WALTER
Engineering Kompetenz

Turning, holemaking, threading, milling

Product highlights
Edition 2025-2

_PRODUCT HIGHLIGHTS

Tools that redefine efficiency.

Groov·tec™
To the max.

The latest generation of high-performance grooving tools

Groov·tec™ grooving tools from Walter literally increase your performance "to the max" - with maximum stability, maximum cutting data and maximum Cutting depths. Thanks to the globally unique double serration profile and controlled Chip breaking, Groov·tec™ also maximizes process reliability. Whether grooving, parting-off, Groove turning or Copy turning: In combination with the wear-resistant Walter Tiger·tec® Gold cutting tool materials, Groov·tec™ has been proven to improve Tool life by 30 to 150 per cent!

Walter - your reliable partner for grooving applications.

WALTER
Engineering Kompetenz

Copy turning: Sharp one & more robust – with new geometries.

NEW

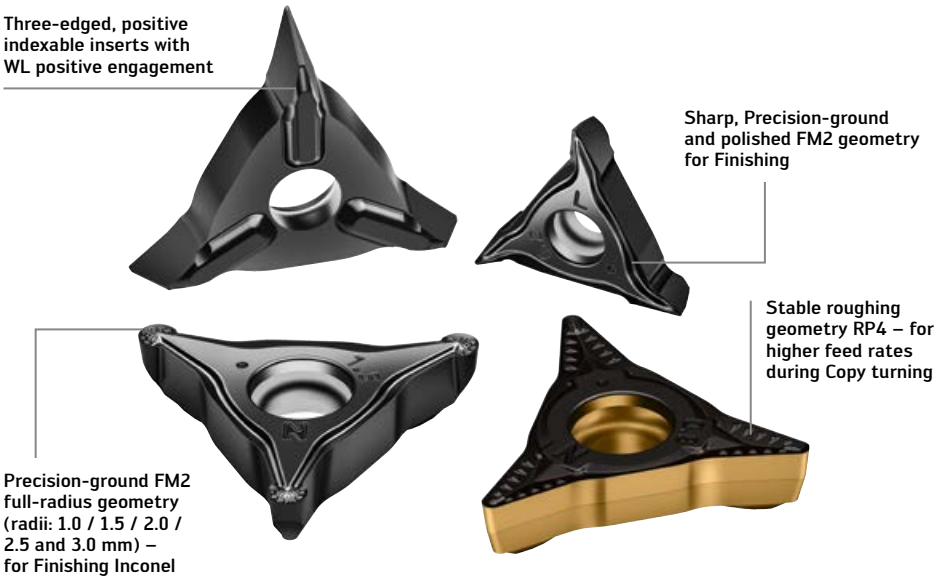
THE GEOMETRY

FM2
- Sharp, Fully ground circumference Finishing inserts
- Polished rake face
- For machining long, thin shafts with low cutting pressure
- Available as WL-VCG 35° and WL-RCG full radius version

MN2
- Indexable insert for non-ferrous materials
- Sharp, fully ground circumference cutting edge
- Polished rake face
- Also very well suited for superfinishing on steel and Stainless steels

RM4
- Universal one for Roughing operation to medium machining
- Extremely large chip breaking range

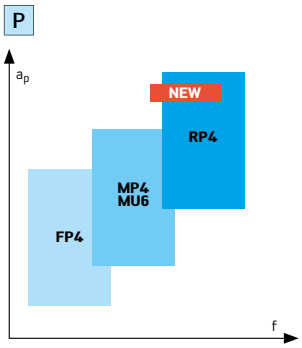
RP4
- Roughing operation to Medium machining and a large Chip breaking range
- Maximum cutting volume and Tool life

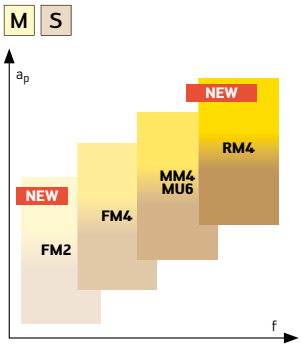


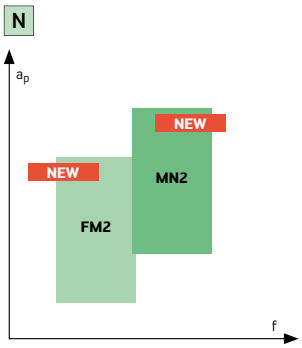
WL geometries FM2, MN2, RP4 Fig.: WL17 and WL25

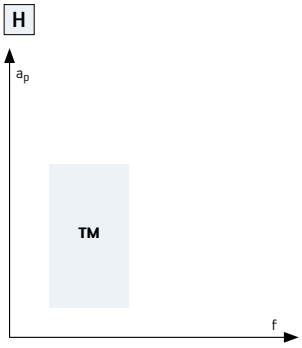
POTENTIAL BENEFITS
- Positive engagement, stable WL interface for high dimensional accuracy on the components
- 50 % higher Repeatability (compared to ISO inserts); Tool presetting can be omitted
- Cost-effective: Lower tool costs thanks to three cutting edges

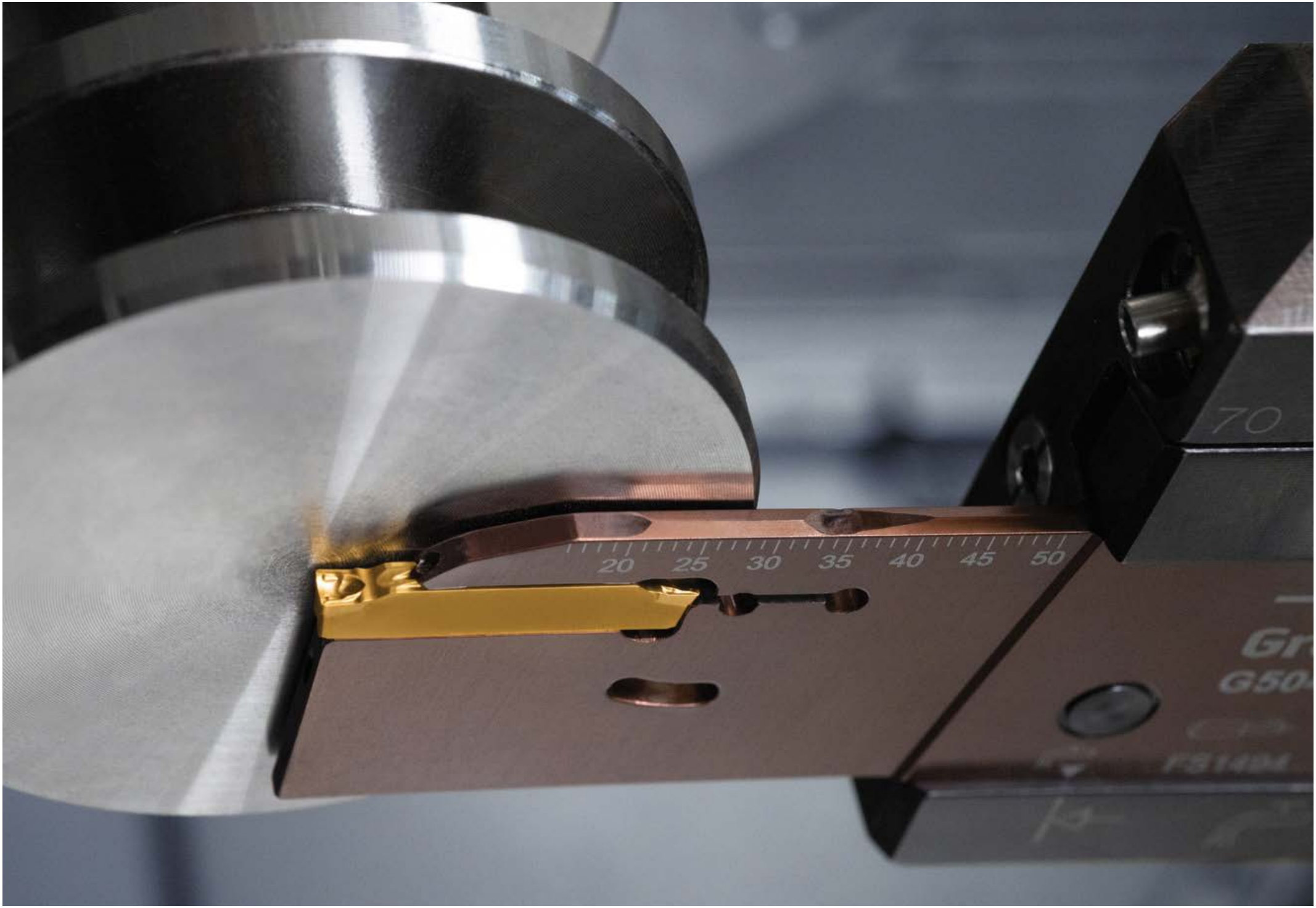
GEOMETRY OVERVIEW & APPLICATION










20
25
30
35
40
45
50
70

Double the serration – double the reliability.

EXPANSION OF THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- Grooving tools G5011 in Shank sizes 12×12 and 32×32 mm
- Walter Capto™ G5011-C-P tools in C3-C6

THE TOOL

- Groov·tec™ GD cutting tools G5011/G5011-P/G5011-C-P; without and with Precision cooling
- Indexable insert clamping can be operated from both sides
- Four cutting depths (T12, T21, T26, T33) for parting-off diameters up to 65 mm
- Shank sizes: 12×12, 16×16, 20×20, 25×25, 32×32 mm; Inch: 5/8", 3/4" and 1"
- Walter Capto™ sizes: C3-C6

THE INDEXABLE INSERTS

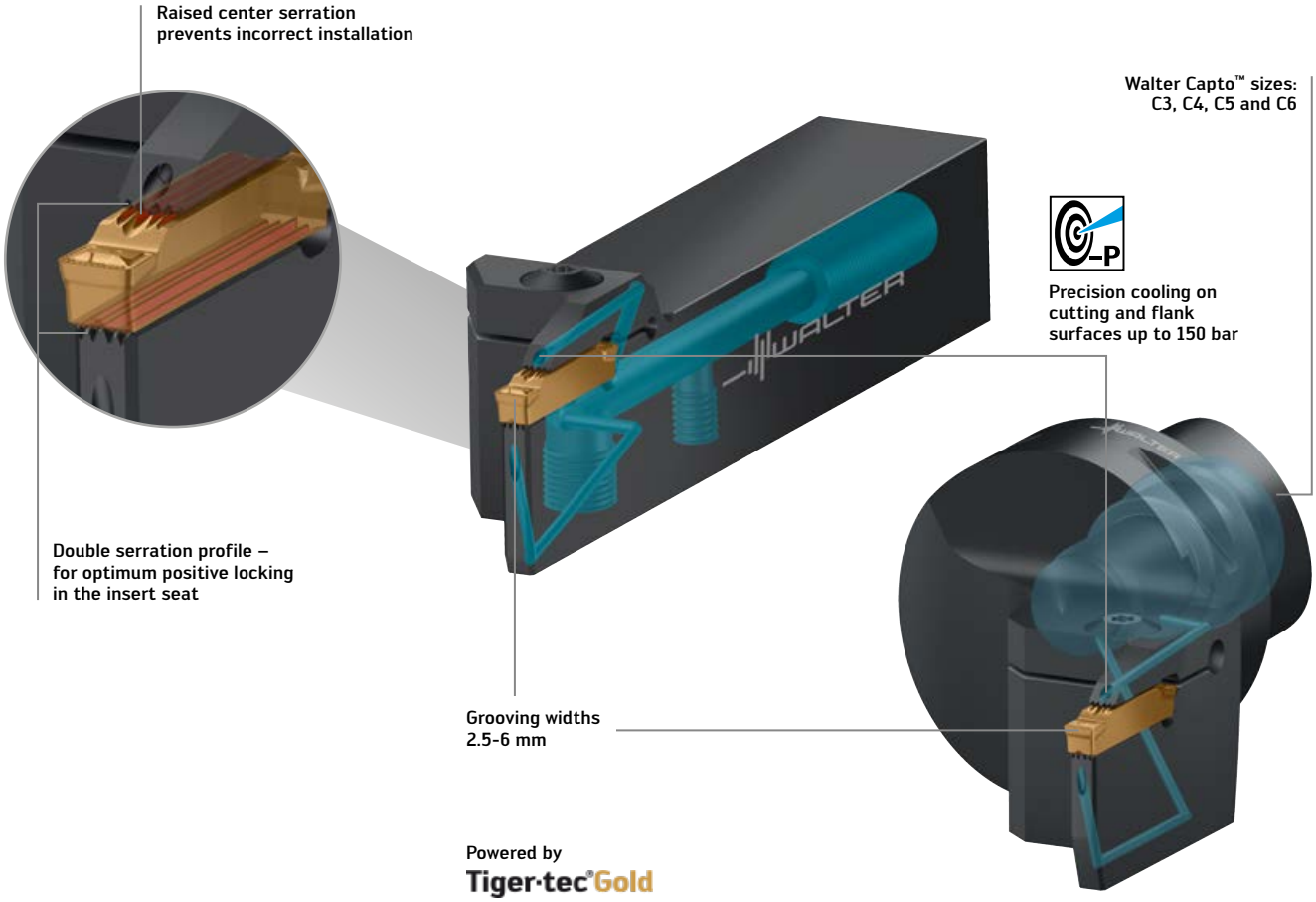
- Patent-pending, double-edged GD26 cutting inserts with double serration clamping profile
- Grooving widths: 2.5 / 3.0 / 4.0 / 5.0 / 6.0 mm

THE GEOMETRY

- Parting off and grooving: CE4, CF5, CF6, GD6 and GD3
- Groove turning: UA4, UD4, UE6, UF4 and UF8
- With full radius: RD4, RE6 and RF8

THE GRADE

- 4 Tiger·tec® Gold PVD grades: WSM13G, WSM23G, WSM33G and WSM43G
- For steel, stainless steels and difficult-to-machine materials
- 3 Tiger·tec® Gold CVD grades: WKP13G, WKP23G and WKP33G
- For steel and cast iron machining



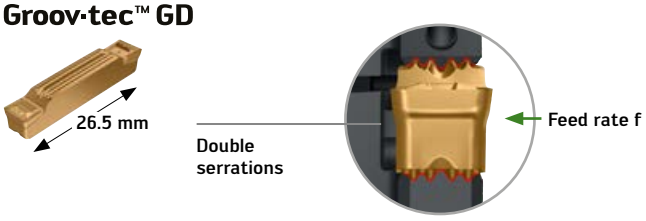
Groov·tec™ GD grooving system

Fig.: G5011-2525R-5T21GD26-P
Fig.: G5011-C5R-5T21GD26-P

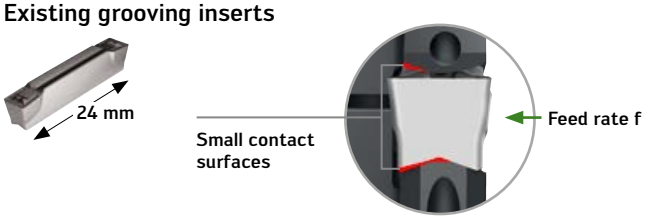
THE TECHNOLOGY

- New insert design with double serration profile. The GD26 cutting insert and tool body (insert seat) are optimally interlocked. The positive fit absorbs lateral forces better during longitudinal and copy turning
- Conventional systems (e.g. without double serrations) are significantly less stable in comparison.

