WALTER
Engineering Kompetenz

Turning, drilling,
threading, milling

Product highlights
Edition 2018-1

_PRODUCT HIGHLIGHTS

Driving the future of metal cutting.

Walter highlight flyer

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A – Turning

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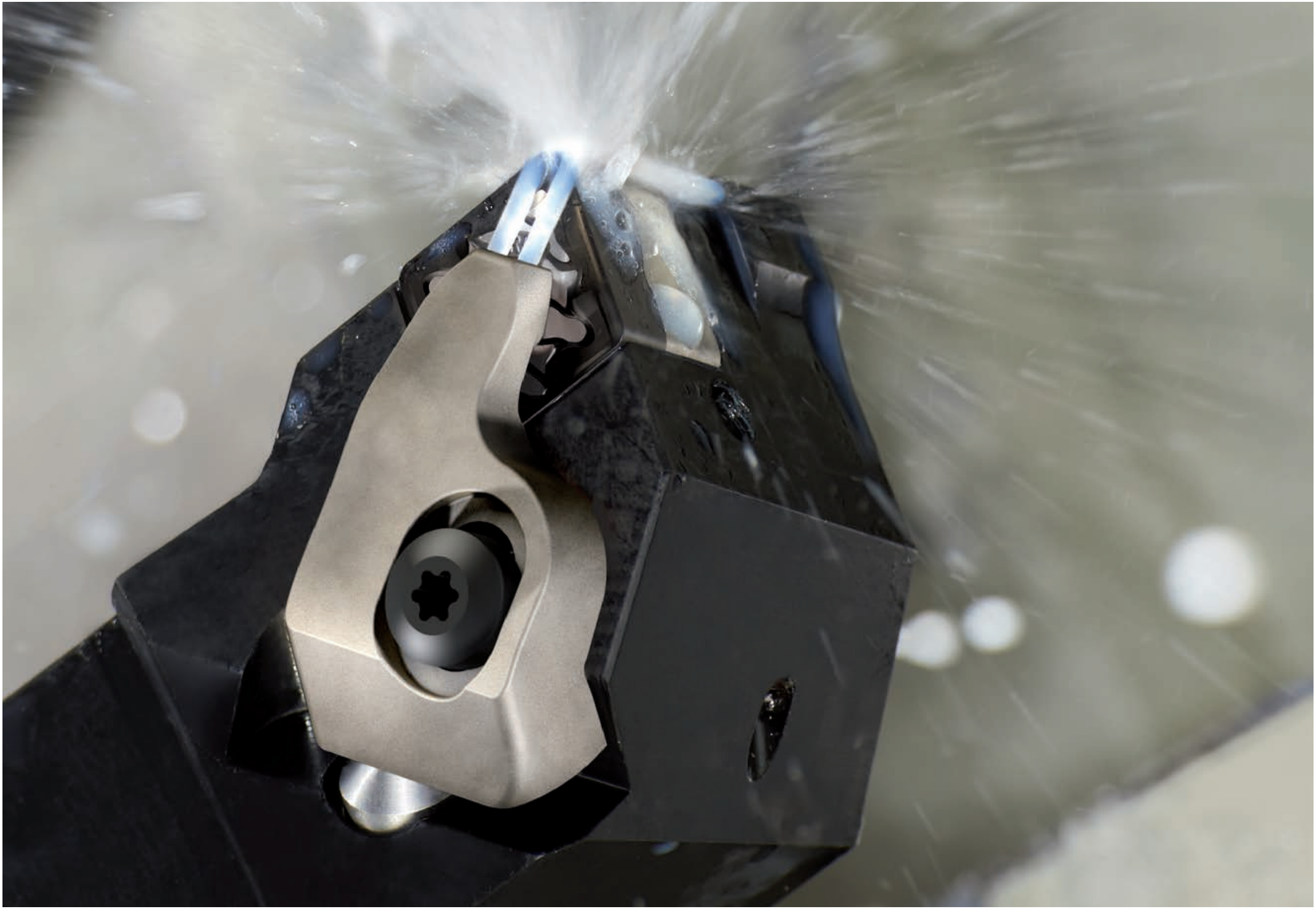
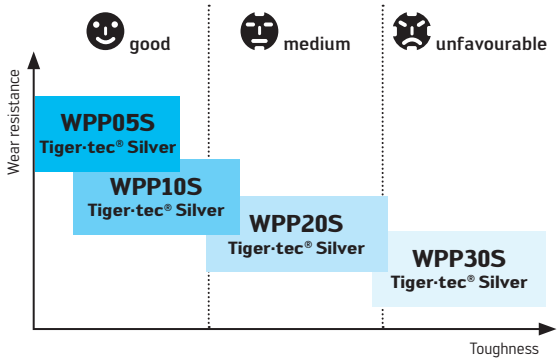
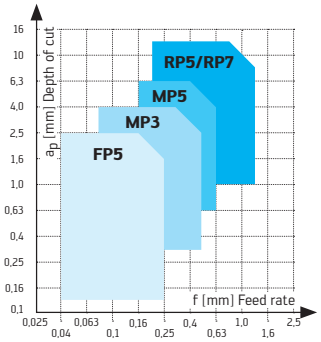


Tiger·tec® Silver grades and geometries

Machining steel ISO P

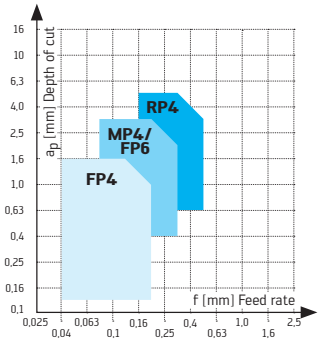


Negative basic shape



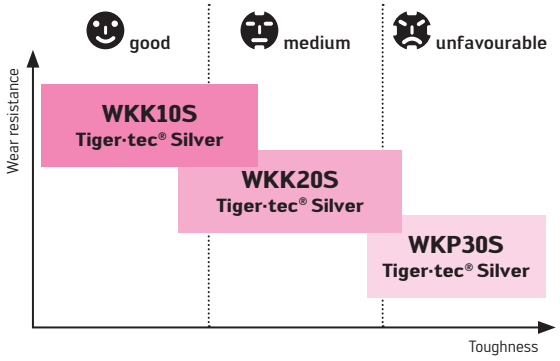
RP5: For universal machining
RP7: For interrupted cuts, cast skin/forged skin

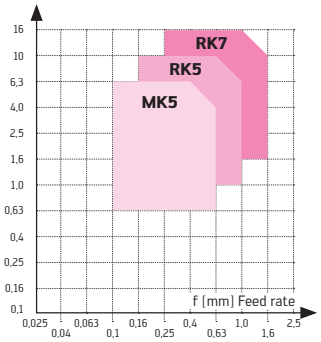
Positive basic shape

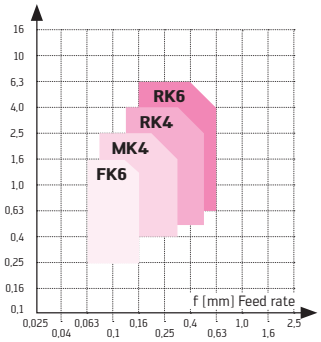


MP4: For universal machining, copy turning
FP6: For semi-finishing operations

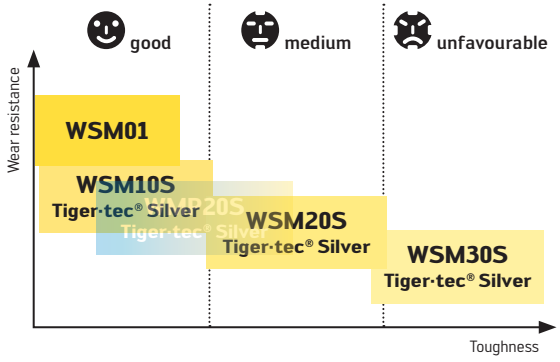
Cast iron machining ISO K

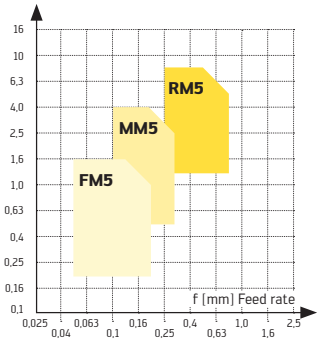


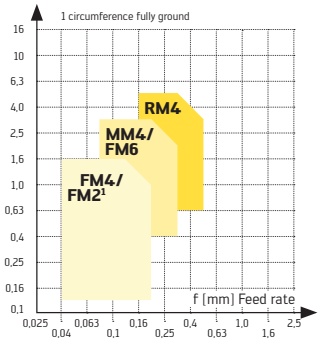




Stainless steel ISO M

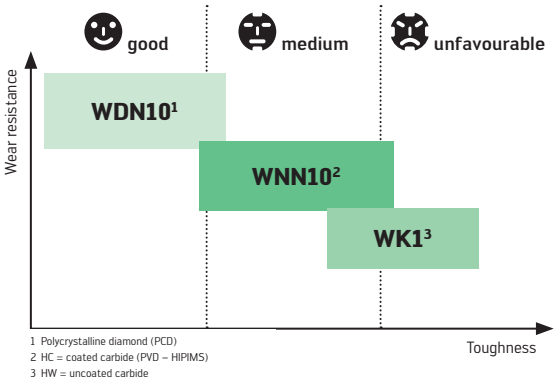






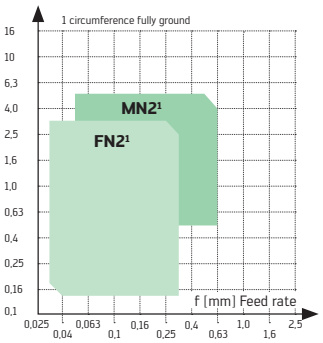
MM4: For universal machining, copy turning
FM6: For semi-finishing operations
[1] Circumference fully ground

NF metals ISO N

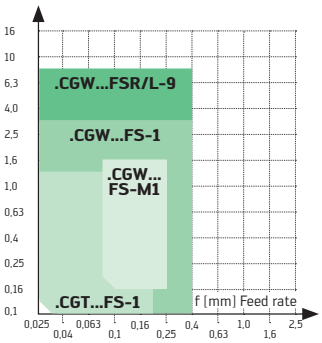


1 Polycrystalline diamond (PCD)
2 HC = coated carbide (PVD – HIPIMS)
3 HW = uncoated carbide

Positive basic shape
Carbide

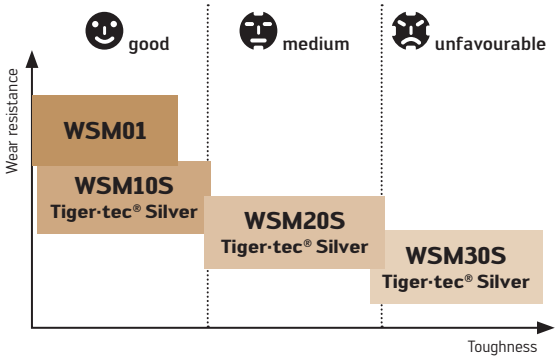


Positive basic shape
PCD



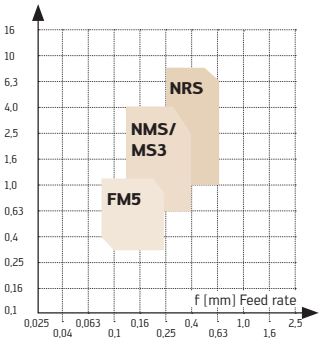
¹ Circumference fully ground

High-temperature alloys and titanium alloys ISO S



Negative basic shape

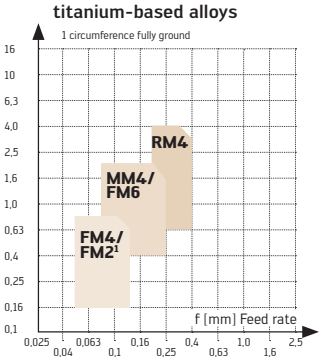
Ni, Co and Fe-based alloys



NMS: For universal machining
MS3: For low cutting pressure

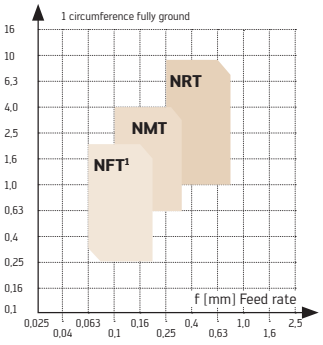
Positive basic shape

Ni, Co, Fe and titanium-based alloys



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

Titanium-based alloys



¹ Circumference fully ground

Maximum cooling and tool life with ISO M and ISO S thanks to jet guiding geometry.

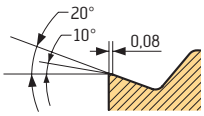
NEW

THE GEOMETRIES

FM5 – Finishing

- For optimal chip breaking
- Machining parameters:
  f: 0.03–0.25 mm
  a_p: 0.1–2.0 mm

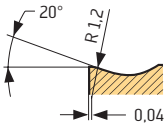
Main cutting edge



MM5 – Medium machining

- Universal geometry
  with large range of applications
- Machining parameters:
  f: 0.1–0.4 mm
  a_p: 0.5–4.5 mm

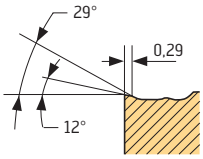
Main cutting edge



RM5 – Roughing

- For optimal coolant supply
  beneath the chip
- Machining parameters:
  f: 0.20–0.60 mm
  a_p: 1.0–5.0 mm

Main cutting edge



THE APPLICATION

Primary application

ISO M – Stainless steels

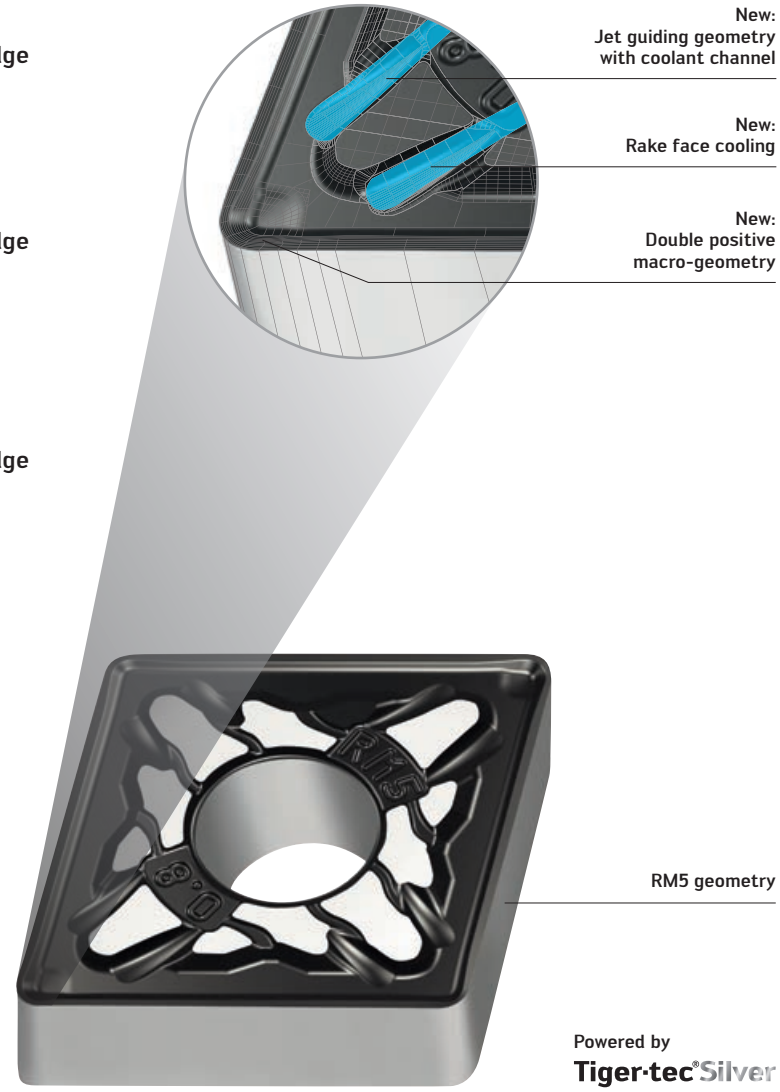
- Austenitic stainless steels
  (e.g. DIN 1.4571/AISI 316Ti)
- Duplex steels (e.g. DIN 1.4462/AISI 318LN)

ISO S – High-temperature alloys

- Nickel-based alloys (e.g. Inconel 718)
- Cobalt-based alloys

Secondary application

ISO P – Steel



Grades: WSM10S, WSM20S, WSM30S, WMP20S

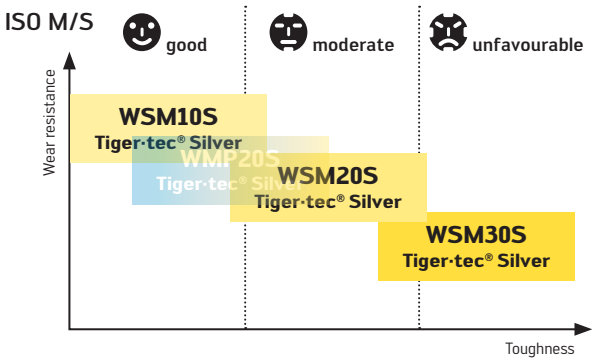
Fig.: RM5 jet guiding geometry

BENEFITS FOR YOU

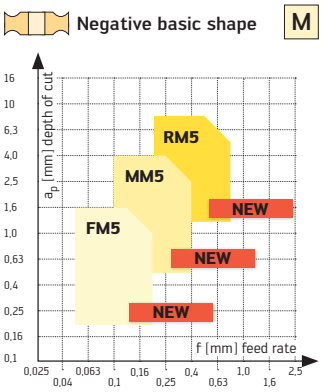
- Optimal cooling and maximum productivity
- Double positive macro-geometry reduces notch formation and crater wear – for up to 100% increase in tool life
- High wear resistance and maximum tool life due to PVD-Al_2O_3 heat shield
- Can be used universally in standard ISO turning toolholders with or without precision cooling
- Burr-free components and reduced build up on the edge

Watch the product animation:
www.youtube.com/waltertools

OVERVIEW OF GRADES: ISO M



OVERVIEW OF GEOMETRIES: ISO M



NEW ADDITION TO THE PRODUCT RANGE

- MM5 geometry basic shapes: CNMG, DNMG, SNMG, TNMG, VNMG, WNMG
- RM5 geometry basic shapes: CNMG, DNMG, SNMG, TNMG, WNMG

DNMG-FM5

THE GRADES

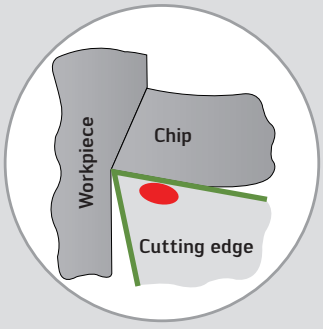
- Tiger·tec® Silver PVD-Al_2O_3 grades: WSM10S, WSM20S, WSM30S
- Tiger·tec® Silver CVD grade: WMP20S

CNMG-MM5

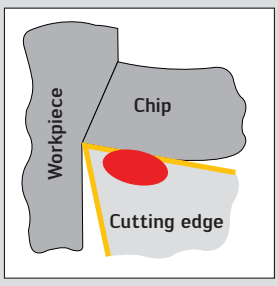
WNMG-RM5

PVD TECHNOLOGY WITH ALUMINIUM OXIDE

Tiger·tec® Silver PVD
Low transfer of heat into the carbide thanks to the Al_2O_3 heat shield



Competitors
High transfer of heat into the carbide due to a conventional PVD layer



= Temperature = Aluminium oxide (Al_2O_3) = Conventional PVD layer

Now with precision cooling: Direct, efficient – straight to the point.

NEW TECHNOLOGY

NEW ADDITION TO THE PRODUCT RANGE

- Coolant clamps with four coolant exits for maximum effect
- Available for CNMG16, CNMG19 indexable inserts

THE TOOL

- Coolant supplied directly through the clamp and along the flank face
- Flexible coolant connection on the square shank: Direct coolant transfer between adaptor and shank tool (A2120-P/A2121-P) or via coolant hose set with G1/8" thread (K601)
- Tool variants: Square shank 20–25 mm; Walter Capto™ C4–C8

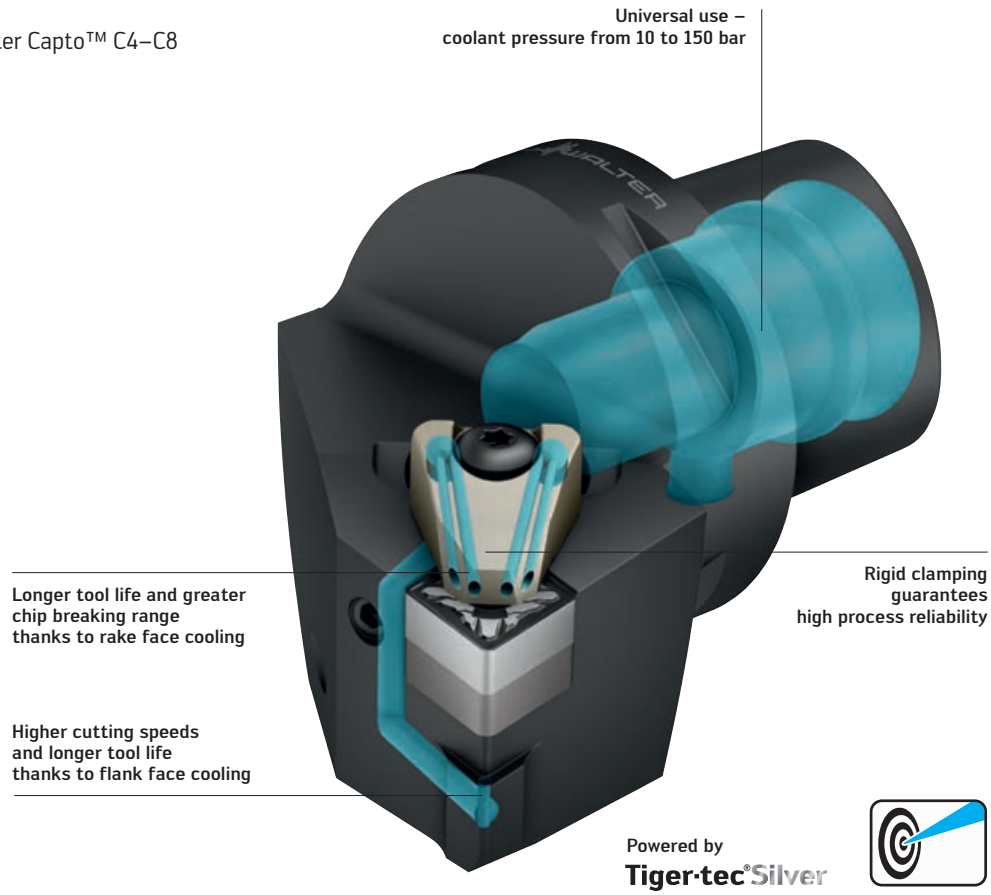
THE APPLICATION

- Stainless steels (ISO M), high-temperature alloys (ISO S) and steel (ISO P)
- Can be used from 10 bar up to a maximum coolant pressure of 150 bar
- Improved chip breaking, in particular at > 40 bar
- Multiple machine operations (e.g. multi-spindle machines), because the chips are removed effectively by the cooling system

Clamp overview:

Two coolant holes for CNMG12, etc.
Fig.: PK265R

Four coolant holes for CNMG16, etc.
Fig.: PK267



Walter Capto™ tool with precision cooling **Fig.:** C6-DCLNR-45065-16-P

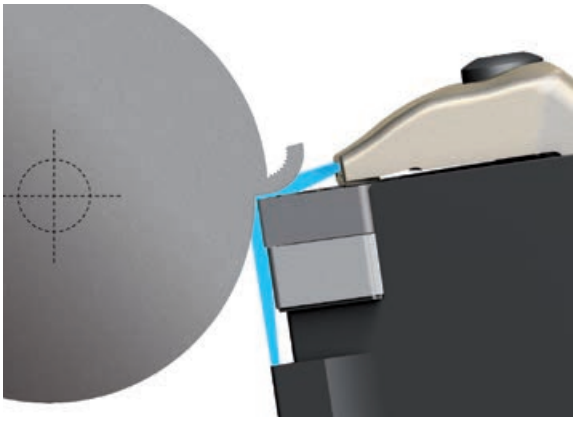
BENEFITS FOR YOU

- Tool life increased by 30–150%
- Plug-and-play: Use of existing machines, as the cooling system can be used starting from a coolant pressure of 10 bar and without an interference contour on the tool
- Increase in cutting speed by up to 100%, while maintaining the same tool life

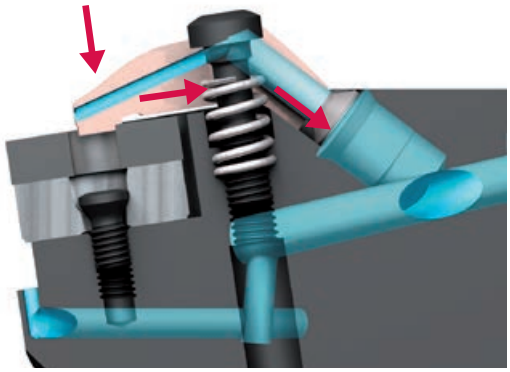
Watch the product video:
www.youtube.com/waltertools

THE TECHNOLOGY

Precision cooling:
In tools with precision cooling, the adaptor, the turning toolholder and the indexable insert geometry are designed to ensure ideal cooling.



At the effective working area:
Precision cooling brings the coolant as close and flatly angled as possible to the effective working area. As a result, significant advantages can be achieved starting from a coolant pressure of just 10 bar.



Process reliability:
The rigid clamping mechanism presses the insert down and back into the insert seat. Consequently, the insert is not detached from its seat even during heavy roughing operations and the component dimensions are consistently maintained with complete accuracy.

THE SYSTEM

Jet guiding geometry:
The new FM5, MM5, RM5 and MS3 jet guiding geometries guide the coolant directly beneath the chip and thereby even closer to the cutting edge.

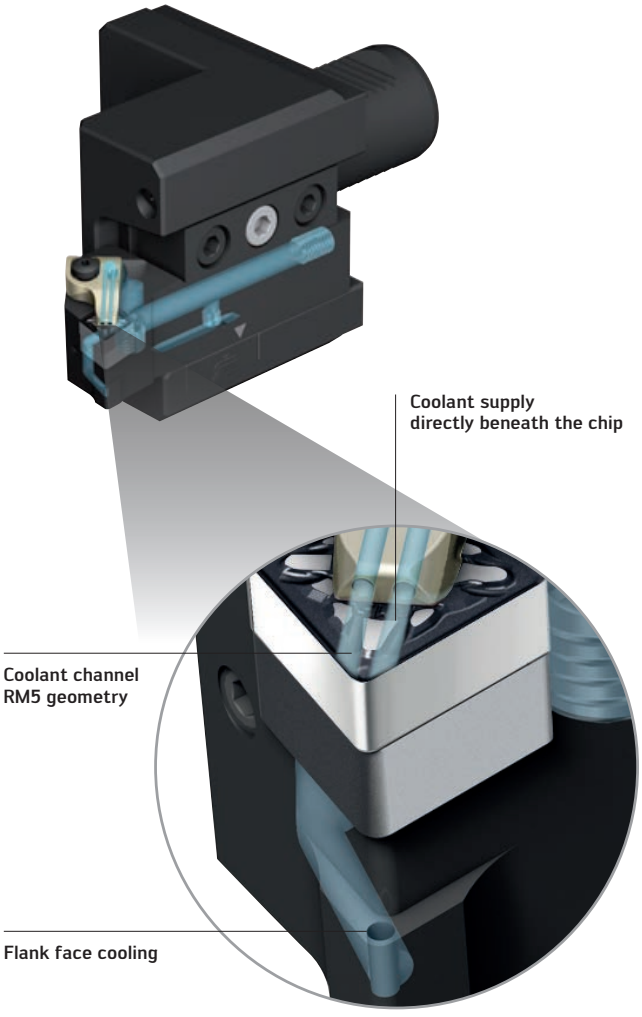


Fig.: DCLN-P shank tool, VDI A2120-P adaptor and RM5 jet guiding geometry

Hard, harder, WSM01 – the no. 1 grade for demanding machining operations.

NEW

THE GRADE

- PVD HIPIMS coating technology for a smooth surface
- Excellent layer bonding with sharp cutting edges
- Extremely hard, wear-resistant ultra fine-grain carbide substrate

THE GEOMETRIES

- Negative basic shape: MS3, NMS, NRS
- Positive basic shape: FM2, MM4, MN2

THE APPLICATION

Primary application:

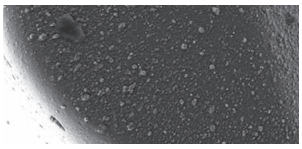
- ISO S – e.g. finishing of engine components made of Inconel 718
- ISO M – e.g. valves made of 1.4462 duplex steel

Secondary application:

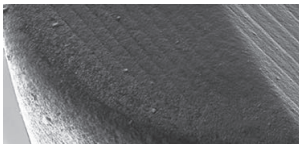
- ISO P – e.g. precision finishing of tool steel
- ISO N – e.g. high-polish turning
- ISO H – e.g. machining of hardened steel with 56 HRC

SURFACE COMPARISON:

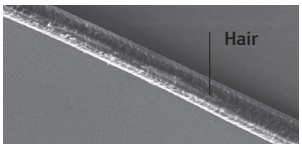
Standard PVD process:
Increased droplet formation

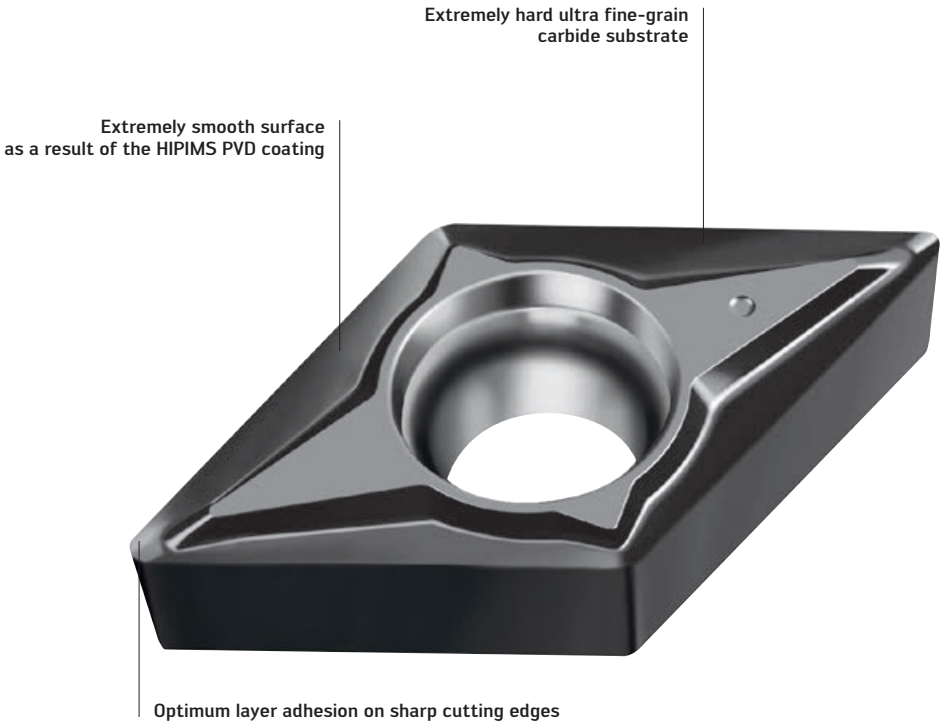


HIPIMS PVD process (WNN10):
Extremely smooth surface

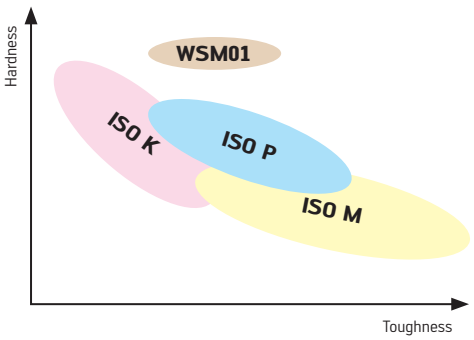


HIPIMS surface and structure of a hair as a direct comparison





CARBIDE COMPARISON – WSM01 GRADE:



The new WSM01 grade is harder than existing carbide substrates with increased toughness at the same time.

