	S10	●●		0.002	0.002	0.002	0.004	0.004	0.005
H	Hardened steel	Hardened and tempered		50 HRC	—	H1	●●		0.002	0.002	0.002	0.004	0.004	0.004
		Hardened and tempered		55 HRC	—	H2	●●		0.002	0.002	0.002	0.004	0.004	0.004
		Hardened and tempered		60 HRC	—	H3								
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4	●●		0.002	0.002	0.002	0.004	0.004	0.004
O	Thermoplastics	Without abrasive fillers				O1	●●	●						
	Thermosets	Without abrasive fillers				O2	●●	●						
	Plastic, glass-fibre-reinforced	GFRP				O3								
	Plastic, carbon-fibre-reinforced	CFRP				O4								
	Plastic, aramid-fibre-reinforced	AFRP				O5								
	Graphite (technical)			80 Shore		O6	●●	●	0.004	0.005	0.006	0.007	0.009	0.009

●● Recommended application (the specified cutting data is regarded as starting values for the recommended application)
● Possible application. Limited to 2 × D_c drilling depth. MQL (minimum quantity lubrication) or compressed air is recommended.

When using drills > 3 × D_c, the following reductions are recommended:
> 3 × D_c: Cutting speed v_c - 20%, feed f - 30% when spot drilling, feed f - 50% when spot drilling on inclined surfaces.
> 4 × D_c: Cutting speed v_c - 30%, feed f - 40% when spot drilling.

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

Indexable insert geometry													Cutting material grade Outer insert [P484.P..]								
Starting values for feed f [inch / rev]													Starting values for cutting speed v_c [sfm]								
E 57						E 67							HC								
Size 1	Size 2	Size 3	Size 4	Size 5 Size 6	Size 7 Size 8	Size 1	Size 2	Size 3	Size 4	Size 5 Size 6	Size 7 Size 8		WKP25S f [inch /rev]			WKP35S f [inch / rev]			WSP45 f [inch / rev]		
D_c [inch]						D_c [inch]															
0.531–0.646	0.650–0.803	0.807–0.961	0.965–1.161	1.161–1.669	1.673–2.339	0.531–0.646	0.650–0.803	0.807–0.961	0.965–1.157	1.161–1.669	1.673–2.339		0.002	0.004	0.006	0.002	0.004	0.006	0.002	0.004	0.006
0.002	0.002	0.002	0.004	0.005	0.005	0.002	0.002	0.002	0.004	0.005	0.005		1150	1050		980	890		820	720	
0.002	0.003	0.003	0.004	0.007	0.007	0.002	0.003	0.003	0.004	0.007	0.007		850	790	720	720	660	590	560	530	490
0.002	0.003	0.003	0.004	0.007	0.007								790	720	660	660	590	490	490	460	430
0.002	0.003	0.003	0.004	0.007	0.007								720	660	590	590	490	460	460	430	390
0.002	0.003	0.003	0.004	0.007	0.007								620	560	490	490	430	390	430	390	360
0.002	0.003	0.003	0.004	0.007	0.007								720	660	590	590	490	460	460	430	390
0.002	0.003	0.004	0.005	0.007	0.008	0.002	0.003	0.004	0.006	0.008	0.008		850	790	720	720	660	590	560	530	530
0.002	0.003	0.003	0.004	0.006	0.006								750	690	620	620	560	460	460	430	390
0.002	0.003	0.003	0.004	0.006	0.006								690	620	560	590	530	430	460	390	360
0.002	0.002	0.002	0.004	0.004	0.005								620	560	530	560	460	430	460	390	360
0.002	0.003	0.004	0.005	0.007	0.007	0.002	0.003	0.004	0.005	0.006	0.007		720	660	590	660	560	490	460	430	390
0.002	0.003	0.003	0.004	0.006	0.006								660	560	490	590	460	430	430	390	360
0.002	0.002	0.003	0.004	0.005	0.006								620	530	460	560	430	390	390	360	330
0.002	0.003	0.003	0.004	0.006	0.006	0.002	0.003	0.003	0.004	0.006	0.006					620	560	490	460	430	390
0.002	0.002	0.003	0.004	0.005	0.006	0.002	0.002	0.003	0.004	0.005	0.006					490	430	390	390	360	330
0.002	0.003	0.003	0.004	0.005	0.006	0.002	0.003	0.004	0.005	0.006	0.006					720	660	590	590	560	490
0.002	0.003	0.003	0.004	0.005	0.006	0.002	0.003	0.004	0.005	0.006	0.006					490	430	360	430	360	330
0.002	0.003	0.003	0.004	0.005	0.006	0.002	0.003	0.004	0.005	0.006	0.006					390	330	260	330	260	230
0.003	0.004	0.004	0.006	0.008	0.009	0.003	0.004	0.004	0.006	0.008	0.009		690	620	560	620	590	530	560	460	390
0.002	0.003	0.003	0.004	0.007	0.007	0.002	0.003	0.004					620	460	390	430	390	360	430	390	360
0.003	0.004	0.005	0.006	0.009	0.009	0.003	0.004	0.005	0.006	0.009	0.009		720	660	590	660	620	560	590	530	430
0.002	0.003	0.004	0.005	0.007	0.008								590	490	430	490	430	360	490	430	360
0.003	0.004	0.005	0.006	0.009	0.009	0.003	0.004	0.005	0.006	0.009	0.009		490	460	430	460	390	360	490	430	390
0.002	0.003	0.004	0.005	0.009	0.009	0.002	0.003						460	430	390	390	360	330	390	360	360
0.003	0.004	0.004	0.006	0.008	0.009	0.003	0.004	0.004	0.006	0.008	0.009		590	490	430	490	430	360	490	430	360
0.003	0.004	0.004	0.005	0.007	0.007	0.003	0.004	0.004	0.005	0.007	0.007								1480	1480	1480
0.003	0.004	0.005	0.006	0.007	0.007	0.003	0.004	0.005	0.006	0.007	0.007								980	980	980
0.003	0.004	0.005	0.006	0.007	0.007	0.003	0.004	0.005	0.006	0.007	0.007								820	820	820
0.003	0.004	0.005	0.006	0.007	0.007	0.003	0.004	0.005	0.006	0.007	0.007								660	660	660
0.003	0.004	0.005	0.006	0.007	0.007	0.003	0.004	0.005	0.006	0.007	0.007								980	980	980
0.004	0.005	0.006	0.007	0.009	0.009	0.004	0.005	0.006	0.007	0.009	0.009								980	820	660
0.004	0.005	0.006	0.007	0.009	0.009	0.004	0.005	0.006	0.007	0.009	0.009								1150	980	820
0.002	0.003	0.003	0.004	0.005	0.006	0.002	0.003	0.004	0.005	0.006	0.006					490	430	360	430	360	330
0.002	0.002	0.003	0.004	0.005	0.006	0.002	0.002	0.003	0.004	0.005	0.006		330	330		330	330		300	300	
0.002	0.002	0.002	0.004	0.004	0.005	0.002	0.002	0.002	0.004	0.004	0.005		260	260		260	260		230	230	
0.002	0.002	0.003	0.004	0.005	0.005	0.002	0.002	0.003	0.004	0.005	0.005		200	200		200	200		160	160	
0.002	0.002	0.002	0.004	0.004	0.005	0.002	0.002	0.002	0.004	0.004	0.005		160	160		160	160		130	130	
0.002	0.002	0.002	0.004	0.004	0.005	0.002	0.002	0.002	0.004	0.004	0.005		160	160		160	160		130	130	
0.002	0.002	0.003	0.004	0.005	0.005	0.002	0.002	0.003	0.004	0.005	0.005					160	160		160	160	
0.002	0.002	0.002	0.004	0.004	0.005	0.002	0.002	0.002	0.004	0.004	0.005					160	160		130	130	
0.002	0.002	0.002	0.004	0.004	0.005	0.002	0.002	0.002	0.004	0.004	0.005		230	200							
0.002	0.002	0.002	0.004	0.004	0.005	0.002	0.002	0.002	0.004	0.004	0.005		230	200							
0.002	0.002	0.002	0.004	0.004	0.004								230	200	160						
0.002	0.002	0.002	0.004	0.004	0.004								200	160	160						
0.002	0.002	0.002	0.004	0.004	0.004								200	160	160						
0.006	0.007	0.008	0.010	0.012	0.012	0.006	0.007	0.008	0.010	0.012	0.012					1310	1310	1310	1310	1310	1310
0.002	0.002	0.007	0.008	0.010	0.010	0.005	0.006	0.007	0.008	0.010	0.010		980	980	980	980	980	980	980	980	980
0.003	0.004	0.004	0.006	0.008	0.009								980	820	660	820	660	490	820	660	490

HC = Coated carbide

B1

Cutting data for D3120

= Wet machining (E = emulsion, O = oil)

= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

* The classification of the machining groups can be found in the material group comparison table

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group *			Indexable insert geometry				
									Starting values for feed f [inch/rev]				
									A 57				
									Size 1	Size 2	Size 3	Size 4	Size 5
									D_c [inch]				
									0.630-0.787	0.827-0.984	1.024-1.181	1.220-1.417	1.457-1.654
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	●●		0.002	0.002	0.002	0.004	0.005
		C > 0.25 ... ≤ 0.55%	Annealed	190	93	P2	●●		0.003	0.004	0.004	0.005	0.007
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	103	P3	●●		0.003	0.004	0.004	0.005	0.007
		C > 0.55%	Annealed	190	93	P4	●●		0.003	0.004	0.004	0.005	0.007
		C > 0.55%	Heat-treated	300	146	P5	●●		0.003	0.004	0.004	0.005	0.007
		Free-machining steel (short-chipping)	Annealed	220	109	P6	●●	●	0.003	0.004	0.004	0.005	0.007
	Low-alloy steel	Annealed		175	86	P7	●●		0.003	0.004	0.005	0.006	0.008
		Heat-treated		285	139	P8	●●		0.003	0.004	0.004	0.005	0.006
		Heat-treated		380	186	P9	●●		0.003	0.004	0.004	0.005	0.006
		Heat-treated		430	215	P10	●●		0.002	0.002	0.002	0.004	0.005
	High-alloyed steel and high-alloyed tool steel	Annealed		200	99	P11	●●		0.003	0.004	0.005	0.006	0.007
		Hardened and tempered		300	146	P12	●●		0.003	0.004	0.004	0.005	0.006
		Hardened and tempered		380	186	P13	●●		0.002	0.003	0.004	0.005	0.006
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	●●		0.003	0.004	0.004	0.005	0.006
		Martensitic, heat-treated		330	161	P15	●●		0.002	0.003	0.004	0.005	0.006
M	Stainless steel	Austenitic, quench hardened		200	99	M1	●●		0.002	0.003	0.003	0.004	0.005
		Austenitic, precipitation hardened (PH)		300	146	M2	●●		0.002	0.003	0.003	0.004	0.005
		Austenitic/ferritic, duplex		230	113	M3	●●		0.002	0.003	0.003	0.004	0.005
K	Malleable cast iron	Ferritic		200	58	K1	●●	●	0.004	0.005	0.006	0.007	0.009
		Pearlitic		260	102	K2	●●	●	0.003	0.004	0.004	0.006	0.007
	Grey cast iron	Low tensile strength		180	29	K3	●●	●	0.004	0.005	0.006	0.007	0.009
		High tensile strength/austenitic		245	51	K4	●●	●	0.003	0.004	0.005	0.006	0.008
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	●●	●	0.004	0.005	0.006	0.007	0.009
		Pearlitic		265	102	K6	●●		0.003	0.004	0.005	0.007	0.009
	GGV (CGI)			230	58	K7	●●	●	0.004	0.005	0.006	0.007	0.009
N	Wrought aluminium alloys	Not hardenable		30	—	N1							
		Hardenable, hardened		100	49	N2	●●						
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3	●●						
		≤ 12% Si, hardenable, hardened		90	45	N4	●●						
		> 12% Si, not hardenable		130	65	N5	●●	●					
	Magnesium alloys			70	36	N6	●●						
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7							
		Brass, bronze, red brass		90	45	N8	●●						
		Cu alloys, short-chipping		110	55	N9	●●	●					
		High-tensile, Ampco		300	146	N10	●●	●	0.002	0.003	0.003	0.004	0.005
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1	●●						
			Hardened	280	136	S2	●●						
		Ni- or Co-based	Annealed	250	122	S3	●●						
			Hardened	350	171	S4	●●						
			Cast	320	157	S5	●●						
	Titanium alloys	Pure titanium		200	99	S6							
		α and β alloys, hardened		375	183	S7	●●						
		β alloys		410	203	S8	●●						
	Tungsten alloys			300	146	S9	●●		0.002	0.002	0.002	0.004	0.004
	Molybdenum alloys			300	146	S10	●●		0.002	0.002	0.002	0.004	0.004
H	Hardened steel	Hardened and tempered		50 HRC	—	H1	●●		0.002	0.002	0.002	0.004	0.004
		Hardened and tempered		55 HRC	—	H2	●●		0.002	0.002	0.002	0.004	0.004
		Hardened and tempered		60 HRC	—	H3							
	Hardened cast iron	Hardened and tempered		55 HRC	—	H4	●●		0.002	0.002	0.002	0.004	0.004
O	Thermoplastics	Without abrasive fillers				O1	●●	●					
	Thermosets	Without abrasive fillers				O2	●●	●					
	Plastic, glass-fibre-reinforced	GFRP				O3							
	Plastic, carbon-fibre-reinforced	CFRP				O4							
	Plastic, aramid-fibre-reinforced	AFRP				O5							
	Graphite (technical)			80 Shore		O6	●●	●	0.004	0.005	0.006	0.007	0.009

●● Recommended application (the specified cutting data is regarded as starting values for the recommended application)
● Possible application, limited to 2 × D_c drilling depth, MQL (minimum quantity lubrication) or compressed air is recommended.

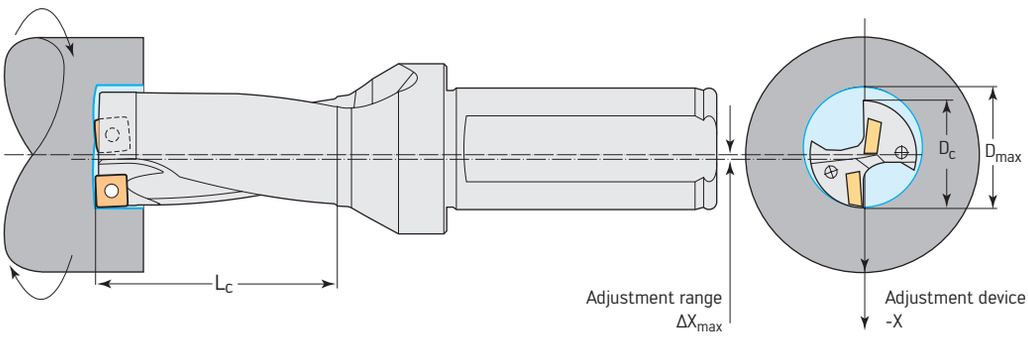
When using drills > 3 × D, the following reductions are recommended:
> 3 × D: Cutting speed v_c –20%, feed f –30% when spot drilling, feed f –50% when spot drilling on inclined surfaces.
> 4 × D: Cutting speed v_c –30%, feed f –40% when spot drilling.

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

Indexable insert geometry											Cutting material grade															
Starting values for feed f [inch/rev]											Starting values for cutting speed v_c [sfm]															
E 57					E 67						HC												HW			
											WKP25S f [inch/rev]			WKP35S f [inch/rev]			WSP45S f [inch/rev]			WXP40 f [inch/rev]			WK40 f [inch/rev]		
Size 1	Size 2	Size 3	Size 4	Size 5	Size 1	Size 2	Size 3	Size 4	Size 5																	
D_c [inch]					D_c [inch]																					
0.630-0.787	0.827-0.984	1.024-1.181	1.220-1.417	1.457-1.654	0.630-0.787	0.827-0.984	1.024-1.181	1.220-1.417	1.457-1.654		0.002	0.004	0.006	0.002	0.004	0.006	0.002	0.004	0.006	0.002	0.004	0.006	0.002	0.004	0.006
0.002	0.002	0.002	0.004	0.005	0.002	0.002	0.002	0.004	0.005		1150	1050		980	890		820	720		660	590	520			
0.002	0.003	0.003	0.004	0.007	0.002	0.003	0.003	0.004	0.007		850	790	720	720	660	590	560	520	490	490	460	430			
0.002	0.003	0.003	0.004	0.007							790	720	660	660	590	490	490	460	430	490	460	390			
0.002	0.003	0.003	0.004	0.007							720	660	590	590	490	460	460	430	390	490	460	430			
0.002	0.003	0.003	0.004	0.007							620	560	490	490	430	390	430	390	360	390	360	330			
0.002	0.003	0.003	0.004	0.007							720	660	590	590	490	460	460	430	390	390	360	430			
0.002	0.003	0.004	0.005	0.007	0.002	0.003	0.004	0.006	0.008		850	790	720	720	660	590	560	520	520	490	460	430			
0.002	0.003	0.003	0.004	0.006							750	690	620	620	560	460	460	430	390	460	390	360			
0.002	0.003	0.003	0.004	0.006							690	620	560	590	520	430	460	390	360	460	390	300			
0.002	0.002	0.002	0.004	0.004							620	560	520	560	460	430	460	390	360	390	360	260			
0.002	0.003	0.004	0.005	0.007	0.002	0.003	0.004	0.005	0.006		720	660	590	660	560	490	460	430	390	430	390	360			
0.002	0.003	0.003	0.004	0.006							660	560	490	590	460	430	430	390	360	390	360	330			
0.002	0.002	0.003	0.004	0.005							620	520	460	560	430	390	390	360	330	360	330	260			
0.002	0.003	0.003	0.004	0.006	0.002	0.003	0.003	0.004	0.006					620	560	490	460	430	390	430	390	360			
0.002	0.002	0.003	0.004	0.005	0.002	0.002	0.003	0.004	0.005					490	430	390	390	360	330	360	330	300			
0.002	0.003	0.003	0.004	0.005	0.002	0.003	0.004	0.005	0.006					720	660	590	590	560	490	520	490	390			
0.002	0.003	0.003	0.004	0.005	0.002	0.003	0.004	0.005	0.006					490	430	360	430	360	330	360	330	250			
0.002	0.003	0.003	0.004	0.005	0.002	0.003	0.004	0.005	0.006					390	330	260	330	260	230	260	230	200			
0.003	0.004	0.004	0.006	0.008	0.003	0.004	0.004	0.006	0.008		690	620	560	620	590	520	560	460	390	520	460	460			
0.002	0.003	0.003	0.004	0.007	0.002	0.003	0.004				620	460	390	430	390	360	430	390	360	430	390	390			
0.003	0.004	0.005	0.006	0.009	0.003	0.004	0.005	0.006	0.009		720	660	590	660	620	560	590	520	430	520	460	390			
0.002	0.003	0.004	0.005	0.007							590	490	430	490	430	360	490	430	360	430	390	330			
0.003	0.004	0.005	0.006	0.009	0.003	0.004	0.005	0.006	0.009		490	460	430	460	390	360	490	430	390	430	390	360			
0.002	0.003	0.004	0.005	0.009	0.002	0.003					460	430	390	390	360	330	390	360	360	360	330	330			
0.003	0.004	0.004	0.006	0.008	0.003	0.004	0.004	0.006	0.008		590	490	430	490	430	360	490	430	360	430	390	330			
																								1640	1640
0.003	0.004	0.004	0.005	0.007	0.003	0.004	0.004	0.005	0.007								1480	1480	1480					1480	1310
0.003	0.004	0.005	0.006	0.007	0.003	0.004	0.005	0.006	0.007								980	980	980					1310	1310
0.003	0.004	0.005	0.006	0.007	0.003	0.004	0.005	0.006	0.007								820	820	820					980	980
0.003	0.004	0.005	0.006	0.007	0.003	0.004	0.005	0.006	0.007								660	660	660					660	660
0.003	0.004	0.005	0.006	0.007	0.003	0.004	0.005	0.006	0.007								980	980	980						
																								980	850
0.004	0.005	0.006	0.007	0.009	0.004	0.005	0.006	0.007	0.009								980	820	660					980	850
0.004	0.005	0.006	0.007	0.009	0.004	0.005	0.006	0.007	0.009								1150	980	820					1310	1150
0.002	0.003	0.003	0.004	0.005	0.002	0.003	0.004	0.005	0.006					490	430	360	430	360	330						
0.002	0.002	0.003	0.004	0.005	0.002	0.002	0.003	0.004	0.005		330	330		330	330		300	300		260	260	230	230	230	
0.002	0.002	0.002	0.004	0.004	0.002	0.002	0.002	0.004	0.004		260	260		260	260		230	230		200	200	160	160	160	
0.002	0.002	0.003	0.004	0.005	0.002	0.002	0.003	0.004	0.005		200	200		200	200		160	160		160	160	130	130	130	
0.002	0.002	0.002	0.004	0.004	0.002	0.002	0.002	0.004	0.004		160	160		160	160		130	130		130	130	110	100	100	
0.002	0.002	0.002	0.004	0.004	0.002	0.002	0.002	0.004	0.004		160	160		160	160		130	130		130	130	110	100	100	
0.002	0.002	0.003	0.004	0.005	0.002	0.002	0.003	0.004	0.005					160	160		160	150							
0.002	0.002	0.002	0.004	0.004	0.002	0.002	0.002	0.004	0.004					160	160		130	130							
0.002	0.002	0.002	0.004	0.004	0.002	0.002	0.002	0.004	0.004		230	200													
0.002	0.002	0.002	0.004	0.004	0.002	0.002	0.002	0.004	0.004		230	200													
0.002	0.002	0.002	0.004	0.004							230	200	160												
0.002	0.002	0.002	0.004	0.004							200	160	160												
0.002	0.002	0.002	0.004	0.004							200	160	160												
0.006	0.007	0.008	0.010	0.012	0.006	0.007	0.008	0.010	0.012					1310	1310	1310	1310	1310	1310	1310	1310	1310			
0.002	0.002	0.007	0.008	0.010	0.005	0.006	0.007	0.008	0.010		980	980	980	980	980	980	980	980	980	980	980	980			
0.003	0.004	0.004	0.006	0.008							980	820	660	820	660	490	820	660	490	820	660	490			

HC = Coated carbide

Drilling with X offset for D4120 using a stationary drill with rotating workpiece

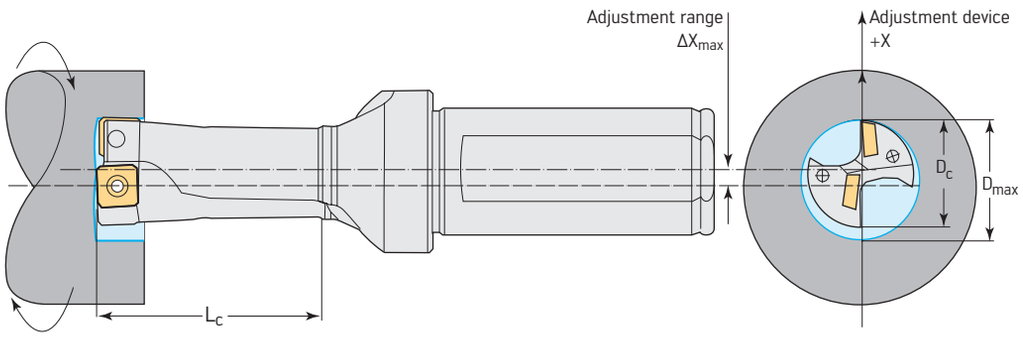


Indexable insert size	D_c	$(L_c / D_c) \geq 4$		$(L_c / D_c) < 4$	
		ΔX	D_{max}	ΔX_{max}	D_{max}
	mm	mm	mm	mm	mm
1	13.5	0.5	14.5	0.7	14.9
	14	0.35	14.7	0.6	15.2
	14.5	0.3	15.1	0.5	15.5
	15	0.2	15.4	0.45	15.9
	15.5	0.15	15.8	0.35	16.2
	16	0.05	16.1	0.3	16.6
	16.4	0	–	0.2	16.8
2	16.5	0.6	17.7	0.9	18.3
	17	0.5	18	0.75	18.5
	17.5	0.35	18.2	0.6	18.7
	18	0.3	18.6	0.55	19.1
	18.5	0.2	18.9	0.45	19.4
	19	0.15	19.3	0.4	19.8
	19.5	0.07	19.64	0.3	20.1
	20	0	20	0.25	20.5
	20.4*	0	–	0.15	20.7
3	20.5	0.35	21.2	0.7	21.9
	21	0.3	21.6	0.6	22.2
	21.5	0.17	21.84	0.45	22.4
	22	0.15	22.3	0.45	22.9
	22.5	0.02	22.54	0.3	23.1
	23	0	–	0.3	23.6
	23.5*	0	–	0.18	23.86
	24*	0	–	0.15	24.3
	24.4*	0	–	0	–
4	24.5	0.5	25.5	0.85	26.2
	25	0.35	25.7	0.75	26.5
	25.5	0.25	26	0.6	26.7
	26	0.15	26.3	0.55	27.1
	26.5	0.05	26.6	0.4	27.3
	27	0	–	0.4	27.8
	27.5	0	–	0.25	28
	28*	0	–	0.25	28.5
	28.5*	0	–	0.12	28.74
	29*	0	–	0.1	29.2
	29.4*	0	–	0	–

Indexable insert size	D_c	$(L_c / D_c) \geq 4$		$(L_c / D_c) < 4$	
		ΔX	D_{max}	ΔX_{max}	D_{max}
	mm	mm	mm	mm	mm
5	29.5	0.7	30.9	1.1	31.7
	30	0.6	31.2	1	32
	31	0.45	31.9	0.8	32.6
	32	0.3	32.6	0.7	33.4
	33	0.15	33.3	0.5	34
	34	0	–	0.4	34.8
	35*	0	–	0.3	35.6
	35.4*	0	–	0.2	35.8
6	35.5	0.8	37.1	1.4	38.3
	36	0.7	37.4	1.25	38.5
	37	0.55	38.1	1.1	39.2
	38	0.4	38.8	0.95	39.9
	39	0.25	39.5	0.8	40.6
	40	0.1	40.2	0.65	41.3
	41	0	–	0.55	42.1
	42	0	–	0.4	42.8
	42.4	0	–	0.3	43

* Outer insert with wiper edge (P4840P.) can only be used 2x.

Drilling with X offset for D3120 using a stationary drill with rotating workpiece

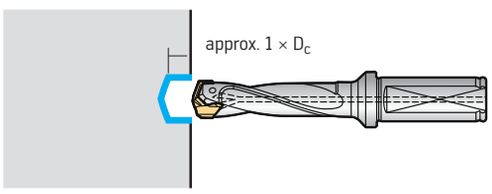


Indexable insert size	D_c	$(L_c / D_c) \geq 4$		$(L_c / D_c) < 4$	
		ΔX	D_{max}	ΔX_{max}	D_{max}
	mm	mm	mm	mm	mm
1	16	1.0	18.0	1.8	19.6
	17	0.8	18.6	1.5	20.0
	18	0.7	19.4	1.3	20.6
	19	0.5	20.0	1.0	21.0
	20	0.3	20.6	0.8	21.6
2	21	1.1	23.2	2.0	25.0
	22	0.9	23.8	1.7	25.4
	23	0.8	24.6	1.5	26.0
	24	0.6	25.2	1.2	26.4
	25	0.4	25.8	1.0	27.0
3	26	1.0	28.0	1.7	29.4
	27	0.8	28.6	1.4	29.8
	28	0.6	29.2	1.2	30.4
	29	0.4	29.8	0.9	30.8
	30	0.3	30.6	0.7	31.4
4	31	1.1	33.2	1.9	34.8
	32	0.9	33.8	1.6	35.2
	33	0.7	34.4	1.4	35.8
	34	0.5	35.0	1.1	36.2
	35	0.3	35.6	0.8	36.6
	36	0.2	36.4	0.6	37.2
5	37	0.9	38.8	1.8	40.6
	38	0.7	39.4	1.5	41.0
	39	0.5	40.0	1.2	41.4
	40	0.5	41.0	1.2	42.4
	41	0.4	41.8	0.9	42.8
	42	0.2	42.4	0.6	43.2

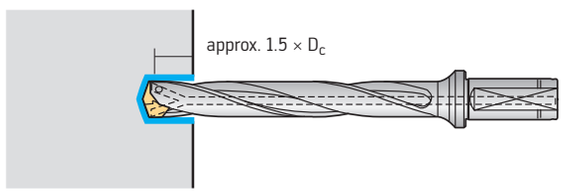
D4140 drilling strategy

Drilling depth > 5 × D_c –10 × D_c

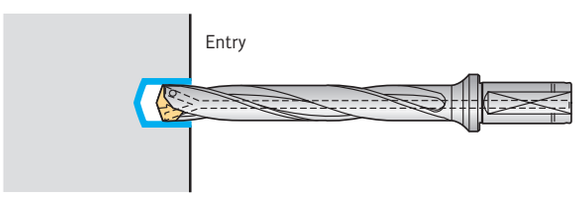
Pilot hole
D4140-01../D4140-03..



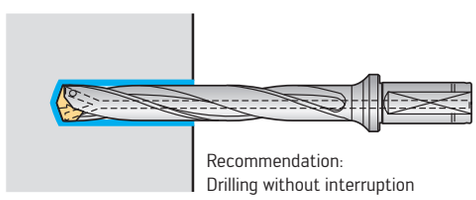
n = -20%
f = -50%



max. approx. 500 rpm



n = 100%
f = 100%



VRR: Feed rate charts for D4140

	Feed f [in] for diameter [in]				
VRR	0.472 [12]	0.591 [15]	0.787 [20]	0.984 [25]	1.575 [40]
2	0.002	0.002	0.003	0.003	0.004
3	0.003	0.003	0.004	0.004	0.006
4	0.004	0.005	0.005	0.006	0.007
5	0.005	0.006	0.007	0.007	0.009
6	0.006	0.007	0.008	0.009	0.011
7	0.007	0.008	0.009	0.01	0.013
8	0.008	0.009	0.011	0.012	0.015
9	0.009	0.01	0.012	0.013	0.017
10	0.01	0.011	0.013	0.015	0.019
12	0.012	0.014	0.016	0.018	0.022
16	0.016	0.018	0.021	0.024	0.03

Cutting data
HSS drills

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

= Wet machining (E = emulsion, O = oil)

= Dry machining possible (M = MQL, L = dry)
Cutting data must be selected from Walter GPS

v_c = Cutting speed (sfm)
VRR = Feed rate chart starting on page 263

* The classification of the machining groups can be found in the material group comparison table

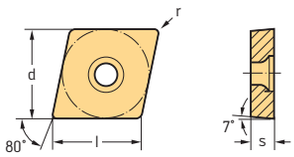
				Drilling depth			~8 × Dc				
				Designation			DA110 Perform				
				Standard			DIN 338				
				Cooling			External coolant				
				Grade			WZ90AJ				
				Dia. range [mm]			1–16				
Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R_m N/mm²	Machining group *	vc	VRR		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1	95	9	E O	
		C > 0.25... ≤ 0.55%	Annealed	190	640	P2	95	10	E O	
		C > 0.25... ≤ 0.55%	Heat-treated	210	710	P3	75	10	E O	
		C > 0.55%	Annealed	190	640	P4	72	8	E O	
		C > 0.55%	Heat-treated	300	1010	P5	49	8	E O	
		Free-machining steel (short-chipping)	Annealed	220	750	P6	95	10	E O	
	Low-alloy steel	Annealed		175	590	P7	95	10	E O	
		Heat-treated		285	960	P8	43	8	E O	
		Heat-treated		380	1280	P9	30	3	E O	
		Heat-treated		430	1480	P10				
	High-alloyed steel and high-alloyed tool steel	Annealed		200	680	P11	30	4	E O	
		Hardened and tempered		300	1010	P12	49	8	E O	
		Hardened and tempered		380	1280	P13	23	3	E O	
	Stainless steel	Ferritic/martensitic, annealed		200	680	P14	79	10	E O	
		Martensitic, heat-treated		330	1110	P15	49	8	E O	
M	Stainless steel	Austenitic, quench hardened		200	680	M1	16	4	O E	
		Austenitic, precipitation hardened (PH)		300	1010	M2	26	5	E O	
		Austenitic/ferritic, duplex		230	780	M3				
K	Malleable cast iron	Ferritic		200	400	K1	72	12	E O	
		Pearlitic		260	700	K2	56	10	E O	
	Grey cast iron	Low tensile strength		180	200	K3	92	12	E O	
		High tensile strength/austenitic		245	350	K4	72	12	E O	
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	82	12	E O	
		Pearlitic		265	700	K6	56	10	E O	
	GGV (CGI)			230	400	K7	66	10	E O	
N	Wrought aluminium alloys	Not hardenable		30	-	N1				
		Hardenable, hardened		100	340	N2				
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3				
		≤ 12% Si, hardenable, hardened		90	310	N4				
		> 12% Si, not hardenable		130	450	N5				
	Magnesium alloys			70	250	N6				
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	N7	135	5	E O	
		Brass, bronze, red brass		90	310	N8				
		Cu alloys, short-chipping		110	380	N9	167	12	E O	
		High-tensile, Ampco		300	1010	N10				
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1	13	3	O E	
			Hardened	280	940	S2				
		Ni- or Co-based	Annealed	250	840	S3				
			Hardened	350	1180	S4				
			Cast	320	1080	S5				
	Titanium alloys	Pure titanium		200	680	S6				
		α and β alloys, hardened		375	1260	S7				
		β alloys		410	1400	S8				
	Tungsten alloys			300	1010	S9				
	Molybdenum alloys			300	1010	S10				
H	Hardened steel	Hardened and tempered		50 HRC	-	H1				
		Hardened and tempered		55 HRC	-	H2				
		Hardened and tempered		60 HRC	-	H3				
	Hardened cast iron	Hardened and tempered		55 HRC	-	H4				
O	Thermoplastics	Without abrasive fillers				O1	82	12	E O	
	Thermosets	Without abrasive fillers				O2	92	8		L
	Plastic, glass-fibre-reinforced	GFRP				O3				
	Plastic, carbon-fibre-reinforced	CFRP				O4				
	Plastic, aramid-fibre-reinforced	AFRP				O5				
	Graphite (technical)			80 Shore		O6				

Product range overview of indexable inserts for counterboring and precision boring

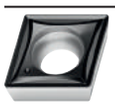
Machining	Insert shape		Description	Page
Counterboring Precision boring		S	For counterboring	282
		C	For counterboring For precision boring	281 283
		W	For counterboring	282
		T	For precision boring	285

Positive rhombic 80°
CCMT / CCGT

Tiger·tec® Silver



Indexable inserts

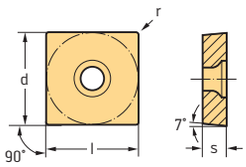
	ANSI Designation	Designation	r in	l in	P HC					M HC					K HC		N HC	S HC			
					WPP10S	WPP20S	WPP30S	WMP20S	WPP20	WMP20S	WSM01	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WNN10	WSM01	WSM10S	WSM20S	WSM30S
	CCMT2(1.5)0.5-E47	CCMT060202-E47	0.008	0.254		●							●	●						●	●
	CCMT2(1.5)1-E47	CCMT060204-E47	0.016	0.254		●			●				●	●						●	●
	CCMT3(2.5)0.5-E47	CCMT09T302-E47	0.008	0.381		●							●	●						●	●
	CCMT3(2.5)1-E47	CCMT09T304-E47	0.016	0.381		●							●	●						●	●
	CCMT3(2.5)2-E47	CCMT09T308-E47	0.031	0.381		●							●	●						●	●
	CCMT431-E47	CCMT120404-E47	0.016	0.508		●							●	●						●	●
	CCMT432-E47	CCMT120408-E47	0.031	0.508		●							●	●						●	●
	CCMT433-E47	CCMT120412-E47	0.047	0.508		●							●	●						●	●
	CCMT5(3.5)2-E47	CCMT160508-E47	0.031	0.630		●							●							●	
	CCMT2(1.5)1-MM4	CCMT060204-MM4	0.016	0.254				●		●		●	●	●					●	●	●
	CCMT2(1.5)2-MM4	CCMT060208-MM4	0.031	0.254				●		●			●							●	
	CCMT3(2.5)1-MM4	CCMT09T304-MM4	0.016	0.381				●		●		●	●	●					●	●	●
	CCMT3(2.5)2-MM4	CCMT09T308-MM4	0.031	0.381				●		●		●	●	●					●	●	●
	CCMT431-MM4	CCMT120404-MM4	0.016	0.508				●		●			●							●	
	CCMT432-MM4	CCMT120408-MM4	0.031	0.508				●		●		●	●						●	●	
	CCGT2(1.5)1-MM4	CCGT060204-MM4	0.016	0.254							●		●					●		●	
	CCGT2(1.5)2-MM4	CCGT060208-MM4	0.031	0.254							●		●					●		●	
	CCGT3(2.5)1-MM4	CCGT09T304-MM4	0.016	0.381							●		●					●		●	
	CCGT3(2.5)2-MM4	CCGT09T308-MM4	0.031	0.381							●		●					●		●	
	CCGT432-MM4	CCGT120408-MM4	0.031	0.508									●							●	

See the ISO 1832 designation key for dimensions

HC = Coated carbide

B2

Positive square
SCMT / SCGT
Tiger·tec® Silver



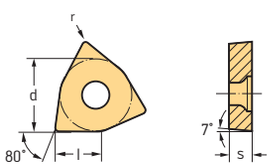
Indexable inserts

	ANSI Designation	Designation	r in	l in	P HC WPP01	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	SCMT2(1.5)1-E47	SCMT060204-E47	0.016	0.254			☹					☺	😐	☹					☺	😐	☹
	SCMT3(2.5)1-E47	SCMT09T304-E47	0.016	0.381			☹					☺	😐	☹					☺	😐	☹
	SCMT3(2.5)2-E47	SCMT09T308-E47	0.031	0.381			☹					☺	😐	☹					☺	😐	☹
	SCMT432-E47	SCMT120408-E47	0.031	0.508			☹					☺	😐	☹					☺	😐	☹
	SCMT3(2.5)1-MM4	SCMT09T304-MM4	0.016	0.381				😐	😐			☺	😐	☹					☺	😐	☹
	SCMT3(2.5)2-MM4	SCMT09T308-MM4	0.031	0.381				😐	😐			☺	😐	☹					☺	😐	☹
	SCMT432-MM4	SCMT120408-MM4	0.031	0.508				😐	😐				😐							😐	
	SCGT3(2.5)1-MM4	SCGT09T304-MM4	0.016	0.381							☺		😐					☺		😐	
	SCGT3(2.5)2-MM4	SCGT09T308-MM4	0.031	0.381							☺		😐					☺		😐	
	SCGT432-MM4	SCGT120408-MM4	0.031	0.508							☺		😐					☺		😐	

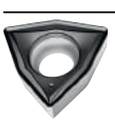
See the ISO 1832 designation key for dimensions

HC = Coated carbide

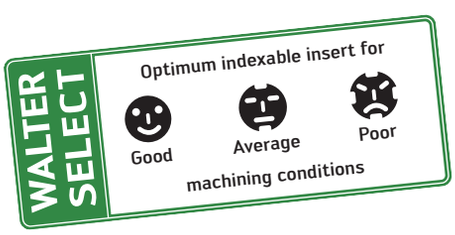
Positive Trigon 80°
WCMT
Tiger·tec® Silver



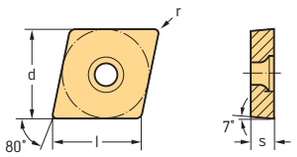
Indexable inserts

	ANSI Designation	Designation	r in	l in	P HC WPP10S	P HC WPP20S	P HC WPP30S	M HC WMP20S	M HC WSM10S	M HC WSM20S	M HC WSM30S	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM10S	S HC WSM20S	S HC WSM30S
	WCMT1.8(1.5)1-E47	WCMT030204-E47	0.016	0.138		☹				😐						😐	
	WCMT2(1.5)1-E47	WCMT040204-E47	0.016	0.169		☹				😐						😐	
	WCMT3(2.5)1-E47	WCMT06T304-E47	0.016	0.256		☹				😐						😐	
	WCMT3(2.5)2-E47	WCMT06T308-E47	0.031	0.256		☹				😐						😐	
	WCMT432-E47	WCMT080408-E47	0.031	0.343		☹				😐						😐	

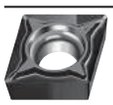
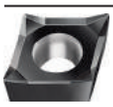
HC = Coated carbide



Positive rhombic 80°
CCGT / CCMT
Tiger·tec® Silver

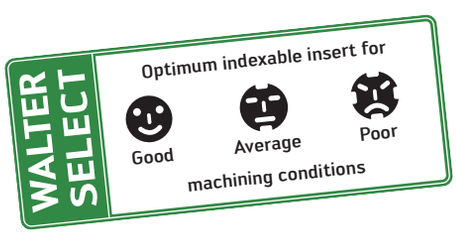


Indexable inserts

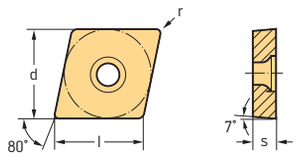
	ANSI Designation	Designation	r in	l in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	M HC WSM10	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	CCGT2(1.5)0.2-FN2	CCGT060201-FN2	0.004	0.253														☺				
	CCGT2(1.5)0.5-FN2	CCGT060202-FN2	0.008	0.253														☺				
	CCGT2(1.5)1-FN2	CCGT060204-FN2	0.016	0.253														☺				
	CCGT3(2.5)0.2-FN2	CCGT09T301-FN2	0.004	0.380														☺				
	CCGT3(2.5)0.5-FN2	CCGT09T302-FN2	0.008	0.380														☺				
	CCGT3(2.5)1-FN2	CCGT09T304-FN2	0.016	0.380														☺				
	CCGT3(2.5)2-FN2	CCGT09T308-FN2	0.031	0.380														☺				
	CCGT431-FN2	CCGT120404-FN2	0.016	0.507														☺				
	CCGT432-FN2	CCGT120408-FN2	0.031	0.507														☺				
	CCGT2(1.5)0.2-FM2	CCGT060201-FM2	0.004	0.253									😐								😐	
	CCGT2(1.5)0.5-FM2	CCGT060202-FM2	0.008	0.253							☺		😐						☺		😐	
	CCGT2(1.5)1-FM2	CCGT060204-FM2	0.016	0.253							☺		😐						☺		😐	
	CCGT3(2.5)0.2-FM2	CCGT09T301-FM2	0.004	0.380									😐								😐	
	CCGT3(2.5)0.5-FM2	CCGT09T302-FM2	0.008	0.380							☺		😐						☺		😐	
	CCGT3(2.5)1-FM2	CCGT09T304-FM2	0.016	0.380							☺	☺	😐						☺	☺	😐	
	CCGT3(2.5)2-FM2	CCGT09T308-FM2	0.031	0.380							☺	☺	😐						☺	☺	😐	
	CCGT431-FM2	CCGT120404-FM2	0.016	0.507									😐								😐	
	CCGT432-FM2	CCGT120408-FM2	0.031	0.507									😐								😐	
	CCGT2(1.5)0.2-MN2	CCGT060201-MN2	0.004	0.253														☺				
	CCGT2(1.5)0.5-MN2	CCGT060202-MN2	0.008	0.253							☺							☺	☺			
	CCGT2(1.5)1-MN2	CCGT060204-MN2	0.016	0.253							☺							☺	☺			
	CCGT3(2.5)0.2-MN2	CCGT09T301-MN2	0.004	0.380														☺				
	CCGT3(2.5)0.5-MN2	CCGT09T302-MN2	0.008	0.380							☺							☺	☺			
	CCGT3(2.5)1-MN2	CCGT09T304-MN2	0.016	0.380							☺							☺	☺			
	CCGT3(2.5)2-MN2	CCGT09T308-MN2	0.031	0.380							☺							☺	☺			
	CCGT4(3)0.5-MN2	CCGT120402-MN2	0.008	0.507														☺				
	CCGT431-MN2	CCGT120404-MN2	0.016	0.507														☺				
	CCGT432-MN2	CCGT120408-MN2	0.031	0.507														☺				
	CCMT2(1.5)0.5-FP4	CCMT060202-FP4	0.008	0.254		☺	😐															
	CCMT2(1.5)1-FP4	CCMT060204-FP4	0.016	0.254		☺	😐															
	CCMT2(1.5)2-FP4	CCMT060208-FP4	0.031	0.254		☺	😐															
	CCMT3(2.5)0.5-FP4	CCMT09T302-FP4	0.008	0.380		☺	😐															
	CCMT3(2.5)1-FP4	CCMT09T304-FP4	0.016	0.380		☺	😐															
	CCMT3(2.5)2-FP4	CCMT09T308-FP4	0.031	0.380		☺	😐															
	CCMT431-FP4	CCMT120404-FP4	0.016	0.507		☺	😐															
	CCMT432-FP4	CCMT120408-FP4	0.031	0.507		☺	😐															

See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide



Positive rhombic 80°
CCGT / CCMT
Tiger·tec® Silver



Indexable inserts

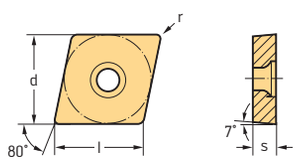
	ANSI Designation	Designation	r in	l in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	M HC WSM10	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	CCMT2(1.5)1-FM6	CCMT060204-FM6	0.016	0.254									☺	☹							☺	☹
	CCMT2(1.5)2-FM6	CCMT060208-FM6	0.031	0.254									☺								☺	
	CCMT3(2.5)1-FM6	CCMT09T304-FM6	0.016	0.380									☺	☹							☺	☹
	CCMT3(2.5)2-FM6	CCMT09T308-FM6	0.031	0.380									☺	☹							☺	☹
	CCMT432-FM6	CCMT120408-FM6	0.031	0.507									☺	☹							☺	☹

See the ISO 1832 designation key for dimensions

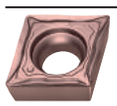
HE = Coated cermet
HC = Coated carbide

B 2

Positive rhombic 80°
CCMT
Cermet



Indexable inserts

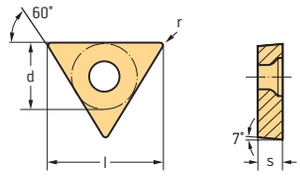
	ANSI Designation	Designation	r in	l in	P HE WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM20S	M HC WSM30S	M HC WSM10	M HC WSM20	M HC WSM30	K HC WKK10S	K HC WKK20S	N HC WXN10	N HW WK1	S HC WSM20S	S HC WSM30S	S HC WSM10	S HC WSM20	S HC WSM30
	CCMT2(1.5)0.5-FP4	CCMT060202-FP4	0.008	0.254	☺																			
	CCMT2(1.5)1-FP4	CCMT060204-FP4	0.016	0.254	☺																			
	CCMT2(1.5)2-FP4	CCMT060208-FP4	0.031	0.254																				
	CCMT3(2.5)0.5-FP4	CCMT09T302-FP4	0.008	0.380	☺																			
	CCMT3(2.5)1-FP4	CCMT09T304-FP4	0.016	0.380	☺																			
	CCMT3(2.5)2-FP4	CCMT09T308-FP4	0.031	0.380	☺																			
	CCMT431-FP4	CCMT120404-FP4	0.016	0.507																				
	CCMT432-FP4	CCMT120408-FP4	0.031	0.507																				

See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide
HW = Uncoated carbide

Positive triangular 60°
TCGT / TCMT

Tiger·tec® Silver

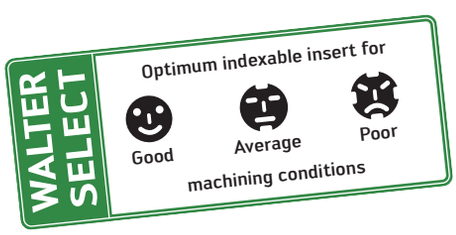


Indexable inserts

	ANSI Designation	Designation	r in	l in	P HC WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	M HC WSM21	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	TCGT1.2(1.2)0.2-FN2	TCGT06T101-FN2	0.039	0.260														☺				
	TCGT1.2(1.2)0.5-FN2	TCGT06T102-FN2	0.008	0.260														☺				
	TCGT1.2(1.2)1-FN2	TCGT06T104-FN2	0.016	0.260														☺				
	TCGT1.8(1.5)0.5-FN2	TCGT090202-FN2	0.008	0.368														☺				
	TCGT1.8(1.5)1-FN2	TCGT090204-FN2	0.016	0.368														☺				
	TCGT2(1.5)0.5-FN2	TCGT110202-FN2	0.008	0.422														☺				
	TCGT2(1.5)1-FN2	TCGT110204-FN2	0.016	0.422														☺				
	TCGT3(2.5)1-FN2	TCGT16T304-FN2	0.016	0.649														☺				
	TCGT3(2.5)2-FN2	TCGT16T308-FN2	0.031	0.649														☺				
	TCGT1.2(1.2)0.2-FM2	TCGT06T101-FM2	0.039	0.260											😣							
	TCGT1.2(1.2)0.5-FM2	TCGT06T102-FM2	0.008	0.260											😣							
	TCGT1.2(1.2)1-FM2	TCGT06T104-FM2	0.016	0.260							☺				😣				☺			
	TCGT1.8(1.5)0.5-FM2	TCGT090202-FM2	0.008	0.368									😐								😐	
	TCGT1.8(1.5)1-FM2	TCGT090204-FM2	0.016	0.368									😐								😐	
	TCGT2(1.5)0.2-FM2	TCGT110201-FM2	0.039	0.422									😐								😐	
	TCGT2(1.5)0.5-FM2	TCGT110202-FM2	0.008	0.422							☺		😐						☺		😐	
	TCGT2(1.5)1-FM2	TCGT110204-FM2	0.016	0.422							☺		😐						☺		😐	
	TCGT3(2.5)0.5-FM2	TCGT16T302-FM2	0.008	0.649									😐								😐	
	TCGT3(2.5)1-FM2	TCGT16T304-FM2	0.016	0.649							☺		😐						☺		😐	
	TCGT3(2.5)2-FM2	TCGT16T308-FM2	0.031	0.649							☺		😐						☺		😐	
	TCMT1.2(1.2)0.5-FM4	TCMT06T102-FM4	0.008	0.260											😣							
	TCMT1.2(1.2)1-FM4	TCMT06T104-FM4	0.016	0.260											😣							
	TCMT1.8(1.5)0.5-FM4	TCMT090202-FM4	0.008	0.368								☺	😐	😣						☺	😐	😣
	TCMT1.8(1.5)1-FM4	TCMT090204-FM4	0.016	0.368								☺	😐	😣						☺	😐	😣
	TCMT1.8(1.5)2-FM4	TCMT090208-FM4	0.031	0.368								☺	😐							☺	😐	
	TCMT2(1.5)0.5-FM4	TCMT110202-FM4	0.008	0.422								☺	😐	😣						☺	😐	😣
	TCMT2(1.5)1-FM4	TCMT110204-FM4	0.016	0.422					😐	😐		☺	😐	😣						☺	😐	😣
	TCMT2(1.5)2-FM4	TCMT110208-FM4	0.031	0.422								☺	😐	😣						☺	😐	😣
	TCMT3(2.5)0.5-FM4	TCMT16T302-FM4	0.008	0.649								☺	😐	😣						☺	😐	😣
	TCMT3(2.5)1-FM4	TCMT16T304-FM4	0.016	0.649					😐	😐		☺	😐	😣						☺	😐	😣
	TCMT3(2.5)2-FM4	TCMT16T308-FM4	0.031	0.649					😐	😐		☺	😐	😣						☺	😐	😣

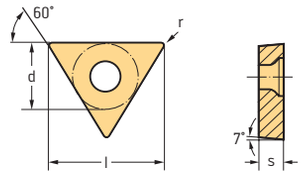
See the ISO 1832 designation key for dimensions

HC = Coated carbide

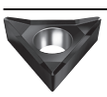


Positive triangular 60°
TCGT / TCMT

Tiger·tec® Silver



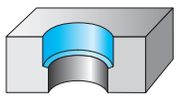
Indexable inserts

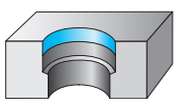
	ANSI Designation	Designation	r in	l in	P HC WEP10	P HC WPP10S	P HC WPP20S	P HC WPP30S	P HC WMP20S	M HC WMP20S	M HC WSM01	M HC WSM10S	M HC WSM20S	M HC WSM30S	M HC WSM21	K HC WKK10S	K HC WKK20S	N HC WNN10	S HC WSM01	S HC WSM10S	S HC WSM20S	S HC WSM30S
	TCMT1.2(1.2)0.5-FP4	TCMT06T102-FP4	0.008	0.261			●															
	TCMT1.2(1.2)1-FP4	TCMT06T104-FP4	0.016	0.261	●		●															
	TCMT1.8(1.5)0.5-FP4	TCMT090202-FP4	0.008	0.369			●															
	TCMT1.8(1.5)1-FP4	TCMT090204-FP4	0.016	0.369	●	●	●															
	TCMT1.8(1.5)2-FP4	TCMT090208-FP4	0.031	0.369			●															
	TCMT2(1.5)0.5-FP4	TCMT110202-FP4	0.008	0.423		●	●															
	TCMT2(1.5)1-FP4	TCMT110204-FP4	0.016	0.423	●	●	●															
	TCMT2(1.5)2-FP4	TCMT110208-FP4	0.031	0.423		●	●															
	TCMT3(2.5)0.5-FP4	TCMT16T302-FP4	0.008	0.650			●															
	TCMT3(2.5)1-FP4	TCMT16T304-FP4	0.016	0.650		●	●															
	TCMT3(2.5)2-FP4	TCMT16T308-FP4	0.031	0.650	●	●	●															
	TCMT2(1.5)1-FM6	TCMT110204-FM6	0.016	0.423									●	✕							●	✕
	TCMT2(1.5)2-FM6	TCMT110208-FM6	0.031	0.423									●	✕							●	✕
	TCMT3(2.5)1-FM6	TCMT16T304-FM6	0.016	0.650									●	✕							●	✕
	TCMT3(2.5)2-FM6	TCMT16T308-FM6	0.031	0.650									●								●	
	TCGT2(1.5)0.2-MN2	TCGT110201-MN2	0.004	0.423														●				
	TCGT2(1.5)0.5-MN2	TCGT110202-MN2	0.008	0.423														●				
	TCGT2(1.5)1-MN2	TCGT110204-MN2	0.016	0.423							●							●	●			
	TCGT3(2.5)0.5-MN2	TCGT16T302-MN2	0.008	0.650														●				
	TCGT3(2.5)1-MN2	TCGT16T304-MN2	0.016	0.650							●							●	●			
	TCGT3(2.5)2-MN2	TCGT16T308-MN2	0.031	0.650							●							●	●			

See the ISO 1832 designation key for dimensions

HC = Coated carbide

Product range overview of drilling and reaming tools with indexable inserts for counterboring and precision boring

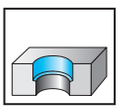
Machining	
Diameter range D_C [in]	**2.756-6.024 (70-153 mm)**
Diameter range D_C [mm]	
Designation	**B3220 Walter Boring^{MEDIUM}**
Shank (page)	Walter Capto™ | 288
	*

Machining					
Diameter range D_C [in]	**0.346-1.791**	**-**	**0.787-7.992**	**-**	**5.906-25.197**
Diameter range D_C [mm]	**8.8-45.5**	**8.8-45.5**	**20-203**	**33–153**	**150–640**
Designation	**B3230 Walter Precision^{MIN}**	**B4030 Walter Precision^{MIN}**	**B3230 Walter Precision^{MEDIUM}**	**B4030/B4031 Walter Precision^{MEDIUM}**	**B3230 / B3234 Walter Precision^{MAXI}**
Shank (starting page)	Walter Capto™ | 290 ScrewFit | - NCT | 320	Walter Capto™ | 292 ScrewFit | 292 NCT | 320	Walter Capto™ | 302 ScrewFit | 300 NCT | 324	Walter Capto™ | 306/308 ScrewFit | 306 NCT | 328	Walter Capto™ | 310 NCT | 332
Balance type	Standard	Balanceable	Standard	Self balanced	Standard
Analog/digital	Analog	Analog	Analog	Analog	Analog
	*	*	*	*	*
Indexable inserts	TC..06T1.. TC..1102..	TC..06T1.. TC..1102..	TC..06T1.. TC..1102..	TC..06T1..	TC..1102..

* Representative images without the triangle inserts

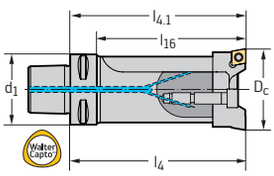
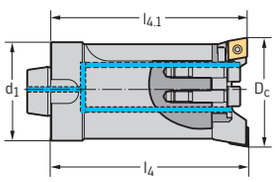
Two flute boring tool
B3220

Walter Boring[MEDIUM]



D_c 41–153	κ=90°	Z=2

	P	M	K	N	S	H	O
B3220	●●	●●	●●	●	●●		

Tool	Basic body designation	d_1 mm	D_c in	D_c mm	l_4 in	$l_{4.1}$ ARS in
Walter Capto™ 	B3220G.N6.070-093.Z2	C6	2.756 - 3.543	70-90	4.331	4.343
	B3220G.C6.070-93.Z2	N6	2.953 - 3.740	75–95	3.937	3.949
	B3220G.C8.090-113.Z2	C8	3.543 - 4.331	90-110	4.331	4.343
NCT 	B3220G.N8.090-113.Z2	N8			3.937	3.949
	B3220G.C8.110-153.Z2	C8	4.331 - 5.236	110-133	4.331	4.343
	B3220G.N8.110-153.Z2	N8			3.937	3.949
	B3220G.C8.110-153.Z2	C8	5.236 - 6.024	130-153	4.331	4.343
	B3220G.N8.110-153.Z2	N8			3.937	3.949

② ARS cartridge for axial and radial offset roughing. For this. a cartridge ① of the complete tool with CC insert seat must be replaced.
$l_{4.1}$ For the projection length when using the ARS counterboring method. see "Technical information"
Bodies and assembly parts are included in the scope of delivery.

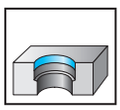
Cartridge ① designation	ARS cartridge ② designation	Type	Complete tool designation with C insert
EB211–212.CC12	EB211–212-1.CC12 (ARS)	CC12 CC16	B3220.C6.070-090.Z2.CC12 B3220.N6.070-090.Z2.CC12
EB211–212.CC16	EB211–212-1.CC16 (ARS)		★ B3220.C6.070-090.Z2.CC16 ★ B3220.N6.070-090.Z2.CC16
EB213–214.CC12 EB213–214.CC16	EB213–214-1.CC12 (ARS) EB213–214-1.CC16 (ARS)		B3220.C8.090-110.Z2.CC12 ★ B3220.C8.090-110.Z2.CC16
			B 3220.N8.090-110.Z2.CC12 ★ B 3220.N8.090-110.Z2.CC16
EB215.CC12 EB215.CC16	EB215-1.CC12 (ARS) EB215-1.CC16 (ARS)		B3220.C8.110-133.Z2.CC12 ★ B3220.C8.110-133.Z2.CC16
			B 3220.N8.110-133.Z2.CC12 ★ B 3220.N8.110-133.Z2.CC16
EB216.CC12 EB216.CC16	EB216-1.CC12 (ARS) EB216-1.CC16 (ARS)		B3220.C8.130-153.Z2.CC12 ★ B3220.C8.130-153.Z2.CC16
			B 3220.N8.130-153.Z2.CC12 ★ B 3220.N8.130-153.Z2.CC16

★ Cartridges with larger CC16 inserts

B2

Precision boring tool
B3230 inch

Walter Precision^{MINI}

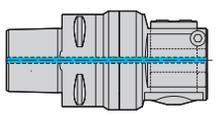


D_C 0.346–0.787	κ=93°	Z=1

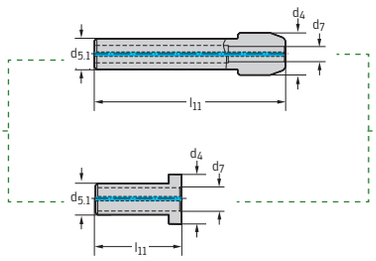
	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●		

Basic body Description

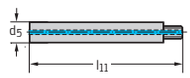
Insert holder



Reduction adaptor

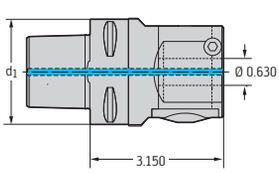


Extension



B2

Tool

Basic body designation	d_1	D_C inch	Reduction adaptor designation	d_7 inch	d_4 inch	$d_{5.1}$ inch	l_{11} inch	Extension designation
Walter Capto™  B3230G.UC6.02-45.Z1 Standard	C6	0.346–0.492	EB104	0.315	0.866	0.630	3.937	EB106
								EB107.CS
		0.464–0.570	EB105	0.394	0.945	0.630	3.937	EB108
								EB109.CS
		0.543–0.649	EB506	0.472	0.669	0.630	1.417	EB508
								EB509.CS
		0.622–0.787	EB507	0.551	0.669	0.630	1.417	EB510
								EB511.CS

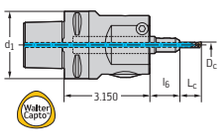
EB . . . CS = Solid carbide shank
Advantages: Increased rigidity, reduced deflection, neutralized vibration

Assembly parts

		d_1 = C6 designation	Tightening torque
	Clamping screw	FS 1085 (SW 5)	89 in lb
	Clamping screw for reduction	FS 2040 (SW 5)	89 in lb
	Clamping screw for extension	FS 1111 (SW 3)	22 in lb
	Clamping screw for insert	0.346-0.5 inch = FS 2147 (Torx 6 IP) 0.464-0.787 inch = FS 2148 (Torx 6 IP)	6 in lb

Cartidge

Complete tool

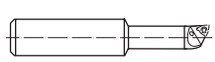


B2

d5 inch	l11 inch	Cartidge designation	l12 inch	Type	Lc min inch	Lc max inch	l6 inch	lbs	Complete tool designation
0.315	1.850	★ EB305.TC06	0.709	TC . . 1.2(1.2) . TC . . 06T1 . .	0.787	1.378	1.339–2.362	4.2	★ B3230.UC6.09-12.Z1.TC06.S*
0.315	3.425				0.787	2.874	1.339–2.362	4.2	★ B3230.UC6.09-12.Z1.TC06.L*
0.394	2.047	★ EB306.TC06	0.906	TC . . 1.2(1.2) . TC . . 06T1 . .	0.984	1.772	1.339–2.362	4.2	★ B3230.UC6.12-14.Z1.TC06.S
0.394	3.031				0.984	2.756	1.339–2.362	4.2	★ B3230.UC6.12-14.Z1.TC06.L
0.472	3.031	★ EB307.TC06	0.906	TC . . 1.2(1.2) . TC . . 06T1 . .	1.339	2.362	0.079	4.2	★ B3230.UC6.14-16.Z1.TC06.S
0.472	3.819				2.126	3.150	0.079	4.2	★ B3230.UC6.14-16.Z1.TC06.L
0.551	3.425	★ EB512.TC06	0.906	TC . . 1.2(1.2) . TC . . 06T1 . .	1.732	2.756	0.079	4.2	★ B3230.UC6.16-20.Z1.TC06.S
0.551	4.606				2.913	3.937	0.079	4.2	★ B3230.UC6.16-20.Z1.TC06.L

* When using the TC . . 0602 . .-PM2 indexable insert. manually shorten the indexable insert clamping screw by 0.04 in [1 mm].

Accessories

	Screwdriver for clamping screw	FS 2086 (Torx 6 IP)
	Allen key DIN 911	SW 2 / SW 4 / SW 5
	One-piece boring bar	D_C 0.346 - 0.622, see page B612 of the 2018 General Catalog

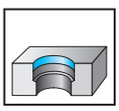
For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

/ ★ New addition to the product range

Precision boring tool
B3230 / B4030 mm

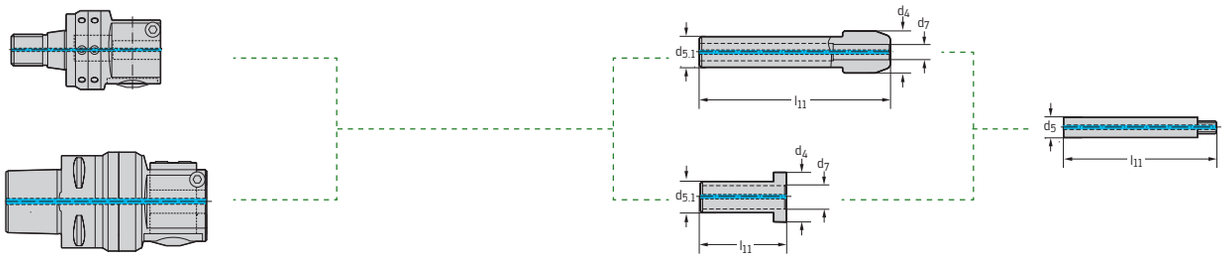
Walter Precision^{MINI}

D_c 8,8–20	κ=93°	Z=1

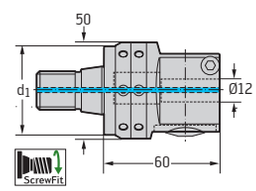
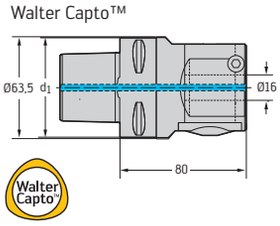
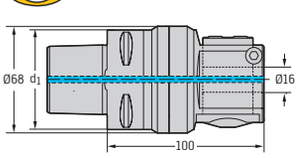


	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●		
B4030	●●	●●	●●	●●	●●	●	●

Basic body | **Reduction Adaptor** | **Extension**

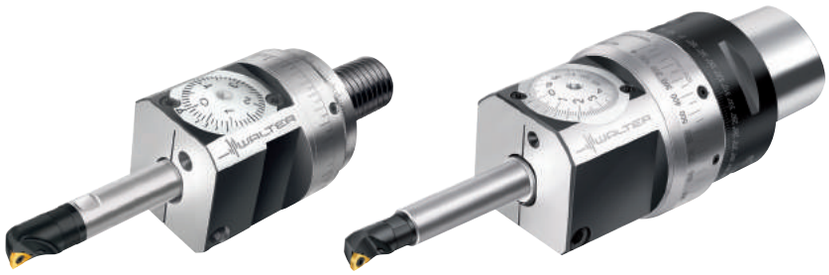


B2

Tool	Basic body designation	d_1 mm	D_c mm	Reduction adaptor designation	d_7 mm	d_4 mm	$d_{5.1}$ mm	l_{11} mm	Extension designation	d_5 mm	l_{11} mm
ScrewFit 	B4030G.T45.02-20.Z1 Balanceable	T45	8.8–12.5	EB504	8	14	12	30	EB106	8	47
									EB107.CS	8	87
			11.8–14.5	EB505	10	14	12	30	EB108	10	52
									EB109.CS	10	97
			13.8–16.5	—					EB508	12	77
									EB509.CS	12	97
			15.8–20.0	—					EB508	12	77
									EB509.CS	12	97
Walter Capto™ 	B3230G.C6.02-45.Z1 Standard	C6	8.8–12.5	EB104	8	22	16	100	EB106	8	47
									EB107.CS	8	87
			11.8–14.5	EB105	10	24	16	100	EB108	10	52
									EB109.CS	10	97
	B4030G.C6.02-45.Z1 Balanceable		13.8–16.5	EB506	12	17	16	36	EB508	12	77
									EB509.CS	12	97
			15.8–20.0	EB507	14	17	16	36	EB510	14	87
									EB511.CS	14	117

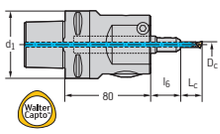
EB . . . CS = Solid carbide shank
Advantages: Increased rigidity. reduced deflection. neutralised vibrations

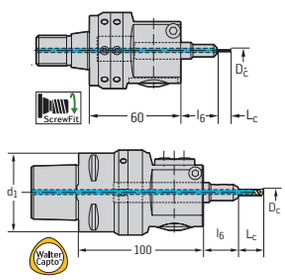
Assembly parts		d_1 = T45		d_1 = C6	
		Designation	Tightening torque	Designation	Tightening torque
	Clamping screw for basic body	FS1084 (SW 4)	6.0 Nm	FS1085 (SW 5)	10 Nm
	Clamping screw for extension	FS2039 (SW 4)	5.0 Nm	FS2240	10 Nm
	Clamping screw for extension	FS1110 (SW 2)	1.0 Nm	FS1111 (SW 3)	2.5 Nm
	Clamping screw for indexable insert	Ø 8.8–12.5 mm = FS2147 (Torx 6IP) Ø11.8-20 mm = FS2148 (Torx 6IP)	0.6 Nm	Ø 8.8–12.5 mm = FS2147 (Torx 6IP) Ø11.8–20 mm = FS2148 (Torx 6IP)	0.6 Nm
	Clamping screw for balancing rings	FS2037 (SW 2)	0.5 Nm	FS2246 (SW 2) for B4030	0.5 Nm



Cartridge

Complete tool

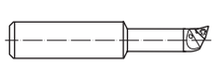




Cartridge designation	l_{12} mm	Type	$L_{c\,min}$ mm	$L_{c\,max}$ mm	l_6 mm	kg	Complete tool designation	Complete tool. balanceable designation
★ EB305.TC06	18	TC . . 0601 . .	18	33	2	0.8		★ B4030.T45.09-12.Z1.TC06.S*
			35	73	2	0.8		★ B4030.T45.09-12.Z1.TC06.L*
★ EB306.TC06	23	TC . . 0601 . .	23	43	2	0.8		★ B4030.T45.12-14.Z1.TC06.S
			45	68	2	0.8		★ B4030.T45.12-14.Z1.TC06.L
★ EB307.TC06	23	TC . . 0601 . .	45	68	—	0.8		★ B4030.T45.14-16.Z1.TC06.S
			65	88	—	0.9		★ B4030.T45.14-16.Z1.TC06.L
★ EB512.TC06	23	TC . . 0601 . .	45	68	—	0.8		★ B4030.T45.16-20.Z1.TC06.S
			65	88	—	0.9		★ B4030.T45.16-20.Z1.TC06.L
★ EB305.TC06	18	TC . . 0601 . .	20	35	34–60	1.9	★ B3230.C6.09-12.Z1.TC06.S*	★ B4030.C6.09-12.Z1.TC06.S*
			20	73	34–60	1.9	★ B3230.C6.09-12.Z1.TC06.L*	★ B4030.C6.09-12.Z1.TC06.L*
★ EB306.TC06	23	TC . . 0601 . .	25	45	34–60	1.9	★ B3230.C6.12-14.Z1.TC06.S	★ B4030.C6.12-14.Z1.TC06.S
			25	70	34–60	1.9	★ B3230.C6.12-14.Z1.TC06.L	★ B4030.C6.12-14.Z1.TC06.L
★ EB307.TC06	23	TC . . 0601 . .	34	60	2	1.9	★ B3230.C6.14-16.Z1.TC06.S	★ B4030.C6.14-16.Z1.TC06.S
			54	80	2	1.9	★ B3230.C6.14-16.Z1.TC06.L	★ B4030.C6.14-16.Z1.TC06.L
★ EB512.TC06	23	TC . . 0601 . .	44	70	2	1.9	★ B3230.C6.16-20.Z1.TC06.S	★ B4030.C6.16-20.Z1.TC06.S
			74	100	2	1.9	★ B3230.C6.16-20.Z1.TC06.L	★ B4030.C6.16-20.Z1.TC06.L

* When using the TC . . 06T1 . .-FN2 indexable insert. manually shorten the indexable insert clamping screw by 1 mm.

Accessories

	Screwdriver for clamping screw	FS2086 (Torx 6IP)
	DIN 911 hex key	SW 2 / SW 4 / SW 5
	One-piece boring bar	For D_c 8.8–20, see page B612 of the 2018 General Catalog

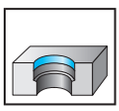
For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

★ New addition to the product range

Precision boring tool
B3230 inch

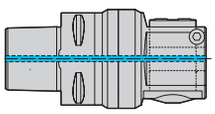
Walter Precision^{MINI}

D_c 0.700–1.791	κ=93°	Z=1

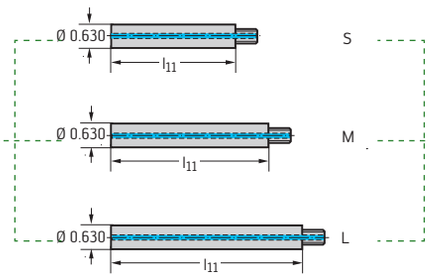


	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●		

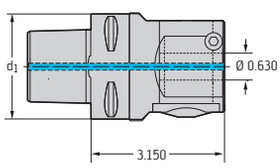
Basic body



Extension



B2

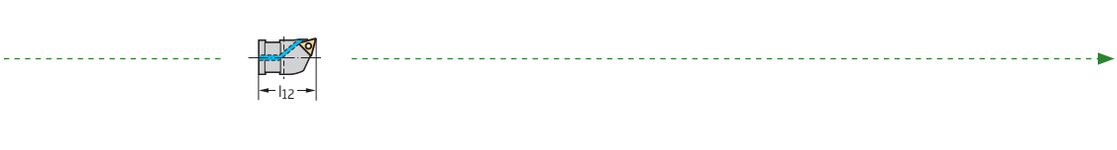
Tool	Basic body designation	d_1	D_c inch	Extension designation	l_{11} in	
Walter Capto™ 	B3230G.UC6.02-45.Z1 Standard	C6	0.700–0.885	EB110	3.465	(S)
				EB111.CS	4.252	(M)
				EB112.CS	6.614	(L)
			0.858–1.003	EB110	3.465	(S)
				EB111.CS	4.252	(M)
				EB112.CS	6.614	(L)
			0.976–1.122	EB110	3.465	(S)
				EB111.CS	4.252	(M)
				EB112.CS	6.614	(L)
			1.094–1.279	EB110	3.465	(S)
				EB111.CS	4.252	(M)
				EB112.CS	6.614	(L)
			1.251–1.437	EB110	3.465	(S)
				EB111.CS	4.252	(M)
				EB112.CS	6.614	(L)
			1.409–1.594 (35.8–40.5)	EB110	3.465	(S)
				EB111.CS	4.252	(M)
				EB112.CS	6.614	(L)
			1.566–1.791	EB110	3.465	(S)
				EB111.CS	4.252	(M)
				EB112.CS	6.614	(L)

EB . . . CS = Solid carbide shank
Advantages: Increased rigidity, reduced deflection, neutralized vibration

Assembly parts

		designation	Tightening torque
	Clamping screw	FS 1085 (SW 5)	89 in lb
	Clamping screw for extension	FS 2040	89 in lb
	Clamping screw for insert	FS 1454 (Torx 8 IP)	11 in lb

Cartridge | **Complete tool**

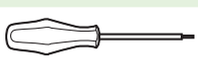


B2

	Cartridge designation	l_{12} inch	Type	$L_{c\ min}$ inch	$L_{c\ max}$ inch	lbs	Complete tool designation
	★ EB308.TC11	1.063	TC . . 2(1.5) . TC . . 1102 .	2.165	3.150	4.0	★ B3230.UC6.18-22.Z1.TC11.S
				2.953	3.937	4.4	★ B3230.UC6.18-22.Z1.TC11.M
				5.315	6.299	4.9	★ B3230.UC6.18-22.Z1.TC11.L
	★ EB309.TC11	1.063	TC . . 2(1.5) . TC . . 1102 .	2.165	3.150	5.1	★ B3230.UC6.22-25.Z1.TC11.S
				2.953	3.937	5.5	★ B3230.UC6.22-25.Z1.TC11.M
				5.315	6.299	6.0	★ B3230.UC6.22-25.Z1.TC11.L
	★ EB310.TC11	1.063	TC . . 2(1.5) . TC . . 1102 .	2.165	3.150	5.1	★ B3230.UC6.25-28.Z1.TC11.S
				2.953	3.937	5.5	★ B3230.UC6.25-28.Z1.TC11.M
				5.315	6.299	6.0	★ B3230.UC6.25-28.Z1.TC11.L
	★ EB311.TC11	1.063	TC . . 2(1.5) . TC . . 1102 .	2.165	3.150	5.1	★ B3230.UC6.28-32.Z1.TC11.S
				2.953	3.937	5.5	★ B3230.UC6.28-32.Z1.TC11.M
				5.315	6.299	6.0	★ B3230.UC6.28-32.Z1.TC11.L
	★ EB312.TC11	1.063	TC . . 2(1.5) . TC . . 1102 .	2.165	3.150	5.1	★ B3230.UC6.32-36.Z1.TC11.S
				2.953	3.937	5.5	★ B3230.UC6.32-36.Z1.TC11.M
				5.315	6.299	6.0	★ B3230.UC6.32-36.Z1.TC11.L
	★ EB313.TC11	1.063	TC . . 2(1.5) . TC . . 1102 .	2.165	3.150	5.1	★ B3230.UC6.36-40.Z1.TC11.S
				2.953	3.937	5.5	★ B3230.UC6.36-40.Z1.TC11.M
				5.315	6.299	6.0	★ B3230.UC6.36-40.Z1.TC11.L
	★ EB314.TC11	1.063	TC . . 2(1.5) . TC . . 1102 .	2.165	3.150	5.1	★ B3230.UC6.40-45.Z1.TC11.S
				2.953	3.937	5.5	★ B3230.UC6.40-45.Z1.TC11.M
				5.315	6.299	6.0	★ B3230.UC6.40-45.Z1.TC11.L

For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Accessories

	Screwdriver	FS 1483 (Torx 8 IP)
	Allen key DIN 911	SW 5

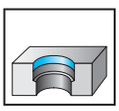
For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

/ ★ New addition to the product range

Precision boring tool
B3230 / B4030 mm

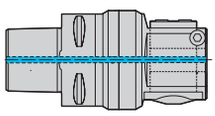
Walter Precision^{MINI}

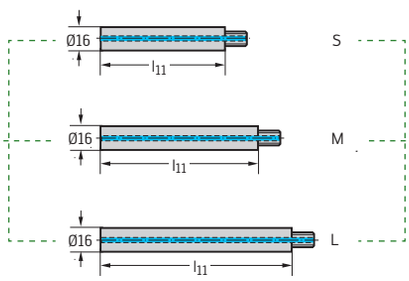
D_c 17,8–45,5	κ=93°	Z=1



	P	M	K	N	S	H	O
B3230 / B4030	●●	●●	●●	●●	●●	●	●

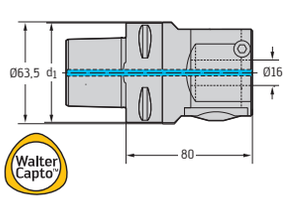
Basic body **Extension**



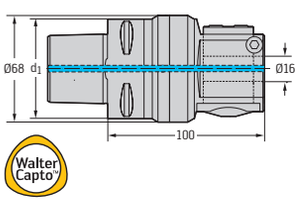


B2

Tool	Basic body designation	d_1 mm	D_c mm	Extension designation	l_{11} mm	
Walter Capto™			17.8–22.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			21.8–25.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			24.8–28.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			27.8–32.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			31.8–36.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			35.8–40.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			39.8–45.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)



B3230G.C6.02-45.Z1
Standard



B4030G.C6.02-45.Z1
Balanceable

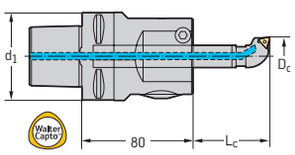
C6

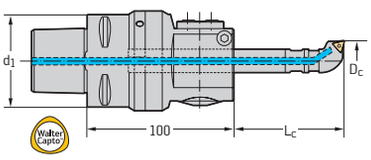
EB . . . CS = Solid carbide shank
Advantages: Increased rigidity, reduced deflection, neutralised vibrations

Assembly parts

		Designation	Tightening torque
	Clamping screw for basic body	FS1085 (SW 5)	10 Nm
	Clamping screw for extension	FS2040	10 Nm
	Clamping screw for indexable insert	FS1454 (Torx 8IP)	1.2 Nm
	Clamping screw for balancing rings	FS2246 for B4030	

Cartridge | Complete tool

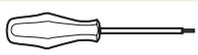




Cartridge designation	l_{12} mm	Type	$L_{c\ min}$ mm	$L_{c\ max}$ mm	kg	Complete tool designation	Complete tool, balanceable designation
★ EB308.TC11	27	TC . . 1102 . .	55	80	1.8	★ B3230.C6.18-22.Z1.TC11.S	★ B4030.C6.18-22.Z1.TC11.S
			75	100	2.0	★ B3230.C6.18-22.Z1.TC11.M	★ B4030.C6.18-22.Z1.TC11.M
			135	160	2.2	★ B3230.C6.18-22.Z1.TC11.L	★ B4030.C6.18-22.Z1.TC11.L
★ EB309.TC11	27	TC . . 1102 . .	55	80	2.3	★ B3230.C6.22-25.Z1.TC11.S	★ B4030.C6.22-25.Z1.TC11.S
			75	100	2.5	★ B3230.C6.22-25.Z1.TC11.M	★ B4030.C6.22-25.Z1.TC11.M
			135	160	2.7	★ B3230.C6.22-25.Z1.TC11.L	★ B4030.C6.22-25.Z1.TC11.L
★ EB310.TC11	27	TC . . 1102 . .	55	80	2.3	★ B3230.C6.25-28.Z1.TC11.S	★ B4030.C6.25-28.Z1.TC11.S
			75	100	2.5	★ B3230.C6.25-28.Z1.TC11.M	★ B4030.C6.25-28.Z1.TC11.M
			135	160	2.7	★ B3230.C6.25-28.Z1.TC11.L	★ B4030.C6.25-28.Z1.TC11.L
★ EB311.TC11	27	TC . . 1102 . .	55	80	2.3	★ B3230.C6.28-32.Z1.TC11.S	★ B4030.C6.28-32.Z1.TC11.S
			75	100	2.5	★ B3230.C6.28-32.Z1.TC11.M	★ B4030.C6.28-32.Z1.TC11.M
			135	160	2.7	★ B3230.C6.28-32.Z1.TC11.L	★ B4030.C6.28-32.Z1.TC11.L
★ EB312.TC11	27	TC . . 1102 . .	55	80	2.3	★ B3230.C6.32-36.Z1.TC11.S	★ B4030.C6.32-36.Z1.TC11.S
			75	100	2.5	B3230.C6.32-36.Z1.TC11.M	★ B4030.C6.32-36.Z1.TC11.M
			135	160	2.7	★ B3230.C6.32-36.Z1.TC11.L	★ B4030.C6.32-36.Z1.TC11.L
★ EB313.TC11	27	TC . . 1102 . .	55	80	2.3	★ B3230.C6.36-40.Z1.TC11.S	★ B4030.C6.36-40.Z1.TC11.S
			75	100	2.5	★ B3230.C6.36-40.Z1.TC11.M	★ B4030.C6.36-40.Z1.TC11.M
			135	160	2.7	★ B3230.C6.36-40.Z1.TC11.L	★ B4030.C6.36-40.Z1.TC11.L
★ EB314.TC11	27	TC . . 1102 . .	55	80	2.3	★ B3230.C6.40-45.Z1.TC11.S	★ B4030.C6.40-45.Z1.TC11.S
			75	100	2.5	★ B3230.C6.40-45.Z1.TC11.M	★ B4030.C6.40-45.Z1.TC11.M
			135	160	2.7	★ B3230.C6.40-45.Z1.TC11.L	★ B4030.C6.40-45.Z1.TC11.L

For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Accessories

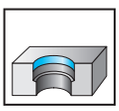
	Screwdriver	FS1483 (Torx 8IP)
	DIN 911 hex key	SW 5

For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

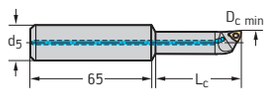
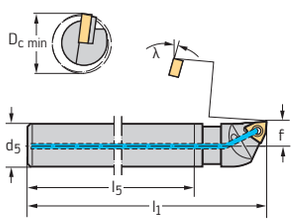
/ ★ New addition to the product range

EB . . . boring bar

κ=93°



Tool

	Designation	$D_{c\ min}$ mm	$D_{c\ min}$ in	d_5 in	f in	l_1 in	l_5 in	L_c in	λ	Type
One-piece	EB554.CS	11.8	0.465	0.630				2.362		TC . . 06T1 . .
	EB555	13.8	0.543	0.630				1.654		
	EB556.CS	13.8	0.543	0.630				2.835		
With insert holder	★ EB353.TC06	8.8	0.346	0.315	0.177	2.559	1.850		−10°	TC . . 06T1 . .
	★ EB354.TC06.CS	8.8	0.346	0.315	0.177	4.134	3.425		−10°	
	★ EB355.TC06	11.8	0.465	0.394	0.236	2.953	2.047		−7°	
	★ EB356.TC06.CS	11.8	0.465	0.394	0.236	4.724	3.819		−7°	
	★ EB357.TC06	13.8	0.543	0.394	0.272	2.953	2.047		−5°	
	★ EB358.TC06.CS	13.8	0.543	0.394	0.272	4.724	3.819		−5°	
	★ EB359.TC11	17.8	0.701	0.630	0.350	4.528	3.465		−3°	TC . . 1102 . .
	★ EB360.TC11.CS	17.8	0.701	0.630	0.350	5.315	4.252		−3°	
	★ EB361.TC11.CS	17.8	0.701	0.630	0.350	7.677	6.614		−3°	
	★ EB362.TC11	21.8	0.858	0.630	0.429	4.528	3.465		−2.5°	
	★ EB363.TC11.CS	21.8	0.858	0.630	0.429	5.315	4.252		−2.5°	
	★ EB364.TC11.CS	21.8	0.858	0.630	0.429	7.677	6.614		−2.5°	
	★ EB365.TC11	24.8	0.976	0.630	0.488	4.528	3.465		0°	
	★ EB366.TC11.CS	24.8	0.976	0.630	0.488	5.315	4.252		0°	
	★ EB367.TC11.CS	24.8	0.976	0.630	0.488	7.677	6.614		0°	
	★ EB368.TC11	27.8	1.094	0.630	0.547	4.528	3.465		0°	
	★ EB369.TC11.CS	27.8	1.094	0.630	0.547	5.315	4.252		0°	
	★ EB370.TC11.CS	27.8	1.094	0.630	0.547	7.677	6.614		0°	
	★ EB371.TC11	31.8	1.252	0.630	0.626	4.528	3.465		0°	
	★ EB372.TC11.CS	31.8	1.252	0.630	0.626	5.315	4.252		0°	
	★ EB373.TC11.CS	31.8	1.252	0.630	0.626	7.677	6.614		0°	
	★ EB374.TC11	35.8	1.409	0.630	0.705	4.528	3.465		0°	
	★ EB375.TC11.CS	35.8	1.409	0.630	0.705	5.315	4.252		0°	
	★ EB376.TC11.CS	35.8	1.409	0.630	0.705	7.677	6.614		0°	
	★ EB377.TC11	39.8	1.567	0.630	0.783	4.528	3.465		0°	
	★ EB378.TC11.CS	39.8	1.567	0.630	0.783	5.315	4.252		0°	
	★ EB379.TC11.CS	39.8	1.567	0.630	0.783	7.677	6.614		0°	

Bodies and assembly parts are included in the scope of delivery.

	Assembly parts				Accessories
	Extension	Cartridge	Clamping screw for indexable insert	Tightening torque	Screwdriver
			FS2148 (Torx 6IP)	8 in lbs	FS2086 (Torx 6IP)
	EB106	★ EB305.TC06*	FS2147 (Torx 6IP)	5 in lbs	FS2086 (Torx 6IP)
	EB107.CS	★ EB305.TC06*			
	EB108	★ EB306.TC06	FS2148 (Torx 6IP)	8 in lbs	
	EB109.CS	★ EB306.TC06			
	EB108	★ EB307.TC06			
	EB109.CS	★ EB307.TC06			
	EB110	★ EB308.TC11	FS1454 (Torx 8IP)	11 in lbs	FS1483 (Torx 8IP)
	EB111.CS	★ EB308.TC11			
	EB112.CS	★ EB308.TC11			
	EB110	★ EB309.TC11			
	EB111.CS	★ EB309.TC11			
	EB112.CS	★ EB309.TC11			
	EB110	★ EB310.TC11			
	EB111.CS	★ EB310.TC11			
	EB112.CS	★ EB310.TC11			
	EB110	★ EB311.TC11			
	EB111.CS	★ EB311.TC11			
	EB112.CS	★ EB311.TC11			
	EB110	★ EB312.TC11			
	EB111.CS	★ EB312.TC11			
	EB112.CS	★ EB312.TC11			
	EB110	★ EB313.TC11			
	EB111.CS	★ EB313.TC11			
	EB112.CS	★ EB313.TC11			
	EB110	★ EB314.TC11			
	EB111.CS	★ EB314.TC11			
	EB112.CS	★ EB314.TC11			

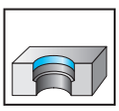
EB . . . CS = Solid carbide shank
Advantages: Increased rigidity, reduced deflection, neutralised vibrations

B2

/ ★ New addition to the product range

Precision boring tool
B3230 mm

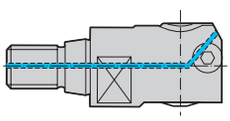
Walter Precision^{MEDIUM}



D_c 15–33	κ=95°	κ=93°	Z=1

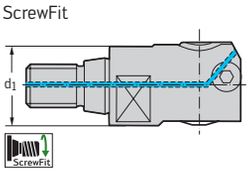
	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

Basic body



B2

Tool

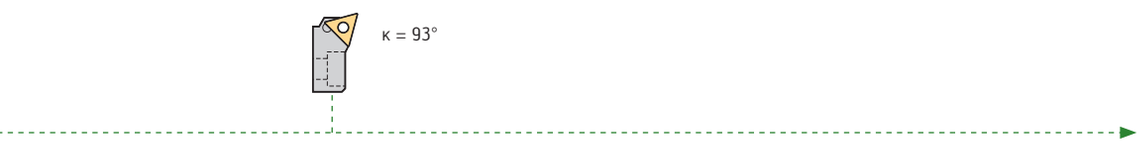
Basic body designation	d_1 mm	D_c mm	Cartridge no.			
ScrewFit 	B3230G.T18.20-26.Z1	T18	20–26	1		
	B3230G.T22.26-33.Z1	T22	26–33	1		

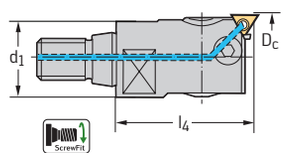
For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

		T18 for $D_{c\ min–max}$ [mm] 20–26	T22 for $D_{c\ min–max}$ [mm] 26–33
	Clamping screw for basic body	FS2251 (Torx 9IP)	FS1082 (SW 2.5)
	Tightening torque		2.0 Nm
	Clamping screw for cartridge	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)
	Tightening torque	0.9 Nm	2.0 Nm
	Clamping screw for indexable insert	TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm	
	Tightening torque		

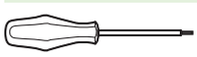
Cartridge





Designation	Indexable insert Type	d_1 mm	l_4 mm	kg	Complete tool designation with T insert
★ EB341.TC06	TC . . 06T1 . .	18	35	0.10	★ B3230.T18.20-26.Z1.TC06
★ EB343.TC06	TC . . 06T1 . .	22	40	0.15	★ B3230.T22.26-33.Z1.TC06

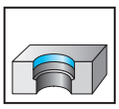
Accessories

		T18	T22
		20–26	26–33
	Screwdriver for clamping screw	TC . . 06T1 . . = FS2086 (Torx 6IP)	
	DIN 911 hex key for clamping screw		SW 2.5
	Key for cartridge clamping	FS1486 (Torx 20IP)	FS1485 (Torx 15IP)

For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

★ New addition to the product range

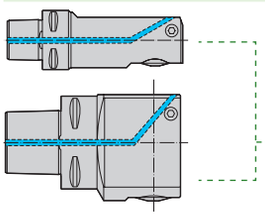
Precision boring tool
B3230 inch
Walter Precision MEDIUM



D_c 0.787–7.992	κ=93°	Z=1

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●		

Basic body



Cartridge with T insert

κ = 93°

B2

Tool

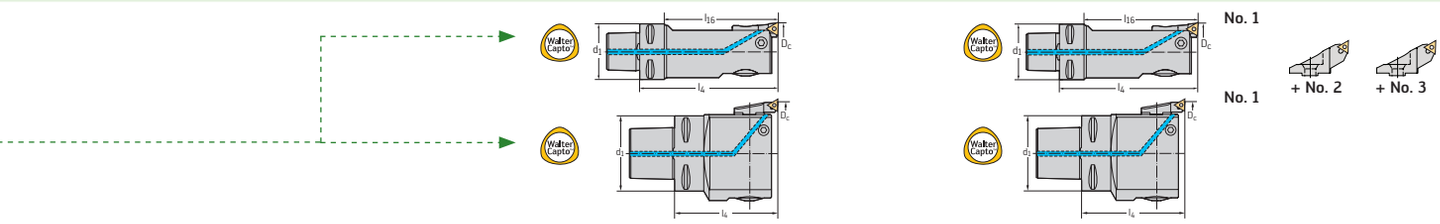
Basic body designation	d_1	D_c inch	Cartridge no.	Cartridge designation	Type
Walter Capto™					
B3230G.UC3.20–38.Z1	C3	0.787–1.043	1	★ EB341.TC06	TC. . 1.2(1.2). . TC . . 06T1 . .
		(1.102)[1] 1.024–1.280*	2	★ EB536.TC06	
		1.260–1.516*	3	★ EB537.TC06	
B3230G.UC3.26–47.Z1	C3	1.024–1.319	1	★ EB343.TC06	TC. . 1.2(1.2). . TC . . 06T1 . .
		(1.339)[1] 1.299–1.594*	2	★ EB538.TC06	
		1.575–1.870*	3	★ EB539.TC06	
B3230G.UC3.33–57.Z1	C3	1.299–1.634	1	★ EB345.TC06	TC. . 1.2(1.2). . TC . . 06T1 . .
		1.614–1.949*	2	★ EB540.TC06	
		1.929–2.264*	3	★ EB541.TC06	
B3230G.UC4.41–83.Z1	C4	1.614–2.185	1	★ EB347.TC06	TC. . 1.2(1.2). . TC . . 06T1 . .
		2.165–2.736*	2	★ EB545.TC06	
		2.716–3.287*	3	★ EB546.TC06	
B3230G.UC5.55–100.Z1	C5	2.165–2.776	1	★ EB349.TC11	TC . . 2(1.5) . . TC . . 1102 . .
		2.756–3.366*	2	★ EB547.TC11	
		3.346–4.153*	3	★ EB548.TC11	
B3230G.UC6.070–120.Z1	C6	2.756–3.563	1	★ EB349.TC11	TC . . 2(1.5) . . TC . . 1102 . .
		3.346–4.153*	2	★ EB547.TC11	
		4.133–4.744*	3	★ EB548.TC11	
B3230G.UC6.090–166.Z1	C6	3.543–4.567*	1	★ EB542.TC11	TC . . 2(1.5) . . TC . . 1102 . .
		4.528–5.551*	2	★ EB543.TC11	
		5.512–6.535*	3	★ EB544.TC11	
B3230G.UC8.090–166.Z1	C8	3.543–4.567*	1	★ EB542.TC11	TC . . 2(1.5) . . TC . . 1102 . .
		4.527–5.551*	2	★ EB543.TC11	
		5.512–6.535*	3	★ EB544.TC11	
B3230G.UC6.110–203.Z1	C6	4.330–6.023*	1	★ EB542.TC11	TC . . 2(1.5) . . TC . . 1102 . .
		5.315–7.008*	2	★ EB543.TC11	
		6.299–7.992*	3	★ EB544.TC11	
B3230G.UC8.110–203.Z1	C8	4.330–6.023*	1	★ EB542.TC11	TC . . 2(1.5) . . TC . . 1102 . .
		5.315–7.008*	2	★ EB543.TC11	
		6.299–7.992*	3	★ EB544.TC11	

[1] D_{min} for reverse machining.
* Reverse machining possible.
For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

		C3			C4	C5	C6	C6 / C8
		for $D_{c\ min–max}$ [inch]						
		0.787–1.516	1.024–1.870	1.299–2.264	1.614–3.287	2.165–4.153	2.756–4.744	3.543–7.992
	Clamping screw	FS 2251 (Torx 9IP)	FS 1082 (SW 3)	FS 1083 (SW 3)	FS 1084 (SW 4)	FS 1085 (SW 5)	FS 1086 (SW 6)	FS 1087 (SW 6)
	Tightening torque		20 in lb	22 in lb	35 in lb	7.4 ft lb	18 ft lb	18 ft lb
	Clamping screw for cartridge	FS 1457 (Torx 9 IP)	FS 2080 (Torx 15 IP)	FS 1495 (Torx 20 IP)	FS 1091 (SW 3)	FS 1092 (SW 5)	FS 1092 (SW 5)	FS 2150 (Torx 30 IP)
	Tightening torque	13 in lb	22 in lb	44 in lb	22 in lb	8.8 ft lb	8.8 ft lb	89 in lb
	Clamping screw for insert	for TC . . 0601 . . = FS 2148 (Torx 6 IP)			FS 1454 = 7 in lb			
	Tightening torque	5 in lb						

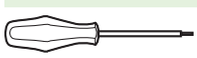
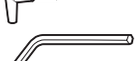
Complete Tool



d_1 inch	l_1 inch	lbs	Complete tool designation with T insert	Precision set designation with T insert
1.260	3.150	0.5	★ B3230.UC3.020-026.Z1.TC06	★ B3230.UUC3.020-038.Z1.TC06
		0.5	★ B3230.UC3.026-032.Z1.TC06	
		0.5	★ B3230.UC3.032-038.Z1.TC06	
1.260	3.150	0.6	★ B3230.UC3.026-033.Z1.TC06	★ B3230.UC3.026-047.Z1.TC06
		0.7	★ B3230.UC3.033-040.Z1.TC06	
		0.7	★ B3230.UC3.040-047.Z1.TC06	
1.260	3.150	0.9	★ B3230.UC3.033-041.Z1.TC06	★ B3230.UC3.033-057.Z1.TC06
		0.9	★ B3230.UC3.041-049.Z1.TC06	
		0.9	★ B3230.UC3.049-057.Z1.TC06	
1.575	3.150	1.5	★ B3230.UC4.041-055.Z1.TC06	★ B3230.UC4.041-083.Z1.TC06
		1.5	★ B3230.UC4.055-069.Z1.TC06	
		1.5	★ B3230.UC4.069-083.Z1.TC06	
1.969	3.937	3.1	★ B3230.UC5.055-070.Z1.TC11	★ B3230.UC5.055-100.Z1.TC11
		3.1	★ B3230.UC5.070-085.Z1.TC11	
		3.1	★ B3230.UC5.085-100.Z1.TC11	
2.480	3.937	4.6	★ B3230.UC6.070-090.Z1.TC11	★ B3230.UC6.070-120.Z1.TC11
		4.9	★ B3230.UC6.085-105.Z1.TC11	
		4.6	★ B3230.UC6.100-120.Z1.TC11	
2.480	4.331	7.1	★ B3230.UC6.090-116.Z1.TC11	★ B3230.UC6.090-166.Z1.TC11
		7.1	★ B3230.UC6.115-141.Z1.TC11	
		7.1	★ B3230.UC6.140-166.Z1.TC11	
3.150	4.331	8.8	★ B3230.UC8.090-116.Z1.TC11	★ B3230.UC8.090-166.Z1.TC11
		8.8	★ B3230.UC8.115-141.Z1.TC11	
		8.8	★ B3230.UC8.140-166.Z1.TC11	
2.480	4.331	9.0	★ B3230.UC6.110-153.Z1.TC11	★ B3230.UC6.110-203.Z1.TC11
		9.0	★ B3230.UC6.135-178.Z1.TC11	
		9.0	★ B3230.UC6.160-203.Z1.TC11	
2.480	4.331	10.6	★ B3230.UC8.110-153.Z1.TC11	★ B3230.UC8.110-203.Z1.TC11
		10.6	★ B3230.UC8.135-178.Z1.TC11	
		10.6	★ B3230.UC8.160-203.Z1.TC11	

* When using the TC . . 0602 . .-PM2 indexable insert. manually shorten the indexable insert clamping screw by 0.04 in [1 mm].

