

_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 Tigertec® 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-tools.com

 **WALTER**
Engineering Kompetenz

ISO turning	Page
WL geometries FM2, MN2, RM4, RP4 – for W1011, W1211	4
Grooving	Page
Groov-tec™ GD G5011 grooving system	6
Groov-tec™ GD axial grooving system G5111	8
Groov-tec™ GD – Reinforced Parting blade G5041	9
Groov-tec™ GD Deep-parting blade G5042	10
Drilling from solid	Page
Drivox-tec™ Ikon DD170 Supreme	12
Drilling tools with indexable inserts	Page
Drion-tec® D-Spade D5142 double-sided exchangeable tip drill	14
Drion-tec® E-Peak D5150 with exchangeable drill head DS50	16
Exchangeable Drill Insert – P6011	18
Geometry F57 for Indexable insert drills	19
Tapping	Page
Thread-tec™ Omni HSS-E TD117 Advance blind-hole tap	20
Thread-tec™ Omni HSS-E TD217 Advance through-hole tap	22
Blind-hole tap TC180 Supreme	24
TC280 Supreme solid carbide through hole tap	25
Thread milling	Page
TD610 Supreme thread milling cutter	26
Multi-row Thread milling cutter TC620 Supreme	28
Milling tools with indexable inserts	Page
Tiger-tec® Gold WPP35G milling grade	30
WKK25G for Xtra-tec® XT M5137	32

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

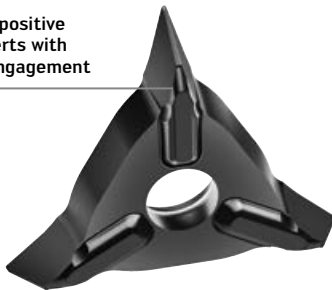
RM4

- 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

Three-edged, positive indexable inserts with WL positive engagement



Sharp, Precision-ground and polished FM2 geometry for Finishing



Stable roughing geometry RP4 – for higher feed rates during Copy turning

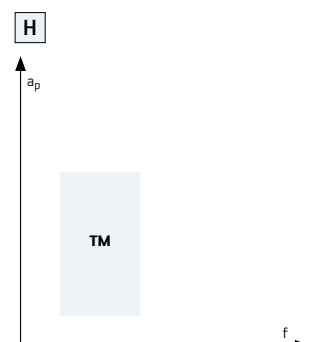
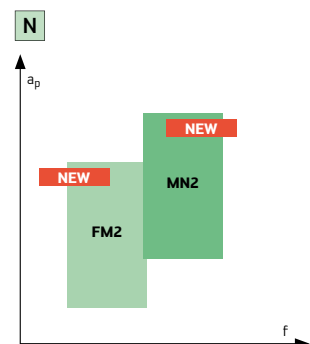
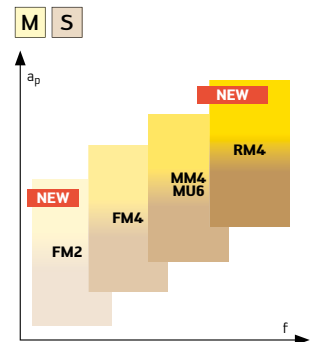
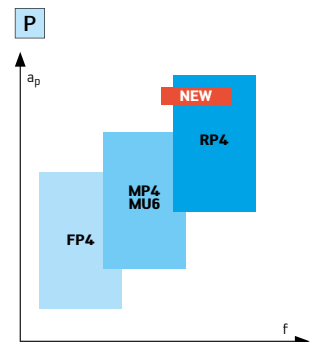


Precision-ground FM2 full-radius geometry (radii: 1.0 / 1.5 / 2.0 / 2.5 and 3.0 mm) – for Finishing Inconel components

WL geometries FM2, MN2, RP4

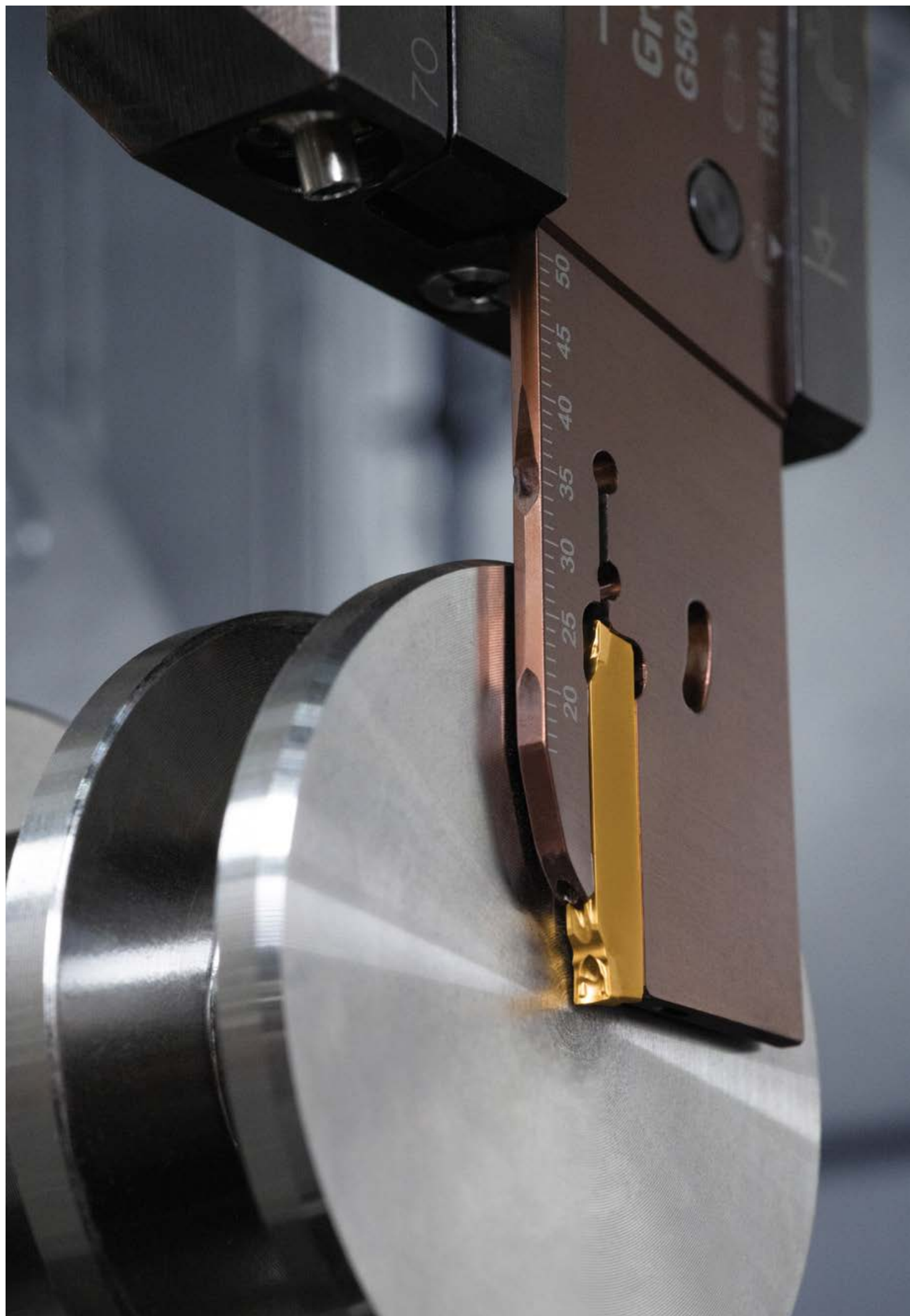
Fig.: WL17 and WL25

GEOMETRY OVERVIEW & APPLICATION



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



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

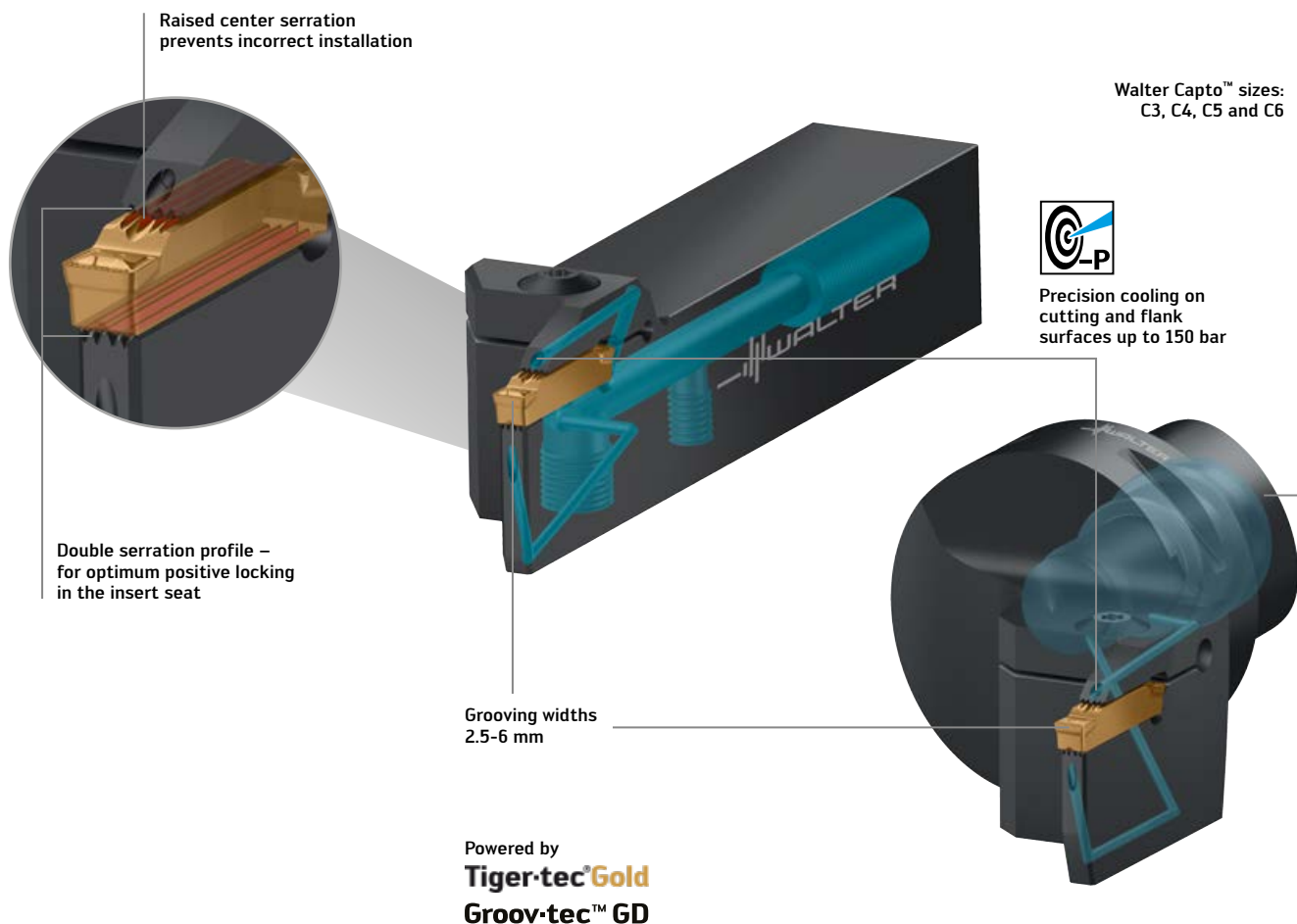
- Patent-pending, double-edged GD26 cutting inserts with double serration clamping profile
- Grooving widths: 2.5 / 3.0 / 4.0 / 5.0 / 6.0 mm