Groov·tec™ GD



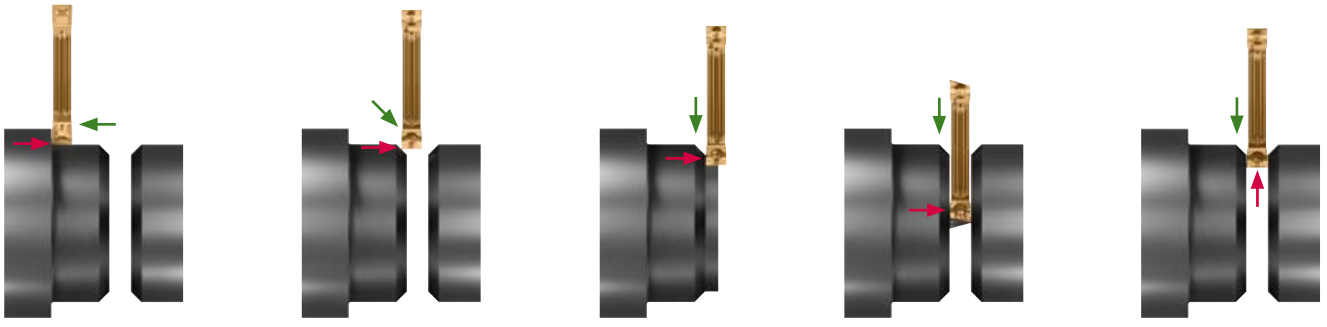
Existing grooving inserts



THE APPLICATION

- Radial grooving and parting off, recess turning and copy turning up to 26 mm grooving depth
- Universal use on lathes of all kinds

Greater stability in all applications – with Groov·tec™ GD



Turning | Chamfers | Offset grooving | Parting off – inclined cutting insert | Parting off – straight cutting insert

→ Feed rate (f)
→ F_{axial}

POTENTIAL BENEFITS

- Increased stability and process reliability thanks to Groov·tec™ GD serration profile
- Increased cutting parameters thanks to new serration profile and precision cooling
- Maximum productivity and service life thanks to wear-resistant Tiger·tec® Gold grades

To the max –
Output & process reliability.

NEW

THE TOOL

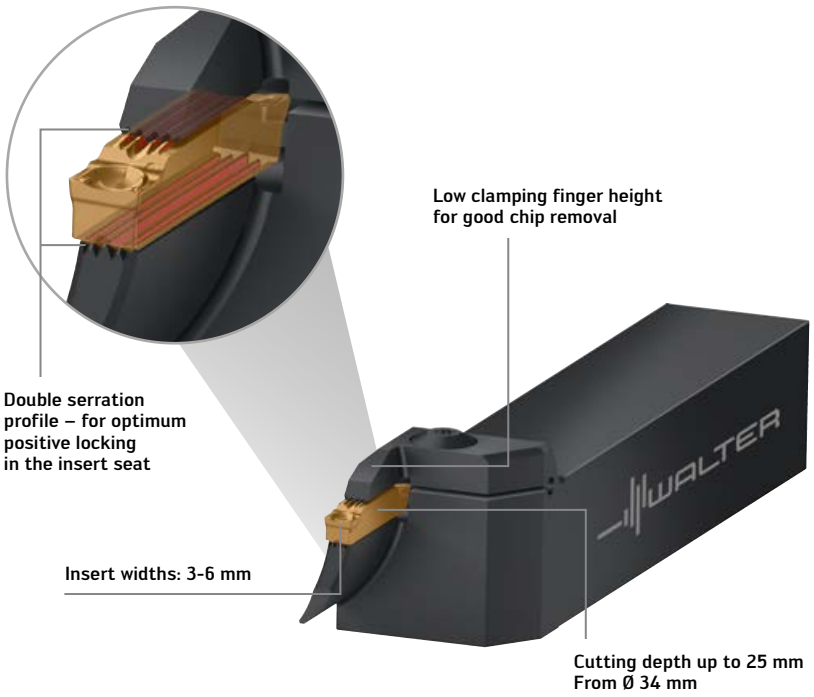
- Groov·tec™ GD axial grooving tool G5111
- Indexable insert clamping can be operated from both sides
- 3 Cutting depths: T12, T21 and T25 mm
- Axial grooving diameter ranges: 34-500 mm
- Shank sizes: 25×25 mm and 1 inch

THE INDEXABLE INSERTS

- Patent-pending, double-edged GD26 cutting inserts with double serration clamping profile
- Insert widths: 3.0 / 4.0 / 5.0 / 6.0 mm

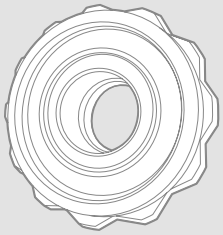
THE APPLICATION

- Axial Grooving, Groove turning and Copy turning
- Universal use on lathes of all kinds



APPLICATION EXAMPLE

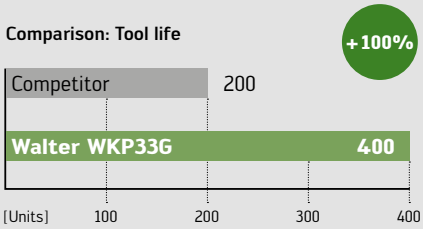
Coupling flange – axial grooving D_{min} 40 mm



Material:	C45 (1.0503)
Tensile strength:	630–780 N/mm²
Tool:	G5111-2525L-5T12-040GD26
Indexable insert:	GD26-5E500N08-UD4 WKP23G

Cutting data	Competitor ISO P20	Walter WKP23G Tiger·tec® Gold
s (mm)	5	5
v_c (m/min)	150	150
f (mm)	0.2	0.2
T (mm)	5	5
Tool life (units)	200	400

Comparison: Tool life



Powered by
Tiger·tec® Gold
Groov·tec™ GD

Fig.: G5111-2525L-6T25-058GD26

POTENTIAL BENEFITS

- Maximum process reliability and service life thanks to stable Groov·tec™ GD serration profile
- Increased cutting parameters thanks to double serration profile
- Maximum productivity and service life thanks to wear-resistant Tiger·tec® Gold grades

To the max – Stability and Tool life.

NEW

THE TOOL

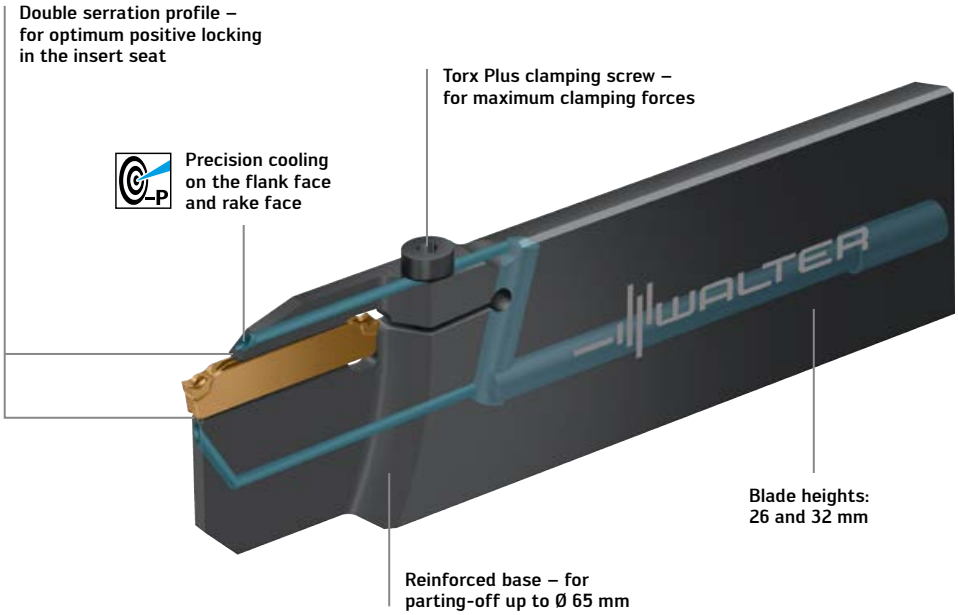
- Groov-tec™ GD Parting blades G5041..R/L-P with reinforced shaft
- Reinforced Parting blades for cutting and grooving; with and without Precision cooling
- Right-hand, left-hand and contra versions available
- Blade heights: 26-32 mm
- Insert widths: 3 and 4 mm

THE INDEXABLE INSERTS

- Patent-pending, double-edged GD26 cutting inserts with double serration clamping profile

THE APPLICATION

- Grooving and parting off where space is limited
- Parting off with long tool overhangs
- Parting off with low burr and pip formation (by 6°, 7° and 15° angled parting off inserts)
- Can be used from 10 bar up to a maximum coolant pressure of 80 bar



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Tiger·tec®Gold
Groov·tec™ GD

Fig.: G5041-32L-3T26GD26C-P

POTENTIAL BENEFITS

- Greater stability and Tool life, less vibration thanks to reinforced Blades with Screw clamping
- Maximum process reliability thanks to reinforced Tool body and Groov-tec™ GD double serration
- Perfect chip control due to precision cooling on the flank and rake faces

Available variants:

G5041...R...
Standard, right

G5041...R...C
Contra, right

G5041...L...
Standard, left

G5041...L...C
Contra, left

To the max – Deep parting-off with maximum process reliability.

NEW

THE TOOL

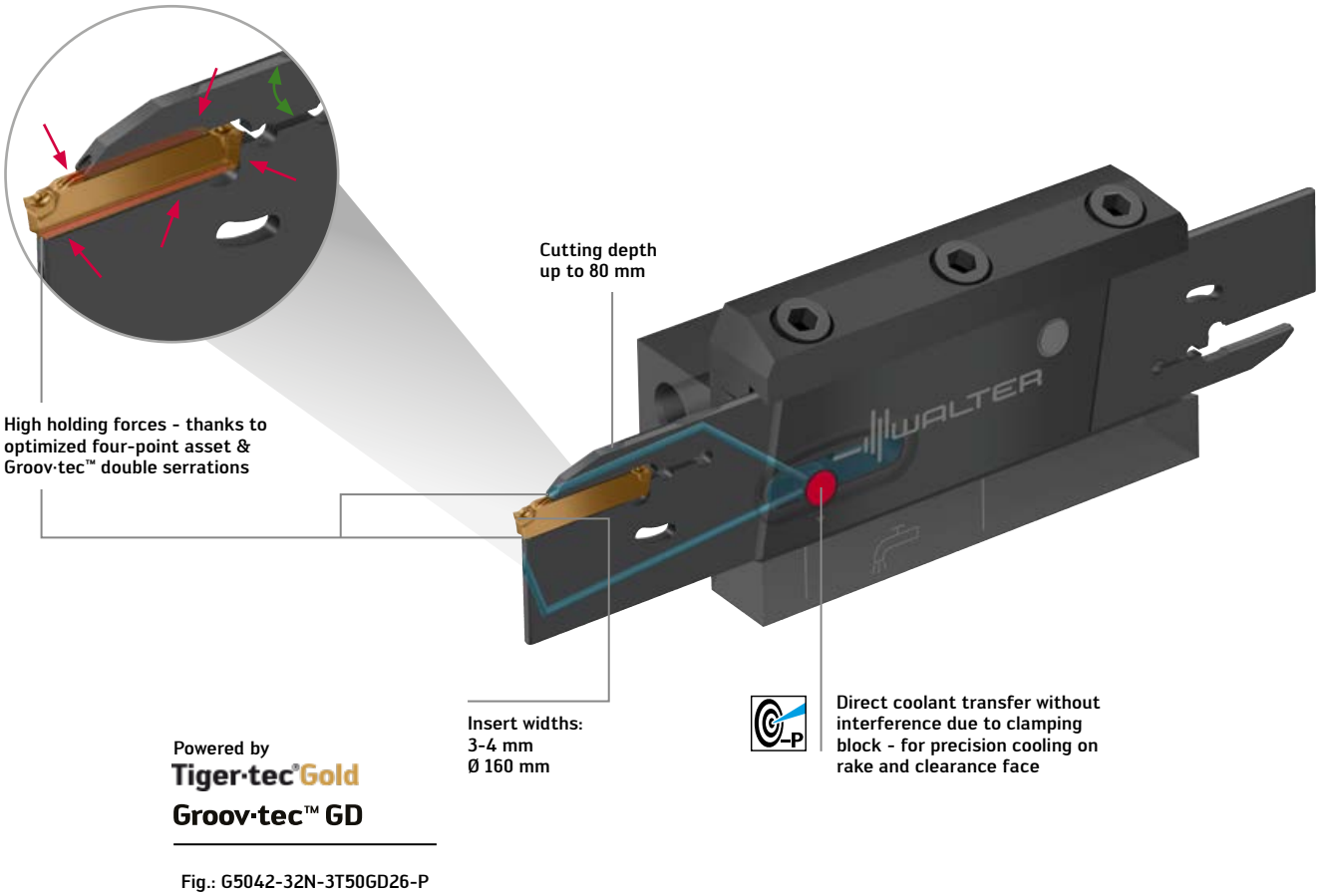
- Groov·tec™ GD Deep-parting blades G5042/G5042-P; with and without Precision cooling
- G5042 Insert widths: 3-6 mm
- G5042-P Insert widths: 3-4 mm
- Selfclamping system with double prism and four-point asset
- Blade height: 26 and 32 mm
- Maximum parting-off diameter: 80-160 mm