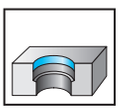
Accessories

		C3			C4	C5	C6	C6 / C8
		for $D_{c\ min-max}$ [inch]						
		0.787-1.516	1.024-1.870	1.299-2.264	1.614-3.287	2.165-4.153	2.756-4.744	3.543-7.992
	Screwdriver for clamping screw	FS 2086 (Torx 6 IP)			FS 1483 (Torx 8 IP)			
	Screwdriver for clamping screw	FS 1484 (Torx 9 IP)						
	Wrench DIN 911 for clamping screw		SW 2,5	SW 3	SW 4	SW 5	SW 6	SW 6
	Wrench for cartridge clamping	FS 1484 (Torx 9 IP)	FS 1485 (Torx 15 IP)	FS 1486 (Torx 20 IP)				FS 2108 (Torx 30 IP)
	Allen key DIN 911 for cartridge clamping				SW 3	SW 5	SW 5	

☻☻☻ / ★ New addition to the product range

Precision boring tool
B3230 mm

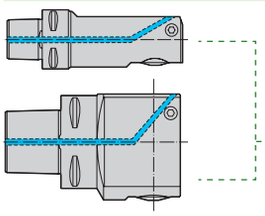
Walter Precision[MEDIUM]



D_c 20–203	κ=95°	κ=93°	Z=1

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

Basic body

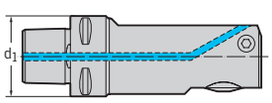


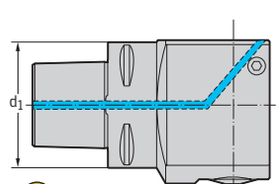
Cartridge with T insert

κ = 93°

B2

Tool	Basic body designation	d_1 mm	D_c mm	Cartridge no.	Cartridge designation	Type
Walter Capto™	B3230G.C3.20-38.Z1	C3	20–26.5	1	★ EB341.TC06	TC . . 06T1 . .
			(28)[1] 26–32.5*	2	★ EB536.TC06	
			32–38.5*	3	★ EB537.TC06	
	B3230G.C3.26-47.Z1	C3	26–33.5	1	★ EB343.TC06	TC . . 06T1 . .
			(34)[1] 33–40.5*	2	★ EB538.TC06	
			40–47.5*	3	★ EB539.TC06	
	B3230G.C3.33-57.Z1	C3	33–41.5	1	★ EB345.TC06	TC . . 06T1 . .
			41–49.5*	2	★ EB540.TC06	
			49–57.5*	3	★ EB541.TC06	
	B3230G.C4.41-83.Z1	C4	41–55.5	1	★ EB347.TC06	TC . . 06T1 . .
			55–69.5*	2	★ EB545.TC06	TC . . 06T1 . .
			69–83.5*	3	★ EB546.TC06	
	B3230G.C5.55-100.Z1	C5	55–70.5	1	★ EB349.TC11	TC . . 1102 . .
			70–85.5*	2	★ EB547.TC11	
			85–100.5*	3	★ EB548.TC11	
	B3230G.C6.070-120.Z1	C6	70–90.5	1	★ EB349.TC11	TC . . 1102 . .
			85–105.5*	2	★ EB547.TC11	
			100–120.5*	3	★ EB548.TC11	
	B3230G.C6.090-166.Z1	C6	90–116*	1	★ EB542.TC11	TC . . 1102 . .
			115–141*	2	★ EB543.TC11	
			140–166*	3	★ EB544.TC11	
	B3230G.C8.090-166.Z1	C8	90–116*	1	★ EB542.TC11	TC . . 1102 . .
			115–141*	2	★ EB543.TC11	
			140–166*	3	★ EB544.TC11	
	B3230G.C6.110-203.Z1	C6	110–153*	1	★ EB542.TC11	TC . . 1102 . .
			135–178*	2	★ EB543.TC11	
			160–203*	3	★ EB544.TC11	
	B3230G.C8.110-203.Z1	C8	110–153*	1	★ EB542.TC11	TC . . 1102 . .
			135–178*	2	★ EB543.TC11	
			160–203*	3	★ EB544.TC11	





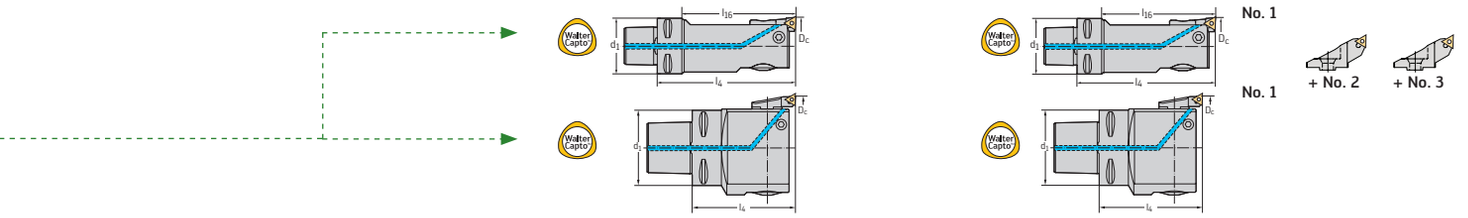
[1] D_{min} for reverse machining.
For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

* Reverse machining possible

Assembly parts

		C3		C4	C5	C6	C6 / C8
		for $D_{c\ min-max}$ [mm]					
		20–38.5	26–47.5	33–57.5	41–83.5	55–100.5	70–120.5	90–203
	Clamping screw	FS2251 (Torx 9IP)	FS1082 (SW 2.5)	FS1083 (SW 3)	FS1084 (SW 4)	FS1085 (SW 5)	FS1086 (SW 6)	FS1087 (SW 6)
	Tightening torque		2.5 Nm	2.5 Nm	4.0 Nm	10.0 Nm	25.0 Nm	25.0 Nm
	Clamping screw for cartridge	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1495 (Torx 20IP)	FS1091 (SW 3)	FS1092 (SW 5)	FS1092 (SW 5)	FS2150 (Torx 30IP)
	Tightening torque	1.5 Nm	2.5 Nm	5.0 Nm	2.5 Nm	12.0 Nm	12.0 Nm	10.0 Nm
	Clamping screw for indexable insert	TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm			FS1454 (Torx 8IP) 1.2 Nm			
	Tightening torque							

Complete tool



d_1 mm	l_4 mm	l_{16} mm	kg	Complete tool with T insert	Precision set designation with T insert
32	80	60	0.23	★ B3230.C3.020-026.Z1.TC06	★ B3230.C3.020-038.Z1.TC06
			0.23	★ B3230.C3.026-032.Z1.TC06	
			0.24	★ B3230.C3.032-038.Z1.TC06	
32	80		0.29	★ B3230.C3.026-033.Z1.TC06	★ B3230.C3.026-047.Z1.TC06
			0.30	★ B3230.C3.033-040.Z1.TC06	
			0.30	★ B3230.C3.040-047.Z1.TC06	
32	80		0.42	★ B3230.C3.033-041.Z1.TC06	★ B3230.C3.033-057.Z1.TC06
			0.42	★ B3230.C3.041-049.Z1.TC06	
			0.42	★ B3230.C3.049-057.Z1.TC06	
40	80		0.7	★ B3230.C4.041-055.Z1.TC06	★ B3230.C4.041-083.Z1.TC06
			0.7	★ B3230.C4.055-069.Z1.TC06	
			0.7	★ B3230.C4.069-083.Z1.TC06	
50	100		1.4	★ B3230.C5.055-070.Z1.TC11	★ B3230.C5.055-100.Z1.TC11
			1.4	★ B3230.C5.070-085.Z1.TC11	
			1.4	★ B3230.C5.085-100.Z1.TC11	
63	100		2.1	★ B3230.C6.070-090.Z1.TC11	★ B3230.C6.070-120.Z1.TC11
			2.2	★ B3230.C6.085-105.Z1.TC11	
			2.1	★ B3230.C6.100-120.Z1.TC11	
63	110		3.2	★ B3230.C6.090-116.Z1.TC11	★ B3230.C6.090-166.Z1.TC11
			3.2	★ B3230.C6.115-141.Z1.TC11	
			3.2	★ B3230.C6.140-166.Z1.TC11	
80	110		4.0	★ B3230.C8.090-116.Z1.TC11	★ B3230.C8.090-166.Z1.TC11
			4.0	★ B3230.C8.115-141.Z1.TC11	
			4.0	★ B3230.C8.140-166.Z1.TC11	
63	110		4.1	★ B3230.C6.110-153.Z1.TC11	★ B3230.C6.110-203.Z1.TC11
			4.1	★ B3230.C6.135-178.Z1.TC11	
			4.1	★ B3230.C6.160-203.Z1.TC11	
63	110		4.8	★ B3230.C8.110-153.Z1.TC11	★ B3230.C8.110-203.Z1.TC11
			4.8	★ B3230.C8.135-178.Z1.TC11	
			4.8	★ B3230.C8.160-203.Z1.TC11	

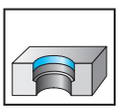
Accessories

	C3		C4	C5	C6	C6 / C8
	for $D_{c\ min-max}$ [mm]					
	20–38.5	26–47.5	33–57.5	41–83.5	55–100.5	70–120.5	90–203
Screwdriver for clamping screw	TC . . 06T1 . . = FS2086 (Torx 6IP)				TC . . 1102 . . = FS1483 (Torx 8IP)		
Screwdriver for clamping screw	FS1484 (Torx 9IP)						
DIN 911 hex key for clamping screw		SW 2,5	SW 3	SW 4	SW 5	SW 6	SW 6
Key for cartridge clamping	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)				FS2109 (Torx 30IP)
DIN 911 hex key for cartridge clamping				SW 3	SW 5	SW 5	

★ New addition to the product range

Self-balancing precision boring tool
B4030 mm

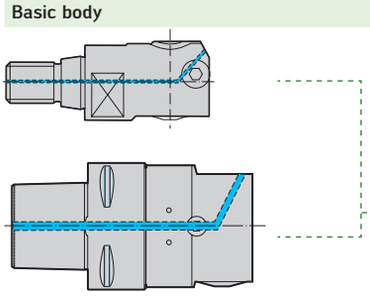
Walter Precision^{MEDIUM}



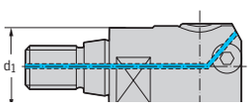
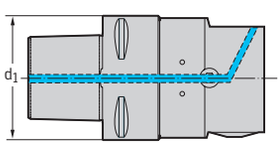
D_c 33–153	κ=95°	κ=93°	Z=1

	P	M	K	N	S	H	O
B4030	●●	●●	●●	●●	●●	●	●

Basic body

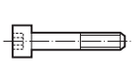


B2

Tool	Basic body designation	d_1 mm	D_c mm
ScrewFit	B4030G.T28.33-41.Z1	T 28	33–41
	B4030G.T36.41-55.Z1	T 36	41–55
	B4030G.T45.55-70.Z1	T 45	55–70
Walter Capto™	B4030G.C3.33-41.Z1	C3	33–41
	B4030G.C4.41-55.Z1	C4	41–55
	B4030G.C5.55-70.Z1	C5	55–70
	B4030G.C6.070-090.Z1	C6	70–90
	B4030G.C6.090-110.Z1	C6	90–110
	B4030G.C8.090-110.Z1	C8	90–110
	B4030G.C6.110-153.Z1	C6	110–153
	B4030G.C8.110-153.Z1	C8	110–153

For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

		$D_{c\ min–max}$ [mm] 33–41	41–55	55–70	70–90	90–110	110–153
	Clamping screw	FS2031 (SW 2.5)	FS2032 (SW 3)	FS2033 (SW 4)	FS2034 (SW 5)	FS2035 (SW 6)	FS2036 (SW 6)
	Tightening torque	2.5 Nm	3.0 Nm	6.0 Nm	12 Nm	15 Nm	15 Nm
	Clamping screw for cartridge	FS2080 (Torx 15IP)	FS1495 (Torx 20IP)	FS1091 (SW 3)			
	Tightening torque	2.5 Nm	2.5 Nm	2.5 Nm			
	Clamping screw for indexable insert	TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm		TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm			
	Tightening torque						

Cartridge with T insert | **Complete tool**

Cartridge designation	Type	d_1 mm	l_1 mm	kg	Complete tool, balanceable designation with T insert
★ EB343.TC06	TC . . 06T1 . .	28	55	0.3	★ B4030.T28.33-41.Z1.TC06
★ EB345.TC06	TC . . 06T1 . .	36	65	0.6	★ B4030.T36.41-55.Z1.TC06
★ EB347.TC06	TC . . 06T1 . .	45	80	1.0	★ B4030.T45.55-70.Z1.TC06
★ EB343.TC06	TC . . 06T1 . .	32	80	0.4	★ B4030.C3.033-041.Z1.TC06
★ EB345.TC06	TC . . 06T1 . .	40	80	0.75	★ B4030.C4.041-055.Z1.TC06
★ EB347.TC06	TC . . 06T1 . .	50	100	1.4	★ B4030.C5.055-070.Z1.TC06
		63	100	1.5	★ B4030.C6.070-090.Z1.TC06
		63	110	1.6	★ B4030.C6.090-110.Z1.TC06
		80	110	1.6	★ B4030.C8.090-110.Z1.TC06
		63	110	2.0	★ B4030.C6.110-153.Z1.TC06
		80	110	2.0	★ B4030.C8.110-153.Z1.TC06

Accessories

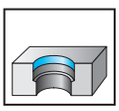
		for $D_{c\ min-max}$ [mm]				
		33–41	41–55	55–70	70–90	90–153
	Screwdriver for clamping screw	TC . . 06T1 . . = FS2086 (Torx 6IP)		TC . . 06T1 . . = FS2086 (Torx 6IP)		
	DIN 911 hex key for clamping screw	SW 2.5	SW 3	SW 4	SW 5	SW 6
	Key for cartridge clamping	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)			
	DIN 911 hex key for cartridge clamping			SW 3		

For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

★ New addition to the product range

Self-balancing precision boring tool
B4031.C mm LWS

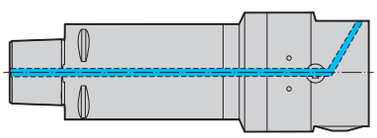
Walter Precision MEDIUM



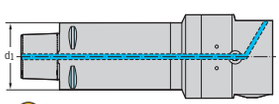
D_c 90–153	κ=95°	κ=93°	Z=1

	P	M	K	N	S	H	O
B4031.C	●●	●●	●●	●●	●●	●	●

Basic body



B2

Tool	Basic body designation	d_1 mm	D_c mm	
Walter Capto™ 	B4031G.C6.090-110.Z1.AL*	C6	90–110	
	B4031G.C6.110-153.Z1.AL*	C6	110–153	

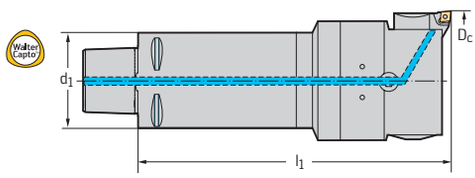
* Reduced-weight aluminium version
For assembly aids, see page D1 in 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

		$D_{c\ min–max}$ [mm] 90–110	110–153
	Clamping screw	FS2035 (SW 6)	FS2036 (SW 6)
	Tightening torque	15 Nm	15 Nm
	Clamping screw for indexable insert	TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm	

Cartridge with T insert

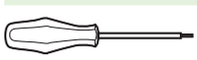
Complete tool



B2

Cartridge designation	Type	d_1 mm	l_1 mm	kg	Complete tool designation with T insert
★ EB347.TC06	TC . . 06T1 . .	60	230	3.4	★ B4031.C6.090-110.Z1.TC06
		60	230	3.8	★ B4031.C6.110-153.Z1.TC06

Accessories

		for $D_{c\ min-max}$ [mm] 70–90	90–153
	Screwdriver for clamping screw	TC . . 06T1 . . = FS2086 (Torx 6IP)	
	DIN 911 hex key for clamping screw	SW 5	SW 6

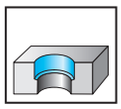
For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

/ ★ New addition to the product range

Precision boring tool with bridge

B3230 **inch**

Walter Precision^{MAXI}



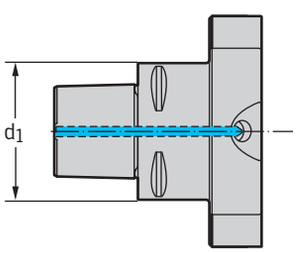
D_c 5.906–25.197	κ=90°	Z=2

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●●		

Basic body **Bridge** **Balance weight** **Cartridge holder**

B2

Tool	Basic body designation	d_1	D_c inch	Bridge designation	Balance weight designation	Cartridge holder designation
Walter Capto™	B3223G.C8.150–640	C8	5.906–8.661	EB134AL	—	EBU123
			8.661–11.417	EB135AL	EB121	
			11.417–14.173	EB136AL		
			14.173–16.929	EB137AL		
			16.929–19.685	EB138AL		
			19.685–22.441	EB139AL		
			22.441–25.197	EB140AL		



For assembly aids, see page D1 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

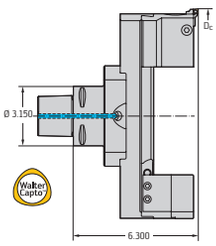
Assembly parts

	Designation	Tightening torque
Clamping screw for bridge	FS 1114 (SW 10)	88 ft lbs
Clamping screw for balance weight slide	FS 1086 (SW 6)	18 ft lbs
Clamping screw for cartridge holder and balance weight	FS 1113 (SW 6)	18 ft lbs
Clamping screw for cartridge	FS 1092 (SW 5)	9 ft lbs
Clamping screw for insert	FS 1454 (Torx 8 IP)	22 in lbs

Cartridge with T insert

κ = 93°

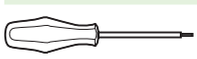
Complete tool



B2

Cartridge designation	Type	lbs	Complete tool designation with T insert
★ EB349.TC11	TC . . 2(1.5) . TC . . 1102.	13.8	★ B3230.UC8.150-220.Z1.TC11
		14.9	★ B3230.UC8.220-290.Z1.TC11
		15.8	★ B3230.UC8.290-360.Z1.TC11
		16.5	★ B3230.UC8.360-430.Z1.TC11
		17.4	★ B3230.UC8.430-500.Z1.TC11
		18.0	★ B3230.UC8.500-570.Z1.TC11
		18.5	★ B3230.UC8.570-640.Z1.TC11

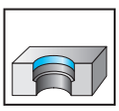
Accessories

	Screwdriver for clamping screw	FS 1483 (Torx 8 IP)
	Allen key DIN 911	SW 5 / SW 6 / SW 10

★ New addition to the product range

Precision boring tool with bridge design
B3230 mm

Walter Precision^{MAXI}



– Aluminium bridge

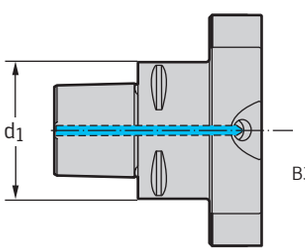
D_c 5.906–25.197	κ=90°	Z=2

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●●		

Basic body **Bridge** **Balance weight** **Cartridge Holder**

B2

Tool	Basic body designation	d_1 mm	D_c mm	Bridge	Balance weight	Cartridge holder
Walter Capto™	B3223G.C8.150-640	C8	150–220	EB134AL	EB121	EB123
			220–290	EB135AL		
			290–360	EB136AL		
			360–430	EB137AL		
			430–500	EB138AL		
			500–570	EB139AL		
			570–640	EB140AL		



For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

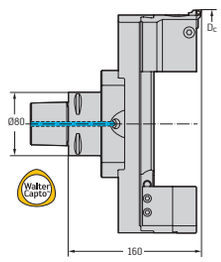
Assembly parts

	Designation	Tightening torque
Clamping screw for bridge	FS1114 (SW 10)	120 Nm
Clamping screw for balance compensation slide	FS1086 (SW 6)	25 Nm
Clamping screw for cartridge holder and balance compensation	FS1113 (SW 6)	25 Nm
Clamping screw for cartridge	FS1092 (SW 5)	12 Nm
Clamping screw for indexable insert	FS1454 (Torx 8IP)	1.2 Nm

Cartridge with T insert

κ = 93°

Complete tool



B2

Cartridge designation	Type	kg	Complete tool designation with T insert
★ EB349.TC11	TC . . 1102 . .	6.3	★ B3230.C8.150-220.Z1.TC11
		6.8	★ B3230.C8.220-290.Z1.TC11
		7.2	★ B3230.C8.290-360.Z1.TC11
		7.5	★ B3230.C8.360-430.Z1.TC11
		7.9	★ B3230.C8.430-500.Z1.TC11
		8.2	★ B3230.C8.500-570.Z1.TC11
		8.4	★ B3230.C8.570-640.Z1.TC11

Accessories

	Screwdriver for clamping screw	
	DIN 911 hex key	SW 5 / SW 6 / SW 10

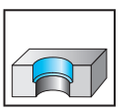
For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

/ ★ New addition to the product range

Precision boring tool with bridge

B3234 **inch**

Walter Precision^{MAXI}



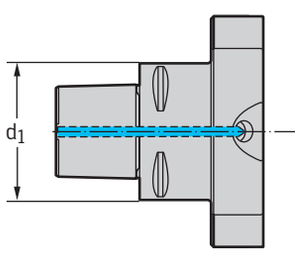
– Cutting edge orientation rotated by 90° in relation to B3230G.C …
– Aluminum bridge

	D_c 5.906–25.197	κ=90°	Z=2

	P	M	K	N	S	H	O
B3234	●●	●●	●●	●	●●		

Basic body **Bridge** **Balance weight** **Cartridge holder**

Tool	Basic body designation	d_1	D_c inch	Bridge designation	Balance weight designation	Cartridge holder designation
Walter Capto™			5.906–8.661	EB134AL	—	
			8.661–11.417	EB135AL		
			11.417–14.173	EB136AL		
			14.173–16.929	EB137AL	EB121	EBU123
			16.929–19.685	EB138AL		
			19.685–22.441	EB139AL		
			22.441–25.197	EB140AL		



B3224G.C8.150–640

C8

For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

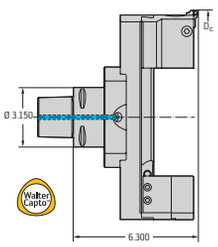
Assembly parts

	designation	Tightening torque
Clamping screw for bridge	FS 1114 (SW 10)	88 ft lbs
Clamping screw for balance weight slide	FS 1086 (SW 6)	18 ft lbs
Clamping screw for cartridge holder and balance weight	FS 1113 (SW 6)	18 ft lbs
Clamping screw for cartridge	FS 1092 (SW 5)	9 ft lbs
Clamping screw for insert	FS 1454 (Torx 8 IP)	22 in lbs

Cartridge with T insert

κ = 93°

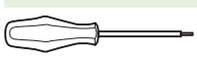
Complete tool



B2

Cartridge designation	Type	lbs	Complete tool designation with T insert
★ EB349.TC11	TC . . 2(1.5) . . TC . . 1102 . .	13.8	★ B3234.UC8.150-220.Z1.TC11
		14.9	★ B3234.UC8.220-290.Z1.TC11
		15.8	★ B3234.UC8.290-360.Z1.TC11
		16.5	★ B3234.UC8.360-430.Z1.TC11
		17.4	★ B3234.UC8.430-500.Z1.TC11
		18.0	★ B3234.UC8.500-570.Z1.TC11
		18.5	★ B3234.UC8.570-640.Z1.TC11

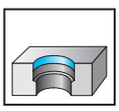
Accessories

	Screwdriver for clamping screw	FS 1483 (Torx 8 IP)
	Allen key DIN 911	SW 5 / SW 6 / SW 10

★ New addition to the product range

Precision boring tool with bridge design
B3234 mm

Walter Precision^{MAXI}

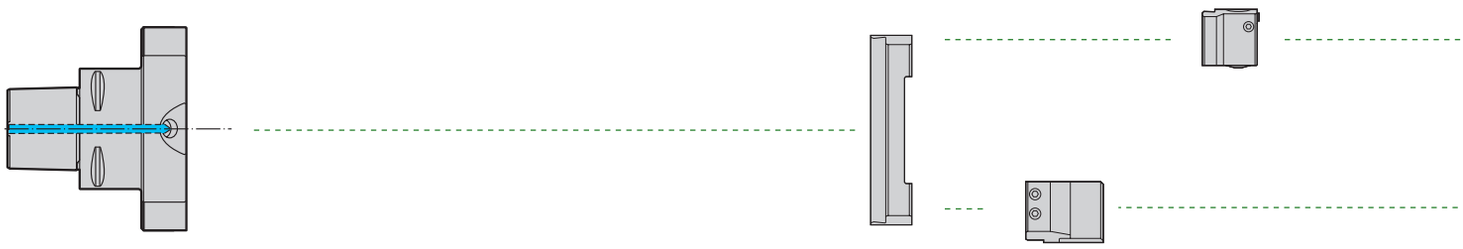


– Cutting edge orientation rotated by 90° in relation to B3230G.C …
– Aluminium bridge

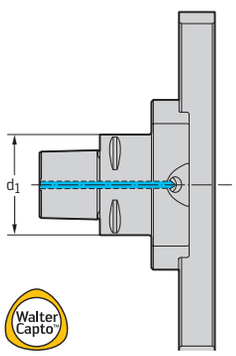
D_c 5.906–25.197	κ=90°	Z=2

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●●		

Basic body **Bridge** **Balance weight** **Cartridge Holder**



Tool	Basic body designation	d_1 mm	D_c mm	Bridge	Balance weight	Cartridge holder
Walter Capto™	B3224G.C8.150-640	C8	150–220	EB134AL	EB121	EB123
			220–290	EB135AL		
			290–360	EB136AL		
			360–430	EB137AL		
			430–500	EB138AL		
			500–570	EB139AL		
			570–640	EB140AL		



For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

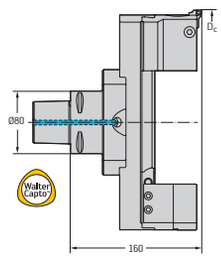
Assembly parts

	Designation	Tightening torque
Clamping screw for bridge	FS1114 (SW 10)	120 Nm
Clamping screw for balance compensation slide	FS1086 (SW 6)	25 Nm
Clamping screw for cartridge holder and balance compensation	FS1113 (SW 6)	25 Nm
Clamping screw for cartridge	FS1092 (SW 5)	12 Nm
Clamping screw for indexable insert	FS1454 (Torx 8IP)	1.2 Nm

Cartridge with T insert

κ = 93°

Complete tool



B2

Cartridge designation	Type	kg	Complete tool designation with T insert
★ EB349.TC11	TC . . 1102 . .	6.3	★ B3234.C8.150-220.Z1.TC11
		6.8	★ B3234.C8.220-290.Z1.TC11
		7.2	★ B3234.C8.290-360.Z1.TC11
		7.5	★ B3234.C8.360-430.Z1.TC11
		7.9	★ B3234.C8.430-500.Z1.TC11
		8.2	★ B3234.C8.500-570.Z1.TC11
		8.4	★ B3234.C8.570-640.Z1.TC11

Accessories

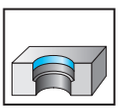
	Screwdriver for clamping screw	FS1483 (Torx 8IP)
	DIN 911 hex key	SW 5 / SW 6 / SW 10

For torque screwdrivers with interchangeable blades, see page B800 of the 2018 General Catalog.

/ ★ New addition to the product range

Precision boring tool
B3230 inch

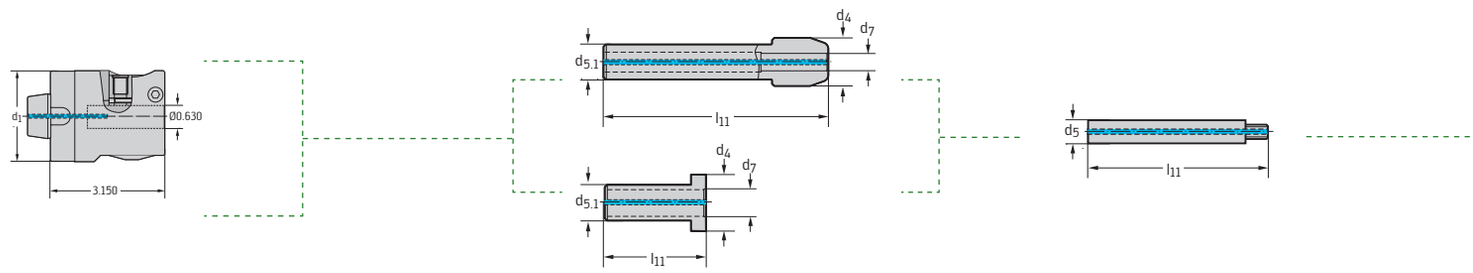
Walter Precision^{MINI}



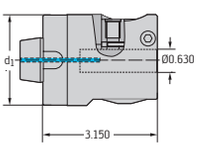
D_C 0.346 - 0.787	κ=93°	Z=1

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

Basic body **Reduction Adaptor** **Extension**



B 2

Tool	Basic body designation	d_1	D in	Reduction adaptor designation	d_7 in	d_4 in	$d_{5.1}$ in	l_{11} in	Extension designation	d_5 in	l_{11} in
Modular Adaptor 	B 3230G.UN6.002-045.Z1 Standard	NCT63	0.346–0.492	EB 104	0.315	0.866	0.63	3.937	EB 106	0.315	1.85
									EB 107.CS	0.315	3.425
			0.465–0.571	EB 105	0.394	0.945	0.63	3.937	EB 108	0.394	2.047
									EB 109.CS	0.394	3.031
			0.543–0.650	EB 506	0.472	0.669	0.63	1.417	EB 508	0.472	3.031
									EB 509.CS	0.472	3.819
			0.622–0.787	EB 507	0.551	0.669	0.63	1.417	EB 510	0.551	3.425
									EB 511.CS	0.551	4.606

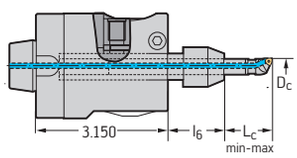
EB . . . CS = Solid carbide shank
Advantages: increased rigidity, reduced deflection, vibration neutralization

Assembly parts

		for D = 0.079-0.236 in		for D = 0.346-0.787 in	
		Designation	Tightening torque	Designation	Tightening torque
	Locking screw	FS 1085 (Hex 5 mm)	89 in lbs	FS 1085 (Hex 5 mm)	89 in lbs
	Clamping screw for reducer	FS 2040 (Hex 5 mm)	124 in lbs	FS 2040 (Hex 5 mm)	124 in lbs
	Clamping screw for extension	FS 1111 (Hex 2 mm)	17 in lbs	FS 1111 (Hex 3 mm)	49 in lbs
	Clamping screw for indexable inserts	0.346-0.5 inch = FS 2147 (Torx 6IP) 0.464-0.787 inch = FS 2148 (Torx 6IP)	5 in lbs	FS 2084 (Torx 7 IP)	5 in lbs

Cartridge

Tool assembly



B 2

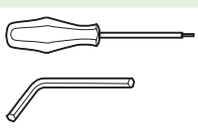
Cartridge designation	l_{12} in	Type	$L_{c\ min}$ in	$L_{c\ max}$ in	l_6 in	lbs	Complete tool designation
★ EB 305.TC06	0.709	TC . . 1.2(1.2) . . TC . . 06T1 . .	0.787	1.378	1.339–2.362	4.19	★ B 3230.UN6.09-12.Z1.TC06.S*
			0.787	2.874	1.339–2.362	4.19	★ B 3230.UN6.09-12.Z1.TC06.L*
★ EB 306.TC06	0.906	TC . . 1.2(1.2) . . TC . . 06T1 . .	0.984	1.772	1.339–2.362	4.19	★ B 3230.UN6.12-14.Z1.TC06.S
			0.984	2.756	1.339–2.362	4.19	★ B 3230.UN6.12-14.Z1.TC06.L
★ EB 307.TC06	0.906	TC . . 1.2(1.2) . . TC . . 06T1 . .	1.339	2.362	0.079	4.19	★ B 3230.UN6.14-16.Z1.TC06.S
			2.126	3.150	0.079	4.19	★ B 3230.UN6.14-16.Z1.TC06.L
★ EB 512.TC06	0.906	TC . . 1.2(1.2) . . TC . . 06T1 . .	1.732	2.756	0.079	4.19	★ B 3230.UN6.16-20.Z1.TC06.S
			2.913	3.937	0.079	4.19	★ B 3230.UN6.16-20.Z1.TC06.L

* When using the TC . . 0602 . .-PM2 indexable insert. manually shorten the indexable insert clamping screw by 0.04 in [1 mm].

IP = Torx Plus

For basic bodies for assembly parts, see page D1 of 2018 General Catalog.

Accessories

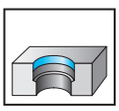


	for D = 0.079-0.236 in	for D = 0.346-0.787 in
Screwdriver for clamping screw	FS 2086 (Torx 6IP)	FS 309 (Torx 7)
Hex key mm	Hex 2 / Hex 5	Hex 2 / Hex 3 / Hex 5

★ New addition to the product range

Precision boring tool
B3230 / B4030 mm

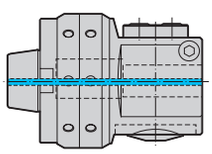
Walter Precision[MINI]

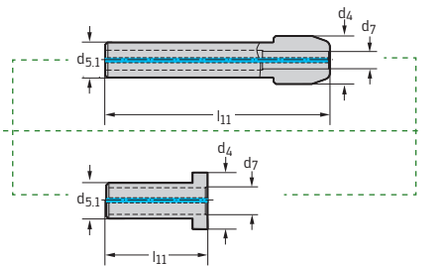


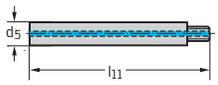
D_c 8,8–20	κ=93°	Z=1

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●	●●		

Basic body | **Reduction Adaptor** | **Extension**

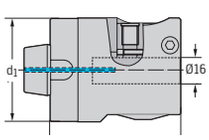


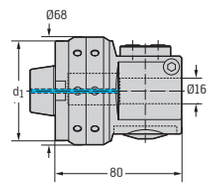




B2

Tool	Designation	d_1 mm	D_c mm	Reduction adaptor designation	d_7 mm	d_4 mm	$d_{5.1}$ mm	l_{11} mm	Extension Designation	d_5 mm	l_{11} mm
NCT	B3230G.N6.002-045.Z1 Standard	NCT63	8.8–12.5	EB104	8	22	16	100	EB106	8	47
									EB107.CS	8	87
			11.8–14.5	EB105	10	24	16	100	EB108	10	52
									EB109.CS	10	97
	B4030G.N6.02-45.Z1 Balanceable		13.8–16.5	EB506	12	17	16	36	EB508	12	77
									EB509.CS	12	97
			15.8–20.0	EB507	14	17	16	36	EB510	14	87
									EB511.CS	14	117





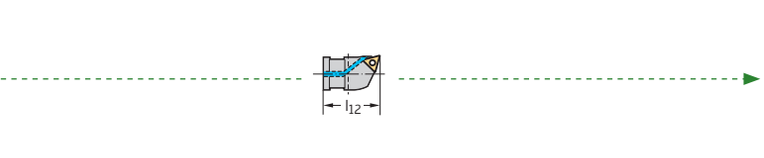
EB . . . CS = Solid carbide shank
Advantages: Increased rigidity. reduced deflection. neutralised vibrations

Assembly parts

	Designation	Tightening torque
Clamping screw	FS1085 (SW 5)	10 Nm
Clamping screw for reducer	FS2040	10 Nm
Clamping screw for extension	FS1111 (SW 3)	2.5 Nm
Clamping screw for indexable insert	Ø 8.8-12.5 mm = FS2147 (Torx 6IP) Ø11.8-20 mm = FS2148 (Torx 6IP)	
Clamping screw for balancing rings	FS2246 (SW 2) for B4030	0.5 Nm

Cartridge

Complete tool

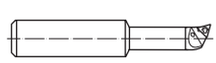


B2

Cartridge designation	l_{12} mm	Type	$L_{c\ min}$ mm	$L_{c\ max}$ mm	l_6 mm	kg	Standard Designation	Balanceable Designation
★ EB305.TC06	18	TC . . 06T1 . .	20	35	34–60	1.9	★ B3230.N6.09-12.Z1.TC06.S*	★ B4030.N6.09-12.Z1.TC06.S*
			20	73	34–60	1.9	★ B3230.N6.09-12.Z1.TC06.L*	★ B4030.N6.09-12.Z1.TC06.L
★ EB306.TC06	23	TC . . 06T1 . .	25	45	34–60	1.9	★ B3230.N6.12-14.Z1.TC06.S	★ B4030.N6.12-14.Z1.TC06.S*
			25	70	34–60	1.9	★ B3230.N6.12-14.Z1.TC06.L	★ B4030.N6.12-14.Z1.TC06.L
★ EB307.TC06	23	TC . . 06T1 . .	34	60	2	1.9	★ B3230.N6.14-16.Z1.TC06.S	★ B4030.N6.14-16.Z1.TC06.S
			54	80	2	1.9	★ B3230.N6.14-16.Z1.TC06.L	★ B4030.N6.14-16.Z1.TC06.L
★ EB512.TC06	23	TC . . 06T1 . .	44	70	2	1.9	★ B3230.N6.16-20.Z1.TC06.S	★ B4030.N6.16-20.Z1.TC06.S
			74	100	2	1.9	★ B3230.N6.16-20.Z1.TC06.L	★ B4030.N6.16-20.Z1.TC06.L

* When using the TC . . 06T1 . .-FN2 indexable insert. manually shorten the indexable insert clamping screw by 1 mm.

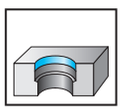
Accessories

	Screwdriver for clamping screw	FS2086 (Torx 6IP)
	DIN 911 hex key	SW 2 / SW 4 / SW 5
	One-piece boring bar	D_c 8.8–15.8, see page B612 of the 2018 General Catalog

/ ★ New addition to the product range

Precision boring tool
B 3230 inch

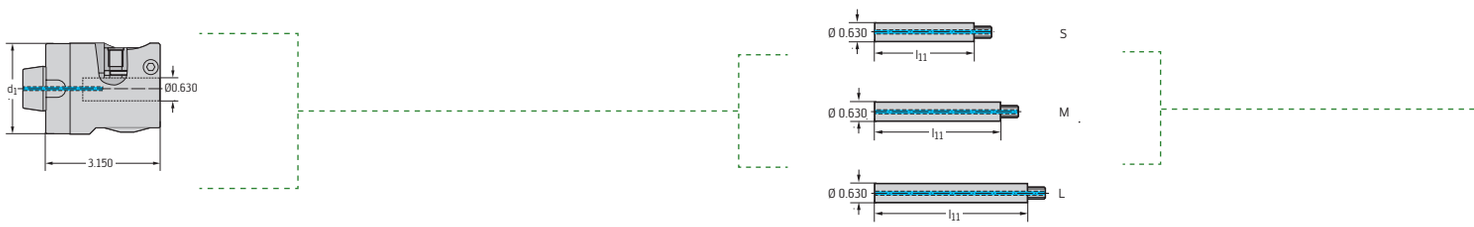
Walter Precision^{MINI}



D_c 0.701-1.790	κ=93°	Z=1

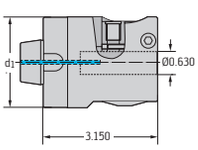
	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

Basic body **Extension**



B 2

Tool	Basic body designation	d_1	D_c in	Extension designation	l_{11} in		
Modular adaptor	B 3230G.UN6.002-045.Z1 Standard	NCT 63	0.701 – 0.886	EB 110	3.465	(S)	
				EB 111.CS	4.252	(M)	
				EB 112.CS	6.614	(L)	
			0.858 – 1.000	EB 110	3.465	(S)	
				EB 111.CS	4.252	(M)	
				EB 112.CS	6.614	(L)	
			0.976 – 1.130	EB 110	3.465	(S)	
				EB 111.CS	4.252	(M)	
				EB 112.CS	6.614	(L)	
			1.090 – 1.280	EB 110	3.465	(S)	
				EB 111.CS	4.252	(M)	
				EB 112.CS	6.614	(L)	
			1.250 – 1.440	EB 110	3.465	(S)	
				EB 111.CS	4.252	(M)	
				EB 112.CS	6.614	(L)	
			1.410 – 1.590	EB 110	3.465	(S)	
				EB 111.CS	4.252	(M)	
				EB 112.CS	6.614	(L)	
			1.570 – 1.790	EB 110	3.465	(S)	
				EB 111.CS	4.252	(M)	
				EB 112.CS	6.614	(L)	



EB . . . CS = Solid carbide shank
Advantages: increased rigidity, reduced deflection, vibration neutralization

Assembly parts

		Designation	Tightening torque
	Locking screw	FS 1085 (Hex 5 mm)	88 in lbs
	Clamping screw for extension	FS 2040 (Hex 5 mm)	89 in lbs
	Clamping screw for insert	FS 1453 (Torx 8 IP)	11 in lbs
	Locking screw for balancing rings	FS 2038 (Hex 2 mm)	

Cartridge

Complete tool

Cartridge designation	l_{12} in	Type	$L_{c\ min}$ in	$L_{c\ max}$ in	lbs	Complete tool designation
★ EB 308.TC11	1.063	TC . . 2(1.5) . . TC . . 1102 . .	2.17	3.15	3.97	★ B 3230.UN6.18-22.Z1.TC11.S
			2.95	3.94	4.41	★ B 3230.UN6.18-22.Z1.TC11.M
			5.31	6.3	4.85	★ B 3230.UN6.18-22.Z1.TC11.L
★ EB 309.TC11	1.063	TC . . 2(1.5) . . TC . . 1102 . .	2.17	3.15	5.07	★ B 3230.UN6.22-25.Z1.TC11.S
			2.95	3.94	5.51	★ B 3230.UN6.22-25.Z1.TC11.M
			5.31	6.3	5.95	★ B 3230.UN6.22-25.Z1.TC11.L
★ EB 310.TC11	1.063	TC . . 2(1.5) . . TC . . 1102 . .	2.17	3.15	5.07	★ B 3230.UN6.25-28.Z1.TC11.S
			2.95	3.94	5.51	★ B 3230.UN6.25-28.Z1.TC11.M
			5.31	6.3	5.95	★ B 3230.UN6.25-28.Z1.TC11.L
★ EB 311.TC11	1.063	TC . . 2(1.5) . . TC . . 1102 . .	2.17	3.15	5.07	★ B 3230.UN6.28-32.Z1.TC11.S
			2.95	3.94	5.51	★ B 3230.UN6.28-32.Z1.TC11.M
			5.31	6.3	5.95	★ B 3230.UN6.28-32.Z1.TC11.L
★ EB 312.TC11	1.063	TC . . 2(1.5) . . TC . . 1102 . .	2.17	3.15	5.07	★ B 3230.UN6.32-36.Z1.TC11.S
			2.95	3.94	5.51	★ B 3230.UN6.32-36.Z1.TC11.M
			5.31	6.3	5.95	★ B 3230.UN6.32-36.Z1.TC11.L
★ EB 313.TC11	1.063	TC . . 2(1.5) . . TC . . 1102 . .	2.17	3.15	5.07	★ B 3230.UN6.36-40.Z1.TC11.S
			2.95	3.94	5.51	★ B 3230.UN6.36-40.Z1.TC11.M
			5.31	6.3	5.95	★ B 3230.UN6.36-40.Z1.TC11.L
★ EB 314.TC11	1.063	TC . . 2(1.5) . . TC . . 1102 . .	2.17	3.15	5.07	★ B 3230.UN6.40-45.Z1.TC11.S
			2.95	3.94	5.51	★ B 3230.UN6.40-45.Z1.TC11.M
			5.31	6.3	5.95	★ B 3230.UN6.40-45.Z1.TC11.L

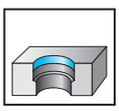
For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Accessories

	Screwdriver	FS 1483 (Torx 8 IP)
	Hex key mm	Hex 5

Precision boring tool
B3230 / B4030 mm

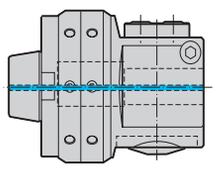
Walter Precision^{MINI}

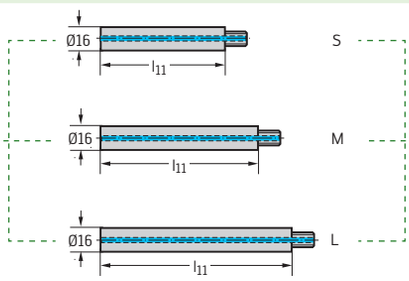


D_c 17,8–45,5	κ=93°	Z=1

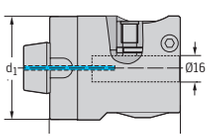
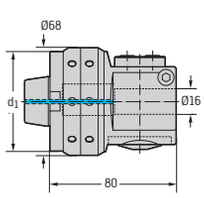
	P	M	K	N	S	H	O
B3230 / B4030	●●	●●	●●	●●	●●	●	●

Basic body **Extension**





B2

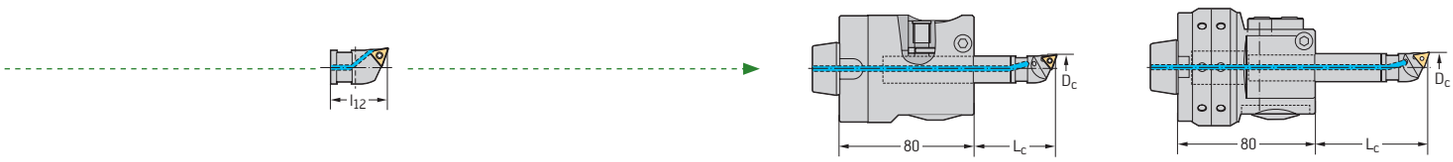
Tool	Basic body designationn	d_1 mm	D_c mm	Extension designation	l_{11} mm	
NCT			17.8–22.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			21.8–25.5	EB110	88	(S)
	B3230G.N6.02-45.Z1 Standard			EB111.CS	108	(M)
				EB112.CS	168	(L)
			24.8–28.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			27.8–32.5	EB110	88	(S)
		NCT63		EB111.CS	108	(M)
				EB112.CS	168	(L)
			31.8–36.5	EB110	88	(S)
	B4030G.N6.02-45.Z1 Balanceable			EB111.CS	108	(M)
				EB112.CS	168	(L)
			35.8–40.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)
			39.8–45.5	EB110	88	(S)
				EB111.CS	108	(M)
				EB112.CS	168	(L)

EB . . . CS = Solid carbide shank
Advantages: Increased rigidity, reduced deflection, neutralised vibrations

Assembly parts

		Designation	Tightening torque
	Clamping screw	FS1085 (SW 5)	10 Nm
	Clamping screw for extension	FS2040	10 Nm
	Clamping screw for indexable insert	FS1454 (Torx 8IP)	1,2 Nm
	Clamping screw for balancing rings	FS2246 (SW 2) for B4030	0,5 Nm

Cartridge | Complete tool

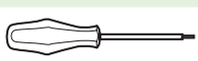


B2

Cartridge designation	l_{12} mm	Type	$L_{c\ min}$ mm	$L_{c\ max}$ mm	kg	Standard Designation	Balanceable Designation
★ EB308.TC11	27	TC . . 1102 . .	55	80	1,8	★ B3230.N6.18-22.Z1.TC11.S	★ B4030.N6.18-22.Z1.TC11.S
			75	100	2,0	★ B3230.N6.18-22.Z1.TC11.M	★ B4030.N6.18-22.Z1.TC11.M
			135	160	2,2	★ B3230.N6.18-22.Z1.TC11.L	★ B4030.N6.18-22.Z1.TC11.L
★ EB309.TC11	27	TC . . 1102 . .	55	80	2,3	★ B3230.N6.22-25.Z1.TC11.S	★ B4030.N6.22-25.Z1.TC11.S
			75	100	2,5	★ B3230.N6.22-25.Z1.TC11.M	★ B4030.N6.22-25.Z1.TC11.M
			135	160	2,7	★ B3230.N6.22-25.Z1.TC11.L	★ B4030.N6.22-25.Z1.TC11.L
★ EB310.TC11	27	TC . . 1102 . .	55	80	2,3	★ B3230.N6.25-28.Z1.TC11.S	★ B4030.N6.25-28.Z1.TC11.S
			75	100	2,5	★ B3230.N6.25-28.Z1.TC11.M	★ B4030.N6.25-28.Z1.TC11.M
			135	160	2,7	★ B3230.N6.25-28.Z1.TC11.L	★ B4030.N6.25-28.Z1.TC11.L
★ EB311.TC11	27	TC . . 1102 . .	55	80	2,3	★ B3230.N6.28-32.Z1. TC11.S	★ B4030.N6.28-32.Z1.TC11.S
			75	100	2,5	★ B3230.N6.28-32.Z1.TC11.M	★ B4030.N6.28-32.Z1.TC11.M
			135	160	2,7	★ B3230.N6.28-32.Z1.TC11.L	★ B4030.N6.28-32.Z1.TC11.L
★ EB312.TC11	27	TC . . 1102 . .	55	80	2,3	★ B3230.N6.32-36.Z1.TC11.S	★ B4030.N6.32-36.Z1.TC11.S
			75	100	2,5	★ B3230.N6.32-36.Z1.TC11.M	★ B4030.N6.32-36.Z1.TC11.M
			135	160	2,7	★ B3230.N6.32-36.Z1.TC11.L	★ B4030.N6.32-36.Z1.TC11.L
★ EB313.TC11	27	TC . . 1102 . .	55	80	2,3	★ B3230.N6.36-40.Z1.TC11.S	★ B4030.N6.36-40.Z1.TC11.S
			75	100	2,5	★ B3230.N6.36-40.Z1.TC11.M	★ B4030.N6.36-40.Z1.TC11.M
			135	160	2,7	★ B3230.N6.36-40.Z1.TC11.L	★ B4030.N6.36-40.Z1.TC11.L
★ EB314.TC11	27	TC . . 1102 . .	55	80	2,3	★ B3230.N6.40-45.Z1.TC11.S	★ B4030.N6.40-45.Z1.TC11.S
			75	100	2,5	★ B3230.N6.40-45.Z1.TC11.M	★ B4030.N6.40-45.Z1.TC11.M
			135	160	2,7	★ B3230.N6.40-45.Z1.TC11.L	★ B4030.N6.40-45.Z1.TC11.L

For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

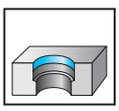
Accessories

	Screwdriver	FS1483 (Torx 8IP)
	DIN 911 hex key	SW 5

/ ★ New addition to the product range

Precision boring tool
B 3230 inch

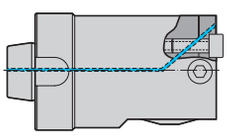
Walter Precision^{MEDIUM}



D_c 0.787–6.024	κ=95°	κ=93°	Z=1

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

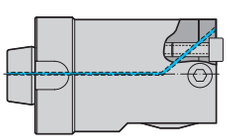
Basic body



B2

Tool

Modular adaptor



Basic body designation	d_1	D_c in
B 3230G.UN2.020–026.Z1	NCT 25	0.787–1.024
B 3230G.UN2.026–033.Z1	NCT 25	1.024–1.299
B 3230G.UN3.033–041.Z1	NCT 32	1.299–1.614
B 3230G.UN4.041–055.Z1	NCT 40	1.614–2.165
B 3230G.UN5.055–070.Z1	NCT 50	2.165–2.756
B 3230G.UN6.070–090.Z1	NCT 63	2.756–3.543
B 3230G.UN8.090–110.Z1	NCT 80	3.543–4.331
B 3230G.UN8.110–153.Z1	NCT 80	4.331–6.024

For assembly aids, see page D1 in 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	$D_{c\ min–max}$ in 0.787-1.024	1.024-1.299	1.299-1.614	1.614-2.165	2.165-2.756	2.756-3.543	3.543-6.023
Clamping screw	FS 2251 (Torx 9 IP)	FS 1082 (SW 2.5)	FS 1083 (SW 3)	FS 1084 (SW 4)	FS 1085 (SW 5)	FS 1086 (SW 6)	FS 1087 (SW 6)
Tightening torque	11 in lbs	18 in lbs	27 in lbs	35 in lbs	89 in lbs	221 in lbs	221 in lbs
Clamping screw for cartridge	FS 1457 (Torx 9 IP)	FS 2080 (Torx 15 IP)	FS 1495 (Torx 20 IP)	FS 1091 (SW 3)	FS 1092 (SW 5)		
Tightening torque	11 in lbs	18 in lbs	22 in lbs	22 in lbs	106 in lbs		
Drive pin (only with NCT 25)	FK 311		FK 312	FK 313			
Screw for drive pin (only with NCT 25)	FS 502		FS 503	FS 504			
Clamping screw for insert	TC . . 06T1 . .			TC . . 06T1 . .			
Tightening torque	= FS 2148 (Torx 6IP) 5 in lbs			= FS 2148 (Torx 6 IP) 5 in lbs			

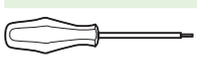
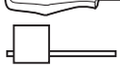
Cartridge with T insert

B2

Cartridge designation	Type	d_1	l_4 in	lbs	Standard designation with T insert
★ EB 341.TC06	TC . . 1.2(1.2) . TC . . 06T1 .	NCT 25*	3.150	0.4	★ B 3230.UN2.020-026.Z1.TC06
★ EB 343.TC06		NCT 25	3.150	0.7	★ B 3230.UN2.026-033.Z1.TC06
★ EB 345.TC06		NCT 32	3.150	1.1	★ B 3230.UN3.033-041.Z1.TC06
★ EB 347.TC06	TC . . 1.2(1.2) . TC . . 06T1 .	NCT 40	3.150	1.8	★ B 3230.UN4.041-055.Z1.TC06
★ EB 349.TC11	TC . . 2(1.5) . . TC . . 1102 . .	NCT 50	3.937	3.5	★ B 3230.UN5.055-070.Z1.TC11
		NCT 63	3.937	5.5	★ B 3230.UN6.070-090.Z1.TC11
		NCT 80	3.937	8.8	★ B 3230.UN8.090-110.Z1.TC11
		NCT 80	3.937	11.0	★ B 3230.UN8.110-153.Z1.TC11

* When using the TC . . 0602 . .-PM2 indexable insert. manually shorten the indexable insert clamping screw by 0.04 in [1 mm].

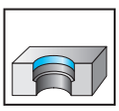
Accessories

		$D_{c\ min-max}$ in					
		0.787-1.024	1.024-1.299	1.299-1.614	1.614-2.165	2.165-2.756	2.756-3.543
	Screwdriver for clamping screw	TC . . 06T1 . . = FS 2086 (Torx 6 IP)			TC . . 06T1 . . = FS 2086 (Torx 6 IP)		
	Torx key for clamping screw	FS 1484 (Torx 9 IP)					
	Wrench DIN 911 for clamping screw		SW 2.5	SW 3	SW 4	SW 5	SW 6
	Wrench for cartridge clamping	FS 1484 (Torx 9 IP)	FS 1485 (Torx 15 IP)	FS 1486 (Torx 20 IP)			FS 2108 (Torx 30 IP)
	Allen key DIN 911 for cartridge clamping				SW 3	SW 5	SW 5

/ ★ New addition to the product range

Precision boring tool
B3230 mm

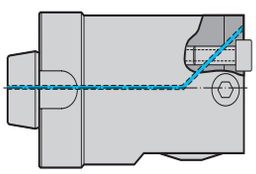
Walter Precision^{MEDIUM}



D_c 20–153	κ=95°	κ=93°	Z=1

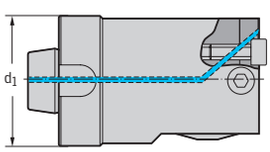
	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

Basic body



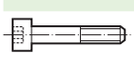
B2

Tool

Basic body designation	d_1 mm	D_c mm	
NCT			
			
B3230G.N2.020-026.Z1	NCT25	20–26	
B3230G.N2.026-033.Z1	NCT25	26–33	
B3230G.N3.033-041.Z1	NCT32	33–41	
B3230G.N4.041-055.Z1	NCT40	41–55	
B3230G.N5.055-070.Z1	NCT50	55–70	
B3230G.N6.070-090.Z1	NCT63	70–90	
B3230G.N8.090-110.Z1	NCT80	90–110	
B3230G.N8.110-153.Z1	NCT80	110–153	

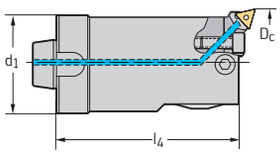
For assembly aids. see page D1 in 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

		$D_{c\ min–max}$ [mm] 20–26	26–33	33–41	41–55	55–70	70–90	90–153
	Clamping screw	FS2251 (Torx 9IP)	FS1082 (SW 2.5)	FS1083 (SW 3)	FS1084 (SW 4)	FS1085 (SW 5)	FS1086 (SW 6)	FS1087 (SW 6)
	Tightening torque	1.2 Nm	2.0 Nm	3.0 Nm	4.0 Nm	10.0 Nm	25.0 Nm	25.0 Nm
	Clamping screw for cartridge	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1495 (Torx 20IP)	FS1091 (SW 3)	FS1092 (SW 5)		
	Tightening torque	0.9 Nm	2.0 Nm	2.5 Nm	2.5 Nm	12.0 Nm		
	Drive pin (only with NCT 25)	FK311		FK312	FK313			
	Screw for drive pin (only with NCT 25)	FS502		FS503	FS504			
	Clamping screw for indexable insert	TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm			TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm			
	Tightening torque							

Cartridge with T insert

Complete tool

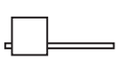


B2

Cartridge designation	Type	d_1 mm	l_4 mm	kg	Standard designation with T insert
★ EB341.TC06	TC . . 06T1 . .	25*	80	0.2	★ B3230.N2.020-026.Z1.TC06
★ EB343.TC06	TC . . 06T1 . .	25	80	0.3	★ B3230.N2.026-033.Z1.TC06
★ EB345.TC06	TC . . 06T1 . .	32	80	0.5	★ B3230.N3.033-041.Z1.TC06
★ EB347.TC06	TC . . 06T1 . .	40	80	0.8	★ B3230.N4.041-055.Z1.TC06
★ EB349.TC11	TC . . 1102 . .	50	100	1.6	★ B3230.N5.055-070.Z1.TC11
		63	100	2.5	★ B3230.N6.070-090.Z1.TC11
		80	100	4.0	★ B3230.N8.090-110.Z1.TC11
		80	100	5.0	★ B3230.N8.110-153.Z1.TC11

* Maximum drilling depth = 65 mm

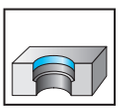
Accessories

		for $D_{c\ min-max}$ [mm]					
		20–26	26–33	33–41	41–55	55–70	70–153
	Screwdriver for clamping screw	TC . . 06T1 . . = FS2086 (Torx 6IP)			TC . . 06T1 . . = FS2086 (Torx 6IP)		
	Torx key for clamping screw	FS1484 (Torx 9IP)					
	DIN 911 hex key for clamping screw		SW 2.5	SW 3	SW 4	SW 5	SW 6
	Key for cartridge clamping	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)			FS2108 (Torx 30IP)
	DIN 911 hex key for cartridge clamping				SW 3	SW 5	SW 5

/ ★ New addition to the product range

Self-balancing precision boring tool B4030

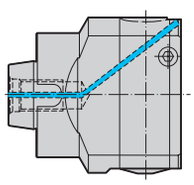
Walter Precision[MEDIUM]



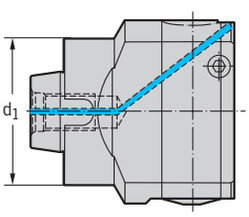
D_c 70–153	κ=95°	κ=93°	Z=1

	P	M	K	N	S	H	O
B4030	●●	●●	●●	●●	●●		●

Basic body

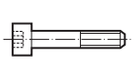


B2

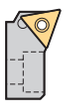
Tool	Basic body designation	d_1 mm	D_c mm
NCT 	B4030G.N6.070-090.Z1	NCT63	70–90
	B4030G.N8.090-110.Z1*	NCT80	90–110
	B4030G.N8.110-153.Z1*	NCT80	110–153

* Aluminium design
For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

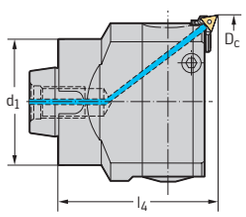
Assembly parts

		$D_{c\ min–max}$ [mm] 33–41	41–55	55–70	70–90	90–110	110–153
	Clamping screw	FS2031 (SW 2.5)	FS2032 (SW 3)	FS2033 (SW 4)	FS2034 (SW 5)	FS2035 (SW 6)	FS2036 (SW 6)
	Tightening torque	2.5 Nm	3.0 Nm	6.0 Nm	10 Nm	12 Nm	12 Nm
	Clamping screw for cartridge	FS2080 (Torx 15IP)	FS1495 (Torx 20IP)	FS1091 (SW 3)			
	Tightening torque	2.5 Nm	2.5 Nm	2.5 Nm			
	Clamping screw for indexable insert	TC . . 06T1 . . = FS2148 (Torx 6IP) 0.6 Nm					
	Tightening torque						

Cartridge with T insert



Complete tool



B2

Cartridge designation	Type	d_1 mm	l_4 mm	kg	Standard designation with T insert
★ EB347.TC06	TC . . 06T1 . .	63	100	2.5	★ B4030.N6.070-090.Z1.TC06
		80	100	1.6	★ B4030.N8.090-110.Z1.TC06
		80	100	2.0	★ B4030.N8.110-153.Z1.TC06

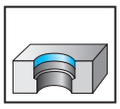
Accessories

		for $D_{c\ min-max}$ [mm]				
		33–41	41–55	55–70	70–90	90–153
	Screwdriver for clamping screw	TC . . 06T1 . . = FS2086 (Torx 6IP)				
	DIN 911 hex key for clamping screw	SW 2.5	SW 3	SW 4	SW 5	SW 6
	Key for cartridge clamping	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)			
	DIN 911 hex key for cartridge clamping			SW 3		

/ ★ New addition to the product range

Precision boring tool with bridge
B 3230 inch

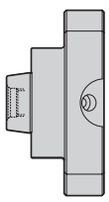
Walter Precision^{MAXI}

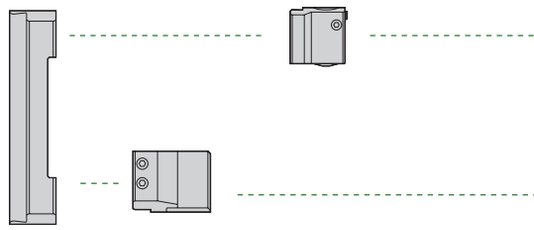


D_c 5.906–25.197	κ=95°	κ=93°	Z=1

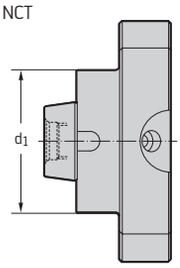
	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

Basic body **Bridge**





B2

Tool	Basic body designation	d_1	D_c in	Bridge designation	Balance designation	Cartridge holder
NCT 	B3223G.N8.150-640	NCT 80	5.906–8.661	EB 124	—	EBU 123
			8.661–11.417	EB 125	EB 121	
			11.417–14.173	EB 126		
			14.173–16.929	EB 127		
			16.929–19.685	EB 128		
			19.685–22.441	EB 129		
			22.441–25.197	EB 130		

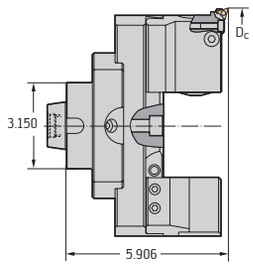
For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

		Designation	Tightening torque
	Clamping screw for bridge	FS 1114 (SW 10)	88 ft lbs
	Clamping screw for balance compensation weight	FS 1086 (SW 6)	18 ft lbs
	Clamping screw for cartridge holder and balance compensation	FS 1113 (SW 6)	18 ft lbs
	Clamping screw for cartridge	FS 1092 (SW 5)	9 ft lbs
	Clamping screw for insert	FS 1454 (Torx 8 IP)	22 in lbs

Cartridge with T insert

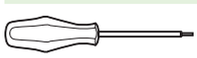
Complete tool



B 2

Cartridge designation	Type	lbs	Standard designation with T insert
★ EB 349.TC11	TC . . 2(1.5) . . TC . . 1102 . .	17.4	★ B 3230.UN8.150-220.Z1.TC11
		20.2	★ B 3230.UN8.220-290.Z1.TC11
		23.1	★ B 3230.UN8.290-360.Z1.TC11
		25.7	★ B 3230.UN8.360-430.Z1.TC11
		28.6	★ B 3230.UN8.430-500.Z1.TC11
		31.5	★ B 3230.UN8.500-570.Z1.TC11
		34.1	★ B 3230.UN8.570-640.Z1.TC11

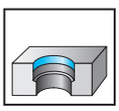
Accessories

	Screwdriver for clamping screw	FS 1483 (Torx 8 IP)
	Allen key DIN 911	SW 5 / SW 6 / SW 10

★ New addition to the product range

Precision boring tool with bridge design
B3230 mm

Walter Precision^{MAXI}



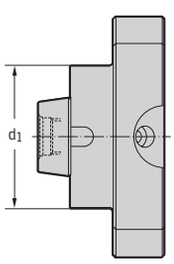
– 0.01 mm adjustment accuracy

D_c 150–640	κ=95°	κ=93°	Z=1

	P	M	K	N	S	H	O
B3230	●●	●●	●●	●●	●●	●	●

Basic body **Bridge**

B2

Tool	Basic body designation	d_1 mm	D_c mm	Bridge designation	Balance weight	Cartridge holder	
NCT 	B3223G.N8.150-640	NCT80	150–220	EB 124	EB121	EB123	
			220–290	EB 125			
			290–360	EB 126			
			360–430	EB 127			
			430–500	EB 128			
			500–570	EB 129			
			570–640	EB 130			

For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

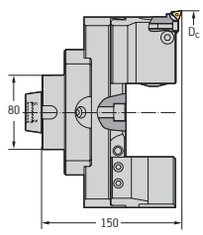
Assembly parts

	Designation	Tightening torque
Clamping screw for bridge	FS1114 (SW 10)	120 Nm
Clamping screw for balance compensation slide	FS1086 (SW 6)	25 Nm
Clamping screw for cartridge holder and balance compensation	FS1113 (SW 6)	15 Nm
Clamping screw for cartridge	FS1092 (SW 5)	12 Nm
Clamping screw for indexable insert	FS1454 (Torx 8IP)	1.2 Nm

Cartridge with T insert

Complete tool

κ = 93°



Cartridge designation	Type		Standard designation with T insert
★ EB 349.TC11	TC . . 1102 . .	7.9	★ B3230.N8.150-220.Z1.TC11
		9.2	★ B3230.N8.220-290.Z1.TC11
		10.5	★ B3230.N8.290-360.Z1.TC11
		11.7	★ B3230.N8.360-430.Z1.TC11
		13.0	★ B3230.N8.430-500.Z1.TC11
		14.3	★ B3230.N8.500-570.Z1.TC11
		15.5	★ B3230.N8.570-640.Z1.TC11

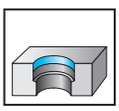
Accessories

	Screwdriver for clamping screw	FS1483 (Torx 8IP)
	DIN 911 hex key	SW 5 / SW 6 / SW 10

/ ★ New addition to the product range

Precision boring tool with bridge
B 3234 inch

Walter Precision^{MAXI}

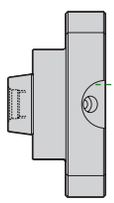


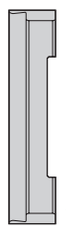
– 0.0004 in. adjustment accuracy
– Cutting edge orientation rotated by 90° in relation to B3230

D_c 5.906–25.197	κ=95°	κ=93°	Z=1

	P	M	K	N	S	H	O
B3224	●●	●●	●●	●●	●●	●	●

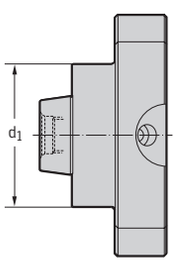
Basic body **Bridge**





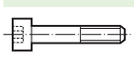
B2

Tool	Basic body designation	d_1	D_c in	Bridge designation	Balance compensation	Cartridge holder
Modular adaptor	B 3224G.N8.150–640	NCT 80	5.906–8.661	EB 124	—	EBU 123
			8.661–11.417	EB 125	EB 121	
			11.417–14.173	EB 126		
			14.173–16.929	EB 127		
			16.929–19.685	EB 128		
			19.685–22.441	EB 129		
			22.441–25.197	EB 130		



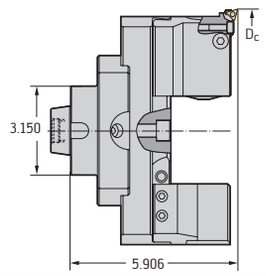
For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Designation	Tightening torque
 Clamping screw for bridge	FS 1114 (SW 10)	88 ft lbs
Clamping screw for balance compensation weight	FS 1086 (SW 6)	18 ft lbs
Clamping screw for cartridge holder and balance compensation	FS 1113 (SW 6)	18 ft lbs
Clamping screw for cartridge	FS 1092 (SW 5)	9 ft lbs
Clamping screw for insert	FS 1454 (Torx 8 IP)	22 in lbs

Cartridge with T insert

Complete tool



B 2

Cartridge designation	Type	lbs	Standard designation with T insert
★ EB 349.TC11	TC . . 2(1.5) . . TC . . 1102 . .	17.4	★ B 3234.UN8.150-220.Z1.TC11
		20.2	★ B 3234.UN8.220-290.Z1.TC11
		23.1	★ B 3234.UN8.290-360.Z1.TC11
		25.7	★ B 3234.UN8.360-430.Z1.TC11
		28.6	★ B 3234.UN8.430-500.Z1.TC11
		31.5	★ B 3234.UN8.500-570.Z1.TC11
		34.1	★ B 3234.UN8.570-640.Z1.TC11

Accessories

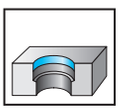
	Screwdriver for clamping screw	FS 1483 (Torx 8 IP)
	Allen key DIN 911	SW 5 / SW 6 / SW 10

/ ★ New addition to the product range

Precision boring tool with bridge design
B3234 mm

Walter Precision^{MAXI}

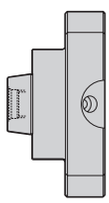
D_c 150–640	κ=95°	κ=93°	Z=1

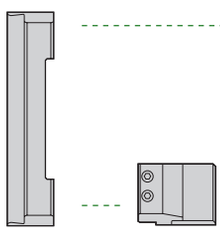


– 0.01 mm adjustment accuracy
– Cutting edge orientation rotated by 90° in relation to B3230

	P	M	K	N	S	H	O
B3224	●●	●●	●●	●●	●●	●	●

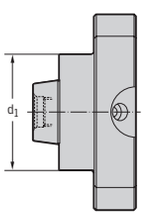
Basic body **Bridge**





B2

Tool

Basic body designation	d_1 mm	D_c mm	Bridge	Balance weight	Cartridge holder
NCT 					
		150–220	EB124		
		220–290	EB125		
		290–360	EB126		
B3224G.N8.150-640	NCT80	360–430	EB127	EB121	EB123
		430–500	EB128		
		500–570	EB129		
		570–640	EB130		

For assembly aids, see page D1 of 2018 General Catalog.
Bodies and assembly parts are included in the scope of delivery.

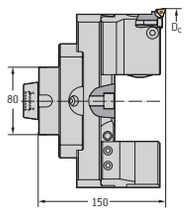
Assembly parts

	Designation	Tightening torque
Clamping screw for bridge	FS1114 (SW 10)	120 Nm
Clamping screw for balance compensation slide	FS1086 (SW 6)	25 Nm
Clamping screw for cartridge holder and balance compensation	FS1113 (SW 6)	15 Nm
Clamping screw for cartridge	FS1092 (SW 5)	12 Nm
Clamping screw for indexable insert	FS1454 (Torx 8IP)	1.2 Nm

Cartridge with T insert

Complete tool

κ = 93°



B2

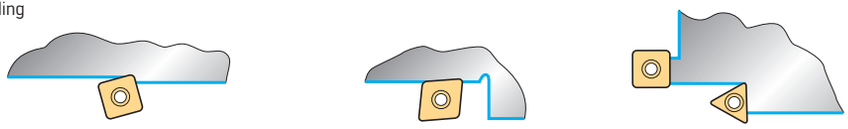
Cartridge designation	Type	kg	Standard designation with T insert
★ EB349.TC11	TC . . 1102 . .	7.9	★ B3234.N8.150-220.Z1.TC11
		9.2	★ B3234.N8.220-290.Z1.TC11
		10.5	★ B3234.N8.290-360.Z1.TC11
		11.7	★ B3234.N8.360-430.Z1.TC11
		13.0	★ B3234.N8.430-500.Z1.TC11
		14.3	★ B3234.N8.500-570.Z1.TC11
		15.5	★ B3234.N8.570-640.Z1.TC11

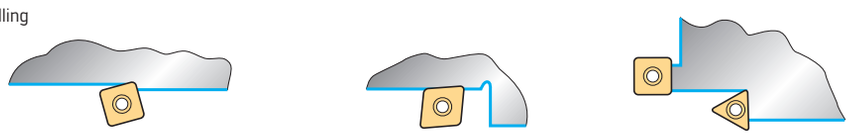
Accessories

	Screwdriver for clamping screw	FS1483 (Torx 8IP)
	DIN 911 hex key	SW 5 / SW 6 / SW 10

/ ★ New addition to the product range

Cartridges product range overview

Machining	Counterboring and step drilling 	
Lead angle κ [°]	**45°**	**75°**
Designation	**PSSN R/L**	**PSKN R/L**
Standard	ISO 5611	
$D_{c\ min}$ mm [in]	50 [1.969]	40/50/60/70/100 [1.575/1.969/2.362/2.756/3.937]
Page	345	344

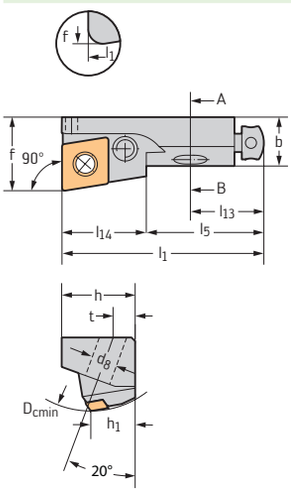
Machining	Counterboring and step drilling 			
Lead angle κ [°]	**90°/95°**			
Designation	**PCFN R/L**	**PTFN R/L**	**STFC R/L**	**PCLN R/L**
Standard	ISO 5611			
$D_{c\ min}$ mm [in]	50 [1.969]	50 [1.969]	25/40 [0.984/1.575]	50 [1.969]
Page	342	346	347	343

ISO cartridges
PCFN

B2

Tool

Designation	h_1 in	b in	$D_{c\ min}$ in	d_8 in	l_{13} in	f in	h in	l_1 in	l_5 in	t in	Type
★ PCFNR12CA-12	0.472	0.524	1.969	0.276	0.787	0.787	0.787	1.850	1.260	0.236	CN . 43 CN .. 1204 ..



Measured with master insert: CN .. 120408
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type	CN . 43 CN .. 1204 ..
Lever	KN109
Clamping screw for insert Tightening torque	FS332 (SW 2.5) 22 in lbs
Adjusting screw. axial	FS335
Adjusting screw. radial	FS334
Fastening screw	FS977 (Torx 30)

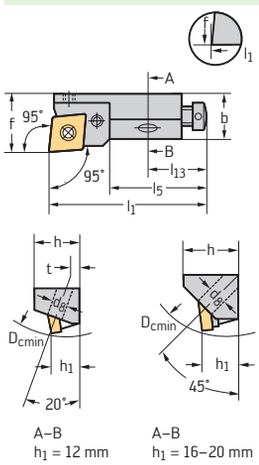
Accessories

Type	CN .. 1204 ..
ISO 2936 key	ISO2936-2.5 (SW 2.5)
Handle key	FS1175 (Torx 30)

/ ★ New addition to the product range

ISO cartridges
PCLN

Tool



Designation	h_1 in	b in	$D_{c\ min}$ in	d_8 in	l_{13} in	f in	h in	l_1 in	l_5 in	t in	Type
PCLNR/L12CA-12	0.472	0.630	1.969	0.276	0.787	0.787	0.787	2.165	1.102	0.236	CN . 43 .. CN .. 1204 ..
PCLNR/L16CA-12	0.630	0.787	2.362	0.354	0.984	0.984	0.984	2.480	1.378	0	
PCLNR/L20CA-16	0.787	0.787	2.756	0.354	1.181	0.984	1.181	2.756	1.575	0	CN . 54 .. CN .. 1606 ..
★ PCLNR25CA-19	0.984	0.984	3.937	0.433	1.181	1.260	1.299	3.543	2.441	0	CN . 64 .. CN .. 1906 ..

Measured with master insert: CN .. 120408 / CN .. 160612 / CN .. 190612
Ordering example. right-hand tool: PCLNR12CA-12/ordering example. left-hand tool: PCLNL12CA-12
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type h_1 [in]	CN .. 1204 .. 0.472	CN .. 1204 .. 0.629	CN .. 1204 ../CN .. 1606 .. 0.787	CN .. 1906 .. 0.984
Lever	KN109	KN121	KN104	KN106
Shim for radius		AP134-CN1216 r ≤ 0.063 in	AP135-CN1624 r ≤ 0.095 in	AP136-CN1924 r ≤ 0.095 in
Clamping screw for insert Tightening torque	FS332 (SW 2.5) 22 in lbs	FS2129 (SW 3) 44 in lbs	FS354 (SW 3) 44 in lbs	FS356 (SW 4) 88 in lbs
Shim pin		RS102	RS103	RS104
Tapered assembly pin		MD101	MD102	MD102
Adjusting screw. axial	FS335	FS338	FS339	FS2575
Adjusting screw. radial	FS334	FS337	FS337	FS974 (SW 3)
Fastening screw	FS977 (Torx 30)	FS975 (Torx 40)	FS975 (Torx 40)	FS2578 (Torx 45)

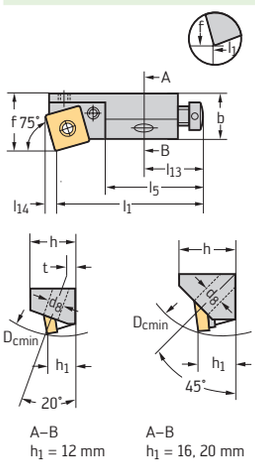
Accessories

Type h_1 [in]	CN .. 1204 .. 12	CN .. 1204 .. 16–20	CN .. 1606 .. 20	CN .. 1906 .. 25
ISO 2936 key	ISO2936-2.5 (SW 2.5)	ISO2936-3 (SW 3)	ISO2936-3 (SW 3)	ISO2936-4 (SW 4)
Handle key	FS1175 (Torx 30)	FS1176 (Torx 40)	FS1176 (Torx 40)	FS2577 (Torx 45)

ISO cartridges
PSKN

B2

Tool



Designation	l_{14} in	h_1 in	b in	$D_{c\ min}$ in	d_8 in	l_{13} in	f in	h in	l_1 in	l_5 in	t in	Type
★ PSKNR10CA-09	0.087	0.394	0.394	1.575	0.276	0.787	0.551	0.591	1.732	0.669	0.197	SN . 32 .. SN .. 0903 ..
PSKNR/L12CA-12	0.122	0.472	0.630	1.969	0.276	0.787	0.787	0.787	2.165	1.260	0.236	SN . 43 .. SN .. 1204 ..
PSKNR/L16CA-12	0.122	0.630	0.787	2.362	0.354	0.984	0.984	0.984	2.480	1.457	0	
PSKNR/L20CA-15	0.150	0.787	0.787	2.756	0.354	1.181	0.984	1.181	2.756	1.575	0	SN . 44 .. SN .. 1506 ..
★ PSKNR25CA-19	0.181	0.984	0.984	3.937	0.433	1.181	1.260	1.299	3.543	2.480	0	SN . 64 .. SN .. 1906 ..

Measured with master insert: SN .. 090308 / SN .. 120408 / SN .. 150612 / SN .. 190612
Ordering example. right-hand tool: PSKNR12CA-12/ordering example. left-hand tool: PSKNL12CA-12
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type h_1 [in]	SN .. 0903 .. 0.393	SN .. 1204 .. 0.472	SN .. 1204 .. 0.629	SN .. 1506 .. 0.787	SN .. 1906 .. 0.984
Shim for radius			AP141-SN1216 r ≤ 0.063 in	AP142-SN1524 r ≤ 0.095 in	AP143-SN1924 r ≤ 0.095 in
Lever	KN126	KN109	KN121	KN104	KN106
Clamping screw for insert Tightening torque	FS2182 (SW 2) 17 in lbs	FS332 (SW 2.5) 22 in lbs	FS2129 (SW 3) 44 in lbs	FS354 (SW 3) 44 in lbs	FS356 (SW 4) 88 in lbs
Shim pin			RS102	RS103	RS104
Tapered assembly pin			MD101	MD102	MD102
Adjusting screw. axial	FS335	FS335	FS338	FS339	FS2575
Adjusting screw. radial	FS333	FS333	FS337	FS337	FS974 (SW 3)
Fastening screw	FS976 (Torx 30)	FS977 (Torx 30)	FS975 (Torx 40)	FS975 (Torx 40)	FS2578 (Torx 45)

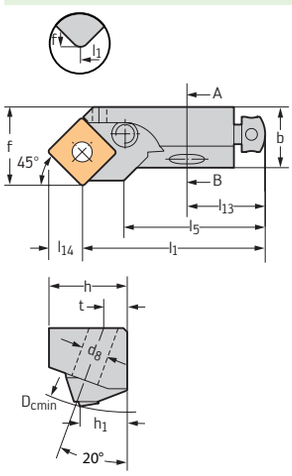
Accessories

Type h_1 [in]	SN .. 0903 .. 10	SN .. 1204 .. 12	SN .. 1204 .. 16	SN .. 1506 .. 20	SN .. 1906 .. 25
ISO 2936 key	ISO2936-2 (SW 2)	ISO2936-2.5 (SW 2.5)	ISO2936-3 (SW 3)	ISO2936-3 (SW 3)	ISO2936-4 (SW 4)
Handle key	FS1175 (Torx 30)	FS1175 (Torx 30)	FS1176 (Torx 40)	FS1176 (Torx 40)	FS2577 (Torx 45)

/ ★ New addition to the product range

ISO cartridges
PSSN

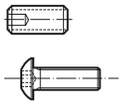
Tool



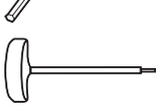
Designation	l_{14} in	h_1 in	b in	$D_{c\,min}$ in	d_8 in	l_{13} in	f in	h in	l_1 in	l_5 in	t in	Type
★ PSSNR12CA-12	0.327	0.472	0.610	1.969	0.276	0.787	0.787	0.787	1.496	1.181	0.236	SN . 43 .. SN .. 1204 ..

Measured with master insert: SN .. 120408
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	SN .. 1204 ..
	Lever	KN109
	Clamping screw for insert Tightening torque	FS332 (SW 2.5) 22 in lbs
	Adjusting screw. axial	FS335
	Adjusting screw. radial	FS333
	Fastening screw	FS977 (Torx 30)

Accessories

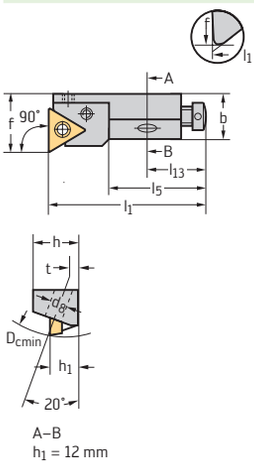
	Type	SN .. 1204 ..
	ISO 2936 key	ISO2936-2.5 (SW 2.5)
	Handle key	FS1175 (Torx 30)

B2

ISO cartridges
PTFN

B2

Tool



A–B
h_1 = 12 mm

Designation	h_1 in	b in	$D_{c\ min}$ in	d_8 in	l_{13} in	f in	h in	l_1 in	l_5 in	t in	Type
PTFNR/L12CA-16	0.472	0.591	1.969	0.276	0.787	0.787	0.787	2.165	1.299	0.236	TN . 33 .. TN .. 1604 ..
★ PTFNR20CA-22	0.787	0.787	2.756	0.354	1.181	0.984	1.181	2.756	1.575	0	TN . 43 .. TN .. 2204 ..

Measured with master insert: TN .. 160408 / TN .. 220408
Ordering example. right-hand tool: PTFNR12CA-16/ordering example. left-hand tool: PTFNL12CA-16
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type	TN .. 1604 ..	TN .. 2204 ..
Shim for radius		AP138-TN2216 r ≤ 0.063 in
Lever	KN108	KN102
Clamping screw for insert Tightening torque	FS331 (SW 2) 17 in lbs	FS352 (SW 3) 44 in lbs
Shim pin		RS102
Tapered assembly pin		MD101
Adjusting screw. axial	FS335	FS338
Adjusting screw. radial	FS333	FS337
Fastening screw	FS977 (Torx 30)	FS977 (Torx 30)

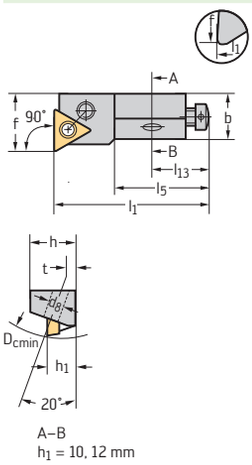
Accessories

Type	TN .. 1604 ..	TN .. 2204 ..
ISO 2936 key	ISO2936-2 (SW 2)	ISO2936-3 (SW 3)
Handle key	FS1175 (Torx 30)	FS1176 (Torx 40)

/ ★ New addition to the product range

ISO cartridges
STFC

Tool

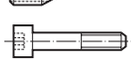


A–B
h_1 = 10, 12 mm

Designation	h_1 in	b in	$D_{c\ min}$ in	d_8 in	l_{13} in	f in	h in	l_1 in	l_5 in	t in	Type
★ STFCR/L08CA-09	0.315	0.260	0.984	0.197	0.669	0.394	0.354	1.260	0.866	0.197	TC . 1.8(1.5) .. TC .. 0902 ..
STFCR/L10CA-11	0.394	0.433	1.575	0.276	0.787	0.551	0.591	1.969	1.299	0.197	TC . 2(1.5) .. TC .. 1102 ..

Measured with master insert: TC .. 090204 / TC .. 110204
Ordering example. right-hand tool: STFCR08CA-09/ordering example. left-hand tool: STFCL08CA-09
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

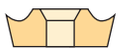
	Type	TC .. 0902 ..	TC .. 1102 ..
	Clamping screw for insert Tightening torque	FS2149 (Torx 7IP) 8 in lbs	FS375 (Torx 7) 7 in lbs
	Adjusting screw. axial	FS1023	FS335
	Adjusting screw. radial	FS493	FS369
	Fastening screw	FS2106 (Torx 15IP)	FS976 (Torx 30)

Accessories

	Type	TC .. 0902 ..	TC .. 1102 ..
	Screwdriver	FS2088 (Torx 7IP)	FS309 (Torx 7)
	Handle key	FS1485 (Torx 15IP)	FS1175 (Torx 30)

B2

Cutting data for precision boring (cartridges) – positive basic shape
Cermet



= Cutting data for wet machining
= Dry machining is possible.

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength PSI x 1000	Machining group [1]			Cutting material grades		
									Starting values for cutting speed v_c [sfm]		
									HE		
									WEP10		
									3 × D_c	4 × D_c	6 × D_c
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	●●	●	940	860	530
		C > 0.25... ≤ 0.55%	Annealed	190	93	P2	●●	●	890	710	440
		C > 0.25... ≤ 0.55%	Heat-treated	210	103	P3	●●	●	800	650	410
		C > 0.55%	Annealed	190	93	P4	●●	●	770	620	380
		C > 0.55%	Heat-treated	300	147	P5	●●	●	680	560	350
		Free-machining steel (short-chipping)	Annealed	220	108	P6	●●	●	800	650	410
	Low-alloy steel	Annealed		175	86	P7	●●	●	890	710	440
		Heat-treated		285	147	P8	●●	●	740	590	380
		Heat-treated		380	186	P9	●●	●	650	530	320
		Heat-treated		430	214	P10	●●	●	560	440	240
	High-alloyed steel and high-alloyed tool steel	Annealed		200	98	P11	●●	●	740	560	380
		Hardened and tempered		300	147	P12	●●	●	620	530	320
		Hardened and tempered		380	197	P13	●●	●	590	470	270
	Stainless steel	Ferritic/martensitic, annealed		200	98	P14	●●	●	740	590	380
		Martensitic, heat-treated		330	162	P15	●●	●	560	500	300
M	Stainless steel	Austenitic, quench hardened		200	98	M1	●●	●	680	530	350
		Austenitic, precipitation hardened (PH)		300	147	M2	●●	●	500	380	320
		Austenitic/ferritic, duplex		230	113	M3	●●	●	560	440	270
K	Malleable cast iron	Ferritic		200	98	K1	●●	●	740	620	350
		Pearlitic		260	126	K2	●●	●	590	500	320
	Grey cast iron	Low tensile strength		180	87	K3	●●	●	800	680	410
		High tensile strength/austenitic		245	120	K4	●●	●	590	500	320
	Cast iron with spheroidal graphite	Ferritic		155	75	K5	●●	●	740	590	380
		Pearlitic		265	128	K6	●●	●	680	530	350
	GGV (CGI)			230	98	K7	●●	●			
N	Wrought aluminium alloys	Not hardenable		30	–	N1	●●	●			
		Hardenable, hardened		100	50	N2	●●	●			
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3	●●	●			
		≤ 12% Si, hardenable, hardened		90	46	N4	●●	●			
		> 12% Si, not hardenable		130	65	N5					
	Magnesium-based alloys [3]			70	36	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	50	N7	●●	●			
		Brass, bronze, red brass		90	46	N8	●●	●			
		Cu alloys, short-chipping		110	55	N9	●●	●			
		High-tensile, Ampco		300	147	N10					
S	Heat-resistant alloys	Fe-based	Annealed	200	98	S1	●●	●			
			Hardened	280	137	S2	●●	●			
		Ni- or Co-based	Annealed	250	122	S3	●●	●			
			Hardened	350	171	S4	●●	●			
			Cast	320	156	S5	●●	●			
	Titanium alloys	Pure titanium		200	98	S6	●●	●			
		α and β alloys, hardened		375	183	S7	●●	●			
		β alloys		410	202	S8	●●	●			
	Tungsten alloys			300	147	S9					
	Molybdenum alloys			300	147	S10					
H	Hardened steel	Hardened and tempered		50 HRC	–	H1	●	●●			
		Hardened and tempered		55 HRC	–	H2	●	●●			
		Hardened and tempered		60 HRC	–	H3	●	●●			
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4	●	●●			
O	Thermoplastics	Without abrasive fillers				O1					
	Thermosets	Without abrasive fillers				O2					
	Plastic, glass-fibre-reinforced	GFRP				O3					
	Plastic, carbon-fibre-reinforced	CFRP				O4					
	Plastic, aramid-fibre-reinforced	AFRP				O5					
	Graphite (technical)			80 Shore		O6					

●● Recommended application (the specified cutting data is regarded as starting values for the recommended application)
● Possible application, reduce cutting data by 30–50% (increase by approx. 70–80% for ISO M)

Note: If dry machining is possible, the tool life is reduced by 20–30% on average.
For specific applications, adjustment is recommended.

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

HE = Coated cermet

[1] The classification of the machining groups can be found from page B 1330 onwards in the Walter General Catalog 2018.
[3] Water-miscible coolants must not be used when machining magnesium alloys.

