WALTER
Engineering Kompetenz

Turning, holemaking,
threading, milling

Product highlights
Edition 2021-1

_PRODUCT HIGHLIGHTS

Moving ahead with innovations.

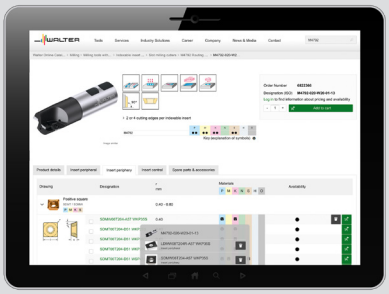
How to find and order your tool solution:

Personal – worldwide
You can contact us by phone, fax or e-mail. The contact details for your local contact can be found on our website at: **walter-tools.com**

The Walter General Catalog 2018
contains the entire standard range of our competence brands Walter, Walter Titex and Walter Prototyp. It is supplemented regularly with the latest Product Innovations catalogs.

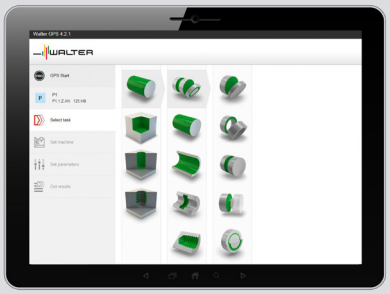
At walter-tools.com, you can access and order your Walter products quickly and conveniently online – via smartphone, tablet or PC. The benefit for you: Direct access from any device, displayed in an optimised form, at any time.

Walter online catalog



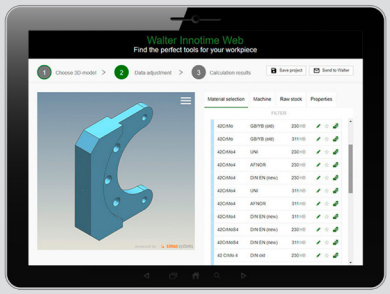
Tool-specific search
You can find products in the Walter online catalog using the familiar structure of our product catalog as well as filter and search functions. Other features: A shopping function and links to drawings and models.

Walter GPS



Application-based search
With Walter GPS, it takes just a few steps to find the optimum machining solution for your component, online and offline – and the solution can be transferred directly to the Walter TOOLSHOP if required.

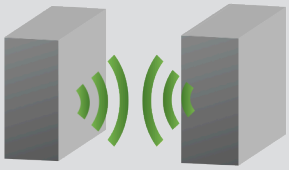
Walter Innotime®



Component-based search
With Walter Innotime®, you can find the most cost-effective machining solution for your component, including all the tools, machining steps and machining parameters required for this. Simply by uploading your 3D model.

Digital ordering methods

TOOLSHOP



EDI B2B

Walter TOOLSHOP & EDI
The Walter TOOLSHOP offers customers opportunities to find information and place orders quickly.
EDI (electronic data interchange) also makes it possible to exchange documents (e.g. orders) – even special tools can be ordered.

Walter highlight flyer

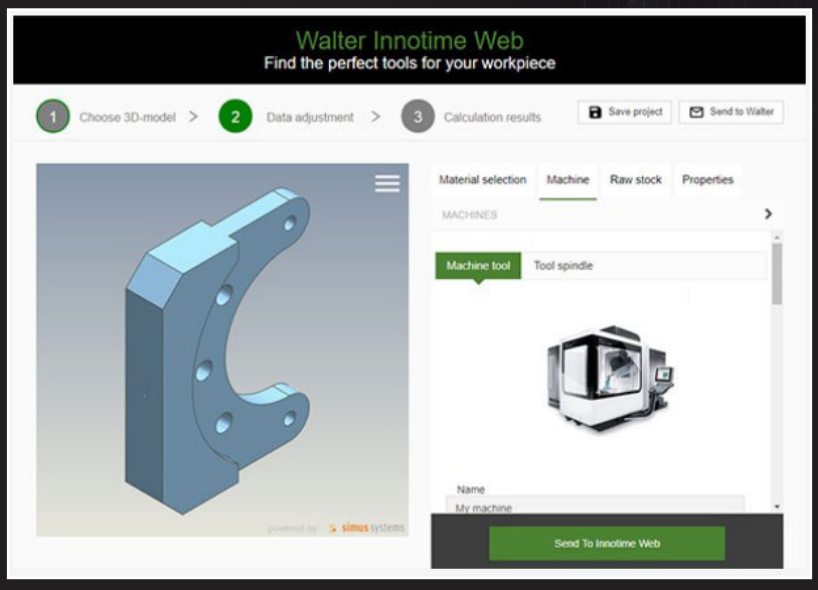
Table of contents

High-speed component design – digital and transparent.

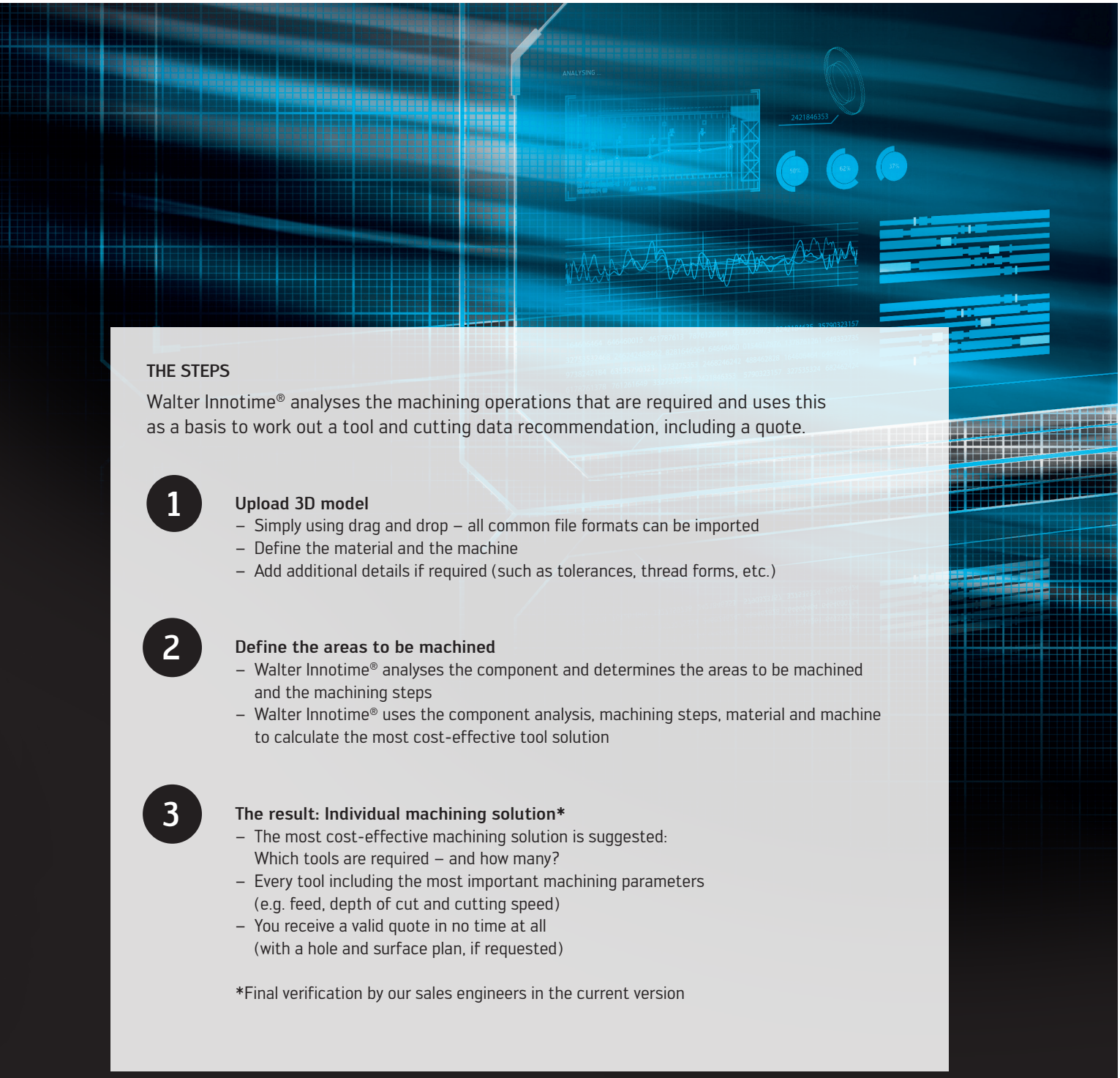
THE APPLICATION

With Walter Innotime®, you can find the right machining solution for your component in no time at all – simply by uploading a 3D model of your component! From this model, Walter Innotime® generates a recommendation of all the tools required for production, as well as the associated machining parameters. This recommendation is then validated by our expert Walter technicians and engineers.

Walter Innotime® significantly speeds up the design process, as the time taken to receive a quote is reduced from days to mere hours.



The Walter Innotime® digital design wizard makes it possible to determine, based on the specific material and machine, all the tools required to produce a component – including number, costs and cutting parameters.



THE STEPS

Walter Innotime® analyses the machining operations that are required and uses this as a basis to work out a tool and cutting data recommendation, including a quote.

1

Upload 3D model
- Simply using drag and drop – all common file formats can be imported
- Define the material and the machine
- Add additional details if required (such as tolerances, thread forms, etc.)

2

Define the areas to be machined
- Walter Innotime® analyses the component and determines the areas to be machined and the machining steps
- Walter Innotime® uses the component analysis, machining steps, material and machine to calculate the most cost-effective tool solution

3

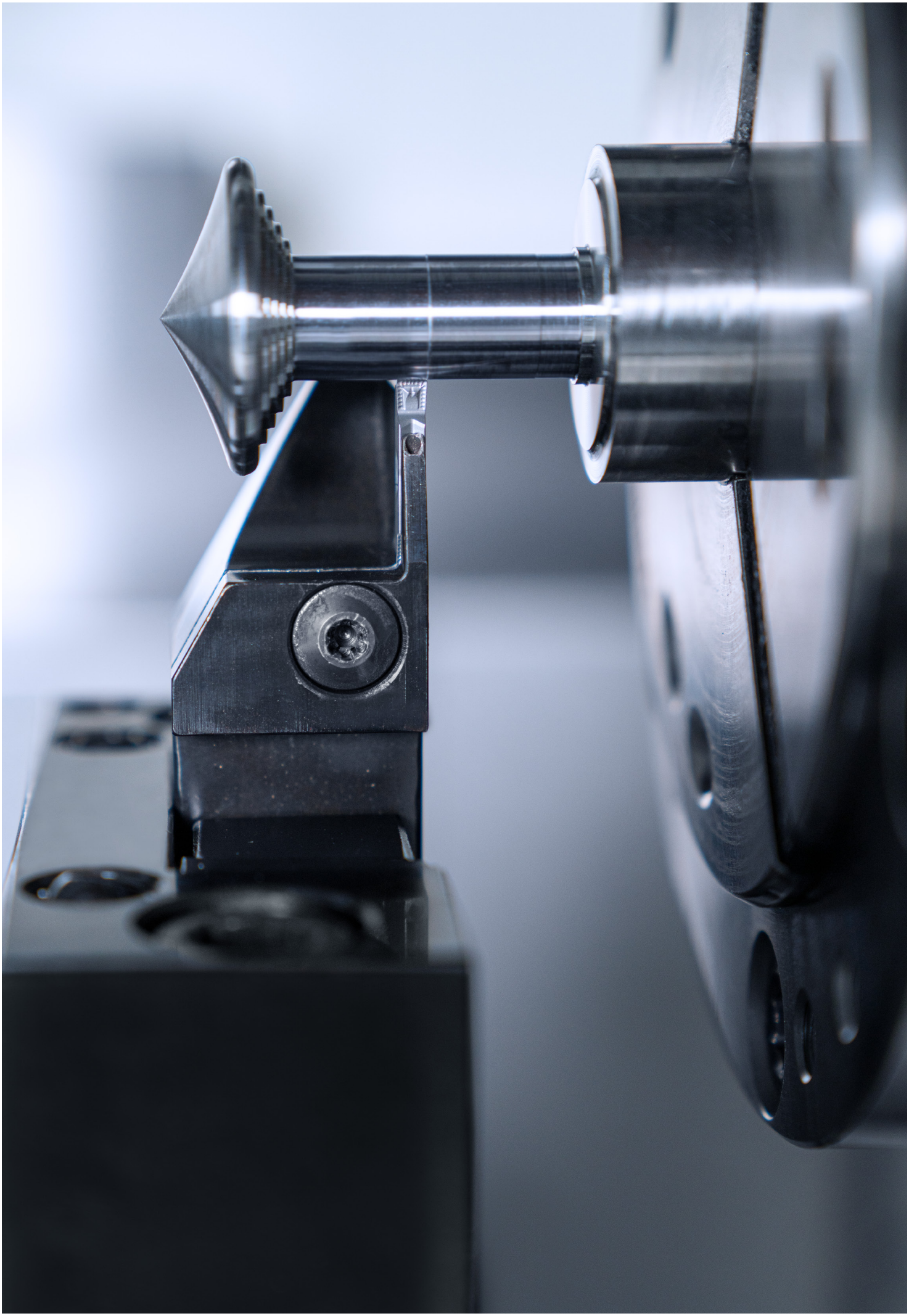
The result: Individual machining solution*
- The most cost-effective machining solution is suggested: Which tools are required – and how many?
- Every tool including the most important machining parameters (e.g. feed, depth of cut and cutting speed)
- You receive a valid quote in no time at all (with a hole and surface plan, if requested)

*Final verification by our sales engineers in the current version

BENEFITS FOR YOU
- All required tools (including number, price and machining parameters) in no time at all
- User-friendly drag-and-drop interface: Simply upload the 3D data for your component and obtain your tool solution in just a few steps
- Support for all common 3D formats
- Obtain a valid quote in a fraction of the time it usually takes
- Benefit from Walter Engineering Kompetenz 24/7

www.innotime.walter

A – Turning



Combines maximum stability with the very best cost-efficiency.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

