

_ MOVING AHEAD WITH INNOVATIONS

Product Innovations catalog



How to find and order your tool solution:



Personal – worldwide

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

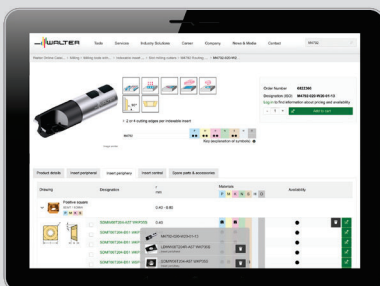


The Walter General Catalog 2018

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

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

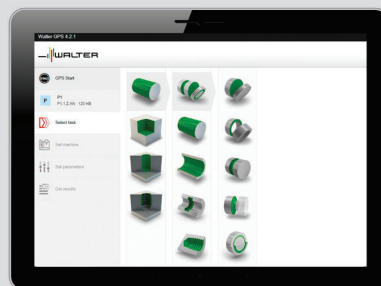
Walter online catalog



Tool-specific search

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

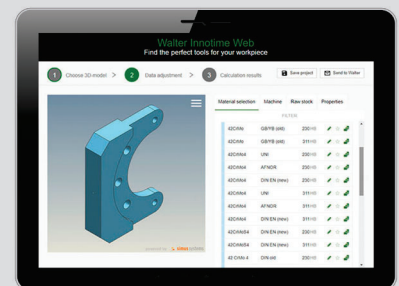
Walter GPS



Application-based search

With Walter GPS, it takes just a few steps for you to find the best machining solution for your component, online and offline – and the solution can be transferred directly to the Walter TOOLSHOP if required!

Walter Innotime®



Component-based search

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

Digital ordering methods



TOOLSHOP



EDI B2B

Walter TOOLSHOP & EDI

The Walter TOOLSHOP offers customers opportunities to find information and place orders quickly.

EDI (electronic data interchange) also makes it possible to exchange documents (e.g. orders) – even special tools can be ordered.

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Technologies at Walter.

(((Accure-tec

The patented Walter Accure-tec technology ensures maximum vibration damping on boring bars for turning and adaptors for milling. Ideal for turning, milling and drilling operations involving extended tool applications.

Tiger-tec® Gold

Tiger-tec® Gold is the new Walter generation platform for unique indexable insert coatings. It makes maximum tool life and process reliability possible. The CVD grade is produced using the innovative ultra low pressure method (ULP-CVD). The special titanium aluminum nitride layer makes them highly resistant to abrasion, hairline cracks, oxidation and plastic deformation. The heat-resistant, tough PVD grade with aluminum oxide multi-layer is suitable for difficult machining conditions.

Tiger-tec® Silver

With Tiger-tec® Silver, Walter is offering a world first in coating technology for indexable inserts. The special aluminum oxide layer with optimised microstructure reduces wear during turning, milling and drilling operations, and increases toughness and temperature resistance for significantly higher cutting data.

Walter BLAXX

Walter BLAXX is the benchmark for a new generation of milling cutters: The milling bodies are extremely robust thanks to their special surface treatment. The milling systems, which are mainly positioned tangentially, are equipped with Tiger-tec® indexable inserts. Tools with the "Walter BLAXX" designation combine high wear resistance with unbeatable performance data.

Walter Green

Walter Green: Sustainability and responsible use of resources are central components of our company principles. We use our "Walter Green" seal to show how we implement these principles, such as by offsetting our CO₂ emissions with environmental conservation projects.

Walter Nexxt

Engineering Kompetenz and digital expertise go hand in hand at Walter. Together with our wholly owned software subsidiary Comara, we develop digital solutions that efficiently connect machines and tools, optimising their performance on the basis of real-time data. Digital solutions on a level playing field with Industry 4.0 – Walter Nexxt.

Walter Xpress

Walter Xpress is the rapid ordering and delivery service offered by Walter Multiply for high-quality special tools. It is available for around 10,000 tool varieties, with a maximum delivery time of two to four weeks from the order date. The ordering process is clearly structured and guarantees absolute planning security. Quotations for all enquiries are calculated and provided within 24 hours.

XD Technology

Walter Titex solid carbide drilling and reaming tools stand for precision, high performance and cost-efficiency when drilling in practically any material. Walter Titex XD Technology offers the greatest precision and cost-efficiency in deep-hole drilling operations up to $70 \times D_c$ without pecking.

Xill-tec™

With Xill-tec™, the solid carbide milling cutters from the MC230 Advance product range, Walter offers a uniquely wide range, with different dimensions, numbers of teeth and shank versions. This means that users are well-equipped for all conceivable milling operations and ISO materials. Universal use – with excellent quality.

Xtra-tec®

Xtra-tec® indexable insert milling cutters and drills guarantee extremely soft cutting action and optimal surface quality on almost all materials. Indexable inserts with highly positive geometries and the Tiger-tec® coating have a particularly beneficial hardness/toughness ratio. For maximum productivity and process reliability.

Xtra-tec® XT

Xtra-tec® XT is the latest generation of Walter milling tools. As the "Xtended" Xtra-tec® technology, it offers a completely new perspective on productivity and process reliability. It can cover nearly all milling operations in every common material group: More reliable, productive, cost-efficient than ever before – all while compensating for the CO₂ emissions through Walter Green.

X-treme Evo

The X-treme Evo solid carbide drills from the DC160 Advance product range and DC260 Advance step drills embody "the next generation of drilling": Can be used universally for all ISO material groups, machine concepts and applications. With outstanding tool life, productivity and process reliability.



Walter Capto™ is a modular tool adaptor system. It is suitable for all turning, milling, drilling and threading processes. Its ISO-standardised polygon taper absorbs torsional moments and bending moments extremely well and ensures optimal repeat accuracy.



Walter ConeFit is an extremely flexible solid carbide milling system with a wide range of high-performance exchangeable heads and shaft variants. Its conical thread can self-centre, thereby guaranteeing maximum stability and concentricity.



Walter ScrewFit users benefit from maximum flexibility. Its modular interface is suitable for a wide variety of boring bars and adaptors and a wide range of tool diameters and lengths for milling and drilling.



The precision-ground QuadFit interface with taper and support face characterises the precision of the vibration-damped boring bars for turning and thread turning with Walter Accure-tec technology. The exchangeable head system, which can be rotated by 180°, makes it possible to rapidly replace tools with high indexing accuracy.



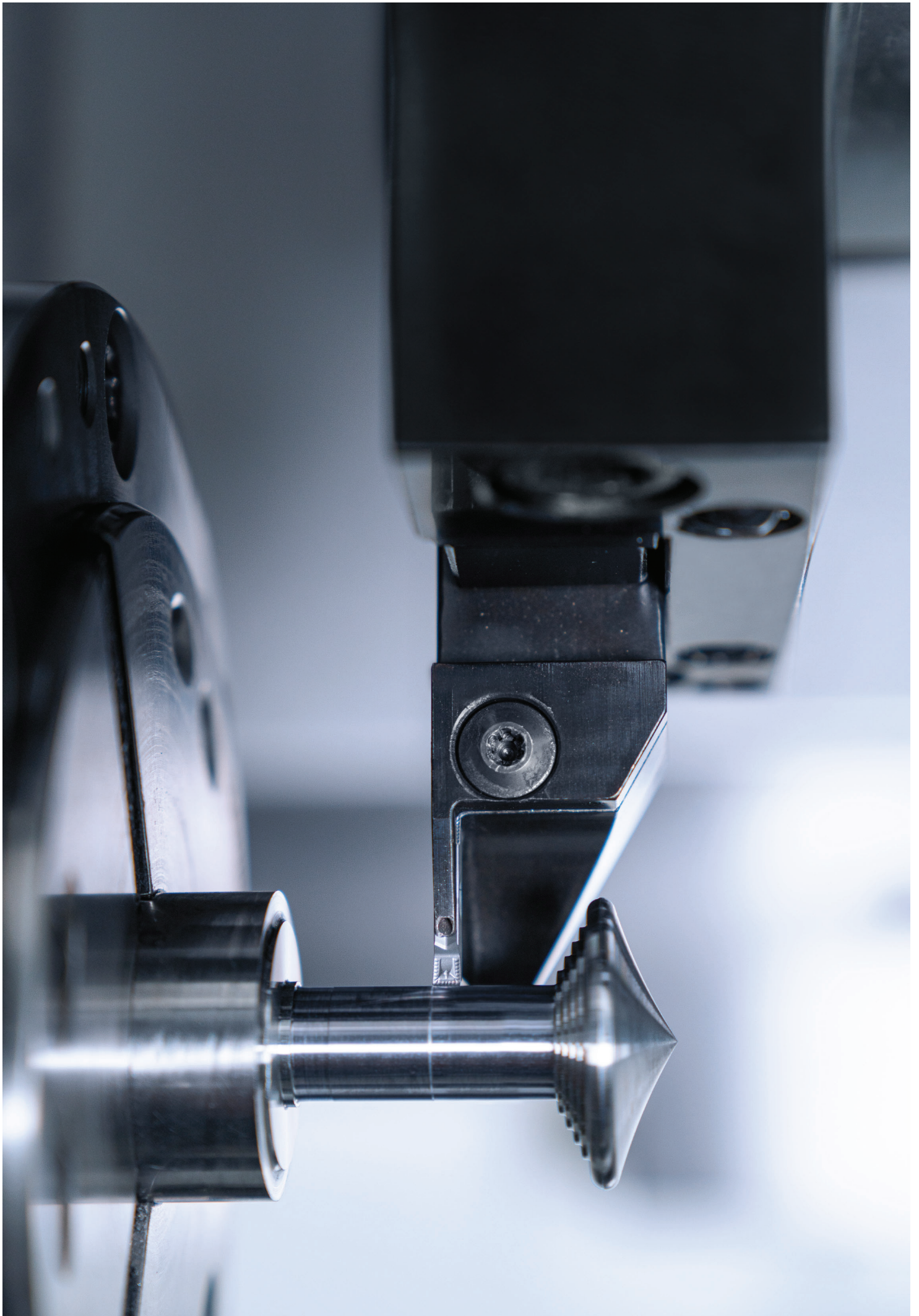
The Walter precision cooling system provides cooling at the centre of chip formation. Its dual coolant jets are directed precisely onto the flank and rake faces of the insert. This system provides significantly increased tool life, improved chip breaking and greater efficiency for turning and grooving applications.



"Flash" refers to specialised solid carbide milling cutters for high-feed milling. Their end-face geometry reduces the chip thickness "h" and therefore enables an extremely high feed per tooth. Forces that occur are diverted axially towards the centre of the tool, which helps to stabilise the machining process.



On Walter turning toolholders with "SmartLock", the clamping screw can be operated from the side of the tool. This makes it possible to change the inserts in the machine quickly and easily. Tool change times are reduced as a result. Ideal for use on CNC lathe and multi-spindle machines.



ISO turning – A1

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Product range overview of indexable inserts and cutting tool materials: ISO turning – Carbide



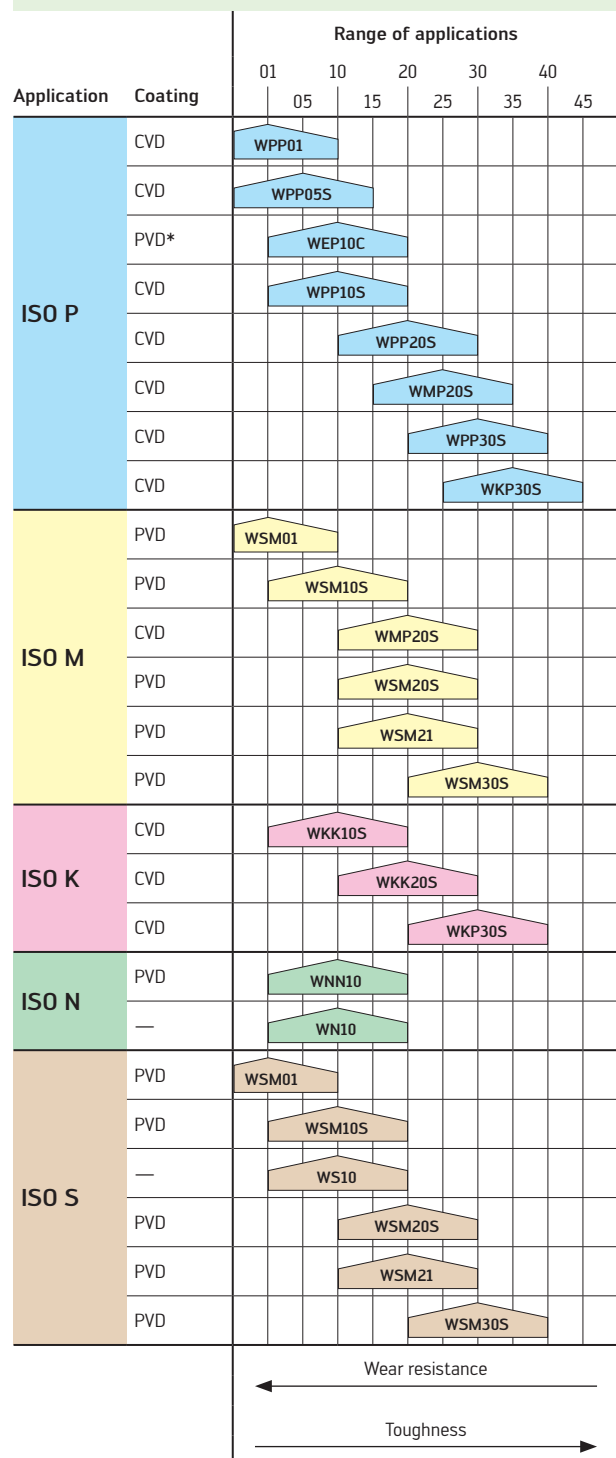
ISO indexable inserts

Insert shape	Description	Page
 C Wiper	Negative basic shape	14
	Positive basic shape 7°	18
	Positive basic shape 11°	18
 D Wiper	Negative basic shape	15
	Positive basic shape 7°	19
 S	Negative basic shape	16
 T Wiper	Negative basic shape	16
	Positive basic shape 7°	19
 V	Negative basic shape	17
	Positive basic shape 5°/7°	20
 W Wiper	Negative basic shape	17

System inserts

Insert shape	Description	Page
 WL	WL copy turning inserts, three-edge	22

Cutting tool materials: Carbide



* Cermet

Product range overview of indexable inserts for ISO turning: Tiger-tec® Silver grades and geometries

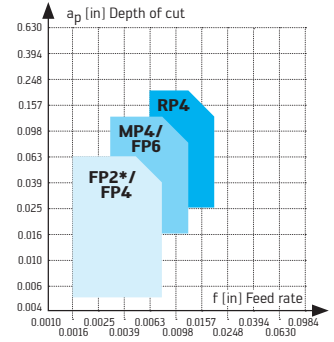
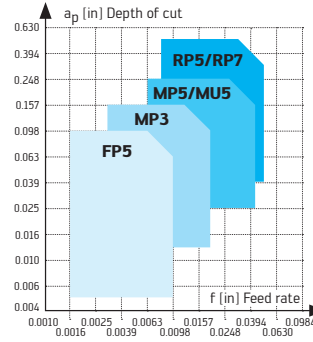
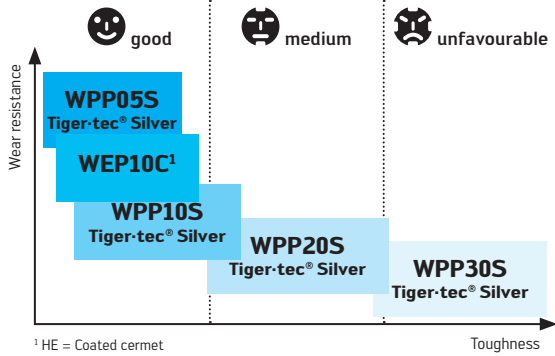


Negative basic shape



Positive basic shape

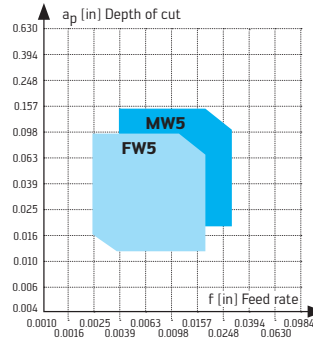
Machining steel ISO P



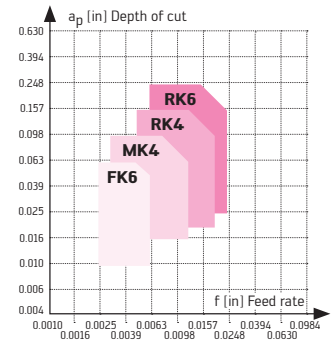
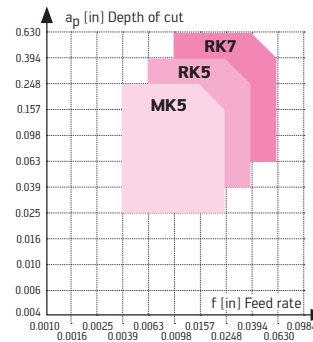
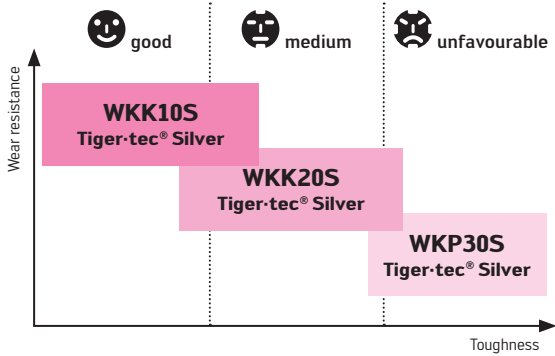
MP5: For universal machining
 MU5: Easy-cutting – for ISO P and ISO M
 RP5: For universal machining
 RP7: For interrupted cuts, cast skin/forged skin

MP4: For universal machining, copy turning
 FP6: For semi-finishing operations
 * Fully ground circumference

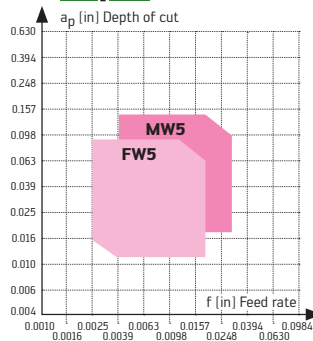
Wiper



Cast iron machining ISO K



Wiper



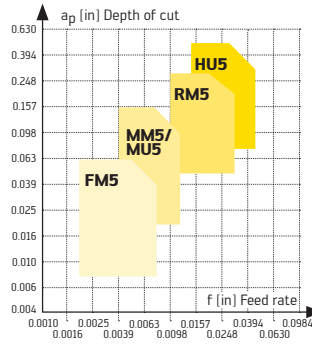
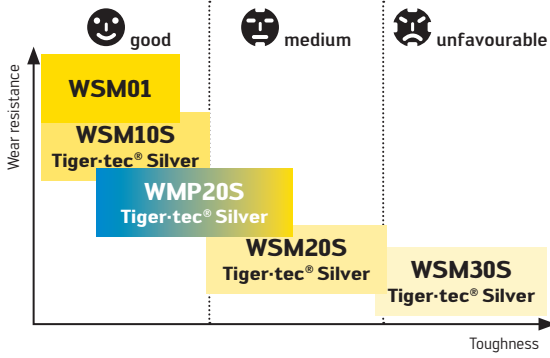


Negative basic shape

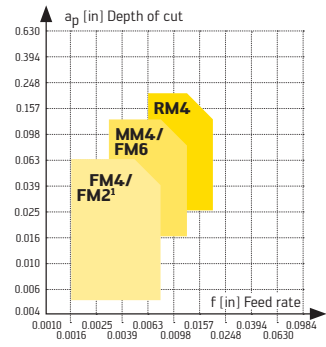


Positive basic shape

Stainless steel ISO M

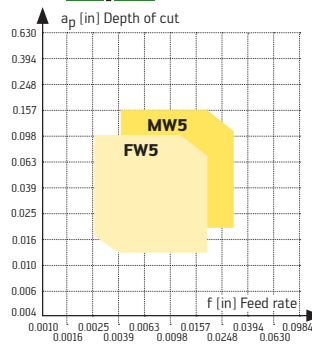


MM5: For universal machining
MU5: Easy-cutting – for ISO P and ISO M

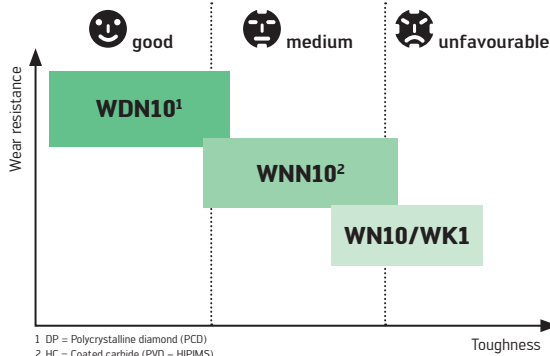


MM4: For universal machining, copy turning
FM6: For semi-finishing operations
1 Fully ground circumference

Wiper

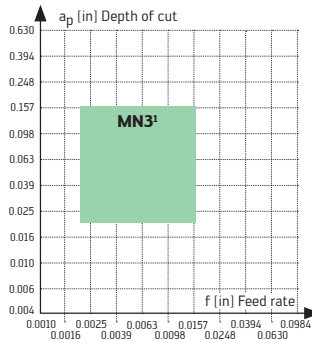


NF metals ISO N



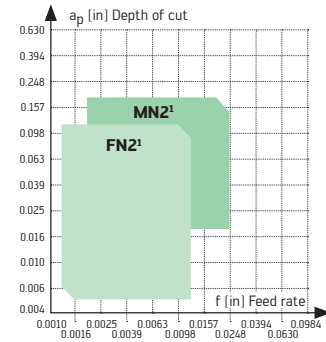
1 DP = Polycrystalline diamond (PCD)
2 HC = Coated carbide (PVD – HIPIMS)
3 HW = Uncoated carbide

Carbide



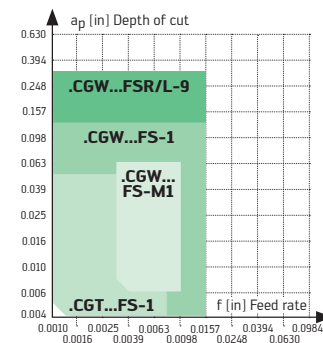
1 Fully ground circumference, polished

Carbide



1 Fully ground circumference, polished

PCD



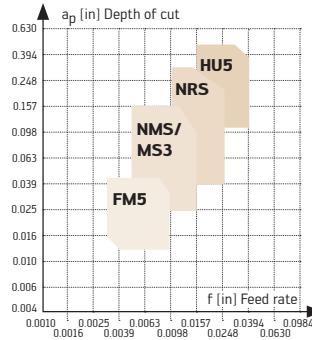
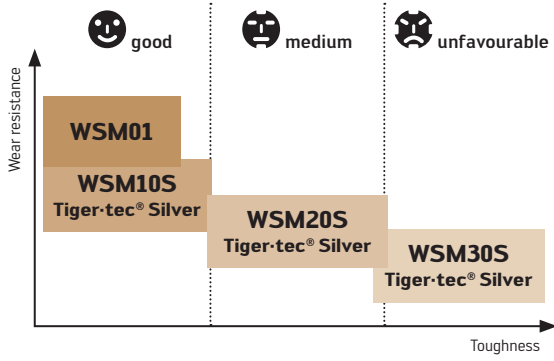