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



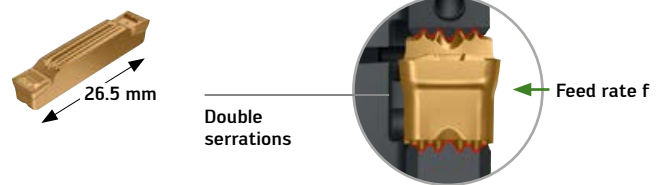
Groov-tec™ GD grooving system

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

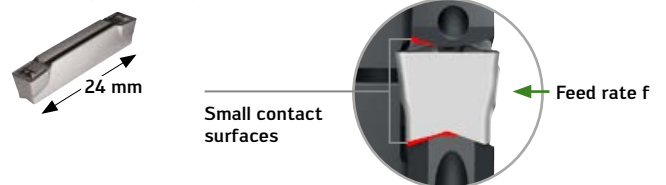
THE TECHNOLOGY

- 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



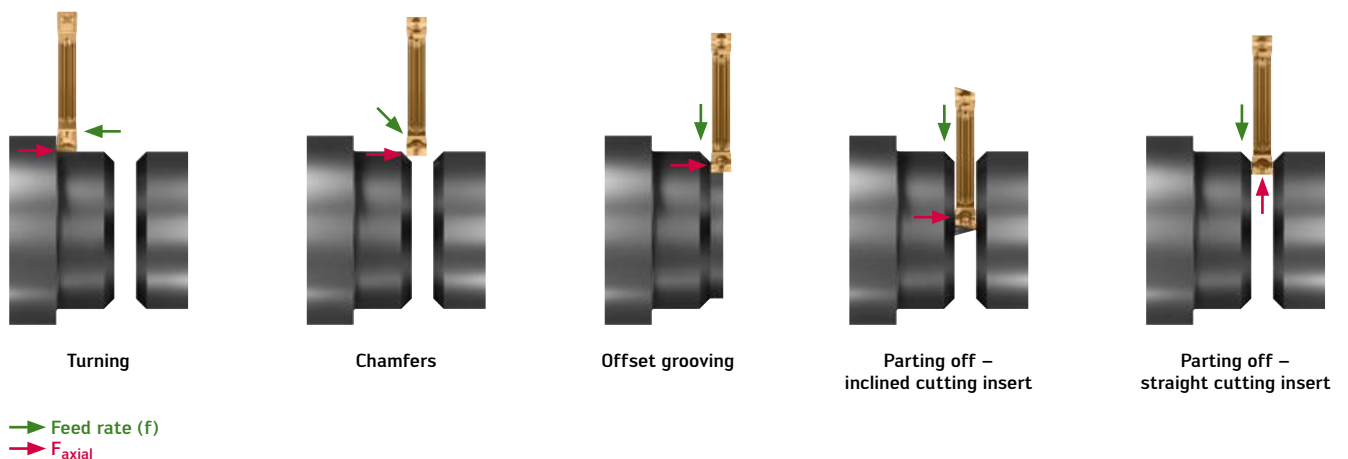
Existing grooving inserts



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



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

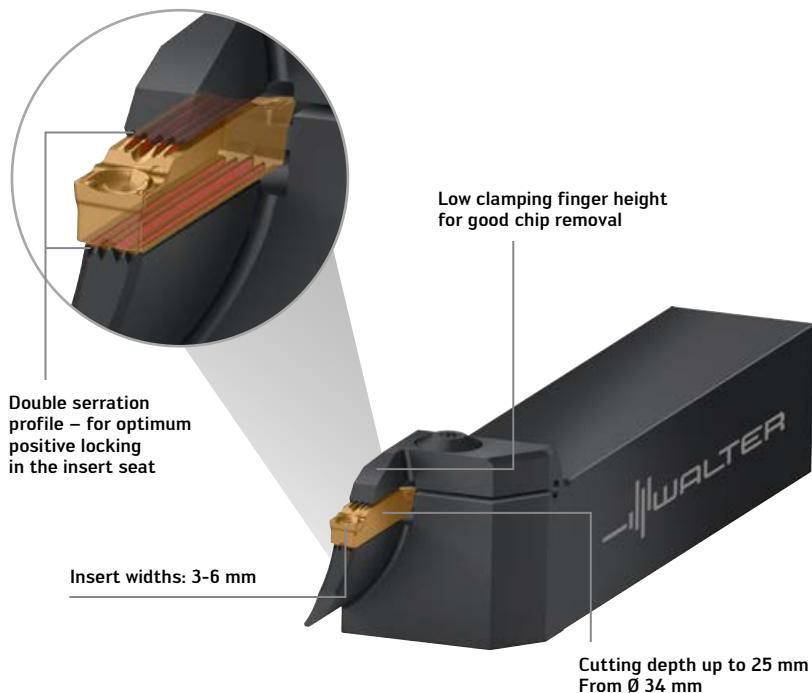
- Groov-tec™ GD axial grooving tool G5111
- Indexable insert clamping can be operated from both sides
- 3 Cutting depths: T12, T21 and T25 mm
- Axial grooving diameter ranges: 34-500 mm
- Shank sizes: 25×25 mm and 1 inch

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

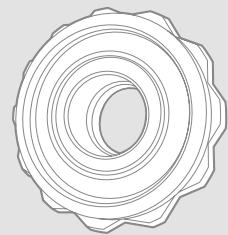
THE APPLICATION

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



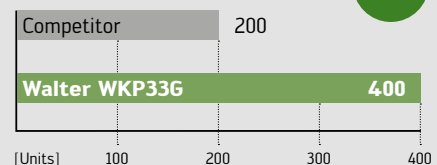
APPLICATION EXAMPLE

**Coupling flange –
axial grooving $D_{\min}$ 40 mm**



Material:	C45 (1.0503)	
Tensile strength:	630–780 N/mm ²	
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

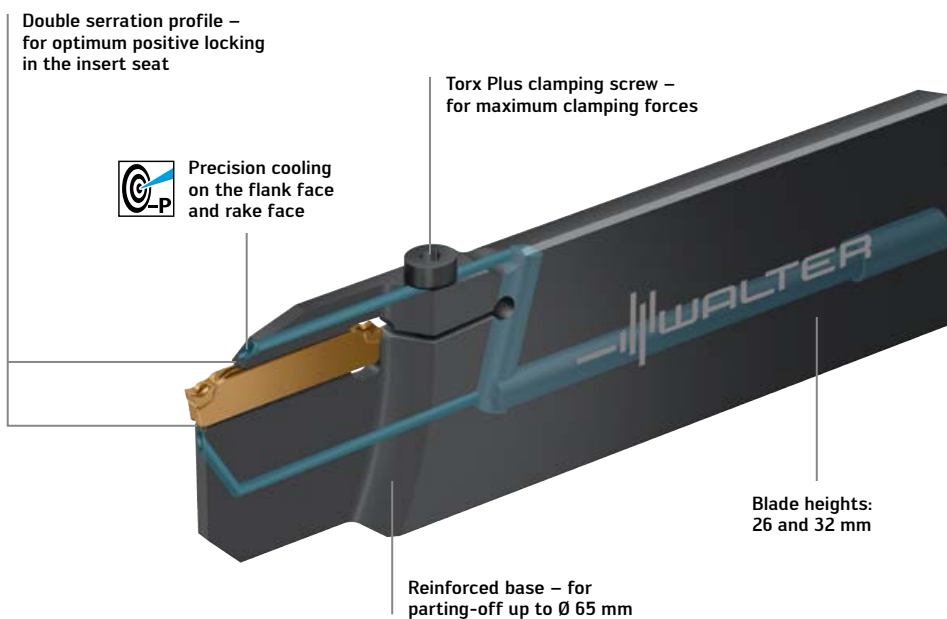
- Groov-tec™ GD Parting blades G5041..R/L-P with reinforced shaft
- Reinforced Parting blades for cutting and grooving; with and without Precision cooling
- Right-hand, left-hand and contra versions available
- Blade heights: 26-32 mm
- Insert widths: 3 and 4 mm

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



Powered by
Tiger-tec[®]Gold
Groov-tec™ GD

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

Available variants:

