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\_ TOOL INNOVATIONS IN MILLING

**Uniquely universal.**

# Walter M4000: High performance made universal.

NEW TO THE  
RANGE FOR  
2015

## THE SYSTEM INSERTS

- Square indexable inserts: Can be used in face, shoulder, slot drill, chamfer and T-slot milling cutters
  - 4 cutting edges
  - Circumference-sintered design for maximum cost efficiency
  - Circumference-ground with facets (90°) for excellent component surface finishes
- Rhombic indexable inserts: Can be used in slot drill milling cutters
  - 2 cutting edges
  - Circumference-sintered design for maximum cost efficiency
- Easy geometry selection thanks to specific "wave" on the flank face
- 15° clearance angle
- Ground base: Improves the seating of the inserts in the mill body and reduces vibration

Powered by Tiger-tec® Silver

### System insert SD ...

- Square, positive basic shape
- Ground support face
- Different grades and geometries



Shoulder mill  
M4132



High-feed milling cutter  
M4002

## BENEFITS FOR YOU

### High level of cost efficiency

- Reduced procurement and inventory costs thanks to universal use of system insert
- Four cutting edges per indexable insert

### Concept requiring minimum resources

- CO<sub>2</sub>-compensated production thanks to climate protection projects
- Low power requirement thanks to highly positive geometries

### Powered by Tiger-tec® Silver

- Two CVD-coated grades (WKP25S and WKP35S) for steel and cast iron machining as well as one CVD-coated grade (WSM45X) for machining stainless steels and difficult-to-cut materials
- Three PVD-coated grades (WKK25S, WSM35S and WSP45S) for machining stainless steels and difficult-to-cut materials, as well as for steel and cast iron



### Leading insert LD...

- Rhombic, positive basic shape
- Ground support face
- Different grades and geometries



Chamfer milling cutter  
M4574




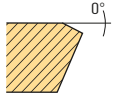

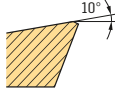

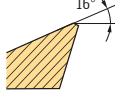
T-slot milling cutter  
M4575



Slot drill  
M4792

### NEW FLANK FACE DESIGN FOR FASTER IDENTIFICATION

The number of waves on the flank face indicates the geometry: The greater the number of waves across the middle of the flank face, the more positive the indexable insert geometry. As a result, the geometry can now be identified at a glance.

Geometry example	Areas of application	Main cutting edge section	Material groups							Suitable tool ranges
			P	M	K	N	S	H	O	
	<b>A57 – The special one</b> <ul style="list-style-type: none"> <li>- For unfavourable machining conditions</li> <li>- Maximum cutting edge stability</li> <li>- High feed rates</li> <li>- Straight border (no wave on the flank face)</li> </ul>		••		••					M4002 M4132
	<b>D57 – The stable one</b> <ul style="list-style-type: none"> <li>- For medium machining conditions</li> <li>- For universal use with most materials</li> <li>- One wave on the flank face</li> </ul>		••	••	••		••			M4574 M4575
	<b>F57 – The universal one</b> <ul style="list-style-type: none"> <li>- For good machining conditions</li> <li>- Low cutting forces</li> <li>- Medium feed rates</li> <li>- Two waves on the flank face</li> </ul>		••	••	••		••			M4792

# Walter High Feed milling cutter M4002: Four cutting edges, maximum feed rates.

NEW TO THE  
RANGE FOR  
2015

## THE TOOLS

- Face mill, 15° approach angle with four-edged system indexable insert
- **NEW:** Diameter range 20–125 mm or 3/4–4"
- With modular ScrewFit interface, parallel shank or bore adaptor
- **NEW:** Three indexable insert sizes SD..06T2..., SD..09T3... and SD..1204...
- **NEW:** Cutting depths: 1.0 / 1.5 / 2.0 mm

## THE INDEXABLE INSERTS

- Square system inserts:  
Can be used in face, shoulder, chamfer and T-slot milling cutters and also as the leading insert in drill slot mills
- Wave-form finish along the flank face indicate the choice of geometry
- 4 cutting edges
- 15° clearance angle
- Circumference-sintered design for maximum cost efficiency
- Differences in shoulder design

Powered by Tiger-tec® Silver

## THE APPLICATION

- High-feed face milling in all steel and cast iron materials, stainless steels and difficult-to-cut materials
- Applications using tools with long projection lengths



## BENEFITS FOR YOU

### High level of cost efficiency

- Reduced procurement and inventory costs thanks to universal use of system insert
- Four cutting edges per indexable insert

### Concept requiring minimum resources

- CO<sub>2</sub>-compensated production thanks to climate protection projects
- Low power requirement thanks to highly positive geometries

### Powered by Tiger-tec® Silver

- Two CVD-coated grades (WKP25S and WKP35S) for steel and cast iron machining as well as one CVD-coated grade (WSM45X) for machining stainless steels and difficult-to-cut materials
- 3 PVD-coated grades (WKK25S, WSM35S and WSP45S) for machining stainless steels and difficult-to-cut materials, as well as for steel and cast iron.

Walter  Xpress



Watch the product video:  
Scan this QR code or go directly to  
<http://goo.gl/HyQdM8>

## THE SHOULDER DESIGNS



- Standard system insert for universal use in face, shoulder, chamfer and T-slot milling cutters and also as the leading or centre insert in slot drill milling cutters
- Corner radius 0.4 / 0.8 mm
- A57, D57 and F57 geometries

## Surfaces produced (at $f_z = 1.2$ mm) indexable insert SDMT09T3..



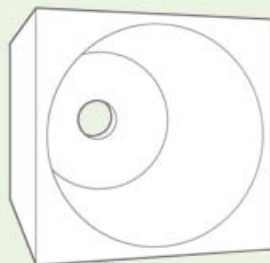
- System insert for use in shoulder and face milling
- Stabilised cutting edge
- Corner radius 1.2 / 2.0 / 2.5 mm
- F57 geometry



- Indexable insert for special use in high-feed mills with face chamfer  $b = 1.2 / 1.8$  mm
- Corner radius 0.4 / 0.8 mm
- D57 geometry



## Housing – circular interpolation milling

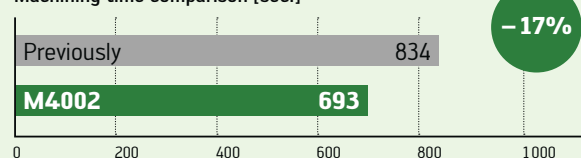


Material: EN-GJS-600-3 (GGG60), ISO K  
 Tool: M4002-052-B22-04-01,5  
 Tool length: 245 mm  
 Insert: SDMT09T320-F57  
 Cutting material: WSP45S

### Cutting data:

	Previously	M4002
Number of teeth	3	4
$D_c$	52 mm	52 mm
$v_c$	261 m/min	230 m/min
$f_z$	1.5 mm	1.54 mm
$a_p$	1.5 mm	1.2 mm
$a_e$	20 mm	20 mm
$v_f$	7190 mm/min	8659 mm/min

### Machining time comparison [sec.]



# Walter M4132 shoulder mill: Effective even in difficult-to-machine materials.

NEW TO THE RANGE FOR 2015

## THE TOOLS

- Shoulder mill with four-edged system insert
- **NEW:** Diameter range 16–125 mm or 5/8–5"
- With modular ScrewFit interface, Weldon shank or bore adaptor
- **NEW:** Three indexable insert sizes: SD..06T2., SD..09T3. and SD..1204.
- **NEW:** Cutting depths: 5.6 / 8.4 / 11.6 mm



Watch the product video:  
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<http://goo.gl/HyQdM8>

Walter **Xpress**

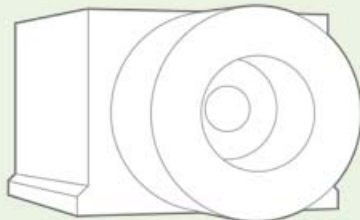


Positive cutting characteristics

Wave-form finish along the flank face indicate the choice of geometry

Four cutting edges per indexable insert

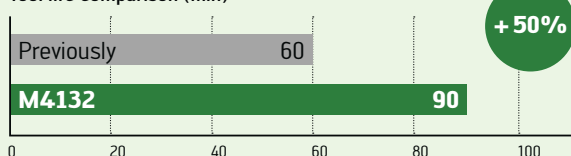
Valve housing – roughing  
External contour



**Material:** X 6CrNiMoTi 17-12-2 (1.4571), ISO M  
**Tool:** M4132-050-B22-06-09  
**Insert:** SDMT09T308-F57  
**Cutting material:** WSP45S

Cutting data:	Previously	M4132
Number of teeth	5	6
$D_c$	50 mm	50 mm
$v_c$	181 m/min	181 m/min
$f_z$	0.167 mm	0.167 mm
$a_p$	7 mm	7 mm
$a_e$	5 mm	5 mm

Tool life comparison (min)



## THE INDEXABLE INSERTS

- Square system inserts:  
Can be used in face, shoulder, chamfer and T-slot milling cutters, and also as the leading or centre insert in slot drill milling cutters
- Wave-form finish along the flank face indicates the choice of geometry
- 4 cutting edges
- 15° clearance angle
- Circumference-sintered design for maximum cost efficiency
- Circumference-ground design with facets for optimum surface finishes on the component

Powered by Tiger-tec® Silver

## THE APPLICATION

- For face and shoulder milling in all steel and cast iron materials, stainless steels and difficult-to-cut materials

# Walter M4792 slot drill milling cutter: Universal in use.

NEW  
2015

## THE TOOLS

- Slot drill milling cutter with square system insert at the circumference and in the centre
- Also with rhombic face insert
- Diameter range: 18–40 mm or 0.75–1.5"
- With centre cut
- Weldon shank
- Three indexable insert sizes: SD..06T2.., SD..09T3.. and SD..1204.. or LD..08T2.., LD..14T3.. and LD..1704..
- With internal coolant for reliable chip evacuation by compressed air or coolant

## THE INDEXABLE INSERTS

- Square system inserts: Can be used in face, shoulder, chamfer and T-slot milling cutters, and also as the leading or centre insert in slot drill milling cutters
  - 4 cutting edges
- Rhombic system inserts: Can be used as a face insert in slot drill milling cutters
  - 2 cutting edges
- 15° clearance angle
- Circumference-sintered design for maximum cost efficiency

Powered by  
Tiger-tec® Silver

## THE APPLICATION

- For slot milling in all steel and cast iron materials, stainless steels and difficult-to-cut materials



Wave-form finish along the flank face indicate the choice of geometry



Watch the product video:  
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<http://goo.gl/HyQdM8>

## BENEFITS FOR YOU

### High level of cost efficiency

- Reduced procurement and inventory costs thanks to universal use of system insert
- Four or two cutting edges per indexable insert

### Concept requiring minimum resources

- CO<sub>2</sub>-compensated production thanks to climate protection projects
- Low power requirement thanks to highly positive geometries

### Powered by Tiger-tec® Silver

- Two CVD-coated grades (WKP25S, WKP35S) for steel and cast iron machining, and one CVD-coated grade (WSM45X) for machining stainless steels and difficult-to-cut materials
- 3 PVD-coated grades (WKK25S, WSM35S and WSP45S) for machining stainless steels and difficult-to-cut materials, as well as for steel and cast iron.



# Walter M4575 T-slot milling cutter: Stable and easy-cutting.

NEW  
2015

## THE TOOLS

- T-slot milling cutter with square system insert for creating T-slots in accordance with DIN 650
- Diameter range: 21–50 mm or 0.781–1.840"
- With Weldon shank
- Three indexable insert sizes: SD..06T2..., SD..09T3.. and SD..1204..
- Groove widths from 9–21 mm
- With internal coolant for reliable chip evacuation by compressed air or coolant

## THE INDEXABLE INSERTS

- Square system inserts: Can be used in face, shoulder, chamfer and T-slot milling cutters, and also as the leading or centre insert in slot drill milling cutters
- 4 cutting edges
- 15° clearance angle
- Circumference-sintered design for maximum cost efficiency

Powered by Tiger-tec® Silver

## THE APPLICATION

- For machining radial grooves and T-slots in machine beds



## BENEFITS FOR YOU

### High level of cost efficiency

- Reduced procurement and inventory costs thanks to universal use of system insert
- Four or two cutting edges per indexable insert

### Concept requiring minimum resources

- CO<sub>2</sub>-compensated production thanks to climate protection projects
- Low power requirement thanks to highly positive geometries

# Walter M4574 chamfer cutter: Cost-effective milling – with four cutting edges per indexable insert.

NEW TO THE  
RANGE FOR  
2015

## THE TOOLS

- Chamfer cutter, 45° approach angle with four-edged system indexable insert
- **NEW:** Diameter range 8–40 mm or 1/2-1 1/2"
- With modular ScrewFit interface or parallel shank
- **NEW:** Three indexable insert sizes: SD..06T2..., SD..09T3... and SD..1204...
- **NEW:** Cutting depths: 3.0 / 5.0 / 7.0 mm
- Overlong parallel shanks can be individually shortened



## THE INDEXABLE INSERTS

- Square system inserts, can be used in face, shoulder, chamfer and T-slot milling cutters, and also as the leading or centre insert in slot drill milling cutters
- Wave-form finish along the flank face facilitates the identification of the geometry
- 4 cutting edges
- 15° clearance angle
- Circumference-sintered design for maximum cost efficiency

**Powered by Tiger-tec® Silver**

## THE APPLICATION

- For chamfering and deburring all steel and cast iron materials, stainless steels and difficult-to-cut materials
- Chamfering and back chamfering

Walter  Xpress

## Powered by Tiger-tec® Silver

- Two CVD-coated grades (WKP25S, WKP35S) for steel and cast iron machining, and one CVD-coated grade (WSM45X) for machining stainless steels and difficult-to-cut materials
- 3 PVD-coated grades (WKK25S, WSM35S and WSP45S) for machining stainless steels and difficult-to-cut materials, as well as for steel and cast iron.



Watch the product video:  
Scan this QR code or go directly to  
<http://goo.gl/HyQdM8>

# Walter BLAXX M3024 heptagon milling cutter: Offers cost-effectiveness and process reliability.

NEW  
2015

## THE TOOLS

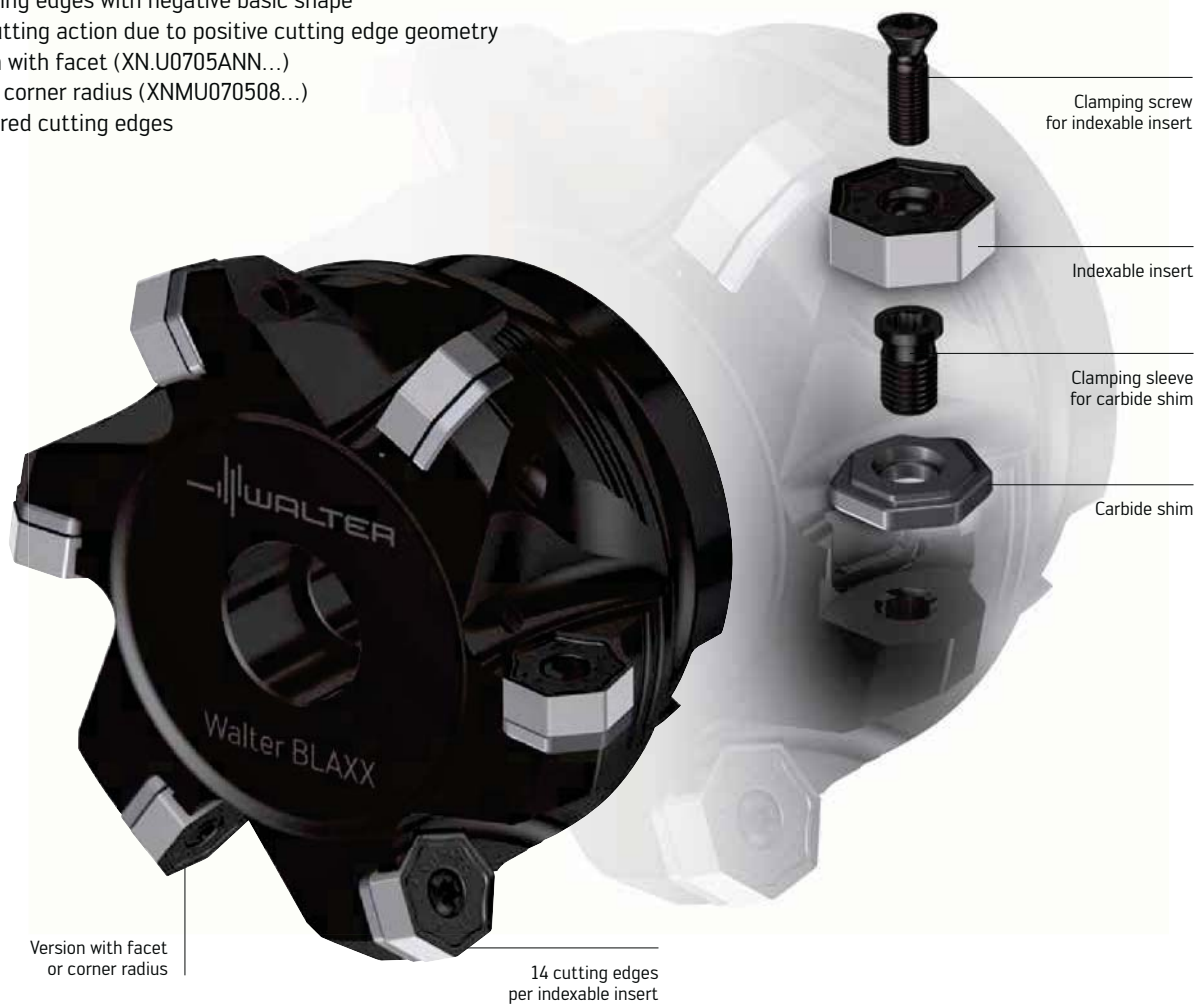
- Walter BLAXX 45° face milling cutter
- 14 cutting edges per indexable insert
- Maximum cutting depth 4 mm
- Diameter range 40–160 mm or 3/4–6"
- With modular ScrewFit interface, Weldon shank or bore adaptor
- High feed per tooth thanks to carbide shim
- Protection from corrosion and wear thanks to special surface treatment

## THE INDEXABLE INSERTS

- 14 cutting edges with negative basic shape
- Soft cutting action due to positive cutting edge geometry
- Version with facet (XN.U0705ANN...)  
or with corner radius (XN.MU070508...)
- Numbered cutting edges

## THE APPLICATION

- For face milling in all steel and cast iron materials, stainless steels and difficult-to-cut materials
- Perfect for machining components such as exhaust turbochargers, turbine blades, etc.



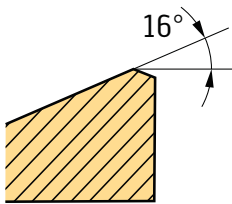
# Walter BLAXX

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The new generation of Walter BLAXX milling cutters

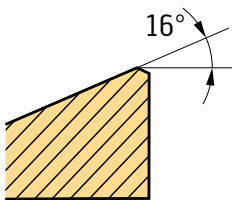
Type: M3024

## THE GEOMETRIES



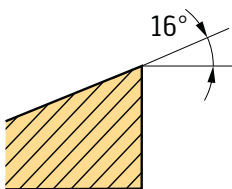
### F27 – The stable one

- For unfavourable machining conditions
- Maximum cutting edge stability
- High feed rates



### F57 – The universal one

- For medium machining conditions
- Universal application



### F67 – The easy-cutting one

- For good machining conditions
- Low cutting forces
- Medium feed rates

## BENEFITS FOR YOU

### High level of cost efficiency

- High machining volume, even on low-performance machines, due to positive, soft cutting action
- Low cutting material costs due to 14 cutting edges per indexable insert

### High process reliability

- Due to stable, negative indexable inserts
- Optimum contact area due to carbide shim

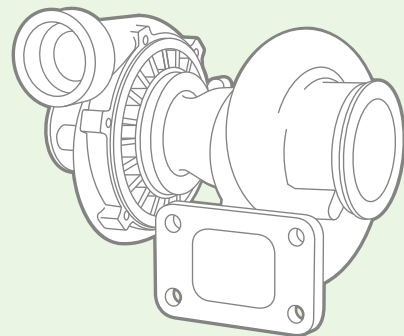
### Powered by Tiger-tec® Silver

- 2 CVD-coated grades (WKP25S and WKP35S) for steel and cast iron machining
- Three PVD-coated grades (WSM35S, WKK25S and WSP45S) for machining steel, cast iron, stainless steel and difficult-to-cut materials



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<http://goo.gl/2ZY7ss>

## Turbocharger – machining flange surfaces

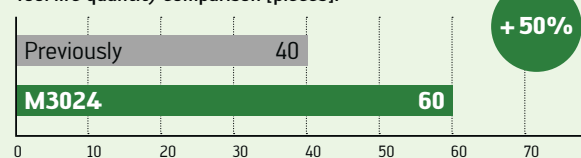


**Material:** GX40CrNiSi25-12, ISO-P  
**Tool:** M3024 / Z = 6 / diameter 63 mm  
**Insert:** XNMU0705ANN-F57  
**Cutting material:** WSP45S

### Cutting data:

	Previously	M3024
$v_c$	168 m/min	168 m/min
$f_z$	0.25 mm	0.25 mm
$v_f$	1910 mm/min	1274 mm/min
$a_e$	40 mm	40 mm
$a_p$	3.5 mm	3.5 mm
$z$	9	6

### Tool life quantity comparison [pieces]:



# Walter BLAXX M3016 heavy-duty cutter: Powerful and reliable.

**NEW  
2015**

## THE TOOLS

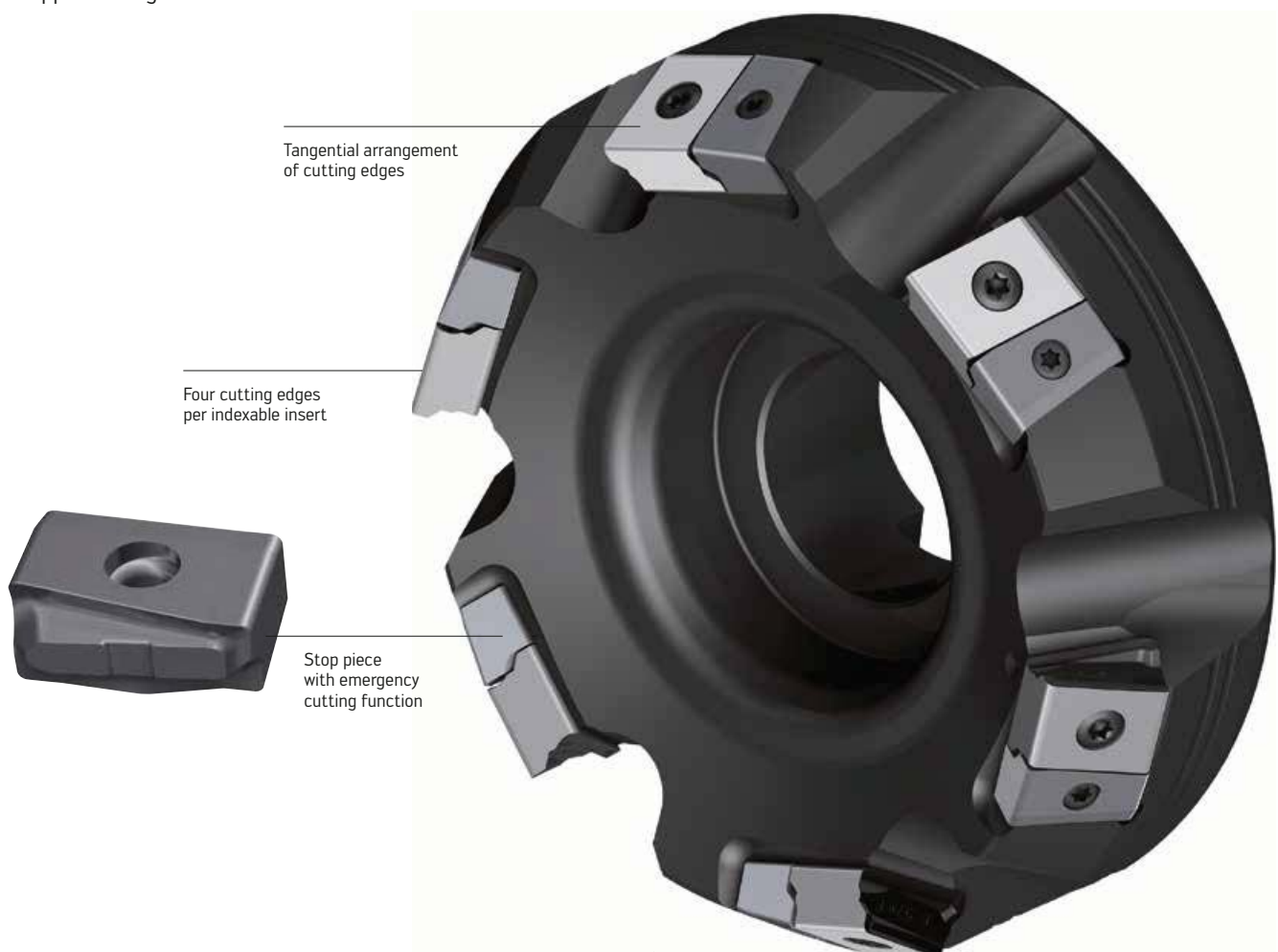
- Walter BLAXX 60° face milling cutter for heavy-duty cutting
- Tangential indexable insert with four cutting edges
- Cutting depth 16 mm
- Diameter range 125–315 mm
- Bore adaptor also for spindle heads according to DIN 2079 form B
- Indexable insert contact against carbide stop piece with emergency cutting function
- Protection from corrosion and wear thanks to special surface treatment
- Heavy-duty cutter with an approach angle of 15° or 90° possible on request via Walter Xpress
- System insert with 1.2 mm corner radius can be used for all approach angles

## THE INDEXABLE INSERTS

- Four cutting edges with negative basic shape
- Soft cutting action due to positive cutting edge geometry
- Version with corner radius for maximum stability
- Numbered cutting edges

## THE APPLICATION

- Face milling with maximum metal removal rate in all steel and cast iron materials
- Large-volume workpieces such as machine housings for wind turbines, rolling mill steel plates, large engines, etc.