Grade: WSM01

Fig.: DCGT – FM2 WSM01

BENEFITS FOR YOU

- Maximum tool life for high-strength materials
- Optimum surface qualities thanks to HIPIMS coating
- High-quality workpieces over a long tool life

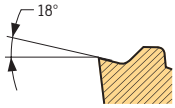
Perfect performance thanks to the new HIPIMS grade.

NEW

THE GEOMETRIES

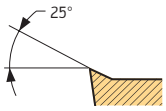
FN2 – Positive indexable inserts for finishing ISO N:
- Finishing insert with circumference fully ground
- For low cutting forces
- Polished rake face
- For long, small-diameter shafts with a tendency to vibrate

Main cutting edge



MN2 – Positive indexable inserts for medium machining of ISO N:
- Can be used universally for non-ferrous metal
- Sharp cutting edge with circumference fully ground
- Polished rake face
- Precision finishing on steel and stainless materials

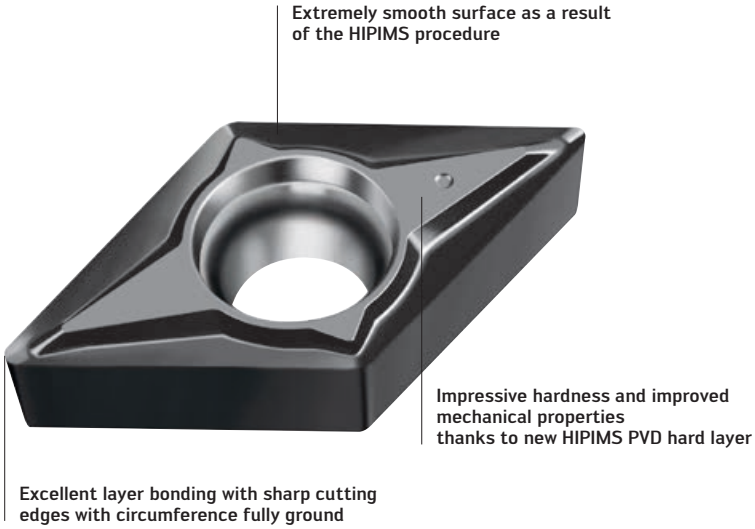
Main cutting edge



THE APPLICATION

Primary application
- Finishing and roughing of:
  ISO N alloys
  Aluminium-based alloys (e.g. 3.2382, AlSi10Mg(Fe))
  Copper-based alloys (e.g. 2.0265, CuZn30)
  Magnesium-based alloys (e.g. 3.5200, MgMn2)

Secondary application
- Fine finishing of small components made from:
  ISO P (steel)
  ISO M (stainless steels)
  ISO S (high-temperature alloys)
- Finishing and roughing of:
  ISO O (thermosets and thermoplastics)



Grade: WNN10

Fig.: FN2 geometry

BENEFITS FOR YOU
- Excellent surface quality and dimensional accuracy
- High process reliability thanks to the new WNN10 grade
- No layer flaking and even wear due to excellent layer bonding
- Longer tool life on materials with a tendency to stick (adhesion) thanks to improved surface roughness

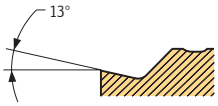
Ideal combination of low cutting pressure and long tool life.

NEW

THE GEOMETRY

- For medium and semi finish machining
- Machining parameters:
  f: 0.10–0.40 mm
  a_p: 0.6–3.0 mm

Main cutting edge



THE INDEXABLE INSERTS

- Negative circumference-sintered and circumference fully ground design with chip breaker groove
- Basic shapes: CNMG, CNGG, DNMG, DNGG, TNMG, VNMG, VNGG, WNMG
- Corner radii: 0.1, 0.2, 0.4 and 0.8 mm

THE GRADES

HIPIMS PVD grade: WSM01
- High-temperature alloys
- Austenitic stainless steels
  (e.g. DIN 1.4571/AISI 316Ti)

PVD-Al_2O_3 grades: WSM10S, WSM20S
- High-temperature alloys
- Austenitic stainless steels
- Machining operations on automatic bar feed machines and multi-spindle machines

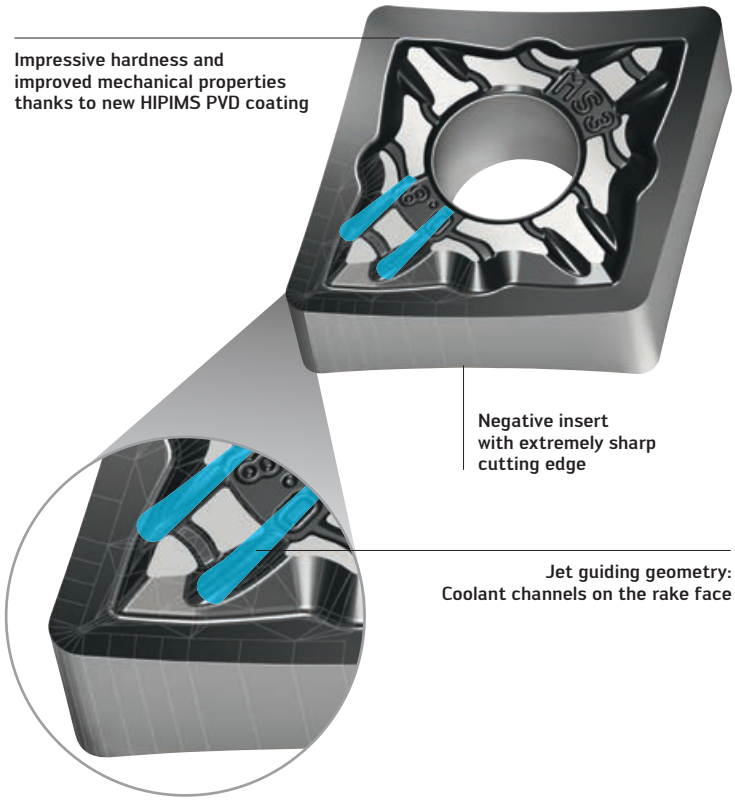
CVD grades: WPP10S, WPP20S
- Free machining steels
- Long contact times
- Maximum wear resistance

THE APPLICATION

- Ideal for long overhangs and unstable or thin-walled components
- Prevents vibration thanks to low cutting pressure

Primary application:
- ISO S: High-temperature alloys, nickel-based alloys
  e.g. Inconel 718, cobalt-based alloys

Secondary application:
- ISO P (steel)
- ISO M (stainless steels)
- ISO N (NF metals)



Grades: WSM01, WSM10S, WSM20S, WPP10S, WPP20S

Fig.: MS3 geometry

BENEFITS FOR YOU

- Burr-free components
- Less build up on the edge thanks to sharp cutting edges
- Machines unstable components with no problems due to low cutting pressure
- Cooling directly at the cutting edge thanks to jet guiding geometry and curved cutting edge design

Watch the product video:
www.youtube.com/waltertools

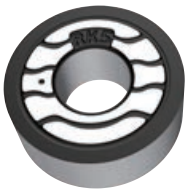
_NEW ISO SHAPES FOR INDEXABLE INSERTS

Increased productivity and flexibility when turning.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

RNMA...-RK5



RNMG...-RP5

TPMR...

TPGN...

CP...0502...

CP...04T1... NEW

DCGT11T302-MM4 NEW
DCGT11T304-MM4
DCGT11T308-MM4

ISO shapes

THE APPLICATION

RNMA...RK5
- Roughing of cast iron and steel components
- High level of cost efficiency
- High feeds can be achieved at the same time as excellent surface qualities

RNMG...RP5
- Roughing operations on steel and cast iron workpieces
- Medium feeds and depths of cut

TPMR... / TPGN...
- Finishing during turning and drilling with low feed and small depth of cut
- Extremely sharp cutting edge and good surface quality
- Low cutting pressure thanks to 11° clearance angle

CP...0502... / CP..04T1..
- Finishing of small hole diameters with best chip control
- Areas of use: Boring tools, boring bars

DCGT11T302-MM4
- Small-parts production on centre lathes or multi-spindle machines
- Small corner radius reduces the cutting pressure of the indexable inserts, making it ideal for unstable components

BENEFITS FOR YOU

- Extensive product range for a variety of applications
- Suitable for finishing, roughing and drilling operations
- Optimum productivity due to Walter coating technologies

Watch the product video:
www.youtube.com/waltertools

Versatile – tried-and-tested technology.

NEW

THE APPLICATION

- Versatile indexable inserts for an extremely wide range of materials and applications
- Areas of use: General mechanical engineering, single-part production and other industries

Primary application:

- ISO P (steels)

Secondary application:

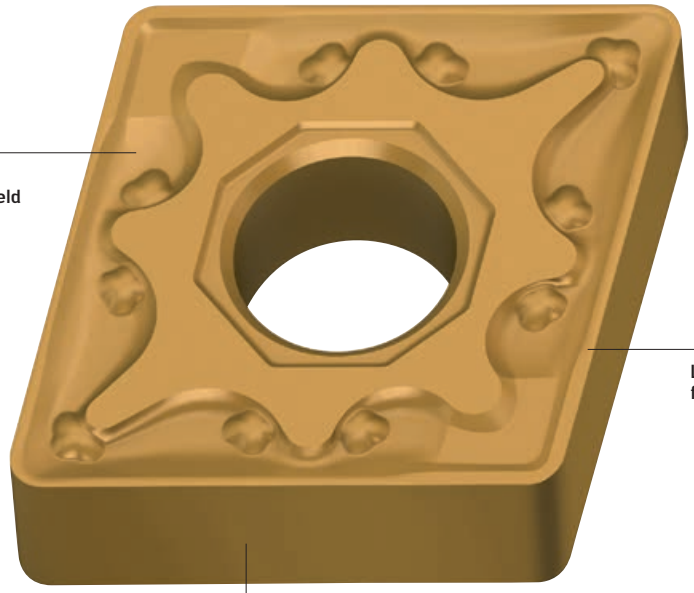
- ISO M (stainless steels)
- ISO K (cast iron workpieces)

THE GRADES

- Cutting tool materials that can be used universally
  WPV10 (ISO P10)
  WPV20 (ISO P20)

THE GEOMETRIES

- Wide range of applications and simple geometry selection
  FV5: Finishing operation
  MV5: Medium machining
  RV5: Roughing operation
- Negative basic shapes:
  CNMG, DNMG, SNMG, TNMG, VNMG, WNMG



Grades: WPV10, WPV20

Fig.: MV5 geometry

BENEFITS FOR YOU

- Efficient machining with tried-and-tested technology
- For versatile and reliable use in many different materials
- For a long tool life at cutting speeds up to 250 m/min

Simple geometry designation:

M	V	5
1	2	3

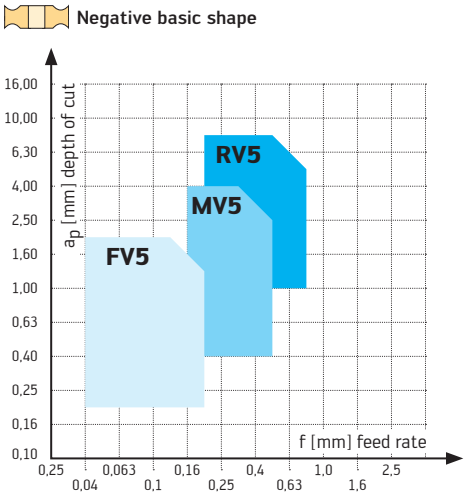
1: Chip breaking range – e.g. M = Medium machining
2: Versatile materials
3: Feed/chip breaking range

Simple grade designation:

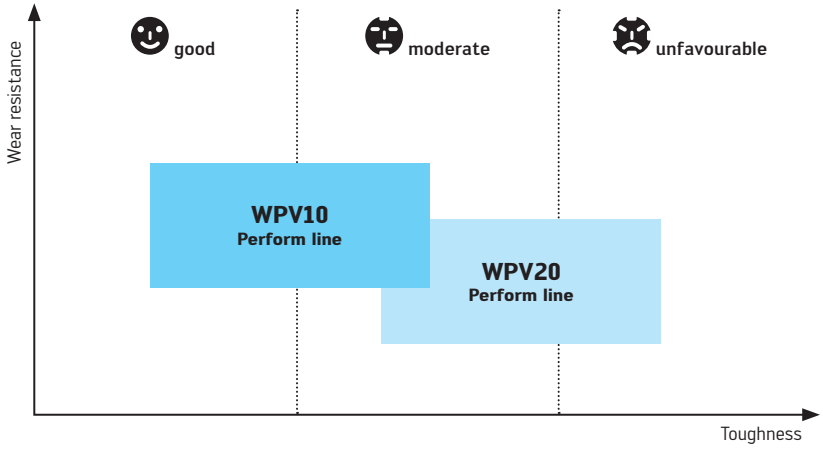
W	P	V	20
1	2	3	4

1: Walter
2: First primary application – e.g. P = ISO P
3: Second primary application, "Versatile"
4: ISO range of applications

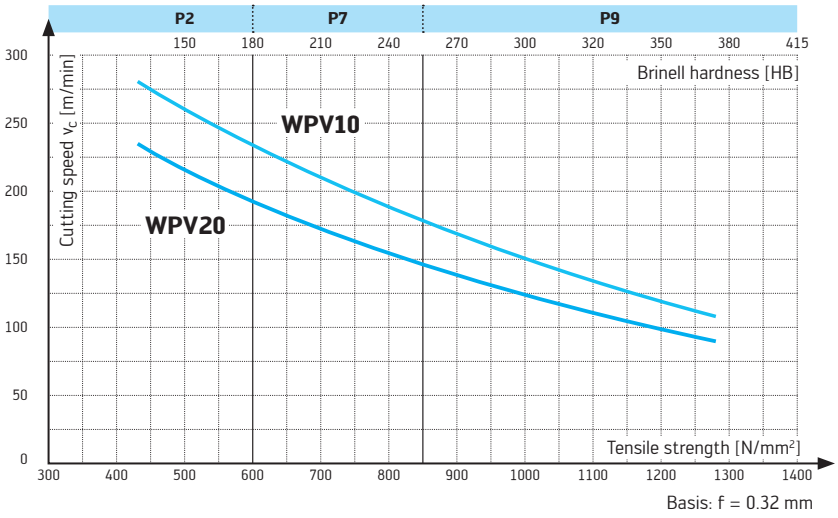
Overview of geometries:



Overview of grades:



Cutting speed selection based on tensile strength/hardness:



Basis: f = 0.32 mm

Cutting speed range for selected materials:

ISO material group sd	Material	Tensile strength	Brinell hardness	Cutting speed	
				WPV10	WPV20
P2	S235JR (St37), C45	500 N/mm²	150 HB	200 – **240** – 340 m/min	160 – **200** – 280 m/min
P7	100Cr6, 42CrMo4	800 N/mm²	240 HB	130 – **180** – 200 m/min	100 – **150** – 180 m/min
P9	56NiCrMoV7	1250 N/mm²	370 HB	80 – **130** – 140 m/min	70 – **100** – 130 m/min

Double the tool life thanks to unparalleled wear resistance.

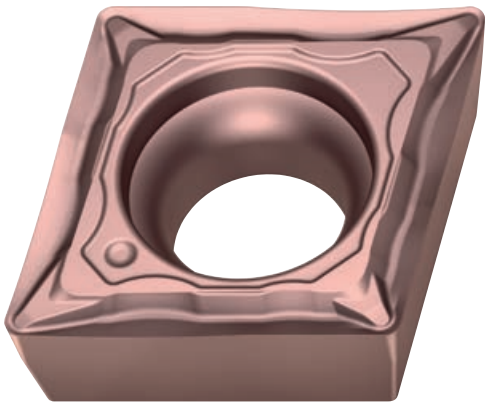
NEW

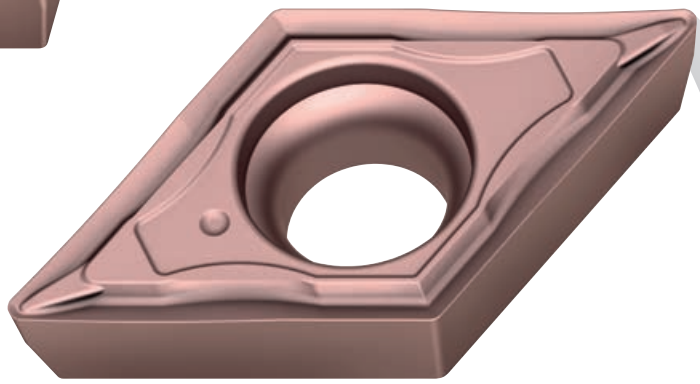
THE TECHNOLOGY

The extremely fine-grain titanium carbon-based cermet substrate, combined with the highly wear-resistant multilayer coating, provides clear advantages during finishing operations compared to coated tungsten carbide indexable inserts.

THE INDEXABLE INSERTS

- Indexable insert with wear-resistant TiCN/CN-based cermet substrate with Ni/Co binder
- Extremely hard TiCN outer layer
- Extra fine cermet substrate grain
- Finishing chip former for versatile use with FP4 soft-cutting geometry
- CCMT, DCMT, TCMT, VCMT indexable insert shapes





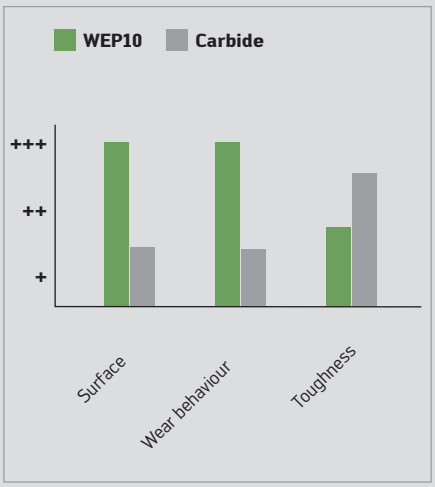
Watch the product video:
www.youtube.com/waltertools

Grade: WEP10

Fig.: FP4 finishing geometry

COMPARISON

Finishing – WEP10 and carbide



BENEFITS FOR YOU

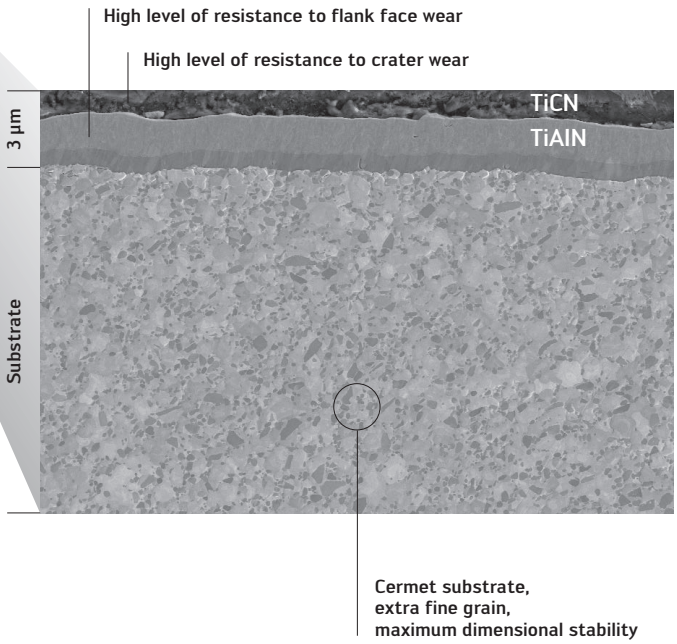
- No readjustment necessary, maximum dimensional accuracy
- Longer tool life and higher productivity in comparison to carbide
- Extremely wear-resistant cermet substrate with multilayer coating
- Reflective surfaces at high and low cutting speeds

THE APPLICATION

- Finishing with continuous and slightly interrupted cut
- Ideal for steels, stainless steels and cast iron workpieces
- Application areas: General mechanical engineering, energy and automotive industries

ISO material groups

Grades	P		M	K	N	S	H	O
	Steel < 1000 N/mm²	Steel > 1000 N/mm²	Stainless steel	Cast iron	NF metals	Difficult-to-machine materials	Hard materials	Other
WEP10	●●	●	●	●				
WSM01	●	●●	●●		●	●●	●	



APPLICATION EXAMPLE

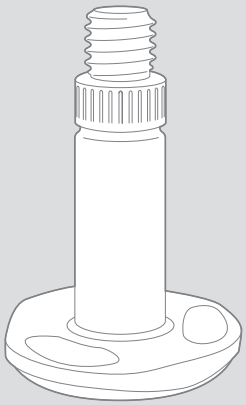
Finishing – Threaded bolt

Material: 15CrMo5 (1.7362; SCM415)

Tool: SVJCR1616H16

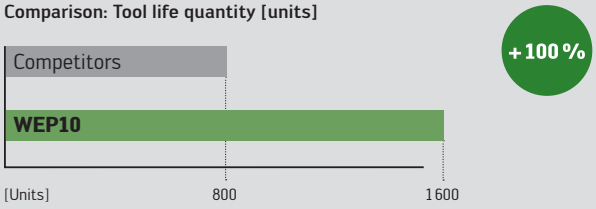
Indexable insert: VCMT160404-FP4

Grade: WEP10

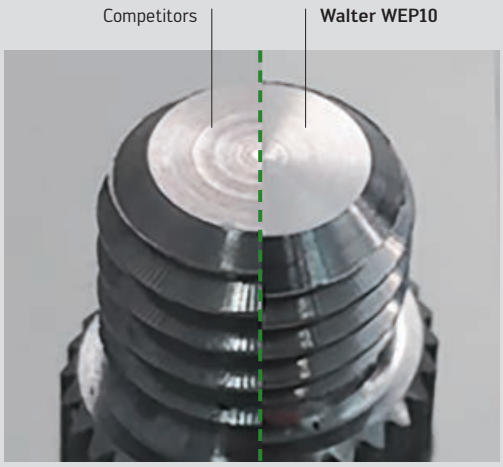


	Competitors	**Walter**
v_c	270 m/min	270 m/min
f	0.08 mm	0.08 mm
a_p	0.3 mm	0.3 mm

Comparison: Tool life quantity [units]



Consistently good surface quality right up to the end of tool life



Fast and productive on cast iron.

NEW

THE INDEXABLE INSERT

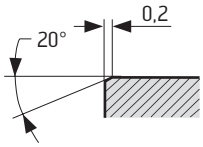
- A variety of versions:
  - With hole (e.g. CNGA), flat top insert
  - Without hole (e.g. CNGN)
  - With cavity clamping (e.g. CNGX)
- Different basic shapes: C, D, S, T, W
- Different corner radii: 0.8; 1.2 and 1.6 mm

THE APPLICATION

- First choice for grey cast iron materials
- Cutting speeds of up to 1000 m/min
- Suitable for turning and milling
- For roughing and finishing

THE GEOMETRIES

- With negative chamfer on the cutting edge – 0.2 mm × 20°
- Further cutting edge versions as a special option



WCK10 indexable inserts in various designs

Fig.: CNGN, WNGA, SNGX

BENEFITS FOR YOU

- Optimum productivity due to maximum cutting speeds
- Long tool life due to wear-resistant ceramic cutting material
- Increased process reliability in tough machining conditions (in comparison to carbide indexable inserts)

Multiply your success – with four cutting edges.

NEW

THE INDEXABLE INSERTS

- Four precision-ground cutting edges ±0.02 mm
- Three contact points in the tool, tangentially mounted
- Insert widths 0.80–3.25 mm
- Cutting depth up to 6 mm
- One cutting insert for left and right tool holders

THE APPLICATION

- For grooving, parting off and chamfering with four cutting edges
- For DIN 471 circlip grooves with the tolerance class H13
- Ideal for precision grooves and small diameters
- Grooving operations where maximum stability is required, e.g. grooving on an inclined surface.

THE GEOMETRIES

GD8:

- For grooving operations
- Straight cutting edge for flat groove base
- Chip formation particularly suited for special shapes up to 5.65 mm wide

CF5:

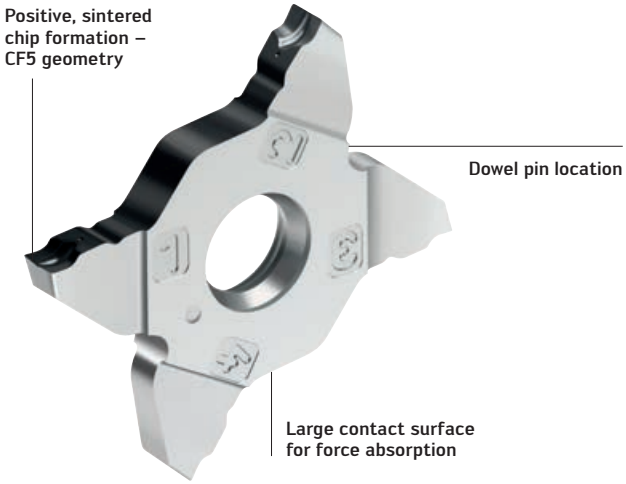
- For grooving and parting off operations
- Very good chip control due to sintered chip formation
- Minimal burr and pip formation
- 5°, 6° and 10° angled parting off inserts for parting off with low burr and pip formation

RF5:

- For full radius grooving operations
- For contour turning with low machining allowances (finishing operation)
- Good chip control

A60/ 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



MX grooving insert with four cutting edges **Fig.:** MX22...

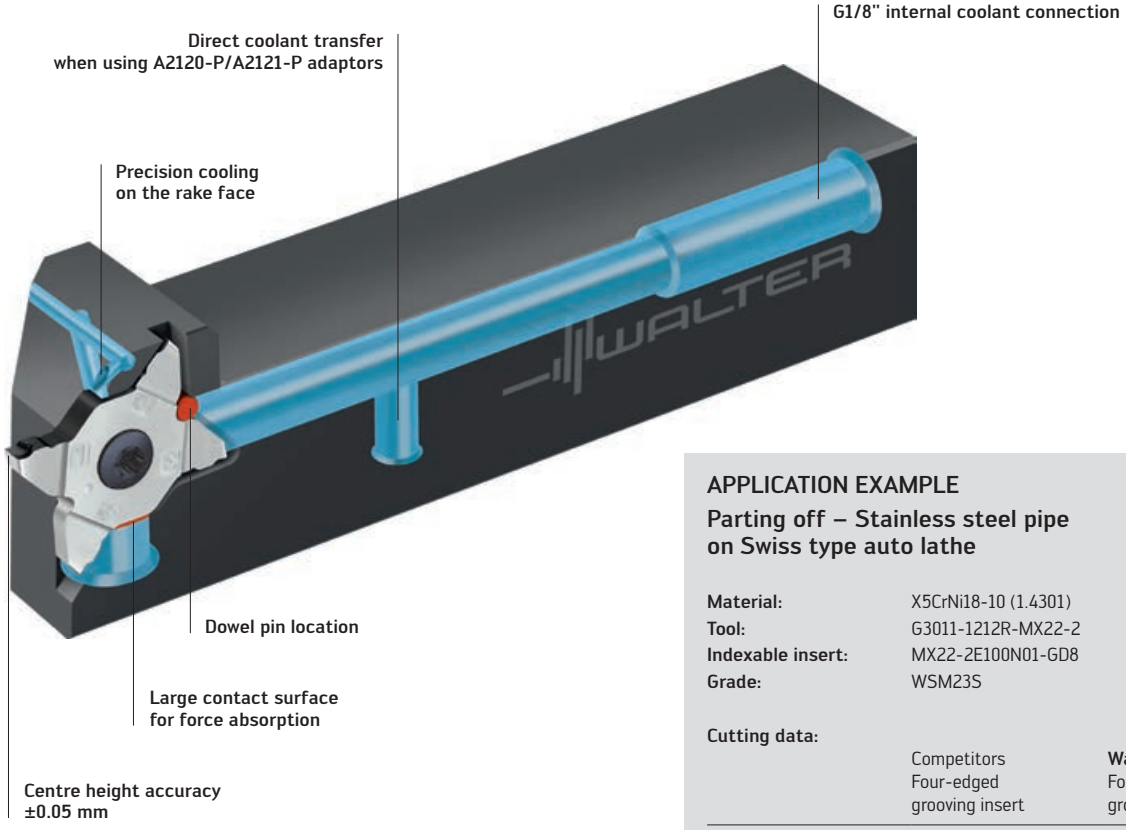
Watch the product video:
www.youtube.com/waltertools

BENEFITS FOR YOU

- Tangential arrangement for outstanding flatness and surface quality
- Very user friendly thanks to self-aligning tangential screw clamping
- Outstanding chip constriction and chip control with CF5 geometry
- Maximum tool life thanks to the latest Tiger·tec® Silver PVD cutting tool material

THE TOOL

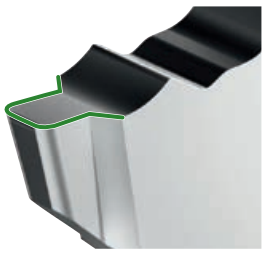
- Grooving and parting off tool with precision cooling
- Toolholder protected by the cutting insert (insert seat is not damaged if a cutting edge breaks)
- Stable, self-aligning tangential insert clamping for optimal force absorption
- Maximum change accuracy thanks to dowel pin location in insert seat
- Available shank sizes: 10 × 10, 12 × 12, 16 × 16, 20 × 20 and 25 × 25 mm



MX monoblock tool with precision cooling **Fig.:** G3011-P

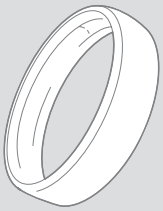
Walter Xpress

- Special profiles in a four-week delivery time
- From 10 pieces
- Standardised price



APPLICATION EXAMPLE

Parting off – Stainless steel pipe on Swiss type auto lathe

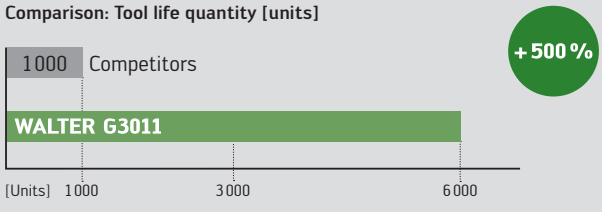


Material:	X5CrNi18-10 (1.4301)
Tool:	G3011-1212R-MX22-2
Indexable insert:	MX22-2E100N01-GD8
Grade:	WSM23S

Cutting data:

	Competitors Four-edged grooving insert	**Walter** Four-edged grooving insert
v_c	75 m/min	75 m/min
f	0.07 mm	0.07 mm
Cutting depth	1.3 mm	1.3 mm
Tool life quantity	1000 units	6000 units
Note:	Fluctuating tool life quantity	Constant tool life quantity

Comparison: Tool life quantity [units]



Part off a diameter of up to 65 mm with two cutting edges.