THE INDEXABLE INSERTS

- Single-edged and Double-edged GD26 Cutting inserts with double serration (patent pending)

THE APPLICATION

- Grooving and parting off where space is limited
- Parting off with long tool overhangs
- Parting off with low burr and pip formation (by 6°, 7° and 15° angled parting off inserts)
- Can be used from 10 bar up to a maximum coolant pressure of 80 bar

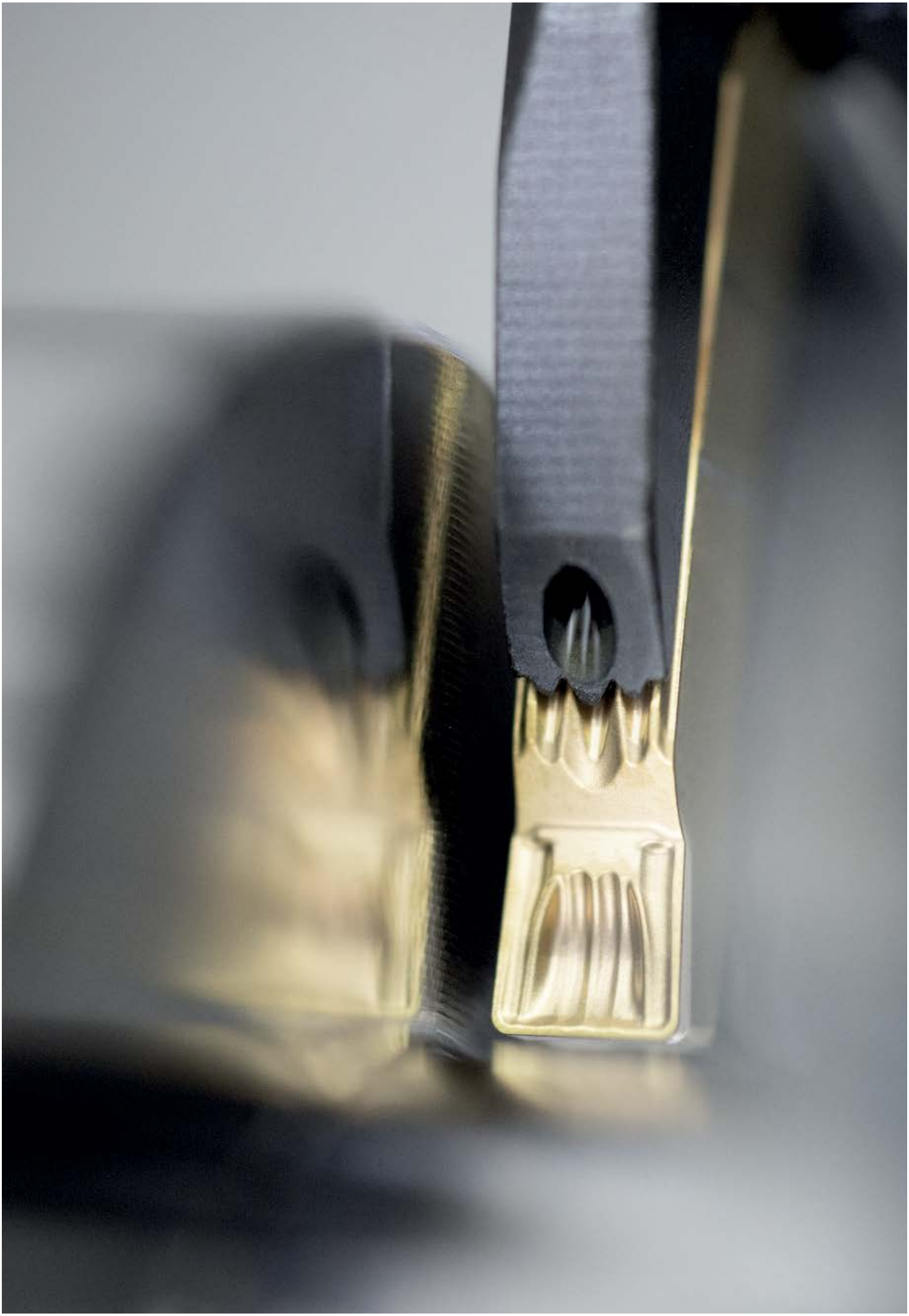


Powered by
Tiger·tec®Gold
Groov·tec™ GD

Fig.: G5042-32N-3T50GD26-P

POTENTIAL BENEFITS

- Increased stability and process reliability thanks to Groov·tec™ GD serration profile
- Simple tool handling thanks to the neutral design of the Parting blade
- Perfect chip control due to precision cooling on the flank and rake faces



The new face in drilling.

EXPANSION OF THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- 16 × D_C according to Walter standard (Ø 3-16 mm)
- 20 × D_C according to Walter standard (Ø 3-16 mm)
- 25 × D_C according to Walter standard (Ø 3-12 mm)
- 30 × D_C according to Walter standard (Ø 3-12 mm)
- 40 × D_C according to Walter standard (Ø 3-11 mm)

THE TOOL

- DD170 Supreme solid carbide drill with internal coolant
- Dia. 3–20 mm

Dimensions - Standard:

- 3 × D_C in accordance with DIN 6537 short
- 5 × D_C in accordance with DIN 6537 long
- 8-40 × D_C according to Walter Norm

Dimensions - Walter Xpress:

- Up to 12 × D_C
- Chamfer drill
- Step drill
- WJ30EY: K30F, AlTiN multi-layer tip coating

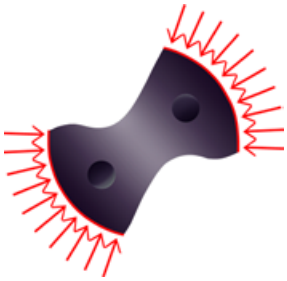
Fig.: DD170-12-08.500A1-WJ30EY

THE APPLICATION

- ISO material groups P and K
- Can be used with emulsion, oil and MQL
- Areas of use: Automotive industry, aerospace industry, energy industry, mold and die making, general mechanical engineering

Shank in accordance with DIN 6535 HA; shank end in accordance with DIN 69090

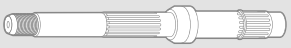
Continuous guidance



Precision-ground tip geometry – for the best centering

APPLICATION EXAMPLE

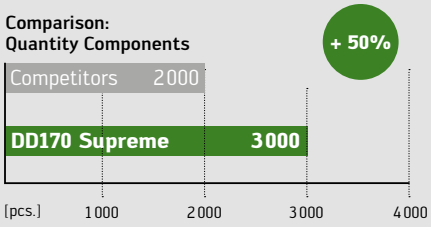
Drive shaft



Material:	16MnCr5 - Bar material
Strength:	207 HB
Tool:	DD170 Supreme DD170-12-11.000A1-WJ30EY
Cooling:	Emulsion 15 bar

Cutting data:	Competitors	**Walter DD170 Supreme**
v_c (m/min)	120	120
n (mm^{-1})	3 474	3 474
f (mm/U)	0,25	0,25
vf (mm/min)	869	869
Drilling depth (mm)	100	100
Components (pcs.)	2 000	3 000

Comparison: Quantity Components



Regrinding scale for maximum cost-efficiency

360° cooling

POTENTIAL BENEFITS

- Maximum process reliability in difficult applications such as those involving cross holes or inclined exits
- Maximum productivity due to Krato·tec® coating technology
- Best positioning due to innovative new tip geometry – no pilot drilling up to 12 × D_C

Also available as

Walter Xpress

The world's first exchangeable tip drill with two cutting edges.

EXPANSION OF THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- Ø 26.00-31.75 mm (1.02-1.25 inch)
- 8 × D_C Tool body
- Expansion of the inch product range within 0.47-1.25 inches

THE TOOL

- Drion·tec® D-Spade D5142 double-sided exchangeable tip drill
- Ø 12-31.75 mm (0.47-1.25 inch)
- Drilling depths: 3, 5 and 8 × D_C
- Self-centering tip geometry (no pilot drilling necessary)
- 6 cooling channels for Precision cooling
- Ground and polished flutes for fast and safe chip removal

The exchangeable tip

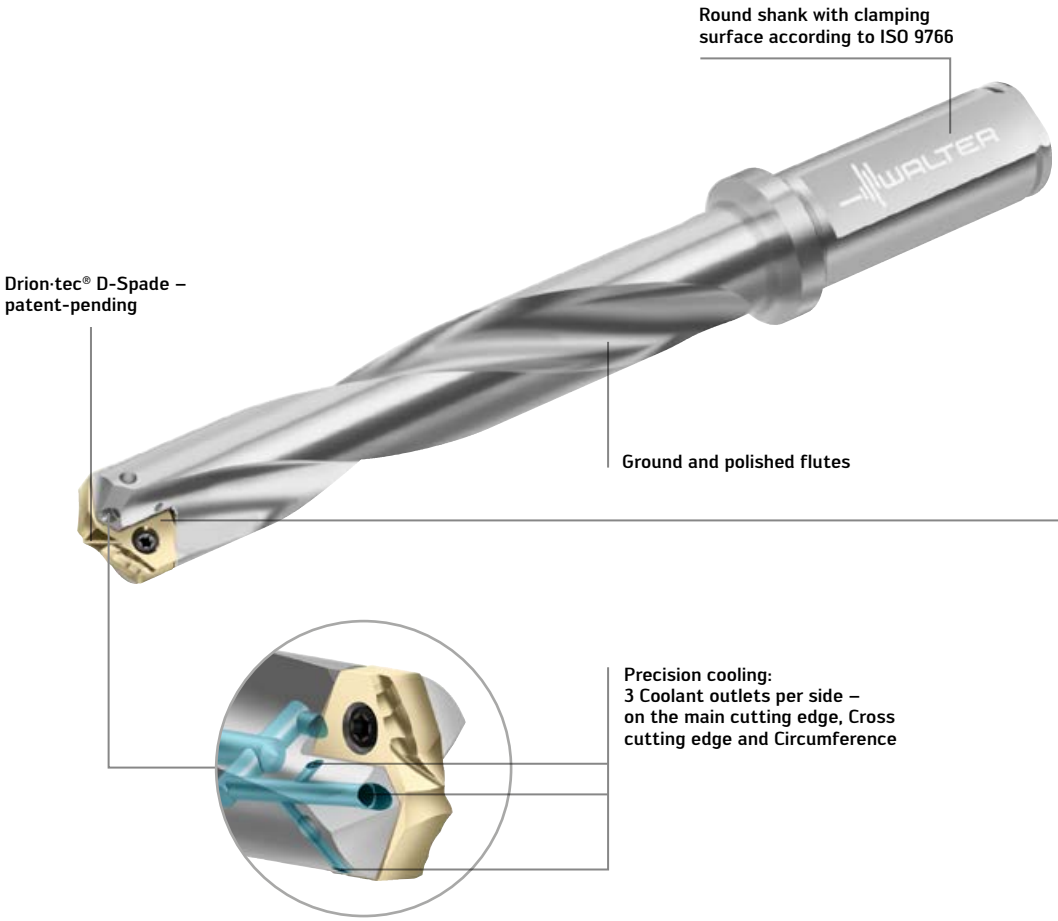
- DS42 double-sided exchangeable tip (symmetrical)
- 4 straight margins for excellent Surface quality
- F58 geometry

THE GRADE

- WPP25: Fine-grained substrate and HIPIMS AlTiN coating for high wear resistance
- Gold-colored top layer for the best wear detection

THE TECHNOLOGY

- Symmetrical Drion·tec® D-Spade design with two cutting edges per exchangeable tip
- The flank face of the first cutting edge forms the pocket support surface of the second cutting edge
- Secure clamping due to two radial screws

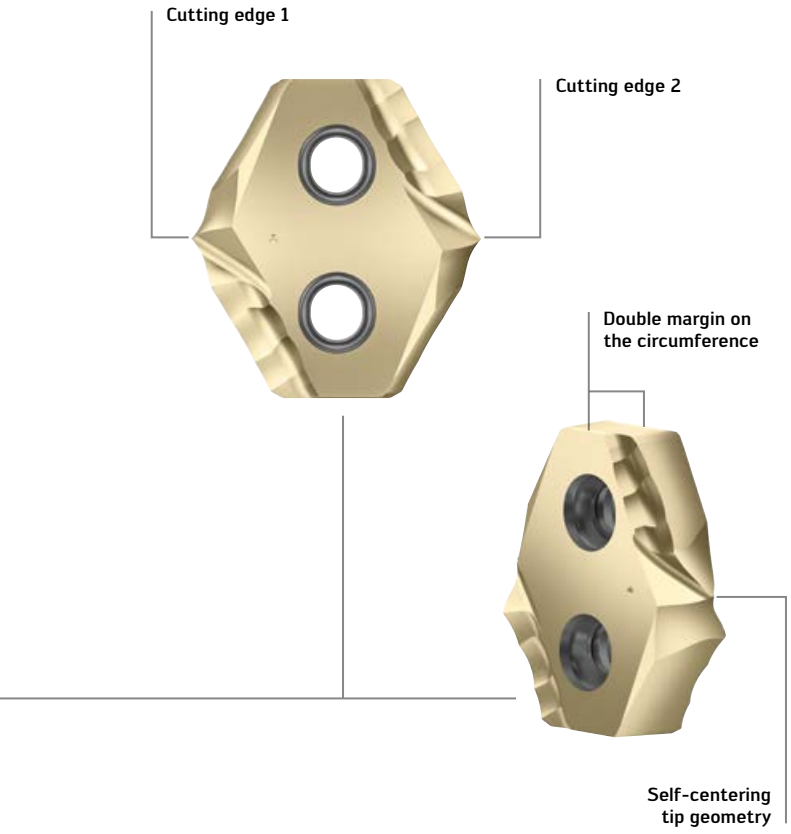


Drion·tec® exchangeable tip drill

Fig.: D5142-05-18.00F20-G

THE APPLICATION

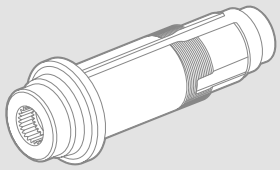
- Drilling blind holes and through holes from solid
- Suitable for stack drilling (laminate drilling)
- Holemaking possible with Inclined entry (≤ 10°) and exit (≤ 20°)
- Primary application: ISO P
- Secondary application: ISO K



Double-sided exchangeable tip **Fig.: DS42-F58-18.00G WPP25**

APPLICATION EXAMPLE

Motor shaft for electric vehicles – holemaking: ø 17 mm



Material:	1.6523/ 21NiCrMo2/ 8620
Tensile strength:	530 N/mm²
Tool:	D5142-05-17.00F20-F
Interchangeable insert:	DS42-17.00F-F58 WPP25

Cutting data	Competitor	**Walter D5142 + DS42**
v_c (m/min)	96	89.5
n (rpm)	1 800	1 680
f_n (mm)	0.15	**0.201**
v_f (mm/min)	270	**337**
Drilling depth (mm)	60	60
Cooling	Internal coolant	Internal coolant
Adaptor	Whistle Notch Ø 20 mm	Weldon Ø 20 mm
Tool life quantity (units)	600	1. Cutting edge: 600 2. Cutting edge: 600 **Total 1 200**

Comparison: Tool life quantity

POTENTIAL BENEFITS

- Maximum cost-efficiency due to two cutting edges per exchangeable tip
- Precise holes due to best centering characteristics
- Excellent surfaces thanks to 4 margins on the circumference
- Maximum process reliability due to optimum cooling effect and chip removal
- High level of sustainability due to approx. 45% less carbide per cutting edge

The peak of productivity.