Negative basic shape

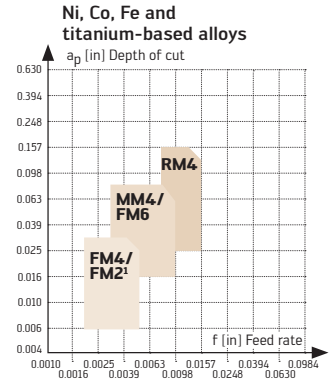


Positive basic shape

ISO S high-temperature alloys and titanium alloys

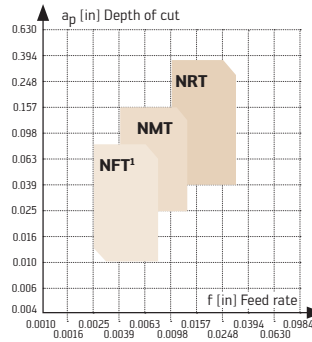


NMS: For universal machining
MS3: For low cutting pressure



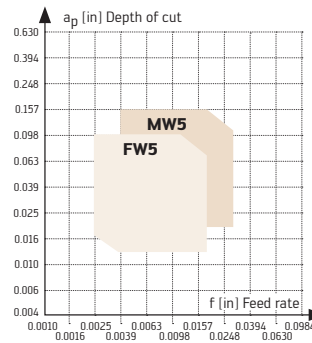
MM4: For universal machining, copy turning
FM6: For semi-finishing operations
¹ Fully ground circumference

Titanium-based alloys



¹ Fully ground circumference

Wiper



WALTER SELECT

Optimum indexable insert for

Good

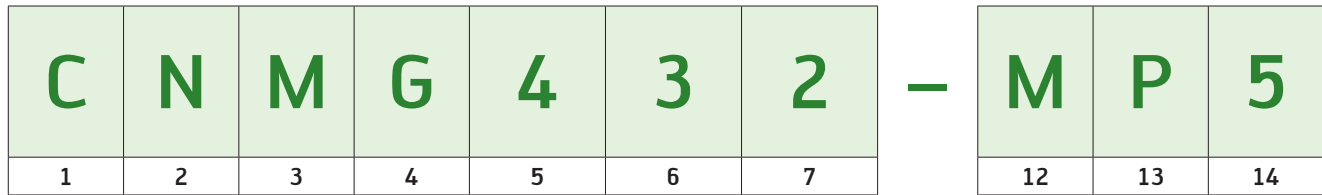
Average

Poor

machining conditions

Designation key in accordance with ANSI / ISO 1832 for indexable inserts for turning — INCH

Example 1:



1	2	3																																																								
Insert shape	Clearance angle	Tolerances																																																								
		<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> </div> <div style="width: 65%;"> <table border="1" style="border-collapse: collapse; width: 100%; text-align: center;"> <thead> <tr> <th colspan="4" style="background-color: #e0f0e0;">Permissible deviation in inch for</th> </tr> <tr> <th style="background-color: #e0f0e0;">d</th> <th style="background-color: #e0f0e0;">m</th> <th colspan="2" style="background-color: #e0f0e0;">s</th> </tr> </thead> <tbody> <tr><td>A</td><td>± 0.0010</td><td>± 0.0002</td><td>± 0.0010</td></tr> <tr><td>C</td><td>± 0.0010</td><td>± 0.0005</td><td>± 0.0010</td></tr> <tr><td>E</td><td>± 0.0010</td><td>± 0.0010</td><td>± 0.0010</td></tr> <tr><td>F</td><td>± 0.0005</td><td>± 0.0002</td><td>± 0.0010</td></tr> <tr><td>G</td><td>± 0.0010</td><td>± 0.0010</td><td>± 0.0051</td></tr> <tr><td>H</td><td>± 0.0005</td><td>± 0.0005</td><td>± 0.0010</td></tr> <tr><td>J¹</td><td>± 0.002–0.006²</td><td>± 0.0002</td><td>± 0.0010</td></tr> <tr><td>K¹</td><td>± 0.002–0.006²</td><td>± 0.0005</td><td>± 0.0010</td></tr> <tr><td>L¹</td><td>± 0.002–0.006²</td><td>± 0.0005</td><td>± 0.0010</td></tr> <tr><td>M</td><td>± 0.002–0.006²</td><td>± 0.003–0.008²</td><td>± 0.0005</td></tr> <tr><td>N</td><td>± 0.002–0.006²</td><td>± 0.003–0.008²</td><td>± 0.0010</td></tr> <tr><td>U</td><td>± 0.003–0.010²</td><td>± 0.005–0.015²</td><td>± 0.002–0.005</td></tr> </tbody> </table> <p>¹ Inserts with ground planar cutting edges ² Depending on the insert size (see ISO standard 1832)</p> </div> </div>	Permissible deviation in inch for				d	m	s		A	± 0.0010	± 0.0002	± 0.0010	C	± 0.0010	± 0.0005	± 0.0010	E	± 0.0010	± 0.0010	± 0.0010	F	± 0.0005	± 0.0002	± 0.0010	G	± 0.0010	± 0.0010	± 0.0051	H	± 0.0005	± 0.0005	± 0.0010	J¹	± 0.002–0.006 ²	± 0.0002	± 0.0010	K¹	± 0.002–0.006 ²	± 0.0005	± 0.0010	L¹	± 0.002–0.006 ²	± 0.0005	± 0.0010	M	± 0.002–0.006 ²	± 0.003–0.008 ²	± 0.0005	N	± 0.002–0.006 ²	± 0.003–0.008 ²	± 0.0010	U	± 0.003–0.010 ²	± 0.005–0.015 ²	± 0.002–0.005
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5										
Size										
IC			Metric Cutting Edge Length							
Inch	inch	mm	C	D	R	S	T	V	W	
1.2 (5)	5/32	3.97	S4	04	03	03	06	—	02	
1.5 (6)	3/16	4.76	04	05	04	04	08	08	S3	
1.8 (7)	7/32	5.56	05	06	05	05	09	09	03	
—	.236	6.00	—	—	06	—	—	—	—	
2	1/4	6.35	06	07	06	06	11	11	04	
2.5	5/16	7.94	08	09	07	07	13	13	05	
—	.315	8.00	—	—	08	—	—	—	—	
3	3/8	9.52	09	11	09	09	16	16	06	
—	.394	10.00	—	—	10	—	—	—	—	
3.5	7/16	11.11	11	13	11	11	19	19	07	
—	.472	12.00	—	—	12	—	—	—	—	
4	1/2	12.70	12	15	12	12	22	22	08	
4.5	9/16	14.29	14	17	14	14	24	24	09	
5	5/8	15.88	16	19	15	15	27	27	10	
—	.630	16.00	—	—	16	—	—	—	—	
5.5	11/16	17.46	17	21	17	17	30	30	11	
6	3/4	19.05	19	23	19	19	33	33	13	
—	.787	20.00	—	—	20	—	—	—	—	
7	7/8	22.22	22	27	22	22	38	38	15	
—	.984	25.00	—	—	25	—	—	—	—	
8	1	25.40	25	31	25	25	44	44	17	
10	1 1/4	31.75	32	38	31	31	54	54	21	
—	1.260	32.00	—	—	32	—	—	—	—	

¹ Inch version (00)

6			
Insert thickness s = inch			
symbol		thickness	
inch	mm	inch	mm
.5 (1)	—	1/32	0.79
.6	T0	0.40	1.00
1 (2)	01	1/16	1.59
1.2	T1	5/64	1.98
1.5 (3)	02	3/32	2.38
2	03	1/8	3.18
2.5	T3	5/32	3.97
3	04	3/16	4.76
3.5	05	7/32	5.56
4	06	1/4	6.35
5	07	5/16	7.94
6	09	3/8	9.52
7	11	7/16	11.11
8	12	1/2	12.70

Note: Inch sizes in parentheses for "alternate symbols" (under 1/4 inch IC)

Example 2:

T	N	M	A	3	3	3	T	020	20
1	2	3	4	5	6	7	8	10	11

4			
Machining and fastening features			
A		H	 $\beta = 70-90^\circ$
B	 $\beta = 70-90^\circ$	J	 $\beta = 70-90^\circ$
C	 $\beta = 70-90^\circ$	M	
F		N	
G		Q	 $\beta = 40-60^\circ$
		R	
		T	 $\beta = 40-60^\circ$
		U	 $\beta = 40-60^\circ$
		W	 $\beta = 40-60^\circ$
		X	Drawing or precise description of the indexable insert is required

7				
Corner radius				
	inch	mm	inch	mm
	0	01	.004	0.1
	.5	02	.008	0.2
	1	04	.015	0.4
	2	08	.031	0.8
	3	12	.047	1.2
	4	16	.062	1.6
	5	20	.078	2.0
	6	24	.093	2.4
	7	28	.109	2.8
8	32	.125	3.2	
—	00	round insert (in)		
—	M0	round insert (mm)		
M0 for diameter inch sizes converted to mm				
00 for diameter in metric sizes				

8	
Edge formation	
F	
E	
T	
S	

9	
Cutting direction	
R	
L	
N	

10	
Chamfer width inch	
	010 = 0.004
	020 = 0.008
	025 = 0.010
	070 = 0.028
	150 = 0.059
	200 = 0.079

11	
Chamfer angle	
	15 = 15°
	20 = 20°

Designation key in accordance with ISO 1832 for indexable inserts for turning

Example 1:

C	N	M	G	12	04	08M	-	M	P	5
1	2	3	4	5	6	7		12	13	14

1	
Insert shape	
A	
B	
C	
D	
E	
H	
K	
L	
M	
O	
P	
R	
S	
T	
V	
W	

2	
Clearance angle	
A	
B	
C	
D	
E	
F	
G	
N	
P	

3			
Tolerances			
Permissible deviation in mm for			
	d	m	s
	A	± 0.025	± 0.005
	C	± 0.025	± 0.013
	E	± 0.025	± 0.025
	F	± 0.013	± 0.005
	G	± 0.025	± 0.025
	H	± 0.013	± 0.013
	J ¹	± 0.05-0.15 ²	± 0.005
	K ¹	± 0.05-0.15 ²	± 0.013
	L ¹	± 0.05-0.15 ²	± 0.025
	M	± 0.05-0.15 ²	± 0.08-0.20 ²
	N	± 0.05-0.15 ²	± 0.08-0.20 ²
	U	± 0.08-0.25 ²	± 0.13-0.38 ²

¹ Inserts with ground planar cutting edges
² Depending on the insert size (see ISO standard 1832)

5														
Cutting edge length l [mm]														
Inner circle diameter d		C		D		R	S		T		V		W	
		Size	l	Size	l	Size	Size	l	Size	l	Size	l	Size	l
3.97	5/32								06	6.9				
5	0.197					05							03	3.8
5.56	7/32								09	9				
6	0.236					06								
6.35	2/8	06	6.4	07	7.7	06 ¹			11	11	11	11	04	4.3
8	0.315					08							05	5.2
9.525	3/8	09	9.6	11	11.6	09 ¹	09	9.5	16	16.5	16	16.5	06	6.5
10	0.394					10								
12	0.472					12								
12.7	4/8	12	12.9	15	15.5	12 ¹	12	12.7	22	22	22	22.1	08	8.7
15.875	5/8	16	16.1				15	15.8	27	27			10	10.8
16	0.63					16								
17.46	11/16												12	11.6
19.05	6/8	19	19.3			19 ¹	19	19.0						
20	0.787					20								
25	0.984					25								
25.4	8/8	25	25.8			25 ¹	25	25.4						
32	1.26					32								

6	
Insert thickness s [mm]	
	01 s = 1.59
	T1 s = 1.98
	02 s = 2.38
	T2 s = 2.78
	03 s = 3.18
	T3 s = 3.97
	04 s = 4.76
	05 s = 5.56
	06 s = 6.35
	07 s = 7.94
	09 s = 9.52

Example 2:

T	N	M	A	16	04	08	T	020	20
1	2	3	4	5	6	7	8	10	11

4			
Machining and fastening features			
A		H	 $\beta = 70-90^\circ$
B	 $\beta = 70-90^\circ$	J	 $\beta = 70-90^\circ$
C	 $\beta = 70-90^\circ$	M	
F		N	
G		Q	 $\beta = 40-60^\circ$
		R	
		T	 $\beta = 40-60^\circ$
		U	 $\beta = 40-60^\circ$
		W	 $\beta = 40-60^\circ$

X Drawing or precise description of the indexable insert is required

7	
Corner radius r [mm]	
	005 r = 0.05 005M r = 0.03
	01 r = 0.1 01M r = 0.07
	02 r = 0.2 02M r = 0.17
	04 r = 0.4 04M r = 0.37
	08 r = 0.8 08M r = 0.77
	12 r = 1.2
	16 r = 1.6
R	24 r = 2.4

M0 Metric version (diameter in [mm])
00 Inch version (diameter with inch units in [mm])

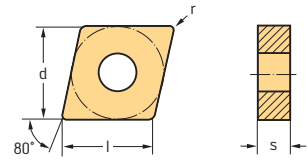
8	
Edge formation	
F	
T	
E	
S	

10	
Chamfer width	
010 = 0.10 mm	070 = 0.70 mm
020 = 0.20 mm	150 = 1.50 mm
025 = 0.25 mm	200 = 2.00 mm

9	
Cutting direction	
	R
	L
	N

11	
Chamfer angle	
	15 = 15°
	20 = 20°

Negative rhombic 80°
CNMG / CNGG
Tiger-tec® Silver



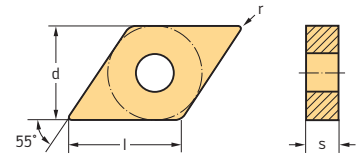
Indexable inserts

	ANSI Designation	Designation	r in	f in	a _p in	P				M				K		N		S			
						HC				HC				HC		HC		HC			
						WPP05S	WPP10S	WPP20S	WPP20S	WMP20S	WSM01	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WN10	WNN10	WSM01	WSM10S	WSM20S
	CNMG431-FW5	CNMG120404-FW5	0.016	0.004-0.016	0.012-0.118	☺	☺	☺			☺	☺						☺	☺		
	CNMG432-FW5	CNMG120408-FW5	0.031	0.006-0.024	0.016-0.118	☺	☺				☺	☺						☺	☺		
	CNMG432-MW5	CNMG120408-MW5	0.031	0.008-0.026	0.031-0.157	☺	☺	☺	☺	☺				☺	☺						
	CNMG433-MW5	CNMG120412-MW5	0.047	0.010-0.028	0.059-0.157	☺	☺	☺	☺	☺				☺	☺						
	CNGG4(3)0.5M-MN3	CNGG120402M-MN3	0.007	0.002-0.005	0.020-0.118										☺	☺					
	CNGG431M-MN3	CNGG120404M-MN3	0.015	0.004-0.012	0.031-0.157										☺	☺					
	CNGG432M-MN3	CNGG120408M-MN3	0.031	0.004-0.016	0.039-0.157										☺	☺					
	CNMG431-MS3	CNMG120404-MS3	0.016	0.005-0.010	0.024-0.118						☺	☺	☺				☺	☺	☺	☺	☺
	CNMG432-MS3	CNMG120408-MS3	0.031	0.006-0.012	0.031-0.118		☺	☺			☺	☺	☺				☺	☺	☺	☺	☺
	CNMG433-MS3	CNMG120412-MS3	0.047	0.006-0.016	0.039-0.138			☺			☺	☺	☺				☺	☺	☺	☺	☺
	CNMG643-MS3	CNMG190612-MS3	0.047	0.007-0.020	0.047-0.197						☺	☺	☺				☺	☺	☺	☺	☺
	CNMG431-MU5	CNMG120404-MU5	0.016	0.006-0.012	0.020-0.157		☺	☺	☺	☺									☺		
	CNMG432-MU5	CNMG120408-MU5	0.031	0.006-0.016	0.024-0.197	☺	☺	☺	☺	☺									☺		
	CNMG433-MU5	CNMG120412-MU5	0.047	0.008-0.020	0.039-0.197	☺	☺	☺	☺	☺									☺		
	CNMG434-MU5	CNMG120416-MU5	0.063	0.010-0.022	0.047-0.197	☺	☺	☺	☺	☺										☺	
	CNMG543-MU5	CNMG160612-MU5	0.047	0.012-0.022	0.039-0.275	☺	☺	☺	☺	☺										☺	

See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

**Negative rhombic 55°
DNMG / DNGG
Tiger-tec® Silver**



Indexable inserts

	ANSI Designation	Designation	r in	f in	a _p in	P				M			K		N		S		
						HC				HC			HC	HC	HC				
						WPP05S	WPP10S	WPP20S	WMP20S	WMP20S	WSM01	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WN10	WNN10	WSM01
	DNMG331-FW5	DNMG110404-FW5	0.016	0.004-0.014	0.012-0.079	☺	☺				☺	☺						☺	☺
	DNMG332-FW5	DNMG110408-FW5	0.031	0.006-0.020	0.016-0.079	☺	☺				☺	☺						☺	☺
	DNMG431-FW5	DNMG150404-FW5	0.016	0.004-0.016	0.012-0.118	☺					☺	☺						☺	☺
	DNMG432-FW5	DNMG150408-FW5	0.031	0.006-0.020	0.016-0.118	☺					☺	☺						☺	☺
	DNMG441-FW5	DNMG150604-FW5	0.016	0.004-0.016	0.012-0.118	☺	☺				☺	☺						☺	☺
	DNMG442-FW5	DNMG150608-FW5	0.031	0.006-0.020	0.016-0.118	☺	☺				☺	☺						☺	☺
	DNMG332-MW5	DNMG110408-MW5	0.031	0.006-0.020	0.031-0.118	☺	☺						☺	☺					
	DNMG333-MW5	DNMG110412-MW5	0.047	0.008-0.024	0.059-0.118	☺	☺						☺	☺					
	DNMG432-MW5	DNMG150408-MW5	0.031	0.006-0.022	0.031-0.157	☺							☺	☺					
	DNMG433-MW5	DNMG150412-MW5	0.047	0.008-0.026	0.059-0.157	☺							☺	☺					
	DNMG442-MW5	DNMG150608-MW5	0.031	0.006-0.022	0.059-0.157	☺	☺	☺					☺	☺					
	DNMG443-MW5	DNMG150612-MW5	0.047	0.008-0.026	0.059-0.157	☺	☺	☺					☺	☺					
	DNGG3(3)0.5M-MN3	DNGG110402M-MN3	0.007	0.002-0.005	0.020-0.079									☺	☺				
	DNGG331M-MN3	DNGG110404M-MN3	0.015	0.004-0.012	0.024-0.118									☺	☺				
	DNMG332-MS3	DNMG110408-MS3	0.031	0.005-0.012	0.031-0.098			☺		☺	☺						☺	☺	☺
	DNMG431-MS3	DNMG150404-MS3	0.016	0.005-0.010	0.024-0.098					☺	☺						☺	☺	☺
	DNMG432-MS3	DNMG150408-MS3	0.031	0.006-0.012	0.031-0.098		☺			☺	☺						☺	☺	☺
	DNMG441-MS3	DNMG150604-MS3	0.016	0.005-0.010	0.024-0.098					☺	☺						☺	☺	☺
	DNMG442-MS3	DNMG150608-MS3	0.031	0.006-0.012	0.031-0.098			☺		☺	☺						☺	☺	☺
	DNMG332-MU5	DNMG110408-MU5	0.031	0.007-0.014	0.024-0.157		☺	☺	☺										☺
	DNMG432-MU5	DNMG150408-MU5	0.031	0.007-0.014	0.024-0.197		☺	☺	☺										☺
	DNMG442-MU5	DNMG150608-MU5	0.031	0.007-0.014	0.024-0.197	☺	☺	☺	☺										☺
	DNMG443-MU5	DNMG150612-MU5	0.047	0.008-0.018	0.039-0.197	☺	☺	☺	☺										☺
	DNMG444-MU5	DNMG150616-MU5	0.063	0.010-0.020	0.047-0.197	☺	☺	☺	☺										☺

See the ISO 1832 designation key for dimensions

HC = Coated carbide

WALTER SELECT

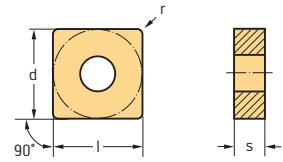
Optimum indexable insert for

☺ Good ☺ Average ☺ Poor

machining conditions

Negative square SNMG

Tiger-tec® Silver



Indexable inserts

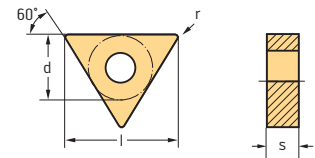
ANSI designation	Designation	r in	f in	a _p in	P HC				M HC			K HC		N HC		S HC			
					WPP05S	WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WN10	WNN10	WSM10S	WSM20S	WSM30S
SNMG431-FM5	SNMG120404-FM5	0.016	0.002–0.006	0.008–0.059						☺	☺							☺	☺
SNMG432-FM5	SNMG120408-FM5	0.031	0.003–0.008	0.016–0.059						☺	☺							☺	☺
SNMG433-FM5	SNMG120412-FM5	0.047	0.004–0.010	0.020–0.079				☺	☺	☺							☺	☺	
SNMG432-MU5	SNMG120408-MU5	0.031	0.007–0.018	0.024–0.197		☺	☺	☺	☺									☺	

See the ISO 1832 designation key for dimensions

HC = Coated carbide
HW = Uncoated carbide

Negative triangular 60° TNMG

Tiger-tec® Silver

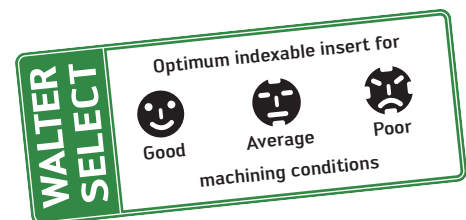


Indexable inserts

ANSI Designation	Designation	r in	f in	a _p in	P HC				M HC			K HC		N HC		S HC			
					WPP05S	WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WN10	WNN10	WSM10S	WSM20S	WSM30S
TNMG331-FW5	TNMG160404-FW5	0.016	0.004–0.016	0.012–0.118		☺	☺			☺	☺							☺	☺
TNMG332-FW5	TNMG160408-FW5	0.031	0.006–0.020	0.016–0.118		☺	☺			☺	☺							☺	☺
Wiper																			
TNMG332-MW5	TNMG160408-MW5	0.031	0.006–0.022	0.031–0.157		☺	☺					☺	☺						
TNMG333-MW5	TNMG160412-MW5	0.047	0.008–0.026	0.059–0.157		☺	☺					☺	☺						
Wiper																			
TNMG331-MU5	TNMG160404-MU5	0.016	0.006–0.012	0.020–0.157		☺	☺	☺	☺										☺
TNMG332-MU5	TNMG160408-MU5	0.031	0.007–0.014	0.024–0.157		☺	☺	☺	☺										☺
TNMG333-MU5	TNMG160412-MU5	0.047	0.008–0.018	0.039–0.157		☺	☺	☺	☺										☺

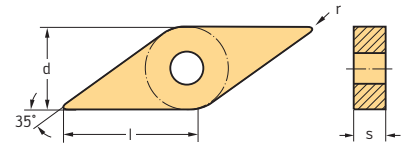
See the ISO 1832 designation key for dimensions

HC = Coated carbide



☺ ☺ ☺ / ★ New addition to the product range

Negative rhombic 35° VNGG



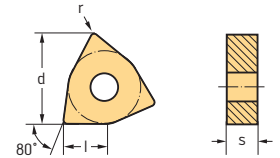
Indexable inserts

ANSI designation	Designation	r in	f in	a _p in	P				M				K		N		S		
					HC				HC				HC		HC		HC		
					WPP05S	WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WN10	WNN10	WSM10S	WSM20S	WSM30S
VNGG3(3)0.5M-MN3	VNGG160402M-MN3	0.007	0.002-0.005	0.020-0.079															
VNGG331M-MN3	VNGG160404M-MN3	0.015	0.004-0.012	0.024-0.119															