## Walter BLAXX

The new generation of Walter BLAXX milling cutters

Type: M3016



Watch the product video:  
Scan this QR code or go directly to  
<http://goo.gl/7fDyyH>

#### BENEFITS FOR YOU

##### High level of cost efficiency

- Maximum machining volume
- Low cutting material costs due to four cutting edges per indexable insert

##### High process reliability

- Due to stable, tangential indexable inserts
- Emergency cutting function of the stop piece protects the body in the event of an insert fracture

##### Powered by Tiger-tec® Silver

- Two CVD-coated grades (WKP25S and WKP35S) and two PVD-coated grades (WKK25S and WSP45S) for steel and cast iron machining

Walter press

Powered by  
**Tiger-tec® Silver**



#### Rotor hub roughing (sand inclusions and cavities)

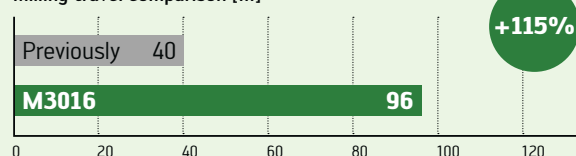


**Material:** EN-GJS-400-15 (GGG40), 0.7040, ISO K  
**Tool:** M3016 / Ø 250 / Z = 11  
**Insert:** LNMx201012R-F27T  
**Cutting material:** WKK25S

#### Cutting data:

	Previously	M3016
$v_c$	200 m/min	200 m/min
$f_z$	0.30 mm	0.48 mm
$v_f$	917 mm/min	1345 mm/min
$a_e$	10 mm	10 mm
$a_p$	220 mm	220 mm

#### Milling travel comparison [m]



# Walter Sky-tec M2131 ramping milling cutter: Benchmark for aluminium wrought alloy in the aircraft industry.

**NEW  
2015**

## THE TOOL

- 90° ramping milling cutter for HSC milling
- Maximum cutting depth 15 mm or 20 mm
- Diameter 25–80 mm or 1–3"
- High level of radial runout accuracy
- Finely balanced basic body
- With different interfaces such as HSK, ScrewFit, parallel shank or bore adaptor

## THE INDEXABLE INSERTS

- Two sizes of indexable insert with various corner radii
  - ZDGT1504...R-K85 (R = 0.4–4.0 mm)
  - ZDGT2005...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
- New milling grade WNN15 with extremely long tool life

## THE APPLICATION

- For machining non-ferrous metals (ISO N) such as aluminium wrought alloys or aluminium lithium alloys
- Machining of structural components in aircraft construction
- Rough milling and semi-finishing of pockets with high chip volume



Internal coolant for MQL or cooling lubricant

V-shaped cutting edge for ramping

Integrated centrifugal force protection

Walter ramping milling cutter

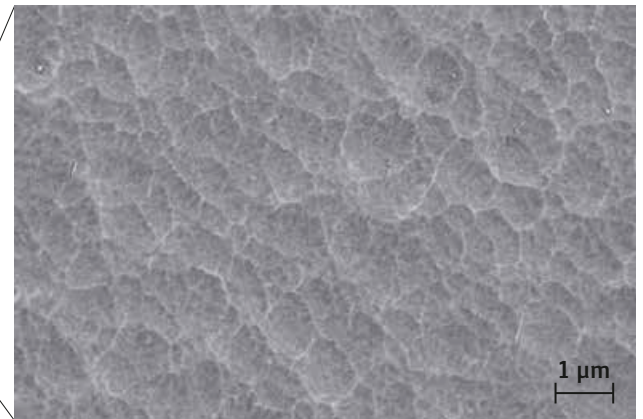
Type: M2131

## BENEFITS FOR YOU

- High level of process reliability even at maximum speeds thanks to centrifugal force protection
- Short machining time due to maximum metal removal rate
- Long tool life thanks to low formation of build-up on the cutting edge



### DETAIL OF THE RAKE FACE

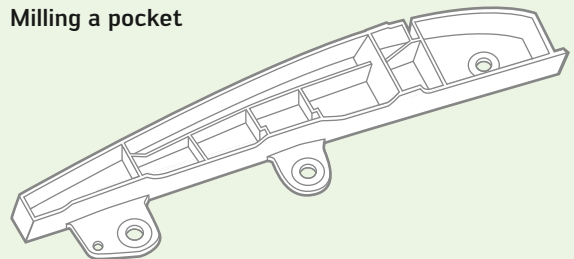


Extremely smooth surface of the WNN15 grade

Walter ISO N indexable insert

Type: ZDGT

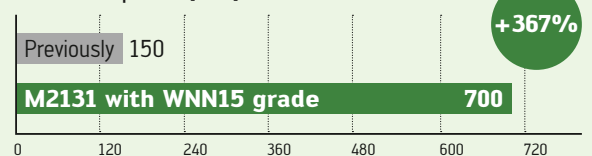
### Milling a pocket



**Material:** Aluminium 7075  
**Tool:** M2131 / Z = 3 / Ø 50 mm  
**Insert:** ZDGT200540R-K85  
**Cutting material:** WNN15  
**Cooling medium:** Emulsion

	Cutting data:	
	Previously	WNN15
$v_c$	2 356 m/min	2 356 m/min
$n$	15 000 rpm	15 000 rpm
$f_z$	0.20 mm	0.20 mm
$v_f$	9 000 mm/min	9 000 mm/min
$a_e$	42 mm	42 mm
$a_p$	9 mm	9 mm

### Tool life comparison [min.]



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<http://goo.gl/i2NpPT>



# Walter BLAXX shoulder mill: Flexible, step-free, higher feed rate.

NEW TO THE  
RANGE FOR  
**2015**

## THE TOOLS

- Tangential F5041, F5141 and F541 shoulder milling cutters with four-edged indexable insert
- Diameter range 25–160 mm
- Three sizes of indexable insert LNHU0904../LNHU1306../LNHU1607..
- 3 cutting depths: 8.0 / 12.0 / 15.0 mm
- Cartridges for face mill F2010
- High level of radial and axial runout accuracy
- Soft-cutting geometries due to helical cutting edges
- Precise 90° angle on the component
- Special surface treatment protects against corrosion and wear

## THE INDEXABLE INSERTS

- Three sizes of indexable insert LNHU0904../LNHU1306../LNHU1607..
- Soft-cutting geometry due to helical cutting edges
- **NEW:** Three different geometries L55T, L65T and L85T
- **NEW:** Special indexable inserts for finishing with high feed rates per revolution LNHX0904PDR-L55T and LNHX1306PDR-L55T

## THE APPLICATION

- For shoulder and face milling all steel and cast iron materials, stainless steels, difficult-to-machine materials, and aluminium
- Flexible use: The automotive industry, aerospace industry and general mechanical engineering, etc.



Powered by  
**Tiger-tec® Silver**



## Walter BLAXX

The new generation of Walter BLAXX milling cutters

Type: F5141

### BENEFITS FOR YOU

#### Maximum process reliability due to stable design

- High volume of carbide in the direction of the cutting force
- Special surface treatment of tool body and reinforced core

#### High level of cost efficiency

- Four cutting edges per indexable insert
- Up to 30 per cent higher feed rate per tooth
- More cutting edges per diameter

#### Powered by Tiger-tec® Silver

- 2 CVD grades (WKP25S and WKP35S) for steel and cast iron machining
- Three PVD grades (WSM35S, WKK25S and WSP45S) for steel, cast iron, stainless steels and difficult-to-cut materials

Walter press



Watch the animation:  
Scan this QR code or go directly to  
<http://goo.gl/CesMH>

### CARTRIDGES FOR FACE MILL F2010

- F2010...R751M for LNHU0904..
- F2010...R752M for LNHU1306..
- Ø 80–315 mm
- Approach angle K = 90°
- Axial runout adjustable



Walter BLAXX

Type: FR751



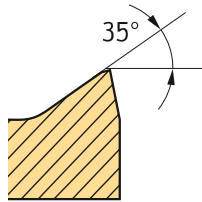
Walter BLAXX

Type: F2010...R751

### THE GEOMETRIES

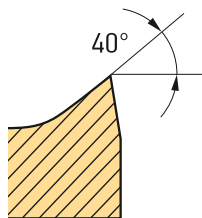
#### L55T – The universal one

- For medium machining conditions
- Can be used universally for most materials



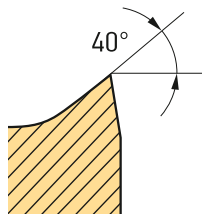
#### L65T – The special one

- For machining stainless steels and titanium materials
- Low cutting forces



#### L85T – The sharp one

- For aluminium machining
- Low cutting forces
- Sharp cutting edge



#### Walter BLAXX:

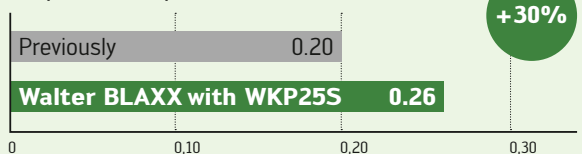
Feed rates which are up to 30 per cent higher due to the tangential arrangement of the indexable inserts

Material: GGG50, ISO K  
 Tool: Shoulder mill, diameter 80 mm  
 Insert: LNHU130608R-L55T  
 Cutting material: WKP25S

#### Cutting data:

$v_c$	264 m/min
$a_p$	8 mm
$a_e$	50 mm

#### Comparison: Feed per tooth $f_z$ [mm]



# Walter BLAXX F5055 slitting cutter: Keep control when separating and slitting.

NEW TO THE  
RANGE FOR  
**2015**

## THE TOOLS

- F5055 slitting cutter with single-edged insert
- Diameter range 63–250 mm
- **NEW:** Cutting widths: 1.5 / 2.0 / 3.0 / 4.0 mm
- High level of radial and axial runout accuracy
- Force- and positive-locking insert clamping in the body
- 3 carbide grades: WKP23S, WSM33S and WSP43S
- User-friendly indexable insert self-clamping system
- As attachment variants or with bore
- No inconvenient clamping elements on the front face

## Powered by Tiger-tec® Silver

## THE APPLICATION

- For parting off and slitting all steel and cast iron materials, stainless steels and difficult-to-cut materials
- Suitable for all industries: The automotive industry, aerospace industry and general mechanical engineering, etc.

## BENEFITS FOR YOU

### Maximum process reliability

- The machining force is introduced into the rigid part of the insert seat
- Extremely high retaining forces as a result of the optimised top clamp
- Force- and positive-locking clamping of the cutting insert

### Low inventory costs

- System indexable inserts, suitable for use in slitting cutters and groove turning holders

### Powered by Tiger-tec® Silver

- One CVD grade (WKP23S) for cast iron materials and two PVD grades (WSM33S and WSP43S) for steel, stainless steels and difficult-to-machine materials

High level of stability by directing the machining force into the rigid section of the insert seat

Extremely high retaining forces as a result of the optimised top clamp

Optimum productivity thanks to Tiger-tec® Silver cutting materials



# Walter BLAXX

The new generation of Walter BLAXX milling cutters

Type: F5055

# Walter Tiger-tec® Silver WSM45X – the grade with eXtra-Performance.



## THE COATING

- Substrate offers extreme process reliability while the latest Tiger-tec® Silver high-performance CVD coating provides extreme hardness
- High temperature resistance combined with high level of toughness
- High process reliability thanks to special Tiger-tec® Silver surface treatment

## THE INDEXABLE INSERTS

- For use in the latest tools from the Walter milling range, such as:
  - Xtra-tec® F4042, F4042R, F4080 face and shoulder milling cutters
  - M4000 M4002, M4132 face and shoulder milling cutters
  - M4000 M4574, M4575 profile milling cutters
  - Walter F2334, F2334R copy mills

## THE APPLICATION

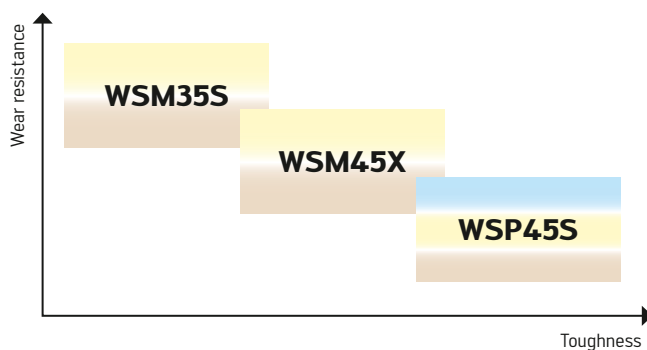
- Machining stainless steels (ISO M) and difficult-to-cut materials (ISO S), such as 1.4848, TiAl6V4 or Inconel 718.
- Typical components: Exhaust turbochargers, turbine blades and titanium formers for the aircraft industry



**Tiger-tec® Silver**

Indexable inserts in the Tiger-tec® Silver WSM45X grade

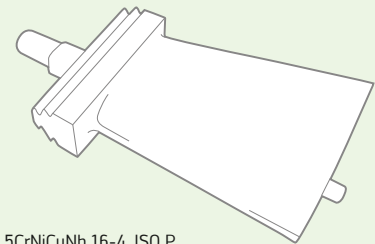
## OVERVIEW OF GRADES: ISO M AND ISO S



## BENEFITS FOR YOU

- A high level of process reliability thanks to a unique combination of wear resistance and hardness
- A high level of productivity when machining exotic materials thanks to the unique Al<sub>2</sub>O<sub>3</sub> coating
- Less formation of build-up on the cutting edge thanks to extremely smooth surfaces
- Reliable wear detection thanks to two-tone Tiger-tec® Silver coating

## Turbine blade roughing

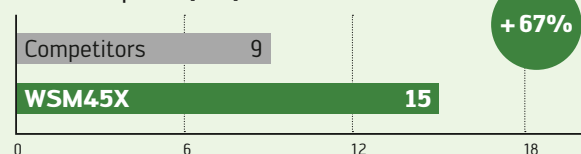


Material: X 5CrNiCuNb 16-4, ISO P  
 Tool: F2334 / Z = 5 / Ø 52 mm  
 Insert: ROMX1204M0-F67  
 Cutting material: WSM45X

### Cutting data:

	Competitors	WSM45X
v <sub>c</sub>	326 m/min	326 m/min
f <sub>z</sub>	0.40–0.45 mm	0.40–0.45 mm
v <sub>f</sub>	4000–4500 mm/min	4000–4500 mm/min
a <sub>e</sub>	8 mm	8 mm
a <sub>p</sub>	2.5–3.5 mm	2.5–3.5 mm

### Tool life comparison [min.]



## Designation key for Walter milling cutters

Example:

M	4	1	32	–	063	B	22	07	09	
1	2	3	4	5	6	7	8	9	10	11

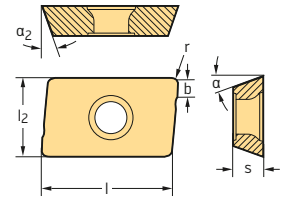
1	2	3	4	5
<b>Tool group</b>	<b>Generation</b>	<b>Tool type</b>	<b>Tool type</b>	<b>1. Delimiters</b>
M Milling		0 Face mill 1 Shoulder mill 5 Profile mill 7 Slot drill	02 $\kappa = 0-15^\circ$ , radial, positive, four cutting edges per indexable insert 25 $\kappa = 42^\circ$ , radial, negative, 16 cutting edges per indexable insert, finishing face mill 26 $\kappa = 42^\circ$ , radial, negative, 16 cutting edges per indexable insert, finishing face mill 32 $\kappa = 90^\circ$ , radial, positive, four cutting edges per indexable insert 74 $\kappa = 45^\circ$ , chamfer milling cutter, radial, positive, four cutting edges per indexable insert 16 $\kappa = 60^\circ$ , tangential, negative, four cutting edges per indexable insert 24 $\kappa = 45^\circ$ , radial, negative, 14 cutting edges per indexable insert, screw clamping 31 $\kappa = 90^\circ$ , radial, positive, two cutting edges per indexable insert 75 T-slot milling cutter, radial, positive, four cutting edges per indexable insert 92 $\kappa = 90^\circ$ , radial, positive, with four or two cutting edges per indexable insert	– Metric · Inch
6	7	8		
<b>Cutting diameter</b>	<b>Adaptor type</b>	<b>Adaptor size</b>		
	A Parallel shank B Bore T NCT ScrewFit W Weldon shank H HSK			
9	10	11		
<b>Number of teeth</b>	<b>Cutting depth</b>	<b>Version acc. to length or manufacturer-specific adaptors</b>		
		S Short version L Long version D Dörries Scharmann machines		



Watch the video:  
Scan this QR code or go directly to  
<http://goo.gl/NOE2Lj>



# Positive rhombic ADGT Tiger-tec® Silver



## Indexable inserts

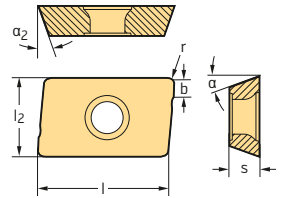
Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	α	α <sub>2</sub>	r mm	b mm	P				M				K				N		S						
										HC				HC				HC				HC HW		HC						
										WKP25S	WKP35S	WSP45S	WSP45	WSM35S	WSM35	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSM35	WSP45S	WSP45		
ADGT0803PER-D51	G	2	6,75	9,52	3,35	15°	20°	0,4	1,2	☉	☉	☉				☉					☉	☉					☉	☉		
ADGT1204PER-D51	G	2	8,4	13,6	4,76	15°	20°	0,8	1,2	☉	☉	☉				☉					☉	☉					☉	☉		
ADGT1606PER-D51	G	2	10,8	17,5	6,15	15°	20°	0,8	1,6	☉	☉	☉				☉					☉	☉					☉	☉		
ADGT1807PER-D51	G	2	14,5	19	7	15°	17°	1,2	1,8	☉	☉	☉				☉					☉	☉					☉	☉		
ADGT0803PER-D56	G	2	6,75	9,52	3,35	15°	20°	0,4	1,2			☉				☉					☉	☉					☉	☉		
ADGT1204PER-D56	G	2	8,4	13,6	4,76	15°	20°	0,8	1,2	☉	☉	☉				☉				☉	☉						☉	☉		
ADGT1606PER-D56	G	2	10,8	17,5	6,15	15°	20°	0,8	1,6	☉	☉	☉				☉				☉	☉						☉	☉		
ADGT1807PER-D56	G	2	14,5	19	7	15°	17°	1,2	1,8	☉	☉	☉				☉				☉	☉						☉	☉		
ADGT10T3PER-D67	G	2	7,25	11,3	3,8	15°	15°	0,8	1,2		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT10T316R-D67	G	2	7,25	11,3	3,8	15°	15°	1,6	1,2		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT10T325R-D67	G	2	7,25	11,3	3,8	15°	15°	2,5	1		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT10T330R-D67	G	2	7,25	11,3	3,8	15°	15°	3	0,8		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT10T332R-D67	G	2	7,25	11,3	3,8	15°	15°	3,2	0,8		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT1204PER-D67	G	2	8,4	13,6	4,76	15°	20°	0,8	1,2		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT120416R-D67	G	2	8,4	13,6	4,76	15°	20°	1,6	1		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT120430R-D67	G	2	8,4	13,6	4,76	15°	20°	3	0,8		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT1606PER-D67	G	2	10,8	17,5	6,15	15°	20°	0,8	1,6		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT160616R-D67	G	2	10,8	17,5	6,15	15°	20°	1,6	1		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT160630R-D67	G	2	10,8	17,5	6,15	15°	20°	3	0,8		☉	☉		☉		☉					☉	☉			☉		☉	☉		
ADGT0803PER-F56	G	2	6,75	9,52	3,35	15°	20°	0,4	1,2			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT080308R-F56	G	2	6,75	9,52	3,35	15°	20°	0,8	1,2			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT120404R-F56	G	2	8,4	13,6	4,76	15°	20°	0,4	1,2			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT1204PER-F56	G	2	8,4	13,6	4,76	15°	20°	0,8	1,2			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT120430R-F56	G	2	8,4	13,6	4,76	15°	20°	3	0,8			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT120440R-F56	G	2	8,4	13,6	4,76	15°	20°	4	0,4			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT1606PER-F56	G	2	10,8	17,5	6,15	15°	20°	0,8	1,6			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT160612R-F56	G	2	10,8	17,5	6,15	15°	20°	1,2	1,6			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT160616R-F56	G	2	10,8	17,5	6,15	15°	20°	1,6	1,4			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT160620R-F56	G	2	10,8	17,5	6,15	15°	20°	2	1,4			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT160632R-F56	G	2	10,8	17,5	6,15	15°	20°	3,2	1,2			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT160640R-F56	G	2	10,8	17,5	6,15	15°	20°	4	1			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT160650R-F56	G	2	10,8	17,5	6,15	15°	20°	5	0,4			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT10T3PER-G77	G	2	7,25	11,3	3,8	15°	15°	0,8	1,2			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT1204PER-G77	G	2	8,4	13,6	4,76	15°	20°	0,8	1,2			☉		☉		☉						☉	☉			☉		☉	☉	
ADGT1606PER-G77	G	2	10,8	17,5	6,15	15°	20°	0,8	1,6			☉		☉		☉						☉	☉			☉		☉	☉	

HC = Coated carbide



HW = Uncoated carbide

New addition to the product range

# Positive rhombic ADMT Tiger-tec® Silver



## Indexable inserts

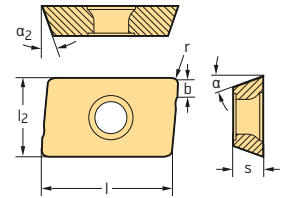
Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	α	α <sub>2</sub>	r mm	b mm	P				M				K				S							
										HC				HC				HC				HC							
										WKP25S	WKP35S	WSP45S	WSP45	WSM35S	WSM35	WSM45X	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WSM35S	WSM35	WSM45X	WSP45S	WSP45	
 ADMT080304R-D56	M	2	6,75	9,52	3,35	15°	20°	0,4	1,2	☉	☉	☉					☉	☉	☉	☉	☉	☉						☉	
ADMT120408R-D56	M	2	8,4	13,6	4,76	15°	20°	0,8	1,2	☉	☉	☉					☉	☉	☉	☉	☉	☉						☉	
ADMT160608R-D56	M	2	10,8	17,5	6,15	15°	20°	0,8	1,6	☉	☉	☉					☉	☉	☉	☉	☉	☉						☉	
ADMT180712R-D56	M	2	14,5	19	7	15°	17°	1,2	1,8	☉	☉	☉					☉	☉	☉	☉	☉	☉						☉	
 ADMT080302R-F56	M	2	6,75	9,52	3,35	15°	20°	0,2	1,2		☉	☉		☉			☉	☉					☉	☉				☉	
ADMT080304R-F56	M	2	6,75	9,52	3,35	15°	20°	0,4	1,2	☉	☉	☉		☉	☉		☉	☉	☉	☉	☉	☉						☉	
ADMT080304L-F56	M	2	6,75	9,52	3,35	15°	20°	0,4	1,2		☉	☉					☉	☉					☉	☉				☉	
ADMT080308R-F56	M	2	6,75	9,52	3,35	15°	20°	0,8	1,2		☉	☉	☉	☉	☉		☉	☉					☉	☉	☉	☉	☉	☉	☉
ADMT080308L-F56	M	2	6,75	9,52	3,35	15°	20°	0,8	1,2		☉	☉					☉	☉					☉	☉				☉	☉
ADMT080312R-F56	M	2	6,75	9,52	3,35	15°	20°	1,2	1		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT080316R-F56	M	2	6,75	9,52	3,35	15°	20°	1,6	1		☉	☉		☉			☉	☉					☉	☉				☉	☉
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ADMT10T304R-F56	M	2	7,25	11,3	3,8	15°	15°	0,4	1,2		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT10T308R-F56	M	2	7,25	11,3	3,8	15°	15°	0,8	1,2	☉	☉	☉		☉		☉	☉	☉	☉	☉	☉	☉	☉	☉				☉	☉
ADMT10T312R-F56	M	2	7,25	11,3	3,8	15°	15°	1,2	1,2		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT10T316R-F56	M	2	7,25	11,3	3,8	15°	15°	1,6	1,2		☉	☉		☉		☉	☉	☉					☉	☉				☉	☉
ADMT10T320R-F56	M	2	7,25	11,3	3,8	15°	15°	2	1		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT10T325R-F56	M	2	7,25	11,3	3,8	15°	15°	2,5	1		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT10T330R-F56	M	2	7,25	11,3	3,8	15°	15°	3	0,8		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT10T332R-F56	M	2	7,25	11,3	3,8	15°	15°	3,2	0,8		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT120404R-F56	M	2	8,4	13,6	3,35	15°	20°	0,4	1,2		☉	☉		☉	☉	☉	☉	☉					☉	☉				☉	☉
ADMT120408R-F56	M	2	8,4	13,6	4,76	15°	20°	0,8	1,2	☉	☉	☉		☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉				☉	☉
ADMT120408L-F56	M	2	8,4	13,6	4,76	15°	20°	0,8	1,2		☉	☉					☉	☉					☉	☉				☉	☉
ADMT120412R-F56	M	2	8,4	13,6	4,76	15°	20°	1,2	1,2		☉	☉		☉		☉	☉	☉					☉	☉				☉	☉
ADMT120416L-F56	M	2	8,4	13,6	4,76	15°	20°	1,6	1		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT120416R-F56	M	2	8,4	13,6	4,76	15°	20°	1,6	1		☉	☉		☉	☉	☉	☉	☉					☉	☉				☉	☉
ADMT120420R-F56	M	2	8,4	13,6	4,76	15°	20°	2	1		☉	☉		☉	☉	☉	☉	☉					☉	☉				☉	☉
ADMT120425L-F56	M	2	8,4	13,6	4,76	15°	20°	2,5	0,8		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT120425R-F56	M	2	8,4	13,6	4,76	15°	20°	2,5	0,8		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT120430L-F56	M	2	8,4	13,6	4,76	15°	20°	3	0,8		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT120430R-F56	M	2	8,4	13,6	4,76	15°	20°	3	0,8		☉	☉		☉	☉	☉	☉	☉					☉	☉				☉	☉
ADMT120432R-F56	M	2	8,4	13,6	4,76	15°	20°	3,2	0,8		☉	☉		☉		☉	☉	☉					☉	☉				☉	☉
ADMT120440L-F56	M	2	8,4	13,6	4,76	15°	20°	4	0,4		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT120440R-F56	M	2	8,4	13,6	4,76	15°	20°	4	0,4		☉	☉		☉	☉	☉	☉	☉					☉	☉				☉	☉
ADMT160608R-F56	M	2	10,8	17,5	6,15	15°	20°	0,8	1,6	☉	☉	☉		☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉				☉	☉
ADMT160608L-F56	M	2	10,8	17,5	6,15	15°	20°	0,8	1,6		☉	☉					☉	☉					☉	☉				☉	☉
ADMT160612R-F56	M	2	10,8	17,5	6,15	15°	20°	1,2	1,6		☉	☉		☉		☉	☉	☉					☉	☉				☉	☉
ADMT160616L-F56	M	2	10,8	17,5	6,15	15°	20°	1,6	1,4		☉	☉		☉			☉	☉					☉	☉				☉	☉
ADMT160616R-F56	M	2	10,8	17,5	6,15	15°	20°	1,6	1,4		☉	☉		☉	☉	☉	☉	☉					☉	☉				☉	☉

HC = Coated carbide



☉ ☉ ☉ New addition to the product range



# Positive rhombic ADMT Tiger-tec® Silver



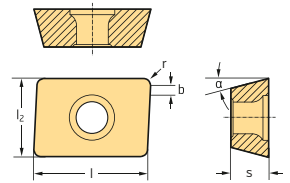
## Indexable inserts

Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	α	α <sub>2</sub>	r mm	b mm	P				M				K				S							
										HC				HC				HC				HC							
										WKP25S	WKP35S	WSP45S	WSP45	WSM35S	WSM35	WSM45X	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WSM35S	WSM35	WSM45X	WSP45S	WSP45	
 ADMT160620R-F56	M	2	10,8	17,5	6,15	15°	20°	2	1,4	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕					⊕	⊕	⊕	⊕	⊕	⊕	
ADMT160625L-F56	M	2	10,8	17,5	6,15	15°	20°	2,5	1,2	⊕	⊕	⊕	⊕					⊕					⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160625R-F56	M	2	10,8	17,5	6,15	15°	20°	2,5	1,2	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160630L-F56	M	2	10,8	17,5	6,15	15°	20°	3	1,2	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160630R-F56	M	2	10,8	17,5	6,15	15°	20°	3	1,2	⊕	⊕	⊕	⊕			⊕	⊕						⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160632R-F56	M	2	10,8	17,5	6,15	15°	20°	3,2	1,2	⊕	⊕	⊕	⊕			⊕	⊕						⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160640R-F56	M	2	10,8	17,5	6,15	15°	20°	4	1	⊕	⊕	⊕	⊕			⊕	⊕						⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160640L-F56	M	2	10,8	17,5	6,15	15°	20°	4	1	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160650R-F56	M	2	10,8	17,5	6,15	15°	20°	5		⊕	⊕	⊕	⊕			⊕	⊕						⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160660R-F56	M	2	10,8	17,5	6,15	15°	20°	6		⊕	⊕	⊕	⊕			⊕	⊕						⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT180712R-F56	M	2	14,5	19	7	15°	17°	1,2	1,8	⊕	⊕	⊕	⊕						⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
 ADMT080304R-G56	M	2	6,75	9,52	3,35	15°	20°	0,4	1,2	⊕	⊕	⊕	⊕						⊕				⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT10T308R-G56	M	2	7,25	11,3	3,8	15°	15°	0,8	1,2	⊕	⊕	⊕	⊕						⊕				⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT10T316R-G56	M	2	7,25	11,3	3,8	15°	15°	1,6	1,2	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT10T325R-G56	M	2	7,25	11,3	3,8	15°	15°	2,5	1	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT10T332R-G56	M	2	7,25	11,3	3,8	15°	15°	3,2	0,8	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT120408R-G56	M	2	8,4	13,6	4,76	15°	20°	0,8	1,2	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕
ADMT160608R-G56	M	2	10,8	17,5	6,15	15°	20°	0,8	1,6	⊕	⊕	⊕	⊕										⊕	⊕	⊕	⊕	⊕	⊕	⊕