NEW

THE TOOL

- Drion·tec® E-Peak exchangeable head drill D5150
- Ø 9-17.99 mm (0.354-0.705")
- Drilling depths: 3, 5 and 8 × D_c
- Optimized Flute geometry with Internal coolant for best chip removal and bore quality
- Several exchangeable head dimensions can be used per body

The exchangeable head

- Exchangeable head DS50

THE GEOMETRY

- Universal geometry M
- Can be used on almost all ISO materials
- Very good output with a wide range of cutting data

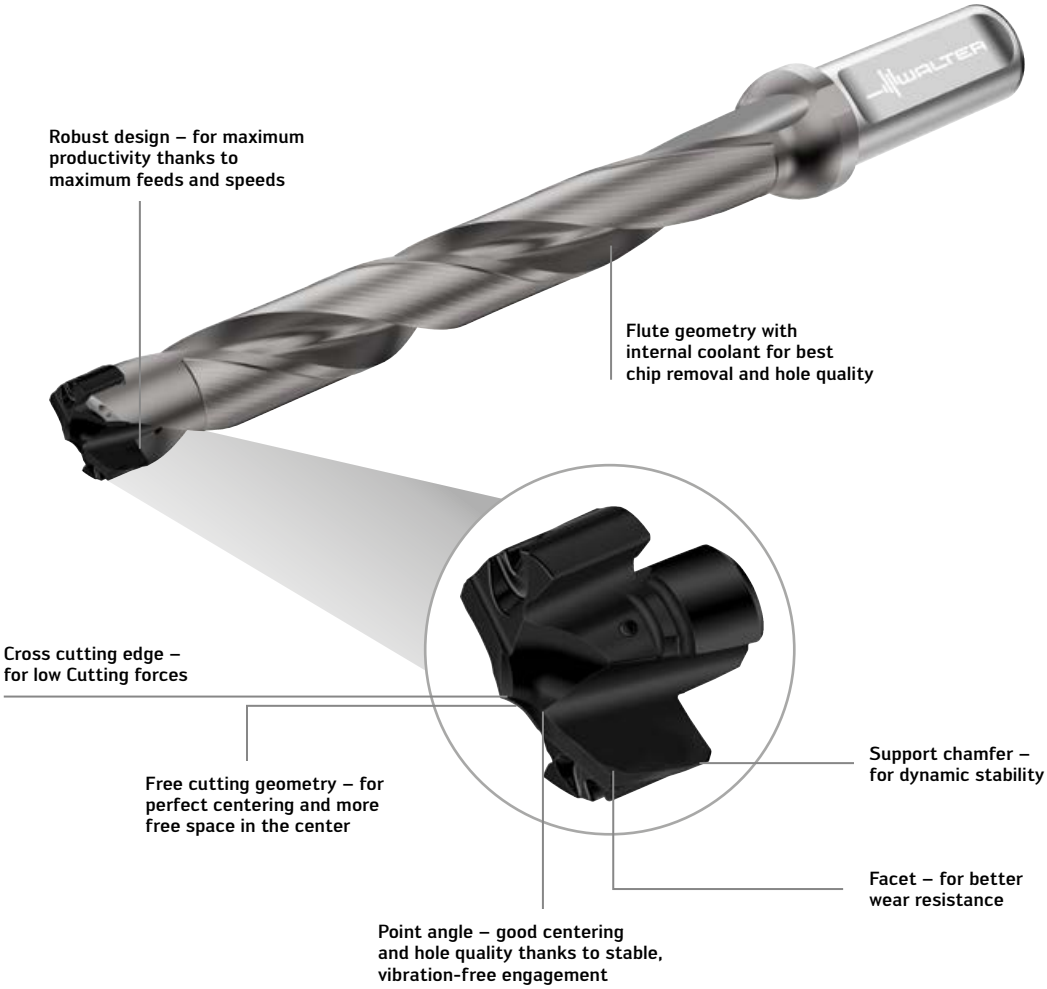
THE GRADE

WPP35

- Resistant PVD coating in combination with fine-grained, tough carbide substrate
- Improved cutting edge stability against fractures and built-up edges
- Primary application: ISO P;
  Secondary application: ISO M, K, N, S and H

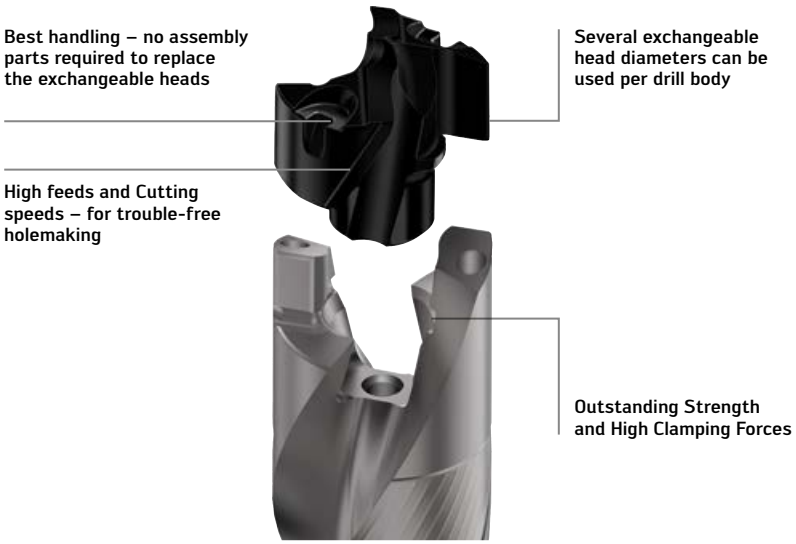
WMS35

- Thin PVD coating in combination with fine-grained, tough carbide substrate
- Resistant to chipping and flaking on the bevelled edge
- Primary application: ISO M and S;
  Secondary application: ISO P, K, N and H



THE INTERFACE

- Patented, robust interface design between exchangeable head and body
- For maximum release torque
- Stable overall torque - even after many installations
- Increasing the holemaking service life
- Quick and easy assembly; no additional assembly parts

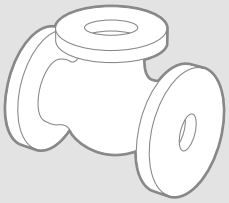


THE APPLICATION

- High-volume production for cross-industry applications
- Large cutting data window with high cutting parameters
- Primary application: ISO P, M and S;
  Secondary application: ISO K, N and H
- Hole tolerance H9/H10
- All common drilling operations (e.g. inclined entry and exit, cross and stack drilling, etc.)

APPLICATION EXAMPLE

Valve

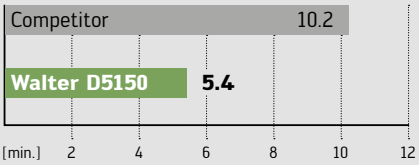


Material:	ISO M/ M3.2.Z.AQ/ Duplex
Tensile strength:	240 HB
Tool:	D5150-05-17.00F20-R; Ø 17 mm; $5 \times D_c$
Interchangeable head:	DS50-17.10R-M WPP35

Cutting data	Competitor	Walter D5150
v_c (m/min)	43	50
n (rpm)	800	930
f_n (mm)	0.08–0.06	0.15–0.1
v_f (mm/min)	64–48	140–93
No. of holes	60	60
Tool life distance (m)	0.3	0.3
Machining time (min.)	10.2	5.4

Comparison: Machining time in minutes (60 holes)

–50%



POTENTIAL BENEFITS

- Highest productivity and low costs per hole thanks to high Feed rate
- Minimized warehousing and purchasing costs thanks to universal geometry
- Reduced machining time, as no Pilot drilling is required

Go for Gold – the safe solution for strong steels.

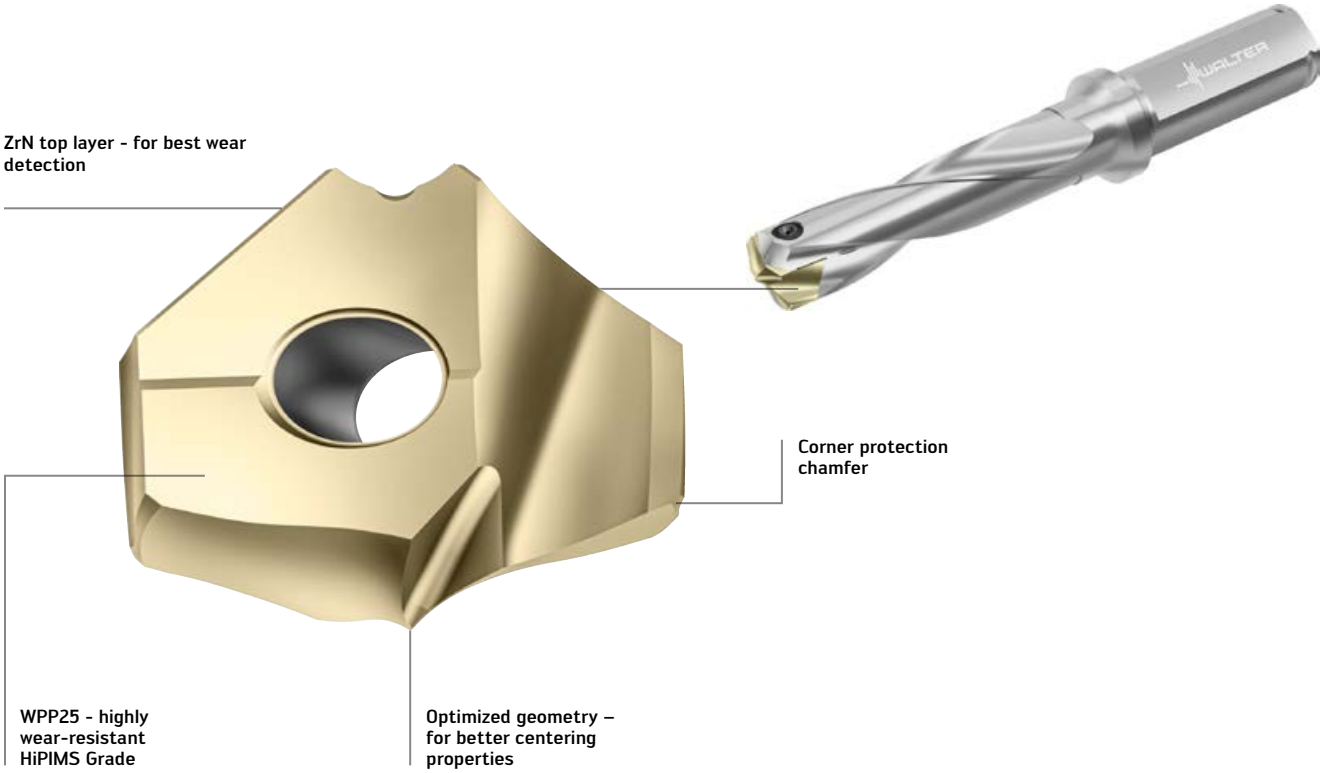
NEW

THE INDEXABLE INSERTS

- Ø 12-38 mm
- WPP25: fine-grained Substrate and HiPIMS AlTiN coating for high Wear resistance
- ZrN top layer for best wear detection
- Optimized geometry for better centering
- Can be used with exchangeable-tip drills D4140 and D4240

THE APPLICATION

- Primary application: ISO P – high-strength steels (650-1400 N/mm²)
- Secondary application: ISO K
- Drilling depths of up to 7 × D without Pilot drilling
- Drilling from solid of blind and through holes
- Suitable for Stack drilling



Exchangeable drill tip P6011 Fig.: P6011-D18,00R WPP25

POTENTIAL BENEFITS

- Maximum tool life thanks to the highly wear-resistant Grade WPP25
- Outstanding process reliability in high-strength steels
- Improved cost efficiency through simple wear detection
- Increased productivity - no Pilot drilling up to 7 × D required

Reduce Cutting forces, increase Feed.