See the ISO 1832 designation key for dimensions

HC = Coated carbide

Negative Trigon 80° WNMG / WNGG Tiger-tec® Silver



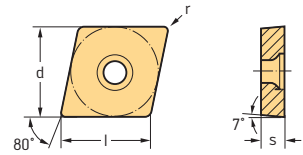
Indexable inserts

ANSI Designation	Designation	r in	f in	a _p in	P				M				K		N		S		
					HC				HC				HC		HC		HC		
					WPP05S	WPP10S	WPP20S	WMP20S	WMP20S	WSM01	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WN10	WNN10	WSM01	WSM10S
Wiper	WNMG331-FW5	WNMG060404-FW5	0.016	0.004-0.138	0.012-0.079	☺	☺										☺	☺	
	WNMG332-FW5	WNMG060408-FW5	0.031	0.006-0.020	0.016-0.079	☺	☺										☺	☺	
	WNMG431-FW5	WNMG080404-FW5	0.016	0.004-0.016	0.012-0.118	☺	☺										☺	☺	
	WNMG432-FW5	WNMG080408-FW5	0.031	0.006-0.024	0.016-0.118	☺	☺										☺	☺	
	WNMG433-FW5	WNMG080412-FW5	0.047	0.010-0.026	0.024-0.118	☺	☺										☺	☺	
Wiper	WNMG332-MW5	WNMG060408-MW5	0.031	0.006-0.020	0.031-0.118	☺	☺						☺						
	WNMG333-MW5	WNMG060412-MW5	0.047	0.008-0.024	0.059-0.118	☺	☺						☺						
	WNMG432-MW5	WNMG080408-MW5	0.031	0.008-0.026	0.031-0.157	☺	☺	☺	☺				☺						
WNMG433-MW5	WNMG080412-MW5	0.047	0.010-0.028	0.059-0.157	☺	☺	☺	☺				☺							
Wiper	WNGG431M-MN3	WNGG080404M-MN3	0.016	0.004-0.012	0.032-0.157											☺	☺		
	WNGG432M-MN3	WNGG080408M-MN3	0.031	0.004-0.016	0.039-0.157											☺	☺		
Wiper	WNMG431-MS3	WNMG080404-MS3	0.016	0.005-0.010	0.024-0.118												☺	☺	
	WNMG432-MS3	WNMG080408-MS3	0.031	0.006-0.012	0.031-0.118												☺	☺	
Wiper	WNMG332-MU5	WNMG060408-MU5	0.031	0.006-0.138	0.024-0.118	☺	☺	☺	☺									☺	
	WNMG431-MU5	WNMG080404-MU5	0.016	0.006-0.012	0.020-0.157	☺	☺	☺	☺									☺	
	WNMG432-MU5	WNMG080408-MU5	0.031	0.006-0.016	0.024-0.197	☺	☺	☺	☺									☺	
	WNMG433-MU5	WNMG080412-MU5	0.047	0.008-0.020	0.039-0.197	☺	☺	☺	☺									☺	


See the ISO 1832 designation key for dimensions

HC = Coated carbide

Positive rhombic 80° CCGT



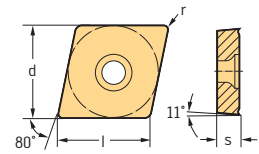
Indexable inserts

ANSI Designation	Designation	l in	r in	f in	a _p in	P			M			K		S					
						HE			HC			HC			HC		HC		
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S
 CCGT2(1.5)0.2M-FP2	CCGT060201M-FP2	0.253	0.003	0.001–0.002	0.004–0.059	☺													
CCGT2(1.5)0.5M-FP2	CCGT060202M-FP2	0.253	0.007	0.002–0.005	0.008–0.079	☺													
CCGT2(1.5)1M-FP2	CCGT060204M-FP2	0.253	0.015	0.003–0.010	0.008–0.098	☺													
CCGT3(2.5)0.2M-FP2	CCGT09T301M-FP2	0.380	0.003	0.001–0.002	0.004–0.059	☺													
CCGT3(2.5)0.5M-FP2	CCGT09T302M-FP2	0.380	0.007	0.002–0.005	0.008–0.079	☺													
CCGT3(2.5)1M-FP2	CCGT09T304M-FP2	0.380	0.015	0.003–0.010	0.008–0.098	☺													
CCGT3(2.5)2M-FP2	CCGT09T308M-FP2	0.380	0.030	0.004–0.012	0.012–0.118	☺													


See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

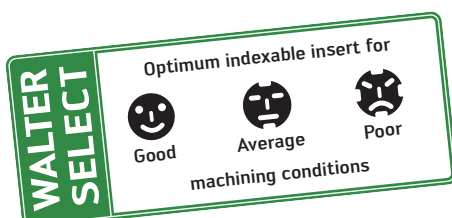
Positive rhombic 80° CPGT



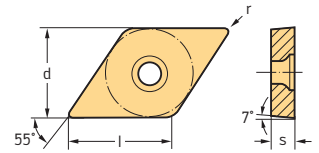
Indexable inserts

ANSI Designation	Designation	l in	r in	f in	a _p in	P			M			K		S					
						HE			HC			HC			HC		HC		
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S
 CPGT1.8(1.5)0.5M-FP2	CPGT050202M-FP2	0.222	0.007	0.002–0.005	0.008–0.079	☺													
CPGT1.8(1.5)1M-FP2	CPGT050204M-FP2	0.222	0.015	0.003–0.008	0.008–0.079	☺													


See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

Positive rhombic 55° DCGT



Indexable inserts

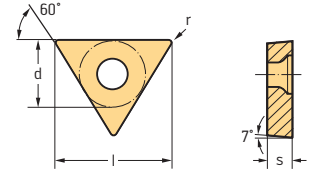
ANSI Designation	Designation	l in	r in	f in	a _p in	P				M			K		S					
						HE				HC			HC			HC		HC		
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S	
 DCGT2(1.5)0.5M-FP2	DCGT070202M-FP2	0.305	0.007	0.002–0.005	0.008–0.079	⊕														
DCGT2(1.5)1M-FP2	DCGT070204M-FP2	0.305	0.015	0.003–0.010	0.008–0.098	⊕														
DCGT32.5X20M-FP2*	DCGT11T3005M-FP2	0.457	0.001	0.0004–0.002	0.004–0.039	⊕														
DCGT3(2.5)0.2M-FP2	DCGT11T301M-FP2	0.457	0.003	0.001–0.002	0.004–0.059	⊕														
DCGT3(2.5)0.5M-FP2	DCGT11T302M-FP2	0.457	0.007	0.002–0.005	0.008–0.079	⊕														
DCGT3(2.5)1M-FP2	DCGT11T304M-FP2	0.457	0.015	0.003–0.010	0.008–0.098	⊕														
DCGT3(2.5)2M-FP2	DCGT11T308M-FP2	0.457	0.030	0.004–0.012	0.012–0.118	⊕														

See the ISO 1832 designation key for dimensions


*For corner radii smaller than ANSI 0.2, the nomenclature changes to direct thousands of an inch. For example, X20=0.002in, X10=0.001 in, etc.

HE = Coated cermet
HC = Coated carbide

Positive triangular 60° TCGT



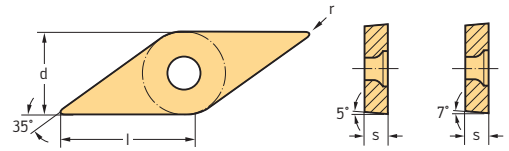
Indexable inserts

ANSI Designation	Designation	l in	r in	f in	a _p in	P				M			K		S					
						HE				HC			HC			HC		HC		
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S	
 TCGT1.2(1.2)1M-FP2	TCGT06T104M-FP2	0.270	0.015	0.003–0.010	0.008–0.079	⊕														
TCGT1.8(1.5)1M-FP2	TCGT090204M-FP2	0.378	0.015	0.003–0.010	0.008–0.098	⊕														
TCGT2(1.5)0.5M-FP2	TCGT110202M-FP2	0.432	0.007	0.002–0.005	0.008–0.079	⊕														
TCGT2(1.5)1M-FP2	TCGT110204M-FP2	0.432	0.015	0.003–0.010	0.008–0.098	⊕														




See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

Positive rhombic 35° VCGT / VCMT Tiger-tec® Silver



Indexable inserts

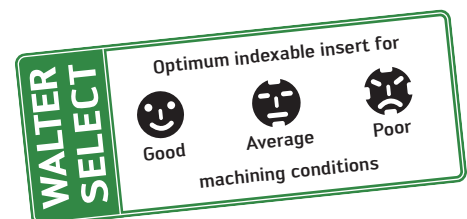
Designation	Designation	l in	r in	f in	a _p in	P		M			K		S				
						HE	HC	HC			HC		HC				
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S
 VCGT22X20M-FP2*	VCGT1103005M-FP2	0.435	0.001	0.0004–0.002	0.004–0.039	☺											
VCGT2(2)0.2M-FP2	VCGT110301M-FP2	0.435	0.003	0.001–0.002	0.004–0.059	☺											
VCGT2(2)0.5M-FP2	VCGT110302M-FP2	0.435	0.007	0.002–0.005	0.008–0.079	☺											
VCGT221M-FP2	VCGT110304M-FP2	0.435	0.015	0.003–0.010	0.008–0.098	☺											
VCGT3(3)0.5M-FP2	VCGT160402M-FP2	0.653	0.007	0.002–0.005	0.008–0.079	☺											
VCGT331M-FP2	VCGT160404M-FP2	0.653	0.015	0.003–0.010	0.008–0.098	☺											
VCGT332M-FP2	VCGT160408M-FP2	0.653	0.030	0.004–0.012	0.012–0.118	☺											
 VCMT331-MM4	VCMT160404-MM4	0.653	0.016	0.004–0.008	0.016–0.079				☹	☹					☹	☹	
VCMT332-MM4	VCMT160408-MM4	0.653	0.032	0.005–0.012	0.020–0.079				☹	☹					☹	☹	
 VCMT331-MP4	VCMT160404-MP4	0.653	0.016	0.004–0.008	0.016–0.079		☹	☹									
VCMT332-MP4	VCMT160408-MP4	0.653	0.032	0.005–0.012	0.020–0.079		☹	☹									

See the ISO 1832 designation key for dimensions

*For corner radii smaller than ANSI 0.2, the nomenclature changes to direct thousands of an inch. For example, X20=0.002in, X10=0.001 in, etc.

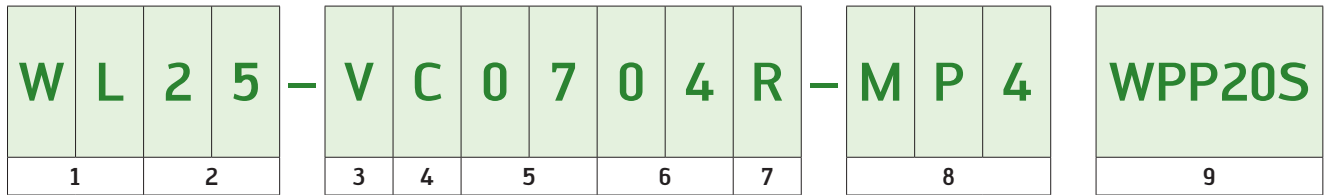
HE = Coated cermet
HC = Coated carbide

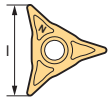






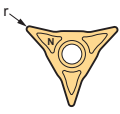



☹ ☹ ☹ / ★ New addition to the product range



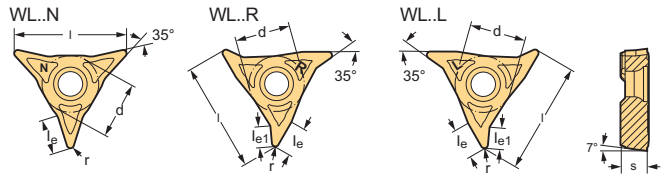
Designation key for system inserts for turning

Example:













1	2	3	4
Type of indexable insert	Indexable insert size	Basic shape	Clearance angle
<p>WL Walter Lock</p>	 <p>25 25 mm 0.984 in</p>	 <p>V 35°</p>  <p>R Round</p>	 <p>C 7°</p>
5	6	7	8
Cutting edge length	Corner radius	Direction of cut	Geometry
 <p>04 4 mm 0.157 in</p>  <p>05 5 mm 0.197 in</p>  <p>07 7 mm 0.276 in</p>	<p>04 0.4 mm 0.016 in</p> <p>08 0.8 mm 0.031 in</p> <p>12 1.2 mm 0.047 in</p> <p>16 1.6 mm 0.063 in</p> 	 <p>N Neutral</p>  <p>R Right-hand</p>  <p>L Left-hand</p>	<p>MP4 Medium machining, ISO P, 4</p> <p>See geometry designation key for indexable inserts for turning, General Catalog 2018, page A 379</p>
			9
			Grade
			<p>WPP20S ISO P20 Tiger-tec® Silver</p> <p>See grade designation key for indexable inserts for turning, General Catalog 2018, page A 372</p>

**Indexable inserts for copy turning system
WL
Tiger-tec® Silver**



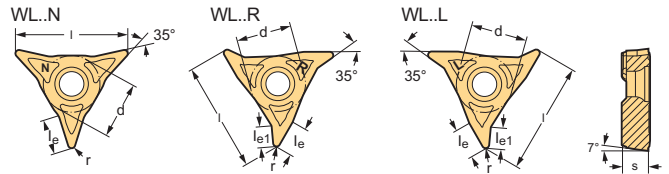
Indexable inserts

Designation	r in	l in	le in	le1 in	f in	ap in	P			M			K			S		
							HC			HC			HC			HC		
							WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S
 WL25-VC0704N-FM4	0.016	0.984	0.248		0.002-0.008	0.004-0.079					⊕	⊕				⊕	⊕	
	WL25-VC0708N-FM4	0.031	0.984	0.280		0.004-0.010	0.008-0.079				⊕	⊕				⊕	⊕	
 WL25-VC0704R-FM4	0.016	0.984	0.244	0.154	0.002-0.008	0.004-0.079					⊕	⊕				⊕	⊕	
	WL25-VC0708R-FM4	0.031	0.984	0.260	0.181	0.004-0.010	0.008-0.079				⊕	⊕				⊕	⊕	
 WL25-VC0704L-FM4	0.016	0.984	0.244	0.154	0.002-0.008	0.004-0.079					⊕	⊕				⊕	⊕	
	WL25-VC0708L-FM4	0.031	0.984	0.260	0.181	0.004-0.010	0.008-0.079				⊕	⊕				⊕	⊕	
 WL25-VC0704N-FP4	0.016	0.984	0.248	0.000	0.002-0.008	0.004-0.079	⊕	⊕										
	WL25-VC0708N-FP4	0.031	0.984	0.280	0.000	0.004-0.010	0.008-0.079	⊕	⊕									
 WL25-VC0704R-FP4	0.016	0.984	0.244	0.154	0.002-0.008	0.004-0.079	⊕	⊕										
	WL25-VC0708R-FP4	0.031	0.984	0.260	0.181	0.004-0.010	0.008-0.079	⊕	⊕									
 WL25-VC0704L-FP4	0.016	0.984	0.244	0.154	0.002-0.008	0.004-0.079	⊕	⊕										
	WL25-VC0708L-FP4	0.031	0.984	0.260	0.181	0.004-0.010	0.008-0.079	⊕	⊕									
 WL25-VC0704N-MM4	0.016	0.984	0.248		0.004-0.010	0.016-0.098			⊕	⊕	⊕	⊕				⊕	⊕	
	WL25-VC0708N-MM4	0.031	0.984	0.280		0.005-0.013	0.020-0.098			⊕	⊕	⊕				⊕	⊕	
	WL25-VC0712N-MM4	0.047	0.984	0.291		0.005-0.014	0.020-0.098				⊕	⊕				⊕	⊕	
	WL25-VC0716N-MM4	0.063	0.984	0.343		0.005-0.016	0.020-0.098				⊕	⊕				⊕	⊕	
 WL25-VC0704R-MM4	0.016	0.984	0.244	0.154	0.004-0.010	0.016-0.098			⊕	⊕	⊕					⊕	⊕	
	WL25-VC0708R-MM4	0.031	0.984	0.260	0.181	0.005-0.013	0.020-0.098			⊕	⊕	⊕				⊕	⊕	
 WL25-VC0704L-MM4	0.016	0.984	0.244	0.154	0.004-0.010	0.016-0.098			⊕	⊕	⊕					⊕	⊕	
	WL25-VC0708L-MM4	0.031	0.984	0.260	0.181	0.005-0.013	0.020-0.098			⊕	⊕	⊕				⊕	⊕	
 WL25-VC0704N-MP4	0.016	0.984	0.248		0.004-0.010	0.016-0.098	⊕	⊕										
	WL25-VC0708N-MP4	0.031	0.984	0.280		0.005-0.013	0.020-0.098	⊕	⊕									
	WL25-VC0712N-MP4	0.047	0.984	0.291		0.005-0.014	0.020-0.098	⊕	⊕									
	WL25-VC0716N-MP4	0.063	0.984	0.343		0.005-0.016	0.020-0.098	⊕	⊕									



HC = Coated carbide

⊕ / ★ New addition to the product range

Indexable inserts for copy turning system
WL
Tiger-tec® Silver

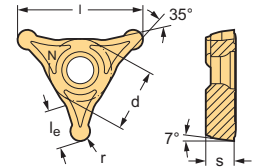


Indexable inserts


Designation	r in	l in	l _e in	l _{e1} in	f in	a _p in	P			M			K		S	
							HC			HC			HC		HC	
							WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S
 WL25-VC0704R-MP4 WL25-VC0708R-MP4	0.016	0.984	0.244	0.154	0.004-0.010	0.016-0.098	⊕	⊕								
	0.031	0.984	0.260	0.181	0.005-0.013	0.020-0.098	⊕	⊕								
 WL25-VC0704L-MP4 WL25-VC0708L-MP4	0.016	0.984	0.244	0.154	0.004-0.010	0.016-0.098	⊕	⊕								
	0.031	0.984	0.260	0.181	0.005-0.013	0.020-0.098	⊕	⊕								

HC = Coated carbide

Indexable inserts for copy turning system
WL
Tiger-tec® Silver






Indexable inserts

Designation	r in	l in	l _e in	f in	a _p in	P			M			K		S	
						HC			HC			HC		HC	
						WPP10S	WPP20S	WMP20S	WMP20S	WSM20S	WSM30S	WKK10S	WKK20S	WSM20S	WSM30S
 WL25-RC0420N-MU6 WL25-RC0525N-MU6	0.079	0.984	0.283	0.005-0.016	0.020-0.079	⊕	⊕							⊕	⊕
	0.098	0.984	0.272	0.005-0.018	0.020-0.098	⊕	⊕							⊕	⊕

HC = Coated carbide

WALTER SELECT

Optimum indexable insert for

 Good
  Average
  Poor

machining conditions

Product range overview of indexable inserts and cutting tool materials: ISO turning – CBN/PCD/ceramic



CBN indexable inserts

Insert shape	Description	Page
 C <u>Wiper</u>	Negative basic shape Positive basic shape 7°	25 28
 D	Negative basic shape Positive basic shape 7°	26 29
 S	Negative basic shape	26
 T	Negative basic shape Positive basic shape 7°	27 30
 V	Negative basic shape Positive basic shape 5°	27 31
 W	Negative basic shape	28

Ceramic indexable inserts

Insert shape	Description	Page
 C <u>Wiper</u>	Negative basic shape	32
 D	Negative basic shape	32
 R	Positive basic shape 11°	35
 S	Negative basic shape	33
 T	Negative basic shape	33
 V	Negative basic shape	34
 W <u>Wiper</u>	Negative basic shape	34

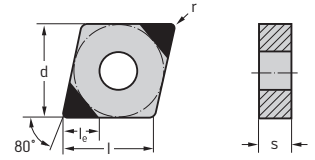
Cutting tool materials: CBN, PCD, ceramic

Application	Cutting tool material	Range of applications										
		01	05	10	15	20	25	30	35	40	45	
ISO K	Si ₃ N ₄ *	WCK10										
	CBN			WBK20								
	CBN					WBK30						
ISO N	PCD		WDN10									
ISO S	CBN		WBS10									
	SiAlON*		WIS10									
	Whisker*			WWS20								
ISO H	CBN		WBH10C									
	AL ₂ O ₃ -TiC*		WCH10C									
	CBN		WBH10									
	CBN			WBH20								
	CBN				WBH30							
ISO O	PCD		WDN10									

← Wear resistance
 Toughness →

* Ceramic

CBN – Negative rhombic 80° CNGA



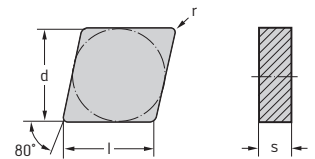
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K		N		S		H			O				
								CN		BH		DP		BH		BL			CC		DP
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10			
	CNGA431TM-MW2	CNGA120404TM-MW2	2	0.110	0.016	0.002–0.008	0.004–0.020														
	CNGA432TM-MW2	CNGA120408TM-MW2	2	0.106	0.031	0.002–0.010	0.004–0.039														
	CNGA433TM-MW2	CNGA120412TM-MW2	2	0.110	0.047	0.002–0.012	0.004–0.039														
	CNGA431EM-2	CNGA120404EM-2	2	0.110	0.016	0.002–0.008	0.004–0.020														
	CNGA432EM-2	CNGA120408EM-2	2	0.106	0.031	0.002–0.010	0.004–0.039														
	CNGA431TS-2	CNGA120404TS-2	2	0.110	0.016	0.002–0.008	0.004–0.078														
	CNGA432TS-2	CNGA120408TS-2	2	0.106	0.031	0.002–0.010	0.004–0.078														
	CNGA433TS-2	CNGA120412TS-2	2	0.110	0.047	0.002–0.012	0.004–0.078														
	CNGA431TM-M2	CNGA120404TM-M2	2	0.110	0.016	0.002–0.008	0.004–0.020														
	CNGA432TM-M2	CNGA120408TM-M2	2	0.106	0.031	0.002–0.010	0.004–0.039														
	CNGA433TM-M2	CNGA120412TM-M2	2	0.110	0.047	0.002–0.012	0.004–0.039														
	CNGA431TM-2	CNGA120404TM-2	2	0.110	0.016	0.002–0.008	0.004–0.020														
	CNGA432TM-2	CNGA120408TM-2	2	0.106	0.031	0.002–0.010	0.004–0.039														
	CNGA433TM-2	CNGA120412TM-2	2	0.110	0.047	0.002–0.012	0.004–0.039														

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

CBN – Negative rhombic 80° CNGN



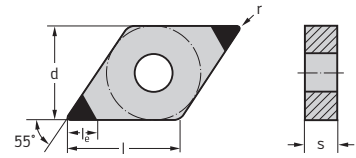
Indexable inserts

	ANSI Designation	Designation	Number of cutting edges	r in	f in	a_p in	K		N		S		H			O			
							CN		BH		DP		BH		BL			DP	
							WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WDN10				
	CNGN432TM-S	CNGN120408TM-S	4	0.032	0.002–0.020	0.004–0.200													
	CNGN433TM-S	CNGN120412TM-S	4	0.047	0.002–0.020	0.004–0.200													
	CNGN434TM-S	CNGN120416TM-S	4	0.063	0.002–0.020	0.004–0.200													