HC = Coated carbide

New addition to the product range

**Positive rhombic  
LDMT / LDMW  
Tiger-tec® Silver**

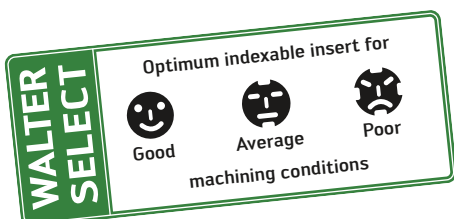


**Indexable inserts**

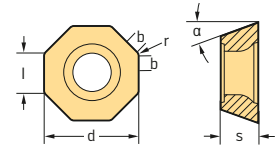
Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	α	r mm	b mm	P			M		K				S	
									HC			HC		HC				HC	
									WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSP45S
 LDMT08T204R-D51	M	2	6,1	8,88	2,58	15°	0,4	0,8	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
LDMT14T308R-D51	M	2	9,68	14,1	4,08	15°	0,8	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
LDMT170408R-D51	M	2	11,78	17,24	4,92	15°	0,8	1,6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
 LDMT08T204R-D57	M	2	6,1	8,88	2,58	15°	0,4	0,8	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
LDMT14T308R-D57	M	2	9,68	14,1	4,08	15°	0,8	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
LDMT170408R-D57	M	2	11,78	17,24	4,92	15°	0,8	1,6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
 LDMT08T204R-F57	M	2	6,1	8,88	2,58	15°	0,4	0,8	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
LDMT14T308R-F57	M	2	9,68	14,1	4,08	15°	0,8	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
LDMT170408R-F57	M	2	11,78	17,24	4,92	15°	0,8	1,6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
 LDMW08T204R-A57	M	2	6,1	8,88	4,08	15°	0,4	0,8	☺	☺				☺	☺				
LDMW14T308R-A57	M	2	9,68	14,1	4,08	15°	0,8	1,2	☺	☺				☺	☺				
LDMW170408R-A57	M	2	11,78	17,24	4,92	15°	0,8	1,6	☺	☺				☺	☺				

HC = Coated carbide

☺ ☺ ☺ New addition to the product range



# Positive octagonal ODMT / ODMW Tiger-tec® Silver

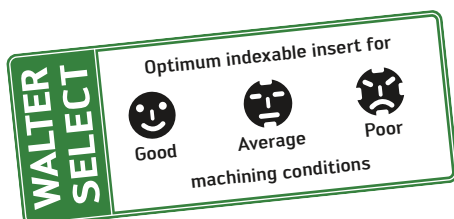


## Indexable inserts

Designation	Tolerance class	Number of cutting edges	l mm	d mm	s mm	α	r mm	b mm	P				M			K				S							
									HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC							
									WKP25S	WKP25	WKP35S	WSP45S	WSM35S	WSM35	WSM45X	WSP45S	WAK15	WKK25S	WKK25	WKP25S	WKP25	WKP35S	WSM35S	WSM35	WSM45X	WSP45S	
ODMT050408-D57	M	8	5,26	12,7	4,76	15°	0,8		☺	☺	☺	☺						☺	☺	☺	☺	☺	☺	☺			
ODMT060512-D57	M	8	6,58	15,88	5,56	15°	1,2		☺	☺	☺	☺						☺	☺	☺	☺	☺	☺	☺			
ODMW050408T-A27	M	8	5,26	12,7	4,76	15°	0,8		☺	☺	☺	☺						☺	☺	☺	☺	☺	☺				
ODMW060508T-A27	M	8	6,58	15,88	5,56	15°	0,8		☺	☺	☺	☺						☺	☺	☺	☺	☺	☺				
ODMW050408-A57	M	8	5,26	12,7	4,76	15°	0,8		☺	☺	☺	☺					☺	☺	☺	☺	☺	☺	☺				
ODMW060508-A57	M	8	6,58	15,88	5,56	15°	0,8		☺	☺	☺	☺					☺	☺	☺	☺	☺	☺	☺				
ODMT0504ZZN-D57	M	8	5,26	12,7	4,76	15°	0,8	1,2	☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺	☺		☺	☺	
ODMT0605ZZN-D57	M	8	6,58	15,88	5,56	15°	0,8	1,6	☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺	☺		☺	☺	

HC = Coated carbide

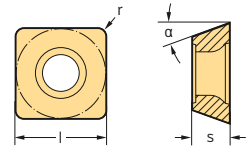
New addition to the product range









Positive square  
SDMT / SDMW / SDGT

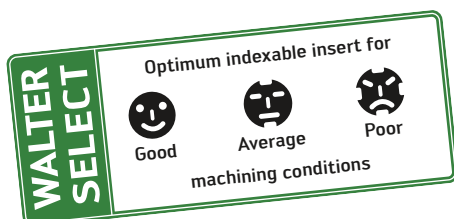
## Tiger-tec® Silver



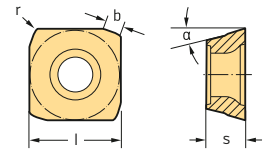
## Indexable inserts

Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	r mm	P			M			K			S	
							HC			HC			HC			HC	
							WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S
 SDMT06T204-D57 SDMT09T308-D57 SDMT120408-D57	M	4	6,35	2,78	15°	0,4	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	9,52	3,97	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	12,7	4,76	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
 SDMT06T204-F57 SDMT06T212-F57 SDMT09T308-F57 SDMT09T320-F57 SDMT120408-F57 SDMT120425-F57	M	4	6,35	2,78	15°	0,4	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	6,35	2,78	15°	1,2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	9,52	3,97	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	9,52	3,97	15°	2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	12,7	4,76	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	12,7	4,76	15°	2,5	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
 SDMT06T204-D51 SDMT09T308-D51 SDMT120408-D51	M	4	6,35	2,78	15°	0,4	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	9,52	3,97	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	12,7	4,76	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
 SDMW06T204-A57 SDMW09T308-A57 SDMW120408-A57	M	4	6,35	2,78	15°	0,4	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	9,52	3,97	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	M	4	12,7	4,76	15°	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕


HC = Coated carbide

 New addition to the product range


**Positive square  
SDMT / SDMW / SDGT  
Tiger-tec® Silver**



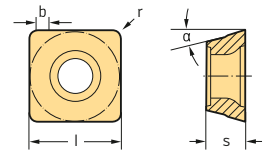
**Indexable inserts**

Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	r mm	b mm	P		M		K		S	
								HC		HC		HC		HC	
								WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S
 SDMT06T2ZDR-D57	M	4	6,3	2,78	15°	0,4	1,2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SDMT09T3ZDR-D57	M	4	9,5	3,97	15°	0,8	1,2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SDMT1204ZDR-D57	M	4	12,7	4,76	15°	0,8	1,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕


HC = Coated carbide

⊕ ⊕ ⊕ New addition to the product range

**Positive square  
SDGT / SDMW / SDGT  
Tiger-tec® Silver**



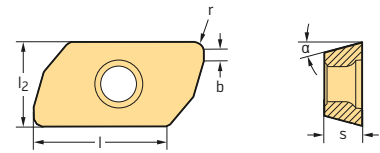
**Indexable inserts**

Designation	Tolerance class	Number of cutting edges	l mm	s mm	α	r mm	b mm	P		M		K		S	
								HC		HC		HC		HC	
								WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S
 SDGT06T2PDR-D57	G	4	6,3	2,78	15°	0,4	1,2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SDGT09T3PDR-D57	G	4	9,5	3,97	15°	0,8	1,2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SDGT1204PDR-D57	G	4	12,7	4,76	15°	0,8	1,6	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕


HC = Coated carbide

⊕ ⊕ ⊕ New addition to the product range

# Positive rhombic ZDGT

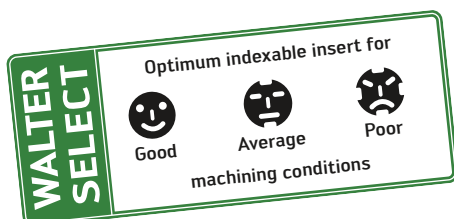


## Indexable inserts

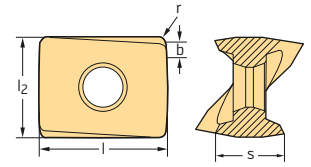
Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	α	r mm	b mm	P			M		K			N			S		HF
									HC			HC		HC			HC	HW	HC			
									WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WNN15	WK10	WSM35S	
 ZDGT150404R-K85	G	2	10,5	16,2	4,76	15°	0,4	1,2														
ZDGT150408R-K85	G	2	10,5	16,2	4,76	15°	0,8	1,2														
ZDGT150412R-K85	G	2	10,5	16,2	4,76	15°	1,2	1,2														
ZDGT150416R-K85	G	2	10,5	16,2	4,76	15°	1,6	1,2														
ZDGT150420R-K85	G	2	10,5	16,2	4,76	15°	2	1,2														
ZDGT150425R-K85	G	2	10,5	16,2	4,76	15°	2,5	1,2														
ZDGT150430R-K85	G	2	10,5	16,2	4,76	15°	3	1,2														
ZDGT150440R-K85	G	2	10,5	16,2	4,76	15°	4	1,2														
ZDGT200508R-K85	G	2	14	21,2	5,56	15°	0,8	1,2														
ZDGT200512R-K85	G	2	14	21,2	5,56	15°	1,2	1,2														
ZDGT200516R-K85	G	2	14	21,2	5,56	15°	1,6	1,2														
ZDGT200520R-K85	G	2	14	21,2	5,56	15°	2	1,2														
ZDGT200530R-K85	G	2	14	21,2	5,56	15°	3	1,2														
ZDGT200540R-K85	G	2	14	21,2	5,56	15°	4	1,2														
ZDGT200550R-K85	G	2	14	21,2	5,56	15°	5	1,2														
ZDGT200560R-K85	G	2	14	21,2	5,56	15°	6	1,2														
ZDGT200564R-K85	G	2	14	21,2	5,56	15°	6,4	1,2														

HC = Coated carbide  
 HW = Uncoated carbide  
 HF = Uncoated fine-grained carbide

 New addition to the product range



# Negative rhombic LNGX Tiger-tec® Silver



## Indexable inserts

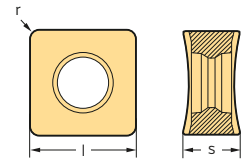
Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	r mm	b mm	P				M				K				N		S						
								HC				HC				HC				HC	HW	HC						
								WKP25S	WKP35S	WSP45S	WSP45	WSM35S	WSM35	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSM35	WSP45S	WSP45		
	LNGX130708R-L55	G	4	11	13,6	7,74	0,8	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	LNGX130712R-L55	G	4	11	13,6	7,74	1,2	1	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	LNGX130716R-L55	G	4	11	13,6	7,74	1,6	0,9	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	LNGX130720R-L55	G	4	11	13,6	7,74	2	0,7	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	LNGX130725R-L55	G	4	11	13,6	7,74	2,5	0,6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	LNGX130730R-L55	G	4	11	13,6	7,74	3	0,7	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	LNGX130708R-L88	G	4	11	13,6	7,74	0,8	1,2													☺	☺						
	LNGX130712R-L88	G	4	11	13,6	7,74	1,2	1														☺						
	LNGX130716R-L88	G	4	11	13,6	7,74	1,6	0,9														☺						
	LNGX130720R-L88	G	4	11	13,6	7,74	2	0,7														☺						
	LNGX130725R-L88	G	4	11	13,6	7,74	2,5	0,6														☺						
	LNGX130730R-L88	G	4	11	13,6	7,74	3	0,7														☺						

HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ New addition to the product range



Negative square  
SNGX / SNMX  
Tiger-tec® Silver

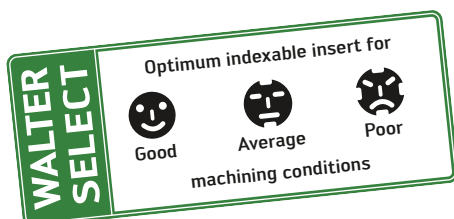


## Indexable inserts

Designation	Tolerance class	Number of cutting edges	l mm	s mm	r mm	P			M			K				N		S					
						HC			HC			HC				HC	HW	HC					
						WKP25S	WKP35S	WSP45S	WSM35S	WSM35	WSP45S	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSM35	WSP45S		
SNGX120512-F57	G	8	12,7	6,4	1,2	☺	☺	☺	☺	☺	☺				☺	☺			☺		☺		
SNMX160620-F57	M	8	16	7,8	2	☺	☺	☺					☺	☺	☺	☺					☺	☺	
SNMX160620-D27	M	8	16	7,8	2	☺	☺						☺	☺	☺	☺							
SNMX160620-F27	M	8	16	7,8	2	☺	☺								☺	☺							
SNMX160640-D27	M	8	16	7,8	4	☺	☺								☺	☺							
SNMX160640-F57	M	8	16	7,8	4	☺	☺	☺		☺					☺	☺						☺	
SNMX120512-D27	M	8	12,7	6,4	1,2	☺	☺						☺	☺	☺	☺							
SNMX120512-F27	M	8	12,7	6,4	1,2	☺	☺								☺	☺							
SNMX120512-F57	M	8	12,7	6,4	1,2	☺	☺	☺		☺			☺	☺	☺	☺						☺	☺
SNMX120512-F67	M	8	12,7	6,4	1,2	☺	☺	☺		☺	☺				☺	☺						☺	☺
SNMX120520-D27	M	8	12,7	6,4	2	☺	☺						☺	☺	☺	☺							
SNMX120520-F57	M	8	12,7	6,4	2	☺	☺	☺		☺			☺	☺	☺	☺							☺
SNMX160640-F57	M	8	16	7,8	4				☺						☺	☺			☺				

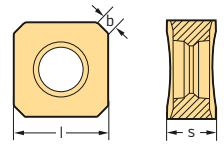
HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ New addition to the product range






# Negative square SNGX / SNMX / SNHX

## Tiger-tec® Silver



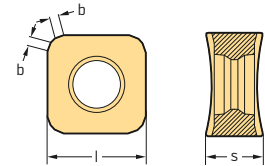
### Indexable inserts

Designation	Tolerance class	Number of cutting edges	l mm	s mm	b mm	P				M				K				N		S			
						HC				HC				HC				HC	HW	HC			
						WKP25S	WKP35S	WSP45S	WSP45	WSM35S	WSM35	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSM35	WSP45S
 SNGX1606ANN-F67	G	8	16	7.7	1.8	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺	☺	☺
SNGX1606ANN-D27	G	8	16	7.7	1.8	☺	☺	☺	☺					☺	☺	☺	☺					☺	☺
SNGX1606ANN-F57	G	8	16	7.7	1.8	☺	☺	☺	☺					☺	☺	☺	☺			☺	☺	☺	☺
SNGX1606ANN-F27	G	8	16	7.7	1.8	☺	☺	☺	☺					☺	☺	☺	☺					☺	☺
SNGX1205ANN-F57	G	8	12.7	6.4	1.5	☺	☺	☺	☺					☺	☺	☺	☺			☺	☺	☺	☺
SNGX1205ANN-F67	G	8	12.7	6.4	1.5	☺	☺	☺	☺					☺	☺	☺	☺			☺	☺	☺	☺
SNGX1205ANN-D27	G	8	12.7	6.4	1.5	☺	☺	☺	☺					☺	☺	☺	☺					☺	☺
SNGX1205ANN-F27	G	8	12.7	6.4	1.5	☺	☺	☺	☺					☺	☺	☺	☺					☺	☺
 SNMX1205ANN-F27	M	8	12.7	6.4	1.5	☺	☺	☺	☺					☺	☺	☺	☺						
SNMX1205ANN-F57	M	8	12.7	6.4	1.5	☺	☺	☺	☺					☺	☺	☺	☺						
SNMX1205ANN-F67	M	8	12.7	6.4	1.5	☺	☺	☺	☺					☺	☺	☺	☺						
 SNHX1205ANN-K88	H	8	12.7	6.4	1.5													☺	☺				

HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ New addition to the product range

## Negative square SNGX Tiger-tec® Silver



### Indexable inserts

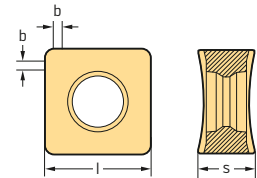
Designation	Tolerance class	Number of cutting edges	l mm	s mm	b mm	P				M				K				N		S		
						HC				HC				HC				HC	HW	HC		
						WKP25S	WKP35S	WSP45S	WSP45	WSM35S	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSP45S	WSP45
SNGX1205ENN-F57	G	8	12,7	6,4	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SNGX1205ENN-F67	G	8	12,7	6,4	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SNGX1205ENN-F27	G	8	12,7	6,4	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺



HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ New addition to the product range

## Negative square SNGX / SNMX / SNHX Tiger-tec® Silver



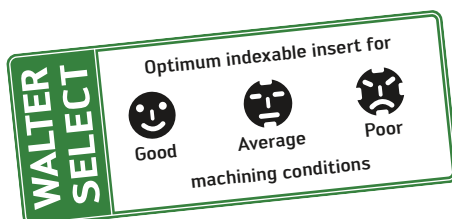
### Indexable inserts

Designation	Tolerance class	Number of cutting edges	l mm	s mm	b mm	P				M				K				N		S		
						HC				HC				HC				HC	HW	HC		
						WKP25S	WKP35S	WSP45S	WSP45	WSM35S	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSP45S	
SNGX1205ZNN-F57	G	8	12,7	6,4	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
SNGX1205ZNN-F67	G	8	12,7	6,4	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
SNGX1205ZNN-F27	G	8	12,7	6,4	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	

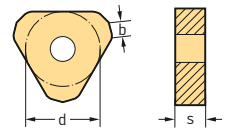


HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ New addition to the product range



# Negative triangular TNEF Tiger-tec® Silver



## Indexable inserts

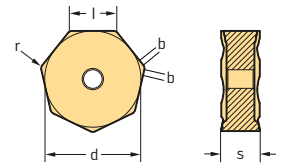
Designation	Tolerance class	Number of cutting edges	d mm	s mm	b mm	P			M		K				N		S	
						HC			HC		HC				HC	HW	HC	
						WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S
TNEF1204AN-D57	E	6	12,7	4,76	1,8	☺	☺				☺	☺	☺	☺	☺			



HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ ☺ New addition to the product range

# Negative heptagonal XNHF Tiger-tec® Silver



## Indexable inserts

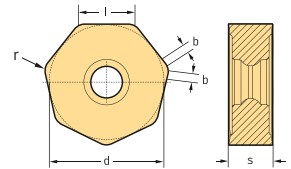
Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	b mm	P			M		K				N		S	
								HC			HC		HC				HC	HW	HC	
								WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S
XNHF070508-D27	H	14	14,5	7	5,8	0,8		☺	☺				☺	☺	☺	☺				
XNHF070508-D57	H	14	14,5	7	5,8	0,8		☺	☺				☺	☺	☺	☺				
XNHF070508-D67	H	14	14,5	7	5,8	0,8		☺	☺				☺	☺	☺	☺				
XNHF090612-D57	H	14	19,05	9	6,35	1,2		☺	☺				☺	☺	☺	☺				
XNHF090612-D27	H	14	19,05	9	6,35	1,2		☺	☺				☺	☺	☺	☺				
XNHF090612-D67	H	14	19,05	9	6,35	1,2		☺	☺				☺	☺	☺	☺				
XNHF0705ANN-D67	H	14	14,5	7	5,8	0,8	1,1	☺	☺				☺	☺	☺	☺				
XNHF0705ANN-D27	H	14	14,5	7	5,8	0,8	1,1	☺	☺				☺	☺	☺	☺				
XNHF0705ANN-D57	H	14	14,5	7	5,8	0,8	1,1	☺	☺				☺	☺	☺	☺				
XNHF0906ANN-D57	H	14	19,05	9	6,35	0,8	1,4	☺	☺				☺	☺	☺	☺				
XNHF0906ANN-D27	H	14	19,05	9	6,35	0,8	1,4	☺	☺				☺	☺	☺	☺				
XNHF0906ANN-D67	H	14	19,05	9	6,35	0,8	1,4	☺	☺				☺	☺	☺	☺				






HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ ☺ New addition to the product range

# Negative heptagonal XNMU / XNGU Tiger-tec® Silver

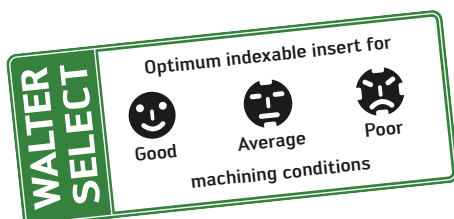


## Indexable inserts

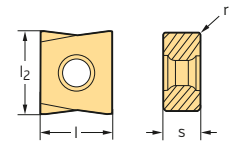
Designation	Tolerance class	Number of cutting edges	d mm	l mm	s mm	r mm	b mm	P			M		K			N		S		
								HC			HC		HC			HC	HW	HC		
								WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSP45S
 XNMU0705ANN-F27 XNMU0705ANN-F57 XNMU0705ANN-F67	M	14	14,5	6,98	4,6	0,8	1,1	⊕	⊕	⊕										
	M	14	14,5	6,98	4,6	0,8	1,1	⊕	⊕	⊕	⊕								⊕	
	M	14	14,5	6,98	4,6	0,8	1,1	⊕	⊕											
 XNMU070508-F57	M	14	14,5	6,98	4,6	0,8		⊕	⊕	⊕	⊕								⊕	
 XNGU0705ANN-F57 XNGU0705ANN-F67	G	14	14,5	6,98	4,6	0,8	1,1	⊕	⊕	⊕	⊕								⊕	⊕
	G	14	14,5	6,98	4,6	0,8	1,1	⊕	⊕	⊕	⊕								⊕	⊕

HC = Coated carbide  
HW = Uncoated carbide

⊕ ⊕ ⊕ New addition to the product range



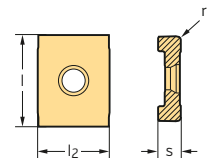
# Tangential rhombic LNMU / LNHU Tiger-tec® Silver



## Indexable inserts

Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	r mm	P					M				K					N		S											
							WKP25S	WKP25	WKP35S	WSP45S	WSP45	WSM35S	WSM35	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP25	WKP35S	WCN15	WK10	WSM35S	WSM35	WSP45S	WSP45							
	LNMU080304-B57T	M	4	9	8	3,5	0,4	⊕	⊕	⊕							⊕	⊕	⊕	⊕	⊕													
	LNMU080404-B57T	M	4	9,4	8	4,5	0,4	⊕	⊕	⊕							⊕	⊕	⊕	⊕	⊕													
	LNMU100508-B57T	M	4	12,3	10	5,5	0,8	⊕	⊕	⊕							⊕	⊕	⊕	⊕	⊕													
	LNMU120608-B57T	M	4	13,9	12	6,5	0,8	⊕	⊕	⊕							⊕	⊕	⊕	⊕	⊕													
	LNMU160812-B57T	M	4	16	17,4	8	1,2	⊕	⊕	⊕							⊕	⊕	⊕	⊕	⊕													
	LNMU080304-F57T	M	4	9	8	3,5	0,4	⊕	⊕	⊕	⊕								⊕	⊕	⊕					⊕	⊕		⊕	⊕				
	LNMU080404-F57T	M	4	9,4	8	4,5	0,4	⊕	⊕	⊕	⊕									⊕	⊕	⊕					⊕	⊕		⊕	⊕			
	LNMU100508-F57T	M	4	12,3	10	5,5	0,8	⊕	⊕	⊕	⊕										⊕	⊕	⊕					⊕	⊕		⊕	⊕		
	LNMU120608-F57T	M	4	13,9	12	6,5	0,8	⊕	⊕	⊕	⊕											⊕	⊕	⊕					⊕	⊕		⊕	⊕	
	LNMU160812-F57T	M	4	16	17,4	8	1,2	⊕	⊕	⊕	⊕												⊕	⊕	⊕					⊕	⊕		⊕	⊕
	LNHU080404-B57T	H	4	9,4	8	4,5	0,4		⊕	⊕	⊕								⊕	⊕	⊕													
	LNHU080304-B57T	H	4	9	8	3,5	0,4		⊕	⊕	⊕								⊕	⊕	⊕													
	LNHU100508-B57T	H	4	12,3	10	5,5	0,8		⊕	⊕	⊕								⊕	⊕	⊕													
	LNHU120608-B57T	H	4	13,9	12	6,5	0,8		⊕	⊕	⊕										⊕	⊕	⊕											
	LNHU160812-B57T	H	4	16	17,4	8	1,2		⊕	⊕	⊕											⊕	⊕	⊕										
	LNHU080304-F57T	H	4	9	8	3,5	0,4	⊕	⊕	⊕	⊕										⊕	⊕	⊕					⊕	⊕		⊕	⊕		
	LNHU080404-F57T	H	4	9,4	8	4,5	0,4	⊕	⊕	⊕	⊕											⊕	⊕	⊕					⊕	⊕		⊕	⊕	
	LNHU100508-F57T	H	4	12,3	10	5,5	0,8	⊕	⊕	⊕	⊕											⊕	⊕	⊕					⊕	⊕		⊕	⊕	
	LNHU120608-F57T	H	4	13,9	12	6,5	0,8	⊕	⊕	⊕	⊕												⊕	⊕	⊕					⊕	⊕		⊕	⊕
	LNHU160812-F57T	H	4	16	17,4	8	1,2	⊕	⊕	⊕	⊕													⊕	⊕	⊕					⊕	⊕		⊕

# Tangential rhombic LNHX / LNMX Tiger-tec® Silver



## Indexable inserts

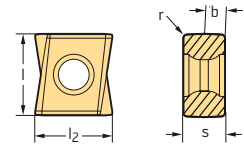
Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	r mm	P					M				K					N		S										
							WKP25S	WKP25	WKP35S	WSP45S	WSP45	WSM35S	WSM35	WSP45S	WSP45	WAK15	WKK25S	WKK25	WKP25S	WKP25	WKP35S	WCN15	WK10	WSM35S	WSM35	WSP45S	WSP45						
	LNHX070204-D57T	H	4	7	9	2,4	0,4	⊕	⊕	⊕									⊕	⊕	⊕												
	LNHX070204-F57T	H	4	7	9	2,4	0,4	⊕	⊕	⊕	⊕											⊕	⊕	⊕					⊕	⊕		⊕	⊕
	LNMX070204-D57T	M	4	7	9	2,4	0,4	⊕	⊕	⊕												⊕	⊕	⊕					⊕	⊕		⊕	⊕
	LNMX070204-F57T	M	4	7	9	2,4	0,4	⊕	⊕	⊕	⊕												⊕	⊕	⊕					⊕	⊕		⊕

HC = Coated carbide  
HW = Uncoated carbide

⊕ ⊕ ⊕ New addition to the product range

# Tangential rhombic LNHU

## Tiger-tec® Silver

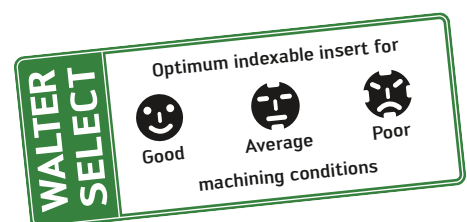


### Indexable inserts

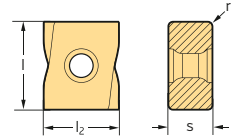
Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	r mm	b mm	P		M		K				N		S			
								HC	HC	HC	HC	HC	HC	HC	HW	HC	HW				
								WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKK25	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSP45S
LNHU090404R-L55T	H	4	9	8,5	4,5	0,4	1,5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU090408R-L55T	H	4	9	8,5	4,5	0,8	1,1	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU090412R-L55T	H	4	9	8,5	4,5	1,2	0,8	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU090416R-L55T	H	4	9	8,5	4,5	1,6		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU090420R-L55T	H	4	9	8,5	4,5	2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU130608R-L55T	H	4	13	12	6,8	0,8	2,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU130612R-L55T	H	4	13	12	6,8	1,2	1,9	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU130616R-L55T	H	4	13	12	6,8	1,6	1,5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU130620R-L55T	H	4	13	12	6,8	2	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU130625R-L55T	H	4	13	12	6,8	2,5	0,7	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU130630R-L55T	H	4	13	12	6,8	3		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU130632R-L55T	H	4	13	12	6,8	3,2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU160708R-L55T	H	4	16	15,5	7,2	0,8	2,3	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU160716R-L55T	H	4	16	15,5	7,2	1,6	1,6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU160720R-L55T	H	4	16	15,5	7,2	2	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU160712R-L55T	H	4	16	15,5	7,2	1,2	1,9	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU160725R-L55T	H	4	16	15,5	7,2	2,5	0,8	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺
LNHU090404R-L85T	H	4	9	8,5	4,5	0,4	1,5											☺	☺		
LNHU130608R-L85T	H	4	13	12	6,8	0,8	2,2											☺	☺		
LNHU160708R-L85T	H	4	16	15,5	7,2	0,8	2,3											☺	☺		
LNHU090404R-L65T	H	4	9	8,5	4,76	0,4	1,5			☺	☺										☺
LNHU130608R-L65T	H	4	13	12	6,35	0,8	2,2			☺	☺										☺
LNHU160708R-L65T	H	4	16	15,5	7,94	0,8	2,3			☺	☺										☺