B – Threading

Tapping – B3

HSS-E(-PM) taps	Product range overview	352
	Designation key	354
	M – Metric thread	357
	MF – Metric fine-pitch thread	364
	UNC	366
	UNF	382
	NPT	395
	UN-8	396
	UNS	397
	STI-UNC	398
	STI-UNF	401
Solid carbide taps	Product range overview	404
	M – Metric thread	405
	G	406

B 3

Thread forming – B3

HSS-E-PM thread formers	Product range overview	407
	Designation key	409
	M – Metric thread	410
	MF – Metric fine-pitch thread	432
	UNC	438
	UNF	441
	G	444

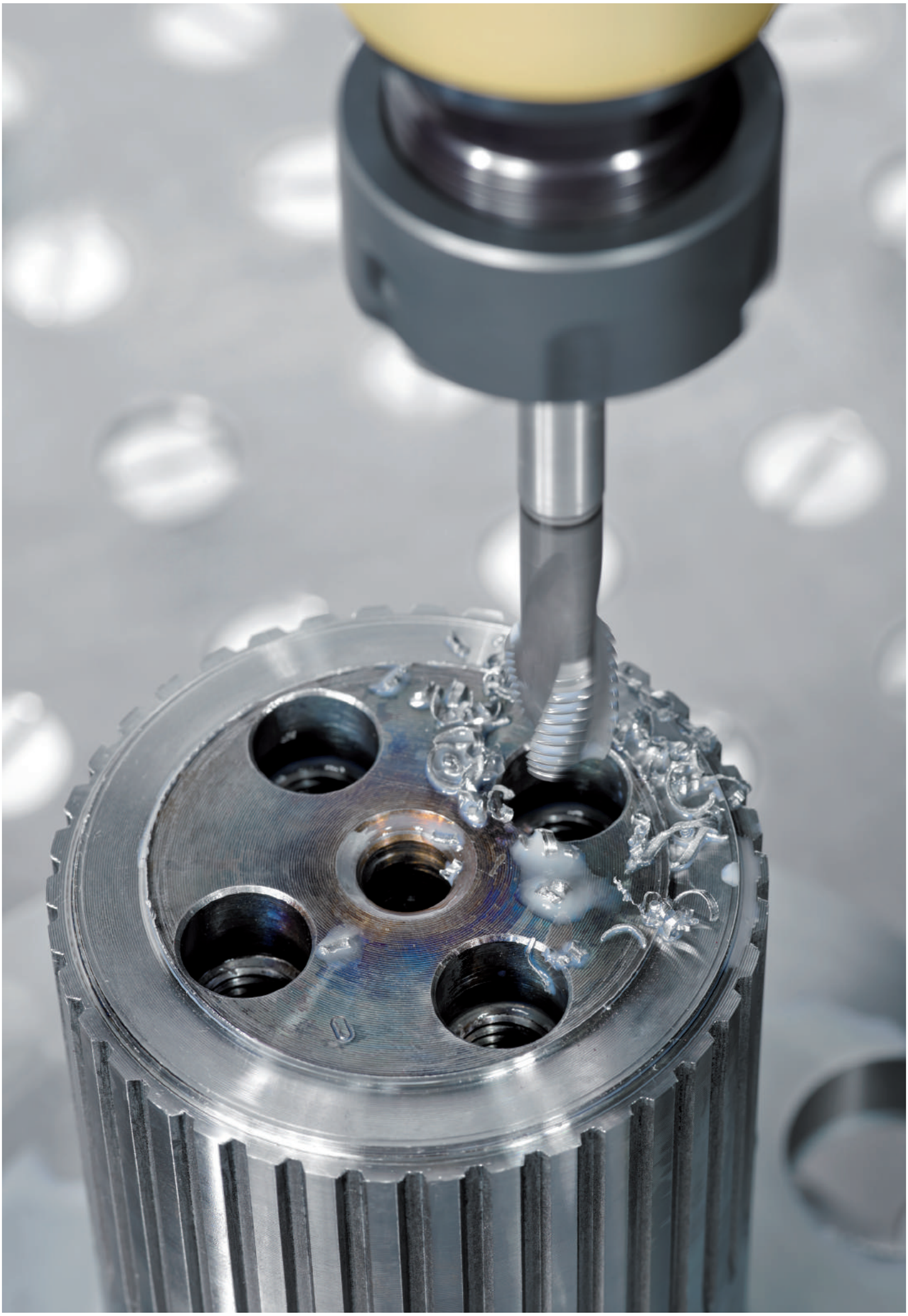
B 4

Thread milling – B4

Thread milling cutters	Product range overview	445
	Designation key	446
	Solid carbide thread milling cutters	447
	Designation key	451
	Indexable insert thread milling cutter	452

Technical information – B3/B4

	Cutting data	468
	Radius correction values	473
	Tool application	475



HSS-E(-PM) taps product range overview
M – Metric thread

Machining						
Thread depth	**3 × D_N**		**1.5 × D_N**	**2.5 × D_N**	**3 × D_N**	
Designation	**TC216 Perform**	**TC217 Advance**	**Paradur® Ni**	**TC117 Advance**	**TC115 Perform**	**Paradur Xpert N**
Dimension range	M 1.6–M 20	M 3 - M 16	M 2–M 20	M 3–M 20	M 1.6–M 20	M 2–M 8
Tolerance	6H	6HX	6HX	6HX	6H	ISO2/6H
Coolant supply	External	External	External	External	External	External
Chamfer form	B	B	C	C	C / E	C
Coating/grade	WY80FC / WY80AA	WY80FC	TiCN/uncoated	WY80FC / WY80RG	WY80FC / WY80AA	uncoated
Length standard	DIN	DIN/ANSI	DIN	DIN/ANSI	DIN	DIN/ANSI
Page	358	357	363	359	360	362

HSS-E(-PM) taps product range overview
MF – Metric fine-pitch thread

Machining			
Thread depth	**2 × D_N**	**3.5 × D_N**	**3 × D_N**
Designation	**Prototex® TiNi**	**TC216 Perform**	**TC115 Perform**
Dimension range	MF 8x0.75– MF 16x1	MF 8x1– MF 18x1.5	MF 8x1– MF 18x1.5
Tolerance	6HX	6H	6H
Coolant supply	External	External	External
Chamfer form	B	B	C
Coating/grade	TiCN/uncoated	WY80FC / WY80AA	WY80FC / WY80AA
Length standard	DIN	DIN	DIN
Page	365	364	364

HSS-E(-PM) taps product range overview
UNC / UNF

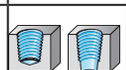
Machining							
Thread depth	**2 × D_N**	**3 × D_N**	**3.5 × D_N**		**1.5 × D_N**	**2.5 × D_N**	**3 × D_N**
Designation	**Prototex® TiNi**	**TC217 Advance**	**TC216 Perform**	**Prototex® Eco Plus**	**Paradur® Ni**	**TC117 Advance**	**Paradur® Xpert N**
Dimension range	UNC 2-56– UNC 3/4-10	UNC 1-64 – UNC 1"-8	UNC 6-32– UNC 3/4-10	UNC 4-40 – UNC 3/4-10	UNC 2-56– UNC 3/4-10	UNC 1-64– UNC 1 1/2-6	UNC 2-56– UNC 3/8-16
Tolerance	3B / 2B	2B / 3B	2B	2B	2B	3B / 2B	2B
Coolant supply	External	External	External	External	External	External	External
Chamfer form	B	B	B	B	C	C / E	C
Coating/grade	TiCN/uncoated	WY80FC WY80RG	WY80AA	THL	TiCN/uncoated	WY80FC WY80RG	uncoated
Length standard	DIN	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN	DIN/ANSI	DIN/ANSI
Page	369	367	368	366	381	373	380

HSS-E(-PM) taps product range overview
UNC / UNF (continued)

Machining								
Thread depth	**3 × D_N**				**3.5 × D_N**	**3 × D_N**	**3 × D_N**	**3 × D_N**
Designation	**TC115 Perform**	**Paradur® Eco Plus**	**TC142 Supreme**	**Paradur® Eco CI**	**Paradur® Short Chip HT**	**Paradur® Xpert K**	**TC217 Advance**	**TC216 Perform**
Dimension range	UNC 6-32–UNC 3/4-10	UNC 4-40–UNC 3/4-10	UNC 2-56 –UNC 3/4-10	UNC 8-32 –UNC 1"-8	UNC 1/4-20 -UNC 5/8 - 11	UNC 2-56–UNC 3/4-10	UNF 0-80–UNF 1"-12	UNF 10-32–UNF 3/4-16
Tolerance	2B	2B	2BX	2B	2B	2B	2B / 3B	2B
Coolant supply	External	Internal	External	External	External	External	External	External
Chamfer form	C	C	C	C	C	C	B	B
Coating/grade	WY80AA	THL	WY80RG WY80FC	TiCN	uncoated	TAFT	WY80FC WY80RG	WY80AA
Length standard	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI
Page	375	371	377	378	376	379	383	384

Machining									
Thread depth	**3.5 × D_N**	**1.5 × D_N**	**1.5 × D_N**	**2 × D_N**	**2.5 × D_N**	**3 × D_N**	**3 × D_N**	**3 × D_N**	**3 × D_N**
Designation	**Prototex® Eco Plus**	**Prototex® TiNi**	**Paradur® Ni**	**Paradur® Ni**	**TC117 Advance**	**Paradur® Eco Plus**	**TC115 Perform**	**TC142 Supreme**	**Paradur® Eco CI**
Dimension range	UNF 6-40–UNF 3/4-16	UNF 4-48–UNF 5/8-18	UNF 8-36–UNF 5/8-16	UNF 4-48–UNF 1/4-28	UNF 0-80–UNF 1 1/4-12	UNF 6-40–UNF 3/4-16	UNF 10-32–UNF 3/4-16	UNF 10-32–UNF 9/16-18	UNF 10-32–UNF 1"-12
Tolerance	2B	2B / 3B	3B	3B	2B / 3B	2B	2B	2BX	2B
Coolant supply	External	External	External	External	External	Internal	External	External	Internal
Chamfer form	B	B	C	B	C / E	C	C	C	C
Coating/grade	THL	TiCN/uncoated	TiCN/uncoated	TiCN/uncoated	WY80FC WY80RG	THL	WY80AA	WY80FC	TiCN
Length standard	DIN/ANSI	DIN	DIN	DIN	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI
Page	382	385	394	394	389	387	391	392	393

HSS-E(-PM) taps product range overview

	NPT	UN8	UNS	STI-UNC			STI-UNF		
Machining									
Thread depth	-	**2.5 × D_N**	**2.5 × D_N**	**3 × D_N**	**2.5 × D_N**	**3 × D_N**		**2.5 × D_N**	**3 × D_N**
Designation	**Paradur® Ni**	**TC117 Advance**	**TC117 Advance**	**TC217 Advance**	**TC117 Advance**	**Paradur® Xpert N**	**TC217 Advance**	**TC117 Advance**	**Paradur® Xpert N**
Dimension range	NPT 1/16-27–NPT 1"-11.5	UN 1.1/8-8–UN 1.5/8-8	UNS 1"-14	STI-UNC 2-56 - STI-UNC 3/8-16	STI-UNC 2-56 - STI-UNC 3/8-16	STI-UNC 2-56 - STI-UNC 1/4-20	STIUNF 10-24 - STIUNF 3/8-16	STIUNF 10-24 - STIUNF 3/8-16	STIUNF 10-24 - STIUNF 1/4-20
Tolerance	NORMAL	2B / 3B	2B / 3B	3B	3B	3B	3B	3B	3B
Coolant supply	External	External	External	External	External	External	External	External	External
Chamfer form	C	C	C	B	C	C	B	C	C
Coating/grade	TiCN/ uncoated	WY80RG	WY80FC WY80RG	WY80FC	WY80FC	uncoated	WY80FC	WY80FC	uncoated
Length standard	DIN	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI	DIN/ANSI
Page	395	396	397	398	399	400	401	402	403

B 3

Designation key
Taps
Example:

T	C	1	20	–	M10	–	C	1	–	W	W	60	AG
1	2	3	4	5	6		7	8		Grade			

1 – Tool group

T	Threading

2 – Generation

3 – Tool type

1	Blind hole taps
2	Through hole taps
3	Blind hole and through hole taps

4 – Tool type

15	Universal 45° helix angle 300–1000 N/mm²
16	Universal Straight-fluted, spiral point 300–800 N/mm²
17	Universal 45° helix angle 500–1250 N/mm²
20	ISO P 45° helix angle 350–800 N/mm²
21	ISO P 40° helix angle 800–1250 N/mm²
22	ISO P 15° helix angle 1000–1400 N/mm²
42	ISO M 50° helix angle 350–1200 N/mm²
88	ISO H Straight-fluted 50–58 HRC
89	ISO H Straight-fluted 55–65 HRC

5 – 1. Delimiters

–	Metric
.	DIN/ANSI

6 – Thread dimensions

7 – Tolerance/shank type

B	4HX, 3B Reinforced shank
C	6HX, 2B Reinforced shank
G	2B / 3B Reinforced shank
K	4HX, 3B Reduced shank
L	6HX, 2B Reduced shank
R	2B / 3B Reduced shank

8 – Modification

0	External coolant
1	Axial internal cooling
D	Chamfer form D
E	Chamfer form E

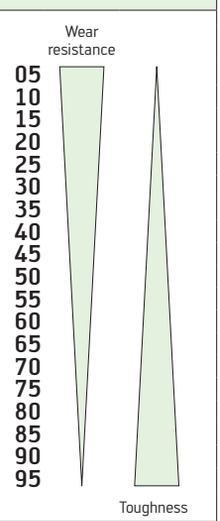
Grade designation key
for solid carbide and HSS-E(-PM) cutting tool materials
Example:

W	W	60	AG
Walter	1	2	3

1 – Substrate

Solid carbide	E
	J
HSS-E-PM	W
HSS-E	Y

2 – Application range

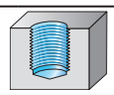


3 – Coating

AA	TiN
AG	TiNK/vap
BA	TiCN
BD	TiCN
BC	TiCN
FC	vap
RB	TiAlN
RG	TiAlN

Product Overview HSS-E (-PM) + Select Taps – Blind Hole

ANSI and DIN/ANSI Standard

Material group																	
Thread Type																	
Main Application		Universal Use						Rigid Tapping	ISO P		ISO M		ISO N				
Thread Depth		3.0 × D_N	2.5 × D_N			3.0 × D_N		2.5 × D_N	2.5 × D_N		2.5 × D_N		3.0 × D_N				
Designation		TC115 Perform	TC117 Advance			Paradur Eco Plus		Paradur Synchro	Paradur Short Chip HT		TC142 Supreme		Paradur Xpert N				
Helix		45°	40°			45°		40°	15°		50°		35°				
P	≤ 150 HB	●●						●●									
	> 150 to ≤ 250 HB	●●		●●		●●		●●			●						
	> 250 to ≤ 370 HB	●		●●		●●		●●	●●		●						
	> 370 HB																
M	≤ 250 HB	●●		●●		●●		●●			●●						
	> 250 HB			●●		●●		●●			●●						
K	GJL/CGI	●		●		●		●	●								
	GJS	●●		●●		●●		●●	●								
N	≤ 7 % Si	●●		●●		●●		●●					●●				
	> 7 % Si	●		●		●		●	●								
S	Ti alloys																
	Ni alloys																
Tolerance		2B	2B / 3B		6HX	2B		2B	2B		2B		2B		3B		6H
Chamfer Form		C	C	E	C	C		C	C		C		C				
Coating		WY80AA	WY80RG / WY80FC			THL		TIN/VAP	THL		WW60RB/WY80FC		bright				
Coolant Supply		-	-	-	-	-	Axial	-	Axial		-		-		-		-
UNC		375	373	373		371	371	B1020	376		377		380				
UNF		391	389	389		387	387	B1062			392						
UN			396														
UNS			397														
STIUNC			398												400		
STIUNF			401												403		
M					359												362

Material group										
Thread Type										
Main Application		ISO S					ISO K			
Thread Depth		2.0 × D_N		1.5 × D_N		1.5 × D_N	2.0 × D_N	3.0 × D_N		
Designation		Paradur Ti		Paradur Ni		Paradur Ni 10	Paradur Xpert K	Paradur Eco CI		
Helix		15°		25°		10°	0°	0°		
P	≤ 150 HB									
	> 150 to ≤ 250 HB									
	> 250 to ≤ 370 HB	●●								
	> 370 HB	●		●		●●				
M	≤ 250 HB									
	> 250 HB	●		●						
K	GJL/CGI						●●	●●		
	GJS						●●	●		
N	≤ 7 % Si									
	> 7 % Si						●●	●●		
S	Ti alloys	●●								
	Ni alloys			●●		●●				
Tolerance		3B		3B		3B	2B	2B		
Chamfer Form		C	E	C	E	C	C	C		
Coating		TICN	NIT	NIT	TICN	NIT	NIT	TICN/bright	TAFT	TICN
Coolant Supply		-	-	-	-	-	-	-	-	Axial
UNC		B1042	B1042	B1043	B1037	B1037	B1038	B1049	379	378
UNF		B1080	B1080	B1081	B1076	B1076	B1077	B1079		393
UN										
UNS										
STIUNC			B1129			B1128				
STIUNF			B1138			B1137				
M										

– Red page numbers reference 2018 General Catalog

B3

Product Overview HSS-E (-PM) + Select Taps - Through Hole/Forming Taps

ANSI and DIN/ANSI Standard

	Thread Type							
	Main Application	Universal Use			Rigid Tapping	ISO S		
	Thread Depth	3.0 × D_N	3.0 × D_N		3.5 × D_N	3.0 × D_N	2.0 × D_N	
	Designation	TC216 Perform	TC217 Advance		Prototex Eco Plus	Prototex Synchro	Prototex TiNi	
	Helix	–	–		–	–	–	
Material group								
P	≤ 150 HB	●●	●●		●●	●●		
	> 150 to ≤ 250 HB	●●	●●		●●	●●		
	> 250 to ≤ 370 HB	●	●●		●●	●●	●●	
	> 370 HB				●●	●●	●●	
M	≤ 250 HB	●●	●●		●●	●●		
	> 250 HB		●●		●●	●●	●●	
K	GJL/CGI	●●	●●		●●	●●		
	GJS	●●	●●		●●	●●		
N	≤ 7 % Si	●●	●●		●●	●●		
	> 7 % Si	●	●●		●●	●●		
S	Ti alloys						●●	
	Ni alloys						●●	
Tolerance		2B	2B / 3B	6HX	2B	2B	3B	6HX
Chamfer Form		B	B		B	B	B	
Coating		TIN	WY80RG / WY80FC		THL	TIN	TiCN	bright
Coolant Supply		–	–		–	–	–	–
UNC		368	367		366	B1003	B1011	B1011
UNF		384	383		382	B1048	B1055	B1055
UN								
UNS								
STIUNC			398					B1125
STIUNF			401					B1133
M				357				B873

Product Overview HSS-E (-PM) + Select Taps - Through Hole/Forming Taps (cont.)

	Thread Type			
	Main Application	ISO P/ISO M	ISO N	ISO S
	Thread Depth			
	Designation	Paradur Inox	Paradur H	Paradur Ni
	Helix	–	–	–
Material group				
P	≤ 150 HB	●●		
	> 150 to ≤ 250 HB	●●		
	> 250 to ≤ 370 HB	●●		
	> 370 HB	●●		●
M	≤ 250 HB	●●		
	> 250 HB	●●		
K	GJL/CGI	●	●	
	GJS	●	●	
N	≤ 7 % Si		●●	
	> 7 % Si		●●	
S	Ti alloys			●●
	Ni alloys			●●
Tolerance		Normal		
Chamfer Form		C		
Coating		VAP	–	VAP
Coolant Supply		–	–	-
UNC				
UNF				
UN				
UNS				
STIUNC				
STIUNF				
M				
NPT		B1109	B1106	B1109
NPTF		B1112	B1110	B1112

	Thread Type			
	Main Application	Universal Use		
	Thread Depth	3.0 × D_N		3.5 × D_N
	Designation	TC410 Advance		TC420 Supreme
	Helix	–		–
Material group				
P	≤ 150 HB	●●		●●
	> 150 to ≤ 250 HB	●●		●●
	> 250 to ≤ 370 HB	●		●●
	> 370 HB			
M	≤ 250 HB	●		●●
	> 250 HB			
K	GJL/CGI			
	GJS	●		●
N	≤ 7 % Si	●●		●●
	> 7 % Si	●		●
S	Ti alloys	●		●
	Ni alloys			●
Tolerance		2BX	6HX	2BX
Chamfer Form		C		C
Coating		WW60AD		WW60AD
Coolant Supply		-		Axial
UNC		440		438
UNF		442		441
UN				
UNS				
STIUNC				
STIUNF				
M			431	
NPT				
NPTF				

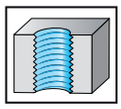
B3

HSS-E machine taps
TC217 Advance inch

– Universal cut tap
– WY80FC: best chip control

M
DIN 13

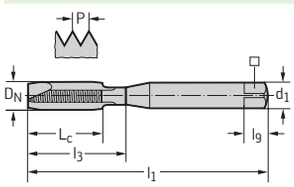
6HX



≤ 3×D_N | B=3.5-5 | 370HB / 100HB

	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			

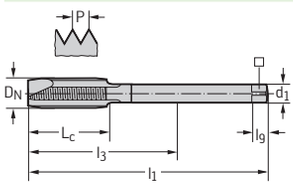
DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC
TC217.M3-C0-	M 3	0.118	2.205	0.354	0.709	0.141	0.110	0.190	2	☻
TC217.M4-C0-	M 4	0.157	2.480	0.472	0.827	0.168	0.131	0.250	3	☻
TC217.M5-C0-	M 5	0.197	2.756	0.512	0.984	0.194	0.152	0.250	3	☻
TC217.M6-C0-	M 6	0.236	3.150	0.591	1.181	0.255	0.191	0.313	3	☻
TC217.M8-C0-	M 8	0.315	3.543	0.709	1.378	0.318	0.238	0.380	3	☻
TC217.M10-C0-	M 10	0.394	3.937	0.787	1.535	0.381	0.286	0.437	3	☻

Order example for grade WY80FC: TC217.M3-C0-WY80FC

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC
TC217.M12-L0-	M 12	0.472	4.331	0.906	3.224	0.367	0.275	0.437	3	☻
TC217.M16-L0-	M 12	0.472	4.331	0.984	2.587	0.480	0.360	0.563	4	☻
TC217.M20-L0-	M 16	0.630	5.512	1.181	3.642	0.652	0.489	0.689	4	☻

Order example for grade WY80FC: TC217.M12-L0-WY80FC

B 3

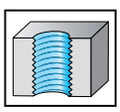
☻☻☻ / ★ New addition to the product range

HSS-E machine taps
TC216 Perform mm

– For long-chipping materials

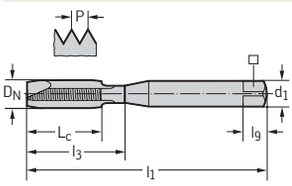
M
DIN 13

ISO2/6H



	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●●			
WY80FC	●●	●●	●●	●●			

DIN 371

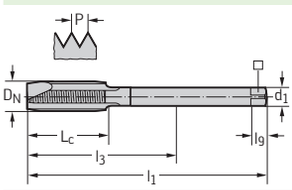


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA	WY80FC
TC216-M1.6-C0-	M 1.6	0.35	40	7	7	2.5	2.1	5	2	✖	✖
TC216-M2-C0-	M 2	0.4	45	6	9	2.8	2.1	5	2	✖	✖
TC216-M2.5-C0-	M 2.5	0.45	50	8	12.5	2.8	2.1	5	2	✖	✖
TC216-M3-C0-	M 3	0.5	56	9	18	3.5	2.7	6	2	✖	✖
TC216-M4-C0-	M 4	0.7	63	12	21	4.5	3.4	6	3	✖	✖
TC216-M5-C0-	M 5	0.8	70	13	25	6	4.9	8	3	✖	✖
TC216-M6-C0-	M 6	1	80	15	30	6	4.9	8	3	✖	✖
TC216-M8-C0-	M 8	1.25	90	18	35	8	6.2	9	3	✖	✖
TC216-M10-C0-	M 10	1.5	100	20	39	10	8	11	3	✖	✖

Ordering example for the WY80FC grade: TC216-M3-C0-WY80FC

B3

DIN 376

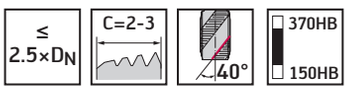


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA	WY80FC
TC216-M12-L0-	M 12	1.75	110	23	83	9	7	10	3	✖	✖
TC216-M14-L0-	M 14	2	110	25	81	11	9	12	4	✖	✖
TC216-M16-L0-	M 16	2	110	25	68	12	9	12	4	✖	✖
TC216-M20-L0-	M 20	2.5	140	30	95	16	12	15	4	✖	✖

Ordering example for the WY80FC grade: TC216-M12-L0-WY80FC

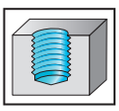
HSS-E machine taps
TC117 Advance inch

– Universal cut tap
– WY80FC: best chip control / WY80RG: good chip control and good wear resistance



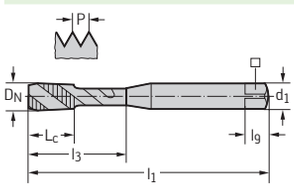
M
DIN 13

6HX



	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			
WY80RG	●●	●●	●●	●●			

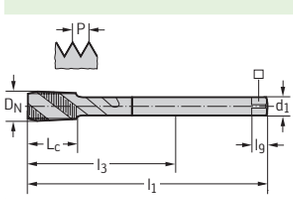
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.M3-C0-	M 3	0.118	2.205	0.236	0.709	0.141	0.110	0.190	3	●	●
TC117.M4-C0-	M 4	0.157	2.480	0.276	0.827	0.168	0.131	0.250	3	●	●
TC117.M5-C0-	M 5	0.197	2.756	0.315	0.984	0.194	0.152	0.250	3	●	●
TC117.M6-C0-	M 6	0.236	3.150	0.394	1.181	0.255	0.191	0.313	3	●	●
TC117.M8-C0-	M 8	0.315	3.543	0.472	1.378	0.318	0.238	0.380	3	●	●
TC117.M10-C0-	M 10	0.394	3.937	0.591	1.535	0.381	0.286	0.437	3	●	●

Order example for grade WY80RG: TC117.M3-C0-WY80RG

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.M12-L0-	M 12	0.472	4.331	0.630	3.224	0.367	0.275	0.437	4	●	●
TC117.M16-L0-	M 16	0.630	4.331	0.787	2.587	0.480	0.360	0.563	4	●	●
TC117.M20-L0-	M 20	0.787	5.512	0.984	3.642	0.652	0.489	0.689	4	●	●

Order example for grade WY80RG: TC117.M12-L0-WY80RG

HSS-E machine taps
TC115 Perform mm

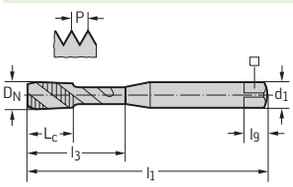
– For long-chipping materials

≤ 3×D_N	C=2-3	45°	32HRC 1000 –350 N/mm²

M DIN 13	ISO2/6H	

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●			
WY80FC	●●	●●	●●	●			

DIN 371

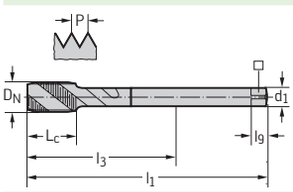


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA	WY80FC
TC115-M1.6-C0-	M 1.6	0.35	40	6	6	2.5	2.1	5	2	✖	✖
TC115-M2-C0-	M 2	0.4	45	4	9	2.8	2.1	5	3	✖	✖
TC115-M2.5-C0-	M 2.5	0.45	50	4	12.5	2.8	2.1	5	3	✖	✖
TC115-M3-C0-	M 3	0.5	56	6	18	3.5	2.7	6	3	✖	✖
TC115-M4-C0-	M 4	0.7	63	7	21	4.5	3.4	6	3	✖	✖
TC115-M5-C0-	M 5	0.8	70	8	25	6	4.9	8	3	✖	✖
TC115-M6-C0-	M 6	1	80	10	30	6	4.9	8	3	✖	✖
TC115-M8-C0-	M 8	1.25	90	12	35	8	6.2	9	3	✖	✖
TC115-M10-C0-	M 10	1.5	100	15	39	10	8	11	3	✖	✖

Ordering example for the WY80FC grade: TC115-M3-C0-WY80FC

B3

DIN 376



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA	WY80FC
TC115-M12-L0-	M 12	1.75	110	16	83	9	7	10	3	✖	✖
TC115-M14-L0-	M 14	2	110	20	81	11	9	12	3	✖	✖
TC115-M16-L0-	M 16	2	110	20	68	12	9	12	3	✖	✖
TC115-M20-L0-	M 20	2.5	140	25	95	16	12	15	4	✖	✖

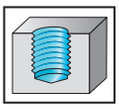
Ordering example for the WY80FC grade: TC115-M12-L0-WY80FC

HSS-E machine taps
TC115 Perform mm

– For long-chipping materials

M
DIN 13

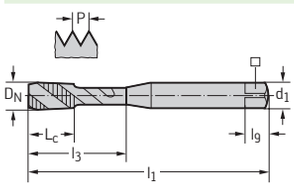
ISO2/6H



≤ 3×D_N | E=1,5-2 | 45° | 32HRC 1000 –350 N/mm²

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●			

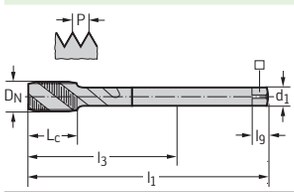
DIN 371



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA
TC115-M3-CE-	M 3	0.5	56	6	18	3.5	2.7	6	3	●
TC115-M4-CE-	M 4	0.7	63	7	21	4.5	3.4	6	3	●
TC115-M5-CE-	M 5	0.8	70	8	25	6	4.9	8	3	●
TC115-M6-CE-	M 6	1	80	10	30	6	4.9	8	3	●
TC115-M8-CE-	M 8	1.25	90	12	35	8	6.2	9	3	●
TC115-M10-CE-	M 10	1.5	100	15	39	10	8	11	3	●

Ordering example for the WY80AA grade: TC115-M3-CE-WY80AA

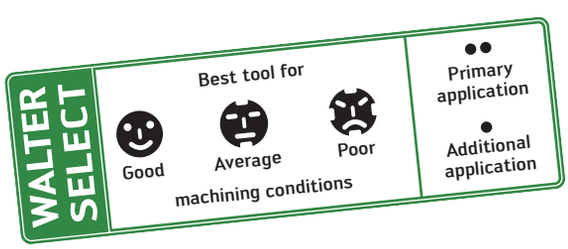
DIN 376



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA
TC115-M12-LE-	M 12	1.75	110	16	83	9	7	10	3	●
TC115-M14-LE-	M 14	2	110	20	81	11	9	12	3	●
TC115-M16-LE-	M 16	2	110	20	68	12	9	12	3	●
TC115-M20-LE-	M 20	2.5	140	25	95	16	12	15	4	●

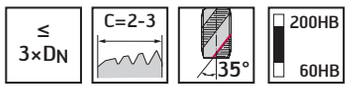
Ordering example for the WY80AA grade: TC115-M12-LE-WY80AA

B 3



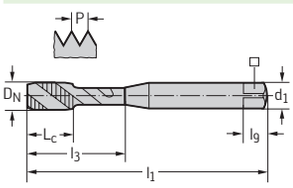
HSS-E machine taps
Paradur® X·pert N inch

– For long-chipping aluminum alloys (Si content < 7 %>



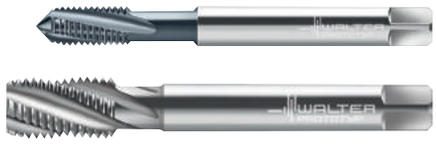
	P	M	K	N	S	H	O
uncoated				●●	●		●

DIN/ANSI



Designation uncoated	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AN20516-M2	M 2	0.079	1.772	0.157	0.354	0.141	0.110	0.190	2
★ AN20516-M2.5	M 2.5	0.098	1.969	0.157	0.492	0.141	0.110	0.190	2
★ AN20516-M3	M 3	0.118	2.205	0.236	0.709	0.141	0.110	0.190	2
★ AN20516-M4	M 4	0.157	2.480	0.276	0.827	0.168	0.131	0.250	2
★ AN20516-M5	M 5	0.197	2.756	0.315	0.984	0.194	0.152	0.250	2
★ AN20516-M6	M 6	0.236	3.150	0.394	1.181	0.255	0.191	0.313	2
★ AN20516-M8	M 8	0.315	3.543	0.472	1.378	0.318	0.238	0.380	2

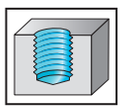
HSS-E-PM machine taps
Paradur® Ni mm



≤ 1,5×D_N | C=2-3 | 25° | 44HRC 1400 –700 N/mm²

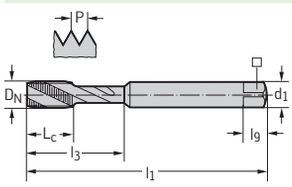
– For long-chipping materials

M DIN 13 | 6HX



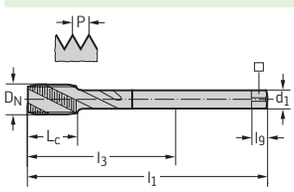
	P	M	K	N	S	H	O
TiCN	●				●●		
Uncoated	●				●●		

~DIN 371



Designation TiCN	Designation uncoated	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
20410206-M2	204102-M2	M 2	0.4	45	8	8	2.8	2.1	5	3
20410206-M2.5	204102-M2.5	M 2.5	0.45	50	9	30	2.8	2.1	5	3
20410206-M3	204102-M3	M 3	0.5	56	10	35	3.5	2.7	6	3
20410206-M4	204102-M4	M 4	0.7	63	13	42	4.5	3.4	6	3
20410206-M5	204102-M5	M 5	0.8	70	16	16	6	4.9	8	3
20410206-M6	204102-M6	M 6	1	80	15	23	6	4.9	8	3
20410206-M8	204102-M8	M 8	1.25	90	18	29.5	8	6.2	9	3
20410206-M10	204102-M10	M 10	1.5	100	20	33.5	10	8	11	4

DIN 376



Designation TiCN	Designation uncoated	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
	204602-M12	M 12	1.75	110	23	83	9	7	10	4
	204602-M14	M 14	2	110	25	81	11	9	12	4
	204602-M16	M 16	2	110	25	68	12	9	12	4
	204602-M18	M 18	2.5	125	30	81	14	11	14	5
	204602-M20	M 20	2.5	140	30	95	16	12	15	5

B 3

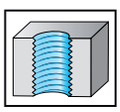
/ ★ New addition to the product range

HSS-E machine taps
TC216 Perform mm

≤ 3,5×D_N | B=3,5-5 | 32HRC 1000 –350 N/mm²

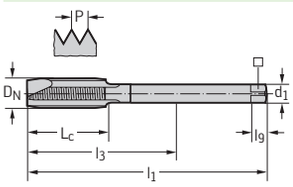
– For long-chipping materials

MF DIN 13 | ISO2/6H



	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●●			
WY80FC	●●	●●	●●	●●			

DIN 374



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA	WY80FC
TC216-M8X1-L0-	MF 8x1	1	90	18	67	6	4.9	8	3	☻	☻
TC216-M10X1-L0-	MF 10x1	1	90	20	67	7	5.5	8	3	☻	☻
TC216-M10X1.25-L0-	MF 10x1.25	1.25	100	20	77	7	5.5	8	3	☹	☹
TC216-M12X1.25-L0-	MF 12x1.25	1.25	100	21	73	9	7	10	4	☻	☻
TC216-M12X1.5-L0-	MF 12x1.5	1.5	100	21	73	9	7	10	4	☻	☻
TC216-M14X1.5-L0-	MF 14x1.5	1.5	100	21	71	11	9	12	4	☻	☻
TC216-M16X1.5-L0-	MF 16x1.5	1.5	100	21	58	12	9	12	4	☻	☻
TC216-M18X1.5-L0-	MF 18x1.5	1.5	110	24	66	14	11	14	4	☻	☻

Ordering example for the WY80FC grade: TC216-M8X1-L0-WY80FC

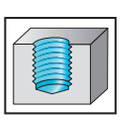
B3

HSS-E machine taps
TC115 Perform mm

≤ 3×D_N | C=2-3 | 45° | 32HRC 1000 –350 N/mm²

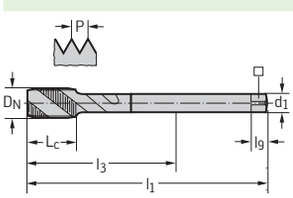
– For long-chipping materials

MF DIN 13 | ISO2/6H



	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●			
WY80FC	●●	●●	●●	●			

DIN 374



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AA	WY80FC
TC115-M8X1-L0-	MF 8x1	1	90	12	67	6	4.9	8	3	☻	☻
TC115-M10X1-L0-	MF 10x1	1	90	12	67	7	5.5	8	3	☻	☻
TC115-M10X1.25-L0-	MF 10x1.25	1.25	100	15	77	7	5.5	8	3	☹	☹
TC115-M12X1.25-L0-	MF 12x1.25	1.25	100	13	73	9	7	10	4	☻	☻
TC115-M12X1.5-L0-	MF 12x1.5	1.5	100	13	73	9	7	10	4	☻	☻
TC115-M14X1.5-L0-	MF 14x1.5	1.5	100	15	71	11	9	12	4	☻	☻
TC115-M16X1.5-L0-	MF 16x1.5	1.5	100	15	58	12	9	12	4	☻	☻
TC115-M18X1.5-L0-	MF 18x1.5	1.5	110	17	66	14	11	14	4	☻	☻

Ordering example for the WY80FC grade: TC115-M8X1-L0-WY80FC

☻☻☹ / ★ New addition to the product range

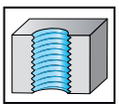
HSS-E-PM machine taps
Prototex® TiNi mm

– Recommended with oil
– For long-chipping materials

≤ 2×D_N | B=3,5-5 | 44HRC 1400 –700 N/mm²

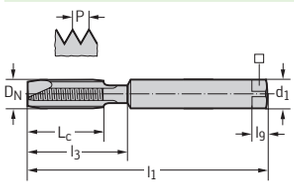
MF
DIN 13

6HX



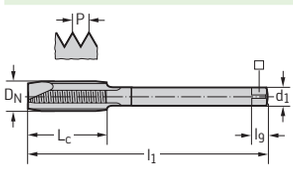
	P	M	K	N	S	H	O
TiCN	●●	●●		●	●●		
Uncoated	●●	●●		●	●●		

~DIN 371

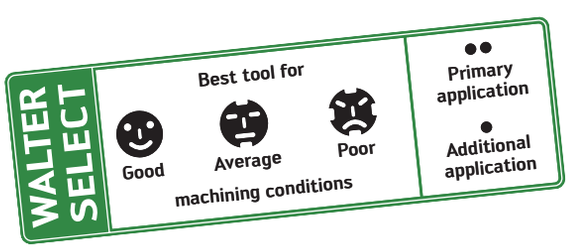


Designation TiCN	Designation uncoated	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
21216106-M8X0.75	212161-M8X0.75	MF 8x0.75	0.75	80	10	29	8	6.2	9	3
21216106-M8X1	212161-M8X1	MF 8x1	1	90	12	29	8	6.2	9	3

DIN 374



Designation TiCN	Designation uncoated	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
21266106-M10X1.25	212661-M10X1.25	MF 10x1.25	1.25	100	20	77	7	5.5	8	3
21266106-M12X1	212661-M12X1	MF 12x1	1	100	16	73	9	7	10	4
21266106-M12X1.25	212661-M12X1.25	MF 12x1.25	1.25	100	21	73	9	7	10	4
21266106-M12X1.5	212661-M12X1.5	MF 12x1.5	1.5	100	21	73	9	7	10	4
21266106-M14X1	212661-M14X1	MF 14x1	1	100	16	71	11	9	12	4
21266106-M14X1.5	212661-M14X1.5	MF 14x1.5	1.5	100	21	71	11	9	12	4
21266106-M16X1	212661-M16X1	MF 16x1	1	100	18	58	12	9	12	4

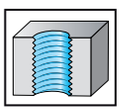


HSS-E PM machine taps
Prototex® Eco Plus inch

– Universal high-performance cut tap
– THL: good chip control and good wear resistance

UNC
ASME B1.1

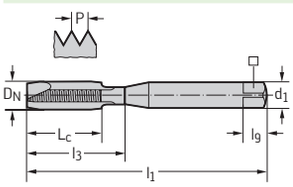
2B



≤ 3.5×D_N

	P	M	K	N	S	H	O
THL	●●	●●	●●	●●			

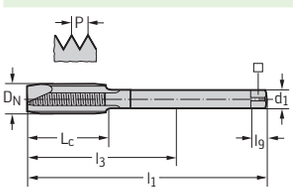
DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N
AEP2221002-UNC4	UNC 4-40	0.112	2.205	0.354	0.709	0.141	0.110	0.187	3
★ AEP2221002-UNC5	UNC 5-40	0.125	2.205	0.394	0.709	0.141	0.110	0.190	3
AEP2221002-UNC6	UNC 6-32	0.138	2.205	0.433	0.787	0.141	0.110	0.187	3
AEP2221002-UNC8	UNC 8-32	0.164	2.480	0.472	0.827	0.168	0.131	0.250	3
AEP2221002-UNC10	UNC 10-24	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3
★ AEP2221002-UNC12	UNC 12-24	0.216	3.150	0.591	1.181	0.220	0.165	0.281	3
AEP2221002-UNC1/4	UNC 1/4-20	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3
AEP2221002-UNC5/16	UNC 5/16-18	0.313	3.543	0.709	1.378	0.318	0.238	0.380	3
AEP2221002-UNC3/8	UNC 3/8-16	0.375	3.937	0.787	1.535	0.381	0.286	0.437	3

B 3

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N
★ AEP2226002-UNC7/16	UNC 7/16-14	0.438	3.937	0.787	2.862	0.323	0.242	0.406	3
AEP2226002-UNC1/2	UNC 1/2-13	0.500	4.331	0.906	3.224	0.367	0.275	0.437	4
★ AEP2226002-UNC9/16	UNC 9/16-12	0.563	4.331	0.984	3.161	0.429	0.322	0.500	4
AEP2226002-UNC5/8	UNC 5/8-11	0.625	4.331	0.984	2.587	0.480	0.360	0.563	4
AEP2226002-UNC3/4	UNC 3/4-10	0.750	4.921	1.181	3.051	0.590	0.442	0.689	4

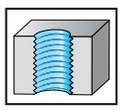
HSS-E machine taps
TC217 Advance inch

- Universal cut tap
- For 2B and 3B tolerances
- WY80FC: best chip control
- WY80RG: good chip control, good wear resistance

≤ 3×D_N | B=3.5-5 | 370HB / 100HB

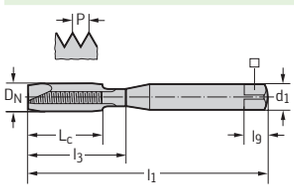
UNC
ASME B1.1

2B / 3B



	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			
WY80RG	●●	●●	●●	●●			

DIN/ANSI

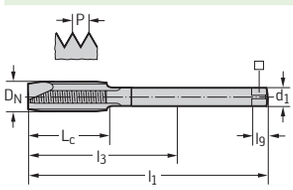


Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC	WY80RG
TC217.UNC1-G0-	UNC 1-64	0.073	1.772	0.236	0.354	0.141	0.110	0.190	2		●●
TC217.UNC2-G0-	UNC 2-56	0.086	1.772	0.276	0.472	0.141	0.110	0.190	2	●●	●●
TC217.UNC3-G0-	UNC 3-48	0.099	1.969	0.315	0.492	0.141	0.110	0.190	2		●●
TC217.UNC4-G0-	UNC 4-40	0.112	2.205	0.354	0.709	0.141	0.110	0.190	2	●●	●●
TC217.UNC5-G0-	UNC 5-40	0.125	2.205	0.394	0.709	0.141	0.110	0.190	2		●●
TC217.UNC6-G0-	UNC 6-32	0.138	2.205	0.433	0.787	0.141	0.110	0.190	2	●●	●●
TC217.UNC8-G0-	UNC 8-32	0.164	2.480	0.472	0.827	0.168	0.131	0.250	3	●●	●●
TC217.UNC10-G0-	UNC 10-24	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3	●●	●●
TC217.UNC12-G0-	UNC 12-24	0.216	3.150	0.591	1.181	0.220	0.165	0.281	3		●●
TC217.UNC1/4-G0-	UNC 1/4-20	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3	●●	●●
TC217.UNC5/16-G0-	UNC 5/16-18	0.313	3.543	0.709	1.378	0.318	0.238	0.380	3	●●	●●
TC217.UNC3/8-G0-	UNC 3/8-16	0.375	3.937	0.787	1.535	0.381	0.286	0.437	3	●●	●●

Order example for grade WY80RG: TC217.UNC1-G0-WY80RG

B 3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC	WY80RG
TC217.UNC7/16-R0-	UNC 7/16-14	0.438	3.937	0.787	2.862	0.323	0.242	0.406	3	●●	●●
TC217.UNC1/2-R0-	UNC 1/2-13	0.500	4.331	0.906	3.224	0.367	0.275	0.437	3	●●	●●
TC217.UNC9/16-R0-	UNC 9/16-12	0.563	4.331	0.984	3.161	0.429	0.322	0.500	4		●●
TC217.UNC5/8-R0-	UNC 5/8-11	0.625	4.331	0.984	2.587	0.480	0.360	0.563	4	●●	●●
TC217.UNC3/4-R0-	UNC 3/4-10	0.750	4.921	1.181	3.051	0.590	0.442	0.689	4	●●	●●
TC217.UNC7/8-R0-	UNC 7/8-9	0.875	5.512	1.181	3.583	0.697	0.523	0.750	4	●●	●●
TC217.UNC1.0-R0-	UNC 1"-8	1.000	6.299	1.417	3.756	0.800	0.600	0.811	4	●●	●●

Order example for grade WY80RG: TC217.UNC7/16-R0-WY80RG

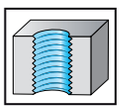
WALTER SELECT
●● Primary application
● Additional application

HSS-E machine taps
TC216 Perform inch

– Universal cut tap

UNC
ASME B1.1

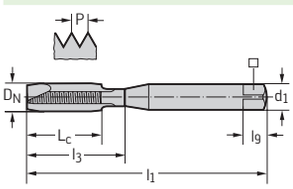
2B



≤ 3×D_N | B=3.5-5 | 300HB / 100HB

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●●			

DIN/ANSI

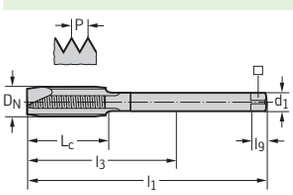


Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80AA
TC216.UNC6-C0-	UNC 6-32	0.138	2.205	0.433	0.787	0.141	0.110	0.188	3	●
TC216.UNC8-C0-	UNC 8-32	0.164	2.480	0.472	0.827	0.168	0.131	0.250	3	●
TC216.UNC10-C0-	UNC 10-24	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3	●
TC216.UNC1/4-C0-	UNC 1/4-20	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3	●
TC216.UNC5/16-C0-	UNC 5/16-18	0.313	3.543	0.709	1.378	0.318	0.238	0.375	3	●
TC216.UNC3/8-C0-	UNC 3/8-16	0.375	3.937	0.787	1.535	0.381	0.286	0.438	3	●

Order example for grade WY80AA: TC216.UNC6-C0-WY80AA

B3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80AA
TC216.UNC1/2-L0-	UNC 1/2-13	0.500	4.331	0.906	3.224	0.367	0.275	0.438	4	●
TC216.UNC5/8-L0-	UNC 5/8-11	0.625	4.331	0.984	2.587	0.480	0.360	0.563	4	●
TC216.UNC3/4-L0-	UNC 3/4-10	0.750	4.921	1.181	3.051	0.590	0.442	0.688	4	●

Order example for grade WY80AA: TC216.UNC1/2-L0-WY80AA

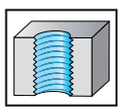
HSS-E-PM machine taps
Prototex® TiNi mm

– Recommended with oil
– For long-chipping materials

≤ 2×D_N | B=3,5-5 | 44HRC 1400 –700 N/mm²

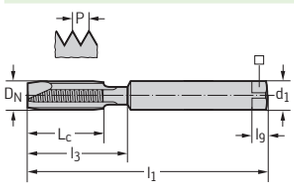
UNC
ASME B1.1

3B



	P	M	K	N	S	H	O
TiCN	●●	●●		●	●●		
Uncoated	●●	●●		●	●●		

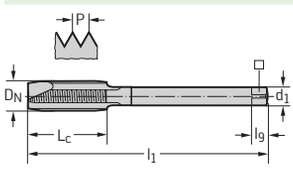
~DIN 2184-1



Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2220706-UNC2	22207-UNC2	UNC 2-56	2.184	45	9	9	2.8	2.1	5	2
2220706-UNC4	22207-UNC4	UNC 4-40	2.845	56	10	10	3.5	2.7	6	2
2220706-UNC6	22207-UNC6	UNC 6-32	3.505	56	12	12	4	3	6	3
2220706-UNC8	22207-UNC8	UNC 8-32	4.166	63	13	13	4.5	3.4	6	3
2220706-UNC10	22207-UNC10	UNC 10-24	4.826	70	16	16	6	4.9	8	3
2220706-UNC1/4	22207-UNC1/4	UNC 1/4-20	6.35	80	15	25	7	5.5	8	3
2220706-UNC5/16	22207-UNC5/16	UNC 5/16-18	7.938	90	18	29.5	8	6.2	9	3
2220706-UNC3/8	22207-UNC3/8	UNC 3/8-16	9.525	100	20	33.5	10	8	11	3

≤ UNC 10: Without reduced neck after the thread

DIN 2184-1



Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2225706-UNC7/16	22257-UNC7/16	UNC 7/16-14	11.113	100	20	76	8	6.2	9	4
2225706-UNC1/2	22257-UNC1/2	UNC 1/2-13	12.7	110	23	83	9	7	10	4
2225706-UNC5/8	22257-UNC5/8	UNC 5/8-11	15.875	110	25	68	12	9	12	4

B 3

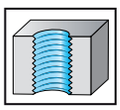
HSS-E-PM machine taps
Prototex® TiNi mm

– Recommended with oil
– For long-chipping materials

≤ 2×D_N | B=3,5-5 | 44HRC 1400 –700 N/mm²

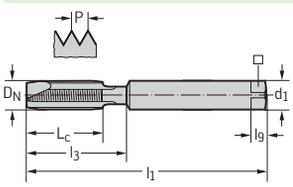
UNC
ASME B1.1

2B



	P	M	K	N	S	H	O
TiCN	●●	●●		●	●●		
Uncoated	●●	●●		●	●●		

~DIN 2184-1

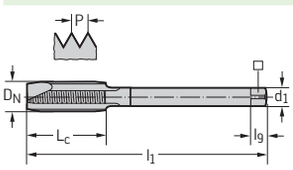


Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2221706-UNC2	22217-UNC2	UNC 2-56	2.184	45	9	9	2.8	2.1	5	2
2221706-UNC4	22217-UNC4	UNC 4-40	2.845	56	10	10	3.5	2.7	6	2
2221706-UNC5	22217-UNC5	UNC 5-40	3.175	56	10	10	3.5	2.7	6	2
2221706-UNC6	22217-UNC6	UNC 6-32	3.505	56	12	12	4	3	6	3
2221706-UNC8	22217-UNC8	UNC 8-32	4.166	63	13	13	4.5	3.4	6	3
2221706-UNC10	22217-UNC10	UNC 10-24	4.826	70	16	16	6	4.9	8	3
2221706-UNC1/4	22217-UNC1/4	UNC 1/4-20	6.35	80	15	25	7	5.5	8	3
2221706-UNC5/16	22217-UNC5/16	UNC 5/16-18	7.938	90	18	29.5	8	6.2	9	3
2221706-UNC3/8	22217-UNC3/8	UNC 3/8-16	9.525	100	20	33.5	10	8	11	3

≤ UNC 10: Without reduced neck after the thread

B3

DIN 2184-1



Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2226706-UNC7/16	22267-UNC7/16	UNC 7/16-14	11.113	100	20	76	8	6.2	9	4
2226706-UNC1/2	22267-UNC1/2	UNC 1/2-13	12.7	110	23	83	9	7	10	4
2226706-UNC9/16	22267-UNC9/16	UNC 9/16-12	14.288	110	25	81	11	9	12	4
2226706-UNC5/8	22267-UNC5/8	UNC 5/8-11	15.875	110	25	68	12	9	12	4
2226706-UNC3/4	22267-UNC3/4	UNC 3/4-10	19.05	125	30	81	14	11	14	4

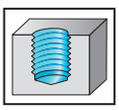
WALTER SELECT
●● Primary application
● Additional application

HSS-E PM machine taps
Paradur® Eco Plus inch

– Universal high-performance cut tap
– THL: good chip control and good wear resistance

UNC
ASME B1.1

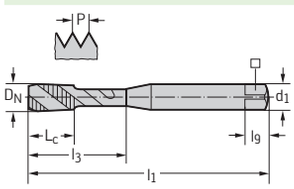
2B



≤ 3×D_N | C=2-3 | 45° | 370HB / 150HB

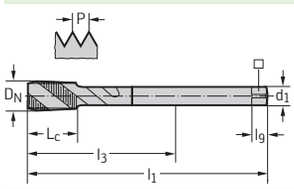
	P	M	K	N	S	H	O
THL	●●	●●	●●	●●			

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
AEP2251302-UNC4	UNC 4-40	0.112	2.205	0.236	0.437	0.141	0.110	0.187	3
★ AEP2251302-UNC5	UNC 5-40	0.125	2.205	0.236	0.476	0.141	0.110	0.190	3
AEP2251302-UNC6	UNC 6-32	0.138	2.205	0.256	0.539	0.141	0.110	0.187	3
AEP2251302-UNC8	UNC 8-32	0.164	2.480	0.276	0.701	0.168	0.131	0.250	3
AEP2251302-UNC10	UNC 10-24	0.190	2.756	0.315	0.831	0.194	0.152	0.250	3
★ AEP2251302-UNC12	UNC 12-24	0.216	3.150	0.394	0.921	0.220	0.165	0.281	3
AEP2251302-UNC1/4	UNC 1/4-20	0.250	3.150	0.394	1.075	0.255	0.191	0.313	3
AEP2251302-UNC5/16	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3
AEP2251302-UNC3/8	UNC 3/8-16	0.375	3.937	0.591	1.535	0.381	0.286	0.437	3

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AEP2256302-UNC7/16	UNC 7/16-14	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3
AEP2256302-UNC1/2	UNC 1/2-13	0.500	4.331	0.709	3.224	0.367	0.275	0.437	4
★ AEP2256302-UNC9/16	UNC 9/16-12	0.563	4.331	0.787	3.161	0.429	0.322	0.500	4
AEP2256302-UNC5/8	UNC 5/8-11	0.625	4.331	0.787	2.587	0.480	0.360	0.563	4
AEP2256302-UNC3/4	UNC 3/4-10	0.750	4.921	0.984	3.051	0.590	0.442	0.689	4

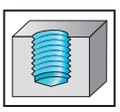
WALTER SELECT
●● Primary application
● Additional application

HSS-E PM machine taps
Paradur® Eco Plus inch

– Universal high-performance cut tap
– THL: good chip control and good wear resistance

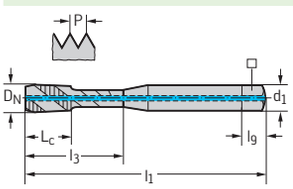
UNC
ASME B1.1

2B



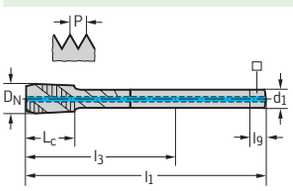
	P	M	K	N	S	H	O
THL	●●	●●	●●	●●			

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
AEP2251312-UNC1/4	UNC 1/4-20	0.250	3.150	0.394	1.075	0.255	0.191	0.313	3
AEP2251312-UNC5/16	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3
AEP2251312-UNC3/8	UNC 3/8-16	0.375	3.937	0.591	1.535	0.381	0.286	0.437	3

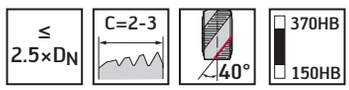
DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
AEP2256312-UNC1/2	UNC 1/2-13	0.500	4.331	0.709	3.224	0.367	0.275	0.437	4
AEP2256312-UNC5/8	UNC 5/8-11	0.625	4.331	0.787	2.587	0.480	0.360	0.563	4
AEP2256312-UNC3/4	UNC 3/4-10	0.750	4.921	0.984	3.051	0.590	0.442	0.689	4

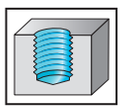
HSS-E machine taps
TC117 Advance inch

– Universal cut tap
– For 2B and 3B tolerances
– WY80FC: best chip control
– WY80RG: good chip control, good wear resistance



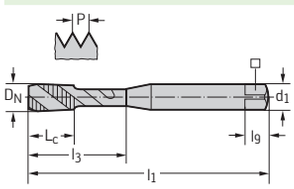
UNC
ASME B1.1

2B / 3B



	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			
WY80RG	●●	●●	●●	●●			

DIN/ANSI

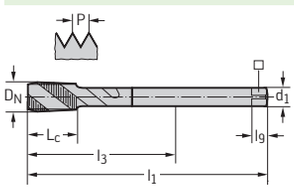


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.UNC1-G0-	UNC 1-64	0.073	1.772	0.157	0.354	0.141	0.110	0.190	3		●
TC117.UNC2-G0-	UNC 2-56	0.086	1.772	0.157	0.472	0.141	0.110	0.190	3	●	●
TC117.UNC3-G0-	UNC 3-48	0.099	1.969	0.157	0.492	0.141	0.110	0.190	3		●
TC117.UNC4-G0-	UNC 4-40	0.112	2.205	0.236	0.709	0.141	0.110	0.190	3	●	●
TC117.UNC5-G0-	UNC 5-40	0.125	2.205	0.236	0.709	0.141	0.110	0.190	3	●	●
TC117.UNC6-G0-	UNC 6-32	0.138	2.205	0.256	0.787	0.141	0.110	0.190	3	●	●
TC117.UNC8-G0-	UNC 8-32	0.164	2.480	0.276	0.827	0.168	0.131	0.250	3	●	●
TC117.UNC10-G0-	UNC 10-24	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●	●
TC117.UNC12-G0-	UNC 12-24	0.216	3.150	0.394	1.181	0.220	0.165	0.281	3		●
TC117.UNC1/4-G0-	UNC 1/4-20	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●	●
TC117.UNC5/16-G0-	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3	●	●
TC117.UNC3/8-G0-	UNC 3/8-16	0.375	3.937	0.591	1.614	0.381	0.286	0.437	3	●	●

Order example for grade WY80RG: TC117.UNC1-G0-WY80RG

B3

DIN/ANSI

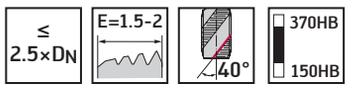


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.UNC7/16-R0-	UNC 7/16-14	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3	●	●
TC117.UNC1/2-R0-	UNC 1/2-13	0.500	4.331	0.709	3.224	0.367	0.275	0.437	4	●	●
TC117.UNC9/16-R0-	UNC 9/16-12	0.563	4.331	0.787	3.161	0.429	0.322	0.500	4		●
TC117.UNC5/8-R0-	UNC 5/8-11	0.625	4.331	0.787	2.587	0.480	0.360	0.563	4	●	●
TC117.UNC3/4-R0-	UNC 3/4-10	0.750	4.921	0.984	3.051	0.590	0.442	0.689	4	●	●
TC117.UNC7/8-R0-	UNC 7/8-9	0.875	5.512	0.984	3.583	0.697	0.523	0.750	4	●	●
TC117.UNC1.0-R0-	UNC 1"-8	1.000	6.299	1.181	3.756	0.800	0.600	0.811	4	●	●
TC117.UNC1.1/8-R0-	UNC 1.1/8-7	1.125	7.087	1.378	4.472	0.896	0.672	0.880	5		●
TC117.UNC1.1/4-R0-	UNC 1.1/4-7	1.250	7.087	1.378	4.354	1.021	0.766	1.000	5		●
TC117.UNC1.1/2-R0-	UNC 1.1/2-6	1.500	7.874	1.575	3.953	1.233	0.925	1.126	5		●

Order example for grade WY80RG: TC117.UNC7/16-R0-WY80RG

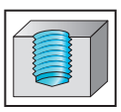
HSS-E machine taps
TC117 Advance inch

– Universal cut tap
– For 2B and 3B tolerances
– WY80FC: best chip control
– WY80RG: good chip control, good wear resistance



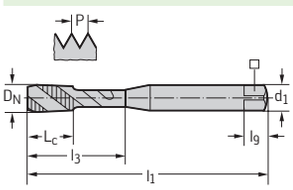
UNC
ASME B1.1

2B / 3B



	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			
WY80RG	●●	●●	●●	●●			

DIN/ANSI

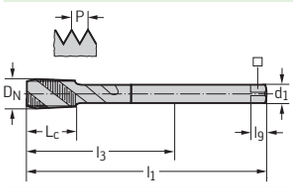


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.UNC2-GE-	UNC 2-56	0.086	1.772	0.157	0.472	0.141	0.110	0.190	3	●●	
TC117.UNC4-GE-	UNC 4-40	0.112	2.205	0.236	0.709	0.141	0.110	0.190	3	●●	
TC117.UNC5-GE-	UNC 5-40	0.125	2.205	0.236	0.709	0.141	0.110	0.190	3	●●	
TC117.UNC6-GE-	UNC 6-32	0.138	2.205	0.256	0.787	0.141	0.110	0.190	3	●●	●●
TC117.UNC8-GE-	UNC 8-32	0.164	2.480	0.276	0.827	0.168	0.131	0.250	3	●●	●●
TC117.UNC10-GE-	UNC 10-24	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●●	●●
TC117.UNC1/4-GE-	UNC 1/4-20	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●●	●●
TC117.UNC5/16-GE-	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3	●●	●●
TC117.UNC3/8-GE-	UNC 3/8-16	0.375	3.937	0.591	1.535	0.381	0.286	0.437	3	●●	●●

Order example for grade WY80RG: TC117.UNC6-GE-WY80RG

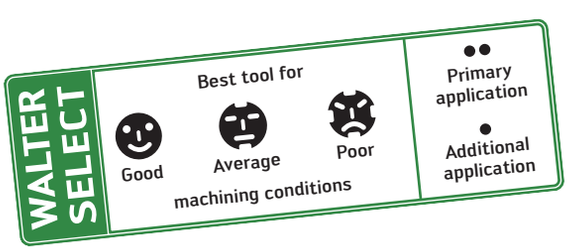
B3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.UNC7/16-RE-	UNC 7/16-14	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3	●●	
TC117.UNC1/2-RE-	UNC 1/2-13	0.500	4.331	0.709	3.224	0.367	0.275	0.437	4	●●	●●
TC117.UNC9/16-RE-	UNC 9/16-12	0.563	4.331	0.787	3.161	0.429	0.322	0.500	4	●●	
TC117.UNC5/8-RE-	UNC 5/8-11	0.625	4.331	0.787	2.587	0.480	0.360	0.563	4	●●	●●
TC117.UNC3/4-RE-	UNC 3/4-10	0.750	4.921	0.984	3.051	0.590	0.442	0.689	4	●●	●●
TC117.UNC7/8-RE-	UNC 7/8-9	0.875	5.512	0.984	3.583	0.697	0.523	0.750	4	●●	
TC117.UNC1.0-RE-	UNC 1"-8	1.000	6.299	1.181	3.756	0.800	0.600	0.811	4	●●	

Order example for grade WY80RG: TC117.UNC1/2-RE-WY80RG

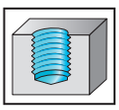


HSS-E machine taps
TC115 Perform inch

– Universal cut tap

UNC
ASME B1.1

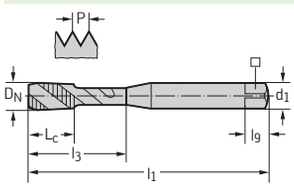
2B



≤ 3×D_N | C=2-3 | 45° | 300HB – 100HB

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●			

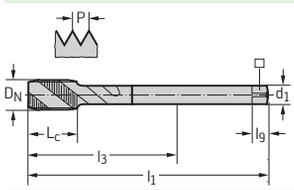
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AA
TC115.UNC6-C0-	UNC 6-32	0.138	2.205	0.256	0.787	0.141	0.110	0.188	3	●
TC115.UNC8-C0-	UNC 8-32	0.164	2.480	0.276	0.827	0.168	0.131	0.250	3	●
TC115.UNC10-C0-	UNC 10-24	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●
TC115.UNC1/4-C0-	UNC 1/4-20	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●
TC115.UNC5/16-C0-	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.375	3	●
TC115.UNC3/8-C0-	UNC 3/8-16	0.375	3.937	0.591	1.535	0.381	0.286	0.438	3	●

Order example for grade WY80AA: TC115.UNC6-C0-WY80AA

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AA
TC115.UNC1/2-L0-	UNC 1/2-13	0.500	4.331	0.709	3.224	0.367	0.275	0.438	3	●
TC115.UNC5/8-L0-	UNC 5/8-11	0.625	4.331	0.787	2.587	0.480	0.360	0.563	3	●
TC115.UNC3/4-L0-	UNC 3/4-10	0.750	4.921	0.984	3.051	0.590	0.442	0.688	4	●

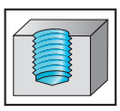
Order example for grade WY80AA: TC115.UNC1/2-L0-WY80AA

HSS-E machine taps
Paradur® Short Chip HT inch

– Problem solver for steels: no bird-nesting
– Reduced helix and bright rake face in chamfer area

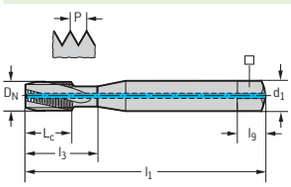
UNC
ASME B1.1

2B



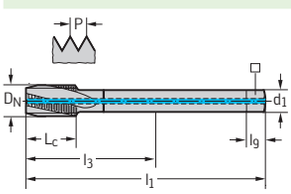
	P	M	K	N	S	H	O
uncoated	●●		●	●			

DIN/ANSI



Designation uncoated	DN-P	DN in	l1 in	Lc in	l3 in	d1 h9 in	□ in	l9 in	N
★ AC22410TR-UNC1/4	UNC 1/4-20	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3
★ AC22410TR-UNC5/16	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3
★ AC22410TR-UNC3/8	UNC 3/8-16	0.375	3.937	0.591	1.535	0.381	0.286	0.437	3

DIN/ANSI



Designation uncoated	DN-P	DN in	l1 in	Lc in	l3 in	d1 h9 in	□ in	l9 in	N
★ AC22460TR-UNC1/2	UNC 1/2-13	0.500	4.331	0.709	3.224	0.367	0.275	0.437	4
★ AC22460TR-UNC5/8	UNC 5/8-11	0.625	4.331	0.787	2.587	0.480	0.360	0.563	4

B 3

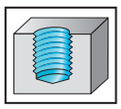
HSS-E (-PM) machine taps
TC142 Supreme inch

– For stainless steels
– WY80FC: very good chip control / WW60RB: very good wear resistance

≤ 3×D_N | C=2-3 | 50° | 350HB / 100HB

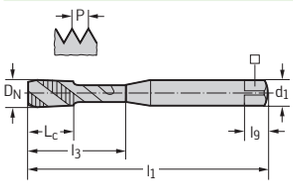
UNC
ASME B1.1

2BX



	P	M	K	N	S	H	O
WW60RB	●	●●					
WY80FC	●	●●					

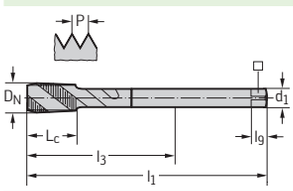
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WW60RB	WY80FC
TC142.UNC2-C0-	UNC 2-56	0.086	1.772	0.157	0.472	0.141	0.110	0.190	3		●●
TC142.UNC4-C0-	UNC 4-40	0.112	2.205	0.236	0.709	0.141	0.110	0.190	3		●●
TC142.UNC6-C0-	UNC 6-32	0.138	2.205	0.256	0.787	0.141	0.110	0.190	3	●●	●●
TC142.UNC8-C0-	UNC 8-32	0.164	2.480	0.276	0.827	0.168	0.131	0.250	3	●●	●●
TC142.UNC10-C0-	UNC 10-24	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●●	●●
TC142.UNC1/4-C0-	UNC 1/4-20	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●●	●●
TC142.UNC5/16-C0-	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3	●●	●●
TC142.UNC3/8-C0-	UNC 3/8-16	0.375	3.937	0.591	1.535	0.381	0.286	0.437	3	●●	●●

Order example for grade WY80FC: TC142.UNC2-C0-WY80FC

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WW60RB	WY80FC
TC142.UNC1/2-L0-	UNC 1/2-13	0.500	4.331	0.709	3.224	0.367	0.275	0.437	3	●●	●●
TC142.UNC5/8-L0-	UNC 5/8-11	0.625	4.331	0.787	2.587	0.480	0.360	0.563	4	●●	●●
TC142.UNC3/4-L0-	UNC 3/4-10	0.750	4.921	0.984	3.051	0.590	0.442	0.689	4	●●	●●

Order example for grade WY80FC: TC142.UNC1/2-L0-WY80FC

B 3

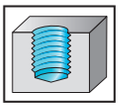
WALTER SELECT
●● Primary application
● Additional application

HSS-E PM machine taps
Paradur® Eco CI inch

– For short-chipping ISO K materials (GJL / CGI)
– For short-chipping aluminum alloys (Si content > 7 %)

UNC
ASME B1.1

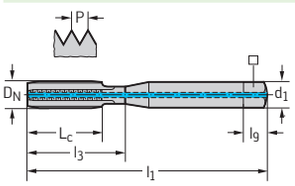
2B



≤ 3×D_N

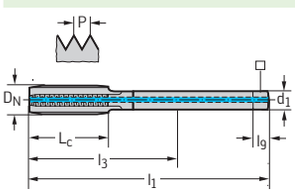
	P	M	K	N	S	H	O
TICN			●●	●●			●●

DIN/ANSI



Designation TICN	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AE2231416-UNC8	UNC 8-32	0.164	2.480	0.472	0.827	0.168	0.131	0.250	3
AE2231416-UNC10	UNC 10-24	0.190	2.756	0.512	0.984	0.194	0.152	0.250	4
AE2231416-UNC1/4	UNC 1/4-20	0.250	3.150	0.591	1.181	0.255	0.191	0.313	4
AE2231416-UNC5/16	UNC 5/16-18	0.313	3.543	0.709	1.378	0.318	0.238	0.380	4
AE2231416-UNC3/8	UNC 3/8-16	0.375	3.937	0.787	1.535	0.381	0.286	0.437	4

DIN/ANSI



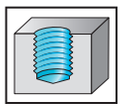
Designation TICN	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AE2236416-UNC7/16	UNC 7/16-14	0.438	3.937	0.787	2.862	0.323	0.242	0.406	4
AE2236416-UNC1/2	UNC 1/2-13	0.500	4.331	0.906	3.224	0.367	0.275	0.437	4
★ AE2236416-UNC9/16	UNC 9/16-12	0.563	4.331	0.984	3.161	0.429	0.322	0.500	4
AE2236416-UNC5/8	UNC 5/8-11	0.625	4.331	0.984	2.587	0.480	0.360	0.563	4
AE2236416-UNC3/4	UNC 3/4-10	0.750	4.921	1.181	3.051	0.590	0.442	0.689	4
★ AE2236416-UNC7/8	UNC 7/8-9	0.875	5.512	1.181	3.583	0.697	0.523	0.750	4
★ AE2236416-UNC1.0	UNC 1"-8	1.000	6.299	1.417	3.756	0.800	0.600	0.811	5

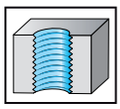
HSS-E PM machine taps
Paradur® X·pert K inch

– For short- and long-chipping ISO K materials (GJL / CGI / GJS)
– For short-chipping aluminum alloys (Si content > 7 %)

UNC
ASME B1.1

2B

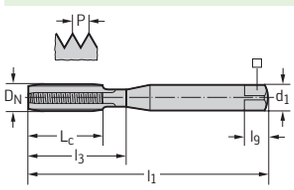




≤ 3×D_N

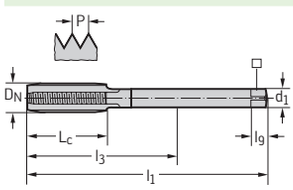
	P	M	K	N	S	H	O
TAFT			●●	●			

DIN/ANSI



Designation TAFT	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AK2231407-UNC2	UNC 2-56	0.086	1.772	0.276	0.472	0.141	0.110	0.190	3
★ AK2231407-UNC4	UNC 4-40	0.112	2.205	0.354	0.709	0.141	0.110	0.190	3
★ AK2231407-UNC6	UNC 6-32	0.138	2.205	0.433	0.787	0.141	0.110	0.190	3
★ AK2231407-UNC8	UNC 8-32	0.164	2.480	0.472	0.827	0.168	0.131	0.250	3
★ AK2231407-UNC10	UNC 10-24	0.190	2.756	0.512	0.984	0.194	0.152	0.250	4
★ AK2231407-UNC1/4	UNC 1/4-20	0.250	3.150	0.591	0.984	0.255	0.191	0.313	4
★ AK2231407-UNC5/16	UNC 5/16-18	0.313	3.543	0.709	1.378	0.318	0.238	0.380	4
★ AK2231407-UNC3/8	UNC 3/8-16	0.375	3.937	0.787	1.535	0.381	0.286	0.437	4

DIN/ANSI



Designation TAFT	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AK2236407-UNC1/2	UNC 1/2-13	0.500	4.331	0.906	3.224	0.367	0.275	0.437	4
★ AK2236407-UNC5/8	UNC 5/8-11	0.625	4.331	0.984	2.587	0.480	0.360	0.563	4
★ AK2236407-UNC3/4	UNC 3/4-10	0.750	4.921	1.181	3.051	0.590	0.442	0.689	4

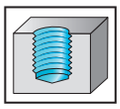
B 3

HSS-E machine taps
Paradur® X·pert N inch

– For long-chipping aluminum alloys (Si content < 7 %>

UNC
ASME B1.1

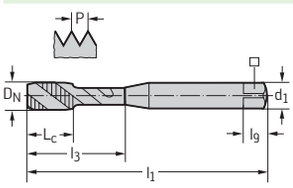
2B



≤ 3×D_N | C=2-3 | 35° | 200HB – 60HB

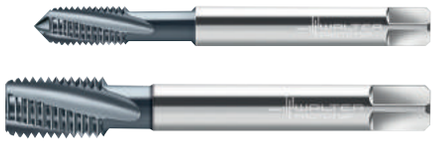
	P	M	K	N	S	H	O
uncoated				●●	●		●

DIN/ANSI

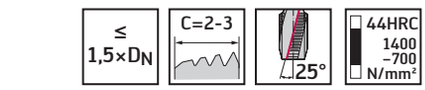


Designation uncoated	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AN22516-UNC2	UNC 2-56	0.086	1.772	0.157	0.472	0.141	0.110	0.190	2
★ AN22516-UNC4	UNC 4-40	0.112	2.205	0.236	0.709	0.141	0.110	0.190	2
★ AN22516-UNC6	UNC 6-32	0.138	2.205	0.256	0.787	0.141	0.110	0.190	2
★ AN22516-UNC8	UNC 8-32	0.164	2.480	0.276	0.827	0.168	0.131	0.250	2
★ AN22516-UNC10	UNC 10-24	0.190	2.756	0.315	0.984	0.194	0.152	0.250	2
★ AN22516-UNC1/4	UNC 1/4-20	0.250	3.150	0.394	1.181	0.255	0.191	0.313	2
★ AN22516-UNC5/16	UNC 5/16-18	0.313	3.543	0.472	1.378	0.318	0.238	0.380	2
★ AN22516-UNC3/8	UNC 3/8-16	0.375	3.937	0.591	1.535	0.381	0.286	0.437	2

HSS-E-PM machine taps
Paradur® Ni mm

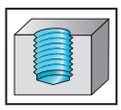


– For long-chipping materials



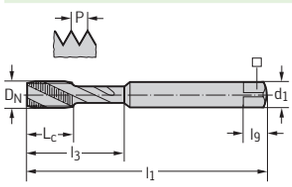
UNC
ASME B1.1

2B



	P	M	K	N	S	H	O
TiCN	●				●●		
Uncoated	●				●●		

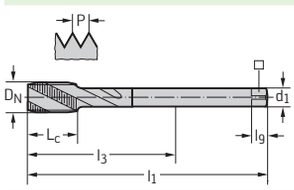
~DIN 2184-1



Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
22410206-UNC2	224102-UNC2	UNC 2-56	2.184	45	9	9	2.8	2.1	5	3
22410206-UNC3	224102-UNC3	UNC 3-48	2.515	50	9	9	2.8	2.1	5	3
22410206-UNC4	224102-UNC4	UNC 4-40	2.845	56	10	10	3.5	2.7	6	3
22410206-UNC6	224102-UNC6	UNC 6-32	3.505	56	12	12	4	3	6	3
22410206-UNC8	224102-UNC8	UNC 8-32	4.166	63	13	13	4.5	3.4	6	3
22410206-UNC10	224102-UNC10	UNC 10-24	4.826	70	16	16	6	4.9	8	3
22410206-UNC1/4	224102-UNC1/4	UNC 1/4-20	6.35	80	15	25	7	5.5	8	3
22410206-UNC5/16	224102-UNC5/16	UNC 5/16-18	7.938	90	18	29.5	8	6.2	9	3
22410206-UNC3/8	224102-UNC3/8	UNC 3/8-16	9.525	100	20	33.5	10	8	11	4

≤ UNC 10: Without reduced neck after the thread

DIN 2184-1



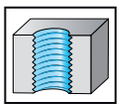
Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
22460206-UNC7/16	224602-UNC7/16	UNC 7/16-14	11.113	100	20	76	8	6.2	9	4
22460206-UNC1/2	224602-UNC1/2	UNC 1/2-13	12.7	110	23	83	9	7	10	4
22460206-UNC5/8	224602-UNC5/8	UNC 5/8-11	15.875	110	25	68	12	9	12	4
22460206-UNC3/4	224602-UNC3/4	UNC 3/4-10	19.05	125	30	81	14	11	14	5

HSS-E PM machine taps
Prototex® Eco Plus inch

– Universal high-performance cut tap
– THL: good chip control and good wear resistance

UNF
ASME B1.1

2B



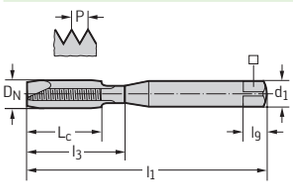
≤ 3.5×D_N

B=3.5-5

400HB
150HB

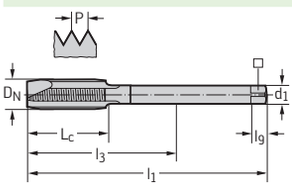
	P	M	K	N	S	H	O
THL	●●	●●	●●	●●			

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N
AEP2321002-UNF6	UNF 6-40	0.138	2.205	0.433	0.787	0.141	0.110	0.187	3
AEP2321002-UNF10	UNF 10-32	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3
AEP2321002-UNF1/4	UNF 1/4-28	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3
AEP2321002-UNF5/16	UNF 5/16-24	0.313	3.543	0.709	1.378	0.318	0.238	0.380	3
AEP2321002-UNF3/8	UNF 3/8-24	0.375	3.937	0.787	1.535	0.381	0.286	0.437	3

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N
AEP2326002-UNF7/16	UNF 7/16-20	0.438	3.937	0.787	2.862	0.323	0.242	0.406	3
AEP2326002-UNF1/2	UNF 1/2-20	0.500	3.937	0.827	2.831	0.367	0.275	0.437	4
★ AEP2326002-UNF9/16	UNC 9/16-12	0.563	3.937	0.827	2.768	0.429	0.322	0.500	4
AEP2326002-UNF5/8	UNF 5/8-18	0.625	3.937	0.827	2.193	0.480	0.360	0.563	4
AEP2326002-UNF3/4	UNF 3/4-16	0.750	4.331	0.945	2.461	0.590	0.442	0.689	4

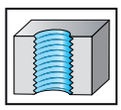
HSS-E machine taps
TC217 Advance inch

- Universal cut tap
- For 2B and 3B tolerances
- WY80FC: best chip control
- WY80RG: good chip control, good wear resistance

≤ 3×D_N | B=3.5-5 | 370HB / 100HB

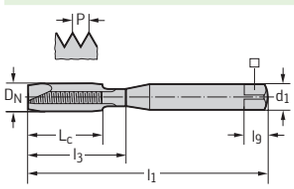
UNF
ASME B1.1

2B / 3B



	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			
WY80RG	●●	●●	●●	●●			

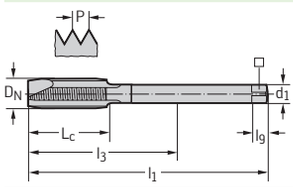
DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC	WY80RG
TC217.UNF0-G0-	UNF 0-80	0.060	1.575	0.256	0.256	0.141	0.110	0.190	2	●	●
TC217.UNF1-G0-	UNF 1-72	0.073	1.772	0.236	0.354	0.141	0.110	0.190	2		●
TC217.UNF2-G0-	UNF 2-64	0.086	1.772	0.276	0.472	0.141	0.110	0.190	2		●
TC217.UNF3-G0-	UNF 3-56	0.099	1.969	0.315	0.492	0.141	0.110	0.190	2		●
TC217.UNF4-G0-	UNF 4-48	0.112	2.205	0.354	0.709	0.141	0.110	0.190	2		●
TC217.UNF5-G0-	UNF 5-44	0.125	2.205	0.394	0.709	0.141	0.110	0.190	2		●
TC217.UNF6-G0-	UNF 6-40	0.138	2.205	0.433	0.787	0.141	0.110	0.190	2		●
TC217.UNF8-G0-	UNF 8-36	0.164	2.480	0.472	0.827	0.168	0.131	0.250	3		●
TC217.UNF10-G0-	UNF 10-32	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3	●	●
TC217.UNF12-G0-	UNF 12-28	0.216	3.150	0.591	1.181	0.220	0.165	0.281	3		●
TC217.UNF1/4-G0-	UNF 1/4-28	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3	●	●
TC217.UNF5/16-G0-	UNF 5/16-24	0.313	3.543	0.709	1.378	0.318	0.238	0.380	3	●	●
TC217.UNF3/8-G0-	UNF 3/8-24	0.375	3.543	0.787	1.535	0.381	0.286	0.437	3	●	●

Order example for grade WY80RG: TC217.UNF0-G0-WY80RG

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC	WY80RG
TC217.UNF7/16-R0-	UNF 7/16-20	0.438	3.937	0.787	2.862	0.323	0.242	0.406	3	●	●
TC217.UNF1/2-R0-	UNF 1/2-20	0.500	3.937	0.827	2.831	0.367	0.275	0.437	4	●	●
TC217.UNF9/16-R0-	UNF 9/16-18	0.563	3.937	0.827	2.768	0.429	0.322	0.500	4	●	●
TC217.UNF5/8-R0-	UNF 5/8-18	0.625	3.937	0.827	2.193	0.480	0.360	0.563	4	●	●
TC217.UNF3/4-R0-	UNF 3/4-16	0.750	4.331	0.945	2.461	0.590	0.442	0.689	4	●	●
TC217.UNF7/8-R0-	UNF 7/8-14	0.875	4.921	0.945	2.992	0.697	0.523	0.750	4	●	●
TC217.UNF1.0-R0-	UNF 1"-12	1.000	5.512	1.024	2.969	0.800	0.600	0.811	4		●

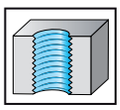
Order example for grade WY80RG: TC217.UNF7/16-R0-WY80RG

HSS-E machine taps
TC216 Perform inch

– Universal cut tap

UNF
ASME B1.1

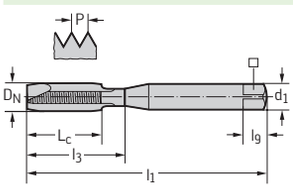
2B



≤ 3×D_N | B=3.5–5 | 300HB / 100HB

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●●			

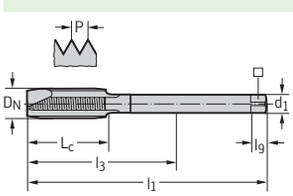
DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80AA
TC216.UNF10-C0-	UNF 10-32	0.190	2.756	0.512	0.984	0.194	0.152	0.250	3	●
TC216.UNF1/4-C0-	UNF 1/4-28	0.250	3.150	0.591	1.181	0.255	0.191	0.313	3	●
TC216.UNF5/16-C0-	UNF 5/16-24	0.313	3.543	0.709	1.378	0.318	0.238	0.380	3	●
TC216.UNF3/8-C0-	UNF 3/8-24	0.375	3.937	0.787	1.535	0.381	0.286	0.437	3	●
TC216.UNF7/16-L0-	UNF 7/16-20	0.438	3.937	0.787	2.862	0.323	0.242	0.406	3	●
TC216.UNF1/2-L0-	UNF 1/2-20	0.500	3.937	0.827	2.831	0.367	0.275	0.437	4	●

Order example for grade WY80AA: TC216.UNF10-C0-WY80AA

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80AA
TC216.UNF9/16-L0-	UNF 9/16-18	0.563	3.937	0.827	2.768	0.429	0.322	0.500	4	●
TC216.UNF5/8-L0-	UNF 5/8-18	0.625	3.937	0.827	2.193	0.480	0.360	0.563	4	●
TC216.UNF3/4-L0-	UNF 3/4-16	0.750	4.331	0.945	2.461	0.590	0.442	0.689	4	●

Order example for grade WY80AA: TC216.UNF9/16-L0-WY80AA

B 3

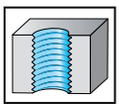
HSS-E-PM machine taps
Prototex® TiNi mm

– Recommended with oil
– For long-chipping materials

≤ 2×D_N | B=3,5-5 | 44HRC 1400 –700 N/mm²

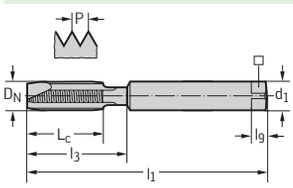
UNF
ASME B1.1

3B



	P	M	K	N	S	H	O
TiCN	●●	●●		●	●●		
Uncoated	●●	●●		●	●●		

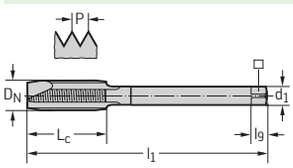
~DIN 2184-1



Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2320706-UNF4	23207-UNF4	UNF 4-48	2.845	56	10	10	3.5	2.7	6	2
2320706-UNF5	23207-UNF5	UNF 5-44	3.175	56	10	10	3.5	2.7	6	2
2320706-UNF6	23207-UNF6	UNF 6-40	3.505	56	12	12	4	3	6	3
2320706-UNF8	23207-UNF8	UNF 8-36	4.166	63	13	13	4.5	3.4	6	3
2320706-UNF10	23207-UNF10	UNF 10-32	4.826	70	16	16	6	4.9	8	3
2320706-UNF1/4	23207-UNF1/4	UNF 1/4-28	6.35	80	15	25	7	5.5	8	3
2320706-UNF5/16	23207-UNF5/16	UNF 5/16-24	7.938	90	18	29.5	8	6.2	9	3
2320706-UNF3/8	23207-UNF3/8	UNF 3/8-24	9.525	100	20	33.5	10	8	11	3

≤ UNF 10: Without reduced neck after the thread

DIN 2184-1



Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2325706-UNF7/16	23257-UNF7/16	UNF 7/16-20	11.113	100	20	76	8	6.2	9	4
2325706-UNF1/2	23257-UNF1/2	UNF 1/2-20	12.7	100	23	73	9	7	10	4
2325706-UNF5/8	23257-UNF5/8	UNF 5/8-18	15.875	100	25	58	12	9	12	4

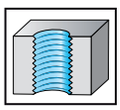
HSS-E-PM machine taps
Prototex® TiNi mm

– Recommended with oil
– For long-chipping materials

≤ 2×D_N | B=3,5-5 | 44HRC 1400 –700 N/mm²

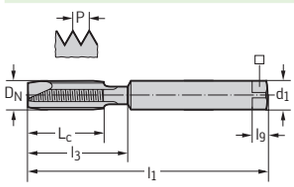
UNF
ASME B1.1

2B



	P	M	K	N	S	H	O
TiCN	●●	●●		●	●●		
Uncoated	●●	●●		●	●●		

~DIN 2184-1

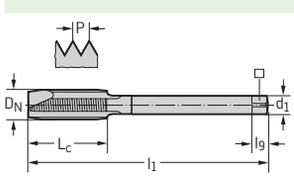


Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2321706-UNF5	23217-UNF5	UNF 5-44	3.175	56	10	10	3.5	2.7	6	2
2321706-UNF6	23217-UNF6	UNF 6-40	3.505	56	12	12	4	3	6	3
2321706-UNF10	23217-UNF10	UNF 10-32	4.826	70	16	16	6	4.9	8	3
2321706-UNF1/4	23217-UNF1/4	UNF 1/4-28	6.35	80	15	25	7	5.5	8	3
2321706-UNF5/16	23217-UNF5/16	UNF 5/16-24	7.938	90	18	29.5	8	6.2	9	3
2321706-UNF3/8	23217-UNF3/8	UNF 3/8-24	9.525	100	20	33.5	10	8	11	3

≤ UNF 10: Without reduced neck after the thread

B3

DIN 2184-1



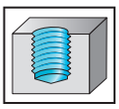
Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 h9 mm	L_c mm	l_3 mm	d_1 mm	□ mm	l_9 mm	N
2326706-UNF7/16	23267-UNF7/16	UNF 7/16-20	11.113	100	20	76	8	6.2	9	4
2326706-UNF1/2	23267-UNF1/2	UNF 1/2-20	12.7	100	23	73	9	7	10	4
2326706-UNF5/8	23267-UNF5/8	UNF 5/8-18	15.875	100	25	58	12	9	12	4

HSS-E PM machine taps
Paradur® Eco Plus inch

– Universal high-performance cut tap
– THL: good chip control and good wear resistance

UNF
ASME B1.1

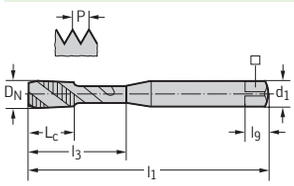
2B



≤ 3×D_N | C=2-3 | 45° | 370HB / 150HB

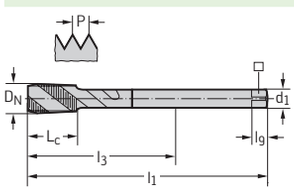
	P	M	K	N	S	H	O
THL	●●	●●	●●	●●			

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
AEP2351302-UNF6	UNF 6-40	0.138	2.205	0.256	0.516	0.141	0.110	0.187	3
AEP2351302-UNF10	UNF 10-32	0.190	2.756	0.315	0.791	0.194	0.152	0.250	3
AEP2351302-UNF1/4	UNF 1/4-28	0.250	3.150	0.394	1.020	0.255	0.191	0.313	3
AEP2351302-UNF5/16	UNF 5/16-24	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3
AEP2351302-UNF3/8	UNF 3/8-24	0.375	3.937	0.472	1.535	0.381	0.286	0.437	3

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
AEP2356302-UNF7/16	UNF 7/16-20	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3
AEP2356302-UNF1/2	UNF 1/2-20	0.500	3.937	0.512	2.831	0.367	0.275	0.437	4
★ AEP2356302-UNF9/16	UNF 9/16-18	0.563	3.937	0.591	2.768	0.429	0.322	0.500	4
AEP2356302-UNF5/8	UNF 5/8-18	0.625	3.937	0.591	2.193	0.480	0.360	0.563	4
AEP2356302-UNF3/4	UNF 3/4-16	0.750	4.331	0.669	2.461	0.590	0.442	0.689	4

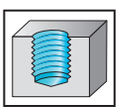
WALTER SELECT
●● Primary application
● Additional application

HSS-E PM machine taps
Paradur® Eco Plus inch

– Universal high-performance cut tap
– THL: good chip control and good wear resistance

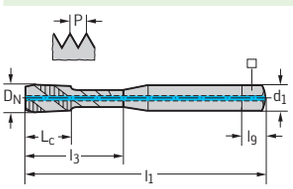
UNF
ASME B1.1

2B



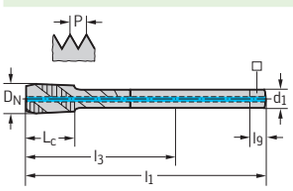
	P	M	K	N	S	H	O
THL	●●	●●	●●	●●			

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
AEP2351312-UNF1/4	UNF 1/4-28	0.250	3.150	0.394	1.020	0.255	0.191	0.313	3
AEP2351312-UNF5/16	UNF 5/16-24	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3
AEP2351312-UNF3/8	UNF 3/8-24	0.375	3.937	0.472	1.535	0.381	0.286	0.437	3

DIN/ANSI



Designation THL	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
AEP2356312-UNF7/16	UNF 7/16-20	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3
AEP2356312-UNF1/2	UNF 1/2-20	0.500	3.937	0.512	2.831	0.367	0.275	0.437	4
AEP2356312-UNF5/8	UNF 5/8-18	0.625	3.937	0.591	2.193	0.480	0.360	0.563	4
AEP2356312-UNF3/4	UNF 3/4-16	0.750	4.331	0.669	2.461	0.590	0.442	0.689	4

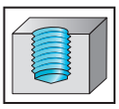
HSS-E machine taps
TC117 Advance inch

- Universal cut tap
- For 2B and 3B tolerances
- WY80FC: best chip control
- WY80RG: good chip control, good wear resistance

≤ 2.5×D_N | C=2-3 | 40° | 370HB / 150HB

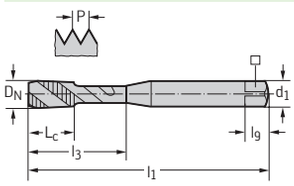
UNF
ASME B1.1

2B / 3B



	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			
WY80RG	●●	●●	●●	●●			

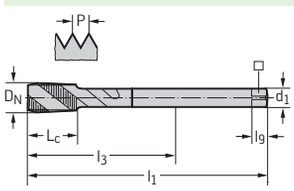
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.UNF0-G0-	UNF 0-80	0.060	1.575	0.197	0.197	0.141	0.110	0.190	3	●	●
TC117.UNF1-G0-	UNF 1-72	0.073	1.772	0.157	0.354	0.141	0.110	0.190	3	●	●
TC117.UNF2-G0-	UNF 2-64	0.086	1.772	0.157	0.472	0.141	0.110	0.190	3		●
TC117.UNF3-G0-	UNF 3-56	0.099	1.969	0.157	0.492	0.141	0.110	0.190	3		●
TC117.UNF4-G0-	UNF 4-48	0.112	2.205	0.236	0.709	0.141	0.110	0.190	3		●
TC117.UNF5-G0-	UNF 5-44	0.125	2.205	0.236	0.709	0.141	0.110	0.190	3		●
TC117.UNF6-G0-	UNF 6-40	0.138	2.205	0.256	0.787	0.141	0.110	0.190	3		●
TC117.UNF8-G0-	UNF 8-36	0.164	2.480	0.276	0.827	0.168	0.131	0.250	3		●
TC117.UNF10-G0-	UNF 10-32	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●	●
TC117.UNF12-G0-	UNF 12-28	0.216	3.150	0.394	1.181	0.220	0.165	0.281	3		●
TC117.UNF1/4-G0-	UNF 1/4-28	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●	●
TC117.UNF5/16-G0-	UNF 5/16-24	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3	●	●
TC117.UNF3/8-G0-	UNF 3/8-24	0.375	3.543	0.472	1.535	0.381	0.286	0.437	3	●	●

Order example for grade WY80RG: TC117.UNF0-G0-WY80RG

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.UNF7/16-R0-	UNF 7/16-20	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3	●	●
TC117.UNF1/2-R0-	UNF 1/2-20	0.500	3.937	0.591	2.831	0.367	0.275	0.437	4	●	●
TC117.UNF9/16-R0-	UNF 9/16-18	0.563	3.937	0.591	2.768	0.429	0.322	0.500	4	●	●
TC117.UNF5/8-R0-	UNF 5/8-18	0.625	3.937	0.591	2.193	0.480	0.360	0.563	4	●	●
TC117.UNF3/4-R0-	UNF 3/4-16	0.750	4.331	0.669	2.461	0.590	0.442	0.689	4	●	●
TC117.UNF7/8-R0-	UNF 7/8-14	0.875	4.921	0.709	2.992	0.697	0.523	0.750	4	●	●
TC117.UNF1.0-R0-	UNF 1"-12	1.000	5.512	0.787	2.969	0.800	0.600	0.811	5		●
TC117.UNF1.1/8-R0-	UNF 1.1/8-12	1.125	5.906	0.787	3.291	0.896	0.672	0.880	5		●
TC117.UNF1.1/4-R0-	UNF 1.1/4-12	1.250	5.906	0.787	3.173	1.021	0.766	1.000	5		●

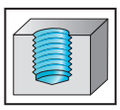
Order example for grade WY80RG: TC117.UNF7/16-R0-WY80RG

HSS-E machine taps
TC117 Advance inch

- Universal cut tap
- For 2B and 3B tolerances
- WY80FC: best chip control
- WY80RG: good chip control, good wear resistance

UNF
ASME B1.1

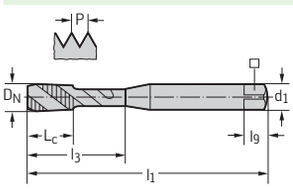
2B / 3B



≤ 2.5×D_N | E=1.5-2 | 40° | 370HB / 150HB

	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			

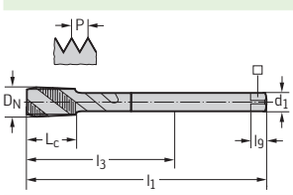
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC117.UNF0-GE-	UNF 0-80	0.060	1.575	0.197	0.197	0.141	0.110	0.190	3	●
TC117.UNF10-GE-	UNF 10-32	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●
TC117.UNF1/4-GE-	UNF 1/4-28	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●
TC117.UNF5/16-GE-	UNF 5/16-24	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3	●
TC117.UNF3/8-GE-	UNF 3/8-24	0.375	3.543	0.472	1.535	0.381	0.286	0.437	3	●

Order example for grade WY80FC: TC117.UNF0-GE-WY80FC

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC117.UNF7/16-RE-	UNF 7/16-20	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3	●
TC117.UNF1/2-RE-	UNF 1/2-20	0.500	3.937	0.591	2.831	0.367	0.275	0.437	4	●
TC117.UNF9/16-RE-	UNF 9/16-18	0.563	3.937	0.591	2.768	0.429	0.322	0.500	4	●
TC117.UNF5/8-RE-	UNF 5/8-18	0.625	3.937	0.591	2.193	0.480	0.360	0.563	4	●
TC117.UNF3/4-RE-	UNF 3/4-16	0.750	4.331	0.669	2.461	0.590	0.442	0.689	4	●

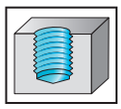
Order example for grade WY80FC: TC117.UNF7/16-RE-WY80FC

HSS-E machine taps
TC115 Perform inch

– Universal cut tap

UNF
ASME B1.1

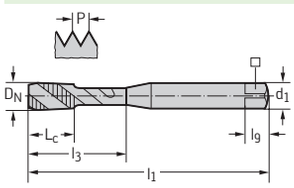
2B



≤ 3×D_N | C=2-3 | 45° | 300HB / 100HB

	P	M	K	N	S	H	O
WY80AA	●●	●●	●●	●			

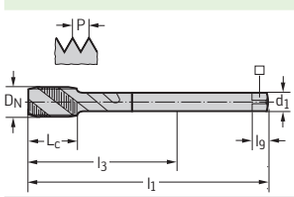
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AA
TC115.UNF10-C0-	UNF 10-32	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●
TC115.UNF1/4-C0-	UNF 1/4-28	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●
TC115.UNF5/16-C0-	UNF 5/16-24	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3	●
TC115.UNF3/8-C0-	UNF 3/8-24	0.375	3.937	0.472	1.535	0.381	0.286	0.437	3	●
TC115.UNF7/16-L0-	UNF 7/16-20	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3	●
TC115.UNF1/2-L0-	UNF 1/2-20	0.500	3.937	0.512	2.831	0.367	0.275	0.437	4	●

Order example for grade WY80AA: TC115.UNF10-C0-WY80AA

DIN/ANSI



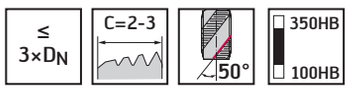
Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AA
TC115.UNF9/16-L0-	UNF 9/16-18	0.563	3.937	0.591	2.768	0.429	0.322	0.500	4	●
TC115.UNF5/8-L0-	UNF 5/8-18	0.625	3.937	0.591	2.193	0.480	0.360	0.563	4	●
TC115.UNF3/4-L0-	UNF 3/4-16	0.750	4.331	0.669	2.461	0.590	0.442	0.689	4	●

Order example for grade WY80AA: TC115.UNF9/16-L0-WY80AA

B 3

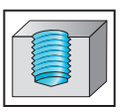
HSS-E (-PM) machine taps
TC142 Supreme inch

– For stainless steels
– WY80FC: best chip control



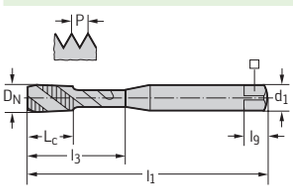
UNF
ASME B1.1

2BX



	P	M	K	N	S	H	O
WY80FC	●	●●					

DIN/ANSI

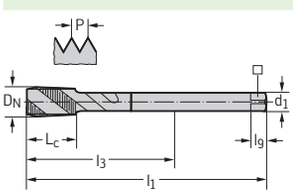


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC142.UNF10-C0-	UNF 10-32	0.190	2.756	0.315	0.984	0.194	0.152	0.250	3	●
TC142.UNF1/4-C0-	UNF 1/4-28	0.250	3.150	0.394	1.181	0.255	0.191	0.313	3	●
TC142.UNF5/16-C0-	UNF 5/16-24	0.313	3.543	0.472	1.378	0.318	0.238	0.380	3	●
TC142.UNF3/8-C0-	UNF 3/8-24	0.375	3.937	0.472	1.535	0.381	0.286	0.437	3	●

Order example for grade WY80FC: TC142.UNF10-C0-WY80FC

B3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC142.UNF7/16-L0-	UNF 7/16-20	0.438	3.937	0.591	2.862	0.323	0.242	0.406	3	●
TC142.UNF1/2-L0-	UNF 1/2-20	0.500	3.937	0.591	2.831	0.367	0.275	0.437	4	●
TC142.UNF9/16-L0-	UNF 9/16-18	0.563	3.937	0.591	2.768	0.429	0.322	0.500	4	●

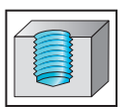
Order example for grade WY80FC: TC142.UNF7/16-L0-WY80FC

HSS-E PM machine taps
Paradur® Eco CI inch

– For short-chipping ISO K materials (GJL / CGI)
– For short-chipping aluminum alloys (Si content > 7 %)

UNF
ASME B1.1

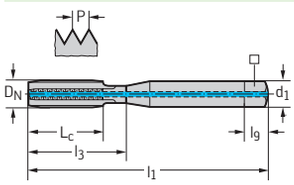
2B



≤ 3×D_N | C=2-3 | 300HB – 40HB

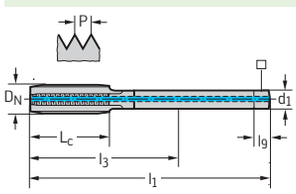
TICN	P	M	K	N	S	H	O
			●●	●●			●●

DIN/ANSI



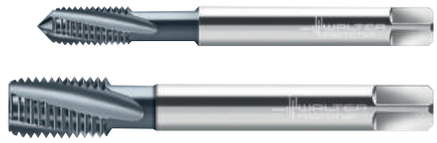
	Designation TICN	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
	AE2331416-UNF10	UNF 10-32	0.190	2.756	0.512	0.984	0.194	0.152	0.250	4
★	AE2331416-UNF12	UNF 12-28	0.216	3.150	0.591	1.181	0.220	0.165	0.281	4
	AE2331416-UNF1/4	UNF 1/4-28	0.250	3.150	0.591	1.181	0.255	0.191	0.313	4
	AE2331416-UNF5/16	UNF 5/16-24	0.313	3.543	0.709	1.378	0.318	0.238	0.380	4
	AE2331416-UNF3/8	UNF 3/8-24	0.375	3.937	0.787	1.535	0.381	0.286	0.437	4

DIN/ANSI



	Designation TICN	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
	AE2336416-UNF7/16	UNF 7/16-20	0.438	3.937	0.787	2.862	0.323	0.242	0.406	4
	AE2336416-UNF1/2	UNF 1/2-20	0.500	3.937	0.827	2.831	0.367	0.275	0.437	4
★	AE2336416-UNF9/16	UNF 9/16-18	0.563	3.937	0.827	2.768	0.429	0.322	0.500	4
★	AE2336416-UNF3/4	UNF 3/4-16	0.750	4.331	0.945	2.461	0.590	0.442	0.689	4
★	AE2336416-UNF7/8	UNF 7/8-14	0.875	4.921	0.945	2.992	0.697	0.523	0.750	5
★	AE2336416-UNF1.0	UNF 1"-12	1.000	5.512	1.024	2.969	0.800	0.600	0.811	5

HSS-E-PM machine taps
Paradur® Ni mm

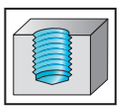


– For long-chipping materials

≤ 1,5×D_N | C=2-3 | 25° | 44HRC 1400 –700 N/mm²

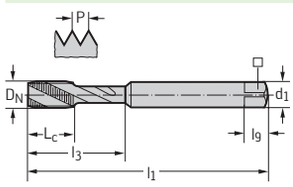
UNF
ASME B1.1

3B



	P	M	K	N	S	H	O
TiCN	●				●●		
Uncoated	●				●●		

~DIN 2184-1

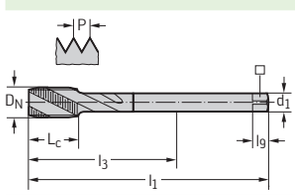


Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
23410406-UNF8	234104-UNF8	UNF 8-36	4.166	63	13	42	4.5	3.4	6	3
23410406-UNF10	234104-UNF10	UNF 10-32	4.826	70	16	16	6	4.9	8	3
23410406-UNF12	234104-UNF12	UNF 12-28	5.486	80	15	23	6	4.9	8	3
23410406-UNF1/4	234104-UNF1/4	UNF 1/4-28	6.35	80	15	25	7	5.5	8	3
23410406-UNF5/16	234104-UNF5/16	UNF 5/16-24	7.938	90	18	29.5	8	6.2	9	3
23410406-UNF3/8	234104-UNF3/8	UNF 3/8-24	9.525	100	20	33.5	10	8	11	4

≤ UNF 10: Without reduced neck after the thread

B 3

DIN 2184-1



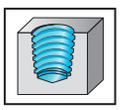
Designation TiCN	Designation uncoated	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
23460406-UNF7/16	234604-UNF7/16	UNF 7/16-20	11.113	100	20	76	8	6.2	9	4
23460406-UNF1/2	234604-UNF1/2	UNF 1/2-20	12.7	100	23	73	9	7	10	4
23460406-UNF5/8	234604-UNF5/8	UNF 5/8-18	15.875	100	25	58	12	9	12	4

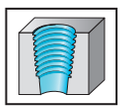
HSS-E machine taps
Paradur® Ni mm

– For long-chipping materials

C=2-3 | 15° | 44HRC 1400 –700 N/mm²

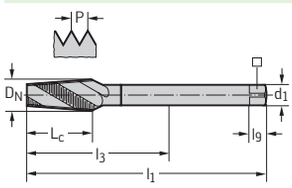
NPT
ASME B1.20.1





	P	M	K	N	S	H	O
TiCN	●				●●		
Uncoated	●				●●		

PWZ



Designation TiCN	Designation uncoated	D_N-P	D_N mm	Threads per inch	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N
2546706-NPT1/16	25467-NPT1/16	NPT 1/16-27	7.717	27	80	14	56	8	6.2	6	3
2546706-NPT1/8	25467-NPT1/8	NPT 1/8-27	10.065	27	90	14	61	11	9	9	4
2546706-NPT1/4	25467-NPT1/4	NPT 1/4-18	13.372	18	100	20	56	14	11	11	4
2546706-NPT3/8	25467-NPT3/8	NPT 3/8-18	16.812	18	110	20	65	16	12	12	5
2546706-NPT1/2	25467-NPT1/2	NPT 1/2-14	20.947	14	125	26	78	18	14.5	15	5
2546706-NPT3/4	25467-NPT3/4	NPT 3/4-14	26.292	14	140	26	75	22	18	18	5
2546706-NPT1	25467-NPT1	NPT 1"-11.5	32.914	12	150	31	81	28	22	22	5