NEW

THE TOOL

Walter Cut G1041..R/L-P parting blades with reinforced shank
- Precision cooling on the rake face and flank face
- Blade height 26–32 mm
- In right-hand, left-hand and contra versions

Walter Cut G1011...R/L-P monoblock tools
- Precision cooling on the rake face and flank face
- Shank sizes 20–25 mm
- Optimal application of force from below due to clamping screw
- G1/8" internal coolant connection

THE APPLICATION
- Deep grooving and parting off up to a diameter of 65 mm
- Parting off operations where space is limited
- Large tool overhangs

THE INDEXABLE INSERT
- 34 mm long grooving inserts, width 3–4 mm
- Three chip formations to choose from: Low to high feed

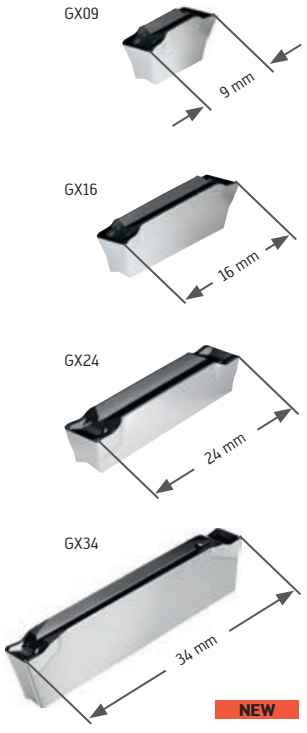
THE GEOMETRIES

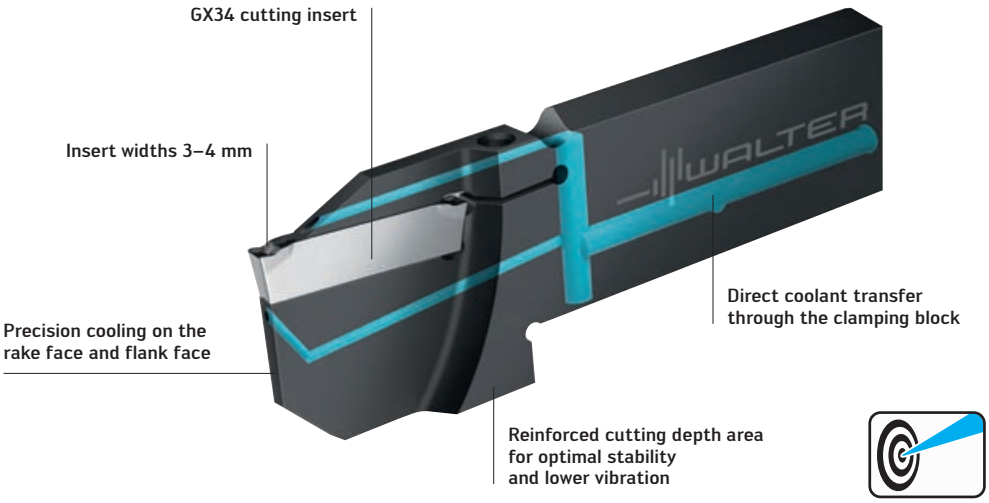
CF5:
- Light to moderate feeds
- Good chip control
- 6° angle, low burr and pip formation

GD6:
- Medium feeds
- Long-chipping materials
- Average machining conditions

CE4:
- Moderate to high feeds
- Good chip constriction
- Stable cutting edge

GX size comparison:





Shank tool with precision cooling – GX34 cutting insert

BENEFITS FOR YOU
- Maximum productivity and cutting values due to optimal cooling, stability and controlled chip breaking
- Efficient parting off with two cutting edges (up to a diameter of 65 mm)
- Best surface qualities and plane parallelism thanks to a long insert guide
- Shorter set-up times and greater process reliability due to omission of cooling nozzle alignment task

_WALTER CUT G1221-P BORING BAR

Efficient internal grooving and recessing with cool precision.

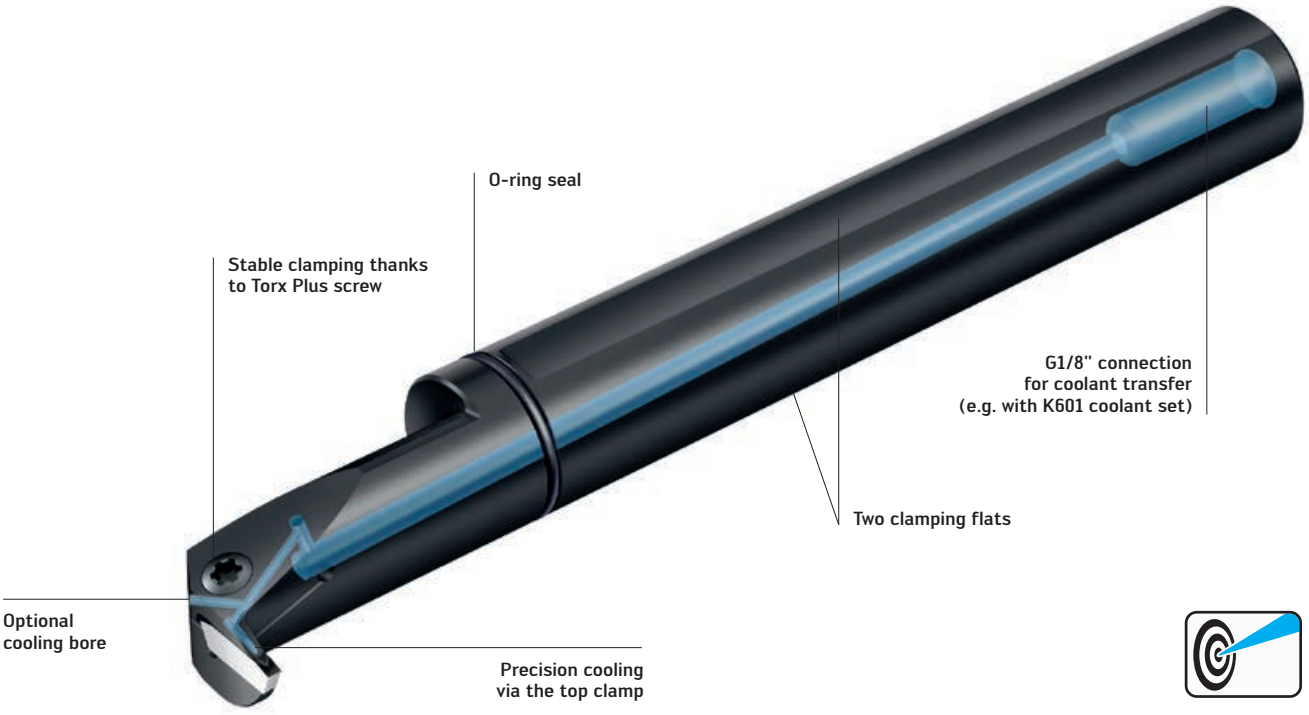
NEW

THE APPLICATION

- First choice for internal grooving and recessing
- All ISO material groups
- Internal grooves with a diameter starting from D_{min} = 16 mm
- Grooving to a depth of T_{max} = 9.5 mm
- Insert widths of 2, 3 and 4 mm
- Can be used up to a coolant pressure of 80 bar

THE TOOL

- Precision cooling via the top clamp
- Sealable axial cooling bore when through-hole machining
- Connection using K601 coolant set (G1/8" thread in shank) or installation, e.g. using a Weldon base adaptor
- Flexible O-ring seal for leakage-free coolant transfer between the tool and base adaptor
- Two clamping flats



Grooving boring bar with precision cooling **Fig.:** G1221-P

BENEFITS FOR YOU

- Interface between base adaptor and tool free from pressure loss thanks to O-ring seal
- Unique flushing effect due to the axial cooling bore for blind-hole machining
- Optimal surface quality, process reliability and chip evacuation
- Tool can be used in normal or overhead position
- Superlative machining results thanks to optimal L × D ratio

Watch the product video:
www.youtube.com/waltertools

_WALTER CUT G1041-P REINFORCED PARTING BLADE

Double the cooling in the groove.

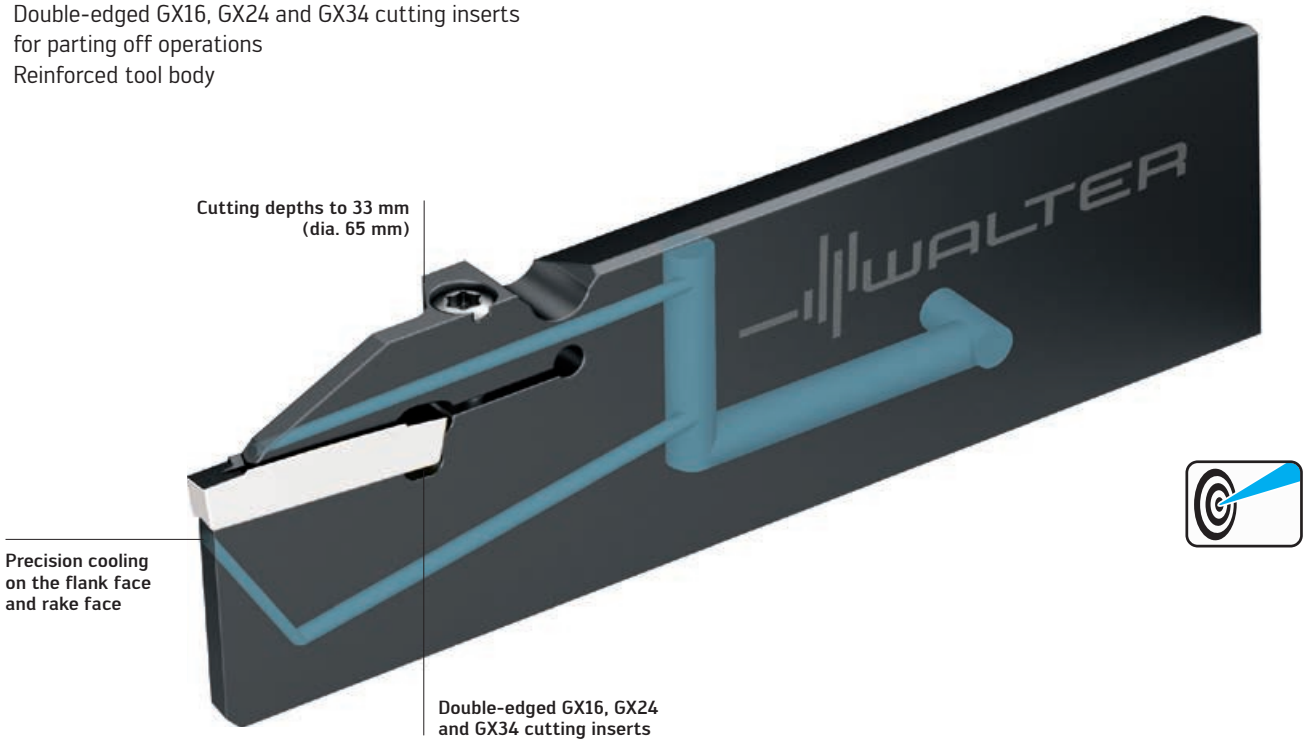
NEW

THE TOOL

- G1041..R/L-P parting blades with reinforced shank and precision cooling on rake face and flank face
- Blade heights 26–32 mm
- Insert widths 2–4 mm
- Grooving to a cutting depth of 33 mm and parting off up to a diameter of 65 mm
- Available in right-hand, left-hand, and contra versions
- Double-edged GX16, GX24 and GX34 cutting inserts for parting off operations
- Reinforced tool body

THE APPLICATION

- Parting off operations where space is limited
- Parting off using long tool projections
- First choice when using parting blades
- Can be used from 10 bar up to a maximum coolant pressure of 80 bar



Reinforced blade with precision cooling **Fig.:** G1041 . . R/L-P

BENEFITS FOR YOU

- Long tool life and high productivity
- Optimum cooling directly in the cutting zone starting from a coolant pressure as low as 10 bar
- Perfect chip control through precision cooling
- Reduced vibration tendency thanks to reinforced shank
- Little deflection due to reinforced tool body
- High cost efficiency thanks to two cutting edges

Right-hand version

Standard
E.g.: G1041 . 32R-3T32GX24-P

Contra
E.g.: G1041 . 32R-3T32GX24C-P

_WALTER CUT UF8 GEOMETRY, PRECISION-GROUND

All in one: Grooving, parting off and recessing.

NEW

NEW ADDITION TO THE PRODUCT RANGE

- Geometry can be used universally for all grooving operations
- Circumference fully ground for maximum precision and change accuracy
- Cutting insert sizes: GX09, GX16, GX24 and GX30
- Cutting insert widths of 1.6–8.0 mm
- Tiger·tec® Silver WSM23S PVD cutting tool material

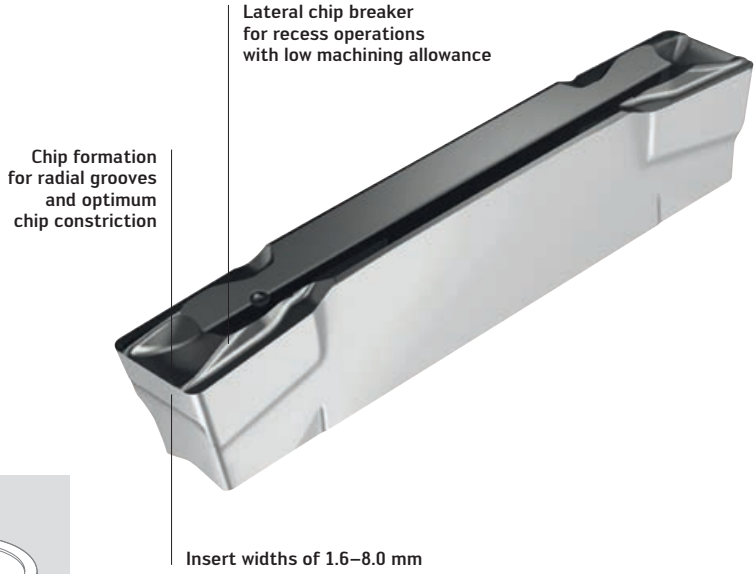
THE APPLICATION

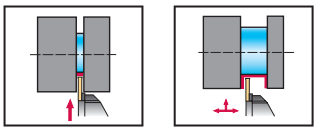
- All grooving, parting off and recessing operations
- For DIN 471 circlip grooves with the tolerance class H13
- Ideal for machining ISO M and ISO S materials thanks to sharp, precision-ground cutting edge

THE GEOMETRY

UF8

- Good chip control in all grooving operations
- Low to average feed range
- Minimal force cutting behaviour thanks to ground cutting edge





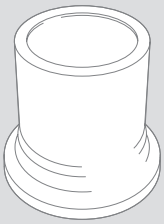
Powered by Tiger·tec® Silver

Grade: WSM23S

Fig.: UF8 geometry

APPLICATION EXAMPLE

Parting off – Bearing bush

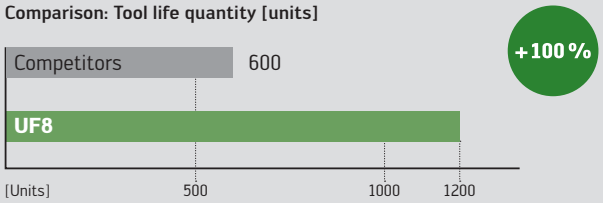


Material: 44SMn28 (1.0762)
Tool: G1011.2020R-3T21GX24
Indexable insert: GX24-2E300N02-UF8
Grade: WSM23S

Cutting data:

	Competitors Single-edged grooving insert	Walter Double-edged grooving insert
v_c	200 m/min	200 m/min
f	0.25 mm	0.25 mm
Cutting depth	17.5 mm	17.5 mm
Tool life quantity	600 units	1200 units
Note:	Chip control	Outstanding chip control

Comparison: Tool life quantity [units]



BENEFITS FOR YOU

- Optimum chip breaking for all grooving applications
- Short chips when radial and axial machining
- No production downtime caused by long chips
- Maximum tool life thanks to the latest Tiger·tec® Silver PVD cutting tool material

Enormous potential savings when machining rear faces.

NEW

NEW ADDITION TO THE PRODUCT RANGE

– VG7 geometry for Walter Cut GX grooving tools

THE INDEXABLE INSERT

– Two precision-sintered GX24 cutting edges
– For use in standard tools
– Indexable insert width of 2.8 mm (designed for 3 mm parting off)
– Corner radii of 0.2 and 0.4 mm

THE APPLICATION

– For finishing operations on the rear face of a component
– Machining parameters: f: 0.05–0.25 mm; a_p: 0.2–2.0 mm
– Machining operations on automatic bar machines and multi-spindle machines

Primary application:
– ISO P – steel

Secondary application:
– ISO M – stainless steels
– ISO N – non-ferrous metals

THE GRADE

– PVD-Al_2O_3 grades: WSM23S, WSM33S

Walter Cut GX grooving tools **Fig.:** GX24

BENEFITS FOR YOU

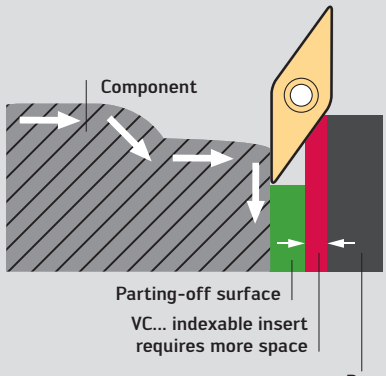
– Enormous savings on material in mass production compared to standard ISO indexable inserts
– High level of efficiency for series production on automatic bar machines and multi-spindle machines
– Optimum chip breaking during finishing operations thanks to VG7 geometry
– Can be used on standard tools

MACHINING EXAMPLE

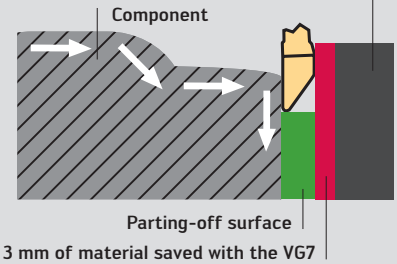
Machining the rear side of bar stock

Components:	4,000,000 units
Saving per component by using GX...VG7:	3 mm
Saving – Material:	125 tonnes of steel

Previously: VCMT160408 ISO indexable insert (35°)



New: GX24-2E280R02-VG7 WSM33S



_A2140 BORING BAR ADAPTOR

Short and sweet – extreme stability.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

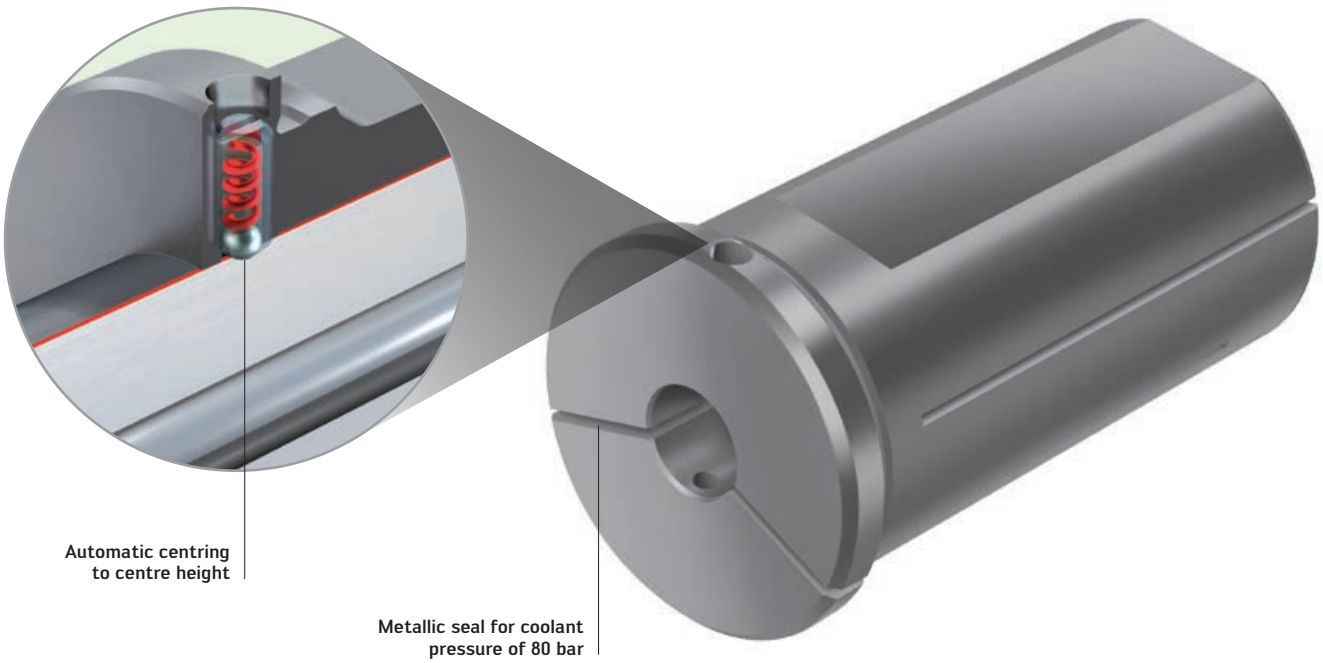
– AK600... is being replaced by A2140-...

THE TOOL

– A2140... adaptor for round shank boring bars using a spring-loaded ball to automatically set the centre height
– Completely enclosed cylindrical shank boring bars (-R) for maximum stability
– Lengths adjusted for VDI boring bar adaptors
– Outside dia.: 25, 32, 40 mm
– Inside dia.: 6, 8, 10, 12, 16, 20 mm

THE APPLICATION

– Internal turning
– Simple, stable boring bar clamping for cylindrical shank without flats
– Machining operations with vibration tendency
– Can be used up to a coolant pressure of 80 bar thanks to metallic seal



Boring bar adaptor **Fig.:** A2140

BENEFITS FOR YOU

– Excellent workpiece surfaces due to exact alignment of the centre height for vibration-free machining
– Automatic alignment of the centre height saves time during tool changes
– One adaptor for solid carbide and steel boring bars

Solid drilling

Solid carbide drilling and reaming tools	DB130 Advance solid carbide drill	32
	DC160 Advance solid carbide drill	33
	DC150 Perform solid carbide drill	34
Drilling tools with indexable inserts	D4140 indexable insert drill	36
	D3120 indexable insert drill	38
HSS drilling and reaming tools	DA110 Perform HSS drill	39

Counterboring and precision boring

Indexable inserts for counterboring and precision boring	CCMT, WCMT, SCMT in E47 geometry	40
	Cermet indexable inserts – WEP10	42
Cartridges	Walter precision boring cartridges	44

_DB130 ADVANCE SOLID CARBIDE DRILL

Precise, reliable and universal.

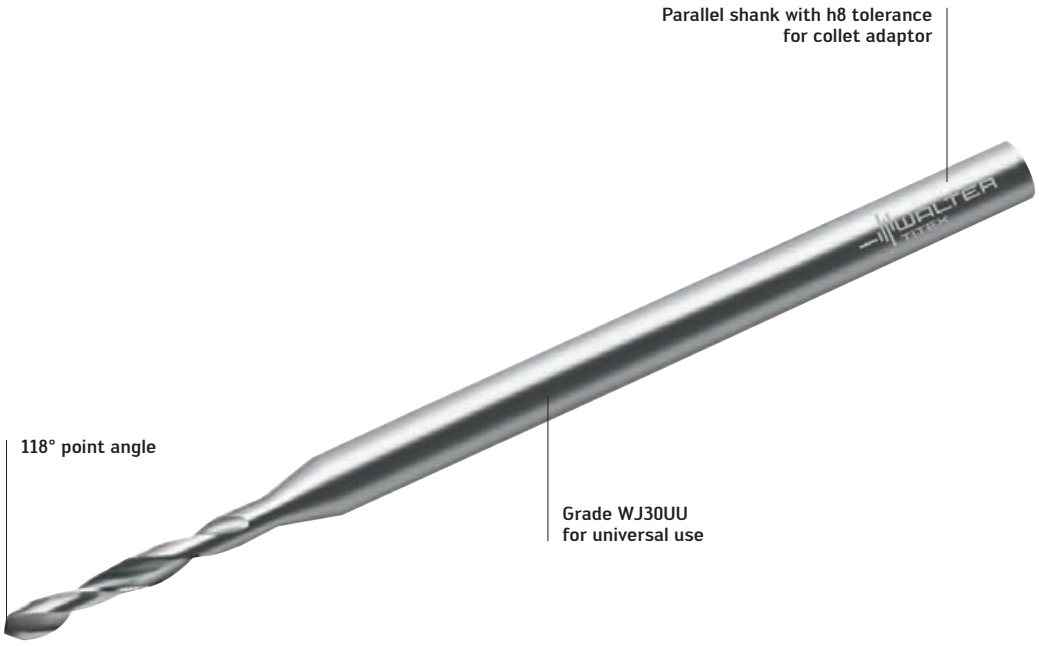
NEW

THE TOOL

- Solid carbide micro twist drill
- Grade WJ30UU
- 118° point angle
- Dimensions according to DIN 1899
- Dia. 0.1–1.45 mm
- Parallel shank with h8 tolerance

THE APPLICATION

- ISO material groups P, M, K, N, S, O
- Can be used with oil and emulsion
- Areas of use: General mechanical engineering, food, medical, instrument and automotive industries, mould and die making



DB130 Advance **Fig.:** DB130-05-00.500U0-WJ30UU

BENEFITS FOR YOU

- High process reliability with very small dimensions
- Can be used universally with a range of materials
- Can be used with oil and emulsion
- Large standard range

Universal application, strong performance.

NEW

THE TOOL

- DC160 Advance solid carbide high-performance drill with and without internal coolant
- Dia. 3–20 mm
- Grade: WJ30ET, K30F TiSiAlCrN/AlTiN
- 140° point angle

THE APPLICATION

- ISO material groups P, M, K, N, S, H, O
- Can be used with emulsion, oil and MQL
- Areas of use: General mechanical engineering, mould and die making, energy and automotive industries

THE DIMENSIONS

- $3 \times D_C$ in accordance with DIN 6537 short, without internal coolant
- $5 \times D_C$ in accordance with DIN 6537 long, with internal coolant
- $8 \times D_C$ in accordance with Walter standard, with internal coolant

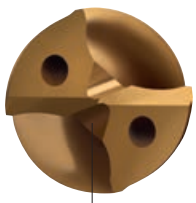
Shank in accordance with DIN 6535:

- $3 \times D_C$ and $5 \times D_C$, form HA and HE
- $8 \times D_C$, form HA

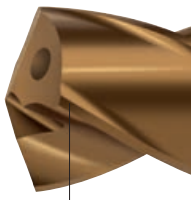
$8 \times D_C$

$5 \times D_C$

$3 \times D_C$



New type of positive thinner web

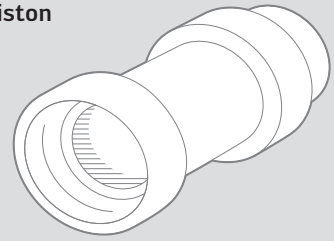


Fourth land in advanced position

DC160 Advance solid carbide drill

APPLICATION EXAMPLE

Valve piston

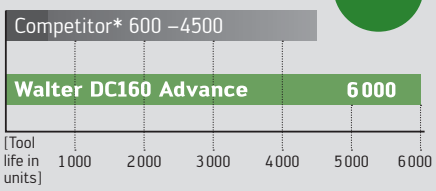


Material:	1.2113; CF 53
Tensile strength:	200 HB (680 N/mm²)
Tool:	DC160-03-07.300A1-WJ30ET
Drilling depth:	26 mm
Cooling:	Oil

	Competitors	Walter Titex DC160 Advance
v_c (m/min)	103	103
n (rpm)	4493	4493
f (mm/U)	0.25	0.25
v_f (mm/min)	1123	1123

Comparison: Number of holes

+33 %



* With tool life fluctuation from 600–4500

BENEFITS FOR YOU

- High productivity in many different materials
- Can be used universally in an extremely wide range of applications
- Lands in advanced position to ensure fast guidance in the hole
- Remarkable positioning accuracy thanks to the innovative new thinner web

_DC150 PERFORM SOLID CARBIDE DRILL

New dimensions – now even more flexible.