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

/ ★ New addition to the product range

CBN – Negative rhombic 55° DNGA



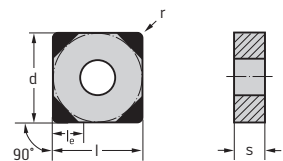
Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l _e in	r in	f in	a _p in	K		N		S		H			O		
							CN		DP		BH		BL			CC		DP
							WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10	
Wiper	DNGA431TM-MW2	DNGA150404TM-MW2	2	0.114	0.016	0.002–0.008	0.004–0.020					☉	☉	☉				
	DNGA441TM-MW2	DNGA150604TM-MW2	2	0.114	0.016	0.002–0.008	0.004–0.020					☉	☉	☉	☉			
	DNGA432TM-MW2	DNGA150408TM-MW2	2	0.110	0.031	0.002–0.010	0.004–0.039					☉	☉	☉				
	DNGA442TM-MW2	DNGA150608TM-MW2	2	0.110	0.031	0.002–0.010	0.004–0.039					☉	☉	☉	☉			
	DNGA443TM-MW2	DNGA150612TM-MW2	2	0.110	0.047	0.002–0.012	0.004–0.039					☉	☉	☉	☉			
	DNGA431EM-2	DNGA150404EM-2	2	0.114	0.016	0.002–0.008	0.004–0.020				☉							
	DNGA432EM-2	DNGA150408EM-2	2	0.110	0.031	0.002–0.010	0.004–0.039				☉							
	DNGA431TS-2	DNGA150404TS-2	2	0.114	0.016	0.002–0.008	0.004–0.079	☉										
	DNGA441TS-2	DNGA150604TS-2	2	0.114	0.016	0.002–0.008	0.004–0.079	☉										
	DNGA432TS-2	DNGA150408TS-2	2	0.110	0.031	0.002–0.010	0.004–0.079	☉										
	DNGA442TS-2	DNGA150608TS-2	2	0.110	0.031	0.002–0.010	0.004–0.079	☉										
	DNGA443TS-2	DNGA150612TS-2	2	0.110	0.047	0.002–0.012	0.004–0.079	☉										

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

CBN – Negative square SNGA



Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l _e in	r in	f in	a _p in	K		N		S		H			O		
							CN		DP		BH		BL			CC		DP
							WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10	
	SNGA432TS-4	SNGA120408TS-4	4	0.110	0.031	0.002-0.012	0.004–0.079	☉										
	SNGA433TS-4	SNGA120412TS-4	4	0.110	0.047	0.002-0.012	0.004–0.079	☉										
	SNGA432TM-4	SNGA120408TM-4	4	0.110	0.031	0.002-0.012	0.004–0.039						☉	☉				
	SNGA433TM-4	SNGA120412TM-4	4	0.110	0.047	0.002-0.012	0.004–0.039						☉	☉				

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

WALTER SELECT

Optimum indexable insert for

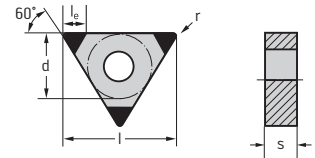
Good

Average

Poor

machining conditions

CBN – Negative triangular 60° TNGA



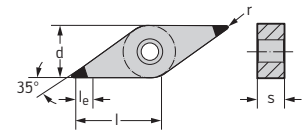
Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K		N		H			O		
							CN	BH	DP	BH	BL	BL	BL	CC	DP	
	TNGA331TS-3	TNGA160404TS-3	3	0.118	0.016	0.002–0.008	0.004–0.079	⊕	⊕							
	TNGA332TS-3	TNGA160408TS-3	3	0.110	0.031	0.002–0.010	0.004–0.079	⊕	⊕							
	TNGA331TM-3	TNGA160404TM-3	3	0.118	0.016	0.002–0.008	0.004–0.020				⊕	⊕	⊕	⊕		
	TNGA332TM-3	TNGA160408TM-3	3	0.110	0.031	0.002–0.008	0.004–0.020				⊕	⊕	⊕	⊕	⊕	

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

CBN – Negative rhombic 35° VNGA



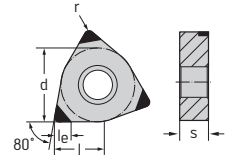
Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K		N		H			O		
							CN	BH	DP	BH	BL	BL	BL	CC	DP	
	VNGA331TS-2	VNGA160404TS-2	2	0.118	0.016	0.002–0.008	0.004–0.079	⊕	⊕							
	VNGA332TS-2	VNGA160408TS-2	2	0.110	0.031	0.002–0.010	0.004–0.079	⊕	⊕							
	VNGA331TM-2	VNGA160404TM-2	2	0.118	0.016	0.002–0.008	0.004–0.020				⊕	⊕	⊕	⊕		
	VNGA332TM-2	VNGA160408TM-2	2	0.110	0.031	0.002–0.008	0.004–0.020				⊕	⊕	⊕	⊕	⊕	

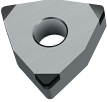

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

CBN – Negative Trigon 80° WNGA



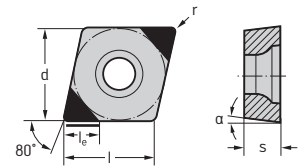
Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l_e in	r in	f in	a_p in	K		N		S		H			O		
							CN		DP		BH		BL			CC		DP
							WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10	DP
 WNGA432TS-3	WNGA080408TS-3	3	0.110	0.031	0.002–0.010	0.004–0.079	☉											
 WNGA432TM-3	WNGA080408TM-3	3	0.110	0.031	0.002–0.010	0.004–0.039						☉	☉	☉				

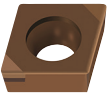

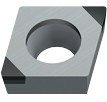
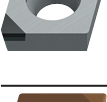
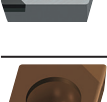
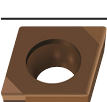

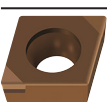


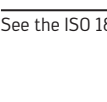

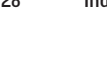

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

CBN – Positive rhombic 80° CCGW



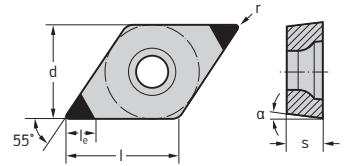
Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K		N		S		H			O		
								CN		DP		BH		BL			CC		DP
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10	DP
 CCGW3(2.5)1TS-MW2	CCGW09T304TS-MW2	2	0.110	0.016	7°	0.002–0.008	0.004–0.020					☉	☉						
 CCGW3(2.5)2TM-MW2	CCGW09T308TM-MW2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020					☉	☉						
 CCGW2(1.5)0.5EM-2	CCGW060202EM-2	2	0.110	0.008	7°	0.002–0.006	0.004–0.012					☉							
 CCGW2(1.5)1EM-2	CCGW060204EM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.012					☉							
 CCGW3(2.5)1EM-2	CCGW09T304EM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.020					☉							
 CCGW3(2.5)2EM-2	CCGW09T308EM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020					☉							
 CCGW2(1.5)0.5TS-2	CCGW060202TS-2	2	0.110	0.008	7°	0.002–0.006	0.004–0.012	☉				☉	☉						
 CCGW2(1.5)1TS-2	CCGW060204TS-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.012	☉											
 CCGW2(1.5)2TS-2	CCGW060208TS-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020	☉											
 CCGW3(2.5)1TS-2	CCGW09T304TS-2	2	0.110	0.016	7°	0.002–0.006	0.004–0.020	☉											
 CCGW3(2.5)2TS-2	CCGW09T308TS-2	2	0.106	0.031	7°	0.002–0.008	0.004–0.020	☉											
 CCGW2(1.5)1TM-2	CCGW060204TM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.012					☉	☉	☉	☉				
 CCGW2(1.5)2TM-2	CCGW060208TM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020					☉	☉	☉	☉				
 CCGW3(2.5)1TM-2	CCGW09T304TM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.020					☉	☉	☉	☉				
CCGW3(2.5)2TM-2	CCGW09T308TM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020					☉	☉	☉	☉				

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

CBN – Positive rhombic 55° DCGW

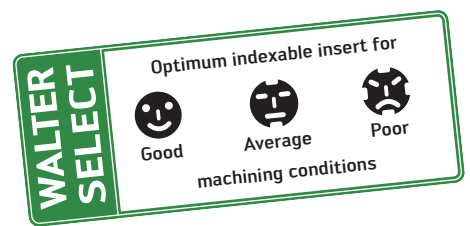


Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l _e in	r in	α	f in	a _p in	K		N		S		H			O	
								CN	BH	DP	BH	WBH10C	BL		CC	DP		
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10
	DCGW2(1.5)0.5EM-2	DCGW070202EM-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.012				☺						
	DCGW2(1.5)1EM-2	DCGW070204EM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.012				☺						
	DCGW3(2.5)1EM-2	DCGW11T304EM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.020				☺						
	DCGW3(2.5)2EM-2	DCGW11T308EM-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020				☺						
	DCGW2(1.5)0.5TS-2	DCGW070202TS-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.012	☺			☺	☺					
	DCGW2(1.5)1TS-2	DCGW070204TS-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.012	☺			☺	☺					
	DCGW2(1.5)2TS-2	DCGW070208TS-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020	☺			☺	☺					
	DCGW3(2.5)0.5TS-2	DCGW11T302TS-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.020	☺			☺	☺					
	DCGW3(2.5)1TS-2	DCGW11T304TS-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.020	☺			☺	☺					
	DCGW3(2.5)2TS-2	DCGW11T308TS-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020	☺			☺	☺					
	DCGW2(1.5)0.5TM-2	DCGW070202TM-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.012						☺				
	DCGW2(1.5)1TM-2	DCGW070204TM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.012					☺	☺	☺			
	DCGW2(1.5)2TM-2	DCGW070208TM-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020					☺	☺	☺			
	DCGW3(2.5)0.5TM-2	DCGW11T302TM-2	2	0.118	0.008	7°	0.002–0.006	0.004–0.020						☺	☺	☺		
	DCGW3(2.5)1TM-2	DCGW11T304TM-2	2	0.114	0.016	7°	0.002–0.008	0.004–0.020						☺	☺	☺	☺	
	DCGW3(2.5)2TM-2	DCGW11T308TM-2	2	0.110	0.031	7°	0.002–0.010	0.004–0.020						☺	☺	☺	☺	

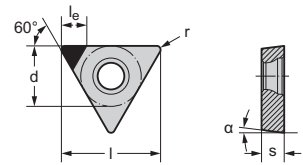
See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content



☺ ☺ ☺ / ★ New addition to the product range

CBN – Positive triangular 60° TCGW



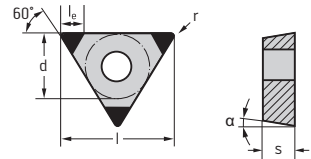
Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K			N		S			H			O	
								CN		BH		DP	BH		BL			CC		DP
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10		
TCGW1.2(1.2)0.5TS-1	TCGW06T102TS-1	1	0.094	0.008	7°	0.002–0.006	0.004–0.012	☒												
TCGW1.2(1.2)0.5TS-1	TCGW06T102TS-1	1	0.094	0.008	7°	0.001–0.005	0.004–0.012													
TCGW1.2(1.2)1TS-1	TCGW06T104TS-1	1	0.086	0.016	7°	0.002–0.006	0.004–0.012	☒												
TCGW1.2(1.2)1TS-1	TCGW06T104TS-1	1	0.086	0.016	7°	0.001–0.005	0.004–0.012													

See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si_3N_4
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

CBN – Positive triangular 60° TCGW



Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K			N		S			H			O	
								CN		BH		DP	BH		BL			CC		DP
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10		
TCGW2(1.5)0.5TS-3	TCGW110202TS-3	3	0.110	0.008	7°	0.002–0.006	0.004–0.012	☒												
TCGW2(1.5)1TS-3	TCGW110204TS-3	3	0.122	0.016	7°	0.002–0.008	0.004–0.012	☒												
TCGW2(1.5)1TM-3	TCGW110204TM-3	3	0.122	0.016	7°	0.002–0.008	0.004–0.012													
TCGW2(1.5)2TM-3	TCGW110208TM-3	3	0.110	0.031	7°	0.002–0.010	0.004–0.020													

See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si_3N_4
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

WALTER SELECT

Optimum indexable insert for

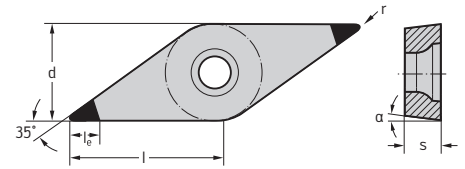
☺
Good

☹
Average

☹
Poor

machining conditions

CBN – Positive rhombic 35° VBGW



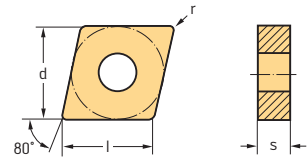
Indexable inserts

Designation	Designation	Number of cutting edges	l _e in	r in	α	f in	a _p in	K		N		S		H			O					
								CN		BH		DP		BH		BL			CC		DP	
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10	DP			
	VBGW331TS-2	VBGW160404TS-2	2	0.118	0.016	5°	0.002–0.008	0.004–0.020														
	VBGW332TS-2	VBGW160408TS-2	2	0.118	0.031	5°	0.002–0.010	0.004–0.020														
	VBGW221TM-2	VBGW110304TM-2	2	0.118	0.016	5°	0.002–0.008	0.004–0.020														
	VBGW3(3)0.5TM-2	VBGW160402TM-2	2	0.134	0.008	5°	0.002–0.010	0.004–0.020														
	VBGW331TM-2	VBGW160404TM-2	2	0.118	0.016	5°	0.002–0.008	0.004–0.020														
	VBGW332TM-2	VBGW160408TM-2	2	0.118	0.031	5°	0.002–0.010	0.004–0.020														



See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

Ceramic – Negative rhombic 80° CNGA



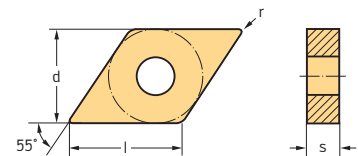
Indexable inserts

ANSI Designation	Designation	r in	f in	a _p in	K			N		S			H			O	
					CN			DP		BH			BL			CC	
					WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10		
 Wiper	CNGA431SM-MWS	CNGA120404SM-MWS	0.016	0.002–0.010	0.004–0.020												
	CNGA432SM-MWS	CNGA120408SM-MWS	0.031	0.002–0.012	0.004–0.040												☹
	CNGA433SM-MWS	CNGA120412SM-MWS	0.047	0.002–0.014	0.004–0.040												☹
	CNGA431SM-S	CNGA120404SM-S	0.016	0.002–0.008	0.004–0.020												☹
	CNGA432SM-S	CNGA120408SM-S	0.031	0.002–0.010	0.004–0.040												☹
	CNGA433SM-S	CNGA120412SM-S	0.047	0.002–0.012	0.004–0.040												☹

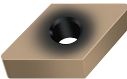
See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

Ceramic – Negative rhombic 55° DNGA

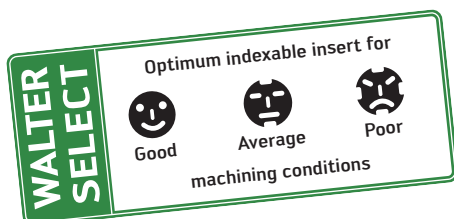


Indexable inserts

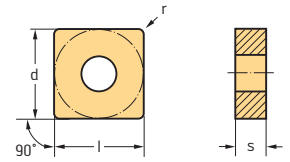
ANSI Designation	Designation	r in	f in	a _p in	K			N		S			H			O	
					CN			DP		BH			BL			CC	
					WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10		
	DNGA431SM-S	DNGA150404SM-S	0.016	0.002–0.008	0.004–0.020												
	DNGA432SM-S	DNGA150408SM-S	0.031	0.002–0.010	0.004–0.039												☹
	DNGA433SM-S	DNGA150412SM-S	0.047	0.002–0.012	0.004–0.039												☹
	DNGA441SM-S	DNGA150604SM-S	0.016	0.002–0.008	0.004–0.020												☹
	DNGA442SM-S	DNGA150608SM-S	0.031	0.002–0.010	0.004–0.039												☹
	DNGA443SM-S	DNGA150612SM-S	0.047	0.002–0.012	0.004–0.039												☹

See the ISO 1832 designation key for dimensions


CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic



Ceramic – Negative square SNGA



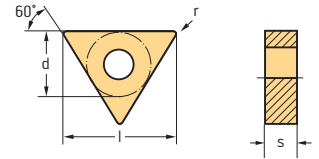
Indexable inserts

ANSI Designation	Designation	r in	f in	a _p in	K		N		S		H			O		
					CN		DP		BH		BL			CC		DP
					WCK10	WBK20	WBK30	WDN10	WDS10	WBS10	WBH10	WBH20	WBH30	WCH10C	WDN10	
 SNGA432SM-S	SNGA120408SM-S	0.031	0.002–0.012	0.004–0.039												
SNGA433SM-S	SNGA120412SM-S	0.047	0.002–0.012	0.004–0.039												

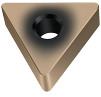
See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

Ceramic – Negative triangular 60° TNGA



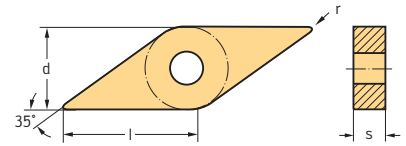
Indexable inserts

ANSI Designation	Designation	r in	f in	a _p in	K		N		S		H			O		
					CN		DP		BH		BL			CC		DP
					WCK10	WBK20	WBK30	WDN10	WDS10	WBS10	WBH10	WBH20	WBH30	WCH10C	WDN10	
 TNGA331SM-S	TNGA160404SM-S	0.016	0.002–0.008	0.004–0.020												
TNGA332SM-S	TNGA160408SM-S	0.031	0.002–0.010	0.004–0.039												
TNGA333SM-S	TNGA160412SM-S	0.047	0.002–0.012	0.004–0.039												


See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

Ceramic – Negative rhombic 35° VNGA



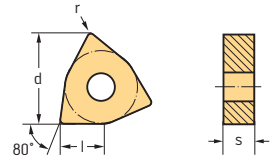
Indexable inserts

ANSI Designation	Designation	r in	f in	a _p in	K		N		S		H			O		
					CN		DP		BH		BL			CC		DP
					WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10	
 VNGA331SM-S	VNGA160404SM-S	0.016	0.002–0.008	0.004–0.020												
VNGA332SM-S	VNGA160408SM-S	0.031	0.002–0.009	0.004–0.020												
VNGA333SM-S	VNGA160412SM-S	0.047	0.002–0.010	0.004–0.028												

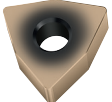
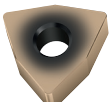
See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

Ceramic – Negative Trigon 80° WNGA

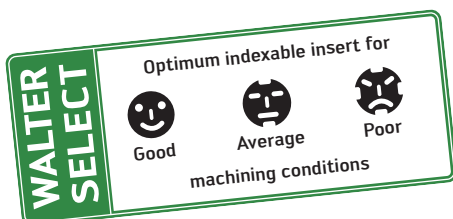


Indexable inserts

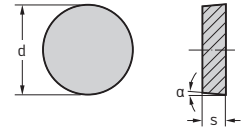
ANSI Designation	Designation	r in	f in	a _p in	K		N		S		H			O		
					CN		DP		BH		BL			CC		DP
					WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WCH10C	WDN10	
 WNGA431SM-MWS	WNGA080404SM-MWS	0.016	0.002–0.010	0.004–0.020												
WNGA432SM-MWS	WNGA080408SM-MWS	0.031	0.002–0.012	0.004–0.039												
Wiper																
 WNGA431SM-S	WNGA080404SM-S	0.016	0.002–0.008	0.004–0.020												
WNGA432SM-S	WNGA080408SM-S	0.031	0.002–0.010	0.004–0.039												

See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic



Ceramic – Positive round RPGN



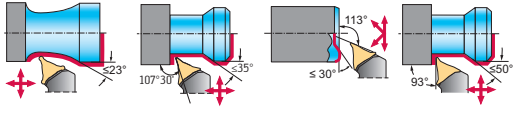
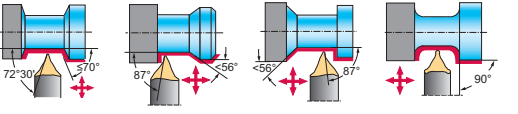





Indexable inserts

ANSI Designation	Designation	d in	α	f in	a_p in	K		N	S	H				O		
						CN		DP	BH	CN	BL				CC	DP
						WCK10	WBK20	WBK30	WDN10	WBS10	WIS10	WBH10C	WBH10	WBH20	WBH30	WCH10C
	RPGN32E	RPGN090300E	0.375	11°	0.004–0.008	0.004–0.094				☺						
	RPGN43E	RPGN120400E	0.499	11°	0.004–0.012	0.004–0.141				☺						
	RPGN32T01020	RPGN090300T01020	0.375	11°	0.004–0.010	0.008–0.094				☺						
	RPGN43T01020	RPGN120400T01020	0.499	11°	0.004–0.013	0.008–0.141				☺						

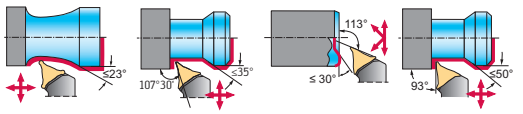


See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content
 CC = Coated ceramic

Walter Turn turning tools product range overview – External machining Square shank turning toolholders – WL copy turning system

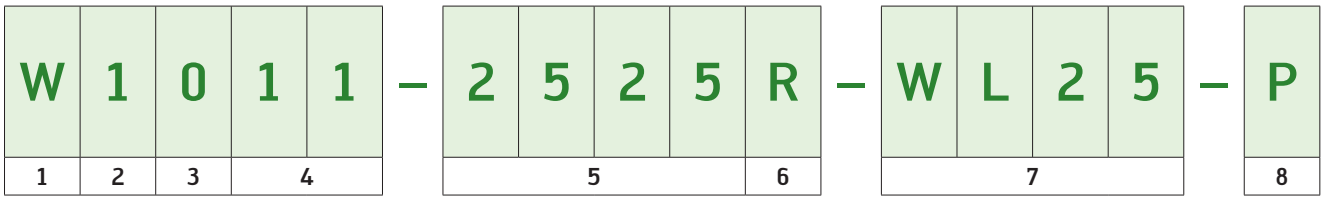
Machining				
Type				
Designation	W1011	W1011...-P	W1010...-P	
Clamping system	Screw	Screw	Screw	
Coolant supply	External	Precision cooling	Precision cooling	
Shank size h [mm]	16–25	19–25	19–25	
Shank size h [inch]	—	0.750–1.000	0.750–1.000	
Insert size l [mm]	25	25	25	
Page	38	40	44	
				

Walter Turn turning tools product range overview – External machining Walter Capto™ turning toolholders – WL copy turning system

Machining	
Type	
Designation	W1011-C...-P
Lead angle κ	107.5°
Clamping system	Screw
Coolant supply	Precision cooling
Walter Capto™ size	C4–C6
Insert size l [mm]	25
Page	48
	

Designation key for Walter Turn system tools – External machining

Example:

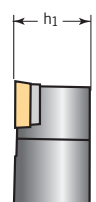
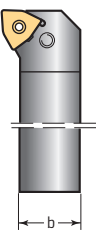


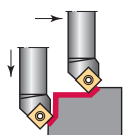
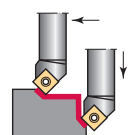
1
Tool group
<p>W Walter Turning</p>