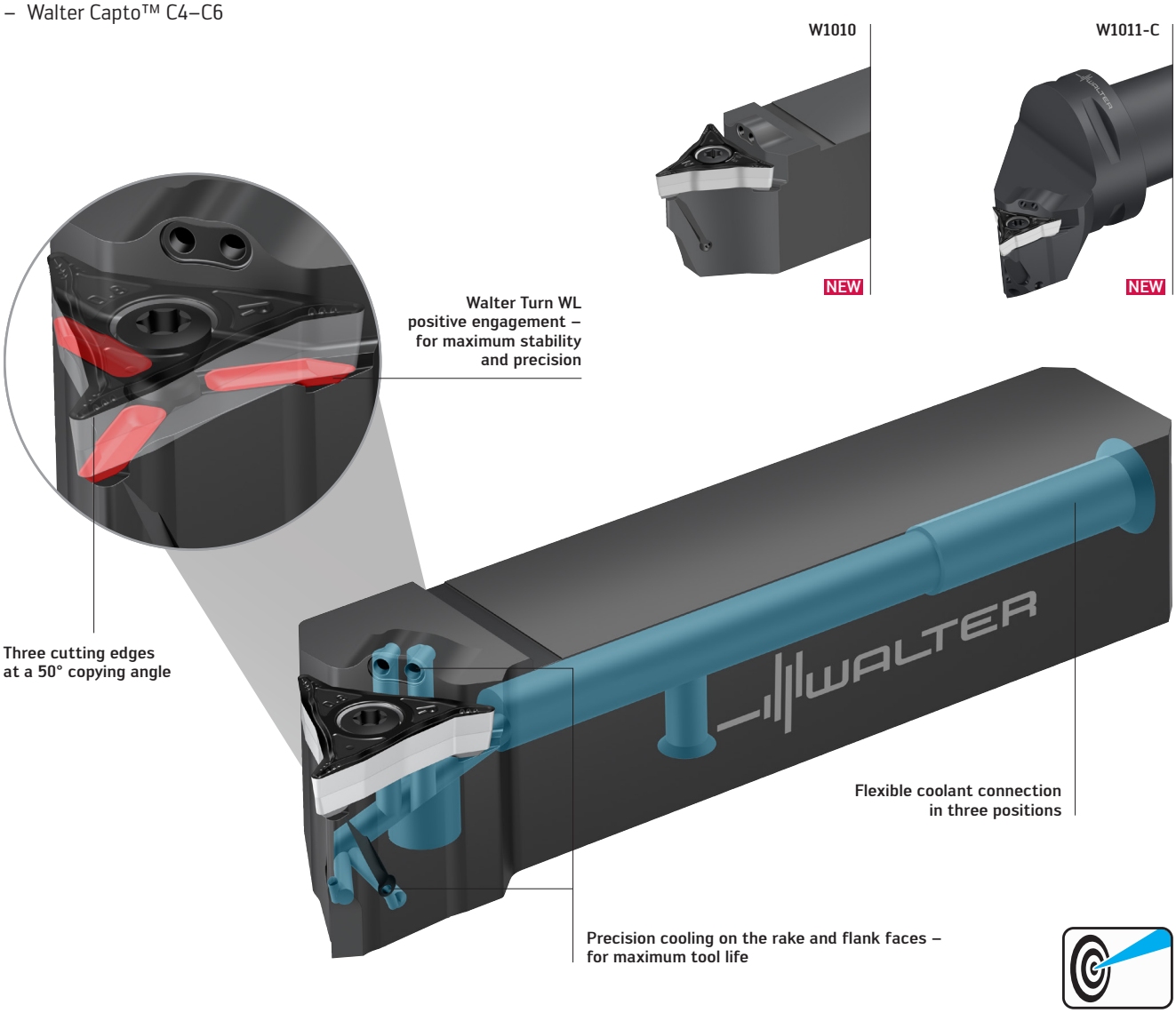
- W1010/W1011/WL25 copy turning systems available with and without precision cooling (-P)
- W1010 = neutral version
- W1011 = right-handed/left-handed version

THE TOOL

- WL positive engagement on toolholder and insert
- Square shank: 0.75", 1" and 16 × 16, 20 × 20 and 25 × 25 mm
- Walter Capto™ C4–C6

THE APPLICATION

- Copy turning of recesses and undercuts up to 30°, 50° (W1011) and 72.5° (W1010)
- Dynamic turning
- High-precision components
- Replacement for ISO VBMT, VCMT, DCMT indexable inserts which have just two cutting edges and lower stability



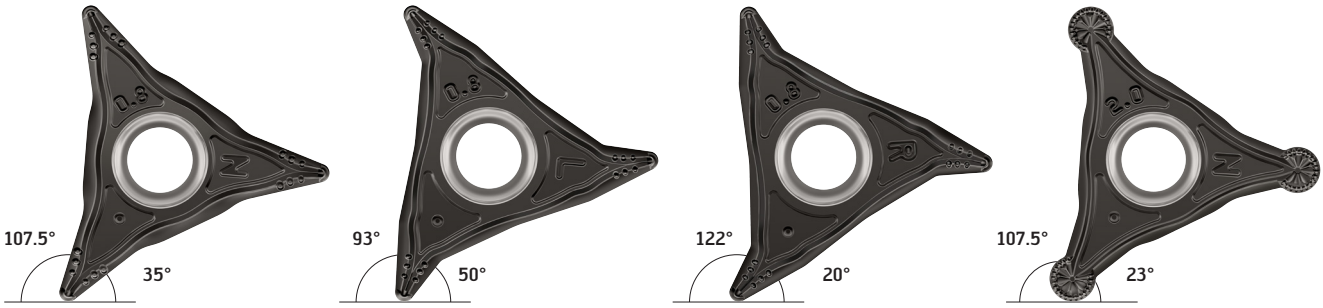
Walter Turn copy turning system

Fig.: W1011-2525R-WL25-P

THE INDEXABLE INSERTS

- Three-edge, positive indexable inserts with WL positive engagement
- Neutral, left-hand and right-hand versions fit into the same tool
- FP4, MP4, FM4 and MM4 geometry with 35° included angle
- MU6 geometry, full-radius indexable inserts
- Grades: WPP10S, WPP20S, WMP20S, WSM10S, WSM20S, WSM30S

Four indexable insert types and applications



WL25..N..
Neutral

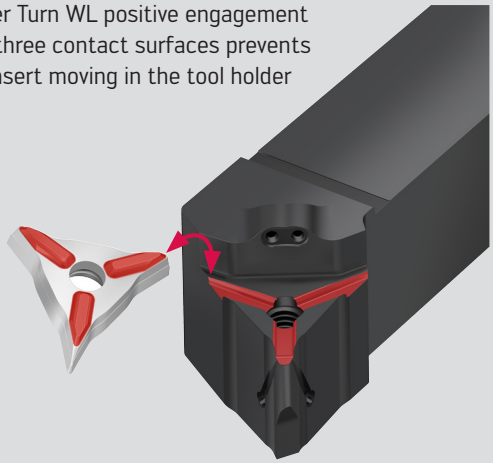
WL25..L..
Left

WL25..R..
Right

WL25..N..-MU6
Full radius

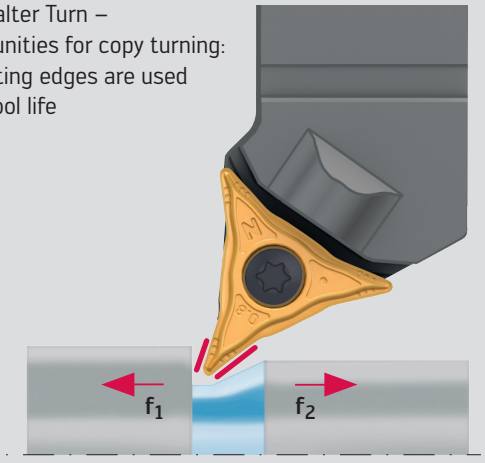
THE TECHNOLOGY

Walter Turn WL positive engagement with three contact surfaces prevents the insert moving in the tool holder



W1011-P Walter Turn –
new opportunities for copy turning:

- Both cutting edges are used
- Longer tool life



BENEFITS FOR YOU

- High level of dimensional stability because of positive-locking, robust WL connection
- Cost-effective: Lower tool costs thanks to three cutting edges
- Longer tool life when copy turning
- High level of flexibility: Four indexable insert types fit in the same tool
- 50% higher indexing accuracy compared to ISO indexable inserts

Accure·tec – anti-vibration turning of large bores.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- A2201 QuadFit Large intermediate adaptor for larger f dimensions
- Boring bar diameters: 60–100 mm; 2.5–4"; lengths: 6 × D and 10 × D (other dimensions available on request)

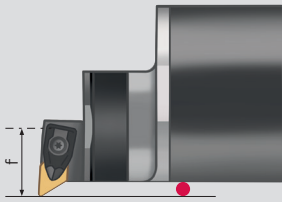
THE TOOL

- Preset, modular, vibration-damped boring bar adaptor
- Interface to the machine:
  - Cylindrical shank 60–100 mm; 2.5–4"
  - Walter Capto™ C6-C8
  - HSK-T 100

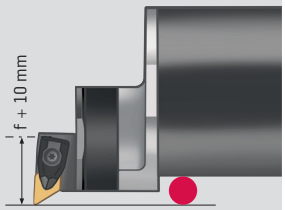
THE APPLICATION

- Counterboring with 6 to 10 × D
- Boring length of up to 1000 mm (39.4") is possible with standard tool
- Can be used for:
  - Counterboring with positive and negative indexable inserts
  - Thread turning with precision cooling T1820-Q…-P

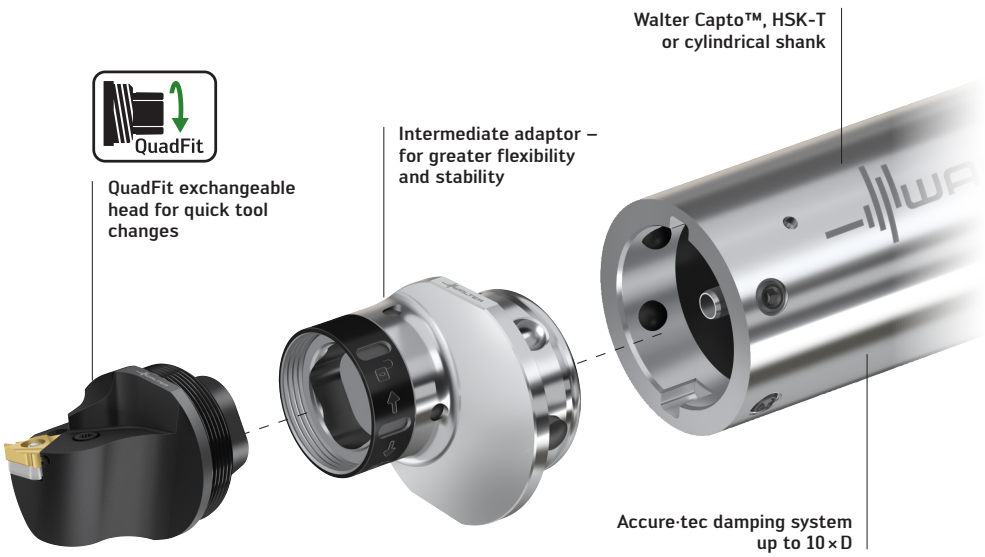
The ideal solution for any application



Standard A2201
Intermediate adaptor for reduced radial forces



A2201 with larger f dimension
More space between the bore wall and boring bar for improved chip removal with very deep bores



Accure·tec

Modular, vibration-damped boring bar up to dia. 4" and 100 mm

Fig.: T1820-Q50R-16I-P, A2201-QL80-23-27-Q50, A3001-C8-QL60-421

BENEFITS FOR YOU

- High productivity and surface quality from low-vibration bore machining
- Time saving due to quick, precise tool changes (±0.002 mm) with QuadFit exchangeable heads
- Reliable due to excellent chip removal from the bore thanks to larger f dimension
- Vibration damping "preset" at the factory – ready for immediate use, no time lost tuning

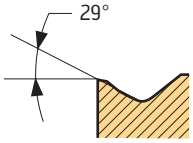
Highly positive and double-sided – ideal for ISO N (non-ferrous) machining.

NEW

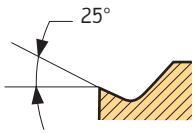
THE GEOMETRY

- Double-sided, polished MN3 geometry
- Highly positive cutting edges

Corner radius – MN3



Main cutting edge – MN3



THE INDEXABLE INSERT

Basic shapes:

- CNGG, DNGG, VNGG, WNGG
- Corner radii with negative tolerance for maximum precision: 0.008/0.016/0.032" (0.2/0.4/0.8 mm)

Grades:

- WNN10 (with HIPIMS PVD coating for an extremely smooth surface)
- WN10 (uncoated and polished)

THE APPLICATION

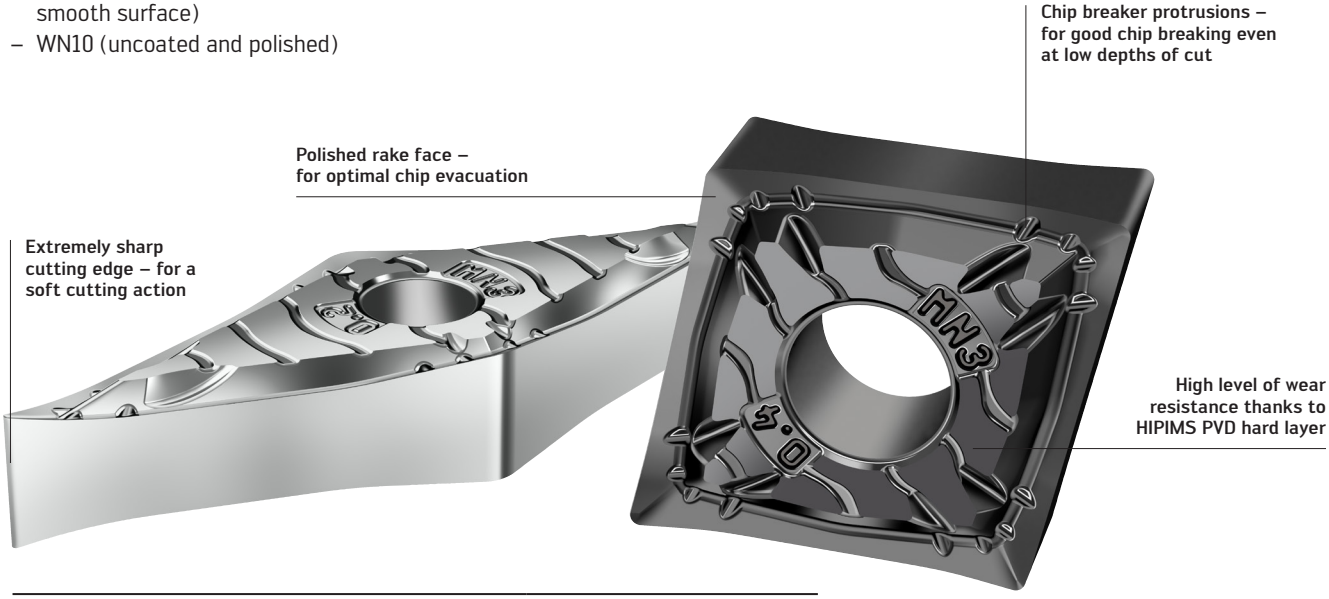
- Machining parameters: f = 0.002-0.016" (0.05–0.40 mm); a_p = 0.02-0.16" (0.5–4.0 mm)

Primary application:

- Medium machining of non-ferrous metals
- ISO N alloys, e.g.:
  - Aluminum alloys
  - Copper alloys
  - Brass alloys
  - "Lead-free" materials

Further applications:

- Fine finishing of small components made from steel and stainless materials, as well as high-temperature alloys
- Best surface qualities up to R_z 3 µm (~32 µ-in Ra)



Double-sided MN3 indexable insert geometry

Fig.: VNGG160401M-MN3 WN10, CNGG431-MN3 WNN10

BENEFITS FOR YOU

- High level of cost-efficiency and productivity thanks to negative basic shape with double the number of cutting edges
- Long tool life on materials with a tendency to build up edge (adhesion) thanks to optimized surface roughness
- Machines unstable components or components with long overhangs with no problems due to low cutting pressure
- Improved chip breaking (even with lead-free materials, e.g. CuZn21Si3P) thanks to chip breaker protrusions and highly positive cutting edges

_ CERAMIC GRADE WCH10C

Coated mixed ceramic – for all hardness cases.