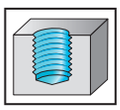
Taper ratio 1:16

HSS-E machine taps
TC117 Advance inch

– Universal cut tap
– For 2B and 3B tolerances
– WY80FC: best chip control
– WY80RG: good chip control, good wear resistance

UN-8
ASME B1.1

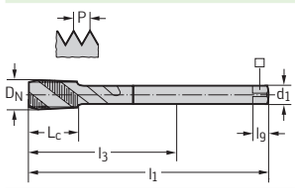
2B / 3B



≤ 2.5×D_N | C=2-3 | 40° | 370HB / 150HB

	P	M	K	N	S	H	O
WY80RG	●●	●●	●●	●●			

DIN/ANSI



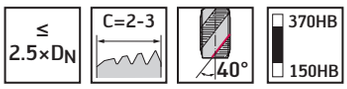
Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80RG
TC117.UN1.1/8-R0-	UN 1.1/8-8	1.125	7.087	1.181	4.472	0.896	0.672	0.880	5	●
TC117.UN1.1/4-R0-	UN 1.1/4-8	1.250	7.087	1.181	4.354	1.021	0.766	1.000	5	●
TC117.UN1.3/8-R0-	UN 1.3/8-8	1.375	7.874	1.181	4.016	1.108	0.831	1.063	5	●
TC117.UN1.1/2-R0-	UN 1.1/2-8	1.500	7.874	1.181	3.953	1.233	0.925	1.126	5	●
TC117.UN1.5/8-R0-	UN 1.5/8-8	1.625	7.874	1.299	3.953	1.305	0.979	1.126	6	●

Order example for grade WY80RG: TC117.UN1.1/8-R0-WY80RG

B3

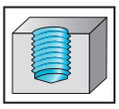
HSS-E machine taps
TC117 Advance inch

– Universal cut tap
– For 2B and 3B tolerances
– WY80FC: best chip control
– WY80RG: good chip control, good wear resistance



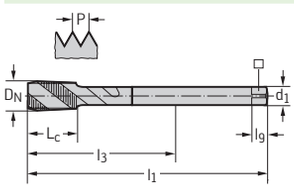
UNS
ASME B1.1

2B / 3B



	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			
WY80RG	●●	●●	●●	●●			

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC	WY80RG
TC117.UNS1.0-R0-	UNS 1"-14	1.000	5.512	0.787	2.969	0.800	0.600	0.811	5	●	●

Order example for grade WY80RG: TC117.UNS1.0-R0-WY80RG

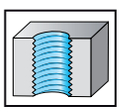
B 3

HSS-E machine taps
TC217 Advance inch

– Universal cut tap
– WY80FC: best chip control

STI-UNC
NASM 33537

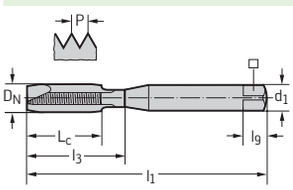
3B



≤ 3×D_N | B=3.5-5 | 370HB / 100HB

	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			

DIN/ANSI

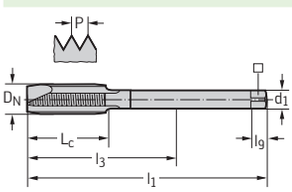


Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC
TC217.STIUNC2-B0-	STI-UNC 2-56	0.109	2.205	0.354	0.709	0.141	0.110	0.190	2	●
TC217.STIUNC4-B0-	STI-UNC 4-40	0.144	2.205	0.472	0.827	0.141	0.110	0.190	2	●
TC217.STIUNC6-B0-	STI-UNC 6-32	0.179	2.756	0.512	0.984	0.194	0.152	0.250	3	●
TC217.STIUNC8-B0-	STI-UNC 8-32	0.205	2.756	0.591	0.984	0.194	0.152	0.250	3	●
TC217.STIUNC10-B0-	STI-UNC 10-24	0.244	3.150	0.591	1.181	0.255	0.191	0.313	3	●
TC217.STIUNC1/4B0-	STI-UNC 1/4-20	0.315	3.543	0.709	1.378	0.318	0.238	0.380	3	●

Order example for grade WY80FC: TC217.STIUNC2-B0-WY80FC

B3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC
TC217.STIUNC3/8K0-	STI-UNC 3/8-16	0.456	3.937	0.827	2.831	0.367	0.275	0.437	4	●

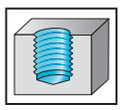
Order example for grade WY80FC: TC217.STIUNC3/8K0-WY80FC

HSS-E machine taps
TC117 Advance inch

– Universal cut tap
– WY80FC: best chip control

STI-UNC
NASM 33537

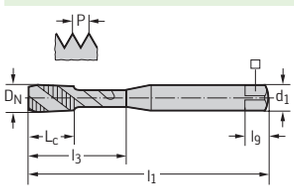
3B



≤ 2.5×D_N | C=2-3 | 40° | 370HB / 150HB

	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			

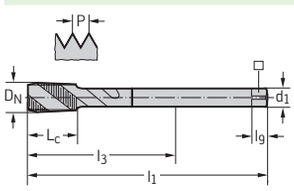
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC117.STIUNC2-B0-	STI-UNC 2-56	0.109	2.205	0.236	0.709	0.141	0.110	0.190	3	●
TC117.STIUNC4-B0-	STI-UNC 4-40	0.144	2.205	0.276	0.827	0.141	0.110	0.190	3	●
TC117.STIUNC6-B0-	STI-UNC 6-32	0.179	2.756	0.315	0.984	0.194	0.152	0.250	3	●
TC117.STIUNC8-B0-	STI-UNC 8-32	0.205	2.756	0.394	0.984	0.194	0.152	0.250	3	●
TC117.STIUNC10-B0-	STI-UNC 10-24	0.244	3.150	0.394	1.181	0.255	0.191	0.313	3	●
TC117.STIUNC1/4B0-	STI-UNC 1/4-20	0.315	3.543	0.472	1.378	0.318	0.238	0.380	3	●

Order example for grade WY80FC: TC117.STIUNC2-B0-WY80FC

DIN/ANSI



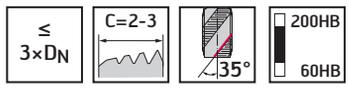
Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC117.STIUNC3/8K0-	STI-UNC 3/8-16	0.456	3.937	0.591	2.831	0.367	0.275	0.437	3	●

Order example for grade WY80FC: TC117.STIUNC3/8K0-WY80FC

B3

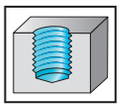
HSS-E machine taps
Paradur® X·pert N inch

– For long-chipping aluminum alloys (Si content < 7 %)



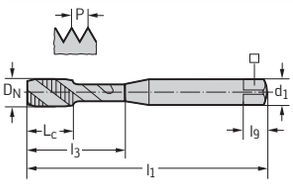
STI-UNC
NASM 33537

3B



	P	M	K	N	S	H	O
uncoated				●●	●		●

DIN/ANSI



Designation uncoated	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AN225069-STIUNC2	STI-UNC 2-56	0.109	2.205	0.236	0.709	0.141	0.110	0.190	2
★ AN225069-STIUNC4	STI-UNC 4-40	0.144	2.205	0.276	0.827	0.141	0.110	0.190	2
★ AN225069-STIUNC6	STI-UNC 6-32	0.179	2.756	0.315	0.984	0.194	0.152	0.250	2
★ AN225069-STIUNC8	STI-UNC 8-32	0.205	2.756	0.394	0.984	0.194	0.152	0.250	2
★ AN225069-STIUNC10	STI-UNC 10-24	0.244	3.150	0.394	1.181	0.255	0.191	0.313	2
★ AN225069-STIUNC1/4	STI-UNC 1/4-20	0.315	3.543	0.472	1.378	0.318	0.238	0.380	2

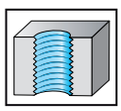
B3

HSS-E machine taps
TC217 Advance inch

– Universal cut tap
– WY80FC: best chip control

STI-UNF
NASM 33537

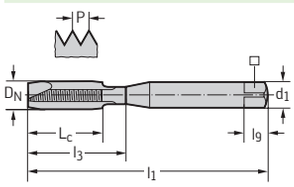
3B



≤ 3×D_N | B=3.5-5 | 370HB / 100HB

	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			

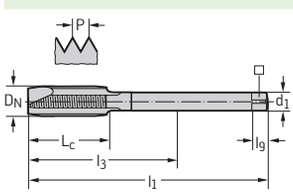
DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC
TC217.STIUNF10-B0-	STI-UNC 10-24	0.244	3.150	0.591	1.181	0.255	0.191	0.313	3	●
TC217.STIUNF1/4B0-	STI-UNC 1/4-20	0.315	3.543	0.709	1.378	0.318	0.238	0.380	3	●

Order example for grade WY80FC: TC217.STIUNF10-B0-WY80FC

DIN/ANSI



Designation	D_N-P	D_N in	l_1 h9 in	L_c in	l_3 in	d_1 in	□ in	l_9 in	N	WY80FC
TC217.STIUNF3/8K0-	STI-UNC 3/8-16	0.456	3.937	0.787	2.862	0.323	0.242	0.406	3	●

Order example for grade WY80FC: TC217.STIUNF3/8K0-WY80FC

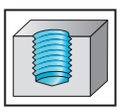
B 3

HSS-E machine taps
TC117 Advance inch

– Universal cut tap
– WY80FC: best chip control

STI-UNF
NASM 33537

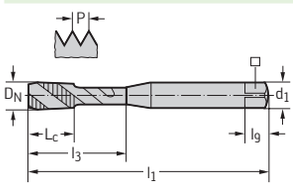
3B



≤ 2.5×D_N | C=2-3 | 40° | 370HB / 150HB

	P	M	K	N	S	H	O
WY80FC	●●	●●	●●	●●			

DIN/ANSI

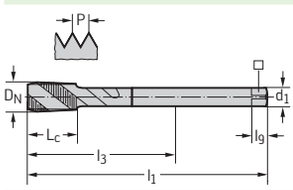


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC117.STIUNF10-B0-	STI-UNC 10-24	0.244	3.150	0.394	1.181	0.255	0.191	0.313	3	●
TC117.STIUNF1/4B0-	STI-UNC 1/4-20	0.315	3.543	0.472	1.378	0.318	0.238	0.380	3	●

Order example for grade WY80FC: TC117.STIUNF10-B0-WY80FC

B 3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80FC
TC117.STIUNF3/8K0-	STI-UNC 3/8-16	0.456	3.937	0.591	2.862	0.323	0.242	0.406	3	●

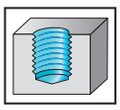
Order example for grade WY80FC: TC117.STIUNF3/8K0-WY80FC

HSS-E machine taps
Paradur® X·pert N inch

– For long-chipping aluminum alloys (Si content < 7 %>

STI-UNF
NASM 33537

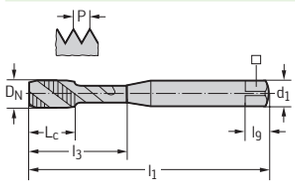
3B



≤ 3×D_N | C=2-3 | 35° | 200HB / 60HB

	P	M	K	N	S	H	O
uncoated				●●	●		●

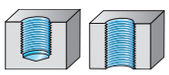
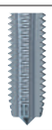
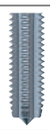
DIN/ANSI



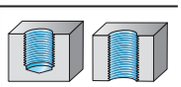
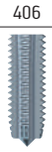
Designation uncoated	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N
★ AN235069-STIUNF10	STI-UNC 10-24	0.244	3.150	0.394	1.181	0.255	0.191	0.313	2
★ AN235069-STIUNF1/4	STI-UNC 1/4-20	0.315	3.543	0.472	1.378	0.318	0.238	0.380	3

B 3

Solid carbide taps product range overview M – Metric thread

Machining		
Thread depth	**2 × D_N**	
Designation	**TC388 Supreme**	**TC389 Supreme**
Dimension range	M 3–M 16	M 3–M 16
Tolerance	6HX	6HX
Coolant supply	External	External
Chamfer form	C	D
Coating/grade	WJ30BA	WE10BA
Version length	M	M
Page	405	405
		

Solid carbide taps product range overview G

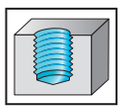
Machining	
Thread depth	**2 × D_N**
Designation	**TC388 Supreme**
Dimension range	G 1/8-28– G 1/4-19
Tolerance	6HX
Coolant supply	External
Chamfer form	C
Coating/grade	WJ30BA
Version length	M
Page	406
	

Solid carbide machine taps
TC388 Supreme mm

– Taps for hardened materials
– Drill core hole at upper tolerance end

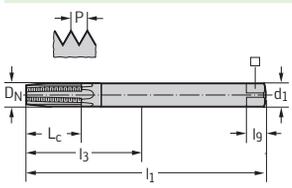
≤ 2×D_N | C=2-3 | 58HRC / 50HRC

M DIN 13 | 6HX



	P	M	K	N	S	H	O
WJ30BA					●	●●	

~DIN 371



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h6 mm	□ mm	l_9 mm	N	WJ30BA
TC388-M3-C0-	M 3	0.5	56	8	35	3.5	2.7	6	4	☺
TC388-M4-C0-	M 4	0.7	63	11	42	4.5	3.4	6	5	☺
TC388-M5-C0-	M 5	0.8	70	13.5	47	6	4.9	8	5	☺
TC388-M6-C0-	M 6	1	80	16.5	57	6	4.9	8	5	☺
TC388-M8-C0-	M 8	1.25	90	21.5	66	8	6.2	9	5	☺
TC388-M10-C0-	M 10	1.5	100	27	72	10	8	11	5	☺
TC388-M12-C0-	M 12	1.75	110	32	68	12	9	12	6	☺
TC388-M16-C0-	M 16	2	110	41	65	16	12	15	6	☺

Without reduced neck after the thread
Ordering example for the WJ30BA grade: TC388-M3-C0-WJ30BA

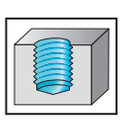
B 3

Solid carbide machine taps
TC389 Supreme mm

– Taps for hardened materials
– Drill core hole at upper tolerance end

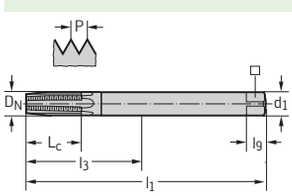
≤ 2×D_N | D=3,5-5 | 65HRC / 55HRC

M DIN 13 | 6HX



	P	M	K	N	S	H	O
WE10BA					●	●●	

~DIN 371



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h6 mm	□ mm	l_9 mm	N	WE10BA
TC389-M3-CD-	M 3	0.5	56	9	35	3.5	2.7	6	4	☺
TC389-M4-CD-	M 4	0.7	63	12	42	4.5	3.4	6	5	☺
TC389-M5-CD-	M 5	0.8	70	14.5	47	6	4.9	8	5	☺
TC389-M6-CD-	M 6	1	80	18	57	6	4.9	8	5	☺
TC389-M8-CD-	M 8	1.25	90	23.5	66	8	6.2	9	5	☺
TC389-M10-CD-	M 10	1.5	100	29	72	10	8	11	5	☺
TC389-M12-CD-	M 12	1.75	110	34.5	68	12	9	12	6	☺
TC389-M16-CD-	M 16	2	110	44	65	16	12	15	6	☺

Without reduced neck after the thread
Ordering example for the WE10BA grade: TC389-M3-CD-WE10BA

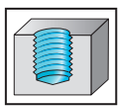
☺☺☹ / ★ New addition to the product range

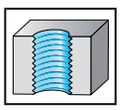
Solid carbide machine taps
TC388 Supreme mm

– Taps for hardened materials
– Drill core hole at upper tolerance end

≤ 2×D_N | C=2-3 | 58HRC / 50HRC

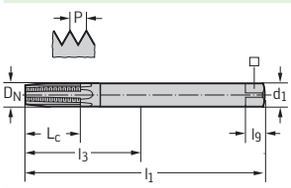
G
DIN EN ISO 228





	P	M	K	N	S	H	O
WJ30BA					●	●●	

~DIN 371



Designation	D_N-P	D_N mm	Threads per inch	l_1 mm	L_c mm	l_3 mm	d_1 h6 mm	□ mm	l_9 mm	N	WJ30BA
TC388-G1/8-C0-	G 1/8-28	9.728	28	90	23.5	62	10	8	11	5	☺
TC388-G1/4-C0-	G 1/4-19	13.157	19	100	32.5	56	14	11	14	6	☺

Without reduced neck after the thread
Ordering example for the WJ30BA grade: TC388-G1/8-C0-WJ30BA

B3

☺ ☹ ☠ / ★ New addition to the product range

HSS-E(-PM) and solid carbide thread formers product range overview M – Metric thread

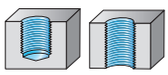
Machining						
Thread depth	**3 × D_N**			**3.5 × D_N**		
Designation	**TC420 Supreme**	**TC410 Advance**	**TC410 Advance**	**TC420 Supreme**	**TC430 Supreme**	**TC410 Advance**
Dimension range	M 2–M 20	M 1–M 24	M 3 LH–M 16 LH	M 2–M 20	M 3–M 16	M 2–M 24
Tolerance	6HX / 6GX	6HX / 6GX / 7GX	6HX	6HX / 6GX	6HX / 6GX	6HX / 6GX / 7GX
Coolant supply	External	External	External	External/radial	External/radial	External
Chamfer form	C	C / D	C	C / E	C	C
Coating/grade	WW60AD / WW60BA	WY80AD	WY80AD	WW60AD / WW60BA	WW60AD / WW60EL	WY80AD
Cutting tool material	HSS-E-PM	HSS-E	HSS-E	HSS-E-PM	HSS-E-PM	HSS-E
Length standard	DIN	DIN	DIN	DIN	DIN	
Page	410	423	425	413	419	426

Machining			
Thread depth	**3 × D_N**	**3.5 × D_N**	
Designation	**TC420 Supreme**	**TC420 Supreme**	**TC430 Supreme**
Dimension range	M 5–M 16	M 2–M 16	M 8–M 16
Tolerance	6HX	6HX	6HX
Coolant supply	Axial	External	Axial
Chamfer form	C	E	C
Coating/grade	WW60AD / WW60BA	WW60AD / WW60BA	WW60AD
Cutting tool material	HSS-E-PM	HSS-E-PM	HSS-E-PM
Length standard	DIN	DIN	DIN
Page	411	432	422

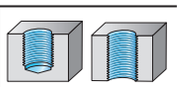
HSS-E(-PM) and solid carbide thread formers product range overview MF – Metric fine-pitch thread

Machining					
Thread depth	**3.5 × D_N**			**3.5 × D_N**	
Designation	**TC420 Supreme**	**TC430 Supreme**	**TC410 Advance**	**TC420 Supreme**	**TC430 Supreme**
Dimension range	MF 8x1– MF 16x1.5	MF 8x1– MF 16x1.5	MF 4x0.5– MF 30x2	MF 8x1– MF 14x1.5	MF 8x1– M 16x1.5
Tolerance	6HX / 6GX	6HX	6HX / 6GX	6HX	6HX
Coolant supply	External/radial	External/radial	External	Axial	Axial
Chamfer form	C	C	C / E	C	C
Coating/grade	WW60AD / WW60BA	WW60AD / WW60EL	WY80AD	WW60AD	WW60AD
Cutting tool material	HSS-E-PM	HSS-E-PM	HSS-E	HSS-E-PM	HSS-E-PM
Length standard	DIN	DIN	DIN	DIN	DIN
Page	414	420	436	432	434

HSS-E and solid carbide thread formers product range overview UNC / UNF

Machining		
Thread depth	**3.5 × D_N**	
Designation	**TC410 Advance**	**TC410 Advance**
Dimension range	UNC 2-56– UNC 5/8-11	UNF 2-64– UNF 5/8-18
Tolerance	2BX	2BX
Coolant supply	External	External
Chamfer form	C	C
Coating/grade	WY80AD	WY80AD
Cutting tool material	HSS-E	HSS-E
Length standard	DIN / ANSI	DIN
Page	439	443

HSS-E and solid carbide thread formers product range overview G

Machining	
Thread depth	**3.5 × D_N**
Designation	**TC410 Advance**
Dimension range	G 1/8-28– G 1"-11
Tolerance	NORMAL
Coolant supply	External
Chamfer form	C
Coating/grade	WY80AD
Cutting tool material	HSS-E
Length standard	DIN
Page	444

Designation key
HSS-E(-PM) thread formers

Example:

T	C	4	20	–	M10	–	C	1	–	W	W	60	AD
1	2	3	4	5	6		7	8		Grade			

1	2	3	4	
Tool group	Generation	Tool type	Tool type	
T Threading		4 Thread formers	10 / 20 Universal 200–1 200 N/mm²	30 ISO P 200–1 200 N/mm²

5	6	7		8
1. Delimiters	Thread dimensions	Tolerance/shank type		Modification
– Metric		C 6HX, 2BX Reinforced shank	L 6HX, 2BX Reduced shank	0 External cooling without lubrication grooves
. DIN/ANSI		E 6GX Reinforced shank	N 6GX Reduced shank	1 Axial internal cooling, without lubrication grooves
		F 7GX Reinforced shank	P 7GX Reduced shank	2 Radial internal cooling
				6 External cooling with lubrication grooves
				E Chamfer form E
				H Extended shank XL

Grade designation key
for solid carbide and HSS-E(-PM) cutting tool materials

Example:

W	W	60	AD
Walter	1	2	3

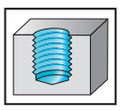
1		2	3
Substrate		Application range	Coating
Solid carbide		Wear resistance 05 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 Toughness	AD TiN
HSS-E-PM	W		BA TiCN
HSS-E	Y		EL AlCRN

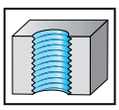
HSS-E-PM machine thread formers
TC420 Supreme mm

≤ 3×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

– For long-chipping materials

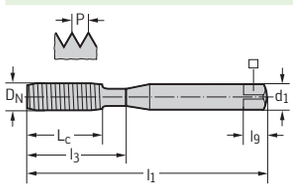
M DIN 13 | 6HX





	P	M	K	N	S	H	O
WW60AD	●●	●	●	●●	●		
WW60BA	●●	●	●	●●	●		

DIN 2174

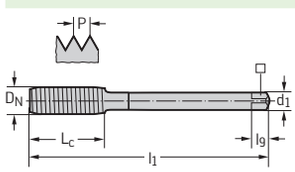


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M2-C0-	M 2	0.4	45	4	11	2.8	2.1	5	3	✕	✕
TC420-M2.5-C0-	M 2.5	0.45	50	4	14	2.8	2.1	5	3	✕	✕
TC420-M3-C0-	M 3	0.5	56	6	18	3.5	2.7	6	4	✕	✕
TC420-M3.5-C0-	M 3.5	0.6	56	7	20	4	3	6	4	✕	✕
TC420-M4-C0-	M 4	0.7	63	7	21	4.5	3.4	6	5	✕	✕
TC420-M5-C0-	M 5	0.8	70	8	25	6	4.9	8	5	✕	✕
TC420-M6-C0-	M 6	1	80	10	30	6	4.9	8	5	✕	✕
TC420-M8-C0-	M 8	1.25	90	12	35	8	6.2	9	5	✕	✕
TC420-M10-C0-	M 10	1.5	100	15	39	10	8	11	6	✕	✕

Ordering example for the WW60AD grade: TC420-M2-C0-WW60AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-L0-	M 12	1.75	110	16	83	9	7	10	6	✕	✕
TC420-M14-L0-	M 14	2	110	20	81	11	9	12	6	✕	✕
TC420-M16-L0-	M 16	2	110	20	68	12	9	12	6	✕	✕
TC420-M20-L0-	M 20	2.5	140	25	95	16	12	15	7	✕	

Ordering example for the WW60AD grade: TC420-M12-L0-WW60AD

HSS-E-PM machine thread formers
TC420 Supreme mm

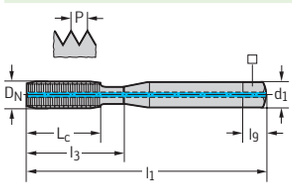
– For long-chipping materials

≤ 3×D_N	C=2-3		36HRC 1200 –200 N/mm²

M DIN 13	6HX	

	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

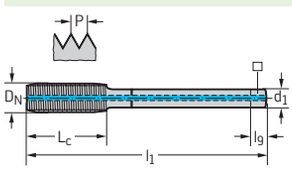
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M5-C1-	M 5	0.8	70	8	25	6	4.9	8	5	●	●
TC420-M6-C1-	M 6	1	80	10	30	6	4.9	8	5	●	●
TC420-M8-C1-	M 8	1.25	90	12	35	8	6.2	9	5	●	●
TC420-M10-C1-	M 10	1.5	100	15	39	10	8	11	6	●	●

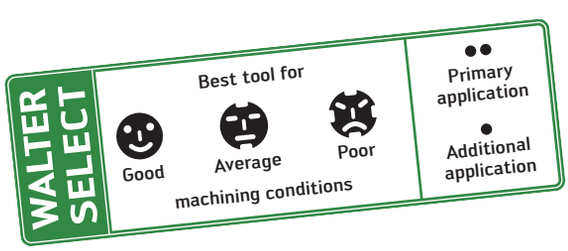
Ordering example for the WW60AD grade: TC420-M5-C1-WW60AD

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-L1-	M 12	1.75	110	16	83	9	7	10	6	●	●
TC420-M14-L1-	M 14	2	110	20	81	11	9	12	6	●	●
TC420-M16-L1-	M 16	2	110	20	68	12	9	12	6	●	●

Ordering example for the WW60AD grade: TC420-M12-L1-WW60AD

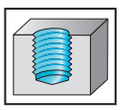


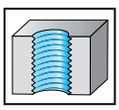
HSS-E-PM machine thread formers
TC420 Supreme mm

≤ 3×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

– For long-chipping materials

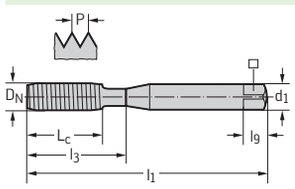
M DIN 13 | 6GX





	P	M	K	N	S	H	O
WW60AD	●●	●	●	●●	●		
WW60BA	●●	●	●	●●	●		

DIN 2174

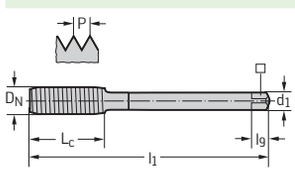


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M2-E0-	M 2	0.4	45	4	11	2.8	2.1	5	3	✕	✕
TC420-M2.5-E0-	M 2.5	0.45	50	4	14	2.8	2.1	5	3	✕	✕
TC420-M3-E0-	M 3	0.5	56	6	18	3.5	2.7	6	4	✕	✕
TC420-M3.5-E0-	M 3.5	0.6	56	7	20	4	3	6	4	✕	✕
TC420-M4-E0-	M 4	0.7	63	7	21	4.5	3.4	6	5	✕	✕
TC420-M5-E0-	M 5	0.8	70	8	25	6	4.9	8	5	✕	✕
TC420-M6-E0-	M 6	1	80	10	30	6	4.9	8	5	✕	✕
TC420-M8-E0-	M 8	1.25	90	12	35	8	6.2	9	5	✕	✕
TC420-M10-E0-	M 10	1.5	100	15	39	10	8	11	6	✕	✕

Ordering example for the WW60AD grade: TC420-M2-E0-WW60AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-N0-	M 12	1.75	110	16	83	9	7	10	6	✕	
TC420-M14-N0-	M 14	2	110	20	81	11	9	12	6	✕	
TC420-M16-N0-	M 16	2	110	20	68	12	9	12	6	✕	

Ordering example for the WW60AD grade: TC420-M12-N0-WW60AD

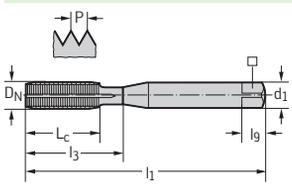
HSS-E-PM machine thread formers
TC420 Supreme mm

– For long-chipping materials

M	6HX		
DIN 13			

	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

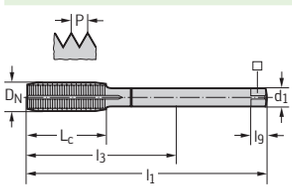
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M2-C6-	M 2	0.4	45	4	11	2.8	2.1	5	3	●	●
TC420-M2.5-C6-	M 2.5	0.45	50	4	14	2.8	2.1	5	3	●	●
TC420-M3-C6-	M 3	0.5	56	6	18	3.5	2.7	6	4	●	●
TC420-M3.5-C6-	M 3.5	0.6	56	7	20	4	3	6	4	●	●
TC420-M4-C6-	M 4	0.7	63	7	21	4.5	3.4	6	5	●	●
TC420-M5-C6-	M 5	0.8	70	8	25	6	4.9	8	5	●	●
TC420-M6-C6-	M 6	1	80	10	30	6	4.9	8	5	●	●
TC420-M8-C6-	M 8	1.25	90	12	35	8	6.2	9	5	●	●
TC420-M10-C6-	M 10	1.5	100	15	39	10	8	11	6	●	●

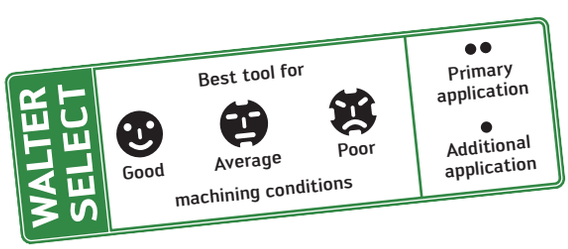
Ordering example for the WW60AD grade: TC420-M2-C6-WW60AD

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-L6-	M 12	1.75	110	16	83	9	7	10	6	●	●
TC420-M14-L6-	M 14	2	110	20	81	11	9	12	6	●	●
TC420-M16-L6-	M 16	2	110	20	68	12	9	12	6	●	●
TC420-M20-L6-	M 20	2.5	140	25	95	16	12	15	7	●	●

Ordering example for the WW60AD grade: TC420-M12-L6-WW60AD



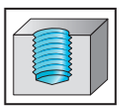
HSS-E-PM machine thread formers
TC420 Supreme mm

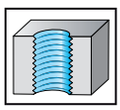
– For long-chipping materials

≤ 3,5×D_N	C=2-3	XL (l_1)	36HRC 1200 –200 N/mm²

M DIN 13

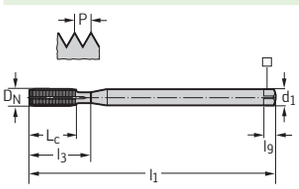
6HX





	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		

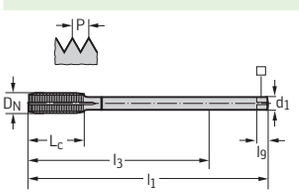
~DIN 371 XL



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC420-M3-CH-	M 3	0.5	125	6	18	3.5	2.7	6	4	●
TC420-M4-CH-	M 4	0.7	125	7	21	4.5	3.4	6	5	●
TC420-M5-CH-	M 5	0.8	140	8	25	6	4.9	8	5	●
TC420-M6-CH-	M 6	1	160	10	30	6	4.9	8	5	●

Ordering example for the WW60AD grade: TC420-M3-CH-WW60AD

~DIN376 XL



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC420-M8-LH-	M 8	1.25	180	13	157	6	4.9	8	5	●
TC420-M10-LH-	M 10	1.5	200	15	177	7	5.5	8	6	●
TC420-M12-LH-	M 12	1.75	220	16	193	9	7	10	6	●
TC420-M16-LH-	M 16	2	220	20	178	12	9	12	6	●

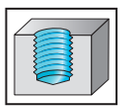
Ordering example for the WW60AD grade: TC420-M8-LH-WW60AD

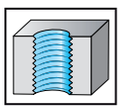
HSS-E-PM machine thread formers
TC420 Supreme mm

– For long-chipping materials

M
DIN 13

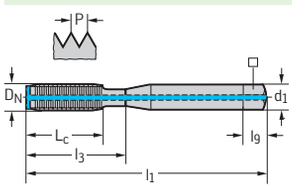
6HX





	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

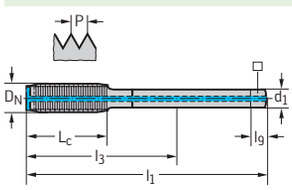
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M5-C2-	M 5	0.8	70	8	25	6	4.9	8	5	●	●
TC420-M6-C2-	M 6	1	80	10	30	6	4.9	8	5	●	●
TC420-M8-C2-	M 8	1.25	90	12	35	8	6.2	9	5	●	●
TC420-M10-C2-	M 10	1.5	100	15	39	10	8	11	6	●	●

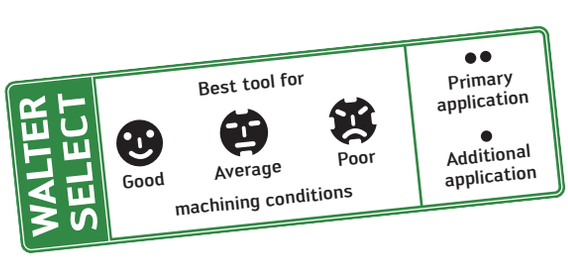
Ordering example for the WW60AD grade: TC420-M5-C2-WW60AD

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-L2-	M 12	1.75	110	16	83	9	7	10	6	●	●
TC420-M14-L2-	M 14	2	110	20	81	11	9	12	6	●	●
TC420-M16-L2-	M 16	2	110	20	68	12	9	12	6	●	●
TC420-M20-L2-	M 20	2.5	140	25	95	16	12	15	7	●	●

Ordering example for the WW60AD grade: TC420-M12-L2-WW60AD

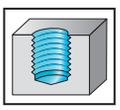


HSS-E-PM machine thread formers
TC420 Supreme mm

≤ 3,5×D_N | E=1,5-2 | 36HRC 1200 –200 N/mm²

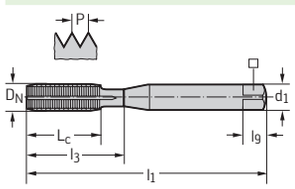
– For long-chipping materials

M DIN 13 | 6HX



	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

DIN 2174

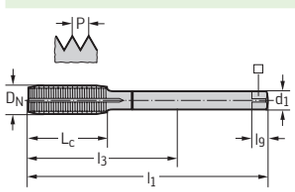


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M2-CE-	M 2	0.4	45	4	11	2.8	2.1	5	3	✕	✕
TC420-M2.5-CE-	M 2.5	0.45	50	4	14	2.8	2.1	5	3	✕	✕
TC420-M3-CE-	M 3	0.5	56	6	18	3.5	2.7	6	4	✕	✕
TC420-M3.5-CE-	M 3.5	0.6	56	7	20	4	3	6	4	✕	✕
TC420-M4-CE-	M 4	0.7	63	7	21	4.5	3.4	6	5	✕	✕
TC420-M5-CE-	M 5	0.8	70	8	25	6	4.9	8	5	✕	✕
TC420-M6-CE-	M 6	1	80	10	30	6	4.9	8	5	✕	✕
TC420-M8-CE-	M 8	1.25	90	12	35	8	6.2	9	5	✕	✕
TC420-M10-CE-	M 10	1.5	100	15	39	10	8	11	6	✕	✕

Ordering example for the WW60AD grade: TC420-M2-CE-WW60AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-LE-	M 12	1.75	110	16	83	9	7	10	6	✕	✕
TC420-M14-LE-	M 14	2	110	20	81	11	9	12	6	✕	✕
TC420-M16-LE-	M 16	2	110	20	68	12	9	12	6	✕	✕

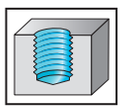
Ordering example for the WW60AD grade: TC420-M12-LE-WW60AD

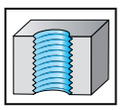
HSS-E-PM machine thread formers
TC420 Supreme mm

– For long-chipping materials

M
DIN 13

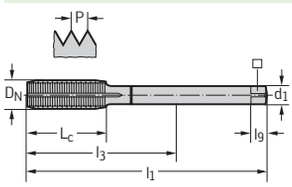
6GX





	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

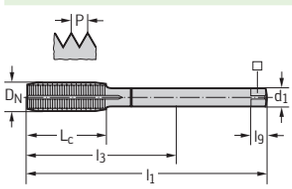
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M2-E6-	M 2	0.4	45	4	11	2.8	2.1	5	3	●	●
TC420-M2.5-E6-	M 2.5	0.45	50	4	14	2.8	2.1	5	3	●	●
TC420-M3-E6-	M 3	0.5	56	6	18	3.5	2.7	6	4	●	●
TC420-M3.5-E6-	M 3.5	0.6	56	7	20	4	3	6	4	●	●
TC420-M4-E6-	M 4	0.7	63	7	21	4.5	3.4	6	5	●	●
TC420-M5-E6-	M 5	0.8	70	8	25	6	4.9	8	5	●	●
TC420-M6-E6-	M 6	1	80	10	30	6	4.9	8	5	●	●
TC420-M8-E6-	M 8	1.25	90	12	35	8	6.2	9	5	●	●
TC420-M10-E6-	M 10	1.5	100	15	39	10	8	11	6	●	●

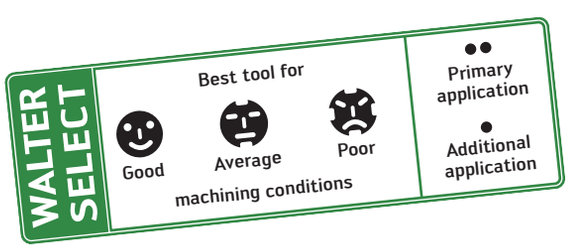
Ordering example for the WW60AD grade: TC420-M2-E6-WW60AD

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-N6-	M 12	1.75	110	16	83	9	7	10	6	●	
TC420-M14-N6-	M 14	2	110	20	81	11	9	12	6	●	
TC420-M16-N6-	M 16	2	110	20	68	12	9	12	6	●	

Ordering example for the WW60AD grade: TC420-M12-N6-WW60AD

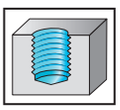


HSS-E-PM machine thread formers
TC420 Supreme mm

≤ 3,5×D_N | E=1,5-2 | 36HRC 1200 –200 N/mm²

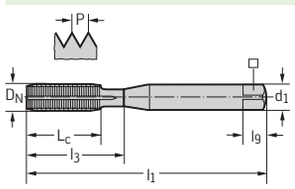
– For long-chipping materials

M DIN 13 | 6GX



	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

DIN 2174

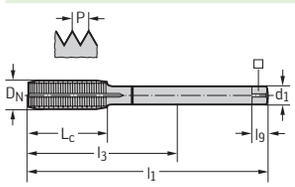


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M2-EE-	M 2	0.4	45	4	11	2.8	2.1	5	3	✕	✕
TC420-M2.5-EE-	M 2.5	0.45	50	4	14	2.8	2.1	5	3	✕	✕
TC420-M3-EE-	M 3	0.5	56	6	18	3.5	2.7	6	4	✕	✕
TC420-M4-EE-	M 4	0.7	63	7	21	4.5	3.4	6	5	✕	✕
TC420-M5-EE-	M 5	0.8	70	8	25	6	4.9	8	5	✕	✕
TC420-M6-EE-	M 6	1	80	10	30	6	4.9	8	5	✕	✕
TC420-M8-EE-	M 8	1.25	90	12	35	8	6.2	9	5	✕	✕
TC420-M10-EE-	M 10	1.5	100	15	39	10	8	11	6	✕	✕

Ordering example for the WW60AD grade: TC420-M2-EE-WW60AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M12-NE-	M 12	1.75	110	16	83	9	7	10	6	✕	
TC420-M14-NE-	M 14	2	110	20	81	11	9	12	6	✕	
TC420-M16-NE-	M 16	2	110	20	68	12	9	12	6	✕	

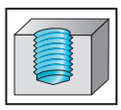
Ordering example for the WW60AD grade: TC420-M12-NE-WW60AD

HSS-E-PM machine thread formers
TC430 Supreme mm

– For long-chipping materials
– ISO-M with oil only

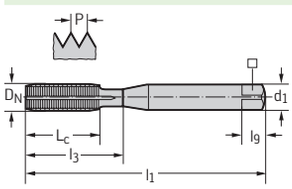
≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

M DIN 13 | 6HX



	P	M	K	N	S	H	O
WW60EL	●●	●	●	●			
WW60AD	●●	●	●	●			

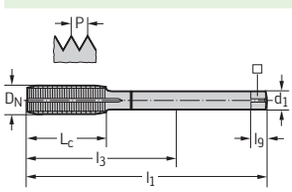
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60EL	WW60AD
TC430-M3-C6-	M 3	0.5	56	6	18	3.5	2.7	6	4	✖	
TC430-M4-C6-	M 4	0.7	63	7	21	4.5	3.4	6	5	✖	
TC430-M5-C6-	M 5	0.8	70	8	25	6	4.9	8	5	✖	
TC430-M6-C6-	M 6	1	80	10	30	6	4.9	8	5	✖	
TC430-M8-C6-	M 8	1.25	90	12	35	8	6.2	9	6	✖	✖
TC430-M10-C6-	M 10	1.5	100	15	39	10	8	11	7	✖	✖

Ordering example for the WW60AD grade: TC430-M8-C6-WW60AD

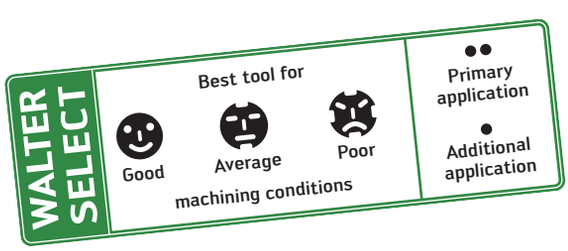
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60EL	WW60AD
TC430-M12-L6-	M 12	1.75	110	16	83	9	7	10	8	✖	✖
TC430-M16-L6-	M 16	2	110	20	68	12	9	12	8		✖

Ordering example for the WW60AD grade: TC430-M12-L6-WW60AD

B 3

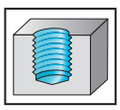


HSS-E-PM machine thread formers
TC430 Supreme mm

– For long-chipping materials
– ISO-M with oil only

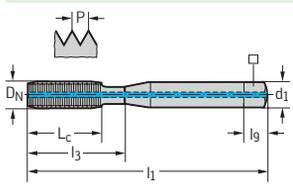
≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

M DIN 13 | 6HX



	P	M	K	N	S	H	O
WW60AD	●●	●	●	●			

DIN 2174

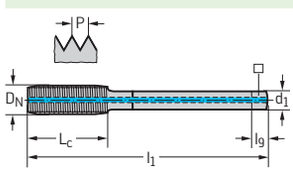


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M8-C1-	M 8	1.25	90	12	35	8	6.2	9	6	✖
TC430-M10-C1-	M 10	1.5	100	15	39	10	8	11	7	✖

Ordering example for the WW60AD grade: TC430-M8-C1-WW60AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M12-L1-	M 12	1.75	110	16	83	9	7	10	8	✖
TC430-M16-L1-	M 16	2	110	20	68	12	9	12	8	✖

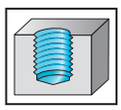
Ordering example for the WW60AD grade: TC430-M12-L1-WW60AD

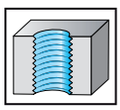
HSS-E-PM machine thread formers
TC430 Supreme mm

– For long-chipping materials
– ISO-M with oil only

M
DIN 13

6HX

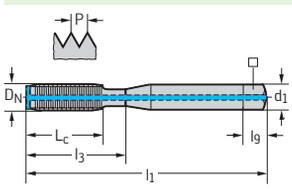




≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WW60AD	●●	●	●	●			

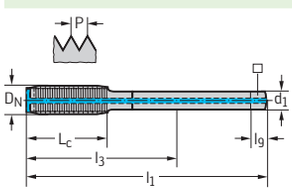
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M8-C2-	M 8	1.25	90	12	35	8	6.2	9	6	●
TC430-M10-C2-	M 10	1.5	100	15	39	10	8	11	7	●

Ordering example for the WW60AD grade: TC430-M8-C2-WW60AD

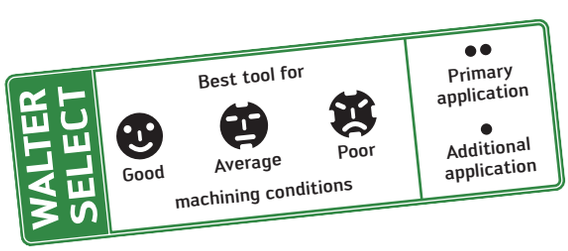
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M12-L2-	M 12	1.75	110	16	83	9	7	10	8	●
TC430-M16-L2-	M 16	2	110	20	68	12	9	12	8	●

Ordering example for the WW60AD grade: TC430-M12-L2-WW60AD

B 3

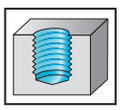


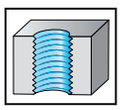
HSS-E-PM machine thread formers
TC430 Supreme mm

– For long-chipping materials
– ISO-M with oil only

≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

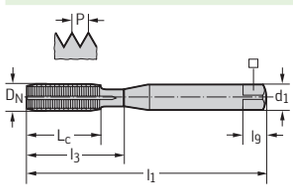
M DIN 13 | 6GX





	P	M	K	N	S	H	O
WW60AD	●●	●	●	●			

DIN 2174

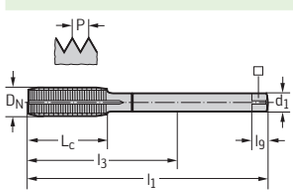


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M8-E6-	M 8	1.25	90	12	35	8	6.2	9	6	●
TC430-M10-E6-	M 10	1.5	100	15	39	10	8	11	7	●

Ordering example for the WW60AD grade: TC430-M8-E6-WW60AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M12-N6-	M 12	1.75	110	16	83	9	7	10	8	●
TC430-M16-N6-	M 16	2	110	20	68	12	9	12	8	●

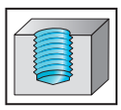
Ordering example for the WW60AD grade: TC430-M12-N6-WW60AD

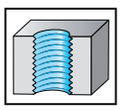
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

M
DIN 13

6HX

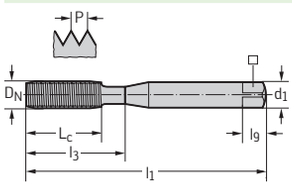




≤ 3×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WY80AD	●●	●	●	●●	●		

DIN 2174

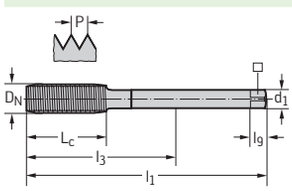


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M1-C0-	M 1	0.25	40	5	5	2.5	2.1	5	3	⊗
TC410-M1.1-C0-	M 1.1	0.25	40	5	5	2.5	2.1	5	3	⊗
TC410-M1.2-C0-	M 1.2	0.25	40	5	5	2.5	2.1	5	3	⊗
TC410-M1.4-C0-	M 1.4	0.3	40	7	7	2.5	2.1	5	3	⊗
TC410-M1.6-C0-	M 1.6	0.35	40	7	7	2.5	2.1	5	3	⊗
TC410-M1.7-C0-	M 1.7	0.35	40	7	7	2.5	2.1	5	3	⊗
TC410-M1.8-C0-	M 1.8	0.35	40	7	7	2.5	2.1	5	3	⊗
TC410-M2-C0-	M 2	0.4	45	6	11	2.8	2.1	5	3	⊗
TC410-M2.2-C0-	M 2.2	0.45	45	7	12	2.8	2.1	5	3	⊗
TC410-M2.3-C0-	M 2.3	0.4	45	7	12	2.8	2.1	5	3	⊗
TC410-M2.5-C0-	M 2.5	0.45	50	8	13	2.8	2.1	5	3	⊗
TC410-M2.6-C0-	M 2.6	0.45	50	8	14	2.8	2.1	5	3	⊗
TC410-M3-C0-	M 3	0.5	56	9	18	3.5	2.7	6	4	⊗
TC410-M3.5-C0-	M 3.5	0.6	56	11	20	4	3	6	4	⊗
TC410-M4-C0-	M 4	0.7	63	12	21	4.5	3.4	6	5	⊗
TC410-M5-C0-	M 5	0.8	70	13	25	6	4.9	8	5	⊗
TC410-M6-C0-	M 6	1	80	15	30	6	4.9	8	5	⊗
TC410-M7-C0-	M 7	1	80	15	30	7	5.5	8	5	⊗
TC410-M8-C0-	M 8	1.25	90	18	35	8	6.2	9	5	⊗
TC410-M10-C0-	M 10	1.5	100	20	39	10	8	11	6	⊗

Ordering example for the WY80AD grade: TC410-M1-C0-WY80AD

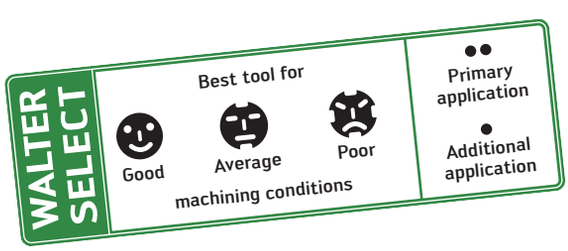
B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M12-L0-	M 12	1.75	110	23	83	9	7	10	6	⊗
TC410-M14-L0-	M 14	2	110	25	81	11	9	12	6	⊗
TC410-M16-L0-	M 16	2	110	25	68	12	9	12	6	⊗
TC410-M18-L0-	M 18	2.5	125	30	81	14	11	14	7	⊗
TC410-M20-L0-	M 20	2.5	140	30	95	16	12	15	7	⊗
TC410-M24-L0-	M 24	3	160	36	113	18	14.5	17	8	⊗

Ordering example for the WY80AD grade: TC410-M12-L0-WY80AD

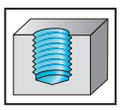


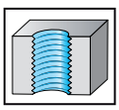
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

≤ 3×D_N | D=3,5-5 | 36HRC 1200 –200 N/mm²

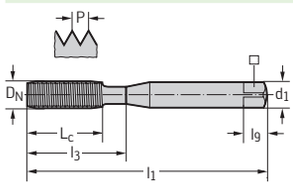
M DIN 13 | 6HX





	P	M	K	N	S	H	O
WY80AD	●●	●	●	●●	●		

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M2-CD-	M 2	0.4	45	6	11	2.8	2.1	5	3	😡
TC410-M3-CD-	M 3	0.5	56	9	18	3.5	2.7	6	4	😡
TC410-M4-CD-	M 4	0.7	63	12	21	4.5	3.4	6	5	😡
TC410-M5-CD-	M 5	0.8	70	13	25	6	4.9	8	5	😡
TC410-M6-CD-	M 6	1	80	15	30	6	4.9	8	5	😡
TC410-M8-CD-	M 8	1.25	90	18	35	8	6.2	9	5	😡

Ordering example for the WY80AD grade: TC410-M2-CD-WY80AD

B 3

😡 / ★ New addition to the product range

HSS-E machine thread formers
TC410 Advance mm

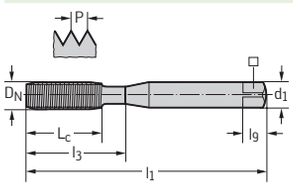
– For long-chipping materials

M	6HX		
DIN 13			

≤ 3×D_N | C=2-3 | LH | 36HRC, 1200 –200 N/mm²

	P	M	K	N	S	H	O
WY80AD	●●	●	●	●●	●		

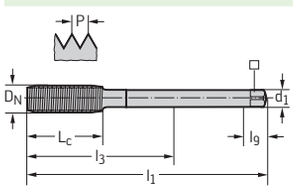
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M3-CL-	M 3 - LH	0.5	56	9	18	3.5	2.7	6	4	⊗
TC410-M4-CL-	M 4 - LH	0.7	63	12	21	4.5	3.4	6	5	⊗
TC410-M5-CL-	M 5 - LH	0.8	70	13	25	6	4.9	8	5	⊗
TC410-M6-CL-	M 6 - LH	1	80	15	30	6	4.9	8	5	⊗
TC410-M8-CL-	M 8 - LH	1.25	90	18	35	8	6.2	9	5	⊗
TC410-M10-CL-	M 10 - LH	1.5	100	20	39	10	8	11	6	⊗

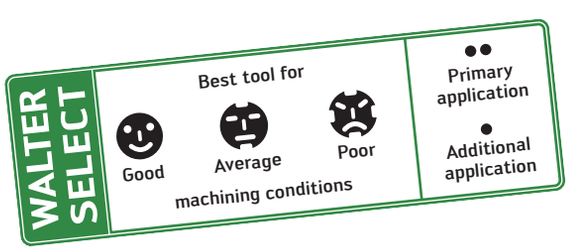
Ordering example for the WY80AD grade: TC410-M3-CL-WY80AD

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M12-LL-	M 12 - LH	1.75	110	23	83	9	7	10	6	⊗
TC410-M16-LL-	M 16 - LH	2	110	25	68	12	9	12	6	⊗

Ordering example for the WY80AD grade: TC410-M12-LL-WY80AD

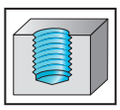


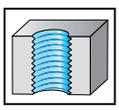
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

≤ 3×D_N	C=2-3	36HRC 1200 –200 N/mm²

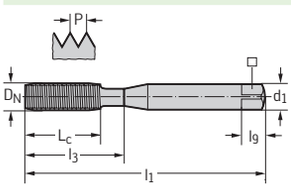
M DIN 13 | 6GX





	P	M	K	N	S	H	O
WY80AD	●●	●	●	●●	●		

DIN 2174

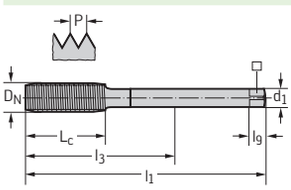


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M2-E0-	M 2	0.4	45	6	11	2.8	2.1	5	3	☹
TC410-M2.5-E0-	M 2.5	0.45	50	8	14	2.8	2.1	5	3	☹
TC410-M3-E0-	M 3	0.5	56	9	18	3.5	2.7	6	4	☹
TC410-M3.5-E0-	M 3.5	0.6	56	11	20	4	3	6	4	☹
TC410-M4-E0-	M 4	0.7	63	12	21	4.5	3.4	6	5	☹
TC410-M5-E0-	M 5	0.8	70	13	25	6	4.9	8	5	☹
TC410-M6-E0-	M 6	1	80	15	30	6	4.9	8	5	☹
TC410-M8-E0-	M 8	1.25	90	18	35	8	6.2	9	5	☹
TC410-M10-E0-	M 10	1.5	100	20	39	10	8	11	6	☹

Ordering example for the WY80AD grade: TC410-M2-E0-WY80AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M12-N0-	M 12	1.75	110	23	83	9	7	10	6	☹

Ordering example for the WY80AD grade: TC410-M12-N0-WY80AD

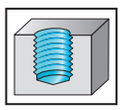
☹ / ★ New addition to the product range

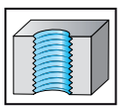
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

≤ 3×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

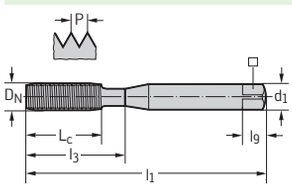
M DIN 13 | 7GX





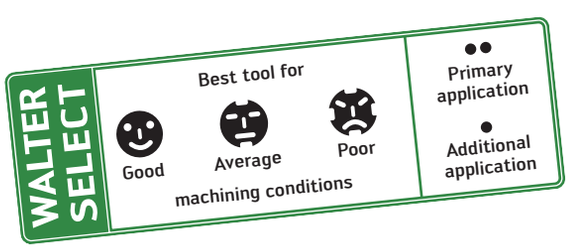
	P	M	K	N	S	H	O
WY80AD	●●	●	●	●●	●		

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M2-F0-	M 2	0.4	45	6	11	2.8	2.1	5	3	⊗
TC410-M2.5-F0-	M 2.5	0.45	50	8	14	2.8	2.1	5	3	⊗
TC410-M3-F0-	M 3	0.5	56	9	18	3.5	2.7	6	4	⊗
TC410-M4-F0-	M 4	0.7	63	12	21	4.5	3.4	6	5	⊗
TC410-M5-F0-	M 5	0.8	70	13	25	6	4.9	8	5	⊗
TC410-M6-F0-	M 6	1	80	15	30	6	4.9	8	5	⊗
TC410-M8-F0-	M 8	1.25	90	18	35	8	6.2	9	5	⊗
TC410-M10-F0-	M 10	1.5	100	20	39	10	8	11	6	⊗

Ordering example for the WY80AD grade: TC410-M2-F0-WY80AD



HSS-E machine thread formers
TC410 Advance mm

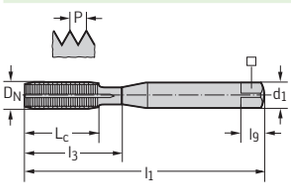
– For long-chipping materials

≤ 3,5×D_N	C=2-3	36HRC 1200 –200 N/mm²

M DIN 13	6HX		

	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

DIN 2174

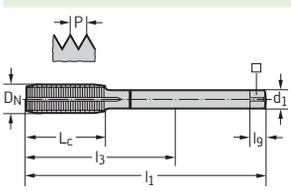


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M2-C6-	M 2	0.4	45	6	11	2.8	2.1	5	3	☹
TC410-M2.5-C6-	M 2.5	0.45	50	8	13	2.8	2.1	5	3	☹
TC410-M3-C6-	M 3	0.5	56	9	18	3.5	2.7	6	4	☹
TC410-M3.5-C6-	M 3.5	0.6	56	11	20	4	3	6	4	☹
TC410-M4-C6-	M 4	0.7	63	12	21	4.5	3.4	6	5	☹
TC410-M5-C6-	M 5	0.8	70	13	25	6	4.9	8	5	☹
TC410-M6-C6-	M 6	1	80	15	30	6	4.9	8	5	☹
TC410-M7-C6-	M 7	1	80	15	30	7	5.5	8	5	☹
TC410-M8-C6-	M 8	1.25	90	18	35	8	6.2	9	5	☹
TC410-M10-C6-	M 10	1.5	100	20	39	10	8	11	6	☹

Ordering example for the WY80AD grade: TC410-M2-C6-WY80AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M12-L6-	M 12	1.75	110	23	83	9	7	10	6	☹
TC410-M14-L6-	M 14	2	110	25	81	11	9	12	6	☹
TC410-M16-L6-	M 16	2	110	25	68	12	9	12	6	☹
TC410-M18-L6-	M 18	2.5	125	30	81	14	11	14	7	☹
TC410-M20-L6-	M 20	2.5	140	30	95	16	12	15	7	☹
TC410-M24-L6-	M 24	3	160	36	113	18	14.5	17	8	☹

Ordering example for the WY80AD grade: TC410-M12-L6-WY80AD

☹☹☹ / ★ New addition to the product range

HSS-E machine thread formers
TC410 Advance mm

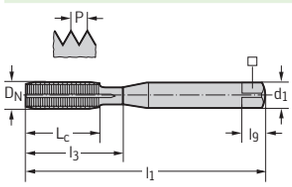
– For long-chipping materials

M	6GX		
DIN 13			

≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

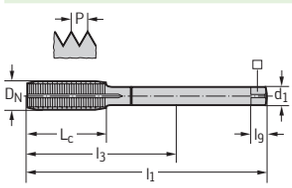
DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M2-E6-	M 2	0.4	45	6	11	2.8	2.1	5	3	⊗
TC410-M2.5-E6-	M 2.5	0.45	50	8	14	2.8	2.1	5	3	⊗
TC410-M3-E6-	M 3	0.5	56	9	18	3.5	2.7	6	4	⊗
TC410-M3.5-E6-	M 3.5	0.6	56	11	20	4	3	6	4	⊗
TC410-M4-E6-	M 4	0.7	63	12	21	4.5	3.4	6	5	⊗
TC410-M5-E6-	M 5	0.8	70	13	25	6	4.9	8	5	⊗
TC410-M6-E6-	M 6	1	80	15	30	6	4.9	8	5	⊗
TC410-M8-E6-	M 8	1.25	90	18	35	8	6.2	9	5	⊗
TC410-M10-E6-	M 10	1.5	100	20	39	10	8	11	6	⊗

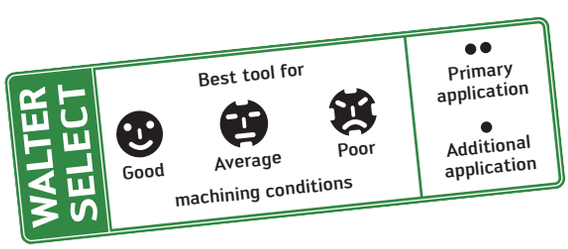
Ordering example for the WY80AD grade: TC410-M2-E6-WY80AD

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M12-N6-	M 12	1.75	110	23	83	9	7	10	6	⊗

Ordering example for the WY80AD grade: TC410-M12-N6-WY80AD



HSS-E machine thread formers
TC410 Advance mm

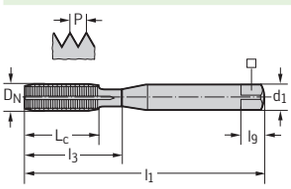
– For long-chipping materials

≤ 3,5×D_N	C=2-3	36HRC 1200 –200 N/mm²

M DIN 13	7GX		

	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

DIN 2174

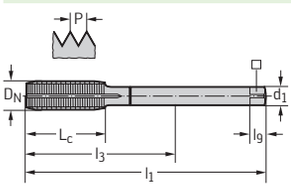


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M2-F6-	M 2	0.4	45	6	11	2.8	2.1	5	3	☹
TC410-M2.5-F6-	M 2.5	0.45	50	8	14	2.8	2.1	5	3	☹
TC410-M3-F6-	M 3	0.5	56	9	18	3.5	2.7	6	4	☹
TC410-M4-F6-	M 4	0.7	63	12	21	4.5	3.4	6	5	☹
TC410-M5-F6-	M 5	0.8	70	13	25	6	4.9	8	5	☹
TC410-M6-F6-	M 6	1	80	15	30	6	4.9	8	5	☹
TC410-M8-F6-	M 8	1.25	90	18	35	8	6.2	9	5	☹
TC410-M10-F6-	M 10	1.5	100	20	39	10	8	11	6	☹

Ordering example for the WY80AD grade: TC410-M2-F6-WY80AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M12-P6-	M 12	1.75	110	23	83	9	7	10	6	☹

Ordering example for the WY80AD grade: TC410-M12-P6-WY80AD

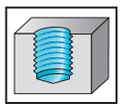
☹☹☹ / ★ New addition to the product range

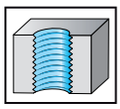
HSS-E machine thread formers
TC410 Advance inch

– Universal form tap
– With lubrication grooves

M
DIN 13

6HX

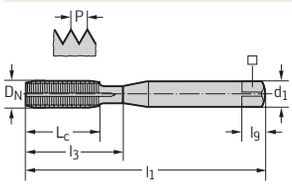




≤ 3.5×D_N | C=2-3 | 350HB / 60HB

	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

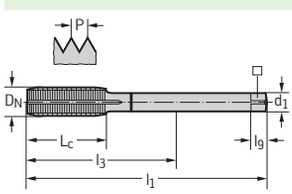
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AD
TC410.M3-C6-	M 3	0.118	2.205	0.354	0.709	0.118	0.110	0.190	4	●
TC410.M4-C6-	M 4	0.157	2.480	0.472	0.827	0.157	0.131	0.250	5	●
TC410.M5-C6-	M 5	0.197	2.756	0.512	0.984	0.197	0.152	0.250	5	●
TC410.M6-C6-	M 6	0.236	3.150	0.591	1.181	0.236	0.191	0.313	5	●
TC410.M8-C6-	M 8	0.315	3.543	0.709	1.378	0.315	0.238	0.380	5	●
TC410.M10-C6-	M 10	0.394	3.937	0.787	1.535	0.394	0.286	0.437	6	●

Order example for grade WY80AD: TC410.M3-C6-WY80AD

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AD
TC410.M12-L6-	M 12	0.472	4.331	0.906	3.224	0.472	0.275	0.437	6	●
TC410.M16-L6-	M 16	0.630	4.331	0.984	2.587	0.630	0.360	0.563	6	●
TC410.M20-L6-	M 20	0.787	5.512	1.181	3.642	0.787	0.489	0.689	7	●

Order example for grade WY80AD: TC410.M12-L6-WY80AD

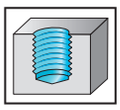
B 3

HSS-E-PM machine thread formers
TC420 Supreme mm

– For long-chipping materials

MF
DIN 13

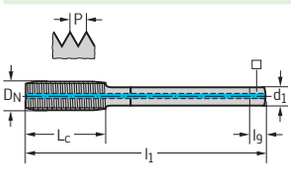
6HX



≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC420-M8X1-L1-	MF 8x1	1	90	12	67	6	4.9	8	5	✱
TC420-M10X1-L1-	MF 10x1	1	90	12	67	7	5.5	8	6	✱
TC420-M12X1-L1-	MF 12x1	1	100	13	73	9	7	10	6	✱
TC420-M12X1.5-L1-	MF 12x1.5	1.5	100	13	73	9	7	10	6	✱
TC420-M14X1.5-L1-	MF 14x1.5	1.5	100	15	71	11	9	12	6	✱

Ordering example for the WW60AD grade: TC420-M8X1-L1-WW60AD

B 3

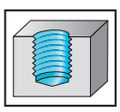
HSS-E-PM machine thread formers
TC420 Supreme mm

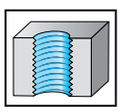
≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

– For long-chipping materials

MF
DIN 13

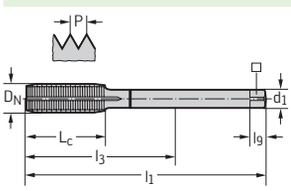
6HX





	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M8X1-L6-	MF 8x1	1	90	12	67	6	4.9	8	5	✱	✱
TC420-M10X1-L6-	MF 10x1	1	90	12	67	7	5.5	8	6	✱	✱
TC420-M12X1-L6-	MF 12x1	1	100	13	73	9	7	10	6	✱	✱
TC420-M12X1.5-L6-	MF 12x1.5	1.5	100	13	73	9	7	10	6	✱	✱
TC420-M14X1-L6-	MF 14x1	1	100	15	71	11	9	12	6	✱	✱
TC420-M14X1.25-L6-	MF 14x1.25	1.25	100	15	71	11	9	12	6	✱	✱
TC420-M14X1.5-L6-	MF 14x1.5	1.5	100	15	71	11	9	12	6	✱	✱
TC420-M16X1.5-L6-	MF 16x1.5	1.5	100	15	58	12	9	12	6	✱	✱

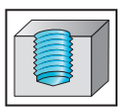
Ordering example for the WW60AD grade: TC420-M8X1-L6-WW60AD

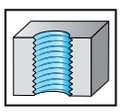
HSS-E-PM machine thread formers
TC420 Supreme mm

≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

– For long-chipping materials

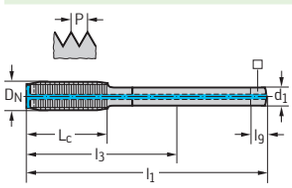
MF DIN 13 | 6HX





	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M8X1-L2-	MF 8x1	1	90	12	67	6	4.9	8	5	✱	✱
TC420-M10X1-L2-	MF 10x1	1	90	12	67	7	5.5	8	6	✱	✱
TC420-M12X1-L2-	MF 12x1	1	100	13	73	9	7	10	6	✱	✱
TC420-M12X1.5-L2-	MF 12x1.5	1.5	100	13	73	9	7	10	6	✱	✱
TC420-M14X1.5-L2-	MF 14x1.5	1.5	100	15	71	11	9	12	6	✱	✱
TC420-M16X1.5-L2-	MF 16x1.5	1.5	100	15	58	12	9	12	6	✱	✱

Ordering example for the WW60AD grade: TC420-M8X1-L2-WW60AD

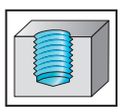
B 3

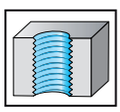
HSS-E-PM machine thread formers
TC420 Supreme mm

≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

– For long-chipping materials

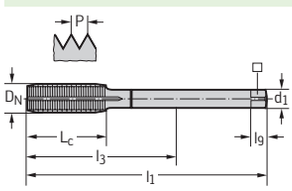
MF DIN 13 | 6GX





	P	M	K	N	S	H	O
WW60AD	●●	●●	●	●●	●		
WW60BA	●●	●●	●	●●	●		

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD	WW60BA
TC420-M8X1-N6-	MF 8x1	1	90	12	67	6	4.9	8	5	✱	✱
TC420-M10X1-N6-	MF 10x1	1	90	12	67	7	5.5	8	6	✱	✱
TC420-M12X1-N6-	MF 12x1	1	100	13	73	9	7	10	6	✱	✱
TC420-M12X1.5-N6-	MF 12x1.5	1.5	100	13	73	9	7	10	6	✱	✱
TC420-M14X1.5-N6-	MF 14x1.5	1.5	100	15	71	11	9	12	6	✱	✱
TC420-M16X1.5-N6-	MF 16x1.5	1.5	100	15	58	12	9	12	6	✱	✱

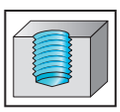
Ordering example for the WW60AD grade: TC420-M8X1-N6-WW60AD

HSS-E-PM machine thread formers
TC430 Supreme mm

– For long-chipping materials
– ISO-M with oil only

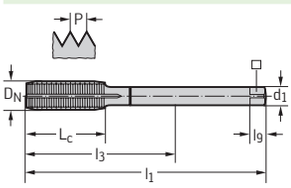
≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

MF DIN 13 | 6HX



	P	M	K	N	S	H	O
WW60EL	●●	●	●	●			
WW60AD	●●	●	●	●			

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60EL	WW60AD
TC430-M8X1-L6-	MF 8x1	1	90	12	67	6	4.9	8	6	✕	✕
TC430-M10X1-L6-	MF 10x1	1	90	12	67	7	5.5	8	7	✕	✕
TC430-M10X1.25-L6-	MF 10x1.25	1.25	100	15	77	7	5.5	8	7	✕	✕
TC430-M12X1-L6-	MF 12x1	1	100	13	73	9	7	10	8	✕	✕
TC430-M12X1.25-L6-	MF 12x1.25	1.25	100	13	73	9	7	10	8	✕	✕
TC430-M12X1.5-L6-	MF 12x1.5	1.5	100	13	73	9	7	10	8	✕	✕
TC430-M14X1.5-L6-	MF 14x1.5	1.5	100	15	71	11	9	12	8	✕	✕
TC430-M16X1.5-L6-	MF 16x1.5	1.5	100	15	58	12	9	12	8	✕	✕

Ordering example for the WW60AD grade: TC430-M8X1-L6-WW60AD

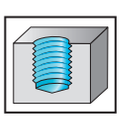
B 3

HSS-E-PM machine thread formers
TC430 Supreme mm

– For long-chipping materials
– ISO-M with oil only

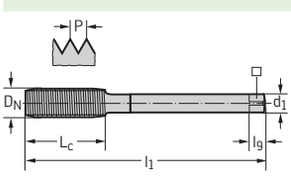
≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

MF DIN 13 | 6HX



	P	M	K	N	S	H	O
WW60AD	●●	●	●	●			

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M8X1-L1-	MF 8x1	1	90	12	67	6	4.9	8	6	✕
TC430-M10X1-L1-	MF 10x1	1	90	12	67	7	5.5	8	7	✕
TC430-M10X1.25-L1-	MF 10x1.25	1.25	100	15	77	7	5.5	8	7	✕
TC430-M12X1-L1-	MF 12x1	1	100	13	73	9	7	10	8	✕
TC430-M12X1.25-L1-	MF 12x1.25	1.25	100	13	73	9	7	10	8	✕
TC430-M12X1.5-L1-	MF 12x1.5	1.5	100	13	73	9	7	10	8	✕
TC430-M14X1.5-L1-	MF 14x1.5	1.5	100	15	71	11	9	12	8	✕
TC430-M16X1.5-L1-	MF 16x1.5	1.5	100	15	58	12	9	12	8	✕

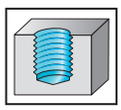
Ordering example for the WW60AD grade: TC430-M8X1-L1-WW60AD

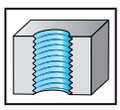
HSS-E-PM machine thread formers
TC430 Supreme mm

– For long-chipping materials
– ISO-M with oil only

MF
DIN 13

6HX

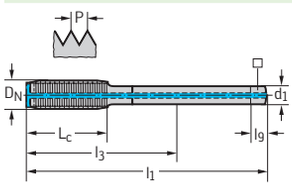




≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WW60AD	●●	●	●	●			

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WW60AD
TC430-M8X1-L2-	MF 8x1	1	90	12	67	6	4.9	8	6	✱
TC430-M10X1-L2-	MF 10x1	1	90	12	67	7	5.5	8	7	✱
TC430-M10X1.25-L2-	MF 10x1.25	1.25	100	15	77	7	5.5	8	7	✱
TC430-M12X1-L2-	MF 12x1	1	100	13	73	9	7	10	8	✱
TC430-M12X1.25-L2-	MF 12x1.25	1.25	100	13	73	9	7	10	8	✱
TC430-M12X1.5-L2-	MF 12x1.5	1.5	100	13	73	9	7	10	8	✱
TC430-M14X1.5-L2-	MF 14x1.5	1.5	100	15	71	11	9	12	8	✱
TC430-M16X1.5-L2-	MF 16x1.5	1.5	100	15	58	12	9	12	8	✱

Ordering example for the WW60AD grade: TC430-M8X1-L2-WW60AD

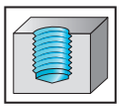
B 3

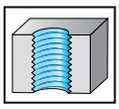
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

MF
DIN 13

6HX

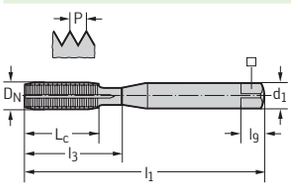




≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

DIN 2174

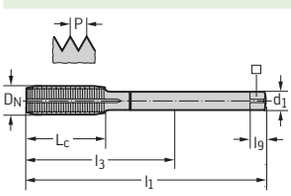


Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M4X0.5-C6-	MF 4x0.5	0.5	63	12	21	4.5	3.4	6	5	●
TC410-M5X0.5-C6-	MF 5x0.5	0.5	70	13	25	6	4.9	8	5	●
TC410-M6X0.5-C6-	MF 6x0.5	0.5	80	15	30	6	4.9	8	5	●
TC410-M6X0.75-C6-	MF 6x0.75	0.75	80	15	30	6	4.9	8	5	●
TC410-M7X0.75-C6-	MF 7x0.75	0.75	80	15	30	7	5.5	8	5	●

Ordering example for the WY80AD grade: TC410-M4X0.5-C6-WY80AD

B 3

DIN 2174



Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M8X0.5-L6-	MF 8x0.5	0.5	80	15	15	6	4.9	8	5	●
TC410-M8X0.75-L6-	MF 8x0.75	0.75	80	15	15	6	4.9	8	5	●
TC410-M8X1-L6-	MF 8x1	1	90	18	18	6	4.9	8	5	●
TC410-M10X1-L6-	MF 10x1	1	90	20	20	7	5.5	8	6	●
TC410-M10X1.25-L6-	MF 10x1.25	1.25	100	20	20	7	5.5	8	6	●
TC410-M12X1-L6-	MF 12x1	1	100	21	73	9	7	10	6	●
TC410-M12X1.25-L6-	MF 12x1.25	1.25	100	21	73	9	7	10	6	●
TC410-M12X1.5-L6-	MF 12x1.5	1.5	100	21	73	9	7	10	6	●
TC410-M14X1.5-L6-	MF 14x1.5	1.5	100	21	71	11	9	12	6	●
TC410-M16X1.5-L6-	MF 16x1.5	1.5	100	21	58	12	9	12	6	●
TC410-M18X1.5-L6-	MF 18x1.5	1.5	110	24	66	14	11	14	7	●
TC410-M20X1.5-L6-	MF 20x1.5	1.5	125	24	80	16	12	15	7	●
TC410-M20X2-L6-	MF 20x2	2	140	30	95	16	12	15	7	●
TC410-M22X1.5-L6-	MF 22x1.5	1.5	125	24	78	18	14.5	17	7	●
TC410-M24X1.5-L6-	MF 24x1.5	1.5	140	26	93	18	14.5	17	8	●
TC410-M24X2-L6-	MF 24x2	2	140	26	93	18	14.5	17	8	●
TC410-M27X1.5-L6-	MF 27x1.5	1.5	140	26	77	20	16	19	8	●
TC410-M27X2-L6-	MF 27x2	2	140	26	77	20	16	19	8	●
TC410-M30X1.5-L6-	MF 30x1.5	1.5	150	26	85	22	18	21	8	●
TC410-M30X2-L6-	MF 30x2	2	150	26	85	22	18	21	8	●

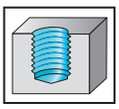
Ordering example for the WY80AD grade: TC410-M8X0.5-L6-WY80AD

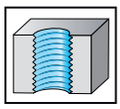
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

MF
DIN 13

6GX



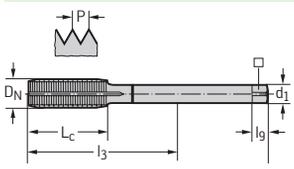


≤ 3,5×D_N

E=1,5-2

	P	M	K	N	S	H	O
WY80AD	●●	●	●	●●	●		

DIN 2174



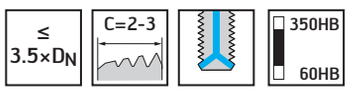
Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-M10X1-NE-	MF 10x1	1	90	20	20	7	5.5	8	6	✱
TC410-M12X1.5-NE-	MF 12x1.5	1.5	100	21	73	9	7	10	6	✱
TC410-M14X1.5-NE-	MF 14x1.5	1.5	100	21	71	11	9	12	7	✱
TC410-M16X1.5-NE-	MF 16x1.5	1.5	100	21	58	12	9	12	7	✱

Ordering example for the WY80AD grade: TC410-M10X1-NE-WY80AD

B 3

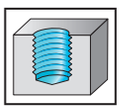
HSS-E-PM machine thread formers
TC420 Supreme inch

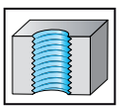
– Universal high-performance form tap
– With lubrication grooves



UNC
ASME B1.1

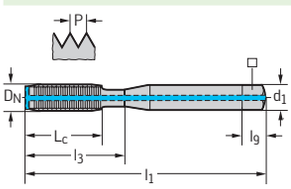
2BX





	P	M	K	N	S	H	O
WW60AD	●●	●	●	●●	●		

DIN/ANSI

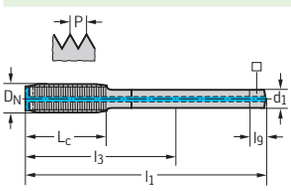


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WW60AD
TC420.UNC10-C2-	UNC 10-24	0.190	2.756	0.315	0.984	0.190	0.152	0.250	5	●
TC420.UNC1/4-C2-	UNC 1/4-20	0.250	3.150	0.394	1.181	0.250	0.191	0.313	5	●
TC420.UNC5/16-C2-	UNC 5/16-18	0.313	3.543	0.472	1.378	0.313	0.238	0.380	5	●
TC420.UNC3/8-C2-	UNC 3/8-16	0.375	3.937	0.591	1.535	0.375	0.286	0.437	5	●

Order example for grade WW60AD: TC420.UNC1/4-C2-WW60AD

B 3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WW60AD
TC420.UNC1/2-L2-	UNC 1/2-13	0.500	4.331	0.709	3.224	0.500	0.275	0.437	6	●
TC420.UNC5/8-L2-	UNC 5/8-11	0.625	4.331	0.787	2.587	0.625	0.360	0.563	6	●
TC420.UNC3/4-L2-	UNC 3/4-10	0.750	4.921	0.984	3.051	0.750	0.442	0.689	7	●

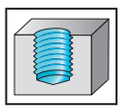
Order example for grade WW60AD: TC420.UNC1/2-L2-WW60AD

HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

UNC
ASME B1.1

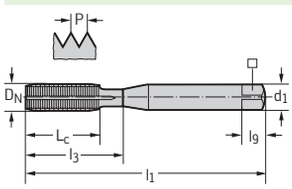
2BX



≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

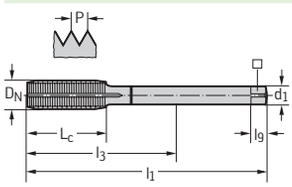
DIN 2184-1



Designation	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-UNC2-C6-	UNC 2-56	2.184	45	7	12	2.8	2.1	5	3	●
TC410-UNC4-C6-	UNC 4-40	2.845	56	9	18	3.5	2.7	6	3	●
TC410-UNC6-C6-	UNC 6-32	3.505	56	11	20	4	3	6	4	●
TC410-UNC8-C6-	UNC 8-32	4.166	63	12	21	4.5	3.4	6	5	●
TC410-UNC10-C6-	UNC 10-24	4.826	70	13	25	6	4.9	8	5	●
TC410-UNC1/4-C6-	UNC 1/4-20	6.35	80	15	30	7	5.5	8	5	●
TC410-UNC5/16-C6-	UNC 5/16-18	7.938	90	18	35	8	6.2	9	5	●
TC410-UNC3/8-C6-	UNC 3/8-16	9.525	100	20	39	10	8	11	5	●

Ordering example for the WY80AD grade: TC410-UNC2-C6-WY80AD

DIN 2184-1



Designation	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-UNC7/16-L6-	UNC 7/16-14	11.113	100	20	76	8	6.2	9	6	●
TC410-UNC1/2-L6-	UNC 1/2-13	12.7	110	23	83	9	7	10	6	●
TC410-UNC5/8-L6-	UNC 5/8-11	15.875	110	25	68	12	9	12	6	●

Ordering example for the WY80AD grade: TC410-UNC7/16-L6-WY80AD

B3

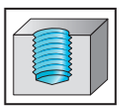
HSS-E machine thread formers
TC410 Advance inch

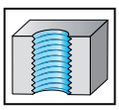
– Universal form tap
– With lubrication grooves

≤ 3.5×D_N | C=2-3 | 350HB / 60HB

UNC
ASME B1.1

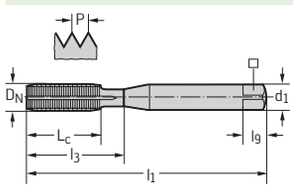
2BX





	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

DIN/ANSI

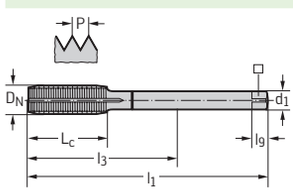


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AD
TC410.UNC2-C6-	UNC 2-56	0.086	1.772	0.276	0.472	0.086	0.110	0.190	3	●
TC410.UNC4-C6-	UNC 4-40	0.112	2.205	0.354	0.709	0.112	0.110	0.190	3	●
TC410.UNC5-C6-	UNC 5-40	0.125	2.205	0.394	0.709	0.125	0.110	0.190	4	●
TC410.UNC6-C6-	UNC 6-32	0.138	2.205	0.512	0.787	0.138	0.110	0.190	4	●
TC410.UNC8-C6-	UNC 8-32	0.164	2.480	0.591	0.984	0.164	0.131	0.250	5	●
TC410.UNC10-C6-	UNC 10-24	0.190	2.756	0.709	0.984	0.190	0.152	0.250	5	●
TC410.UNC1/4-C6-	UNC 1/4-20	0.250	3.150	0.630	1.181	0.250	0.191	0.313	5	●
TC410.UNC5/16-C6-	UNC 5/16-18	0.313	3.543	0.748	1.378	0.313	0.238	0.380	5	●
TC410.UNC3/8-C6-	UNC 3/8-16	0.375	3.937	0.748	1.535	0.375	0.286	0.437	5	●

Order example for grade WY80AD: TC410.UNC2-C6-WY80AD

B3

DIN/ANSI

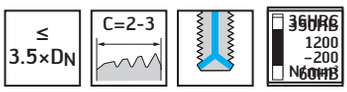


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AD
TC410.UNC7/16-L6-	UNC 7/16-14	0.438	3.937	0.866	2.862	0.438	0.242	0.406	6	●
TC410.UNC1/2-L6-	UNC 1/2-13	0.500	4.331	0.945	3.224	0.500	0.275	0.437	6	●
TC410.UNC9/16-L6-	UNC 9/16-12	0.563	4.331	1.024	3.161	0.563	0.322	0.500	6	●
TC410.UNC5/8-L6-	UNC 5/8-11	0.625	4.331	1.102	2.587	0.625	0.360	0.563	6	●
TC410.UNC3/4-L6-	UNC 3/4-10	0.750	4.921	1.181	3.051	0.750	0.442	0.689	7	●
TC410.UNC7/8-L6-	UNC 7/8-9	0.875	5.512	1.181	3.583	0.875	0.523	0.750	7	●

Order example for grade WY80AD: TC410.UNC7/16-L6-WY80AD

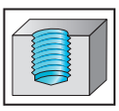
HSS-E-PM machine thread formers
TC420 Supreme inch

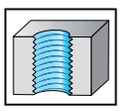
– Universal high-performance form tap
– With lubrication grooves



UNF
ASME B1.1

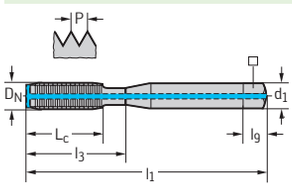
2BX





	P	M	K	N	S	H	O
WW60AD	●●	●	●	●●	●		

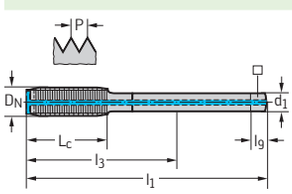
DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WW60AD
TC420.UNF10-C2-	UNF 10-32	0.190	2.756	0.315	0.984	0.190	0.152	0.250	5	⊗
TC420.UNF1/4-C2-	UNF 1/4-28	0.250	3.150	0.394	1.181	0.250	0.191	0.313	5	⊗
TC420.UNF5/16-C2-	UNF 5/16-24	0.313	3.543	0.472	1.378	0.313	0.238	0.380	5	⊗
TC420.UNF3/8-C2-	UNF 3/8-24	0.375	3.937	0.472	1.535	0.375	0.286	0.437	5	⊗

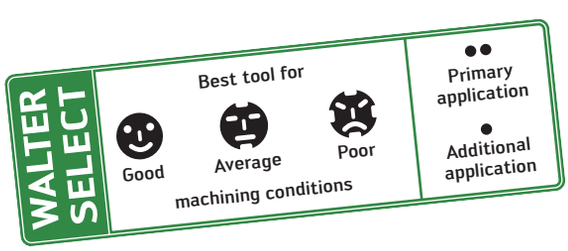
Order example for grade WW60AD: TC420.UNF1/4-C2-WW60AD

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WW60AD
TC420.UNF7/16-L2-	UNF 7/16-20	0.438	3.937	0.591	2.862	0.438	0.242	0.406	6	⊗
TC420.UNF1/2-L2-	UNF 1/2-20	0.500	3.937	0.591	2.831	0.500	0.275	0.437	6	⊗
TC420.UNF9/16-L2-	UNF 9/16-18	0.563	3.937	0.591	2.768	0.563	0.322	0.500	6	⊗
TC420.UNF5/8-L2-	UNF 5/8-18	0.625	3.937	0.591	2.193	0.625	0.360	0.563	6	⊗
TC420.UNF3/4-L2-	UNF 3/4-16	0.750	4.331	0.669	2.461	0.750	0.442	0.689	7	⊗

Order example for grade WW60AD: TC420.UNF7/16-L2-WW60AD



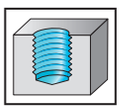
HSS-E machine thread formers
TC410 Advance inch

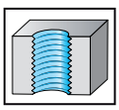
– Universal form tap
– With lubrication grooves

≤ 3.5×D_N | C=2-3 | 350HB / 60HB

UNF
ASME B1.1

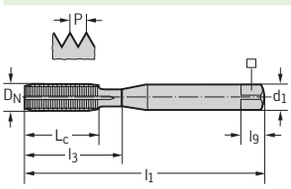
2BX





	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

DIN/ANSI

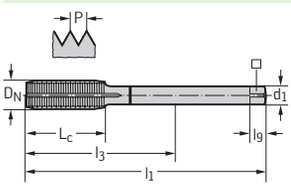


Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AD
TC410.UNF0-C6-	UNF 0-80	0.060	1.575	0.217	0.256	0.060	0.110	0.190	3	☹
TC410.UNF1-C6-	UNF 1-72	0.073	1.772	0.276	0.354	0.073	0.110	0.190	3	☹
TC410.UNF6-C6-	UNF 6-40	0.138	2.205	0.512	0.787	0.138	0.110	0.190	4	☹
TC410.UNF8-C6-	UNF 8-36	0.164	2.480	0.591	0.984	0.164	0.131	0.250	5	☹
TC410.UNF10-C6-	UNF 10-32	0.190	2.756	0.709	0.984	0.190	0.152	0.250	5	☹
TC410.UNF1/4-C6-	UNF 1/4-28	0.250	3.150	0.630	1.181	0.250	0.191	0.313	5	☹
TC410.UNF5/16-C6-	UNF 5/16-24	0.313	3.543	0.748	1.378	0.313	0.238	0.380	5	☹
TC410.UNF3/8-C6-	UNF 3/8-24	0.375	3.937	0.748	1.535	0.375	0.286	0.437	5	☹

Order example for grade WY80AD: TC410.UNF0-C6-WY80AD

B3

DIN/ANSI



Designation	D_N-P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	□ in	l_9 in	N	WY80AD
TC410.UNF7/16-L6-	UNF 7/16-20	0.438	3.937	0.866	2.862	0.438	0.242	0.406	6	☹
TC410.UNF1/2-L6-	UNF 1/2-20	0.500	3.937	0.945	2.831	0.500	0.275	0.437	6	☹
TC410.UNF9/16-L6-	UNF 9/16-18	0.563	3.937	1.024	2.768	0.563	0.322	0.500	6	☹
TC410.UNF5/8-L6-	UNF 5/8-18	0.625	3.937	1.102	2.193	0.625	0.360	0.563	6	☹
TC410.UNF3/4-L6-	UNF 3/4-16	0.750	4.331	1.181	2.461	0.750	0.442	0.689	7	☹
TC410.UNF7/8-L6-	UNF 7/8-14	0.875	4.921	1.260	2.992	0.875	0.523	0.750	7	☹

Order example for grade WY80AD: TC410.UNF7/16-L6-WY80AD

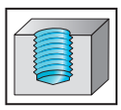
☺ 😐 ☹ / ★ New addition to the product range

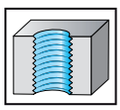
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

UNF
ASME B1.1

2BX

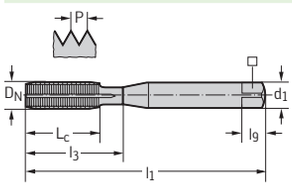




≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

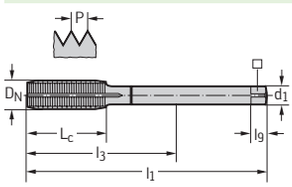
DIN 2184-1



Designation	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-UNF2-C6-	UNF 2-64	2.184	45	7	12	2.8	2.1	5	3	●●●
TC410-UNF4-C6-	UNF 4-48	2.845	56	9	18	3.5	2.7	6	3	●●●
TC410-UNF6-C6-	UNF 6-40	3.505	56	11	20	4	3	6	4	●●●
TC410-UNF8-C6-	UNF 8-36	4.166	63	12	21	4.5	3.4	6	5	●●●
TC410-UNF10-C6-	UNF 10-32	4.826	70	13	25	6	4.9	8	5	●●●
TC410-UNF1/4-C6-	UNF 1/4-28	6.35	80	15	30	7	5.5	8	5	●●●
TC410-UNF5/16-C6-	UNF 5/16-24	7.938	90	18	35	8	6.2	9	5	●●●
TC410-UNF3/8-C6-	UNF 3/8-24	9.525	90	20	39	10	8	11	5	●●●

Ordering example for the WY80AD grade: TC410-UNF2-C6-WY80AD

DIN 2184-1



Designation	D_N-P	D_N mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-UNF7/16-L6-	UNF 7/16-20	11.113	100	20	76	8	6.2	9	6	●●●
TC410-UNF1/2-L6-	UNF 1/2-20	12.7	100	21	73	9	7	10	6	●●●
TC410-UNF5/8-L6-	UNF 5/8-18	15.875	100	21	58	12	9	12	6	●●●

Ordering example for the WY80AD grade: TC410-UNF7/16-L6-WY80AD

B3

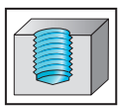
●●● / ★ New addition to the product range

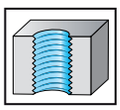
HSS-E machine thread formers
TC410 Advance mm

– For long-chipping materials

≤ 3,5×D_N | C=2-3 | 36HRC 1200 –200 N/mm²

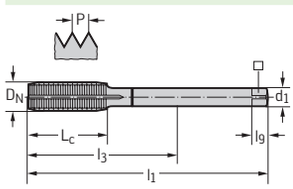
G
DIN EN ISO 228





	P	M	K	N	S	H	O
WY80AD	●●	●●	●	●●	●		

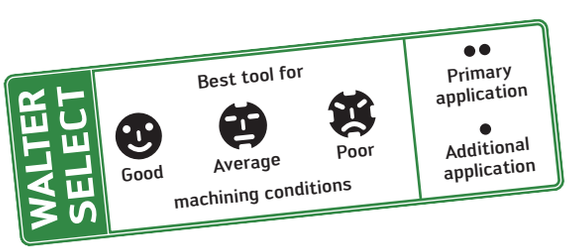
DIN 2189



Designation	D_N-P	D_N mm	Threads per inch	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	□ mm	l_9 mm	N	WY80AD
TC410-G1/8-N6-	G 1/8-28	9.728	28	90	20	20	7	5.5	8	5	⊗
TC410-G1/4-N6-	G 1/4-19	13.157	19	100	21	71	11	9	12	6	⊗
TC410-G3/8-N6-	G 3/8-19	16.662	19	100	21	58	12	9	12	6	⊗
TC410-G1/2-N6-	G 1/2-14	20.955	14	125	24	80	16	12	15	8	⊗
TC410-G3/4-N6-	G 3/4-14	26.441	14	140	26	77	20	16	19	8	⊗
TC410-G1-N6-	G 1"-11	33.249	11	160	28	93	25	20	23	8	⊗

Ordering example for the WY80AD grade: TC410-G1/8-N6-WY80AD

B3



Product range overview – Thread milling cutters

Machining	Universal				
Thread depth	**2 × D_N**		**2.5 × D_N**		**3 × D_N**
Designation	**TC620 Supreme**	**T2711**	**TC620 Supreme**	**T2712**	**T2713**
Description	Multiple-row thread milling cutter	Thread milling cutter with indexable inserts	Multiple-row thread milling cutter	Thread milling cutter with indexable inserts	Thread milling cutter with indexable inserts
Coolant supply	Axial	Axial/radial	Axial	Axial/radial	Axial/radial
Coating/grade	WB10TJ	WSM37S	WB10TJ	WSM37S	WSM37S
Shank	DIN 6535 HA	DIN 1835 B	DIN 6535 HA	DIN 1835 B	DIN 1835 B / Walter Capto™
Helix angle	20°	–	20°	–	–
Thread type | Page	M / MF | 447 UNC | 448	M / MF | 452 UNC / UNF / UN | 458	M / MF | 447	M / MF | 454 UNC / UNF / UN | 460 G (BSP) | 466	M / MF | 456 UNC / UNF / UN | 462 G (BSP) | 466

B 4

Designation key
Solid carbide thread milling cutters

Example:

T	C	6	85	–	M10	–	A	1	D	–	W	B	10	RC
1	2	3	4	5	6		7	8	9		Grade			

1	2	3	4	5	6	7	8	9
Tool group	Generation	Tool type	Tool type	1. Delimiters	Thread dimensions	Shank type	Cooling	Thread depth
T Threading		6 Solid carbide thread milling cutters	10 Universal, 1.5 × D_N 11 Universal, 2.0 × D_N 20 Universal, multiple-row 85 ISO H, orbital drill thread milling cutter	– Metric		A Parallel shank W Weldon shank	0 External coolant 1 Axial internal cooling	D 2.0 × D_N E 2.5 × D_N

B 4

Grade designation key
for solid carbide and HSS cutting tool materials

Example:

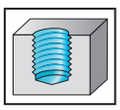
W	B	10	RC
Walter	1	2	3

1	2	3
Substrate	Application range	Coating
Solid carbide: B, J HSS	Wear resistance 05 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 Toughness	RC TiAlN RD TiAlN (+ ZrN) TJ TiAlN

Multiple-row thread milling cutters
TC620 Supreme mm

– Universal multiple-row thread milling cutter
– For high cutting speeds and high feeds per tooth

M-MF
DIN 13

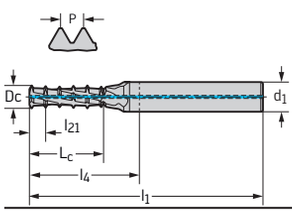


≤ 2×D_N | 20° | 48HRC

	P	M	K	N	S	H	O
WB10TJ	●●	●●	●●	●●	●●		●

Tool

Shank DIN 6535 HA



Designation	P mm	D_c mm	l_{21} mm	L_c mm	l_4 mm	l_1 mm	d_1 mm	Z	WB10TJ
TC620-M4-A1D-	0.70	3.1	1.4	8.4	21	57	6	3	☻
TC620-M5-A1D-	0.80	3.9	1.6	10.4	21	57	6	3	☻
TC620-M6-A1D-	1.00	4.7	2	12	21	57	6	4	☻
TC620-M8-A1D-	1.25	6.3	2.5	16.3	27	63	8	4	☻
TC620-M10-A1D-	1.50	7.9	3	21	27	63	8	4	☻
TC620-M12-A1D-	1.75	9.6	3.5	24.5	32	72	10	4	☻
TC620-M14-A1D-	2.00	11.2	4	28	38	83	12	4	☻
TC620-M16-A1D-	2.00	13.1	4	32	44	92	16	5	☻
TC620-M20-A1D-	2.50	16.4	5	40	58	106	18	5	☻

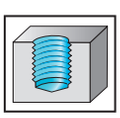
Ordering example for the WB10TJ grade: TC620-M4-A1D-WB10TJ

Multiple-row thread milling cutters
TC620 Supreme mm

B 4

– Universal multiple-row thread milling cutter
– For high cutting speeds and high feeds per tooth

M-MF
DIN 13

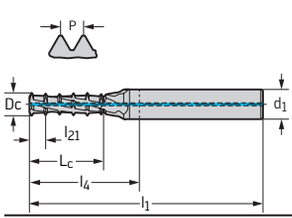


≤ 2,5×D_N | 20° | 48HRC

	P	M	K	N	S	H	O
WB10TJ	●●	●●	●●	●●	●●		●

Tool

Shank DIN 6535 HA



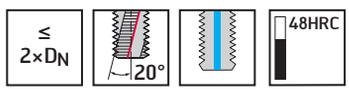
Designation	P mm	D_c mm	l_{21} mm	L_c mm	l_4 mm	l_1 mm	d_1 mm	Z	WB10TJ
TC620-M4-A1E-	0.70	3.1	2.1	10.5	21	57	6	3	☻
TC620-M5-A1E-	0.80	3.9	2.4	12.8	21	57	6	3	☻
TC620-M6-A1E-	1.00	4.7	3	15	21	57	6	4	☻
TC620-M8-A1E-	1.25	6.3	3.75	20	27	63	8	4	☻
TC620-M10-A1E-	1.50	7.9	4.5	27	36	72	8	4	☻
TC620-M12-A1E-	1.75	9.6	5.25	31.5	43	83	10	4	☻
TC620-M14-A1E-	2.00	11.2	6	36	55	100	12	4	☻
TC620-M16-A1E-	2.00	13.1	6	42	58	106	16	5	☻
TC620-M20-A1E-	2.50	16.4	7.5	52.5	68	116	18	5	☻

Ordering example for the WB10TJ grade: TC620-M4-A1E-WB10TJ

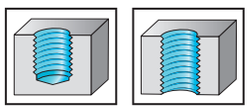
☻☻☻ / ★ New addition to the product range

Multiple-row thread milling cutters
TC620 Supreme mm

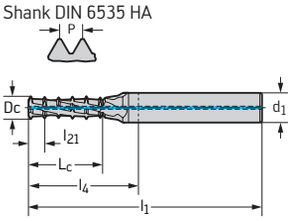
– Universal multiple-row thread milling cutter
– For high cutting speeds and high feeds per tooth



UNC
ASME B1.1



	P	M	K	N	S	H	O
WB10TJ	●●	●●	●●	●●	●●		●

Tool		Threads per inch mm	D_c mm	l_{21} mm	L_c mm	l_4 mm	l_1 mm	d_1 mm	Z	WB10TJ
Shank DIN 6535 HA	TC620-UNC8-A1D-	32	3.1	1.59	8.7	21	57	6	3	☻
	TC620-UNC10-A1D-	24	3.5	2.12	10.5	21	57	6	3	☻
	TC620-UNC1/4-A1D-	20	4.7	2.54	12.7	21	57	6	3	☻
	TC620-UNC5/16-A1D-	18	6.1	2.82	16.9	27	63	8	4	☻
	TC620-UNC3/8-A1D-	16	7.4	3.18	19.1	27	63	8	4	☻
	TC620-UNC1/2-A1D-	13	10.1	3.91	25.4	38	83	12	4	☻
	TC620-UNC5/8-A1D-	11	12.7	4.62	32.3	44	92	16	4	☻
	TC620-UNC3/4-A1D-	10	15.5	5.08	38.1	56	104	16	5	☻

Ordering example for the WB10TJ grade: TC620-UNC8-A1D-WB10TJ

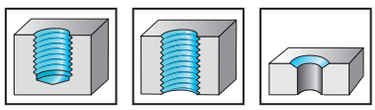
B 4

☻☻☻ / ★ New addition to the product range

Orbital drill thread milling cutter
TC685 Supreme mm

– Orbital drill thread milling cutter for hardened materials
– Chamfer. core hole and thread in one operation

M-MF
DIN 13

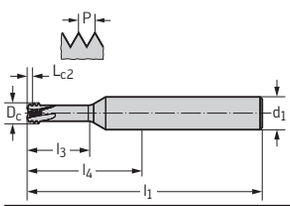


≤ 2×D_N | L-rot. | -15° | 65HRC – 44HRC

	P	M	K	N	S	H	O
WB10RC	●		●		●	●●	

Tool

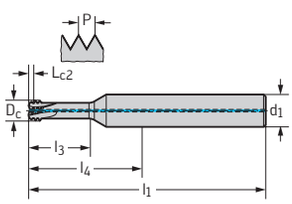
Shank DIN 6535 HA	Designation	P mm	D_c mm	L_{c2} mm	l_3 mm	l_4 mm	l_1 mm	d_1 mm	Z	WB10RC
	TC685-M3-A0D-	0.5	2.4	0.55	6.8	14	50	6	4	●
	TC685-M4-A0D-	0.7	3.1	0.77	9.1	14	50	6	4	●
	TC685-M5-A0D-	0.8	3.9	0.89	11.2	21	57	6	4	●



Maximum thread nominal diameter for fine-pitch threads: Dc × 1.94
Example: TC685-M4../3.1 mm × 1.94 = 6.01 mm/MF 6 x 0.7 possible
Ordering example for the WB10RC grade: TC685-M3-A0D-WB10RC

Tool

Shank DIN 6535 HA	Designation	P mm	D_c mm	L_{c2} mm	l_3 mm	l_4 mm	l_1 mm	d_1 mm	Z	WB10RC
	TC685-M6-A1D-	1	4.6	1.11	13.5	21	57	6	4	●
	TC685-M8-A1D-	1.25	6.2	1.39	17.9	27	63	8	4	●
	TC685-M10-A1D-	1.5	7.8	1.68	22.3	27	63	8	4	●
	TC685-M12-A1D-	1.75	9	1.96	26.6	32	72	10	4	●
	TC685-M14-A1D-	2	10.5	2.25	31	38	83	12	4	●
	TC685-M16-A1D-	2	12.5	2.28	35	44	92	16	4	●



Maximum thread nominal diameter for fine-pitch threads: Dc × 1.94
Example: TC685-M8../6.2 mm × 1.94 = 12.03 mm/MF 12 x 1.25 possible
Ordering example for the WB10RC grade: TC685-M6-A1D-WB10RC

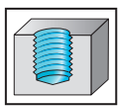
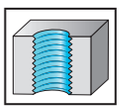
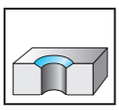
B 4

● ● ● / ★ New addition to the product range

Orbital drill thread milling cutter
TC685 Supreme mm

– Orbital drill thread milling cutter for hardened materials
– Chamfer. core hole and thread in one operation

M-MF
DIN 13

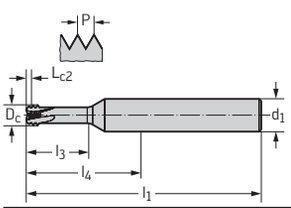




≤ 2,5×D_N | L-rot. | -15° | 65HRC – 44HRC

	P	M	K	N	S	H	O
WB10RC	●		●		●	●●	

Tool

Shank DIN 6535 HA

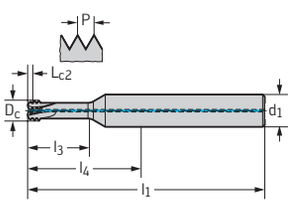


Designation	P mm	D_c mm	L_{c2} mm	l_3 mm	l_4 mm	l_1 mm	d_1 mm	Z	WB10RC
TC685-M3-A0E-	0.5	2.4	0.55	8.3	14	50	6	4	●
TC685-M4-A0E-	0.7	3.1	0.77	11.1	21	57	6	4	●
TC685-M5-A0E-	0.8	3.9	0.89	13.7	21	57	6	4	●

Maximum thread nominal diameter for fine-pitch threads: Dc × 1.94
Example: TC685-M4../3.1 mm × 1.94 = 6.01 mm/MF 6 x 0.7 possible
Ordering example for the WB10RC grade: TC685-M3-A0E-WB10RC

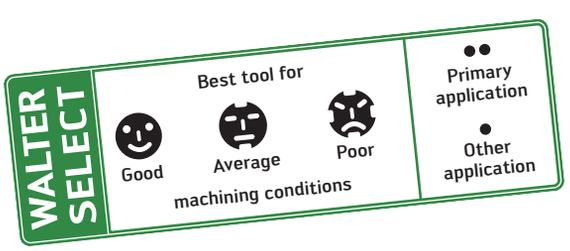
Tool

Shank DIN 6535 HA



Designation	P mm	D_c mm	L_{c2} mm	l_3 mm	l_4 mm	l_1 mm	d_1 mm	Z	WB10RC
TC685-M6-A1E-	1	4.6	1.11	16.5	21	57	6	4	●
TC685-M8-A1E-	1.25	6.2	1.39	21.9	27	63	8	4	●
TC685-M10-A1E-	1.5	7.8	1.68	27.3	27	63	8	4	●
TC685-M12-A1E-	1.75	9	1.96	32.6	32	72	10	4	●
TC685-M14-A1E-	2	10.5	2.25	38	38	83	12	4	●
TC685-M16-A1E-	2	12.5	2.28	43	44	92	16	4	●

Maximum thread nominal diameter for fine-pitch threads: Dc × 1.94
Example: TC685-M8../6.2 mm × 1.94 = 12.03 mm/MF 12 x 1.25 possible
Ordering example for the WB10RC grade: TC685-M6-A1E-WB10RC



Designation key for indexable insert thread milling cutters

Tool:

T	2	7	11	–	29	-	W	32	-	3	-	09	-	3	-	24
1	2	3	4	5	6		7	8		9		10		11		12

1 – Tool group

T Threading

2 – Generation

3 – Tool type

7 Indexable insert thread milling cutter

4 – Tool type

11 Universal With triangular insert $2.0 \times D_N$

12 Universal With triangular insert $2.5 \times D_N$

13 Universal With triangular insert $3.0 \times D_N$/modular

5 – 1. Delimiters

– Metric

· Inch

6 – Cutting diameter

7 – Adaptor type

W Weldon shank

C Walter Capto™

8 – Adaptor size

9 – Number of teeth

10 – Insert size

11 – Number of cutting rows

12 – Cutting row spacing

Indexable insert:

P26300	-	09	02	-	D	6	7		W	SM	37	S
1		2	3		4	5	6		Walter	7	8	9

1 – Family

P26300 Triangular thread milling cutter insert, positive

P26310 Triangular thread milling cutter insert, positive, for single-row tools

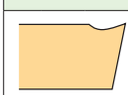
2 – Insert size

06
09
11
14
22

3 – Insert radius/thread specification

01 = 0.1 mm
02 = 0.2 mm
04 = 0.4 mm
G11 = G thread, 11 TPI

4 – Chip breaker groove

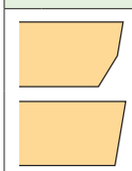


D = 10°

5 – Cutting edge

6

6 – Flank face design



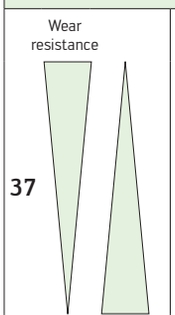
1

7

7 – Application

SM Can be used universally with ISO P, M, K, S and H materials

8 – ISO application range



Cutting tool materials for: 7 thread milling

9 – Generation

S Tiger·tec® Silver

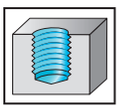
B 4

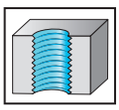
Indexable insert thread milling cutter
T2711 mm

– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

M
DIN 13

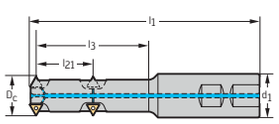
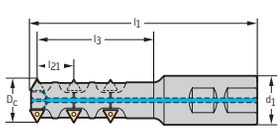
MF
DIN 13





≤ 2×D_N

	P	M	K	N	S	H	O
T2711	●●	●●	●●	●	●●	●	●

Tool	Designation	D_N	P_{max} mm	D_c mm	l_{21} mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B	T2711-19-W20-3-06-2-24	M 24	3.00	19	24	51	110	20	3	6	P26300-06 ..
	T2711-24-W25-3-09-2-31.5	M 30	3.50	24	31.5	64.5	132	25	3	6	P26300-09 ..
	T2711-52-W40-4-14-2-60	M 64	6.00	52	60	135	217	40	4	8	P26300-14 ..
Shank DIN 1835 B	T2711-29-W32-3-09-3-24	M 36	4.00	29	24	76.5	149	32	3	9	P26300-09 ..
	T2711-35-W32-3-11-3-27	M 42	4.50	35	27	89.5	160	32	3	9	P26300-11 ..
	T2711-40-W40-3-14-3-30	M 48	5.00	40	30	103	187	40	3	9	P26300-14 ..
	T2711-44-W40-3-14-3-33	M 56	5.50	44	33	119	202	40	3	9	

Bodies and assembly parts are included in the scope of delivery.