2
Generation
<p>1 Walter Lock</p>


3
Application
<p>0 External machining</p>

4
Tool type
<p>10 0° angle (72.5°)</p> <p>11 35° angle (107°)</p>

5
Shank size
 <p>Height 25 25 mm (0.984 in)</p>
 <p>Width 25 25 mm (0.984 in)</p>

6
Version
 <p>R Right-hand</p>
 <p>L Left-hand</p>

7
Type of indexable insert
<p>WL25</p>  <p>25 mm (0.984 in)</p>

8
Cooling
<p>– P Precision cooling</p> 

Shank tool – copy turning system

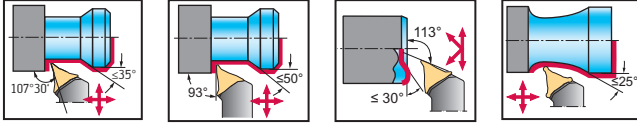
W1011

Walter Turn



Left-hand

Right-hand



Tool		Designation		h = h ₁ mm	b mm	f mm	l ₁ mm	l ₄ mm	γ	λ _s	Type
		★ W1011-1616R-WL25		25	16	20	100	33.5	0°	0°	WL25..
		★ W1011-2020R-WL25		25	20	25	125	33.5	0°	0°	
		★ W1011-2525R-WL25		25	25	32	150	33.5	0°	0°	
		★ W1011-1616L-WL25		25	16	20	100	33.5	0°	0°	
		★ W1011-2020L-WL25		25	20	25	125	33.5	0°	0°	
		★ W1011-2525L-WL25		25	25	32	150	33.5	0°	0°	

Fig. shows right-hand version

Measured with master insert: WL25-VC0708N
 For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type		WL25..
	Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 5.0 Nm
	Torx key	FS1464 (Torx 20IP)

Indexable inserts

Designation	r mm	l _{e1} mm	f mm	a _p mm	P			M			K		S		
					HC			HC			HC		HC		
					WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S
	WL25-RC0420N-MU6	2		0.12-0.40	0.5-2.0	☞				☞	☞			☞	☞
	WL25-RC0525N-MU6	2.5		0.12-0.45	0.5-2.5	☞				☞	☞			☞	☞
	WL25-VC0704L-FM4	0.4	3.9	0.05-0.20	0.1-2.0					☞	☞			☞	☞
	WL25-VC0708L-FM4	0.8	4.6	0.08-0.25	0.2-2.0					☞	☞			☞	☞
	WL25-VC0704L-FP4	0.4	3.9	0.05-0.20	0.1-2.0	☞	☞								
	WL25-VC0708L-FP4	0.8	4.6	0.08-0.25	0.2-2.0	☞	☞								
	WL25-VC0704L-MM4	0.4	3.9	0.08-0.25	0.4-2.5			☞	☞						☞
	WL25-VC0708L-MM4	0.8	4.6	0.12-0.32	0.5-2.5			☞	☞						☞
	WL25-VC0704L-MP4	0.4	3.9	0.08-0.25	0.4-2.5	☞	☞								
	WL25-VC0708L-MP4	0.8	4.6	0.12-0.32	0.5-2.5	☞	☞								
	WL25-VC0704N-FM4	0.4		0.05-0.20	0.1-2.0					☞	☞			☞	☞
	WL25-VC0708N-FM4	0.8		0.08-0.25	0.2-2.0					☞	☞			☞	☞
	WL25-VC0704N-FP4	0.4		0.05-0.20	0.1-2.0	☞	☞								
	WL25-VC0708N-FP4	0.8		0.08-0.25	0.2-2.0	☞	☞								
	WL25-VC0704N-MM4	0.4		0.08-0.25	0.4-2.5			☞	☞	☞	☞			☞	☞
	WL25-VC0708N-MM4	0.8		0.12-0.32	0.5-2.5			☞	☞	☞	☞			☞	☞
	WL25-VC0712N-MM4	1.2		0.12-0.35	0.5-2.5					☞	☞			☞	☞
	WL25-VC0716N-MM4	1.6		0.12-0.40	0.5-2.5					☞	☞			☞	☞
	WL25-VC0704N-MP4	0.4		0.08-0.25	0.4-2.5	☞	☞								
	WL25-VC0708N-MP4	0.8		0.12-0.32	0.5-2.5	☞	☞								
	WL25-VC0712N-MP4	1.2		0.12-0.35	0.5-2.5	☞	☞								
	WL25-VC0716N-MP4	1.6		0.12-0.40	0.5-2.5	☞	☞								
	WL25-VC0704R-FM4	0.4	3.9	0.05-0.20	0.1-2.0					☞	☞			☞	☞
	WL25-VC0708R-FM4	0.8	4.6	0.08-0.25	0.2-2.0					☞	☞			☞	☞
	WL25-VC0704R-FP4	0.4	3.9	0.05-0.20	0.1-2.0	☞	☞								
	WL25-VC0708R-FP4	0.8	4.6	0.08-0.25	0.2-2.0	☞	☞								
	WL25-VC0704R-MM4	0.4	3.9	0.08-0.25	0.4-2.5			☞	☞						☞
	WL25-VC0708R-MM4	0.8	4.6	0.12-0.32	0.5-2.5			☞	☞						☞
	WL25-VC0704R-MP4	0.4	3.9	0.08-0.25	0.4-2.5	☞	☞								
	WL25-VC0708R-MP4	0.8	4.6	0.12-0.32	0.5-2.5	☞	☞								

HC = Coated carbide

Shank tool – copy turning system

W1011...-P

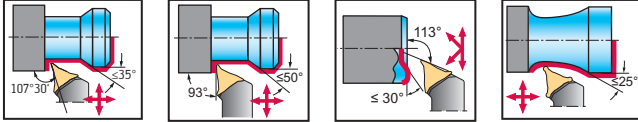
Walter Turn



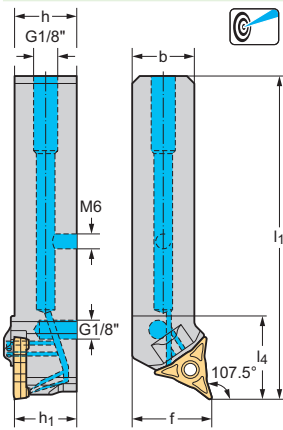
Left-hand

Right-hand

- Precision cooling



Tool



Designation		h = h ₁ mm	b mm	f mm	l ₁ mm	l ₄ mm	γ	λ _s	Type
W1011-2020R-WL25-P		25	20	25	115	33.5	0°	0°	WL25..
W1011-2525R-WL25-P		25	25	32	130	33.5	0°	0°	
W1011-2020L-WL25-P		25	20	25	115	33.5	0°	0°	
W1011-2525L-WL25-P		25	25	32	130	33.5	0°	0°	

Fig. shows right-hand version

Measured with master insert: WL25-VC0708N

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"

For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"

The maximum recommended coolant pressure is 150 bar (2175 psi)

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

Assembly parts

Type	WL25..
Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 5.0 Nm
G 1/8" threaded plug	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)
Torx key	FS1464 (Torx 20IP)

Indexable inserts

Designation	r mm	le1 mm	f mm	ap mm	P			M			K		S			
					HC			HC			HC			HC		
					WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S
WL25-RC0420N-MU6	2		0.12-0.40	0.5-2.0	⊗											
	WL25-RC0525N-MU6	2.5		0.12-0.45	0.5-2.5	⊗										
	WL25-VC0704L-FM4	0.4	3.9	0.05-0.20	0.1-2.0				⊗	⊗				⊗	⊗	
	WL25-VC0708L-FM4	0.8	4.6	0.08-0.25	0.2-2.0				⊗	⊗				⊗	⊗	
	WL25-VC0704L-FP4	0.4	3.9	0.05-0.20	0.1-2.0	⊗	⊗									
	WL25-VC0708L-FP4	0.8	4.6	0.08-0.25	0.2-2.0	⊗	⊗									
	WL25-VC0704L-MM4	0.4	3.9	0.08-0.25	0.4-2.5			⊗	⊗							⊗
	WL25-VC0708L-MM4	0.8	4.6	0.12-0.32	0.5-2.5			⊗	⊗							⊗
	WL25-VC0704L-MP4	0.4	3.9	0.08-0.25	0.4-2.5	⊗	⊗									
	WL25-VC0708L-MP4	0.8	4.6	0.12-0.32	0.5-2.5	⊗	⊗									
	WL25-VC0704N-FM4	0.4		0.05-0.20	0.1-2.0				⊗	⊗				⊗	⊗	
	WL25-VC0708N-FM4	0.8		0.08-0.25	0.2-2.0				⊗	⊗				⊗	⊗	
	WL25-VC0704N-FP4	0.4		0.05-0.20	0.1-2.0	⊗	⊗									
	WL25-VC0708N-FP4	0.8		0.08-0.25	0.2-2.0	⊗	⊗									
	WL25-VC0704N-MM4	0.4		0.08-0.25	0.4-2.5			⊗	⊗					⊗	⊗	
	WL25-VC0708N-MM4	0.8		0.12-0.32	0.5-2.5			⊗	⊗					⊗	⊗	
	WL25-VC0712N-MM4	1.2		0.12-0.35	0.5-2.5				⊗	⊗				⊗	⊗	
	WL25-VC0716N-MM4	1.6		0.12-0.40	0.5-2.5				⊗	⊗				⊗	⊗	
	WL25-VC0704N-MP4	0.4		0.08-0.25	0.4-2.5	⊗	⊗									
	WL25-VC0708N-MP4	0.8		0.12-0.32	0.5-2.5	⊗	⊗									
	WL25-VC0712N-MP4	1.2		0.12-0.35	0.5-2.5	⊗	⊗									
	WL25-VC0716N-MP4	1.6		0.12-0.40	0.5-2.5	⊗	⊗									
	WL25-VC0704R-FM4	0.4	3.9	0.05-0.20	0.1-2.0				⊗	⊗				⊗	⊗	
	WL25-VC0708R-FM4	0.8	4.6	0.08-0.25	0.2-2.0				⊗	⊗				⊗	⊗	
	WL25-VC0704R-FP4	0.4	3.9	0.05-0.20	0.1-2.0	⊗	⊗									
	WL25-VC0708R-FP4	0.8	4.6	0.08-0.25	0.2-2.0	⊗	⊗									
	WL25-VC0704R-MM4	0.4	3.9	0.08-0.25	0.4-2.5			⊗	⊗							⊗
	WL25-VC0708R-MM4	0.8	4.6	0.12-0.32	0.5-2.5			⊗	⊗							⊗
	WL25-VC0704R-MP4	0.4	3.9	0.08-0.25	0.4-2.5	⊗	⊗									
	WL25-VC0708R-MP4	0.8	4.6	0.12-0.32	0.5-2.5	⊗	⊗									

HC = Coated carbide

Shank tool – copy turning system

W1011...-P **inch**

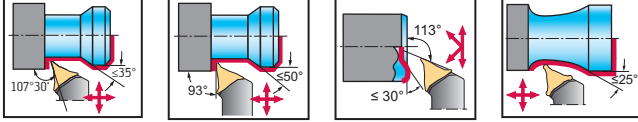
Walter Turn



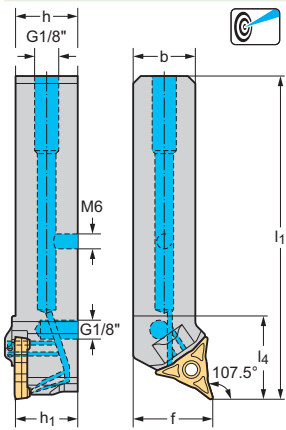
Left-hand

Right-hand

– Precision cooling



Tool



Designation



$h = h_1$
inch

b
inch

f
inch

l_1
inch

l_4
inch

γ

λ_s

Type

Designation	$h = h_1$ inch	b inch	f inch	l_1 inch	l_4 inch	γ	λ_s	Type
W1011.12R-WL25-P	0.500	0.750	1.000	4.500	1.319	0°	0°	WL25..
W1011.16R-WL25-P	0.500	1.000	1.250	6.000	1.319	0°	0°	
W1011.12L-WL25-P	0.500	0.750	1.000	4.500	1.319	0°	0°	
W1011.16L-WL25-P	0.500	1.000	1.250	6.000	1.319	0°	0°	

Fig. shows right-hand version

Measured with master insert: WL25-VC0708N

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s , see "Technical information – ISO turning"

For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"

The maximum recommended coolant pressure is 150 bar (2175 psi)

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

Assembly parts

Type	WL25..
Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 44 in lbs
G 1/8" threaded plug	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)
Torx key	FS1464 (Torx 20IP)

Indexable inserts

Designation	r in	le1 in	f in	ap in	P			M			K		S				
					HC	WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	HC	WKK10S	WKK20S	WSM10S	WSM20S
WL25-RC0420N-MU6	0.079		0.005-0.016	0.020-0.079													
	WL25-RC0525N-MU6	0.098		0.005-0.018	0.020-0.098												
	WL25-VC0704L-FM4	0.016	0.154	0.002-0.008	0.004-0.079												
	WL25-VC0708L-FM4	0.031	0.181	0.003-0.010	0.008-0.079												
	WL25-VC0704L-FP4	0.016	0.154	0.002-0.008	0.004-0.079												
	WL25-VC0708L-FP4	0.031	0.181	0.003-0.010	0.008-0.079												
	WL25-VC0704L-MM4	0.016	0.154	0.003-0.010	0.016-0.098												
	WL25-VC0708L-MM4	0.031	0.181	0.005-0.013	0.020-0.098												
	WL25-VC0704L-MP4	0.016	0.154	0.003-0.010	0.016-0.098												
	WL25-VC0708L-MP4	0.031	0.181	0.005-0.013	0.020-0.098												
	WL25-VC0704N-FM4	0.016		0.002-0.008	0.004-0.079												
	WL25-VC0708N-FM4	0.031		0.003-0.010	0.008-0.079												
	WL25-VC0704N-FP4	0.016		0.002-0.008	0.004-0.079												
	WL25-VC0708N-FP4	0.031		0.003-0.010	0.008-0.079												
	WL25-VC0704N-MM4	0.016		0.003-0.010	0.016-0.098												
	WL25-VC0708N-MM4	0.031		0.005-0.013	0.020-0.098												
	WL25-VC0712N-MM4	0.047		0.005-0.014	0.020-0.098												
	WL25-VC0716N-MM4	0.063		0.005-0.016	0.020-0.098												
	WL25-VC0704N-MP4	0.016		0.003-0.010	0.016-0.098												
	WL25-VC0708N-MP4	0.031		0.005-0.013	0.020-0.098												
	WL25-VC0712N-MP4	0.047		0.005-0.014	0.020-0.098												
	WL25-VC0716N-MP4	0.063		0.005-0.016	0.020-0.098												
	WL25-VC0704R-FM4	0.016	0.154	0.002-0.008	0.004-0.079												
	WL25-VC0708R-FM4	0.031	0.181	0.003-0.010	0.008-0.079												
	WL25-VC0704R-FP4	0.016	0.154	0.002-0.008	0.004-0.079												
	WL25-VC0708R-FP4	0.031	0.181	0.003-0.010	0.008-0.079												
	WL25-VC0704R-MM4	0.016	0.154	0.003-0.010	0.016-0.098												
	WL25-VC0708R-MM4	0.031	0.181	0.005-0.013	0.020-0.098												
	WL25-VC0704R-MP4	0.016	0.154	0.003-0.010	0.016-0.098												
	WL25-VC0708R-MP4	0.031	0.181	0.005-0.013	0.020-0.098												

HC = Coated carbide

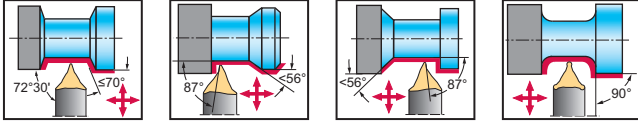
Shank tool – copy turning system

W1010...-P mm

Walter Turn



– Precision cooling



Tool		Designation		$h = h_1$ mm	b mm	f mm	l_1 mm	l_4 mm	γ	λ_s	Type
		★ W1010-2020N-WL25-P		25	20	10	115	33.5	0°	0°	WL25..
		★ W1010-2525N-WL25-P		25	25	13	130	33.5	0°	0°	

Measured with master insert: WL25-VC0708N
 For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s , see "Technical information – ISO turning"
 For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
 The maximum recommended coolant pressure is 150 bar (2175 psi)
 Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range

Assembly parts

Type	WL25..
Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 5.0 Nm
G 1/8" threaded plug	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)
Torx key	FS1464 (Torx 20IP)

Indexable inserts

Designation	r mm	l _{e1} mm	f mm	a _p mm	P			M			K		S					
					HC	WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	HC	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S
WL25-RC0420N-MU6 WL25-RC0525N-MU6	2		0.12–0.40	0.5–2.0														
	2.5		0.12–0.45	0.5–2.5														
WL25-VC0704L-FM4 WL25-VC0708L-FM4 WL25-VC0704L-FP4 WL25-VC0708L-FP4 WL25-VC0704L-MM4 WL25-VC0708L-MM4 WL25-VC0704L-MP4 WL25-VC0708L-MP4	0.4	3.9	0.05–0.20	0.1–2.0														
	0.8	4.6	0.08–0.25	0.2–2.0														
	0.4	3.9	0.05–0.20	0.1–2.0														
	0.8	4.6	0.08–0.25	0.2–2.0														
	0.4	3.9	0.08–0.25	0.4–2.5														
	0.8	4.6	0.12–0.32	0.5–2.5														
	0.4	3.9	0.08–0.25	0.4–2.5														
	0.8	4.6	0.12–0.32	0.5–2.5														
WL25-VC0704N-FM4 WL25-VC0708N-FM4 WL25-VC0704N-FP4 WL25-VC0708N-FP4 WL25-VC0704N-MM4 WL25-VC0708N-MM4 WL25-VC0712N-MM4 WL25-VC0716N-MM4 WL25-VC0704N-MP4 WL25-VC0708N-MP4 WL25-VC0712N-MP4 WL25-VC0716N-MP4	0.4		0.05–0.20	0.1–2.0														
	0.8		0.08–0.25	0.2–2.0														
	0.4		0.05–0.20	0.1–2.0														
	0.8		0.08–0.25	0.2–2.0														
	0.4		0.08–0.25	0.4–2.5														
	0.8		0.12–0.32	0.5–2.5														
	1.2		0.12–0.35	0.5–2.5														
	1.6		0.12–0.40	0.5–2.5														
	0.4		0.08–0.25	0.4–2.5														
	0.8		0.12–0.32	0.5–2.5														
	1.2		0.12–0.35	0.5–2.5														
	1.6		0.12–0.40	0.5–2.5														
WL25-VC0704R-FM4 WL25-VC0708R-FM4 WL25-VC0704R-FP4 WL25-VC0708R-FP4 WL25-VC0704R-MM4 WL25-VC0708R-MM4 WL25-VC0704R-MP4 WL25-VC0708R-MP4	0.4	3.9	0.05–0.20	0.1–2.0														
	0.8	4.6	0.08–0.25	0.2–2.0														
	0.4	3.9	0.05–0.20	0.1–2.0														
	0.8	4.6	0.08–0.25	0.2–2.0														
	0.4	3.9	0.08–0.25	0.4–2.5														
	0.8	4.6	0.12–0.32	0.5–2.5														
	0.4	3.9	0.08–0.25	0.4–2.5														
	0.8	4.6	0.12–0.32	0.5–2.5														

HC = Coated carbide

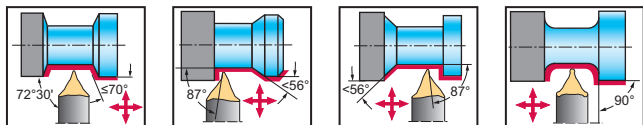
Shank tool – copy turning system

W1010...-P inch

Walter Turn



– Precision cooling



Tool

		Designation		h = h ₁ inch	b inch	f inch	l ₁ inch	l ₄ inch	γ	λ _s	Type
		★ W1010.12N-WL25-P	0.500	0.750	0.750	0.375	4.500	1.319	0°	0°	WL25..
		★ W1010.16N-WL25-P	0.500	1.000	1.000	0.500	6.000	1.319	0°	0°	

Measured with master insert: WL25-VC0708N
 For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
 For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
 The maximum recommended coolant pressure is 150 bar (2175 psi)
 Bodies and assembly parts are included in the scope of delivery.

★ New addition to the product range

Assembly parts

Type	WL25..
Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 44 in lbs
G 1/8" threaded plug	FS2258 (SW 5)
M6 threaded plug	FS2288 (SW 3)
Torx key	FS1464 (Torx 20IP)

Indexable inserts

Designation	r in	le1 in	f in	ap in	P			M			K		S				
					HC	WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S
WL25-RC0420N-MU6 WL25-RC0525N-MU6	0.079		0.005-0.016	0.020-0.079													
	0.098		0.005-0.018	0.020-0.098													
WL25-VC0704L-FM4 WL25-VC0708L-FM4 WL25-VC0704L-FP4 WL25-VC0708L-FP4 WL25-VC0704L-MM4 WL25-VC0708L-MM4 WL25-VC0704L-MP4 WL25-VC0708L-MP4	0.016	0.154	0.002-0.008	0.004-0.079													
	0.031	0.181	0.003-0.010	0.008-0.079													
	0.016	0.154	0.002-0.008	0.004-0.079													
	0.031	0.181	0.003-0.010	0.008-0.079													
	0.016	0.154	0.003-0.010	0.016-0.098													
	0.031	0.181	0.005-0.013	0.020-0.098													
	0.016	0.154	0.003-0.010	0.016-0.098													
	0.031	0.181	0.005-0.013	0.020-0.098													
WL25-VC0704N-FM4 WL25-VC0708N-FM4 WL25-VC0704N-FP4 WL25-VC0708N-FP4 WL25-VC0704N-MM4 WL25-VC0708N-MM4 WL25-VC0712N-MM4 WL25-VC0716N-MM4 WL25-VC0704N-MP4 WL25-VC0708N-MP4 WL25-VC0712N-MP4 WL25-VC0716N-MP4	0.016		0.002-0.008	0.004-0.079													
	0.031		0.003-0.010	0.008-0.079													
	0.016		0.002-0.008	0.004-0.079													
	0.031		0.003-0.010	0.008-0.079													
	0.016		0.003-0.010	0.016-0.098													
	0.031		0.005-0.013	0.020-0.098													
	0.047		0.005-0.014	0.020-0.098													
	0.063		0.005-0.016	0.020-0.098													
	0.016		0.003-0.010	0.016-0.098													
	0.031		0.005-0.013	0.020-0.098													
	0.047		0.005-0.014	0.020-0.098													
	0.063		0.005-0.016	0.020-0.098													
WL25-VC0704R-FM4 WL25-VC0708R-FM4 WL25-VC0704R-FP4 WL25-VC0708R-FP4 WL25-VC0704R-MM4 WL25-VC0708R-MM4 WL25-VC0704R-MP4 WL25-VC0708R-MP4	0.016	0.154	0.002-0.008	0.004-0.079													
	0.031	0.181	0.003-0.010	0.008-0.079													
	0.016	0.154	0.002-0.008	0.004-0.079													
	0.031	0.181	0.003-0.010	0.008-0.079													
	0.016	0.154	0.003-0.010	0.016-0.098													
	0.031	0.181	0.005-0.013	0.020-0.098													
	0.016	0.154	0.003-0.010	0.016-0.098													
	0.031	0.181	0.005-0.013	0.020-0.098													

HC = Coated carbide

Turning toolholders – copy turning system

W1011-C...-P

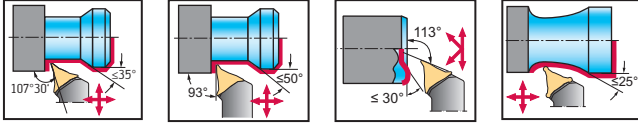
Walter Turn

- Precision cooling
- Walter Capto™



Left-hand

Right-hand



Tool	Designation		d ₁	f mm	l ₄ mm	D _{min} mm	D _{min2} mm	γ	λ _s	Type	
	Walter Capto™ in acc. with ISO 26623	★ W1011-C4R-WL25-P	25	C4	27	50	200	200	0°	0°	WL25..
	★ W1011-C5R-WL25-P	25	C5	35	60	200	200	0°	0°		
	★ W1011-C6R-WL25-P	25	C6	45	65	200	200	0°	0°		
	★ W1011-C4L-WL25-P	25	C4	27	50	200	200	0°	0°		
	★ W1011-C5L-WL25-P	25	C5	35	60	200	200	0°	0°		
	★ W1011-C6L-WL25-P	25	C6	45	65	200	200	0°	0°		