NEW

NEW ADDITION TO THE PRODUCT RANGE

- 3 × D_C and 5 × D_C with universal shank

THE DIMENSIONS

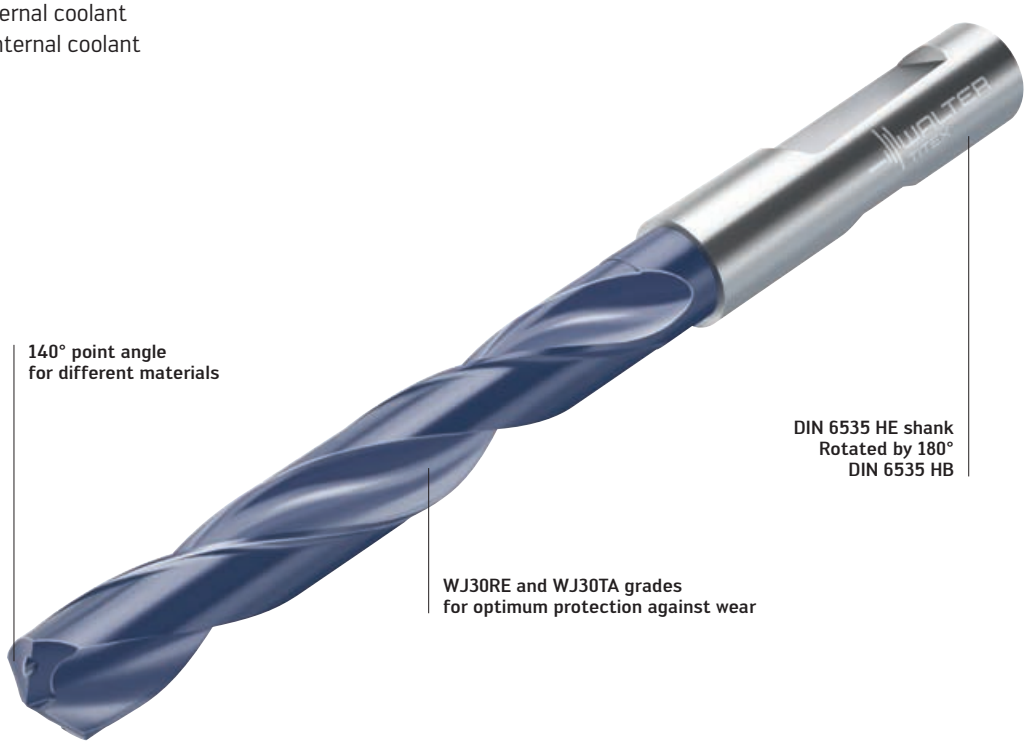
- 3 × D_C (DIN 6535 short) with and without internal cooling
- 5 × D_C (DIN 6535 long) with internal cooling
- 8 × D_C with internal coolant
- 12 × D_C with internal coolant

THE APPLICATION

- ISO P, M, K, N, S, H, O
- Can be used with oil and emulsion
- Areas of use: General mechanical engineering, mould and die making, energy and automotive industries

THE APPLICATION

- Solid carbide twist drills
- Grades: WJ30RE and WJ30TA
- 140° point angle
- Dia. 3–20 mm



DC150 Perform **Fig.:** DC150-05-08.500D1-WJ30RE

BENEFITS FOR YOU

- Cost-efficient machining of small and medium batch sizes
- Can be used universally with all materials
- Universal shank for all adaptors typically used in drilling, such as: Whistle Notch, hydro-expansion chuck, collet chuck, shrink-fit chuck, power chuck, Weldon chuck

Efficiency for all – including in 5 × D_c without internal coolant.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

– 5 × D_c without internal coolant

THE TOOL

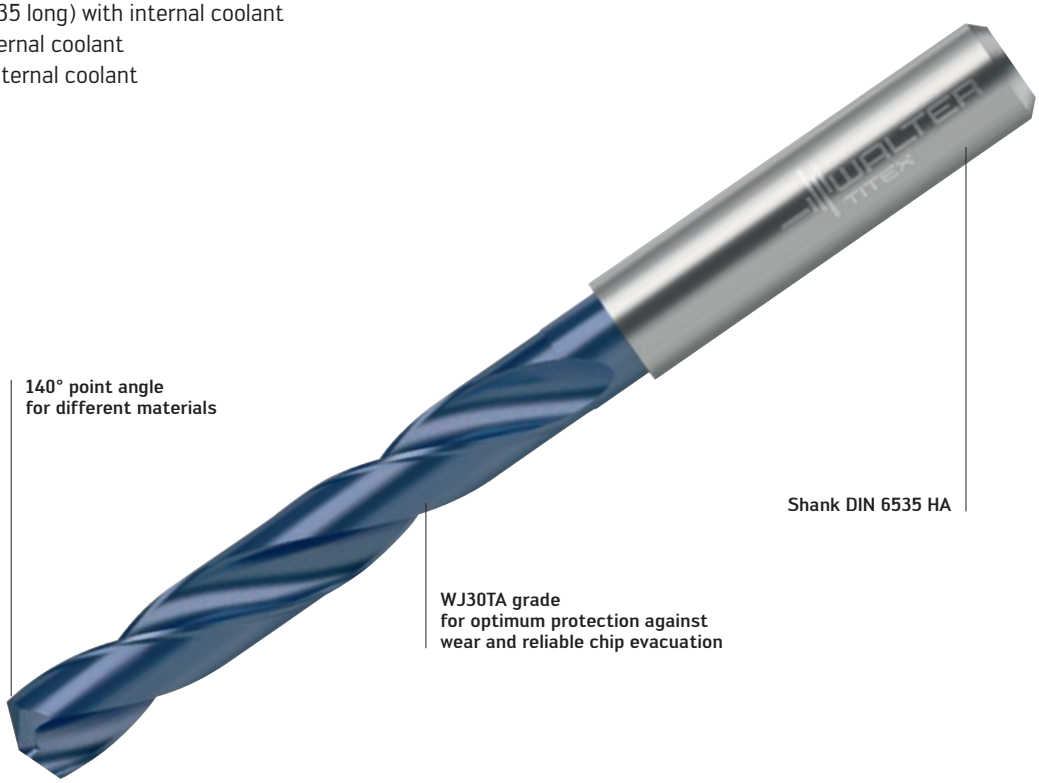
– Solid carbide twist drills
– Grades: WJ30RE and WJ30TA
– 140° point angle
– Dia. 3–20 mm

THE DIMENSIONS

– 3 × D_c (DIN 6535 short) with and without internal coolant
– 5 × D_c (DIN 6535 long) with internal coolant
– 8 × D_c with internal coolant
– 12 × D_c with internal coolant

THE APPLICATION

– ISO P, M, K, N, S, H, O
– Can be used with oil and emulsion
– Areas of use: General mechanical engineering, mould and die making, energy and automotive industries



DC150 Perform solid carbide drill **Fig.:** DC150-05-08.500A0-WJ30TA

BENEFITS FOR YOU

– Cost-efficient machining of small and medium batch sizes
– Can be used universally with all materials
– Shank variants for all adaptors typically used in drilling, such as: Whistle Notch, hydraulic expansion chuck, collet chuck, shrink-fit chuck, power chuck, Weldon chuck

Watch the product video:
www.youtube.com/waltertools

_D4140 INDEXABLE INSERT DRILL

Incomparably tough in all working conditions.

NEW

NEW ADDITION TO THE PRODUCT RANGE

- Solid drills:
  D4140-03 ($3 \times D_C$)
  D4140-05 ($5 \times D_C$)
  D4140-07 ($7 \times D_C$)

THE TOOL

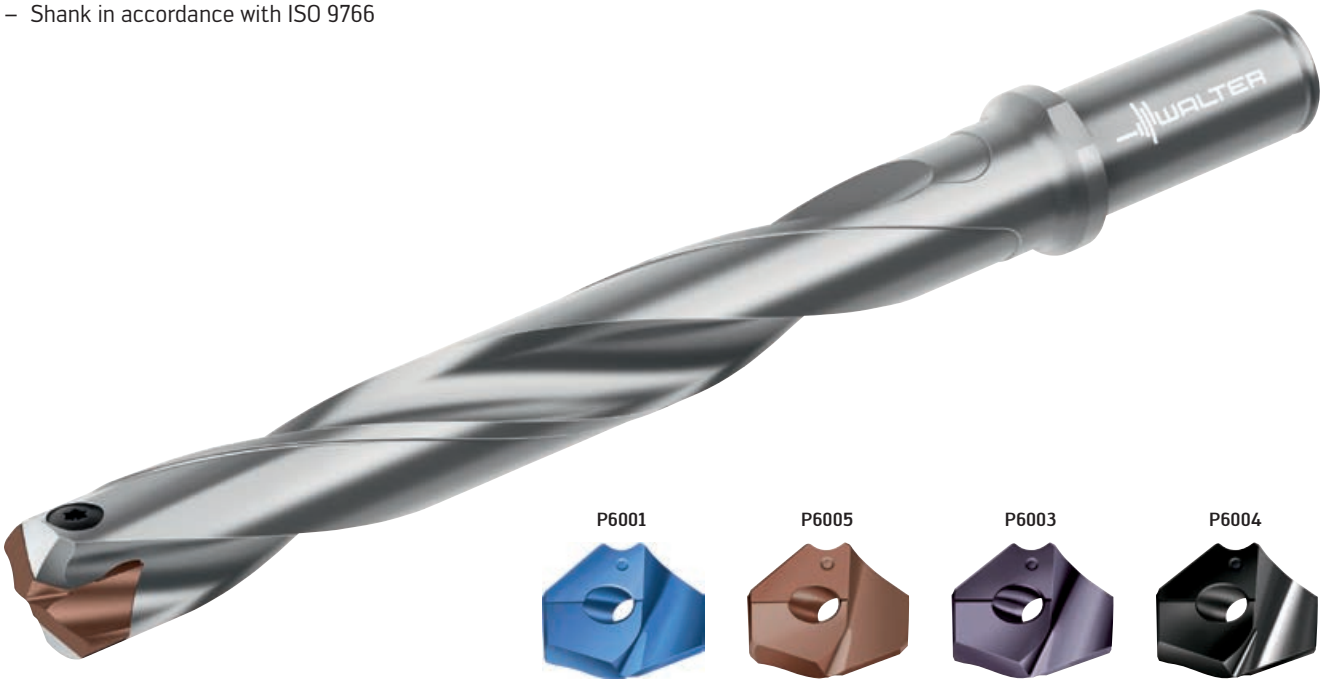
- Dia. 12–31.99 mm
- 3, 5 and $7 \times D_C$
- Polished flutes
- Hardened and polished surface
- Optimised coolant outlet to the centre
- Shank in accordance with ISO 9766

THE APPLICATION

- Solid drilling
  Suitable for stack drilling, inclined entry and exit up to ~5°
- ISO P, M, K, N, S
- Areas of use:
  General mechanical engineering, mould and die making, energy industry, automotive industry

THE INDEXABLE INSERT

- Exact positioning thanks to 100° prism at insert seat
- Four geometries and grades:
  P6001 – WPP45C: Specialist for ISO P
  P6003 – WMP35: Specialist for ISO M and S
  P6004 – WNN25: Specialist for ISO N
  P6005 – WKK45C: Specialist for ISO K



Walter D4140 indexable insert drill **Fig.:** D4140-07

BENEFITS FOR YOU

- Maximum process reliability and tool life due to coolant outlet directly on the cutting edge
- Reliable chip evacuation due to polished flutes
- Best protection against friction and long tool life for drilling bodies due to hardened and polished surface
- Simple indexable insert selection with Color Select

Walter Xpress

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

– D4140-10 (10 × D_c)

Additional dimensions

– D4140-03 (3 × D_c)
– D4140-05 (5 × D_c)
– D4140-07 (7 × D_c)

THE TOOL

– Dia. 12–31.99 mm for 3 × D_c, 5 × D_c and 7 × D_c
– Dia. 0.472–1.259" for 3 × D_c, 5 × D_c and 7 × D_c
– Dia. 18–24.99 mm for 10 × D_c
– Polished flutes
– Hardened and polished surface
– Optimal coolant outlet to the centre
– Shank in accordance with ISO 9766

THE APPLICATION

– Solid drilling, suitable for stack drilling, inclined inlet and outlet up to ~5°
– ISO P, M, K, N, S
– Areas of use: General mechanical engineering, mould and die making, energy and automotive industries

THE INDEXABLE INSERT

– Exact positioning thanks to 100° prism at insert seat
– Four geometries and grades

P6001

WPP45C specialist for ISO P

P6005

WKK45C specialist for ISO K

P6003

WMP35 specialist for ISO M and ISO S

P6004

WNN25 specialist for ISO N

Walter D4140 indexable insert drill

BENEFITS FOR YOU

– Maximum process reliability and tool life due to coolant outlet directly on the cutting edge
– Reliable chip evacuation due to polished flutes
– Best protection against friction and long tool life for drilling bodies due to hardened and polished surface
– Simple indexable insert selection with Color Select

Also available from:

Walter Xpress

Strong performance with four cutting edges.

NEW

NEW ADDITION TO THE PRODUCT RANGE

- Solid drills
  D3120-02 (2 × D_C)
  D3120-03 (3 × D_C)
  D3120-04 (4 × D_C)

THE TOOL

- Dia. 16–42 mm
- 2, 3 and 4 × D_C
- Stable design for lathes and machining centres
- Polished flutes
- Hardened and polished surface
- Torx Plus indexable insert clamping screws
- Measuring collar for D_C for easy drill identification, even when assembled

THE APPLICATION

- Solid drilling
  Suitable for difficult machining operations, such as cross holes, chain drilling, chamfered entry and exit
- ISO P, M, K, S, H
- Areas of use:
  General mechanical engineering, mould and die making, energy and automotive industries

THE INDEXABLE INSERT

- 4-edge, positive indexable insert
- Three geometries:
  A57 – the stable one
  E57 – the universal one
  E67 – the easy-cutting one
- Three grades: WKP25S, WKP35S, WSP45S
- For special drills, indexable insert can also be used left-hand cutting

Walter D3120 indexable insert drill **Fig.:** D3120-04

BENEFITS FOR YOU

- Maximum process reliability thanks to simple chip evacuation through optimal coolant channels and polished flutes
- Best protection against friction due to hardened and polished surfaces
- Secure indexable insert clamping with Torx Plus screws
- High stability in all working conditions
- Low cutting material costs thanks to four cutting edges
- Long tool life thanks to Tiger·tec® Silver grades
- Easy to use: One indexable insert shape for outer and inner seat

Walter Xpress

Efficient in all materials.

NEW

NEW

– DA110 Perform HSS drill

THE TOOL

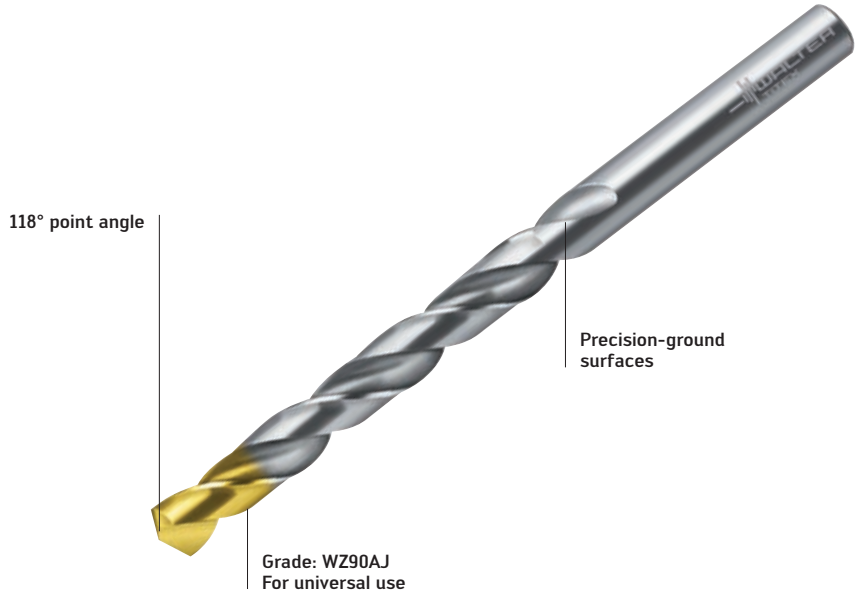
– Dia. 1–16 mm
– Grade: WZ90AJ HSS, TiN point coating
– Type N
– 118° point angle

THE DIMENSIONS

– In accordance with DIN 338

THE APPLICATION

– ISO material groups P, M, K, N, S, H, O
– Can be used with emulsion, oil and MQL
– Areas of use: General mechanical engineering, mould and die making, energy and automotive industries



DA110 Perform HSS drill **Fig.:** DA110-08-08.500U0-WZ90AJ

BENEFITS FOR YOU

– Can be used universally with various different materials
– Tip geometry for optimum centring accuracy
– Maximum accuracy on the component thanks to precision-ground surfaces

_CCMT, WCMT, SCMT IN E47 GEOMETRY

Now also in Tiger·tec® Silver grades.

NEW TO THE RANGE

THE GRADES

- WPP20S, WSM20S and WSM30S
- Maximum toughness thanks to minimal thermal loads with the newly developed coating process
- PVD aluminium oxide (Al_2O_3) protects the substrate against heat ingress during machining
- Reduced friction during machining due to extremely smooth rake face
- Maximum wear resistance and temperature resistance when machining stainless steels and heat-resistant super alloys

THE APPLICATION

- Suitable for all counterboring operations with and without interrupted cut
- WPP20S and WSM30S are PVD multi-range grades with Tiger·tec® Silver coating; can be used with ISO material groups M and S
- WPP20S is a Tiger·tec® Silver CVD grade; main application range: Steel (ISO P)

THE GEOMETRIES

- 15° rake angle
- Flexible geometry that can be used universally for variable depths of cut
- Can be used with ISO material groups P, M and S

THE INDEXABLE INSERTS

- Indexable insert in basic shapes CC.., SC.. and WC..
- Circumference-sintered
- Straight cutting edge
- Chip groove with variable width for different depths of cut
- Protective chamfer: Designed for the ISO material groups
- PVD- and CVD-coated Tiger·tec® Silver grades

Powered by Tiger·tec® Silver

Grades: WSM10S, WSM20S and WSM30S

Fig.: CCMT, WCMT, SCMT

BENEFITS FOR YOU

- Long tool life due to optimally designed geometry and less heat entering the carbide
- Best level of wear resistance thanks to optimised aluminium oxide
- Maximum process reliability thanks to excellent chip breaking at all depths of cut
- Increase in productivity thanks to higher cutting data from Tiger·tec® Silver
- Ideally suited to highly variable depths of cut

_ARS CARTRIDGE

Universal counterboring with a very clean cut.

NEW TO THE RANGE

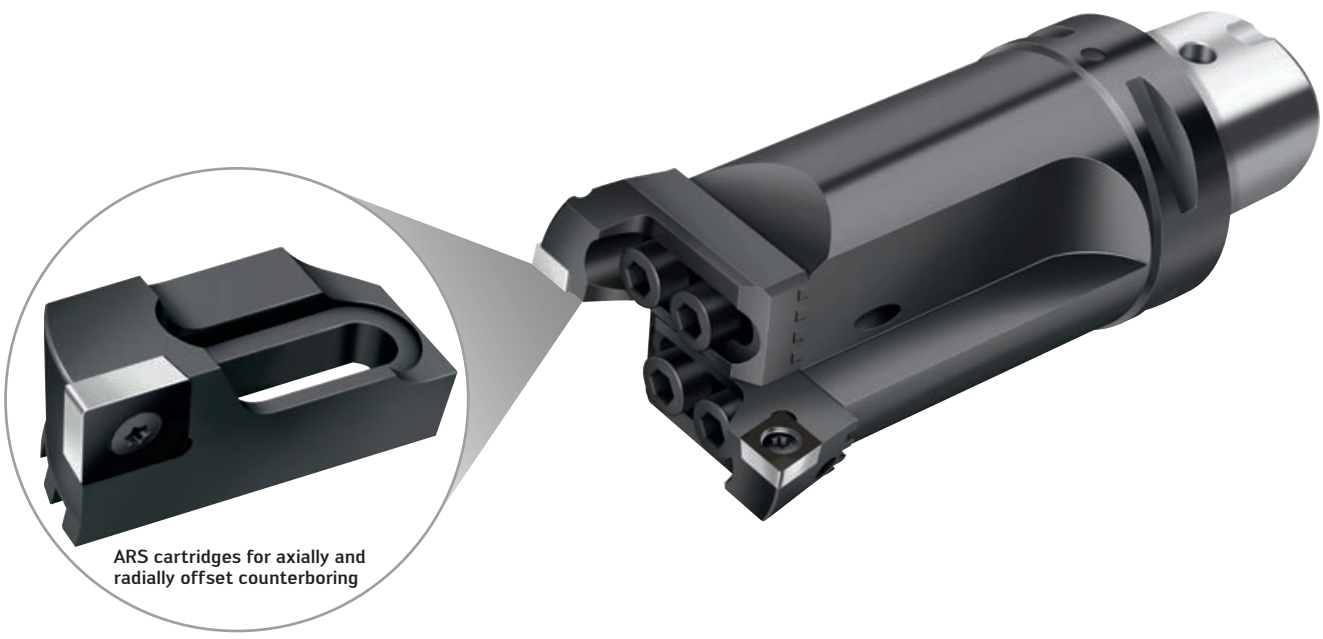
THE INDEXABLE INSERT

Indexable insert in the CC.. basic shape

- Circumference-sintered
- Straight cutting edge
- Chip groove with variable width for different depths of cut
- Protective chamfer: Designed for the ISO material groups
- PVD- and CVD-coated Tiger·tec® Silver grades

THE APPLICATION

- The CC..1605.. indexable insert enables larger overlaps to be achieved
- Suitable for all counterboring operations with and without interrupted cut
- WSM20S and WSM30S are PVD multi-range grades with Tiger·tec® Silver coating; can be used with ISO material groups M and S
- WPP20S is a Tiger·tec® Silver CVD grade; main application range: Steel (ISO P)



ARS cartridges for axially and radially offset counterboring

Grades: WSM20S

Fig.: B3220.C

BENEFITS FOR YOU

- The CC..1605 covers larger diameter ranges
- High process reliability due to stable insert thickness and excellent chip breaking across the entire cutting depth range
- Ideally suited to highly variable depths of cut
- Higher cutting data thanks to Tiger·tec® Silver grades
- Long tool life thanks to optimum geometry design

Watch the product video:
www.youtube.com/waltertools

Best tool life and surface quality for precision boring.

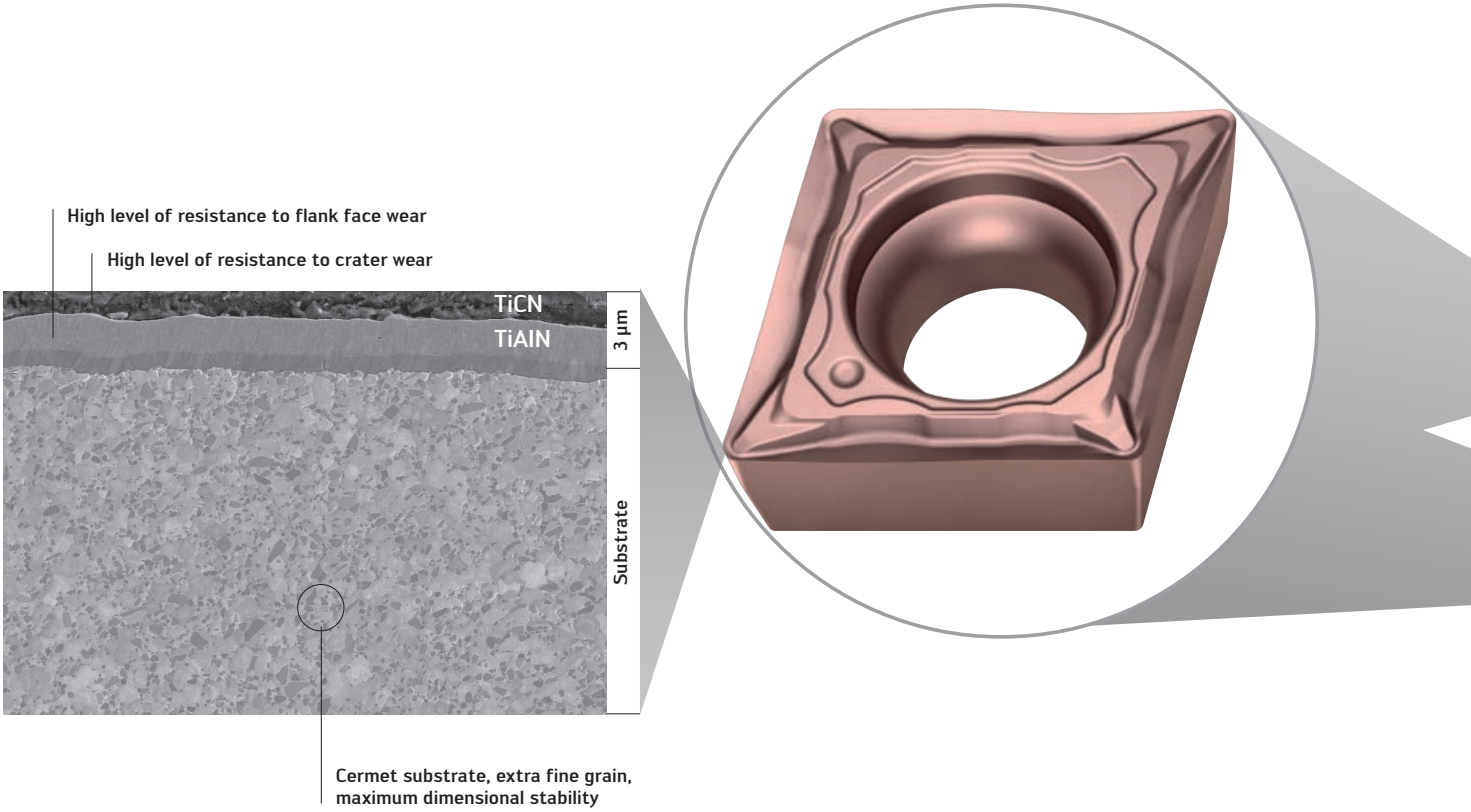
NEW

THE INDEXABLE INSERTS

- Indexable inserts made of the wear-resistant, coated WEP10 cermet grade for precision boring tools
- Wear-resistant TiCN/CN-based cermet substrate with Ni/Co binder
- Extremely hard TiCN outer layer
- Extra fine cermet substrate grain
- Finishing chip former for versatile use with FP4 soft-cutting geometry
- CCMT indexable insert shapes

THE TECHNOLOGY

The extremely fine-grain titanium carbon-based cermet substrate, combined with the highly wear-resistant multilayer coating, provides clear advantages during finishing operations compared to coated tungsten carbide indexable inserts.



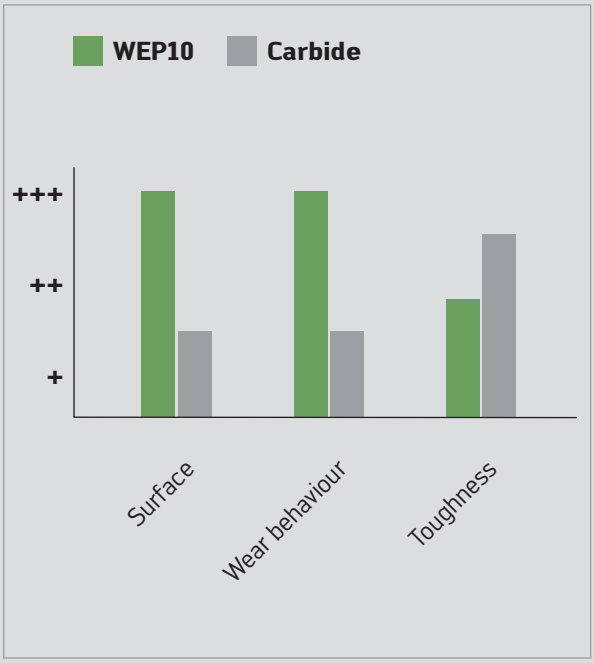
Watch the product video:
www.youtube.com/waltertools

BENEFITS FOR YOU

- No readjustment necessary, maximum dimensional accuracy
- Longer tool life and higher productivity in comparison to carbide
- No burr formation or build-up on the cutting edge
- Mirror finishes at high and low cutting speeds

COMPARISON

Finishing – WEP10 and carbide



THE APPLICATION

- Precision boring applications with long machining paths
- Applications with continuous or slightly interrupted cut
- For low and high cutting speeds
- Can be used in the B3230... and B4030... precision boring tools

B3230 precision boring tool

Fig.: B3230-C-20-100/ B3230-C-150-640

Precision down to the smallest detail times two.

NEW TO THE RANGE

THE CARTRIDGE

- Precision boring cartridge with adjustment mechanism accurate to 2 µm
- Approach angles of 90° and 95°
- For CC..0602 and TC..1102 indexable inserts
- FR760: TC..1102.. / 90° approach angle
- FR761: CC..0602.. / 90° approach angle
- FR763: CC..0602.. / 95° approach angle

THE APPLICATION

- Areas of use: General mechanical engineering, etc.
- Machining connecting rods, gearbox housings, bearing gaps, fittings
- Precise and cost-effective custom solutions

FR710

FR761 – 2 µm version

0.01 mm precision boring/0.002 mm precision boring

Fig.: FR710 and FR761

BENEFITS FOR YOU

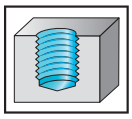
- Two programming variants – adjustment steps: 0.01 mm and NEW: 0.002 mm
- Reliable and easy to use with error-free readings
- Backlash-free adjustment in "+" and "–" directions
- Backlash < 2 µm
- No need for locking
- Low-maintenance
- Easy to integrate into custom solutions

Threading

Tapping	Overview of TC120/TC121/TC122 taps	48
	TC120 tap	49
	TC121 tap	50
	TC122 tap	51
	Walter Prototyp Paradur®HT	52
	Prototex® TiNi tap	53
	Paradur® Ni tap	54
Thread forming	TC420 Supreme thread former	56
	TC430 Supreme thread former	57
Thread milling	T2711/T2712 thread milling cutters	58
	T2711/T2712/T2713 thread milling cutter	59

The new generation of Supreme taps for steel.

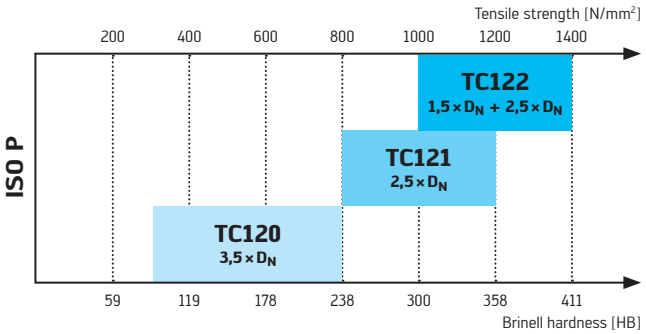
NEW



Supreme taps for blind-hole machining:
Three different taps with various geometries and coatings for machining all steel materials.

		Tensile strength	Material groups P	M	K	N	S	H	O
Soft steels	TC120 	90–240 HB (300–800 N/mm²)	••			•			
Medium-strength steels	TC121 	240–370 HB (800–1250 N/mm²)	••	•	•	•			
High tensile steels	TC122 	300–420 HB (1000–1400 N/mm²)	••		•				

Application ranges in ISO P



The application ranges of the TC120, TC121 and TC122 product ranges in steel materials are specified according to tensile strengths of between 300 and 1400 N/mm².

_TC120 TAP

High reliability in soft steel and medium-strength steel.

NEW

NEW ADDITION TO THE PRODUCT RANGE

Dimension range:

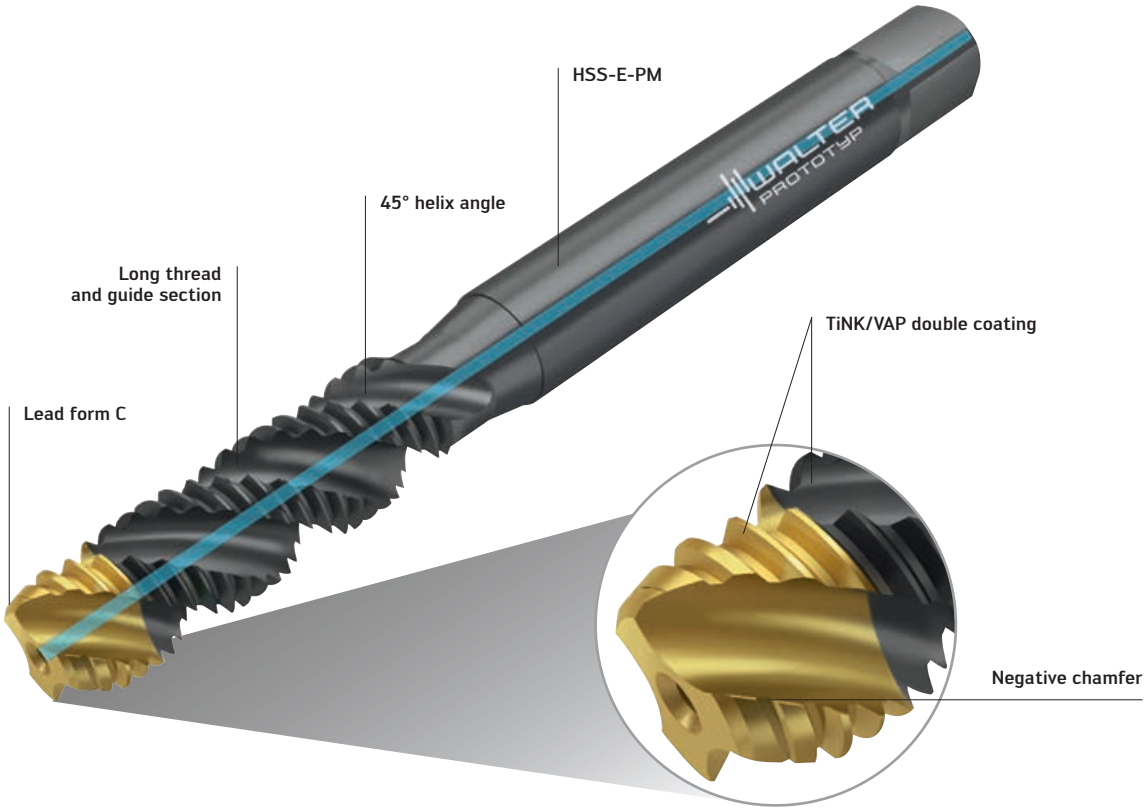
- M3–M30 (without internal coolant)
- M8–M16 (with internal coolant)

THE TOOL

- Blind hole tap
- Double coating: TiN in the lead section; vaporised in the guide section
- WW60AG grade (HSS-E-PM + TiNK/VAP)
- 45° helix angle
- Thread section $3 \times D_N$ long
- Negative chamfer in the lead section
- With and without internal coolant

THE APPLICATION

- ISO P materials
- 90–240 HB (300–800 N/mm²)
- Thread depth $3 \times D_N$



TC120 tap

Fig.: TC120-M10-C1-WW60AG

BENEFITS FOR YOU

- No more birds nesting due to negative chamfer in the lead section
- Prevents total breakage due to chip build-up
- Significantly less fracturing in the guide section thanks to extra long thread.