B 4

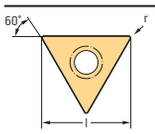
Assembly parts

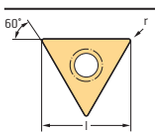
D_c [mm]	19	24–29	35	40–52
Clamping screw for indexable insert Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm
Coolant screw Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm

Accessories

D_c [mm]	19	24–35	40–52
Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm
Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
Screwdriver for indexable insert	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

Thread milling cutter inserts P26300





Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
P26300-0601-D67	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
P26300-0602-D67		0.2	3.00	8	6.58	3	●	●	●		●	●	
P26300-0901-D67	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
P26300-0902-D67		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
P26300-1401-D67	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
P26300-1402-D67		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
P26300-1404-D67		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
P26300-0601-D61	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
P26300-0602-D61		0.2	3.00	8	6.58	3	●	●	●		●	●	
P26300-0901-D61	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
P26300-0902-D61		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
P26300-1101-D61	11	0.1	1.50–2.50	18–10	10.85	3	●	●	●		●	●	
P26300-1102-D61		0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
P26300-1401-D61	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
P26300-1402-D61		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
P26300-1404-D61		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	

HC = Coated carbide

B 4

Tool selection

Metric thread

Family	Body designation	l_3 [mm]	Coarse pitch thread M24 / M27	M30 / M33	M36 / M39	M42 / M45	M48 / M52	M56 / M59	M64 / M68	D_N [mm]	Fine pitch thread P [mm] 1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
	T2711-19-W20-3-06-2-24	51	0602							≥ 24	0601	0601		0602						
	T2711-24-W25-3-09-2-31.5	64.5		0902						≥ 30	0901				0902					
	T2711-29-W32-3-09-3-24	76.5			0902					≥ 36	0901	0901		0902		0902				
T2711	T2711-35-W32-3-11-3-27	89.5				1102				≥ 42				1102			1102			
	T2711-40-W40-3-14-3-30	103					1404			≥ 48	1401	1401	1401	1402				1404		
	T2711-44-W40-3-14-3-33	119						1404		≥ 56	1401			1402					1404	
	T2711-52-W40-4-14-2-60	135							1404	≥ 64	1401	1401	1401	1402		1402		1404		1404

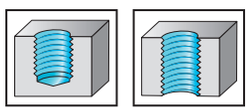
Example: With the T2711-29-W32-3-09-3-24 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..). an M36 or M39 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 or 4 mm, when the nominal diameter is ≥ 36 mm.

Indexable insert thread milling cutter
T2712 mm

– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

M
DIN 13

MF
DIN 13



≤ 2,5×D_N

	P	M	K	N	S	H	O
T2712	●●	●●	●●	●	●●		●

Tool

Designation	D_N	P_{max} mm	P_{max} TPI	D_c mm	l_{21} mm	L_c mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B												
T2712-24-W25-3-09-2-31.5	M 30	3.50	-	24	31.5	63	79.5	147	25	3	6	P26300-09 ..
T2712-29-W32-3-09-2-36	M 36	4.00	-	29	36	72	94.5	167	32	3	6	
T2712-35-W32-3-11-2-40.5	M 42	4.50	-	35	40.5	81	110.5	180	32	3	6	P26300-11 ..
T2712-40-W40-3-14-2-50	M 48	5.00	-	40	50	100	127	211	40	3	6	P26300-14 ..
Shank DIN 1835 B												
T2712-19-W20-3-06	M24	3.00	8	19	-	-	63	123	20	3	3	P26300-06 ..
T2712-24-W25-3-09	M30	3.50	7	24	-	-	79.5	148	25	3	3	P26300-09 ..
T2712-29-W32-3-09	M36	4.00	6	29	-	-	94.5	167	32	3	3	
T2712-35-W32-3-11	M42	4.50	6	35	-	-	110.5	181	32	3	3	P26300-11 ..
T2712-40-W40-3-14	M48	5.00	5	40	-	-	127	211	40	3	3	P26300-14 ..
T2712-44-W40-3-14	M56	5.50	4.5	44	-	-	147	230	40	3	3	
T2712-52-W40-4-14	M64	6.00	4	52	-	-	167	249	40	4	4	

Bodies and assembly parts are included in the scope of delivery.

B 4

/ ★ New addition to the product range

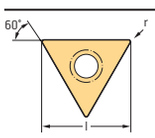
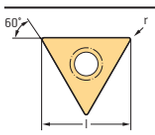
Assembly parts

D_c [mm]	19	24–29	35	40–52
Clamping screw for indexable insert Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm
Coolant screw Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm

Accessories

D_c [mm]	19	24–35	40–52
Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm
Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
Screwdriver for indexable insert	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

Thread milling cutter inserts P26300

	Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
	P26300-0601-D67	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D67		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D67	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D67		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D67	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D67		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D67		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-0601-D61	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D61		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D61	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D61		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1101-D61	11	0.1	1.50–2.50	18–10	10.85	3	●	●	●		●	●	
	P26300-1102-D61		0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D61	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D61		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D61		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	

HC = Coated carbide

B 4

Tool selection

Metric thread

Family	Body designation	l_3 [mm]	Coarse pitch thread M24 / M27	M30 / M33	M36 / M39	M42 / M45	M48 / M52	M56 / M59	M64 / M68	D_N [mm]	Fine pitch thread P [mm] 1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
T2712	T2712-24-W25-3-09-2-31.5	79.5		0902						≥ 30	0901				0902					
	T2712-29-W32-3-09-2-36	94.5			0902					≥ 36	0901	0901		0902		0902				
	T2712-35-W32-3-11-2-40.5	110.5				1102				≥ 42	1101						1102			
	T2712-40-W40-3-14-2-50	127					1404			≥ 48		1401	1401					1404		
T2712	T2712-19-W20-3-06	63	0602							≥ 24	0601			0602						
	T2712-24-W25-3-09	79.5		0902						≥ 30	0901			0902						
	T2712-29-W32-3-09	94.5			0902					≥ 36	0901			0902						
	T2712-35-W32-3-11	110.5				1102				≥ 42	1101			1102						
	T2712-40-W40-3-14	127					1404			≥ 48	1401			1402				1404		
	T2712-44-W40-3-14	147						1404		≥ 56	1401			1402				1404		
	T2712-52-W40-4-14	167							1404	≥ 64	1401			1402				1404		

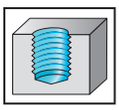
Example: With the T2712-29-W32-3-09-2-36 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..). an M36 or M39 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 or 4 mm, when the nominal diameter is ≥ 36 mm.

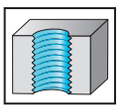
Indexable insert thread milling cutter
T2713 mm

– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

M
DIN 13

MF
DIN 13





≤ 3×D_N

	P	M	K	N	S	H	O
T2713	●●	●●	●●	●	●●		●

Tool	Designation	D_N	P_{max} mm	P_{max} TPI	D_c mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B	T2713-19-W20-3-06	M24	3.00	8	19	75	135	20	3	3	P26300-06 ..
	T2713-24-W25-3-09	M30	3.50	7	24	94.5	163	25	3	3	P26300-09 ..
	T2713-29-W32-3-09	M36	4.00	6	29	112.5	185	32	3	3	
	T2713-35-W32-3-11	M42	4.50	6	35	131.5	202	32	3	3	P26300-11 ..
	T2713-40-W40-3-14	M48	5.00	5	40	151	235	40	3	3	
	T2713-44-W40-3-14	M56	5.50	4.5	44	175	258	40	3	3	P26300-14 ..
	T2713-52-W40-4-14	M64	6.00	4	52	199	281	40	4	4	
Walter Capto™ in accordance with ISO 26623	T2713-60-C5-4-14	M72	6.00	4	60	115	152	50	4	4	P26300-14 ..
	T2713-73-C6-5-14	M85	6.00	4	73	125	170	63	5	5	
	★ T2713-94-C8-5-22	M125	10.00	4	94	140	199	80	5	5	P26300-22 ..

Bodies and assembly parts are included in the scope of delivery.

B 4

😊😐☹ / ★ New addition to the product range

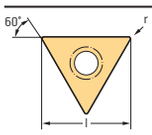
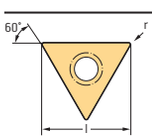
Assembly parts

	D_c [mm]	19	24–29	35	40–73	94
	Clamping screw for indexable insert Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS1495 (Torx 20IP) 5.0 Nm
	Coolant screw Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS1495 (TorxIP) 5.0 Nm

Accessories

	D_c [mm]	19	24–35	40–73	94
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)	FS2015 (Torx 20IP)
	Screwdriver for indexable insert	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)	FS1486 (Torx 20IP)

Thread milling cutter inserts P26300

	Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
	P26300-0601-D67	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D67		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D67	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D67		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D67	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D67		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D67		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-0601-D61	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D61		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D61	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D61		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1101-D61	11	0.1	1.50–2.50	18–10	10.85	3	●	●	●		●	●	
	P26300-1102-D61		0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D61	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D61		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D61		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-2204-D61	22	0.4	6.00–10.00	4	21.38	3	●	●	●		●	●	

HC = Coated carbide

B 4

Tool selection

Metric thread

Family	Body designation	l_3 [mm]	Coarse pitch thread M24 / M27	M30 / M33	M36 / M39	M42 / M45	M48 / M52	M56 / M59	M64 / M68	D_N [mm]	Fine pitch thread P [mm] 1.5–2.5	3	3.5	4	4.5	5	5.5	6	7–10
T2713	T2713-19-W20-3-06	75	0602							≥ 24	0601	0602							
	T2713-24-W25-3-09	94.5		0902						≥ 30	0901	0902							
	T2713-29-W32-3-09	112.5			0902					≥ 36	0901	0902							
	T2713-35-W32-3-11	131.5				1102				≥ 42	1101	1102							
	T2713-40-W40-3-14	151					1404			≥ 48	1401	1402				1404			
	T2713-44-W40-3-14	175						1404		≥ 56	1401	1402				1404			
	T2713-52-W40-4-14	199							1404	≥ 64	1401	1402				1404			
	T2713-60-C5-4-14	115								≥ 72	1401	1402				1404			
	T2713-73-C6-5-14	125								≥ 85	1401	1402				1404			
	T2713-94-C8-5-22	140								≥ 125								2204	

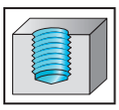
Example: With the T2713-29-W32-3-09 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..). an M36 or M39 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 or 4 mm, when the nominal diameter is ≥ 36 mm.

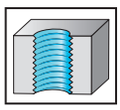
Indexable insert thread milling cutter
T2711 mm

– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

UNC
ASME B1.1

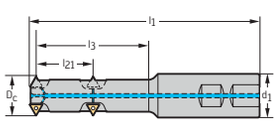
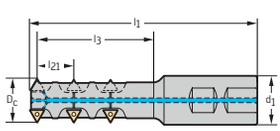
UNF
ASME B1.1





≤ 2×D_N

	P	M	K	N	S	H	O
T2711	●●	●●	●●	●	●●	●	●

Tool	Designation	D_N	P_{max} TPI	D_c mm	l_{21} mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B	T2711-20-W20-3-06-2-25.4	UNC 1	8	20	25.4	53.9	113	20	3	6	P26300-06 ..
	T2711-26-W25-3-09-2-32.7	UNC 1.1/4	7	26	32.66	68	135	25	3	6	P26300-09 ..
Shank DIN 1835 B	T2711-31-W32-3-09-3-25.4	UNC 1.1/2	6	31	25.4	80.7	153	32	3	9	P26300-09 ..
											

Bodies and assembly parts are included in the scope of delivery.

B 4

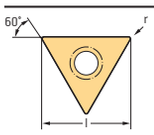
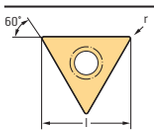
Assembly parts

	D_c [mm]	20	26–31
	Clamping screw for indexable insert Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm
	Coolant screw Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm

Accessories

	D_c [mm]	20	26–31
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)
	Screwdriver for indexable insert	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)

Thread milling cutter inserts P26300

	Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
	P26300-0601-D67	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D67		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D67	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D67		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D67	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D67		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D67		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-0601-D61	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D61		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D61	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D61		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1101-D61	11	0.1	1.50–2.50	18–10	10.85	3	●	●	●		●	●	
	P26300-1102-D61		0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D61	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D61		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D61		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	

HC = Coated carbide

B 4

Tool selection

UN threads

Family	Body designation	l_3 [mm]	UNC 1"	UNC 1 1/4"	UNC 1 1/2"	UNF 1"	UNF 1 1/8"	UNF 1 1/4"	UNF 1 3/8"	UNF 1 1/2"	D_N	UN TPI 18*	UN TPI 16	UN TPI 14	UN TPI 12	UN TPI 8	UN TPI 6
T2711	T2711-20-W20-3-06-2-25.4	53.9	0602			0601	0601	0601	0601	0601	≥ 1.00"	0601	0601	0601	0601	0602	
	T2711-26-W25-3-09-2-32.7	68		0902							≥ 1.25"			0901			
	T2711-31-W32-3-09-3-25.4	80.7			0902					0901	≥ 1.50"	0901	0901	0901	0901	0902	0902

Example: With the T2711-31-W32-3-09-3-25.4 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..). a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 and 6 TPI, when their nominal diameter is ≥ 1.5".

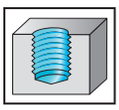
* = UNEF

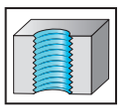
Indexable insert thread milling cutter
T2712 mm

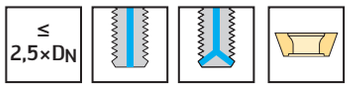
– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

UNC
ASME B1.1

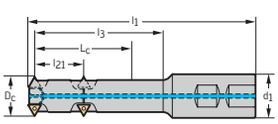
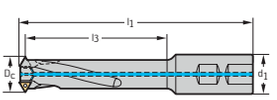
UNF
ASME B1.1







	P	M	K	N	S	H	O
T2712	●●	●●	●●	●	●●		●

Tool	Designation	D_N	P_{max} TPI	P_{max} mm	D_c mm	l_{21} mm	L_c mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of index-able inserts	Type
Shank DIN 1835 B	T2712-26-W25-3-09-2-32.7	UNC 1 1/4	7	-	26	32.66	65.32	84	151	25	3	6	P26300-09 ..
	T2712-31-W32-3-09-2-38.1	UNC 1 1/2	6	-	31	38.1	76.2	99.8	172	32	3	6	
Shank DIN 1835 B	T2712-19-W20-3-06	1.00"	8	3.00	19	-	-	63	123	20	3	3	P26300-06 ..
	T2712-24-W25-3-09	1.25"	7	3.50	24	-	-	79.5	148	25	3	3	P26300-09 ..
	T2712-29-W32-3-09	1.50"	6	4.00	29	-	-	94.5	167	32	3	3	
	T2712-35-W32-3-11	1.75"	6	4.50	35	-	-	110.5	181	32	3	3	P26300-11 ..
	T2712-40-W40-3-14	2.00"	5	5.00	40	-	-	127	211	40	3	3	
	T2712-44-W40-3-14	2.25"	4.5	5.50	44	-	-	147	230	40	3	3	P26300-14 ..
	T2712-52-W40-4-14	2.75"	4	6.00	52	-	-	167	249	40	4	4	

Bodies and assembly parts are included in the scope of delivery.

B 4

/ ★ New addition to the product range

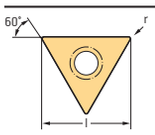
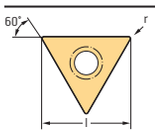
Assembly parts

D_c [mm]	19	24–31	35	40–52
Clamping screw for indexable insert Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm
Coolant screw Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm

Accessories

D_c [mm]	19	24–31	40–52
Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm
Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
Screwdriver for indexable insert	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

Thread milling cutter inserts P26300

	Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
	P26300-0601-D67	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D67		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D67	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D67		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D67	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D67		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D67		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-0601-D61	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D61		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D61	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D61		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1101-D61	11	0.1	1.50–2.50	18–10	10.85	3	●	●	●		●	●	
	P26300-1102-D61		0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D61	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D61		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D61		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	

HC = Coated carbide

B 4

Tool selection

UN threads

Family	Body designation	l_3 [mm]	UNC 1"	UNC 1 1/4"	UNC 1 1/2"	UNC 2 1/4"	UNC ≥ 2 3/4"	UNF 1"	UNF 1 1/8"	UNF 1 1/4"	UNF 1 3/8"	UNF 1 1/2"	D_N	UN TPI 18–10	UN TPI 8	UN TPI 6	UN TPI 5	UN TPI 4.5	UN TPI 4
T2712	T2712-26-W25-3-09-2-32.7	83.88		0902									≥ 1.25"						
	T2712-31-W32-3-09-2-38.1	99.75			0902							0901	≥ 1.50"	0901*	0902	0902			
T2712	T2712-19-W20-3-06	63	0602					0601	0601	0601	0601	0601	≥ 1.00"	0601	0602				
	T2712-24-W25-3-09	79.5		0902					0901	0901	0901	0901	≥ 1.25"	0901	0902				
	T2712-29-W32-3-09	94.5			0902						0901	0901	≥ 1.50"	0901	0902				
	T2712-35-W32-3-11	110.5											≥ 1.75"	1101	1102				
	T2712-40-W40-3-14	127											≥ 2.00"	1401	1402		1404		
	T2712-44-W40-3-14	147				1404							≥ 2.25"	1401	1402		1404		
	T2712-52-W40-4-14	167					1404						≥ 2.75"	1401	1402		1404		

Example: With the T2712-31-W32-3-09-2-38.1 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..). a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 and 6 TPI, when their nominal diameter is ≥ 1.5".

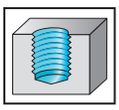
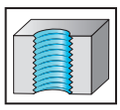
* Exceptions: 13/11.5 and 11 TPI cannot be machined.

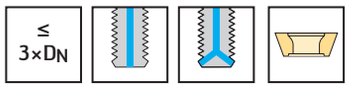
Indexable insert thread milling cutter
T2713 mm

– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

UNC
ASME B1.1

UNF
ASME B1.1

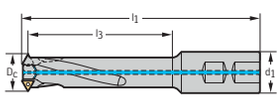





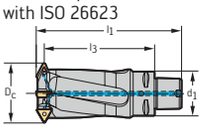
	P	M	K	N	S	H	O
T2713	●●	●●	●●	●	●●		●

Tool

Shank DIN 1835 B



Walter Capto™ in accordance with ISO 26623



Designation	D_N	P_{max} TPI	P_{max} mm	D_c mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
T2713-19-W20-3-06	1.00"	8	3.00	19	75	135	20	3	3	P26300-06 ..
T2713-24-W25-3-09	1.25"	7	3.50	24	94.5	163	25	3	3	P26300-09 ..
T2713-29-W32-3-09	1.50"	6	4.00	29	112.5	185	32	3	3	
T2713-35-W32-3-11	1.75"	6	4.50	35	131.5	202	32	3	3	P26300-11 ..
T2713-40-W40-3-14	2.00"	5	5.00	40	151	235	40	3	3	
T2713-44-W40-3-14	2.25"	4.5	5.50	44	175	258	40	3	3	P26300-14 ..
T2713-52-W40-4-14	2.75"	4	6.00	52	199	281	40	4	4	
T2713-60-C5-4-14	3.00"	4	6.00	60	115	152	50	4	4	P26300-14 ..
T2713-73-C6-5-14	3.50"	4	6.00	73	125	170	63	5	5	
★ T2713-94-C8-5-22	5.00"	4	10.00	94	140	199	80	5	5	P26300-22 ..

Bodies and assembly parts are included in the scope of delivery.

B 4

☻☻☻ / ★ New addition to the product range

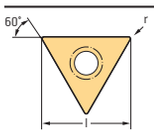
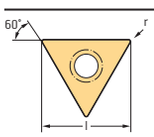
Assembly parts

	D_c [mm]	19	24–29	35	40–73	94
	Clamping screw for indexable insert Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS1495 (Torx 20IP) 5.0 Nm
	Coolant screw Tightening torque	FS2147 (Torx 6IP) 0.6 Nm	FS2111 (Torx 7IP) 0.9 Nm	FS2061 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm	FS1495 (TorxIP) 5.0 NM

Accessories

	D_c [mm]	19	24–35	40–73	94
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)	FS2015 (Torx 20IP)
	Screwdriver for indexable insert	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)	FS1486 (Torx 20IP)

Thread milling cutter inserts P26300

	Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
	P26300-0601-D67	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D67		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D67	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D67		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D67	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D67		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D67		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-0601-D61	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D61		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D61	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D61		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1101-D61	11	0.1	1.50–2.50	18–10	10.85	3	●	●	●		●	●	
	P26300-1102-D61		0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D61	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D61		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D61		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-2204-D61	22	0.4	6.00–10.00	4	21.38	3	●	●	●		●	●	

HC = Coated carbide

B 4

Tool selection

UN threads

Family	Body designation	l_3 [mm]	UNC 1"	UNC 1 1/4"	UNC 1 1/2"	UNC 2 1/4"	UNC 2 3/4"	UNC ≥ 3"	UNC ≥ 3 1/2"	UNF 1"	UNF 1 1/8"	UNF 1 1/4"	UNF ≥ 1 3/8"	UN D_N	UN TPI 18–10	UN TPI 8	UN TPI 6	UN TPI 5	UN TPI 4.5	UN TPI 4
	T2713-19-W20-3-06	75	0602							0601	0601	0601	0601	≥ 1.00"	0601	0602				
	T2713-24-W25-3-09	94.5		0902							0901	0901	0901	≥ 1.25"	0901	0902				
	T2713-29-W32-3-09	112.5			0902								0901	≥ 1.50"	0901	0902				
	T2713-35-W32-3-11	131.5												≥ 1.75"	1101	1102				
T2713	T2713-40-W40-3-14	151												≥ 2.00"	1401	1402		1404		
	T2713-44-W40-3-14	175				1404								≥ 2.25"	1401	1402		1404		
	T2713-52-C5-4-14	199					1404	1404	1404					≥ 2.75"	1401	1402		1404		
	T2713-60-C5-4-14	115						1404	1404					≥ 3.00"	1401	1402		1404		
	T2713-73-C6-5-14	125							1404					≥ 3.50"	1401	1402		1404		
	T2713-94-C8-5-22	140												≥5.00"						2204

Example: With the T2713-29-W32-3-09 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..). a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 to 6 TPI, when the nominal diameter is ≥ 1.5".

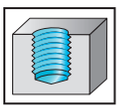
Indexable insert thread milling cutter
T2711 / T2712 inch

– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

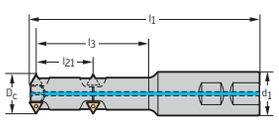
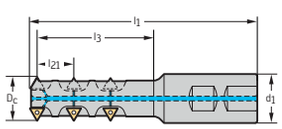
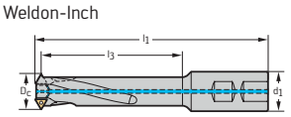
≤ 2×D_N	≤ 2,5×D_N			

UNC
ASME B1.1

UNF
ASME B1.1



	P	M	K	N	S	H	O
T2711	●●	●●	●●	●	●●	●	●
T2712	●●	●●	●●	●	●●		●

Tool	Designation	D_N	P_{max} TPI	P_{max} mm	D_c Inch	l_{21} Inch	l_3 Inch	l_1 Inch	d_1 Inch	Z	No. of index-able inserts	Type
Weldon-Inch	T2711.20-W19-3-06-2-25.4	UNC 1	8	-	0.787	1.000	2.122	4.461	0.750	3	6	P26300-06 ..
	T2711.26-W26-3-09-2-32.7	UNC 1.1/4	7	-	1.024	1.286	2.677	5.299	1.000	3	6	P26300-09 ..
Weldon-Inch	T2711.31-W31-3-09-3-25.4	UNC 1.1/2	6	-	1.220	1.000	3.177	5.892	1.250	3	9	P26300-09 ..
												
Weldon-Inch	T2712.20-W19-3-06	UNC 1	8	3.00	0.787	-	2.618	4.953	0.750	3	3	P26300-06 ..
	T2712.23-W26-3-09	UNC 1 1/8	7	3.50	0.886	-	2.992	5.695	1.000	3	3	P26300-09 ..
	T2712.28-W31-3-09	UNC 1 3/8	6	4.00	1.083	-	3.622	6.482	1.250	3	3	

Bodies and assembly parts are included in the scope of delivery.

B 4

☻☻☻ / ★ New addition to the product range

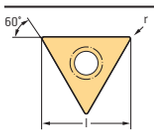
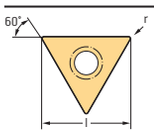
Assembly parts

	D_c [Inch]	0.787	0.886–1.220
	Clamping screw for indexable insert Tightening torque	FS2147 (Torx 6IP) 5 in lbs	FS2111 (Torx 7IP) 8 in lbs
	Coolant screw Tightening torque	FS2147 (Torx 6IP) 5 in lbs	FS2111 (Torx 7IP) 8 in lbs

Accessories

	D_c [Inch]	0.787	0.886 –1.220
	Torque screwdriver. analogue Tightening torque	FS2002 4 - 11 in lbs	FS2002 4 - 11 in lbs
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)
	Screwdriver for indexable insert	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)

Thread milling cutter inserts P26300

	Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
	P26300-0601-D67	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D67		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D67	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D67		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D67	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D67		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D67		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	
	P26300-0601-D61	6	0.1	1.50–2.50	18–10	6.73	3	●	●	●		●	●	
	P26300-0602-D61		0.2	3.00	8	6.58	3	●	●	●		●	●	
	P26300-0901-D61	9	0.1	1.50–2.50	18–10	9.48	3	●	●	●		●	●	
	P26300-0902-D61		0.2	3.00–4.00	8–6	9.34	3	●	●	●		●	●	
	P26300-1101-D61	11	0.1	1.50–2.50	18–10	10.85	3	●	●	●		●	●	
	P26300-1102-D61		0.2	3.00–4.50	8–6	10.71	3	●	●	●		●	●	
	P26300-1401-D61	14	0.1	1.50–2.50	18–10	13.87	3	●	●	●		●	●	
	P26300-1402-D61		0.2	3.00–4.50	8–6	13.72	3	●	●	●		●	●	
	P26300-1404-D61		0.4	5.00–6.00	5–4	13.43	3	●	●	●		●	●	

HC = Coated carbide

B 4

Tool selection

UN threads

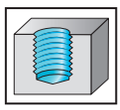
			UNC					UNF					UN			
														TPI		
Family	Body designation	l_3 [inches]	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"	D_N	18–10	8	6
T2711	T2711.20-W19-3-06-2-25.4	2.122"	0602					0601	0601	0601	0601	0601	≥ 1.000"	0601	0602	
	T2711.26-W26-3-09-2-32.7	2.677"			0902								≥ 1.250"			
	T2711.31-W31-3-09-3-25.4	3.177"					0902					0901	≥ 1.500"	0901	0902	0902
T2712	T2712.20-W19-3-06	2.618"	0602					0601	0601	0601	0601	0601	≥ 1.000"	0601	0602	
	T2712.23-W26-3-09	2.992"		0902	0902				0901	0901	0901	0901	≥ 1.125"	0901	0902	
	T2712.28-W31-3-09	3.622"				0902	0902				0901	0901	≥ 1.375"	0901	0902	0902

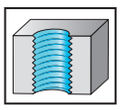
Example: With the T2711.31-W31-3-09-3-25.4 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..). a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 or 6 TPI, when the nominal diameter is ≥ 1.5".

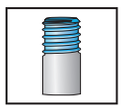
Indexable insert thread milling cutter
T2712 / T2713 mm

– Radius correction values: See technical information
– D67 geometry: Maximum tool life/D61 geometry: Best operational smoothness

G
DIN EN ISO 228



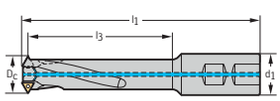




≤ 2,5×D_N | ≤ 3×D_N

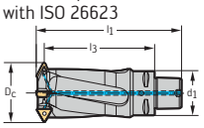
	P	M	K	N	S	H	O
T2712 / T2713	●●	●●	●●	●	●●		●

Tool	Designation	D_N	P_{max} mm	P_{max} TPI	D_c mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B	★ T2712-24-W25-3-09	G 1"	3.50	7	24	79.5	148	25	3	3	P26310-09G11 ..
	★ T2712-29-W32-3-09	G1 1/8"	4.00	6	29	94.5	167	32	3	3	
	★ T2712-40-W40-3-14	G 1 1/2"	5.00	5	40	127	211	40	3	3	P26310-14G11 ..
	★ T2712-44-W40-3-14	G 1 3/4"	5.50	5	44	147	230	40	3	3	
	★ T2712-52-W40-4-14	G 2"	6.00	4	52	167	249	40	4	4	



Bodies and assembly parts are included in the scope of delivery.

Tool	Designation	D_N	P_{max} mm	P_{max} TPI	D_c mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B	★ T2713-24-W25-3-09	G 1"	3.50	7	24	94.5	163	25	3	3	P26310-09G11 ..
	★ T2713-29-W32-3-09	G1 1/8"	4.00	6	29	112.5	185	32	3	3	
	★ T2713-40-W40-3-14	G 1 1/2"	5.00	5	40	151	235	40	3	3	P26310-14G11 ..
	★ T2713-44-W40-3-14	G 1 3/4"	5.50	5	44	175	258	40	3	3	
	★ T2713-52-W40-4-14	G 2"	6.00	4	52	199	281	40	4	4	
Walter Capto™ in accordance with ISO 26623	★ T2713-60-C5-4-14	G 2 1/4"	6.00	4	60	115	152	50	4	4	P26310-14G11 ..
	★ T2713-73-C6-5-14	G 2 3/4"	6.00	4	73	125	170	63	5	5	



Bodies and assembly parts are included in the scope of delivery.

B 4

/ ★ New addition to the product range

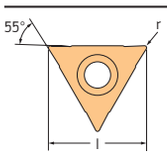
Assembly parts

	D_c [mm]	24–29	40–73
	Clamping screw for indexable insert Tightening torque	FS2111 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm
	Coolant screw Tightening torque	FS2111 (Torx 7IP) 0.9 Nm	FS1457 (Torx 9IP) 2.0 Nm

Accessories

	D_c [mm]	24–29	40–73
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
	Screwdriver for indexable insert	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

Thread milling cutter inserts P26310



Designation	Size	r mm	Pitch P TPI	l mm	Number of cutting edges	P HC WSM37S	M HC WSM37S	K HC WSM37S	N HC WSM37S	S HC WSM37S	H HC WSM37S	O HC WSM37S
P26310-09G11-D61	9	0.2	11	9.34	3	●●	●●	●●		●●	●●	
P26310-14G11-D61	14	0.2	11	13.72	3	●●	●●	●●		●●	●●	

Partial profile indexable inserts for producing the flattened profile in accordance with DIN EN ISO 228.

HC = Coated carbide

B 4

Tool selection

G thread (BSP)

Family	Body designation	Insert	l3 [mm]	G 1"	G 1 1/8"	G 1 1/4"	G 1 1/2"	G 1 3/4"	G 2"	G 2 1/4"	G 2 1/2"	G 2 3/4"	G 3"	≥ G 3 1/2"
T2712	T2712-24-W25-3-09	09G11	79.5	●●	●●	●●	●●	●	●	●	●	●	●	●
	T2712-29-W32-3-09		94.5		●●	●●	●●	●●	●	●	●	●	●	●
	T2712-40-W40-3-14	14G11	127				●●	●●	●●	●●	●	●	●	●
	T2712-44-W40-3-14		147					●●	●●	●●	●	●	●	●
	T2712-52-W40-4-14		167						●●	●●	●●	●	●	●
T2713	T2713-24-W25-3-09	09G11	94.5	●●	●●	●●	●●	●	●	●	●	●	●	●
	T2713-29-W32-3-09		112.5		●●	●●	●●	●●	●	●	●	●	●	●
	T2713-40-W40-3-14	14G11	151				●●	●●	●●	●●	●	●	●	●
	T2713-44-W40-3-14		175					●●	●●	●●	●	●	●	●
	T2713-52-W40-4-14		199						●●	●●	●●	●	●	●
	T2713-60-C5-4-14		115							●●	●●	●●	●	●
	T2713-73-C6-5-14		125									●●	●●	●●

Example: With the T2712-29-W32-3-09 body and the P26310-09G11.. indexable insert. G threads from 1 1/8" can be produced.

●● **Primary application:** High level of cost efficiency for small and large batch sizes

● **Additional application:** Cost-effective for small batch sizes (in order to achieve a good surface quality, the feed per tooth must be reduced. This results in longer machining times.)

Cutting data
Thread forming and tapping

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

= Cooling lubricant recommended

E = Emulsion
O = Oil
v_c = Cutting speed

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R_m N/mm²	Machining group [1]	HSS-E(-PM) thread formers, Coated, v_c [sfm] 1.5 × D_N	2 × D_N	2.5 × D_N	
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1	151	121	105	E
		C > 0.25%... ≤ 0.55%	Annealed	190	640	P2	154	125	108	E
		C > 0.25%... ≤ 0.55%	Heat-treated	210	710	P3	95	75	66	E
		C > 0.55%	Annealed	190	640	P4	95	75	66	E
		C > 0.55%	Heat-treated	300	1010	P5	56	46	39	E
		Free-machining steel (short-chipping)	Annealed	220	750	P6	95	75	66	E
	Low-alloy steel	Annealed		175	590	P7	154	125	108	E
		Heat-treated		285	960	P8	49	39	36	E
		Heat-treated		380	1280	P9				
		Heat-treated		430	1480	P10				
	High-alloyed steel and high-alloyed tool steel	Annealed		200	680	P11	95	75	66	E
		Hardened and tempered		300	1010	P12	56	46	39	E
		Hardened and tempered		380	1280	P13				
	Stainless steel	Ferritic/martensitic, annealed		200	680	P14	43	33	30	E O
		Martensitic, heat-treated		330	1110	P15	16	13	10	O
M	Stainless steel	Austenitic, quench hardened		200	680	M1	49	39	36	E O
		Austenitic, precipitation hardened (PH)		300	1010	M2	16	13	13	O
		Austenitic/ferritic, duplex		230	780	M3	16	13	13	E O
K	Malleable cast iron	Ferritic		200	400	K1				
		Pearlitic		260	700	K2				
	Grey cast iron	Low tensile strength		180	200	K3				
		High tensile strength/austenitic		245	350	K4				
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	95	75	66	E
		Pearlitic		265	700	K6	46	39	33	E
	GGV (CGI)			230	400	K7				
N	Wrought aluminium alloys	Not hardenable		30	–	N1	184	148	128	E
		Hardenable, hardened		100	340	N2	171	141	121	E
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	157	128	112	E
		≤ 12% Si, hardenable, hardened		90	310	N4	157	128	112	E
		> 12% Si, not hardenable		130	450	N5				
	Magnesium alloys			70	250	N6				
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	N7	69	56	49	E
		Brass, bronze, red brass		90	310	N8				
		Cu alloys, short-chipping		110	380	N9				
		High-tensile, Ampco		300	1010	N10				
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1	26	20	16	E
			Hardened	280	940	S2				
		Ni- or Co-based	Annealed	250	840	S3	26	20	16	O
			Hardened	350	1180	S4				
			Cast	320	1080	S5				
	Titanium alloys	Pure titanium		200	680	S6				
		α and β alloys, hardened		375	1260	S7				
		β alloys		410	1400	S8				
	Tungsten alloys			300	1010	S9				
	Molybdenum alloys			300	1010	S10				
H	Hardened steel	Hardened and tempered		50 HRC	–	H1				
		Hardened and tempered		55 HRC	–	H2				
		Hardened and tempered		60 HRC	–	H3				
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4				
O	Thermoplastics	Without abrasive fillers				O1				
	Thermosets	Without abrasive fillers				O2				
	Plastic, glass-fibre-reinforced	GFRP				O3				
	Plastic, carbon-fibre-reinforced	CFRP				O4				
	Plastic, aramid-fibre-reinforced	AFRP				O5				
	Graphite (technical)			80 Shore		O6				

[1] The classification of the machining groups can be found Starting on Page B1330 in the Walter General Catalog 2018.
[3] Water-miscible coolants must not be used when machining magnesium-based alloys.
*For materials with a hardness of more than 63 HRC, reduce the cutting speed by 50–75%.

	HSS-E(-PM) taps							TC388 tap		TC389 tap*		
	Uncoated			Coated				WJ30BA		WE10BA		
	v_c [sfw]			v_c [sfw]				v_c [sfw]		v_c [sfw]		
	$1.5 \times D_N$	$2 \times D_N$	$2.5 \times D_N$	$1.5 \times D_N$	$2 \times D_N$	$2.5 \times D_N$		$1.5 \times D_N$	$2 \times D_N$	$1.5 \times D_N$	$2 \times D_N$	
	52	43	39	121	98	85	E					
	66	56	46	121	102	85	E					
	33	30	23	75	62	56	E					
	33	30	23	75	62	52	E					
	20	16	13	46	39	33	E					
	33	30	23	75	62	52	E					
	66	56	46	121	98	85	E					
	16	13	13	39	33	30	E					
	10	10	7	23	20	16	E					
	10	7	7	16			O					
	33	30	23	75	62	52	E					
	20	16	13	46	39	33	E					
	10	10	7	23	20	16	O					
	10	7	7	23	20	16	E					
	10	7	7	16	13	10	E					
	13	10	10	26	23	20	E					
	7	7	3	16	13	10	E					
	7	7	7	20	16	13	E					
	33	30	23	72	59	52	E					
	23	16	16	36	30	26	E					
	62	52	43	144	118	105	E					
	43	33	30	56	46	39	E					
	33	30	23	72	59	52	E					
	23	16	16	39	33	30	E					
	20	16	13	33	26	23	E					
	33	26	23	26	23	20	E					
	62	52	43	105	85	72	E					
	56	46	39	72	59	52	E					
	56	46	39	72	59	52	E					
	52	43	36	82	69	59	E					
	85	69	62	112	92	79	O					
	30	23	20	46	39	33	E					
	79	69	59	118	95	82	E					
	102	82	69	157	131	112	E					
	7						E					
	10	10	7				E					
	7	7	7	10			E					
	10	10	7				E					
	7	7	7	10			O					
	7	7	7	10			O					
	33	26	23	26	23	20	E					
	10	7	7	13	13		O					
	10	7	7	13	13		O					
	7	7	7	7	7		O	20	16	20	16	O
	16	16	13	23	16		O	56	46	56	46	O
							O	33	26			E O
							O	13	10	13	10	E O
							O			7	5	E O
							O	13	10	13	10	E O
	92	75	62	72	59	49	E					
	36	30	26	43	33	30	E					
	20	16	13	26	20	16	E					
	20	16	13	26	20	16	E					
	20	16	13	26	20	16	E					
	43	36	30	62	52	43	E					

Cutting data
Solid carbide thread milling

= Cooling lubricant recommended

E = Emulsion
M = MQL
A = Compressed air
v_c = Cutting speed [sfm]
f_z = Feed rate per tooth [mm]

●● = Recommended strategy
● = Possible strategy

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R_m N/mm²	Machining group [1]		TC620 Strategy: Synchronous milling	TC620 Strategy: Asynchronous milling	TC620 Strategy: Non-cutting pass
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1	**E M**	●	●●	●
		C > 0.25 ... ≤ 0.55%	Annealed	190	640	P2	**E M**	●	●●	●
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	710	P3	**E M**	●	●●	●
		C > 0.55%	Annealed	190	640	P4	**E M**	●	●●	●
		C > 0.55%	Heat-treated	300	1010	P5	**E M**	●	●●	●
		Free-machining steel (short-chipping)	Annealed	220	750	P6	**E M**	●	●●	●
	Low-alloy steel	Annealed		175	590	P7	**E M**	●	●●	●●
		Heat-treated		285	960	P8	**E M**	●	●●	●
		Heat-treated		380	1280	P9	**E M**	●	●●	●
		Heat-treated		430	1480	P10	**E M**	●	●●	●
	High-alloyed steel and high-alloyed tool steel	Annealed		200	680	P11	**E M**	●	●●	●●
		Hardened and tempered		300	1010	P12	**E M**	●	●●	●
		Hardened and tempered		380	1280	P13	**E M**	●	●●	●
	Stainless steel	Ferritic/martensitic, annealed		200	680	P14	**E M**	●	●●	●●
		Martensitic, heat-treated		330	1110	P15	**E M**	●	●●	●
M	Stainless steel	Austenitic, quench hardened		200	680	M1	**E**	●●	●	●●
		Austenitic, precipitation hardened (PH)		300	1010	M2	**E**	●●	●	●●
		Austenitic/ferritic, duplex		230	780	M3	**E**	●●	●	●●
K	Malleable cast iron	Ferritic		200	400	K1	**E M**	●	●●	●
		Pearlitic		260	700	K2	**E M**	●	●●	●
	Grey cast iron	Low tensile strength		180	200	K3	**E M**	●	●●	●
		High tensile strength/austenitic		245	350	K4	**E M**	●	●●	●
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	**E M**	●	●●	●
		Pearlitic		265	700	K6	**E M**	●	●●	●
	GGV (CGI)			230	400	K7	**E M**	●	●●	●
N	Wrought aluminium alloys	Not hardenable		30	–	N1	**E M**	●●	●	●
		Hardenable, hardened		100	340	N2	**E M**	●●	●	●
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	**E M**	●●	●	●
		≤ 12% Si, hardenable, hardened		90	310	N4	**E M**	●●	●	●
		> 12% Si, not hardenable		130	450	N5	**E M**	●●	●	●
	Magnesium-based alloys [3]			70	250	N6	**A**	●●	●	●
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	N7	**E M**	●●	●	●●
		Brass, bronze, red brass		90	310	N8	**E M**	●●	●	●
		Cu alloys, short-chipping		110	380	N9	**E M**	●●	●	●
		High-tensile, Ampco		300	1010	N10	**E M**	●●	●	●
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1	**E**	●●	●	●●
			Hardened	280	940	S2	**E**	●●	●	●●
		Ni- or Co-based	Annealed	250	840	S3	**E**	●●	●	●●
			Hardened	350	1180	S4	**E**	●●	●	●●
			Cast	320	1080	S5	**E**	●●	●	●●
	Titanium alloys	Pure titanium		200	680	S6	**E**	●●	●	●●
		α and β alloys, hardened		375	1260	S7	**E**	●●	●	●
		β alloys		410	1400	S8	**E**	●●	●	●
	Tungsten alloys			300	1010	S9	**E**	●●	●	●
	Molybdenum alloys			300	1010	S10	**E**	●●	●	●
H	Hardened steel	Hardened and tempered		50 HRC	–	H1	**M A**	●	●●	●
		Hardened and tempered		55 HRC	–	H2	**M**			
		Hardened and tempered		60 HRC	–	H3	**M**			
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4	**M A**			
O	Thermoplastics	Without abrasive fillers				O1	**E M**	●●	●	●
	Thermosets	Without abrasive fillers				O2	**E M**	●●	●	●
	Plastic, glass-fibre-reinforced	GFRP				O3	**E M**	●●	●	●
	Plastic, carbon-fibre-reinforced	CFRP				O4	**E M**	●●	●	●
	Plastic, aramid-fibre-reinforced	AFRP				O5	**E M**	●●	●	●
	Graphite (technical)			65		O6	**E M**	●●	●	●

[1] The classification of the machining groups can be found starting on page B1330 in the Walter General Catalog 2018.
[3] Water-miscible coolants must not be used when machining magnesium alloys.
* The TC685 is a left-hand cutting version. Machining is therefore performed synchronously.

	TC620				TC685*			
	v_c [sfm]	f_z [mm]			v_c	f_z [mm]		
	WB10TJ	D_c ≤ 6 mm	D_c > 0.236 in and ≤ 0.472 in	D_c > 0.472 in	WB10RC	D_c ≤ 0.157 in	D_c > 0.157 in and ≤ 0.315 in	D_c > 0.315 in
	377	0.0028	0.0043	0.0059				
	509	0.0028	0.0043	0.0059				
	427	0.0028	0.0043	0.0059				
	427	0.0028	0.0043	0.0059				
	312	0.0028	0.0043	0.0059				
	427	0.0028	0.0043	0.0059				
	427	0.0028	0.0043	0.0059				
	262	0.0020	0.0035	0.0051				
	246	0.0020	0.0035	0.0051				
	213	0.0020	0.0035	0.0051	230	0.0006	0.0012	0.002
	492	0.0028	0.0043	0.0059				
	361	0.0028	0.0043	0.0059				
	295	0.0028	0.0043	0.0059				
	180	0.0028	0.0043	0.0059				
	148	0.0028	0.0043	0.0059				
	230	0.0020	0.0035	0.0051				
	131	0.0020	0.0035	0.0051				
	148	0.0016	0.0028	0.0039				
	344	0.0028	0.0047	0.0067	295	0.0008	0.0018	0.0028
	328	0.0028	0.0047	0.0067	295	0.0008	0.0018	0.0028
	427	0.0028	0.0047	0.0067	328	0.0008	0.0018	0.0028
	361	0.0028	0.0043	0.0059	295	0.0008	0.0018	0.0028
	344	0.0028	0.0043	0.0059	295	0.0008	0.0018	0.0028
	328	0.0028	0.0043	0.0059	295	0.0008	0.0018	0.0028
	279	0.0028	0.0043	0.0059	262	0.0008	0.0018	0.0028
	1312	0.0028	0.0047	0.0067				
	1312	0.0028	0.0047	0.0067				
	1312	0.0028	0.0047	0.0067				
	1312	0.0028	0.0047	0.0067				
	558	0.0028	0.0047	0.0067				
	1312	0.0028	0.0047	0.0067				
	1181	0.0028	0.0047	0.0067				
	1181	0.0028	0.0047	0.0067				
	1181	0.0028	0.0047	0.0067				
	164	0.0020	0.0035	0.0051				
	115	0.0028	0.0043	0.0059				
	82	0.0028	0.0043	0.0059				
	131	0.0028	0.0043	0.0059				
	82	0.0020	0.0035	0.0051				
	82	0.0020	0.0035	0.0051				
	131	0.0028	0.0043	0.0059				
	131	0.0020	0.0035	0.0051				
	66	0.0020	0.0035	0.0051				
	164	0.0020	0.0035	0.0051	98	0.0004	0.0008	0.002
	197	0.0020	0.0035	0.0051	98	0.0004	0.0008	0.002
	180	0.0020	0.0035	0.0051	180	0.0005	0.0012	0.002
					164	0.0004	0.0009	0.0016
					148	0.0003	0.0008	0.0012
					164	0.0004	0.0009	0.0016
	951	0.0024	0.0039	0.0055				
	476	0.0024	0.0039	0.0055				
	213	0.0024	0.0039	0.0055				
	213	0.0024	0.0039	0.0055				
	213	0.0024	0.0039	0.0055				
	705	0.0024	0.0039	0.0055				

Cutting data
Indexable insert thread milling

= Cooling lubricant recommended

E = Emulsion
M = MQL
A = Compressed air
v_c = Cutting speed [sfm]
f_z = Feed rate per tooth [in]

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R_m N/mm²	Machining group [1]		T2711 / T2712 / T2713		
								v_c (sfm)	f_z (in) Insert size 06	f_z (in) Insert size 09 / 11 / 14
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1	E M	656	0.0118	0.0157
		C > 0.25 ... ≤ 0.55%	Annealed	190	640	P2	E M	656	0.0118	0.0157
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	710	P3	E M	656	0.0118	0.0157
		C > 0.55%	Annealed	190	640	P4	E M	656	0.0118	0.0157
		C > 0.55%	Heat-treated	300	1010	P5	E M	656	0.0118	0.0157
		Free-machining steel (short-chipping)	Annealed	220	750	P6	E M	656	0.0118	0.0157
	Low-alloy steel	Annealed		175	590	P7	E M	656	0.0118	0.0157
		Heat-treated		285	960	P8	E M	656	0.0118	0.0157
		Heat-treated		380	1280	P9	E M	492	0.0098	0.0138
		Heat-treated		430	1480	P10	E M	328	0.0079	0.0118
	High-alloyed steel and high-alloyed tool steel	Annealed		200	680	P11	E M	656	0.0118	0.0157
		Hardened and tempered		300	1010	P12	E M	656	0.0118	0.0157
		Hardened and tempered		380	1280	P13	E M	492	0.0118	0.0157
	Stainless steel	Ferritic/martensitic, annealed		200	680	P14	E M	656	0.0098	0.0138
		Martensitic, heat-treated		330	1110	P15	E M	492	0.0098	0.0138
M	Stainless steel	Austenitic, quench hardened		200	680	M1	E	656	0.0079	0.0118
		Austenitic, precipitation hardened (PH)		300	1010	M2	E	492	0.0079	0.0118
		Austenitic/ferritic, duplex		230	780	M3	E	262	0.0079	0.0118
K	Malleable cast iron	Ferritic		200	400	K1	E M	656	0.0118	0.0157
		Pearlitic		260	700	K2	E M	656	0.0118	0.0157
	Grey cast iron	Low tensile strength		180	200	K3	E M	820	0.0118	0.0157
		High tensile strength/austenitic		245	350	K4	E M	656	0.0118	0.0157
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	E M	656	0.0118	0.0157
		Pearlitic		265	700	K6	E M	656	0.0118	0.0157
	GGV (CGI)			230	400	K7	E M	656	0.0118	0.0157
N	Wrought aluminium alloys	Not hardenable		30	–	N1	E M	–	–	–
		Hardenable, hardened		100	340	N2	E M	–	–	–
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	E M	–	–	–
		≤ 12% Si, hardenable, hardened		90	310	N4	E M	–	–	–
		> 12% Si, not hardenable		130	450	N5	E M	656	0.0118	0.0157
	Magnesium-based alloys [3]			70	250	N6	A	820	0.0118	0.0157
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	N7	E M	–	–	–
		Brass, bronze, red brass		90	310	N8	E M	–	–	–
		Cu alloys, short-chipping		110	380	N9	E M	–	–	–
		High-tensile, Ampco		300	1010	N10	E M	–	–	–
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1	E	131	0.0098	0.0098
			Hardened	280	940	S2	E	82	0.0059	0.0059
		Ni- or Co-based	Annealed	250	840	S3	E	131	0.0098	0.0098
			Hardened	350	1180	S4	E	82	0.0059	0.0059
			Cast	320	1080	S5	E	98	0.0079	0.0079
	Titanium alloys	Pure titanium		200	680	S6	E	131	0.0098	0.0098
		α and β alloys, hardened		375	1260	S7	E	131	0.0098	0.0098
		β alloys		410	1400	S8	E	98	0.0079	0.0079
	Tungsten alloys			300	1010	S9	E	131	0.0098	0.0098
	Molybdenum alloys			300	1010	S10	E	131	0.0098	0.0098
H	Hardened steel	Hardened and tempered		50 HRC	–	H1	M A	148	0.0079	0.0118
		Hardened and tempered		55 HRC	–	H2	M	–	–	–
		Hardened and tempered		60 HRC	–	H3	M	–	–	–
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4	M A	148	0.0079	0.0118
O	Thermoplastics	Without abrasive fillers				O1	E M	656	0.0118	0.0157
	Thermosets	Without abrasive fillers				O2	E M	492	0.0118	0.0157
	Plastic, glass-fibre-reinforced	GFRP				O3	E M	164	0.0118	0.0157
	Plastic, carbon-fibre-reinforced	CFRP				O4	E M	164	0.0118	0.0157
	Plastic, aramid-fibre-reinforced	AFRP				O5	E M	164	0.0118	0.0157
	Graphite (technical)			65		O6	E M	656	0.0118	0.0157

[1] The classification of the machining groups can be found starting on page B1330 in the Walter General Catalog 2018.
[3] Water-miscible coolants must not be used when machining magnesium alloys.

Machining must be performed synchronously. The specified cutting data are target values under good machining conditions.

Remedy for vibrations:
– Use indexable inserts with D61 geometry
– Reduce v_c by 25–50% and/or increase f_z by 25–50%
– Radial cutting pass

T2711/T2712: One radial cut is recommended
T2713: Radial cutting pass may be required.

Radius correction values for thread milling Walter T2711 / T2712 / T2713

Metric thread in accordance with DIN 13

Thread nominal diameter D_N	P	r	Radius correction		
			Minimum dimension for H tolerances	Middle of the tolerance range for a 6H tolerance	Middle of the tolerance range for a 6G tolerance
[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
≥ 24	1.5	0.1	-0.05	-0.10	-0.12
	2	0.1	-0.10	-0.15	-0.17
	3	0.2	-0.10	-0.16	-0.19
	3.5	0.2	-0.15	-0.22	-0.24
	4	0.2	-0.20	-0.27	-0.30
	4.5	0.2	-0.25	-0.33	-0.36
	5	0.4	-0.10	-0.18	-0.22
	5.5	0.4	-0.15	-0.24	-0.27
	6	0.4	-0.20	-0.29	-0.33
	8	0.4	-0.40	-0.51	-0.56
	10	0.4	-0.59	-0.71	–

Based on the pitch diameter tolerances in accordance with DIN ISO 965-1. Valid from M24.

UN/UNC/UNF/UNEF thread in accordance with ASME B1.1

Thread nominal diameter D_N	P	r	Radius correction		
			Minimum dimension	Middle of the tolerance range for a 2B tolerance	Middle of the tolerance range for a 3B tolerance
[inches]	[TPI]	[mm]	[in]	[in]	[in]
≥ 1 "	18	0.1	-0.0016	-0.0031	-0.0028
	16	0.1	-0.0024	-0.0039	-0.0035
	14	0.1	-0.0031	-0.0047	-0.0043
	12	0.1	-0.0043	-0.0063	-0.0059
	8	0.2	-0.0047	-0.0067	-0.0063
	7	0.2	-0.0063	-0.0087	-0.0083
	6	0.2	-0.0087	-0.0114	-0.0106
	5	0.4	-0.0043	-0.0071	-0.0063
	4.5	0.4	-0.0063	-0.0094	-0.0087
	4	0.4	-0.0091	-0.0126	-0.0118

Based on the pitch diameter tolerances in accordance with ASME B1.1. Valid from UNC 1.

Pipe thread G (BSP) in accordance with DIN EN ISO 228

Thread nominal diameter D_N	P	r	Radius correction	
			Minimum dimension	Middle of the tolerance range
[inches]	[TPI]	[in]	[in]	[in]
≥ 1" and < 2 1/4"	11	0.008	-0.004	-0.006
≥ 2 1/4 "	11	0.008	-0.004	-0.007

Based on the pitch diameter tolerances in accordance with DIN ISO 228. Valid from D_N 1" and above.

If the measured tool radius is reduced by the value stated in the "Minimum dimension" column, the thread is still in the lower tolerance range after machining and is usually too narrow. If the thread has to be milled to bring it to the middle of the tolerance range, the measured tool radius must be reduced by the value stated in the "Middle of the tolerance range" column. The thread is generally true to gauge after machining. Radius correction values can also be determined in Walter GPS.

Example of an M36 – 6H thread	P	4 mm
	r	0.2 mm
Measured tool radius		14.53 mm
Radius correction in the middle of the 6H tolerance range		- 0.27 mm
Tool radius to be used		**= 14.26 mm**

Radius correction values for solid carbide thread milling cutters Walter TC620 / TC685

Metric thread in accordance with DIN 13

Thread nominal diameter D_N	P	Radius correction		
		Minimum dimension for H tolerances	Middle of the tolerance range for a 6H tolerance	Middle of the tolerance range for a 6G tolerance
[mm]	[mm]		[mm]	[mm]
≥ 3 and ≤ 22	0.50	Rprg.	-0.025	-0.035
	0.70	Rprg.	-0.030	-0.041
	0.80	Rprg.	-0.031	-0.043
	1.00	Rprg.	-0.038	-0.051
	1.25	Rprg.	-0.040	-0.054
	1.50	Rprg.	-0.045	-0.061
	1.75	Rprg.	-0.050	-0.067
	2.00	Rprg.	-0.053	-0.072
	2.50	Rprg.	-0.056	-0.077

Based on the pitch diameter tolerances in accordance with DIN ISO 965-1.

UN/UNC/UNF/UNEF thread in accordance with ASME B1.1

Thread nominal diameter D_N	P	Radius correction		
		Minimum dimension for H tolerances	Middle of the tolerance range for a 2B tolerance	Middle of the tolerance range for a 3B tolerance
[inches]	[TPI]		[mm]	[mm]
≥ 0.164" and ≤ 0.75"	32	Rprg.	-0.023	-0.017
	24	Rprg.	-0.027	-0.020
	20	Rprg.	-0.031	-0.023
	18	Rprg.	-0.034	-0.025
	16	Rprg.	-0.036	-0.027
	13	Rprg.	-0.041	-0.030
	11	Rprg.	-0.046	-0.034
	10	Rprg.	-0.049	-0.036

Based on the pitch diameter tolerances in accordance with ASME B1.1.

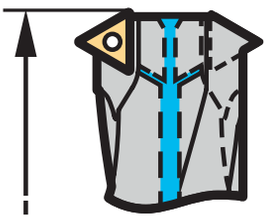
The programming radius (abbreviated to "Rprg.") can be read from the tool shank and is to be entered in the tool table of the CNC control system. The milled thread is then in the lower tolerance range and is usually too narrow. If the thread has to be milled to bring it to the middle of the tolerance range, the Rprg. must be reduced by the value stated in the "Middle of the tolerance range" column. The thread is then generally true to gauge. The radius correction values can also be determined using Walter GPS.

Example of an M8 – 6H thread with P = 1.25 mm	
Programming radius (Rprg.)	3.07 mm
Radius correction in the middle of the 6H tolerance range	- 0.04 mm
Tool radius to be used	**= 3.03 mm**

Tool application
Walter T2711 / T2712 / T2713

TOOL GAUGING

If the CNC program is created using Walter GPS, the tool must be gauged as shown in the diagram on the right. The thread depth that was entered is then reached.

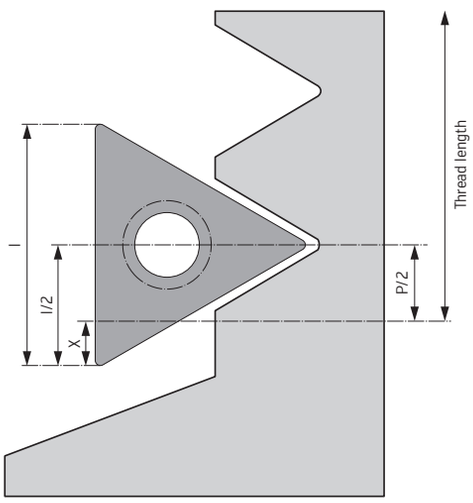


UNUSABLE LENGTH

The thread length includes the last thread ridge plus half a pitch. Since l/2 is greater than P/2, this results in an "unusable length" (X), which must be taken into consideration during programming.
This is calculated as half of the insert length (l/2) minus half of the thread pitch (P/2). When creating CNC programs, Walter GPS takes the "unusable length" into account.

Example: M36 with P26300-0902.. thread milling cutter insert.

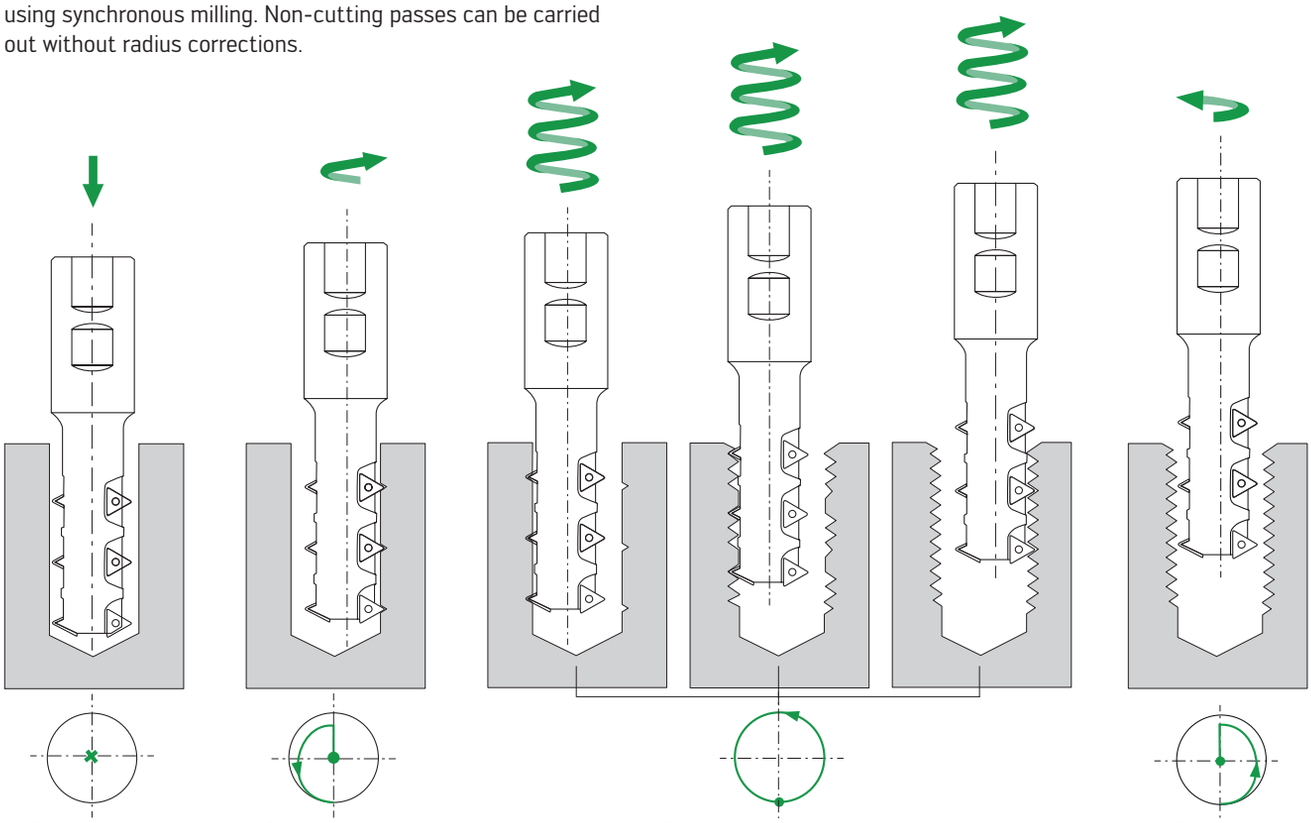
Unusable length $X = l/2 - P/2 = \frac{9.34\ mm}{2} - \frac{4\ mm}{2} = 2.67\ mm$



The unusable length of the T271.. families is less than the chamfer length of a tap.

THE STRATEGY

It is recommended that the thread be produced with a radial cut using synchronous milling. Non-cutting passes can be carried out without radius corrections.



Positioning the milling cutter over core hole and plunging

Descending loop

Producing the thread using helical interpolation until the row spacing is bridged

Exit loop

C – Milling

Solid carbide and ceramic milling tools – C1

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Milling tools with indexable inserts – C2

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Solid carbide milling tools product range overview
Shoulder milling cutters

Machining			
Helix angle	**35°**	**50°**	
Designation	**MD133 Supreme**	**MC187 Advance**	**MC111 Advance**
Diameter range [mm] / [inch]	1/4–3/4	1/8–3/4	3/32–3/4
Z	5–6	4–8	4
Corner radius [mm] / [inch]	0.015–0.030	0.015–0.060	0
Page	482	484	488

Solid carbide milling tools product range overview
Shoulder/slot milling cutters

Machining						
Helix angle	**35°**	**30°**	**50°**	**50°**	**45°**	**50°**
Designation	**AH4135217 AH4137217 Proto·max™$_{ST}$**	**MB266 Supreme**	**MC388 Advance**	**MC326 Supreme**	**Proto·max™$_{ST}$**	**Proto·max™$_{ST}$**
Diameter range [inch]	3/8–3/4	1/4–1	1/8–1/2	1/8–1	1/16-3/4	1/4-3/4
Z	5	3	3–4	4–5	3	4
Corner radius [inch]	0.030–0.060	0.015–0.120	0.15-0.030	0.20-0.120	0.000	0.000
Page	486	489	492	493	485	485

Machining			
Helix angle	**38°**	**45°**	**25°**
Designation	**Proto·max™$_{Inox}$**	**AH602511 AH602551**	**AH602681**
Diameter range [inch]	1/4-1	1/16-3/4	1/8–5/8
Z	4	2-3	2
Corner radius [inch]	0.000–0.120	0.000	0.000
Page	487	490	491

C1

Solid carbide milling tools product range overview Shoulder/slot milling cutters

Machining			
Helix angle	**30°**	**40°**	**35°**
Designation	**MC213 Advance MC216 Advance**	**MC319 Advance**	**MC320 Advance**	**MC232 Perform**
Diameter range [mm] / [inch]	3/32–3/4	5–25	4–25 / 1/4–3/4	2–20 / 1/8–3/4
Z	2–4	4	3–8	2–4
Corner radius [mm]	0–0.120	0	0	0–4 / 0–0.125
Page	495	497	498	500

Solid carbide milling tools product range overview Copy milling cutters

Machining	
Helix angle	**30°**
Designation	**MC482 Advance**
Diameter range [inch]	1/8–1/2
Z	2–4
Corner radius [inch]	0.063–0.250
Page	506

Designation key – Solid carbide milling tools

Example:

M	C	3	26	–	12.0	A	4	B	200	A	–	W	K	40	TF
1	2	3	4	5	6	7	8	9	10	11		Grade			

1 Tool group

M	Milling

2 Generation

3 Tool type

0	Face milling cutters
1	Shoulder milling cutters
2	Shoulder/slot/porcupine milling cutters Helix angle ≤ 39°
3	Shoulder/slot/porcupine milling cutters Helix angle ≥ 40°
4	Ball nose mill/ copy milling cutters
5	Profiling cutters
7	Slot drill mills/ circular interpolation mills

4 Tool type

00	Universal	Helix angle 0°, chamfer milling cutters 60°
01	Universal	Helix angle 0°, chamfer milling cutters 90°
02	Universal	Helix angle 0°, chamfer milling cutters 120°
03	Universal	Helix angle 0°, quadrant profiling cutters
04	Universal	Helix angle 0°, front/back deburrers
11	Universal	Helix angle 30°, type N
12	Universal	Helix angle 30°, type HSC
13	Universal	Helix angle 30°, type HSC, long version
16	Universal	Helix angle 30°, type 30
19	Universal	Helix angle 40°, knurled profile with internal cooling
20	Universal	Helix angle 40°, knurled profile
21	Universal	Helix angle 45°, short version
22	Universal	Helix angle 45°, type N
24	Universal	Helix angle 45°, type 45
26	Universal	Helix angle 50°, unequal groove depth, differential pitch
29	Universal	Helix angle 60°, type N, multipurpose cutter
32	Universal	Helix angle 35°
33	Universal	Helix angle 35° + chip breaker
41	ISO P	Helix angle 50°, HPC, differential pitch
51	ISO M	Helix angle 35°/38°, without IC
65	ISO N	Helix angle 30°, Al geometry, RAPAX G30 roughing profile, Axial internal coolant
66	ISO N	Helix angle 30°, Al geometry, Axial internal coolant
80	ISO H	Helix angle 30°, HSC type H = Helix angle 30°, HSC, type H
81	ISO H	Helix angle 30°, mini HSC T, type H = Helix angle 30°, mini HSC T, type H
82	ISO H	Helix angle 30°, mini HSC R, type H = Helix angle 30°, mini HSC R, type H
83	ISO H	Helix angle 30°, multi-flute, type H = Helix angle 30°, multi-flute, type H
87	ISO H	Helix angle 50°, multi-flute, type H = Helix angle 50°, multi-flute, type H
88	ISO H	Helix angle 50°, HPC type H = Helix angle 50°, HPC, type H
89	ISO H	Helix angle 50°, high-feed, type H = Helix angle 50°, high-feed, type H

5 Delimiters

–	Metric
.	Inch

6 Cutting diameter

7 Shank type

A	Parallel shank
E	ConeFit
W	Weldon shank

8 Number of teeth

9 Design standard

A	DIN 6527 K
B	DIN 6527 L
C	ANSI stub
D	ANSI standard
L	P Standard L
M	P Standard Mini
P	P Standard
S	P Standard S
X	P Standard XL

10 Corner radius

11 Variant

A	l3 XS
B	l3 S $2 \times D_c$*
C	l3 M $3 \times D_c$*
D	l3 L $4 \times D_c$*
E	l3 XL $5 \times D_c$*
F	l3 XXL $6 \times D_c$*
G	l3 XXXL $8 \times D_c$*
H	l3 XXXXL $10 \times D_c$*
J	Lc S $3 \times D_c$*
K	Lc M $4 \times D_c$*
L	Lc L $5 \times D_c$*
V	Conical neck α ≤ 3°
W	Conical neck α ≤ 6°
X	Conical neck α ≤ 12°

* Standard values

Grade designation key
for solid carbide and HSS cutting tool materials

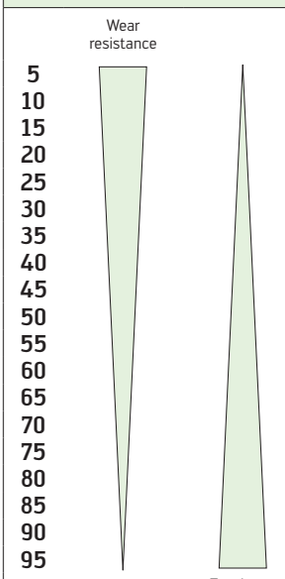
Example:

W	K	40	TF
Walter	1	2	3

1 – Substrate

Solid carbide	B
	J
	K
HSS	

2 – Application range



3 – Coating

TF	TiAlN
UU	Uncoated
CA	CrN
RC	TiAlN + AlTi
TZ	AlTiN + ZrN
ED	AlCRN
TG	TiAlSiN
RD	AlTiN + ZrN
RA	TiAlN + TiAl

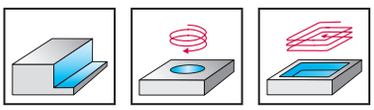
C1

Solid carbide shoulder milling cutters
MD133 Supreme inch

Z= 5–6

35°

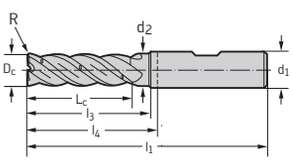
– Chip breaker



	P	M	K	N	S	H	O
WJ30RA		●●		●	●		
WJ30RD	●●		●				

P STANDARD L

Shank DIN 6535 HB



Designation	D_c h10 Inch/ no.	R Inch	L_c Inch	l_3 Inch	d_2 Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30RA	WJ30RD
MD133.6.35W5L038D-	1/4"	0.015	0.875	1.000	0.237	2.500	1.437	0.250	5	☺	☺
MD133.9.53W5L038D-	3/8"	0.015	1.250	1.500	0.356	3.250	1.687	0.375	5	☺	☺
MD133.12.7W5L076D-	1/2"	0.030	1.750	2.125	0.475	4.000	2.217	0.500	5	☺	☺
MD133.15.9W6L076D-	5/8"	0.030	2.000	2.500	0.594	4.500	2.594	0.625	6	☺	☺
MD133.19.1W6L076D-	3/4"	0.030	2.500	3.000	0.713	5.500	3.469	0.750	6	☺	☺

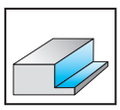
Shoulder milling $a_e \leq 0.10 \times D_c$ for ISO P
Shoulder milling $a_e \leq 0.03 \times D_c$ for ISO M and ISO S
Ordering example for the WJ30RD grade: MD133.6.35W5L038D-WJ30RD

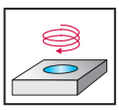
C1

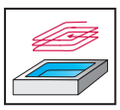
Solid carbide shoulder milling cutters
MD133 Supreme inch

Z= 5–6

– Chip breaker



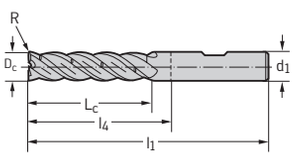




	P	M	K	N	S	H	O
WJ30RA		●●		●	●		
WJ30RD	●●		●				

P STANDARD XL

Shank DIN 6535 HB

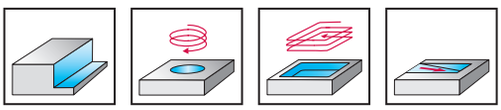


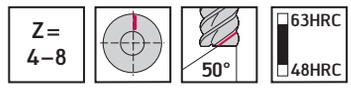
Designation	D_c h10 Inch/no.	R Inch	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30RA	WJ30RD
MD133.6.35W5X038L-	1/4"	0.015	1.375	3.000	1.937	0.250	5	●	●
MD133.9.53W5X038L-	3/8"	0.015	2.000	4.000	2.437	0.375	5	●	●
MD133.12.7W5X076L-	1/2"	0.030	2.750	5.000	3.217	0.500	5	●	●
MD133.15.9W6X076L-	5/8"	0.030	3.250	5.500	3.594	0.625	6	●	●
MD133.19.1W6X076L-	3/4"	0.030	3.875	6.500	4.469	0.750	6	●	●

Shoulder milling $a_e \leq 0.03 \times D_c$ for ISO P
Shoulder milling $a_e \leq 0.015 \times D_c$ for ISO M and ISO S
Ordering example for the WJ30RD grade: MD133.6.35W5X038L-WJ30RD

C1

Solid carbide shoulder milling cutters
MC187 Advance inch

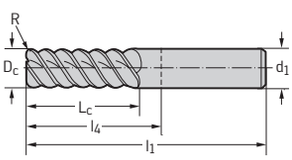




	P	M	K	N	S	H	O
WB10TG						●●	

STANDARD

Shank DIN 6535 HA



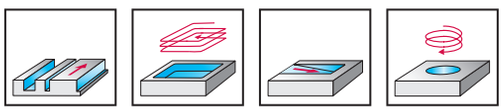
Designation	D_c h9 Inch/no.	R Inch	L_c Inch	l_1 Inch	l_4 Inch	d_1 h5 Inch	Z	WB10TG
MC187.3.18A4D038-	1/8"	0.015	0.500	2.500	1.083	0.250	4	☺
MC187.4.76A4D038-	3/16"	0.015	0.625	2.500	1.083	0.250	4	☺
MC187.6.35A6D038-	1/4"	0.015	0.750	3.000	1.583	0.250	6	☺
MC187.7.94A6D051-	5/16"	0.020	0.813	3.000	1.437	0.375	6	☺
MC187.9.53A6D076-	3/8"	0.030	0.875	3.000	1.437	0.375	6	☺
MC187.12.7A6D076-	1/2"	0.030	1.000	4.500	2.717	0.500	6	☺
MC187.15.9A6D152-	5/8"	0.060	1.250	5.000	3.094	0.625	6	☺
MC187.19.1A8D152-	3/4"	0.060	1.500	5.000	2.969	0.750	8	☺

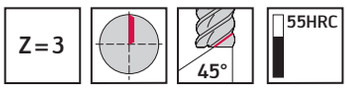
Shoulder milling $a_e \leq 0.1 \times D_c$
Ordering example for the WB10TG grade: MC187.3.18A4D038-WB10TG

C1

Solid carbide shoulder/slot mills
AH4033217 inch
Proto·max™ST

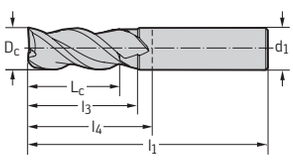
– Long reach





	P	M	K	N	S	H	O
TAZ	●●	●					

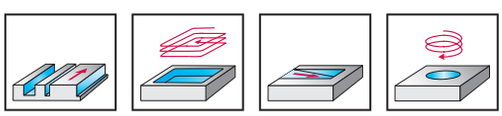
LONG	Designation TAZ	D_c h9	L_c in	l_3 in	l_1 in	l_4 in	d_1 h6 in	Z
Cylindrical shank	AH4033217-1/16	1/16"	0.164	0.246	2.000	0.582	0.250	3
	AH4033217-3/32	3/32"	0.227	0.340	2.500	1.437	0.250	3
	AH4033217-1/8	1/8"	0.289	0.434	2.500	1.437	0.250	3
	AH4033217-3/16	3/16"	0.414	0.622	2.500	1.437	0.250	3
	AH4033217-1/4	1/4"	0.539	0.809	3.000	1.437	0.375	3
	AH4033217-5/16	5/16"	0.664	0.996	3.000	1.437	0.375	3
	AH4033217-3/8	3/8"	0.829	1.243	3.000	1.437	0.375	3
	AH4033217-7/16	7/16"	0.954	1.430	3.500	1.717	0.500	3
	AH4033217-1/2	1/2"	1.079	1.430	3.500	1.717	0.500	3
	AH4033217-5/8	5/8"	1.329	1.535	3.500	1.594	0.625	3
	AH4033217-3/4	3/4"	1.579	1.890	4.000	1.969	0.750	3

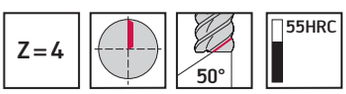


Slot milling $a_p \leq 2.0 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$

Solid carbide shoulder/slot mills
AH4034217 inch
Proto·max™ST

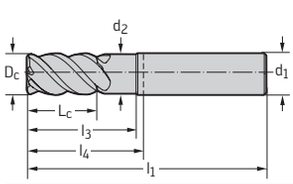
– Long reach





	P	M	K	N	S	H	O
TAZ	●●	●					

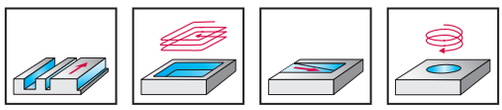
LONG	Designation TAZ	D_c h9	L_c in	l_3 in	d_2 in	l_1 in	l_4 in	d_1 h6 in	Z
Cylindrical shank	AH4034217-1/4	1/4"	0.405	0.607	0.237	3.000	1.437	0.375	4
	AH4034217-5/16	5/16"	0.506	0.759	0.297	3.000	1.437	0.375	4
	AH4034217-3/8	3/8"	0.608	0.911	0.356	3.000	1.437	0.375	4
	AH4034217-7/16	7/16"	0.709	1.063	0.416	3.500	1.717	0.500	4
	AH4034217-1/2	1/2"	0.810	1.215	0.475	3.500	1.717	0.500	4
	AH4034217-5/8	5/8"	1.013	1.519	0.594	3.500	1.594	0.625	4
	AH4034217-3/4	3/4"	1.215	1.822	0.713	4.000	1.969	0.750	4

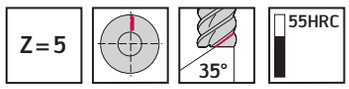


Slot milling $a_p \leq 1.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$

C1

Solid carbide shoulder/slot milling cutters
AH4135217 inch / AH4137217 inch
Proto·max™ST

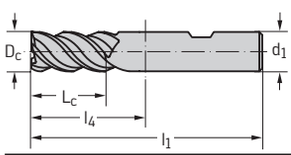




TAZ	P	M	K	N	S	H	O
	●●	●					

STANDARD

Shank DIN 6535 HB

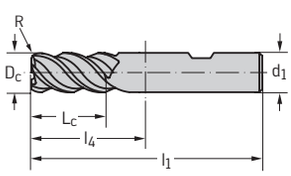


Designation TAZ	D_c h9 Inch/no.	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z
AH4135217-3/8	3/8"	0.875	3.000	1.437	0.375	5
AH4135217-1/2	1/2"	1.063	3.500	1.717	0.500	5
AH4135217-5/8	5/8"	1.250	3.500	1.594	0.625	5
AH4135217-3/4	3/4"	1.500	4.000	1.969	0.750	5

Slot milling $a_p \leq 1.0 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$

STANDARD

Shank DIN 6535 HB



Designation TAZ	D_c h9 Inch/no.	R Inch	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z
AH4137217-3/8-0.030	3/8"	0.030	0.875	3.000	1.437	0.375	5
AH4137217-1/2-0.030	1/2"	0.030	1.063	3.500	1.717	0.500	5
AH4137217-1/2-0.060	1/2"	0.060	1.063	3.500	1.717	0.500	5
AH4137217-3/4-0.030	3/4"	0.030	1.500	4.000	1.969	0.750	5
AH4137217-3/4-0.060	3/4"	0.060	1.500	4.000	1.969	0.750	5

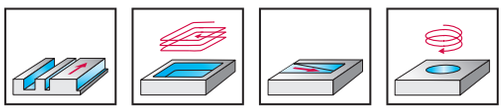
Slot milling $a_p \leq 1.0 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$

C1

WALTER SELECT
●● Primary application
● Additional application

Solid carbide shoulder/slot mills
AH2034217 inch

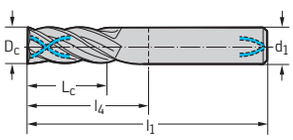
Proto·max™ Inox



	P	M	K	N	S	H	O
TAA		●●			●		

DIN 6527

Cylindrical shank

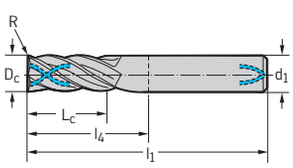


Designation TAA	D_c h10	L_c in	l_1 in	l_4 in	d_1 h5 in	Z
AH2034217-1/4	1/4"	0.750	2.500	1.083	0.250	4
AH2034217-5/16	5/16"	0.813	3.000	1.437	0.375	4
AH2034217-3/8	3/8"	0.875	3.000	1.437	0.375	4
AH2034217-7/16	7/16"	1.000	3.500	1.717	0.500	4
AH2034217-1/2	1/2"	1.000	3.500	1.717	0.500	4
AH2034217-5/8	5/8"	1.250	3.500	1.594	0.625	4
AH2034217-3/4	3/4"	1.500	4.000	1.969	0.750	4
AH2034217-1	1"	1.500	5.000	2.717	1.000	4

Slot milling $a_p \leq 1.0 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$

DIN 6527 L

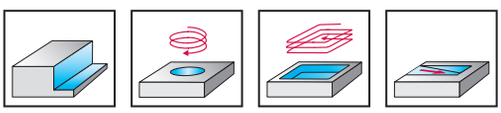
Cylindrical shank

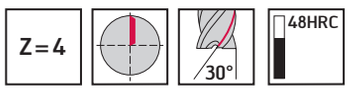


Designation TAA	D_c h9	R in	L_c in	l_1 in	l_4 in	d_1 h5 in	Z
AH2038217-1/4-0.020	1/4"	0.020	0.750	2.500	1.083	0.250	4
AH2038217-5/16-0.020	5/16"	0.020	0.813	3.000	1.437	0.375	4
AH2038217-3/8-0.020	3/8"	0.020	0.875	3.000	1.437	0.375	4
AH2038217-3/8-0.060	3/8"	0.060	0.875	3.000	1.437	0.375	4
AH2038217-7/16-0.020	7/16"	0.020	1.000	3.500	1.717	0.500	4
AH2038217-7/16-0.060	7/16"	0.060	1.000	3.500	1.717	0.500	4
AH2038217-1/2-0.030	1/2"	0.030	1.000	3.500	1.717	0.500	4
AH2038217-1/2-0.060	1/2"	0.060	1.000	3.500	1.717	0.500	4
AH2038217-1/2-0.120	1/2"	0.120	1.000	3.500	1.717	0.500	4
AH2038217-5/8-0.030	5/8"	0.030	1.250	3.500	1.594	0.625	4
AH2038217-5/8-0.060	5/8"	0.060	1.250	3.500	1.594	0.625	4
AH2038217-5/8-0.090	5/8"	0.090	1.250	3.500	1.594	0.625	4
AH2038217-5/8-0.120	5/8"	0.120	1.250	3.500	1.594	0.625	4
AH2038217-3/4-0.030	3/4"	0.030	1.500	4.000	1.969	0.750	4
AH2038217-3/4-0.060	3/4"	0.060	1.500	4.000	1.969	0.750	4
AH2038217-3/4-0.090	3/4"	0.090	1.500	4.000	1.969	0.750	4
AH2038217-3/4-0.120	3/4"	0.120	1.500	4.000	1.969	0.750	4
AH2038217-1.00-0.030	1"	0.030	1.500	5.000	2.717	1.000	4
AH2038217-1-0.060	1"	0.060	1.500	5.000	2.717	1.000	4
AH2038217-1-0.120	1"	0.120	1.500	5.000	2.717	1.000	4

Solid carbide shoulder milling cutters
MC111 Advance inch

– Type N 30

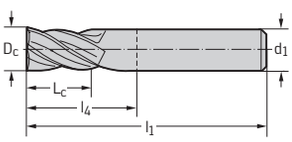




	P	M	K	N	S	H	O
WJ30TF	●●	●	●	●	●		

STANDARD

Shank DIN 6535 HA



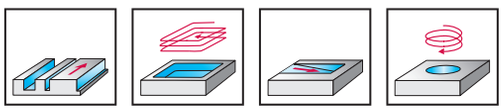
Designation	D_c h10 Inch/no.	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30TF
MC111.2.38A4D-	3/32"	0.375	2.500	1.083	0.250	4	●
MC111.3.18A4D-	1/8"	0.500	2.500	1.083	0.250	4	●
MC111.4.76A4D-	3/16"	0.625	2.500	1.083	0.250	4	●
MC111.6.35A4D-	1/4"	0.750	2.500	1.083	0.250	4	●
MC111.7.94A4D-	5/16"	0.813	3.000	1.437	0.375	4	●
MC111.9.53A4D-	3/8"	0.875	3.000	1.437	0.375	4	●
MC111.12.7A4D-	1/2"	1.000	3.500	1.717	0.500	4	●
MC111.15.9A4D-	5/8"	1.250	3.500	1.594	0.625	4	●
MC111.19.1A4D-	3/4"	1.500	4.000	1.969	0.750	4	●

Slot milling $a_p \leq 0.3 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$
Ordering example for the WJ30TF grade: MC111.2.38A4D-WJ30TF

C1

Solid carbide shoulder/slot milling cutters
MB266 Supreme inch

– Long reach



	P	M	K	N	S	H	O
WJ30UU				●●			

P STANDARD XL	Designation	D_c h9 Inch/ no.	R Inch	L_c Inch	l_3 Inch	d_2 Inch	l_1 Inch	l_4 Inch	d_1 h5 Inch	Z	WJ30UU
Shank DIN 6535 HA	MB266.6.35A3X038B-	1/4"	0.015	0.375	1.500	0.236	3.000	1.583	0.250	3	☺
	MB266.6.35A3X076B-	1/4"	0.030	0.375	1.500	0.236	3.000	1.583	0.250	3	☺
	MB266.9.53A3X038B-	3/8"	0.015	0.500	1.550	0.355	3.250	1.687	0.375	3	☺
	MB266.9.53A3X076B-	3/8"	0.030	0.500	1.550	0.355	3.250	1.687	0.375	3	☺
	MB266.12.7A3X038B-	1/2"	0.015	0.625	2.125	0.470	4.000	2.217	0.500	3	☺
	MB266.12.7A3X038C-	1/2"	0.015	1.250	3.125	0.470	5.000	3.217	0.500	3	☺
	MB266.12.7A3X076B-	1/2"	0.030	0.625	2.125	0.470	4.000	2.217	0.500	3	☺
	MB266.12.7A3X076C-	1/2"	0.030	1.250	3.125	0.470	5.000	3.217	0.500	3	☺
	MB266.12.7A3X152C-	1/2"	0.060	1.250	3.125	0.470	5.000	3.217	0.500	3	☺
	MB266.12.7A3X305C-	1/2"	0.120	1.250	3.125	0.470	5.000	3.217	0.500	3	☺
	MB266.15.9A3X038C-	5/8"	0.015	1.625	3.125	0.600	5.000	3.148	0.625	3	☺
	MB266.15.9A3X076C-	5/8"	0.030	1.625	3.125	0.600	5.000	3.148	0.625	3	☺
	MB266.15.9A3X152C-	5/8"	0.060	1.625	3.125	0.600	5.000	3.148	0.625	3	☺
	MB266.15.9A3X305C-	5/8"	0.120	1.625	3.125	0.600	5.000	3.148	0.625	3	☺
	MB266.19.1A3X038C-	3/4"	0.015	1.625	3.125	0.715	5.000	3.156	0.750	3	☺
	MB266.19.1A3X076B-	3/4"	0.030	1.000	2.125	0.715	4.000	2.156	0.750	3	☺
	MB266.19.1A3X076C-	3/4"	0.030	1.625	3.125	0.715	5.000	3.156	0.750	3	☺
	MB266.19.1A3X152B-	3/4"	0.060	1.000	2.125	0.715	4.000	2.156	0.750	3	☺
	MB266.19.1A3X305C-	3/4"	0.120	1.625	3.125	0.715	5.000	3.156	0.750	3	☺
	MB266.25.4A3X038B-	1"	0.015	1.250	2.125	0.955	5.000	2.717	1.000	3	☺
	MB266.25.4A3X076B-	1"	0.030	1.250	2.125	0.955	5.000	2.717	1.000	3	☺
	MB266.25.4A3X152B-	1"	0.060	1.250	2.125	0.955	5.000	2.717	1.000	3	☺
	MB266.25.4A3X305B-	1"	0.120	1.250	2.125	0.955	5.000	2.717	1.000	3	☺

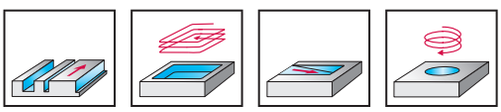
Slot milling $a_p \leq 0.9 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$
Ordering example for the WJ30UU grade: MB266.6.35A3X038B-WJ30UU