Fig. shows right-hand version

Measured with master insert: WL25-VC0708N
 For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
 For information on D_{min} and D_{min2}, see "Technical information – ISO turning"
 The maximum recommended coolant pressure is 150 bar (2175 psi)
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts


Type		WL25..
	Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 5.0 Nm
	Torx key	FS1464 (Torx 20IP)

Indexable inserts







Designation	r mm	l _{e1} mm	f mm	a _p mm	P			M			K		S				
					HC			HC			HC		HC				
					WPP10S	WPP20S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S	
	WL25-VC0704N-FM4	0.4		0.05-0.20	0.1-2.0												
	WL25-VC0708N-FM4	0.8		0.08-0.25	0.2-2.0												
	WL25-VC0704N-FP4	0.4		0.05-0.20	0.1-2.0												
	WL25-VC0708N-FP4	0.8		0.08-0.25	0.2-2.0												
	WL25-VC0704N-MM4	0.4		0.08-0.25	0.4-2.5												
	WL25-VC0708N-MM4	0.8		0.12-0.32	0.5-2.5												
	WL25-VC0712N-MM4	1.2		0.12-0.35	0.5-2.5												
	WL25-VC0716N-MM4	1.6		0.12-0.40	0.5-2.5												
	WL25-VC0704N-MP4	0.4		0.08-0.25	0.4-2.5												
	WL25-VC0708N-MP4	0.8		0.12-0.32	0.5-2.5												
	WL25-VC0712N-MP4	1.2		0.12-0.35	0.5-2.5												
	WL25-VC0716N-MP4	1.6		0.12-0.40	0.5-2.5												
	WL25-VC0704R-FM4	0.4	3.9	0.05-0.20	0.1-2.0												
	WL25-VC0708R-FM4	0.8	4.6	0.08-0.25	0.2-2.0												
	WL25-VC0704R-FP4	0.4	3.9	0.05-0.20	0.1-2.0												
	WL25-VC0708R-FP4	0.8	4.6	0.08-0.25	0.2-2.0												
	WL25-VC0704R-MM4	0.4	3.9	0.08-0.25	0.4-2.5												
	WL25-VC0708R-MM4	0.8	4.6	0.12-0.32	0.5-2.5												
	WL25-VC0704R-MP4	0.4	3.9	0.08-0.25	0.4-2.5												
	WL25-VC0708R-MP4	0.8	4.6	0.12-0.32	0.5-2.5												
	WL25-VC0704L-FM4	0.4	3.9	0.05-0.20	0.1-2.0												
	WL25-VC0708L-FM4	0.8	4.6	0.08-0.25	0.2-2.0												
	WL25-VC0704L-FP4	0.4	3.9	0.05-0.20	0.1-2.0												
	WL25-VC0708L-FP4	0.8	4.6	0.08-0.25	0.2-2.0												
	WL25-VC0704L-MM4	0.4	3.9	0.08-0.25	0.4-2.5												
	WL25-VC0708L-MM4	0.8	4.6	0.12-0.32	0.5-2.5												
	WL25-VC0704L-MP4	0.4	3.9	0.08-0.25	0.4-2.5												
	WL25-VC0708L-MP4	0.8	4.6	0.12-0.32	0.5-2.5												
	WL25-RC0420N-MU6	2		0.12-0.40	0.5-2.0												
	WL25-RC0525N-MU6	2.5		0.12-0.45	0.5-2.5												

HC = Coated carbide


Walter Turn turning tools product range overview – Internal machining Boring bar/adaptor

Designation	A2140-W
Coolant supply	Axial
Boring bar diameter d_1 mm [in]	16–40 [0.630–1.575]
Sleeve diameter d_1 mm [in]	6–25 [0.236–0.984]
Page	53
	

Walter Turn turning tools product range overview – Internal machining Accure-tec vibration-damped boring bar/adaptor

Designation	A3000	A3001	A3000-C	A3001-C	A3000-HSK-T	A3001-HSK-T
Tool type	Accure-tec boring bars/adaptors					
Machine-side	Parallel shank	Parallel shank	Walter Capto™ in acc. with ISO 26623	Walter Capto™ in acc. with ISO 26623	HSK-T DIN 69893-7	HSK-T DIN 69893-7
Tool-side	Q25 / Q32 / Q40 / Q50	QL60 / QL64 / QL74 / QL80 / QL100	Q25 / Q32 / Q40 / Q50	QL60 / QL80	Q25 / Q32 / Q40 / Q50	QL60 / QL80
Boring bar diameter d_2 [mm]	25–50	60–100	25–50 [0.984–1.969]	60–80 [2.362–3.150]	25–50 [0.984–1.969]	60–80 [2.362–3.150]
Boring bar diameter d_2 [in]	1–2	2.5–4				
Boring bar length l_4 [mm]	130–470	301–953	130–468 [5.118–18.425]	301–581 [11.850–22.874]	130–468 [5.118–18.425]	301–581 [11.850–22.874]
Boring bar length l_4 [in]	5.250–18.500	12.500–37.500				
Page	54	56	58	59	60	61
						

Walter Turn turning tools product range overview – Internal machining Intermediate adaptor – QuadFit Large

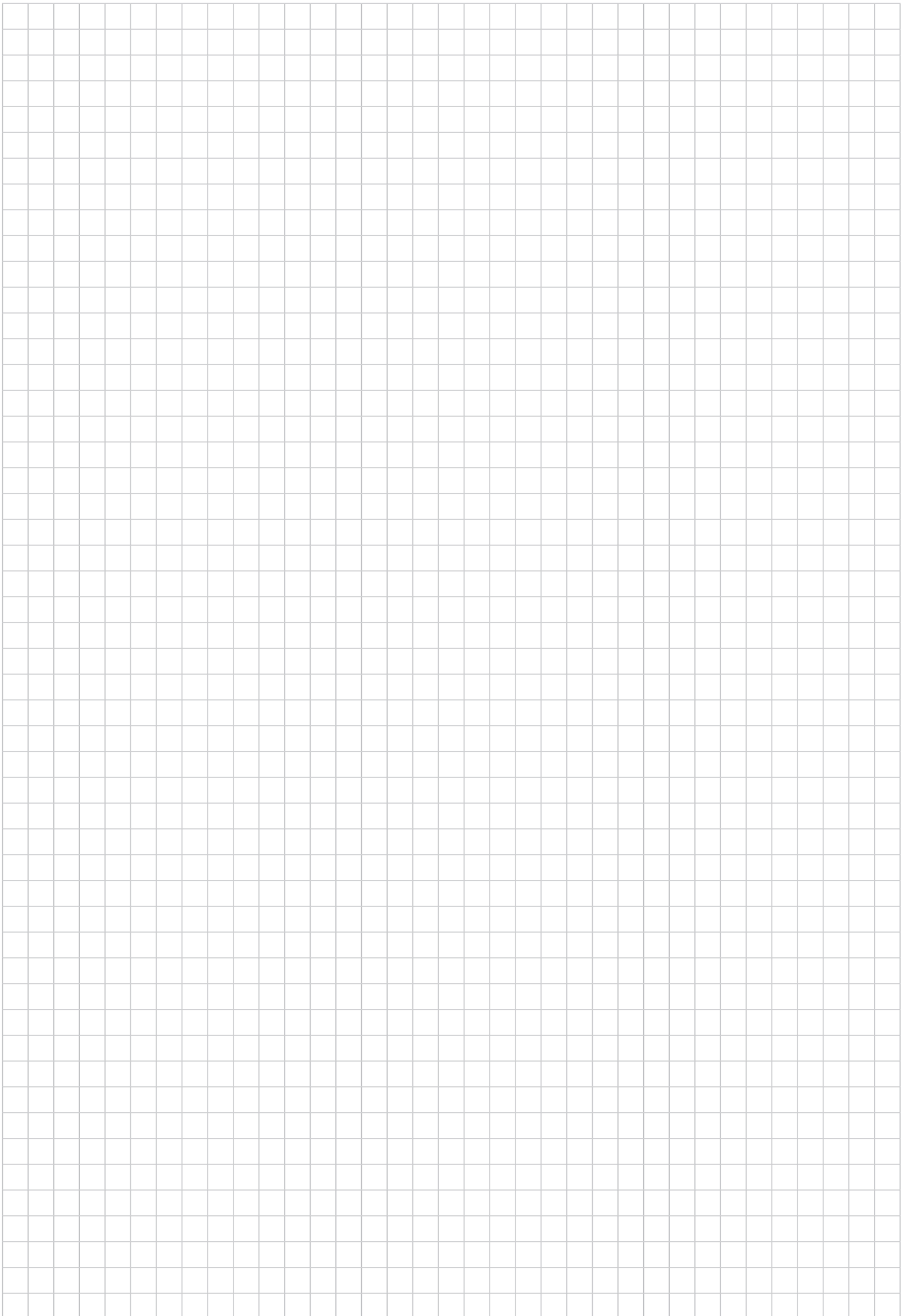
Designation	A2201
Machine-side	QuadFit Large
Tool-side	QuadFit
Page	62
	

Walter Turn turning tools product range overview – Internal machining QuadFit exchangeable head – Negative basic shape

Machining			
Type			
Designation	Q...-DCLN	Q...-DDUN	Q...-DWLN
Lead angle κ	95°	93°	95°
Clamping system	Clamp	Clamp	Clamp
Coolant supply	Internal	Internal	Internal
QuadFit size	Q32-Q50	Q32-Q50	Q32-Q50
Insert size l [mm]	12-16	11-15	6-8
Page	64	65	66

Walter Turn turning tools product range overview – Internal machining QuadFit exchangeable head – Positive basic shape

Machining						
Type						
Designation	Q...-SCLC	Q...-SDUC	Q...-SDXC	Q...-SDUC...-X	Q...-STFC	Q...-SVUB
Lead angle κ	95°	93°	62,5°	32°	91°	93°
Clamping system	Screw	Screw	Screw	Screw	Screw	Screw
Coolant supply	Internal	Internal	Internal	Internal	Internal	Internal
QuadFit size	Q25-Q50	Q25-Q50	Q25-Q50	Q25-Q50	Q25-Q50	Q25-Q50
Insert size l [mm]	9-12	11	11	11	11-16	11-16
Page	67	68	70	68	70	72

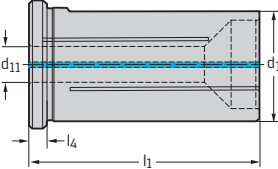


Boring bar/adaptor

A2140-W



- With Weldon shank in accordance with DIN 9766
- Self-centring for cylindrical round shank

Tool	Designation	d ₁ mm	d ₁₁ mm	l ₁ mm	l ₄ mm	kg
Parallel shank with flat in acc. with ISO 9766 	A2140-W16-R06-048	16	6	48	5	0.1
	A2140-W16-R08-048	16	8	48	5	0.1
	A2140-W16-R10-048	16	10	48	5	0.1
	A2140-W16-R12-048	16	12	48	5	0.0
	A2140-W20-R06-055	20	6	55	5	0.1
	A2140-W20-R08-055	20	8	55	5	0.1
	A2140-W20-R10-055	20	10	55	5	0.1
	A2140-W20-R12-055	20	12	55	5	0.1
	A2140-W20-R16-055	20	16	55	5	0.1
	A2140-W25-R08-061	25	8	61	5	0.2
	A2140-W25-R10-061	25	10	61	5	0.2
	A2140-W25-R12-061	25	12	61	5	0.2
	A2140-W25-R16-061	25	16	61	5	0.1
	A2140-W32-R06-065	32	6	65	5	0.3
	A2140-W32-R08-065	32	8	65	5	0.3
	A2140-W32-R10-065	32	10	65	5	0.3
	A2140-W32-R12-065	32	12	65	5	0.3
	A2140-W32-R16-065	32	16	65	5	0.3
	A2140-W32-R20-065	32	20	65	5	0.2
	A2140-W40-R06-075	40	6	75	5	0.6
	A2140-W40-R08-075	40	8	75	5	0.6
	A2140-W40-R10-075	40	10	75	5	0.6
	A2140-W40-R12-075	40	12	75	5	0.6
	A2140-W40-R16-075	40	16	75	5	0.6
	A2140-W40-R20-075	40	20	75	5	0.6
	A2140-W40-R25-075	40	25	75	5	0.5

Note: Groove for self-centring is present on all Walter Turn boring bars with fully rounded shank (-R) dia. 6–25 mm.
The maximum recommended coolant pressure is 80 bar (1160 psi)

Plain cylindrical adaptor – vibration-damped

A3000

Accure-tec



- For QuadFit exchangeable heads
- With preset vibration damping

Tool	Designation	d ₁ mm	d ₁₁	l ₄ mm	l ₅ mm	l ₁ mm	d ₁₃	kg
Parallel shank with clamping surface 	A3000-25-Q25-130	25	Q25	130	100	235	G 1/4	0.9
	A3000-25-Q25-180	25	Q25	180	100	285	G 1/4	1.1
	A3000-32-Q32-160	32	Q32	160	128	293	G 1/4	1.8
	A3000-32-Q32-224	32	Q32	224	128	357	G 1/4	2.3
	A3000-40-Q40-208	40	Q40	208	160	374	G 1/4	3.8
	A3000-40-Q40-288	40	Q40	288	160	454	G 1/4	4.6
	A3000-50-Q50-268	50	Q50	268	200	475	G 1/4	7.5
	A3000-50-Q50-368	50	Q50	368	200	575	G 1/4	9.1
Parallel shank without clamping surface 	A3000-25-Q25-230-CS	25	Q25	230	75	310	M8X1	1.7
	A3000-32-Q32-288-CS	32	Q32	288	98	389	M8X1	2.7
	A3000-40-Q40-368	40	Q40	368	160	534	G 1/4	5.5
	A3000-50-Q50-468	50	Q50	468	200	675	G 1/4	11

QuadFit exchangeable heads – see the "Turning" section

A3000...-CS = Carbide-reinforced version

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

Assembly parts	d ₁₁	Q25	Q32	Q40	Q50
	Hook wrench Tightening torque	SD9000-Q25 25 Nm	SD9000-Q32 25 Nm	SD9000-Q40 35 Nm	SD9000-Q50 55 Nm
	Coolant adaptor for CS variant	CN3001-M8-G1/4	CN3001-M8-G1/4		

Accessories	d ₁₁	Q32	Q40	Q50
	Torque wrench with hook Tightening torque	SD4000-Q32-25 25 Nm	SD4000-Q40-35 35 Nm	SD4000-Q50-55 55 Nm
	Hook for torque wrench	SD6000-Q32	SD6000-Q40	SD6000-Q50

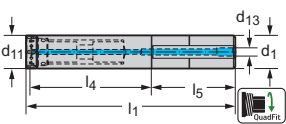
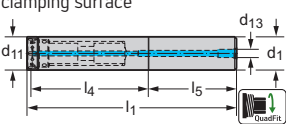
Plain cylindrical adaptor – vibration-damped

A3000 inch

Accure-tec





- For QuadFit exchangeable heads
- With preset vibration damping



Tool	Designation	d ₁ inch	d ₁₁	l ₄ inch	l ₅ inch	l ₁ inch	d ₁₃	lbs
Parallel shank with clamping surface 	A3000.16-Q25-133	1.000	Q25	5.250	4.000	9.430	G 1/4	4.37
	A3000.16-Q25-184	1.000	Q25	7.250	4.000	11.430	G 1/4	5.36
	A3000.20-Q32-165	1.250	Q32	6.500	5.000	11.713	G 1/4	3.97
	A3000.20-Q32-229	1.250	Q32	9.000	5.000	14.213	G 1/4	5.07
	A3000.24-Q40-203	1.500	Q40	8.000	6.000	14.252	G 1/4	7.72
	A3000.24-Q40-279	1.500	Q40	11.000	6.000	17.252	G 1/4	9.48
	A3000.32-Q50-267	2.000	Q50	10.500	8.000	18.791	G 1/4	16.76
	A3000.32-Q50-368	2.000	Q50	14.496	8.000	22.791	G 1/4	20.28
	Parallel shank without clamping surface 	A3000.16-Q25-235-CS	1.000	Q25	9.250	3.000	12.430	M8X1
A3000.20-Q32-292-CS		1.250	Q32	11.500	3.750	15.463	M8X1	13.12
A3000.24-Q40-356		1.500	Q40	14.000	6.000	20.252	G 1/4	11.46
A3000.32-Q50-470		2.000	Q50	18.500	8.000	26.791	G 1/4	24.69

QuadFit exchangeable heads – see the "Turning" section

A3000...-CS = Carbide-reinforced version

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

Assembly parts		d ₁₁	Q25	Q32	Q40	Q50
	Hook wrench Tightening torque		SD9000-Q25 221 in lbs	SD9000-Q32 221 in lbs	SD9000-Q40 310 in lbs	SD9000-Q50 487 in lbs
	Coolant adaptor for CS variant		CN3001-M8-G1/4	CN3001-M8-G1/4		

Accessories		d ₁₁	Q32	Q40	Q50
	Torque wrench with hook Tightening torque		SD4000-Q32-25 221 in lbs	SD4000-Q40-35 310 in lbs	SD4000-Q50-55 487 in lbs
	Hook for torque wrench		SD6000-Q32	SD6000-Q40	SD6000-Q50

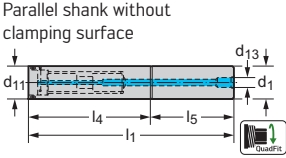
Plain cylindrical adaptor – vibration-damped

A3001

Accure-tec





- For A2201 intermediate adaptor with QuadFit interface
- With preset vibration damping

Tool	Designation	d ₁ mm	d ₁₁	l ₄ mm	l ₅ mm	l ₁ mm	d ₁₃	kg
Parallel shank without clamping surface 	★ A3001-60-QL60-301	60	QL60	301	240	541	G 3/4	12.5
	★ A3001-60-QL60-541	60	QL60	541	240	781	G 3/4	18.1
	★ A3001-80-QL80-421	80	QL80	421	320	741	G 3/4	30.2
	★ A3001-80-QL80-741	80	QL80	741	320	1061	G 3/4	43.4
	★ A3001-100-QL100-939	100	QL100	939	500	1439	G 3/4	84.7

QuadFit exchangeable heads – see the "Turning" section

A2201 intermediate adaptor – see the "Boring bars/adaptors" section

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

Assembly parts	d ₁₁	QL60	QL80	QL100
 Threaded plug Tightening torque		FS2609 11 Nm	FS2610 16 Nm	FS2611 23 Nm
 Allen key		ISO2936-4 (SW 4)	ISO2936-5 (SW 5)	ISO2936-6 (SW 6)

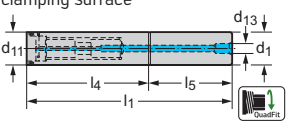
Plain cylindrical adaptor – vibration-damped

A3001 inch

Accure-tec




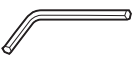
- For A2201 intermediate adaptor with QuadFit interface
- With preset vibration damping

Tool	Designation	d ₁ inch	d ₁₁	l ₄ inch	l ₅ inch	l ₁ inch	d ₁₃	lbs
Parallel shank without clamping surface 	★ A3001.40-QL64-318	2.500	QL64	12.500	10.000	22.500	G 3/4	32.41
	★ A3001.40-QL64-572	2.500	QL64	22.500	10.000	32.500	G 3/4	46.74
	★ A3001.48-QL76-394	3.000	QL74	15.500	12.000	27.500	G 3/4	57.32
	★ A3001.48-QL76-699	3.000	QL74	27.500	12.000	39.500	G 3/4	83.11
	★ A3001.64-QL100-953	4.000	QL100	37.500	20.000	57.500	G 3/4	195.55

QuadFit exchangeable heads – see the "Turning" section

A2201 intermediate adaptor – see the "Boring bars/adaptors" section

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

Assembly parts	d ₁₁	QL64	QL74	QL100
 Threaded plug Tightening torque		FS2609 97 in lbs	FS2610 142 in lbs	FS2611 204 in lbs
 Allen key		ISO2936-4 (SW 4)	ISO2936-5 (SW 5)	ISO2936-6 (SW 6)

Walter Capto™ boring bar/adaptor – vibration-damped

A3000-C mm

Accure-tec



- For QuadFit exchangeable heads
- With preset vibration damping

Tool

Designation	d ₁	d ₁₁	d ₁₂ mm	l ₄ mm	l ₁₆ mm	l ₁₇ mm	n _{max}	kg
Walter Capto™ in acc. with ISO 26623 A3000-C4-Q25-130	C4	Q25	25	130	107	110	10000	0.8
A3000-C4-Q25-180	C4	Q25	25	180	157	160	8000	1
A3000-C4-Q32-160	C4	Q32	32	160	137	140	10000	1.2
A3000-C4-Q32-224	C4	Q32	32	224	201	204	8000	1.7
A3000-C5-Q25-130	C5	Q25	25	130	107	110	10000	0.9
A3000-C5-Q25-180	C5	Q25	25	180	157	160	8000	1.1
A3000-C5-Q25-230	C5	Q25	25	230	207	210	6000	1.3
A3000-C5-Q32-160	C5	Q32	32	160	136	140	10000	1.4
A3000-C5-Q32-224	C5	Q32	32	224	200	204	8000	1.8
A3000-C5-Q32-288	C5	Q32	32	288	264	268	6000	2.2
A3000-C5-Q40-208	C5	Q40	40	208	184	188	8000	2.5
A3000-C5-Q40-288	C5	Q40	40	288	264	268	6000	3.3
A3000-C5-Q40-368	C5	Q40	40	368	344	348	5000	4.3
A3000-C6-Q25-130	C6	Q25	25	130	102	105	10000	1.3
A3000-C6-Q25-180	C6	Q25	25	180	152	155	8000	1.5
A3000-C6-Q25-230	C6	Q25	25	230	202	205	6000	1.7
A3000-C6-Q32-160	C6	Q32	32	160	129	135	10000	1.8
A3000-C6-Q32-224	C6	Q32	32	224	193	199	8000	2.1
A3000-C6-Q32-288	C6	Q32	32	288	257	263	6000	2.6
A3000-C6-Q40-208	C6	Q40	40	208	177	183	8000	2.9
A3000-C6-Q40-288	C6	Q40	40	288	257	263	6000	3.7
A3000-C6-Q40-368	C6	Q40	40	368	337	343	5000	4.5
A3000-C6-Q50-268	C6	Q50	50	268	238	243	6000	5
A3000-C6-Q50-368	C6	Q50	50	368	338	343	4000	6.6
A3000-C6-Q50-468	C6	Q50	50	468	438	443	2500	8.5
A3000-C8-Q32-224	C8	Q32	32	224	181	191	8000	3.2
A3000-C8-Q32-288	C8	Q32	32	288	245	255	6000	3.6
A3000-C8-Q40-288	C8	Q40	40	288	245	255	6000	4.7
A3000-C8-Q40-368	C8	Q40	40	368	325	335	5000	5.6
A3000-C8-Q50-268	C8	Q50	50	268	225	235	6000	5.9
A3000-C8-Q50-368	C8	Q50	50	368	325	335	4000	7.5
A3000-C8-Q50-468	C8	Q50	50	468	425	435	2500	9.4