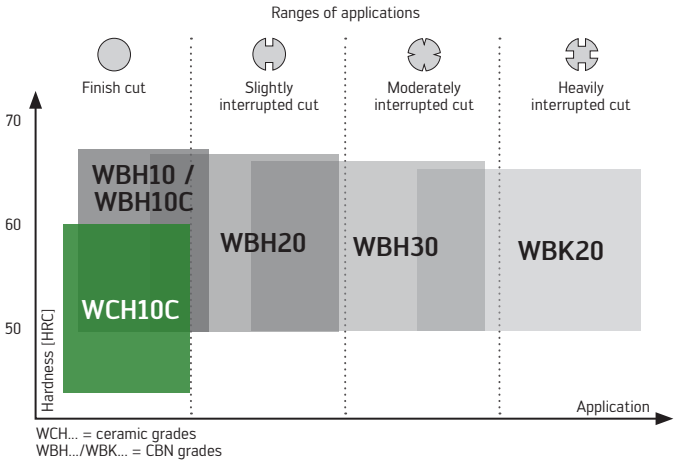
NEW

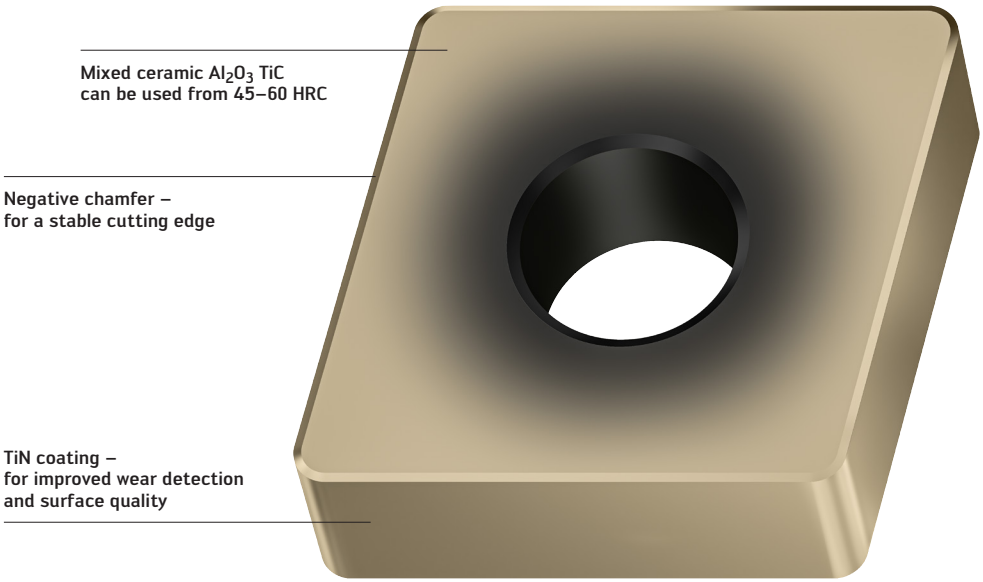
THE INDEXABLE INSERTS

- Coated mixed ceramic grade WCH10C
- Mixed ceramic Al_2O_3 TiC
- TiN PVD coating
- Inserts with and without MW wiper geometry

THE APPLICATION

- For hard materials up to 60 HRC
- Finish turning, turning hard+soft combination; cuts in the hard/soft area
- For varying hardness measurements after hardening
- For roughing weld seams and localized hardening
- As a cost-effective alternative to CBN cutting tool materials





Coated ceramic indexable insert **Fig.:** CNGA120408SM-S WCH10C

BENEFITS FOR YOU

- Cost-effective hard machining, as lower costs per cutting edge
- High level of process reliability in the hard/soft area thanks to high chemical and thermal stability of the aluminum oxide base
- High repeat accuracy due to homogeneity in the sintering process
- Tough and wear-resistant due to connection with titanium carbide structure
- Best surfaces thanks to uniform grain distribution in the substrate

Developed for hard turning with interrupted cuts.

NEW

THE INDEXABLE INSERTS

- CBN grade WBH30 for hard machining
- Inserts with and without MW wiper geometry
- 65% CBN content
- Dia. grain size 5.0 µm
- Ceramic binder

THE APPLICATION

- Hard ISO H materials up to 65 HRC
- Interrupted cuts
- Replaces grinding in many areas (e.g. turning gears)

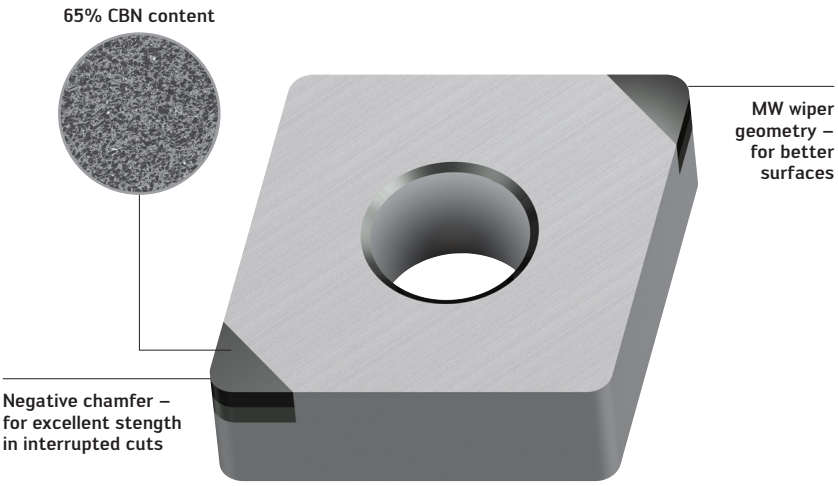
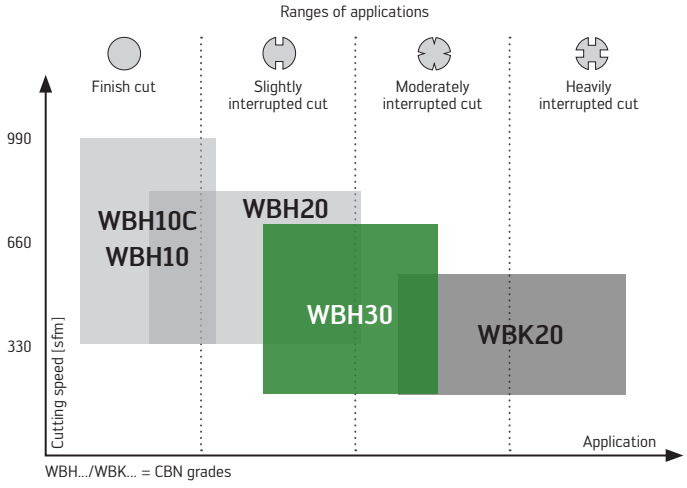
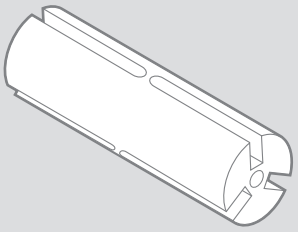


Fig.: WBH30



APPLICATION EXAMPLE

Shaft with three grooves



Material: 100CrMo7-3/60 HRC (DIN 1.3536)

Cutting data:

	Competitors	Walter WBH30
v_c (sfm)	525	525
f (in)	0.008	0.008
a_p (in)	0.012	0.012

Comparison: Tool life

+100 %

*Average value from six competing products

BENEFITS FOR YOU

- Excellent toughness from good distribution of different CBN grain sizes
- Chemical stability due to TiN binder prevents crater wear and flank face wear
- Wear-resistant in hardened steels from 65% CBN content
- Reliably high-performance CBN substrate with homogenous sintering process
- Higher feeds, surface quality and stability due to wiper geometry

Grooving and groove turning – fast and universal.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

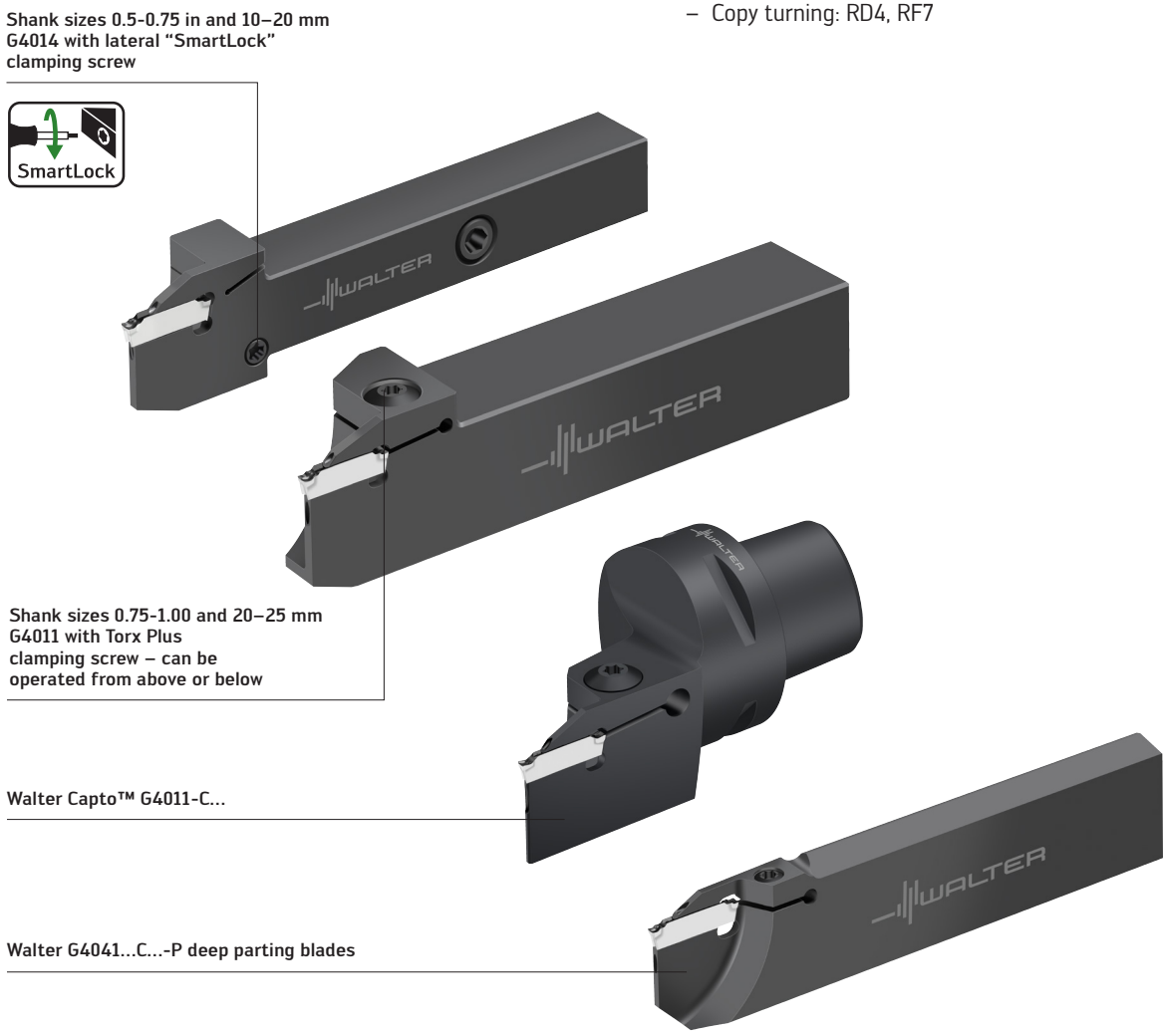
- Walter Cut G4011.../G4011-P monoblock shank tools
- Universal tool for grooving and groove turning
- 0.75", 1", 20 × 20 and 25 × 25 mm: With and without precision cooling
- Insert widths: 0.079/0.098/0.118/0.157 in. (2.0/2.5/3.0/4.0 mm)
- Cutting depths: 0.393" (10 mm) (for groove turning, grooving and parting off without diameter limit), 0.689" (17.5 mm) (with reinforced support)

THE INDEXABLE INSERTS

- Double-edged DX18 cutting inserts with positive engagement
- Insert widths: 0.059/0.079/0.098/0.118/0.157 in (1.5/2.0/2.5/3.0/4.0 mm)
- PVD grades: WSM13S, WSM23S, WSM33S, WSM43S
- MT-CVD grades: WKP13S, WKP23S, WKP33S

THE APPLICATION

- Parting off: CF6, CF5, CE4
- Grooving and parting off for a flat witness mark: GD3, GD6
- Universal grooving and groove turning: UF4, UD4, UA4
- Copy turning: RD4, RF7



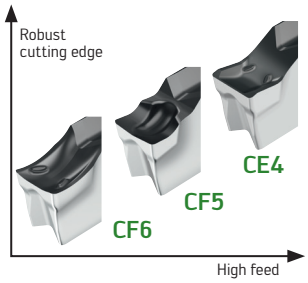
Powered by
Tiger·tec® Silver

Walter Cut DX monoblock tools

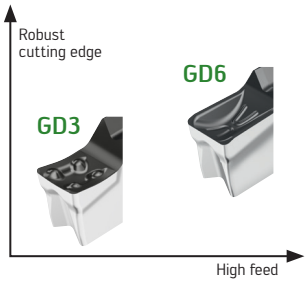
Fig.: G4014-P, G4011, G4011-C, G4041-P

THE GEOMETRIES

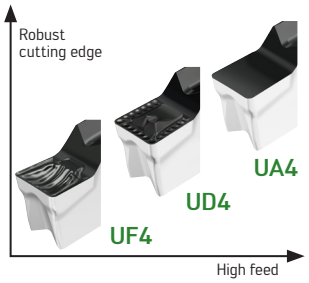
Parting off



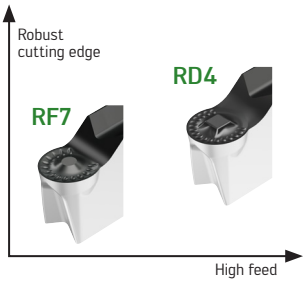
Grooving and parting off for a flat groove base



Universal grooving and groove turning

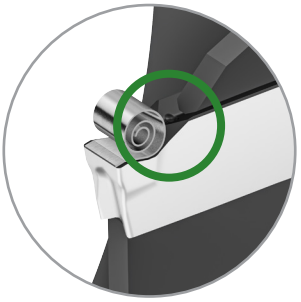


Copy turning

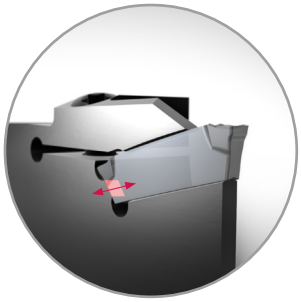


THE TECHNOLOGY

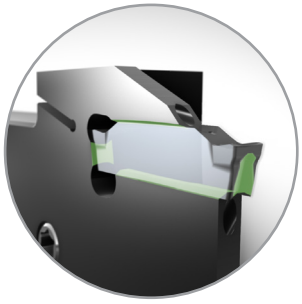
Existing grooving insert:
The low chip shoulder makes the chip longer, cause chip wash on clamping finger.



NEW **Elevated grooving insert:**
Protects the clamping finger and produces short chips. Elevated insert edge acts as a chip breaker leading to smaller, tighter curled chips. These are easier to transport out of the groove.