HC = Coated carbide  
HW = Uncoated carbide



☺ ☺ ☺ New addition to the product range



# Tangential rhombic LNMX Tiger-tec® Silver



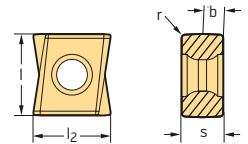
## Indexable inserts

Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	r mm	P			M		K			N		S	
							HC			HC		HC			HC	HW	HC	
							WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WK10	WSM35S
 LNMX201012R-F27T	M	4	17.05	20	10	1.2	⊕	⊕				⊕	⊕	⊕				
 LNMX201012R-F57T	M	4	17.05	20	10	1.2	⊕	⊕	⊕	⊕		⊕	⊕	⊕				⊕


HC = Coated carbide  
HW = Uncoated carbide

⊕ ⊕ ⊕ ⊕ New addition to the product range

# Tangential rhombic LNHX Finishing inserts



## Indexable inserts

Designation	Tolerance class	Number of cutting edges	l <sub>2</sub> mm	l mm	s mm	r mm	b mm	P			M		K			N		S		H		
								HC			HC		HC			HC	HW	HC		HC	HC	
								WKP25S	WKP35S	WSP45S	WXM15	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSP45S	WHH15
 LNHX0904PDR-L55T	H	2	9	8,5	4,76	0,4	3,5													⊕	⊕	
 LNHX1306PDR-L55T	H	2	13	12	6,35	0,6	5														⊕	⊕

HC = Coated carbide  
HW = Uncoated carbide

⊕ ⊕ ⊕ ⊕ New addition to the product range



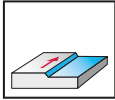
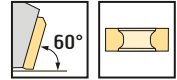
# Heavy-duty cutter

## M3016

### Walter BLAXX



- Tangential indexable insert arrangement
- Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M3016	●	●	●	●	●		

Tool	Designation	D <sub>c</sub> mm	D <sub>a</sub> mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	L <sub>c</sub> mm	Z	 kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	★ M3016-125-B40-06-16	125	144	40	63		16	6	4,2	6	LNMX201012
	★ M3016-160-B40-07-16	160	179	40	63		16	7	4,2	7	
Parallel bore DIN 138 transverse keyway	★ M3016-200-B60-09-16	200	219	60	63		16	9	9,5	9	LNMX201012
	★ M3016-250-B60-11-16	250	269	60	63		16	11	14,8	11	
Parallel bore DIN 138 transverse keyway	★ M3016-315-B60-13-16	315	334	60	80		16	13	30,9	13	LNMX201012

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

★ New addition to the product range

Assembly parts		Type	LNMX201012
		D <sub>c</sub> mm	125-315
	Clamping screw for insert Tightening torque		FS2090 (Torx 20 IP) 6,4 Nm
	Clamping screw for stop piece Tightening torque		FS2081 (Torx 15 IP) 3,0 Nm
	Stop piece		FR753

Accessories		Type	LNMX201012
		D <sub>c</sub> mm	125-315
	Torque screwdriver, analogue		FS2003
	Torque T-handle, analogue		FS2041
	Torque screwdriver, digital		FS2248
	Screwdriver for indexable insert		FS1486 (Torx 20 IP)
	Screwdriver for stop piece		FS1485 (Torx 15 IP)
	Interchangeable blade for indexable insert		FS2048 (Torx 20 IP)
	Interchangeable blade for stop piece		FS2014 (Torx 15 IP)

Indexable inserts			P	M	K	N	S
			HC	HC	HC	HC HW	HC
			WKP25S WKP35S WSP45S	WSM35S WSP45S	WAK15 WKK25S WKP25S WKP35S	WXN15 WK10	WSM35S WSP45S
Designation		r mm					
	LNMX201012R-F27T	1,2					
	LNMX201012R-F57T	1,2					

HC = Coated carbide  
HW = Uncoated carbide

New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

Primary application

Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

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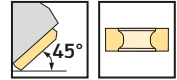
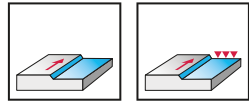
# Face mill

## M3024

### Walter BLAXX



– 14 cutting edges per indexable insert



	P	M	K	N	S	H	O
M3024	●	●	●	●	●		

Tool	Designation	D <sub>c</sub> mm	D <sub>a</sub> mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	L <sub>c</sub> mm	Z	kg	No. of indexable inserts	Type
NCT ScrewFit	★ M3024-040-T36-03-04	40	50	36	40		4	3	0,5	3	XN.U0705..
Shank DIN 1835-B	★ M3024-040-W40-03-04	40	50	40	40	110	4	3	0,9	3	XN.U0705..
Parallel hole DIN 138 longitudinal key way	★ M3024-040-B16-03-04	40	50	16	40		4	3	0,2	3	XN.U0705..
	★ M3024-050-B22-04-04	50	60	22	40		4	4	0,3	4	
	★ M3024-050-B22-05-04	50	60	22	40		4	5	0,3	5	
	★ M3024-063-B22-05-04	63	73	22	40		4	5	0,6	5	
	★ M3024-063-B22-06-04	63	73	22	40		4	6	0,6	6	
	★ M3024-080-B27-06-04	80	90	27	50		4	6	1,2	6	
	★ M3024-080-B27-07-04	80	90	27	50		4	7	1,2	7	
	★ M3024-100-B32-07-04	100	110	32	50		4	7	1,9	7	
Parallel hole DIN 138 longitudinal key way	★ M3024-125-B40-08-04	125	135	40	63		4	8	3,4	8	XN.U0705..
	★ M3024-125-B40-10-04	125	135	40	63		4	10	3,5	10	
	★ M3024-160-B40-09-04	160	170	40	63		4	9	5,6	9	
	★ M3024-160-B40-12-04	160	170	40	63		4	12	5,7	12	

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

★ New addition to the product range

Assembly parts		Type D <sub>c</sub> mm	XN.U0705.. 40–160
	Shim for indexable insert		AP800-XN0705
	Clamping screw for shim		FS2068 (SW 3,5)
	Clamping screw for insert Tightening torque		FS2279 (Torx 15 IP) 3,0 Nm

Accessories		Type D <sub>c</sub> mm	XN.U0705.. 40–160
	Key for shim		ISO2936-3,5 (SW 3,5)
	Torque screwdriver, analogue		FS2003
	Torque screwdriver, digital		FS2248
	Screwdriver for indexable insert		FS1485 (Torx 15 IP)
	Interchangeable blade for indexable insert		FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P		M		K			N		S	
			HC		HC		HC			HC	HW	HC	
			WKP 25S	WKP 35S	WSP 45S	WSM 35S	WSP 45S	WAK 15	WKP 25S	WKP 35S	WXN 15	WK 10	WSM 35S
	XNGU0705ANN-F57	0,8	1,1										
	XNGU0705ANN-F67	0,8	1,1										
	XNMMU0705ANN-F27	0,8	1,1										
	XNMMU0705ANN-F57	0,8	1,1										
	XNMMU0705ANN-F67	0,8	1,1										
	XNMMU070508-F57	0,8											

HC = Coated carbide  
HW = Uncoated carbide

New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

•• Primary application

• Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

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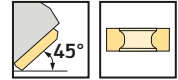
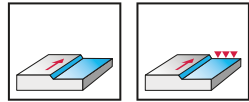
# Face mill

## M3024 inch

### Walter BLAXX



- 14 cutting edges per indexable insert



	P	M	K	N	S	H	O
M3024	●	●	●	●	●	●	●

Tool	Designation	D <sub>c</sub> inch	D <sub>a</sub> inch	d <sub>1</sub> inch	l <sub>4</sub> inch	L <sub>c</sub> inch	Z	kg	No. of indexable inserts	Type
Shank DIN 1835-B	★ M3024.038-W38-03-04	1,500	1,886	0,375	1,500	0,157	3	0,8	3	XN.U0705..
Parallel hole DIN 138 longitudinal key way	★ M3024.038-B13-03-04	1,500	1,886	0,500	1,575	0,157	3	0,2	3	XN.U0705..
	★ M3024.051-B19-04-04	2,000	2,386	0,750	1,575	0,157	4	0,3	4	
	★ M3024.064-B26-06-04	2,500	2,886	1,000	1,575	0,157	6	0,6	6	
	★ M3024.076-B26-07-04	3,000	3,386	1,000	1,969	0,157	7	1,1	7	
	★ M3024.102-B31-08-04	102	111	32	50	4	8	2,0	8	
	★ M3024.127-B38-10-04	5,000	5,386	1,500	2,480	0,157	10	3,6	10	
Parallel hole DIN 138 longitudinal key way	★ M3024.152-B38-12-04	6,000	6,386	1,500	2,480	0,157	12	6,3	12	XN.U0705..

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

★ New addition to the product range

Assembly parts		Type D <sub>c</sub> inch	XN.U0705.. 1,500-6,000
	Shim for indexable insert		AP800-XN0705
	Clamping screw for shim		FS2068 (SW 3,5)
	Clamping screw for insert Tightening torque		FS2279 (Torx 15 IP) 3,0 Nm

Accessories		Type D <sub>c</sub> inch	XN.U0705.. 1,500-6,000
	Key for shim		ISO2936-3,5 (SW 3,5)
	Torque screwdriver, analogue		FS2003
	Torque screwdriver, digital		FS2248
	Screwdriver for indexable insert		FS1485 (Torx 15 IP)
	Interchangeable blade for indexable insert		FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P		M		K			N		S	
			HC		HC		HC			HC	HW	HC	
			WKP 25S	WKP 35S	WSP 45S	WSM 35S	WSP 45S	WAK 15	WKK 25S	WKP 25S	WKP 35S	WXN 15	WK 10
	XNGU0705ANN-F57	0,8	1,1	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	XNGU0705ANN-F67	0,8	1,1	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	XNMMU0705ANN-F27	0,8	1,1	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	XNMMU0705ANN-F57	0,8	1,1	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	XNMMU0705ANN-F67	0,8	1,1	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	XNMMU070508-F57	0,8					⊕	⊕	⊕	⊕	⊕	⊕	⊕

HC = Coated carbide  
HW = Uncoated carbide

⊕ ⊕ ⊕ New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

●● Primary application

● Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

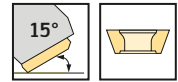
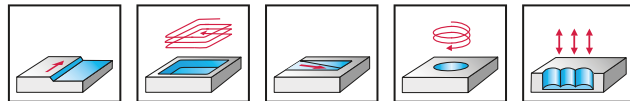
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# High-feed milling cutter M4002



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4002	●●	●●	●●	●●	●●		

Tool	Designation	D <sub>c</sub> mm	D <sub>a</sub> + mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	L <sub>c</sub> mm	a <sub>r</sub> mm	Z	kg	No. of indexable inserts	Type
NCT ScrewFit 	★ M4002-020-T18-02-01	8	20	18	30	51	1	5,7	2	0,1	2	SD..06T2..
	M4002-025-T22-02-01,5	8	25	22	40	63	1,5	8,4	2	0,1	2	SD..09T3..
	★ M4002-025-T22-03-01	13	25	22	35	58	1	5,7	3	0,1	3	SD..06T2..
	M4002-032-T28-03-01,5	15	32	28	40	69	1,5	8,4	3	0,2	3	SD..09T3..
	M4002-035-T28-03-01,5	18	35	28	40	69	1,5	8,4	3	0,2	3	SD..09T3..
	★ M4002-032-T28-04-01	20	32	28	40	69	1	5,7	4	0,2	4	SD..06T2..
	★ M4002-035-T28-03-01	23	35	28	40	69	1	5,7	3	0,3	3	SD..06T2..
	M4002-040-T36-04-01,5	23	40	36	40	75	1,5	8,4	4	0,3	4	SD..09T3..
	M4002-042-T36-03-01,5	25	42	36	40	75	1,5	8,4	3	0,3	3	SD..09T3..
	★ M4002-040-T36-05-01	28	40	36	40	75	1	5,7	5	0,4	5	SD..06T2..
★ M4002-042-T36-04-01	30	42	36	40	75	1	5,7	4	0,4	4	SD..06T2..	
Parallel shank without flat 	★ M4002-020-A20-02-01	8	20	20	30	200	1	5,7	2	0,5	2	SD..06T2..
	★ M4002-025-A25-03-01	13	25	25	35	200	1	5,7	3	0,8	3	SD..06T2..
	★ M4002-032-A32-04-01	20	32	40	40	250	1	5,7	4	1,5	4	SD..06T2..
Parallel bore DIN 138 transverse keyway 	★ M4002-042-B16-04-01,5	25	42	16	40	40	1,5	8,4	4	0,2	4	SD..09T3..
	★ M4002-050-B22-04-02	27	50	22	40	40	2	11,4	4	0,3	4	SD..1204..
	★ M4002-040-B16-05-01	28	40	16	40	40	1	5,7	5	0,2	5	SD..06T2..
	★ M4002-052-B22-03-02	29	52	22	40	40	2	11,4	3	0,3	3	SD..1204..
	★ M4002-042-B16-04-01	30	42	16	40	40	1	5,7	4	0,2	4	SD..06T2..
	M4002-050-B22-05-01,5	33	50	22	40	40	1,5	8,4	5	0,3	5	SD..09T3..
	M4002-052-B22-04-01,5	35	52	22	40	40	1,5	8,4	4	0,4	4	SD..09T3..
	★ M4002-052-B22-05-01,5	35	52	22	40	40	1,5	8,4	5	0,3	5	SD..09T3..
	★ M4002-050-B22-07-01	38	50	22	40	40	1	5,7	7	0,3	7	SD..06T2..
	★ M4002-052-B22-06-01	40	52	22	40	40	1	5,7	6	0,4	6	SD..06T2..
	★ M4002-063-B22-05-02	40	63	22	50	50	2	11,4	5	0,5	5	SD..1204..
	★ M4002-066-B27-04-02	43	66	22	50	50	2	11,4	4	0,8	4	SD..1204..
	M4002-063-B22-06-01,5	46	63	22	50	50	1,5	8,4	6	0,8	6	SD..09T3..
	M4002-066-B27-05-01,5	49	66	27	50	50	1,5	8,4	5	0,9	5	SD..09T3..
	★ M4002-066-B27-06-01,5	49	66	27	50	50	1,5	8,4	6	0,8	6	SD..09T3..
	★ M4002-063-B22-08-01	51	63	22	50	50	1	5,7	8	0,6	8	SD..06T2..
	★ M4002-066-B27-07-01	54	66	27	50	50	1	5,7	7	0,8	7	SD..06T2..
	★ M4002-080-B27-06-02	57	80	27	50	50	2	11,4	6	1,3	6	SD..1204..
	★ M4002-085-B27-05-02	62	85	27	50	50	2	11,4	5	1,5	5	SD..1204..
	★ M4002-100-B32-07-02	77	100	32	60	60	2	11,4	7	2,6	7	SD..1204..
★ M4002-125-B40-08-02	102	125	40	60	60	2	11,4	8	3	8	SD..1204..	

\* Measured using SDM . 06T204, SDM . 09T308, SDM . 120408

For programming information, see page 302.

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

★ New addition to the product range

Assembly parts		SD..06T2.. 20-66	SD..09T3.. 25-66	SD..1204.. 50-125
	Type D <sub>a</sub> mm Clamping screw for insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. 20-66	SD..09T3.. 25-66	SD..1204.. 50-125
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Torque screwdriver, digital		FS2248	FS2248
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P			M			K			S		
			HC			HC			HC			HC		
			WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	SDMT06T204-D57	0,4												
	SDMT09T308-D57	0,8												
	SDMT120408-D57	0,8												
	SDMT06T204-F57	0,4												
	SDMT09T308-F57	0,8												
	SDMT120408-F57	0,8												
	SDMT06T212-F57	1,2												
	SDMT09T320-F57	2												
	SDMT120425-F57	2,5												
	SDMT06T2ZDR-D57	0,4												
	SDMT09T3ZDR-D57	0,8												
	SDMT1204ZDR-D57	0,8												
	SDMW06T204-A57	0,4												
	SDMW09T308-A57	0,8												
	SDMW120408-A57	0,8												

HC = Coated carbide

New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

•• Primary application

• Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

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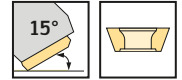
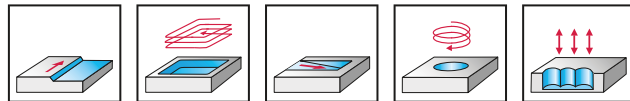


# High-feed milling cutter

## M4002 inch



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4002	●	●	●	●	●	●	●

Tool	Designation	D <sub>c</sub> inch	D <sub>a</sub> + inch	d <sub>1</sub> inch	l <sub>4</sub> inch	l <sub>1</sub> inch	L <sub>c</sub> inch	a <sub>r</sub> inch	Z	kg	No. of indexable inserts	Type
NCT ScrewFit 	★ M4002.019-T18-02-01	0,291	0,750	0,709	1,181	2,008	0,039	0,224	2	0,1	2	SD..06T2..
	M4002.026-T22-02-01,5	0,339	1,000	0,866	1,575	2,480	0,059	0,331	2	0,1	2	SD..09T3..
	★ M4002.026-T22-03-01	0,543	1,000	0,866	1,378	2,283	0,039	0,224	3	0,1	3	SD..06T2..
	M4002.031-T28-03-01,5	0,593	1,250	1,102	1,575	2,717	0,059	0,331	3	0,2	3	SD..09T3..
	★ M4002.031-T28-04-01	0,795	1,250	1,102	1,575	2,717	0,039	0,224	4	0,2	4	SD..06T2..
	M4002.038-T36-04-01,5	0,843	1,500	1,417	1,575	2,953	0,059	0,331	4	0,3	4	SD..09T3..
Parallel shank without flat 	★ M4002.019-A19-02-01	0,291	0,750	0,750	1,181	7,874	0,039	0,224	2	0,5	2	SD..06T2..
	★ M4002.026-A26-03-01	0,543	1,000	1,000	1,378	7,874	0,039	0,224	3	0,8	3	
	★ M4002.031-A31-04-01	0,795	1,250	1,250	1,575	9,843	0,039	0,224	4	1,5	4	
Parallel bore DIN 138 transverse keyway 	★ M4002.038-B13-05-01	1,043	1,500	0,500	1,378	1,378	0,039	0,224	5	0,1	5	SD..06T2..
	★ M4002.051-B19-04-02	1,094	2,000	0,750	1,575	1,575	0,079	0,449	4	0,3	4	SD..1204..
	M4002.051-B19-05-01,5	1,337	2,000	0,750	1,575	1,575	0,059	0,331	5	0,3	5	SD..09T3..
	★ M4002.051-B19-07-01	1,543	2,000	0,750	1,575	1,575	0,039	0,224	7	0,3	7	SD..06T2..
	★ M4002.064-B19-05-02	1,594	2,500	0,750	1,969	1,969	0,079	0,449	5	0,6	5	SD..1204..
	M4002.064-B19-06-01,5	1,843	2,500	0,750	1,969	1,969	0,059	0,331	6	0,8	6	SD..09T3..
	★ M4002.064-B26-08-01	2,043	2,500	1,000	1,969	1,969	0,039	0,224	8	0,8	8	SD..06T2..
	★ M4002.076-B26-06-02	2,094	3,000	1,500	1,969	1,969	0,079	0,449	6	1,2	6	SD..1204..
	★ M4002.102-B38-07-02	3,094	4,000	1,500	1,969	1,969	0,079	0,449	7	2,2	7	

\* Measured using SDM . 06T204, SDM . 09T308, SDM . 120408

For programming information, see page 302.

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

★ New addition to the product range

Assembly parts		SD..06T2.. 0,750-2,500	SD..09T3.. 1,000-2,500	SD..1204.. 2,000-4,000
	Type D <sub>a</sub> inch Clamping screw for insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. 0,750-2,500	SD..09T3.. 1,000-2,500	SD..1204.. 2,000-4,000
	Torque screwdriver, analogue	FS2001	FS2003	FS2001
	Torque screwdriver, digital		FS2248	FS2248
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P			M			K			S		
			HC			HC			HC			HC		
			WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	SDMT06T204-D57	0,4												
	SDMT09T308-D57	0,8												
	SDMT120408-D57	0,8												
	SDMT06T204-F57	0,4												
	SDMT09T308-F57	0,8												
	SDMT120408-F57	0,8												
	SDMT06T212-F57	1,2												
	SDMT09T320-F57	2												
	SDMT120425-F57	2,5												
	SDMT06T2ZDR-D57	0,4												
	SDMT09T3ZDR-D57	0,8												
	SDMT1204ZDR-D57	0,8												
	SDMW06T204-A57	0,4												
	SDMW09T308-A57	0,8												
	SDMW120408-A57	0,8												

HC = Coated carbide

New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

Primary application

Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

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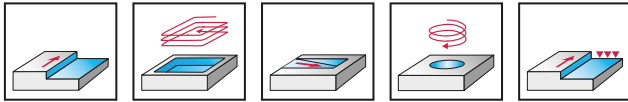
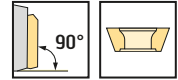
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# Ramping milling cutter

## M2131



- Two cutting edges per indexable insert
- For pocket machining



	P	M	K	N	S	H	O
M2131				●●			●●

Tool	Designation	D <sub>c</sub> mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	l <sub>16</sub> mm	L <sub>c</sub> mm	Z	kg	No. of indexable inserts	Type
NCT ScrewFit 	★ M2131-025-T22-02-15	25	22	45			15	2	0,1	2	ZDGT1504..
	★ M2131-032-T28-02-15	32	28	50			15	2	0,2	2	ZDGT1504..
	★ M2131-032-T28-02-20	32	28	50			20	2	0,2	2	ZDGT2005..
	★ M2131-032-T28-03-15	32	28	50			15	3	0,2	3	ZDGT1504..
	★ M2131-040-T36-02-20	40	36	50			20	2	0,3	2	ZDGT2005..
	★ M2131-040-T36-03-15	40	36	50			15	3	0,4	3	ZDGT1504..
Parallel shank without flat 	★ M2131-025-A25-02-15-L	25	25	40	150		15	2	0,5	2	ZDGT1504..
	★ M2131-032-A25-02-15-L	32	25	40	175		15	2	0,6	2	ZDGT1504..
	★ M2131-032-A25-03-15-L	32	25	40	175		15	3	0,6	3	ZDGT1504..
	★ M2131-032-A25-02-20-L	32	25	40	175		20	2	0,6	2	ZDGT2005..
	★ M2131-032-A32-02-15-L	32	32	50	175		15	2	1,0	2	ZDGT1504..
	★ M2131-032-A32-02-20-L	32	32	50	175		20	2	0,9	2	ZDGT2005..
	★ M2131-032-A32-03-15-L	32	32	50	175		15	3	0,9	3	ZDGT1504..
	★ M2131-040-A32-02-20-L	40	32	50	175		20	2	1,0	2	ZDGT2005..
Parallel shank without flat 	★ M2131-025-A20-02-15-S	25	20	40	110		15	2	0,2	2	ZDGT1504..
	★ M2131-032-A20-02-15-S	32	20	40	110		15	2	0,3	2	ZDGT1504..
	★ M2131-032-A20-03-15-S	32	20	40	110		15	3	0,3	3	ZDGT1504..
Parallel bore DIN 138 transverse keyway 	★ M2131-040-B16-03-15	40	16	50			15	3	0,2	3	ZDGT1504..
	★ M2131-050-B22-03-20	50	22	60			20	3	0,4	3	ZDGT2005..
	★ M2131-050-B22-04-15	50	22	50			15	4	0,4	4	ZDGT1504..
	★ M2131-063-B22-04-20	63	22	50			20	4	0,5	4	ZDGT2005..
	★ M2131-063-B22-05-15	63	22	50			15	5	0,6	5	ZDGT1504..
	★ M2131-080-B27-05-15	80	27	60			15	5	1,3	5	ZDGT1504..

Tools balanced to G6.3 where n = 10,000 rpm

For information on high-speed applications, see page 300.

For special clamping screws for arbour mounted tools, see page 303.

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

★ New addition to the product range

Assembly parts	Type D <sub>c</sub> mm	ZDGT1504.. 25-32	ZDGT2005.. 32	ZDGT1504.. 40-80	ZDGT2005.. 40-63
	Clamping screw for insert Tightening torque	FS1222 (Torx 15 IP) 3,5 Nm	FS2139 (Torx 20 IP) 5,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm	FS2281 (Torx 20 IP) 5,0 Nm

Accessories	Type D <sub>c</sub> mm	ZDGT1504.. 25-80	ZDGT2005.. 32-63
	Torque screwdriver, analogue	FS2003	FS2003
	Torque screwdriver, digital	FS2248	FS2248
	Screwdriver	FS1485 (Torx 15 IP)	FS1486 (Torx 20 IP)
	Interchangeable blade	FS2014 (Torx 15 IP)	FS2015 (Torx 20 IP)

### Indexable inserts

Designation	r mm	b mm	P			M		K			N		S		HF
			HC			HC		HC			HC	HW	HC		
			WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WKN15	WNN15	WK10	
ZDGT150404R-K85	0,4	1,2									☺	☺	☺		☺
ZDGT150408R-K85	0,8	1,2									☺	☺	☺		☺
ZDGT200508R-K85	0,8	1,2									☺	☺	☺		☺
ZDGT150412R-K85	1,2	1,2									☺	☺	☺		☺
ZDGT200512R-K85	1,2	1,2									☺	☺	☺		☺
ZDGT150416R-K85	1,6	1,2									☺	☺	☺		☺
ZDGT200516R-K85	1,6	1,2									☺	☺	☺		☺
ZDGT150420R-K85	2	1,2									☺	☺	☺		☺
ZDGT200520R-K85	2	1,2									☺	☺	☺		☺
ZDGT150425R-K85	2,5	1,2									☺	☺	☺		☺
ZDGT150430R-K85	3	1,2									☺	☺	☺		☺
ZDGT200530R-K85	3	1,2									☺	☺	☺		☺
ZDGT150440R-K85	4	1,2									☺	☺	☺		☺
ZDGT200540R-K85	4	1,2									☺	☺	☺		☺
ZDGT200550R-K85	5	1,2									☺	☺	☺		☺
ZDGT200560R-K85	6	1,2									☺	☺	☺		☺
ZDGT200564R-K85	6,4	1,2									☺	☺	☺		☺

If the corner radius is R = 2.0 mm or above, the body in the corner section must be reworked:

$$R_{(body)} = R_{(indexable\ insert)} - 1\text{ mm}$$

HC = Coated carbide  
 HW = Uncoated carbide  
 HF = Uncoated fine-grained carbide

☺ ☺ ☺ New addition to the product range

WALTER  
SELECT

Stability of machine, workpiece and clamping arrangement

☺  
Very good

☺  
Good

☺  
Moderate

•• Primary application

• Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

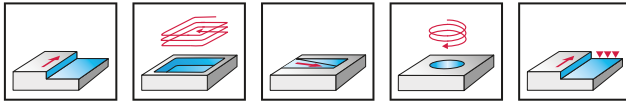
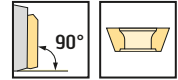
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# Ramping milling cutter M2131



- Two cutting edges per indexable insert
- For pocket machining



	P	M	K	N	S	H	O
M2131				●●			●●

Tool	Designation	D <sub>c</sub> mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	l <sub>16</sub> mm	L <sub>c</sub> mm	Z	kg	No. of indexable inserts	Type
HSK DIN 69893/1-A 	★ M2131-025-H63-02-15	25	63	110		60	15	2	0,9	2	ZDGT1504..
	★ M2131-032-H63-02-15	32	63	110		65	15	2	1,1	2	ZDGT2005..
	★ M2131-040-H63-02-20	40	63	110		65	20	2	1,2	2	ZDGT1504..
	★ M2131-050-H63-04-15	50	63	110		80	15	4	1,5	4	ZDGT1504..
	★ M2131-050-H63-03-20	50	63	110		80	20	3	1,4	3	ZDGT2005..
Similar to HSK-A DIN 69893 	★ M2131-050-H80-04-15-D	50	80	110		80	15	4	1,9	4	ZDGT1504..
	★ M2131-050-H80-03-20-D	50	80	110		80	20	3	1,8	3	ZDGT2005..
HSK DIN 69893/1-A 	★ M2131-063-H63-04-20	63	63	110		80	20	4	1,6	4	ZDGT2005..
	★ M2131-063-H63-05-15	63	63	110		80	15	5	1,7	5	ZDGT1504..