G5041...R...
Standard, right



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



G5041...L...
Standard, left



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



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

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

NEW

THE TOOL

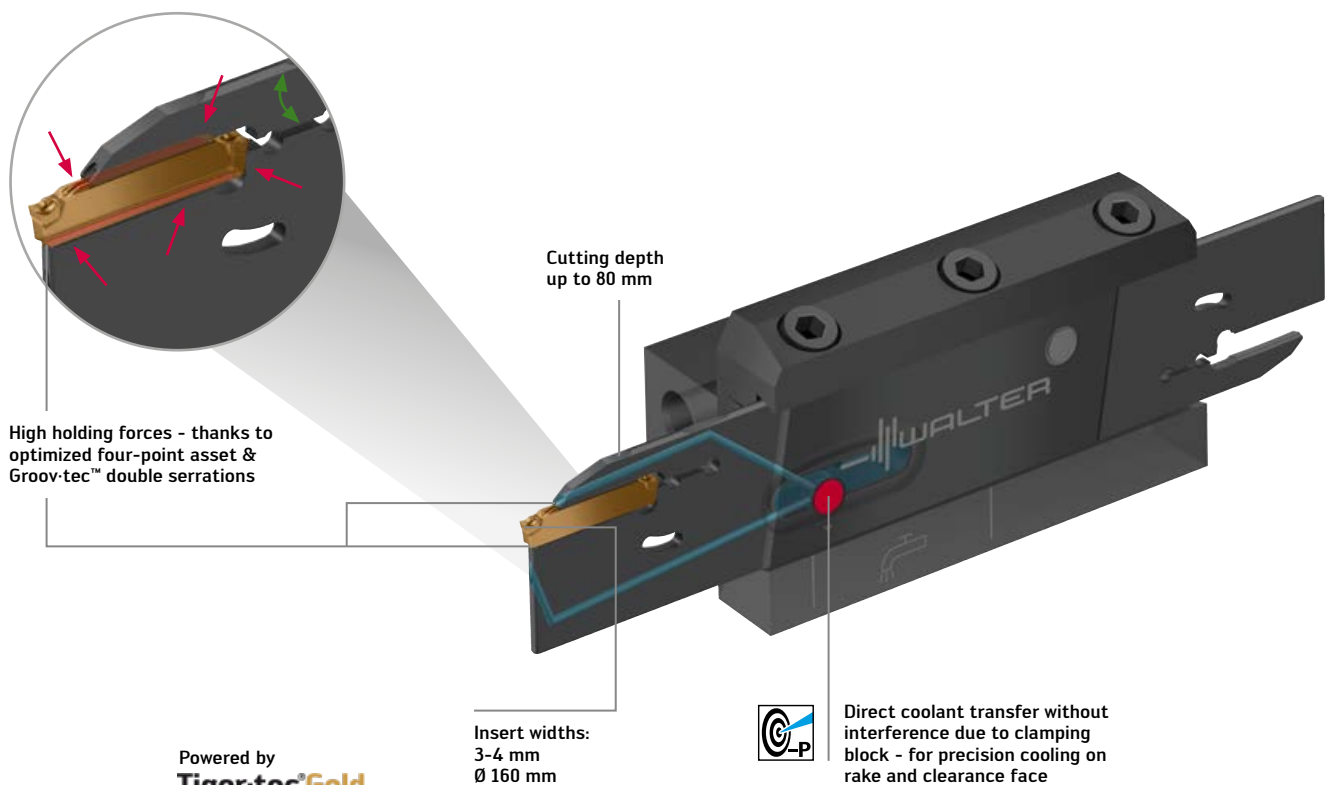
- Groov-tec™ GD Deep-parting blades G5042/G5042-P; with and without Precision cooling
- G5042 Insert widths: 3-6 mm
- G5042-P Insert widths: 3-4 mm
- Selfclamping system with double prism and four-point asset
- Blade height: 26 and 32 mm
- Maximum parting-off diameter: 80-160 mm

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

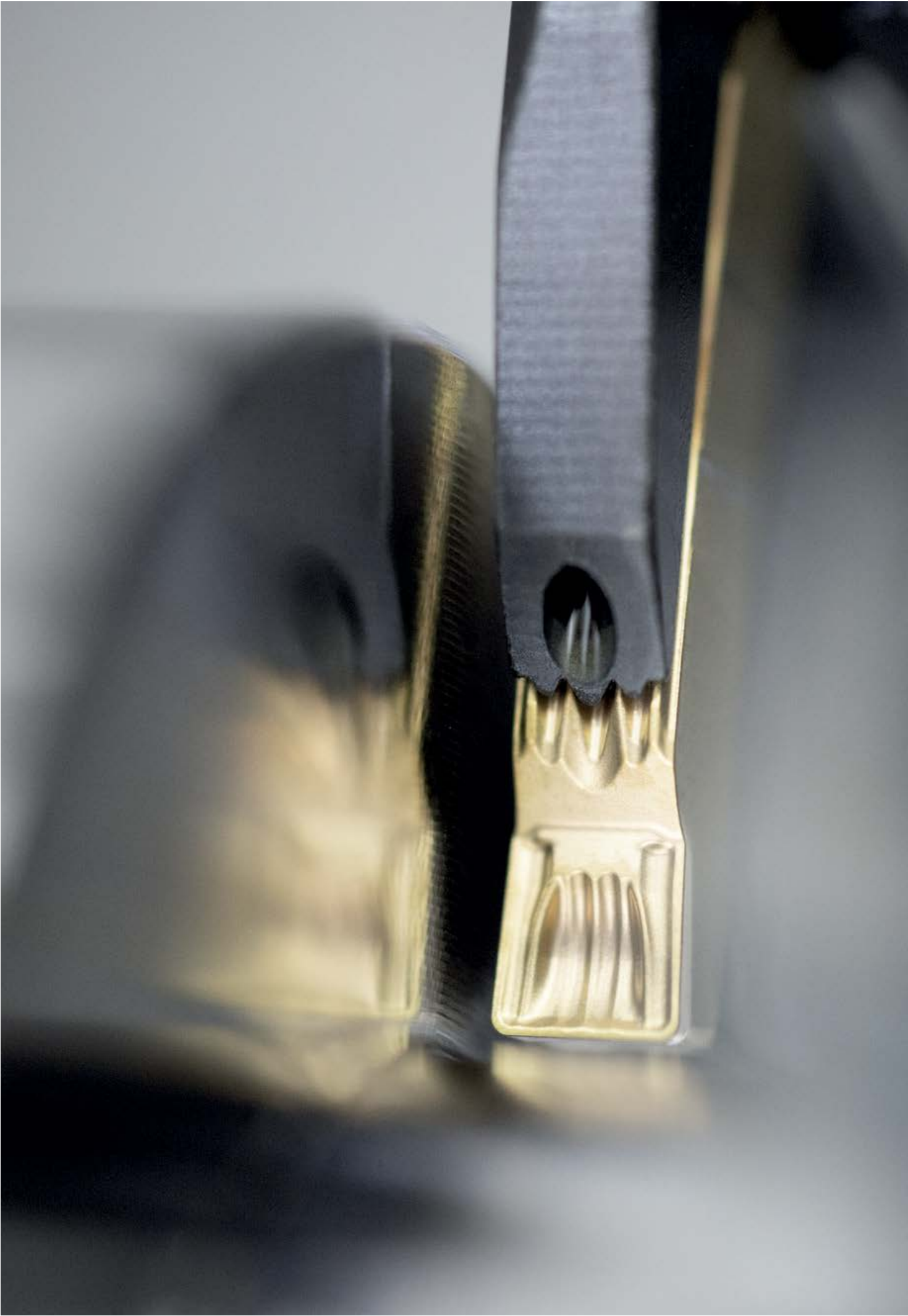


Powered by
Tiger-tec^{Gold}
Groov-tec™ GD

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

- $16 \times D_c$ according to Walter standard ($\varnothing$ 3-16 mm)
- $20 \times D_c$ according to Walter standard ($\varnothing$ 3-16 mm)
- $25 \times D_c$ according to Walter standard ($\varnothing$ 3-12 mm)
- $30 \times D_c$ according to Walter standard ($\varnothing$ 3-12 mm)
- $40 \times D_c$ according to Walter standard ($\varnothing$ 3-11 mm)

THE TOOL

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

Dimensions - Standard:

- $3 \times D_c$ in accordance with DIN 6537 short
- $5 \times D_c$ in accordance with DIN 6537 long
- $8-40 \times D_c$ according to Walter Norm

Dimensions - Walter Xpress:

- Up to $12 \times D_c$
- Chamfer drill
- Step drill
- WJ30EY: K30F, AlTiN multi-layer tip coating

Stronger than ever –
thanks to maximum volume
of carbide material

12 grooves –
for more possible
regrinding operations

Coolant grooves with a
new profile – for greater
process reliability in
soft materials

Grade: WJ30EY

Powered by
Krato-tec®

140° point angle

Fig.: DD170-12-08.500A1-WJ30EY

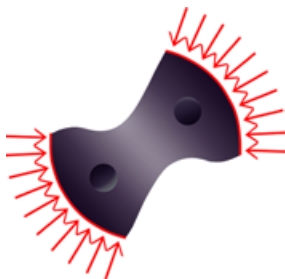
THE APPLICATION

- 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

Regrinding scale for maximum cost-efficiency



APPLICATION EXAMPLE

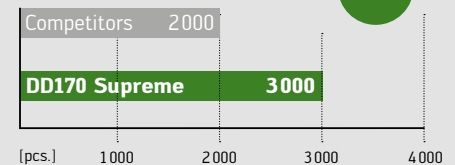
Drive shaft



Material:	16MnCr5 - Bar material
Strength:	207 HB
Tool:	DD170 Supreme DD170-12-11.000A1-WJ30EY powered by Krato-tec®
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



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 $12 \times D_c$

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)
- $8 \times D_c$ 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 $8 \times D_c$
- 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