QuadFit exchangeable heads – see the "Turning" section
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

d ₁₁	Q25	Q32	Q40	Q50
Hook wrench Tightening torque	SD9000-Q25 25 Nm	SD9000-Q32 25 Nm	SD9000-Q40 35 Nm	SD9000-Q50 55 Nm

Accessories

d ₁₁	Q32	Q40	Q50
Torque wrench with hook Tightening torque	SD4000-Q32-25 25 Nm	SD4000-Q40-35 35 Nm	SD4000-Q50-55 55 Nm
Hook for torque wrench	SD6000-Q32	SD6000-Q40	SD6000-Q50

Walter Capto™ boring bar/adaptor – vibration-damped

A3001-C

Accure-tec



- For A2201 intermediate adaptor with QuadFit interface
- With preset vibration damping

Tool	Designation	d ₁	d ₁₁	d ₁₂ mm	l ₄ mm	l ₁₆ mm	l ₁₇ mm	n _{max}	
	Walter Capto™ in acc. with ISO 26623 ★ A3001-C6-QL60-301	C6	QL60	60	301	273	276	4000	7.8
	★ A3001-C6-QL60-421	C6	QL60	60	421	393	396	3000	10.6
	★ A3001-C8-QL60-301	C8	QL60	60	301	263	268	4000	8.6
	★ A3001-C8-QL60-421	C8	QL60	60	421	383	388	3000	11.4
	★ A3001-C8-QL60-541	C8	QL60	60	541	503	508	2000	14
	★ A3001-C8-QL80-421	C8	QL80	80	421	383	388	3000	18.8
	★ A3001-C8-QL80-581	C8	QL80	80	581	543	548	2000	25.1

QuadFit exchangeable heads – see the "Turning" section
 A2201 intermediate adaptor – see the "Boring bars/adaptors" section
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts	d ₁₁	QL60	QL80
Threaded plug Tightening torque		FS2609 11 Nm	FS2610 16 Nm
Allen key		ISO2936-4 (SW 4)	ISO2936-5 (SW 5)

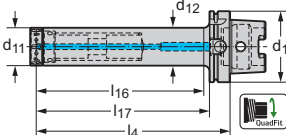
HSK-T boring bar/adaptor – vibration-damped

A3000-HSK-T

Accure-tec




- For QuadFit exchangeable heads
- With preset vibration damping



Tool	Designation	d ₁ mm	d ₁₁	d ₁₂ mm	l ₄ mm	l ₁₆ mm	l ₁₇ mm	n _{max}	kg
	HSK-T DIN 69893-7								
	A3000-H63T-Q25-130	63	Q25	25	130	101	104	10000	1.1
	A3000-H63T-Q25-180	63	Q25	25	180	151	154	8000	1.3
	A3000-H63T-Q25-230	63	Q25	25	230	201	204	6000	1.5
	A3000-H63T-Q32-160	63	Q32	32	160	128	134	10000	1.6
	A3000-H63T-Q32-224	63	Q32	32	224	192	198	8000	2
	A3000-H63T-Q40-208	63	Q40	40	208	176	182	8000	2.7
	A3000-H63T-Q40-288	63	Q40	40	288	256	262	6000	3.5
	A3000-H63T-Q50-268	63	Q50	50	268	241	242	6000	4.8
	A3000-H63T-Q50-368	63	Q50	50	368	341	342	4000	6.4
	A3000-H100T-Q32-224	100	Q32	32	224	189	195	8000	3.4
	A3000-H100T-Q32-288	100	Q32	32	288	253	259	6000	3.8
	A3000-H100T-Q40-288	100	Q40	40	288	253	259	6000	4.9
	A3000-H100T-Q40-368	100	Q40	40	368	333	339	5000	5.8
	A3000-H100T-Q50-268	100	Q50	50	268	234	239	6000	6.2
	A3000-H100T-Q50-368	100	Q50	50	368	334	339	4000	7.8
	A3000-H100T-Q50-468	100	Q50	50	468	434	439	2500	9.7

QuadFit exchangeable heads – see the "Turning" section
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	d ₁₁	Q25	Q32	Q40	Q50
	Hook wrench Tightening torque	SD9000-Q25 25 Nm	SD9000-Q32 25 Nm	SD9000-Q40 35 Nm	SD9000-Q50 55 Nm

Accessories

	d ₁₁	Q32	Q40	Q50
	Torque wrench with hook Tightening torque	SD4000-Q32-25 25 Nm	SD4000-Q40-35 35 Nm	SD4000-Q50-55 55 Nm
	Hook for torque wrench	SD6000-Q32	SD6000-Q40	SD6000-Q50


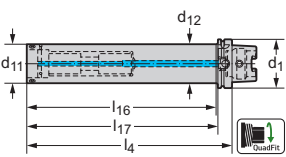
HSK-T boring bar/adaptor – vibration-damped

A3001-HSK-T

Accure-tec


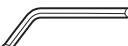


- For A2201 intermediate adaptor with QuadFit interface
- With preset vibration damping

Tool	Designation	d ₁ mm	d ₁₁	d ₁₂ mm	l ₄ mm	l ₁₆ mm	l ₁₇ mm	n _{max}	
 HSK-T DIN 69893-7	★ A3001-H100T-QL60-301	100	QL60	60	301	267	272	4000	8.9
	★ A3001-H100T-QL60-421	100	QL60	60	421	387	392	3000	11.8
	★ A3001-H100T-QL60-541	100	QL60	60	541	507	512	2000	14.5
	★ A3001-H100T-QL80-421	100	QL80	80	421	387	392	3000	19.4
	★ A3001-H100T-QL80-581	100	QL80	80	581	547	552	2000	26.2

QuadFit exchangeable heads – see the "Turning" section
 A2201 intermediate adaptor – see the "Boring bars/adaptors" section
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	d ₁₁	QL60	QL80
 Threaded plug Tightening torque		FS2609 11 Nm	FS2610 16 Nm
 Allen key		ISO2936-4 (SW 4)	ISO2936-5 (SW 5)

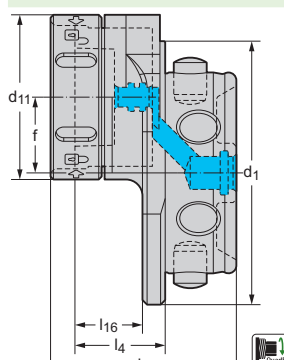
QuadFit Large intermediate adaptor

A2201


Accure-tec

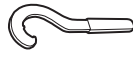



- QuadFit
- For A3001 Accure-tec boring bars

Tool	Designation	d_{11}	d_1	f mm	l_1 mm	l_4 mm	l_{16} mm	kg
	★ A2201-QL60-05-27-Q50	Q50	QL60	5	50.4	27	21.5	0.6
	★ A2201-QL60-10-27-Q50	Q50	QL60	10	50.4	27	21.5	0.6
	★ A2201-QL80-15-27-Q50	Q50	QL80	15	56.4	27	21.5	0.9
	★ A2201-QL80-23-27-Q50	Q50	QL80	23	56.4	27	21.5	0.9
	★ A2201-QL100-28-29-Q50	Q50	QL100	28	61.4	29	21.5	1.5
	★ A2201-QL100-38-29-Q50	Q50	QL100	38	61.4	29	21.5	1.5

QuadFit exchangeable heads – see the "Turning" section
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts	d_{11}	Q50
	Hook wrench Tightening torque	SD9000-Q50 55 Nm

Accessories	d_{11}	Q50
	Torque wrench with hook Tightening torque	SD4000-Q50-55 55 Nm
	Hook for torque wrench	SD6000-Q50

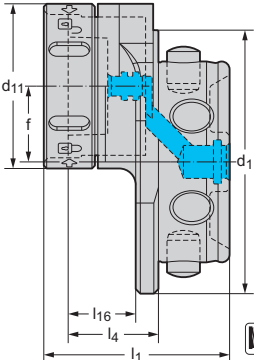
QuadFit Large intermediate adaptor

A2201 inch




Accure-tec



- QuadFit
- For A3001 Accure-tec boring bars

Tool	Designation	d_{11}	d_1	f inch	l_1 inch	l_4 inch	l_{16} inch	lbs
	★ A2201.QL64-07-27-Q50	Q50	QL64	0.266	1.988	1.063	0.846	2.2
	★ A2201.QL64-12-27-Q50	Q50	QL64	0.463	1.988	1.063	0.846	2.2
	★ A2201.QL76-13-27-Q50	Q50	QL76	0.516	2.228	1.063	0.846	2.2
	★ A2201.QL76-21-27-Q50	Q50	QL76	0.831	2.228	1.063	0.846	2.2

QuadFit exchangeable heads – see the "Turning" section
 Bodies and assembly parts are included in the scope of delivery.

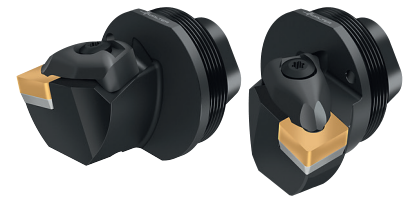
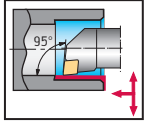
Assembly parts		d_{11}	Q50
	Hook wrench Tightening torque		SD9000-Q50 487 in lbs
Accessories		d_{11}	Q50
	Torque wrench with hook Tightening torque		SD4000-Q50-55 487 in lbs
	Hook for torque wrench		SD6000-Q50

Exchangeable head – rigid clamping

Q...-DCLN

Walter Turn

- QuadFit
- For Accure-tec boring bars



Left-hand

Right-hand



Tool

Designation		d_1	D_{min} in	f in	l_4 in	D_{min} mm	f mm	l_4 mm	γ	λ_s	Type	
Q32-DCLNR-22032-12		12	Q32	1.575	0.866	1.260	40	22	32	-6°	-10°	CN .. 43. CN .. 1204 ..
Q40-DCLNR-27032-12		12	Q40	1.969	1.063	1.260	50	27	32	-6°	-10°	
Q50-DCLNR-32032-12		12	Q50	2.480	1.260	1.260	63	32	32	-6°	-8°	
Q50-DCLNR-32037-16		16	Q50	2.480	1.260	1.457	63	32	37	-5°	-14°	CN .. 54. CN .. 1606 ..
Q32-DCLNL-22032-12		12	Q32	1.575	0.866	1.260	40	22	32	-6°	-10°	CN .. 43. CN .. 1204 ..
Q40-DCLNL-27032-12		12	Q40	1.969	1.063	1.260	50	27	32	-6°	-10°	
Q50-DCLNL-32032-12		12	Q50	2.480	1.260	1.260	63	32	32	-6°	-8°	
Q50-DCLNL-32037-16		16	Q50	2.480	1.260	1.457	63	32	37	-5°	-14°	CN .. 54. CN .. 1606 ..

Fig. shows right-hand version

Measured with master insert: CN .. 432

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s , see "Technical information – ISO turning"
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Type	CN .. 43. CN .. 1204 ..	CN .. 54. CN .. 1606 ..
Shim	AP354-CN12	AP302-CN16
Screw for shim Tightening torque	FS1461 (Torx 15IP) 22 in lbs (2.5 Nm)	FS1463 (Torx 20IP) 44 in lbs (5.0 Nm)
Clamp	PK241	PK242
Clamp screw Tightening torque	FS1473 (Torx 15IP) 35 in lbs (3.9 Nm)	FS1474 (Torx 20IP) 57 in lbs (6.4 Nm)
Pressure spring	FS1470	FS1471
Pin	RS117	RS117
Torx key	FS1465 (Torx 15IP /SW 3.5)	FS1464 (Torx 20IP)

Accessories

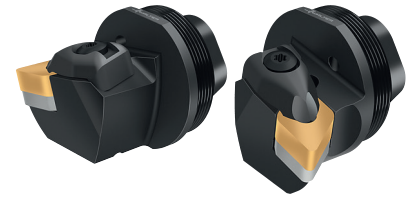
Type	CN .. 43. CN .. 1204 ..	CN .. 54. CN .. 1606 ..
Clamp set (standard assembly parts)	PK241 SET	PK242 SET
Carbide clamp set Insert with bore	PK245 SET	PK246 SET
Carbide clamp set Insert without bore	PK254 SET	

Exchangeable head – rigid clamping

Q...-DDUN

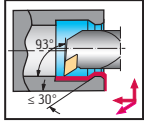
Walter Turn

- QuadFit
- For Accure-tec boring bars



Left-hand

Right-hand



Tool	Designation		d ₁	D _{min} in	f in	l ₄ in	D _{min} mm	f mm	l ₄ mm	γ	λ _s	Type	
	Q32-DDUNR-22032-11		11	Q32	1.575	0.866	1.260	40	22	32	-6°	-10°	DN .. 33.
	Q40-DDUNR-27032-11		11	Q40	1.969	1.063	1.260	50	27	32	-5°	-10°	DN .. 1104 ..
	Q32-DDUNR-22032-15		15	Q32	1.575	0.862	1.260	40	21.9	32	-6°	-14°	DN .. 44. DN .. 1506 ..
	Q40-DDUNR-27032-15		15	Q40	1.969	1.063	1.260	50	27	32	-6°	-12°	
	Q50-DDUNR-32032-15		15	Q50	2.480	1.260	1.260	63	32	32	-6°	-12°	
	Q32-DDUNL-22032-11		11	Q32	1.575	0.866	1.260	40	22	32	-6°	-10°	DN .. 33.
	Q40-DDUNL-27032-11		11	Q40	1.969	1.063	1.260	50	27	32	-5°	-10°	DN .. 1104 ..
	Q32-DDUNL-22032-15		15	Q32	1.575	0.862	1.260	40	21.9	32	-6°	-14°	DN .. 44. DN .. 1506 ..
	Q40-DDUNL-27032-15		15	Q40	1.969	1.063	1.260	50	27	32	-6°	-12°	
	Q50-DDUNL-32032-15		15	Q50	2.480	1.260	1.260	63	32	32	-6°	-12°	

Fig. shows right-hand version

Measured with master insert: DN .. 442/DN .. 332

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
Bodies and assembly parts are included in the scope of delivery.

Assembly parts	Type	DN .. 33. DN .. 1104 ..	DN .. 44. DN .. 1506 ..
	Shim	AP305-DN11	AP304-DN15
	Screw for shim Tightening torque	FS1462 (Torx 9IP) 13 in lbs (1.5 Nm)	FS1461 (Torx 15IP) 22 in lbs (2.5 Nm)
	Clamp	PK240	PK241
	Clamp screw Tightening torque	FS1472 (Torx 9IP) 15 in lbs (1.7 Nm)	FS1473 (Torx 15IP) 35 in lbs (3.9 Nm)
	Pressure spring	FS1469	FS1470
	Pin	RS116	RS117
	Torx key	FS1466 (Torx 9IP)	FS1465 (Torx 15IP / SW 3.5)

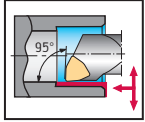
Accessories	Type	DN .. 33. DN .. 1104 ..	DN .. 44. DN .. 1506 ..
	Carbide clamp set Insert with bore		PK245 SET
	Clamp set (standard assembly parts)	PK240 SET	PK241 SET
	Carbide clamp set Insert without bore		PK254 SET
	Shim for DN .. 1504 ..		AP304-DN1504

Exchangeable head – rigid clamping

Q...-DWLN

Walter Turn

- QuadFit
- For Accure-tec boring bars



Left-hand

Right-hand



Tool	Designation		d_1	D_{min} in	f in	l_4 in	D_{min} mm	f mm	l_4 mm	γ	λ_s	Type
	Q32-DWLN-22032-06	6	Q32	1.575	0.866	1.260	40	22	32	-5°	-12°	WN .. 33. WN .. 0604 ..
	Q32-DWLN-22035-08	8	Q32	1.575	0.866	1.378	40	22	35	-5°	-14°	WN .. 43. WN .. 0804 ..
	Q40-DWLN-27037-08	8	Q40	1.969	1.063	1.457	50	27	37	-5°	-12°	
	Q50-DWLN-32038-08	8	Q50	2.480	1.260	1.496	63	32	38	-5°	-12°	
	Q32-DWLN-22032-06	6	Q32	1.575	0.866	1.260	40	22	32	-5°	-12°	WN .. 33. WN .. 0604 ..
	Q32-DWLN-22035-08	8	Q32	1.575	0.866	1.378	40	22	35	-5°	-14°	WN .. 43. WN .. 0804 ..
	Q40-DWLN-27037-08	8	Q40	1.969	1.063	1.457	50	27	37	-5°	-12°	
	Q50-DWLN-32038-08	8	Q50	2.480	1.260	1.496	63	32	38	-5°	-12°	

Fig. shows right-hand version

Measured with master insert: WN .. 432/WN .. 332

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s , see "Technical information – ISO turning"
Bodies and assembly parts are included in the scope of delivery.

Assembly parts	Type	WN .. 33. WN .. 0604 ..	WN .. 43. WN .. 0804 ..
	Shim	AP306-WN06	AP331-WN08
	Screw for shim Tightening torque	FS1462 (Torx 9IP) 13 in lbs (1.5 Nm)	FS1461 (Torx 15IP) 22 in lbs (2.5 Nm)
	Clamp	PK240	PK241
	Clamp screw Tightening torque	FS1472 (Torx 9IP) 15 in lbs (1.7 Nm)	FS1473 (Torx 15IP) 35 in lbs (3.9 Nm)
	Pressure spring	FS1469	FS1470
	Pin	RS116	RS117
	Torx key	FS1466 (Torx 9IP)	FS1465 (Torx 15IP /SW 3.5)

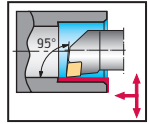
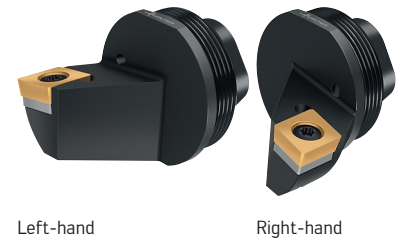
Accessories	Type	WN .. 33. WN .. 0604 ..	WN .. 43. WN .. 0804 ..
	Clamp set (standard assembly parts)	PK240 SET	PK241 SET
	Carbide clamp set Insert with bore		PK245 SET
	Carbide clamp set Insert without bore		PK254 SET

Exchangeable head – screw clamping

Q...-SCLC

Walter Turn

- QuadFit
- For Accure-tec boring bars



Tool	Designation		d ₁	D _{min} in	f in	l ₄ in	D _{min} mm	f mm	l ₄ mm	γ	λ _s	Type
	Q25-SCLCR-17020-09	9	Q25	1.260	0.669	0.787	32	17	20	0°	-3°	CC .. 3(2.5). CC .. 09T3 ..
	Q32-SCLCR-22032-09	9	Q32	1.575	0.866	1.260	40	22	32	0°	-2°	
	Q40-SCLCR-27032-09	9	Q40	1.969	1.063	1.260	50	27	32	0°	-2°	
	Q50-SCLCR-32032-09	9	Q50	2.480	1.260	1.260	63	32	32	0°	-2°	CC .. 43 . CC .. 1204 ..
	Q32-SCLCR-22032-12	12	Q32	1.575	0.866	1.260	40	22	32	0°	-8°	
	Q40-SCLCR-27032-12	12	Q40	1.969	1.063	1.260	50	27	32	0°	-8°	
	Q50-SCLCR-32032-12	12	Q50	2.480	1.260	1.260	63	32	32	0°	-9°	CC .. 3(2.5). CC .. 09T3 ..
	Q25-SCLCL-17020-09	9	Q25	1.260	0.669	0.787	32	17	20	0°	-3°	
	Q32-SCLCL-22032-09	9	Q32	1.575	0.866	1.260	40	22	32	0°	-2°	
	Q40-SCLCL-27032-09	9	Q40	1.969	1.063	1.260	50	27	32	0°	-2°	CC .. 43 . CC .. 1204 ..
	Q50-SCLCL-32032-09	9	Q50	2.480	1.260	1.260	63	32	32	0°	-2°	
	Q32-SCLCL-22032-12	12	Q32	1.575	0.866	1.260	40	22	32	0°	-8°	
	Q40-SCLCL-27032-12	12	Q40	1.969	1.063	1.260	50	27	32	0°	-8°	CC .. 43 . CC .. 1204 ..
	Q50-SCLCL-32032-12	12	Q50	2.480	1.260	1.260	63	32	32	0°	-9°	

Fig. shows right-hand version

Measured with master insert: CC.. 3(2.5)2 / CC.. 432
 For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
 Bodies and assembly parts are included in the scope of delivery.

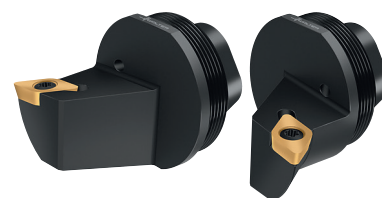
Assembly parts	Type	CC .. 3(2.5). CC .. 09T3 ..	CC .. 3(2.5). CC .. 09T3 ..	CC .. 43 . CC .. 1204 ..
	Clamping screw for indexable insert Tightening torque	FS1461 (Torx 15IP) 22 in lbs (2.5 Nm)	FS2062 (Torx 15IP) 27 in lbs (3.0 Nm)	FS2281 (Torx 20IP) 44 in lbs (5.0 Nm)
	Shim			AP364-CC1208
	Screw for shim			FS2592 (SW 5)
	Torx key	FS1465 (Torx 15IP /SW 3.5)	FS1465 (Torx 15IP /SW 3.5)	
	Allen key			FS1464 (Torx 20IP)
	Allen key for shim			ISO2936-5 (SW 5)

Exchangeable head – screw clamping

Q...-SDUC

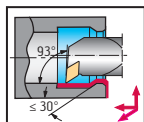
Walter Turn

- QuadFit
- For Accure-tec boring bars



Left-hand

Right-hand



Tool	Designation		d_1	D_{min} in	f in	l_4 in	D_{min} mm	f mm	l_4 mm	γ	λ_s	Type	
	Q25-SDUCR-17020-11	11	Q25	1.260	0.669	0.787	32	17	20	0°	-6°	DC .. 3(2.5). DC .. 11T3 ..	
	Q32-SDUCR-22032-11	11	Q32	1.575	0.866	1.260	40	22	32	0°	-5°		
	Q40-SDUCR-27032-11	11	Q40	1.969	1.063	1.260	50	27	32	0°	-5°		
	Q50-SDUCR-32032-11	11	Q50	2.480	1.260	1.260	63	32	32	0°	-5°		
	Q25-SDUCL-17020-11	11	Q25	1.260	0.669	0.787	32	17	20	0°	-6°		
	Q32-SDUCL-22032-11	11	Q32	1.575	0.866	1.260	40	22	32	0°	-5°		
	Q40-SDUCL-27032-11	11	Q40	1.969	1.063	1.260	50	27	32	0°	-5°		
	Q50-SDUCL-32032-11	11	Q50	2.480	1.260	1.260	63	32	32	0°	-5°		

Fig. shows right-hand version

Measured with master insert: DC .. 3(2.5)2

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s , see "Technical information – ISO turning"
Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	Type	DC .. 3(2.5). DC .. 11T3 ..
	Clamping screw for indexable insert Tightening torque	FS1461 (Torx 15IP) 22 in lbs (2.5 Nm)
	Torx key	FS1465 (Torx 15IP /SW 3.5)

Exchangeable head – screw clamping

Q...-SDUC...-X

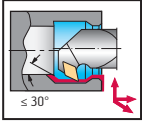
Walter Turn

- QuadFit
- For Accure-tec boring bars



Left-hand

Right-hand



Tool		Designation		d ₁	D _{min} in	f in	l ₄ in	l ₂₀ in	X ₁ in	D _{min} mm	f mm	l ₄ mm	l ₂₀ mm	X ₁ mm	γ	λ _s	Type	
		Q25-SDUCR-17012-11X		11	Q25	1.260	0.669	0.472	0.965	0.177	32	17	12	24.5	4.5	0°	-6°	DC .. 3(2.5). DC .. 11T3 ..
		Q32-SDUCR-22018-11X		11	Q32	1.575	0.862	0.709	1.476	0.232	40	21.9	18	37.5	5.9	0°	-5°	
		Q40-SDUCR-27017-11X		11	Q40	1.969	1.059	0.669	1.594	0.272	50	26.9	17	40.5	6.9	0°	-5°	
		Q50-SDUCR-32017-11X		11	Q50	2.480	1.260	0.669	1.673	0.272	63	32	17	42.5	6.9	0°	-5°	
		Q25-SDUCL-17012-11X		11	Q25	1.260	0.669	0.472	0.965	0.177	32	17	12	24.5	4.5	0°	-6°	
		Q32-SDUCL-22018-11X		11	Q32	1.575	0.862	0.709	1.476	0.232	40	21.9	18	37.5	5.9	0°	-5°	
		Q40-SDUCL-27017-11X		11	Q40	1.969	1.059	0.669	1.594	0.272	50	26.9	17	40.5	6.9	0°	-5°	
	Q50-SDUCL-32017-11X		11	Q50	2.480	1.260	0.669	1.673	0.272	63	32	17	42.5	6.9	0°	-5°		

Fig. shows right-hand version

Measured with master insert: DC .. 3(2.5)2

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"
Bodies and assembly parts are included in the scope of delivery.