Tools with HSK balanced to G6.3 where n = 20,000 rpm, with chip-hole drilling, without chip.

For information on high-speed applications, see page 300.

For HSK accessories, see General Catalogue, page H 42.

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

★ New addition to the product range

Assembly parts	Type D <sub>c</sub> mm	ZDGT1504.. 25-32	ZDGT2005.. 40-63	ZDGT1504.. 50-63
	Clamping screw for insert Tightening torque	FS1222 (Torx 15 IP) 3,5 Nm	FS2281 (Torx 20 IP) 5,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories	Type D <sub>c</sub> mm	ZDGT1504.. 25-63	ZDGT2005.. 40-63
	Torque screwdriver, analogue	FS2003	FS2003
	Torque screwdriver, digital	FS2248	FS2248
	Screwdriver	FS1485 (Torx 15 IP)	FS1486 (Torx 20 IP)
	Interchangeable blade	FS2014 (Torx 15 IP)	FS2015 (Torx 20 IP)

### Indexable inserts

Designation	r mm	b mm	P			M		K			N			S		HF
			HC			HC		HC			HC	HW	HC			
			WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WNN15	WK10	WSM35S	WSP45S
ZDGT150404R-K85	0,4	1,2														
ZDGT150408R-K85	0,8	1,2														
ZDGT200508R-K85	0,8	1,2														
ZDGT150412R-K85	1,2	1,2														
ZDGT200512R-K85	1,2	1,2														
ZDGT150416R-K85	1,6	1,2														
ZDGT200516R-K85	1,6	1,2														
ZDGT150420R-K85	2	1,2														
ZDGT200520R-K85	2	1,2														
ZDGT150425R-K85	2,5	1,2														
ZDGT150430R-K85	3	1,2														
ZDGT200530R-K85	3	1,2														
ZDGT150440R-K85	4	1,2														
ZDGT200540R-K85	4	1,2														
ZDGT200550R-K85	5	1,2														
ZDGT200560R-K85	6	1,2														
ZDGT200564R-K85	6,4	1,2														

If the corner radius is R = 2.0 mm or above, the body in the corner section must be reworked:

$$R_{(body)} = R_{(indexable\ insert)} - 1\text{ mm}$$

HC = Coated carbide  
 HW = Uncoated carbide  
 HF = Uncoated fine-grained carbide

New addition to the product range

**WALTER SELECT**

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

Primary application

Other application

\* The page information relates to the Walter General Catalogue 2012

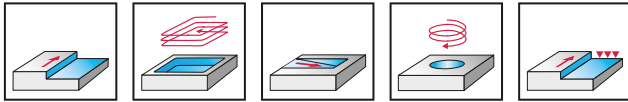
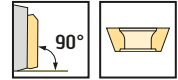


# Ramping milling cutter

## M2131 inch



- Two cutting edges per indexable insert
- For pocket machining



	P	M	K	N	S	H	O
M2131				●●			●●

Tool	Designation	D <sub>c</sub> inch	d <sub>1</sub> inch	l <sub>4</sub> inch	l <sub>1</sub> inch	l <sub>16</sub> inch	L <sub>c</sub> inch	Z	kg	No. of indexable inserts	Type
NCT ScrewFit 	★ M2131.026-T22-02-15	1,000	0,866	1,752			0,591	2	0,1	2	ZDGT1504..
	★ M2131.031-T28-02-15	1,250	1,102	2,000			0,591	2	0,2	2	
	★ M2131.031-T28-03-15	1,250	1,102	2,000			0,591	3	0,2	3	
	★ M2131.038-T36-03-15	1,500	1,417	2,000			0,591	3	0,4	3	
Parallel shank without flat 	★ M2131.026-A26-02-15-L	1,000	1,000	1,500	5,984		0,591	2	0,5	2	ZDGT1504..
	★ M2131.031-A26-02-15-L	1,250	1,000	1,500	5,984		0,591	2	0,7	2	
	★ M2131.031-A26-03-15-L	1,250	1,000	1,500	5,984		0,591	3	0,6	3	
	★ M2131.038-A31-03-15-L	1,500	1,250	2,252	7,008		0,591	3	1,0	3	
Parallel bore DIN 138 transverse keyway 	★ M2131.051-B19-03-20	2,000	0,750	2,000			0,787	3	0,3	3	ZDGT2005..
	★ M2131.051-B19-04-15	2,000	0,750	2,000			0,591	4	0,4	4	ZDGT1504..
	★ M2131.064-B26-04-20	2,500	1,000	2,000			0,787	4	0,4	4	ZDGT2005..
	★ M2131.064-B26-05-15	2,500	1,000	2,000			0,591	5	0,5	5	ZDGT1504..
	★ M2131.076-B26-05-20	3,000	1,000	2,000			0,787	5	0,7	5	ZDGT2005..
	★ M2131.076-B26-05-15	3,000	1,000	2,000			0,591	5	0,9	5	ZDGT1504..

Tools balanced to G6.3 where n = 10,000 rpm.

For information on high-speed applications, see page 300.

For special clamping screws for arbour mounted tools, see page 303.

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

★ New addition to the product range

Assembly parts		ZDGT1504.. 1,000-1,250	ZDGT1504.. 1,500-3,000	ZDGT2005.. 2,000-3,000
	Type D <sub>c</sub> inch Clamping screw for insert Tightening torque	FS1222 (Torx 15 IP) 3,5 Nm	FS1453 (Torx 15 IP) 3,5 Nm	FS2281 (Torx 20 IP) 5,0 Nm

Accessories		ZDGT1504.. 1,000-3,000	ZDGT2005.. 2,000-3,000
	Torque screwdriver, analogue	FS2003	FS2003
	Torque screwdriver, digital	FS2248	FS2248
	Screwdriver	FS1485 (Torx 15 IP)	FS1486 (Torx 20 IP)
	Interchangeable blade	FS2014 (Torx 15 IP)	FS2015 (Torx 20 IP)

### Indexable inserts

Designation	r mm	b mm	P			M		K			N			S		HF
			WKP25S	WKP35S	WSP45S	WSM35S	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WNN15	WK10	WSM35S	
ZDGT150404R-K85	0,4	1,2														
ZDGT150408R-K85	0,8	1,2														
ZDGT200508R-K85	0,8	1,2														
ZDGT150412R-K85	1,2	1,2														
ZDGT200512R-K85	1,2	1,2														
ZDGT150416R-K85	1,6	1,2														
ZDGT200516R-K85	1,6	1,2														
ZDGT150420R-K85	2	1,2														
ZDGT200520R-K85	2	1,2														
ZDGT150425R-K85	2,5	1,2														
ZDGT150430R-K85	3	1,2														
ZDGT200530R-K85	3	1,2														
ZDGT150440R-K85	4	1,2														
ZDGT200540R-K85	4	1,2														
ZDGT200550R-K85	5	1,2														
ZDGT200560R-K85	6	1,2														
ZDGT200564R-K85	6,4	1,2														

If the corner radius is R = 2.0 mm or above, the body in the corner section must be reworked:  
 $R_{(body)} = R_{(indexable\ insert)} - 1\text{ mm}$

HC = Coated carbide  
 HW = Uncoated carbide  
 HF = Uncoated fine-grained carbide

New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

•• Primary application

• Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

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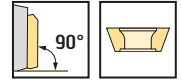
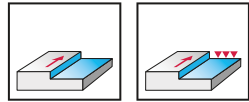
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# Shoulder mill M4132



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4132	●●	●●	●●	●●	●●	●●	●●

Tool	Designation	D <sub>c</sub> mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	L <sub>c</sub> mm	Z	 kg	No. of indexable inserts	Type
NCT ScrewFit 	★ M4132-016-T14-02-06	16	15	25		5,6	2	0,0	2	
	★ M4132-020-T18-03-06	20	18	30		5,6	3	0,1	3	SD..06T2..
	★ M4132-020-T18-02-06	20	18	30		5,6	2	0,1	2	
	M4132-025-T22-02-09	25	22	35		8,4	2	0,1	2	SD..09T3..
	★ M4132-025-T22-03-06	25	22	35		5,6	3	0,1	3	SD..06T2..
	★ M4132-025-T22-04-06	25	22	35		5,6	4	0,1	4	
	M4132-032-T28-03-09	32	28	40		8,4	3	0,2	3	
	M4132-032-T28-02-09	32	28	40		8,4	2	0,2	2	
	M4132-040-T36-04-09	40	36	40		8,4	4	0,3	4	SD..09T3..
	M4132-040-T36-03-09	40	36	40		8,4	3	0,4	3	
M4132-050-T45-06-09	50	45	40		8,4	6	0,5	6		
M4132-050-T45-04-09	50	45	40		8,4	4	0,5	4		
Shank according to DIN 1835-B 	★ M4132-016-W16-02-06	16	16	31	80	5,6	2	0,1	2	
	★ M4132-020-W20-03-06	20	20	39	90	5,6	3	0,2	3	SD..06T2..
	★ M4132-020-W20-02-06	20	20	39	90	5,6	2	0,2	2	
	M4132-025-W25-02-09	25	25	43	100	8,4	2	0,3	2	SD..09T3..
	★ M4132-025-W25-03-06	25	25	43	100	5,6	3	0,3	3	SD..06T2..
	★ M4132-025-W25-04-06	25	25	43	100	5,6	4	0,3	4	
	M4132-032-W32-03-09	32	32	49	110	8,4	3	0,6	3	
	M4132-032-W32-02-09	32	32	49	110	8,4	2	0,6	2	SD..09T3..
	M4132-040-W40-04-09	40	40	49	120	8,4	4	1,0	4	
	M4132-040-W40-03-09	40	40	49	120	8,4	3	1,0	3	
Parallel hole DIN 138 longitudinal key way 	M4132-040-B16-05-09	40	16	40		8,4	5	0,2	5	
	M4132-040-B16-04-09	40	16	40		8,4	4	0,2	4	SD..09T3..
	M4132-050-B22-06-09	50	22	40		8,4	6	0,3	6	
	M4132-050-B22-04-09	50	22	40		8,4	4	0,3	4	
	★ M4132-050-B22-04-12	50	22	40		11,6	4	0,3	4	SD..1204..
	★ M4132-050-B22-05-12	50	22	40		11,6	5	0,3	5	
	M4132-063-B22-07-09	63	22	40		8,4	7	0,4	7	SD..09T3..
	M4132-063-B22-05-09	63	22	40		8,4	5	0,4	5	
	★ M4132-063-B22-05-12	63	22	40		11,6	5	0,5	5	SD..1204..
	★ M4132-063-B22-06-12	63	22	40		11,6	6	0,5	6	
	M4132-080-B27-08-09	80	27	50		8,4	8	1,1	8	SD..09T3..
	M4132-080-B27-06-09	80	27	50		8,4	6	1,1	6	
	★ M4132-080-B27-06-12	80	27	50		11,6	6	1,0	6	
	★ M4132-080-B27-08-12	80	27	50		11,6	8	1,0	8	
	★ M4132-100-B32-07-12	100	32	50		11,6	7	1,7	7	SD..1204..
	★ M4132-100-B32-09-12	100	32	50		11,6	9	1,7	9	
★ M4132-125-B40-08-12	125	40	63		11,6	8	3,2	8		
★ M4132-125-B40-10-12	125	40	63		11,6	10	3,3	10		

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

★ New addition to the product range

Assembly parts		SD..06T2.. 16-25	SD..09T3.. 25-80	SD..1204.. 50-125
	Type D <sub>c</sub> mm Clamping screw for insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. 16-25	SD..09T3.. 25-80	SD..1204.. 50-125
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Torque screwdriver, digital		FS2248	FS2248
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P			M			K			S		
			HC			HC			HC			HC		
			WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	SDGT06T2PDR-D57	0,4	1,2	⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDGT09T3PDR-D57	0,8	1,2	⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDGT1204PDR-D57	0,8	1,6	⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT06T204-D51	0,4		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT09T308-D51	0,8		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT120408-D51	0,8		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT06T204-D57	0,4		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT09T308-D57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT120408-D57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT06T204-F57	0,4		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT09T308-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT120408-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT06T212-F57	1,2		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT09T320-F57	2		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT120425-F57	2,5		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMW06T204-A57	0,4		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMW09T308-A57	0,8		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMW120408-A57	0,8		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕

HC = Coated carbide

⊕ ⊕ ⊕ New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

•• Primary application

• Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

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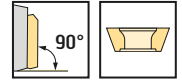
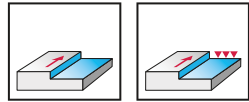
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# Shoulder mill

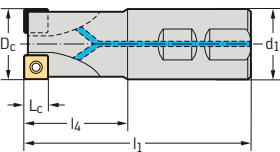
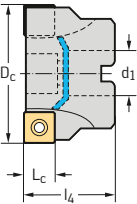
## M4132 inch



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4132	●●	●●	●●	●●	●●	●●	●●

Tool	Designation	D <sub>c</sub> inch	d <sub>1</sub> inch	l <sub>4</sub> inch	l <sub>1</sub> inch	L <sub>c</sub> inch	Z	kg	No. of indexable inserts	Type
Shank according to DIN 1835-B 	★ M4132.015-W15-02-06	0,625	0,625	0,945	2,851	0,220	2	0,1	2	SD..06T2..
	★ M4132.019-W19-03-06	0,750	0,750	0,945	2,976	0,220	3	0,2	3	
	M4132.026-W26-02-09	1,000	1,000	1,339	3,622	0,331	2	0,3	2	
	M4132.031-W31-03-09	1,250	1,250	1,417	3,701	0,331	3	0,5	3	SD..09T3..
	M4132.038-W38-04-09	1,500	1,500	1,496	4,185	0,331	4	0,8	4	
Parallel hole DIN 138 longitudinal key way 	M4132.038-B13-05-09	1,500	0,500	1,575		0,331	5	0,2	5	SD..09T3..
	M4132.051-B19-06-09	2,000	0,750	1,575		0,331	6	0,4	6	
	★ M4132.051-B19-04-12	2,000	0,750	1,500		0,457	4	0,3	4	SD..1204..
	M4132.064-B26-07-09	2,500	1,000	1,575		0,331	7	0,6	7	SD..09T3..
	★ M4132.064-B26-05-12	2,500	1,000	1,575		0,457	5	0,5	5	SD..1204..
	M4132.076-B26-08-09	3,000	1,000	1,969		0,331	8	1,0	8	SD..09T3..
	★ M4132.076-B26-06-12	3,000	1,000	1,969		0,457	6	0,9	6	
	★ M4132.102-B31-07-12	4,000	1,250	1,969		0,457	7	1,8	7	SD..1204..
★ M4132.127-B38-08-12	5,000	1,500	2,480		0,457	8	3,7	8		

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

★ New addition to the product range

Assembly parts		SD..06T2.. 0,625-0,750	SD..09T3.. 1,000-3,000	SD..1204.. 2,000-5,000
	Type D <sub>c</sub> inch Clamping screw for insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. 0,625-0,750	SD..09T3.. 1,000-3,000	SD..1204.. 2,000-5,000
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Torque screwdriver, digital		FS2248	FS2248
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P			M			K			S						
			HC	WKP255	WKP355	WSP45S	HC	WSM35S	WSM45X	WSP45S	HC	WAK15	WKK25S	WKP255	WKP355	WSM35S	WSM45X	WSP45S
SDGT06T2PDR-D57	0,4	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDGT09T3PDR-D57	0,8	1,2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDGT1204PDR-D57	0,8	1,6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT06T204-D51	0,4		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT09T308-D51	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT120408-D51	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT06T204-D57	0,4		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT09T308-D57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT120408-D57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT06T204-F57	0,4		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT09T308-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT120408-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT06T212-F57	1,2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT09T320-F57	2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMT120425-F57	2,5		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMW06T204-A57	0,4		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMW09T308-A57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SDMW120408-A57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺

HC = Coated carbide

☺ ☺ ☺ ☺ New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺  
Very good

☺  
Good

☺  
Moderate

•• Primary application

• Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

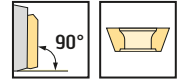
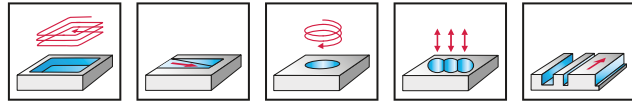
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# Slot drill M4792



– Two/four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4792	●●	●●	●●	●●	●●		

Tool	Designation	D <sub>c</sub> mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	L <sub>c</sub> mm	Z	kg	No. of indexable inserts	Type
Shank DIN 1835-B 	★ M4792-018-W16-01-08	18	16	31	80	8	1	0,1	1 1	SD..06T2.. LD..08T2..
	★ M4792-020-W20-01-13	20	20	34	85	13	1	0,2	2 1	
	★ M4792-025-W25-01-13	25	25	43	100	13	1	0,3	1 1	
	★ M4792-030-W32-01-20	30	32	54	115	21	1	0,6	2 1	SD..09T3.. LD..14T3..
	★ M4792-032-W32-01-20	32	32	54	115	21	1	0,6	2 1	
	★ M4792-040-W32-01-26	40	32	69	130	27	1	0,8	2 1	SD..1204.. LD..1704..

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

★ New addition to the product range

Assembly parts		SD..06T2.. / LD..08T2.. 18-20	SD..09T3.. / LD..14T3.. 25-32	SD..1204.. / LD..1704.. 40
	Type D <sub>c</sub> mm Clamping screw for insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. / LD..08T2.. 18-20	SD..09T3.. / LD..14T3.. 25-32	SD..1204.. / LD..1704.. 40
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Torque screwdriver, digital		FS2248	FS2248
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P			M			K			S		
			HC			HC			HC			HC		
			WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	LDMT08T204R-D51	0,4	0,8	⊕	⊕	⊕								⊕
	LDMT14T308R-D51	0,8	1,2	⊕	⊕	⊕								⊕
	LDMT170408R-D51	0,8	1,6	⊕	⊕	⊕								⊕
	LDMT08T204R-D57	0,4	0,8	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕		⊕
	LDMT14T308R-D57	0,8	1,2	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕		⊕
	LDMT170408R-D57	0,8	1,6	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕		⊕
	LDMT08T204R-F57	0,4	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕		⊕
	LDMT14T308R-F57	0,8	1,2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕		⊕
	LDMT170408R-F57	0,8	1,6	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕		⊕
	LDMW08T204R-A57	0,4	0,8	⊕	⊕					⊕				
	LDMW14T308R-A57	0,8	1,2	⊕	⊕					⊕				
	LDMW170408R-A57	0,8	1,6	⊕	⊕					⊕				
	SDMT06T204-D51	0,4		⊕	⊕	⊕		⊕		⊕	⊕			⊕
	SDMT09T308-D51	0,8		⊕	⊕	⊕		⊕		⊕	⊕			⊕
	SDMT120408-D51	0,8		⊕	⊕	⊕		⊕		⊕	⊕			⊕
	SDMT06T204-D57	0,4		⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕		⊕
	SDMT09T308-D57	0,8		⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕		⊕
	SDMT120408-D57	0,8		⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕		⊕
	SDMT06T204-F57	0,4		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT09T308-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT120408-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT06T212-F57	1,2		⊕	⊕	⊕	⊕				⊕	⊕	⊕	⊕
	SDMT09T320-F57	2		⊕	⊕	⊕	⊕				⊕	⊕	⊕	⊕
	SDMT120425-F57	2,5		⊕	⊕	⊕	⊕				⊕	⊕	⊕	⊕
	SDMW06T204-A57	0,4		⊕	⊕					⊕	⊕			
	SDMW09T308-A57	0,8		⊕	⊕					⊕	⊕			
	SDMW120408-A57	0,8		⊕	⊕					⊕	⊕			

HC = Coated carbide

⊕ ⊕ ⊕ New addition to the product range

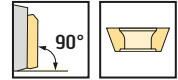
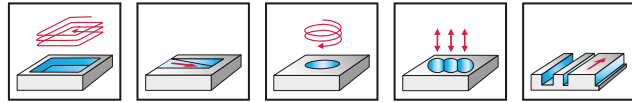
\* The page information relates to the Walter General Catalogue 2012



## Slot drill

 M4792 inch


– Two/four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4792	●●	●●	●●	●●	●●	●●	●●

Tool	Designation	D <sub>c</sub> inch	d <sub>1</sub> inch	l <sub>4</sub> inch	l <sub>1</sub> inch	L <sub>c</sub> inch	Z	kg	No. of indexable inserts	Type
Shank DIN 1835-B 	★ M4792.019-W26-01-13	0,750	1,000	1,339	3,621	0,535	1	0,3	2 1	SD..06T2.. LD..08T2..
	★ M4792.024-W26-01-13	1,000	1,000	1,693	3,974	0,524	1	0,3	1 1	SD..09T3.. LD..14T3..
	★ M4792.026-W26-01-13	1,000	1,000	1,693	3,974	0,524	1	0,3	1 1	
	★ M4792.031-W31-01-20	1,250	1,250	2,126	4,407	0,819	1	0,6	2 1	SD..1204.. LD..1704..
	★ M4792.038-W31-01-26	1,500	1,250	2,520	4,997	1,059	1	0,7	2 1	

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

★ New addition to the product range

Assembly parts		SD..06T2.. / LD..08T2.. 0,750	SD..09T3.. / LD..14T3.. 1,000-1,250	SD..1204.. / LD..1704.. 1,500
	Type D <sub>c</sub> inch Clamping screw for insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. / LD..08T2.. 0,750	SD..09T3.. / LD..14T3.. 1,000-1,250	SD..1204.. / LD..1704.. 1,500
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Torque screwdriver, digital		FS2248	FS2248
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P			M			K			S		
			HC			HC			HC			HC		
			WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	LDMT08T204R-D51	0,4	0,8	⊕	⊕	⊕								⊕
	LDMT14T308R-D51	0,8	1,2	⊕	⊕	⊕								⊕
	LDMT170408R-D51	0,8	1,6	⊕	⊕	⊕								⊕
	LDMT08T204R-D57	0,4	0,8	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕	⊕
	LDMT14T308R-D57	0,8	1,2	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕	⊕
	LDMT170408R-D57	0,8	1,6	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕	⊕
	LDMT08T204R-F57	0,4	0,8	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	LDMT14T308R-F57	0,8	1,2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	LDMT170408R-F57	0,8	1,6	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	LDMW08T204R-A57	0,4	0,8	⊕	⊕				⊕	⊕				
	LDMW14T308R-A57	0,8	1,2	⊕	⊕				⊕	⊕				
	LDMW170408R-A57	0,8	1,6	⊕	⊕				⊕	⊕				
	SDMT06T204-D51	0,4		⊕	⊕	⊕		⊕		⊕	⊕			⊕
	SDMT09T308-D51	0,8		⊕	⊕	⊕		⊕		⊕	⊕			⊕
	SDMT120408-D51	0,8		⊕	⊕	⊕		⊕		⊕	⊕			⊕
	SDMT06T204-D57	0,4		⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕	⊕
	SDMT09T308-D57	0,8		⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕	⊕
	SDMT120408-D57	0,8		⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕	⊕
	SDMT06T204-F57	0,4		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT09T308-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT120408-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	SDMT06T212-F57	1,2		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT09T320-F57	2		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMT120425-F57	2,5		⊕	⊕	⊕	⊕	⊕		⊕	⊕	⊕	⊕	⊕
	SDMW06T204-A57	0,4		⊕	⊕				⊕	⊕				
	SDMW09T308-A57	0,8		⊕	⊕				⊕	⊕				
	SDMW120408-A57	0,8		⊕	⊕				⊕	⊕				

HC = Coated carbide

⊕ ⊕ ⊕ New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

●● Primary application

● Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2\*

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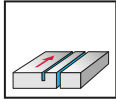
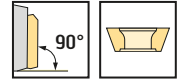
298



# Slitting cutter F5055 Walter BLAXX



– One cutting edge per indexable insert



	P	M	K	N	S	H	O
F5055	●●	●	●●	●	●		●

Tool	Designation	D <sub>c</sub> mm	d <sub>1</sub> mm	d <sub>6</sub> mm	l <sub>10</sub> mm	SB mm	a <sub>e max</sub> mm	Z	kg	No. of indexable inserts	Type
Parallel hole Longitudinal keyway DIN 138 	★ F5055.B16.063.Z05.1.5	63	16		1,2	1,5	15	5	0,02	5	SX-1
	F5055.B16.063.Z05.2.0	63	16		1,6	2	15	5	0,02	5	SX-2
	F5055.B16.063.Z04.3.0	63	16		2,4	3	15	4	0,03	4	SX-3
	F5055.B16.063.Z04.4.0	63	16		3,4	4	15	4	0,05	4	SX-4
	★ F5055.B16.080.Z07.1.5	80	16		1,2	1,5	20	7	0,03	7	SX-1
	F5055.B16.080.Z07.2.0	80	16		1,6	2	20	7	0,04	7	SX-2
	F5055.B16.080.Z06.3.0	80	16		2,4	3	20	6	0,06	6	SX-3
	F5055.B16.080.Z06.4.0	80	16		3,4	4	20	6	0,09	6	SX-4
	★ F5055.B22.100.Z09.1.5	100	22		1,2	1,5	25	9	0,06	9	SX-1
	F5055.B22.100.Z09.2.0	100	22		1,6	2	25	9	0,07	9	SX-2
	F5055.B22.100.Z09.3.0	100	22		2,4	3	25	9	0,10	9	SX-3
	F5055.B22.100.Z09.4.0	100	22		3,4	4	25	9	0,14	9	SX-4
	★ F5055.B32.125.Z11.1.5	125	32		1,2	1,5	33	11	0,09	11	SX-1
	F5055.B32.125.Z11.2.0	125	32		1,6	2	33	11	0,11	11	SX-2
	F5055.B32.125.Z11.3.0	125	32		2,4	3	33	11	0,17	11	SX-3
	F5055.B32.125.Z11.4.0	125	32		3,4	4	33	11	0,23	11	SX-4
	F5055.B40.160.Z14.2.0	160	40		1,6	2	38	14	0,19	14	SX-2
	F5055.B40.160.Z14.3.0	160	40		2,4	3	38	14	0,28	14	SX-3
	F5055.B40.160.Z14.4.0	160	40		3,4	4	38	14	0,40	14	SX-4
	F5055.B40.200.Z19.3.0	200	40		2,4	3	58	19	0,48	19	SX-3
F5055.B40.200.Z19.4.0	200	40		3,4	4	58	19	0,68	19	SX-4	
F5055.B40.250.Z24.3.0	250	40		2,4	3	83	24	0,79	24	SX-3	
F5055.B40.250.Z24.4.0	250	40		3,4	4	83	24	1,12	24	SX-4	

Values for a<sub>e max</sub> in combination with drive collar.

For information on high-speed applications, see Supplementary Catalogue, page F-123.

For fitting the indexable insert, use fitting key FS1494 or FS2249.