Maximum performance in steel in medium strength range.

NEW

NEW ADDITION TO THE PRODUCT RANGE

Dimension range:
- M2–M20 (without internal coolant)
- M5–M20 (with internal coolant)

THE TOOL

- Blind hole tap
- Grades: WW60RG (HSS-E-PM + TiAlN) WY80BD (HSS-E + TiCN)
- 40° helix angle
- Chamfered thread section

THE APPLICATION

- ISO P materials
- Thread depth $2.5 \times D_N$
- 240–370 HB (800–1250 N/mm²)
- With and without internal coolant

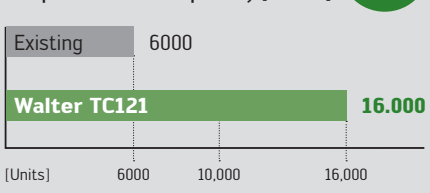
APPLICATION EXAMPLE

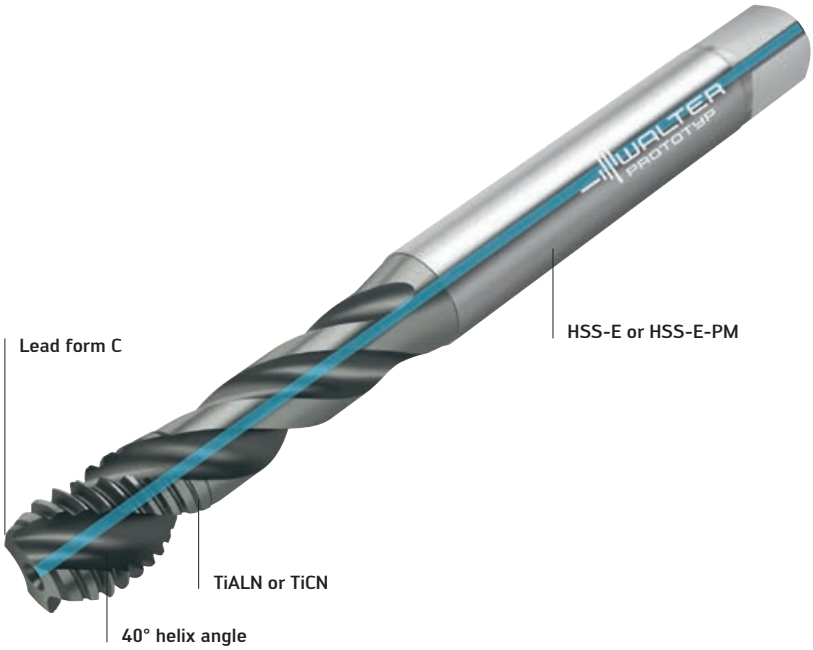
Nuts – Multi-spindle machines

Material: 1.0718 (11SMPb30)
Tensile strength: 240 HB (800 N/mm²)

	Existing	Walter – TC121
Application:	Blind hole	Blind hole
Dimensions:	M8	M8
Tolerance:	6G	6G
Coating/grade:	TiN	WW60RG
Chamfer:	Form C	Form C
Thread depth:	10 mm	10 mm
v_c	14 m/min	14 m/min
Lubrication:	Oil	Oil
Machining:	Horizontal	Horizontal
Tool life	6000 threads	16,000 threads

Comparison: Tool life quantity [thread] **+267 %**





TC121 tap

Fig.: TC121-M10-C1-WW60RG

BENEFITS FOR YOU

- Reliable due to tightly rolled chips
- Prevents birds nesting (WW60RG)
- Maximum tool life (WY80BD)
- Internal coolant for improved chip evacuation

_TC122 TAP

Maximum tool life in steel with medium to high tensile strength.

NEW

NEW ADDITION TO THE PRODUCT RANGE

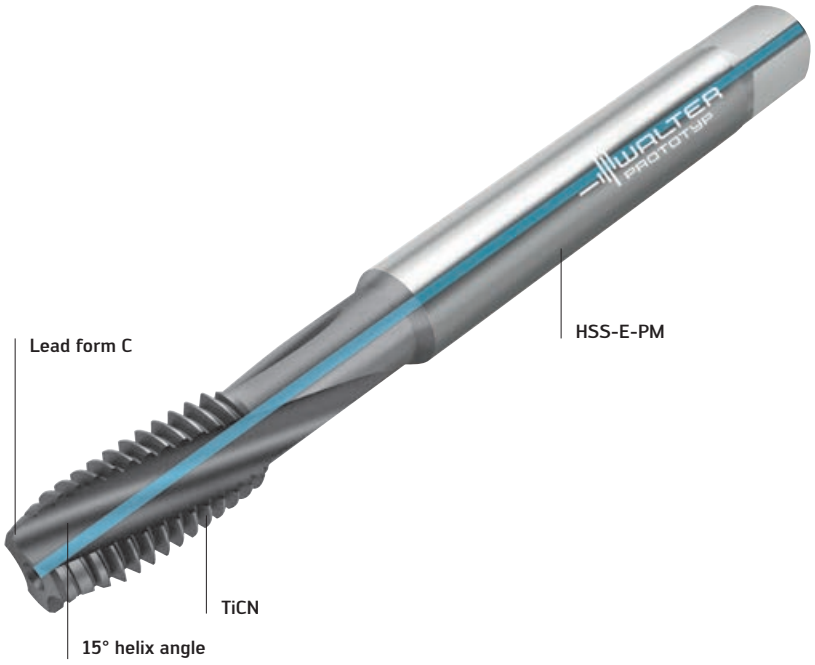
Dimension range:
- M3–M20 (without internal coolant)
- M5–M20 (with internal coolant)

THE TOOL

- Blind hole tap
- Grade: WW60BC (HSS-E-PM + TiCN)
- 15° helix angle

THE APPLICATION

- ISO P materials
- Thread depths:
  $1.5 \times D_N$ without internal coolant
  $2.5 \times D_N$ with internal coolant
- 300–420 HB (1000–1400 N/mm²)



TC122 tap **Fig.:** TC122-M10-C1-WW60BC

BENEFITS FOR YOU

- Maximum tool life in strong to high tensile ISO P materials
- Short chips
- No chip residue in the hole thanks to internal coolant

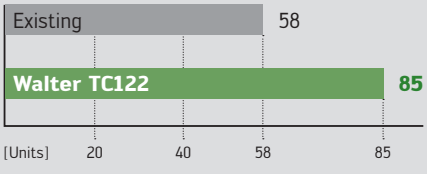
APPLICATION EXAMPLE

Blind hole thread – Inlet side valve

Material: 1.2367 (X38CrMoV5-3)
Tensile strength: 360 HB (1200 N/mm²)

	Existing	Walter – TC122
Application:	Blind hole	Blind hole
Dimensions:	M10	M10
Coating/grade:	TiN	WW60BC
Lead:	Form C	Form C
Thread depth:	23 mm	23 mm
v_c	4 m/min	10 m/min
Cooling:	External cooling	Internal cooling
Lubrication:	Emulsion	Emulsion
Machining:	Horizontal	Horizontal
Tool life	58 threads	85 threads

Comparison: Tool life quantity [thread] **+147%**



Reliable chip evacuation and process in ISO P, K and N.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- UNC: UNC 1/4–UNC 1

Additional dimensions:

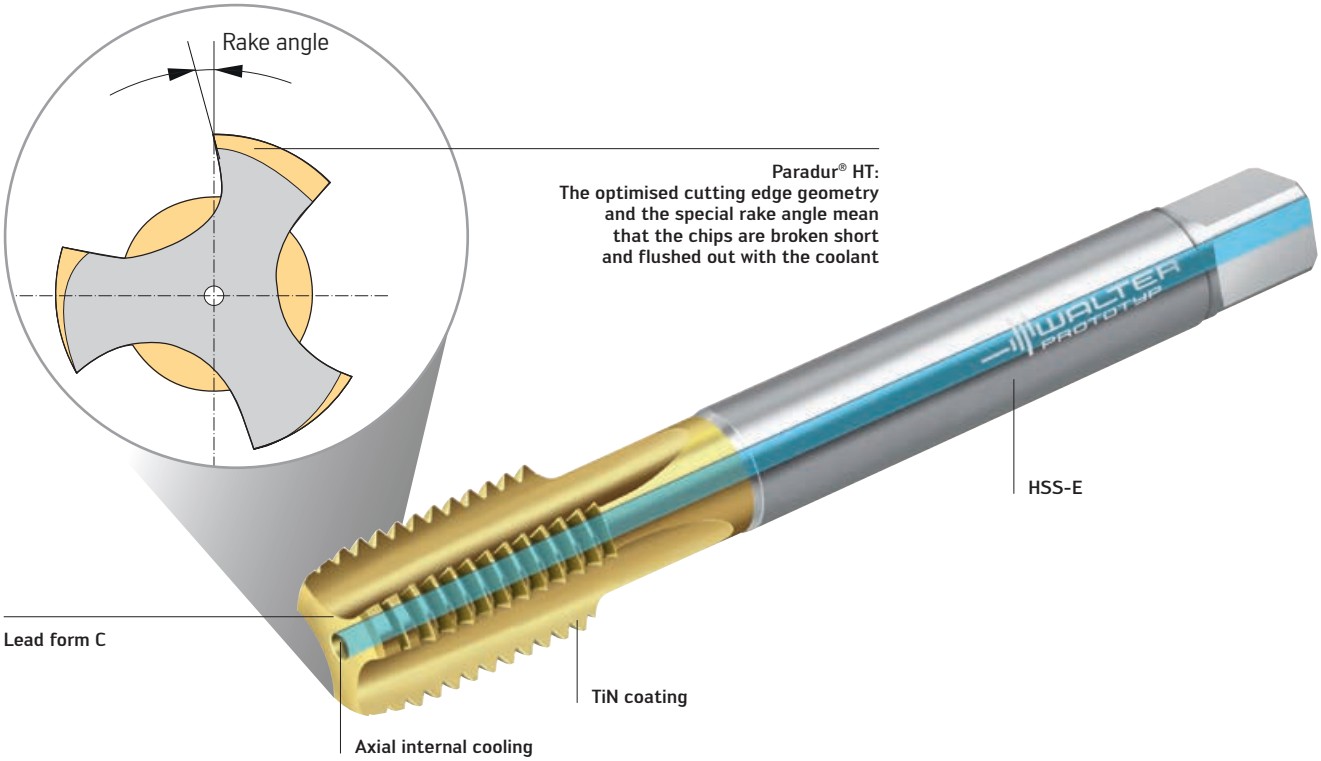
- M: M4–M36
- MF: MF10 × 1–MF33 × 2

THE TOOL

- Blind hole tap
- TiN coating
- Lead form C
- Axial internal cooling
- Tolerance 2B

THE APPLICATION

- Primary application
  ISO P: 700–1400 N/mm²
  ISO K: Predominantly GJS (GGG) materials
- Secondary application
  AlSi alloys > 7% Si content
  Short-chipping Cu alloys
  Mg alloys
- Up to 3.5 × D_N



Walter Prototyp

Fig.: 2236115

BENEFITS FOR YOU

- Extremely high process reliability even with deep threads
- Outstanding chip breaking even in long-chipping materials – no more birds nesting
- Optimum transport of the short broken chips thanks to axial internal cooling

_WALTER PROTOTYP PROTOTEX® TINI

High performance, wide range of applications in ISO S, ISO P & ISO M materials.

NEW TO THE RANGE

THE TOOL

- HSS-E-PM taps
- Spiral point
- Tolerances: 6HX, 2B and 3B
- Coating: TiCN
- Dimension range:
  Metric: M8 × 0.75–M16 × 1
  UNC: UNC 2-56–UNC 3/4-10
  UNF: UNF 4-48–UNF 5/8-18

THE APPLICATION

- Through-hole threads
- Thread depth up to $2 \times D_N$
- ISO material groups P, M and S
- Areas of use: General mechanical engineering, aerospace, medical and foodstuff industries

Walter Prototyp Prototex® TiNi **Fig.:** 21216106

BENEFITS FOR YOU

- Cost-efficient and reliable machining of Ti and Ni alloys
- Wide range of applications in ISO P, M and S
- Long tool life – even with abrasive materials, reduced friction (large flank clearance angle), hard cutting tool material, extreme toughness, "X" tolerance position
- Reduced torque thanks to sharp cutting edges (ideal for tough, hard materials)

Watch the product video:
www.youtube.com/waltertools

_WALTER PROTOTYP PARADUR® NI

Reliable tapping in ISO S materials.

NEW TO THE RANGE

THE TOOL

- HSS-E-PM taps
- Tolerances: 6HX, 2B and 3B
- Coating: TiCN
- Dimension range:
  Metric: M2–M20
  UNC: UNC 2-56–UNC 3/4-10
  UNF: UNF 6-40–UNF 5/8-18
  NPT: NPT1/16-27–NPT1-11.5

THE APPLICATION

- Blind hole thread
- Thread depth up to 1.5 × D_N
- ISO material groups: ISO S and P
- Areas of use: General mechanical engineering, aerospace industry, offshore

Walter Prototyp Paradur® Ni **Fig.:** 20410206

BENEFITS FOR YOU

- High level of process reliability thanks to stable design and reduced friction
- Reliable machining of nickel alloys
- Reduced torque thanks to sharp cutting edges

_TC420 SUPREME THREAD FORMER

Superior performance, for universal use.

NEW

THE TOOL

- HSS-E-PM thread former
- With and without lubrication grooves
- With and without internal coolant (axial/radial)
- Tolerances: 6HX and 6GX

THE GRADE

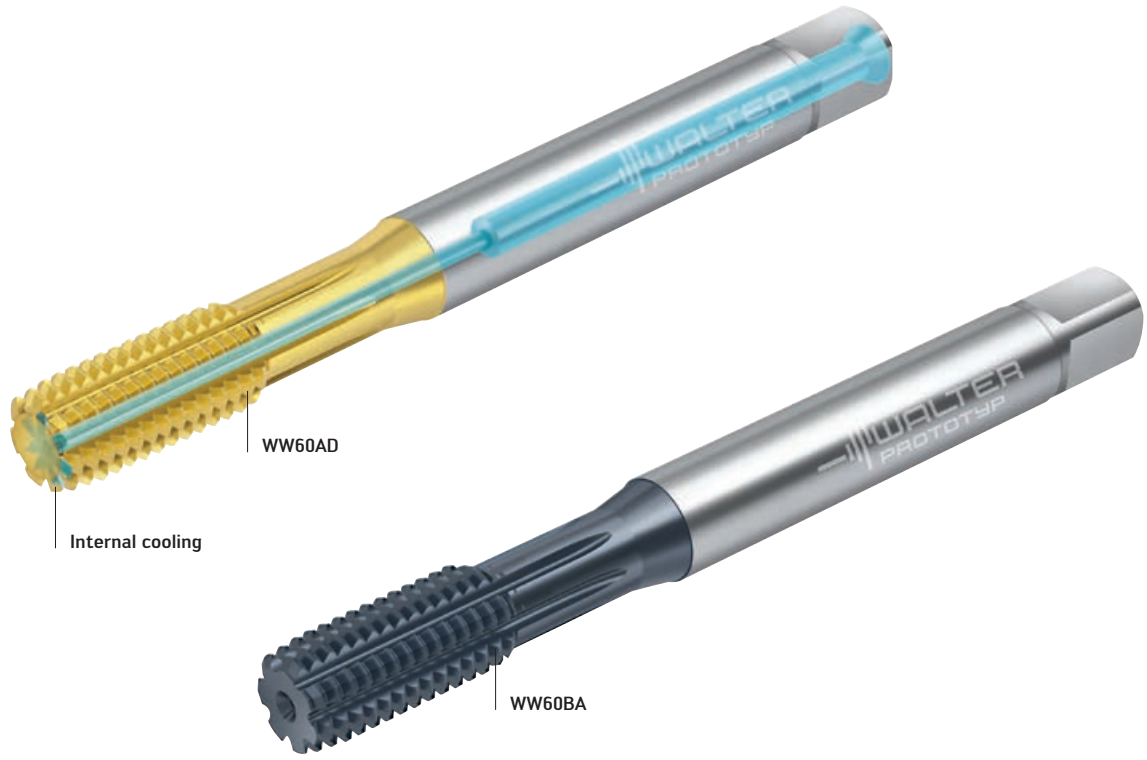
- WW60AD (HSS-E-PM + TiN)
- WW60BA (HSS-E-PM + TiCN)

Dimension range:

- Metric: M2–M20
- Metric fine: M8 × 1–M16 × 1.5

THE APPLICATION

- Blind-hole and through-hole threads
- Thread depth up to $3.5 \times D_N$
- ISO material groups P, M, K and N
- All formable materials
- Areas of use: General mechanical engineering, automotive and energy industries, amongst others



TC420 Supreme thread former **Fig.:** TC420

Watch the product video:
www.youtube.com/waltertools

BENEFITS FOR YOU

- Can be used universally
- Up to 30% lower torque
- High cutting speeds possible
- Better surface finish than that achieved using thread cutting

_TC430 SUPREME THREAD FORMER

Specialist in chip-free ISO P machining.

NEW

THE TOOL

- HSS-E-PM thread former
- With and without lubrication grooves
- With and without internal coolant (axial/radial)
- Tolerances: 6HX and 6GX

THE GRADE

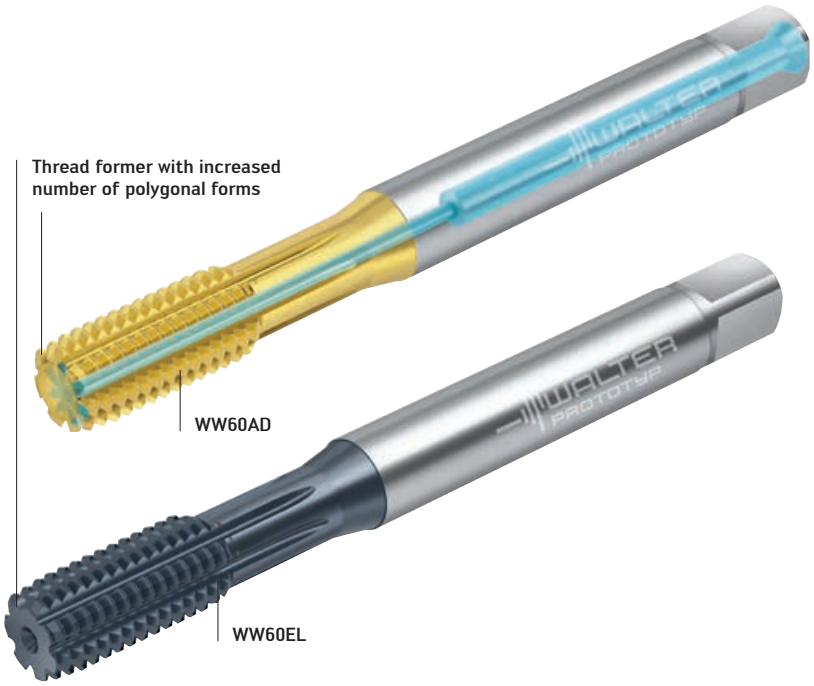
- WW60AD (HSS-E-PM + TiN)
- WW60EL (HSS-E-PM + TiAlN)

Dimension range:

- Metric: M2–M20
- Metric fine: M8 × 1–M16 × 1.5

THE APPLICATION

- For blind-hole and through-hole threads
- Thread depth up to 3.5 × D_N
- Specialist for ISO P materials
- All formable steel materials
- Areas of use: General mechanical engineering, automotive and energy industries, etc.



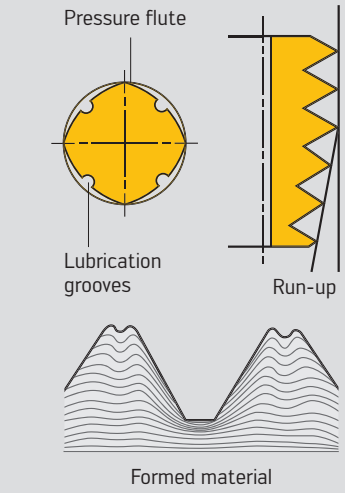
TC430 Supreme thread former **Fig.:** TC430

BENEFITS FOR YOU

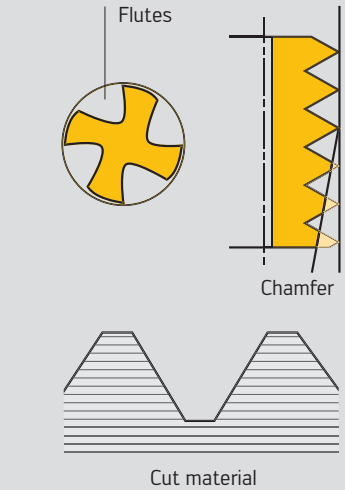
- Maximum tool life with ISO P
- No chip formation, no miscutting, improved surface finish
- Stable tool design to counteract the risk of breakages
- Very strong formed thread

Non-cutting production of internal threads

Thread former:



Tap:



Maximum productivity – absolute process reliability.

NEW

THE TOOL

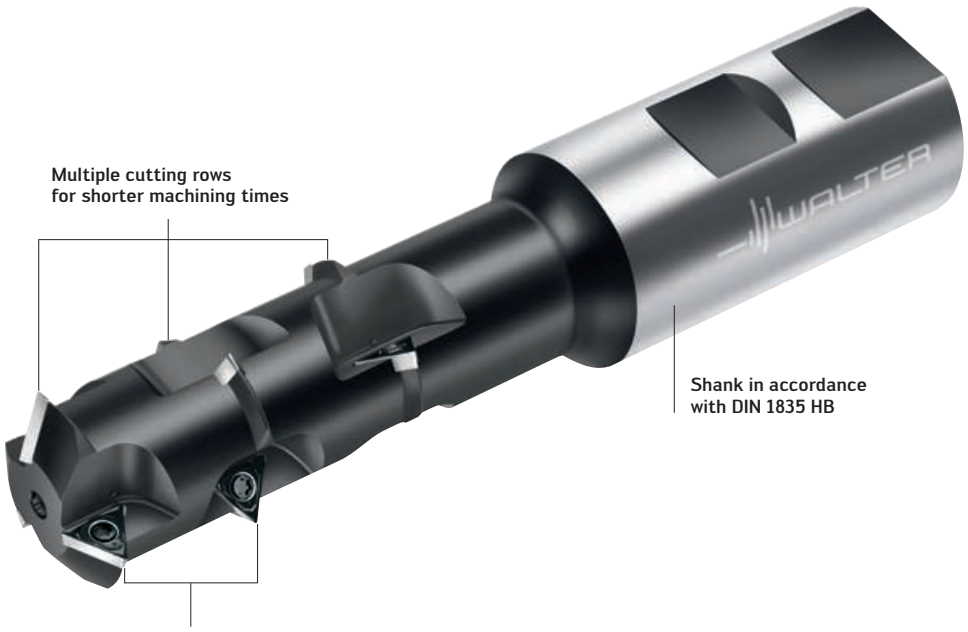
- Universal indexable insert thread milling cutter
- Designed for high cutting speeds and high feeds per tooth
- Adjustable coolant supply: Radial or axial coolant outlets
- T2712 family: Designed for $2 \times D_N$ thread lengths and with an additional neck in order to bridge interference contours

THE APPLICATION

- For threads with a nominal diameter from 24 mm
- Pitch range: 1.5–6 mm/18-4 TPI
- Thread depth up to $2.5 \times D_N$
- Can be used universally with ISO P, M, K, S and H up to 55 HRC

THE THREAD MILLING CUTTER INSERT

- Positive basic shape with three cutting edges
- Easy-cutting geometry
- Wear-resistant, universal grade: WSM37S
- Defined corner radii for producing threads in accordance with various standards



Powered by
Tiger·tec® Silver

T2711/T2712 thread milling cutter

Fig.: T2711

Significant reduction in machining time as multiple thread sections are machined simultaneously.
This enables machining times to be achieved which, in many cases, are comparable with tapping and thread forming.
The row spacing must be an integer which is a multiple of the thread pitch to be produced.
This means that numerous different pitches can be produced with just a few bodies.

BENEFITS FOR YOU

- **100% productivity:** Low costs per thread thanks to quick machining and high tool life quantity
- **100% process reliability:** Easy handling and few radius corrections
- **100% quality:** Outstanding thread quality thanks to superb operational smoothness – threads are free of chip residue

Walter Xpress

Watch the product video:
www.youtube.com/waltertools

Extremely productive – surprisingly versatile.

NEW

THE TOOL

- Universal indexable insert thread milling cutter
- Designed for high cutting speeds and high feeds per tooth

Single-row tools:

- With flute for fully cylindrical thread
- With Weldon shank and Walter Capto™ interface

Two geometry variants:

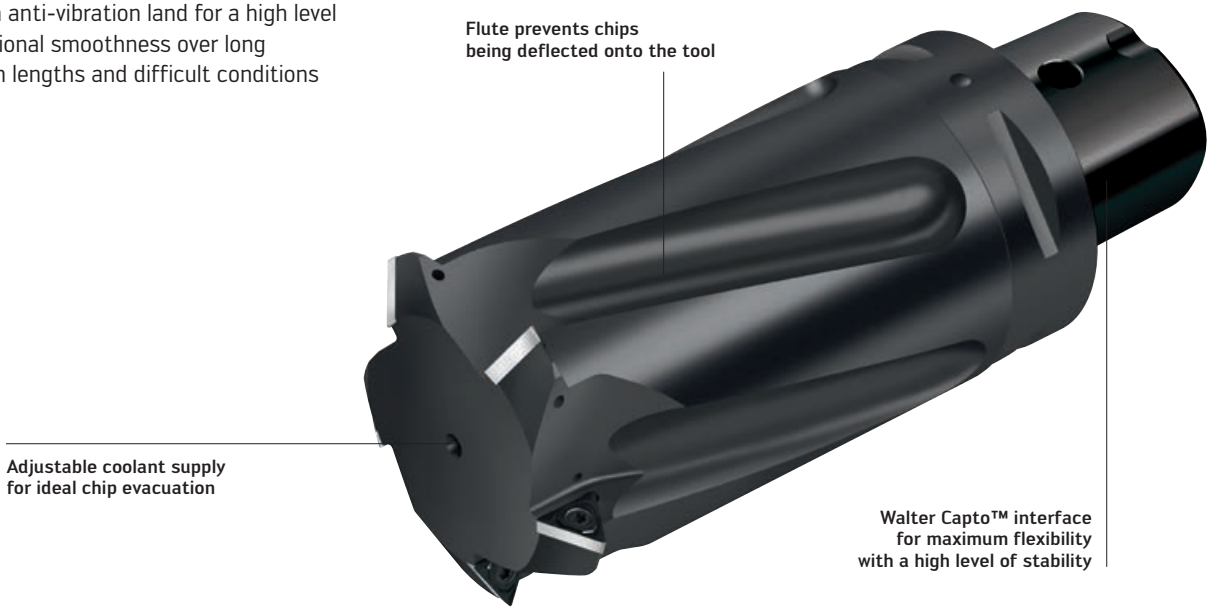
- D67: Universal geometry for maximum tool life
- D61: With anti-vibration land for a high level of operational smoothness over long projection lengths and difficult conditions

THE APPLICATION

- For threads with a nominal diameter from 24 mm
- Pitch range: 1.5–6 mm/18-4 TPI
- Can be used universally with ISO material groups P, M, K, S and H up to 55 HRC

THE THREAD MILLING CUTTER INSERT

- Positive basic shape with three cutting edges
- Wear-resistant, universal grade: WSM37S
- Defined corner radii for producing threads in accordance with various standards



Powered by
Tiger·tec® Silver

T2713 thread milling cutter

Fig.: T2713-73-C6-5-14

BENEFITS FOR YOU

- **100% productivity:** Fast machining and high tool life quantity
- **100% process reliability:** Easy handling and few radius corrections
- **100% quality:** High operational smoothness and cylindrical threads
- **100% flexibility:** Various different thread pitches and lengths

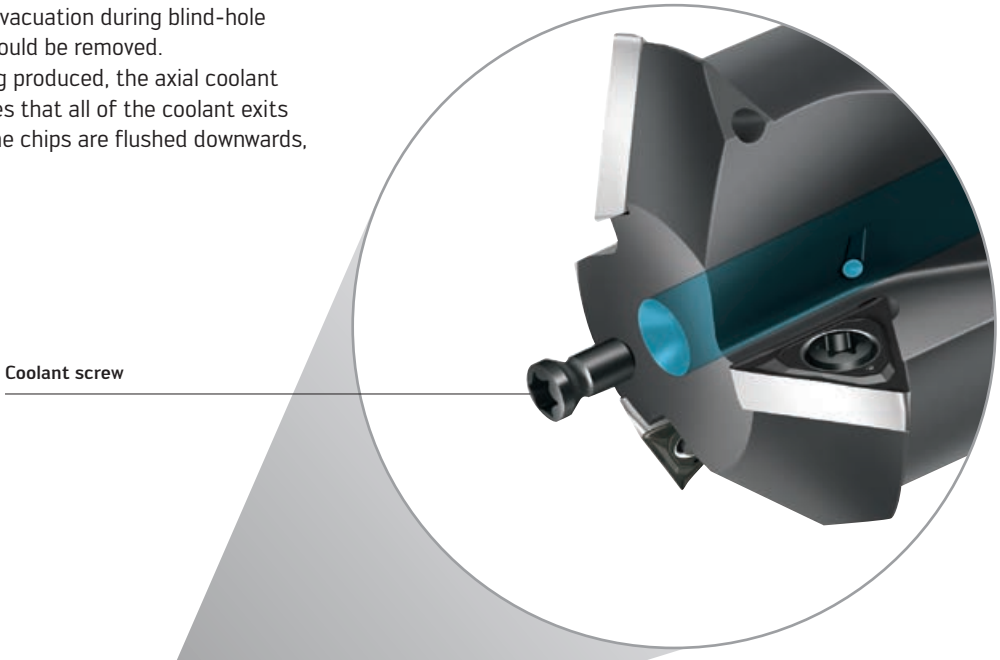
Watch the product video:
www.youtube.com/waltertools

Three families – singularly productive and versatile.