Existing insert seat without positive engagement:
The insert is not supported at the rear contact point and can move when encountering lateral forces.



NEW **Insert seat with positive engagement:**
The positive engagement in the insert seat ensures reliable installation and maximum stability. Particularly with lateral forces, the insert is held securely in the positive engagement and can no longer move – for higher cutting parameters and a longer tool life for the cutting insert and tool.

BENEFITS FOR YOU

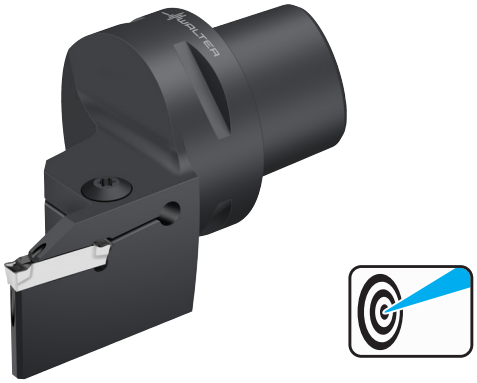
- Process reliability and reduced costs with the unique DX positive engagement design (the cutting insert does not move; wear and breakages are minimized)
- Tool change time reduced by 70% during insert changeover in the machine with SmartLock
- Higher productivity due to improved chip breaking (no chip jams, longer tool life)

_ NEW ADDITIONS TO THE PRODUCT RANGE – TURNING TOOLS

Walter Capto™ grooving tool; single-sided UF4 geometry.

Fast and reliable groove turning with Walter Capto™.

G1011-C…-P/G4011-C…-P monoblock toolholder



NEW ADDITION TO THE PRODUCT RANGE

- Walter Cut monoblock tools for grooving, parting off and groove turning
- Precision cooling, 145 psi (10 bar) to 2175 psi (150 bar) coolant pressure
- Walter Capto™: C3, C4, C5 and C6
- For double-edged DX18 and GX24 cutting inserts
- Insert widths: 0.078-0.236 in (2–6 mm)

THE APPLICATION

- First choice for grooving and groove turning operations on machines with Walter Capto™ interface

BENEFITS FOR YOU

- Quick, reliable tool changes thanks to the Walter Capto™ quickchange system
- Maximum productivity with higher cutting parameters due to robust support

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Versatile for deep grooving operations.

Walter Cut UF4 geometries – GX24 and DX18

NEW ADDITION TO THE PRODUCT RANGE

- GX24…F…S geometry for universal use; DX18…F…S for deep grooving operations
- Single-sided version for large cutting depths, avoids the engagement of second cutting edge
- Cutting insert widths: 0.118-0.236 in (3–6 mm)
- For all grooving, parting off and recessing operations in the average feed range

THE APPLICATION

- For cutting depths larger than the insert length 0.709/0.945 in (18/24 mm)
- Fits in standard tools

BENEFITS FOR YOU

- Optimal chip breaking for deep radial and axial machining operations
- Maximum tool life from Tiger·tec® Silver PVD cutting tool material

Grooving tools in just four weeks: So cost-effective – yet customized.

SPECIAL TOOL

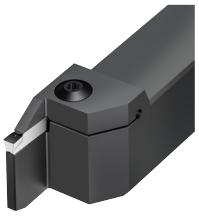
THE TOOL

- G1011 monoblock special tools for GX09, GX16, GX24, GX30 and GX34 indexable inserts
- Left-hand, right-hand or neutral versions
- With and without precision cooling
- Approach angle: 0 to 90° possible
- Cutting depths: 0.196-1.299 in (5–33 mm)
- Shank sizes: 0.393-1.969 in (10–50 mm)
- Walter Capto™ C3–C8

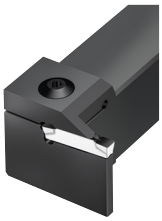
THE APPLICATION

- Grooving and groove turning with and without precision cooling
- Radial grooving, parting off and groove turning
- Can be used with coolant pressure of 145 psi (10 bar) to 2175 psi (150 bar)
- Ideal grooving tool design modifications (e.g. reinforcement of the cutting insert support for a longer tool life and higher productivity)

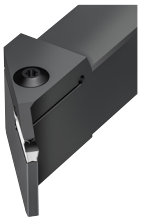
Possible variants – approach angle and cutting depth



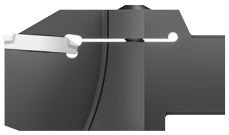
0° approach angle



90° approach angle

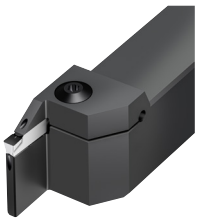


1–89° approach angle

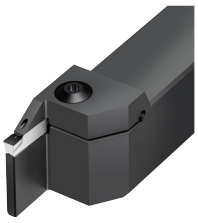


Adapted cutting depths: 0.196-1.299 in (5–33 mm)

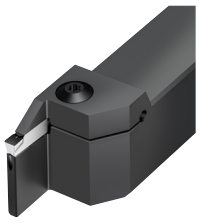
Possible variants – cooling



Precision cooling on the rake and clearance faces



Precision cooling on the rake face



Precision cooling on the clearance face

Also available:

Walter Xpress for GX16 and GX24 cutting inserts

Walter Xpress – maximum stability for individual grooving solutions **Fig.:** G1011-P

BENEFITS FOR YOU

- Greater flexibility and four-week delivery time for little more than the standard price
- Rapid response with to quotes returned within 24 hours
- Fewer tool design errors through a rule-based design approach in accordance with the component definition
- Superior machining results due to proven standard technology plus optimal special design
- Walter Xpress is available for grooving tools and grooving inserts

Available from:

Walter Xpress

B – Holemaking

_ P6006 EXCHANGEABLE-TIP DRILL

Redefine bore quality and process reliability.

NEW

THE INDEXABLE INSERT

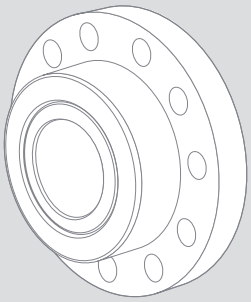
- P6006 exchangeable-tip drill
- Dia. 0.472-1.161 in (12.00–29.50 mm)
- Optimized geometry
- Wear-resistant grade WPP25

THE APPLICATION

- Can be used in all exchangeable-tip drills D4140, D4240 and D4340
- Machining steels (ISO P); ideal for unalloyed, low-carbon and low-alloy steels up to 145 ksi (1000 N/mm²) (e.g. AISI 1018, ST=355)
- Ideal for holemaking without pilot drilling up to 10 × D
- For maximum tool life in stable machining conditions
- Areas of use: General mechanical engineering, energy, automotive and aerospace industries

APPLICATION EXAMPLE

Hydraulic flange



Material: C22.8 (similar to AISI 1024)

Tool: D4140-07-14.00F16-B

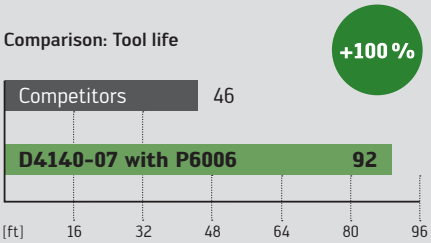
Indexable insert: P6006-D14.00R WPP25

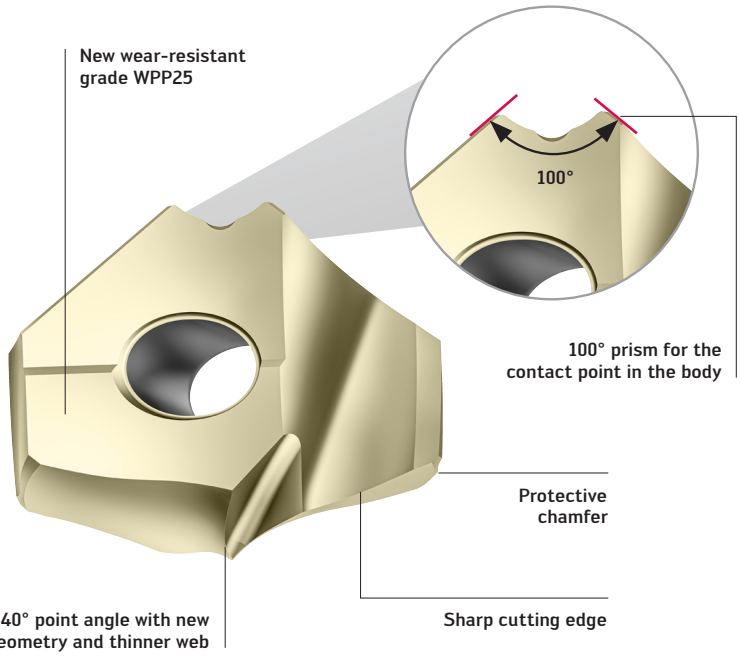
Grade: WPP25

Cutting data:

	Competitors	Walter D4140-07-14.00F16-B
v_c (sfm)	367	328
n (rpm)	2548	2275
f_n (in)	0.008	0.009
v_f (in/min)	20.1	20.2
Drilling depth (in)	1.102	1.102
Tool life	25 components 500 bores 46 ft	50 components 1000 bores 92 ft
Cooling	Emulsion	Emulsion
Adaptor	HSK 63	HSK 63

Comparison: Tool life





P6006 exchangeable-tip drill **Fig.:** P6006-D18,00R WPP25

BENEFITS FOR YOU

- Maximum process reliability with very effiecient chip breakage in unalloyed steels
- High centring accuracy due to new geometry with optimized thinner web
- Specially designed for long overhangs: Holemaking without pilot drilling up to 10 × D
- Maximum tool life in stable conditions – from new grade WPP25
- Best surface quality and wear detection with the light-colored top layer

Incomparably tough under all working conditions.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

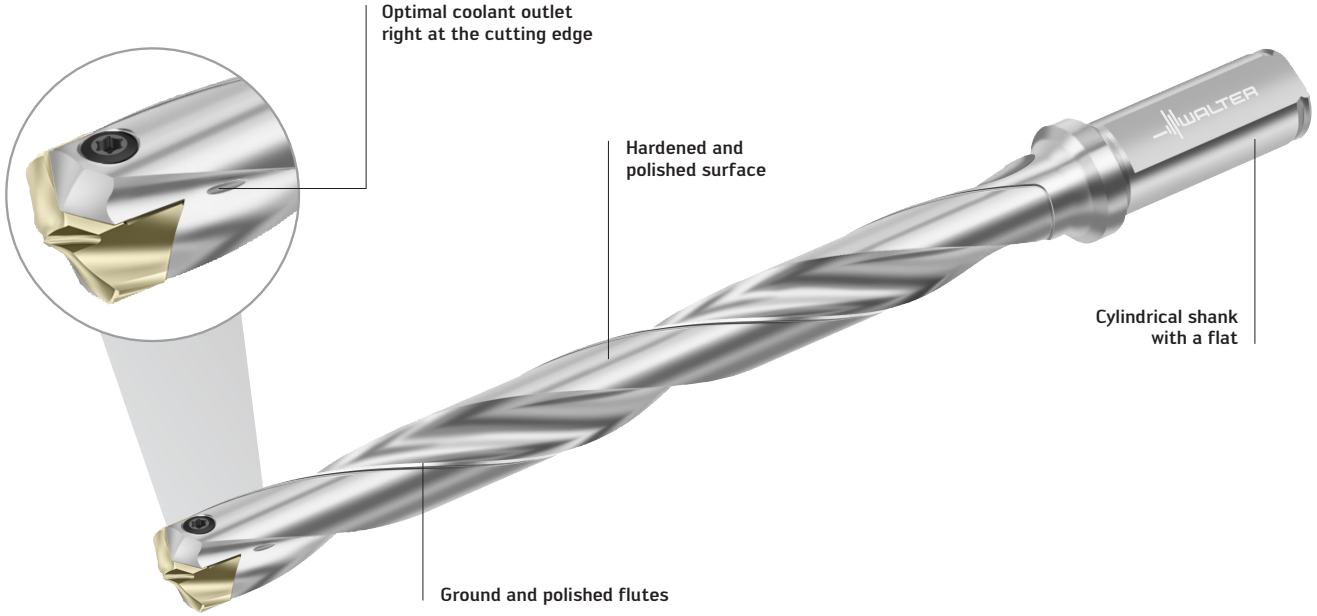
- D4140-10 (10 × D); dia. 0.500–1.000"
- D4140.10 (10 × D); dia. 12–25 mm

THE TOOL

- Diameter range: 12–37.99 mm for 3 × D, 5 × D and 7 × D
- Diameter range: 0.472–1.496" for 3 × D, 5 × D and 7 × D
- Diameter range: 12–25.80 mm for 10 × D
- Diameter range: 0.472–1.016"

THE APPLICATION

- Drilling from solid, stack drilling (laminate drilling), inclined entrances and exits up to ~5°
- Steels, stainless steels, cast irons, non-ferrous and super apploys (ISO materials P,M,K,N,S)
- Areas of use: General mechanical engineering, mold and die making, energy and automotive industries



D4140 exchangeable-tip drill **Fig.:** D4140-10-18.00F20-D

BENEFITS FOR YOU

- Maximum process reliability up to 10 × D
- Increase in the tool life due to coolant aimed directly on the cutting edge
- Reliable chip evacuation due to ground and polished flutes
- Hardened and polished surface offers a long tool life and protection against wear

Specially designed for aluminum: Reliable boring in a matter of seconds.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- Indexable inserts for tangential/lateral use:
  - P4460-2R08-G88 WK10
  - P4460-2R08-G88 WNN15
  - P4460-2R04-G88 WNN15

THE TOOL

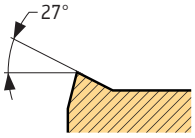
- Special tool with tangentially/laterally arranged indexable inserts
- Combined for chamfering and boring operations
- High number of teeth for small tool diameters
- Radially adjustable solutions are also possible

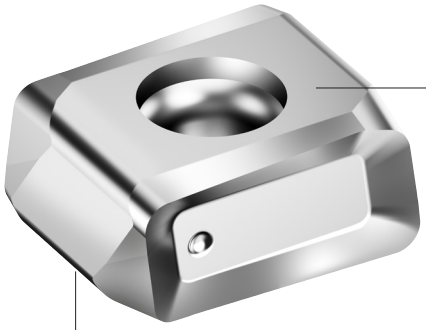
THE APPLICATION

- Non-ferrous (ISO N) materials
- Boring (with and without interrupted cuts)
- Milling and chamfering
- Customer-specific components

THE GEOMETRY

- G88 – The sharp one: Especially for machining aluminum



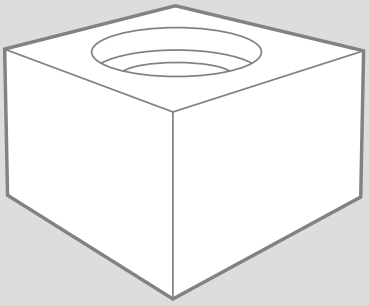


P4460-2R08-G88 WK10 indexable insert

Special tool: Indexable insert step drill **Fig.:** B2074-7786154

APPLICATION EXAMPLE

Test component



Material: AlSi9

Cutting data:

	D_c – tangential: Dia. 1.26 in	D_c – lateral: Dia. 1.86 in
v_c (sfm)	2637	3792
n (rpm)	8000	8000
f_z (in)	**0.014**	**0.014**
v_f (feet/min)	27.5	27.5
a_p (in)	0.118	0.276

BENEFITS FOR YOU

- Maximum productivity due to extremely high feeds per tooth
- Several machining operations are combined in a single tool
- Long tool life and flexible use from customer-specific design
- High level of process reliability due to excellent chip breaking

D4120 and D4170 – perfect performance and precision.