NEW

THE INDEXABLE INSERTS

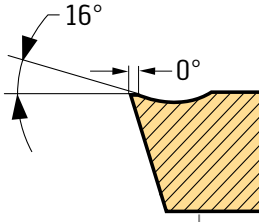
- Can be used in all Walter Indexable insert drills
- P484. for Drion·tec® D4120: Ø 13.5-59 mm (0.531-2.250 inch)
- P284. for Drion·tec® D3120: Ø 16-58 mm (0,750-1,500 Inch)
- LC.X. for drilling tools B321.: Ø 10-18 mm (0,391-0,640 Inch)
- Directly pressed and Fully ground circumference

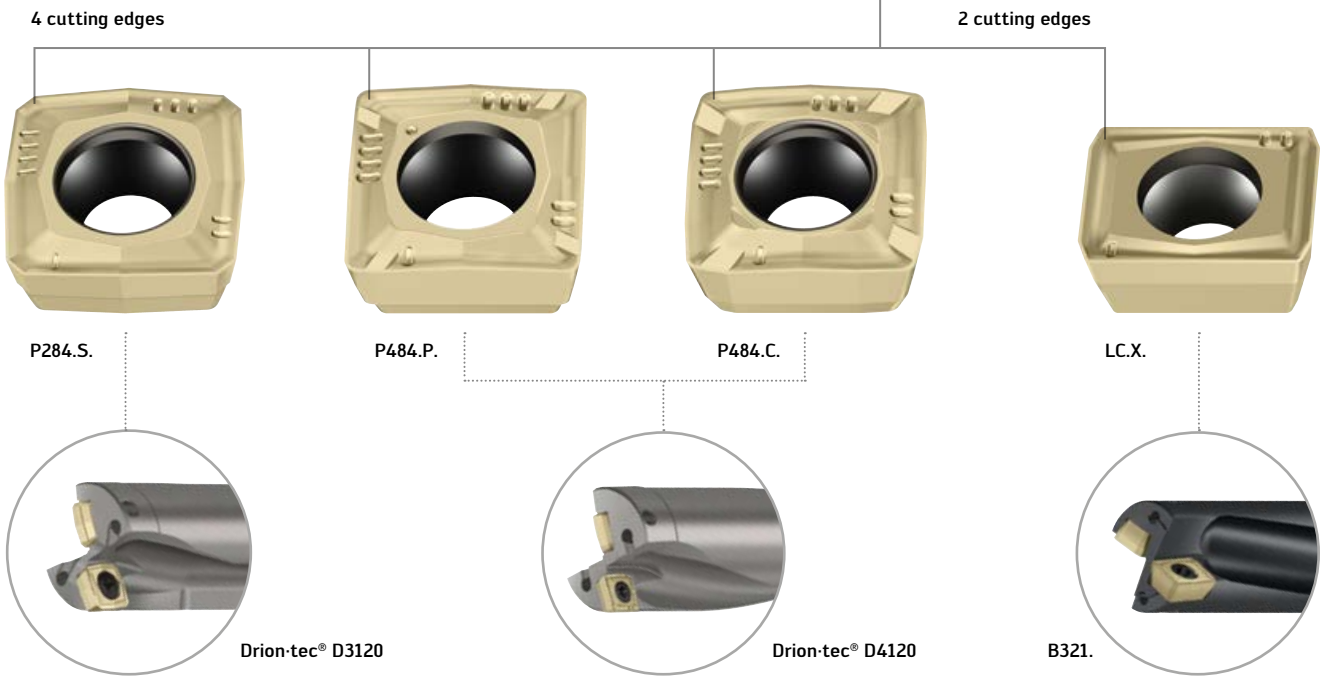
THE APPLICATION

- For all drilling applications – even with the highest accuracies
- Ideal for long-chipping materials (such as steels ST37, ST52 and stainless steels)
- Can be used in ISO P, M, K and S (through drilling grades WSP45G, WKP35S, WXP40)
- Ideal for favorable to medium conditions
- Machining of soft materials even in unfavorable conditions

THE GEOMETRY

- F57 – the Easy-cutting one
- Very low Cutting forces due to deep Chip breaker groove and reduced plateau height
- 16° Rake angle
- High stability at the cutting edge
- Wide finishing chamfer – for the first time also for directly pressed Indexable inserts





POTENTIAL BENEFITS

- Up to 30 % increase in productivity due to higher Feed rate
- Economical thanks to proven coatings and the latest geometry
- Greater process reliability and fewer tool changes
- Significantly longer Tool life with the same cutting conditions

Powered by Tiger·tec Gold

Thread·tec™ – the versatile and universal thread range.

EXPANSION OF THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

Profiles (DIN):
- G
- UNC, UNF, UN-8
- Thread insert (STI): EgUNC, EgUNF

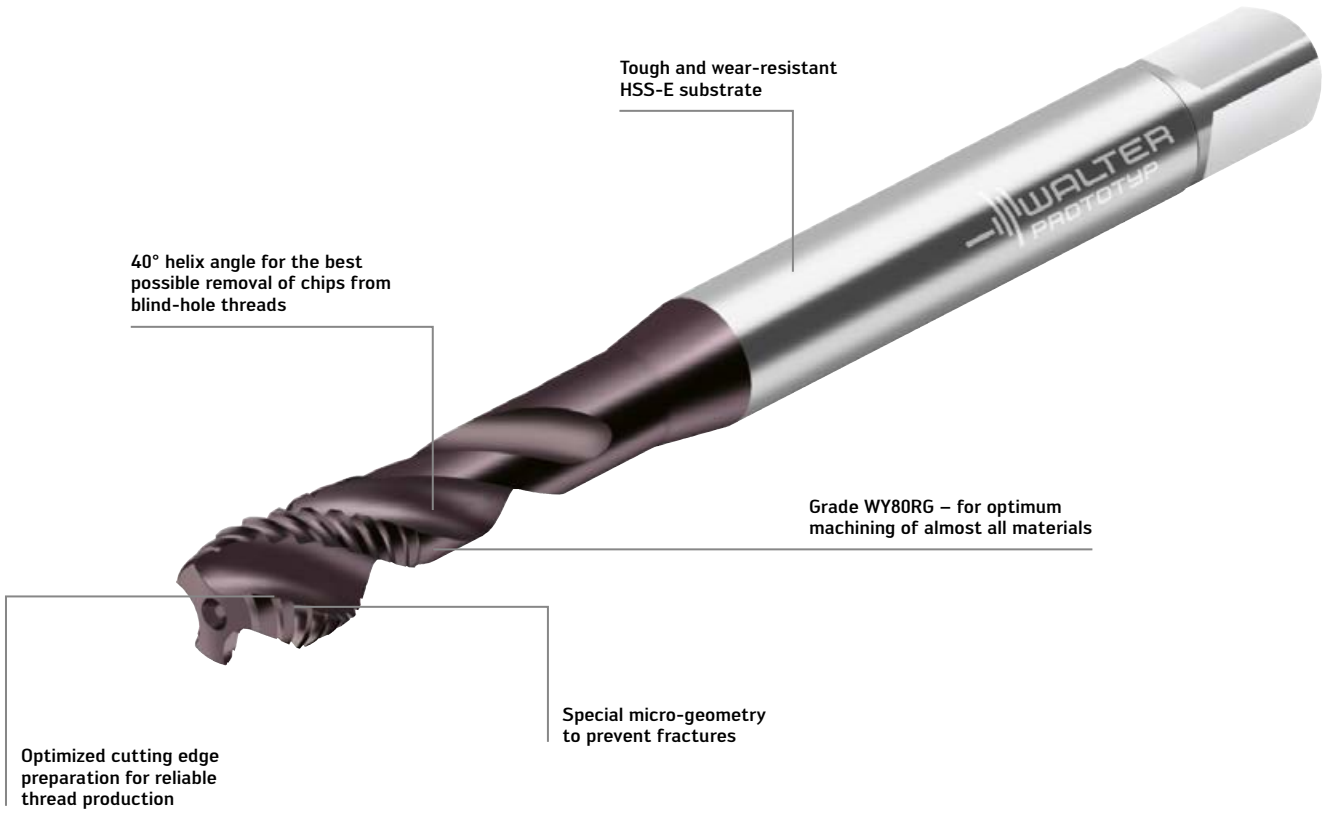
Profiles (DIN/ANSI):
- UNC, UNF, UN-8
- Thread insert: UNC STI, UNF STI

Existing profiles (DIN and DIN/ANSI):
- Metric, metric fine
- Thread insert (STI): EgM

THE TOOL

- HSS-E blind hole tap
- Grades: WY80FC, WY80RG and WY80AA
- Available in various tolerance levels
- Variant: Extra-long
- Chamfer forms: C and E

Variants:
- Available in all standard profiles and dimensions



Thread·tec™ Omni TD117 Advance

Fig.: TD117-M10-C0-WY80RG

THE APPLICATION

- Blind-hole thread up to 2.5 × D_N
- Suitable for ISO materials P, M, K and N
- Area of use: General mechanical engineering

P	M	K	N
●●	●●	●●	●●

Grade WY80FC:
Universal application with excellent chip formation

P	M	K	N
●	●●	●	●●

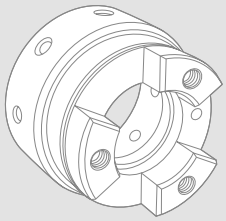
Grade WY80RG:
High performance in ISO M and ISO N materials

P	M	K	N
●●	●	●●	●

Grade WY80AA:
First choice for ISO P and ISO K materials

APPLICATION EXAMPLE

Coupling flange

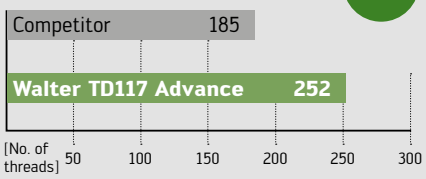


Material:	11SMn30/1.0715
Strength:	650 N/mm² / 195 HB
Dimension:	M10
Tap:	TD117-M10-E0-WY80RA

Cutting data	Competitor	**Walter TD117 Advance**
v_c (m/min)	18	18
Thread depth (mm)	22	22
Cooling	external	external
Tool life (number of threads)	185 – Breakage	252 – No breakage

Comparison: Tool life

+36%



POTENTIAL BENEFITS

- Reliable thread production
- Universal application for numerous materials
- Reduction of tool and inventory costs

Thread·tec™ – a safe choice for every application.

EXPANSION OF THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

Profiles (DIN):
- G, BSW
- UNC, UNF, UNEF
- Thread insert (STI): EgUNC, EgUNF

Profiles (DIN/ANSI):
- UNC, UNF
- Thread insert: UNC STI, UNF STI

Existing profiles (DIN and DIN/ANSI):
- Metric, metric fine

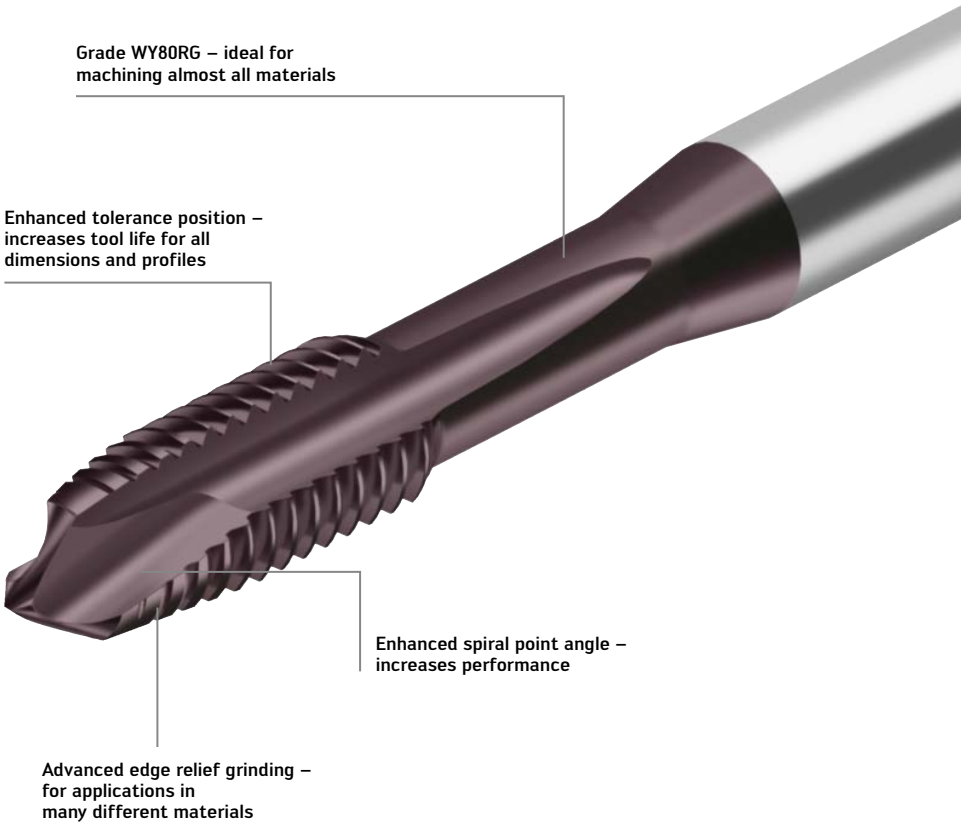
THE TOOL

- HSS-E through hole tap
- Grades: WY80FC, WY80RG and WY80AA
- Available in various tolerance levels
- Variants: Long, extra-long and l eft-hand cutting
- Chamfer form B

Variants:
- Available in all standard profiles and dimensions

THE APPLICATION

- Through-hole thread up to 3 × D_N
- Suitable for ISO materials P, M, K and N
- Area of use: General mechanical engineering



POTENTIAL BENEFITS

- Reliable thread production
- Universal application for various materials
- Reduced tool and inventory costs

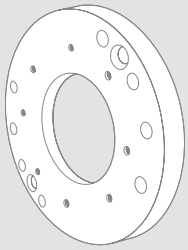
HSS-E substrate with greater hardness – optimizes wear resistance and tool life

Thread·tec™ Omni TD217 Advance

Fig.: TD217-M10-C0-WY80RG

APPLICATION EXAMPLE

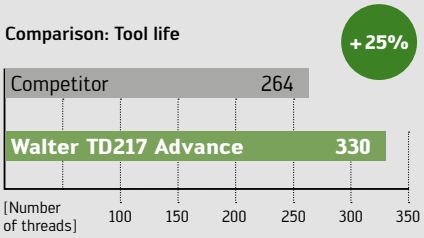
Guide flange



Material:	42CrMo4/1.7225/4140
Strength:	900 N/mm² / 266 HB
Dimension:	M12
Tap:	TD217-M12-E0-WY80AA

Cutting data	Competitor	Walter TD217 Advance
v_c (m/min)	15	21
Thread depth	18	18
Cooling	external	external
Tool life (number of threads)	264	330

Comparison: Tool life



P	M	K	N
●●	●●	●●	●●

Grade WY80FC: Universal application with a wide selection of dimensions in the standard range