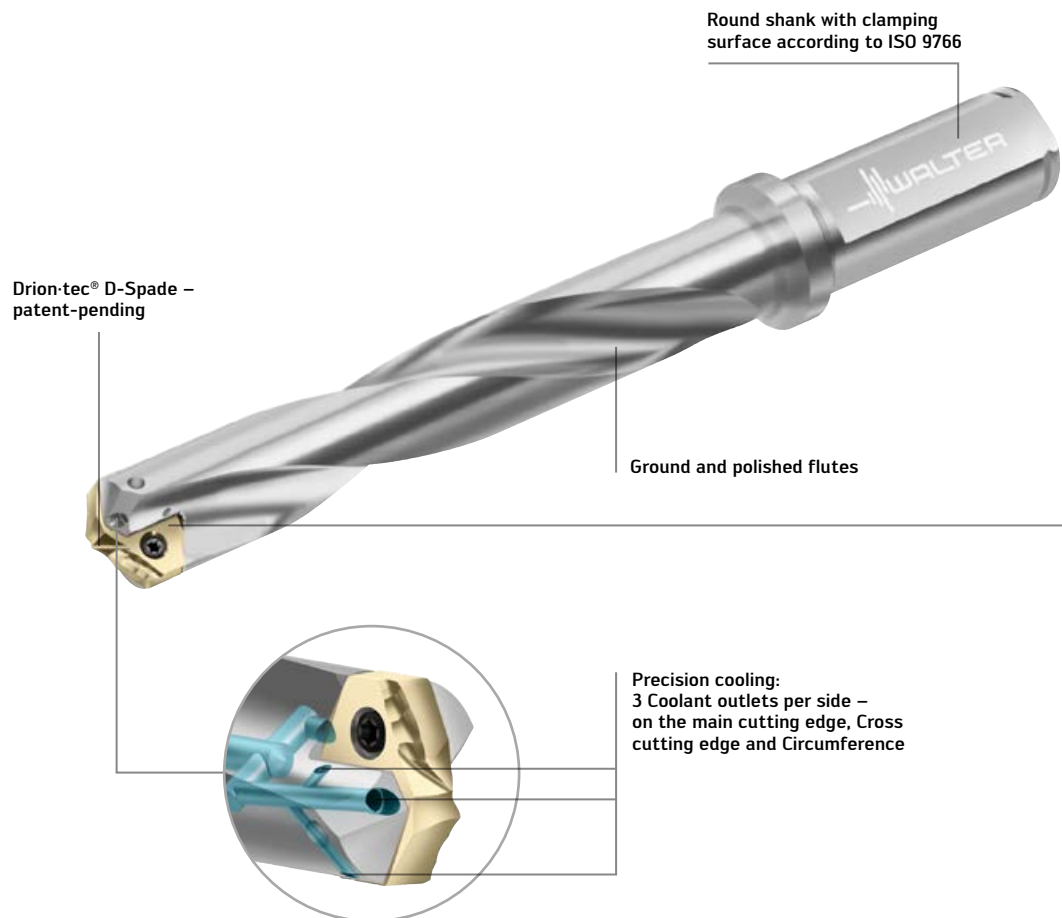
- DS42 double-sided exchangeable tip (symmetrical)
- 4 straight margins for excellent Surface quality
- F58 geometry

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

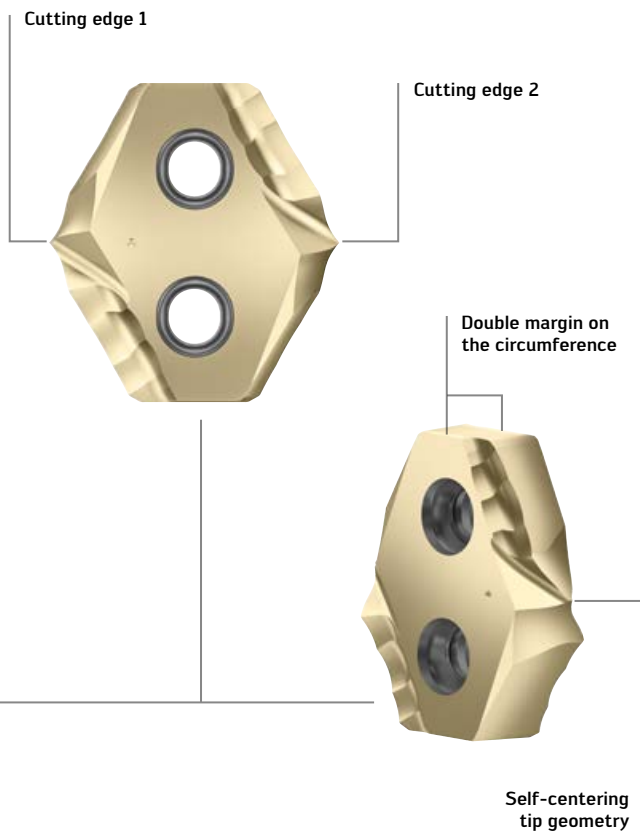


Drion-tec® exchangeable tip drill

Fig.: D5142-05-18.00F20-G

THE APPLICATION

- Drilling blind holes and through holes from solid
- Suitable for stack drilling (laminar drilling)
- Holmaking possible with Inclined entry ($\leq 10^\circ$) and exit ($\leq 20^\circ$)
- Primary application: ISO P
- Secondary application: ISO K

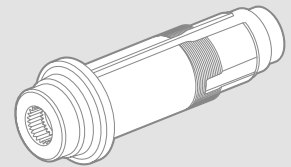


Double-sided exchangeable tip

Fig.: DS42-F58-18.00G WPP25

APPLICATION EXAMPLE

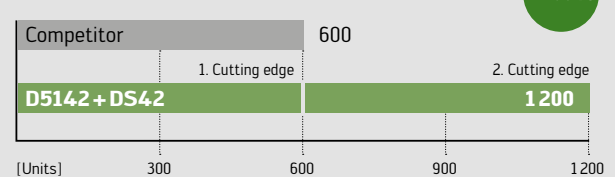
Motor shaft for electric vehicles – holmaking: $\varnothing 17$ mm



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)	1800	1680
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 $\varnothing 20$ mm	Weldon $\varnothing 20$ mm
Tool life quantity (units)	600	1. Cutting edge: 600 2. Cutting edge: 600 Total: 1200

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

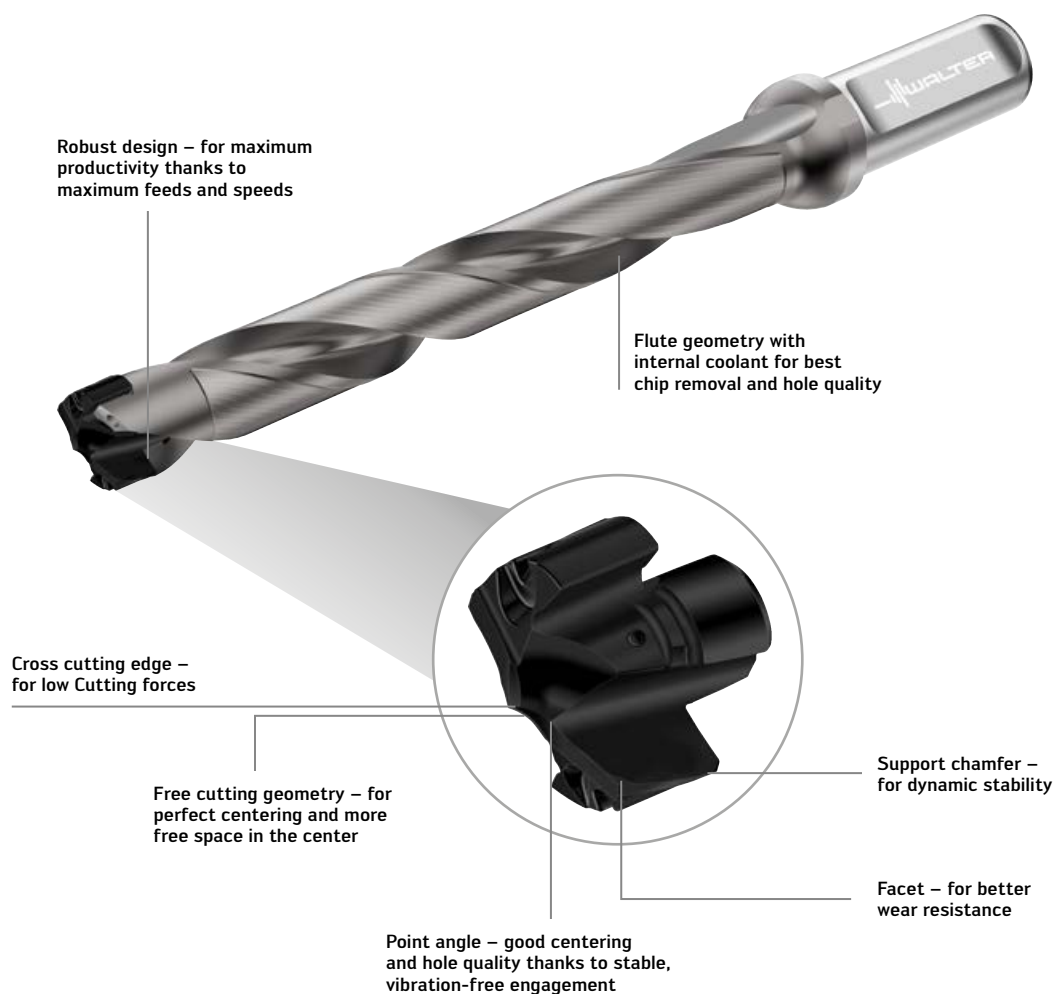
THE GRADE

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

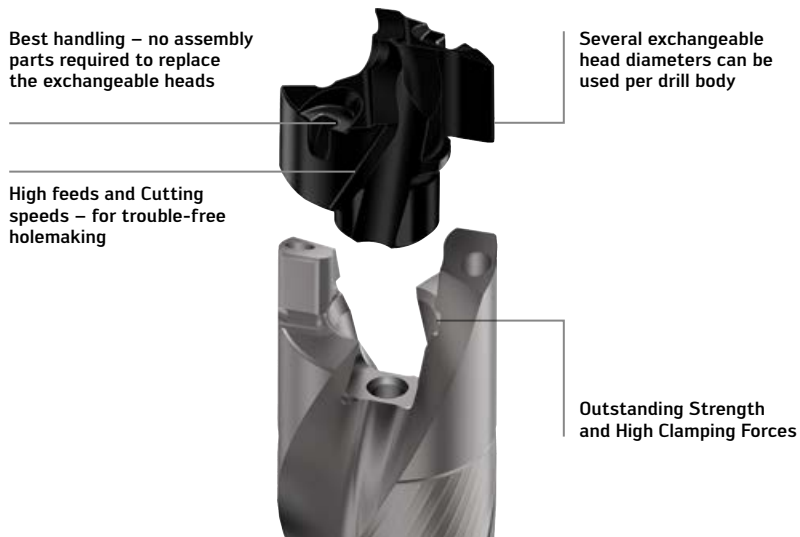
WMS35

- 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 holmaking service life
- Quick and easy assembly; no additional assembly parts