NEW ADDITION TO THE PRODUCT RANGE

D4120 indexable insert drill

– Cylindrical shank with flat (dia. 1.687–2.25"):
  - D4120.02 (2 × D)
  - D4120.03 (3 × D)
  - D4120.04 (4 × D)
  - D4120.05 (5 × D)

BENEFITS FOR YOU

– High precision because of balancing of the cutting forces between the center and outer insert
– Excellent surface quality due to wiper geometry
– High level of process reliability thanks to reliable chip removal

---

NEW ADDITION TO THE PRODUCT RANGE

D4170 indexable insert drill with cartridge

– Walter NCT:
  D4170-03 (3 × D); dia. 65–80 mm (2.559-3.149 in)

BENEFITS FOR YOU

– High level of flexibility from modular design with cartridges
– Tool diameter can be adjusted by +0.024 in (+0.6 mm)
– NCT interface enables short overhangs

B – Threading

_ TC440 SUPREME THREAD FORMER

Powerful and reliable in stainless steels.

NEW

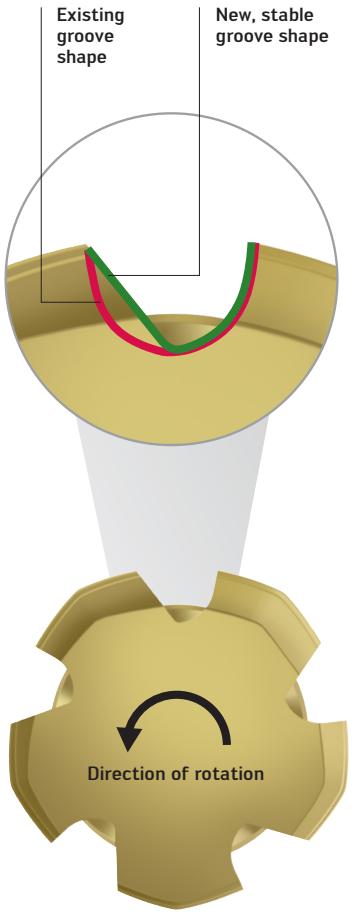
THE TOOL

- HSS-E thread former
- With or without internal coolant (axial and radial)
- Tolerance: 6HX
- Dimension range:
  - Metric: M2–M12
  - Metric fine: M8 × 1–M16 × 1.5

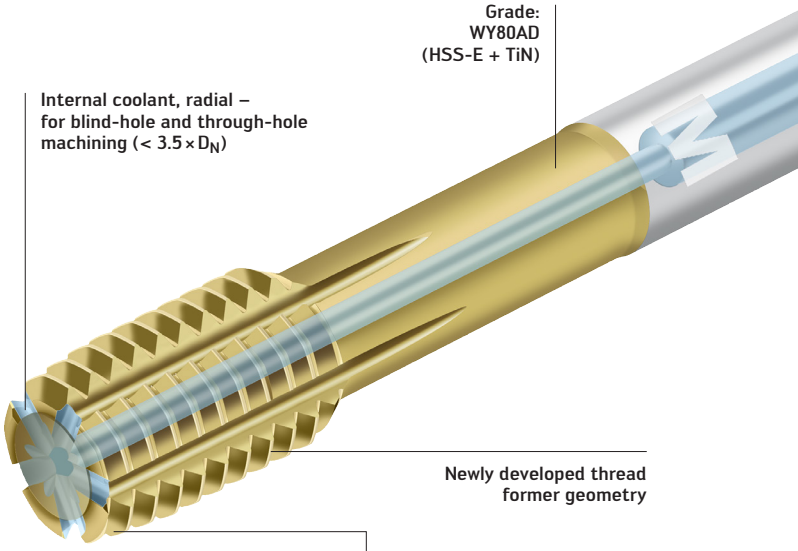
THE APPLICATION

- Blind-hole and through-hole threads
- ISO M materials
- Thread depths up to 3.5 × D_N
- Areas of use: General mechanical engineering, among others

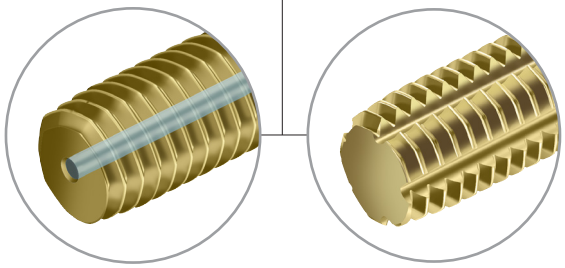
THE GEOMETRY



Stable thread former geometry – for maximum process reliability in stainless steels



Additional variants:

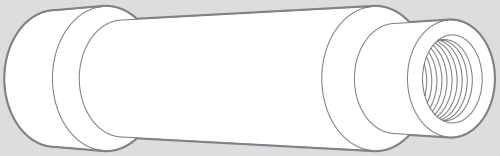


With internal coolant – for blind-hole machining < 3.5 × D_N

With lubrication grooves – for blind-hole and through-hole machining < 3.5 × D_N

APPLICATION EXAMPLE

Piston rod

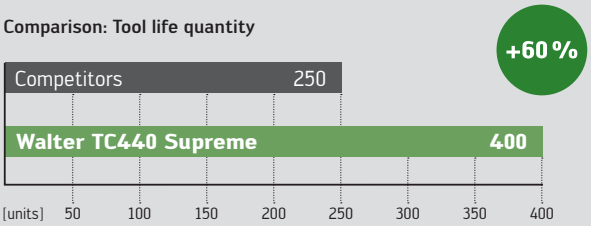


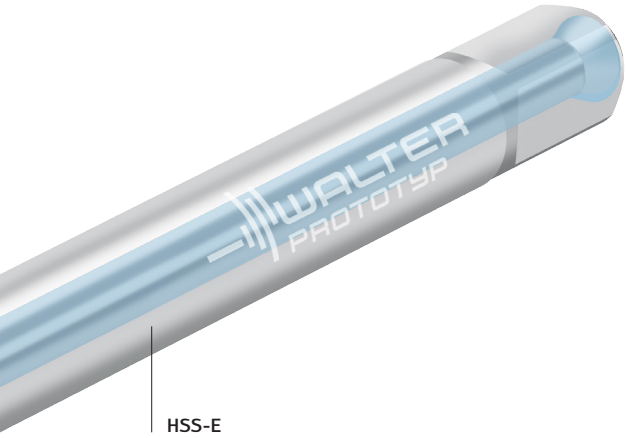
Material:	430F Stainless Steel
Tool:	TC440 Supreme thread former
Dimensions:	M8
Thread depth:	40 mm (5 × D)
Cooling:	Emulsion

Cutting data:

	Competitors	Walter TC440 Supreme
v_c (sfm)	20	20
Tool life quantity (threads)	250	400

Comparison: Tool life quantity





HSS-E

TC440 Supreme thread former **Fig.:** TC440-M12-L2WY80AD

BENEFITS FOR YOU

- Long tool life and high process reliability due to newly developed, patent-pending geometry
- Suitable for any application thanks to a range of different variants
- High thread quality from the technological advantages of thread forming

Specially designed for blind hole threads on turbochargers.

SPECIAL TOOL

THE TOOL

- HSS-E-PM Paradur® Ni 10 tap
- Stable design with reduced helix angle
- Chamfer form E

THE APPLICATION

- M6 blind hole thread
- Optimised for Ni- and Ti-based high-temperature alloys
- Area of use: Automotive industry (turbocharger housings)

APPLICATION EXAMPLE

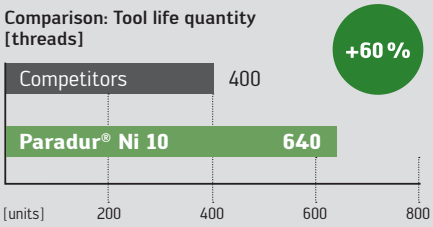
Turbocharger

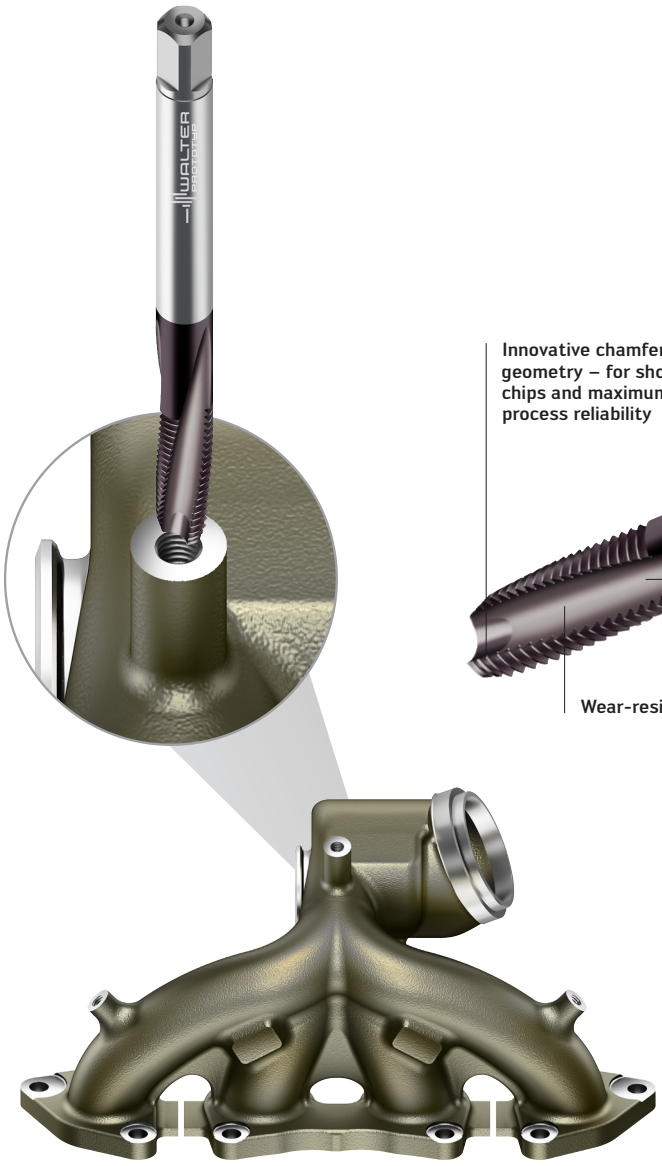
Material:	1.4837+NB
Tool:	Paradur® Ni 10
Dimensions:	M6
Thread depth:	2.5 × D

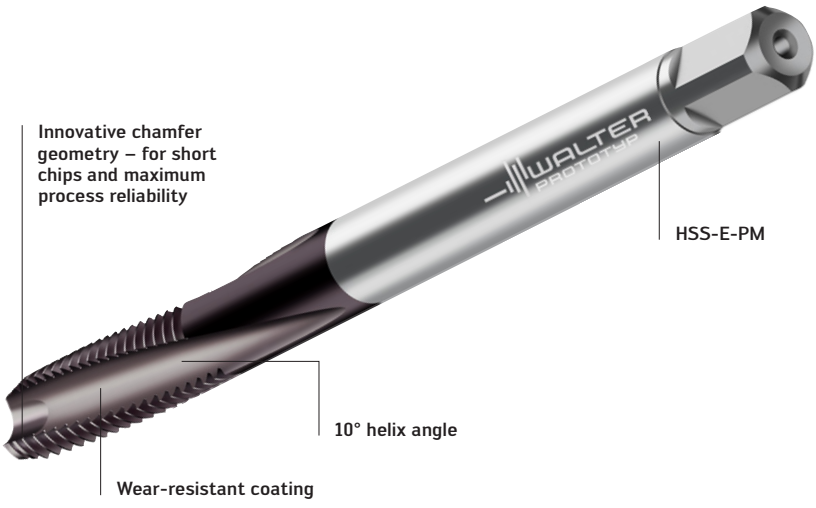
Cutting data:

	Competitors	Walter Paradur® Ni 10
v_c (m/min)	4	4
f (mm)	1	1
v_f (mm/min)	212	212
Core hole dia. (mm)	5.1	5.1

Comparison: Tool life quantity [threads]





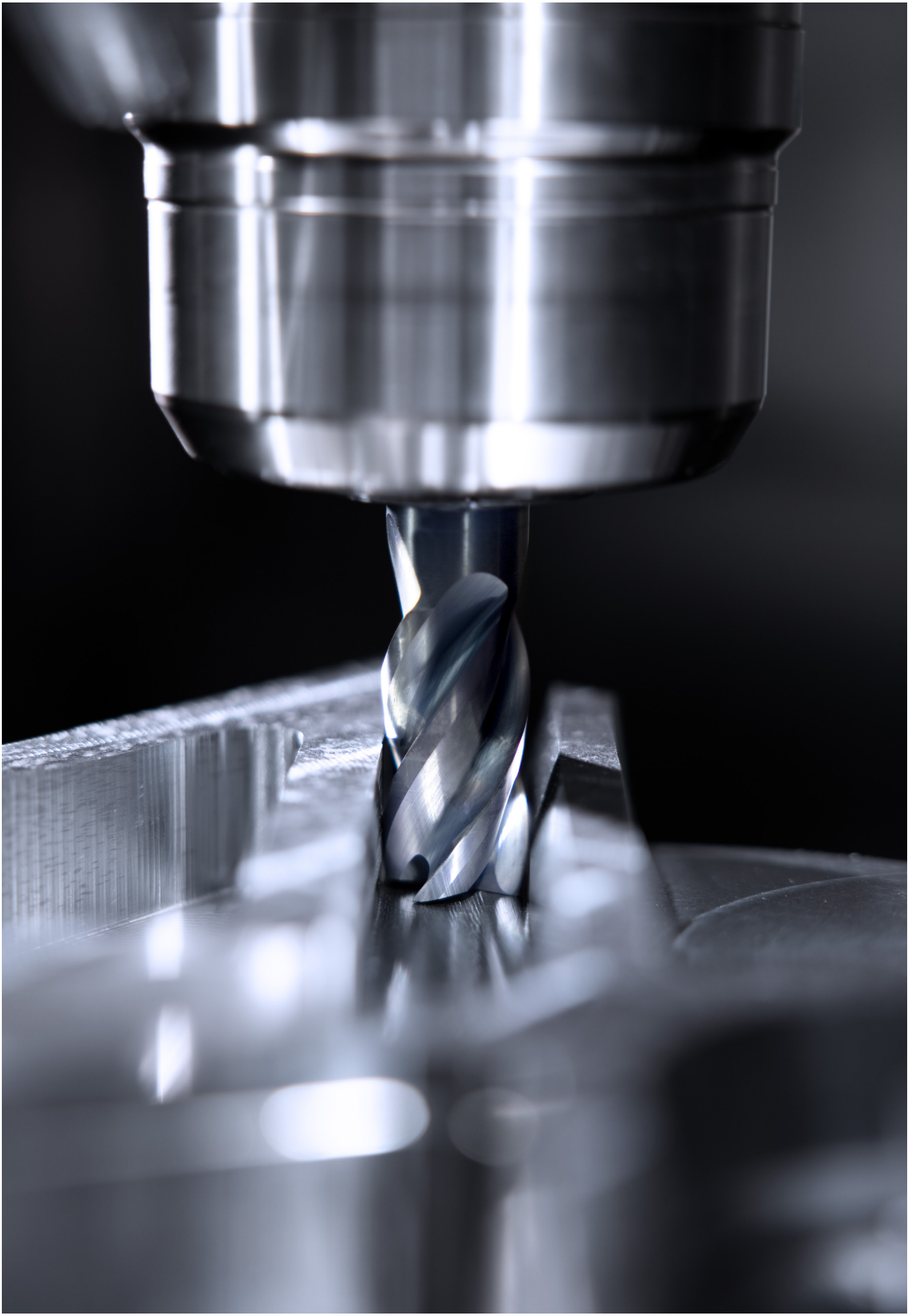


Paradur® Ni 10 tap **Fig.:** 3B1167-7012900

BENEFITS FOR YOU

- Exceptionally high productivity from optimized geometry
- Maximum process reliability due to short chips
- High level of cost-efficiency from low costs per thread

C – Milling



Xill·tec™ – universal and eXcellent.