P	M	K	N
●	●●	●	●●

Grade WY80RG: High performance in ISO M and ISO N materials

P	M	K	N
●●	●	●●	●

Grade WY80AA: First choice in ISO P and ISO K materials

Reliable One –
The specialist for mass production

NEW

THE TOOL

- Solid carbide Blind-hole tap
- Grade WJ30EL
- Tolerance: 6HX
- Chamfer form C

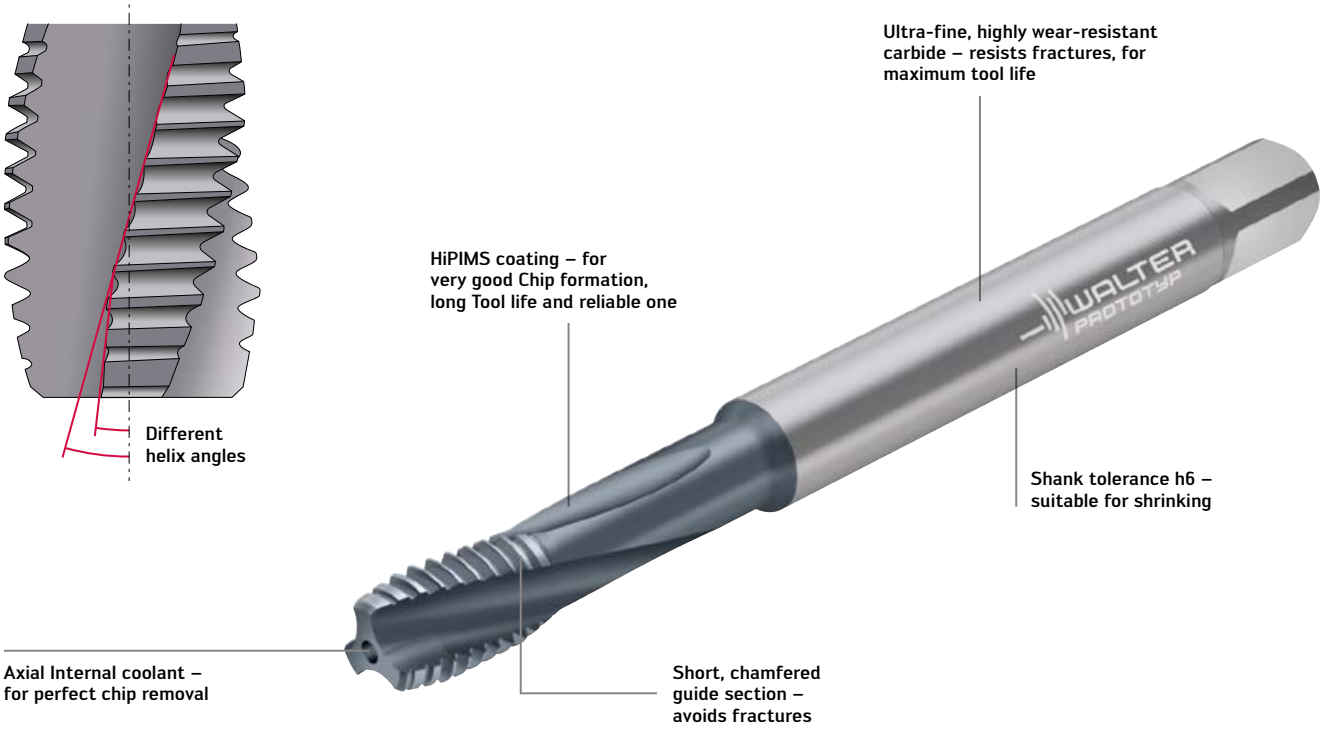
Dimensions:

- Metric: M6-M12

THE APPLICATION

- Blind-hole thread up to 2 × D_N
- ISO materials P, K and N
- Large batch sizes and mass production
- Areas of application: Automotive industry and automotive suppliers

Special geometry for TC180 Supreme – for short chips and process reliability



Blind-hole tap TC180 Supreme

Fig.: TC180-M10-C1-WJ30EL

POTENTIAL BENEFITS

- Very long Tool life thanks to HiPIMS coating
- High wear resistance due to ultra-fine carbide
- High cutting speeds possible
- Reliable due to special lead angle geometry
- High cost-effectiveness for large batch sizes

A safe choice for large batch sizes.

NEW

THE TOOL

- Solid carbide through hole tap
- Grade WJ30EL
- Tolerance: 6HX
- Chamfer form B

Dimensions:

- Metric: M6-M12
- Metric fine: M14×1.5 and M16×1.5

THE APPLICATION

- Through-hole thread up to 2 × D_N
- Suitable for ISO materials P, K and N
- Large batch sizes and mass production
- Areas of application: Automotive industry and automotive suppliers

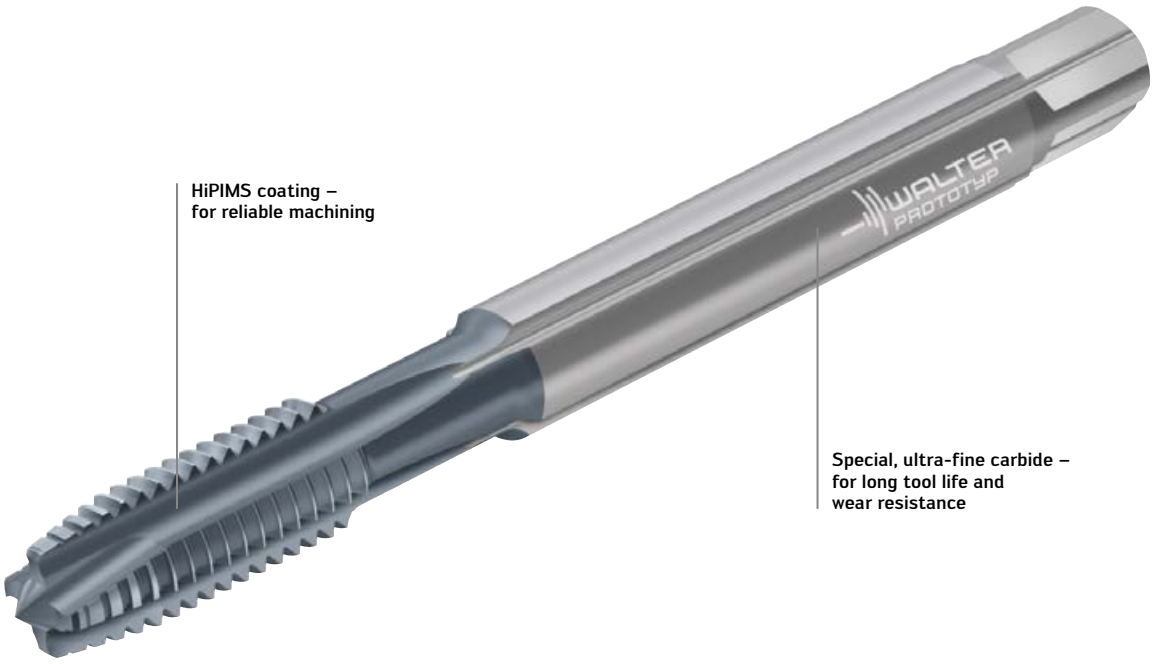


Fig.: TC280-M10-C3-WJ30EL

POTENTIAL BENEFITS

- Very long Tool life
- High cutting speeds possible
- Reliable One - Thread production for the high-volume enviroments

Universal One – Fast, with strong performance

NEW

THE TOOL

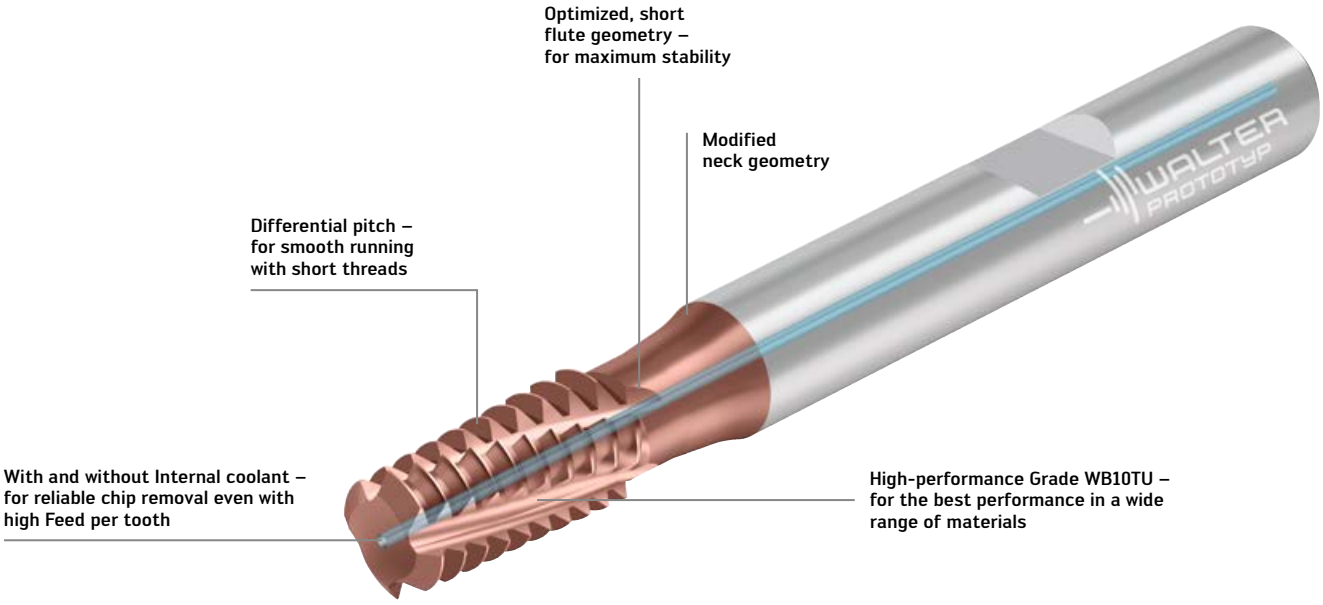
- Universal One – TD610 Supreme full-effective thread milling cutter
- With and without internal cooling
- Shank in accordance with DIN 6535 HB

The programme

- M4-M20
- M4×0.5-M20×2
- UNC8-UNC7/8
- UNF8-UNF3/4
- G1/16-G1

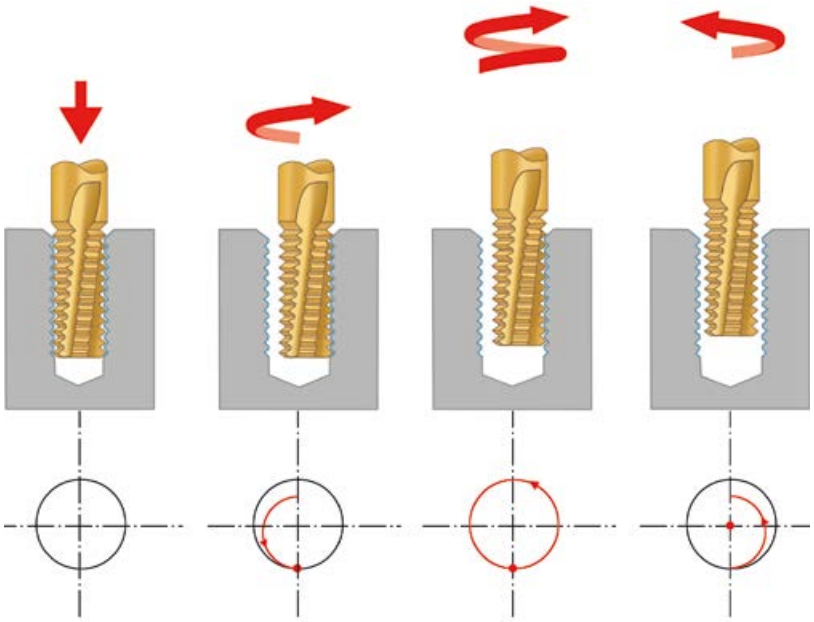
THE APPLICATION

- Blind-hole and through-hole threads
- ISO materials P, M, K, N and S up to 48 HRC
- Thread depth ≤ 1.5 × D_N
- Ideal for strict requirements on process reliability (e.g. for expensive components)



Full-effective TD610 Supreme thread milling cutter — TD610-M10-W1C-WB10TU

THE STRATEGY



Plunging after positioning over the core hole

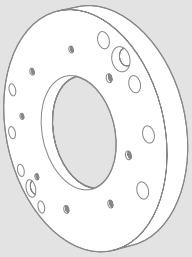
Entry loop

Creating the thread using the 360° helix

Exit loop followed by resetting to start position

APPLICATION EXAMPLE

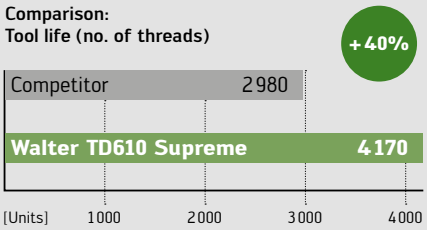
Guide flange



Material:	1.7225/ 42CrMo4/ 4140
Tensile strength:	820 N/mm2
Tool:	TD610-M6-W1C-WB10TU
Thread size/depth:	M6 / 9 mm

Cutting data	Competitor	Walter TD610 Supreme
No. of teeth (z)	6	4
v_c (m/min)	103	103
f_z (mm)	0.04	0.06
No. of radial cuts	1	1
Machining time per thread (s)	2.9	2.9
Tool life (no. of threads)	2980	4170

Comparison:
Tool life (no. of threads)



POTENTIAL BENEFITS

- Reliable chip removal even at high Feed per tooth thanks to Internal coolant
- Short machining times and high Tool life quantities with few Radius corrections
- Excellent thread quality
- Universal One - due to very large product offering

Walter Xpress

Sovereign specialist for the aerospace industry.