THE APPLICATION

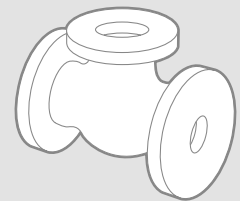
- High-volume production for cross-industry applications
- Large cutting data window with high cutting parameters
- Primary application: ISO P, M and S;
Secondary application: ISO K, N and H
- Hole tolerance H9/H10
- All common drilling operations (e.g. inclined entry and exit, cross and stack drilling,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

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

APPLICATION EXAMPLE

Valve

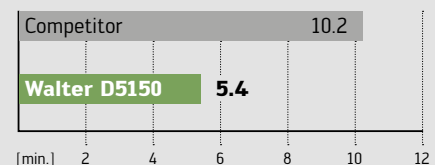


Material: ISO M/ M3.2.Z.AQ/ Duplex
Tensile strength: 240 HB
Tool: D5150-05-17.00F20-R;
 Ø 17 mm; 5 × D_c
Interchangeable head: DS50-17.10R-M WPP35

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%



Go for Gold – the safe solution for strong steels.

NEW

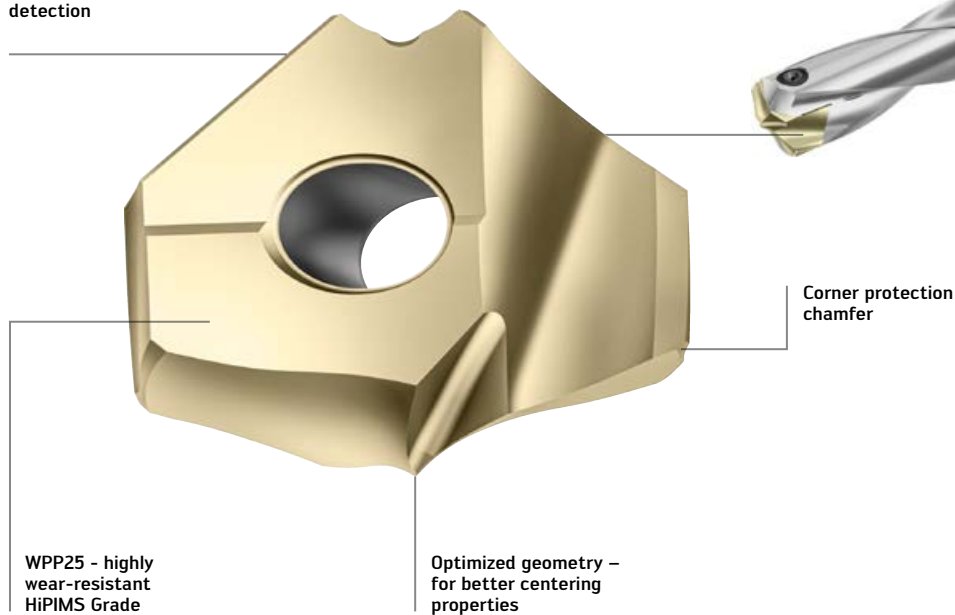
THE INDEXABLE INSERTS

- 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

ZrN top layer - for best wear detection



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

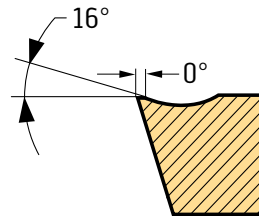
- Can be used in all Walter Indexable insert drills
- P484. for Drion-tec® D4120: Ø 13.5-59 mm (0.531-2.250 inch)
- P284. for Drion-tec® D3120: Ø 16-58 mm (0.750-1,500 Inch)
- LC.X. for drilling tools B321.: Ø 10-18 mm (0.391-0,640 Inch)
- Directly pressed and Fully ground circumference

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



4 cutting edges

2 cutting edges

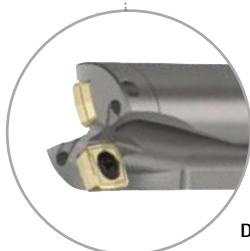


P284.S.

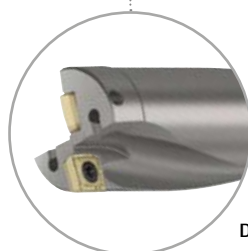
P484.P.

P484.C.

LC.X.



Drion-tec® D3120



Drion-tec® D4120



B321.

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):

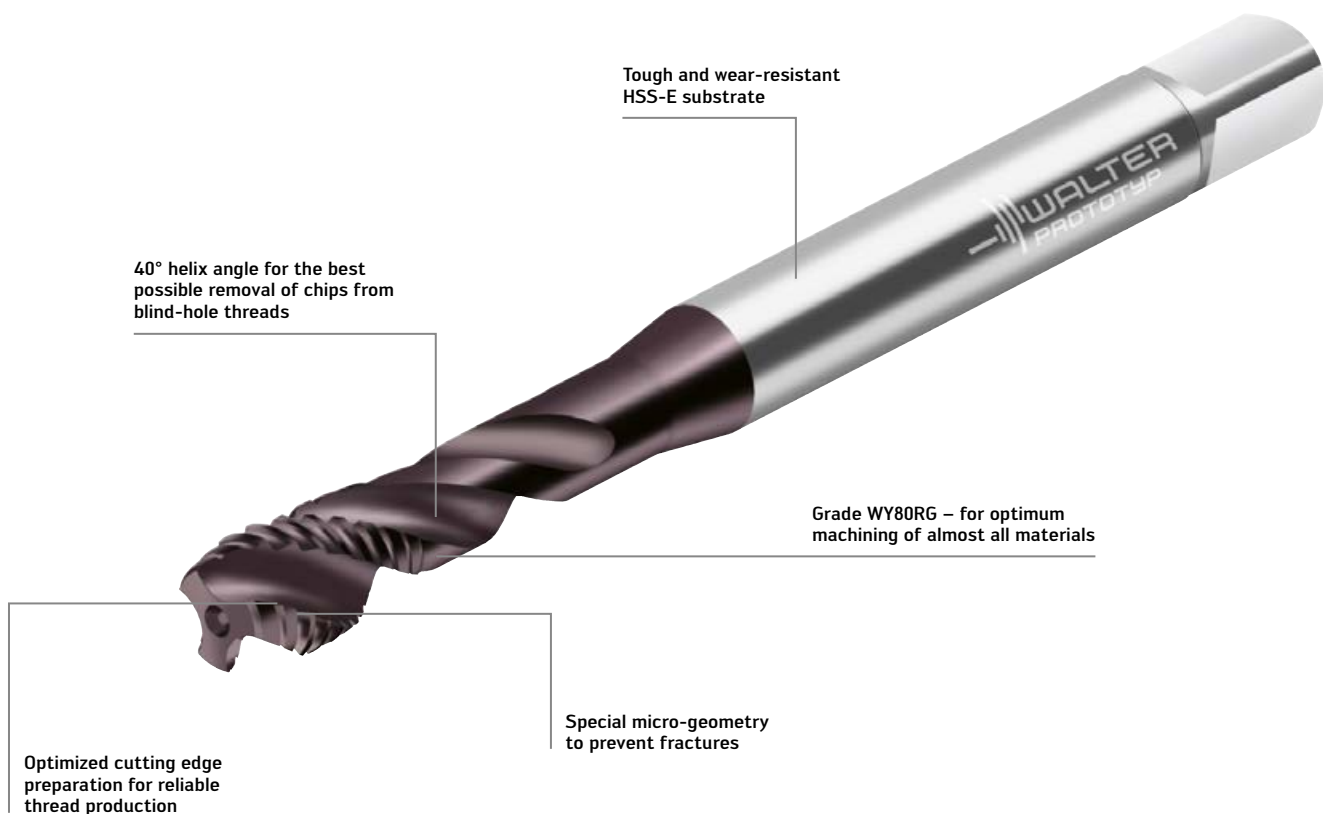
- Metric, metric fine
- Thread insert (STI): EgM

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 $2.5 \times D_N$
- 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
••	•	••	•

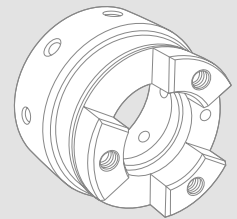
Grade WY80AA:
First choice for ISO P
and ISO K materials