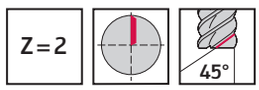
C1

Solid carbide shoulder/slot mills
AH602511 inch

Protostar®

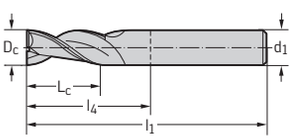
– Long reach
– Type AI 45





	P	M	K	N	S	H	O
uncoated				●●			

STANDARD	Designation uncoated	D_c h10	L_c in	l_1 in	l_4 in	d_1 h6 in	Z
Cylindrical shank	AH602511-1/16	1/16"	0.187	2.500	1.083	0.250	2
	AH602511-3/32	3/32"	0.375	2.500	1.083	0.250	2
	AH602511-1/8	1/8"	0.500	2.500	1.083	0.250	2
	AH602511-3/16	3/16"	0.625	2.500	1.083	0.250	2
	AH602511-1/4	1/4"	0.750	2.500	1.083	0.250	2
	AH602511-5/16	5/16"	0.813	3.000	1.437	0.375	2
	AH602511-3/8	3/8"	0.875	3.000	1.437	0.375	2
	AH602511-7/16	7/16"	1.000	3.500	1.717	0.500	2
	AH602511-1/2	1/2"	1.000	3.500	1.717	0.500	2
	AH602511-5/8	5/8"	1.250	3.500	1.594	0.625	2
	AH602511-3/4	3/4"	1.500	4.000	1.969	0.750	2

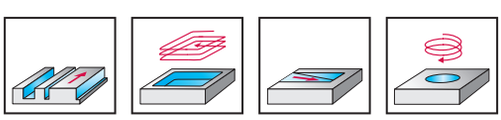


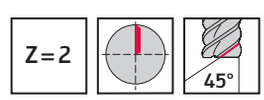
Slot milling $a_p \leq 1.0 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$

Solid carbide shoulder/slot mills
AH602551 inch

Protostar®

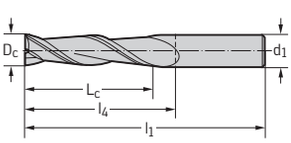
– Type AI 45. long



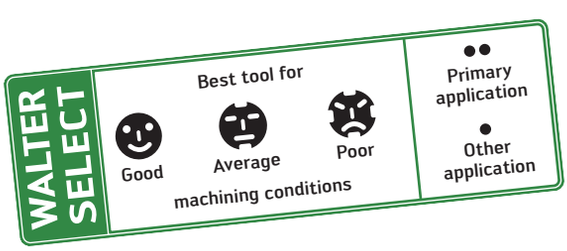


	P	M	K	N	S	H	O
uncoated				●●			

LONG	Designation uncoated	D_c h10	L_c in	l_1 in	l_4 in	d_1 h6 in	Z
Cylindrical shank	AH602551-1/8	1/8"	0.750	2.500	1.083	0.250	2
	AH602551-1/4	1/4"	1.125	3.000	1.583	0.250	2
	AH602551-5/16	5/16"	1.125	3.000	1.458	0.375	2
	AH602551-3/8	3/8"	1.125	3.000	1.437	0.375	2
	AH602551-1/2	1/2"	2.000	4.500	2.717	0.500	2
	AH602551-5/8	5/8"	2.250	5.000	3.094	0.625	2
	AH602551-3/4	3/4"	2.250	5.000	2.969	0.750	2



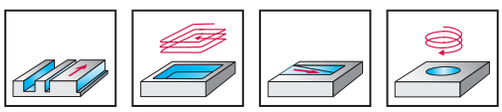
Slot milling $a_p \leq 1.0 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$

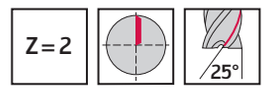


Solid carbide shoulder/slot mills
AH602681 inch

Protostar®

– Type Al 25

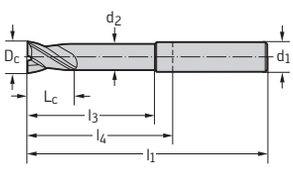




	P	M	K	N	S	H	O
uncoated				●●			

EXTRA-LONG

Cylindrical shank

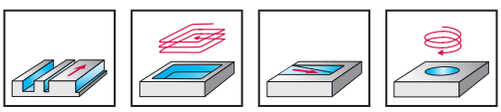


Designation uncoated	D_c h10	L_c in	l_3 in	d_2 in	l_1 in	l_4 in	d_1 h6 in	Z
AH602681-1/8	1/8"	0.250	1.062	0.119	3.000	1.937	0.250	2
AH602681-3/16	3/16"	0.375	1.625	0.178	3.000	1.687	0.250	2
AH602681-1/4	1/4"	0.500	2.375	0.237	4.000	2.583	0.250	2
AH602681-5/16	5/16"	0.500	2.375	0.297	4.500	2.937	0.375	2
AH602681-3/8	3/8"	0.563	2.500	0.356	4.500	2.937	0.375	2
AH602681-1/2	1/2"	0.625	4.000	0.475	6.000	4.217	0.500	2
AH602681-5/8	5/8"	0.875	4.000	0.594	6.000	4.094	0.625	2

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$

C1

Solid carbide shoulder/slot milling cutters
MC388 Advance inch

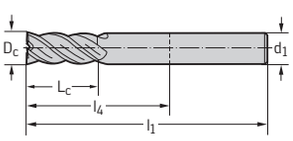


Z= 3–4 | 50° | 63HRC – 48HRC

	P	M	K	N	S	H	O
WB10TG	●					●●	

P STANDARD L

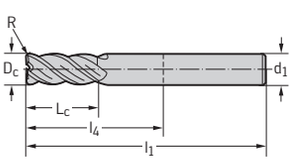
Designation	D_c h10 Inch/no.	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WB10TG
Shank DIN 6535 HA							
MC388.3.18A3L-	1/8"	0.500	2.500	1.083	0.250	3	☻
MC388.4.76A3L-	3/16"	0.625	2.500	1.083	0.250	3	☻
MC388.6.35A4L-	1/4"	0.750	2.500	1.083	0.250	4	☻
MC388.9.53A4L-	3/8"	0.875	3.000	1.437	0.375	4	☻
MC388.12.7A4L-	1/2"	1.000	3.500	1.717	0.500	4	☻



Slot milling $a_p \leq 0.9 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_a$
Ordering example for the WB10TG grade: MC388.3.18A3L-WB10TG

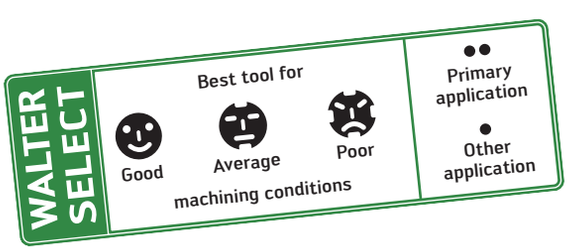
P STANDARD L

Designation	D_c h10 Inch/no.	R Inch	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WB10TG
Shank DIN 6535 HA								
MC388.3.18A3L038-	1/8"	0.015	0.500	2.500	1.083	0.250	3	☻
MC388.4.76A3L038-	3/16"	0.015	0.625	2.500	1.083	0.250	3	☻
MC388.6.35A4L038-	1/4"	0.015	0.750	2.500	1.083	0.250	4	☻
MC388.9.53A4L076-	3/8"	0.030	0.875	3.000	1.437	0.375	4	☻
MC388.12.7A4L076-	1/2"	0.030	1.000	3.500	1.717	0.500	4	☻



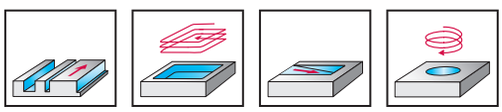
Slot milling $a_p \leq 0.9 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_a$
Ordering example for the WB10TG grade: MC388.3.18A3L038-WB10TG

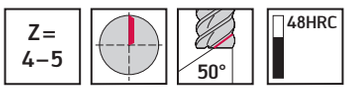
C1



Solid carbide shoulder/slot milling cutters
MC326 Supreme inch

– Long reach
– Type N 50

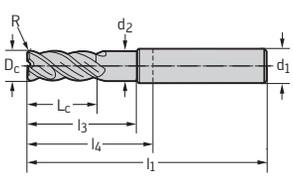




	P	M	K	N	S	H	O
WK40TF	●●	●	●		●		

LONG

Cylindrical shank

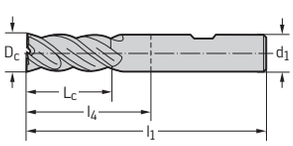


Designation	D_c h9 in	R in	L_c in	l_1 in	l_4 in	d_1 h5 in	Z	WK40TF
MC326.3.18A4L051C-	1/8"	0.020	0.500	3.000	1.583	0.250	3	☺
MC326.4.76A4L051C-	3/16"	0.020	0.625	3.000	1.583	0.250	3	☺
MC326.6.35A4L102C-	1/4"	0.040	0.750	3.000	1.583	0.250	4	☺
MC326.6.35A4L076C-	1/4"	0.030	0.750	3.000	1.583	0.250	4	☺
MC326.7.94A4L076C-	5/16"	0.030	0.813	3.500	1.937	0.375	4	☺
MC326.7.94A4L203C-	5/16"	0.080	0.813	3.500	1.937	0.375	4	☺
MC326.9.53A4L076C-	3/8"	0.030	0.875	3.500	1.937	0.375	4	☺
MC326.9.53A4L203C-	3/8"	0.080	0.875	3.500	1.937	0.375	4	☺
MC326.9.53A4L152C-	3/8"	0.060	0.875	3.500	1.937	0.375	4	☺
MC326.11.1A4L076C-	7/16"	0.030	1.000	4.750	2.967	0.500	4	☺
MC326.11.1A4L203C-	7/16"	0.080	1.000	4.750	2.967	0.500	4	☺
MC326.12.7A4L076C-	1/2"	0.030	1.000	4.750	2.967	0.500	4	☺
MC326.12.7A4L152C-	1/2"	0.060	1.000	4.750	2.967	0.500	4	☺
MC326.12.7A4L305C-	1/2"	0.120	1.000	4.750	2.967	0.500	4	☺
MC326.15.9A4L076C-	5/8"	0.030	1.250	5.000	3.217	0.625	4	☺
MC326.15.9A4L152C-	5/8"	0.060	1.250	5.000	3.217	0.625	4	☺
MC326.15.9A4L318C-	5/8"	0.125	1.250	5.000	3.094	0.625	4	☺
MC326.19.1A4L152C-	3/4"	0.060	1.500	5.250	3.219	0.750	4	☺
MC326.19.1A4L318C-	3/4"	0.125	1.500	5.250	3.219	0.750	4	☺
MC326.19.1A4L406C-	3/4"	0.160	1.500	5.250	3.219	0.750	4	☺
MC326.25.4A5L152C-	1"	0.060	1.625	5.500	3.217	1.000	5	☺
MC326.25.4A5L318C-	1"	0.120	1.625	5.500	3.217	1.000	5	☺

Slot milling $a_p \leq 0.9 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$
Order example for grade WK40TF: MC326.12.7A4L305C-WK40TF

STANDARD

Weldon shank

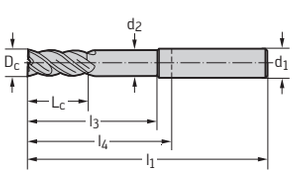


Designation	D_c h10 in	L_c in	l_1 in	l_4 in	d_1 h5 in	Z	WK40TF
MC326.6.35W4D-	1/4"	0.750	3.000	1.437	0.375	4	☺
MC326.7.94W4D-	5/16"	0.813	3.000	1.437	0.375	4	☺
MC326.9.53W4D-	3/8"	0.875	3.000	1.437	0.375	4	☺
MC326.11.1W4D-	7/16"	1.000	3.500	1.717	0.500	4	☺
MC326.12.7W4D-	1/2"	1.000	3.500	1.717	0.500	4	☺
MC326.15.9W4D-	5/8"	1.250	3.500	1.594	0.625	4	☺
MC326.19.1W4D-	3/4"	1.500	4.000	1.969	0.750	4	☺

Slot milling $a_p \leq 0.9 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$
Order example for grade WK40TF: MC326.12.7W4D-WK40TF

LONG

Cylindrical shank

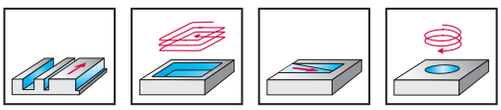


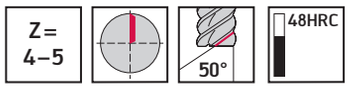
Designation	D_c h10 in	L_c in	l_3 in	d_2 in	l_1 in	l_4 in	d_1 h5 in	Z	WK40TF
MC326.3.18A4LC-	1/8"	0.500	1.188	0.119	3.000	1.583	0.250	3	☺
MC326.4.76A4LC-	3/16"	0.625	1.125	0.178	3.000	1.583	0.250	3	☺
MC326.6.35A4LC-	1/4"	0.750	1.375	0.237	3.000	1.583	0.250	4	☺
MC326.7.94A4LC-	5/16"	0.813	1.500	0.297	3.250	1.833	0.375	4	☺
MC326.9.53A4LC-	3/8"	0.875	1.500	0.356	3.250	1.833	0.375	4	☺
MC326.11.1A4LC-	7/16"	1.000	2.875	0.416	4.750	2.967	0.500	4	☺
MC326.12.7A4LC-	1/2"	1.000	2.875	0.475	4.750	2.967	0.500	4	☺
MC326.15.9A4LC-	5/8"	1.250	3.000	0.594	5.000	3.094	0.625	4	☺
MC326.19.1A4LC-	3/4"	1.500	3.000	0.713	5.250	3.219	0.750	4	☺

Slot milling $a_p \leq 0.9 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$
Order example for grade WK40TF: MC326.12.7A4LC-WK40TF

Solid carbide shoulder/slot milling cutters
MC326 Supreme inch

– Long reach
– Type N 50

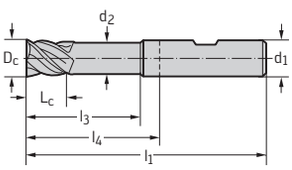




	P	M	K	N	S	H	O
WK40TF	●●	●	●		●		

STANDARD

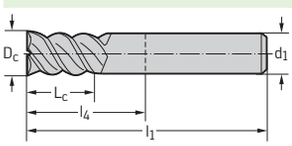
Weldon shank



Designation	D_c h10	L_c in	l_3 in	d_2 in	l_1 in	l_4 in	d_1 h5 in	Z	WK40TF
MC326.6.35W4DCJ-	1/4"	0.250	0.875	0.237	3.000	1.437	0.375	4	☺
MC326.7.94W4DCJ-	5/16"	0.313	1.000	0.297	3.000	1.437	0.375	4	☺
MC326.9.53W4DCJ-	3/8"	0.375	1.000	0.356	3.000	1.437	0.375	4	☺
MC326.11.1W4DCJ-	7/16"	0.438	1.125	0.416	3.000	1.217	0.500	4	☺
MC326.12.7W4DCJ-	1/2"	0.500	1.375	0.475	3.500	1.717	0.500	4	☺
MC326.15.9W4DCJ-	5/8"	0.625	1.500	0.594	3.500	1.594	0.625	4	☺
MC326.19.1W4DCJ-	3/4"	0.750	2.000	0.713	4.250	2.219	0.750	4	☺

Slot milling $a_p \leq 0.9 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$
Order example for grade WK40TF: MC326.12.7W4DCJ-WK40TF

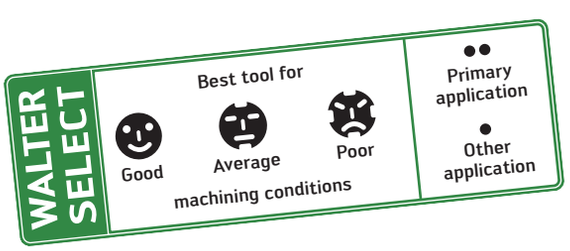
Tool



Designation	D_c h11	L_c in	l_1 in	l_4 in	d_1 h6 in	Z	WJ30TF
MC321.3.18A4C-	1/8"	0.250	2.500	1.083	0.250	4	☺
MC321.4.75A4C-	3/16"	0.375	2.500	1.083	0.250	4	☺
MC321.6.35A4C-	1/4"	0.500	2.500	1.083	0.250	4	☺
MC321.7.94A4C-	5/16"	0.500	2.500	0.937	0.375	4	☺
MC321.9.53A4C-	3/8"	0.563	2.500	0.937	0.375	4	☺
MC321.11.1A4C-	7/16"	0.625	3.000	1.217	0.500	4	☺
MC321.12.7A4C-	1/2"	0.625	3.000	1.217	0.500	4	☺

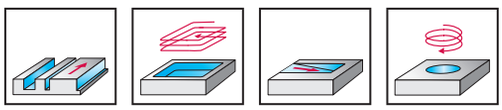
Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$
Order example for grade WJ30TF: MC321.11.1A4C-WJ30TF

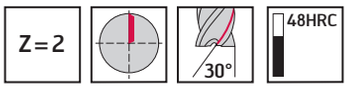
C1



Solid carbide shoulder/slot milling cutters
MC216 Advance inch

– Type 30

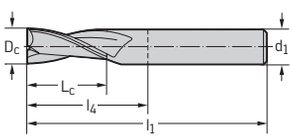




	P	M	K	N	S	H	O
WJ30TF	●●	●	●		●		

STANDARD

Shank DIN 6535 HA



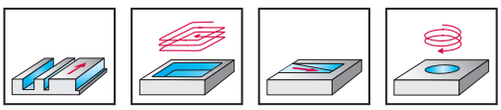
Designation	D_c h10 Inch/no.	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30TF
MC216.2.38A2D-	3/32"	0.375	2.500	1.083	0.250	2	●
MC216.3.18A2D-	1/8"	0.500	2.500	1.083	0.250	2	●
MC216.4.76A2D-	3/16"	0.625	2.500	1.083	0.250	2	●
MC216.6.35A2D-	1/4"	0.750	2.500	1.083	0.250	2	●
MC216.7.94A2D-	5/16"	0.813	3.000	1.437	0.375	2	●
MC216.9.53A2D-	3/8"	0.875	3.000	1.437	0.375	2	●
MC216.12.7A2D-	1/2"	1.000	3.500	1.717	0.500	2	●
MC216.15.9A2D-	5/8"	1.250	3.500	1.594	0.625	2	●
MC216.19.1A2D-	3/4"	1.500	4.000	1.969	0.750	2	●

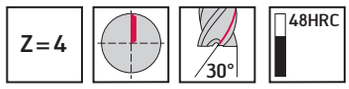
Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.3 \times D_c$
Ordering example for the WJ30TF grade: MC216.2.38A2D-WJ30TF

C1

Solid carbide shoulder/slot milling cutters
MC213 Advance inch

– Long reach
– Type HSC 30

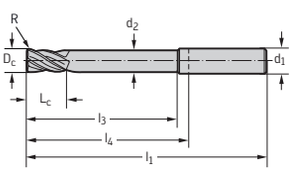




	P	M	K	N	S	H	O
WJ30TF	●●	●	●		●		

P STANDARD L

Shank DIN 6535 HA



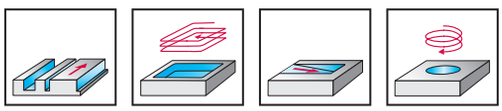
Designation	D_c h10 Inch/ no.	R Inch	L_c Inch	l_3 Inch	d_2 Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30TF
MC213.6.35A4L038C-	1/4"	0.015	0.750	1.375	0.237	3.000	1.583	0.250	4	●
MC213.6.35A4L076C-	1/4"	0.030	0.750	1.375	0.237	3.000	1.583	0.250	4	●
MC213.9.53A4L038C-	3/8"	0.015	0.875	1.500	0.356	3.500	1.937	0.375	4	●
MC213.9.53A4L076C-	3/8"	0.030	0.875	1.500	0.356	3.500	1.937	0.375	4	●
MC213.12.7A4L076C-	1/2"	0.030	1.000	2.875	0.475	4.750	2.967	0.500	4	●
MC213.12.7A4L152C-	1/2"	0.060	1.000	2.875	0.475	4.750	2.967	0.500	4	●
MC213.12.7A4L305C-	1/2"	0.120	1.000	2.875	0.475	4.750	2.967	0.500	4	●
MC213.15.9A4L076C-	5/8"	0.030	1.250	3.000	0.594	5.000	3.094	0.625	4	●
MC213.15.9A4L152C-	5/8"	0.060	1.250	3.000	0.594	5.000	3.094	0.625	4	●
MC213.19.1A4L152C-	3/4"	0.060	1.500	3.000	0.713	5.250	3.219	0.750	4	●
MC213.19.1A4L305C-	3/4"	0.120	1.500	3.000	0.713	5.250	3.219	0.750	4	●

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30TF grade: MC213.6.35A4L038C-WJ30TF

C1

Solid carbide shoulder/slot milling cutters
MC319 Advance mm

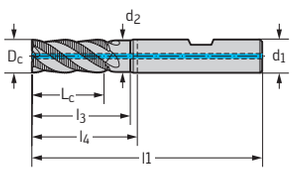
– Long reach



	P	M	K	N	S	H	O
WK40TF	●●	●	●		●		

DIN 6527 L

Shank DIN 6535 HB



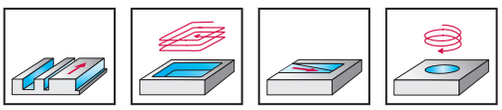
Designation	D_c h12 mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WK40TF
MC319-05.0W4BC-	5	13	16	4.8	57	21	6	4	●
MC319-06.0W4BC-	6	13	13	5.6	57	21	6	4	●
MC319-07.0W4BC-	7	16	26	6.5	63	27	8	4	●
MC319-08.0W4BC-	8	19	25	7.5	63	27	8	4	●
MC319-09.0W4BC-	9	19	31	8.8	72	32	10	4	●
MC319-10.0W4BC-	10	22	30	9.5	72	32	10	4	●
MC319-11.0W4BC-	11	26	35	10.5	83	38	12	4	●
MC319-12.0W4BC-	12	26	36	11.4	83	38	12	4	●
MC319-13.0W4BC-	13	26	35	12.4	83	38	14	4	●
MC319-14.0W4BC-	14	26	36	13.3	83	38	14	4	●
MC319-15.0W4BC-	15	32	41	14.3	92	44	16	4	●
MC319-16.0W4BC-	16	32	42	15.2	92	44	16	4	●
MC319-18.0W4BC-	18	32	42	17.1	92	44	18	4	●
MC319-20.0W4BC-	20	38	52	19	104	54	20	4	●
MC319-25.0W4BC-	25	45	63	23.8	121	65	25	4	●

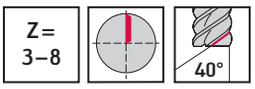
Slot milling $a_p \leq 2.0 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$
Ordering example for the WK40TF grade: MC319-05.0W4BC-WK40TF

C1

Solid carbide shoulder/slot milling cutters
MC320 Advance inch

– Long reach

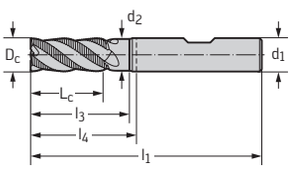




	P	M	K	N	S	H	O
WK40TF	●●	●	●		●		

DIN 6527 L

Shank DIN 6535 HB



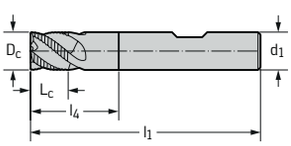
Designation	D_c h12 mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WK40TF
MC320-04.0W3BC-	4	8	15	3.8	57	21	6	3	●
MC320-04.0W4BC-	4	11	15	3.8	57	21	6	4	●
MC320-05.0W3BC-	5	10	16	4.8	57	21	6	3	●
MC320-05.0W4BC-	5	13	16	4.8	57	21	6	4	●
MC320-06.0W3BC-	6	10	19	5.5	57	21	6	3	●
MC320-06.0W4BC-	6	13	19	5.5	57	21	6	4	●
MC320-06.0W5BC-	6	13	19	5.5	57	21	6	5	●
MC320-08.0W4BC-	8	19	25	7.5	63	27	8	4	●
MC320-08.0W5BC-	8	19	25	7.5	63	27	8	5	●
MC320-10.0W4BC-	10	22	30	9.5	72	32	10	4	●
MC320-10.0W5BC-	10	22	30	9.5	72	32	10	5	●
MC320-12.0W4BC-	12	26	36	11.4	83	38	12	4	●
MC320-12.0W5BC-	12	26	36	11.4	83	38	12	5	●
MC320-14.0W4BC-	14	26	36	13.3	83	38	14	4	●
MC320-14.0W5BC-	14	26	36	13.3	83	38	14	5	●
MC320-16.0W4BC-	16	32	42	15.2	92	44	16	4	●
MC320-16.0W6BC-	16	32	42	15.2	92	44	16	6	●
MC320-18.0W4BC-	18	32	42	17.1	92	44	18	4	●
MC320-18.0W6BC-	18	32	42	17.1	92	44	18	6	●
MC320-20.0W4BC-	20	38	52	19	104	54	20	4	●
MC320-20.0W6BC-	20	38	52	19	104	54	20	6	●
MC320-20.0W8BC-	20	38	52	19	104	54	20	8	●
MC320-25.0W4BC-	25	45	63	23.8	121	65	25	4	●
MC320-25.0W6BC-	25	45	63	23.8	121	65	25	6	●
MC320-25.0W8BC-	25	45	63	23.8	121	65	25	8	●

Slot milling $a_p \leq 1.5 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$
Ordering example for the WK40TF grade: MC320-04.0W3BC-WK40TF

C1

DIN 6527 K

Shank DIN 6535 HB

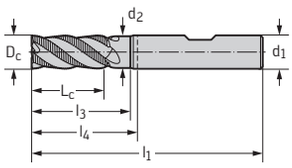


Designation	D_c h12 mm	L_c mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WK40TF
MC320-06.0W3A-	6	7	54	18	6	3	●
MC320-06.0W4A-	6	7	54	18	6	4	●
MC320-08.0W3A-	8	9	58	18	8	3	●
MC320-08.0W4A-	8	9	58	18	8	4	●
MC320-10.0W3A-	10	11	66	26	10	3	●
MC320-10.0W4A-	10	11	66	26	10	4	●
MC320-12.0W3A-	12	12	73	28	12	3	●
MC320-12.0W4A-	12	12	73	28	12	4	●
MC320-16.0W3A-	16	16	82	34	16	3	●
MC320-16.0W4A-	16	16	82	34	16	4	●
MC320-20.0W3A-	20	20	92	42	20	3	●
MC320-20.0W4A-	20	20	92	42	20	4	●
MC320-25.0W3A-	25	26	121	65	25	3	●
MC320-25.0W4A-	25	26	121	65	25	4	●

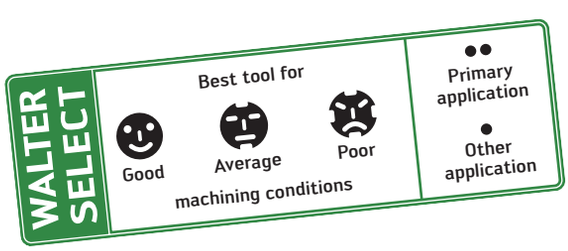
Slot milling $a_p \leq 1.0 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$
Ordering example for the WK40TF grade: MC320-06.0W3A-WK40TF

Continued

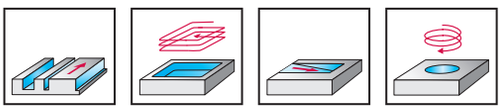
Continued

STANDARD	Designation	D_c h12 Inch/ no.	L_c Inch	l_3 Inch	d_2 Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WK40TF
Shank DIN 6535 HB	MC320.6.35W4DC-	1/4"	0.750	0.875	0.230	3.000	1.437	0.375	4	☻
	MC320.9.52W4DC-	3/8"	0.875	1.000	0.355	3.000	1.437	0.375	4	☻
	MC320.12.7W4DC-	1/2"	1.000	1.374	0.475	3.500	1.717	0.500	4	☻
	MC320.15.9W4DC-	5/8"	1.250	1.500	0.594	3.500	1.594	0.625	4	☻
	MC320.19.1W4DC-	3/4"	1.500	2.000	0.713	4.000	1.969	0.750	4	☻

Slot milling $a_p \leq 1.5 \times D_c$
Shoulder milling $a_e \leq 0.6 \times D_c$
Ordering example for the WK40TF grade: MC320.9.52W4DC-WK40TF



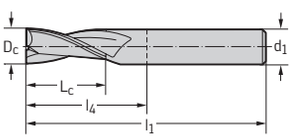
Solid carbide shoulder/slot milling cutters
MC232 Perform mm /
MC232 Perform inch

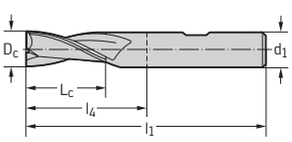


	P	M	K	N	S	H	O
WJ30ED	●●	●	●				

DIN 6527 L

	Designation	D_c h12 mm	L_c mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WJ30ED
Shank DIN 6535 HA	MC232-02.0A2B-	2	6	57	29	4	2	●
	MC232-02.5A2B-	2.5	7	57	29	4	2	●
	MC232-03.0A2B-	3	7	57	29	4	2	●
	MC232-03.5A2B-	3.5	7	57	29	4	2	●
	MC232-04.0A2B-	4	8	57	29	4	2	●
Shank DIN 6535 HB	MC232-05.0W2B-	5	10	57	21	6	2	●
	MC232-06.0W2B-	6	10	57	21	6	2	●
	MC232-08.0W2B-	8	16	63	27	8	2	●
	MC232-10.0W2B-	10	19	72	32	10	2	●
	MC232-12.0W2B-	12	22	83	38	12	2	●
	MC232-16.0W2B-	16	26	92	44	16	2	●
	MC232-20.0W2B-	20	32	104	54	20	2	●

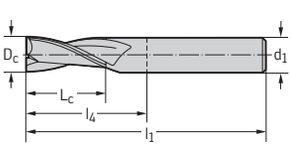


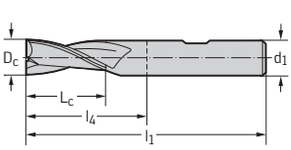


Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232-02.0A2B-WJ30ED

STANDARD

	Designation	D_c h12 Inch/no.	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30ED
Shank DIN 6535 HA	MC232.3.18A2D-	1/8"	0.500	2.500	1.083	0.250	2	●
	MC232.6.35A2D-	1/4"	0.750	2.500	1.083	0.250	2	●
Shank DIN 6535 HB	MC232.9.53W2D-	3/8"	0.875	3.000	1.437	0.375	2	●
	MC232.12.7W2D-	1/2"	1.000	3.500	1.717	0.500	2	●
	MC232.15.9W2D-	5/8"	1.250	3.500	1.594	0.625	2	●
	MC232.19.1W2D-	3/4"	1.500	4.000	1.969	0.750	2	●



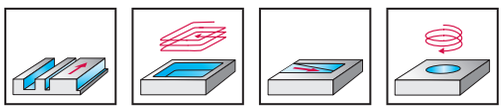


Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232.3.18A2D-WJ30ED

C1

Solid carbide shoulder/slot milling cutters
MC232 Perform mm

– Long reach



	P	M	K	N	S	H	O
WJ30ED	●●	●	●				

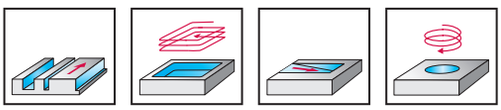
DIN 6527 L

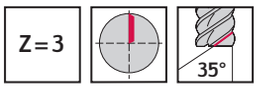
	Designation	D_c h12 mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WJ30ED
Shank DIN 6535 HA	MC232-02.0A3BC-	2	6	11	1.9	57	29	4	3	●●
	MC232-02.5A3BC-	2.5	7	12	2.4	57	29	4	3	●●
	MC232-03.0A3BC-	3	7	12	2.9	57	29	4	3	●●
	MC232-03.5A3BC-	3.5	7	15	3.3	57	29	4	3	●●
	MC232-04.0A3BC-	4	8	15	3.8	57	29	4	3	●●
Shank DIN 6535 HB	MC232-05.0W3BC-	5	10	18	4.8	57	21	6	3	●●
	MC232-06.0W3BC-	6	10	19	5.7	57	21	6	3	●●
	MC232-08.0W3BC-	8	16	25	7.6	63	27	8	3	●●
	MC232-10.0W3BC-	10	19	30	9.5	72	32	10	3	●●
	MC232-12.0W3BC-	12	22	36	11.4	83	38	12	3	●●
	MC232-16.0W3BC-	16	26	42	15.2	92	44	16	3	●●
	MC232-20.0W3BC-	20	32	52	19	104	54	20	3	●●

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232-02.0A3BC-WJ30ED

C1

Solid carbide shoulder/slot milling cutters
MC232 Perform mm /
MC232 Perform inch





	P	M	K	N	S	H	O
WJ30ED	●●	●	●				

DIN 6527 L

	Designation	D_c h12 mm	L_c mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WJ30ED
Shank DIN 6535 HA	MC232-02.0A3B-	2	6	57	29	4	3	●
	MC232-02.5A3B-	2.5	7	57	29	4	3	●
	MC232-03.0A3B-	3	7	57	29	4	3	●
	MC232-03.5A3B-	3.5	7	57	29	4	3	●
	MC232-04.0A3B-	4	8	57	29	4	3	●
Shank DIN 6535 HB	MC232-05.0W3B-	5	10	57	21	6	3	●
	MC232-06.0W3B-	6	10	57	21	6	3	●
	MC232-08.0W3B-	8	16	63	27	8	3	●
	MC232-10.0W3B-	10	19	72	32	10	3	●
	MC232-12.0W3B-	12	22	83	38	12	3	●
	MC232-16.0W3B-	16	26	92	44	16	3	●
	MC232-20.0W3B-	20	32	104	54	20	3	●

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232-02.0A3B-WJ30ED

STANDARD

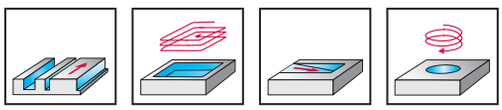
	Designation	D_c h12 Inch/no.	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30ED
Shank DIN 6535 HA	MC232.3.18A3D-	1/8"	0.500	2.500	1.083	0.250	3	●
	MC232.6.35A3D-	1/4"	0.750	2.500	1.083	0.250	3	●
Shank DIN 6535 HB	MC232.9.53W3D-	3/8"	0.875	3.000	1.437	0.375	3	●
	MC232.12.7W3D-	1/2"	1.000	3.500	1.717	0.500	3	●
	MC232.15.9W3D-	5/8"	1.250	3.500	1.594	0.625	3	●
	MC232.19.1W3D-	3/4"	1.500	4.000	1.969	0.750	3	●

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232.3.18A3D-WJ30ED

C1

Solid carbide shoulder/slot milling cutters
MC232 Perform mm /
MC232 Perform inch

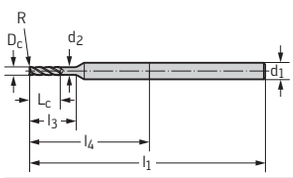
– Long reach



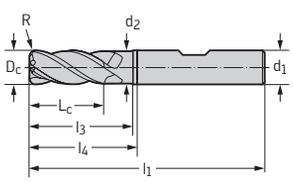
	P	M	K	N	S	H	O
WJ30ED	●●	●	●				

DIN 6527 L

Shank DIN 6535 HA



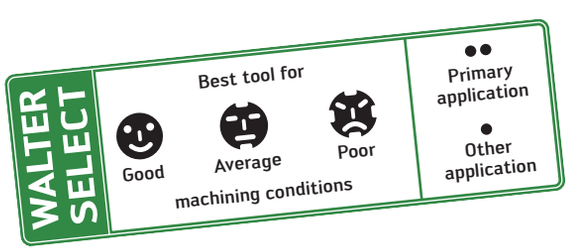
Shank DIN 6535 HB



Designation	D_c h12 mm	R mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WJ30ED
MC232-02.0A4B020C-	2	0.2	7	11	1.9	57	29	4	4	●
MC232-03.0A4B030C-	3	0.3	8	12	2.9	57	29	4	4	●
MC232-04.0A4B050C-	4	0.5	11	15	3.8	57	29	4	4	●
MC232-05.0W4B050C-	5	0.5	13	18	4.8	57	21	6	4	●
MC232-06.0W4B050C-	6	0.5	13	19	5.7	57	21	6	4	●
MC232-06.0W4B080C-	6	0.8	13	19	5.7	57	21	6	4	●
MC232-06.0W4B100C-	6	1	13	19	5.7	57	21	6	4	●
MC232-08.0W4B050C-	8	0.5	19	25	7.6	63	27	8	4	●
MC232-08.0W4B080C-	8	0.8	19	25	7.6	63	27	8	4	●
MC232-08.0W4B100C-	8	1	19	25	7.6	63	27	8	4	●
MC232-08.0W4B150C-	8	1.5	19	25	7.6	63	27	8	4	●
MC232-08.0W4B200C-	8	2	19	25	7.6	63	27	8	4	●
MC232-10.0W4B050C-	10	0.5	22	30	9.5	72	27	10	4	●
MC232-10.0W4B080C-	10	0.8	22	30	9.5	72	32	10	4	●
MC232-10.0W4B100C-	10	1	22	30	9.5	72	32	10	4	●
MC232-10.0W4B150C-	10	1.5	22	30	9.5	72	32	10	4	●
MC232-10.0W4B200C-	10	2	22	30	9.5	72	32	10	4	●
MC232-12.0W4B050C-	12	0.5	26	36	11.4	83	38	12	4	●
MC232-12.0W4B080C-	12	0.8	26	36	11.4	83	38	12	4	●
MC232-12.0W4B100C-	12	1	26	36	11.4	83	38	12	4	●
MC232-12.0W4B150C-	12	1.5	26	36	11.4	83	38	12	4	●
MC232-12.0W4B200C-	12	2	26	36	11.4	83	38	12	4	●
MC232-12.0W4B250C-	12	2.5	26	36	11.4	83	38	12	4	●
MC232-12.0W4B300C-	12	3	26	36	11.4	83	38	12	4	●
MC232-16.0W4B050C-	16	0.5	32	42	15.2	92	44	16	4	●
MC232-16.0W4B100C-	16	1	32	42	15.2	92	44	16	4	●
MC232-16.0W4B200C-	16	2	32	42	15.2	92	44	16	4	●
MC232-16.0W4B250C-	16	2.5	32	42	15.2	92	44	16	4	●
MC232-16.0W4B300C-	16	3	32	42	15.2	92	44	16	4	●
MC232-16.0W4B400C-	16	4	32	42	15.2	92	44	16	4	●
MC232-20.0W4B050C-	20	0.5	38	52	19	104	54	20	4	●
MC232-20.0W4B100C-	20	1	38	52	19	104	54	20	4	●
MC232-20.0W4B200C-	20	2	38	52	19	104	54	20	4	●
MC232-20.0W4B250C-	20	2.5	38	52	19	104	54	20	4	●
MC232-20.0W4B300C-	20	3	38	52	19	104	54	20	4	●
MC232-20.0W4B400C-	20	4	38	52	19	104	54	20	4	●

Continued

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232-02.0A4B020C-WJ30ED



C1

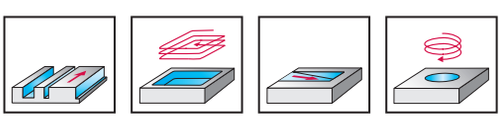
Continued

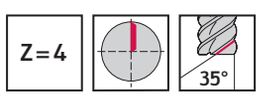
STANDARD	Designation	D_c h12 Inch/ no.	R Inch	L_c Inch	l_3 Inch	d_2 Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30ED
Shank DIN 6535 HA	MC232.3.18A4D038C-	1/8"	0.015	0.500	0.625	0.119	2.500	1.083	0.250	4	
	MC232.6.35A4D038C-	1/4"	0.015	0.750	1.000	0.237	2.500	1.083	0.250	4	
	MC232.6.35A4D076C-	1/4"	0.030	0.750	1.000	0.237	2.500	1.083	0.250	4	
Shank DIN 6535 HB	MC232.9.53W4D038C-	3/8"	0.015	0.875	1.125	0.356	3.000	1.437	0.375	4	
	MC232.9.53W4D076C-	3/8"	0.030	0.875	1.125	0.356	3.000	1.437	0.375	4	
	MC232.12.7W4D038C-	1/2"	0.015	1.000	1.500	0.475	3.500	1.717	0.500	4	
	MC232.12.7W4D076C-	1/2"	0.030	1.000	1.500	0.475	3.500	1.717	0.500	4	
	MC232.12.7W4D152C-	1/2"	0.060	1.000	1.500	0.475	3.500	1.717	0.500	4	
	MC232.12.7W4D318C-	1/2"	0.125	1.000	1.500	0.475	3.500	1.717	0.500	4	
	MC232.15.9W4D318C-	5/8"	0.125	1.250	1.563	0.594	3.500	1.594	0.625	4	
	MC232.19.1W4D076C-	3/4"	0.030	1.500	1.875	0.713	4.000	1.969	0.750	4	
	MC232.19.1W4D318C-	3/4"	0.125	1.500	1.875	0.713	4.000	1.969	0.750	4	

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232.3.18A4D038C-WJ30ED

Solid carbide shoulder/slot milling cutters
MC232 Perform mm

– Long reach





	P	M	K	N	S	H	O
WJ30ED	●●	●	●				

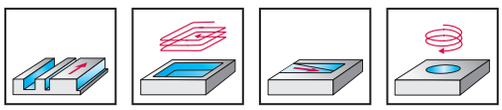
DIN 6527 L	Designation	D_c h12 mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WJ30ED
Shank DIN 6535 HA	MC232-02.0A4BC-	2	7	11	1.9	57	29	4	4	
	MC232-02.5A4BC-	2.5	8	12	2.4	57	29	4	4	
	MC232-03.0A4BC-	3	8	12	2.9	57	29	4	4	
	MC232-03.5A4BC-	3.5	10	15	3.3	57	29	4	4	
	MC232-04.0A4BC-	4	11	15	3.8	57	29	4	4	
Shank DIN 6535 HB	MC232-05.0W4BC-	5	13	18	4.8	57	21	6	4	
	MC232-06.0W4BC-	6	13	19	5.7	57	21	6	4	
	MC232-08.0W4BC-	8	19	25	7.6	63	27	8	4	
	MC232-10.0W4BC-	10	22	30	9.5	72	32	10	4	
	MC232-12.0W4BC-	12	26	36	11.4	83	38	12	4	
	MC232-16.0W4BC-	16	32	42	15.2	92	44	16	4	
	MC232-20.0W4BC-	20	38	52	19	104	54	20	4	

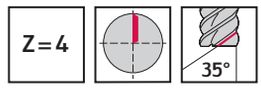
Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232-02.0A4BC-WJ30ED

C1

/ ★ New addition to the product range

Solid carbide shoulder/slot milling cutters
MC232 Perform mm / MC232 Perform inch





	P	M	K	N	S	H	O
WJ30ED	●●	●	●				

DIN 6527 L

	Designation	D_c h12 mm	L_c mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WJ30ED
Shank DIN 6535 HA	MC232-02.0A4B-	2	7	57	29	4	4	●
	MC232-02.5A4B-	2.5	8	57	29	4	4	●
	MC232-03.0A4B-	3	8	57	29	4	4	●
	MC232-03.5A4B-	3.5	10	57	29	4	4	●
	MC232-04.0A4B-	4	11	57	29	4	4	●
Shank DIN 6535 HB	MC232-05.0W4B-	5	13	57	21	6	4	●
	MC232-06.0W4B-	6	13	57	21	6	4	●
	MC232-08.0W4B-	8	19	63	27	8	4	●
	MC232-10.0W4B-	10	22	72	32	10	4	●
	MC232-12.0W4B-	12	26	83	38	12	4	●
	MC232-16.0W4B-	16	32	92	44	16	4	●
	MC232-20.0W4B-	20	38	104	54	20	4	●

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232-02.0A4B-WJ30ED

STANDARD

	Designation	D_c h12 Inch/no.	L_c Inch	l_1 Inch	l_4 Inch	d_1 h6 Inch	Z	WJ30ED
Shank DIN 6535 HA	MC232.3.18A4D-	1/8"	0.500	2.500	1.083	0.250	4	●
	MC232.6.35A4D-	1/4"	0.750	2.500	1.083	0.250	4	●
Shank DIN 6535 HB	MC232.9.53W4D-	3/8"	0.875	3.000	1.437	0.375	4	●
	MC232.12.7W4D-	1/2"	1.000	3.500	1.717	0.500	4	●
	MC232.15.9W4D-	5/8"	1.250	3.500	1.594	0.625	4	●
	MC232.19.1W4D-	3/4"	1.500	4.000	1.969	0.750	4	●

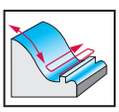
Shoulder milling $a_e \leq 0.5 \times D_c$
Slot milling $a_p \leq 0.5 \times D_c$
Ordering example for the WJ30ED grade: MC232.3.18A4D-WJ30ED

C1

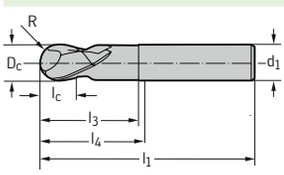
Solid carbide ball-nose end mills
MC482 Advance inch

Z= 2–4

63HRC
48HRC



	P	M	K	N	S	H	O
WB10TG						●●	

Tool		D_c h7 Inch/ no.	R Inch	L_c Inch	l_3 Inch	d_2 Inch	l_1 Inch	l_4 Inch	d_1 h5 Inch	Z	WB10TG
	MC482.3.18A2PC-	1/8"	0.063	0.125	0.375	0.121	2.500	1.083	0.250	2	☺
	MC482.4.76A2PC-	3/16"	0.094	0.188	0.500	0.184	2.500	1.083	0.250	2	☺
	MC482.6.35A2PC-	1/4"	0.125	0.250	0.875	0.246	2.500	1.083	0.250	2	☺
	MC482.9.53A2PB-	3/8"	0.188	0.375	1.000	0.369	3.000	1.437	0.375	2	☺
	MC482.12.7A2PB-	1/2"	0.250	0.500	1.375	0.492	3.500	1.717	0.500	2	☺

Ordering example for the WB10TG grade: MC482.3.18A2PC-WB10TG

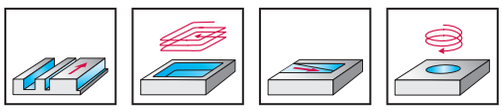
C1

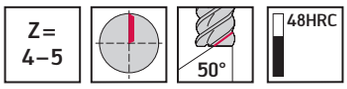
Solid carbide milling tools with ConeFit interface product range overview Shoulder/slot milling cutters

Machining		
Helix angle	**50°**	**40°**
Designation	**MC326**	**MC320**
Diameter range [mm] / [inch]	3/8–1	10–25
Z	4–5	4–8
Corner radius [mm] / [inch]	0.015-0.125	0
Page	509	510

Solid carbide shoulder/slot milling cutters
MC326 inch

– Type N 50

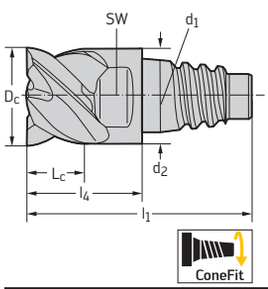




	P	M	K	N	S	H	O
WJ30TF	●●	●	●		●		

PWZ

ConeFit

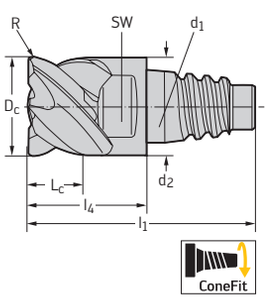


Designation	D_c h9 Inch/ no.	L_c Inch	d_2 Inch	l_1 Inch	l_4 Inch	SW Inch	d_1 Inch	Z	WJ30TF
MC326.9.53E4P-	3/8"	0.209	0.364	0.929	0.488	0.315	E10	4	☺
MC326.12.7E4P-	1/2"	0.276	0.484	1.114	0.575	0.394	E12	4	☺
MC326.15.9E4P-	5/8"	0.335	0.610	1.406	0.736	0.472	E16	4	☺
MC326.19.1E4P-	3/4"	0.413	0.728	1.606	0.839	0.630	E20	4	☺
MC326.25.4E5P-	1"	0.551	0.965	1.953	1.008	0.787	E25	5	☺

Slot milling $a_p \leq 0.4 \times D_c$
Shoulder milling $a_e \leq 0.05 \times D_c$
Ordering example for the WJ30TF grade: MC326.9.53E4P-WJ30TF

PWZ

ConeFit

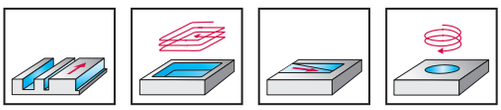


Designation	D_c h9 Inch/ no.	R Inch	L_c Inch	d_2 Inch	l_1 Inch	l_4 Inch	SW Inch	d_1 Inch	Z	WJ30TF
MC326.9.53E4P038-	3/8"	0.015	0.209	0.364	0.929	0.488	0.315	E10	4	☺
MC326.9.53E4P076-	3/8"	0.030	0.209	0.364	0.929	0.488	0.315	E10	4	☺
MC326.12.7E4P038-	1/2"	0.015	0.276	0.484	1.114	0.575	0.394	E12	4	☺
MC326.12.7E4P076-	1/2"	0.030	0.276	0.484	1.114	0.575	0.394	E12	4	☺
MC326.12.7E4P152-	1/2"	0.060	0.276	0.484	1.114	0.575	0.394	E12	4	☺
MC326.15.9E4P152-	5/8"	0.060	0.335	0.610	1.406	0.736	0.472	E16	4	☺
MC326.19.1E4P152-	3/4"	0.060	0.413	0.728	1.606	0.839	0.630	E20	4	☺
MC326.19.1E4P318-	3/4"	0.125	0.413	0.728	1.606	0.839	0.630	E20	4	☺
MC326.25.4E5P152-	1"	0.060	0.551	0.965	1.953	1.008	0.787	E25	5	☺
MC326.25.4E5P318-	1"	0.125	0.551	0.965	1.953	1.008	0.787	E25	5	☺

Slot milling $a_p \leq 0.4 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30TF grade: MC326.9.53E4P038-WJ30TF

C1

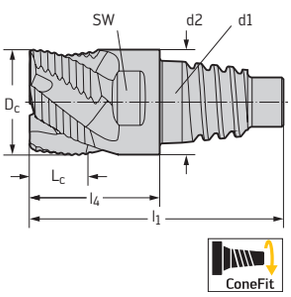
Solid carbide shoulder/slot milling cutters
MC320 mm



	P	M	K	N	S	H	O
WJ30TF	●●	●	●		●		

PWZ

ConeFit



Designation	D_c h12 mm	L_c mm	d_2 mm	l_1 mm	l_4 mm	SW mm	d_1 mm	Z	WJ30TF
MC320-10.0E4P-	10	5.5	9.7	23.6	12.4	8	E10	4	●
MC320-10.0E5P-	10	5.5	9.7	23.6	12.4	8	E10	5	●
MC320-12.0E4P-	12	6.5	11.7	28.3	14.5	10	E12	4	●
MC320-12.0E5P-	12	6.5	11.7	28.3	14.5	10	E12	5	●
MC320-16.0E6P-	16	8.5	15.5	35.7	18.7	12	E16	6	●
MC320-20.0E6P-	20	11	19.3	40.8	21.3	16	E20	6	●
MC320-25.0E8P-	25	25	24.2	49.6	25.6	20	E25	8	●

Slot milling $a_p \leq 0.5 \times D_c$
Shoulder milling $a_e \leq 0.5 \times D_c$
Ordering example for the WJ30TF grade: MC320-10.0E4P-WJ30TF

C1

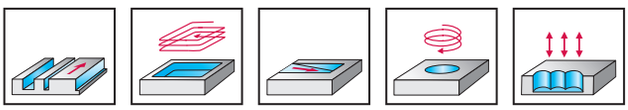
Brazed milling tools product range overview
Shoulder/slot milling cutters

Machining				
Designation	**MC275**	**MC075**	**MC275**	**MC075**
Dia. range [mm]	8–12	8–12	12–25	16–25
Z	4–6	4	4–8	4
Shank [mm]	DIN 6535 HA	DIN 6535 HA	ConeFit	ConeFit
Page	512	512	513	513

C1

Ceramic shoulder/slot milling cutters
MC275 mm

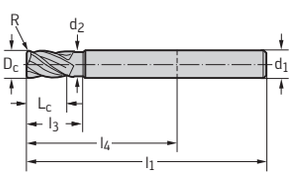
– Long reach



	P	M	K	N	S	H	O
WIS10					●●		

P STANDARD

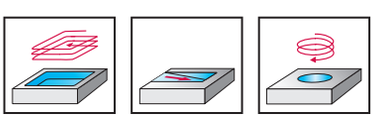
Designation	D_c h12 mm	R mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h6 mm	Z	WIS10
Shank DIN 6535 HA										
MC275-08.0A4P100C-	8	1	7	19	7.6	67	31	8	4	☺
MC275-10.0A4P100C-	10	1	7	22	9.5	75	35	10	4	☺
MC275-12.0A4P100C-	12	1	7	26	11.4	82	37	12	4	☺
MC275-12.0A6P100C-	12	1	7	26	11.4	82	37	12	6	☺

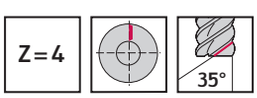


Shoulder milling $a_e \leq 0.1 \times D_c$
Slot milling $a_p \leq 0.1 \times D_c$
Ordering example for the WIS10 grade: MC275-08.0A4P100C-WIS10

Ceramic shoulder/slot milling cutters
MC075 mm

– Long reach

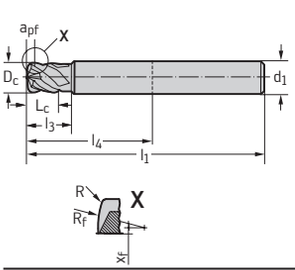




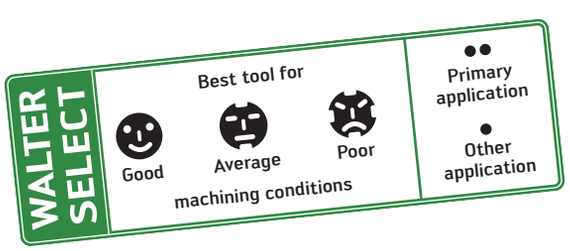
	P	M	K	N	S	H	O
WIS10					●●		

P STANDARD

Designation	D_c h12 mm	a_{pf} mm	x_f mm	R_f mm	R_{ers} mm	R mm	L_c mm	l_1 mm	l_3 mm	l_4 mm	d_1 h6 mm	WIS10
Shank DIN 6535 HA												
MC075-08.0A4P100C-	8	0.25	0.78	12	1.226	1	7	67	19	31	8	☺
MC075-10.0A4P150C-	10	0.3	0.8	15	1.773	1.5	7	75	22	35	10	☺
MC075-12.0A4P150C-	12	0.4	1	18	1.875	1.5	7	82	26	37	12	☺

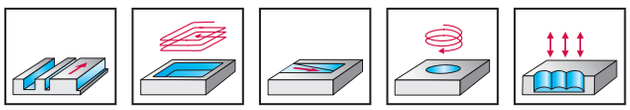


Shoulder milling $a_e \leq 0.5 \times D_a$
Ordering example for the WIS10 grade: MC075-08.0A4P100C-WIS10



C1

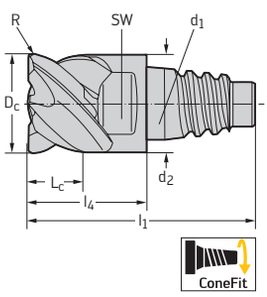
Ceramic shoulder/slot milling cutters
MC275 mm



	P	M	K	N	S	H	O
WIS10					●●		

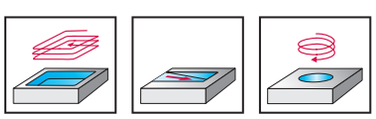
P STANDARD

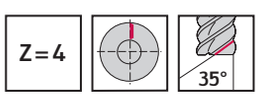
Designation	D_c h12 mm	R mm	L_c mm	d_2 mm	l_1 mm	l_4 mm	SW mm	d_1 mm	Z	WIS10
ConeFit										
MC275-12.0E4P100-	12	1	7	11.7	32.6	18.8	10	E12	4	☺
MC275-12.0E6P100-	12	1	7	11.7	32.6	18.8	10	E12	6	☺
MC275-16.0E6P150-	16	1.5	9	15.5	42.7	25.7	12	E16	6	☺
MC275-16.0E8P150-	16	1.5	9	15.5	42.7	25.7	12	E16	8	☺
MC275-20.0E6P150-	20	1.5	9	19.3	47.8	28.3	16	E20	6	☺
MC275-20.0E8P150-	20	1.5	9	19.3	47.8	28.3	16	E20	8	☺
MC275-25.0E6P150-	25	1.5	9	24.2	56.6	32.6	20	E25	6	☺
MC275-25.0E8P150-	25	1.5	9	24.2	56.6	32.6	20	E25	8	☺



Shoulder milling $a_e \leq 0.1 \times D_c$
Ordering example for the WIS10 grade: MC275-12.0E4P100-WIS10

Ceramic shoulder/slot milling cutters
MC075 mm

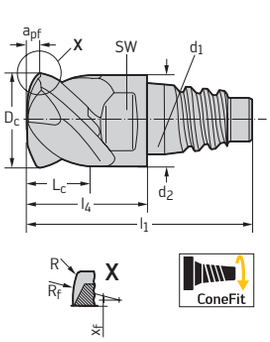




	P	M	K	N	S	H	O
WIS10					●●		

P STANDARD

Designation	D_c h12 mm	a_{pf} mm	x_f mm	R_f mm	R_{ers} mm	R mm	L_c mm	l_1 mm	l_4 mm	SW mm	d_1 mm	Z	WIS10
ConeFit													
MC075-16.0E4P200-	16	0.5	1.5	24	2.465	2	9	42.7	25.7	12	E16	4	☺
MC075-20.0E4P200-	20	0.65	2.2	30	2.607	2	9	47.8	28.3	16	E20	4	☺
MC075-25.0E4P300-	25	0.75	2.8	36	3.687	3	9	56.6	32.6	20	E25	4	☺



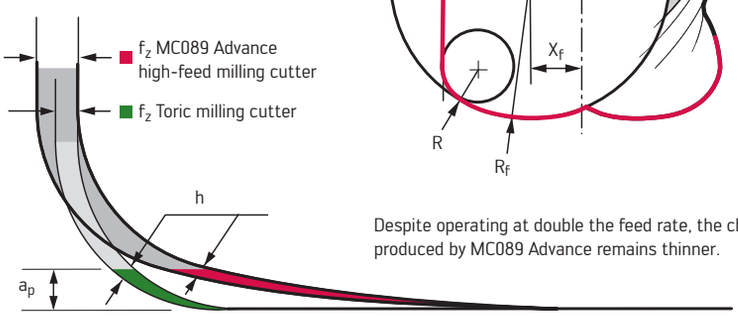
Shoulder milling $a_e \leq 0.05 \times D_c$
Ordering example for the WIS10 grade: MC075-16.0E4P200-WIS10

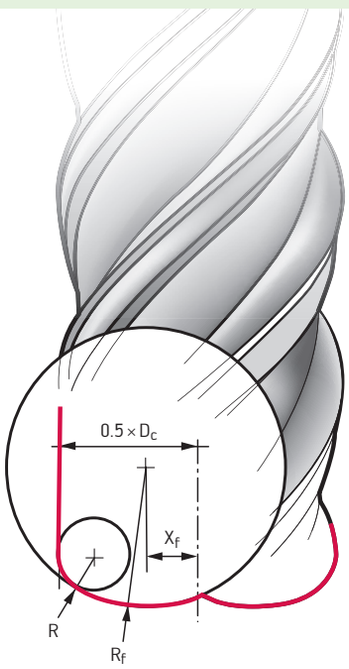
C1

High-feed geometry

MC089 Advance high-feed milling cutter

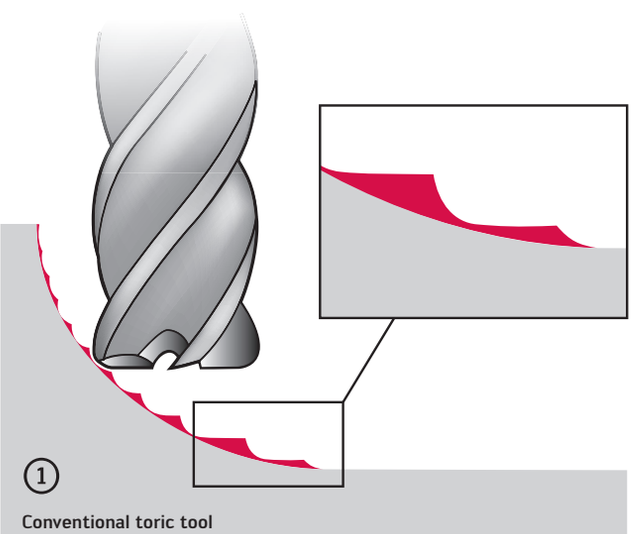
The chip thickness "h" is reduced thanks to the special end-face geometry. Extremely high feeds are possible. Forces are diverted axially towards the centre of the tool. This stabilises the machining process.



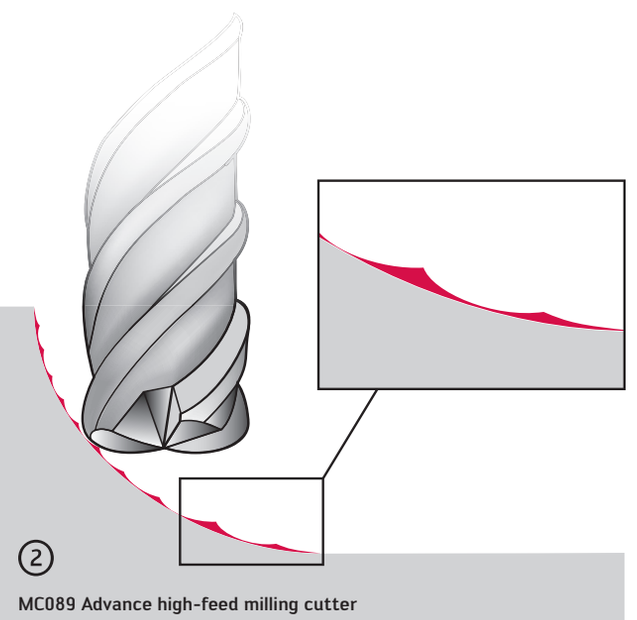


Despite operating at double the feed rate, the chip thickness (h) produced by MC089 Advance remains thinner.

In comparison with conventional toric tools (figure 1), the MC089 Advance high-feed milling cutter (figure 2) reduces the amount of residual material produced.
This is due to the special geometry that minimises the machining of residual material and increases the tool life of the subsequent finishing tool.



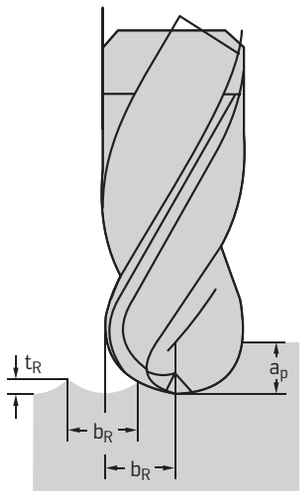
Conventional toric tool



MC089 Advance high-feed milling cutter

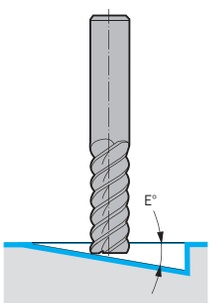
Usage recommendations for copying and finishing with the MC480 / MC482 Advance

Tool diameter D_c (mm)	Row width (b_R) for groove depth t_R = 5 µm	Row width (b_R) for groove depth t_R = 2 µm
0.4	0.09	0.05
0.5	0.10	0.06
0.6	0.11	0.07
0.8	0.12	0.08
1.0	0.14	0.09
1.5	0.17	0.11
2.0	0.20	0.12
2.5	0.22	0.14
3.0	0.25	0.16
4.0	0.28	0.18
5.0	0.31	0.20
6.0	0.34	0.22
8.0	0.40	0.25
10.0	0.45	0.28
12.0	0.49	0.31
16.0	0.56	0.36



Maximum feed angle [°] on MC183 Advance, MC187 Advance, MC281 Advance, MC388 Advance

Material groups	Material	Number of teeth					
		2	3	4	5	6–8	8
H	Hard materials	2	2	1.5	1.5	1.5	1



C1

Grade description

Coated carbide

Walter grade designation	Standard designation	Material groups P Steel	M Stainless steel	K Cast iron	N Non-ferrous metals	S Materials with difficult cutting properties	H Hard materials	O Other	Range of applications 01 05 10 15 20 25 30 35 40 45	Coating process	Coating composition	Tool example
WK40TF	HC – P 40	●●								PVD	AlTiN	
	HC – M 40		●									
	HC – K 40			●								
	HC – S 40					●						
WJ30TF	HC – P 30	●●								PVD	AlTiN	
	HC – M 30		●									
	HC – K 30			●								
	HC – N 30				●							
	HC – S 30					●						
WJ30CA	HC – N 30				●●					PVD	CrN mod	
WK40RC	HC – M 40		●●							PVD	TiAlN	
	HC – S 40					●						
WK40TZ	HC – P 40	●●								PVD	AlTiN + ZrN	
	HC – M 40		●									
WJ30ED	HC – P 30	●●								PVD	AlCrN	
	HC – M 30		●									
	HC – K 30			●								
WJ30RA	HC - M 30		●●							PVD	TiAlN + TiAl	
	HC - N 30				●							
	HC - S 30					●						
WJ30RD	HC - P 30	●●								PVD	TiAlN + ZrN	
	HC - K 30			●								
WB10TG	HC - H 10						●●			PVD	TiAlSiN	

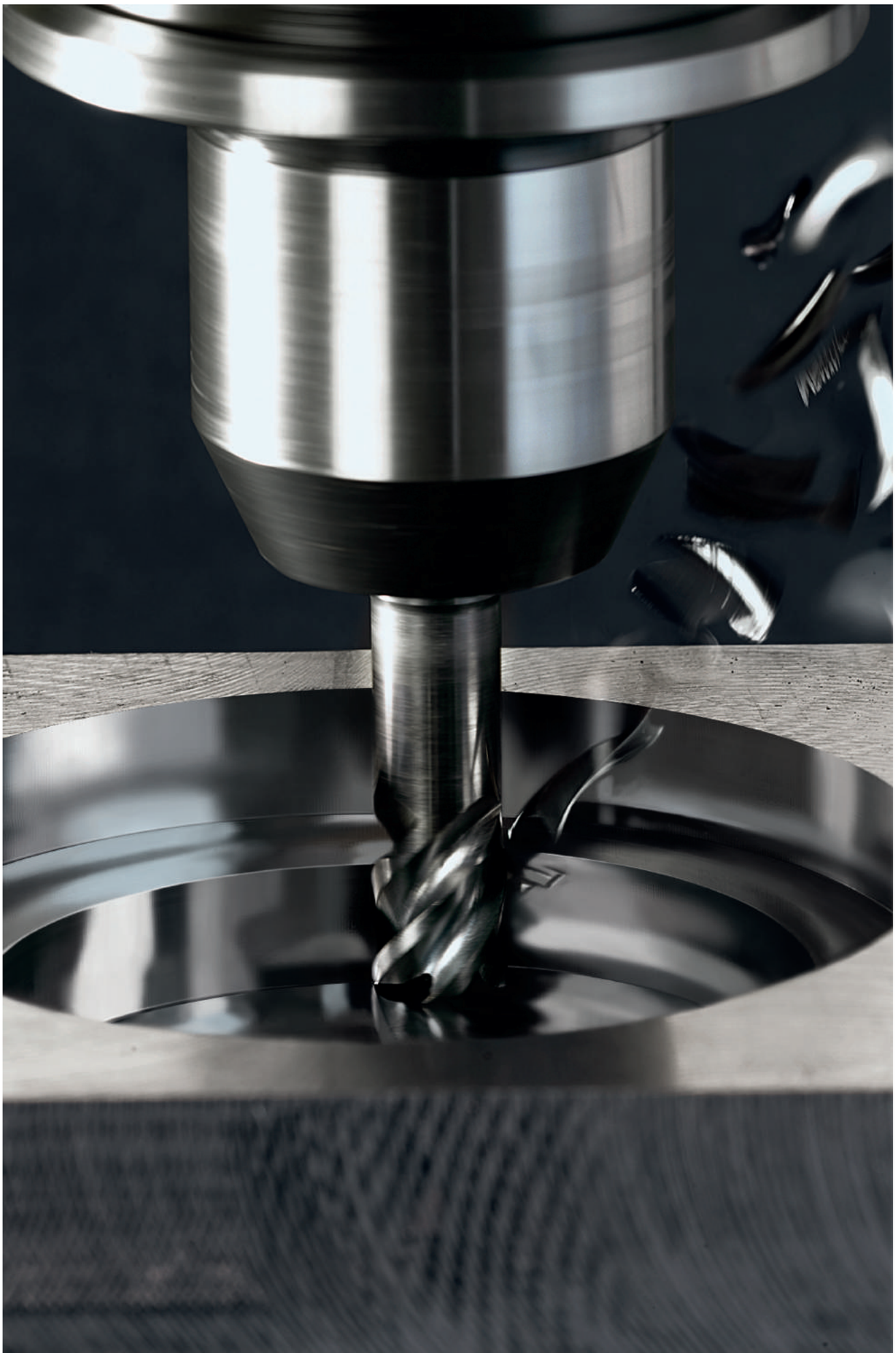
Uncoated carbide

Walter grade designation	Standard designation	Material groups P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	Range of applications 01 05 10 15 20 25 30 35 40 45	Coating process	Coating composition	Tool example
WJ30UU	HW – N 30				●●					–	–	

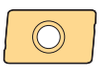
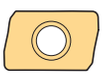
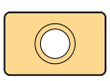
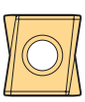
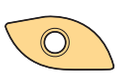
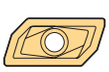
HC = Coated carbide
HW = Uncoated carbide

●● Primary application
● Additional application

C1



Indexable inserts for milling product range overview

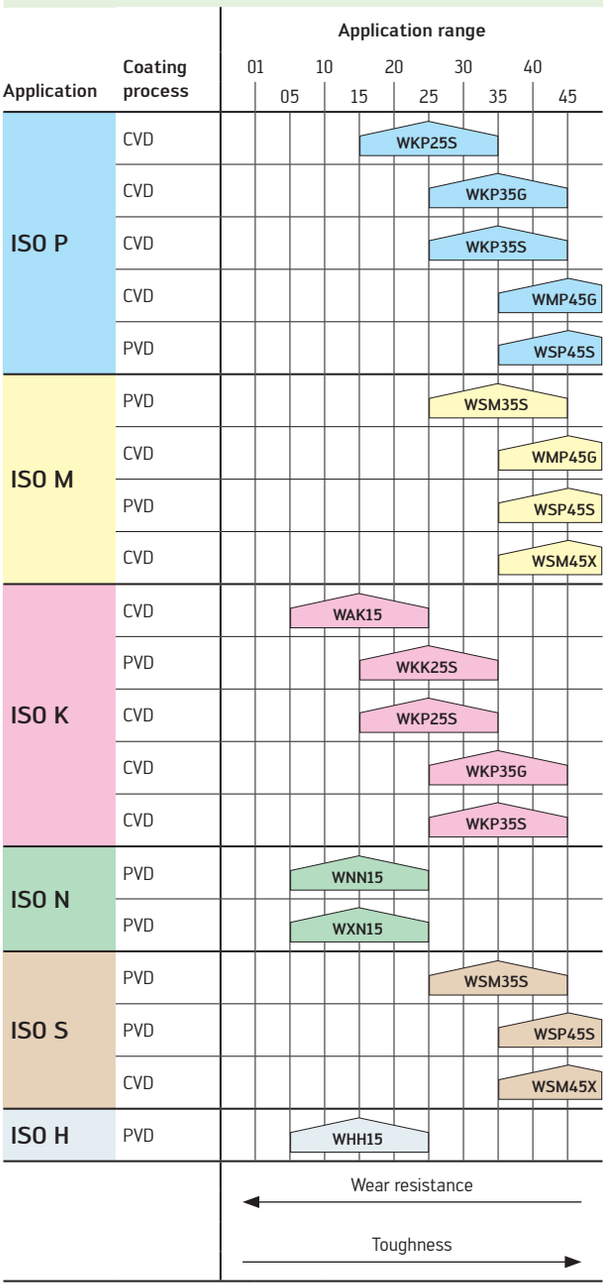
Insert shape		Description	Page
	**A**	Positive rhombic for **Xtra·tec®**	521
	**B**	Positive rhombic for **Xtra·tec® XT**	522
 	**L**	Positive rhombic Tangential rhombic	522 540
	O	Negative octagonal	531
	S	Positive square Negative square	524 532
	X	Negative heptagonal	536
	**X**	Positive form inserts for copy milling cutters	527
	**Z**	Positive rhombic	529
	P 236 . .	Negative triangular	531

C2

Cutting tool materials for milling product range overview

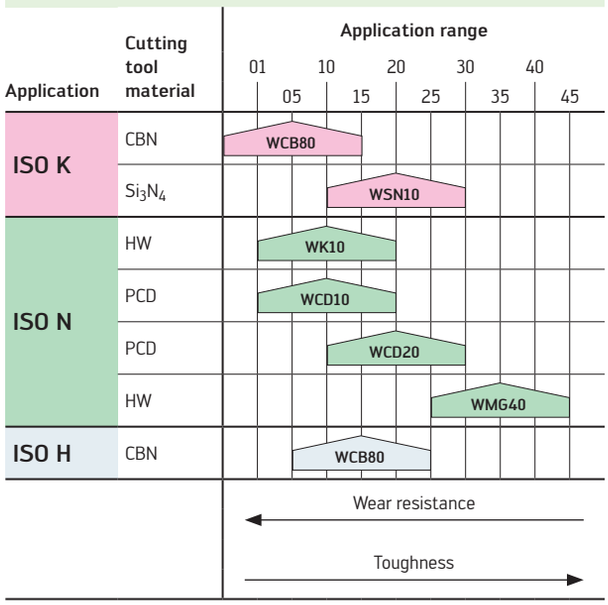
Cutting tool materials: Coated carbide

Cutting tool material applications



Cutting tool materials: Uncoated carbide, ceramic, CBN and PCD

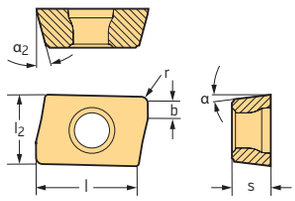
Cutting tool material applications



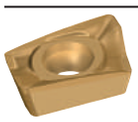
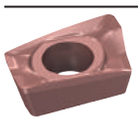
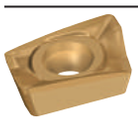
Si_3N_4 = Silicon nitride ceramic
HW = Uncoated carbide
CBN = Cubic boron nitride
PCD = Polycrystalline diamond

C2

Positive rhombic
ACGT / ACMT
Tiger·tec® Gold



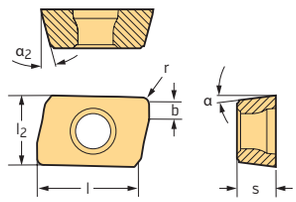
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	α_2	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	ACGT060204R-G65	G	2	4.4	6.7	2.38	7°	15°	0.4	0.9	☺	😐	😐	☹	😐	☹			😐	☹	☹				☹
	ACGT060204R-M85	G	2	4.4	6.7	2.38	7°	15°	0.4	0.9												☺	☺		
	ACMT060202R-G55	M	2	4.4	6.7	2.38	7°	15°	0.2	1		😐	😐	☹		☹				☹	☹				☹
	ACMT060204R-G55	M	2	4.4	6.7	2.38	7°	15°	0.4	0.9	☺	😐	😐	☹		☹	☺	☺	😐	☹	☹			😐	☹
	ACMT060208R-G55	M	2	4.4	6.7	2.38	7°	15°	0.8	0.8		😐	😐	☹		☹				☹	☹				☹
	ACMT060212R-G55	M	2	4.4	6.7	2.38	7°	15°	1.2	0.6		😐	😐	☹		☹				☹	☹				☹
	ACMT060216R-G55	M	2	4.4	6.7	2.38	7°	15°	1.6	0.1		😐	😐	☹		☹				☹	☹				☹
	ACMT060204R-K55	M	2	4.4	6.7	2.38	7°	15°	0.4	0.9		☺	☺	😐	☺	😐				☺	😐			☺	😐

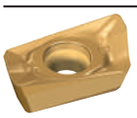
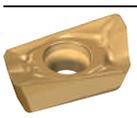
HC = Coated carbide
HW = Uncoated carbide

☺😐☹ / ★ New addition to the product range

Positive rhombic
BCGT / BCMT
Tiger·tec® Gold

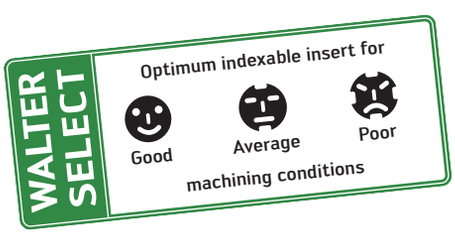


Indexable inserts

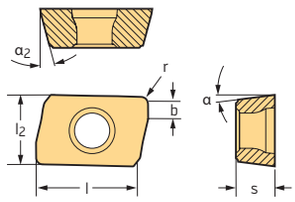
	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	α_2	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	BCGT160508R-G55	G	2	14.9	17.3	5.75	7°	17°	0.8	2	☺	😐	😐	☹	😐		☹	☺		😐	☹	☹			☹
	BCMT160508R-F55	M	2	14.9	17.3	5.75	7°	17°	0.8	2	☺	😐	😐	☹			☹	☺	😐	😐	☹	☹			☹
	BCMT160508R-G55	M	2	14.9	17.3	5.75	7°	17°	0.8	2	☺	😐	😐	☹	😐	☹	☹	☺	😐	😐	☹	☹	😐	☹	☹

HC = Coated carbide

C2



Positive rhombic
BCGT / BCMT
Tiger·tec® Gold

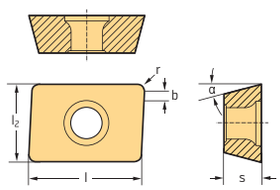


Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	α_2	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	BCMT160508R-K55	M	2	14.9	17.3	5.75	7°	17°	0.8	2		☻	☻	☻	☻		☻				☻	☻	☻		☻

HC = Coated carbide

Positive rhombic
LDMW / LDMT
Tiger·tec® Gold



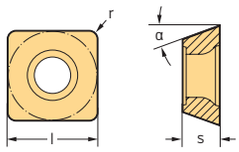
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSP45S
	LDMW08T204R-A57	M	2	6.1	8.88	2.58	15°	0.4	0.8	☹	☹	☹						☹	☹	☹		
	LDMW14T308R-A57	M	2	9.68	14.1	4.08	15°	0.8	1.2	☹	☹	☹						☹	☹	☹		
	LDMW170408R-A57	M	2	11.78	17.24	4.92	15°	0.8	1.6	☹	☹	☹						☹	☹	☹		
	LDMT08T204R-D51	M	2	6.1	8.88	2.58	15°	0.4	0.8	☺	☹	☹	☠		☠			☹	☠	☠		☠
	LDMT14T308R-D51	M	2	9.68	14.1	4.08	15°	0.8	1.2	☺	☹	☹	☠		☠			☹	☠	☠		☠
	LDMT170408R-D51	M	2	11.78	17.24	4.92	15°	0.8	1.6	☺	☹	☹	☠		☠			☹	☠	☠		☠
	LDMT170412R-D51	M	2	11.78	17.24	4.92	15°	1.2	1.6		☹	☹	☠		☠				☠	☠		☠
	LDMT08T204R-D57	M	2	6.1	8.88	2.58	15°	0.4	0.8	☺	☹	☹	☠	☹	☠		☹	☹	☠	☠	☹	☠
	LDMT14T308R-D57	M	2	9.68	14.1	4.08	15°	0.8	1.2	☺	☹	☹	☠	☹	☠		☹	☹	☠	☠	☹	☠
	LDMT170408R-D57	M	2	11.78	17.24	4.92	15°	0.8	1.6	☺	☹	☹	☠	☹	☠		☹	☹	☠	☠	☹	☠
	LDMT08T204R-F57	M	2	6.1	8.88	2.58	15°	0.4	0.8	☺	☹	☹	☠	☹	☠	☺		☹	☠	☠	☹	☠
	LDMT14T308R-F57	M	2	9.68	14.1	4.08	15°	0.8	1.2	☺	☹	☹	☠	☹	☠	☺		☹	☠	☠	☹	☠
	LDMT170408R-F57	M	2	11.78	17.24	4.92	15°	0.8	1.6	☺	☹	☹	☠	☹	☠	☺		☹	☠	☠	☹	☠

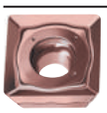
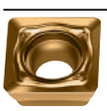
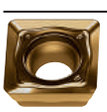
HC = Coated carbide

☺☹☠ / ★ New addition to the product range

Positive square
SDHT / SDMW / SDMT
Tiger·tec® Gold

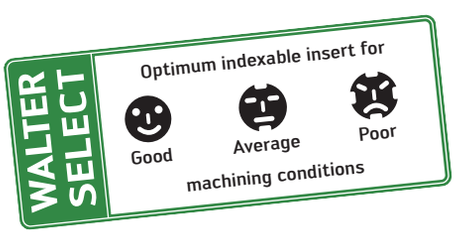


Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDHT06T204-G88	H	4	6.35	2.78	15°	0.4													☺	☺			
	SDHT09T304-G88	H	4	9.52	3.97	15°	0.4													☺	☺			
	SDHT09T308-G88	H	4	9.52	3.97	15°	0.8													☺	☺			
	SDHT120408-G88	H	4	12.7	4.76	15°	0.8													☺	☺			
	SDMW06T204-A57	M	4	6.35	2.78	15°	0.4	😐	😣	😣							😐	😣	😣					
	SDMW09T308-A57	M	4	9.52	3.97	15°	0.8	😐	😣	😣							😐	😣	😣					
	SDMW09T320-A57	M	4	9.52	3.97	15°	2		😣	☹	😣	😐		😣		😐		😣	☹			😐		😣
	SDMW120408-A57	M	4	12.7	4.76	15°	0.8	😐	😣	😣							😐	😣	😣					
	SDMW120425-A57	M	4	12.7	4.76	15°	2.5		😣	☹	😣	😐		😣		😐		😣	☹			😐		😣
	SDMT06T204-D51	M	4	6.35	2.78	15°	0.4	☺	😐	😐	😣			😣			😐	😣	😣					😣
	SDMT09T308-D51	M	4	9.52	3.97	15°	0.8	☺	😐	😐	😣			😣			😐	😣	😣					😣
	SDMT120408-D51	M	4	12.7	4.76	15°	0.8	☺	😐	😐	😣			😣			😐	😣	😣					😣
	SDMT06T204-D57	M	4	6.35	2.78	15°	0.4	☺	😐	😐	😣	😐		😣		😐	😐	😣	😣			😐		😣
	SDMT09T308-D57	M	4	9.52	3.97	15°	0.8	☺	😐	😐	😣	😐		😣		😐	😐	😣	😣			😐		😣
	SDMT120408-D57	M	4	12.7	4.76	15°	0.8	☺	😐	😐	😣	😐		😣		😐	😐	😣	😣			😐		😣
	SDMT06T204-F57	M	4	6.35	2.78	15°	0.4	☺	😐	😐	😣	😐	😣	😣	☺		😐	😣	😣			😐	😣	😣
	SDMT06T208-F57	M	4	6.35	2.78	15°	0.8		😐	☹	😣			😣				😣	☹					😣
	SDMT06T212-F57	M	4	6.35	2.78	15°	1.2		😐	😐	😣	😐	😣	😣				😣	😣			😐	😣	😣
	SDMT09T304-F57	M	4	9.52	3.97	15°	0.4		😐	☹	😣			😣				😣	☹					😣
	SDMT09T308-F57	M	4	9.52	3.97	15°	0.8	☺	😐	😐	😣	😐	😣	😣	☺		😐	😣	😣			😐	😣	😣
	SDMT09T312-F57	M	4	9.52	3.97	15°	1.2		😐	☹	😣			😣				😣	☹					😣
	SDMT09T316-F57	M	4	9.52	3.97	15°	1.6		😐	☹	😣			😣				😣	☹					😣
	SDMT09T320-F57	M	4	9.52	3.97	15°	2		😐	😐	😣	😐	😣	😣				😣	😣			😐	😣	😣
	SDMT120408-F57	M	4	12.7	4.76	15°	0.8	☺	😐	😐	😣	😐	😣	😣	☺		😐	😣	😣			😐	😣	😣
	SDMT120412-F57	M	4	12.7	4.76	15°	1.2		😐	☹	😣			😣				😣	☹					😣
	SDMT120416-F57	M	4	12.7	4.76	15°	1.6		😐	☹	😣			😣				😣	☹					😣
	SDMT120420-F57	M	4	12.7	4.76	15°	2		😐	☹	😣			😣				😣	☹					😣
	SDMT120425-F57	M	4	12.7	4.76	15°	2.5		😐	😐	😣	😐	😣	😣				😣	😣			😐	😣	😣

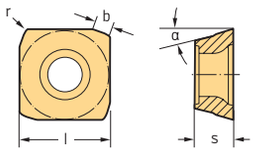
HC = Coated carbide
HW = Uncoated carbide

C2

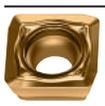


Positive square
SDMT

Tiger·tec® Gold



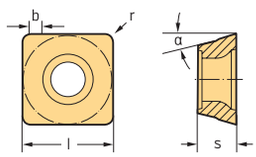
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSP45S
	SDMT06T2ZDR-D57	M	4	6.4	2.78	15°	0.4	1.2		☺	☺	☹		☹		☹	☹		☹
	SDMT09T3ZDR-D57	M	4	9.5	3.97	15°	0.8	1.2		☺	☺	☹		☹		☹	☹		☹
	SDMT1204ZDR-D57	M	4	12.7	4.76	15°	0.8	1.8		☺	☺	☹		☹		☹	☹		☹

HC = Coated carbide

Positive square
SDGT

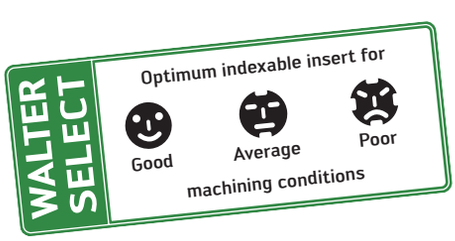
Tiger·tec® Gold



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSP45S
	SDGT06T2PDR-D57	G	4	6.4	2.78	15°	0.4	1.2	☺	☺	☺	☹	☺	☹	☺	☹	☹	☺	☹
	SDGT09T3PDR-D57	G	4	9.5	3.97	15°	0.8	1.2	☺	☺	☺	☹	☺	☹	☺	☹	☹	☺	☹
	SDGT1204PDR-D57	G	4	12.7	4.76	15°	0.8	1.6	☺	☺	☺	☹	☺	☹	☺	☹	☹	☺	☹

HC = Coated carbide

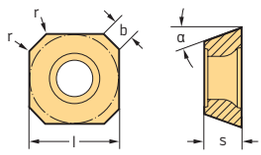


☺☺☹ / ★ New addition to the product range

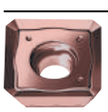
C2

Positive square
SDMW / SDMT / SDGT

Tiger·tec® Gold



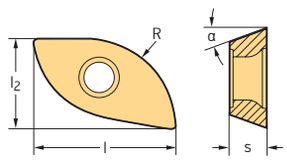
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDMW09T3AZN-A57	M	4	9.5	3.97	15°	0.3	1.2	☺	☺	☹					☺		☺	☺	☹					
	SDMW1204AZN-A57	M	4	12.7	4.76	15°	0.3	1.4	☺	☺	☹					☺		☺	☺	☹					
	SDMT09T3AZN-D57	M	4	9.5	3.97	15°	0.3	1.2	☺	☺	☹	☹	☺		☹		☺	☺	☹	☹			☺		☹
	SDMT1204AZN-D57	M	4	12.7	4.76	15°	0.3	1.4	☺	☺	☹	☹	☺		☹	☺	☺	☺	☹	☹			☺		☹
	SDMT09T3AZN-F57	M	4	9.5	3.97	15°	0.3	1.4	☺	☺	☹	☹		☹	☹			☺	☹	☹				☹	☹
	SDMT1204AZN-F57	M	4	12.7	4.76	15°	0.3	1.8	☺	☺	☹	☹		☹	☹			☺	☹	☹				☹	☹
	SDGT09T3AZN-F57	G	4	9.5	3.97	15°	0.3	1.4	☺	☺	☹	☹	☺		☹	☺		☺	☹	☹			☺		☹
	SDGT1204AZN-F57	G	4	12.7	4.76	15°	0.3	1.8	☺	☺	☹	☹	☺		☹	☺		☺	☹	☹			☺		☹
	SDGT09T3AZN-G77	G	4	9.5	3.97	15°	0.3	1.2				☹			☹										☹
	SDGT1204AZN-G77	G	4	12.7	4.76	15°	0.3	1.4				☹			☹										☹
	SDHT09T3AZN-G88	H	4	9.5	3.97	15°	0.3	1.2													☺	☺			
	SDHT1204AZN-G88	H	4	12.7	4.76	15°	0.3	1.4												☺	☺				

HC = Coated carbide
HW = Uncoated carbide

C2

Positive form inserts
XDGT / XDMT
Tiger·tec® Gold



Indexable inserts

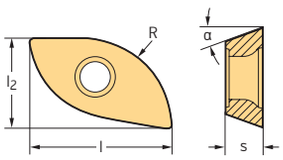
	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	R mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSP45S
	XDGT1303080R-D57	G	2	8.5	13.12	3	15°	8			☻	☻		☻			☻		☻
	XDGT16T3100R-D57	G	2	9	15.93	3.74	15°	10			☻	☻		☻			☻		☻
	XDGT2004125R-D57	G	2	11.3	19.94	4.68	15°	12.5			☻	☻		☻			☻		☻
	XDGT2405150R-D57	G	2	13.5	23.94	5.62	15°	15			☻	☻		☻			☻		☻
	XDGT2506160R-D57	G	2	14.4	25.54	6	15°	16			☻	☻		☻			☻		☻
	XDGT3207200R-D57	G	2	18	31.95	7.5	15°	20			☻	☻		☻			☻		☻
	XDGT4009250R-D57	G	2	22.5	39.95	9.39	15°	25			☻	☻		☻			☻		☻
	XDGT1303079R-D57	G	2	8.5	13.12	3	15°	7.84			☻	☻		☻			☻		☻
	XDGT16T3095R-D57	G	2	9	15.93	3.74	15°	9.53			☻	☻		☻			☻		☻
	XDGT2004127R-D57	G	2	11.3	19.94	4.68	15°	12.7			☻	☻		☻			☻		☻
	XDGT2506159R-D57	G	2	14.4	25.54	6	15°	15.88			☻	☻		☻			☻		☻
	XDGT3207191R-D57	G	2	18	31.95	7.5	15°	19.05			☻	☻		☻			☻		☻
	XDGT4009254R-D57	G	2	22.5	39.95	9.39	15°	25.4			☻	☻		☻			☻		☻

HC = Coated carbide

☻☻☻ / ★ New addition to the product range

C2

Positive form inserts
XDGT / XDMT
Tiger·tec® Gold

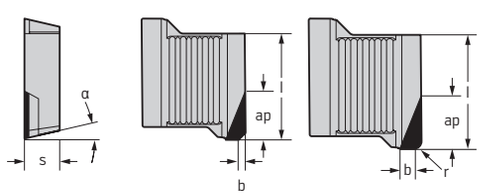


Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	R mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSP45S
	XDMT1303080R-F55	M	2	8.5	13.12	3	15°	8	☺	😐	😐	☹	😐	☹	😐	☹	☹	😐	☹
	XDMT16T3100R-F55	M	2	9	15.93	3.74	15°	10	☺	😐	😐	☹	😐	☹	😐	☹	☹	😐	☹
	XDMT2004125R-F55	M	2	11.3	19.94	4.68	15°	12.5	☺	😐	😐	☹	😐	☹	😐	☹	☹	😐	☹
	XDMT2405150R-F55	M	2	13.5	23.94	5.62	15°	15	☺	😐	😐	☹	😐	☹	😐	☹	☹	😐	☹
	XDMT2506160R-F55	M	2	14.4	25.54	6	15°	16	☺	😐	😐	☹	😐	☹	😐	☹	☹	😐	☹
	XDMT3207200R-F55	M	2	18	31.95	7.5	15°	20	☺	😐	😐	☹	😐	☹	😐	☹	☹	😐	☹
	XDMT4009250R-F55	M	2	22.5	39.95	9.39	15°	25	☺	😐	😐	☹	😐	☹	😐	☹	☹	😐	☹
	XDMT1303079R-F55	M	2	8.5	13.12	3	15°	7.92	☺	😐	😐	☠		☠	😐	☹	☹		☠
	XDMT16T3095R-F55	M	2	9	15.93	3.74	15°	9.53	☺	😐	😐	☹		☹	😐	☹	☹		☹
	XDMT2004127R-F55	M	2	11.3	19.94	4.68	15°	12.7	☺	😐	😐	☠		☠	😐	☹	☹		☠
	XDMT2506159R-F55	M	2	14.4	25.54	6	15°	15.88	☺	😐	😐	☠		☠	😐	☹	☹		☠
	XDMT3207191R-F55	M	2	18	31.95	7.5	15°	19.05	☺	😐	😐	☠		☠	😐	☹	☹		☠
	XDMT4009254R-F55	M	2	22.5	39.95	9.39	15°	25.4	☺	😐	😐	☠		☠	😐	☹	☹		☠

HC = Coated carbide

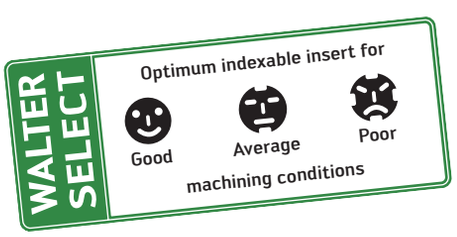
PCD indexable inserts
XOEN



Indexable inserts

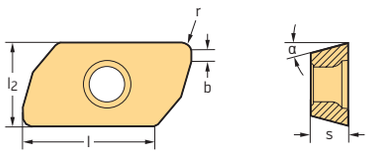
	Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	a_p mm	b mm	r mm	P HC WKP25S	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35S	N DP WDN20	S HC WSM35S	S HC WSP45S
	XOEN12T308R-A-A88	E	1	12.11	4	13°	5	1.2	0.8								☠		
	XOEN12T3AZR-A-A88	E	1	12.21	4	13°	5.1	0.8									☠		
	XOEN12T308R-F-A88	E	1	12.11	4	13°	10.3	1.2	0.8								☠		

HC = Coated carbide
DP = Polycrystalline diamond



C2

Positive rhombic
ZDGT



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	r mm	b mm	P HC WKP25S	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35S	N HC WXN15	N HC WNN15	N HW WK10	N HF WMG40	S HC WSM35S	S HC WSP45S	O HF WMG40
	ZDGT150404R-K85	G	2	10.5	16.2	4.76	15°	0.4	1.2								☺	☺	☺	☺			☺
	ZDGT150408R-K85	G	2	10.5	16.2	4.76	15°	0.8	1.2								☺	☺	☺	☺			☺
	ZDGT150412R-K85	G	2	10.5	16.2	4.76	15°	1.2	1.2								☺	☺	☺	☺			☺
	ZDGT150416R-K85	G	2	10.5	16.2	4.76	15°	1.6	1.2								☺	☺	☺	☺			☺
	ZDGT150420R-K85	G	2	10.5	16.2	4.76	15°	2	1.2								☺	☺	☺	☺			☺
	ZDGT150425R-K85	G	2	10.5	16.2	4.76	15°	2.5	1.2								☺	☺	☺	☺			☺
	ZDGT150430R-K85	G	2	10.5	16.2	4.76	15°	3	1.2								☺	☺	☺	☺			☺
	ZDGT150440R-K85	G	2	10.5	16.2	4.76	15°	4	1.2								☺	☺	☺	☺			☺
	ZDGT200508R-K85	G	2	14	21.2	5.56	15°	0.8	1.2									☺	☺	☺			☺
	ZDGT200512R-K85	G	2	14	21.2	5.56	15°	1.2	1.2									☺	☺	☺			☺
	ZDGT200516R-K85	G	2	14	21.2	5.56	15°	1.6	1.2									☺	☺	☺			☺
	ZDGT200520R-K85	G	2	14	21.2	5.56	15°	2	1.2									☺	☺	☺			☺
	ZDGT200530R-K85	G	2	14	21.2	5.56	15°	3	1.2									☺	☺	☺			☺
	ZDGT200540R-K85	G	2	14	21.2	5.56	15°	4	1.2									☺	☺	☺			☺
	ZDGT200550R-K85	G	2	14	21.2	5.56	15°	5	1.2									☺	☺	☺			☺
	ZDGT200560R-K85	G	2	14	21.2	5.56	15°	6	1.2									☺	☺	☺			☺
	ZDGT200564R-K85	G	2	14	21.2	5.56	15°	6.4	1.2									☺	☺	☺			☺

ZDGT1504 and ZDGT2005 can be used in the M2131 ramping milling cutter

HC = Coated carbide
HW = Uncoated carbide
HF = Uncoated fine-grained carbide

Indexable inserts

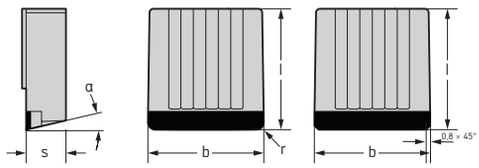
	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	α	r mm	b mm	P HC WKP25S	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35S	N HF WMG40	S HC WSM35S	S HC WSP45S	O HF WMG40
	ZDGT15A404R-K85	G	2	10.5	16.2	4.76	15°	0.4	1.2								☺			☺
	ZDGT15A408R-K85	G	2	10.5	16.2	4.76	15°	0.8	1.2								☺			☺
	ZDGT15A412R-K85	G	2	10.5	16.2	4.76	15°	1.2	1.2								☺			☺
	ZDGT15A416R-K85	G	2	10.5	16.2	4.76	15°	1.6	1.2								☺			☺
	ZDGT15A420R-K85	G	2	10.5	16.2	4.76	15°	2	1.2								☺			☺
	ZDGT15A425R-K85	G	2	10.5	16.2	4.76	15°	2.5	1.2								☺			☺
	ZDGT15A430R-K85	G	2	10.5	16.2	4.76	15°	3	1.2								☺			☺
	ZDGT15A440R-K85	G	2	10.5	16.2	4.76	15°	4	1.2								☺			☺
	ZDGT20A508R-K85	G	2	14	21.2	5.56	15°	0.8	1.2								☺			☺
	ZDGT20A512R-K85	G	2	14	21.2	5.56	15°	1.2	1.2								☺			☺
	ZDGT20A516R-K85	G	2	14	21.2	5.56	15°	1.6	1.2								☺			☺
	ZDGT20A520R-K85	G	2	14	21.2	5.56	15°	2	1.2								☺			☺
	ZDGT20A530R-K85	G	2	14	21.2	5.56	15°	3	1.2								☺			☺
	ZDGT20A540R-K85	G	2	14	21.2	5.56	15°	4	1.2								☺			☺
	ZDGT20A550R-K85	G	2	14	21.2	5.56	15°	5	1.2								☺			☺
	ZDGT20A560R-K85	G	2	14	21.2	5.56	15°	6	1.2								☺			☺
	ZDGT20A564R-K85	G	2	14	21.2	5.56	15°	6.4	1.2								☺			☺

ZDGT15A4 and ZDGT20A5 can be used in the M2131 and M2331 ramping milling cutters

HC = Coated carbide
HF = Uncoated fine-grained carbide

C2

PCD finishing inserts
XOEX



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	b mm	P HC WKP25S	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35S	N DP WDN20	S HC WSM35S	S HC WSP45S
	XOEX12T3AZR-F-A88	E	1	12.16	4	13°	11.8								☹		
	XOEX12T308N-F-A88	E	1	12.16	4	13°	11.8								☹		