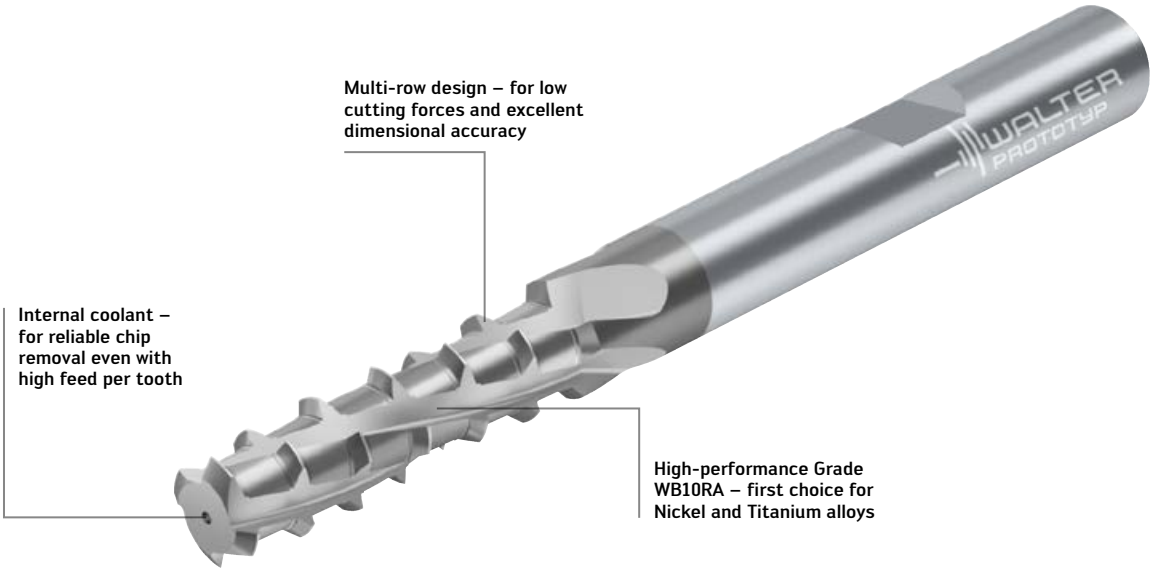
NEW

THE TOOL

- Multi-row thread milling cutter TC620 Supreme
- Usable length: up to 2.5 × D_N in the standard program

THE APPLICATION

- Specialist for the aerospace industry
- Primary application: ISO materials M and S (up to 48 HRC)
- Secondary application: ISO materials P, K and N (up to 48 HRC)
- Materials that are difficult to machine (e.g. Inconel 718)
- Ideal for difficult applications and high requirements (e.g. in terms of process reliability)



Multi-row solid carbide thread milling cutter — TC620-MJ10-W1E-WB10RA

POTENTIAL BENEFITS

- Low costs per thread due to high Tool life quantities and short machining time
- High process reliability and easy handling, as Radius corrections are extremely rare
- Large Product range - now also for J-threads

Specializes in steel, delivers top performance in cast iron.

EXPANSION OF THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

- Additional Indexable inserts in the Tiger-tec® Gold milling grade WPP35G:
- Tangential Indexable inserts for Slotting cutters
- Round inserts for copy milling cutters
- Indexable inserts for High-feed milling cutters

THE INDEXABLE INSERTS

- Indexable inserts for shoulder, face, high-feed, profile, copy and slot milling
- For all standard milling cutters from the Walter range (e.g. Xtra·tec® XT, Walter BLAXX, M4000)

THE GRADE

- Wear-resistant Tiger·tec® Gold CVD coating: Fine-matrix, highly textured MT-TiCN
- Multi-layer MT-TiCN structure with optimized elastic properties of the crystals
- Multi-stage post-treatment for improved toughness and reduced friction thanks to the smooth rake face
- Highly textured Al_2O_3 top layer on the rake face reduces adhesion (e.g. with ISO K)

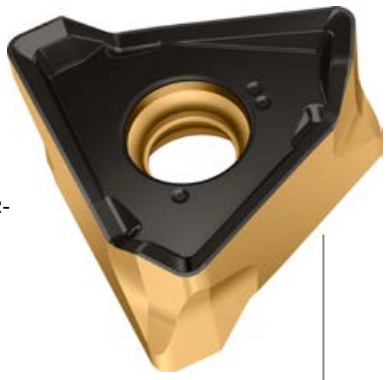


Fig.: TNMU160508R-G27 WPP35G

Fig.: SDMT120408-F57 WPP35G

Fig.: LNHU130612R-L55T WPP35G

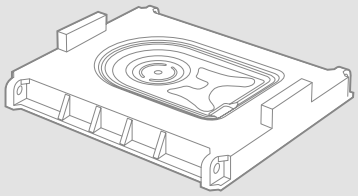
Powered by Tiger·tec®Gold

Versatile: The new Tiger·tec® Gold WPP35G milling grade

Fig.: Xtra·tec® XT, Walter BLAXX & M4000

APPLICATION EXAMPLE

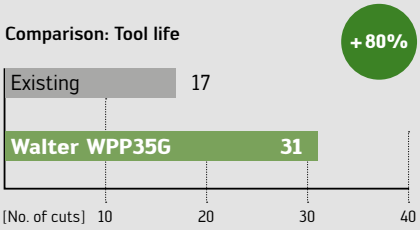
Cast iron



Material:	40CrMnMo7 (1.2311) P2.5.Z.HT
Tensile strength:	300 HB
Tool:	M5004-100-B32-07-04
Indexable insert:	ODMT0605ZZN-D57

Cutting data	Existing	**Walter WPP35G**
v_c (m/min)	117	117
f_z (mm)	0.34	0.34
v_f (mm/min)	1000	1000
a_p (mm)	2.5	2.5
a_e (mm)	70	70
Cooling	Emulsion – internal	
Tool life No. of cuts	17	31

Comparison: Tool life



THE APPLICATION

- Roughing steel and cast iron materials at moderate to high cutting speeds
- For average to good machining conditions
- Dry machining (especially for steel) or with cooling lubricant
- Areas of use: General mechanical engineering, mold and die making, aerospace, energy and automotive industries

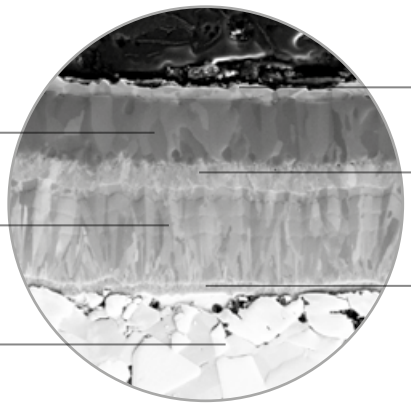
Conventional TiCN Competitor

Wears more quickly because individual crystals detach from the compound.

Highly textured MT-TiCN Tiger·tec® Gold

Higher wear resistance, as aligned crystals offer more resistance.

Cross section: Tiger·tec® Gold WPP35G milling grade



Gold-colored TiN top layer on the flank face

Al_2O_3 aluminium oxide layer – wear-resistant heat shield

Bonding layer

MT-TiCN base layer – with ultimate hardness, resistant to wear caused by chemicals

Bonding layer

Carbide substrate with high level of toughness

POTENTIAL BENEFITS

- Reliable coating, ideal for mostly automated production and mass production
- High level of cost-efficiency due to Tiger·tec® Gold coating
- Resistant to flank face wear due to fine-matrix, highly textured MT-TiCN
- Simple wear detection due to gold-colored TiN layer on the flank face

Six strong cutting edges for ISO K.

EXPANSION OF THE RANGE

NEW ADDITION TO THE PRODUCT RANGE

WKK25G

- Indexable inserts TNMU-G27 in Tiger-tec® Gold Grade WKK25G
- Universal one for ISO K materials (e.g. Ductile cast iron)
- Ideal for unfavorable conditions such as Interrupted cut or for Wet machining

THE INDEXABLE INSERTS

TNMU11T3...

- Maximum depth of cut a_p = 5 mm; corner radii r = 0.4 mm and 0.8 mm

TNMU1605...

- Maximum depth of cut a_p = 8 mm; corner radii r = 0.8 mm, 1.2 mm and 1.6 mm
- Design with secondary cutting edge
- Directly pressed: For maximum cost-efficiency

Geometries:

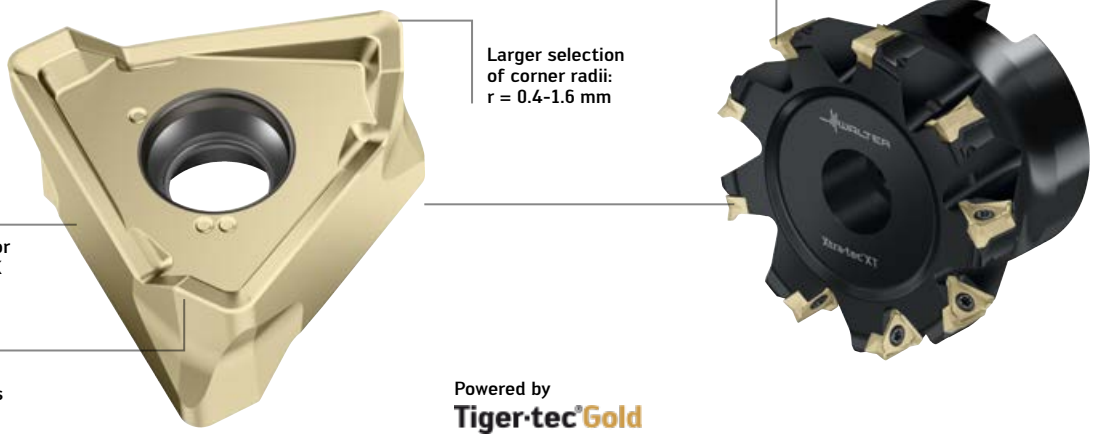
- G27 – The universal one
- G57 – The easy-cutting one

THE TOOL

- Shoulder milling cutter with triangular, double-sided indexable inserts
- Two pitches for different applications
- 90° approach angle
- Interfaces: Weldon shank and bore adaption
- Diameter range: 25–160 mm or 1–6"

THE APPLICATION

- Primary application: Steel and cast iron; secondary application: Stainless steels and materials with difficult cutting properties
- Face milling, shoulder milling, ramping, pocket milling and circular interpolation milling
- Areas of application: General mechanical engineering, aerospace, medical, electronics and precision mechanical industries



Xtra·tec® XT M5137 shoulder milling cutter with extended application range

Fig.: M5137-063-B22-09-05
Fig.: TNMU160508R-G27 WKK25G

POTENTIAL BENEFITS

- High process reliability due to stable, double-sided indexable inserts
- Extended application range due to different corner radii of the TNMU indexable inserts
- High level of cost-efficiency due to Tiger·tec® cutting tool materials and six cutting edges per indexable insert
- Simple tool selection and low cutting tool material costs
- Wide range of applications thanks to innovative Indexable insert geometry

INNOVATIONS & PORTFOLIO

WALTER EWAG

CREATING TOOL PERFORMANCE




Walter Maschinenbau GmbH with headquartes in Tubingen produces CNC machines for grinding and eroding as well as laser processing metal, wood and PCD tools as well as rotationally symmetrical production parts.

The production program is complemented by optical CNC measuring machines for non-contact complete measurement of complex precision tools and rotationally symmetrical parts with logged accuracy in one clamping.

Our know-how is incorporated in the development of our own software. Comprehensive service offers round off our range of products.

Together with EWAG, we are a system and solution provider for tool machining and form a joint technology group within UNITED MACHINING SOLUTIONS.

The highlights at a glance

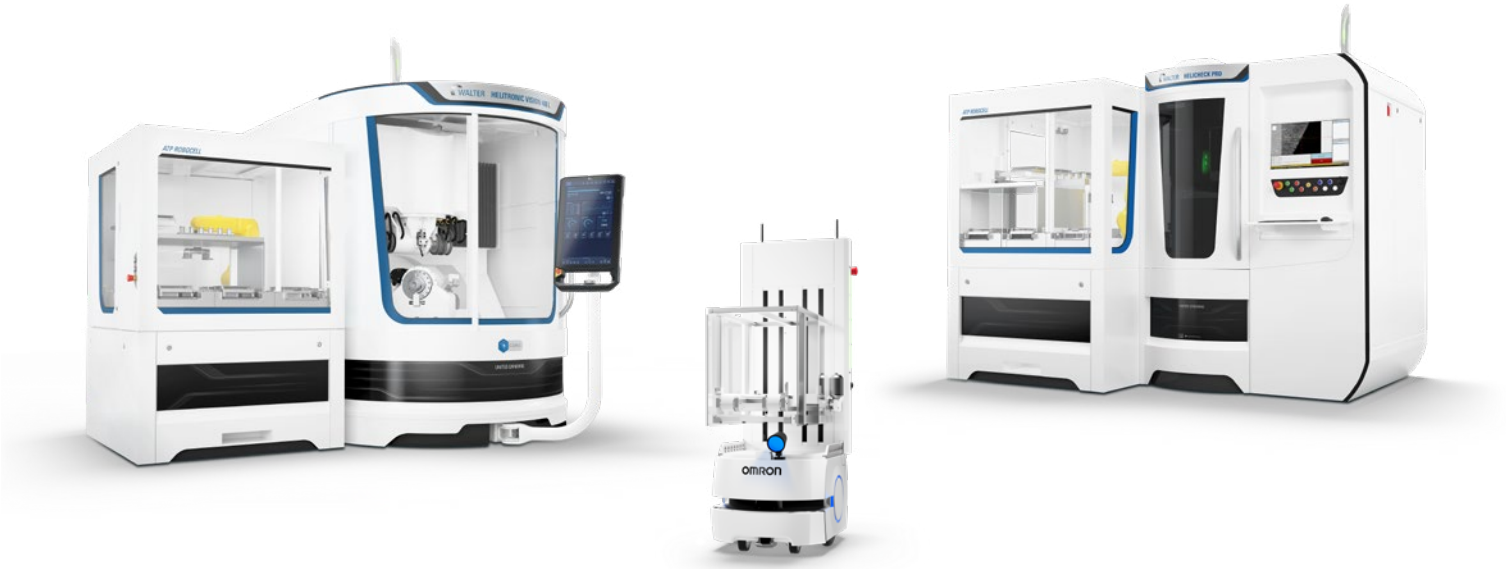
NETWORKED AUTOMATION SOLUTION
AUTOMATED TOOL PRODUCTION (ATP)

With Automated Tool Production (ATP), WALTER offers a forward-looking automation solution for maximum efficiency. ATP seamlessly connects grinding, eroding, and measuring machines as well as upstream and downstream systems, enabling automatic process compensation and continuous quality control. The scalable solution can be integrated into existing production environments without requiring additional space – an important step toward the "dark factory".