★ New addition to the product range

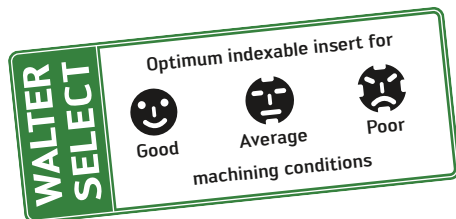
Accessories		D <sub>c</sub> mm SB mm	63 1,5-4	80 1,5-4	100 1,5-4	125 1,5-4	160 2-4	200 3-4	250 3-4
	Drive collar		FS1346	FS1347	FS1348	FS1349	FS1350	FS1350	FS1350
	Fitting key		FS2249	FS1494	FS1494	FS1494	FS1494	FS1494	FS1494
	Clamping screw for retaining disc							FS966 (SW 5)	FS966 (SW 5)
	Retaining disc instead of drive collar							FS1351 a <sub>e max</sub> = 30 mm	FS1351 a <sub>e max</sub> = 55 mm FS1352 a <sub>e max</sub> = 30 mm
	Key for clamping screw							ISO 2936-5 (SW 5)	ISO 2936-5 (SW 5)

Drive collars and retaining discs should always be ordered in pairs.  
Clamping screws for retaining discs are included in the scope of delivery.

	s mm	r mm	P			M			K		N		S			H	
			HC			HC			HC		HC	HW	HC			HC	HC
			WKP23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WKP35S	WXN15	WK10	WSM23S	WSM33S	WSM43S	WHH15	WXM15
	SX-1E150N01-CE4	1,5		☺	☺												
	SX-2E200N02-CE4	2	☺	☺	☺			☺	☺					☺	☺		
	SX-3E300N02-CE4	3	☺	☺	☺			☺	☺					☺	☺		
	SX-4E400N02-CE4	4	☺	☺	☺			☺	☺					☺	☺		
	SX-1E150N01-SF5	1,5		☺	☺									☺	☺		
	SX-2E200N02-SF5	2		☺	☺			☺	☺					☺	☺		
	SX-3E300N02-SF5	3		☺	☺			☺	☺					☺	☺		
	SX-4E400N02-SF5	4		☺	☺			☺	☺					☺	☺		
	SX-1E150N01-CF6	1,5		☺	☺									☺	☺		
	SX-2E200N02-CF6	2		☺	☺			☺	☺					☺	☺		
	SX-3E300N02-CF6	3		☺	☺			☺	☺					☺	☺		

HC = Coated carbide  
HW = Uncoated carbide

☺ ☺ ☺ New addition to the product range



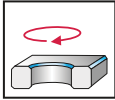
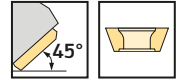
\* The page information relates to the Walter General Catalogue 2012  
\*\* The page information relates to the Walter Supplementary Catalogue 2013/2014



# Chamfer milling cutter M4574



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4574	●●	●●	●●	●●	●●		

Tool	Designation	D <sub>c</sub> mm	D <sub>a</sub> mm	d <sub>1</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	L <sub>c</sub> mm	Z	kg	No. of indexable inserts	Type
NCT ScrewFit 	★ M4574-012-T09-02-03	12	20,3	9,7	20		3,5	2	0,01	2	SD..06T2..
	★ M4574-016-T14-03-03	16	24,3	14,5	25		3,5	3	0,28	3	
	M4574-020-T18-02-05	20	32,8	18	30		5,5	2	0,07	2	
	M4574-025-T22-03-05	32	37,8	22	35		5,5	3	0,11	3	SD..09T3..
	M4574-032-T28-03-05	32	44,8	28	40		5,5	3	0,23	3	
	★ M4574-032-T28-03-07	32	48,6	28	40		7,5	3	0,21	3	SD..1204..
Parallel shank without flat 	★ M4574-008-A12-01-03	8	16,3	12	30	120	3,5	1	0,09	1	
	★ M4574-010-A12-01-03	10	18,3	12	30	120	3,5	1	0,10	1	SD..06T2..
	★ M4574-012-A16-02-03	12	20,3	16	40	160	3,5	2	0,22	2	
	M4574-012-A16-01-05	12	24,8	16	40	160	5,5	1	0,23	1	SD..09T3..
	★ M4574-016-A16-03-03	16	24,3	16	40	160	3,5	3	0,22	3	SD..06T2..
	★ M4574-016-A16-02-05	16	28,8	16	40	160	5,5	2	0,23	2	
	M4574-020-A20-02-05	20	32,8	20	40	200	5,5	2	0,47	2	SD..09T3..
	M4574-025-A25-03-05	25	37,8	25	40	200	5,5	3	0,71	3	
	★ M4574-025-A25-02-07	25	41,6	25	40	200	7,5	2	0,71	2	SD..1204..
	M4574-032-A32-03-05	32	44,8	32	40	250	5,5	3	1,46	3	SD..09T3..
	★ M4574-032-A32-03-07	32	48,6	32	40	250	7,5	3	1,47	3	
	★ M4574-040-A32-03-07	40	56,6	32	40	250	7,5	3	1,53	3	SD..1204..

You can shorten tools with a parallel shank to the length required for a particular job.  
Bodies and assembly parts are included in the scope of delivery.

★ New addition to the product range

Assembly parts		SD..06T2.. 8-16	SD..09T3.. 12-32	SD..1204.. 25-40
	Type D <sub>c</sub> mm Clamping screw for indexable insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. 8-16	SD..09T3.. 12-32	SD..1204.. 25-40
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Torque screwdriver, digital		FS2248	FS2248
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

Indexable inserts		r mm	b mm	P			M			K			S			
Designation	r mm			b mm	HC			HC			HC			HC		
					WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	SDMT06T204-D51	0,4		☺	☺	☺										
	SDMT09T308-D51	0,8		☺	☺	☺										
	SDMT120408-D51	0,8		☺	☺	☺										
	SDMT06T204-D57	0,4		☺	☺	☺	☺			☺	☺	☺	☺		☺	
	SDMT09T308-D57	0,8		☺	☺	☺	☺			☺	☺	☺	☺		☺	
	SDMT120408-D57	0,8		☺	☺	☺	☺			☺	☺	☺	☺		☺	
	SDMT06T204-F57	0,4		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	SDMT09T308-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	SDMT120408-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	SDMT06T212-F57	1,2			☺	☺	☺	☺	☺				☺	☺	☺	
	SDMT09T320-F57	2			☺	☺	☺	☺	☺				☺	☺	☺	
	SDMT120425-F57	2,5			☺	☺	☺	☺	☺				☺	☺	☺	
	SDMW06T204-A57	0,4		☺	☺						☺	☺				
	SDMW09T308-A57	0,8		☺	☺						☺	☺				
	SDMW120408-A57	0,8		☺	☺						☺	☺				

HC = Coated carbide

☺ ☺ ☺ New addition to the product range

**WALTER SELECT**

Stability of machine, workpiece and clamping arrangement

☺  
Very good

☹  
Good

☹  
Moderate

●●  
Primary application

●  
Other application

\* The page information relates to the Walter General Catalogue 2012

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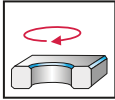
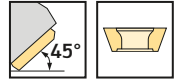
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# Chamfer milling cutter

## M4574 inch



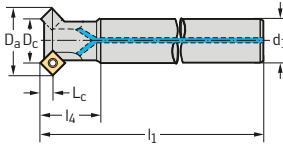
– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4574	●●	●●	●●	●●	●●		

### Tool

Parallel shank without flat



Designation	D <sub>c</sub> inch	D <sub>a</sub> inch	d <sub>1</sub> inch	l <sub>4</sub> inch	l <sub>1</sub> inch	L <sub>c</sub> inch	Z	kg	No. of indexable inserts	Type
M4574.013-A15-01-05	0,500	0,976	0,625	1,575	6,299	0,217	1	0,23	1	SD..09T3..
M4574.019-A19-02-05	0,750	1,224	0,750	1,575	7,874	0,217	2	0,42	2	
M4574.026-A26-03-05	1,000	1,476	1,000	1,575	7,874	0,217	3	0,71	3	
M4574.031-A31-03-05	1,250	1,724	1,250	1,575	9,843	0,217	3	1,44	3	
★ M4574.038-A38-03-07	1,500	2,154	1,500	1,575	9,843	0,295	3	2,11	3	SD..1204..

You can shorten tools with a parallel shank to the length required for a particular job.  
Bodies and assembly parts are included in the scope of delivery.

★ New addition to the product range

Assembly parts		SD..09T3.. 0,500-1,250	SD..1204.. 1,500
	Type D <sub>c</sub> inch Clamping screw for indexable insert Tightening torque	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..09T3.. 0,500-1,250	SD..1204.. 1,500
	Torque screwdriver, analogue	FS2003	FS2003
	Torque screwdriver, digital	FS2248	FS2248
	Screwdriver	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Interchangeable blade	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

### Indexable inserts

Designation	r mm	b mm	P		M			K			S			
			HC		HC			HC			HC			
			WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
SDMT09T308-D51	0,8		⊕	⊕	⊕					⊕	⊕			⊕
SDMT120408-D51	0,8		⊕	⊕	⊕					⊕	⊕			⊕
SDMT09T308-D57	0,8		⊕	⊕	⊕	⊕			⊕	⊕	⊕			⊕
SDMT120408-D57	0,8		⊕	⊕	⊕	⊕			⊕	⊕	⊕			⊕
SDMT09T308-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SDMT120408-F57	0,8		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SDMT09T320-F57	2			⊕	⊕	⊕	⊕				⊕	⊕	⊕	⊕
SDMT120425-F57	2,5			⊕	⊕	⊕	⊕				⊕	⊕	⊕	⊕
SDMW09T308-A57	0,8		⊕	⊕						⊕	⊕			
SDMW120408-A57	0,8		⊕	⊕						⊕	⊕			

HC = Coated carbide

⊕ ⊕ ⊕ New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

Primary application

Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

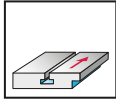
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# T-slot milling cutter M4575

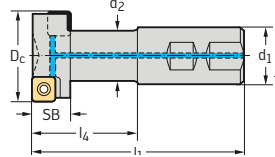


– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4575	●●	●●	●●	●●	●●		

Tool	Designation	D <sub>c</sub> mm	d <sub>1</sub> mm	d <sub>2</sub> mm	l <sub>4</sub> mm	l <sub>1</sub> mm	SB mm	Z	kg	No. of indexable inserts	Type
Shank DIN 1835-B	★ M4575-021-W12-02-09	20,5	12	11	27	73	9	2	0,05	4	SD..06T2..
	★ M4575-025-W16-02-11	24,5	16	12,1	31	80	11	2	0,11	4	
	★ M4575-032-W20-02-14	31,75	20	17	31	90	14	2	0,20	4	SD..09T3..
	★ M4575-040-W25-02-17	39,5	25	21	49	106	17	2	0,39	4	
	★ M4575-050-W32-02-21	49,5	32	27	61	122	21	2	0,71	4	SD..1204..



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

★ New addition to the product range

Assembly parts		SD..06T2.. 20,5-24,5	SD..09T3.. 31,75-39,5	SD..1204.. 49,5
	Type D <sub>c</sub> mm Clamping screw for indexable insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. 20,5-24,5	SD..09T3.. 31,75-39,5	SD..1204.. 49,5
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Torque screwdriver, digital		FS2248	FS2248
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

Indexable inserts		r mm	b mm	P			M			K			S		
Designation				HC			HC			HC			HC		
				WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	SDMT06T204-D51	0,4		☺	☺	☺									☺
	SDMT09T308-D51	0,8		☺	☺	☺									☺
	SDMT120408-D51	0,8		☺	☺	☺									☺
	SDMT06T204-D57	0,4		☺	☺	☺	☺			☺	☺	☺	☺	☺	☺
	SDMT09T308-D57	0,8		☺	☺	☺	☺			☺	☺	☺	☺	☺	☺
	SDMT120408-D57	0,8		☺	☺	☺	☺			☺	☺	☺	☺	☺	☺
	SDMT06T204-F57	0,4		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SDMT09T308-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SDMT120408-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SDMT06T212-F57	1,2			☺	☺	☺	☺	☺				☺	☺	☺
	SDMT09T320-F57	2			☺	☺	☺	☺	☺				☺	☺	☺
	SDMT120425-F57	2,5			☺	☺	☺	☺	☺				☺	☺	☺
	SDMW06T204-A57	0,4		☺	☺								☺	☺	
	SDMW09T308-A57	0,8		☺	☺								☺	☺	
	SDMW120408-A57	0,8		☺	☺								☺	☺	

HC = Coated carbide

☺ ☺ ☺ New addition to the product range

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺  
Very good

☺  
Good

☺  
Moderate

•• Primary application

• Other application

\* The page information relates to the Walter General Catalogue 2012

230

D 2 \*

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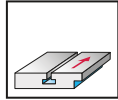


# T-slot milling cutter

## M4575 inch

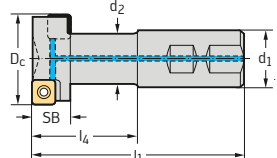


– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4575	●●	●●	●●	●●	●●		

Tool	Designation	D <sub>c</sub> inch	d <sub>1</sub> inch	d <sub>2</sub> inch	l <sub>4</sub> inch	l <sub>1</sub> inch	CW inch	Z	kg	No. of indexable inserts	Type
Shank DIN 1835-B	★ M4575.019-W19-01-08	0,778	0,750	0,406	1,220	3,252	0,317	1	0,14	2	SD..06T2..
	★ M4575.024-W19-02-09	0,949	0,750	0,476	1,406	3,437	0,368	2	0,15	4	
	★ M4575.031-W26-02-12	1,230	1,000	0,780	1,614	3,895	0,463	2	0,31	4	SD..09T3..
	★ M4575.037-W26-02-15	1,447	1,000	0,780	2,126	4,407	0,600	2	0,38	4	
	★ M4575.047-W31-02-21	1,949	1,250	1,031	2,500	4,781	0,817	2	0,69	4	SD..1204..



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

★ New addition to the product range

Assembly parts		SD..06T2.. 0,778-0,949	SD..09T3.. 1,230-1,447	SD..1204.. 1,949
	Type D <sub>c</sub> inch Clamping screw for indexable insert Tightening torque	FS2084 (Torx 7 IP) 0,9 Nm	FS2266 (Torx 10 IP) 2,0 Nm	FS1453 (Torx 15 IP) 3,5 Nm

Accessories		SD..06T2.. 0,778-0,949	SD..09T3.. 1,230-1,447	SD..1204.. 1,949
	Torque screwdriver, analogue	FS2001	FS2003	FS2003
	Screwdriver	FS2088 (Torx 7 IP)	FS2267 (Torx 10 IP)	FS1485 (Torx 15 IP)
	Torque screwdriver, digital		FS2248	FS2248
	Interchangeable blade	FS2011 (Torx 7 IP)	FS2268 (Torx 10 IP)	FS2014 (Torx 15 IP)

Indexable inserts		r mm	b mm	P			M			K			S			
Designation	r mm			b mm	HC			HC			HC			HC		
					WKP25S	WKP35S	WSP45S	WSM35S	WSM45X	WSP45S	WAK15	WKK25S	WKP25S	WKP35S	WSM35S	WSM45X
	SDMT06T204-D51	0,4		☺	☺	☺										
	SDMT09T308-D51	0,8		☺	☺	☺										
	SDMT120408-D51	0,8		☺	☺	☺										
	SDMT06T204-D57	0,4		☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	
	SDMT09T308-D57	0,8		☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	
	SDMT120408-D57	0,8		☺	☺	☺	☺			☺	☺	☺	☺	☺	☺	
	SDMT06T204-F57	0,4		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	SDMT09T308-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	SDMT120408-F57	0,8		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	SDMT06T212-F57	1,2			☺	☺	☺	☺	☺				☺	☺	☺	
	SDMT09T320-F57	2			☺	☺	☺	☺	☺				☺	☺	☺	
	SDMT120425-F57	2,5			☺	☺	☺	☺	☺				☺	☺	☺	
	SDMW06T204-A57	0,4		☺	☺								☺	☺		
	SDMW09T308-A57	0,8		☺	☺								☺	☺		
	SDMW120408-A57	0,8		☺	☺								☺	☺		

HC = Coated carbide

☺ ☺ ☺ New addition to the product range

**WALTER SELECT**

Stability of machine, workpiece and clamping arrangement

☺  
Very good

☺  
Good

☺  
Moderate

••  
Primary application

•  
Other application

\* The page information relates to the Walter General Catalogue 2012

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D 2 \*

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# Cutting data for roughing

## Face/shoulder milling

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>	= Cutting data for wet machining = Dry machining is possible		Cutting material grades								
								Starting values for cutting speed $v_c$ [m/min]								
								HC								
								WKP35S		WKP25S		WAK15				
$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		1/1		1/5								
1/2		1/5		1/2		1/5		1/2		1/5						
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●	250	300	290	320				
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●	220	260	260	330				
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●	215	250	255	320				
		C > 0.55%	Annealed	190	639	P4	●	●●	220	260	260	330				
		C > 0.55%	Heat-treated	300	1013	P5	●	●●	160	180	220	260				
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●	●●	210	240	250	315				
	Low-alloyed steel	Annealed	175	591	P7	●	●●	220	270	260	320					
		Heat-treated	300	1013	P8	●	●●	170	190	210	250					
		Heat-treated	380	1282	P9	●	●●	130	150	170	190					
		Heat-treated	430	1477	P10	●	●●	110	130	150	170					
High-alloyed steel and high-alloyed tool steel	Annealed	200	675	P11	●	●●	130	160	140	170						
	Hardened and tempered	300	1013	P12	●	●●	80	90	110	130						
	Hardened and tempered	400	1361	P13	●	●●	70	80	90	110						
Stainless steel	Ferritic/martensitic, annealed	200	675	P14	●	●●	140	160								
	Martensitic, heat-treated	330	1114	P15	●	●●	90	110								
M	Stainless steel	Austenitic, quench hardened	200	675	M1	●●	●									
		Austenitic, precipitation hardened (PH)	300	1013	M2	●●	●									
		Austenitic/ferritic, duplex	230	778	M3	●●	●									
K	Malleable cast iron	Ferritic	200	675	K1	●	●●	160	190	180	210	210	230			
		Pearlitic	260	867	K2	●	●●	140	170	160	190	190	210			
	Grey cast iron	Low tensile strength	180	602	K3	●	●●	300	330	320	350	380	410			
		High tensile strength/austenitic	245	825	K4	●	●●	190	220	180	210	230	260			
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	●	●●	200	220	220	240	260	280			
		Pearlitic	265	885	K6	●	●●	130	150	140	170	170	200			
GGV (CGI)		200	675	K7	●	●●	130	160	150	180	180	200				
N	Aluminium wrought alloys	Cannot be hardened	30	–	N1	●●										
		Hardenable, hardened	100	343	N2	●●										
	Cast aluminium alloys	≤ 12% Si, cannot be hardened	75	260	N3	●●										
		≤ 12% Si, hardenable, hardened	90	314	N4	●●										
		> 12% Si, cannot be hardened	130	447	N5	●●										
	Magnesium alloys		70	250	N6	●●										
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper	100	343	N7	●●										
		Brass, bronze, red brass	90	314	N8	●●										
		Cu-alloys, short-chipping	110	382	N9	●●										
		High-strength, Ampco	300	1013	N10	●●										
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●									
			Hardened	280	943	S2	●●									
		Ni or Co base	Annealed	250	839	S3	●●									
			Hardened	350	1177	S4	●●									
			Cast	320	1076	S5	●●									
	Titanium alloys	Pure titanium	200	675	S6	●●										
		α and β alloys, hardened	375	1262	S7	●●										
		β alloys	410	1396	S8	●●										
	Tungsten alloys		300	1013	S9	●●										
	Molybdenum alloys		300	1013	S10	●●										
H	Hardened steel	Hardened and tempered	50 HRC	–	H1		●●					65	80			
		Hardened and tempered	55 HRC	–	H2		●●					50	65			
		Hardened and tempered	60 HRC	–	H3		●●					40	50			
	Hardened cast iron	Hardened and tempered	55 HRC	–	H4		●●					50	65			
O	Thermoplastics	Without abrasive fillers			O1	●●	●	400	400			400	400			
	Thermosetting plastics	Without abrasive fillers			O2	●●	●	300	300			300	300			
	Plastic, glass-fibre reinforced	GFRP			O3											
	Plastic, carbon-fibre reinforced	CFRP			O4											
	Plastic, aramid-fibre reinforced	AFRP			O5											
	Graphite (technical)		80 Shore		O6		●●			400	500	600	800			

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.

<sup>2</sup> Cutting data can also be used without coolant.

\*  $a_e / D_c = 1 / 10$ ,  $v_c = 10\%$  higher than 1 / 5

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

Cutting material grades																									
Starting values for cutting speed $v_c$ [m/min]																									
HC												HF		HW		CN		WCB80		DP					
WSP45		WSP45S		WSM45X		WSM35		WSM35S		WKK25		WKK25S		WXN15		WNN15		WMG40		WK10		WSN10			
$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$			
1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5
230	290	230	290																						
190	250	190	250																						
180	230	180	230																						
190	250	190	250																						
130	145	130	145																						
175	225	175	225																						
190	240	190	240																						
130	145	130	145																						
100	110	100	110																						
80	90	80	90																						
115	140	115	140																						
75	90	75	90																						
65	80	65	80																						
115	140	115	140			120	150	120	150																
80	100	80	100			80	110	80	110																
110	130	110	130	120	145	130	155	130	155																
90	100	90	100	95	110	100	120	100	120																
100	120	100	120	115	130	120	140	120	140																
										190	230	190	230								900	1000			
										170	200	170	200								800	900			
										350	380	350	380								1100	1300	1000	1250	
										190	230	190	230								900	1000	800	950	
										240	260	240	260								750	900	650	800	
										150	180	150	180								650	750	600	700	
										160	190	160	190								650	750	600	700	
														2640	2640	2640	2640	1500	1500	2200	2200			3000	4000
														1980	1980	1980	1980	1000	1000	1650	1650			2000	2000
														660	730	660	730			550	605			1500	1500
														530	530	530	530			440	440			1000	1000
														265	310	265	310			220	260			500	500
														530	530	530	530			440	440				
														460	460	460	460			380	380				
														260	300	260	300			220	260				
														190	200	190	200			160	170				
														150	160	150	160			120	130				
65	70	65	70	75	80	80	90	80	90									75	80						
45	50	45	50	50	60	60	65	60	65									45	50						
50	55	50	55	55	65	60	70	60	70									55	60						
30	35	30	35	35	40	40	45	40	45									25	30						
40	45	40	45	45	50	50	55	50	55									35	40						
65	70	65	70	75	80	80	90	80	90									75	80						
30	35	30	35	35	40	40	45	40	45									25	30						
30	35	30	35	30	40	30	45	30	45									30	40						
70	80	70	80	70	80	70	80	70	80									70	80						
70	80	70	80	70	80	70	80	70	80									70	80						
										65	80	65	80							65	80			450	550
										50	65	50	65							50	65			220	280
										40	50	40	50							40	50			140	220
										50	65	50	65							50	65			220	280
400	400	400	400			400	400	400	400	400	400	400	400	400	400			400	400	400	400				
300	300	300	300			300	300	300	300	300	300	300	300	300	300			300	300	300	300				
										600	800	600	800	600	800					400	500				

HC = Coated carbide  
HW = Uncoated carbide  
HF = Uncoated fine-grained carbide

BH = CBN with high CBN content  
BL = CBN with low CBN content  
DP = Polycrystalline diamond  
CN = Silicon nitride Si<sub>3</sub>N<sub>4</sub>

## Cutting data for roughing

### Shoulder milling with full effective porcupine cutters (F2338F, F4038, F4138, F4238, F4338, F5038, F5138)

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>	= Cutting data for wet machining = Dry machining is possible		Cutting material grades					
								Starting values for cutting speed $v_c$ [m/min]					
								HC					
								WKP35S		WKP25S			
		$a_e / D_c^*$		$a_e / D_c^*$									
		1/2	1/5	1/2	1/5								
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	● ●	195	250	210	275		
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	● ●	170	215	200	255		
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	● ●	155	190	175	220		
		C > 0.55%	Annealed	190	639	P4	● ●	170	215	200	255		
		C > 0.55%	Heat-treated	300	1013	P5	● ●	130	145	165	200		
		Free cutting steel (short-chipping)	Annealed	220	745	P6	● ●	150	210	170	210		
	Low-alloyed steel	Annealed	175	591	P7	● ●	170	215	200	255			
		Heat-treated	300	1013	P8	● ●	130	145	155	200			
		Heat-treated	380	1282	P9	● ●	85	100	125	140			
		Heat-treated	430	1477	P10	● ●	80	90	110	120			
	High-alloyed steel and high-alloyed tool steel	Annealed	200	675	P11	● ●	100	120	110	130			
		Hardened and tempered	300	1013	P12	● ●	65	75	80	95			
		Hardened and tempered	400	1361	P13	● ●	60	70	70	80			
	Stainless steel	Ferritic/martensitic, annealed	200	675	P14	● ●	105	120					
		Martensitic, heat-treated	330	1114	P15	● ●	60	70					
M	Stainless steel	Austenitic, quench hardened	200	675	M1	● ●							
		Austenitic, precipitation hardened (PH)	300	1013	M2	● ●							
		Austenitic/ferritic, duplex	230	778	M3	● ●							
K	Malleable cast iron	Ferritic	200	675	K1	● ●	150	170	120	220			
		Pearlitic	260	867	K2	● ●	120	140	130	150			
	Grey cast iron	Low tensile strength	180	602	K3	● ●	160	180	180	230			
		High tensile strength/austenitic	245	825	K4	● ●	120	140	130	150			
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	● ●	140	150	150	160			
		Pearlitic	265	885	K6	● ●	105	115	120	125			
GGV (CGI)		200	675	K7	● ●	150	170	120	220				
N	Aluminium wrought alloys	Cannot be hardened	30	–	N1	● ●							
		Hardenable, hardened	100	343	N2	● ●							
	Cast aluminium alloys	≤ 12% Si, cannot be hardened	75	260	N3	● ●							
		≤ 12% Si, hardenable, hardened	90	314	N4	● ●							
		> 12% Si, cannot be hardened	130	447	N5	● ●							
	Magnesium alloys		70	250	N6	● ●							
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper	100	343	N7	● ●							
Brass, bronze, red brass		90	314	N8	● ●								
Cu-alloys, short-chipping		110	382	N9	● ●								
High-strength, Ampco		300	1013	N10	● ●								
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	● ●						
			Hardened	280	943	S2	● ●						
		Ni or Co base	Annealed	250	839	S3	● ●						
			Hardened	350	1177	S4	● ●						
			Cast	320	1076	S5	● ●						
	Titanium alloys	Pure titanium	200	675	S6	● ●							
		α and β alloys, hardened	375	1262	S7	● ●							
		β alloys	410	1396	S8	● ●							
	Tungsten alloys		300	1013	S9	● ●							
	Molybdenum alloys		300	1013	S10	● ●							
H	Hardened steel	Hardened and tempered	50 HRC	–	H1	● ●							
		Hardened and tempered	55 HRC	–	H2	● ●							
		Hardened and tempered	60 HRC	–	H3	● ●							
	Hardened cast iron	Hardened and tempered	55 HRC	–	H4	● ●							
O	Thermoplastics	Without abrasive fillers			O1	● ●	400	400					
	Thermosetting plastics	Without abrasive fillers			O2	● ●	300	300					
	Plastic, glass-fibre reinforced	GFRP			O3								
	Plastic, carbon-fibre reinforced	CFRP			O4								
	Plastic, aramid-fibre reinforced	AFRP			O5								
	Graphite (technical)		80 Shore		O6	● ●			400	500			

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.