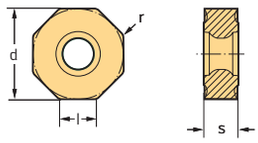
HC = Coated carbide
DP = Polycrystalline diamond

C2

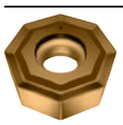
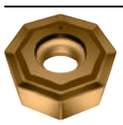
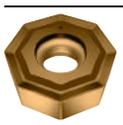
☺ 😐 ☹ / ★ New addition to the product range

Negative octagonal
ONHU / ONMU

Tiger·tec® Gold



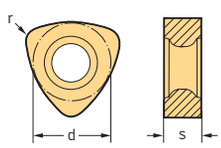
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	ONHU050408-F57	H	16	12.7	5.26	4.86	0.8		☺	😐	☹		☹				☹	☹				☹
	ONHU050408-F67	H	16	12.7	5.26	4.86	0.8		☺	😐	☹	☺	☹				☹	☹			☺	☹
	ONMU050408-D57	M	16	12.7	5.26	4.86	0.8		☺	😐	☹		☹				☹	☹				☹

HC = Coated carbide
HW = Uncoated carbide

Negative triangular
P23696

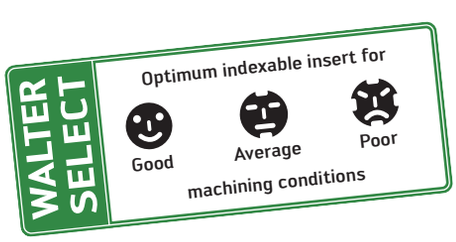
Tiger·tec® Gold



Indexable inserts

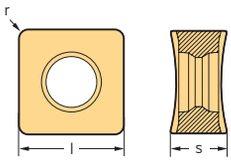
	Designation	Tolerance class	Number of cutting edges	d mm	s mm	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	P23696-1.0	M	6	9.52	5	1.2	☺	😐	😐	☹	😐	☹			😐	☹	☹			😐	☹
	P23696-2.0	M	6	13.5	7	1.6	☺	😐	😐	☹	😐	☹			😐	☹	☹			😐	☹

HC = Coated carbide
HW = Uncoated carbide



C2

Negative square
SNGX / SNMX
Tiger·tec® Gold



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l mm	s mm	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	SNGX120512-F57	G	8	12.7	6.4	1.2	●	●	●	●	●	●			●	●	●			●	●
	SNMX120512-D27	M	8	12.7	6.4	1.2	●	●	●					●	●	●	●				
	SNMX120520-D27	M	8	12.7	6.4	2	●	●	●					●	●	●	●				
	SNMX160620-D27	M	8	16	7.8	2	●	●	●					●	●	●	●				
	SNMX160640-D27	M	8	16	7.8	4		●								●					
	SNMX090408-F27	M	8	9.52	5.11	0.8	●	●	●						●	●	●				
	SNMX120512-F27	M	8	12.7	6.4	1.2	●	●	●						●	●	●				
	SNMX160620-F27	M	8	16	7.8	2	●	●	●						●	●	●				

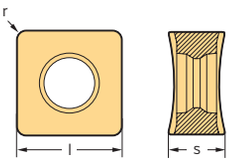
HC = Coated carbide
HW = Uncoated carbide

C2

● ● ● / ★ New addition to the product range

Negative square
SNGX / SNMX

Tiger·tec® Gold



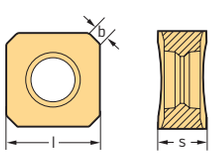
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l mm	s mm	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	SNMX090408-F57	M	8	9.52	5.11	0.8	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			☹	☹
	SNMX120512-F57	M	8	12.7	6.4	1.2	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			☹	☹
	SNMX120520-F57	M	8	12.7	6.4	2	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			☹	☹
	SNMX160620-F57	M	8	16	7.8	2	☺	😐	😐	☹		☹		😐	😐	☹	☹				☹
	SNMX160640-F57	M	8	16	7.8	4		😐	😐	☹		☹				☹	☹				☹
	SNMX090408-F67	M	8	9.52	5.11	0.8	☺	😐	😐	☹	😐	☹			😐	☹	☹			☹	☹
	SNMX120512-F67	M	8	12.7	6.4	1.2	☺	😐	😐	☹	😐	☹	☺		😐	☹	☹			☹	☹

HC = Coated carbide
HW = Uncoated carbide

Negative square
SNGX / SNHX / SNMX

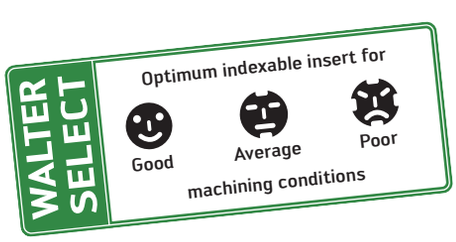
Tiger·tec® Gold



Indexable inserts

	Designation	Number of cutting edges	l mm	s mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	SNGX1205ANN-F27	8	12.7	6.4	1.5	☺	😐	😐						☹	☹	☹				
	SNGX0904ANN-F57	8	9.52	5.11	1.2	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			☹	☹
	SNGX1205ANN-F57	8	12.7	6.4	1.5	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			☹	☹
	SNGX1606ANN-F57	8	16	7.7	1.8		😐	😐	☹		☹				☹	☹				☹
	SNGX0904ANN-F67	8	9.52	5.11	1.2	☺	😐	😐	☹	😐	☹	☺		😐	☹	☹			☹	☹
	SNGX1205ANN-F67	8	12.7	6.4	1.5	☺	😐	😐	☹	😐	☹	☺		😐	☹	☹			☹	☹

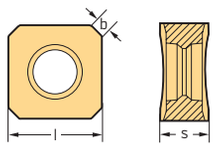
HC = Coated carbide
HW = Uncoated carbide



C2

Negative square
SNGX / SNHX / SNMX

Tiger·tec® Gold



Indexable inserts

	Designation	Number of cutting edges	l mm	s mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	SNHX0904ANN-K88	8	9.52	5.11	1.5												☺	☺		
	SNHX1205ANN-K88	8	12.7	6.4	1.5												☻	☻		
	SNMX0904ANN-F27	8	9.52	5.11	1.2	☺	☹	☹						☹	☹	☹				
	SNMX1205ANN-F27	8	12.7	6.4	1.5	☻	☹	☹						☹	☹	☹				
	SNMX0904ANN-F57	8	9.52	5.11	1.2	☺	☹	☹					☹	☹	☹	☹				
	SNMX1205ANN-F57	8	12.7	6.4	1.5	☻	☹	☹					☹	☹	☹	☹				
	SNMX0904ANN-F67	8	9.52	5.11	1.2	☺	☹	☹				☺		☹	☹	☹				
	SNMX1205ANN-F67	8	12.7	6.4	1.5	☻	☹	☹				☻		☹	☹	☹				

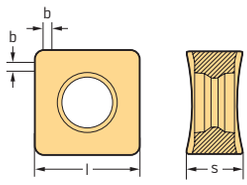
HC = Coated carbide
HW = Uncoated carbide

C2

☺☹☹ / ★ New addition to the product range

Negative square
SNGX

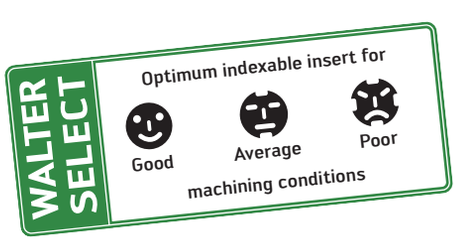
Tiger·tec® Gold



Indexable inserts

	Designation	Number of cutting edges	l mm	s mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	SNGX1205ZNN-F27	8	12.7	6.4	1.2	☺	😐	😐						😐	☹	☹				
	SNGX1205ZNN-F57	8	12.7	6.4	1.2	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			😐	☹
	SNGX1205ZNN-F67	8	12.7	6.4	1.2	☺	😐	😐	☹	😐	☹	☺		😐	☹	☹			😐	☹

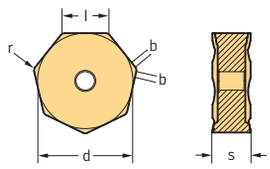
HC = Coated carbide
HW = Uncoated carbide



C2

Negative heptagonal
XNHF / XNMF

Tiger·tec® Gold



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	XNHF070508-D27	H	14	14.5	7	5.8	0.8								😊	😊	😐	😐				
	XNHF090612-D27	H	14	19.05	9	6.35	1.2								😊	😊	😐	😐				
	XNHF070508-D57	H	14	14.5	7	5.8	0.8								😊	😊	😐	😐				
	XNHF090612-D57	H	14	19.05	9	6.35	1.2								😊	😊	😐	😐				
	XNHF070508-D67	H	14	14.5	7	5.8	0.8							😊		😊	😐	😐				
	XNHF090612-D67	H	14	19.05	9	6.35	1.2							😊		😊	😐	😐				
	XNMF070508-D27	M	14	14.5	7	5.8	0.8								😊	😊	😐	😐				
	XNMF090612-D27	M	14	19.05	9	6.35	1.2								😊	😊	😐	😡				

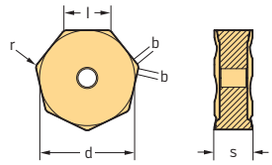
HC = Coated carbide
HW = Uncoated carbide

C2

😊😐😡 / ★ New addition to the product range

Negative heptagonal
XNHF / XNMF

Tiger·tec® Gold



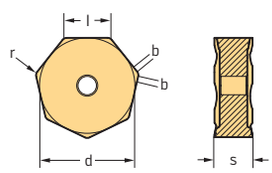
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	XNMF070508-D57	M	14	14.5	7	5.8	0.8								☹	☹	☹	☹				
	XNMF090612-D57	M	14	19.05	9	6.35	1.2								☹	☹	☹	☹				
	XNMF070508-F57	M	14	14.5	7	5.8	0.8								☹	☹	☹	☹				
	XNMF090612-F57	M	14	19.05	9	6.35	1.2								☹	☹	☹	☹				

HC = Coated carbide
HW = Uncoated carbide

Negative heptagonal
XNHF

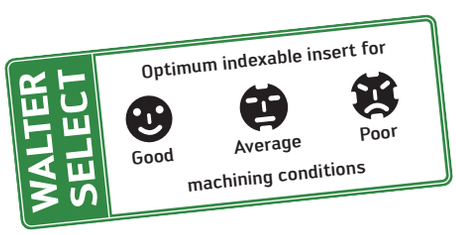
Tiger·tec® Gold



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	XNHF0705ANN-D27	H	14	14.5	7	5.8	0.8	1.1								☹	☹	☹	☹				
	XNHF0906ANN-D27	H	14	19.05	9	6.35	0.8	1.4								☹	☹	☹	☹				
	XNHF0705ANN-D57	H	14	14.5	7	5.8	0.8	1.1								☹	☹	☹	☹				
	XNHF0906ANN-D57	H	14	19.05	9	6.35	0.8	1.4								☹	☹	☹	☹				
	XNHF0705ANN-D67	H	14	14.5	7	5.8	0.8	1.1							☺		☹	☹	☹				
	XNHF0906ANN-D67	H	14	19.05	9	6.35	0.8	1.4							☺		☹	☹	☹				

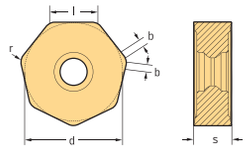
HC = Coated carbide
HW = Uncoated carbide



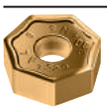
C2

Negative heptagonal
XNGU / XNMU

Tiger·tec® Gold



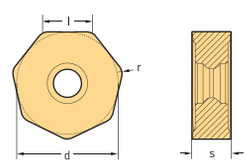
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	XNGU0705ANN-F57	G	14	14.5	6.98	4.6	0.8	1.1	☺	😐	😐	☹	😐		☹			😐	☹	☹					
	XNGU0705ANN-F67	G	14	14.5	6.98	4.6	0.8	1.1	☺	😐	😐	☹	😐		☹			😐	☹	☹					
	XNMU0705ANN-F27	M	14	14.5	6.98	4.6	0.8	1.1	😐	☹	☹						😐	😐	☹	☹					
	XNMU0906ANN-F27	M	14	19.05	9.18	5.88	0.8	1.4	😐	☹	★						😐	😐	☹	★					
	XNMU0705ANN-F57	M	14	14.5	6.98	4.6	0.8	1.1	☺	😐	😐	☹	😐		☹			😐	☹	☹			😐		
	XNMU0906ANN-F57	M	14	19.05	9.18	5.88	0.8	1.4	☺	😐	★	☹	😐		☹			😐	☹	★			😐		
	XNMU0705ANN-F67	M	14	14.5	6.98	4.6	0.8	1.1	☺	😐	😐		😐	☹				😐	☹	☹			😐	☹	
	XNMU0906ANN-F67	M	14	19.05	9.18	5.88	0.8	1.4	☺	😐	★			☹				😐	☹	★				☹	

HC = Coated carbide
HW = Uncoated carbide

Negative heptagonal
XNMU

Tiger·tec® Gold



Indexable inserts

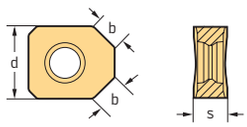
	Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	XNMU070508-F57	M	14	14.5	6.98	4.6	0.8	☺	😐	😐	☹	😐	☹			😐	☹	☹			😐	
	XNMU090612-F57	M	14	19.05	9.18	5.88	1.2	☺	😐	☹	☹		☹			😐	☹	☹				

HC = Coated carbide
HW = Uncoated carbide

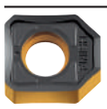
☺ 😐 ☹ / ★ New addition to the product range

Finishing inserts
XNGX

Tiger·tec®



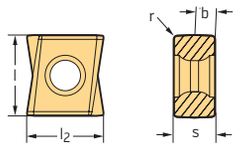
Indexable inserts

	Designation	Tolerance class	Number of cutting edges	d mm	s mm	b mm	P HC WKP25S	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S	H HC WHH15	O HC WXM15
	XNGX0904ANN-F67	G	2	9.52	5.27	5						☺								☺	
	XNGX1205ANN-F67	G	2	12.7	6.02	4.7						☻								☻	☻

HC = Coated carbide
HW = Uncoated carbide

C2

Tangential rhombic
LNHU / LNMU
Tiger·tec® Gold



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	LNHU090404R-L55T	H	4	8.5	9	4.5	0.4	1.5	☺	😐	😐	☹	😐	☹	☺	😐	😐	☹	☹			😐	☹
	LNHU090408R-L55T	H	4	8.5	9	4.5	0.8	1.1	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			😐	☹
	LNHU090412R-L55T	H	4	8.5	9	4.5	1.2	0.8		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU090416R-L55T	H	4	8.5	9	4.5	1.6			😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU090420R-L55T	H	4	8.5	9	4.5	2			😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU130608R-L55T	H	4	12	13	6.8	0.8	2.2	☺	😐	😐	☹	😐	☹	☺	😐	😐	☹	☹			😐	☹
	LNHU130612R-L55T	H	4	12	13	6.8	1.2	1.9		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU130616R-L55T	H	4	12	13	6.8	1.6	1.5		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU130620R-L55T	H	4	12	13	6.8	2	1.2		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU130625R-L55T	H	4	12	13	6.8	2.5	0.7		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU130630R-L55T	H	4	12	13	6.8	3			😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU130632R-L55T	H	4	12	13	6.8	3.2			😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU160708R-L55T	H	4	15.5	16	7.2	0.8	2.3	☺	😐	😐	☹	😐	☹	☺	😐	😐	☹	☹			😐	☹
	LNHU160712R-L55T	H	4	15.5	16	7.2	1.2	1.9		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU160716R-L55T	H	4	15.5	16	7.2	1.6	1.6			😐	☹	😐	☹					☹			😐	☹

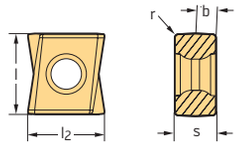
HC = Coated carbide
HW = Uncoated carbide

C2

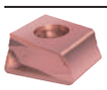
☺😐☹ / ★ New addition to the product range

Tangential rhombic
LNHU / LNMU

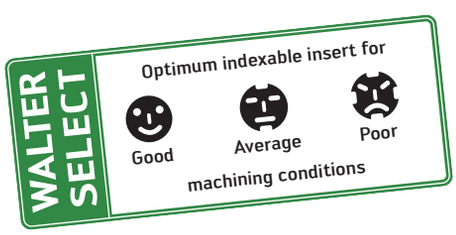
Tiger·tec® Gold



Indexable inserts

	Designation	Tolerance class	Number of cutting edges	l_2 mm	l mm	s mm	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	LNHU160720R-L55T	H	4	15.5	16	7.2	2	1.2		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNHU160725R-L55T	H	4	15.5	16	7.2	2.5	0.8		😐	😐	☹	😐	☹				☹	☹			😐	☹
	LNMU090404R-L55T	M	4	8.5	9	4.5	0.4	1.5	🙂	😐	😟	☹		☹		😐	😐	☹	☹				☹
	LNMU130608R-L55T	M	4	12	13	6.8	0.8	2.2	🙂	😐	😐	☹		☹		😐	😐	☹	☹				☹
	LNHU090404R-L65T	H	4	8.5	9	4.5	0.4	1.5				☹		☹									☹
	LNHU130608R-L65T	H	4	12	13	6.8	0.8	2.2				☹		☹									☹
	LNHU160708R-L65T	H	4	15.5	16	7.2	0.8	2.3				☹		☹									☹
	LNHU090404R-L85T	H	4	8.5	9	4.5	0.4	1.5												🙂	🙂		
	LNHU130608R-L85T	H	4	12	13	6.8	0.8	2.2												🙂	🙂		
	LNHU160708R-L85T	H	4	15.5	16	7.2	0.8	2.3												🙂	🙂		

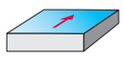
HC = Coated carbide
HW = Uncoated carbide



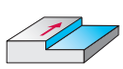
C2

Indexable insert milling cutters product range overview

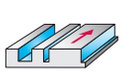
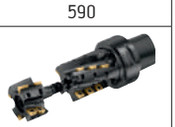
Face milling cutters

Machining			
κ	**15°**	**45°**	
Designation	**F2010**	**F2010**	**M5009 Xtra·tec® XT**
Dia. range [mm]	70–305	80–315	25–100
Diameter range [inch]	2.604–11.604	3.000–12.000	1.000–4.000
Page	544	548	556

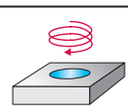
Shoulder milling cutters

Machining			
κ	**90°**		
Designation	**F2010**	**M2331**	**M5130 Xtra·tec® XT**
Dia. range [mm]	80–315	32–50	10–160
Diameter range [inch]	3.000–12.000	1.500–2.000	0.500–6.000
Page	560	568	572

Slot milling cutters

Machining		
κ	**90°**	
Designation	**M4791**	**M4258**
Dia. range [mm]	–	50–80
Diameter range [inch]	0.750–1.500	2.000–3.000
Page	588	590
		

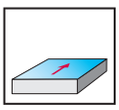
Circular interpolation cutters

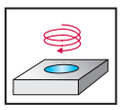
Machining	
κ	
Designation	**M5130 Xtra·tec® XT**
Dia. range [mm]	10–160
Diameter range [inch]	0.500–6.000
Page	572

C2

Face milling cutters
F2010 mm
SDM . 1204 ..

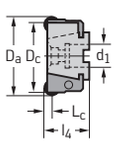
– Adjustable runout
– Four cutting edges per indexable insert

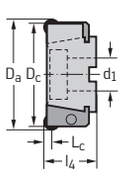


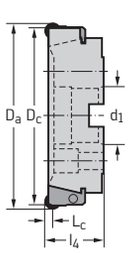


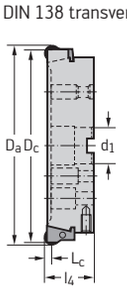
	P	M	K	N	S	H	O
F2010	●●	●●	●●		●●	●	

Tool	Designation	D_c mm	D_a * mm	d_1 mm	l_4 mm	L_c mm	a_r mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.B.080.Z06.08.R755M	70	93	27	50	2	11.4	6	1.3	6	SDM . 1204 ..
Parallel bore DIN 138 transverse keyway	F2010.B.100.Z07.08.R755M	90	113	32	50	2	11.4	7	1.9	7	SDM . 1204 ..
	F2010.B.125.Z08.08.R755M	115	138	40	63	2	11.4	8	3.6	8	
Parallel bore DIN 138 transverse keyway	F2010.B.160.Z10.08.R755M	150	173	40/40 B	63	2	11.4	10	5.6	10	SDM . 1204 ..
	F2010.B.200.Z12.08.R755M	190	213	60/50 B	63	2	11.4	12	8.3	12	
	F2010.B.250.Z12.08.R755M	240	263	60/50 B	63	2	11.4	12	14.8	12	
	F2010.B.250.Z16.08.R755M	240	263	60/50 B	63	2	11.4	16	14.6	16	
Parallel bore DIN 138 transverse keyway	F2010.B.315.Z14.08.R755M	305	328	60/50-60 BB	80	2	11.4	14	26.3	14	SDM . 1204 ..
	F2010.B.315.Z18.08.R755M	305	328	60/50-60 BB	80	2	11.4	18	26.2	18	





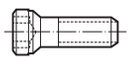




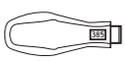
* Measured against SDM.120408
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [mm]	70–305
	Cartridge for tool body	FR755M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 8.0 Nm
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 3.5 Nm
	Adjusting pin	FS303 (Torx 20)

Accessories

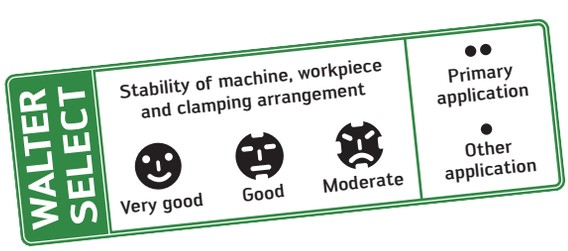
	D_c [mm]	70–305
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2041 4.5–14 Nm
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC				M HC			K HC					S HC		
				WKP25S	WKP35G	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSM35S	WSM45X	WSP45S
	SDMT1204ZDR-D57	0.8	1.8	●	●●	●●	●●			●●				●●	●●			●●
	SDMT120408-D57	0.8		●●●	●●	●●	●●	●●		●●		●●	●●	●●	●●	●●		●●
	SDMT120408-F57	0.8		●●●	●●	●●	●●	●●	●●	●●	●●●		●●	●●	●●	●●	●●	●●
	SDMT120425-F57	2.5			●●	●●	●●	●●	●●	●●				●●	●●	●●	●●	●●
	SDMW120408-A57	0.8		●●	●●	●●							●●	●●	●●			

SD..1204.. : If the corner radius is r > 0.8 mm. the corner area of the cartridge must be reworked.
$R_{(body)} = r_{(indexable\ insert)}$

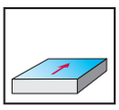
HC = Coated carbide

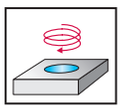


C2

Face milling cutters
F2010 inch
SDM . 1204 ..

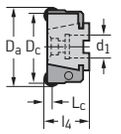
– Adjustable runout
– Four cutting edges per indexable insert

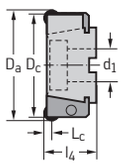


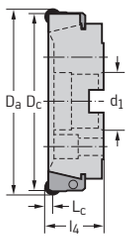


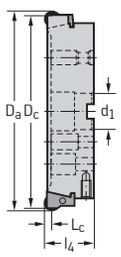
	P	M	K	N	S	H	O
F2010	●●	●●	●●		●●	●	

Tool	Designation	D_c Inch	D_a * Inch	d_1 Inch	l_4 Inch	L_c Inch	a_r Inch	Z	lbs	No. of index-able inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.UB.076.Z06.08R755M	2.604	3.509	1.000	2.000	0.079	0.449	6	3.3	6	
	F2010.UB.102.Z07.08R755M	3.604	4.509	1.250	2.000	0.079	0.449	7	5.7	7	SDM . 1204 ..
	F2010.UB.127.Z08.08R755M	4.604	5.509	1.500	2.500	0.079	0.449	8	7.5	8	
Parallel bore DIN 138 transverse keyway	F2010.UB.152.Z10.08R755M	5.604	6.509	1.500	2.500	0.079	0.449	10	14.6	10	SDM . 1204 ..
Parallel bore DIN 138 transverse keyway	F2010.UB.203.Z12.08R755M	7.604	8.509	2.500	2.500	0.079	0.449	12	21.4	12	
	F2010.UB.254.Z12.08R755M	9.604	10.509	2.500	2.500	0.079	0.449	12	36.4	12	SDM . 1204 ..
	F2010.UB.254.Z16.08R755M	9.604	10.509	2.500	2.500	0.079	0.449	16	36.4	16	
Parallel bore DIN 138 transverse keyway	F2010.UB.305.Z18.08R755M	11.604	12.509	2.500	2.500	0.079	0.449	18	45.6	18	SDM . 1204 ..





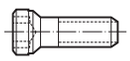
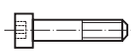




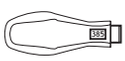
* Measured against SDM.120408
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [Inch]	2.604	3.604	4.604–5.604	7.604–11.604
	Cartridge for tool body	FR755M	FR755M	FR755M	FR755M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs
	Adjusting pin	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)
	Clamping screw for arbour-mounted tools	FS1519	FS1565	FS1566	

Accessories

	D_c [Inch]	2.604–11.604
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 63 in lbs
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2042 40 - 124 in lbs
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

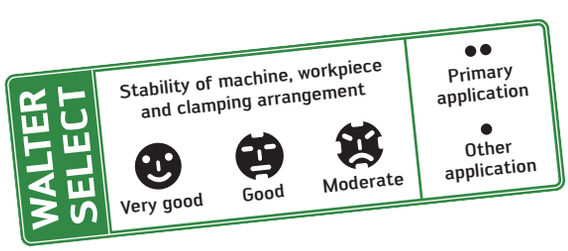
Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDMT1204ZDR-D57	0.8	1.8		☺	☺	☹			☹				☹	☹			☹
	SDMT120408-D57	0.8		☻	☺	☺	☹	☺		☹		☺	☺	☹	☹	☺		☹
	SDMT120408-F57	0.8		☻	☺	☺	☹	☺	☹	☹	☻		☺	☹	☹	☺	☹	☹
	SDMT120425-F57	2.5			☺	☺	☹	☺	☹	☹				☹	☹	☺	☹	☹
	SDMW120408-A57	0.8		☺	☹	☹							☺	☹	☹			

SD..1204.. : If the corner radius is r > 0.8 mm. the corner area of the cartridge must be reworked.

HC = Coated carbide

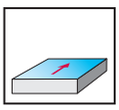
$R_{(body)} = r_{(indexable\ insert)}$

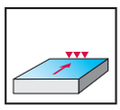


C2

Face milling cutters
F2010 mm
SD .. 1204AZN

– Adjustable runout
– Four cutting edges per indexable insert





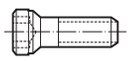
	P	M	K	N	S	H	O
F2010	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c mm	D_a mm	d_1 mm	l_4 mm	L_c mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.B.080.Z06.06.R758M	80	94	27	50	7	6	1.2	6	SD .. 1204AZN SDHX1204AZR
	F2010.B.100.Z07.06.R758M	100	114	32	50	7	7	1.8	7	SD .. 1204AZN SDHX1204AZR
	F2010.B.125.Z08.06.R758M	125	139	40	63	7	8	3.5	8	
	F2010.B.160.Z10.06.R758M	160	174	40/40 B	63	7	10	5.5	10	
	F2010.B.200.Z12.06.R758M	200	214	60/50 B	63	7	12	8.3	12	SD .. 1204AZN SDHX1204AZR
	F2010.B.250.Z12.06.R758M	250	264	60/50 B	63	7	12	14.7	12	
	F2010.B.250.Z16.06.R758M	250	264	60/50 B	63	7	16	14.6	16	
	F2010.B.315.Z14.06.R758M	315	329	60/50-60 BB	80	7	14	26.3	14	SD .. 1204AZN SDHX1204AZR
	F2010.B.315.Z18.06.R758M	315	329	60/50-60 BB	80	7	18	26.2	18	

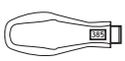
Bodies and assembly parts are included in the scope of delivery.

C2

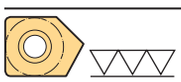
Assembly parts

	D_c [mm]	80–315
	Cartridge for tool body	FR758M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 8.0 Nm
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 3.5 Nm
	Adjusting pin	FS303 (Torx 20)

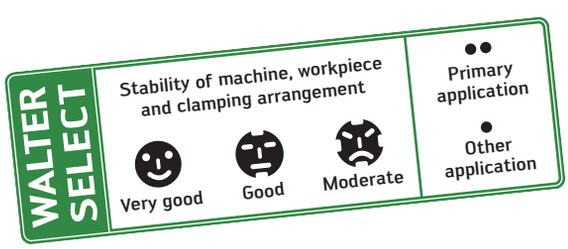
Accessories

	D_c [mm]	80–315
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2041 4.5–14 Nm
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HC WNN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S	H HC WHH15	O HC WXM15
	SDHX1204AZR-A88		7.5								☺											☺	☺
	SDGT1204AZN-F57	0.3	1.8	☺	😐	☹	☠	😐		☠	☺		😐	☠	☠				😐		☠		
	SDGT1204AZN-G77	0.3	1.4				☠			☠											☠		
	SDHT1204AZN-G88	0.3	1.4													☺	☺	☺					
	SDMT1204AZN-D57	0.3	1.4	☺	😐	☹	☠	😐		☠	☺	😐	😐	☠	☠				😐		☠		
	SDMT1204AZN-F57	0.3	1.8	☺	😐	☹	☠		☠	☠			😐	☠	☠					☠	☠		
	SDMW1204AZN-A57	0.3	1.4	😐	☠	☠					☺		😐	☠	☠								

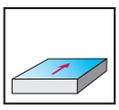
HC = Coated carbide
HW = Uncoated carbide

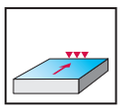


C2

Face milling cutters
F2010 inch
SD .. 1204AZN

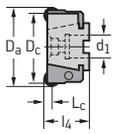
– Adjustable runout
– Four cutting edges per indexable insert

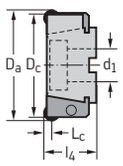


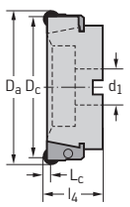


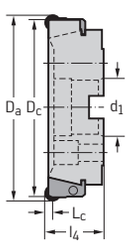
	P	M	K	N	S	H	O
F2010	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c Inch	D_a Inch	d_1 Inch	l_4 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.UB.076.Z06.06R758M	3.000	3.551	1.000	2.000	0.276	6	2.4	6	SD .. 1204AZN SDHX1204AZR
	F2010.UB.102.Z07.06R758M	4.000	4.551	1.250	2.000	0.276	7	4.3	7	
	F2010.UB.127.Z08.06R758M	5.000	5.551	1.500	2.500	0.276	8	7.5	8	
Parallel bore DIN 138 transverse keyway	F2010.UB.152.Z10.06R758M	6.000	6.551	1.500	2.500	0.276	10	13.1	10	SD .. 1204AZN SDHX1204AZR
Parallel bore DIN 138 transverse keyway	F2010.UB.203.Z12.06R758M	8.000	8.551	2.50/4.0	2.500	0.276	12	21.6	12	SD .. 1204AZN SDHX1204AZR
	F2010.UB.254.Z12.06R758M	10.000	10.551	2.50/4.0	2.500	0.276	12	39.6	12	
	F2010.UB.254.Z16.06R758M	10.000	10.551	2.50/4.0	2.500	0.276	16	38.6	16	
Parallel bore DIN 138 transverse keyway	F2010.UB.305.Z18.06R758M	12.000	12.551	2.50/4.0/7.0	2.500	0.276	18	49.5	18	SD .. 1204AZN SDHX1204AZR





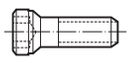
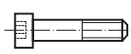




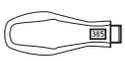
Bodies and assembly parts are included in the scope of delivery.

C2

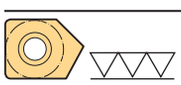
Assembly parts

	D_c [Inch]	3.000	4.000	5.000–6.000	8.000–12.000
	Cartridge for tool body	FR758M	FR758M	FR758M	FR758M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs
	Adjusting pin	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)
	Clamping screw for arbour-mounted tools	FS1519	FS1565	FS1566	

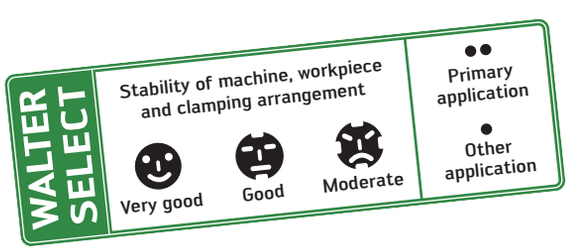
Accessories

	D_c [Inch]	3.000–12.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2042 40 - 124 in lbs
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HC WNN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S	H HC WHH15	O HC WXM15
	SDHX1204AZR-A88		7.5								●											●	●
	SDGT1204AZN-F57	0.3	1.8	●	●	●	●	●		●	●		●	●	●				●		●		
	SDGT1204AZN-G77	0.3	1.4				●			●											●		
	SDHT1204AZN-G88	0.3	1.4													●	●	●					
	SDMT1204AZN-D57	0.3	1.4	●	●	●	●	●		●	●	●	●	●	●				●		●		
	SDMT1204AZN-F57	0.3	1.8	●	●	●	●		●	●			●	●	●					●	●		
	SDMW1204AZN-A57	0.3	1.4	●	●	●					●		●	●	●								

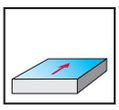
HC = Coated carbide
HW = Uncoated carbide

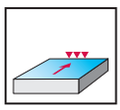


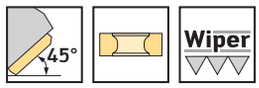
C2

Face milling cutters
F2010 mm
XN . U0705 ..

– Adjustable runout
– 14 cutting edges per indexable insert

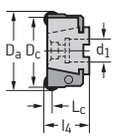


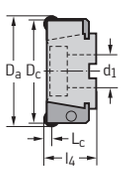


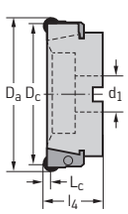


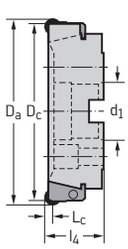
	P	M	K	N	S	H	O
F2010	●●	●●	●●		●●		

Tool	Designation	D_c mm	D_a mm	d_1 mm	l_4 mm	L_c mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.B.080.Z06.04.R759M	80	90	27	50	4	6	1.2	6	XN . U0705 .. XNGX0705ANN
	F2010.B.100.Z07.04.R759M	100	110	32	50	4	7	1.8	7	XN . U0705 .. XNGX0705ANN
	F2010.B.125.Z08.04.R759M	125	135	40	63	4	8	3.5	8	
	F2010.B.160.Z10.04.R759M	160	170	40/40 B	63	4	10	5.5	10	
	F2010.B.200.Z12.04.R759M	200	210	60/50 B	63	4	12	8.3	12	XN . U0705 .. XNGX0705ANN
	F2010.B.250.Z12.04.R759M	250	260	60/50 B	63	4	12	14.7	12	
	F2010.B.250.Z16.04.R759M	250	260	60/50 B	63	4	16	14.6	16	
	F2010.B.315.Z14.04.R759M	315	325	60/50-60 BB	80	4	14	26.3	14	XN . U0705 .. XNGX0705ANN
	F2010.B.315.Z18.04.R759M	315	325	60/50-60 BB	80	4	18	26.2	18	





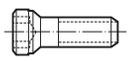




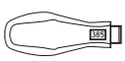
Bodies and assembly parts are included in the scope of delivery.

C2

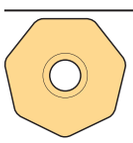
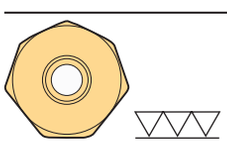
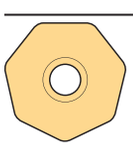
Assembly parts

	D_c [mm]	80–315
	Cartridge for tool body	FR759M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 8.0 Nm
	Clamping screw for insert Tightening torque	FS2119 (Torx 15IP) 3.0 Nm
	Adjusting pin	FS303 (Torx 20)

Accessories

	D_c [mm]	80–315
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2041 4.5–14 Nm
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	Interchangeable blade for cartridge	FS2051 (SW 4)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S	H HC WHH15	O HC WXM15
	XNGU0705ANN-F57	0.8	1.1	●	●	●	○	●		○			●	○	○							
	XNGU0705ANN-F67	0.8	1.1	●	●	●	○	●		○			●	○	○							
	XNGX0705ANN-F67		5.7								●										●	●
	XNMU070508-F57	0.8		●	●	●	○	●		○			●	○	○			●				
	XNMU0705ANN-F27	0.8	1.1	●	○	○						●	●	○	○							
	XNMU0705ANN-F57	0.8	1.1	●	●	●	○	●		○			●	○	○			●				
	XNMU0705ANN-F67	0.8	1.1	●	●	●		●	○				●	○	○			●	○			

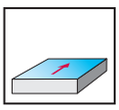
XNGX0705ANN-F67 wiper insert only in combination with XNGU0705ANN . .

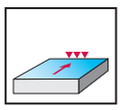
HC = Coated carbide
HW = Uncoated carbide

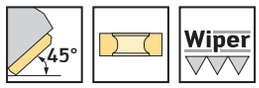
C2

Face milling cutters
F2010 inch
XN . U0705 ..

– Adjustable runout
– 14 cutting edges per indexable insert







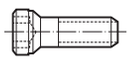
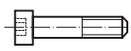
	P	M	K	N	S	H	O
F2010	●●	●●	●●		●●		

Tool	Designation	D_c Inch	D_a Inch	d_1 Inch	l_4 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.UB.076.Z06.04R759M	3.000	3.394	1.000	2.000	0.157	6	2.4	6	XN . U0705 .. XNGX0705ANN
	F2010.UB.102.Z07.04R759M	4.000	4.394	1.250	2.000	0.157	7	4.3	7	
	F2010.UB.127.Z08.04R759M	5.000	5.394	1.500	2.500	0.157	8	7.5	8	
Parallel bore DIN 138 transverse keyway	F2010.UB.152.Z10.04R759M	6.000	6.394	1.500	2.500	0.157	10	13.1	10	XN . U0705 .. XNGX0705ANN
Parallel bore DIN 138 transverse keyway	F2010.UB.203.Z12.04R759M	8.000	8.394	2.50/4.0	2.500	0.157	12	21.6	12	XN . U0705 .. XNGX0705ANN
	F2010.UB.254.Z12.04R759M	10.000	10.394	2.50/4.0	2.500	0.157	12	39.6	12	
	F2010.UB.254.Z16.04R759M	10.000	10.394	2.50/4.0	2.500	0.157	16	38.6	16	
Parallel bore DIN 138 transverse keyway	F2010.UB.305.Z18.04R759M	12.000	12.394	2.50/4.0/7.0	2.500	0.157	18	49.5	18	XN . U0705 .. XNGX0705ANN

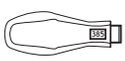
Bodies and assembly parts are included in the scope of delivery.

C2

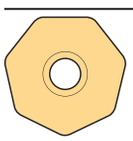
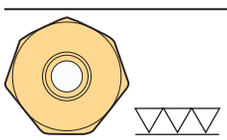
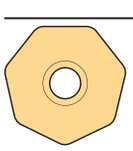
Assembly parts

	D_c [Inch]	3.000	4.000	5.000–6.000	8.000–12.000
	Cartridge for tool body	FR759M	FR759M	FR759M	FR759M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs
	Clamping screw for insert Tightening torque	FS2119 (Torx 15IP) 27 in lbs	FS2119 (Torx 15IP) 27 in lbs	FS2119 (Torx 15IP) 27 in lbs	FS2119 (Torx 15IP) 27 in lbs
	Adjusting pin	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)
	Clamping screw for arbour-mounted tools	FS1519	FS1565	FS1566	

Accessories

	D_c [Inch]	3.000–12.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2042 40 - 124 in lbs
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S	H HC WHH15	O HC WXM15
	XNGU0705ANN-F57	0.8	1.1	●	●	●	○	●		○			●	○	○							
	XNGU0705ANN-F67	0.8	1.1	●	●	●	○	●		○			●	○	○							
	XNGX0705ANN-F67		5.7								●										●	●
	XNMU070508-F57	0.8		●	●	●	○	●		○			●	○	○			●				
	XNMU0705ANN-F27	0.8	1.1	●	○	○						●	●	○	○							
	XNMU0705ANN-F57	0.8	1.1	●	●	●	○	●		○			●	○	○			●				
	XNMU0705ANN-F67	0.8	1.1	●	●	●		●	○				●	○	○			●	○			

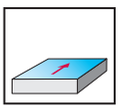
XNGX0705ANN-F67 wiper insert only in combination with XNGU0705ANN . .

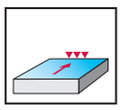
HC = Coated carbide
HW = Uncoated carbide

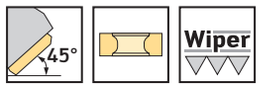
C2

Face milling cutters
M5009 mm
SN . X0904 ..
Xtra·tec® XT

– Eight cutting edges per indexable insert

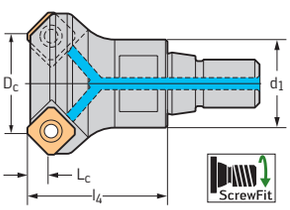


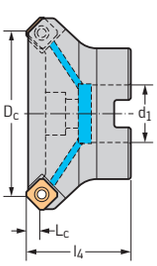




	P	M	K	N	S	H	O
M5009	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	Z	kg	No. of indexable inserts	Type
ScrewFit	★ M5009-025-T22-03-05	25	T22	35	5	3	0.1	3	SN . X0904 .. XNGX0904ANN
	★ M5009-032-T28-04-05	32	T28	40	5	4	0	4	
	★ M5009-032-T28-05-05	32	T28	40	5	5	0	5	
	★ M5009-040-T36-04-05	40	T36	40	5	4	0	4	
	★ M5009-040-T36-06-05	40	T36	40	5	6	0	6	
Parallel bore DIN 138 transverse keyway	★ M5009-040-B16-04-05	40	16	40	5	4	0.3	4	SN . X0904 .. XNGX0904ANN
	★ M5009-040-B16-06-05	40	16	40	5	6	0.3	6	
	★ M5009-050-B22-06-05	50	22	40	5	6	0.4	6	
	★ M5009-050-B22-08-05	50	22	40	5	8	0.4	8	
	★ M5009-063-B22-07-05	63	22	40	5	7	0.6	7	
	★ M5009-063-B22-10-05	63	22	40	5	10	0.6	10	
	★ M5009-080-B27-08-05	80	27	50	5	8	1.2	8	
	★ M5009-080-B27-11-05	80	27	50	5	11	1.1	11	
	★ M5009-100-B32-09-05	100	32	50	5	9	1.9	9	
	★ M5009-100-B32-13-05	100	32	50	5	13	1.8	13	





Bodies and assembly parts are included in the scope of delivery.

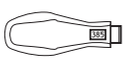
C2

😊😐☹ / ★ New addition to the product range

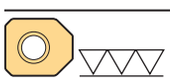
Assembly parts

	D_c [mm]	25–100
	Clamping screw for insert Tightening torque	FS2579 (Torx 8IP) 1.2 Nm

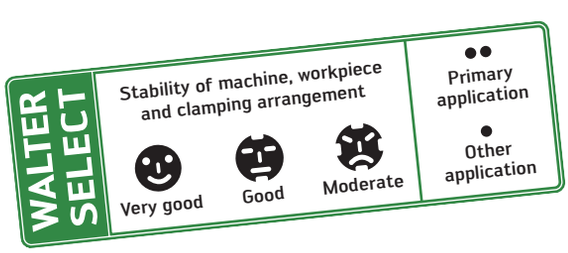
Accessories

	D_c [mm]	25–100
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2012 (Torx 8IP)
	Screwdriver	FS1483 (Torx 8IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S	H HC WHH15
	SNGX0904ANN-F57		1.2	☺	☺	☺	☹	☺	☹		☺	☺	☹	☹			☺	☹	
	SNGX0904ANN-F67		1.2	☺	☺	☺	☹	☺	☹	☺		☺	☹	☹			☺	☹	
	SNHX0904ANN-K88		1.5												☺	☺			
	SNMX0904ANN-F27		1.2	☺	☺	☺						☺	☹	☹					
	SNMX0904ANN-F57		1.2	☺	☺	☺					☺	☺	☹	☹					
	SNMX0904ANN-F67		1.2	☺	☺	☺				☺		☺	☹	☹					
	SNMX090408-F27	0.8		☺	☺	☺						☺	☹	☹					
	SNMX090408-F57	0.8		☺	☺	☺	☹	☺	☹		☺	☺	☹	☹			☺	☹	
	SNMX090408-F67	0.8		☺	☺	☺	☹	☺	☹			☺	☹	☹			☺	☹	
	XNGX0904ANN-F67		5							☺									☺

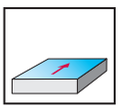
HC = Coated carbide
HW = Uncoated carbide

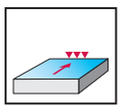


C2

Face milling cutters
M5009 inch
SN . X0904 ..
Xtra·tec® XT

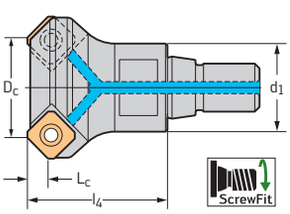
– Eight cutting edges per indexable insert

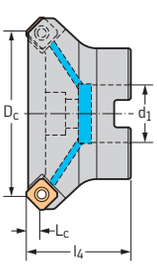




	P	M	K	N	S	H	O
M5009	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
ScrewFit	★ M5009.026-T22-03-05	1.000	0.866	1.378	0.197	3	0.3	3	SN . X0904 .. XNGX0904ANN
	★ M5009.031-T28-04-05	1.250	1.102	1.575	0.197	4	0.5	4	
	★ M5009.031-T28-05-05	1.250	1.102	1.575	0.197	5	0.5	5	
	★ M5009.038-T36-04-05	1.500	1.417	1.575	0.197	4	0.9	4	
	★ M5009.038-T36-06-05	1.500	1.417	1.575	0.197	6	0.8	6	
Parallel bore DIN 138 transverse keyway	★ M5009.038-B19-04-05	1.500	0.750	1.500	0.197	4	0.6	4	SN . X0904 .. XNGX0904ANN
	★ M5009.038-B19-06-05	1.500	0.750	1.500	0.197	6	0.6	6	
	★ M5009.051-B19-06-05	2.000	0.750	1.500	0.197	6	0.9	6	
	★ M5009.051-B19-08-05	2.000	0.750	1.500	0.197	8	0.9	8	
	★ M5009.064-B26-07-05	2.500	1.000	2.000	0.197	7	1.9	7	
	★ M5009.064-B26-10-05	2.500	1.000	2.000	0.197	10	1.8	10	
	★ M5009.076-B26-08-05	3.000	1.000	2.000	0.197	8	2.4	8	
	★ M5009.076-B26-11-05	3.000	1.000	2.000	0.197	11	22.2	11	
	★ M5009.102-B38-09-05	4.000	1.500	2.500	0.197	9	6.5	9	
	★ M5009.102-B38-13-05	4.000	1.500	2.500	0.197	13	6.5	13	





Bodies and assembly parts are included in the scope of delivery.

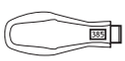
C2

☻☹☠ / ★ New addition to the product range

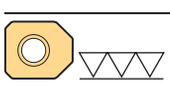
Assembly parts

	D_c [Inch]	1.000–1.250	1.500–2.000	2.500–3.000	4.000
	Clamping screw for insert Tightening torque	FS2579 (Torx 8IP) 11 in lbs	FS2579 (Torx 8IP) 11 in lbs	FS2579 (Torx 8IP) 11 in lbs	FS2579 (Torx 8IP) 11 in lbs
	Clamping screw for arbour-mounted tools		FS1518	FS1519	FS1583

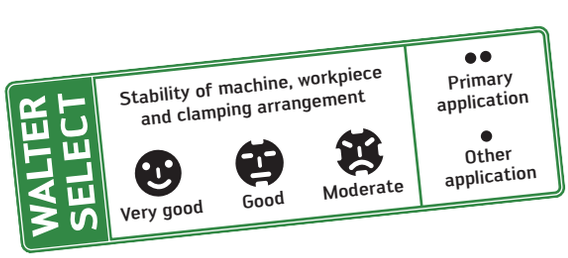
Accessories

	D_c [Inch]	1.000–4.000
	Torque screwdriver. analogue Tightening torque	FS2002 4 - 11 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade	FS2012 (Torx 8IP)
	Screwdriver	FS1483 (Torx 8IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S	H HC WHH15
	SNGX0904ANN-F57		1.2	☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			😐	☹	
	SNGX0904ANN-F67		1.2	☺	😐	😐	☹	😐	☹	☺		😐	☹	☹			😐	☹	
	SNHX0904ANN-K88		1.5												☺	☺			
	SNMX0904ANN-F27		1.2	☺	😐	😐						😐	☹	☹					
	SNMX0904ANN-F57		1.2	☺	😐	😐					😐	😐	☹	☹					
	SNMX0904ANN-F67		1.2	☺	😐	😐				☺		😐	☹	☹					
	SNMX090408-F27	0.8		☺	😐	😐						😐	☹	☹					
	SNMX090408-F57	0.8		☺	😐	😐	☹	😐	☹		😐	😐	☹	☹			😐	☹	
	SNMX090408-F67	0.8		☺	😐	😐	☹	😐	☹			😐	☹	☹			😐	☹	
	XNGX0904ANN-F67		5							☺									☺

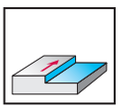
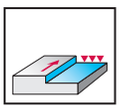
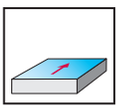
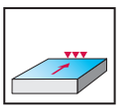
HC = Coated carbide
HW = Uncoated carbide



C2

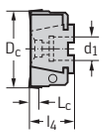
Shoulder milling cutters
F2010 mm
SD .. 09T3 ..

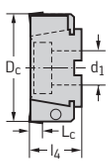
– Adjustable runout
– Four cutting edges per indexable insert

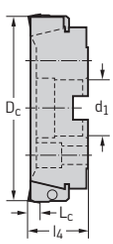





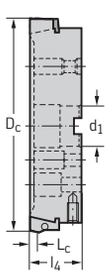
	P	M	K	N	S	H	O
F2010	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.B.080.Z06.08.R756M	80	27	50	8.4	6	1.3	6	SD .. 09T3 ..
	F2010.B.100.Z07.08.R756M	100	32	50	8.4	7	1.9	7	SD .. 09T3 ..
	F2010.B.125.Z08.08.R756M	125	40	63	8.4	8	3.6	8	
	F2010.B.160.Z10.08.R756M	160	40/40 B	63	8.4	10	5.6	10	SD .. 09T3 ..
	F2010.B.200.Z12.08.R756M	200	60/50 B	63	8.4	12	8.3	12	
	F2010.B.250.Z12.08.R756M	250	60/50 B	63	8.4	12	14.8	12	
	F2010.B.250.Z16.08.R756M	250	60/50 B	63	8.4	16	14.6	16	
	F2010.B.315.Z14.08.R756M	315	60/50-60 BB	80	8.4	14	26.3	14	SD .. 09T3 ..
	F2010.B.315.Z18.08.R756M	315	60/50-60 BB	80	8.4	18	26.2	18	





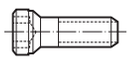




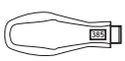
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [mm]	80–315
	Cartridge for tool body	FR756M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 8.0 Nm
	Clamping screw for insert Tightening torque	FS2266 (Torx 10IP) 2.0 Nm
	Adjusting pin	FS303 (Torx 20)

Accessories

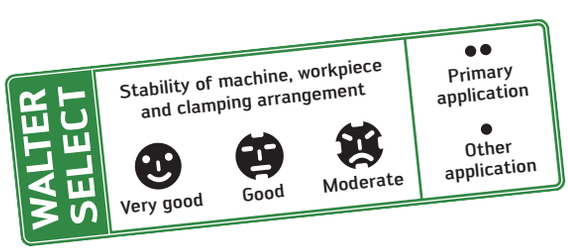
	D_c [mm]	80–315
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade for screwdriver	FS2268 (Torx 10IP)
	Torque T-handle Tightening torque	FS2041 4.5–14 Nm
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS2267 (Torx 10IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDGT09T3PDR-D57	0.8	1.2	☺	😐	😐	☹	😐		☹			😐	☹	☹			😐		☹
	SDHT09T304-G88	0.4														☺	☺			
	SDHT09T308-G88	0.8														☺	☺			
	SDMT09T308-D51	0.8		☺	😐	😐	☹			☹			😐	☹	☹					☹
	SDMT09T308-D57	0.8		☺	😐	😐	☹	😐		☹		😐	😐	☹	☹			😐		☹
	SDMT09T308-F57	0.8		☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹			😐	☹	☹
	SDMT09T320-F57	2			😐	😐	☹	😐	☹	☹				☹	☹			😐	☹	☹
	SDMW09T308-A57	0.8		😐	☹	☹							😐	☹	☹					

SD..09T3.. : If the corner radius is r > 0.8 mm. the corner area of the cartridge must be reworked.
$R_{(body)} = r_{(indexable\ insert)}$

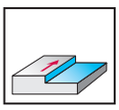
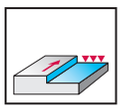
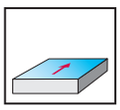
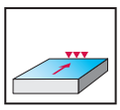
HC = Coated carbide
HW = Uncoated carbide



C2

Shoulder milling cutters
F2010 inch
SD .. 09T3 ..

– Adjustable runout
– Four cutting edges per indexable insert

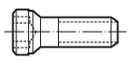
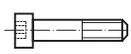
	P	M	K	N	S	H	O
F2010	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.UB.076.Z06.08R756M	3.000	1.000	2.000	0.331	6	3.3	6	
	F2010.UB.102.Z07.08R756M	4.000	1.250	2.000	0.331	7	5.7	7	SD .. 09T3 ..
	F2010.UB.127.Z08.08R756M	5.000	1.500	2.500	0.331	8	7.5	8	
Parallel bore DIN 138 transverse keyway	F2010.UB.152.Z10.08R756M	6.000	1.500	2.500	0.331	10	14.6	10	SD .. 09T3 ..
Parallel bore DIN 138 transverse keyway	F2010.UB.203.Z12.08R756M	8.000	2.50/4.0	2.500	0.331	12	21.4	12	
	F2010.UB.254.Z12.08R756M	10.000	2.50/4.0	2.500	0.331	12	36.4	12	SD .. 09T3 ..
	F2010.UB.254.Z16.08R756M	10.000	2.50/4.0	2.500	0.331	16	36.4	16	
Parallel bore DIN 138 transverse keyway	F2010.UB.305.Z18.08R756M	12.000	2.50/4.0/7.0	2.500	0.331	18	45.6	18	SD .. 09T3 ..

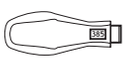
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [Inch]	3.000	4.000	5.000–6.000	8.000–12.000
	Cartridge for tool body	FR756M	FR756M	FR756M	FR756M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs
	Clamping screw for insert Tightening torque	FS2266 (Torx 10IP) 18 in lbs	FS2266 (Torx 10IP) 18 in lbs	FS2266 (Torx 10IP) 18 in lbs	FS2266 (Torx 10IP) 18 in lbs
	Adjusting pin	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)
	Clamping screw for arbour-mounted tools	FS1519	FS1565	FS1566	

Accessories

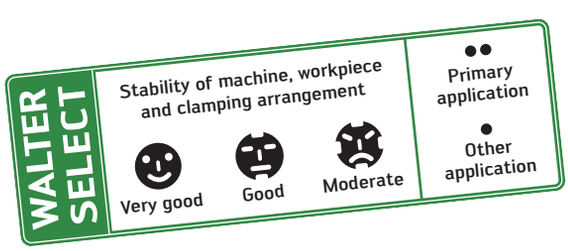
	D_c [Inch]	3.000–12.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade for screwdriver	FS2268 (Torx 10IP)
	Torque T-handle Tightening torque	FS2042 40 - 124 in lbs
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS2267 (Torx 10IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDGT09T3PDR-D57	0.8	1.2	☺	😐	😐	☹	😐		☹			😐	☹	☹			😐		☹
	SDHT09T304-G88	0.4														☺	☺			
	SDHT09T308-G88	0.8														☺	☺			
	SDMT09T308-D51	0.8		☺	😐	😐	☹			☹			😐	☹	☹					☹
	SDMT09T308-D57	0.8		☺	😐	😐	☹	😐		☹		😐	😐	☹	☹			😐		☹
	SDMT09T308-F57	0.8		☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹			😐	☹	☹
	SDMT09T320-F57	2			😐	😐	☹	😐	☹	☹				☹	☹			😐	☹	☹
	SDMW09T308-A57	0.8		😐	☹	☹							😐	☹	☹					

SD..09T3.. : If the corner radius is r > 0.8 mm. the corner area of the cartridge must be reworked.
$R_{(body)} = r_{(indexable\ insert)}$

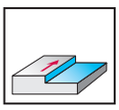
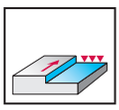
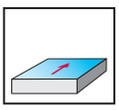
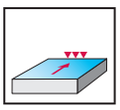
HC = Coated carbide
HW = Uncoated carbide



C2

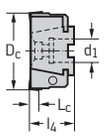
Shoulder milling cutters
F2010 mm
SD .. 1204 ..

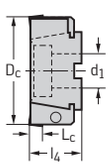
– Adjustable runout
– Four cutting edges per indexable insert

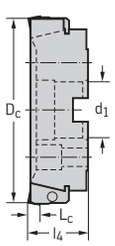





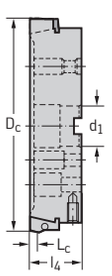
	P	M	K	N	S	H	O
F2010	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.B.080.Z06.08.R757M	80	27	50	11.6	6	1.3	6	SD .. 1204 ..
	F2010.B.100.Z07.08.R757M	100	32	50	11.6	7	1.9	7	SD .. 1204 ..
	F2010.B.125.Z08.08.R757M	125	40	63	11.6	8	3.6	8	
	F2010.B.160.Z10.08.R757M	160	40/40 B	63	11.6	10	5.6	10	SD .. 1204 ..
	F2010.B.200.Z12.08.R757M	200	60/50 B	63	11.6	12	8.3	12	
	F2010.B.250.Z12.08.R757M	250	60/50 B	63	11.6	12	14.8	12	
	F2010.B.250.Z16.08.R757M	250	60/50 B	63	11.6	16	14.6	16	
	F2010.B.315.Z14.08.R757M	315	60/50-60 BB	80	11.6	14	26.3	14	SD .. 1204 ..
	F2010.B.315.Z18.08.R757M	315	60/50-60 BB	80	11.6	18	26.2	18	





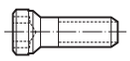




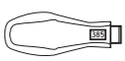
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [mm]	80–315
	Cartridge for tool body	FR757M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 8.0 Nm
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 3.5 Nm
	Adjusting pin	FS303 (Torx 20)

Accessories

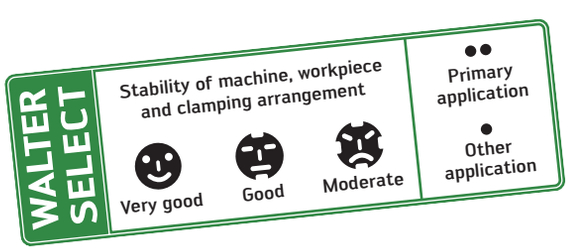
	D_c [mm]	80–315
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2041 4.5–14 Nm
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDGT1204PDR-D57	0.8	1.6	☺	😐	😐	☹	😐		☹			😐	☹	☹			😐		☹
	SDHT120408-G88	0.8														☺	☺			
	SDMT120408-D51	0.8		☺	😐	😐	☹			☹			😐	☹	☹					☹
	SDMT120408-D57	0.8		☺	😐	😐	☹	😐		☹		😐	😐	☹	☹			😐		☹
	SDMT120408-F57	0.8		☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹			😐	☹	☹
	SDMT120425-F57	2.5			😐	😐	☹	😐	☹	☹				☹	☹			😐	☹	☹
	SDMW120408-A57	0.8		😐	☹	☹							😐	☹	☹					

SD..1204.. : If the corner radius is r > 0.8 mm. the corner area of the cartridge must be reworked.
$R_{(body)} = r_{(indexable\ insert)}$

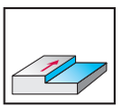
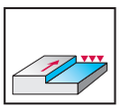
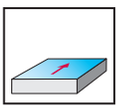
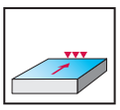
HC = Coated carbide
HW = Uncoated carbide



C2

Shoulder milling cutters
F2010 inch
SD .. 1204 ..

– Adjustable runout
– Four cutting edges per indexable insert

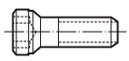
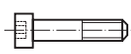
	P	M	K	N	S	H	O
F2010	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	F2010.UB.076.Z06.08R757M	3.000	1.000	2.000	0.457	6	3.3	6	
	F2010.UB.102.Z07.08R757M	4.000	1.250	2.000	0.457	7	5.7	7	SD .. 1204 ..
	F2010.UB.127.Z08.08R757M	5.000	1.500	2.500	0.457	8	7.5	8	
Parallel bore DIN 138 transverse keyway	F2010.UB.152.Z10.08R757M	6.000	1.500	2.500	0.457	10	14.6	10	SD .. 1204 ..
Parallel bore DIN 138 transverse keyway	F2010.UB.203.Z12.08R757M	8.000	2.50/4.0	2.500	0.457	12	21.4	12	
	F2010.UB.254.Z12.08R757M	10.000	2.50/4.0	2.500	0.457	12	36.4	12	SD .. 1204 ..
	F2010.UB.254.Z16.08R757M	10.000	2.50/4.0	2.500	0.457	16	36.4	16	
Parallel bore DIN 138 transverse keyway	F2010.UB.305.Z18.08R757M	12.000	2.50/4.0/7.0	2.500	0.457	18	45.6	18	SD .. 1204 ..

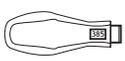
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [Inch]	3.000	4.000	5.000–6.000	8.000–12.000
	Cartridge for tool body	FR757M	FR757M	FR757M	FR757M
	Clamping screw for cartridge Tightening torque	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs	FS247 (SW 4) 71 in lbs
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs
	Adjusting pin	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)	FS303 (Torx 20)
	Clamping screw for arbour-mounted tools	FS1519	FS1565	FS1566	

Accessories

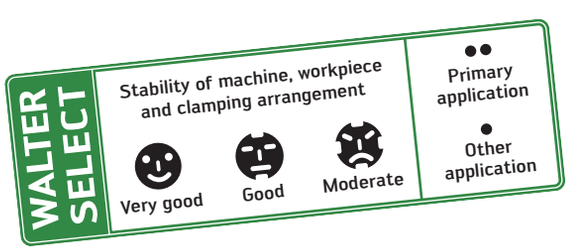
	D_c [Inch]	3.000–12.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade for screwdriver	FS2014 (Torx 15IP)
	Torque T-handle Tightening torque	FS2042 40 - 124 in lbs
	Interchangeable blade for cartridge	FS2051 (SW 4)
	Screwdriver for indexable insert	FS1485 (Torx 15IP)
	Screwdriver for adjusting pin	FS228 (Torx 20)
	ISO 2936 Allen key for cartridge	ISO2936-4 (SW 4)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDGT1204PDR-D57	0.8	1.6	☺	😐	😐	☹	😐		☹			😐	☹	☹			😐		☹
	SDHT120408-G88	0.8														☺	☺			
	SDMT120408-D51	0.8		☺	😐	😐	☹			☹			😐	☹	☹					☹
	SDMT120408-D57	0.8		☺	😐	😐	☹	😐		☹		😐	😐	☹	☹			😐		☹
	SDMT120408-F57	0.8		☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹			😐	☹	☹
	SDMT120425-F57	2.5			😐	😐	☹	😐	☹	☹				☹	☹			😐	☹	☹
	SDMW120408-A57	0.8		😐	☹	☹							😐	☹	☹					

SD..1204.. : If the corner radius is r > 0.8 mm. the corner area of the cartridge must be reworked.
$R_{(body)} = r_{(indexable\ insert)}$

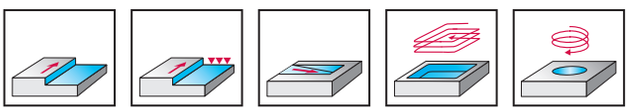
HC = Coated carbide
HW = Uncoated carbide

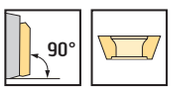


C2

Ramping milling cutter
M2331 mm

– For pocket machining
– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M2331				●●			●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	l_{16} mm	L_c mm	Z	kg	No. of indexable inserts	Type
HSK DIN 69893-1 A	M2331-032-H80F-02-15-MA	32	HSK-A80/A63	110	65	15	2	1.5	2	ZDGT15A4 .. R
	M2331-040-H80F-02-20-MA	40	HSK-A80/A63	110	75	20	2	1.6	2	ZDGT20A5 .. R
	M2331-040-H80F-03-15-MA	40	HSK-A80/A63	110	75	15	3	1.6	3	ZDGT15A4 .. R
	M2331-050-H80F-03-20-MA	50	HSK-A80/A63	110	86	20	3	1.9	3	ZDGT20A5 .. R
	M2331-050-H80F-04-15-MA	50	HSK-A80/A63	110	86	15	4	1.9	4	ZDGT15A4 .. R
Parallel bore DIN 138 transverse keyway	M2331-040-B16-03-15	40	16	50		15	3	0.2	3	ZDGT15A4 .. R
	M2331-050-B22-03-20	50	22	60		20	3	0.4	3	ZDGT20A5 .. R
	M2331-050-B22-04-15	50	22	50		15	4	0.3	4	ZDGT15A4 .. R
	M2331-050-B22-02-20	50	22	60		20	2	0.5	2	ZDGT20A5 .. R
	M2331-050-B22-02-15	50	22	50		15	2	0.4	2	ZDGT15A4 .. R
	M2331-050-B22-03-15	50	22	50		15	3	0.4	3	

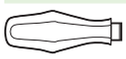
Pre-balanced tools
For information on high-speed applications. see "Technical information/Information on high-speed applications"
Tools with HSK have a residual imbalance of 3 gmm – with chip hole. without chip
M2331-...-MA special interface for Makino (similar to HSK-A DIN 69893)
For tools with locating bores. use longer tightening screws in accordance with ISO 4762. see "Assembly parts and accessories/Other"
Bodies and assembly parts are included in the scope of delivery.

C2

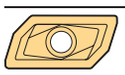
Assembly parts

Type D_c [mm]	ZDGT15A4 .. R 32	ZDGT15A4 .. R 40–50	ZDGT20A5 .. R 40–50
Clamping screw for insert Tightening torque	FS1222 (Torx 15IP) 3.5 Nm	FS1453 (Torx 15IP) 3.5 Nm	FS2281 (Torx 20IP) 5.0 Nm

Accessories

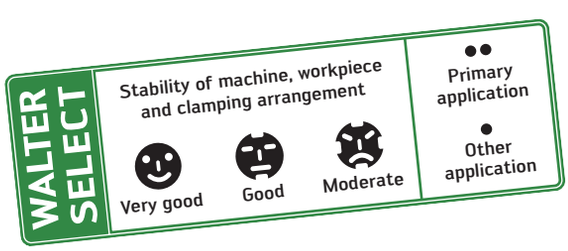
Type	ZDGT15A4 .. R	ZDGT20A5 .. R
 Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
Interchangeable blade	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35S	N HF WMG40	S HC WSM35S	S HC WSP45S	O HF WMG40
	ZDGT15A404R-K85	0.4	1.2								●●			●●
	ZDGT15A408R-K85	0.8	1.2								●●			●●
	ZDGT15A412R-K85	1.2	1.2								●●			●●
	ZDGT15A416R-K85	1.6	1.2								●●			●●
	ZDGT15A420R-K85	2	1.2								●●			●●
	ZDGT15A425R-K85	2.5	1.2								●●			●●
	ZDGT15A430R-K85	3	1.2								●●			●●
	ZDGT15A440R-K85	4	1.2								●●			●●
	ZDGT20A508R-K85	0.8	1.2								●●			●●
	ZDGT20A512R-K85	1.2	1.2								●●			●●
	ZDGT20A516R-K85	1.6	1.2								●●			●●
	ZDGT20A520R-K85	2	1.2								●●			●●
	ZDGT20A530R-K85	3	1.2								●●			●●
	ZDGT20A540R-K85	4	1.2								●●			●●
	ZDGT20A550R-K85	5	1.2								●●			●●
	ZDGT20A560R-K85	6	1.2								●●			●●
	ZDGT20A564R-K85	6.4	1.2								●●			●●

If the corner radius r = 2.0 mm or above. the corner area of the body must be reworked:
R (body) = r (indexable insert) – 1 mm

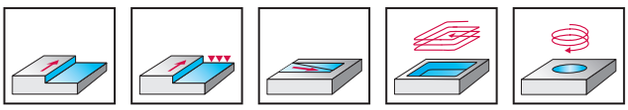
HC = Coated carbide
HF = Uncoated fine-grained carbide

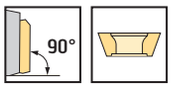


C2

Ramping milling cutter
M2331 inch

– For pocket machining
– Two cutting edges per indexable insert





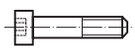
	P	M	K	N	S	H	O
M2331				●●			●

Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	l_{16} Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
ScrewFit	M2331.051-T45-03-15	2.000	T45	2.000		0.591	3	1.3	3	ZDGT15A4 .. R
	M2331.051-T45-03-20	2.000	T45	2.000		0.787	3	1.1	3	ZDGT20A5 .. R
HSK DIN 69893-1 A	M2331.038-H80F-03-15-MA	1.500	80.000	4.331	2.524	0.591	3	3.5	3	ZDGT15A4 .. R
	M2331.051-H80F-03-20-MA	2.000	80.000	4.331	3.150	0.787	3	4.2	3	ZDGT20A5 .. R
	M2331.051-H80F-04-15-MA	2.000	80.000	4.331	3.150	0.591	4	4.2	4	ZDGT15A4 .. R
Parallel bore DIN 138 transverse keyway	M2331.051-B19-03-15	2.000	0.750	2.000		0.591	3	1.0	3	ZDGT15A4 .. R
	M2331.051-B19-02-20	2.000	0.750	2.000		0.787	2	1.0	2	ZDGT20A5 .. R
	M2331.051-B19-02-15	2.000	0.750	2.000		0.591	2	1.1	2	ZDGT15A4 .. R

Pre-balanced tools
For information on high-speed applications. see "Technical information/Information on high-speed applications"
Tools with HSK have a residual imbalance of 3 gmm – with chip hole. without chip
M2331-...-MA special interface for Makino (similar to HSK-A DIN 69893)
For tools with locating bores. use longer tightening screws in accordance with ISO 4762. see "Assembly parts and accessories/Other"
Bodies and assembly parts are included in the scope of delivery.

C2

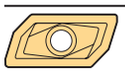
Assembly parts

	Type D_c [Inch]	ZDGT15A4 .. R 1.500	ZDGT15A4 .. R 2.000	ZDGT20A5 .. R 2.000
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs	FS2281 (Torx 20IP) 44 in lbs
	Clamping screw for arbour-mounted tools		FS1338	FS1338

Accessories

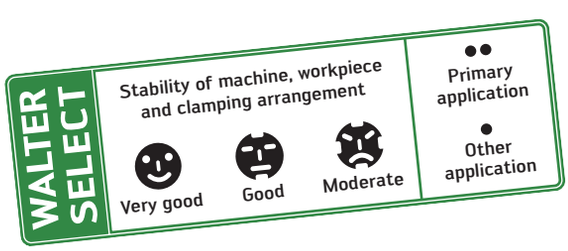
	Type	ZDGT15A4 .. R	ZDGT20A5 .. R
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs	FS2248 9 - 53 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
	Screwdriver	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WKP25S	K HC WKP35S	N HF WMG40	S HC WSM35S	S HC WSP45S	O HF WMG40
	ZDGT15A404R-K85	0.4	1.2								●●			●●
	ZDGT15A408R-K85	0.8	1.2								●●			●●
	ZDGT15A412R-K85	1.2	1.2								●●			●●
	ZDGT15A416R-K85	1.6	1.2								●●			●●
	ZDGT15A420R-K85	2	1.2								●●			●●
	ZDGT15A425R-K85	2.5	1.2								●●			●●
	ZDGT15A430R-K85	3	1.2								●●			●●
	ZDGT15A440R-K85	4	1.2								●●			●●
	ZDGT20A508R-K85	0.8	1.2								●●			●●
	ZDGT20A512R-K85	1.2	1.2								●●			●●
	ZDGT20A516R-K85	1.6	1.2								●●			●●
	ZDGT20A520R-K85	2	1.2								●●			●●
	ZDGT20A530R-K85	3	1.2								●●			●●
	ZDGT20A540R-K85	4	1.2								●●			●●
	ZDGT20A550R-K85	5	1.2								●●			●●
	ZDGT20A560R-K85	6	1.2								●●			●●
	ZDGT20A564R-K85	6.4	1.2								●●			●●

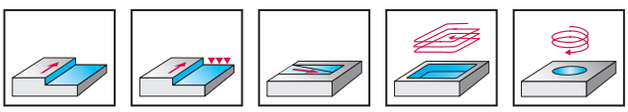
If the corner radius r = 2.0 mm or above. the corner area of the body must be reworked:
R (body) = r (indexable insert) – 1 mm

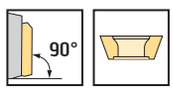
HC = Coated carbide
HF = Uncoated fine-grained carbide



Shoulder milling cutters
M5130 mm
AC . T0602 .. R
Xtra·tec® XT

– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M5130	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	l_1 mm	Z	kg	No. of indexable inserts	Type
ScrewFit	★ M5130-010-T09-02-05	10	T09	20	5		2	0.01	2	
	★ M5130-012-T09-03-05	12	T09	20	5		3	0.01	3	
	★ M5130-016-T14-03-05	16	T14	25	5		3	0.03	3	
	★ M5130-016-T14-04-05	16	T14	25	5		4	0.03	4	
	★ M5130-020-T18-04-05	20	T18	25	5		4	0.05	4	
	★ M5130-020-T18-05-05	20	T18	25	5		5	0.05	5	
	★ M5130-025-T22-05-05	25	T22	30	5		5	0.10	5	AC . T0602 .. R
	★ M5130-025-T22-07-05	25	T22	30	5		7	0.1	7	
	★ M5130-032-T28-06-05	32	T28	35	5		6	0.19	6	
	★ M5130-032-T28-08-05	32	T28	35	5		8	0.20	8	
	★ M5130-040-T36-07-05	40	T36	35	5		7	0.34	7	
	★ M5130-040-T36-10-05	40	T36	35	5		10	0.35	10	
Shank DIN 1835 B	★ M5130-010-W10-02-05	10	10	16	5	60	2	0.03	2	
	★ M5130-010-W16-02-05	10	16	30	5	80	2	0.09	2	
	★ M5130-012-W12-03-05	12	12	19	5	65	3	0.05	3	
	★ M5130-012-W16-03-05	12	16	30	5	80	3	0.09	3	
	★ M5130-016-W16-03-05	16	16	21	5	70	3	0.09	3	
	★ M5130-016-W16-04-05	16	16	21	5	70	4	0.94	4	AC . T0602 .. R
	★ M5130-020-W20-04-05	20	20	24	5	75	4	0.16	4	
	★ M5130-020-W20-05-05	20	20	24	5	75	5	0.16	5	
	★ M5130-025-W25-05-05	25	25	26	5	85	5	0.29	5	
	★ M5130-025-W25-07-05	25	25	26	5	85	7	0.29	7	
Parallel shank	★ M5130-010-A10-02-05	10	10	16	5	60	2	0.03	2	
	★ M5130-010-A16-02-05	10	16	30	5	80	2	0.24	2	
	★ M5130-012-A12-03-05	12	12	19	5	70	3	0.05	3	
	★ M5130-012-A16-03-05	12	12	30	5	80	3	0.09	3	
	★ M5130-014-A16-03-05	14	16	30	5	80	3	0.06	3	
	★ M5130-016-A16-03-05	16	16	21	5	90	3	0.12	3	
	★ M5130-016-A16-04-05	16	16	21	5	90	4	0.13	4	AC . T0602 .. R
	★ M5130-018-A16-03-05	18	16	21	5	90	3	0.13	3	
	★ M5130-020-A20-04-05	20	20	24	5	110	4	0.24	4	
	★ M5130-020-A20-05-05	20	20	24	5	110	5	0.24	5	
	★ M5130-022-A20-04-05	22	20	24	5	110	4	0.25	4	
	★ M5130-025-A25-05-05	25	25	26	5	120	5	0.42	5	
	★ M5130-025-A25-07-05	25	25	26	5	120	7	0.42	7	

Bodies and assembly parts are included in the scope of delivery.

C2

/ ★ New addition to the product range

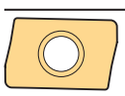
Assembly parts

	D_c [mm]	10–40
	Clamping screw for insert Tightening torque	FS2560 (Torx 6IP) 0.6 Nm

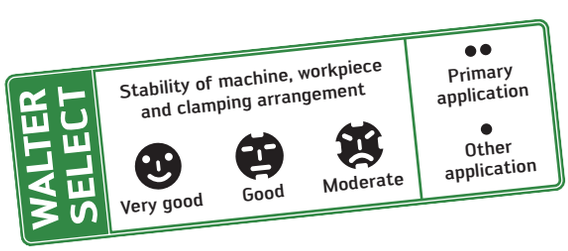
Accessories

	D_c [mm]	10–40
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm
	Interchangeable blade	SD2001-6IP
	Screwdriver	SD1001-6IP

Indexable inserts

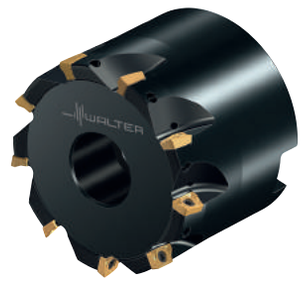
	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	ACGT060204R-G65	0.4	0.9	●●●	●●	●●	●	●●	●			●●	●	●				●
	ACGT060204R-M85	0.4	0.9												●●	●●		
	ACMT060202R-G55	0.2	1		●●	●●	●		●				●	●				●
	ACMT060204R-G55	0.4	0.9	●●●	●●	●●	●		●	●●	●●	●●	●	●			●●	●●
	ACMT060204R-K55	0.4	0.9		●●●	●●●	●●	●●●	●●				●●●	●●			●●●	●●
	ACMT060208R-G55	0.8	0.8		●●	●●	●		●				●	●				●
	ACMT060212R-G55	1.2	0.6		●●	●●	●		●				●	●				●
	ACMT060216R-G55	1.6	0.1		●●	●●	●		●				●	●				●

HC = Coated carbide
HW = Uncoated carbide

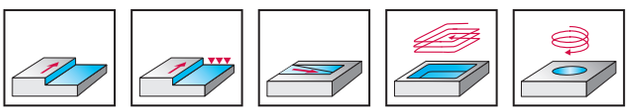


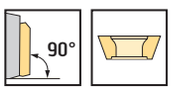
C2

Shoulder milling cutters
M5130 mm
AC . T0602 .. R
Xtra·tec® XT



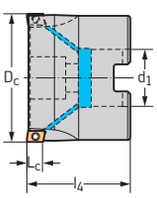
– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M5130	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	l_1 mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	★ M5130-032-B16-06-05	32	16	40	5		6	0.14	6	AC . T0602 .. R
	★ M5130-032-B16-08-05	32	16	40	5		8	0.14	8	
	★ M5130-040-B16-07-05	40	16	40	5		7	0.27	7	
	★ M5130-040-B16-10-05	40	16	40	5		10	0.27	10	
	★ M5130-050-B22-09-05	50	22	40	5		9	0.42	9	
	★ M5130-050-B22-12-05	50	22	40	5		12	0.42	12	
	★ M5130-063-B22-11-05	63	22	40	5		11	0.54	11	
	★ M5130-063-B22-14-05	63	22	40	5		14	0.54	14	



Bodies and assembly parts are included in the scope of delivery.

C2

😊😐☹ / ★ New addition to the product range

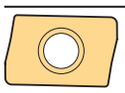
Assembly parts

	D_c [mm]	32–63
	Clamping screw for insert Tightening torque	FS2560 (Torx 6IP) 0.6 Nm

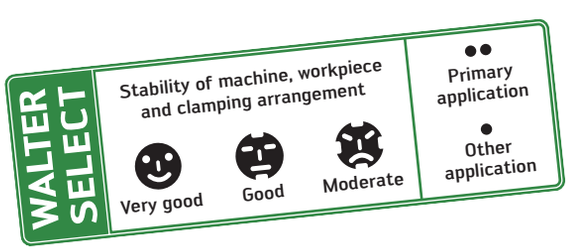
Accessories

	D_c [mm]	32–63
	Torque screwdriver. analogue Tightening torque	FS2001 0.4–1.2 Nm
	Interchangeable blade	SD2001-6IP
	Screwdriver	SD1001-6IP

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	ACGT060204R-G65	0.4	0.9	●	◐	◐	○	◐	○			◐	○	○				○
	ACGT060204R-M85	0.4	0.9												●	●		
	ACMT060202R-G55	0.2	1		◐	◐	○		○				○	○				○
	ACMT060204R-G55	0.4	0.9	●	◐	◐	○		○	●	◐	◐	○	○			◐	○
	ACMT060204R-K55	0.4	0.9		●	●	◐	●	◐				●	◐			●	◐
	ACMT060208R-G55	0.8	0.8		◐	◐	○		○				○	○				○
	ACMT060212R-G55	1.2	0.6		◐	◐	○		○				○	○				○
	ACMT060216R-G55	1.6	0.1		◐	◐	○		○				○	○				○

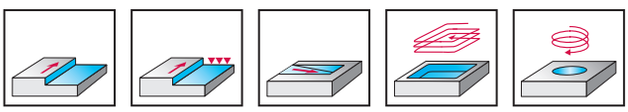
HC = Coated carbide
HW = Uncoated carbide

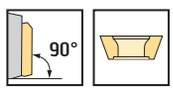


C2

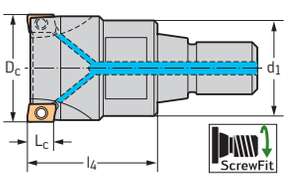
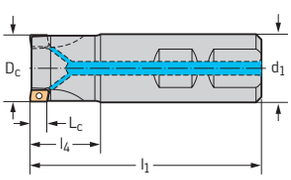
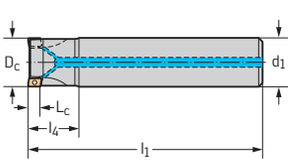
Shoulder milling cutters
M5130 inch
AC . T0602 .. R
Xtra·tec® XT

– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M5130	●●	●●	●●	●●	●●	●	●

Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	l_1 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
ScrewFit 	★ M5130.013-T09-03-05	0.500	T09	0.787		0.197	3	0.0	3	
	★ M5130.015-T14-03-05	0.625	T14	0.984		0.197	3	0.1	3	
	★ M5130.015-T14-04-05	0.625	T14	0.984		0.197	4	0.1	4	
	★ M5130.019-T18-04-05	0.750	T18	0.984		0.197	4	0.1	4	
	★ M5130.019-T18-05-05	0.750	T18	0.984		0.197	5	0.1	5	
	★ M5130.026-T22-05-05	1.000	T22	1.181		0.197	5	0.2	5	AC . T0602 .. R
	★ M5130.026-T22-07-05	1.000	T22	1.181		0.197	7	0.2	7	
	★ M5130.031-T28-06-05	1.250	T28	1.378		0.197	6	0.4	6	
	★ M5130.031-T28-08-05	1.250	T28	1.378		0.197	8	0.4	8	
	★ M5130.038-T36-07-05	1.500	T36	1.378		0.197	7	0.7	7	
	★ M5130.038-T36-10-05	1.500	T36	1.378		0.197	10	0.8	10	
Shank DIN 1835 B 	★ M5130.013-W13-03-05	0.500	1/2	0.700	2.281	0.197	3	0.1	3	
	★ M5130.015-W15-03-05	0.625	0.625	0.750	2.656	0.197	3	0.2	3	
	★ M5130.015-W15-04-05	0.625	0.625	0.750	2.656	0.197	4	0.2	4	
	★ M5130.019-W19-04-05	0.750	0.750	0.945	2.781	0.197	4	0.3	4	AC . T0602 .. R
	★ M5130.019-W19-05-05	0.750	0.750	0.945	2.781	0.197	5	0.3	5	
	★ M5130.026-W26-05-05	1.000	1.000	1.000	3.281	0.197	5	0.6	5	
	★ M5130.026-W26-07-05	1.000	1.000	1.000	3.281	0.197	7	0.6	7	
Parallel shank 	★ M5130.013-A13-03-05	0.500	1/2	0.750	2.531	0.197	3	0.1	3	
	★ M5130.015-A15-03-05	0.625	0.625	0.750	3.566	0.197	3	0.3	3	
	★ M5130.015-A15-04-05	0.625	0.625	0.750	3.566	0.197	4	0.3	4	
	★ M5130.019-A19-04-05	0.750	0.750	1.000	4.250	0.197	4	0.5	4	AC . T0602 .. R
	★ M5130.019-A19-05-05	0.750	0.750	1.000	4.250	0.197	5	0.5	5	
	★ M5130.026-A26-05-05	1.000	1.000	1.000	4.750	0.197	5	1.0	5	
	★ M5130.026-A26-07-05	1.000	1.000	1.000	4.750	0.197	7	1.0	7	

Bodies and assembly parts are included in the scope of delivery.

C2

😊😐☹ / ★ New addition to the product range

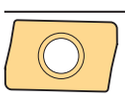
Assembly parts

	D_c [Inch]	0.500–1.500
	Clamping screw for insert Tightening torque	FS2560 (Torx 6IP) 5 in lbs

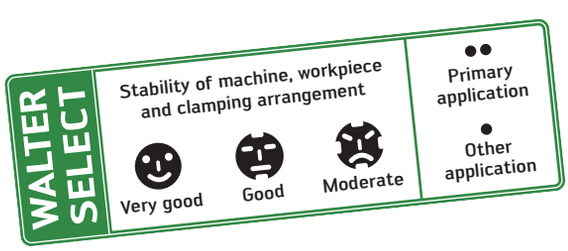
Accessories

	D_c [Inch]	0.500–1.500
	Torque screwdriver. analogue Tightening torque	FS2002 4 - 11 in lbs
	Interchangeable blade	SD2001-6IP
	Screwdriver	SD1001-6IP

Indexable inserts

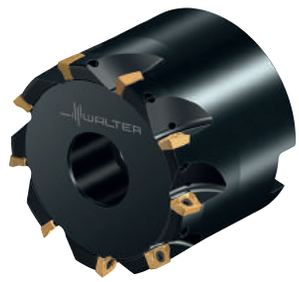
	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	ACGT060204R-G65	0.4	0.9	☺	😐	😐	☹	😐	☹			😐	☹	☹				☹
	ACGT060204R-M85	0.4	0.9												☺	☺		
	ACMT060202R-G55	0.2	1		😐	😐	☹		☹				☹	☹				☹
	ACMT060204R-G55	0.4	0.9	☺	😐	😐	☹		☹	☺	😐	😐	☹	☹			😐	☹
	ACMT060204R-K55	0.4	0.9		☺	☺	😐	☺	😐				☺	😐			☺	😐
	ACMT060208R-G55	0.8	0.8		😐	😐	☹		☹				☹	☹				☹
	ACMT060212R-G55	1.2	0.6		😐	😐	☹		☹				☹	☹				☹
	ACMT060216R-G55	1.6	0.1		😐	😐	☹		☹				☹	☹				☹

HC = Coated carbide
HW = Uncoated carbide

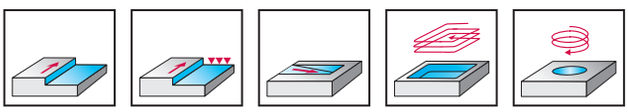


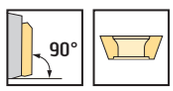
C2

Shoulder milling cutters
M5130 inch
AC . T0602 .. R
Xtra·tec® XT



– Two cutting edges per indexable insert

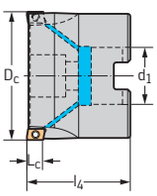




	P	M	K	N	S	H	O
M5130	●●	●●	●●	●●	●●	●	●

Tool

Parallel bore
DIN 138 transverse keyway



Designation	D_c Inch	d_1 Inch	l_4 Inch	l_1 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
★ M5130.051-B19-09-05	2.000	0.750	1.575		0.197	9	0.9	9	AC . T0602 .. R
★ M5130.051-B19-12-05	2.000	0.750	1.575		0.197	12	0.9	12	
★ M5130.064-B26-11-05	2.500	1.000	1.575		0.197	11	1.4	11	
★ M5130.064-B26-14-05	2.500	1.000	1.575		0.197	14	1.5	14	

Bodies and assembly parts are included in the scope of delivery.

C2

☻☹☠ / ★ New addition to the product range

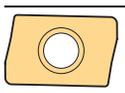
Assembly parts

	D_c [Inch]	0.750	1.000
	Clamping screw for insert Tightening torque	FS2560 (Torx 6IP) 5 in lbs	FS2560 (Torx 6IP) 5 in lbs
	Clamping screw for arbour-mounted tools	FS1518	FS1519

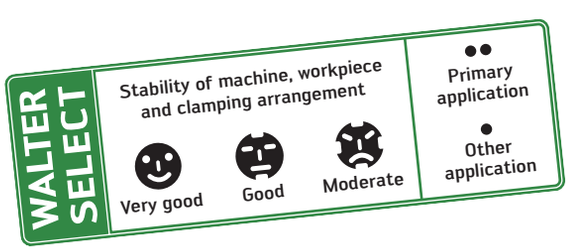
Accessories

	D_c [Inch]	0.750–1.000
	Torque screwdriver. analogue Tightening torque	FS2002 4 - 11 in lbs
	Interchangeable blade	SD2001-6IP
	Screwdriver	SD1001-6IP

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSP45S
	ACGT060204R-G65	0.4	0.9	●	●	●	●	●	●			●	●	●				●
	ACGT060204R-M85	0.4	0.9												●	●		
	ACMT060202R-G55	0.2	1		●	●	●		●				●	●				●
	ACMT060204R-G55	0.4	0.9	●	●	●	●		●	●	●	●	●	●			●	●
	ACMT060204R-K55	0.4	0.9		●	●	●	●	●				●	●			●	●
	ACMT060208R-G55	0.8	0.8		●	●	●		●				●	●				●
	ACMT060212R-G55	1.2	0.6		●	●	●		●				●	●				●
	ACMT060216R-G55	1.6	0.1		●	●	●		●				●	●				●

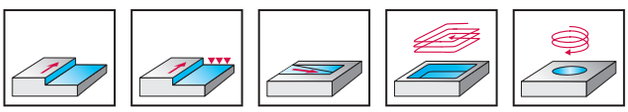
HC = Coated carbide
HW = Uncoated carbide

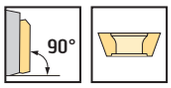


C2

Shoulder milling cutters
M5130 mm
BC . T160508R
Xtra·tec® XT

– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M5130	●●	●●	●●		●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	l_1 mm	Z	kg	No. of indexable inserts	Type
ScrewFit	★ M5130-032-T28-03-15	32	T28	40	15		3	0.16	3	
	★ M5130-040-T36-03-15	40	T36	40	15		3	0.31	3	
	★ M5130-040-T36-04-15	40	T36	40	15		4	0.31	4	BC . T160508R
	★ M5130-050-T45-03-15	50	T45	40	15		3	0.45	3	
	★ M5130-050-T45-06-15	50	T45	40	15		6	0.45	6	
Shank DIN 1835 B	★ M5130-025-W25-02-15	25	25	43	15	100	2	0.30	2	BC . T160508R
	★ M5130-032-W32-03-15	32	32	49	15	110	3	0.56	3	
Parallel shank	★ M5130-025-A25-02-15	25	25	38	15	200	2	0.68	2	
	★ M5130-028-A25-02-15	28	25	38	15	200	2	0.70	2	BC . T160508R
	★ M5130-032-A32-03-15	32	32	39	15	250	3	1.43	3	
	★ M5130-035-A32-03-15	35	32	39	15	250	3	1.46	3	

Bodies and assembly parts are included in the scope of delivery.

C2

😊😐☹ / ★ New addition to the product range

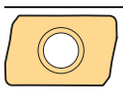
Assembly parts

	D_c [mm]	25–50
	Clamping screw for insert Tightening torque	FS2300 (Torx 15IP) 3.5 Nm

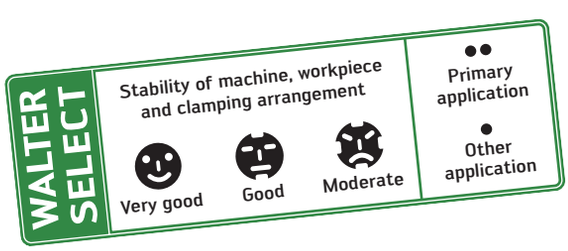
Accessories

	D_c [mm]	25–50
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

	Designation	r mm	b mm	P HC				M HC			K HC					S HC		
				WKP25S	WKP35G	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSM35S	WSM45X	WSP45S
	BCGT160508R-G55	0.8	2	☺	😐	😐	☹	😐		☹	☺		😐	☹	☹			☹
	BCMT160508R-F55	0.8	2	☺	😐	😐	☹			☹	☺	😐	😐	☹	☹			☹
	BCMT160508R-G55	0.8	2	☺	😐	😐	☹	😐	☹	☹	☺	😐	😐	☹	☹	😐	☹	☹
	BCMT160508R-K55	0.8	2		☺	☺	😐	☺		😐				☹	😐	☺		😐

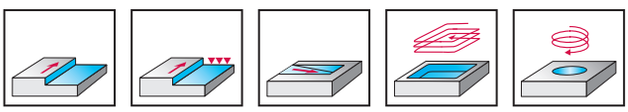
HC = Coated carbide

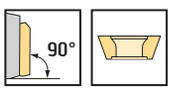


C2

Shoulder milling cutters
M5130 mm
BC . T160508R
Xtra·tec® XT

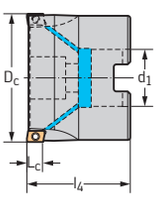
– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M5130	●●	●●	●●		●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	l_1 mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	★ M5130-040-B16-03-15	40	16	40	15		3	0.15	3	BC . T160508R
	★ M5130-040-B16-04-15	40	16	40	15		4	0.14	4	
	★ M5130-042-B16-03-15	42	16	40	15		3	0.17	3	
	★ M5130-050-B22-03-15	50	22	40	15		3	0.31	3	
	★ M5130-050-B22-06-15	50	22	40	15		6	0.31	6	
	★ M5130-052-B22-03-15	52	22	40	15		3	0.34	3	
	★ M5130-063-B22-04-15	63	22	40	15		4	0.43	4	
	★ M5130-063-B27-04-15	63	27	50	15		4	0.66	4	
	★ M5130-063-B22-07-15	63	22	40	15		7	0.45	7	
	★ M5130-063-B27-07-15	63	27	50	15		7	0.68	7	
	★ M5130-066-B27-04-15	66	22	50	15		4	0.72	4	
	★ M5130-080-B27-05-15	80	27	50	15		5	0.92	5	
	★ M5130-080-B27-08-15	80	27	50	15		8	0.97	8	
	★ M5130-085-B27-05-15	85	27	50	15		5	1.03	5	
	★ M5130-100-B32-05-15	100	32	50	15		5	1.55	5	
	★ M5130-100-B32-08-15	100	32	50	15		8	1.62	8	
	★ M5130-125-B40-07-15	125	40	63	15		7	2.47	7	
	★ M5130-125-B40-10-15	125	40	63	15		10	2.67	10	



Bodies and assembly parts are included in the scope of delivery.

C2

/ ★ New addition to the product range

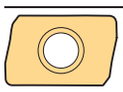
Assembly parts

	D_c [mm]	40–125
	Clamping screw for insert Tightening torque	FS2300 (Torx 15IP) 3.5 Nm

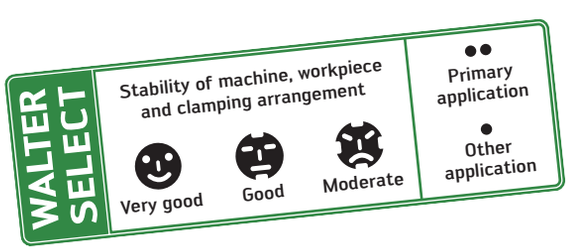
Accessories

	D_c [mm]	40–125
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	BCGT160508R-G55	0.8	2	●●	●	●	○	●		○	●●		●	○	○			○
	BCMT160508R-F55	0.8	2	●●	●	●	○			○	●●	●	●	○	○			○
	BCMT160508R-G55	0.8	2	●●	●	●	○	●	○	○	●●	●	●	○	○	●	○	○
	BCMT160508R-K55	0.8	2		●●	●●	●	●●		●				●	●	●●		●

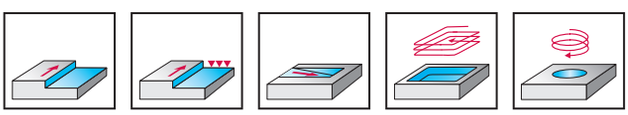
HC = Coated carbide

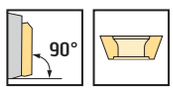


C2

Shoulder milling cutters
M5130 mm
BC . T160508R
Xtra·tec® XT

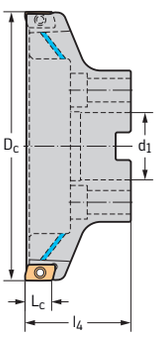
– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M5130	●●	●●	●●		●●	●	●

Tool	Designation	D_c mm	d_1 mm	l_4 mm	L_c mm	l_1 mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	★ M5130-160-B40-08-15	160	40/40 B	63	15		8	2.88	8	BC . T160508R
	★ M5130-160-B40-12-15	160	40/40 B	63	15		12	3.02	12	



Bodies and assembly parts are included in the scope of delivery.