POTENTIAL BENEFITS

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

APPLICATION EXAMPLE

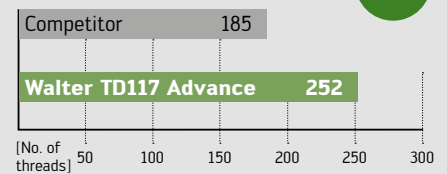
Coupling flange



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



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

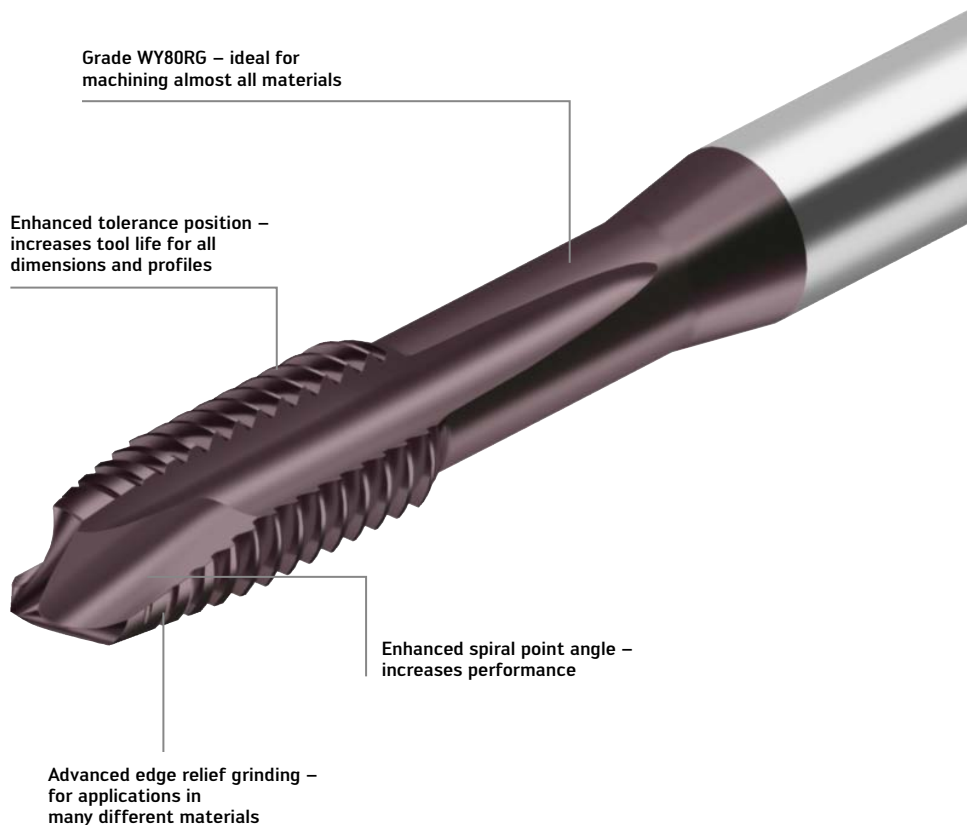
- HSS-E through hole tap
- Grades: WY80FC, WY80RG and WY80AA
- Available in various tolerance levels
- Variants: Long, extra-long and left-hand cutting
- Chamfer form B

Variants:

- Available in all standard profiles and dimensions

THE APPLICATION

- Through-hole thread up to $3 \times D_N$
- 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



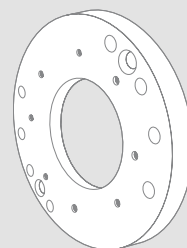
HSS-E substrate with greater hardness – optimizes wear resistance and tool life

Thread-tec™ Omni
TD217 Advance

Fig.: TD217-M10-
C0-WY80RG

APPLICATION EXAMPLE

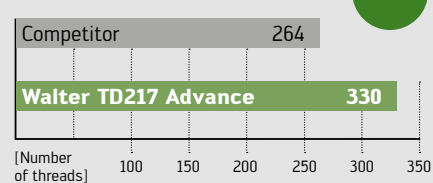
Guide flange



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



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



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



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

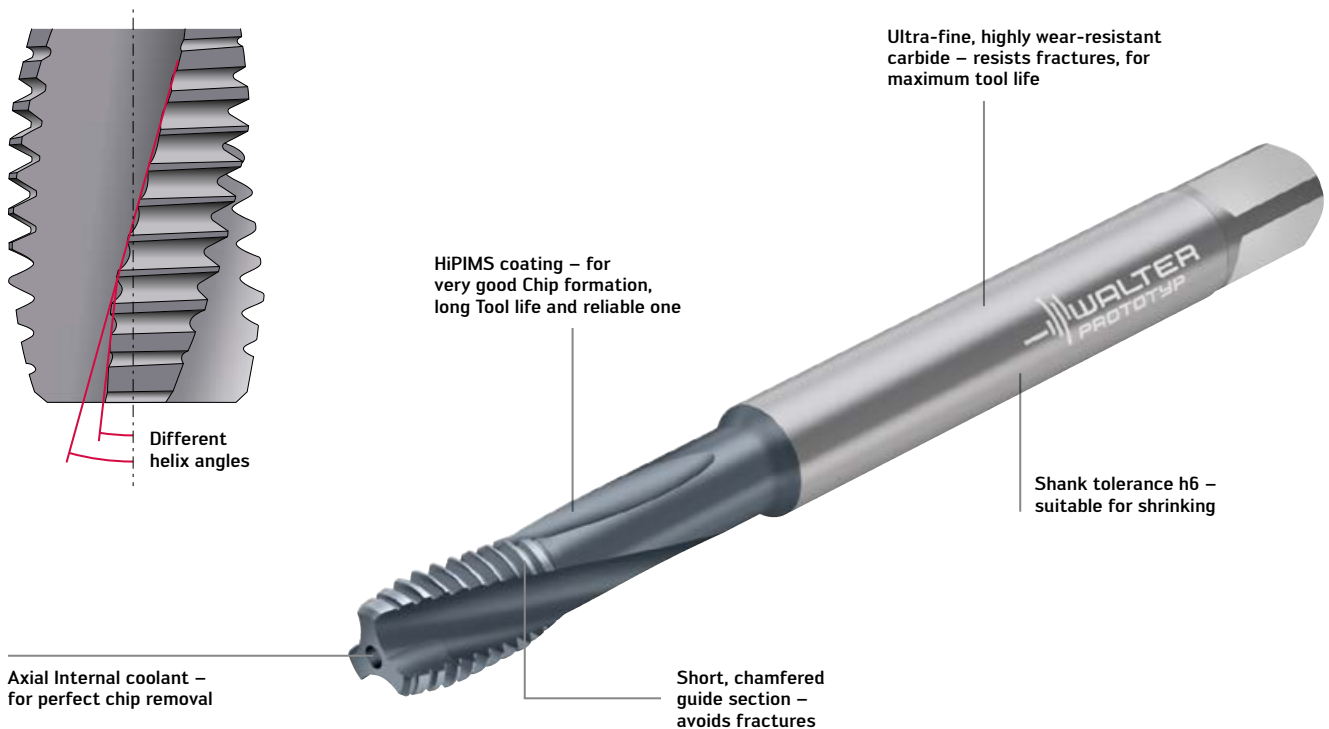
Dimensions:

- Metric: M6-M12

THE APPLICATION

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

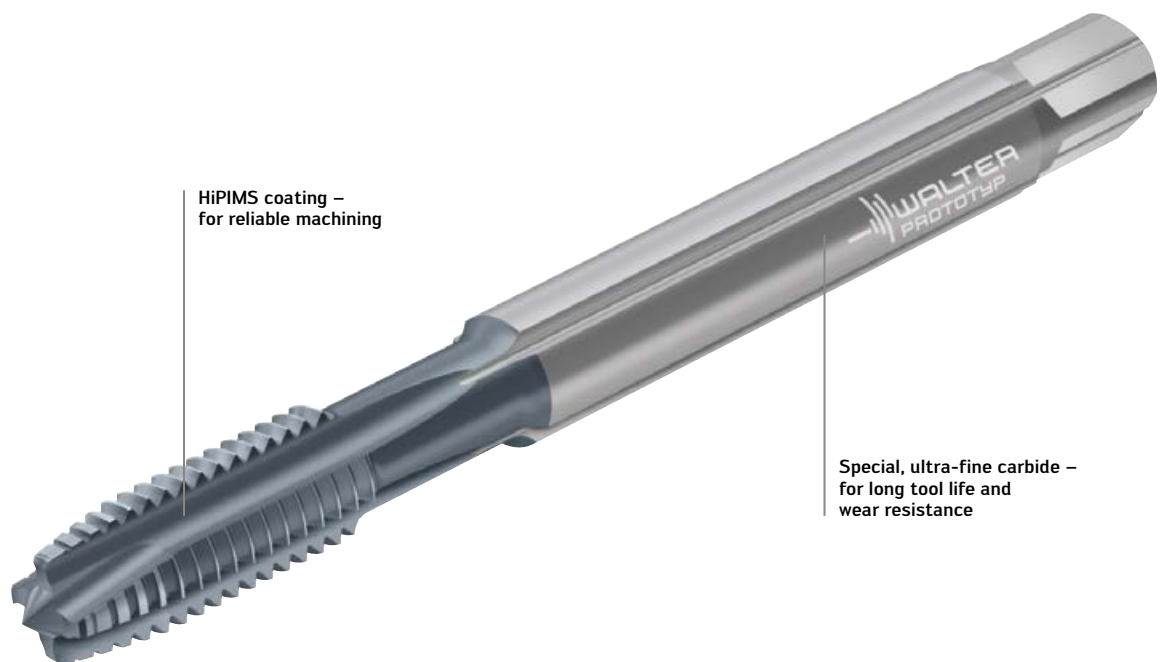


Fig.: TC280-M10-C3-WJ30EL

POTENTIAL BENEFITS

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

Universal One – Fast, with strong performance

NEW

THE TOOL

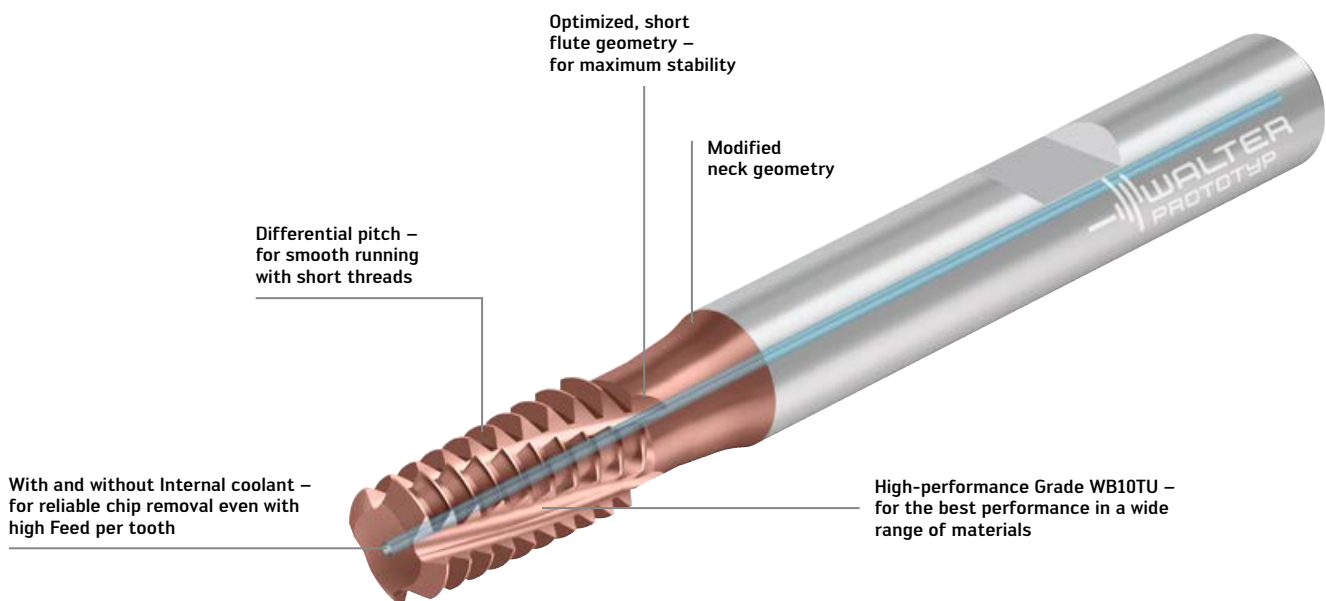
- Universal One – TD610 Supreme full-effective thread milling cutter
- With and without internal cooling
- Shank in accordance with DIN 6535 HB