NEW

Adjustable coolant supply

In order to ensure optimal chip evacuation during blind-hole machining, the coolant screw should be removed.
If through-hole threads are being produced, the axial coolant outlet can be closed. This ensures that all of the coolant exits through the radial outlets and the chips are flushed downwards, out of the pilot hole.



THE STANDARD RANGE

- Different dimensions: M24–M85/UNC 1–UNC 1 1/2
- Different projection lengths: 2.0 × D_N, 2.5 × D_N and 3.0 × D_N
- Tools for UN threads also available with one-inch shank

Also available from:

Walter Xpress

T2711-29-W32-3-09-3-24

T2712-29-W32-3-09-2-36

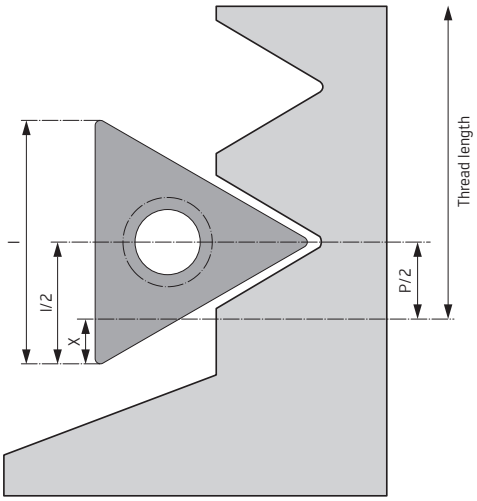
T2713-29-W32-3-09

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).

Example: M36 with P26300-0902.. thread milling cutter insert

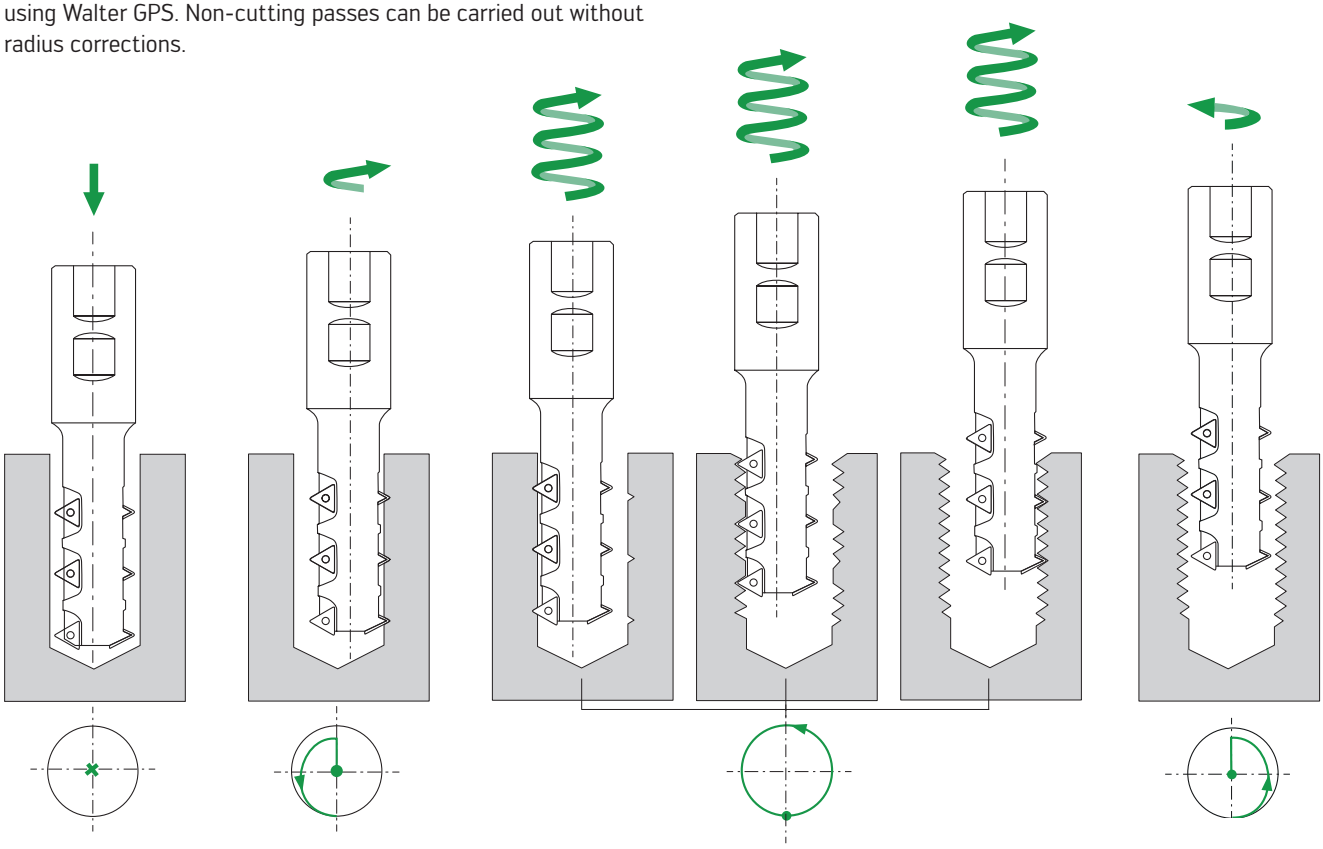
$$\text{Unusable length } X = l/2 - P/2 = \frac{9.34\ \text{mm}}{2} - \frac{4\ \text{mm}}{2} = 2.67\ \text{mm}$$



The unusable length of the T271.. families is less than the lead length of a tap.

THE STRATEGY

It is recommended that the thread be produced with a radial cut using synchronous milling. The programming radius can be determined using Walter GPS. Non-cutting passes can be carried out without radius corrections.



Positioning the milling cutter over core hole and plunging

Ascending loop

Producing the thread using helical interpolation until the row spacing is bridged

Exit loop and retracting the tool to the start position

C – Milling

Solid carbide milling tools	MC319/MC320 Advance & MC320 ConeFit solid carbide milling cutters	64
	MD133 Supreme solid carbide milling cutter	66
	ISO H Advance solid carbide milling cutters	68
	MC232 Perform solid carbide milling cutter	69
Solid carbide, ceramic milling tools	MC275/MC075 ceramic milling cutters	70
Milling tools with indexable inserts	Tiger·tec® Gold	74
	WMP45G cutting tool material	75
	Walter M4000 system	76
	M4003 face milling cutter	78
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	M4258 porcupine milling cutter	80
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	Indexable inserts for Walter BLAXX milling cutters	85
	M2331 ramping milling cutter	86
	M2136 close pitch cutter	87
	M2471 copy milling cutter	88
	Walter BLAXX F5055 slitting cutter	90


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More efficient roughing – with the new knurled profile.

NEW

THE TOOLS

– Two families with new knurled profile for roughing operations

MC319 Advance: Solid carbide end milling cutter [metric] with internal coolant supply

– Variant:
  With neck (DIN 6527 L)

MC320 Advance: Solid carbide end milling cutter [inch & metric]

– Variants:
  Without neck (DIN 6527 K)
  With neck (DIN 6527 L)

MC320 ConeFit: Replaceable head system [metric]

THE APPLICATION

– Roughing operation
– Can be used universally

Primary application:

– Steel (ISO P)

Secondary application:

– Stainless steels (ISO M)
– Cast iron (ISO K)
– Materials with difficult cutting properties (ISO S)

THE GRADES

– WK40TF (MC319 Advance; MC320 Advance)
– WJ30TF (MC320 ConeFit)

Walter Prototyp solid carbide milling cutters **Fig.:** MC319 / MC320 Advance; MC320 ConeFit

BENEFITS FOR YOU

– Requires 30% less power in the milling process thanks to the new roughing profile
– Robust tool
– Can be used universally, especially for roughing
– Short chips
– Extremely quiet milling process
– Ideal for unstable conditions of use

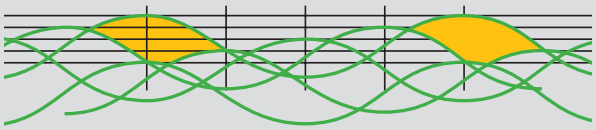
THE GEOMETRIES

- Knurled profile specially developed for roughing operations
- With centre cutting edge: MC320 Advance; MC320 ConeFit
- Without centre cutting edge: MC319 Advance
- DIN 6535 HB shank variant
- 40° helix
- Pre-treatment adapted to tool diameter

CHIP FORMATION ON THE KNURLED PROFILE

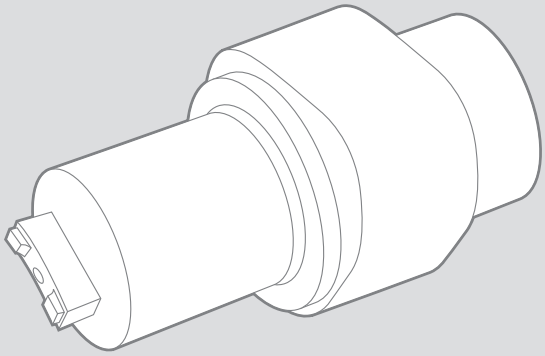
Smooth cutting edge:

Profiled cutting edge:



APPLICATION EXAMPLE

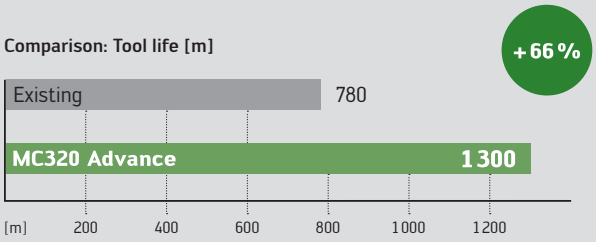
Roughing – Camshaft



Material: 100Cr6

	Existing	Walter MC320-16.0W4BC-WK40TF
a_e	14 mm	14 mm
a_p	8.0 mm	8.0 mm
v_c	80 m/min	80 m/min
n	1600 rpm	1600 rpm
f_z	0.30 mm	0,30 mm
v_f	1920 mm/min	1920 mm/min
Cooling	Emulsion	Emulsion
Q	215 cm³/min	215 cm³/min
Tool life	780 m	1300 m

Comparison: Tool life [m]



Watch the product video:
www.youtube.com/waltertools

Dynamic milling – now an entire range.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

– Length of cutting edge $L_c = 4 \times D_c$

THE APPLICATION

– Specially designed for dynamic milling (low a_e, high a_p)
– Suitable for various materials
– Cutting width a_e depends on the material

THE GRADE

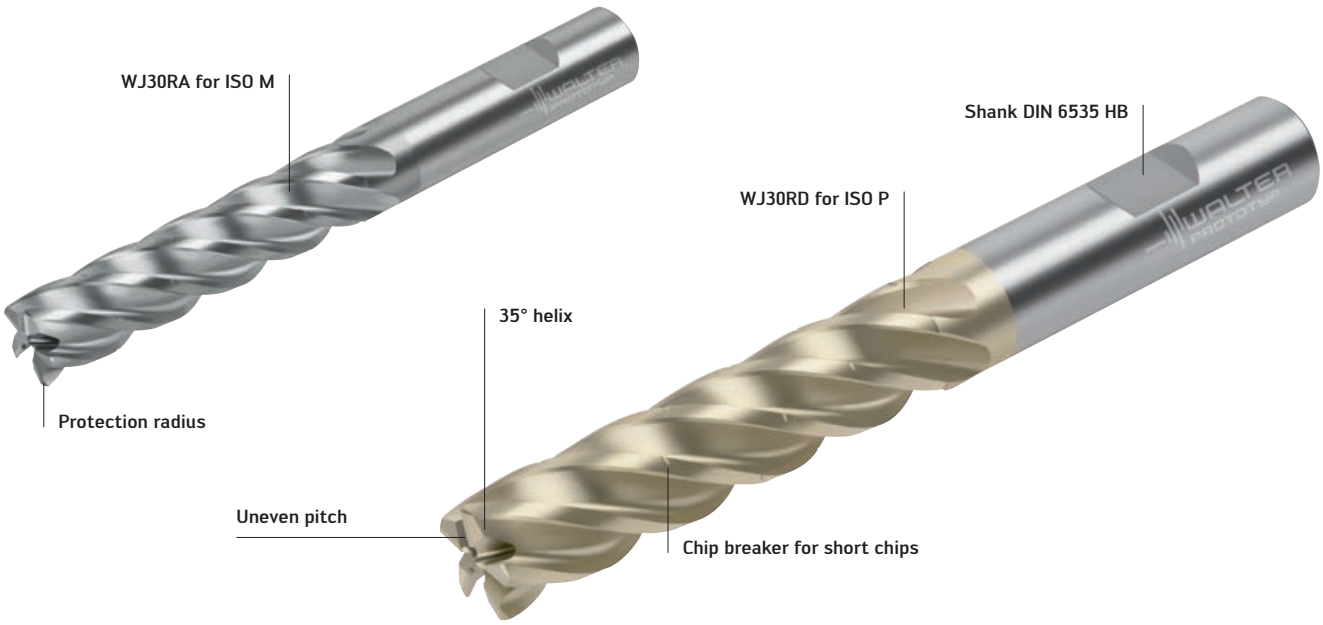
– WJ30RD for steel (ISO P)
  Secondary application: Cast iron (ISO K), NF metals (ISO N)
– WJ30RA for stainless steels (ISO M)
  Secondary application: Materials with difficult cutting properties (ISO S)

THE TOOL

– Solid carbide milling cutter with Weldon shank
– Version with chip separator
– Dia. 6–12 mm / z = 5
– Dia. 1/4–1/2" / z = 5
– Dia. 16–20 mm / z = 6
– Dia. 5/8–3/4" / z = 6

THE GEOMETRY

– No centre cutting edge
– Defined protection radius
– Cutting length L_c:
  $3 \times D_c$ / $3 \times D_c$ (with neck) / $4 \times D_c$ / $5 \times D_c$



MD133 Supreme solid carbide milling cutter **Fig.:** WJ30RD and WJ30RA

BENEFITS FOR YOU

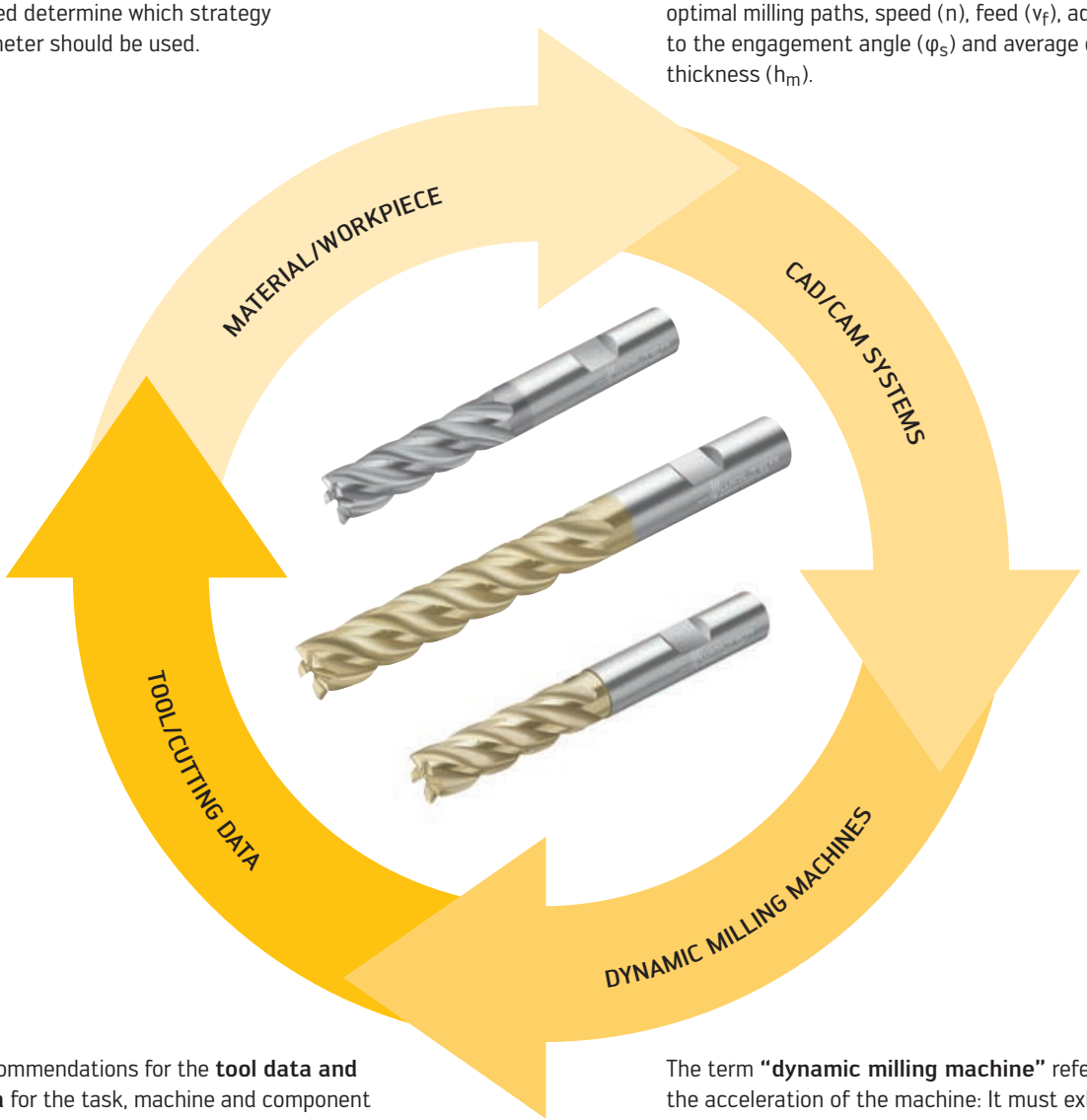
– High process reliability in unmanned machining
– Maximum productivity due to optimal metal removal rate with reduced machining times
– Max. tool life: Use of the entire length of the cutting edge and uniform wear
– High level of flexibility for a variety of different cavities on the component (machining with a tool diameter)
– No problems working with materials that have difficult cutting properties or under unstable conditions

Watch the product video:
www.youtube.com/waltertools

What are the requirements for dynamic milling?

The **material** dictates the cutting values for the milling tools, i.e. the radial cutting width (a_e) and the engagement angle (φ_s). The dimensions of the pockets and cavities to be produced determine which strategy and tool diameter should be used.

Most **CAD/CAM systems** provide the elements necessary for dynamic milling. The software avoids full-depth cuts and collisions, calculating all of the key parameters such as the milling direction, optimal milling paths, speed (n), feed (v_f), adherence to the engagement angle (φ_s) and average chip thickness (h_m).



Optimum recommendations for the **tool data and cutting data** for the task, machine and component in question can be determined using Walter GPS*. Most chucks can be used for dynamic milling. However, Walter recommends the MD133 Supreme solid carbide milling cutter with Weldon shank. The milling cutter's cutting length (L_c) and diameter (D_c) are defined by the geometry of the workpiece.

The term **"dynamic milling machine"** refers to the acceleration of the machine: It must exhibit sufficiently high acceleration behaviour and high rapid traverse rates and feeds, as well as a wide speed range and short calculating and switching times.

* Walter GPS – the machining navigation system at: walter-tools.com

The full range for solid carbide machining.

NEW

THE TOOLS

Seven tool families for ISO H machining up to 63 HRC

- New, performance-improving geometry and WB10TG grade
- Optimised for maximum surface quality and tool life

THE APPLICATION

- Specially designed for ISO H materials up to 63 HRC
- For machining of 3D contours
- For a range of milling strategies: HPC roughing, high-feed milling, finishing with ball-nose end mills
- Areas of use: Mould and die making, general mechanical engineering

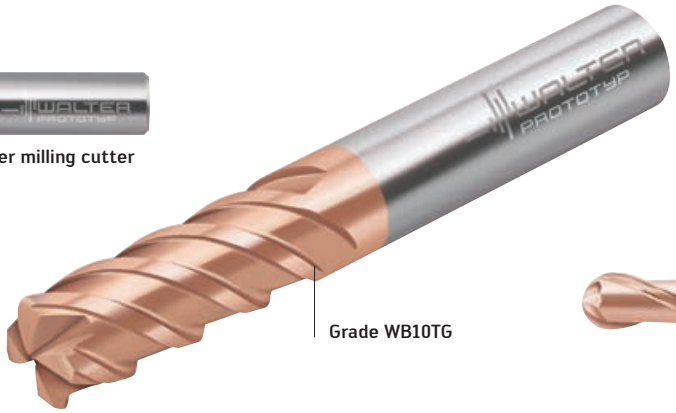
THE GEOMETRIES

- Specially developed for solid carbide machining
- Large selection of neck and shank variants for universal use in ISO H materials

MC183 Advance multi-flute shoulder milling cutter with up to 16 teeth

MC480 Advance mini ball-nose end mill Dia. 0.4–5 mm

MC187 Advance multi-flute shoulder milling cutter with/without radius



Grade WB10TG

MC089 Advance high-feed milling cutter

MC482 Advance ball-nose end mill

Toric MC281 Advance mini tools Dia. 1–4 mm

MC388 Advance shoulder/slot milling cutter with/without radius

ISO H Advance solid carbide milling cutters

Fig.: MC089 Advance, MC183 Advance, MC187 Advance, MC281 Advance, MC388 Advance, MC480 Advance, MC482 Advance

BENEFITS FOR YOU

- Cost-effective and technically optimised for hardened materials up to 63 HRC (ISO H)
- Large selection from wide range of seven tool families
- High metal removal rates thanks to special geometries for solid carbide machining
- Long tool life due to Walter's new WB10TG grade
- Time and cost-savings for high-speed or high-performance milling

_MC232 PERFORM SOLID CARBIDE MILLING CUTTER

Can be used universally for small and medium batch sizes.

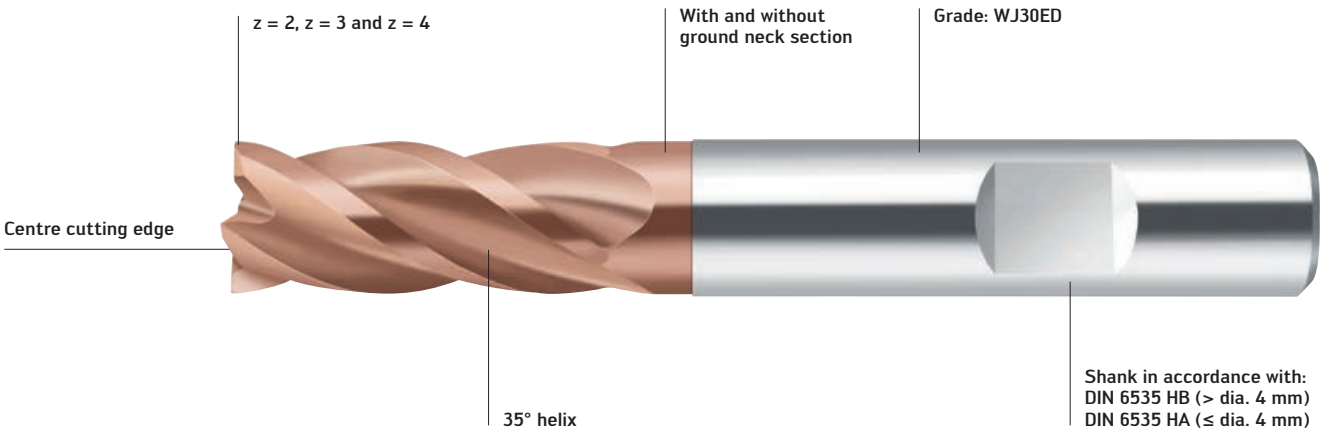
NEW

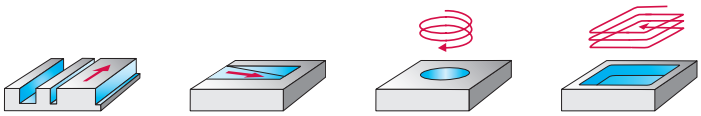
NEW ADDITION TO THE PRODUCT RANGE

- With ground neck section
- Solid carbide milling cutters from the Perform line
- 1 family – 78 dimensions
- Milling cutters with two, three or four cutting edges
- Dia. 2–20 mm
- Dia. 1/8–3/4"
- Design according to DIN 6527 L

THE APPLICATION

- ISO material groups P, M and K
- Lateral milling, full slotting, pocket milling, helical plunging, ramping
- Areas of use: General mechanical engineering, mould and die making, automotive and energy industries





Solid carbide milling cutter **Fig.:** MC232 Perform

BENEFITS FOR YOU

- Universal applicability
- Wide range of applications
- High level of cost efficiency for small and medium batch sizes

Cost-efficient machining of nickel-based alloys.

NEW

THE TOOL

Walter Prototyp brazed ceramic milling cutters MC275/MC075

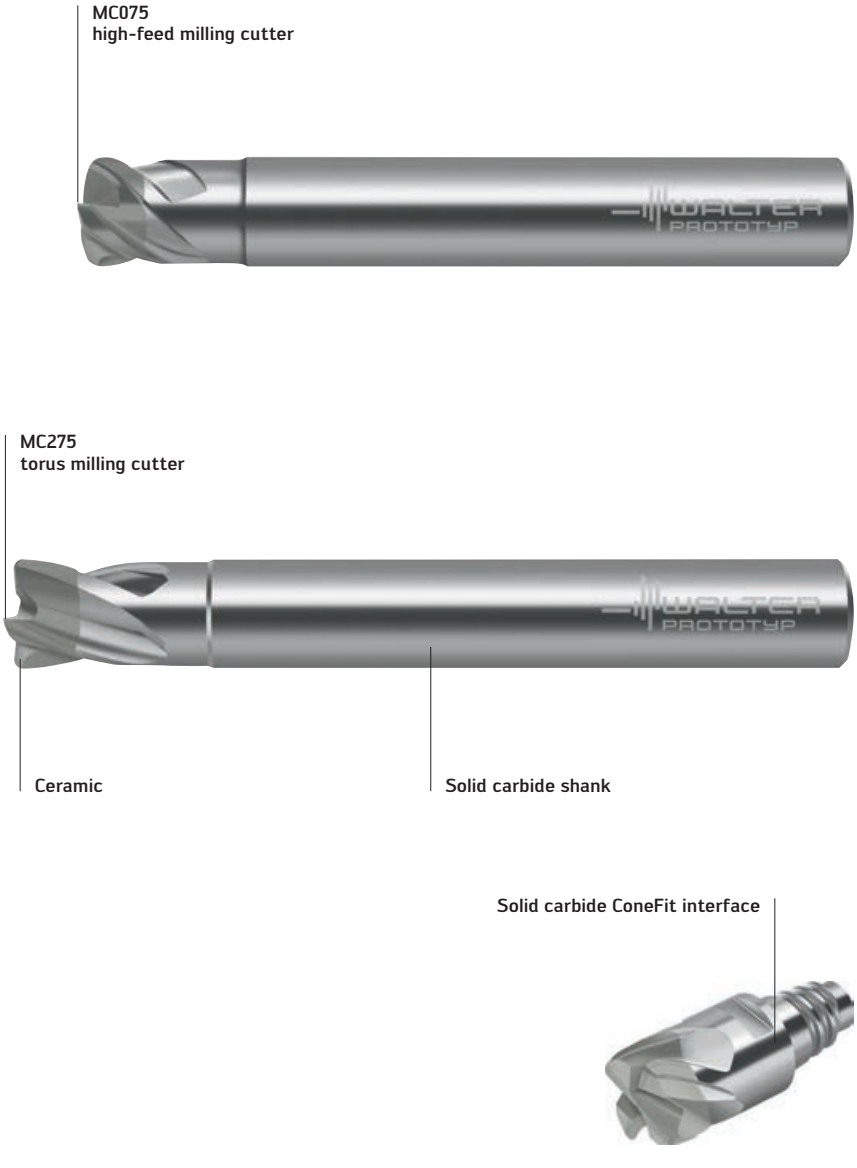
Toric milling cutters:
- Dia. 8–25 mm
- Corner radius 1–1.5 mm
- Number of teeth 4–8
- Cutting length 7–9 mm

High-feed milling cutters:
- Dia. 8–25 mm
- Number of teeth 4

Properties:
- Tough tool thanks to combination of carbide and ceramic
- Good vibration damping

THE INTERFACE

- Parallel shank
- ConeFit



Walter Prototyp ceramic milling cutters

Fig.: MC275 and MC075

BENEFITS FOR YOU

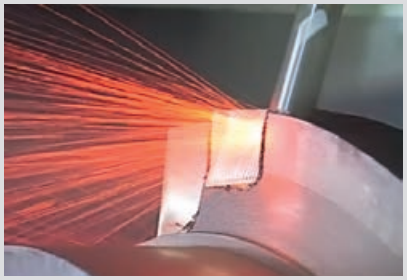
- Significantly increased cutting speeds (in comparison to solid carbide tools)
- High metal removal rate
- Short machining times
- High productivity with nickel-based alloys with difficult cutting properties, in particular, Inconels

THE APPLICATION

- Roughing operations on nickel-based alloys (e.g. Inconel 718)
- Synchronous milling
- Dry machining
- Milling strategies: Full slotting, lateral milling, ramping, helical milling, plunging
- Recommended machining allowance for subsequent finishing operation (milling, grinding): Min. 0.5 mm
- Recommended chucks: Power chuck, hydro-expansion chuck

APPLICATION EXAMPLE

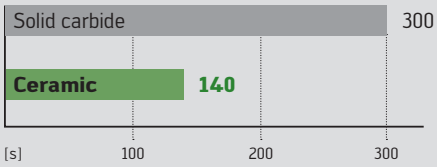
Inconel 718 / Strategy: Roughing



Ceramic milling cutters in use: Blisk machining (plunging), Inconel

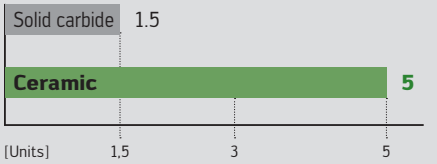
	Solid carbide Dia. 12	**Ceramic Dia. 12**
a_e	1.75 mm	1.1 mm
a_p	18 mm	18 mm
v_c	40 m/min	680 m/min
n	1060 rpm	18,000 rpm
f_z	0.1 mm	0.02 mm
v_f	424 mm/min	1440 mm/min
Cooling	Emulsion	Dry
Q	13.3 cm³/min	28.6 cm³/min

Comparison: Machining time [s]



-53 %

Comparison: Tool life [units]

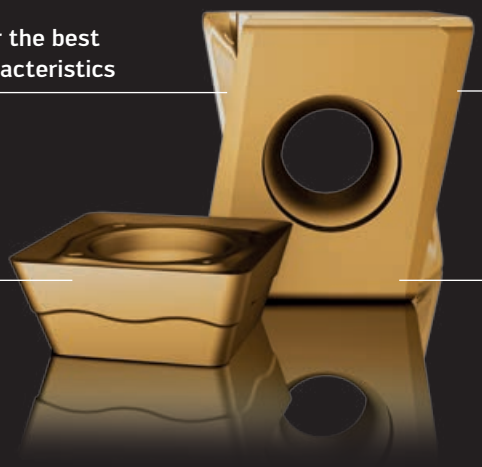


+333 %

YOU HAVE HIGH EXPECTATIONS – WE CAN OFFER LONG TOOL LIFE.