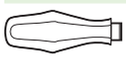
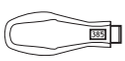
C2

/ ★ New addition to the product range

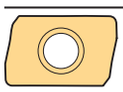
Assembly parts

	D_c [mm]	160
	Clamping screw for insert Tightening torque	FS2300 (Torx 15IP) 3.5 Nm

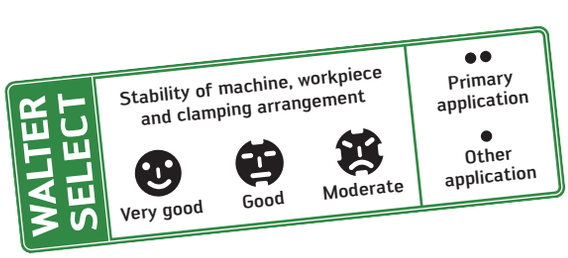
Accessories

	D_c [mm]	160
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)
	Sealing disc set (incl. gasket and screws)	FS936 COMPLETE SET
	Gasket	O-R 96X4

Indexable inserts

	Designation	r mm	b mm	P HC				M HC			K HC					S HC		
				WKP25S	WKP35G	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSM35S	WSM45X	WSP45S
	BCGT160508R-G55	0.8	2	●	●	●	●	●		●	●		●	●	●			●
	BCMT160508R-F55	0.8	2	●	●	●	●			●	●	●	●	●	●			●
	BCMT160508R-G55	0.8	2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	BCMT160508R-K55	0.8	2		●	●	●	●		●				●	●	●		●

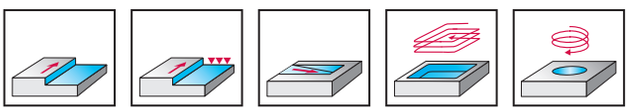
HC = Coated carbide

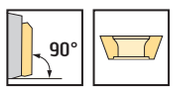


C2

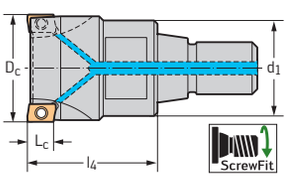
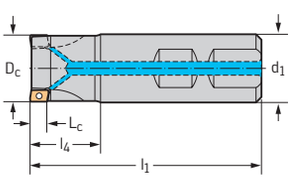
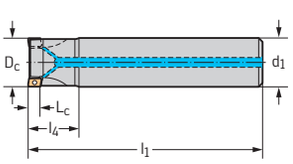
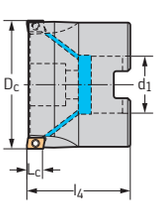
Shoulder milling cutters
M5130 inch
BC . T160508R
Xtra·tec® XT

– Two cutting edges per indexable insert





	P	M	K	N	S	H	O
M5130	●●	●●	●●	●●	●●	●	●

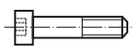
Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	l_1 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
ScrewFit	★ M5130.038-T36-03-15	1.500	T36	1.500		0.591	3	0.7	3	
	★ M5130.038-T36-04-15	1.500	T36	1.500		0.591	4	0.7	4	BC . T160508R
	★ M5130.051-T45-06-15	2.000	T45	1.575		0.591	6	1.0	6	
Shank DIN 1835 B	★ M5130.026-W26-02-15	1.000	1.000	1.850	4.131	0.591	2	0.7	3	
	★ M5130.031-W31-03-15	1.250	1.250	1.500	3.781	0.591	3	1.0	3	BC . T160508R
	★ M5130.038-W31-04-15	1.500	1.250	1.730	4.008	0.591	4	1.3	3	
Parallel shank	★ M5130.026-A26-02-15	1.000	1.000	1.850	8.350	0.591	2	1.6	2	BC . T160508R
	★ M5130.031-A31-03-15	1.250	1.250	1.500	92.547	0.591	3	3.1	3	
Parallel bore DIN 138 transverse keyway	★ M5130.051-B19-03-15	2.000	0.750	1.575		0.591	3	0.7	3	
	★ M5130.051-B19-06-15	2.000	0.750	1.575		0.591	6	0.7	6	
	★ M5130.064-B26-04-15	2.500	1.000	1.575		0.591	4	1.1	4	
	★ M5130.064-B26-07-15	2.500	1.000	1.575		0.591	7	1.1	7	
	★ M5130.076-B26-05-15	3.000	1.000	1.969		0.591	5	2.5	5	
	★ M5130.076-B26-08-15	3.000	1.000	1.969		0.591	8	2.3	8	BC . T160508R
	★ M5130.102-B38-05-15	4.000	1.500	2.480		0.591	5	5.3	5	
	★ M5130.102-B38-08-15	4.000	1.500	2.480		0.591	8	6.0	8	
	★ M5130.127-B38-07-15	5.000	1.500	2.480		0.591	7	7.5	7	
	★ M5130.127-B38-10-15	5.000	1.500	2.480		0.591	10	8.2	10	
	★ M5130.152-B38-08-15	6.000	1.500	2.480		0.591	8	10.4	8	
	★ M5130.152-B38-12-15	6.000	1.500	2.480		0.591	12	10.2	12	

Bodies and assembly parts are included in the scope of delivery.

C2

★ New addition to the product range

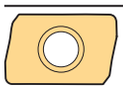
Assembly parts

	D_c [Inch]	1.000–1.500	2.000	2.500–3.000	4.000–6.000
	Clamping screw for insert Tightening torque	FS2300 (Torx 15IP) 31 in lbs	FS2300 (Torx 15IP) 31 in lbs	FS2300 (Torx 15IP) 31 in lbs	FS2300 (Torx 15IP) 31 in lbs
	Clamping screw for arbour-mounted tools		FS1523	FS1519	FS1583

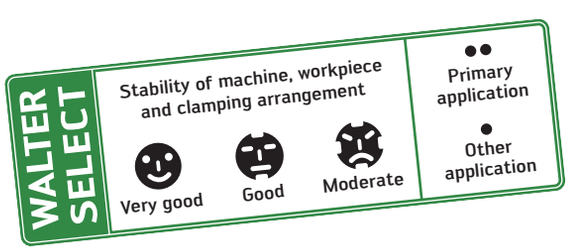
Accessories

	D_c [Inch]	1.000–6.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	BCGT160508R-G55	0.8	2	☺	😐	😐	☹	😐		☹	☺		😐	☹	☹			☹
	BCMT160508R-F55	0.8	2	☺	😐	😐	☹			☹	☺	😐	😐	☹	☹			☹
	BCMT160508R-G55	0.8	2	☺	😐	😐	☹	😐	☹	☹	☺	😐	😐	☹	☹	😐	☹	☹
	BCMT160508R-K55	0.8	2		☺	☺	😐	😐		😐				😐	😐	☺		😐

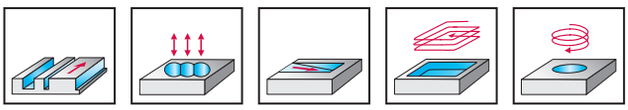
HC = Coated carbide

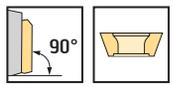


C2

Routing cutters
M4791 inch

– Four cutting edges per indexable insert

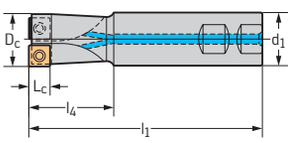




	P	M	K	N	S	H	O
M4791	●●	●●	●●	●●	●●	●	

Tool

Shank DIN 1835 B



Designation	D_c Inch	d_1 Inch	l_4 Inch	l_1 Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
M4791.019-W19-01-06	0.750	0.750	1.529	3.560	0.220	1	0.3	2	SD .. 06T204
M4791.026-W26-01-09	1.000	1.000	2.844	5.125	0.331	1	0.9	2	SD .. 09T30 ..
M4791.031-W31-01-12	1.250	1.250	3.219	5.500	0.457	1	1.4	2	SD .. 120408
M4791.038-W31-01-12	1.500	1.250	3.219	5.500	0.457	1	1.5	2	

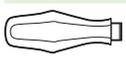
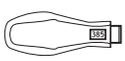
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	Type	SD .. 06T204	SD .. 09T30 ..	SD .. 120408
	Clamping screw for insert Tightening torque	FS2084 (Torx 7IP) 8 in lbs	FS2266 (Torx 10IP) 18 in lbs	FS1453 (Torx 15IP) 31 in lbs

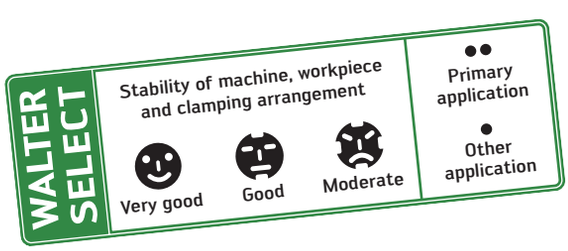
Accessories

	Type	SD .. 06T204	SD .. 09T30 ..	SD .. 120408
	Torque screwdriver. analogue Tightening torque	FS2002 4 - 11 in lbs	FS2004 13 - 44 in lbs	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque		FS2248 9 - 53 in lbs	FS2248 9 - 53 in lbs
	Interchangeable blade	FS2011 (Torx 7IP)	FS2268 (Torx 10IP)	FS2014 (Torx 15IP)
	Screwdriver	FS2088 (Torx 7IP)	FS2267 (Torx 10IP)	FS1485 (Torx 15IP)

Indexable inserts

	Designation	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	N HC WXN15	N HW WK10	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDHT06T204-G88	0.4													☺	☺			
	SDMT06T204-D51	0.4	☺	😐	😐	☹			☹			😐	☹	☹					☹
	SDMT06T204-D57	0.4	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹			😐		☹
	SDMT06T204-F57	0.4	☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹			😐	☹	☹
	SDMW06T204-A57	0.4	😐	☹	☹							😐	☹	☹					
	SDHT09T304-G88	0.4													☺	☺			
	SDHT09T308-G88	0.8													☺	☺			
	SDMT09T308-D51	0.8	☺	😐	😐	☹			☹			😐	☹	☹					☹
	SDMT09T308-D57	0.8	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹			😐		☹
	SDMT09T308-F57	0.8	☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹			😐	☹	☹
	SDMW09T308-A57	0.8	😐	☹	☹							😐	☹	☹					
	SDHT120408-G88	0.8													☺	☺			
	SDMT120408-D51	0.8	☺	😐	😐	☹			☹			😐	☹	☹					☹
	SDMT120408-D57	0.8	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹			😐		☹
	SDMT120408-F57	0.8	☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹			😐	☹	☹
	SDMW120408-A57	0.8	😐	☹	☹							😐	☹	☹					

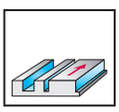
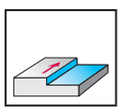
HC = Coated carbide
HW = Uncoated carbide



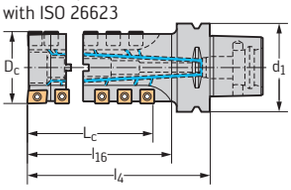
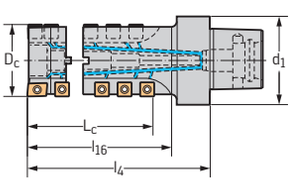
C2

Porcupine milling cutters
M4258 modular mm
SDM . 120408 / LDM.1704 .. R

– Two or four cutting edges per indexable insert
– Half effective design with corner front piece

	P	M	K	N	S	H	O
M4258 modular	●●	●●	●●		●●		

Tool	Designation	D_c mm	d_1 mm	l_4 mm	l_{16} mm	L_c mm	Z	kg	No. of indexable inserts	Type
Walter Capto™ in accordance with ISO 26623 	M4258-050-C6-02-75-M	50	C6	110	88	77	2	1.3	14 2	SDM . 120408 LDM . 1704 .. R
	M4258-063-C8-02-96-M	63	C8	150	115	98	2	3.1	18 2	
Walter Capto™ similar to ISO 26623 (without gripper groove) 	M4258-080-C8-03-116-M	80	C8	150	150	118	3	3.9	33 3	SDM . 120408 LDM . 1704 .. R

Body with 80 mm diameter: Adaptor without gripper groove
Bodies and assembly parts are included in the scope of delivery.

C2

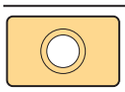
Assembly parts

	D_c [mm]	50	63–80
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 3.5 Nm	FS1453 (Torx 15IP) 3.5 Nm
	Clamping screw for front piece Tightening torque	FS370 (SW 10) 40 Nm	FS373 (SW 12) 120.0 Nm

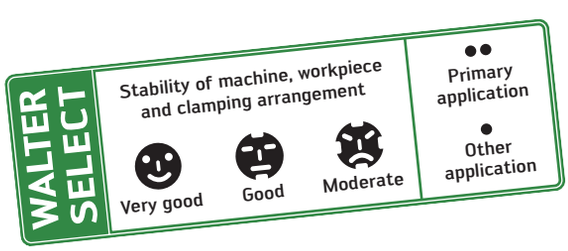
Accessories

	D_c [mm]	50–80
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

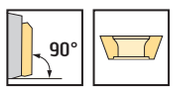
	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	LDMT170408R-D51	0.8	1.6	☺	😐	😐	☹			☹			😐	☹	☹			☹
	LDMT170408R-D57	0.8	1.6	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	LDMT170408R-F57	0.8	1.6	☺	😐	😐	☹	😐		☹	☺		😐	☹	☹	😐		☹
	LDMT170412R-D51	1.2	1.6		😐	😐	☹			☹				☹	☹			☹
	LDMW170408R-A57	0.8	1.6	😐	☹	☹							😐	☹	☹			
	SDMT120408-D51	0.8		☺	😐	😐	☹			☹			😐	☹	☹			☹
	SDMT120408-D57	0.8		☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	SDMT120408-F57	0.8		☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹	😐	☹	☹
	SDMW120408-A57	0.8		😐	☹	☹							😐	☹	☹			

HC = Coated carbide



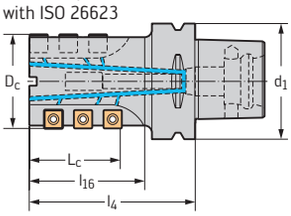
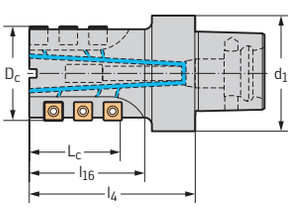
C2

Porcupine milling cutter basic bodies
M4258 modular mm
SDM . 120408



– Two or four cutting edges per indexable insert
– Basic body for porcupine milling cutters

	P	M	K	N	S	H	O
M4258 modular	●●	●●	●●		●●		

Tool	Designation	D_c mm	d_1 mm	l_4 mm	l_{16} mm	L_c mm	Z	kg	No. of indexable inserts	Type
Walter Capto™ in accordance with ISO 26623 	M4258-050-C6-02-50-B	50	C6	85	62	52	2	1.2	10	SDM . 120408
	M4258-063-C8-02-60-B	63	C8	115	80	63	2	2.8	12	
Walter Capto™ similar to ISO 26623 (without gripper groove) 	M4258-080-C8-03-80-B	80	C8	115	115	83	3	3.3	25	SDM . 120408

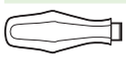
Body with 80 mm diameter: Adaptor without gripper groove
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [mm]	50–80
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 3.5 Nm

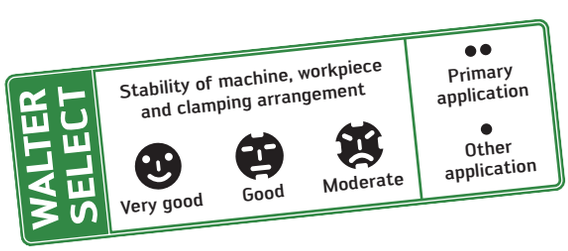
Accessories

	D_c [mm]	50–80
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

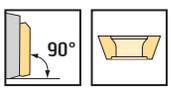
	Designation	r mm	P HC				M HC			K HC					S HC		
			WKP25S	WKP35G	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSM35S	WSM45X	WSP45S
	SDMT120408-D51	0.8	☺	😐	😐	☹			☹			😐	☹	☹			☹
	SDMT120408-D57	0.8	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	SDMT120408-F57	0.8	☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹	😐	☹	☹
	SDMW120408-A57	0.8	😐	☹	☹							😐	☹	☹			

HC = Coated carbide



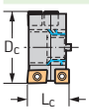
C2

Porcupine milling cutter front piece
M4258 modular mm
SDM . 120408 / LDM.1704 .. R



– Two or four cutting edges per indexable insert
– Half effective design with corner front piece

	P	M	K	N	S	H	O
M4258 modular	●●	●●	●●		●●		

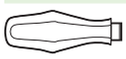
Tool	Designation	D_c mm	L_c mm	Z	kg	No. of indexable inserts	Type
	M4258-050-P20-02-25-F	50	25	2	0.1	4 2	SDM . 120408 LDM . 1704 .. R
	M4258-063-P30-02-36-F	63	35	2	0.3	6 2	
	M4258-080-P40-03-36-F	80	35	3	0.6	9 3	

Bodies and assembly parts are included in the scope of delivery.

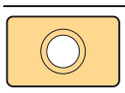
Assembly parts

	D_c [mm]	50–80
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 3.5 Nm

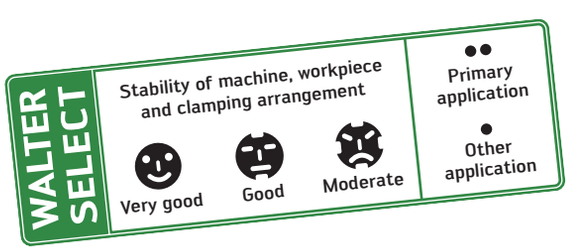
Accessories

	D_c [mm]	50–80
	Torque screwdriver. analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	LDMT170408R-D51	0.8	1.6	☺	😐	😐	☹			☹			😐	☹	☹			☹
	LDMT170408R-D57	0.8	1.6	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	LDMT170408R-F57	0.8	1.6	☺	😐	😐	☹	😐		☹	☺		😐	☹	☹	😐		☹
	LDMT170412R-D51	1.2	1.6		😐	😐	☹			☹				☹	☹			☹
	LDMW170408R-A57	0.8	1.6	😐	☹	☹							😐	☹	☹			
	SDMT120408-D51	0.8		☺	😐	😐	☹			☹			😐	☹	☹			☹
	SDMT120408-D57	0.8		☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	SDMT120408-F57	0.8		☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹	😐	☹	☹
	SDMW120408-A57	0.8		😐	☹	☹							😐	☹	☹			

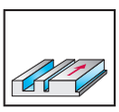
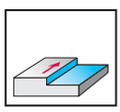
HC = Coated carbide



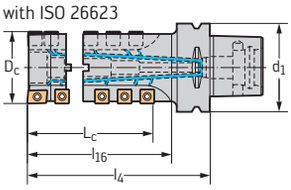
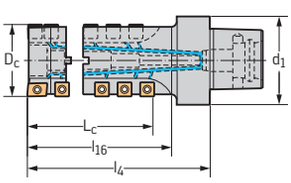
C2

Porcupine milling cutters
M4258 modular inch
SDM . 120408 / LDM.1704 .. R

– Two or four cutting edges per indexable insert
– Half effective design with corner front piece

	P	M	K	N	S	H	O
M4258 modular	●●	●●	●●		●●		

Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	l_{16} Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
Walter Capto™ in accordance with ISO 26623 	M4258.051-C6-02-75-M	2.000	C6	4.331	3.445	3.031	2	2.9	14 2	SDM . 120408 LDM . 1704 .. R
	M4258.064-C8-02-96-M	2.500	C8	5.906	4.528	3.858	2	7.0	18 2	
Walter Capto™ similar to ISO 26623 (without gripper groove) 	M4258.076-C8-03-116-M	3.000	C8	5.906	5.906	4.646	3	8.0	33 3	SDM . 120408 LDM . 1704 .. R

Body with 80 mm diameter: Adaptor without gripper groove
Bodies and assembly parts are included in the scope of delivery.

C2

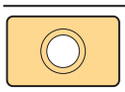
Assembly parts

	D_c [Inch]	2.000	2.500-3.000
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs	FS1453 (Torx 15IP) 31 in lbs
	Clamping screw for front piece Tightening torque	FS370 (SW 10) 354 in lbs	FS373 (SW 12) 1062 in lbs

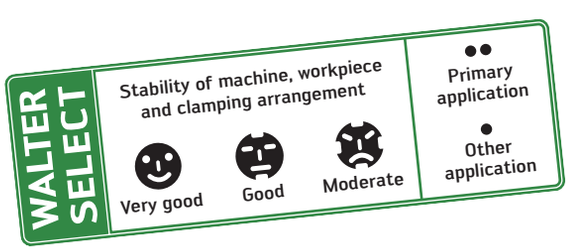
Accessories

	D_c [Inch]	2.000-3.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

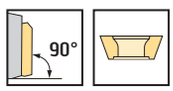
	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	LDMT170408R-D51	0.8	1.6	☺	😐	😐	☹			☹			😐	☹	☹			☹
	LDMT170408R-D57	0.8	1.6	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	LDMT170408R-F57	0.8	1.6	☺	😐	😐	☹	😐		☹	☺		😐	☹	☹	😐		☹
	LDMT170412R-D51	1.2	1.6		😐	😐	☹			☹				☹	☹			☹
	LDMW170408R-A57	0.8	1.6	😐	☹	☹							😐	☹	☹			
	SDMT120408-D51	0.8		☺	😐	😐	☹			☹			😐	☹	☹			☹
	SDMT120408-D57	0.8		☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	SDMT120408-F57	0.8		☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹	😐	☹	☹
	SDMW120408-A57	0.8		😐	☹	☹							😐	☹	☹			

HC = Coated carbide



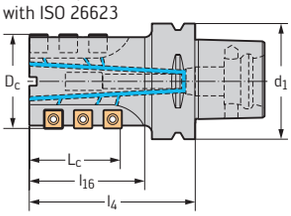
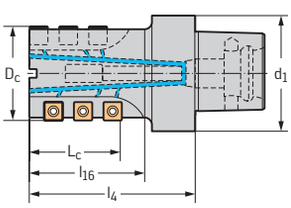
C2

Porcupine milling cutter basic bodies
M4258 modular inch
SDM . 120408



– Two or four cutting edges per indexable insert
– Basic body for porcupine milling cutters

	P	M	K	N	S	H	O
M4258 modular	●●	●●	●●		●●		

Tool	Designation	D_c Inch	d_1 Inch	l_4 Inch	l_{16} Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
Walter Capto™ in accordance with ISO 26623 	M4258.051-C6-02-50-B	2.000	C6	3.346	2.441	2.047	2	2.6	10	SDM . 120408
	M4258.064-C8-02-60-B	2.500	C8	4.528	3.150	2.480	2	6.2	12	
Walter Capto™ similar to ISO 26623 (without gripper groove) 	M4258.076-C8-03-80-B	3.000	C8	4.528	4.528	3.268	3	6.8	25	SDM . 120408

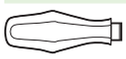
Body with 80 mm diameter: Adaptor without gripper groove
Bodies and assembly parts are included in the scope of delivery.

C2

Assembly parts

	D_c [Inch]	2.000-3.000
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs

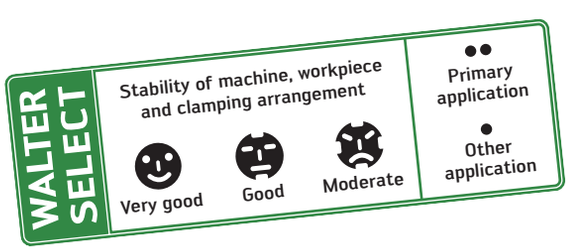
Accessories

	D_c [Inch]	2.000-3.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

	Designation	r mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	SDMT120408-D51	0.8	☺	😐	😐	☹			☹			😐	☹	☹			☹
	SDMT120408-D57	0.8	☺	😐	😐	☹	😐		☹		😐	😐	☹	☹	😐		☹
	SDMT120408-F57	0.8	☺	😐	😐	☹	😐	☹	☹	☺		😐	☹	☹	😐	☹	☹
	SDMW120408-A57	0.8	😐	☹	☹							😐	☹	☹			

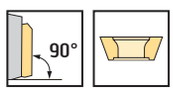
HC = Coated carbide



C2

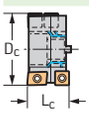
Porcupine milling cutter front piece
M4258 modular inch

SDM . 120408 / LDM.1704 .. R



– Two or four cutting edges per indexable insert
– Half effective design with corner front piece

	P	M	K	N	S	H	O
M4258 modular	●●	●●	●●		●●		

Tool	Designation	D_c Inch	L_c Inch	Z	lbs	No. of indexable inserts	Type
	M4258.051-P20-02-25-F	2.000	0.984	2	0.3	4 2	SDM . 120408 LDM . 1704 .. R
	M4258.064-P30-02-36-F	2.500	1.378	2	0.7	6 2	
	M4258.076-P40-03-36-F	3.000	1.378	3	1.3	9 3	

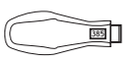
Bodies and assembly parts are included in the scope of delivery.

C2

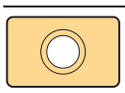
Assembly parts

	D_c [Inch]	2.000–3.000
	Clamping screw for insert Tightening torque	FS1453 (Torx 15IP) 31 in lbs

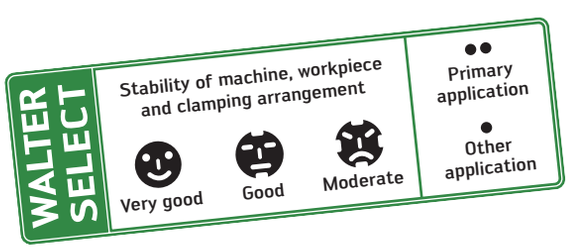
Accessories

	D_c [Inch]	2.000–3.000
	Torque screwdriver. analogue Tightening torque	FS2004 13 - 44 in lbs
	Torque screwdriver. digital Tightening torque	FS2248 9 - 53 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

	Designation	r mm	b mm	P HC WKP25S	P HC WKP35G	P HC WKP35S	P HC WSP45S	M HC WSM35S	M HC WSM45X	M HC WSP45S	K HC WAK15	K HC WKK25S	K HC WKP25S	K HC WKP35G	K HC WKP35S	S HC WSM35S	S HC WSM45X	S HC WSP45S
	LDMT170408R-D51	0.8	1.6	●●	●	●	●			●			●	●	●			●
	LDMT170408R-D57	0.8	1.6	●●	●	●	●	●		●		●	●	●	●	●		●
	LDMT170408R-F57	0.8	1.6	●●	●	●	●	●		●	●●		●	●	●	●		●
	LDMT170412R-D51	1.2	1.6		●	●	●			●				●	●			●
	LDMW170408R-A57	0.8	1.6	●	●	●							●	●	●			
	SDMT120408-D51	0.8		●●	●	●	●			●			●	●	●			●
	SDMT120408-D57	0.8		●●	●	●	●	●		●		●	●	●	●	●		●
	SDMT120408-F57	0.8		●●	●	●	●	●	●	●	●●		●	●	●	●	●	●
	SDMW120408-A57	0.8		●	●	●							●	●	●			

HC = Coated carbide



Cutting data for roughing
WKP35G/WMP45G

= Cutting data for wet machining
= Dry machining is possible

Material group	Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R_m N/mm²	Machining group [1]			Cutting material grades: Starting values for cutting speed v_c [sfm] HC Face/shoulder milling WKP35G a_e / D_c* 1/1 1/2	Cutting material grades: Starting values for cutting speed v_c [sfm] HC Face/shoulder milling WKP35G a_e / D_c* 1/5
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●	820	984
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●	722	853
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●	705	820
		C > 0.55%	Annealed	190	639	P4	●	●●	722	853
		C > 0.55%	Heat-treated	300	1013	P5	●	●●	525	591
		Free-machining steel (short-chipping)	Annealed	220	745	P6	●	●●	689	787
	Low-alloy steel	Annealed		175	591	P7	●	●●	722	886
		Heat-treated		300	1013	P8	●	●●	558	623
		Heat-treated		380	1282	P9	●	●●	427	492
		Heat-treated		430	1477	P10	●	●●	361	427
	High-alloyed steel and high-alloyed tool steel	Annealed		200	675	P11	●	●●	427	525
		Hardened and tempered		300	1013	P12	●	●●	262	295
		Hardened and tempered		400	1361	P13	●	●●	230	262
	Stainless steel	Ferritic/martensitic, annealed		200	675	P14	●	●●	459	525
		Martensitic, heat-treated		330	1114	P15	●	●●	295	361
M	Stainless steel	Austenitic, quench hardened		200	675	M1	●●	●		
		Austenitic, precipitation hardened (PH)		300	1013	M2	●●	●		
		Austenitic/ferritic, duplex		230	778	M3	●●	●		
K	Malleable cast iron	Ferritic		200	675	K1	●	●●	525	623
		Pearlitic		260	867	K2	●	●●	459	558
	Grey cast iron	Low tensile strength		180	602	K3	●	●●	984	1083
		High tensile strength/austenitic		245	825	K4	●	●●	623	722
	Cast iron with spheroidal graphite	Ferritic		155	518	K5	●	●●	656	722
		Pearlitic		265	885	K6	●	●●	427	492
	GGV (CGI)			200	675	K7	●	●●	427	525
N	Wrought aluminium alloys	Not hardenable		30	–	N1	●●			
		Hardenable, hardened		100	343	N2	●●			
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	●●			
		≤ 12% Si, hardenable, hardened		90	314	N4	●●			
		> 12% Si, not hardenable		130	447	N5	●●			
	Magnesium-based alloys[3]			70	250	N6	●●			
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	343	N7	●●			
		Brass, bronze, red brass		90	314	N8	●●			
		Cu alloys, short-chipping		110	382	N9	●●			
		High-tensile, Ampco		300	1013	N10	●●			
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●			
			Hardened	280	943	S2	●●			
		Ni- or Co-based	Annealed	250	839	S3	●●			
			Hardened	350	1177	S4	●●			
			Cast	320	1076	S5	●●			
	Titanium alloys	Pure titanium		200	675	S6	●●			
		α and β alloys, hardened		375	1262	S7	●●			
		β alloys		410	1396	S8	●●			
	Tungsten alloys			300	1013	S9	●●			
	Molybdenum alloys			300	1013	S10	●●			
H	Hardened steel	Hardened and tempered		50 HRC	–	H1		●●		
		Hardened and tempered		55 HRC	–	H2		●●		
		Hardened and tempered		60 HRC	–	H3		●●		
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4		●●		
O	Thermoplastics	Without abrasive fillers				O1	●●	●	1312	1312
	Thermosets	Without abrasive fillers				O2	●●	●	984	984
	Plastic, glass-fibre-reinforced	GFRP				O3				
	Plastic, carbon-fibre-reinforced	CFRP				O4				
	Plastic, aramid-fibre-reinforced	AFRP				O5				
	Graphite (technical)			80 Shore		O6		●●		

●● Recommended application (the specified cutting data is regarded as starting values for the recommended application)
● Possible application, reduce cutting data by 30–50% (increase by approx. 70–80% for ISO M)

[1] The classification of the machining groups can be found on page C672 in the Walter General Catalog 2018.
[2] Cutting data can also be used without coolant.
* a_e / D_c = 1 / 10, v_c = 10% higher than 1 / 5
[3] Water-miscible coolants must not be used when machining magnesium alloys.

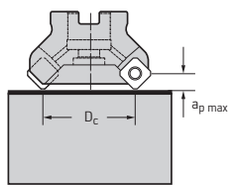
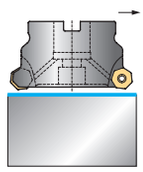
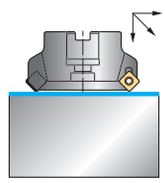
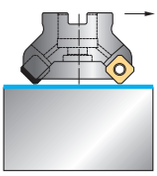
C2

The specified cutting data are average standard values.
For specific applications, adjustment is recommended.

	Cutting material grades													
	Starting values for cutting speed v_c [sfm]													
	HC													
	Shoulder milling with full effective porcupine milling cutters WKP35G a_e / D_c*		Slot milling with half effective porcupine milling cutters WKP35G a_e / D_c*		Circular interpolation milling WKP35G a_e / D_c*		Slot milling with slotting cutters WKP35G a_e / D_c		Copy milling WKP35G a_e / D_c			Copy milling WMP45G a_e / D_c		
	1/2	1/5	1/1 1/2	1/5	1/1 1/2	1/5	1/4*	1/10	1/1	1/5	1/10	1/1 1/2	1/5	1/20
	640	820	640	820	722	886	640	820	787	984	984			
	558	705	558	705	656	755	558	705	656	837	902			
	509	623	509	623	689	755	525	673	607	787	787			
	558	705	558	705	656	755	525	656	509	640	689			
	427	476	427	476	459	525	427	476	476	591	607			
	492	689	492	689	623	722	525	673	656	837	902			
	558	705	558	705	656	787	558	705	541	689	755			
	427	476	427	476	492	558	410	476	509	640	705			
	279	328	279	328	361	427	279	312	476	591	656			
	262	295	262	295	262	328	262	295	394	509	558			
	328	394	328	394	394	459	328	394	361	476	525			
	213	246	213	246	262	295	213	262	246	328	328			
	197	230	197	230	230	262	197	230	213	262	295			
	344	394	344	394	394	459	344	427	394	509	558	410	492	607
	197	230	197	230	197	230	197	279	361	476	509	328	394	492
												394	459	591
												328	394	509
												361	427	541
	492	558	492	558	361	394	459	509	820	951	1017			
	394	459	394	459	427	525	443	476	656	787	853			
	525	591	525	591	886	984	525	591	787	919	984			
	394	459	394	459	492	591	394	459	623	755	820			
	459	492	459	492	591	656	459	492	787	919	984			
	344	377	344	377	394	459	361	394	623	755	820			
	492	558	492	558	394	492	394	443	591	722	820			
												230	262	328
												164	164	213
												180	197	262
												115	131	164
												148	164	197
												230	295	361
												148	164	197
												115	131	164
												148	164	197
												148	164	197
	1312	1312	1312	1312	984	984	1312	1312	1312	1476	1640			
	984	984	984	984	1312	1312	984	984	984	1148	1312			

C2

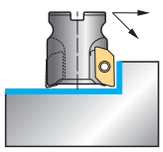
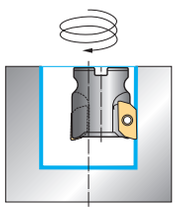
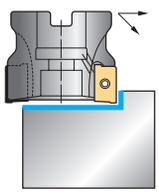
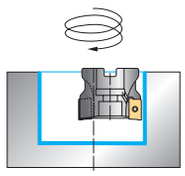
Feed determination (starting values)

Material group	Cutter type		M3024	M4003		M5009	
	Feed per tooth f_{z0} for $a_e = D_c$ $a_p = a_{p\,max} = L_c$						
	Lead angle κ		90°	45°		45°	
			f_{z0} [in]	f_{z0} [in]	f_{z0} [in]	f_{z0} [in]	
	Tool diameter or diameter range [mm]		63–160	20–100	25–160	25–100	
	Tool diameter or diameter range [in]		2.50-6.00	0.75-6.00	1.00-6.00	1.00-6.00	
	Maximum depth of cut $a_{p\,max} = L_c$ [in]		0.236	0.177	0.256	0.197	
P	Non-alloyed steel [1]		0.018	0.008	0.010	0.007	
P	Low-alloy steel		0.016	0.006	0.008	0.006	
P	High-alloyed steel and tool steel		0.013	0.006	0.008	0.006	
P	Stainless steel		0.009	0.005	0.006	0.004	
M	Stainless steel [2]		0.007	0.004	0.005	0.004	
K	Malleable cast iron		0.013	0.008	0.010	0.007	
K	Grey cast iron		0.022	0.010	0.012	0.009	
K	Cast iron with spheroidal graphite		0.018	0.008	0.010	0.007	
K	GGV (CGI)		0.011	0.007	0.008	0.006	
N	Wrought aluminium alloys			0.005	0.006	0.004	
N	Cast aluminium alloys			0.005	0.006	0.004	
N	Magnesium alloys			0.004	0.005	0.004	
N	Copper and copper alloys (bronze/brass)			0.004	0.005	0.004	
S	Heat-resistant alloys			0.004	0.005	0.004	
S	Titanium alloys			0.004	0.005	0.004	
S	Tungsten alloys			0.004	0.005	0.004	
S	Molybdenum alloys			0.004	0.005	0.004	
H	Hardened steel					0.004	
H	Hardened cast iron					0.004	
O	Thermoplastics			0.004	0.006	0.004	
O	Plastic, carbon-fibre-reinforced				0.006		
O	Graphite (technical)			0.004		0.004	
	Indexable insert types		XNMU0906..	SD..09T3AZN..	SD..1204AZN..	SN.X0904..	
	Correction factor **Ka_e**	$a_e / D_c =$ 1/1–1/2	0.0394	0.0394	0.0394	0.0394	
		1/5	0.0433	0.0433	0.0433	0.0433	
	for the feed per tooth depending on the ratio of width of cut a_e to milling cutter diameter D_c	1/10	0.0472	0.0472	0.0472	0.0472	
		1/20	0.0512	0.0512	0.0512	0.0512	
		1/50					
		$a_p =$ 1					
	Correction factor **Ka_p** for the feed per tooth depending on the depth of cut **a_p**	2					
		3					
		4					
		6					
		8					
	$f_z = f_{z0} \cdot Ka_e \cdot Ka_p$	$a_{p\,max} = L_c$					

[1] and steel casting
[2] and austenitic/ferritic
* only possible if $a_p < 0.75 \times D_c$
** only with $a_e/D_c < 1/5$

C2

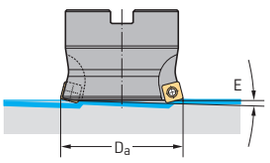
The specified feed rates are average standard values.
For specific applications, adjustment is recommended.

	M2331				M5130		M5130	
	 For face/shoulder milling		 For circular interpolation milling		 For shoulder milling operations		 For circular interpolation milling operations	
	90°		90°		90°		90°	
	f_{z0} [in]		f_{z0} [in]		f_{z0} [in]	f_{z0} [in]	f_{z0} [in]	f_{z0} [in]
	32–50	40–50	32–50	40–50	10–63	25–160	10–63	25-160
	1.25-2.00	1.50-2.00	1.25-2.00	1.50-2.00	0.39-2.48	0.98-6.30	0.39-2.48	0.98-6.30
	0.591	0.787	0.591	0.787	0.39-2.50	1.00-6.00	0.39-2.50	1.00-6.00
					0.12	0.26	0.10	0.23
					0.08	0.19	0.07	0.17
					0.08	0.19	0.07	0.17
					0.06	0.16	0.06	0.14
					0.06	0.13	0.06	0.11
					0.10	0.26	0.08	0.23
					0.12	0.32	0.10	0.28
					0.10	0.26	0.08	0.23
					0.08	0.19	0.08	0.23
	0.006	0.008	0.005	0.007	0.08		0.08	
	0.005	0.006	0.005	0.007	0.10		0.08	
	0.005	0.005	0.005	0.007	0.08		0.07	
	0.004	0.004	0.004	0.005	0.06		0.07	
					0.06	0.16	0.06	0.14
					0.06	0.16	0.06	0.14
					0.06	0.16	0.06	0.14
					0.06	0.16	0.06	0.14
					0.06	0.13		
					0.08	0.15		
	0.006	0.006	0.000	0.000	0.10		0.10	
	0.005	0.005	0.000	0.000	0.08	0.16	0.08	0.16
	ZDGT15A4..	ZDGT20A..	ZDGT15A4..	ZDGT20A5..	AC..0602..	BC..1605..	AC..0602..	BC..1605..
	0.0394	0.0394	0.0394	0.0394	1.0	1.0	1.0	1.0
	0.0433	0.0433	0.0433	0.0433	1.1	1.1	1.1	1.1
	0.0472	0.0472	0.0472	0.0472	1.2	1.2	1.2	1.2
	0.0512	0.0512	0.0512	0.0512	1.3	1.3	1.3	1.3

C2

Application information for M4002/F2010 high-feed face milling cutters

Ramping



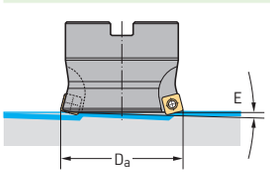
Maximum feed angle E [°]

D_a [mm]	SD..06T2..						
	r = 0.4	r = 0.8	r = 1.2	r = 1.6	r = 2.0	r = 2.5	ZDR
20	3.7	2.9	2.2				1.5
25	2.2	1.8	1.4				0.6
32	1.3	1	0.7				0.4
35	1.2	1	0.7				0.5
40	1.1	0.9	0.7				0.3
42	0.8	0.7	0.5				0.3
50	0.8	0.7	0.5				0.3
52	0.7	0.6	0.5				0.3
63	0.6	0.4	0.3				0.2
66	0.5	0.4	0.3				0.2

D_a [mm]	SD..09T3..						
	r = 0.4	r = 0.8	r = 1.2	r = 1.6	r = 2.0	r = 2.5	ZDR
25	4.3	3.5	2.8	2.3	1.2		1.2
32	3.6	3.1	2.7	2.3	1.9		1.8
35	2.9	2.5	2.2	1.9	1.5		1.6
40	2.2	1.9	1.6	1.4	1.2		1.2
42	2	1.7	1.5	1.3	1		1
50	1.5	1.3	1.1	1	0.8		0.8
52	1.3	1.2	1	0.8	0.7		0.7
63	1	0.8	0.7	0.6	0.5		0.5
66	0.9	0.8	0.7	0.6	0.4		0.4

D_a [mm]	SD..120408..						
	r = 0.4	r = 0.8	r = 1.2	r = 1.6	r = 2.0	r = 2.5	ZDR
50		1.9	1.7	1.5	1.3	1	1
52		1.8	1.6	1.4	1.2	0.9	0.9
63		1.2	1.1	0.9	0.8	0.6	0.6
66		1.1	1	0.9	0.7	0.6	0.6
80		0.8	0.7	0.6	0.5	0.4	0.4
85		0.7	0.7	0.6	0.5	0.4	0.3
100		0.5	0.4	0.4	0.3	0.2	0.2
125		0.4	0.4	0.3	0.3	0.2	0.2

Ramping



Maximum feed angle E [°]

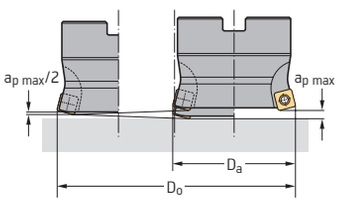
D_a [inch]	SD..06T2..						
	r = 0.016	r = 0.031	r = 0.047	r = 0.063	r = 0.079	r = 0.098	ZDR
0.750	4.2	3.3	2.5				1.5
1.000	2.2	1.6	1.2				0.7
1.250	1.4	1.1	0.8				0.5
1.500	1.2	0.9	0.7				0.3
2.000	0.7	0.6	0.4				0.3
2.500	0.4	0.3	0.2				0.1

D_a [inch]	SD..09T3..						
	r = 0.016	r = 0.031	r = 0.047	r = 0.063	r = 0.079	r = 0.098	ZDR
1.000	4	3.3	2.6	1.9	1.3		1.2
1.250	3.6	3.2	2.8	2.3	2		2
1.500	2.4	2.1	1.8	1.5	1.3		1.3
2.000	1.4	1.2	1	0.9	0.7		0.7
2.500	1	0.8	0.7	0.6	0.5		0.5

D_a [inch]	SD..1204..						
	r = 0.0157	r = 0.0315	r = 0.0472	r = 0.0623	r = 0.0787	r = 0.0984	ZDR
2.000		1.9	1.6	1.4	1.2	1.0	1.0
2.500		1.2	1.1	0.9	0.8	0.6	0.6
3.000		0.9	0.8	0.7	0.6	0.5	0.4
4.000		0.5	0.4	0.3	0.3	0.2	0.2

Application information for M4002/F2010 high-feed face milling cutters

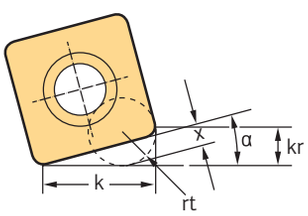
Circular interpolation of a hole into solid material



Diameter range for milling a hole in one pass [mm]/[inch]

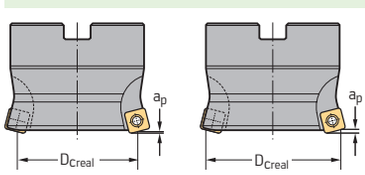
	Indexable insert					
	SD..06T204		SD..09T308		SD..120408	
D_A [mm]	$D_{0\ min}$[mm]	$D_{0\ max}$[mm]	$D_{0\ min}$[mm]	$D_{0\ max}$[mm]	$D_{0\ min}$[mm]	$D_{0\ max}$[mm]
20	28.6	40				
25	38.6	50	33.26	50		
32	52.6	64	47.26	64		
35	58.6	70	53.26	70		
40	68.6	80	63.26	80		
42	72.6	84	67.26	84		
50	88.6	100	83.26	100	77.12	100
52	92.6	104	87.26	104	81.12	104
63	114.6	126	109.26	126	103.12	126
66	120.6	132	115.26	132	109.12	132
80					137.12	160
85					147.12	170
100					177.12	200
125					227.12	250
D_a [inch]	$D_{0\ min}$[inch]	$D_{0\ max}$[inch]	$D_{0\ min}$[inch]	$D_{0\ max}$[inch]	$D_{0\ min}$[inch]	$D_{0\ max}$[inch]
0.75	1.051	1.500				
1.00	1.551	2.000	1.341	2.000		
1.25	2.051	2.500	1.841	2.500		
1.50	2.551	3.000	2.341	3.000		
2.00	3.551	4.000	3.341	4.000	3.099	4.000
2.50	4.551	5.000	4.341	5.000	4.099	5.000
3.00					5.099	6.000
4.00					7.099	8.000

Programming information



Indexable insert	α [°]	rt		x		kr		k	
		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
SD . . 06T212	15	2.1	0.083	0.68	0.027	2.2	0.087	4.86	0.191
SD . . 06T2ZDR	15	1.3	0.051	0.72	0.028	2.63	0.104	4.29	0.169
SD . . 06T204	15	1.7	0.067	1	0.039	1.83	0.072	5.7	0.224
SD . . 09T320	15	3.3	0.130	0.94	0.037	3.41	0.134	7.07	0.278
SD . . 09T3ZDR	15	2.4	0.094	1.09	0.043	3.65	0.144	6.9	0.272
SD . . 09T308	15	2.7	0.106	1.43	0.056	2.83	0.111	8.37	0.330
SD . . 120425	15	4.3	0.169	1.32	0.052	4.46	0.176	9.61	0.378
SD . . 1204ZDR	15	3.1	0.122	1.58	0.062	4.85	0.191	9.31	0.367
SD . . 120408	15	3.5	0.138	2.02	0.080	3.65	0.144	11.44	0.450

Increase in productivity



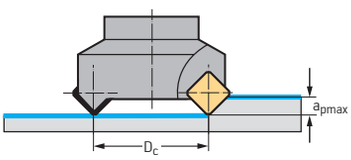
$D_{c\,real} \approx D_c + 8 \cdot a_p$

– In order to achieve an increase in productivity. it is recommended to use the $D_{c\,real}$ when calculating the cutting data.
– The $D_{c\,real}$ depends on the depth of cut a_p (see figure).

C2

Application information for M4003/F2010 face milling cutters

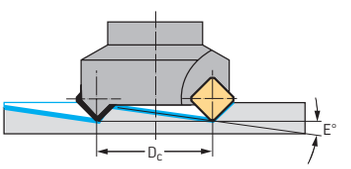
Face milling



Maximum milling depth a_p [mm]

	SD . . 09T3AZN	SD . . 1204AZN
a_p	4.5	6.5

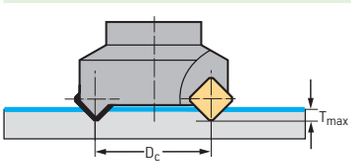
Ramping



Maximum feed angle E [°]

Metric			Inch			
D_c [mm]	SD..09T3AZN..	SD..1204AZN..	D_c [mm]	D_c [inch]	SD..09T3AZN..	SD..1204AZN..
20	23.2		19.05	0.75	25.0	
25	16.9	25.9	25.4	1	16.5	25.3
32	12.1	17.9	31.75	1.25	12.3	18.1
40	9.1	13.2	38.1	1.5	9.7	14.0
50	7.0	9.8	50.8	2	6.8	9.6
63	5.3	7.4	63.5	2.5	5.3	7.3
80	4.0	5.6	76.2	3	4.3	5.9
100	3.1	4.3	101.6	4	3.1	4.2
125		3.4	127	5		3.3
160	6.8	2.6	152.4	6		2.7

Vertical plunging



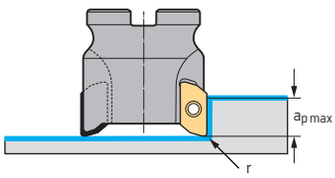
Maximum plunging depth T_{max} [mm]

	SD..09T3AZN..	SD..1204AZN..
T_{max}	4.5	6.0

C2

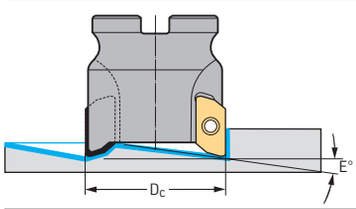
Application information for M2331 ramping milling cutters

Shoulder milling



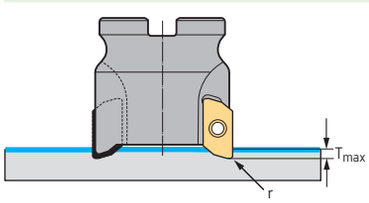
Corner radius r [mm]	Maximum milling depth $a_{p\,max}$ [mm] ZDGT15A4..	ZDGT20A5..
0.4	16.0	21.3
0.8	16.0	21.3
1.2	15.9	21.2
1.6	15.8	21.0
2.0	15.7	20.9
2.5	15.5	20.8
3.0	15.4	20.6
4.0	15.1	20.3
5.0		20.0
6.0		19.8
6.4		19.7

Ramping



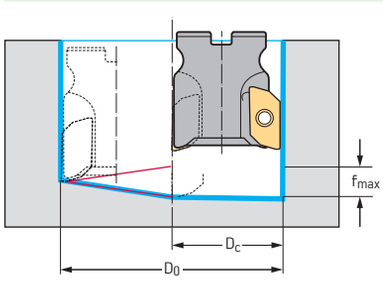
D_c [mm]	Maximum feed angle E [°] ZDGT15A4..	ZDGT20A5..
32	11	
40	7	12
50	5	8
D_c [inch]		
1.500	8	
2.000	5.4	8.6

Vertical plunging



Corner radius r [mm]	Maximum plunging depth T_{max} [mm] ZDGT15A4..	ZDGT20A5..
0.4	4.5	6.0
0.8	4.5	6.0
1.2	4.4	5.9
1.6	4.2	5.7
2.0	4.1	5.6
2.5	4.0	5.5
3.0	3.8	5.3
4.0	3.5	5.0
5.0		4.7
6.0		4.5
6.4		4.4

Circular interpolation of a hole into solid material



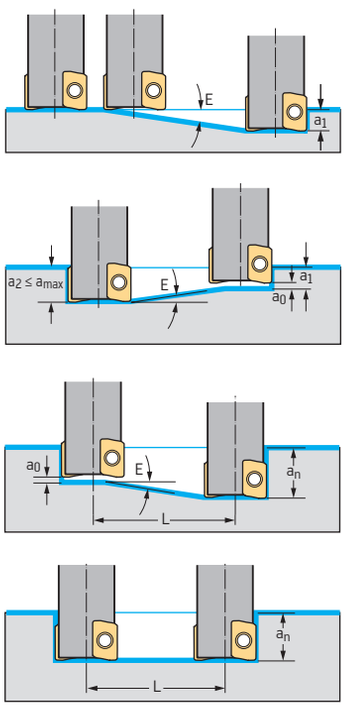
Milling cutter dia.	Possible hole diameters and axial feeds [mm]/[inch] ZDGT15A4..			ZDGT20A5..		
D_c [mm]	$D_{0\,min}$ [mm]	$D_{0\,max}$ [mm]	f_{max} [mm]	$D_{0\,min}$ [mm]	$D_{0\,max}$ [mm]	f_{max} [mm]
32	45	64	7.9			
40	61	80	8.1	54	80	9.3
50	81	100	8.5	74	100	10.6
D_c [inch]	$D_{0\,min}$ [inch]	$D_{0\,max}$ [inch]	f_{max} [inch]	$D_{0\,min}$ [inch]	$D_{0\,max}$ [inch]	f_{max} [inch]
1.500	2.244	3.000	0.325			
2.000	3.244	4.000	0.368	2.968	4.000	0.455

Designation	Tightening screw for adaptor
M2331-040-B16-03-15	M8 × 40 (SW6)
M2331-050-B22-02-15	M10 × 35 (SW8)
M2331-050-B22-03-15	M10 × 35 (SW8)

Designation	Tightening screw for adaptor
M2331-050-B22-04-15	M10 × 35 (SW8)
M2331-050-B22-02-20	M10 × 40 (SW8)
M2331-050-B22-03-20	M10 × 40 (SW8)

Application information for M5130 shoulder milling cutter

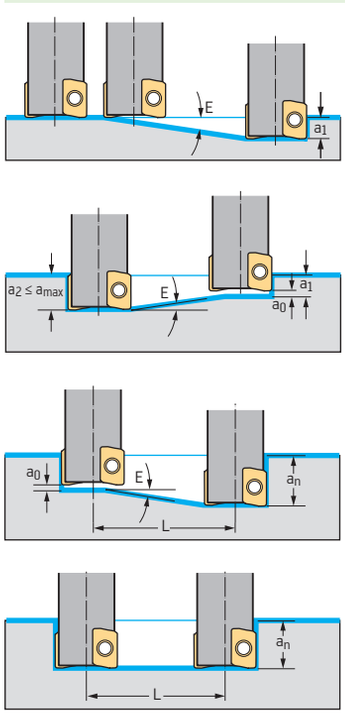
Ramping and circular plunging into solid material



Plunging with M5130 shoulder milling cutter/plunging angle E_{max} [°]

Milling cutter diameter D_c [mm]	AC..0602.. $a_{p\,max}$ = 5 mm				BC..1605.. $a_{p\,max}$ = 15 mm			
	E_{max} [°]	$D_{0\,min}$ [mm]	$D_{0\,max}$ [mm]	a_0 [mm]	E_{max} [°]	$D_{0\,min}$ [mm]	$D_{0\,max}$ [mm]	a_0 [mm]
10	6.7	15	20	0.58				
12	4.8	18	24	0.57				
14	3.7	21	28	0.57				
16	3.0	25	32	0.56				
18	2.5	29	36	0.56				
20	2.1	33	40	0.55				
22	1.9	37	44	0.55				
25	1.6	43	50	0.55	8.8	32	50	2
28					7.1	38	56	2
32	1.2	57	64	0.55	5.8	46	64	2
35					5.0	52	70	2
40	0.9	73	80	0.55	4.1	62	80	2
42					3.8	66	84	2
50	0.7	93	100	0.55	3.0	82	100	2
52					2.9	86	104	2
63	0.5	119	126	0.55	2.3	108	126	2
66					2.1	114	132	2
80					1.7	142	160	2
85					1.6	152	170	2
100					1.3	182	200	2
125					1.0	232	250	2
160					0.8	302	320	2

Ramping and circular plunging into solid material

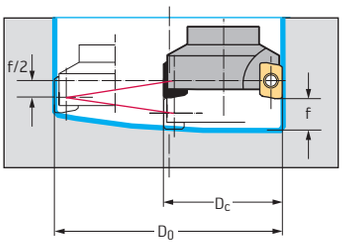


Plunging with M5130 shoulder milling cutter/plunging angle E_{max} [°]

Milling cutter diameter D_c [inch]	AC..0602.. $a_{p\,max}$ = 5 mm				BC..1605.. $a_{p\,max}$ = 15 mm			
	E_{max} [°]	$D_{0\,min}$ [inch]	$D_{0\,max}$ [inch]	a_0 [inch]	E_{max} [°]	$D_{0\,min}$ [inch]	$D_{0\,max}$ [inch]	a_0 [inch]
0.500	4.4	0.709	1.00	0.022				
0.625	3.0	0.974	1.25	0.022				
0.750	2.3	1.224	1.50	0.022				
1.000	1.6	1.724	2.00	0.022	8.5	1.291	2.00	0.079
1.250	1.2	2.224	2.50	0.022	5.8	1.791	2.50	0.079
1.500	1.0	2.724	3.00	0.022	4.4	2.291	3.00	0.079
2.000	0.7	3.724	4.00	0.022	3.0	3.291	4.00	0.079
2.500	0.5	4.724	5.00	0.022	2.2	4.291	5.00	0.079
3.000					1.8	5.291	6.00	0.079
4.000					1.3	7.291	8.00	0.079
5.000					1.0	9.291	10.00	0.079
6.000					0.8	11.291	12.00	0.079

Application information for M5130 shoulder milling cutter

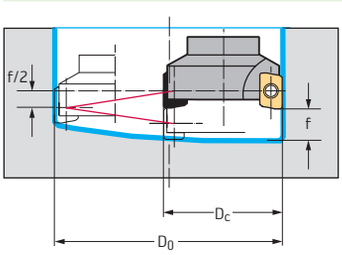
Circular interpolation of a hole into solid material



Max. axial feed per tool revolution ("thread pitch") f [mm]

Machined hole diameter D_0 [mm]	AC..0602.. D_c [mm]											
	10	12	14	16	18	20	22	25	32	40	50	63
15	1.8											
20	3.7	2.1										
30	5.0	4.7	3.3	2.3	1.6							
40	5.0	5.0	5.0	4.0	3.0	2.3	1.9					
50	5.0	5.0	5.0	5.0	4.4	3.5	2.9	2.2				
60	5.0	5.0	5.0	5.0	5.0	4.6	4.0	3.1	1.8			
70	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.9	2.5			
80	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.8	3.2	2.0		
90	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.8	2.5		
100	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.5	3.0	1.9	
120	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.9	2.7	1.6
150	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.8	2.4
180	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.2
200	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3.8
250	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Circular interpolation of a hole into solid material



Max. axial feed per tool revolution ("thread pitch") f [inch]

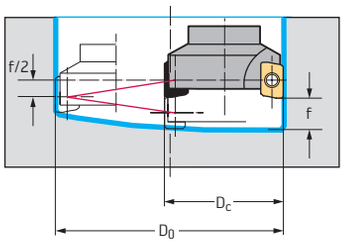
Machined hole diameter D_0 [inch]	AC..0602.. D_c [inch]							
	0.500	0.625	0.750	1.000	1.500	2.000	2.500	3.000
0.591								
0.787	0.069							
1.181	0.165	0.092						
1.575	0.197	0.156	0.104					
1.969	0.197	0.197	0.154	0.085				
2.362	0.197	0.197	0.197	0.120	0.073			
2.756	0.197	0.197	0.197	0.154	0.099	0.069		
3.150	0.197	0.197	0.197	0.189	0.125	0.090		
3.543	0.197	0.197	0.197	0.197	0.151	0.112	0.059	
3.937	0.197	0.197	0.197	0.197	0.177	0.134	0.074	
4.724	0.197	0.197	0.197	0.197	0.197	0.177	0.105	0.061
5.906	0.197	0.197	0.197	0.197	0.197	0.197	0.150	0.093
7.087	0.197	0.197	0.197	0.197	0.197	0.197	0.195	0.126
7.874	0.197	0.197	0.197	0.197	0.197	0.197	0.197	0.147
9.843	0.197	0.197	0.197	0.197	0.197	0.197	0.197	0.197

C2

Application information for M5130 shoulder milling cutter

Circular interpolation of a hole into solid material

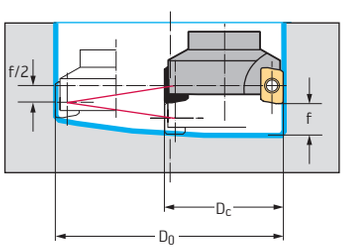
Max. axial feed per tool revolution ("thread pitch") f [mm]



Machined hole diameter D_0 [mm]	BC..1605.. D_c [mm]														
	25	28	32	35	40	42	50	52	63	66	80	85	100	125	160
15															
20															
30															
40	7.3	4.7													
50	12.2	8.6	5.7	4.1											
60	15.0	12.5	8.9	6.9											
70	15.0	15.0	12.1	9.6	6.8	5.8									
80	15.0	15.0	15.0	12.4	9.0	7.9									
90	15.0	15.0	15.0	15.0	11.3	10.0	6.6	6.0							
100	15.0	15.0	15.0	15.0	13.5	12.1	8.2	7.6							
120	15.0	15.0	15.0	15.0	15.0	15.0	11.5	10.8	7.2	6.2					
150	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	11.0	9.7	6.5	5.7			
180	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.8	13.1	9.3	8.3			
200	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	11.2	10.1	7.1		
250	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.5	10.7	6.9	
300	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.3	9.6	
350	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	12.3	8.3
400	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	10.5
450	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	12.7
500	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.9

Circular interpolation of a hole into solid material

Max. axial feed per tool revolution ("thread pitch") f [inch]



Machined hole diameter D_0 [inch]	BC..1605.. D_c [inch]								
	1.000	1.250	1.500	2.000	2.500	3.000	4.000	5.000	6.000
0.591									
0.787									
1.181	0.085								
1.575	0.270	0.104							
1.969	0.455	0.229	0.113						
2.362	0.591	0.355	0.208						
2.756	0.591	0.481	0.304	0.124					
3.150	0.591	0.591	0.399	0.189					
3.543	0.591	0.591	0.494	0.254	0.126				
3.937	0.591	0.591	0.589	0.319	0.173				
4.724	0.591	0.591	0.591	0.448	0.268	0.170			
5.906	0.591	0.591	0.591	0.591	0.411	0.287	0.136		
7.087	0.591	0.591	0.591	0.591	0.554	0.404	0.220		
7.874	0.591	0.591	0.591	0.591	0.591	0.481	0.276	0.158	
9.843	0.591	0.591	0.591	0.591	0.591	0.591	0.417	0.266	0.169
11.811	0.591	0.591	0.591	0.591	0.591	0.591	0.557	0.373	0.255
13.780	0.591	0.591	0.591	0.591	0.591	0.591	0.591	0.481	0.341
15.748	0.591	0.591	0.591	0.591	0.591	0.591	0.591	0.589	0.428
17.717	0.591	0.591	0.591	0.591	0.591	0.591	0.591	0.591	0.514
19.685	0.591	0.591	0.591	0.591	0.591	0.591	0.591	0.591	0.591

Information on high-speed applications

1. Maximum permissible speeds:
   The limit values specified in the tables should not be exceeded. Otherwise correct operation and/or reliability are no longer guaranteed.
2. Only use original Walter indexable inserts and assembly parts (screws. etc.). New screws should be used after having replaced the indexable inserts five times at the most.
3. Observe the torques specified in the catalog.
4. Balancing:
   Balancing in two steps is required when milling at fast speeds (> 6000 rpm) or at circumferential speeds of > 1000 m/min: 3280 sfm
   a. Basic balancing of the tool body including indexable inserts (can be carried out by Walter if required). In this case. tool adaptors that have been balanced separately beforehand must be used.
   b. Fine balancing of the tool when fully mounted on the adaptor. The fine balancing operation is strongly recommended. as even the smallest runout can seriously affect the balance status.
5. Short projection lengths reduce runout. and increase spindle service life. The specified speeds only apply to the use of tools without additional extensions and for tools with a neck length of ≤ 2.2 × D_c.
   For tools with longer neck lengths. the speeds must be reduced upon consultation with Walter.

Metric

			n_{max} [rpm] with D											
Tool	**Safety-related parts**	**In relation to**	**Ø 10**	**Ø 12**	**Ø 14**	**Ø 16**	**Ø 18**	**Ø 20**	**Ø 22**	**Ø 25**	**Ø 28**	**Ø 32**	**Ø 35**	
M3024	XN.U0705...	D_c												
	XN.U0906...	D_c												
M4002	SD..06T2...	D_a						28.300		25.300		22.400		
	SD..09T3...	D_a								34.900		30.800	29.500	
	SD..1204...	D_a												
M4003	SD..09T3...	D_c						40.000		38.000		33.600		
	SD..1204...	D_c								33.300		29.400		
M2331	ZD..15A4..	D_c										40.000		
	ZD..20A5..	D_c												
M4130	LD..08T204...	D_c				40000		34.300		29.400				
	LD..14T308...	D_c								40.000		33.600		
	LD..170408...	D_c												
M5130	AC.T0602..	D_c	40.000	40.000	40.000	40.000	40.000	40.000	40.000	40.000		36.600		
	BC.T1605..	D_c								22.300	20.900	19.300	18.300	
M2136	SNEF...	D_c												
M4258	SD..1204..	D_c												
	LD..1704..	D_c												
M2471	RNMX12...	D_c										26.600		

Inch

			n_{max} [rpm] with D						
Tool	**Safety-related parts**	**In relation to**	**Ø 0.375**	**Ø 0.5**	**Ø 0.625**	**Ø 0.750**	**Ø 1.000**	**Ø 1.250**	**Ø 1.500**
M3024	XN.U0705...	D_c							12.800
	XN.U0906...	D_c							
M4002	SD..06T2...	D_a	28.300				25.300	22.400	20.000
	SD..09T3...	D_a					34.900	30.800	27.600
	SD..1204...	D_a							
M4003	SD..09T3...	D_c	40.000				37.700	33.800	30.800
	SD..1204...	D_c					33.000	29.500	27.000
M2331	ZD..15A4..	D_c							40.000
	ZD..20A5..	D_c							
M2136	SNEF...	D_c							
M5130	AC.T0602..	D_c		40.000	40.000	40.000	40.000	36.800	33.400
	BC.T1605..	D_c					22.100	19.300	17.400
M4258	SD..1204..	D_c							
	LD..1704..	D_c							
M2471	RNMX12...	D_c							

C2

6. Safety guard:
   Appropriate safety guards or machine encapsulations must be used to safely collect particles which spin off. such as chips or cutting edge parts that are broken as a result of collisions.
7. Damaged tools:
   The operating speed must be specified for the repair of an HSC tool. The table values only apply to tools with a condition equivalent to new condition following repair.
8. Application of standards:
   Walter recommends using the balancing standard DIN 69888. which describes the balancing of tools and the requirements in the cutting area. DIN 69888 is tailored to the needs of the cutting area. and describes the tool balancing requirements in a practical way. DIN ISO 1940. which was previously often used. describes balancing for all areas of mechanical engineering.
   The requirements when working at circumferential speeds of >1000 m/min are described in DIN ISO 15641.

		n_{max} [rpm] with D												
		Ø 40	Ø 42	Ø 50	Ø 52	Ø 63	Ø 66	Ø 80	Ø 85	Ø 100	Ø 125	Ø 160	Ø 200	Ø 250	Ø 315
		12.500		11.200		10.000		8.800		7.900	7.000	6.200	4.200	3.800	3.350
						8.500		7.400		6.500	5.200	4.100			
		20.000		17.900	17.600	16.000	15.600								
		27.600		24.600	24.200	22.000	21.400								
				17.900	17.600	16.000	15.600	14.100		12.600	11.300		4.200	3.800	3.350
		30.100		26.900		24.000		21.200		19.000			4.200	3.800	3.350
		26.300		23.500		21.000		18.600		16.600	14.900	13.100	4.200	3.800	3.350
		39.800		34.400											
		40.000		34.000											
		28.800		25.000											
				17.300		15.000		12.900		11.400	10.000				
		32.500		28.900		25.700									
		16.900	16.500	14.900	14.600	13.200	12.800	11.600	11.200	10.300	9.100	8.000			
				11.200		10.000		8.800		7.900	7.000	6.200			
				17.300		15.000		12.900							
				17.300		15.000		12.900							
		23.300		20.400	20.000	18.000									

		n_{max} [rpm] with D								
		Ø 2.000	Ø 2.500	Ø 3.000	Ø 4.000	Ø 5.000	Ø 6.000	Ø 8.000	Ø 10.000	Ø 12.000
		11.100	9.900	9.000	7.800	7.000	6.400	4.200	3.800	3.350
			8.400	7.600	6.500	5.100	4.300			
		17.900	16.000							
		24.600	22.000							
		17.900	16.000	14.100	12.600			4.200	3.800	3.350
		26.700	23.900	21.800	18.800			4.200	3.800	3.350
		23.300	20.900	19.000	16.500	14.700	13.500	4.200	3.800	3.350
		34.100								
		33.600								
		11.100	9.900	9.000	7.800	7.000	6.400			
		28.700	25.500							
		14.800	13.100	11.900	10.200	9.100	8.200			
		17.100	14.900	13.300						
		17.100	14.900	13.300						
		20.300	17.900							

Torque screwdriver with interchangeable blades

Torque screwdriver

Designation	Size		Scale range
FS2001	1	4	0.4–1.2 Nm
FS2003	3	4	1.5–5.0 Nm
FS2002	1	4	3.5–10.6 in lbs
FS2004	3	4	13.3–44 in lbs

Designation	Size		Scale range
FS2248	3	4	1.0–5.0 Nm

Interchangeable blades	Designation	Torx	
Torx interchangeable blades Blade length 175 mm	FS2005	6	4
	FS2006	7	
	FS2007	8	
	FS2008	10	
	FS2009	15	
	FS2010	20	
Torx Plus interchangeable blades Blade length 175 mm	FS2085	6IP	4
	FS2011	7IP	
	FS2012	8IP	
	FS2013	9IP	
	FS2268	10IP	
	FS2014	15IP	
	FS2015	20IP	
	FS2016	25IP	
Torx Plus interchangeable blades with retaining function Blade length 175 mm	★ SD2001-6IP	6IP	4
Complete blade set (FS2005–FS2016) Blade length 175 mm	FS2017		4

IP = Torx Plus

Torque T-handle

Designation		Scale range
FS2041	6	4.5–14 Nm
FS2042	6	40–123 in lbs

Interchangeable blades	Designation	Torx/WAF	
Torx interchangeable blades Blade length 130 mm	FS2043	15	6
	FS2044	20	
	FS2045	25	
	FS2046	30	
Torx Plus interchangeable blades Blade length 130 mm	FS2047	15IP	6
	FS2048	20IP	
	FS2049	25IP	
	FS2109	30IP	
Hexagonal interchangeable blades Blade length 130 mm	FS2050	SW3	6
	FS2566	★ SW3.5	
	FS2051	SW4	
	FS2052	SW5	
Complete blade set (FS2043–FS2052) Blade length 130 mm	FS2053		6

IP = Torx Plus

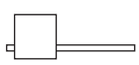
C2

/ ★ New addition to the product range

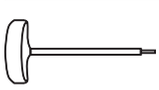
Screwdriver

Screwdriver types	Designation	Torx
Screwdriver	FS1063	6
	FS2086	6IP
	★ SD1001-6IP *	6IP
	FS309	7
	FS2088	7IP
	FS230	8
	FS1483	8IP
	FS1128	9
	FS1484	9IP
	FS2267	10IP
	FS229	15
	FS1485	15IP
	FS228	20
	FS1486	20IP
	FS2167	25
	FS1487	25IP
	FS396	30
	FS2109	30IP

* with retaining function/IP = Torx Plus

Screwdriver types	Designation	Torx	WAF
 Torx key	FS2146	6IP	–
	FS2087	6IP	–
	FS325	7	–
	FS1490	7IP	–
	FS257	8	–
	FS1466	9IP	–
	FS1050	10	–
	FS255	15	–
	FS1465	15IP	3.5
	FS1496	15IP	4.0
	FS256	20	–
	FS1154	–	2.0
	FS1155	–	2.5

IP = Torx Plus

Screwdriver types	Designation	Torx
Handle key. small	FS1047	15
	FS1048	20
	FS1049	25
 Handle key. large	FS1172	15
	FS1173	20
	FS1174	25
	FS1175	30

Allen key	Designation	Torx	WAF
	ISO 2936–1.3	–	1.3
	ISO 2936–1.5	–	1.5
	ISO 2936–2	–	2
	ISO 2936–2.5	–	2.5
	ISO 2936–3	–	3
	ISO 2936–3.5	–	3.5
	ISO 2936–4	–	4
	ISO 2936–5	–	5
	ISO 2936–6	–	6
	FS1464	20IP	–
	FS1592	25IP	–

IP = Torx Plus

D – Adaptors

Stationary adaptors – D1

Product range overview		620
Walter Capto™ adaptors	Clamping units	621
VDI adaptors, one-piece	VDI clamping units	623

Rotating adaptors – D2

Product range overview		624
Walter Capto™ adaptors	Tool adaptors	629
Walter ScrewFit adaptors	Tool adaptors	625
Walter ConeFit adaptors	Tool adaptors	627
Product range overview	Adaptor accessories	628
Adaptor sleeves	For peripheral cooling and internal cooling	629
Assembly parts and accessories	Cooling nozzle	630

Technical information – D3

Stationary adaptors	Assembly parts and accessories	631

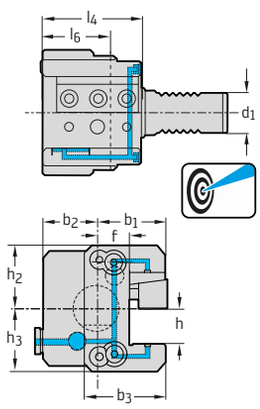
Product range overview for VDI adaptors

Designation	A2120-V...-P	A2110-V...-P	A2120-BT...-P
Alignment	Straight	Straight	Straight
Shanks/blades	Shanks	Blades	Shanks
Page	621	623	622

VDI adaptor – DIN 69880 shank tools
A2120-V...-P mm

– Precision cooling
– For star turrets

Tool	Designation	d_1	h mm	b_1 mm	b_2 mm	b_3 mm	f mm	l_4 mm	l_6 mm	h_2 mm	h_3 mm	kg
Shank DIN 1835 E	A2120-V25-20N-055-P	VDI25	20	39	30	20	19	70	35	35	35	1.3
	A2120-V30-20N-070-P	VDI30	20	55.5	30	39.5	35.5	70	48	35	35	1.7
	A2120-V40-25N-085-P	VDI40	25	50.5	42	45	25.5	85	45	44	44	3.2
	★ A2120-V50-25N-100-P	VDI50	25	55.5	50	50	30.5	100	70	44	44	3.2



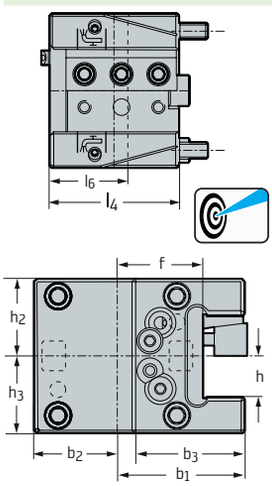
The maximum recommended coolant pressure is 80 bar (1160 psi)

D1

/ ★ New addition to the product range

BMT adaptor – DIN 69880 shank tools
A2120-BT...-P mm

– Precision cooling
– For BMT star turrets



Tool Designation	d_1	h mm	b_1 mm	b_2 mm	b_3 mm	f mm	l_4 mm	l_6 mm	h_2 mm	h_3 mm	kg
A2120-BT45-20N-063-P	BT45	20	62	40	42	34	63	38	38	38	2.2
★ A2120-BT55-25N-060-P	BT55	25	81	44	56	56	60	35	49	49	3.9

The maximum recommended coolant pressure is 80 bar (1160 psi)

D1

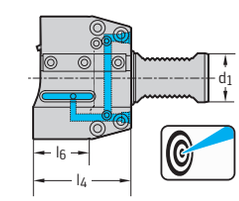
/ ★ New addition to the product range

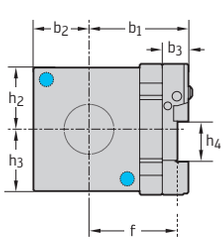
VDI adaptor – DIN 69880 parting blades
A2110-V...-P mm

– Precision cooling
– For Traub star turrets

Tool

Shank DIN 1835 E





Designation	d_1	h_4 mm	b_1 mm	b_2 mm	b_3 mm	f mm	l_4 mm	l_6 mm	h_2 mm	h_3 mm	kg
★ A2110-V25T-26R/L-083-P	VDI25	26	50.5	30	17	38.5	83	50	37	37	1.2
★ A2110-V30-32R/L-080-P	VDI30	32	66.5	35	20	58	80	52	50	50	2.3

The maximum recommended coolant pressure is 80 bar (1160 psi)
Ordering example. right-hand tool: A2110-V25T-26R-083-P/ordering example. left-hand tool: A2110-V25T-26L-083-P

D1

Product range overview of:

Walter ScrewFit adaptors

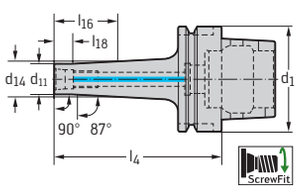
Designation	AK530	AK580
Tool type	ScrewFit adaptor	ScrewFit adaptor
Machine-side	Walter HSK	Walter Capto™
Tool-side	T09 – T45	T09 –T45
Page	625	626

Walter CAT adaptors

Designation	AB001
Tool type	Shell mill holder
Machine-side	CAT
Tool-side	0.750-2.50 in
Page	627

DIN 69893-1 A adaptor
AK530 mm

– For ScrewFit front pieces

Tool	Designation	d_1	d_{11}	d_{14} mm	l_4 mm	l_{16} mm	l_{18} mm	kg
HSK DIN 69893-1 A	★ AK530.H100A.T09.055	HSK-A100	T09	9.7	55	15	10	2.06
	★ AK530.H100A.T14.055	HSK-A100	T14	14.5	55	15	10	2.09
	★ AK530.H100A.T18.055	HSK-A100	T18	18.5	55	15	10	2.12
	AK530.H100A.T22.100	HSK-A100	T22	22	100	61	10	2.31
	AK530.H100A.T22.150	HSK-A100	T22	22	150	113	10	2.63
	AK530.H100A.T22.200	HSK-A100	T22	22	200	163	10	3.02
	AK530.H100A.T22.055CO	HSK-A100	T22	22	55	16	10	2.16
	AK530.H100A.T28.110	HSK-A100	T28	28	110	73	10	2.49
	AK530.H100A.T28.160	HSK-A100	T28	28	160	123	10	2.96
	AK530.H100A.T28.210	HSK-A100	T28	28	210	173	10	3.49
	AK530.H100A.T28.260	HSK-A100	T28	28	260	223	10	4.17
	AK530.H100A.T28.060CO	HSK-A100	T28	28	60	23	10	2.17
	AK530.H100A.T36.120	HSK-A100	T36	36	120	83	10	2.84
	AK530.H100A.T36.170	HSK-A100	T36	36	170	133	10	3.53
	AK530.H100A.T36.220	HSK-A100	T36	36	220	183	10	4.32
	AK530.H100A.T36.270	HSK-A100	T36	36	270	233	10	5.31
	AK530.H100A.T36.070CO	HSK-A100	T36	36	70	33	10	2.33
	AK530.H100A.T45.120	HSK-A100	T45	45	120	83	10	3.30
	AK530.H100A.T45.170	HSK-A100	T45	45	170	133	10	4.28
	AK530.H100A.T45.220	HSK-A100	T45	45	220	183	10	5.40
	AK530.H100A.T45.270	HSK-A100	T45	45	270	233	10	6.72
	AK530.H100A.T45.070CO	HSK-A100	T45	45	70	33	10	2.53

Balance class: G6.3 where n = 16,000 rpm
...CO = Interface is manufactured to be cutting edge-oriented. For the use of B4030.T and B3230.T.
For accessories for HSK, see "Assembly parts and accessories"
For the tightening torques of screw-fit front pieces, see "Rotating adaptors/Assembly parts and accessories"

D2

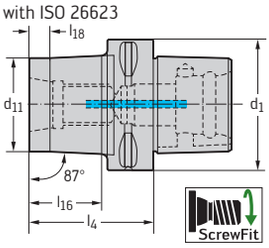
/ ★ New addition to the product range

Walter Capto™ adaptor
AK580.C mm

– For ScrewFit front pieces
– ISO 26623

Tool

Walter Capto™ in accordance with ISO 26623

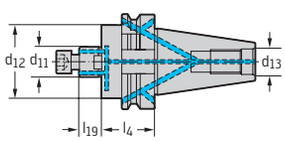


Designation	d_1	d_{11}	l_4 mm	l_{16} mm	l_{18} mm	kg
AK580.C3.T09.30	C3	T09	30	12.2	10	0.14
AK580.C3.T14.45CO	C3	T14	45	27	10	0.16
AK580.C3.T18.45CO	C3	T18	45	27	10	0.18
AK580.C3.T22.45CO	C3	T22	45	27	10	0.2
AK580.C3.T28.55CO	C3	T28	55	40	10	0.28
AK580.C4.T09.30	C4	T09	30	10	7	0.28
AK580.C4.T14.45CO	C4	T14	45	22	10	0.3
AK580.C4.T18.45CO	C4	T18	45	22	10	0.31
AK580.C4.T22.45CO	C4	T22	45	22	10	0.32
AK580.C4.T28.55CO	C4	T28	55	32	10	0.39
AK580.C4.T36.55CO	C4	T36	55	35	10	0.46
AK580.C4.T45.55CO	C4	T45	55		35	0.6
AK580.C5.T09.35	C5	T09	35	12	10	0.46
AK580.C5.T14.45	C5	T14	45	22	10	0.48
AK580.C5.T18.45	C5	T18	45	22	10	0.49
AK580.C5.T22.45	C5	T22	45	22	10	0.51
AK580.C5.T28.55	C5	T28	55	32	10	0.58
AK580.C5.T36.55	C5	T36	55	32	10	0.65
AK580.C5.T45.55	C5	T45	55	35	10	0.81
★ AK580.C6.T09.48	C6	T09	48	23	10	0.77
AK580.C6.T14.50	C6	T14	50	25	10	0.84
AK580.C6.T18.50	C6	T18	50	25	10	0.85
AK580.C6.T22.50	C6	T22	50	25	10	0.87
AK580.C6.T28.60	C6	T28	60	35	10	0.94
AK580.C6.T36.60	C6	T36	60	35	10	1.01
AK580.C6.T45.60CO	C6	T45	60	35	10	1.19
★ AK580.C8.T09.56	C8	T09	56	23	10	1.75
★ AK580.C8.T14.56	C8	T14	56	23	10	1.76
★ AK580.C8.T18.56	C8	T18	56	23	10	1.77
★ AK580.C8.T22.56	C8	T22	56	23	10	1.78
★ AK580.C8.T28.60	C8	T28	60	27	10	1.82
★ AK580.C8.T36.60	C8	T36	60	27	10	1.87
★ AK580.C8.T45.60CO	C8	T45	60	27	10	2

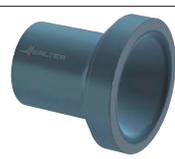
For the tightening torques of screw-fit front pieces. see "Rotating adaptors/Assembly parts and accessories"
...CO = Interface is manufactured to be cutting edge-oriented. For the use of B4030.T and B3230.T.

ASME B5.50 shell mill arbor
AB001.K

– For tools in accordance with DIN 1880

Tool	Designation	d_1	d_{11} in	d_{12} in	l_4 in	l_{19} in	d_{13}	lbs
CATV B 5.50 	AB001.K40-B19-038	CAT40	0.750	1.750	1.500	0.687	5/8"-11	2.3
	AB001.K40-B26-051	CAT40	1.000	2.250	2.000	0.687	5/8"-11	3.0
	AB001.K40-B31-102	CAT40	1.250	2.750	4.000	0.687	5/8"-11	5.8
	AB001.K40-B38-061	CAT40	1.500	3.750	2.400	0.937	5/8"-11	5.9
	AB001.K50-B19-038	CAT50	0.750	1.748	1.500	0.687	1"-8	6.9
	AB001.K50-B26-051	CAT50	1.000	2.252	2.000	0.687	1"-8	7.5
	AB001.K50-B26-102	CAT50	1.000	2.252	4.000	0.687	1"-8	9.5
	AB001.K50-B31-038	CAT50	1.250	2.750	1.500	0.687	1"-8	7.1
	AB001.K50-B38-061	CAT50	1.500	3.750	2.400	0.937	1"-8	10.3
	AB001.K50-B38-102	CAT50	1.500	3.750	4.000	0.937	1"-8	14.0
	AB001.K50-B63-061	CAT50	2.500	4.875	2.400	1.125	1"-8	13.6

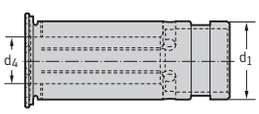
Product range overview of adaptor accessories

Designation	SL00..	GL00..
Tool type	Adaptor sleeve	Cooling nozzle
Adaptor-side	Hydro-expansion	ER collets
Tool-side	3.0–25 mm	3.0–16 mm
Page	629	630
		

Adaptor sleeves for peripheral cooling

inch

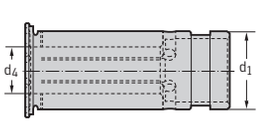
Tool	Designation	d_1 mm	d_4 Inch	kg
For tools with shank in accordance with DIN 1835 Form A	SL0017	12	0.125	0.02
	SL0018	12	0.188	0.02
	SL0019	12	0.250	0.1
	SL0020	12	0.375	0.02
	SL0021	20	0.125	0.08
	SL0022	20	0.188	0.1
	SL0023	20	0.250	0.08
	SL0024	20	0.375	0.1
	SL0025	20	0.500	0.08
	SL0026	20	0.625	0.05
	SL0027	32	0.500	0.26
	SL0028	32	0.625	0.25
	SL0029	32	0.750	0.22
	SL0030	32	1.000	0.14



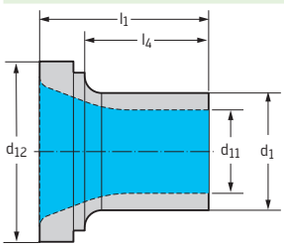
Adaptor sleeves for internal cooling

inch

Tool	Designation	d_1 Inch	d_4 Inch	kg
For tools with shank in accordance with DIN 1835 Form A	SL0001	12	0.125	0.03
	SL0002	12	0.188	0.03
	SL0003	12	0.250	0.1
	SL0004	12	0.375	0.1
	SL0005	20	0.125	0.1
	SL0006	20	0.188	0.1
	SL0007	20	0.250	0.1
	SL0008	20	0.375	0.08
	SL0009	20	0.500	0.06
	SL0010	20	0.625	0.04
	SL0011	32	0.250	0.28
	SL0012	32	0.375	0.3
	SL0013	32	0.500	0.3
	SL0014	32	0.625	0.25
	SL0015	32	0.750	0.3
	SL0016	32	1.000	0.3



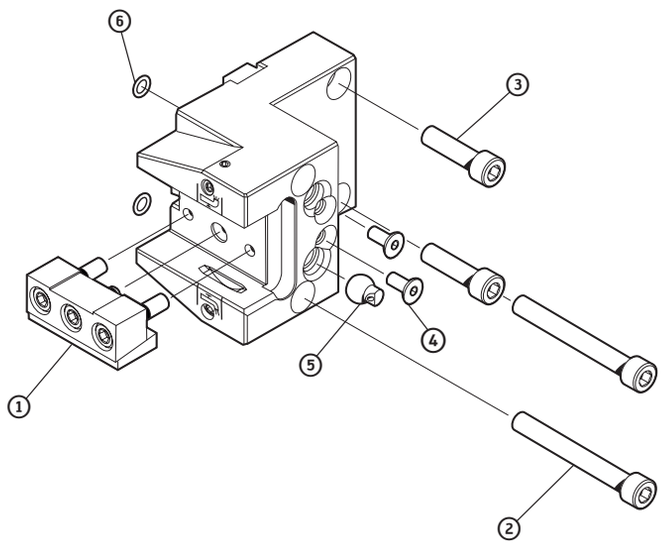
Cooling nozzles for ER collets
GL00.. mm

Tool	Designation	Collets	d_{11} mm	l_1 mm	kg
	★ GL0001	ER16	3	15	0.01
	★ GL0002	ER16	4	15	0.01
	★ GL0003	ER16	5	15	0.01
	★ GL0004	ER16	6	15	0.01
	★ GL0005	ER16	7	15	0.01
	★ GL0006	ER16	8	15	0.01
	★ GL0007	ER16	9	6	0.01
	★ GL0008	ER16	10	6	0.01
	★ GL0009	ER20	6	15	0.01
	★ GL0010	ER20	7	15	0.01
	★ GL0011	ER20	8	15	0.01
	★ GL0012	ER20	9	15	0.01
	★ GL0013	ER20	10	15	0.01
	★ GL0014	ER20	12	6	0.01
	★ GL0015	ER25	6	15	0.01
	★ GL0016	ER25	7	15	0.01
	★ GL0017	ER25	8	15	0.01
	★ GL0018	ER25	9	15	0.01
	★ GL0019	ER25	10	15	0.01
	★ GL0020	ER25	12	15	0.01
	★ GL0021	ER25	14	15	0.01
	★ GL0022	ER25	16	15	0.01
	★ GL0023	ER32	6	15	0.01
	★ GL0024	ER32	7	15	0.01
	★ GL0025	ER32	8	15	0.01
	★ GL0026	ER32	9	15	0.01
	★ GL0027	ER32	10	15	0.01
	★ GL0028	ER32	12	15	0.01
	★ GL0029	ER32	14	15	0.01
	★ GL0030	ER32	16	15	0.01

D2

/ ★ New addition to the product range

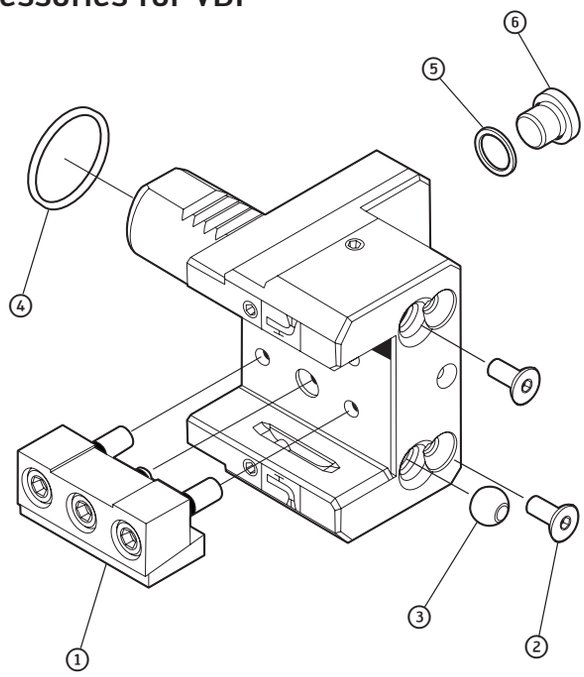
Assembly parts and accessories for BMT A2120-BT45-20N-063-P



Assembly parts

	BT45
1 Wedge	FK392
2 Screw	M08x065 ISO4762 12.9
3 Screw	M08x030 ISO4762 12.9
4 Screw	M06x012 DIN7991 10.9
5 Nozzle	FS2561
6 O-ring	6x1,5-NBR 70

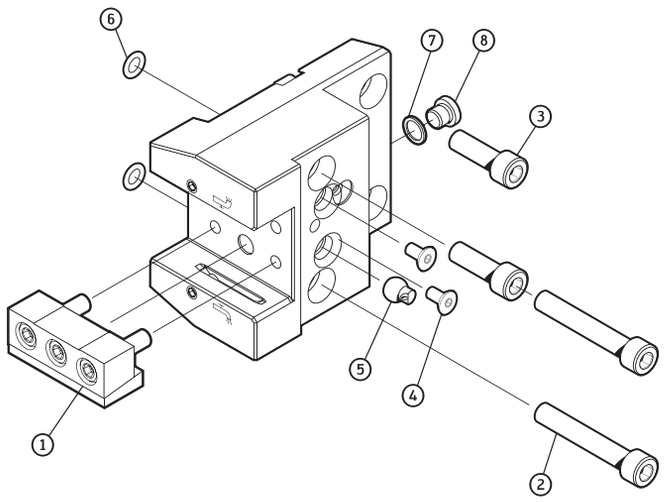
Assembly parts and accessories for VDI A2120-V25-20N-055-P



Assembly parts

	V25
1 Wedge	FK385
2 Screw	M05x012 DIN7991 10.9
3 Nozzle	FS2562
4 O-ring	23,52x1,78
5 Gasket	FS2564
6 Plug	G1/8 DIN908

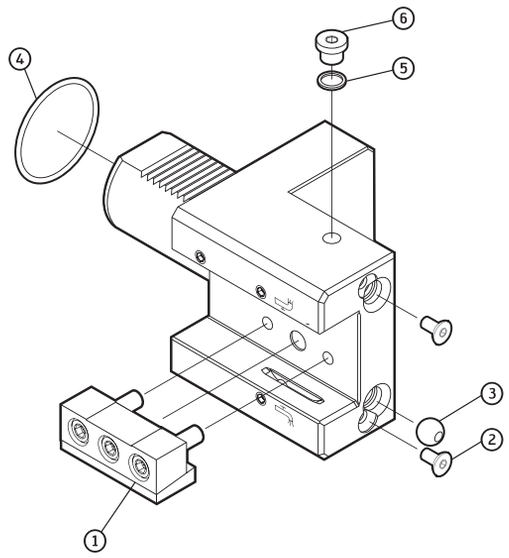
Assembly parts and accessories for BMT A2120-BT55-25N-060-P



Assembly parts

	BT55
1 Wedge	FK393
2 Screw	M10x60 ISO4762 12.9
3 Screw	M10x30 ISO4762 12.9
4 Screw	M06x012 DIN7991 10.9
5 Nozzle	FS2561
6 O-ring	8.00x2.00 NBR 70
7 Gasket	FS2564
8 Plug	M10x1 DIN908

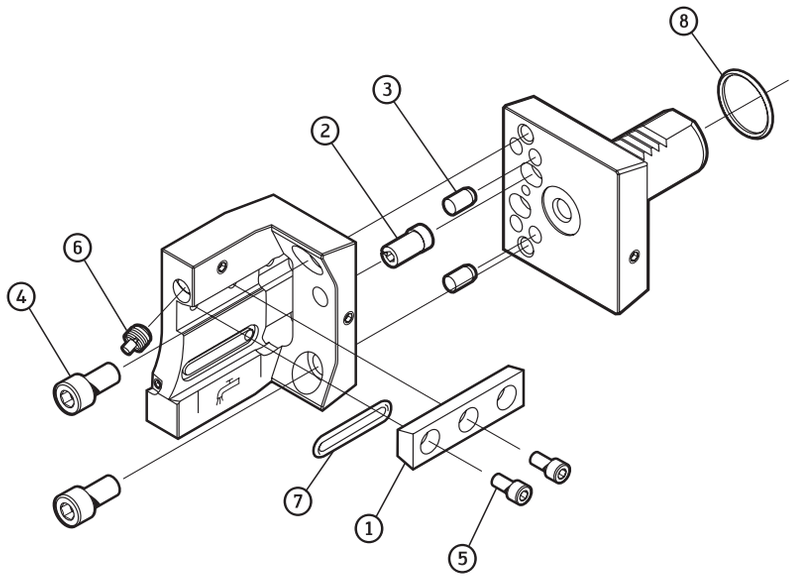
Assembly parts and accessories for VDI
A2120-V50-25N-100-P



Assembly parts

		V50
1	Wedge	FK393
2	Screw	M06x012 DIN7991 10.9
3	Nozzle	FS2562
4	O-ring	O-ring 47.29x2.62 70/75
5	Gasket	FS2564
6	Plug	G1/8 DIN908

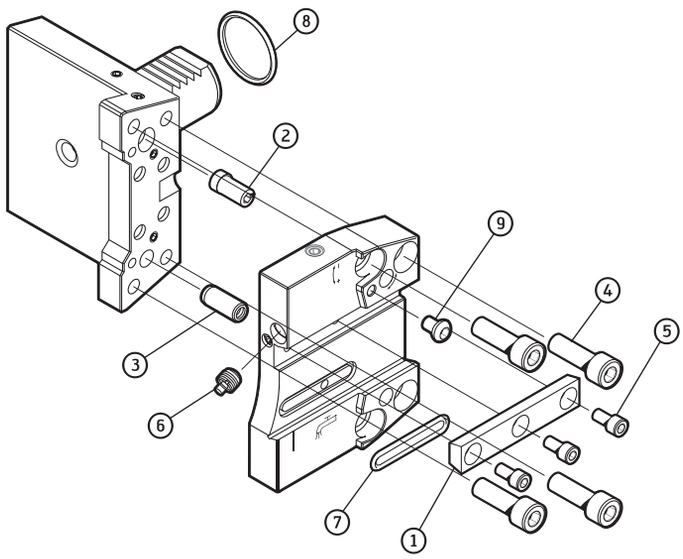
Assembly parts and accessories for Traub VDI A2110-V25T-26R/L-083-P



Assembly parts

	V25T
1 Wedge	FK383
2 Eccentric pin	FS2275
3 Parallel pin	06,0M6X012 ISO8734
4 Screw	M08X016 ISO4762 12.9
5 Screw	M05X010 ISO14579 8.8
6 Nozzle	FS1477
7 O-ring	O-ring 24X2 70 / 80
8 O-ring	O-ring 23.52X1.78 70/75

Assembly parts and accessories for Traub VDI A2110-V30-32R/L-080-P



Assembly parts

		V30
1	Wedge	FK384
2	Eccentric pin	FS2275
3	Parallel pin	08,0M6X20 ISO8735
4	Screw	M08X025 ISO4762 12.9
5	Screw	M05X010 ISO14579 8.8
6	Nozzle	FS1477
7	O-ring	O-ring 24X2 70 / 80
8	O-ring	O-ring 28.3X1.78 70/75
9	Plug	M05X08 ISO7380 10.9-Torx

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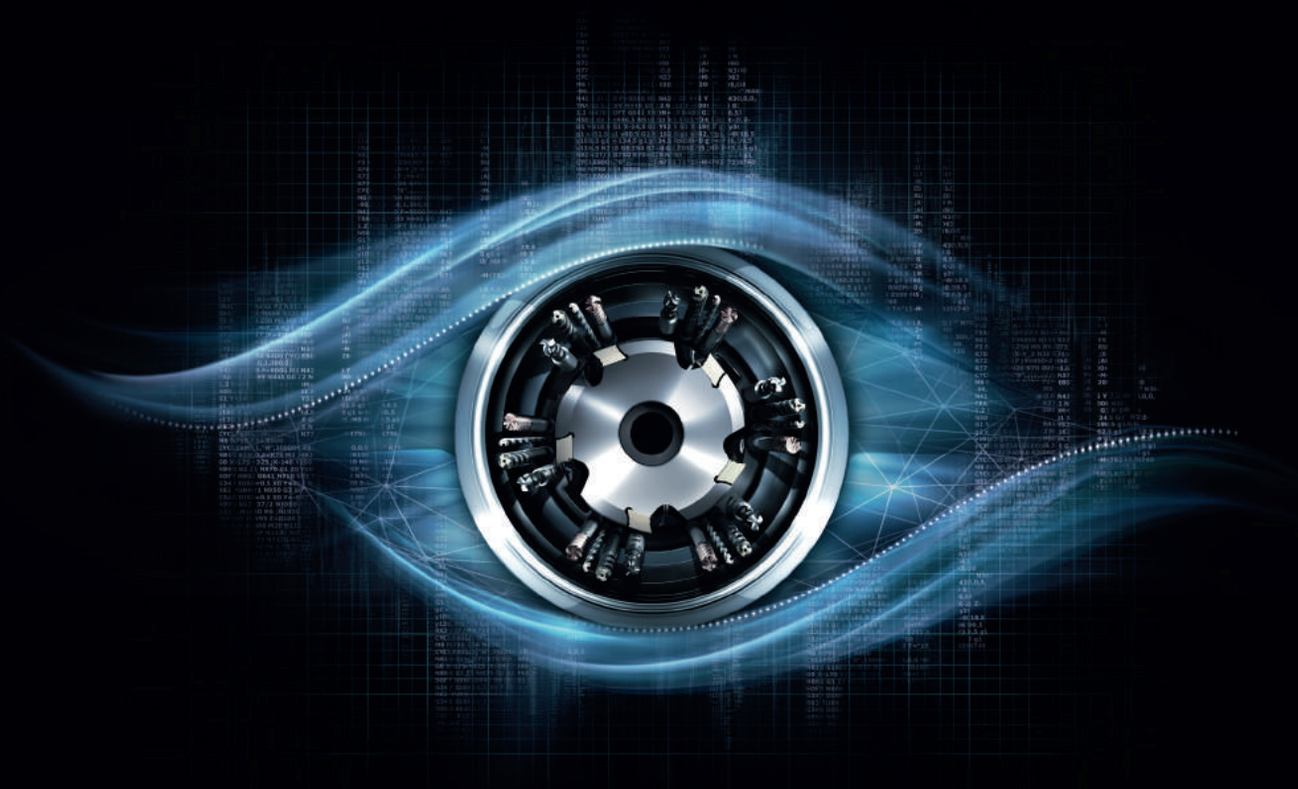

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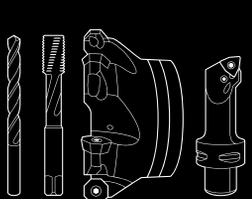

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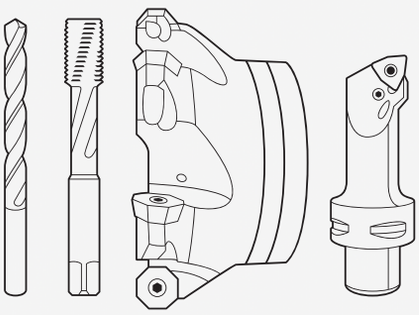

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0992988292

Printed in the USA 831570-292, EDP-# 7785162 (2/2019)

Subject to change without prior notice – Printed in United States 7785162 (2/2019)