The programme

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

THE APPLICATION

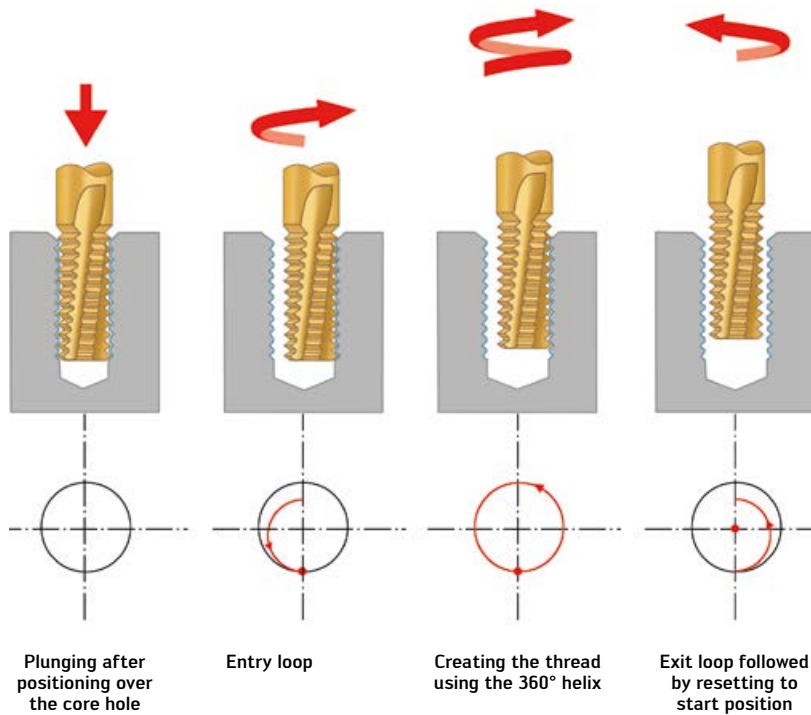
- Blind-hole and through-hole threads
- ISO materials P, M, K, N and S up to 48 HRC
- Thread depth $\leq 1.5 \times D_N$
- Ideal for strict requirements on process reliability (e.g. for expensive components)



Full-effective TD610 Supreme thread milling cutter

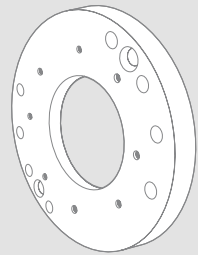
TD610-M10-W1C-WB10TU

THE STRATEGY



APPLICATION EXAMPLE

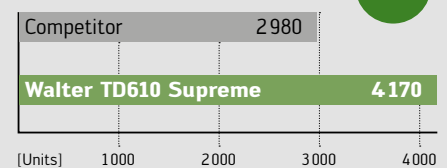
Guide flange



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)	2 980	4 170

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.

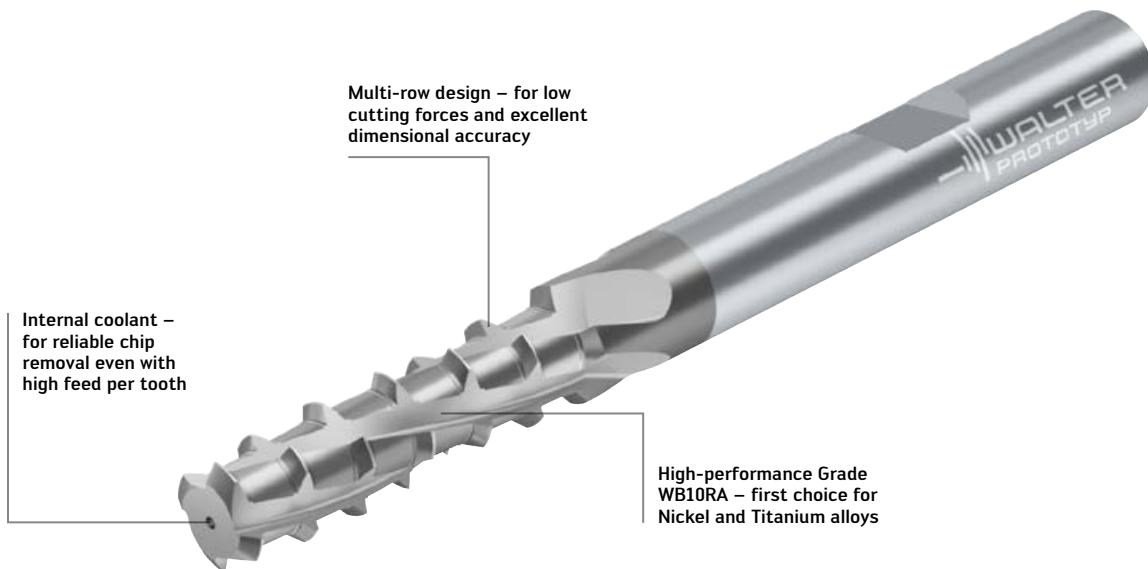
NEW

THE TOOL

- Multi-row thread milling cutter TC620 Supreme
- Usable length: up to $2.5 \times D_N$ 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

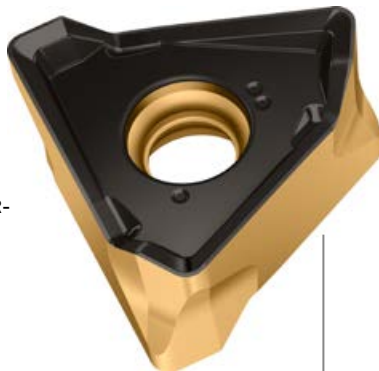


Fig.: SDMT120408-
F57 WPP35G



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

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.

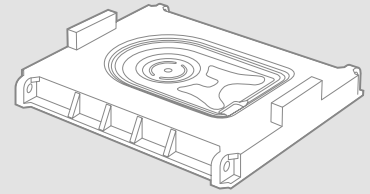
Highly textured MT-TiCN Tiger-tec® Gold



Higher wear resistance, as aligned crystals offer more resistance.

APPLICATION EXAMPLE

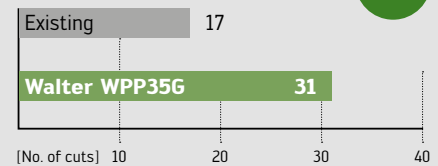
Cast iron



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	17	31
No. of cuts	17	31

Comparison: Tool life

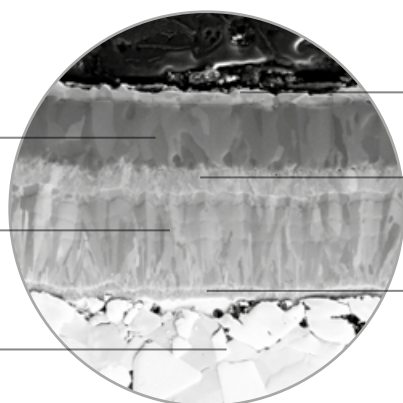


Cross section: Tiger-tec® Gold WPP35G milling grade

Al₂O₃ aluminium oxide layer – wear-resistant heat shield

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

Carbide substrate with high level of toughness



Gold-colored TiN top layer on the flank face

Bonding layer

Bonding layer

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:

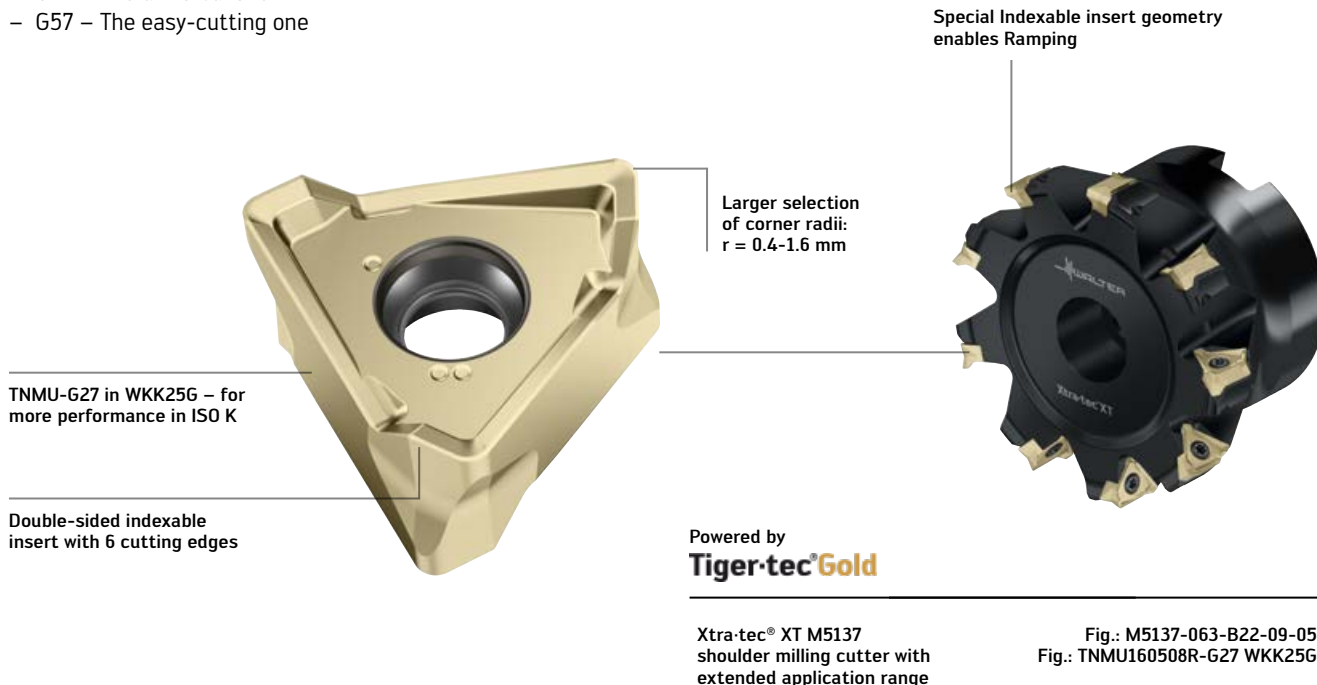
- G27 – The universal one
- G57 – The easy-cutting one