Smooth rake face for the best possible friction characteristics

Optimum wear detection on rake face and flank face



Tough cutting edge for maximum process reliability

Latest coating technology for long tool life and excellent cutting data

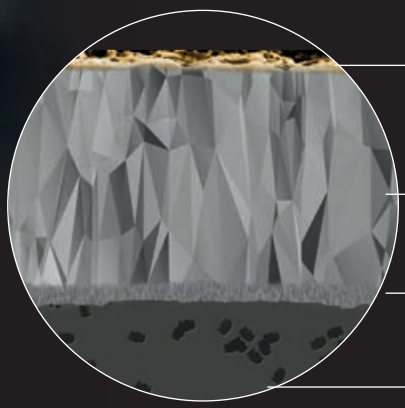
Tiger·tec® Gold

Your challenges spur us on to exceed our own expectations
As an innovative company, we are frequently asked how we manage to produce fascinating and often groundbreaking technological products time and time again. The answer begins with a question we put to ourselves: How can we at Walter help you design your machining process to make it even more efficient?

Our answer is: By making your objectives our own, as your product is the best starting point for our development work.

And the result of this development strategy is remarkable: With Tiger·tec® Gold, we are providing you with a new technology that meets the most exacting requirements placed on machining.

HOW CAN YOU TURN AN OUTSTANDING LAYER INTO A PERFECT COATING? WITH SUPERIOR PROPERTIES.



TiN
Best friction characteristics and wear detection

TiAlN
Resistant to abrasion, hairline cracks, plastic deformation, oxidation

TiN
Good layer bonding

Carbide substrate
High level of toughness

Schematic diagram

Tiger·tec® Gold was developed to make your production process even more reliable and efficient

At the core of Walter's new indexable insert grade lies a particularly tough carbide substrate. Although much less material is used on the outer area, this makes it all the more advantageous: In addition to the geometry of the indexable insert, it is the coating that really makes the crucial difference.

With the new WKP35G milling grade, manufactured using the innovative ultra low pressure method (ULP-CVD), you can benefit from tomorrow's technology right now.

The superior properties of Tiger·tec® Gold are based on several related factors

The standout feature is the extremely tough and resistant TiAlN layer, with an extremely high aluminium content. This is located directly underneath the TiN top layer and protects the substrate against abrasion, hairline cracks, plastic deformation and oxidation. The eye-catching, gold-coloured top layer enables outstanding wear detection and boasts impressive friction characteristics. Another, delicate TiN layer is located between the carbide substrate and the TiAlN layer, ensuring excellent binding of the layers.

Tiger·tec® Gold – the new technology platform from Walter.

NEW

THE GRADE

- New WKP35G Tiger·tec® Gold milling grade: CVD-coated all-round grade
- TiAlN as the main component: High aluminium content for outstanding wear characteristics
- Produced using the innovative ultra low pressure method (ULP-CVD)
- Gold-coloured textured top layer made of TiN
- Excellent combination of wear resistance and toughness for milling

THE APPLICATION

- For roughing steel and cast iron materials
- For moderate to high cutting speeds
- For dry milling or use with coolant

THE INDEXABLE INSERT

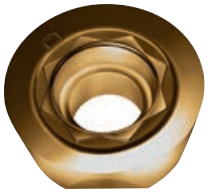
WKP35G – available for almost the entire Walter milling range, such as:

- All tools in the M4000 family
- Walter BLAXX milling cutters
- Xtra·tec®

Indexable inserts – selected examples from the range:

LNMU..L55T

SDGT...-D57



ROHX...-F67

XNMU...-F27

SNMX...-F57

ADMT...-G56

Tiger·tec® Gold

Fig.: Indexable inserts

BENEFITS FOR YOU

- Up to 200% longer tool life due to the optimised wear behaviour
- Maximum process reliability due to the tough cutting edge
- Optimum wear detection due to the gold-coloured top layer

Watch the product trailer: www.youtube.com/waltertools

Tiger·tec® Gold – Top performance when roughing turbine blades.

NEW

THE GRADE

- New WMP45G Tiger·tec® Gold milling grade
- Produced using the ultra low pressure method (ULP-CVD)
- As the main constituent of the coating, TiAlN ensures outstanding wear properties
- Gold-coloured top layer made of TiN
- Special high-performance substrate with a balanced ratio between temperature resistance and toughness enables extra performance during milling

THE APPLICATION

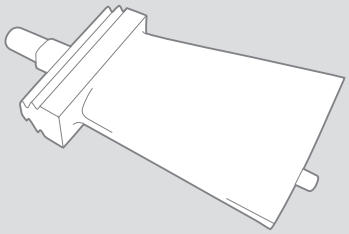
- Helirough and z-level machining of turbine blades
- Face milling under difficult conditions
- For martensitic and austenitic stainless steels

THE INDEXABLE INSERTS

- Round indexable inserts, specially for face and copy milling of turbine blades
- Positive ROHX10T3M0.. and ROHX1204M0.. round indexable inserts in the D57, D67 and F67 geometries
- Four cutting edges per indexable insert
- Suitable for the F2334R copy milling cutter

APPLICATION EXAMPLE

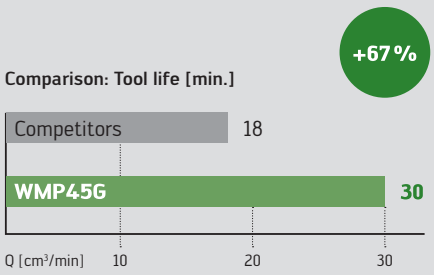
Turbine blade roughing



Material: X11CrNiMo12, ISO P

	Competitors	ROHX1204M0-F67 WMP45G
Ø / z	40 / Z4	40 / Z4
v_c	200 m/min	200 m/min
f_z	0.30 mm	0.30 mm
v_f	1900 mm/min	1900 mm/min
a_p	2.0 mm	2.0 mm
a_e	25 mm	25 mm

Comparison: Tool life [min.]



Tiger·tec® Gold **Fig.:** F2334R

BENEFITS FOR YOU

- Maximum productivity due to the wear-resistant Tiger·tec® Gold grade
- Easy wear detection thanks to the gold-coloured top layer
- High level of process reliability thanks to heat-resistant and tough substrate

Walter M4000 – high performance made universal.

SYSTEM EXPANSION

System insert SD ...
- Square, positive basic shape
- Different grades and geometries

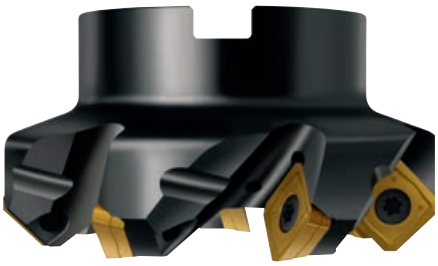
Powered by Tiger·tec® Silver

Now also in: Tiger·tec® Gold

Can now also be equipped with the new WKP35G Tiger·tec® Gold grade for even longer tool life on steel and cast iron.

Shoulder milling cutters
M4132

High-feed milling cutter
M4002



Face milling cutter
M4003

THE SYSTEM INSERTS

- 15° clearance angle
- Ground support face: Improves the seating of the indexable inserts in the insert seat and reduces vibration

Square indexable inserts:
- Can be used in face milling cutters, shoulder milling cutters, high-feed milling cutters, routing cutters, porcupine milling cutters, chamfer milling cutters and T-slot milling cutters
- Four cutting edges
- Circumference-sintered design for maximum cost efficiency
- Circumference fully ground with secondary cutting edges (45° + 90°) for best component surfaces

Rhombic indexable inserts:
- Can be used in shoulder milling cutters, routing cutters and porcupine milling cutters
- Two cutting edges
- Circumference-sintered design for maximum cost efficiency

BENEFITS FOR YOU

- High degree of cost efficiency and reduced procurement and inventory costs thanks to system insert which can be used universally
- Resource-saving thanks to CO_2-compensated production through climate protection projects
- Low power requirement thanks to highly positive geometries
- CVD-coated grades (WKP25S, WKP35S and WKP35G) for steel and cast iron machining as well as for machining stainless steels and difficult-to-cut materials (WSM45X)
- PVD-coated grades (WKK25S, WSM35S and WSP45S) for machining steel and cast iron, stainless steels and difficult-to-cut materials

NEW FLANK FACE DESIGN FOR FASTER IDENTIFICATION

The number of waves on the flank face indicates the geometry: The more waves there are, the more positive the geometry of the indexable insert. This means that the geometry can be identified at a glance.

Leading insert LD...

- Rhombic, positive basic shape
- Different grades and geometries

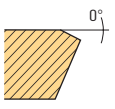
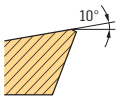
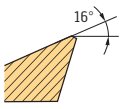
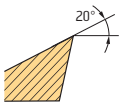
Chamfer milling cutter M4574

T-slot milling cutter M4575

Routing cutter M4792

Porcupine milling cutters M4256/M4257/M4258

Shoulder milling cutters M4130

Geometry example	Areas of application	Main cutting edge section	Material groups P	M	K	N	S	H	O
	**A57 – The special one** – For unfavourable machining conditions – Maximum cutting edge stability – High feeds – No wave on the flank face		●●		●●				
	**D57 – The stable one** – For medium machining conditions – Can be used universally – One wave on the flank face		●●	●●	●●		●●		
	**F57 – The universal one** – For good machining conditions – Low cutting forces – Medium feeds – Two waves on the flank face		●●	●●	●●		●●		
	**G88 – The sharp one** – For machining aluminium – Low cutting forces – Sharp cutting edges – Three waves on the flank face					●●			●

Four cutting edges for one-of-a-kind surfaces.

NEW

THE TOOL

- Face milling cutter with 45° approach angle and four-edged system insert
- Diameter range 20–160 mm (or 1–6")
- Available with parallel shank and bore adaptor
- Two insert sizes: SD..09T3.. and SD..1204..
- Depth of cut 4.5/6.5 mm

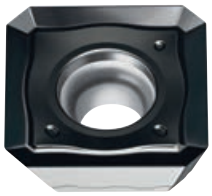
THE APPLICATION

- Face milling of steel, cast iron, stainless steels, non-ferrous metals and materials with difficult cutting properties
- Roughing, semi-finishing and finishing

THE INDEXABLE INSERTS

- Square system inserts with secondary cutting edges
- 15° clearance angle
- Circumference-sintered design for maximum cost efficiency
- Design with circumference fully ground for maximum precision
- Different geometries available
- Three CVD-coated grades: WKP25S, WKP35G and WSM45X
- Three PVD-coated grades: WKK25S, WSM35S and WSP45S

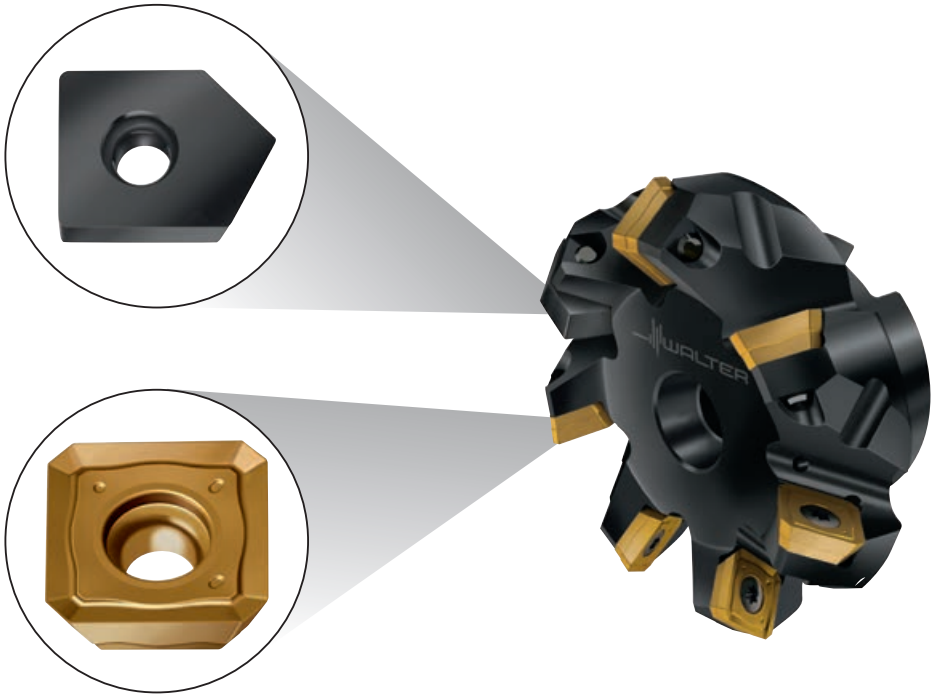
Powered by
Tiger·tec® Silver



SDGT...-F57
WKP25S

Now also in:
Tiger·tec® Gold

SDGT...-F57
WKP35G



Walter M4000 face milling cutter

Fig.: M4003

BENEFITS FOR YOU

- High degree of cost efficiency thanks to system insert which can be used universally
- Reduced procurement and inventory costs
- Four cutting edges per indexable insert
- Reduction of machining steps by combining roughing and finishing
- Resource-saving thanks to CO_2-compensated production
- Low power requirement thanks to highly positive geometries

Walter Green

Watch the product animation:
www.youtube.com/waltertools

Cost-efficient shoulder milling with M4000 system.

NEW

THE TOOL

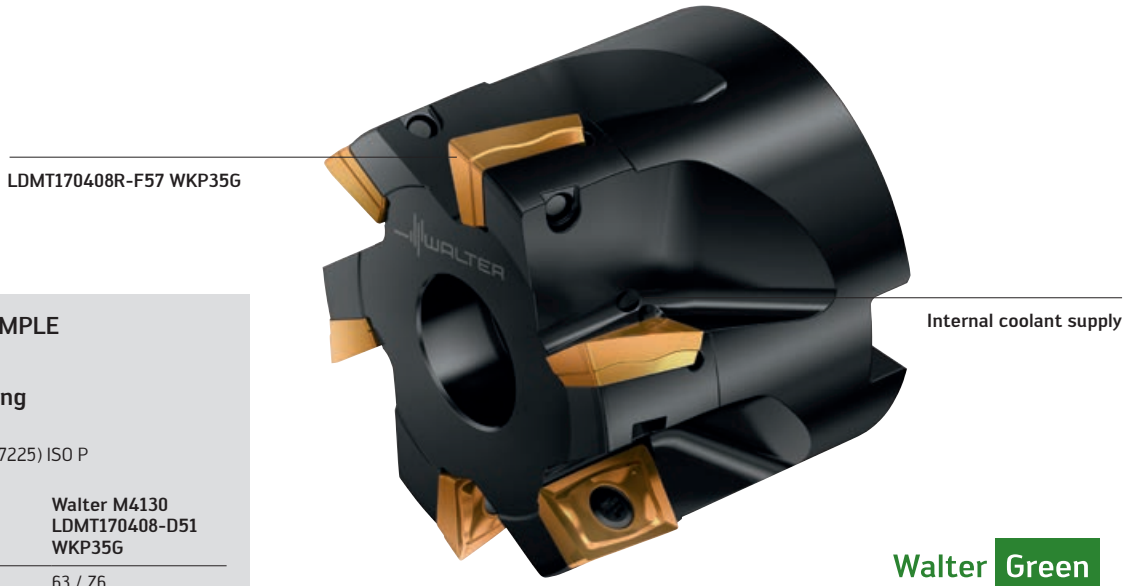
- M4130 shoulder milling cutter with 90° approach angle
- Double-edged indexable insert
- Dia. 16–100 mm
- Depth of cut: 8/13/16 mm
- Available with Weldon shank and bore adaption

THE APPLICATION

- Roughing operation
- Shoulder milling, ramping, pocket milling and circular interpolation milling
- For steel, cast iron, stainless steel and materials with difficult cutting properties

THE INDEXABLE INSERTS

- Three indexable insert sizes with two cutting edges each (LDM.08T2.., LDM.14T3.., LDM.1704..)
- Rhombic basic shape with 15° clearance angle
- Circumference-sintered – for maximum cost efficiency
- Three CVD-coated grades (WKP25S, WKP35G and WAK15)
- Three PVD-coated grades (WKK25S, WSM35S and WSP45S)
- Can also be used in routing cutters and porcupine milling cutters from the M4000 family



Walter M4000 shoulder milling cutter

Fig.: M4130, diameter 63

APPLICATION EXAMPLE

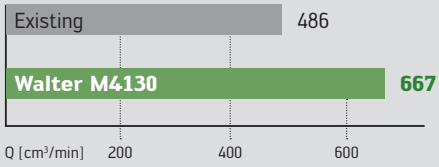
Gripper clamp
Operation: Trimming

Material: 42CrMo4 (1.7225) ISO P

	Existing	**Walter M4130 LDMT170408-D51 WKP35G**
Dia. / z	63 / Z5	63 / Z6
v_c	182 m/min	250 m/min
f_z	0.24 mm	0.2 mm
v_f	1104 mm/min	1516 mm/min
a_p	8 mm	8 mm
a_e	55 mm	55 mm

Comparison:
Metal removal rate [cm³/min]

+37 %



BENEFITS FOR YOU

- High level of cost efficiency
- Reduced procurement and inventory costs
- Concept requiring minimum resources
- Low power requirement thanks to positive geometries
- CO_2-compensated production

Modular slot milling with maximum cost efficiency.

NEW

THE INDEXABLE INSERTS

- Circumference-sintered design for maximum cost efficiency
- 15° clearance angle

Square system inserts from the M4000 milling system:

- Four cutting edges
- For universal use in face, shoulder, chamfer and T-slot milling cutters and also as the leading insert in slot drill and porcupine milling cutters

Rhombic indexable inserts:

- Two cutting edges
- Can be used as a face insert in shoulder milling cutters, routing cutters and porcupine milling cutters

THE GRADES

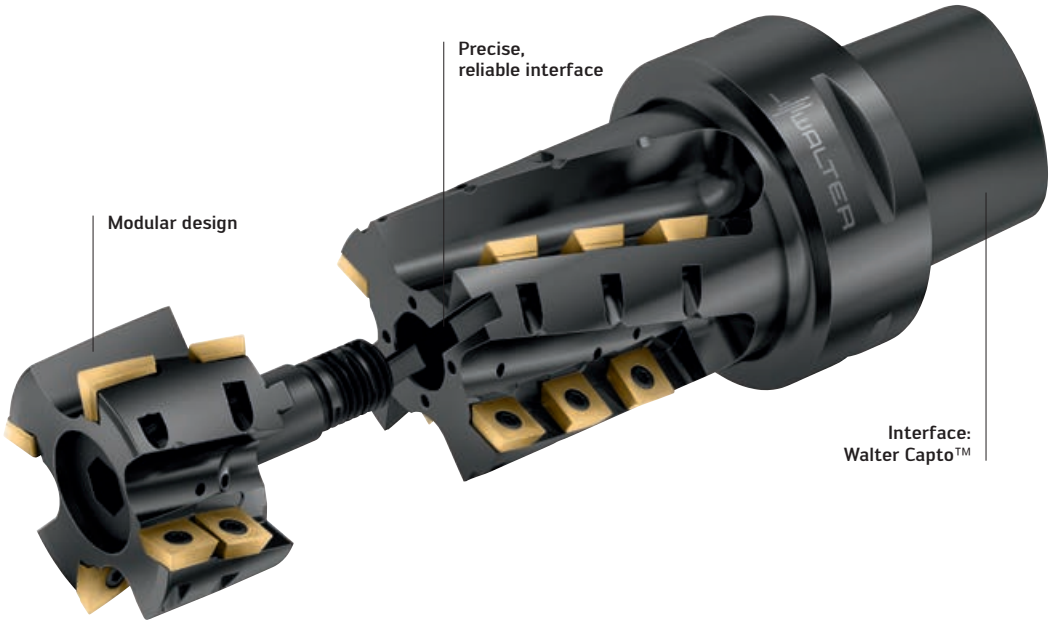
- Three CVD-coated grades (WKP25S, WKP35G, WKP35S) for machining steel and cast iron
- Three PVD-coated grades (WKK25S, WSM35S and WSP45S)

THE TOOL

- M4258 half effective porcupine milling cutter
- Modular design: Replaceable front piece
- Dia. 50–80 mm
- Interface: Walter Capto™ C6 and C8

THE APPLICATION

- For shoulder and slot milling
- For steel, cast iron, stainless steels and materials with difficult cutting properties



Porcupine milling cutter **Fig.:** M4258

BENEFITS FOR YOU

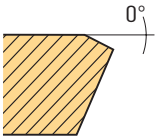
- Modular design: The front piece can be replaced when the face of the cutter body is worn
- High level of process reliability thanks to an internal coolant supply – even in the front piece
- Reduced procurement and inventory costs
- High cost efficiency thanks to four or two cutting edges per indexable insert
- Low power requirement thanks to positive geometries
- Concept requiring minimum resources
- Walter Green: CO_2-compensated production

Walter Green

THE GEOMETRIES

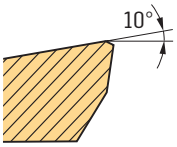
A57 – the special one:
- Unfavourable machining conditions
- Maximum cutting edge stability
- High feeds
- Straight border (no wave on the flank face)

A57



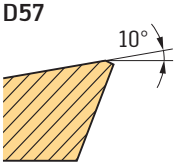
D51 – the quiet one:
- Anti-vibration geometry
- For tools with long overhang
- One wave on the flank face

D51



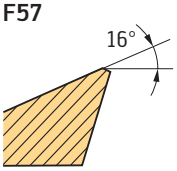
D57 – the stable one:
- Average machining conditions
- Can be used universally
- One wave on the flank face

D57



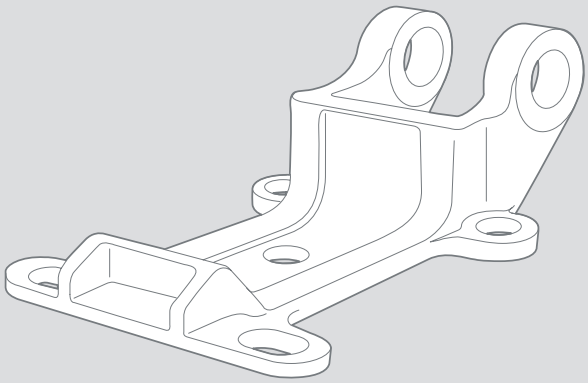
F57 – the universal one:
- Good machining conditions
- Low cutting forces
- Medium feeds
- Two waves on the flank face

F57



APPLICATION EXAMPLE

Hinge – Slotting

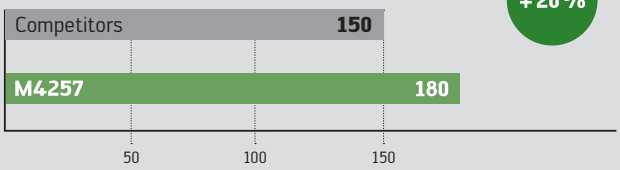


Material:	ST-52, ISO P (1.0570)
Tool:	M4258 / Ø 50 mm / Z2
Indexable inserts:	LDMT1170408-D57 / SDMT120408R-D57
Cutting tool material:	WKP35G

Cutting data:

	Competitors	**Walter**
v_c	250 m/min	250 m/min
n	1590 rpm	1590 rpm
f_z	0.11 mm	0.225 mm
v_f	835 mm/min	715 mm/min
a_e	1.5 mm	3 mm
a_p	37.5 mm	37.5 mm
Power requirement	3.0–4.5 kW	2.0–3.5 kW
Q	47 cm³/min	81 cm³/min

Tool life quantity comparison [pcs]



+20 %

Watch the product video:
www.youtube.com/waltertools

Machine large components efficiently.

NEW

THE CARTRIDGES

Cartridges for the F2010 face and shoulder milling cutter and indexable inserts from the M4000 system:

- F2010...R756M for SD..09; Approach angle [κ] 89.5°
- F2010...R757M for SD..12; Approach angle [κ] 89.5°
- F2010...R755M for SD..12; Approach angle [κ] 15°
- F2010...R758M for SD..1204AZN..; Approach angle [κ] 45°

THE TOOL

- Dia. 80–315 mm
- Replaceable cartridges
- Bore adaption
- Runout adjustable

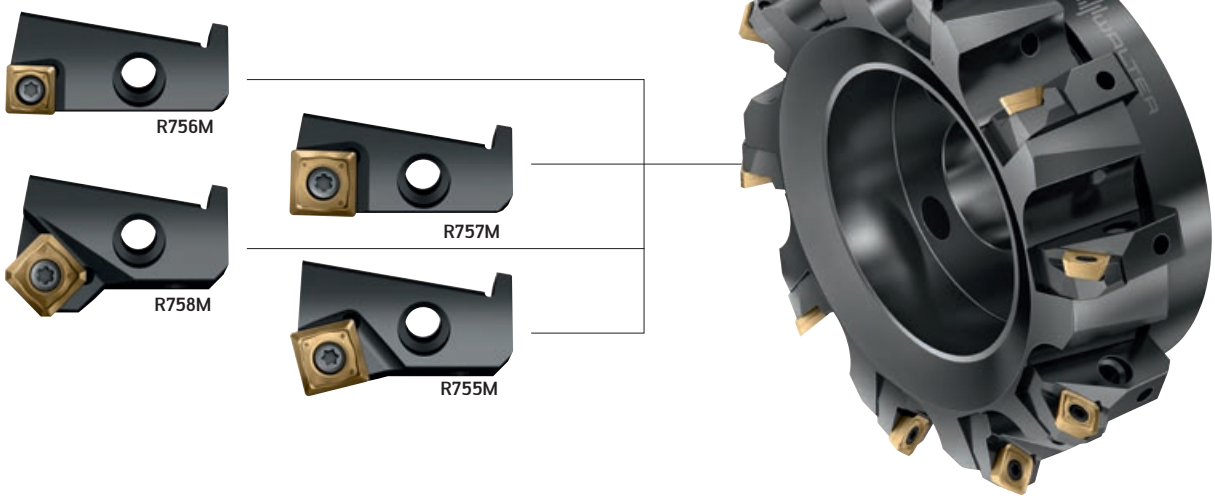
THE APPLICATION

- Shoulder, face or high-feed milling
- Steel and cast iron workpieces, stainless steels, materials with difficult cutting properties, aluminium and non-ferrous metals
- Areas of use: Automotive and aerospace industries, general mechanical engineering, etc.

THE INDEXABLE INSERTS

- Square system inserts
- Can be used in face, shoulder, chamfer, porcupine and T-slot milling cutters and routing cutters
- Circumference-sintered design for maximum cost efficiency
- Design with circumference fully ground for maximum precision
- Four cutting edges
- 15° clearance angle

Cartridges for the F2010 face and shoulder milling cutter:



Face milling cutter **Fig.:** F2010

BENEFITS FOR YOU

- High metal removal rate, even on low-performance machines, due to soft cutting action thanks to positive geometry
- Excellent surface quality when finishing thanks to adjustable runout
- High level of flexibility thanks to replaceable cartridges and large diameter range

Face milling with high process reliability.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

Cartridges for the F2010 face milling cutter and indexable inserts from the M3024 family:

- F2010...R759M for XN.U0705
- Dia. 80–315 mm
- Replaceable cartridges
- Bore adaption
- Runout adjustable

THE INDEXABLE INSERTS

For roughing:
XN.U0705.. and XNMU0906..

- Double-sided indexable insert with 14 cutting edges
- Positive cutting edge geometry
- Version with secondary cutting edge: XN.U0705ANN... and XNMU0906ANN...
- Version with corner radius: XNMU070508... and XNMU090612...

THE TOOL

- M3024 Walter BLAXX 45° face milling cutter
- Maximum depth of cut 4 or 6 mm
- Dia. 40–160 mm (or 3/4–12")
- Protected against corrosion and wear by special Walter BLAXX surface treatment

THE APPLICATION

- Face milling in all steel and cast iron workpieces as well as in stainless steels
- Perfect for machining components in mass production, such as exhaust turbochargers
- Areas of use: General mechanical engineering and other sectors

Versions available with secondary cutting edge or corner radius

14 cutting edges

New: FR759M cartridge for the F2010 face milling cutter (and XN.U0705 indexable inserts)

Powered by Tiger·tec® Silver

Walter BLAXX

Now also in: Tiger·tec® Gold

Cartridge for F2010 and Walter BLAXX heptagon face milling cutter

Fig.: M3024

BENEFITS FOR YOU

- High level of efficiency, even on low-performance machines
- Soft cutting action and high metal removal rate thanks to positive cutting edge geometry
- High level of process reliability thanks to stable indexable inserts
- Carbide shim provides an optimum support face and a high feed per tooth
- High surface quality when finishing and high level of flexibility thanks to replaceable cartridges and large diameter range

Watch the product video:
www.youtube.com/waltertools

_M2029 OCTAGON FINISHING FACE MILLING CUTTER

Productive face milling with 16 cutting edges.

NEW

THE TOOL

- M2029 finishing face milling cutter with 45° lead angle
- Available as semi-standard
- Dia. 50–160 mm (or 2–6")
- Face cutting length 4 mm
- Double-sided, tough indexable insert

THE INDEXABLE INSERT

- Double-sided standard insert with 16 cutting edges
- 0.8 mm corner radius
- Circumference fully ground: ONHU050408-F57 and ONHU050408-F67
- Sintered: ONMU050408-D57 (also suitable for roughing)

THE APPLICATION

- Roughing and finishing (including unstable cast steel workpieces)
- Cast iron and steel materials, e.g. GG25, 42CrMo4, 1.4837
- Areas of use: Automotive industry, general mechanical engineering, etc.