\*  $a_e / D_c = 1 / 10$ ,  $v_c = 10\%$  higher than 1 / 5

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

Cutting material grades																					
Starting values for cutting speed $v_c$ [m/min]																					
		HC																HW			
WAK15		WSP45		WSP45S		WSM45X		WSM35		WSM35S		WKK25		WKK25S		WXN15		WK10			
$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$			
1/2	1/5	1/2	1/5	1/2	1/5	1/1 1/2	1/5	1/2	1/5	1/2	1/5	1/2	1/5	1/2	1/5	1/2	1/5	1/2	1/5	1/5	
				185	230	185	230														
				150	200	150	200														
				130	165	130	165														
				150	200	150	200														
				105	115	105	115														
				125	160	125	160														
				150	190	150	190														
				105	115	105	115														
				60	70	60	70														
				60	70	60	70														
				90	110	90	110														
				65	70	65	70														
				60	70	60	70														
				90	110	90	110			95	120	95	120								
				60	70	60	70			60	70	60	70								
				85	100	85	100	95	110	100	120	100	120								
				70	80	70	80	75	90	80	100	80	100								
				75	90	75	90	85	100	90	110	90	110								
	210	270												190	250	190	250			70	80
	160	180												140	160	140	160			65	65
	220	280												200	260	200	260			75	85
	160	180												140	160	140	160			55	55
	180	190												160	170	160	170			70	80
	155	165												135	145	135	145			65	65
	210	270												190	250	190	250			70	80
																		1800	1800	1500	1500
																		1440	1440	1200	1200
																		540	640	450	530
																		430	430	360	360
																		220	260	180	215
																		430	430	360	360
																		170	210	140	175
																		280	280	230	230
																		170	210	140	175
																		130	170	100	130
				50	55	50	55	60	65	65	70	65	70								
				35	40	35	40	40	45	50	50	50	50								
				40	45	40	45	45	50	50	55	50	55								
				25	30	25	30	25	30	30	35	30	35								
				30	35	30	35	40	40	40	45	40	45								
				50	65	50	65	60	75	65	80	65	80								
				30	35	30	35	35	40	40	45	40	45								
				25	30	25	30	30	35	35	40	35	40								
				30	35	30	35	35	40	40	45	40	45								
				25	30	25	30	30	35	35	40	35	40								
	45	55												45	55	45	55				35
	40	50												40	50	40	50				35
	40	50												40	50	40	50				35
	400	400	400	400	400	400	400		400	400	400	400	400	400	400	400	400	400	400	400	400
	300	300	300	300	300	300	300		300	300	300	300	300	300	300	300	300	300	300	300	300
	600	800												600	800	600	800	600	800	400	500

HC = Coated carbide  
HW = Uncoated carbide  
HF = Uncoated fine-grained carbide

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

## Cutting data for roughing

### Slot milling with half effective porcupine cutters (F2237, F2238, F2338, M4792)

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>	= Cutting data for wet machining = Dry machining is possible		Cutting material grades		
								Starting values for cutting speed $v_c$ [m/min]		
								HC WKP355		
						1/1	1/2	1/5		
						$a_e / D_c^*$				
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●	195	250
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●	170	215
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●	155	190
		C > 0.55%	Annealed	190	639	P4	●	●●	170	215
		C > 0.55%	Heat-treated	300	1013	P5	●	●●	130	145
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●	●●	150	210
	Low-alloyed steel	Annealed		175	591	P7	●	●●	170	215
		Heat-treated		300	1013	P8	●	●●	130	145
		Heat-treated		380	1282	P9	●	●●	85	100
		Heat-treated		430	1477	P10	●	●●	80	90
	High-alloyed steel and high-alloyed tool steel	Annealed		200	675	P11	●	●●	100	120
		Hardened and tempered		300	1013	P12	●	●●	65	75
		Hardened and tempered		400	1361	P13	●	●●	60	70
	Stainless steel	Ferritic/martensitic, annealed		200	675	P14	●	●●	105	120
		Martensitic, heat-treated		330	1114	P15	●	●●	60	70
M	Stainless steel	Austenitic, quench hardened		200	675	M1	●●	●		
		Austenitic, precipitation hardened (PH)		300	1013	M2	●●	●		
		Austenitic/ferritic, duplex		230	778	M3	●●	●		
K	Malleable cast iron	Ferritic		200	675	K1	●	●●	150	170
		Pearlitic		260	867	K2	●	●●	120	140
	Grey cast iron	Low tensile strength		180	602	K3	●	●●	160	180
		High tensile strength/austenitic		245	825	K4	●	●●	120	140
	Cast iron with spheroidal graphite	Ferritic		155	518	K5	●	●●	140	150
		Pearlitic		265	885	K6	●	●●	105	115
	GGV (CGI)		200	675	K7	●	●●	150	170	
N	Aluminium wrought alloys	Cannot be hardened		30	–	N1	●●			
		Hardenable, hardened		100	343	N2	●●			
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	260	N3	●●			
		≤ 12% Si, hardenable, hardened		90	314	N4	●●			
		> 12% Si, cannot be hardened		130	447	N5	●●			
	Magnesium alloys		70	250	N6	●●				
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper		100	343	N7	●●			
		Brass, bronze, red brass		90	314	N8	●●			
		Cu-alloys, short-chipping		110	382	N9	●●			
		High-strength, Ampco		300	1013	N10	●●			
S	Heat-resistant alloys	Fe-based	Annealed		200	675	S1	●●		
			Hardened		280	943	S2	●●		
		Ni or Co base	Annealed		250	839	S3	●●		
			Hardened		350	1177	S4	●●		
			Cast		320	1076	S5	●●		
	Titanium alloys	Pure titanium		200	675	S6	●●			
		α and β alloys, hardened		375	1262	S7	●●			
		β alloys		410	1396	S8	●●			
	Tungsten alloys		300	1013	S9	●●				
	Molybdenum alloys		300	1013	S10	●●				
H	Hardened steel	Hardened and tempered		50 HRC	–	H1		●●		
		Hardened and tempered		55 HRC	–	H2		●●		
		Hardened and tempered		60 HRC	–	H3		●●		
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4		●●		
O	Thermoplastics	Without abrasive fillers				O1	●●	●	400	400
	Thermosetting plastics	Without abrasive fillers				O2	●●	●	300	300
	Plastic, glass-fibre reinforced	GFRP				O3				
	Plastic, carbon-fibre reinforced	CFRP				O4				
	Plastic, aramid-fibre reinforced	AFRP				O5				
	Graphite (technical)			80 Shore		O6				

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.  
 \*  $a_e / D_c = 1 / 10$ ,  $v_c = 10\%$  higher than 1 / 5





## Cutting data for roughing

### Circular interpolation milling (F2231, F2234, F2330, F2334, F2334R, F3040, F4042, F4080, F4081, M2131, M4002, M4792)

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>	= Cutting data for wet machining = Dry machining is possible		Cutting material grades				
								Starting values for cutting speed $v_c$ [m/min]				
								HC				
								WKP35S		WKP25S		
		$a_e / D_c^*$		$a_e / D_c^*$								
		1/1	1/5	1/1	1/5							
		1/2		1/2								
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●	220	270	260	330
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●	200	230	230	300
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●	210	230	250	310
		C > 0.55%	Annealed	190	639	P4	●	●●	200	230	230	300
		C > 0.55%	Heat-treated	300	1013	P5	●	●●	140	160	200	230
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●	●●	190	220	220	290
	Low-alloyed steel	Annealed	175	591	P7	●	●●	200	240	230	290	
		Heat-treated	300	1013	P8	●	●●	150	170	190	230	
		Heat-treated	380	1282	P9	●	●●	110	130	140	160	
		Heat-treated	430	1477	P10	●	●●	80	100	110	130	
	High-alloyed steel and high-alloyed tool steel	Annealed	200	675	P11	●	●●	120	140	130	150	
		Hardened and tempered	300	1013	P12	●	●●	80	90	110	130	
		Hardened and tempered	400	1361	P13	●	●●	70	80	100	120	
	Stainless steel	Ferritic/martensitic, annealed	200	675	P14	●	●●	120	140			
		Martensitic, heat-treated	330	1114	P15	●	●●	60	70			
M	Stainless steel	Austenitic, quench hardened	200	675	M1	●●	●					
		Austenitic, precipitation hardened (PH)	300	1013	M2	●●	●					
		Austenitic/ferritic, duplex	230	778	M3	●●	●					
K	Malleable cast iron	Ferritic	200	675	K1	●	●●	110	120	130	140	
		Pearlitic	260	867	K2	●	●●	130	160	150	180	
	Grey cast iron	Low tensile strength	180	602	K3	●	●●	270	300	190	310	
		High tensile strength/austenitic	245	825	K4	●	●●	150	180	170	200	
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	●	●●	180	200	200	220	
		Pearlitic	265	885	K6	●	●●	120	140	130	160	
GGV (CGI)		200	675	K7	●	●●	120	150	140	170		
N	Aluminium wrought alloys	Cannot be hardened	30	–	N1	●●						
		Hardenable, hardened	100	343	N2	●●						
	Cast aluminium alloys	≤ 12% Si, cannot be hardened	75	260	N3	●●						
		≤ 12% Si, hardenable, hardened	90	314	N4	●●						
		> 12% Si, cannot be hardened	130	447	N5	●●						
	Magnesium alloys		70	250	N6	●●						
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper	100	343	N7	●●						
Brass, bronze, red brass		90	314	N8	●●							
Cu-alloys, short-chipping		110	382	N9	●●							
High-strength, Ampco		300	1013	N10	●●							
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●					
			Hardened	280	943	S2	●●					
		Ni or Co base	Annealed	250	839	S3	●●					
			Hardened	350	1177	S4	●●					
			Cast	320	1076	S5	●●					
	Titanium alloys	Pure titanium	200	675	S6	●●						
		α and β alloys, hardened	375	1262	S7	●●						
		β alloys	410	1396	S8	●●						
	Tungsten alloys		300	1013	S9	●●						
	Molybdenum alloys		300	1013	S10	●●						
H	Hardened steel	Hardened and tempered	50 HRC	–	H1		●●					
		Hardened and tempered	55 HRC	–	H2		●●					
		Hardened and tempered	60 HRC	–	H3		●●					
	Hardened cast iron	Hardened and tempered	55 HRC	–	H4		●●					
O	Thermoplastics	Without abrasive fillers			O1	●●	●	300	300			
	Thermosetting plastics	Without abrasive fillers			O2	●●	●	400	400			
	Plastic, glass-fibre reinforced	GFRP			O3							
	Plastic, carbon-fibre reinforced	CFRP			O4							
	Plastic, aramid-fibre reinforced	AFRP			O5							
	Graphite (technical)		80 Shore		O6		●●			400	500	

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.  
 \*  $a_e / D_c = 1 / 10$ ,  $v_c = 10\%$  higher than 1 / 5

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

Cutting material grades																							
Starting values for cutting speed $v_c$ [m/min]																							
HC																				HF		HW	
WAK15		WSP45		WSP45S		WSM45X		WSM35		WSM35S		WKK25		WKK25S		WXN15		WNN15		WMG40		WK10	
$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$		$a_e / D_c^*$	
1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5	1/1	1/5
		210	260	210	260																		
		170	220	170	220																		
		160	210	160	210																		
		170	220	170	220																		
		120	130	120	130																		
		160	210	160	210																		
		170	210	170	210																		
		125	150	125	150																		
		85	95	85	95																		
		60	65	60	65																		
		100	130	100	130																		
		75	90	75	90																		
		65	75	65	75																		
		100	120	100	120			110	130	110	130												
		55	65	55	65			60	70	60	70												
		90	100	90	100	95	110	100	120	100	120												
		70	80	70	80	75	90	80	100	80	100												
		80	90	80	90	85	100	90	110	90	110												
	150	160										140	150	140	150								
	160	170										150	160	150	160								
	340	370										330	360	330	360								
	200	220										190	210	190	210								
	230	250										220	240	220	240								
	160	190										150	180	150	180								
	150	170										140	160	140	160								
																2640	2640	2640	2640	1500	1500	2200	2200
																1780	1780	1780	1780	900	900	1500	1500
																600	660	600	660			500	540
																480	480	480	480			400	400
																240	280	240	280			200	230
																480	480	480	480			400	400
																180	200	180	200			150	160
																240	280	240	280			200	230
																180	200	180	200			150	160
																240	280	240	280			200	230
		60	65	60	65	65	70	70	80	70	80										67	72	
		40	45	40	45	45	50	55	60	55	60										40	45	
		45	50	45	50	50	55	55	65	55	65										50	55	
		27	32	27	32	30	35	35	40	35	40										22	27	
		35	40	35	40	40	45	45	50	45	50										30	35	
		65	80	65	80	70	90	80	100	80	100										70	80	
		40	45	40	45	45	50	50	55	50	55										45	50	
		35	40	35	40	40	45	45	50	45	50												
		40	45	40	45	45	50	50	55	50	55												
		35	40	35	40	40	45	45	50	45	50												
	45	55										45	55	45	55								35
	45	55										45	55	45	55								35
	45	55										45	55	45	55								35
	300	300	300	300	300	300		300	300	300	300	300	300	300	300	300	300			300	300	300	300
	400	400	400	400	400	400		400	400	400	400	400	400	400	400	400	400			400	400	400	400
	600	800										600	800	600	800	600	800					400	500

HC = Coated carbide  
HW = Uncoated carbide  
HF = Uncoated fine-grained carbide

BH = CBN with high CBN content  
BL = CBN with low CBN content  
DP = Polycrystalline diamond  
CN = Silicon nitride Si<sub>3</sub>N<sub>4</sub>

# Cutting data for roughing

## Slot milling with side and face mills

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>	= Cutting data for wet machining = Dry machining is possible		Cutting material grades				
								Starting values for cutting speed $v_c$ [m/min]				
								HC				
								WKP35S		WKP25S		
		$a_e / D_c$		$a_e / D_c$								
		1/4*	1/10	1/4*	1/10							
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●	195	250	210	285
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●	170	215	200	255
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●	160	205	185	230
		C > 0.55%	Annealed	190	639	P4	●	●●	160	200	185	230
		C > 0.55%	Heat-treated	300	1013	P5	●	●●	130	145	165	200
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●	●●	160	205	190	245
	Low-alloyed steel	Annealed	175	591	P7	●	●●	170	215	200	255	
		Heat-treated	300	1013	P8	●	●●	125	145	155	200	
		Heat-treated	380	1282	P9	●	●●	85	95	125	140	
		Heat-treated	430	1477	P10	●	●●	80	90	120	130	
	High-alloyed steel and high-alloyed tool steel	Annealed	200	675	P11	●	●●	100	120	110	145	
		Hardened and tempered	300	1013	P12	●	●●	65	80	75	100	
		Hardened and tempered	400	1361	P13	●	●●	60	70	70	90	
	Stainless steel	Ferritic/martensitic, annealed	200	675	P14	●	●●	105	130			
		Martensitic, heat-treated	330	1114	P15	●	●●	60	85			
M	Stainless steel	Austenitic, quench hardened	200	675	M1	●●	●					
		Austenitic, precipitation hardened (PH)	300	1013	M2	●●	●					
		Austenitic/ferritic, duplex	230	778	M3	●●	●					
K	Malleable cast iron	Ferritic	200	675	K1	●	●●	140	155	155	180	
		Pearlitic	260	867	K2	●	●●	135	145	100	155	
	Grey cast iron	Low tensile strength	180	602	K3	●	●●	160	180	180	230	
		High tensile strength/austenitic	245	825	K4	●	●●	120	140	130	150	
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	●	●●	140	150	170	190	
		Pearlitic	265	885	K6	●	●●	110	120	110	150	
	GGV (CGI)		200	675	K7	●	●●	120	135	120	165	
N	Aluminium wrought alloys	Cannot be hardened	30	-	N1	●●						
		Hardenable, hardened	100	343	N2	●●						
	Cast aluminium alloys	≤ 12% Si, cannot be hardened	75	260	N3	●●						
		≤ 12% Si, hardenable, hardened	90	314	N4	●●						
		> 12% Si, cannot be hardened	130	447	N5	●●						
	Magnesium alloys		70	250	N6	●●						
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper	100	343	N7	●●						
		Brass, bronze, red brass	90	314	N8	●●						
		Cu-alloys, short-chipping	110	382	N9	●●						
		High-strength, Ampco	300	1013	N10	●●						
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●					
			Hardened	280	943	S2	●●					
		Ni or Co base	Annealed	250	839	S3	●●					
			Hardened	350	1177	S4	●●					
			Cast	320	1076	S5	●●					
	Titanium alloys	Pure titanium	200	675	S6	●●						
		α and β alloys, hardened	375	1262	S7	●●						
		β alloys	410	1396	S8	●●						
	Tungsten alloys		300	1013	S9	●●						
	Molybdenum alloys		300	1013	S10	●●						
H	Hardened steel	Hardened and tempered	50 HRC	-	H1		●●					
		Hardened and tempered	55 HRC	-	H2		●●					
		Hardened and tempered	60 HRC	-	H3		●●					
	Hardened cast iron	Hardened and tempered	55 HRC	-	H4		●●					
O	Thermoplastics	Without abrasive fillers			O1	●●	●	400	400			
	Thermosetting plastics	Without abrasive fillers			O2	●●	●	300	300			
	Plastic, glass-fibre reinforced	GFRP			O3							
	Plastic, carbon-fibre reinforced	CFRP			O4							
	Plastic, aramid-fibre reinforced	AFRP			O5							
	Graphite (technical)		80 Shore		O6		●●			400	500	

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.  
 \*  $a_e = a_{e \max}$



# Cutting data for roughing

## Copy milling

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>		Cutting material grades			
							Starting values for cutting speed $v_c$ [m/min]			
							HC WKP35S $a_e / D_c$			
			1/1	1/5	1/10					
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	● ●	240	300	300
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	● ●	200	255	275
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	● ●	185	240	240
		C > 0.55%	Annealed	190	639	P4	● ●	155	195	210
		C > 0.55%	Heat-treated	300	1013	P5	● ●	145	180	185
		Free cutting steel (short-chipping)	Annealed	220	745	P6	● ●	200	255	275
	Low-alloyed steel	Annealed		175	591	P7	● ●	165	210	230
		Heat-treated		300	1013	P8	● ●	155	195	215
		Heat-treated		380	1282	P9	● ●	145	180	200
		Heat-treated		430	1477	P10	● ●	120	155	170
	High-alloyed steel and high-alloyed tool steel	Annealed		200	675	P11	● ●	110	145	160
		Hardened and tempered		300	1013	P12	● ●	75	100	100
		Hardened and tempered		400	1361	P13	● ●	65	80	90
	Stainless steel	Ferritic/martensitic, annealed		200	675	P14	● ●	120	155	170
		Martensitic, heat-treated		330	1114	P15	● ●	110	145	155
M	Stainless steel	Austenitic, quench hardened		200	675	M1	● ●			
		Austenitic, precipitation hardened (PH)		300	1013	M2	● ●			
		Austenitic/ferritic, duplex		230	778	M3	● ●			
K	Malleable cast iron	Ferritic		200	675	K1	● ●	250	290	310
		Pearlitic		260	867	K2	● ●	200	240	260
	Grey cast iron	Low tensile strength		180	602	K3	● ●	240	280	300
		High tensile strength/austenitic		245	825	K4	● ●	190	230	250
	Cast iron with spheroidal graphite	Ferritic		155	518	K5	● ●	240	280	300
		Pearlitic		265	885	K6	● ●	190	230	250
	GGV (CGI)		200	675	K7	● ●	180	220	250	
N	Aluminium wrought alloys	Cannot be hardened		30	–	N1	● ●			
		Hardenable, hardened		100	343	N2	● ●			
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	260	N3	● ●			
		≤ 12% Si, hardenable, hardened		90	314	N4	● ●			
		> 12% Si, cannot be hardened		130	447	N5	● ●			
	Magnesium alloys		70	250	N6	● ●				
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper		100	343	N7	● ●			
		Brass, bronze, red brass		90	314	N8	● ●			
		Cu-alloys, short-chipping		110	382	N9	● ●			
		High-strength, Ampco		300	1013	N10	● ●			
S	Heat-resistant alloys	Fe-based	Annealed		200	675	S1	● ●		
			Hardened		280	943	S2	● ●		
		Ni or Co base	Annealed		250	839	S3	● ●		
			Hardened		350	1177	S4	● ●		
			Cast		320	1076	S5	● ●		
	Titanium alloys	Pure titanium		200	675	S6	● ●			
		α and β alloys, hardened		375	1262	S7	● ●			
		β alloys		410	1396	S8	● ●			
	Tungsten alloys		300	1013	S9	● ●				
	Molybdenum alloys		300	1013	S10	● ●				
H	Hardened steel	Hardened and tempered		50 HRC	–	H1	● ●			
		Hardened and tempered		55 HRC	–	H2	● ●			
		Hardened and tempered		60 HRC	–	H3	● ●			
	Hardened cast iron	Hardened and tempered		55 HRC	–	H4	● ●			
O	Thermoplastics	Without abrasive fillers				O1	● ●	400	450	500
	Thermosetting plastics	Without abrasive fillers				O2	● ●	300	350	400
	Plastic, glass-fibre reinforced	GFRP				O3				
	Plastic, carbon-fibre reinforced	CFRP				O4				
	Plastic, aramid-fibre reinforced	AFRP				O5				
	Graphite (technical)		80 Shore			O6	● ●			

- ● Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.



# Cutting data for roughing

## Copy milling

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>		Cutting material grades				
							Starting values for cutting speed $v_c$ [m/min]				
							HC WKK25 $a_e / D_c$				
			1/1	1/5	1/10						
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●			
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●			
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●			
		C > 0.55%	Annealed	190	639	P4	●	●●			
		C > 0.55%	Heat-treated	300	1013	P5	●	●●			
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●	●●			
	Low-alloyed steel		Annealed	175	591	P7	●	●●			
			Heat-treated	300	1013	P8	●	●●			
			Heat-treated	380	1282	P9	●	●●			
			Heat-treated	430	1477	P10	●	●●			
	High-alloyed steel and high-alloyed tool steel		Annealed	200	675	P11	●	●●			
			Hardened and tempered	300	1013	P12	●	●●			
			Hardened and tempered	400	1361	P13	●	●●			
	Stainless steel		Ferritic/martensitic, annealed	200	675	P14	●	●●			
			Martensitic, heat-treated	330	1114	P15	●	●●			
M	Stainless steel	Austenitic, quench hardened	200	675	M1	●●	●				
		Austenitic, precipitation hardened (PH)	300	1013	M2	●●	●				
		Austenitic/ferritic, duplex	230	778	M3	●●	●				
K	Malleable cast iron	Ferritic	200	675	K1	●	●●	330	375	405	
		Pearlitic	260	867	K2	●	●●	285	330	360	
	Grey cast iron	Low tensile strength	180	602	K3	●	●●	315	360	375	
		High tensile strength/austenitic	245	825	K4	●	●●	270	315	330	
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	●	●●	315	360	375	
		Pearlitic	265	885	K6	●	●●	270	315	330	
GGV (CGI)		200	675	K7	●	●●	260	300	330		
N	Aluminium wrought alloys	Cannot be hardened	30	–	N1	●●					
		Hardenable, hardened	100	343	N2	●●					
	Cast aluminium alloys	≤ 12% Si, cannot be hardened	75	260	N3	●●					
		≤ 12% Si, hardenable, hardened	90	314	N4	●●					
		> 12% Si, cannot be hardened	130	447	N5	●●					
	Magnesium alloys		70	250	N6	●●					
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper	100	343	N7	●●					
		Brass, bronze, red brass	90	314	N8	●●					
		Cu-alloys, short-chipping	110	382	N9	●●					
		High-strength, Ampco	300	1013	N10	●●					
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●				
			Hardened	280	943	S2	●●				
		Ni or Co base	Annealed	250	839	S3	●●				
			Hardened	350	1177	S4	●●				
			Cast	320	1076	S5	●●				
	Titanium alloys	Pure titanium	200	675	S6	●●					
		α and β alloys, hardened	375	1262	S7	●●					
		β alloys	410	1396	S8	●●					
	Tungsten alloys		300	1013	S9	●●					
	Molybdenum alloys		300	1013	S10	●●					
H	Hardened steel	Hardened and tempered	50 HRC	–	H1		●●				
		Hardened and tempered	55 HRC	–	H2		●●				
		Hardened and tempered	60 HRC	–	H3		●●				
	Hardened cast iron	Hardened and tempered	55 HRC	–	H4		●●				
O	Thermoplastics	Without abrasive fillers			O1	●●	●	600	700	800	
	Thermosetting plastics	Without abrasive fillers			O2	●●	●	500	600	700	
	Plastic, glass-fibre reinforced	GFRP			O3						
	Plastic, carbon-fibre reinforced	CFRP			O4						
	Plastic, aramid-fibre reinforced	AFRP			O5						
	Graphite (technical)		80 Shore		O6		●●	500	600	700	

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.

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

Cutting material grades												
Starting values for cutting speed $v_c$ [m/min]												
WCN15			HC			HF			HW			
$a_e / D_c$			$a_e / D_c$			$a_e / D_c$			$a_e / D_c$			
1/1	1/5	1/10	1/1	1/5	1/10	1/1	1/5	1/10	1/1	1/5	1/10	
				170	225	305						
				150	200	270						
				120	160	220						
				105	140	190						
				80	105	145						
				120	160	220						
				140	185	250						
				120	160	220						
				110	150	200						
				105	140	190						
				105	140	190						
				100	130	180						
				80	100	140						
				120	160	220						
				100	130	180						
				105	140	190						
				90	120	160						
				110	150	200						
				90	120	160						
				110	150	200						
				90	130	180						
				80	110	150						
	1920	1920	2110				1600	1600	1760	2000	2000	2200
	1440	1440	1630				1200	1200	1360	1500	1500	1700
	480	530	580				400	440	480	500	550	600
	385	385	420				320	320	350	400	400	440
	190	225	250				160	190	210	200	235	260
	480	530	580				400	440	480	500	550	600
	240	310	340				200	260	280	250	320	355
	260	325	360				220	270	300	270	340	375
	365	465	515				305	390	430	380	485	535
	210	280	340				170	230	280	190	260	320
							50	55	60			
							40	45	50			
							30	35	40			
							70	90	100			
							30	40	45			
							30	40	45			
							40	45	50			
							40	45	50			
				50	65	85						
				35	50	70						
				35	45	60						
				40	55	80						
	700	800	900	700	800	900	650	800	900	700	850	950
	580	735	810	600	700	800	550	700	800	600	765	840
	600	700	800	600	700	800						

HC = Coated carbide  
HW = Uncoated carbide  
HF = Uncoated fine-grained carbide

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



# Cutting data for semi-finishing and finishing

## Copy milling

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>		Cutting material grades					
							Starting values for cutting speed $v_c$ [m/min]					
							HC WKP35S $a_e / D_c^*$					
			1/1	1/5	1/20							
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●	210	275	375	
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●	185	255	340	
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●	145	185	260	
		C > 0.55%	Annealed	190	639	P4	●	●●	120	165	220	
		C > 0.55%	Heat-treated	300	1013	P5	●	●●	90	120	160	
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●	●●	190	260	340	
	Low-alloyed steel	Annealed		175	591	P7	●	●●	165	220	295	
		Heat-treated		300	1013	P8	●	●●	145	185	260	
		Heat-treated		380	1282	P9	●	●●	130	175	240	
		Heat-treated		430	1477	P10	●	●●	120	165	220	
	High-alloyed steel and high-alloyed tool steel	Annealed		200	675	P11	●	●●	130	175	240	
		Hardened and tempered		300	1013	P12	●	●●	120	165	220	
		Hardened and tempered		400	1361	P13	●	●●	90	120	160	
	Stainless steel	Ferritic/martensitic, annealed		200	675	P14	●	●●	145	185	260	
		Martensitic, heat-treated		330	1114	P15	●	●●	110	1745	200	
M	Stainless steel	Austenitic, quench hardened		200	675	M1	●●	●				
		Austenitic, precipitation hardened (PH)		300	1013	M2	●●	●				
		Austenitic/ferritic, duplex		230	778	M3	●●	●				
K	Malleable cast iron	Ferritic		200	675	K1	●	●●	170	230	290	
		Pearlitic		260	867	K2	●	●●	140	200	250	
	Grey cast iron	Low tensile strength		180	602	K3	●	●●	190	250	300	
		High tensile strength/austenitic		245	825	K4	●	●●	140	200	250	
	Cast iron with spheroidal graphite	Ferritic		155	518	K5	●	●●	190	250	300	
		Pearlitic		265	885	K6	●	●●	150	210	260	
GGV (CGI)			200	675	K7	●	●●	130	190	240		
N	Aluminium wrought alloys	Cannot be hardened		30	–	N1	●●					
		Hardenable, hardened		100	343	N2	●●					
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	260	N3	●●					
		≤ 12% Si, hardenable, hardened		90	314	N4	●●					
		> 12% Si, cannot be hardened		130	447	N5	●●					
	Magnesium alloys			70	250	N6	●●					
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper		100	343	N7	●●					
		Brass, bronze, red brass		90	314	N8	●●					
		Cu-alloys, short-chipping		110	382	N9	●●					
		High-strength, Ampco		300	1013	N10	●●					
S	Heat-resistant alloys	Fe-based	Annealed		200	675	S1	●●				
			Hardened		280	943	S2	●●				
		Ni or Co base	Annealed		250	839	S3	●●				
			Hardened		350	1177	S4	●●				
			Cast		320	1076	S5	●●				
	Titanium alloys	Pure titanium		200	675	S6	●●					
		α and β alloys, hardened		375	1262	S7	●●					
		β alloys		410	1396	S8	●●					
	Tungsten alloys			300	1013	S9	●●					
	Molybdenum alloys			300	1013	S10	●●					
H	Hardened steel	Hardened and tempered		50 HRC	–	H1		●●				
		Hardened and tempered		55 HRC	–	H2		●●				
		Hardened and tempered		60 HRC	–	H3		●●				
	Hardened cast iron			55 HRC	–	H4		●●				
O	Thermoplastics	Without abrasive fillers				O1	●●	●	450	500	550	
	Thermosetting plastics	Without abrasive fillers				O2	●●	●	350	400	450	
	Plastic, glass-fibre reinforced	GFRP				O3						
	Plastic, carbon-fibre reinforced	CFRP				O4						
	Plastic, aramid-fibre reinforced	AFRP				O5						
	Graphite (technical)			80 Shore		O6						

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.