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

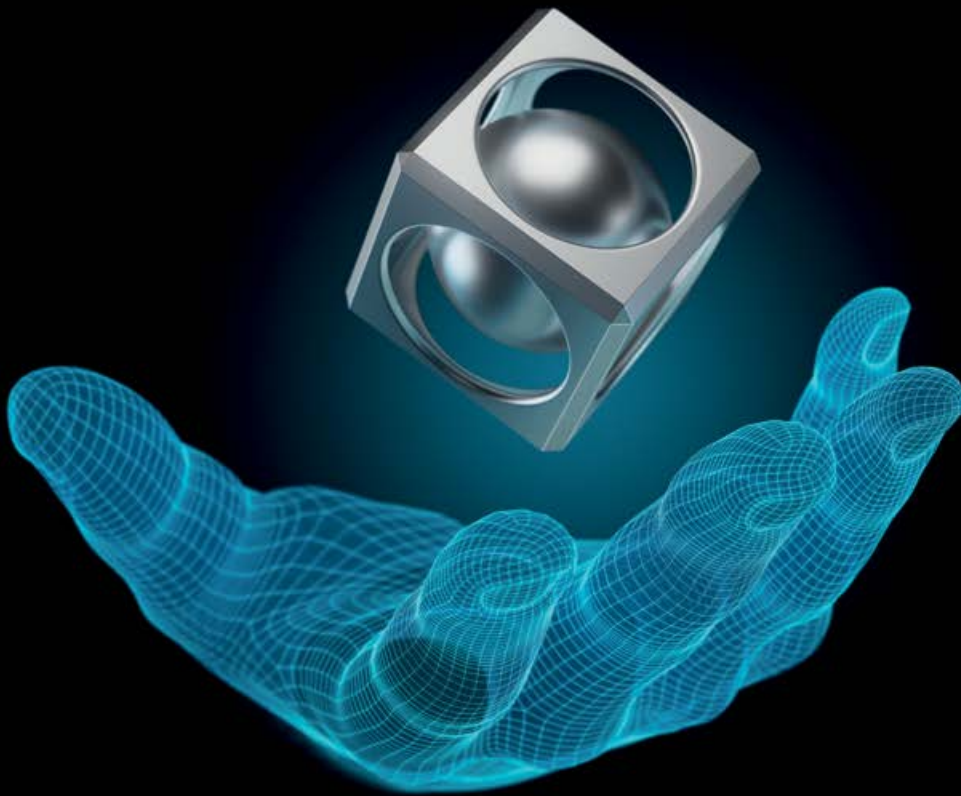
- Primary application: Steel and cast iron;
secondary application: Stainless steels and materials with difficult cutting properties
- Face milling, shoulder milling, ramping, pocket milling and circular interpolation milling
- Areas of application: General mechanical engineering, aerospace, medical,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



POTENTIAL BENEFITS

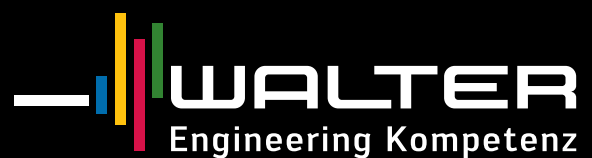
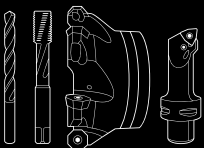
- High process reliability due to stable, double-sided indexable inserts
- Extended application range due to different corner radii of the TNMU indexable inserts
- High level of cost-efficiency due to Tiger-tec® cutting tool materials and six cutting edges per indexable insert
- Simple tool selection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

Think Lightweight. Together.



From automotive and the aviation industry to general mechanical engineering, lightweight materials, such as aluminium, have huge application potential. They save fuel and energy and offer a wide range of design options. With Walter FMT, the new market leading PCD competence brand, as well as Walter solid carbide and indexable insert solutions for lightweight machining, you can benefit from a broad portfolio and unique Engineering Kompetenz. With consistent customer orientation, we master your challenges – and offer you tailor-made solutions that work from day one.

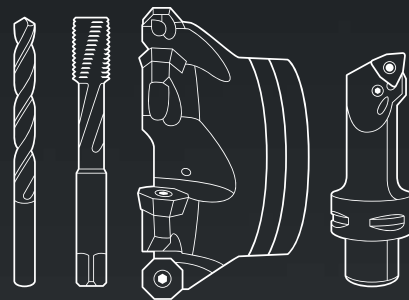
Walter – your reliable partner for lightweight machining.



Walter AG

Derendinger Straße 53, 72072 Tübingen
Postfach 2049, 72010 Tübingen
Germany

walter-tools.com



Europe

Walter Austria GmbH

Wien, Österreich
+43 1 5127300-0, service.at@walter-tools.com

Walter Benelux N.V./S.A.

Zaventem, Belgique
(B) +32 (02) 7258500
(NL) +31 (0) 900 26585-22
service.benelux@walter-tools.com

Walter (Schweiz) AG

Solothurn, Schweiz
+41 (0) 32 617 40 72, service.ch@walter-tools.com

Walter CZ s.r.o.

Kurim, Czech Republic
+420 (0) 541 423352, service.cz@walter-tools.com

Walter Deutschland GmbH

Tübingen, Deutschland
+49 (0) 7071 701-400, service.de@walter-tools.com

Walter France

Soultz-sous-Forêts, France
+33 (0) 3 88 80 20 00, service.fr@walter-tools.com

Walter Hungária Kft.

Budapest, Magyarország
+36 1 464 7160, service.hu@walter-tools.com

Walter Tools Ibérica S.A.U.

El Prat de Llobregat, España
+34 934 796760, service.iberica@walter-tools.com

Walter Italia s.r.l.

Via Volta, s.n.c., 22071 Cadorago - CO, Italia
+39 031 926-111, service.it@walter-tools.com

Walter Norden AB

Halmstad, Sweden
+46 (0) 35 16 53 00, service.norden@walter-tools.com

Walter Polska Sp. z o.o.

Warszawa, Polska
+48 (0) 22 8520495, service.pl@walter-tools.com

Walter Tools SRL

Timisoara, România
+40 (0) 256 406218, service.ro@walter-tools.com

Walter Tools d.o.o.

Maribor, Slovenija
+386 (2) 629 01 30, service.si@walter-tools.com

Walter Slovakia, s.r.o.

Nitra, Slovakia
+421 (0) 37 3260 910, service.sk@walter-tools.com

Walter Kesici Takımlar Sanayi ve Ticaret Ltd. Şti.

Bursa, Türkiye
+90 (0) 224 909 5000 Pbx, service.tr@walter-tools.com

Walter GB Ltd.

Bromsgrove, England
+44 (1527) 839 450, service.uk@walter-tools.com

Asia

Walter Wuxi Co. Ltd.

Wuxi, Jiangsu, P.R. China
+86 (510) 853 72199, service.cn@walter-tools.com

Walter Wuxi Co. Ltd.

中国江苏省无锡市新区新畅南路 3 号
电话 : +86-510-8537 2199 邮编 : 214028
客服热线 : 400 1510 510
邮箱 : service.cn@walter-tools.com

Walter Tools India Pvt. Ltd.

Pune, India
+91 (20) 6773 7300, service.in@walter-tools.com

Walter Japan K.K.

Nagoya, Japan
+81 (52) 533 6135, service.jp@walter-tools.com

ワルタージャパン株式会社

名古屋市千代田区名駅二丁目 45 番 7 号
+81 (0) 52 533 6135, service.jp@walter-tools.com

Walter Korea Ltd.

Anyang-si Gyeonggi-do, Korea
+82 (31) 337 6100, service.wkr@walter-tools.com

한국발터(주)

경기도 안양시 동안구 학의로 282
금강펜테리움 106호 14056
+82 (0) 31 337 6100, service.wkr@walter-tools.com

Walter Malaysia Sdn. Bhd.

Selangor D.E., Malaysia
+60(3)-5624 4265, service.my@walter-tools.com

Walter AG Singapore Pte. Ltd.

+65 6773 6180, service.sg@walter-tools.com

Walter (Thailand) Co., Ltd.

Bangkok, 10120, Thailand
+66 2 687 0388, service.th@walter-tools.com

America

Walter do Brasil Ltda.

Sorocaba – SP, Brasil
+55 15 32245700, service.br@walter-tools.com

Walter Canada

Mississauga, Canada
service.ca@walter-tools.com

Walter Tools S.A. de C.V.

El Marqués, Querétaro, México
+52 (442) 478-3500, service.mx@walter-tools.com

Walter USA, LLC

Greer, SC, USA
+1 800-945-5554, service.us@walter-tools.com