NEW

THE TOOL

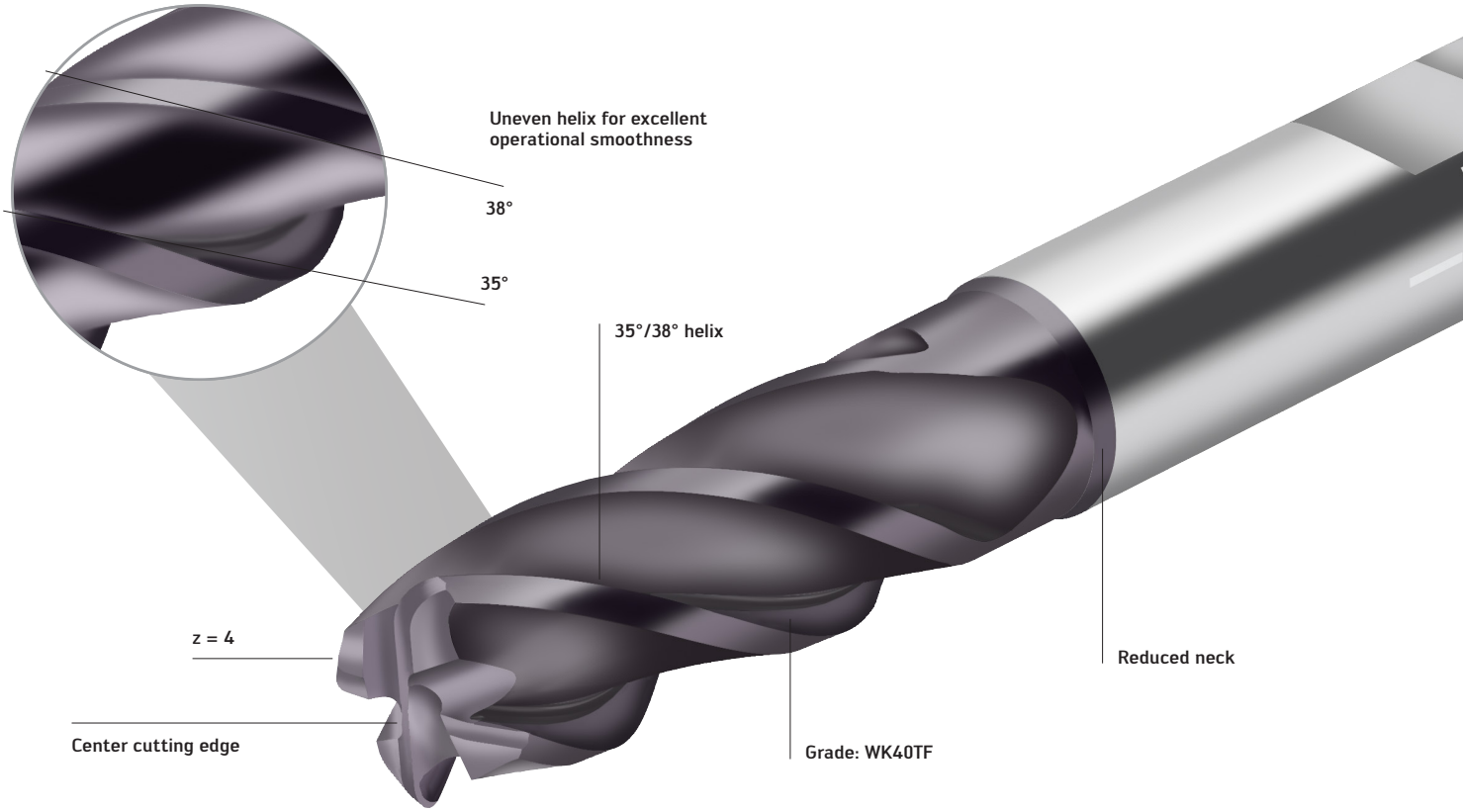
- MC230 Advance Xill·tec™ solid carbide milling cutter range
- z = 4
- Varying 35°/38° helix
- Corner radius: 0.2–4 mm, with protective chamfer
- Dia. 2–20 mm [DIN 6535 HA]
- Dia. 2–25 mm [DIN 6535 HB]

THE GRADE

- Universal, tough milling grade WK40TF with TiAlN coating

THE APPLICATION

- First choice for universal application when roughing and finishing
- Shoulder milling, full slotting, ramping and dynamic milling
- For ISO materials P, M, K, N and S
- Areas of use: General mechanical engineering, mold and die making, sub-supplier for the aerospace industry, medical technology, energy and automotive industries

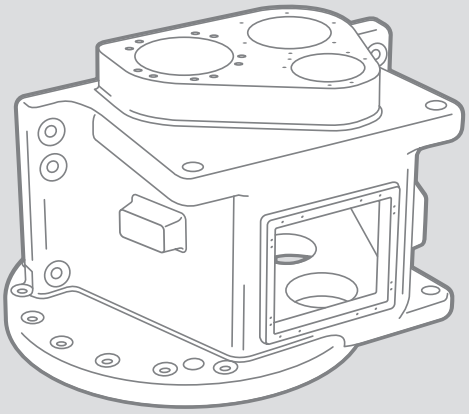


Xill·tec™

MC230 Advance Xill·tec™ solid carbide milling cutter **Fig.:** MC230 Advance WK40TF

APPLICATION EXAMPLE

Gearbox housing



Material: G22NiMoCr05-6/1.6760

Tensile strength: 900–1200 N/mm²

Tool: MC230-16.0W4B050C-WK40TF

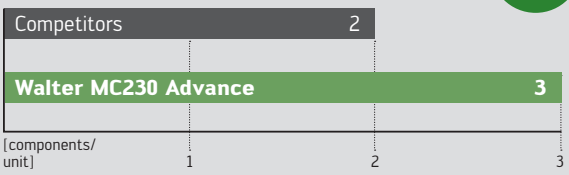
Adaptor: HSK 100; Weldon

Cutting data:

	Competitors	Walter MC230-16.0W4B050C-WK40TF
v_c (sfm)	425	425
f_z (in)	0.003	0.003
a_e (in)	0.61	0.61
a_p (in)	0.20-1.14	0.20-1.14
Number of components	2	3

DIN 6527 L

Comparison: Number of components **+50 %**



BENEFITS FOR YOU

- Can be used universally with all ISO materials
- Low inventory costs
- Comprehensive range: With corner radii, protective chamfer, cylindrical shank and Weldon shank
- Long tool life from high-performance grade WK40EA
- Regrindable in all Walter Reconditioning Centers with performance guarantee

Specially designed for aluminum: The new Supreme and Advance solid carbide milling cutters.

NEW

THE TOOLS

- Universal high-performance milling cutter and universal milling cutter for ISO N machining
- MD266 Supreme: z2 and z3, dia. 2–25 mm with neck; internal coolant from dia. 6 mm; uncoated; center cut
- MC267 Advance: z2 and z3, dia. 1–20 mm with and without neck; with and without radius; coated and uncoated; center cut

THE APPLICATION

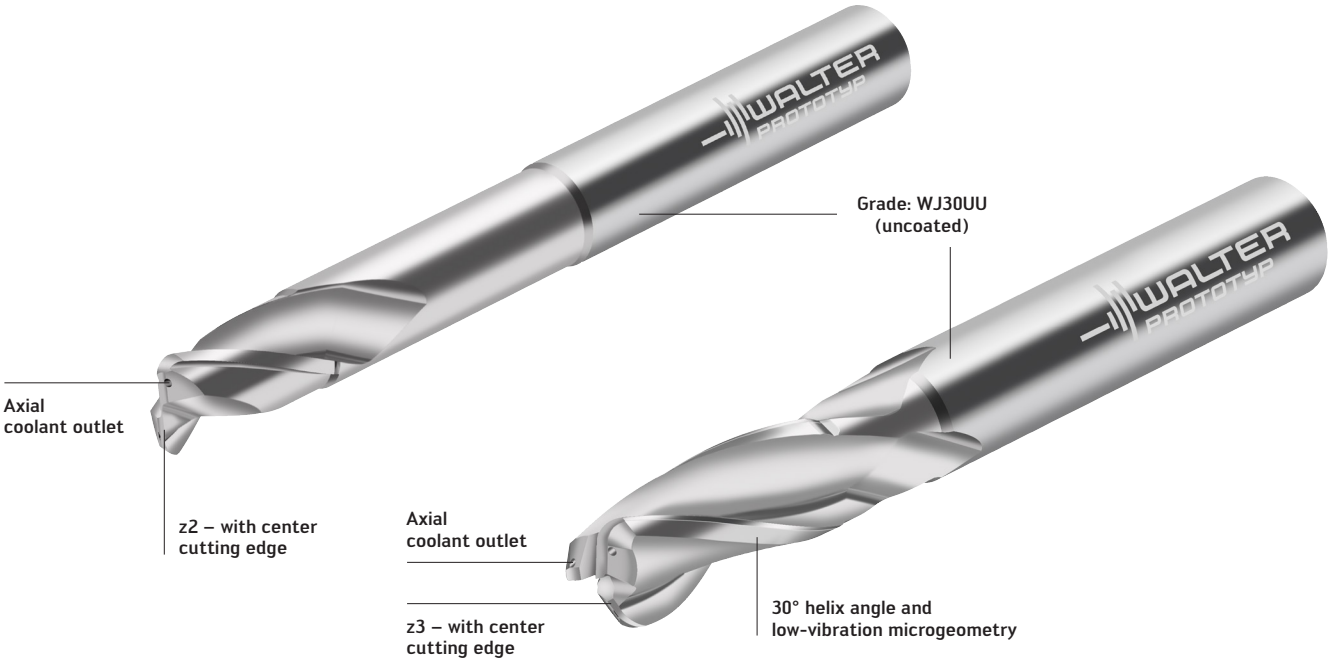
- Developed for the aerospace industry
- Can be used universally for roughing, semi-finishing and finishing
- Suitable for full slotting and ramping
- Ideal for wrought and cast aluminum alloys up to 9% silicon
- Ideal for ISO N materials such as copper, magnesium, brass

MD266 Supreme

- Best performance when machining structural components in the aerospace industry and in general mechanical engineering

MC267 Advance

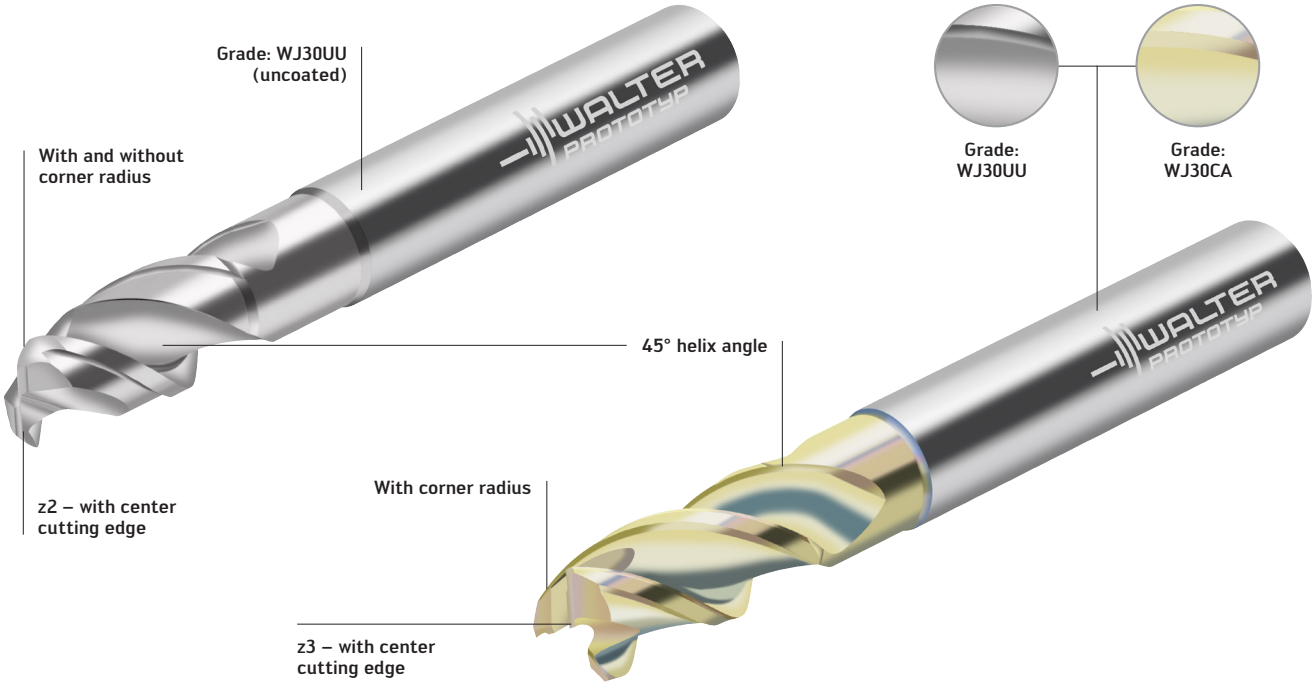
- Residual material machining of tight radii in the aerospace industry
- Universal application in all areas of industry



Also available from: Walter Xpress

MD266 Supreme solid carbide milling cutter

Fig.: WJ30UU



Also available from:
Walter Xpress

MC267 Advance solid carbide milling cutter

Fig.: MC267 Advance WJ30UU & WJ30CA

BENEFITS FOR YOU

MD266 Supreme

- Can be used universally for roughing, semi-finishing and finishing
- Highest machining rates and process reliability
- Low-vibration from special geometry

MC267 Advance

- Can be used universally for roughing, semi-finishing and finishing
- Maximum process reliability

Reduced cutting forces – less vibration.