\*  $a_e / D_c = 1 / 50$ ,  $v_c = 40\%$  higher than 1 / 20



# Cutting data for semi-finishing and finishing

## Copy milling (continued)

Material group	Structure of main material groups and code letters		Brinell hardness HB	Tensile strength $R_m$ N/mm <sup>2</sup>	Machining group <sup>1</sup>		Cutting material grades				
							Starting values for cutting speed $v_c$ [m/min]				
							HC WKK25 $a_e / D_c^*$				
			1/1	1/5	1/20						
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	●	●●			
		C > 0.25 ... ≤ 0.55%	Annealed	190	639	P2	●	●●			
		C > 0.25 ... ≤ 0.55%	Heat-treated	210	708	P3	●	●●			
		C > 0.55%	Annealed	190	639	P4	●	●●			
		C > 0.55%	Heat-treated	300	1013	P5	●	●●			
		Free cutting steel (short-chipping)	Annealed	220	745	P6	●	●●			
	Low-alloyed steel		Annealed	175	591	P7	●	●●			
			Heat-treated	300	1013	P8	●	●●			
			Heat-treated	380	1282	P9	●	●●			
			Heat-treated	430	1477	P10	●	●●			
	High-alloyed steel and high-alloyed tool steel		Annealed	200	675	P11	●	●●			
			Hardened and tempered	300	1013	P12	●	●●			
			Hardened and tempered	400	1361	P13	●	●●			
	Stainless steel		Ferritic/martensitic, annealed	200	675	P14	●	●●			
			Martensitic, heat-treated	330	1114	P15	●	●●			
M	Stainless steel	Austenitic, quench hardened	200	675	M1	●●	●				
		Austenitic, precipitation hardened (PH)	300	1013	M2	●●	●				
		Austenitic/ferritic, duplex	230	778	M3	●●	●				
K	Malleable cast iron	Ferritic	200	675	K1	●	●●	250	340	430	
		Pearlitic	260	867	K2	●	●●	225	280	375	
	Grey cast iron	Low tensile strength	180	602	K3	●	●●	270	360	450	
		High tensile strength/austenitic	245	825	K4	●	●●	225	280	375	
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	●	●●	270	360	450	
		Pearlitic	265	885	K6	●	●●	230	280	410	
	GGV (CGI)		200	675	K7	●	●●	210	270	360	
N	Aluminium wrought alloys	Cannot be hardened	30	–	N1	●●					
		Hardenable, hardened	100	343	N2	●●					
	Cast aluminium alloys	≤ 12% Si, cannot be hardened	75	260	N3	●●					
		≤ 12% Si, hardenable, hardened	90	314	N4	●●					
		> 12% Si, cannot be hardened	130	447	N5	●●					
	Magnesium alloys		70	250	N6	●●					
	Copper and copper alloys (bronze/brass)	Non-alloyed, electrolytic copper	100	343	N7	●●					
		Brass, bronze, red brass	90	314	N8	●●					
		Cu-alloys, short-chipping	110	382	N9	●●					
		High-strength, Ampco	300	1013	N10	●●					
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●				
			Hardened	280	943	S2	●●				
		Ni or Co base	Annealed	250	839	S3	●●				
			Hardened	350	1177	S4	●●				
			Cast	320	1076	S5	●●				
	Titanium alloys	Pure titanium	200	675	S6	●●					
		α and β alloys, hardened	375	1262	S7	●●	35	45	60		
		β alloys	410	1396	S8	●●					
	Tungsten alloys		300	1013	S9	●●					
	Molybdenum alloys		300	1013	S10	●●					
H	Hardened steel	Hardened and tempered	50 HRC	–	H1		●●				
		Hardened and tempered	55 HRC	–	H2		●●				
		Hardened and tempered	60 HRC	–	H3		●●				
	Hardened cast iron	Hardened and tempered	55 HRC	–	H4		●●				
O	Thermoplastics	Without abrasive fillers			O1	●●	●	700	800	900	
	Thermosetting plastics	Without abrasive fillers			O2	●●	●	600	700	800	
	Plastic, glass-fibre reinforced	GFRP			O3						
	Plastic, carbon-fibre reinforced	CFRP			O4						
	Plastic, aramid-fibre reinforced	AFRP			O5						
	Graphite (technical)		80 Shore		O6		●●	600	700	900	

- Recommended application (the specified cutting data are regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase approx. 70–80% for ISO M)

<sup>1</sup> The classification of the machining groups can be found in the Walter General Catalogue 2012 from page H 8 onwards.  
 \*  $a_e / D_c = 1 / 50$ ,  $v_c = 40\%$  higher than 1 / 20



## Feed rate determination (starting values) Face/shoulder mill

The specified feed rates are average recommended values.  
For special applications, adjustment is recommended.

Cutter type		M3016	M3024
Material group	<p>Feed per tooth <math>f_{z0}</math> for <math>a_e = D_c</math> <math>a_p = a_{p \max} = L_c</math></p>	<p>For face milling operations</p>	<p>For face milling operations</p>
	Lead angle $\kappa$	60°	45°
	Page	242	244
	Tool $\emptyset$ or $\emptyset$ range [mm]	$f_{z0}$ [mm] 125–315	$f_{z0}$ [mm] 40–160
	Maximum cutting data $a_{p \max} = L_c$ [mm]	16,0	4,0
<b>P</b>	Non-alloyed steel <sup>1</sup>	0,80	0,25
	Low-alloyed steel	0,70	0,20
	High-alloyed steel and tool steel	0,50	0,20
	Stainless steel	0,40	0,15
<b>M</b>	Stainless steel <sup>2</sup>	0,30	0,12
	Malleable cast iron	0,80	0,25
<b>K</b>	Grey cast iron	1,00	0,30
	Cast iron with spheroidal graphite	0,80	0,25
	GGV (CGI)	0,35	0,20
<b>N</b>	Aluminium wrought alloys		
	Cast aluminium alloys		
	Magnesium alloys		
	Copper and copper alloys (bronze/brass)		
<b>S</b>	Heat-resistant alloys		0,12
	Titanium alloys		0,12
	Tungsten alloys		0,12
	Molybdenum alloys		0,12
<b>H</b>	Hardened steel		
	Hardened cast iron		
<b>O</b>	Thermoplastics		0,15
	Plastic, carbon-fibre reinforced		
	Graphite (technical)	0,40	0,15
Indexable insert types		LNMX201012R-..	XN.U070508.. XN.U0705ANN..
Correction factor $K_{a_e}$	$a_e / D_c = 1/1 - 1/2$	1,0	1,0
For the feed per tooth depending on the ratio of cut width $a_e$ to cutter diameter $D_c$	$1/5$	1,1	1,1
	$1/10$	1,2	1,2
	$1/20$	1,3	1,3
$f_z = f_{z0} \cdot K_{a_e}$			

<sup>1</sup> and cast steel

<sup>2</sup> and austenitic/ferritic

# Feed rate determination (starting values)

## High-feed milling cutter

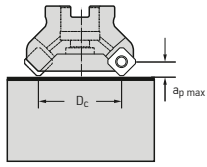
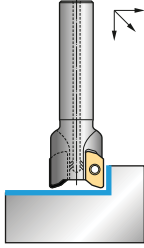
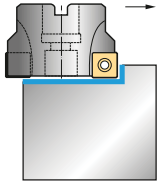
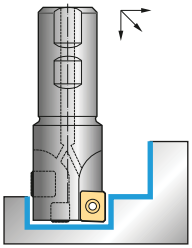
The specified feed rates are average recommended values.  
For special applications, adjustment is recommended.

Cutter type		M4002			M4002			
Material group	<p>Feed per tooth <math>f_{z0}</math> for <math>a_e = D_c</math> <math>a_p = a_{p \max} = L_c</math></p>	<p>For face milling operations</p>			<p>For plunging</p>			
	Lead angle $\kappa$	15°			15°			
	Page	248			248			
		$f_{z0}$ [mm]			$f_{z0}$ [mm]			
	Tool $\emptyset$ or $\emptyset$ range [mm]	20–66	25–66	50–125	20–66	25–66	50–125	
	Maximum cutting data $a_{p \max} = L_c$ [mm]	1	1,5	2,0	$a_{r \max}$ 5,7	$a_{r \max}$ 8,4	$a_{r \max}$ 11,4	
	<b>P</b>	Non-alloyed steel <sup>1</sup>	1	1,50	2,00	0,18	0,25	0,30
		Low-alloyed steel	1	1,40	1,80	0,16	0,22	0,25
		High-alloyed steel and tool steel	0,9	1,20	1,60	0,12	0,16	0,22
		Stainless steel	0,4	0,80	1,00	0,10	0,12	0,15
<b>M</b>	Stainless steel <sup>2</sup>	0,3	0,50	0,80	0,10	0,12	0,15	
	Malleable cast iron	0,3	0,50	0,80	0,16	0,22	0,28	
<b>K</b>	Grey cast iron	1	1,20	1,40	0,18	0,25	0,30	
	Cast iron with spheroidal graphite	1,2	1,40	1,60	0,16	0,22	0,28	
	GGV (CGI)	1	1,20	1,40	0,16	0,22	0,28	
<b>N</b>	Aluminium wrought alloys							
	Cast aluminium alloys							
	Magnesium alloys							
	Copper and copper alloys (bronze/brass)							
<b>S</b>	Heat-resistant alloys	0,4	0,60	0,80	0,08	0,10	0,12	
	Titanium alloys	0,4	0,60	0,80	0,08	0,10	0,12	
	Tungsten alloys	0,4	0,60	0,80	0,08	0,10	0,12	
	Molybdenum alloys	0,4	0,60	0,80	0,08	0,10	0,12	
<b>H</b>	Hardened steel							
	Hardened cast iron							
<b>O</b>	Thermoplastics							
	Plastic, carbon-fibre reinforced Graphite (technical)							
Indexable insert types		SD..06T2...	SD..09T3...	SD..1204...	SD..06T2...	SD..09T3...	SD..1204...	
Correction factor $K_{a_e}$	$a_e / D_c =$	1/1 – 1/2	1,0	1,0	1,0			
		1/5	1,4	1,4	1,4			
		1/10	1,8	1,8	1,8			
		1/20						
		1/50						
Correction factor $K$	1 < (L:Dc) =	≤2	1,4	1,4	1,4	1,0	1,0	
	2 < (L:Dc) =	≤4	1,0	1,0	1,0	0,7	0,7	
	4 < (L:Dc) =	≤6	0,7	0,7	0,7	0,5	0,5	
$f_z = f_{z0} \cdot K_{a_e} \cdot K$								

<sup>1</sup> and cast steel  
<sup>2</sup> and austenitic/ferritic

## Feed rate determination (starting values) Face/shoulder milling cutter and slot drill milling cutter

The specified feed rates are average recommended values.  
For special applications, adjustment is recommended.

Cutter type		M2131		M4132			M4792			
Feed per tooth $f_{z0}$ for $a_e = D_c$ $a_p = a_{p \max} = L_c$ 										
Lead angle $\kappa$		90°		90°			90°			
Page		252		258			262			
Material group		$f_{z0}$ [mm]		$f_{z0}$ [mm]			$f_{z0}$ [mm]			
		M 2131	M 2131	M 4132	M 4132	M 4132	M4792	M4792	M4792	
	Tool $\varnothing$ or $\varnothing$ range [mm]	80	32–63	15–25	25–80	50–125	18–20	25–32	40	
Maximum cutting data $a_{p \max} = L_c$ [mm]		15	20	5,6	8,4	11,6	7 + 13	14 + 22	25,0	
<b>P</b>	Non-alloyed steel <sup>1</sup>			0,10	0,15	0,20	0,10	0,15	0,20	
	Low-alloyed steel			0,08	0,12	0,15	0,10	0,12	0,15	
	High-alloyed steel and tool steel			0,08	0,12	0,15	0,08	0,12	0,15	
	Stainless steel			0,06	0,10	0,12	0,06	0,08	0,12	
<b>M</b>	Stainless steel <sup>2</sup>			0,06	0,08	0,10	0,06	0,08	0,10	
<b>K</b>	Malleable cast iron			0,10	0,15	0,20	0,12	0,20	0,25	
	Grey cast iron			0,12	0,20	0,25	0,10	0,15	0,20	
	Cast iron with spheroidal graphite			0,10	0,15	0,20	0,10	0,15	0,20	
	GGV (CGI)			0,08	0,10	0,15	0,10	0,15	0,20	
<b>N</b>	Aluminium wrought alloys	0,15	0,20							
	Cast aluminium alloys	0,12	0,15							
	Magnesium alloys	0,12	0,12							
	Copper and copper alloys (bronze/brass)	0,10	0,10							
<b>S</b>	Heat-resistant alloys			0,06	0,10	0,10	0,06	0,10	0,10	
	Titanium alloys			0,06	0,10	0,10	0,06	0,10	0,10	
	Tungsten alloys			0,06	0,10	0,10	0,06	0,10	0,10	
	Molybdenum alloys			0,06	0,10	0,10	0,06	0,10	0,10	
<b>H</b>	Hardened steel									
	Hardened cast iron									
<b>O</b>	Thermoplastics									
	Plastic, carbon-fibre reinforced									
	Graphite (technical)									
Indexable insert types		ZDGT 1504 ..	ZDGT 2005 ..	SD..06T2...	SD..09T3...	SD..1204...	SD..06T204... LD..08T204...	SD..09T308 LD..14T308...	SD..120408... LD..170408...	
Correction factor $K_{a_e}$		$a_e / D_c = 1/1 - 1/2$		1,0	1,0	1,0	1,0	1,0	1,0	
For the feed per tooth depending on the ratio of cut width $a_e$ to cutter diameter $D_c$ $f_z = f_{z0} \cdot K_{a_e}$		1/5		1,1	1,1	1,1	1,1	1,1	1,1	
		1/10		1,2	1,2	1,2	1,2	1,2	1,2	
		1/20		1,3	1,3	1,3	1,3	1,3	1,3	1,3
		1/50								

<sup>1</sup> and cast steel

<sup>2</sup> and austenitic/ferritic

# Feed rate determination (starting values)

## Profile mill

The specified feed rates are average recommended values.  
For special applications, adjustment is recommended.

Cutter type		M4574			M4575		
<p>Feed per tooth <math>f_{z0}</math> for <math>a_e = D_c</math> <math>a_p = a_{p \max} = L_c</math></p>							
Lead angle $\kappa$		45°			90°		
Page		268			272		
Material group		$f_{z0}$ [mm]			$f_{z0}$ [mm]		
		M4574	M4574	M4574	M4575	M4575	M4575
	Tool $\emptyset$ or $\emptyset$ range [mm]	8–16	20–32	25–40	21–25	32–40	50
	Maximum cutting data $a_{p \max} = L_c$ [mm]	3,0	5,0	7,0			
<b>P</b>	Non-alloyed steel <sup>1</sup>	0,15	0,20	0,25	0,10	0,12	0,16
	Low-alloyed steel	0,12	0,15	0,20	0,08	0,09	0,10
	High-alloyed steel and tool steel	0,12	0,15	0,20	0,08	0,06	0,08
	Stainless steel	0,10	0,15	0,15	0,06	0,06	0,08
<b>M</b>	Stainless steel <sup>2</sup>	0,08	0,10	0,12	0,06	0,06	0,06
<b>K</b>	Malleable cast iron	0,15	0,20	0,25	0,08	0,08	0,10
	Grey cast iron	0,20	0,25	0,30	0,12	0,16	0,18
	Cast iron with spheroidal graphite	0,15	0,20	0,25	0,10	0,12	0,12
	GGV (CGI)	0,15	0,20	0,25	0,08	0,08	0,10
<b>N</b>	Aluminium wrought alloys						
	Cast aluminium alloys						
	Magnesium alloys						
	Copper and copper alloys (bronze/brass)						
<b>S</b>	Heat-resistant alloys	0,08	0,10	0,12	0,06	0,06	0,06
	Titanium alloys	0,08	0,10	0,12	0,06	0,06	0,06
	Tungsten alloys	0,08	0,10	0,12	0,06	0,06	0,06
	Molybdenum alloys	0,08	0,10	0,12	0,06	0,06	0,06
<b>H</b>	Hardened steel						
	Hardened cast iron						
<b>O</b>	Thermoplastics						
	Plastic, carbon-fibre reinforced						
	Graphite (technical)						
Indexable insert types		SDMT06T204...	SDMT09T308...	SDMT120408...	SD..06T204...	SD..09T308	SD..120408...
Correction factor $Ka_e$		$a_e / D_c = 1/1 - 1/2$					
		1,0	1,0	1,0	1,0	1,0	1,0
For the feed per tooth depending on the ratio of cut width $a_e$ to cutter diameter $D_c$		$1/5$					
		1,1	1,1	1,1	1,5	1,5	1,5
		$1/10$					
		1,2	1,2	1,2	1,8	1,8	1,8
		$1/20$					
		1,3	1,3	1,3	2,5	2,5	2,5
$f_z = f_{z0} \cdot Ka_e$		$1/50$					
		1,5	1,5	1,5			

<sup>1</sup> and cast steel  
<sup>2</sup> and austenitic/ferritic



## Cutting material application tables – milling

Coated carbide																						
Walter grade designation	Standard designation	Workpiece material groups							Application range							Coating method	Coating composition	Example of indexable insert				
		P	M	K	N	S	H	O	01	05	10	15	20	25	30				35	40	45	
		Steel	Stainless steel	Cast iron	NF metals	Difficult-to-machine cut materials	Hard materials	Other														
WKP35S	HC – P 35	●●																				
	HC – K 35			●●																		
WKP25S	HC – P 25	●●																				
	HC – K 25			●●																		
WAK15	HC – K 15			●●																		
WSP45S	HC – S 45																					
	HC – P 45	●●																				
	HC – M 45		●●																			
WSM45X	HC – S 45																					
	HC – M 45		●●																			
WSM35S	HC – S 35																					
	HC – M 35		●●																			
WKK25S	HC – K 25			●●																		
WKK25	HC – K 25			●●																		
	HC – S 45																					
	HC – P 45	●●																				
WSP46	HC – S 45																					
	HC – P 45	●●																				
	HC – M 45		●●																			
WSM36	HC – S 35																					
	HC – M 35		●●																			
WHH15	HC – H 15																					
	HC – P 15	●																				
	HC – K 15			●																		
WNN15	HC – N 15																					
WXN15	HC – N 15																					
WXM15	HC – P 15	●●																				
	HC – M 15		●																			
	HC – K 15			●																		

BH = CBN with high CBN content  
 CN = Silicon nitride Si<sub>3</sub>N<sub>4</sub>  
 DP = Polycrystalline diamond

HC = Coated carbide  
 HF = Uncoated fine-grained carbide  
 HW = Uncoated carbide

●● Primary application  
 ● Other application

## Cutting material application tables – milling

(continued)

Uncoated carbide grades, cutting ceramics, CBN and PCD																									
Walter grade designation	Standard designation	Workpiece material groups						Application range							Coating method	Coating composition	Example of indexable insert								
		P	M	K	N	S	H	O	01	05	10	15	20	25				30	35	40	45				
		Steel	Stainless steel	Cast iron	NF metals	Difficult-to-machine cut materials	Hard materials	Other																	
WK10	HW – N 10				●●																				
WMG40	HF – N 35				●●																				
WCB80	BH – K 05			●●																					
	BH – H 15						●																		
WSN10	CN – K 20			●●																					
WCD10	DP – N 10				●●																				

BH = CBN with high CBN content  
 CN = Silicon nitride Si<sub>3</sub>N<sub>4</sub>  
 DP = Polycrystalline diamond  
 HC = Coated carbide  
 HF = Uncoated fine-grained carbide  
 HW = Uncoated carbide

●● Primary application  
 ● Other application

## Notes on high-speed cutting

1. Maximum permissible RPM:  
The limiting values shown in the tables should not be exceeded. Otherwise correct operation and/or reliability are not guaranteed.
2. Only use original Walter indexable inserts and installation parts (screws, etc.). Recommendation: New screws should be fitted after having replaced the indexable inserts five times at the latest.
3. Observe the torques specified in the catalogue.
4. Balancing:  
Balancing in two steps is required when milling at fast speeds (> 6000 rpm) or at circumferential speeds of > 1000 m/min:
  - a. Basic balancing of the tool body including indexable inserts (can be carried out by Walter if required). In this case, tool adaptors that have been balanced separately beforehand must be used.
  - b. Fine balancing of the tool when fully mounted on the adaptor. The fine balancing operation is strongly recommended as even the smallest eccentricity can seriously affect the balance status.
5. Short projection lengths reduce concentricity faults and imbalance, as well as increase spindle service life. The specified speeds apply to the use of tools without additional extensions.
6. Safety guards:  
Appropriate safety guards or machine encapsulations must be used to collect particles which spin off, such as chips or cutting edges that are broken as a result of collisions.
7. Damaged tools:  
The operating speed must be specified for the repair of HSC Tools.  
Repairs on Walter tools for HSC machining operations must only be carried out by Walter.
8. Use of standards:  
Walter recommends using the balancing standard DIN 69888, which describes the balancing of tools and the requirements in the chip removal area. DIN 69888 is tailored to the needs of the cutting area, and describes the tool balancing requirements in a practical way. DIN ISO 1940, which was previously often used, describes balancing for all areas of mechanical engineering. The requirements when working at circumferential speeds of > 1000 m/min are described in DIN ISO 15641.

### Walter milling cutters

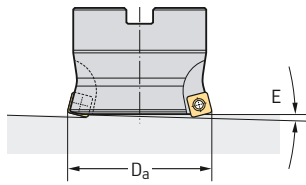
Tool	Safety-related parts	in relation to	n <sub>max</sub> [1/min] with D											
			Ø 08	Ø 10	Ø 12	Ø 16	Ø 18	Ø 20	Ø 21	Ø 25	Ø 30	Ø 32	Ø 35	Ø 40
M2025	ONHF...0504... P45424-1	D <sub>c</sub>												
M2026	ONHF...0504... P45424-2	D <sub>c</sub>												
M2131	ZDGT1504...	D <sub>c</sub>								40 000		37 900		32 400
	ZDGT2005...	D <sub>c</sub>										38 100		31 700
M3016	LNMX2010...	D <sub>c</sub>												
M3024	XN.U0705...	D <sub>c</sub>												12 800
M4002	SD..06T2...	D <sub>a</sub>						28 300		25 300		22 400		20 000
	SD..09T3...	D <sub>a</sub>								34 900		30 800	29 500	27 600
	SD..1204...	D <sub>a</sub>												
M4132	SD..06T2...	D <sub>c</sub>				31 700		28 300		25 300				
	SD..09T3...	D <sub>c</sub>								34 900		30 800		27 600
	SD..1204...	D <sub>c</sub>												
M4574	SD..06T2...	D <sub>c</sub>	31 400	29 600	28 100	23 600								
	SD..09T3...	D <sub>c</sub>			35 000	32 500		30 400		28 400		25 000		
	SD..1204...	D <sub>c</sub>								20 600		18 200		16 800
M4575	SD..06T2...	D <sub>c</sub>							28 000	25 300				
	SD..09T3...	D <sub>c</sub>										30 800		27 600
	SD..1204...	D <sub>c</sub>												
M4792	LD..08T204...	D <sub>c</sub>					14 000	12 000						
	LD..14T308...	D <sub>c</sub>								10 000	7 500	7 200		
	LD..170408...	D <sub>c</sub>												5 500

\* Speeds higher than 40,000 rpm are possible under favourable conditions and for short projection lengths upon consultation with Walter.

	Ø 50	Ø 52	Ø 63	Ø 66	Ø 80	Ø 100	Ø 125	Ø 160	Ø 200	Ø 250	Ø 315
					4900	4400	3900	3500			
									3100	2800	
	28000		24300		21100						
	26900		23100		19900						
							1100	1000	900	800	700
	11300		10000		8700	7800	6900	6100			
	17900	17600	16000	15600							
	24600	24200	22000	21400							
	17900	17600	16000	15600	14100	12600	11300				
	24600		22000		19500						
	17900		16000		14100	12600	11300				
	17900										

## Application information for M4002 high-feed milling cutter

### Ramping

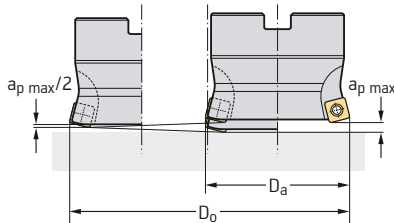


#### Maximum plunging depth E [°]

D <sub>a</sub> [mm]	SD..06T204...	SD..09T308...	SD..120408...
20	5,5		
25	3,8	9,0	
32	2,3	4,8	
35	2,1	4,4	
40	1,6	3,0	
42	1,5	2,8	
50	1,3	2,0	2,8
52	1,25	1,8	2,6
63	0,9	1,6	2,0
66	0,9	1,4	1,7
80			1,3
85			1,2
100			0,9
125			0,7
19,05	6,0		
25,40	3,3	8,8	
31,75	2,3	4,5	
38,10	1,9	4,0	
50,80	1,2	1,9	2,7
63,50	0,8	1,4	1,8
76,20			1,4
101,60			0,9

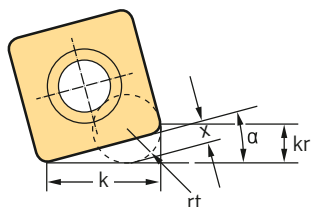
### Circular interpolation milling of a hole into solid material

#### Diameter range for milling a hole in one operation [mm]



D <sub>a</sub> [mm]	Indexable insert					
	SD..06T204		SD..09T308		SD..120408	
	D <sub>0 min</sub> [mm]	D <sub>0 max</sub> [mm]	D <sub>0 min</sub> [mm]	D <sub>0 max</sub> [mm]	D <sub>0 min</sub> [mm]	D <sub>0 max</sub> [mm]
20	28,6	40				
25	38,6	50	33,26	50		
32	52,6	64	47,26	64		
35	58,6	70	53,26	70		
40	68,6	80	63,26	80		
42	72,6	84	67,26	84		
50	88,6	100	83,26	100	77,12	100
52	92,6	104	87,26	104	81,12	104
63	114,6	126	109,26	126	103,12	126
66	120,6	132	115,26	132	109,12	132
80					137,12	160
85					147,12	170
100					177,12	200
125					227,12	250
19,05	26,7	38,1				
25,40	39,4	50,8	34,06	50,8		
31,75	52,1	63,5	46,76	63,5		
38,10	64,8	76,2	59,46	76,2		
50,80	90,2	101,6	84,86	101,6	78,72	101,6
63,50	115,6	127	110,26	127	104,12	127
76,20					129,52	152,4
101,60					180,32	203,2

### Programming information



	α	rt mm	x mm	kr mm	k mm
SD..06T212	15°	1,5	0,87	4,86	2,20
SD..06T2ZDR	15°	1,5	0,72	4,29	2,63
SD..06T204	15°	1,5	1,08	5,70	1,83
SD..09T320	15°	1,5	1,44	7,07	3,41
SD..09T3ZDR	15°	1,5	1,40	6,90	3,65
SD..09T308	15°	1,5	1,78	8,37	2,83
SD..120425	15°	1,5	2,10	9,61	4,46
SD..1204ZDR	15°	1,5	2,02	9,31	4,85
SD..120408	15°	1,5	2,57	11,44	3,65

## Safety information for Walter M2131 ramping milling cutter

**When using the M2131, the following information must be observed:**

- Always tighten the indexable insert screws using a torque wrench.
- For the tightening torque, see table on page 253.
- Do not apply lubricant to indexable insert screws.
- After five indexable insert replacements, replace the indexable insert screws.
- The indexable insert must make full-surface contact in the insert seat (see illustrations).
- Check for satisfactory concentricity and state of balance of the adaptor (see DIN 69888).

Apply pressure to the rear part of the indexable insert when tightening



Check with 0.01 mm spacer



N.B.: The film gauge must **not** be able to fit between the indexable insert and the insert seat.

**Tightening screws for shell end mill arbors**

When using M2131 ramping milling cutters with a parallel bore and transverse keyway according to DIN 138, the tightening screw of the adaptor must be replaced.

Designation	Tightening screw for adaptor*
M2131-040-B16-03-15	M8 × 40 (SW6)
M2131-050-B22-04-15	M10 × 35 (SW8)
M2131-063-B22-05-15	M10 × 35 (SW8)
M2131-080-B27-05-15	M12 × 40 (SW10)
M2131-050-B22-03-20	M10 × 40 (SW8)
M2131-063-B22-04-20	M10 × 35 (SW8)

\* Cap screw ISO 4762 (12.9)