The following WALTER machines can be integrated into Automated Tool Production (ATP):

Grinding/Erosion machines
– HELITRONIC VISION 400 L, HELITRONIC VISION DIAMOND 400 L
– HELITRONIC POWER 400, HELITRONIC POWER DIAMOND 400
– HELITRONIC RAPTOR, HELITRONIC RAPTOR DIAMOND
– HELITRONIC MINI PLUS
– HELITRONIC DIAMOND EVOLUTION

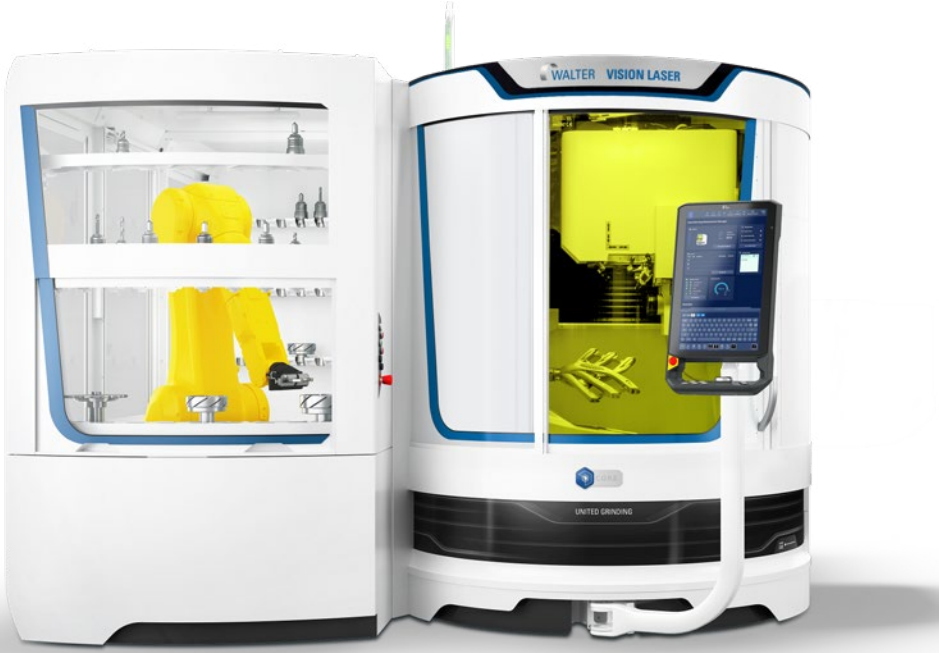
Measuring machines
– HELICHECK NANO
– HELICHECK PRO
– HELICHECK PLUS



FOR SUPER-HARD TOOLS
VISION LASER

The VISION LASER sets new standards in the processing of super-hard materials such as PCD, CVD-D and MCD. The reliable and highly efficient laser system produces breakout-free cutting edges on complex geometries with maximum precision and quality.

Particularly impressive: the environmentally friendly technology operates without consumables, while offering low operating costs and fast processing times.

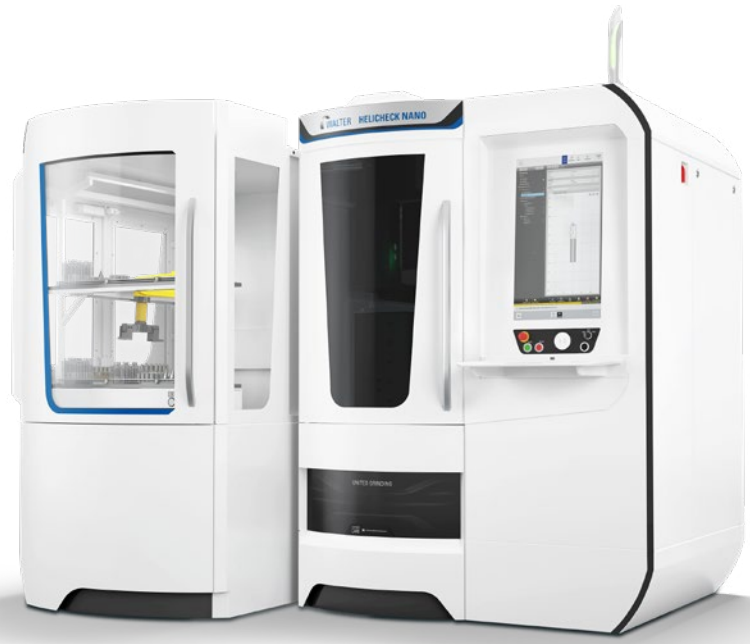


THE NEW ENTRY-LEVEL MACHINE
HELITRONIC RAPID

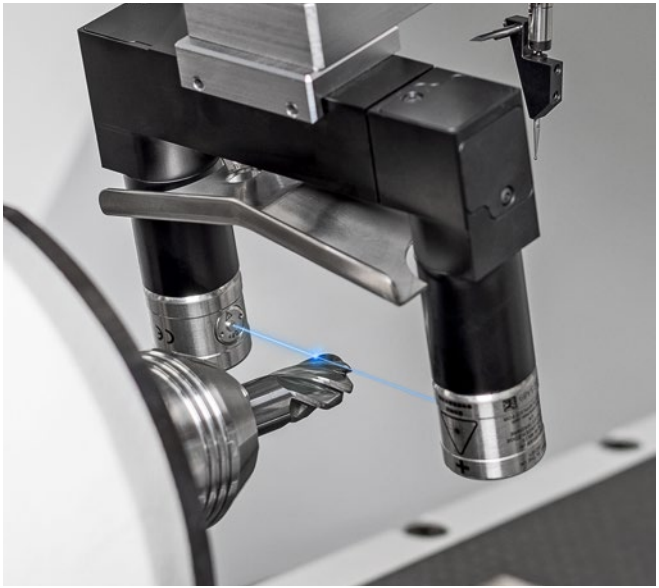
The HELITRONIC RAPID is the economical entry-level solution for professional tool grinding. The 5-axis CNC tool grinding machine offers precision in both production (Ø 1–16 mm) and regrinding (Ø 3–100 mm) of milling cutters, drills, and special tools. Optionally expandable with top loader, glass scales, and torque motor for the A-axis.

MEASURING PRECISION IN THE MICRO RANGE
HELICHECK NANO

HELICHECK NANO – The new standard for measuring tools in the micro and nano range. This fully automatic CNC measuring machine delivers operator-independent, high-precision measurement results for tools with diameters from 0.1 mm to 16 mm. Measurement is performed with an 8:1 lens and approx. 400x magnification for transmitted light parameters. In addition, the machine features a newly developed microscope turret and innovative incident light image processing for determining the cutting geometry. This guarantees comprehensive quality documentation.



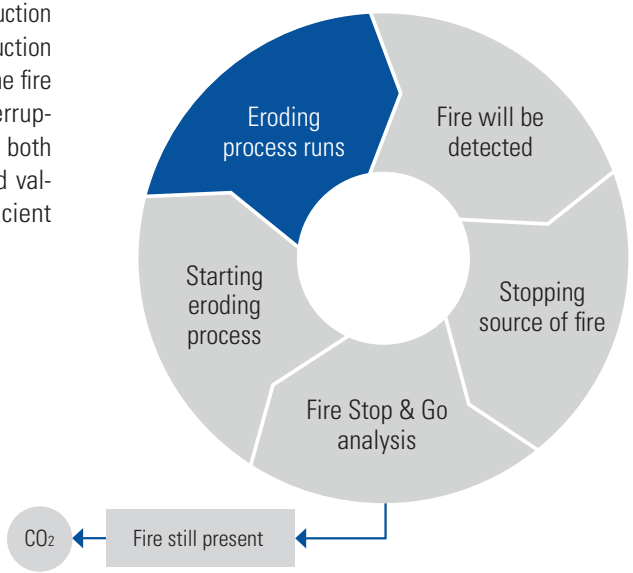
THE PRECISE MEASURING SYSTEM
LASER CONTOUR CHECK



With the advanced Laser Contour Check option, WALTER offers an intelligent measuring system that is integrated directly into the tool grinding and EDM machine. The non-contact technology enables highly accurate measurements of various tool parameters during the production process. This in-process measurement improves accuracy and reduces downtime – a decisive advantage for consistent quality assurance in your production.

INCREASED PRODUCTIVITY AND RESOURCE SAVINGS
FIRE STOP & GO

The Fire Stop & Go system for eroding machines from WALTER minimizes production interruptions and prevents costly production downtime. The combination of real-time fire detection and targeted process interruption with minimal fire risk increases both productivity and safety – a real added value for resource-saving and cost-efficient manufacturing.



TAILOR-MADE PACKAGES
WE CARE

Our customized maintenance program WE Care offers tailor-made solutions for every WALTER grinding and EDM machine with FANUC control. Select the ideal package for your needs from the WE CARE maintenance program:

- **WE CARE Check**, particularly suitable for customers who only want information about the condition of their machine.
- **WE CARE Innovate**, particularly suitable as a customised solution for customers who want to integrate their own maintenance department into the maintenance process.
- **WE CARE Complete**, for customers who prefer regular inspection and maintenance work by the machine manufacturer.

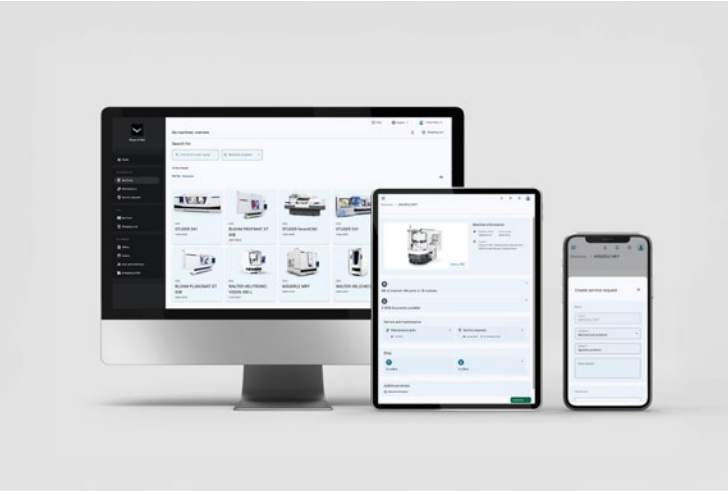
The digital fingerprint and free remote services are already included in WE CARE Innovate. A standard travel allowance can be added to almost all European countries. Various additional packages can be added to the above packages to suit your individual needs.

MANUFACTURER-NEUTRAL PLATFORM
TRANSACTION NETWORK

The Transaction Network establishes an industry-leading, manufacturer-neutral platform for optimized service and maintenance processes in the machine industry.

This digital solution includes 360° asset management, digitized service processes and a modern online shop. The digital machine file contains all essential documents and data in one central location. You can also access your machine history.

As an open, networked ecosystem with intelligent data integration, it forms a customer-oriented portal for a company's entire machine fleet – all manufacturers on a single platform with a uniform user experience.



MACHINE PORTFOLIO


WALTER HELITRONIC POWER DIAMOND 400
UNITED GRINDING

CREATING TOOL PERFORMANCE

GRINDING
Grinding of rotation-symmetrical tools and workpieces, as well as indexable inserts

EROSION
Eroding and grinding of rotation-symmetrical tools

LASER
Production of tools with laser

Machines	Use | Materials	Tool dimensions[1] max. length[2] / diameter
HELITRONIC G 200	P R HSS TC C/C	235 mm / Ø 1 – 125 mm
HELITRONIC RAPID	P R HSS TC C/C CBN	255 mm / Ø 1 – 100 mm
HELITRONIC MINI PLUS	P R HSS TC C/C CBN	255 mm / Ø 1 – 100 mm
HELITRONIC RAPTOR	P R HSS TC C/C CBN	280 mm / Ø 3 – 320 mm
HELITRONIC POWER 400	P R HSS TC C/C CBN	520 mm / Ø 3 – 315 mm
HELITRONIC VISION 400 L	P R HSS TC C/C CBN	420 mm / Ø 3 – 315 mm
HELITRONIC MICRO	P HSS TC C/C CBN R HSS TC C/C CBN	220 mm / Ø 0.1 – 12.7 mm 220 mm / Ø 3 – 12.7 mm
HELITRONIC DIAMOND EVOLUTION	P R HSS TC C/C CBN PCD	185/255 mm / Ø 1 – 165 mm
HELITRONIC RAPTOR DIAMOND	P R HSS TC C/C CBN PCD	270 mm / Ø 3 – 400 mm
HELITRONIC POWER DIAMOND 400	P R HSS TC C/C CBN PCD	520 mm / Ø 3 – 380 mm
HELITRONIC VISION DIAMOND 400 L	P R HSS TC C/C CBN PCD	420 mm / Ø 3 – 315 mm
VISION LASER	P R TC CVD-D MCD PCD	400 mm / Ø 3 – 250 (300) mm

MEASURING
Contact-free measurement of tools, workpieces and grinding wheels

SOFTWARE
The intelligence of tool machining and measuring for production and regrinding

CUSTOMER CARE
Comprehensive range of services

Machines	Use	$E_{UX,MPE}$-value	Tool dimensions[1] max. length[2] / diameter
HELICHECK PRO	M	(1.2 + L/300) µm	300 mm / Ø1 – 200 mm
HELICHECK PRO LONG	M	(1.2 + L/300) µm	730 mm / Ø1 – 200 mm
HELICHECK PLUS	M	(1.2 + L/300) µm	300 mm / Ø0.1 – 200 mm
HELICHECK PLUS LONG	M	(1.2 + L/300) µm	730 mm / Ø0.1 – 200 mm
HELICHECK NANO	M	(1.2 + L/300) µm	120 mm / Ø0.1 – 16 mm

AUTOMATION
Solutions for complete tool production: From loading systems that are integrated into the machine's working area to robot loaders and Automated Tool Production (ATP), our innovative solution for networking grinding, eroding and measuring machines from WALTER.

[1] The maximum tool dimensions depend on the type of tool and its geometry, as well as the type of machining.
[2] From theoretical taper diameter of the workpiece holder.

Use: P Production R Regrinding M Measuring
Materials: HSS High speed steel TC Tungsten carbide C/C Cermet/ceramics CBN Cubic boron nitride PCD Polycrystalline diamond CVD-D Chemical vapour deposition MCD Monocrystalline diamond