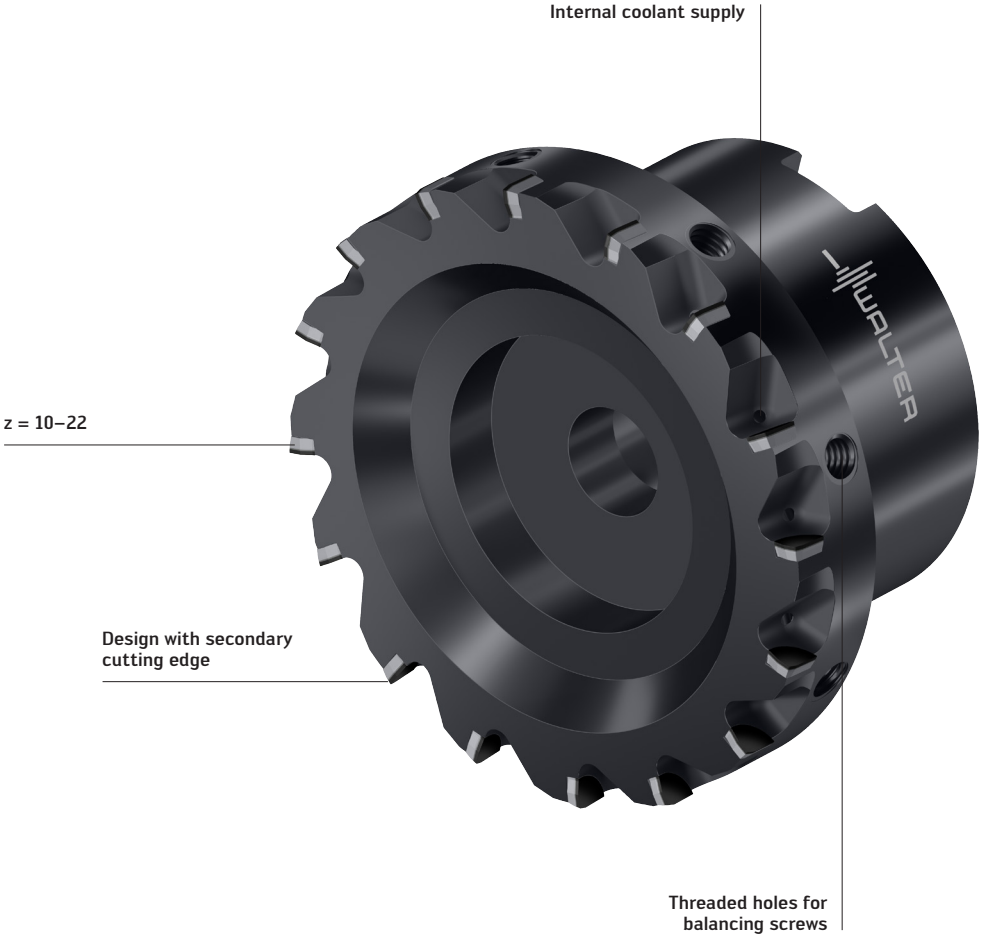
NEW

THE TOOLS

- Face milling cutters, shoulder milling cutters and routing cutters with brazed PCD cutting edges dia. 4–125 mm
- MP060 face milling cutter with maximum number of teeth; dia. 40–125 mm
- MP160 shoulder milling cutter with cylindrical shank and ScrewFit adaptor; dia. 16–40 mm
- MP260 routing cutter with cylindrical shank and ScrewFit adaptor; dia. 4–20 mm

THE APPLICATION

- Milling operations with the highest surface quality
- Face, shoulder and slot milling
- Non-ferrous metals (e.g. aluminum, Al-Si alloys, magnesium and magnesium-based alloys), as well as plastics and fiber-reinforced plastics
- For applications with emulsion or with MQL
- Areas of use: Automotive and aerospace industries, general mechanical engineering



MP060 PCD milling cutter **Fig.:** MP060 WDN20

MP160 and MP260 PCD milling cutters **Fig.:** MP160; MP260 WDN20

BENEFITS FOR YOU

- Cost-effective, precise machining
- Tool life increased by 20 to 200 times (compared to conventional solid carbide tools on the market)
- Reduced cutting forces and minimal vibration tendency due to optimized geometries
- Excellent surfaces
- Shortest machining times thanks to high cutting speeds and a high number of teeth
- Low cutting tool material costs from extremely long tool life
- Possibility of reconditioning and/or reconfiguration

Roughing and finishing – cost-effective and stable.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- Face milling tools for indexable insert size SN.X1205..
- Indexable inserts with fully sintered circumference and facet for 88° approach angle
- Aluminum for 88° approach angle

THE TOOLS

- Xtra·tec® XT M5009 and M5012 face milling cutters for indexable insert size SN.X1205..
- Xtra·tec® XT M5009 face milling cutter with 45° approach angle: Dia. 25–160 mm (or 1–6"); depth of cut 5 or 6.5 mm
- Xtra·tec® XT M5012 face milling cutter with 88° approach angle: Dia. 32–160 mm; depth of cut 8 or 10 mm
- Tools with wide and medium pitch for insert size SN.X1205.. are designed with carbide shim
- Three pitches for different applications
- Interfaces: ScrewFit and shell mill mount

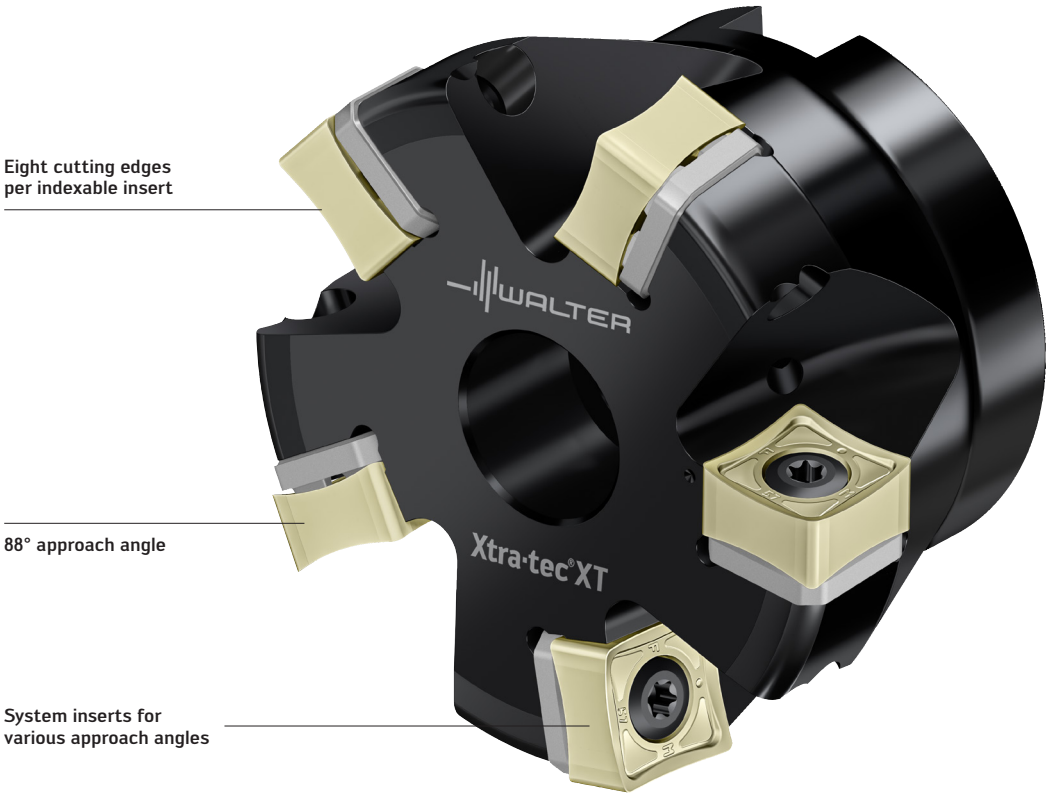
THE INDEXABLE INSERTS

- System inserts, can be used in:
  - Xtra·tec® XT M5009 and M5012 face milling cutters
- Roughing insert:
  - Double-sided indexable inserts with eight cutting edges
  - Easy-cutting geometries
  - Variants:
    Fully ground circumference (SNGX..., SNHX...) for maximum precision
    Fully sintered circumference (SNMX...) for maximum cost-efficiency
- Wiper insert:
  - Double-sided indexable insert with two cutting edges (XNGX0904... and XNGX1205...)

Xtra·tec® XT M5009 face milling cutter **Fig.:** M5009-080-B27-05-06-AP

THE APPLICATION

- For steel and cast iron workpieces, stainless steels, materials with difficult cutting properties and non-ferrous metals
- Face milling: Roughing and rough-finishing with wiper inserts
- Face milling with larger depth of cut (M5012)
- Can also be used on less powerful machines due to the positive, soft cutting action



Xtra·tec® XT M5012 face milling cutter **Fig.:** M5012-063-B27-05-10-AP

BENEFITS FOR YOU

- High level of stability for minimal material removal and variable conditions
- Maximum feeds, tool life and productivity due to small indexable inserts and high number of teeth
- High process reliability from strong, double-sided indexable inserts and carbide shim
- Very good handling due to easily accessible clamping screw (prevents typical installation mistakes)
- Highly cost-effective from low cutting tool material costs

_ XTRA·TEC® XT M5004 OCTAGON MILLING CUTTER

Milling with eight times the flexibility.

NEW

THE TOOL

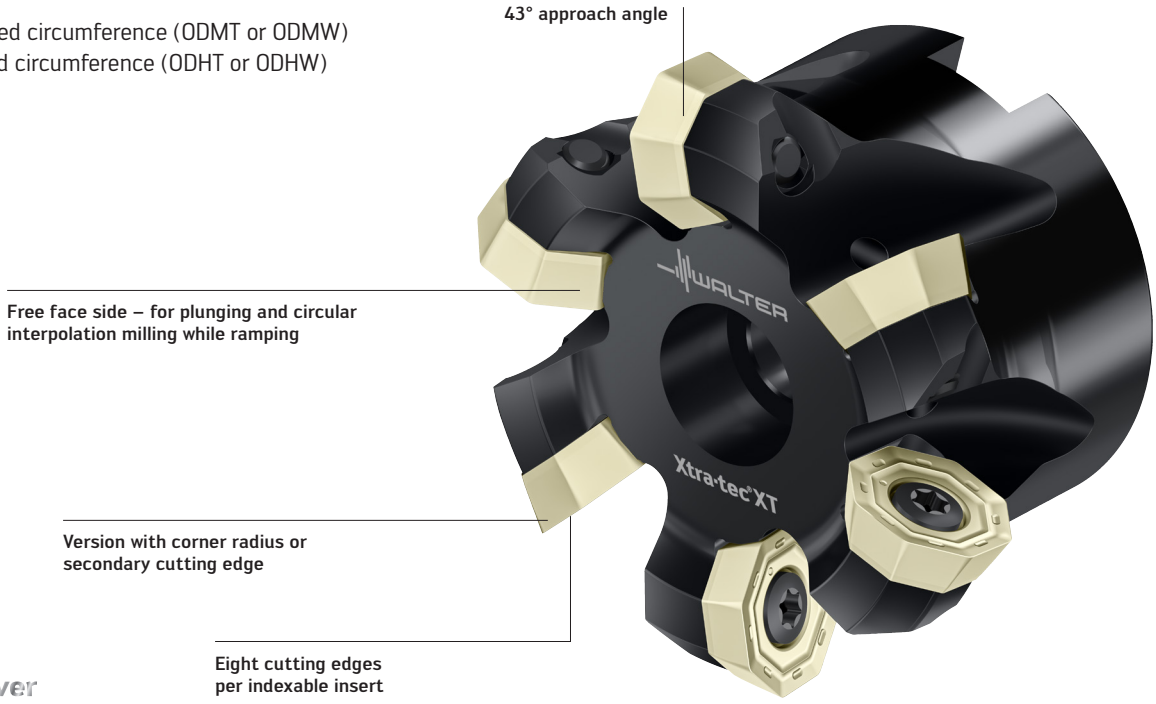
- Xtra·tec® XT M5004 octagon milling cutter
- 43° approach angle
- Depth of cut 3 or 4 mm
- Three pitches for different applications
- Dia. 32–170 mm (or 1.25–3.315")
- Interfaces: ScrewFit, cylindrical-modular, cylindrical shank and shell mill mount

THE INDEXABLE INSERT

- Eight-cornered, positive indexable inserts with eight cutting edges
- Two indexable insert sizes with corner radius or facet
- Variants:
  - Fully sintered circumference (ODMT or ODMW)
  - Fully ground circumference (ODHT or ODHW)

THE APPLICATION

- Face milling (roughing and finishing), ramping, pocket milling and circular interpolation milling, as well as chamfering and back chamfering
- For steel, stainless steels, cast iron, non-ferrous metals and materials with difficult cutting properties
- Areas of use: Energy industry, mold and die making, general mechanical engineering, among others



Xtra·tec® XT M5004 octagon milling cutter **Fig.:** M5004-073-B22-06-04

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Tiger·tec® Silver
Tiger·tec® Gold

BENEFITS FOR YOU

- Optimum cutting data and tool life for maximum productivity
- Maximum process reliability from high stability
- Perfectly adapted to the machining operation due to different indexable insert sizes, corner designs and geometries
- Lower tool costs and minimized effort due to universal usability
- Maximum cost-efficiency due to Tiger·tec® cutting tool materials, high number of teeth and low cutting tool material costs

_ XTRA·TEC® XT M5468 ROUND INSERT MILLING CUTTER

Maximum security against inadvertent twisting.

NEW

THE TOOL

- Xtra·tec® XT M5468 round insert milling cutter
- Protection against twisting and cutting edge rotation due to eight facets on the indexable insert
- Oversize milling cutter for machining operations on deep shoulders
- Dia. 20–100 mm (or 1–4")
- Two pitches for different applications
- Interfaces: ScrewFit, cylindrical-modular, Weldon shank and shell mill mount

THE INDEXABLE INSERT

- Eight cutting edges with positive basic shape
- Two indexable insert sizes:
  - RO.X10T3M08
  - RO.X1204M08
- Variants:
  - Fully sintered circumference (ROM..)
  - Fully ground circumference (ROG.., ROH..)

THE APPLICATION

- Universal system for copy milling, face milling, ramping, pocket milling and circular interpolation milling
- Ideal for copy milling with minimal material removal
- For steel, stainless steels, cast iron, non-ferrous metals, materials with difficult cutting properties and for hard machining
- Areas of use: Mold and die making, general mechanical engineering, energy industry, among others

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Xtra·tec® XT M5468 round insert milling cutter **Fig.:** M5468-032-TC16-04-05

BENEFITS FOR YOU

- Maximum productivity from optimum cutting data and tool life
- Maximum process reliability due to indexing of the indexable inserts using facets
- Perfectly adapted to the machining operation due to different indexable insert sizes and geometries
- High level of flexibility for use in existing adaptor systems due to cylindrical-modular interface
- Lower tool costs and minimized effort from universal usability
- High level of cost-efficiency due to Tiger·tec® cutting tool materials, higher number of teeth

The indexable insert with Xtra performance.