Octagon finishing face milling cutter **Fig.:** M2029

BENEFITS FOR YOU

- High process reliability due to stable indexable insert
- Low cutting material costs due to 16 cutting edges
- Soft cutting action due to positive cutting edge geometry
- Can be used universally due to Tiger·tec® Gold and Tiger·tec® Silver cutting tool materials
- Maximum productivity and tool life

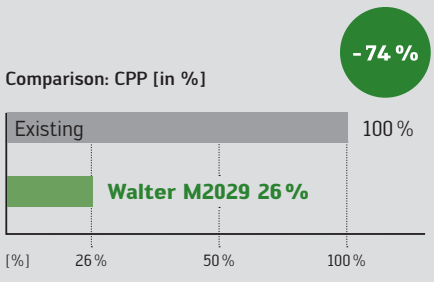
APPLICATION EXAMPLE

Finishing – Turbocharger flange surface

Material: GX40CrNiSi22-10 (1.4826+Nb) ISO M

	Existing	**Walter M2029 (octagon)**
Dia.	100	100
z	8 + 2	8
v_c	137 m/min	165 m/min
f_z	0.26 mm	0.31 mm
v_f	916 mm/min	1325 mm/min
a_p	0.35 mm	0.35 mm
a_e	90 mm	90 mm
Tool life	36 parts	80 parts

Comparison: CPP [in %]



Cost-effective roughing with soft cutting action.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

– Sintered indexable inserts for roughing LNMU090404R-L55T and LNMU130608R-L55T

THE INDEXABLE INSERTS

LNMU090404R-L55T

– Available in Tiger·tec® Gold grade WKP35G and Tiger·tec® Silver grades WKP25S, WSP45S and WKK25

LNMU130608R-L55T

– Available in Tiger·tec® Gold grade WKP35G and Tiger·tec® Silver grades WKP25S, WKP35S, WSP45S, WKK25

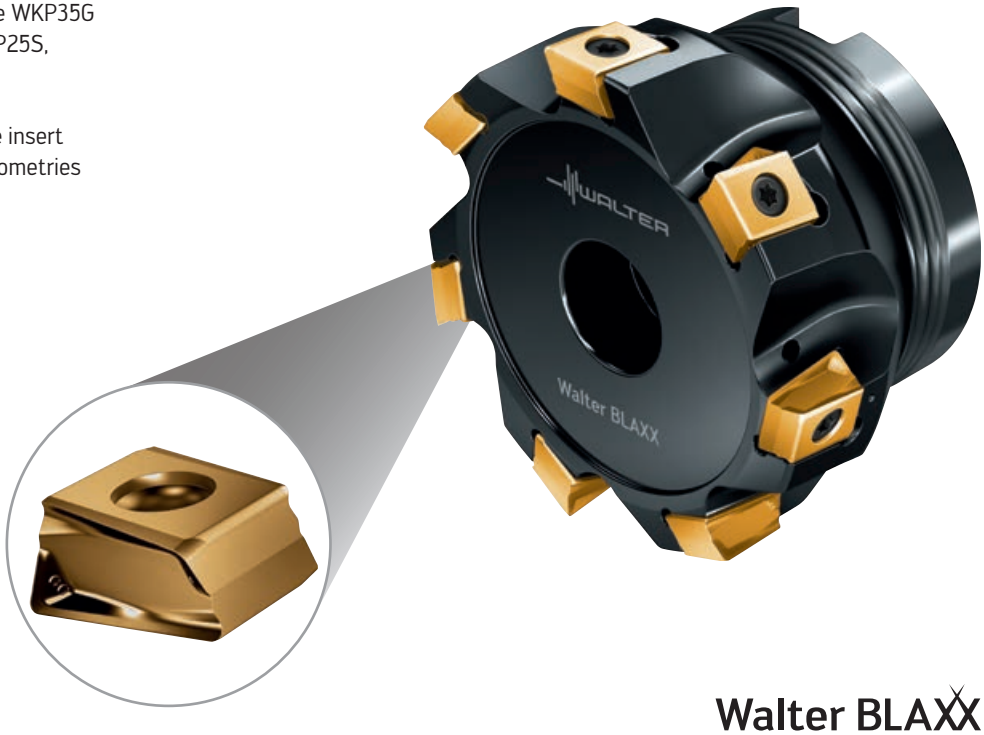
– Four cutting edges per indexable insert
– Soft-cutting indexable insert geometries thanks to helical cutting edges

THE TOOL

– Can be used in Walter BLAXX F5041 and F5141 shoulder milling cutters and in F2010 cartridge cutters
– Can be used in Walter BLAXX F5038 and F5138 porcupine milling cutters
– Dia. 25–315 mm

THE APPLICATION

– Roughing of shoulders and end faces
– Steel, cast iron, stainless steels and materials with difficult cutting properties
– Areas of use: Automotive industry, aerospace industry, general mechanical engineering



Powered by
Tiger·tec® Silver

Now also in:
Tiger·tec® Gold

Walter BLAXX

Walter BLAXX shoulder milling cutters **Fig.:** F5141

BENEFITS FOR YOU

– Extremely reliable due to stable tangential indexable insert
– High degree of cost efficiency thanks to more cutting edges per diameter
– Soft cutting action and up to 30% higher feed per tooth

Machine specialist for wrought aluminium alloys.

NEW

THE TOOL

- M2331 90° ramping milling cutter for HSC milling
- Maximum depth of cut 15 mm or 20 mm
- Dia. 32–50 mm or 1.5–2"
- High concentricity
- Finely balanced basic body
- With different interfaces such as HSK for Makino machines, ScrewFit or bore adaption
- Extremely high speeds are possible

THE APPLICATION

- Non-ferrous metals (ISO N) such as wrought aluminium alloys or aluminium-lithium alloys
- Machining of structural components in aircraft construction
- Rough milling and semi-finishing of pockets with high chip volume
- Can be used at extremely high speeds (e.g. for D_C = 50 mm; n = 33,000 rpm

THE INDEXABLE INSERTS

- Two indexable insert sizes with various corner radii
  ZDGT15A4…R-K85 (r = 0.4–4.0 mm)
  ZDGT20A5…R-K85 (r = 0.8–6.4 mm)
- Positive basic shape with special geometry for pocket milling
- Centrifugal force protection at the contact surface for HSC machining
- Indexable inserts in grade WMG40

Walter ramping milling cutter **Fig.:** M2331

BENEFITS FOR YOU

- High level of process reliability even at maximum speeds thanks to centrifugal force protection
- Short machining times thanks to maximum metal removal rate
- Long tool life due to minimised build-up on the cutting edge
- Machine-specific variants of milling cutters are available (Makino)

90° shoulders with eight-edged indexable insert.

NEW

THE TOOL

- Face/shoulder milling cutter with 90° lead angle
- Depth of cut 6.5 mm
- Dia. 50–160 mm (or 2–6")

THE APPLICATION

- For all cast iron workpieces (e.g. GG25, GG26Cr, CGI, etc.)
- For face and shoulder milling
- For roughing and finishing
- Areas of use: Automotive industry, general mechanical engineering, etc.

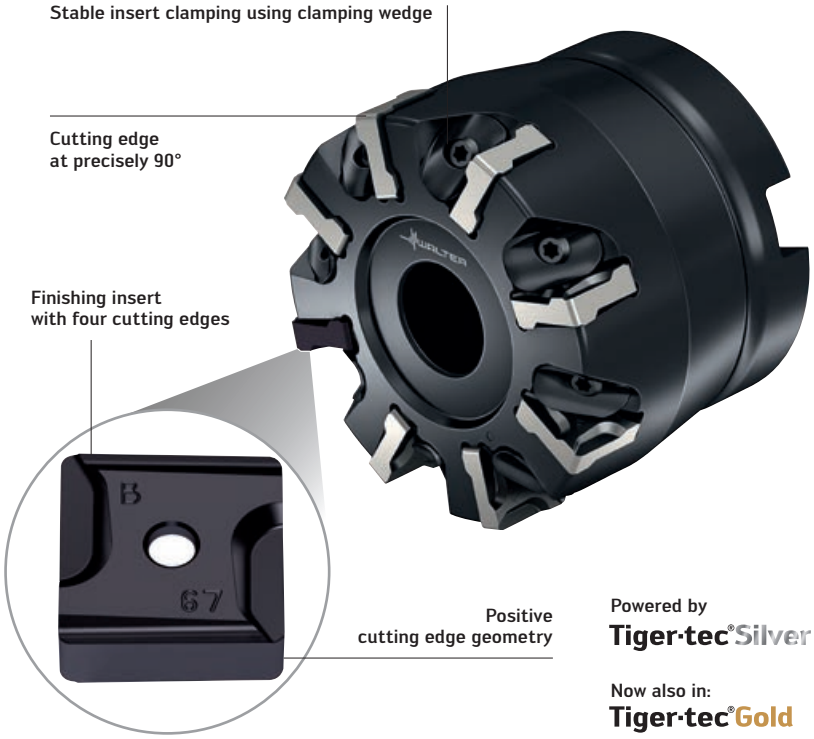
THE INDEXABLE INSERTS

Roughing inserts:

- Double-sided indexable insert with eight cutting edges
- With corner radius and secondary cutting edge
- Tiger·tec® Gold and Tiger·tec® Silver cutting tool materials for maximum tool life
- Insert type SNEF120408R...

Finishing inserts:

- SNEX1204PNR-B67 for surface structures with cross-section cut
- SNEX1204PNN-A27 for homogeneous surface structures



Close pitch cutter

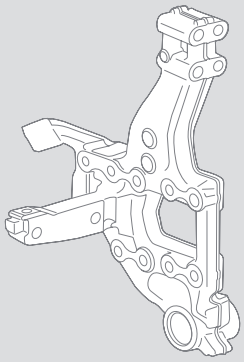
Fig.: M2136

BENEFITS FOR YOU

- High process reliability due to stable, wedge-clamped indexable inserts
- Low cutting material costs thanks to indexable inserts with eight cutting edges
- Soft cutting action due to positive cutting edge geometry
- Maximum productivity thanks to cutting tool materials that can be used universally

APPLICATION EXAMPLE

Toolholder, face milling top side

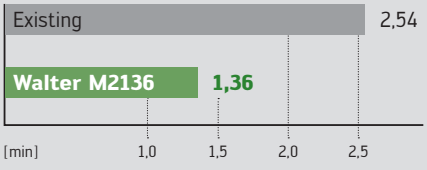


Material: EN-GJS-500-7 (GGG50 - 0.7050), ISO K

	Existing	Walter M2136
Number of teeth	7	12
v_c	226 m/min	226 m/min
f_z	0.286 mm	0.218 mm
v_f	1800 mm/min	2350 mm/min
a_p	3–5 mm	3–5 mm
a_e	75 mm	75 mm

Comparison: Machining time [min]

-47 %



Optimum cost efficiency thanks to maximum number of cutting edges.

NEW

THE TOOL

- Copy milling cutter with 12 mm round inserts
- Recommended depth of cut 4 mm
- Dia. 32–63 mm (or. 2–2.5")
- Available with modular ScrewFit interface or bore adaption

THE APPLICATION

- Perfect for helirough and Z-level machining on turbine blades
- For face milling
- For steel, stainless steels and materials with difficult cutting properties

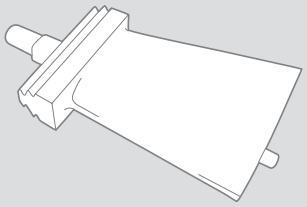
THE INDEXABLE INSERTS

- Eight cutting edges due to double-sided indexable insert
- Indexing using flank face
- Sintered design RNMX1206M0-..
- D57 and F67 geometries in the WSP45S grade

Watch the product animation:
www.youtube.com/waltertools

APPLICATION EXAMPLE

Helirough milling a turbine blade

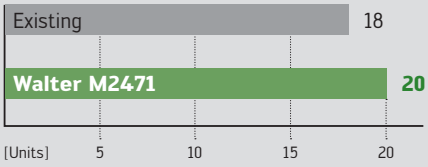


Material: X22CrMoV12-1 QT2 (1.4923), ISO P

	Existing	Walter
Dia. / z	50 / Z5	50 / Z5
v_c	280 m/min	280 m/min
n	1782 rpm	1782 rpm
f_z	0.4 mm	0.4 mm
v_f	3565 mm/min	3565 mm/min
a_p	3 mm	3 mm
a_e	32 mm	32 mm

Comparison:
Number of grooves [units]

+11 %



Walter copy milling cutter

Fig.: M2471 and RNMX1206M0-D57 indexable insert

BENEFITS FOR YOU

- Excellent cost efficiency thanks to high metal removal rate, even on low-performance machines
- Lower cutting material costs as there are eight cutting edges per insert
- High process reliability due to stable indexable inserts
- Soft cutting action thanks to positive cutting edge geometry
- PVD-coated WSP45S grade can be used without coolant, with MQL and for wet machining (emulsion)

Walter GPS

The latest generation of tool navigation.

The right tool at the click of a mouse
With just four clicks, Walter GPS takes you from the definition of your objective to the most cost-effective tool and machining solution. Walter GPS is surprisingly comprehensive.
Be it drilling, 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

Reliable parting and slitting.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- Attachment variant now also with one-inch locating bore
- F5055.UBN...

THE INDEXABLE INSERTS

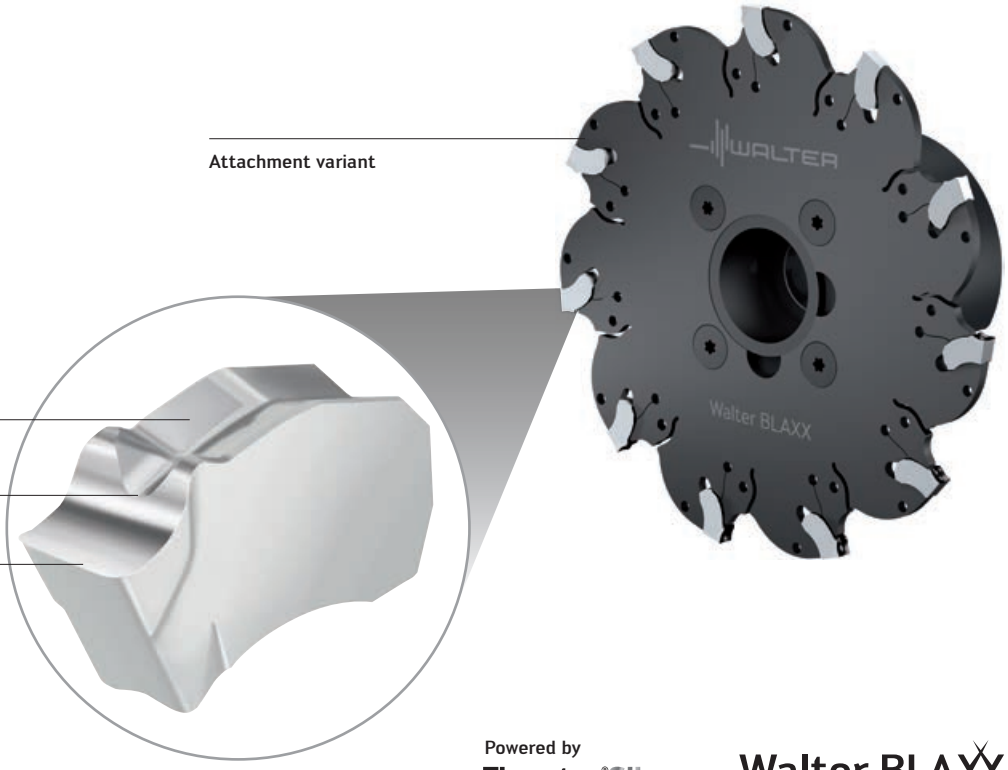
- Single-edged indexable insert
- Cutting widths: 1.5 / 2.0 / 3.0 / 4.0 / 5.0 mm
- Available with CE4, SF5, CE6 and SK8 geometries

THE APPLICATION

- Cutting off and slitting of: Steel and cast iron, stainless steels, non-ferrous metals and materials with difficult cutting properties
- Areas of use: General mechanical engineering, automotive industry, aerospace industry, etc.

THE TOOL

- Walter BLAXX F5055 slitting cutter
- Dia. 63–250 mm (2.48–6.3")
- Non-positive and positive-locking insert clamping
- Optimised top clamp with extremely high retaining forces



Powered by Tiger·tec®Silver

Walter BLAXX

Walter BLAXX slitting cutter **Fig.:** F5055.UBN..

BENEFITS FOR YOU

- Optimal process reliability as the machining force is introduced into the most rigid part of the insert seat
- High level of radial and axial runout accuracy
- User-friendly indexable insert self-clamping system
- Low inventory costs thanks to universal system inserts (can be used in slitting cutters and groove turning holders)

Controlled cutting – even with large dimensions.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- F5055 slitting cutter with single-edged insert
- Dia. 500 mm
- Cutting width: 5.0 mm
- Number of teeth: z = 40
- FS2290 ergonomic mounting wrench

THE INDEXABLE INSERTS

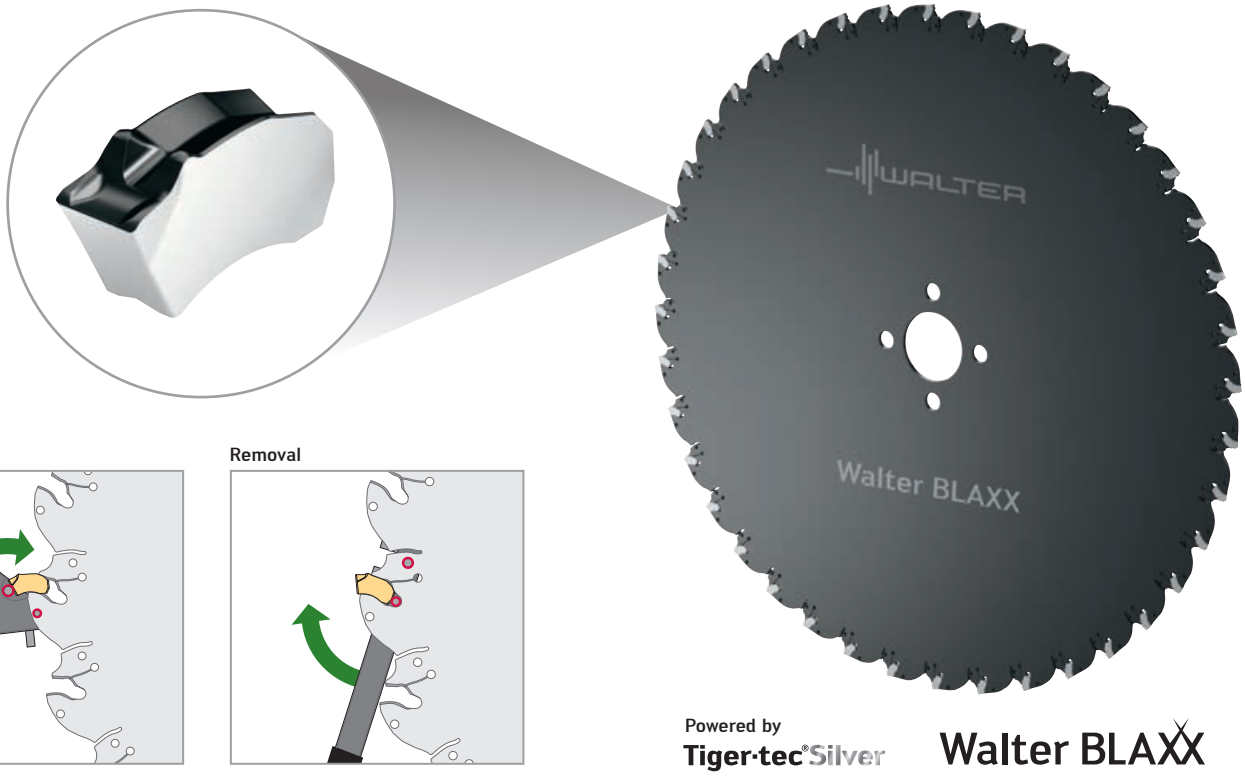
- Single-edged
- Cutting width: 5.0 mm
- Available geometries: CE4, SF5, CE6 and SK8

THE APPLICATION

- Cutting and slitting: Steel and cast iron, stainless steels, non-ferrous metals and materials with difficult cutting properties
- Areas of use: General mechanical engineering (e.g. cutting of large-volume workpieces on sawing machines)

THE TOOL

- Walter BLAXX F5055 slitting cutter
- Dia. 63–250 mm (2.48"–6.3"); NEW: 500 mm
- Non-positive and positive-locking insert clamping
- Optimised top clamp for extremely high retaining forces



Fitting

Removal

Powered by Tiger·tec®Silver

Walter BLAXX

Walter BLAXX slitting cutter **Fig.:** F5055

BENEFITS FOR YOU

- Brazed saw blades replaced by a cost-efficient indexable insert solution
- High flexibility thanks to wide selection of geometries to choose from
- Inserts are easy to change thanks to FS2290 ergonomic mounting wrench (resulting in an approximately 40% saving on set-up times)

D – Adaptors

Stationary adaptors

Walter Capto™ adaptors	A2120-C/A2121-C axial/radial adaptor	94

Rotating adaptors

Thread cutting chuck	AB035 synchronous thread cutting chuck	96
Adaptor sleeves	SL00.. adaptor sleeves	98

Walter Capto™ adaptors with direct coolant transfer.

NEW

THE APPLICATION

- Walter Capto™ shank adaptor in accordance with ISO 26623
- For shank tools with precision cooling

THE ADAPTOR

- A2120-C/A2121-C shank adaptors
- For 20 mm and 25 mm square shanks
- Axial and radial versions
- Direct coolant transfer for shank tools with internal coolant

THE INTERFACES

- Walter Capto™ C5 and C6

Axial/radial adaptors for square shanks **Fig.:** A2120-C / A2121-C

BENEFITS FOR YOU

- Easy handling thanks to plug-and-play solution
- Increase in the service life of the tool and the cutting edge, as well as improved chip formation, thanks to precision cooling
- Reduction of downtime

_AB035 SYNCHRONOUS THREAD CUTTING CHUCK

Control the pressure forces – make the most of your tool's performance.

NEW TO THE RANGE

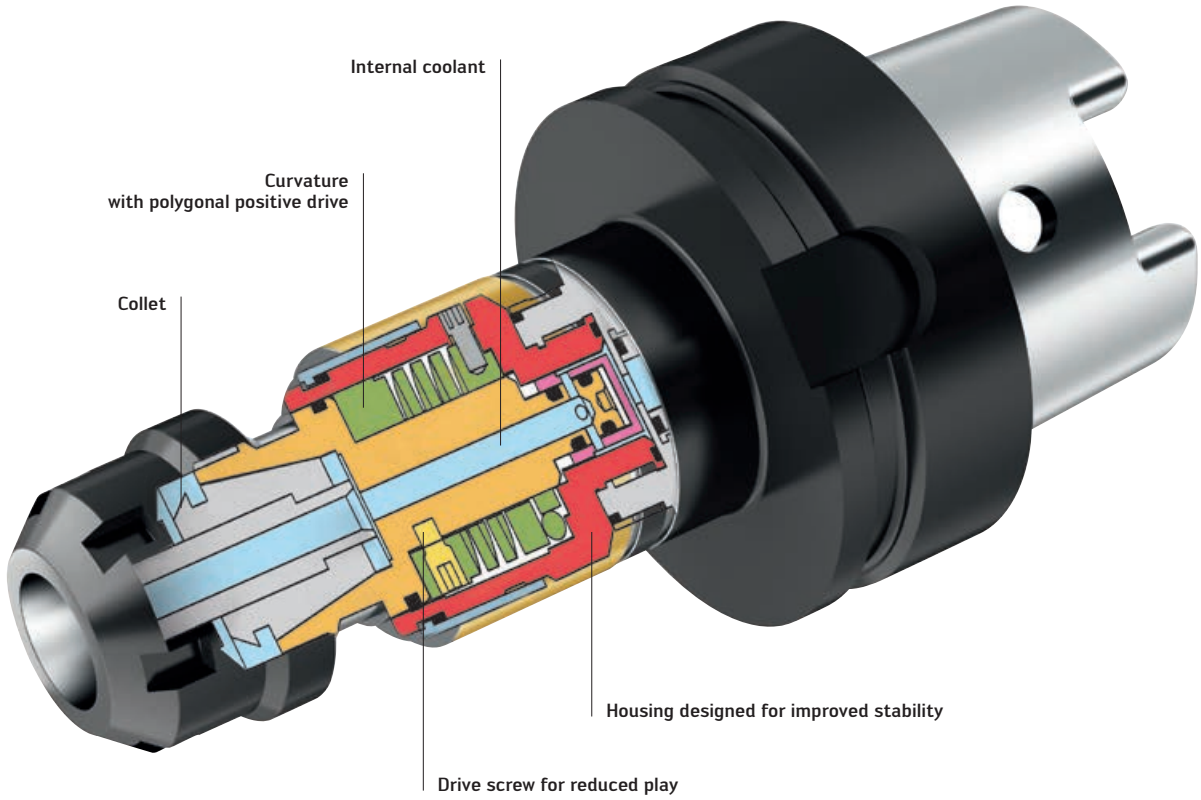
NEW ADDITION TO THE PRODUCT RANGE

Interfaces:
- Walter Capto™
- C4, C5, C6

Other available interfaces:
- HSK63
- HSK100
- BT30/40/50
- SK40/50
- DIN 1835 B/E combi-shank
- NCT

THE TOOL

- Synchronous thread cutting chuck for optimal use of modern high-performance tools with tapping collets according to DIN 6499
- Patented micro-compensator made of a specially developed alloy
- Integrated minimum compensation in axial and radial directions
- MQL variant available on request



AB035-H

BENEFITS FOR YOU

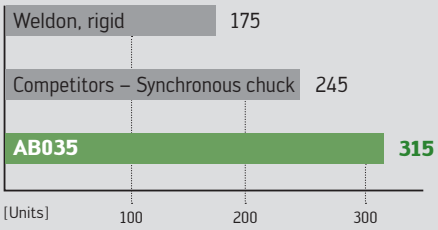
- Compensates for axial changes in position within a range of ±0.5 mm
- High process reliability thanks to the reduced risk of fracture (particularly where dimensions are small)
- Longer threading tool life due to less friction

APPLICATION EXAMPLE

Tool life comparison in tool steel

Material	Tool steel 1.2344
Tensile strength	1100 N/mm²
Cooling	5% emulsion
v_c	12 m/min
Thread	M6 – 12 mm deep

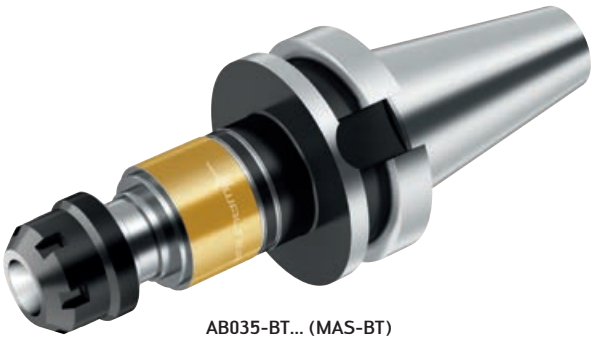
Comparison: Tool life quantity [units]



THE APPLICATION

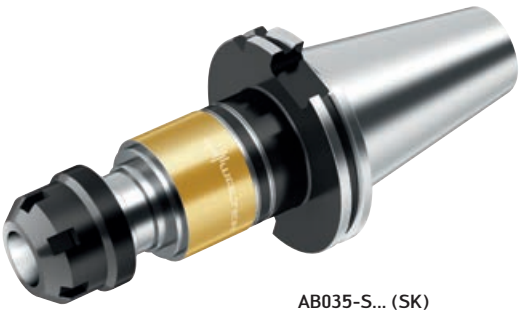
- Synchronous machining
- Suitable for taps and thread formers
- Also for high cutting speeds
- Can be used on all conventional machining centres

AB035-C... (Walter Capto™)



AB035-BT... (MAS-BT)

AB035-H... (HSK)



AB035-S... (SK)

Adaptors with Walter Capto™ HSK, MAS-BT and SK interface

Fig.: AB035... synchronous chuck

Clamp inch tools with a precise fit.

NEW TO THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

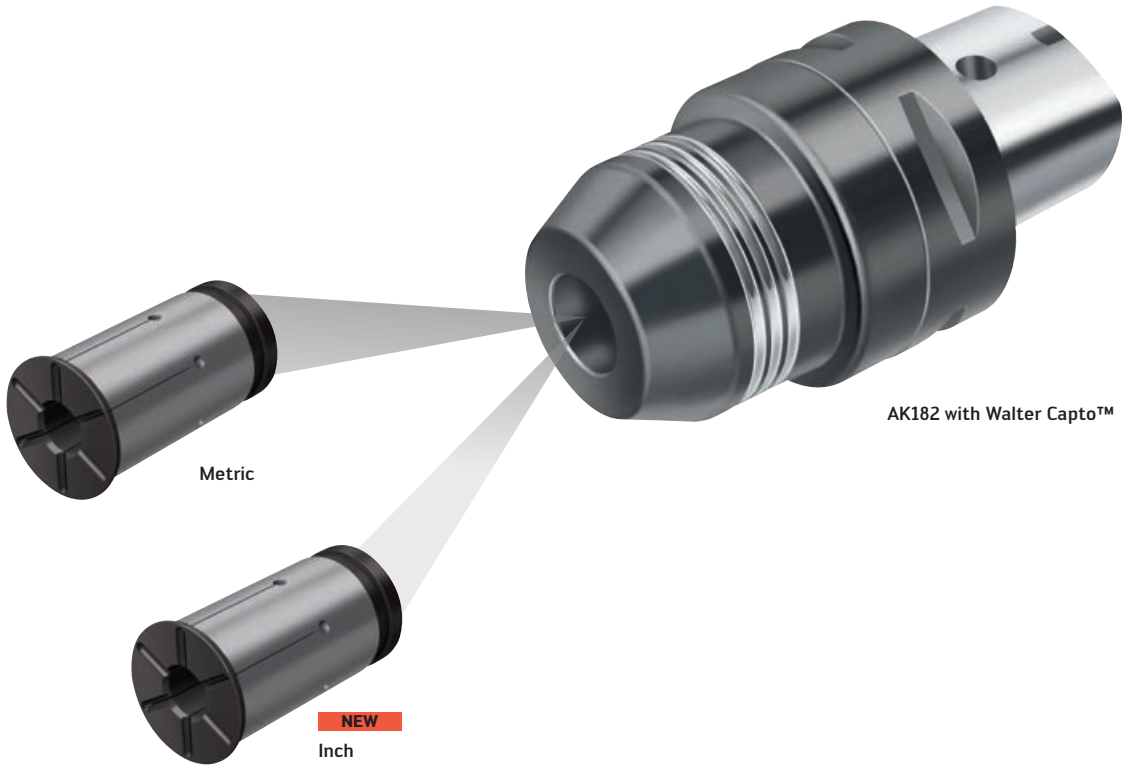
– SL00.. adaptor sleeves in inch dimensions, for the AK182 hydraulic expansion chuck for clamping diameters of 12 mm, 20 mm, 32 mm

THE ADAPTOR

– Adaptor sleeves for inch tools
– Reduction of hydraulic expansion clamping diameters 12 mm, 20 mm, 32 mm
– Dia. 1/8"–1"

THE APPLICATION

– Clamping of inch tools with a precise fit
– For tools with shank in accordance with DIN 1835 form A



SL000.. adaptor sleeve **Fig.:** SL000..

BENEFITS FOR YOU

– High concentricity for a longer tool life
– High repeat accuracy when using inch tools
– Optimum machining results thanks to high accuracy of fit

Walter AG

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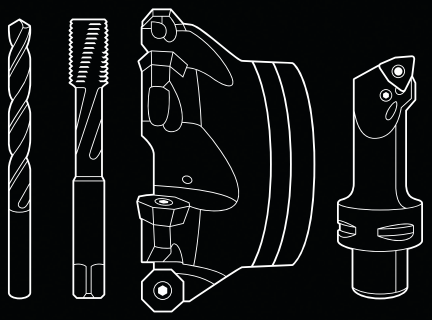

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Walter Product highlights · Edition 2018-1
Subject to changes – Printed in Germany 7573139 (03/2018) EN