NEW

THE INDEXABLE INSERT

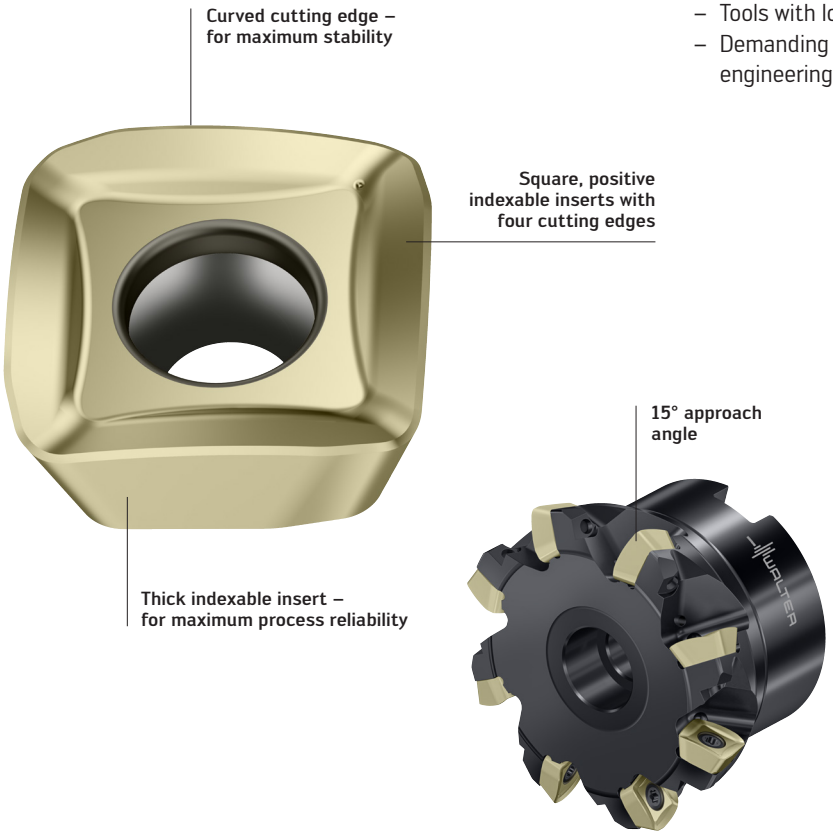
- SDMX indexable inserts with curved cutting edge
- Two indexable insert sizes with facet (SDMX0904ZDR-E27 and SDMX1205ZDR-E27)

THE TOOL

- M4002 high-feed milling cutter with three pitches
- Depth of cut 1.5 or 2 mm
- Dia. 25–125 mm (or 1–4")
- Interfaces: ScrewFit, cylindrical-modular, shell mill mount

THE APPLICATION

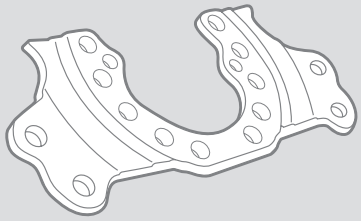
- High-feed milling in steel and cast iron, stainless steels and materials with difficult cutting properties
- Tools with long overhangs
- Demanding tasks in mold and die making, general mechanical engineering



M4002 high-feed milling cutter **Fig.:** SDMX1205ZDR-E27 WSP45G

APPLICATION EXAMPLE

Brake flange

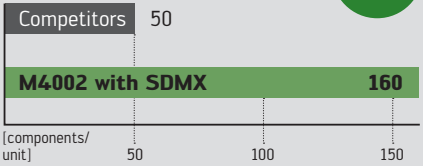


Material:	S690Q (1.8928) – ISO P
Tool:	M4002-080-B27-08-02
Indexable insert:	SDMX1205ZDR-E27
Cutting tool material:	WSP45G

Cutting data:

	Competitors	Walter M4002 with SDMX
v_c (sfm)	920	920
f_z (in)	0.035	0.044
a_p (in)	0.051-0.063	0.051-0.063
a_e (in)	1.2-1.6	1.2-1.6
v_f (in/min)	310	400

Comparison: Tool life quantity **+320 %**



BENEFITS FOR YOU

- Maximum productivity from optimum cutting data and tool life
- Reliable thanks to maximum stability due to the curved cutting edge
- Reduced tool costs due to universal usability
- Maximum cost-efficiency from Tiger·tec® cutting tool materials, high number of teeth and low cutting tool material costs

_ CUSTOM SLOTTING CUTTER

Reduce unit costs with the defined cycle time.

SPECIAL TOOL

THE TOOL

- Slotting cutter set with double-sided indexable inserts
- Cutting diameter D_c = 220 mm, z = 2 × 24
- Customer end mill adaptor HSK 125-C

THE INDEXABLE INSERT

- Precision-ground indexable insert
- Double-sided with eight cutting edges
- Soft-cutting geometry with positive rake angle

THE APPLICATION

- Roughing hinges made of structural steel
- Milling the workpiece height from two sides
- For use on multi-spindle machines with a very short cycle time

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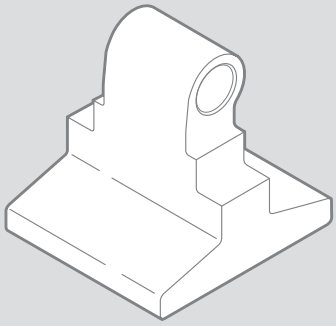
Tiger·tec®Gold

Custom slotting cutter for trimming **Fig.:** SNMX090408-F57

APPLICATION EXAMPLE

Hinge



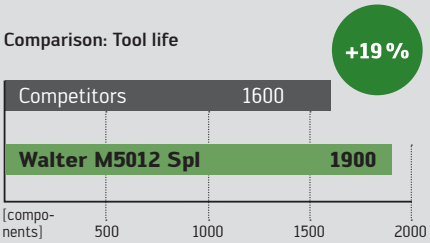
Material: A572 Grade 50

Machine: Multi-spindle machine

Cutting data:

	Competitors	Walter M5012 Spl
v_c (sfm)	650-820	650-820
f_z (in)	0.004-0.008	0.004-0.008
Tool life	1600	1900

Comparison: Tool life



BENEFITS FOR YOU

- Low cutting material costs due to eight cutting edges
- High availability due to standard indexable insert
- Simple installation from good accessibility of the indexable insert
- Reduced inventory costs due to a long tool life
- Low unit costs due to the specified cycle time

Walter GPS

Your navigation system for the best machining solution.

Find the right tool with a click of the mouse.
In just four clicks, Walter GPS takes you from the definition of your target to the most cost-efficient tool and machining solution. Walter GPS is surprisingly comprehensive. Be it holemaking, threading, turning or milling: Full information on all tools from Walter, Walter Titex and Walter Prototyp can be displayed in an instant. Access essential usage data, such as accurate cutting data or precise cost-efficiency calculations, on your screen.

Walter GPS is now also available for smartphones and tablet PCs. This means that you are able to access all the required tool information at any time, wherever you are, even without a PC: In the workshop, at the machine or on the move.

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WALTER
Engineering Kompetenz

D – Boring bars/adaptors

Accure·tec – vibration-free machining with long milling tools.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- Accure·tec AC060 vibration-damped ScrewFit adaptors for milling
- For tools with ScrewFit interface T18, T22, T28
- Conical design

THE TOOL

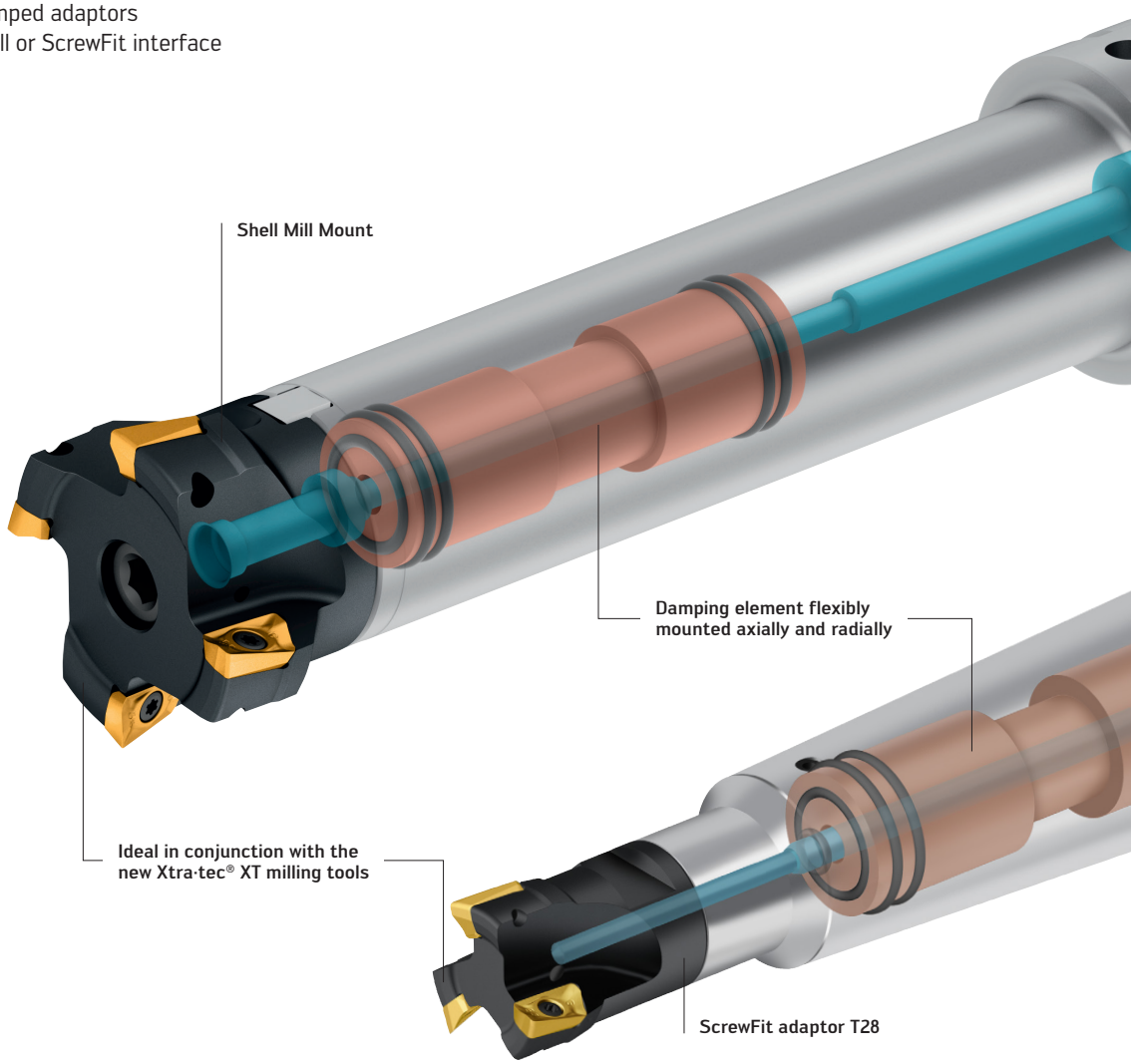
- Accure·tec AC001 vibration-damped adaptors
- For milling cutters with shell mill or ScrewFit interface
- Cylindrical and conical versions
- High rigidity
- Internal coolant supply
- Concentricity < 5 µm

THE INTERFACES

- Walter Capto™
- HSK-A
- ISO Taper
- MAS-BT
- CAT-V

THE APPLICATION

- Machining deep pockets
- Machining complex one-piece workpieces
- Long overhangs of up to 5 × D are possible
- Areas of use: Mold and die making, aerospace industry, general mechanical engineering, automotive and energy industries



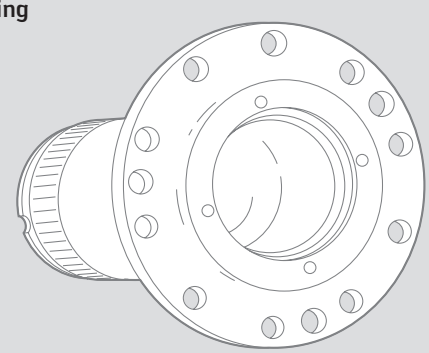
Accure·tec

Vibration-damped end mill adaptors

Fig.: AC001-C6-B16-160, AC060-C6-T28-235

APPLICATION EXAMPLE

Shoulder milling



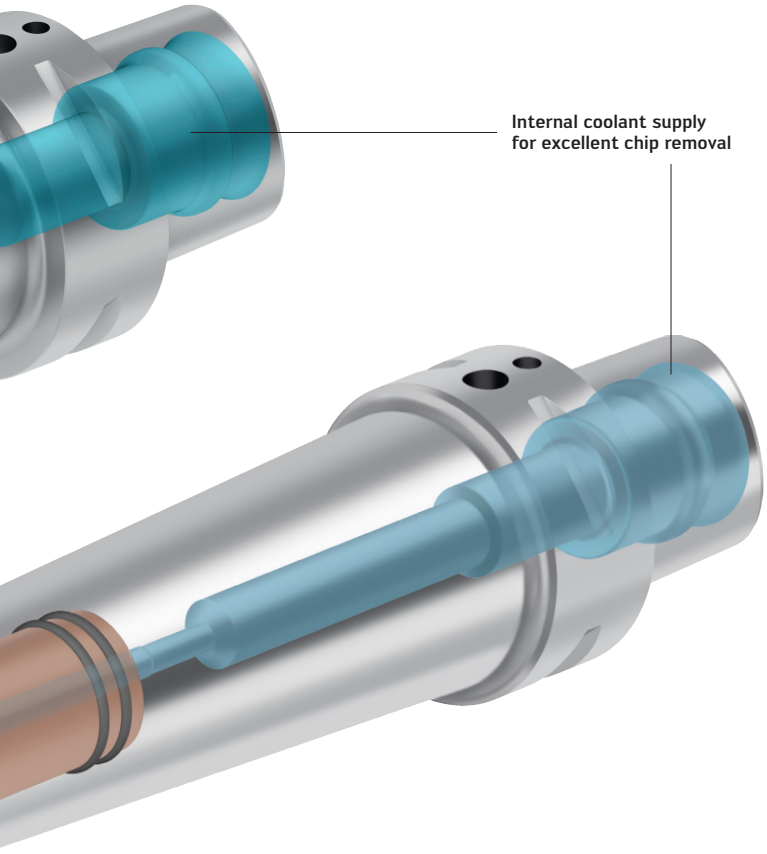
Material:	4140
Adaptor:	AC001-H100-B27-320
Tool:	M5130 | Ø63 | Z4
Projection length:	4 × D
Machine:	GROB G550

Cutting data:

	Conventional undamped	**Accure·tec/AC001 damped**
v_c (sfm)	400	400
n (rpm)	606	606
f_z (in)	0.008	0.008
v_f (in/min)	19	19
a_e (in)	1.0	1.0
a_p (in)	0.080	0.240
Q (in³/min)	1.53	4.50
R_a (in)	42	30

Comparison: Depth of cut

*no damping



BENEFITS FOR YOU

- High level of productivity, process reliability and surface quality
- Long tool life of tool and spindle
- Vibration damping “preset” at the factory (no time lost tuning)
- Stable process producing little noise
- Depth of cut up to three times higher (compared to conventional methods)
- Optimum chip removal thanks to internal coolant supply

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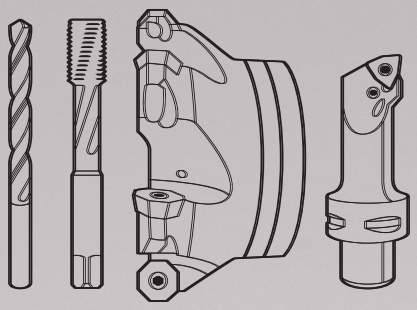

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