Assembly parts		Type	DC .. 3(2.5). DC .. 11T3 ..
	Clamping screw for indexable insert Tightening torque		FS1461 (Torx 15IP) 22 in lbs (2.5 Nm)
	Torx key		FS1465 (Torx 15IP / SW 3.5)

Exchangeable head – screw clamping

Q...-SDXC

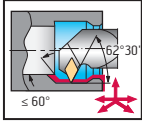
Walter Turn

- QuadFit
- For Accure-tec boring bars

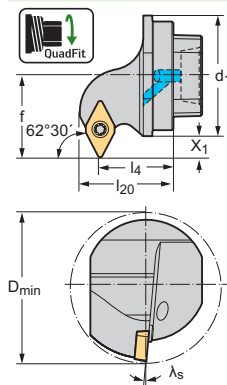


Left-hand

Right-hand



Tool



Designation		d ₁	D _{min} in	f in	l ₄ in	l ₂₀ in	X ₁ in	D _{min} mm	f mm	l ₄ mm	l ₂₀ mm	X ₁ mm	γ	λ _s	Type	
Q25-SDXCR-17018-11	11	Q25	1.260	0.669	0.709	0.957	0.177	32	17	18	24.3	4.5	0°	-6°	DC .. 3(2.5). DC .. 11T3 ..	
Q32-SDXCR-22025-11	11	Q32	1.575	0.862	0.984	1.476	0.232	40	21.9	25	37.5	5.9	0°	-5°		
Q40-SDXCR-27025-11	11	Q40	1.969	1.059	0.984	1.594	0.272	50	26.9	25	40.5	6.9	0°	-5°		
Q50-SDXCR-32025-11	11	Q50	2.480	1.256	0.984	1.673	0.272	63	31.9	25	42.5	6.9	0°	-5°		
Q25-SDXCL-17018-11	11	Q25	1.260	0.669	0.709	0.957	0.177	32	17	18	24.3	4.5	0°	-6°		
Q32-SDXCL-22025-11	11	Q32	1.575	0.862	0.984	1.476	0.232	40	21.9	25	37.5	5.9	0°	-5°		
Q40-SDXCL-27025-11	11	Q40	1.969	1.059	0.984	1.594	0.272	50	26.9	25	40.5	6.9	0°	-5°		
Q50-SDXCL-32025-11	11	Q50	2.480	1.256	0.984	1.673	0.272	63	31.9	25	42.5	6.9	0°	-5°		

Fig. shows right-hand version

Measured with master insert: DC .. 3(2.5)2

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s, see "Technical information – ISO turning"

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

Assembly parts



Type

Clamping screw for indexable insert
Tightening torque

DC .. 3(2.5).
DC .. 11T3 ..

FS1461 (Torx 15IP)
22 in lbs (2.5 Nm)



Torx key

FS1465 (Torx 15IP /SW 3.5)

Exchangeable head – screw clamping

Q...-STFC

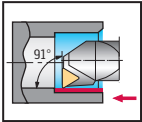
Walter Turn

- QuadFit
- For Accure-tec boring bars



Left-hand

Right-hand



Tool	Designation		d_1	D_{min} in	f in	l_4 in	D_{min} mm	f mm	l_4 mm	γ	λ_s	Type
	Q25-STFCR-17020-11	11	Q25	1.260	0.669	1.005	32	17	25.5	0°	-3°	TC .. 2(1.5). TC .. 1102 ..
	Q32-STFCR-22032-16	16	Q32	1.575	0.866	1.260	40	22	32	0°	-10°	TC .. 3(2.5). TC .. 16T3 ..
	Q40-STFCR-27032-16	16	Q40	1.969	1.063	1.260	50	27	32	0°	-8°	
	Q50-STFCR-32032-16	16	Q50	2.480	1.260	1.260	63	32	32	0°	-8°	
	Q25-STFCL-17020-11	11	Q25	1.260	0.669	1.004	32	17	25.5	0°	-3°	TC .. 2(1.5). TC .. 1102 ..
	Q32-STFCL-22032-16	16	Q32	1.575	0.866	1.260	40	22	32	0°	-10°	TC .. 3(2.5). TC .. 16T3 ..
	Q40-STFCL-27032-16	16	Q40	1.969	1.063	1.260	50	27	32	0°	-8°	
	Q50-STFCL-32032-16	16	Q50	2.480	1.260	1.260	63	32	32	0°	-8°	

Fig. shows right-hand version

Measured with master insert: TC .. 3(2.5)2
 For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s , see "Technical information – ISO turning"
 Bodies and assembly parts are included in the scope of delivery.

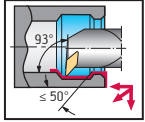
Assembly parts	Type	TC .. 3(2.5) . TC .. 16T3 ..	TC .. 2(1.5) . TC .. 1102 ..
	Clamping screw for indexable insert Tightening torque	FS2063 (Torx 15IP) 27 in lbs (3.0 Nm)	FS2061 (Torx 7IP) 8 in lbs (0.9 Nm)
	Shim for radius	AP317-TC1612 $r \leq 1.2$ mm	
	Screw for shim	FS2068 (SW 3.5)	
	Torx key	FS1465 (Torx 15IP / SW 3.5)	FS1490 (Torx 7IP)

Exchangeable head – screw clamping

Q...-SVUB

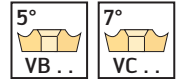
Walter Turn

- QuadFit
- For Accure-tec boring bars



Left-hand

Right-hand



Tool	Designation		d_1	D_{min} in	f in	l_4 in	D_{min} mm	f mm	l_4 mm	γ	λ_s	Type
	Q25-SVUBR-17020-11	11	Q25	1.260	0.669	0.788	32	17	20	0°	-4°	VB .. 22 .. VB .. 1103 .. VC .. 22 .. VC .. 1103 ..
	Q32-SVUBR-22032-16	16	Q32	1.575	0.866	1.260	40	22	32	0°	-3°	VB .. 33 .. VB .. 1604 .. VC .. 33 .. VC .. 1604 ..
	Q40-SVUBR-27032-16	16	Q40	1.969	1.059	1.260	50	26.9	32	0°	-3°	VB .. 33 .. VB .. 1604 .. VC .. 33 .. VC .. 1604 ..
	Q50-SVUBR-32032-16	16	Q50	2.480	1.256	1.260	63	31.9	32	0°	-3°	VB .. 33 .. VB .. 1604 .. VC .. 33 .. VC .. 1604 ..
	Q25-SVUBL-17020-11	11	Q25	1.260	0.669	0.787	32	17	20	0°	-4°	VB .. 22 .. VB .. 1103 .. VC .. 22 .. VC .. 1103 ..
	Q32-SVUBL-22032-16	16	Q32	1.575	0.866	1.260	40	22	32	0°	-3°	VB .. 33 .. VB .. 1604 .. VC .. 33 .. VC .. 1604 ..
	Q40-SVUBL-27032-16	16	Q40	1.969	0.272	1.260	50	6.9	32	0°	-3°	VB .. 33 .. VB .. 1604 .. VC .. 33 .. VC .. 1604 ..
	Q50-SVUBL-32032-16	16	Q50	2.480	1.256	1.260	63	31.9	32	0°	-3°	VB .. 33 .. VB .. 1604 .. VC .. 33 .. VC .. 1604 ..

Fig. shows right-hand version

Measured with master insert: VB .. 332

For information on the rake angle γ (for indexable inserts without chip groove) and on the inclination angle λ_s , see "Technical information – ISO turning"

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

Assembly parts	Type	VB .. 22 .. VB .. 1103 .. VC .. 22 .. VC .. 1103 ..	VB .. 33 .. VB .. 1604 .. VC .. 33 .. VC .. 1604 ..
	Clamping screw for indexable insert Tightening torque	FS2061 (Torx 7IP) 8 in lbs (0.9 Nm)	FS2063 (Torx 15IP) 27 in lbs (3.0 Nm)
	Shim for radius		AP316-VB1608 $r \leq 0.8$ mm
	Screw for shim		FS2068 (SW 3.5)
	Torx key	FS1490 (Torx 7IP)	FS1465 (Torx 15IP / SW 3.5)



Cutting data for turning inserts

1. Cermet and carbide grades

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

Material group	Overview of the main material groups and code letters		Brinell hardness HB	Tensile strength PSI x 1000	Machining group ¹			Cutting material grades					
								Starting values for cutting speed v_c [sfm]					
								HE WEPI0C f [inch/rev]					
			0.004	0.008	0.012								
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	63	P1	●●	●	980	820	660		
		C > 0.25% to ≤ 0.55%	Annealed	190	93	P2	●●	●	750	660	590		
		C > 0.25% to ≤ 0.55%	Heat-treated	210	103	P3	●●	●	690	590	490		
		C > 0.55%	Annealed	190	93	P4	●●	●	720	660	590		
		C > 0.55%	Heat-treated	300	146	P5	●●	●	590	490			
		Free-machining steel (short-chipping)	Annealed	220	109	P6	●●	●	750	660	590		
	Low-alloy steel	Annealed		175	86	P7	●●	●	690	590	490		
		Heat-treated		285	139	P8	●●	●	490	430	360		
		Heat-treated		380	186	P9	●●	●					
		Heat-treated		430	215	P10	●●	●					
	High-alloy steel and high-alloy tool steel	Annealed		200	99	P11	●●	●	520	460	430		
		Hardened and tempered		300	146	P12	●●	●					
		Hardened and tempered		380	186	P13	●●	●					
	Stainless steel	Ferritic/martensitic, annealed		200	99	P14	●●	●					
		Martensitic, heat-treated		330	161	P15	●●	●					
M	Stainless steel	Austenitic, quench hardened		200	99	M1	●●	●	690	620	520		
		Austenitic, precipitation hardened (PH)		300	146	M2	●●	●	490	430	360		
		Austenitic/ferritic, duplex		230	113	M3	●●	●	520	460	360		
K	Malleable cast iron	Ferritic		200	58	K1	●●	●	720	660	590		
		Pearlitic		260	102	K2	●●	●	620	560	490		
	Grey cast iron	Low tensile strength		180	29	K3	●●	●	1380	1280	1180		
		High tensile strength/austenitic		245	51	K4	●●	●	720	660	590		
	Cast iron with spheroidal graphite	Ferritic		155	58	K5	●●	●	790	720	660		
		Pearlitic		265	102	K6	●●	●	560	460	430		
GGV (CGI)			230	58	K7	●●	●	720	590	560			
N	Wrought aluminium alloys	Not hardenable		30	—	N1	●●	●					
		Hardenable, hardened		100	49	N2	●●	●					
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	38	N3	●●	●					
		≤ 12% Si, hardenable, hardened		90	45	N4	●●	●					
		> 12% Si, not hardenable		130	66	N5							
	Magnesium-based alloys ³		70	36	N6								
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	49	N7	●●	●					
Brass, bronze, red brass			90	45	N8	●●	●						
Cu alloys, short-chipping			110	55	N9	●●	●						
High tensile, Ampco			300	146	N10								
S	Heat-resistant alloys	Fe-based	Annealed		200	99	S1	●●	●				
			Hardened		280	136	S2	●●	●				
		Ni- or Co-based	Annealed		250	122	S3	●●	●				
			Hardened		350	171	S4	●●	●				
			Cast		320	157	S5	●●	●				
	Titanium alloys	Pure titanium		200	99	S6	●●	●					
		α and β alloys, hardened		375	183	S7	●●	●					
		β alloys		410	203	S8	●●	●					
	Tungsten alloys		300	146	S9								
	Molybdenum alloys		300	146	S10								
H	Hardened steel	Hardened and tempered		45 HRC	—								
		Hardened and tempered		50 HRC	—								
		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				01							
	Thermosets	Without abrasive fillers				02							
	Plastic, glass-fibre-reinforced	GFRP				03							
	Plastic, carbon-fibre-reinforced	CFRP				04							
	Plastic, aramid-fibre-reinforced	AFRP				05							
	Graphite (technical)		80 Shore			06							

- Recommended application (the specified cutting data is regarded as starting values for the recommended application)
- Possible application

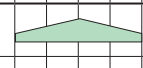
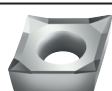

Note: If dry machining is possible, the tool life is reduced by 20–30% on average.

¹ The classification of the machining groups can be found from page A 681 onwards in the Walter General Catalog 2018.

³ Water-miscible coolants must not be used when machining magnesium alloys.

Cutting tool material application charts – Turning





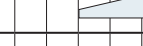
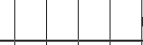




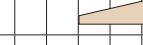

Carbide

Walter grade designation	Standard designation	Material groups							Range of applications							Coating process	Coating composition	Indexable insert example
		P	M	K	N	S	H	O	01	05	10	15	20	25	30			
WN10	HW – N 10				●●											-	-	
	HW – S 10					●										-	-	

HC = Coated carbide
HW = Uncoated carbide

●● Primary application
● Additional application


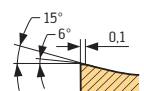
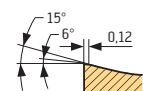

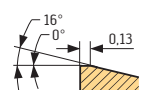
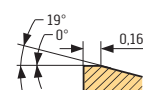

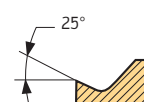
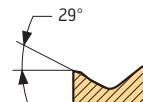
CBN/cermet/PCD/ceramic

Walter grade designation	Standard designation	Material groups							Range of applications							Coating process	Cutting tool material	Indexable insert example
		P	M	K	N	S	H	O	01	05	10	15	20	25	30			
WBH10C	BL – H 05						●●									PVD	CBN + TiAlSiN	
WBH10	BL – H 10						●●									-	CBN	
WBH20	BL – H 20						●●									-	CBN	
WBH30	BL – H 30						●●									-	CBN	
WCH10C	CM – H 10						●●									PVD	Al ₂ O ₃ -TiC + TiN	
WIS10	CN – S 10				●●											-	SiAlON ceramic	
WWS20	CR – S 20				●●											-	Whisker ceramic	
	CR – H 20					●										-		

BH = CBN with high CBN content
BL = CBN with low CBN content
CM = Mixed ceramic
CN = Silicon nitride Si₃N₄
CR = Reinforced ceramic
DP = Polycrystalline diamond

●● Primary application
● Additional application


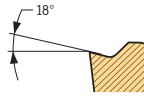
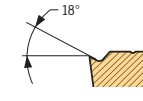
Geometry overview of turning inserts – Negative basic shape

Finishing operation											
Geometry	Remarks/field of applications	Material groups						Main cutting edge section	Corner radius section	a _p [in]	f [in]
		P	M	K	N	S	H				
 <p>FW5 – Finishing with wiper technology – Double the feed rate – the same high surface quality – Reduced cutting pressure thanks to short wiper curved cutting edge</p> <p>Wiper</p>		●●	●●	●●	●					0.012–0.118	0.004–0.024
Medium machining											
 <p>MW5 – Medium machining with wiper technology – Double the feed rate – the same high surface quality – Maximum feeds thanks to long wiper curved cutting edge</p> <p>Wiper</p>		●●	●●	●●	●					0.031–0.157	0.006–0.030
 <p>MN3 – Universal indexable insert for non-ferrous metallic materials – Fully ground circumference – Polished rake face – Precision finishing on steel and stainless materials or high-temperature alloys</p>		●	●	●●	●					0.020–0.157	0.002–0.016

●● Primary application
 ● Additional application

Note: Sectional views show CNMG120408 . .

Geometry overview of turning inserts – Positive basic shape


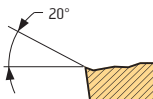
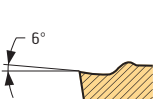

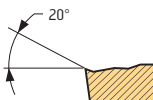
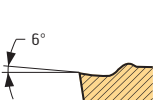

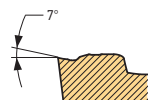
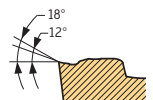

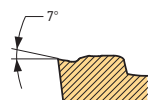
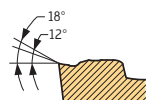

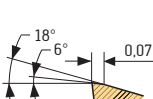
Finishing operation											
Geometry	Remarks/field of applications	Material groups						Main cutting edge section	Corner radius section	a _p [in]	f [in]
		P	M	K	N	S	H				
 <p>FP2 – Finishing insert with fully ground circumference – Long, small-diameter shafts with a tendency to vibrate – Low cutting forces</p>		●●	●●	●●	●	●				0.005–0.098	0.001–0.013

●● Primary application
 ● Additional application

Note: Sectional views show CCMT09T308 . . and CCGT09T308 . .

Geometry overview of system inserts – WL


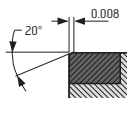
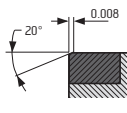

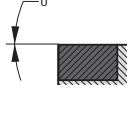
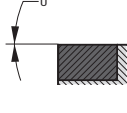

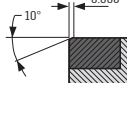
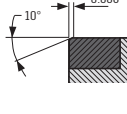

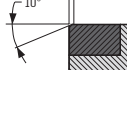
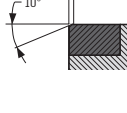

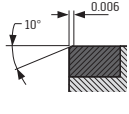
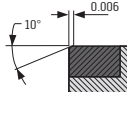

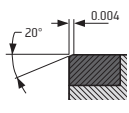
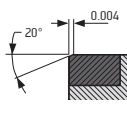
Medium machining

Geometry	Remarks/field of applications	Material groups							Main cutting edge section	Corner radius section	a_p [in]	f [in]
		P	M	K	N	S	H	O				
		Steel	Stainless steel	Cast iron	NF metals	Materials with difficult cutting properties	Hard materials	Other				
	FM4 – Finishing geometries for minimal depths of cut – Excellent chip control – Specially developed for copy turning	•	••			••					0.004–0.079	0.002–0.010
	FP4 – Finishing geometries for minimal depths of cut – Excellent chip control – Specially developed for copy turning	••	•			•					0.004–0.079	0.002–0.010
	MM4 – Medium machining – with a large range of applications – Machining for long-chipping materials – Specially developed for copy turning	•	••	•		••					0.016–0.098	0.003–0.014
	MP4 – Medium machining – with a large range of applications – Machining for long-chipping materials – Specially developed for copy turning	••	•	•		•					0.016–0.098	0.003–0.014
	MU6 – Full-radius geometry for copy turning – Soft cutting action with excellent chip breaking – Chip breaking in all feed directions	••	••	••		••	•				0.016–0.098	0.004–0.016

- Primary application
- Additional application

Note: Sectional views show WL25-VC0708 . . and WL25-RC0420 . .

Geometry overview of turning inserts – Negative basic shape CBN/PCD/ceramic


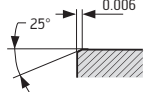
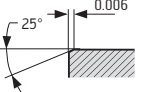

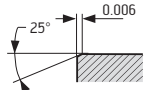
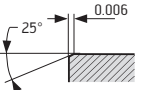

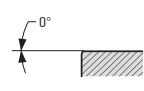
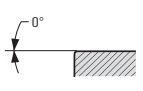

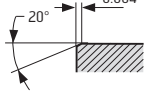
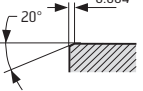

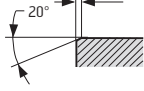
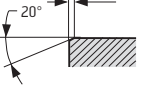
CBN		Material groups							Main cutting edge section	Corner radius section	a _p [in]	f [in]
Geometry	Remarks/field of applications	P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other				
 Wiper	<p>.NGA..TM-MW2</p> <ul style="list-style-type: none"> – CBN indexable insert with circumference fully ground in G tolerance – CBN indexable insert with chamfered cutting edge – Effective wiper geometry for the best surfaces 						••				0.004–0.020	0.002–0.012
	<p>.NGN..EM2</p> <ul style="list-style-type: none"> – CBN indexable insert with circumference fully ground in G tolerance – Rounded cutting edge for minimum cutting forces – Machining high-temperature alloys 					••					0.004–0.079	0.002–0.008
	<p>.NGN..TS2</p> <ul style="list-style-type: none"> – CBN indexable insert with circumference fully ground in G tolerance – Universal CBN indexable insert with chamfered cutting edge – Finishing operations in hardened steel 						••				0.004–0.020	0.002–0.010
	<p>.NGN..TM-S</p> <ul style="list-style-type: none"> – Solid CBN indexable insert with circumference fully ground to G tolerance – Universal CBN indexable insert with chamfered cutting edge – Roughing operations in hardened steel, cast iron and sintered steel 			••			•				Up to 0.315 in. in cast material	0.002–0.016
	<p>.NGN..TM2</p> <ul style="list-style-type: none"> – CBN indexable insert with circumference fully ground in G tolerance – Universal CBN indexable insert with chamfered cutting edge – Machining of hardened steel 						••				0.004–0.020	0.002–0.010
 Chipbreaker	<p>.NGN..TM-M2</p> <ul style="list-style-type: none"> – CBN indexable insert with circumference fully ground in G tolerance – CBN indexable insert with chamfered cutting edge – Effective chip formation for hard machining 						••				0.004–0.020	0.002–0.010

- Primary application
- Additional application

Note: Sectional views show RNGN120700 ...
CNGA120408 ...

Geometry overview of turning inserts – Negative basic shape CBN/PCD/ceramic

Ceramic

Geometry	Remarks/field of applications	Material groups							Main cutting edge section	Corner radius section	a _p [in]	f [in]
		P	M	K	N	S	H	O				
	<p>. NGA. . SM-S</p> <ul style="list-style-type: none"> – Ceramic indexable insert with fully ground circumference to G tolerance – Universal ceramic indexable insert with chamfered and rounded cutting edge – Machining of hardened steel and hard/soft areas 						••				0.004–0.039	0.002–0.012
 <p>Wiper</p>	<p>. NGA. . SM-MWS</p> <ul style="list-style-type: none"> – Ceramic indexable insert with fully ground circumference to G tolerance – Hard machining with wiper technology – High feeds and best surface quality – Excellent stability thanks to wiper geometry 						••			0.004–0.039	0.002–0.014	
	<p>... E</p> <ul style="list-style-type: none"> – Ceramic indexable insert with circumference fully ground – Rounded cutting edge for minimum cutting forces – Machining high-temperature alloys 						••			0.004–0.295	0.004–0.020	
	<p>... T01020</p> <ul style="list-style-type: none"> – Ceramic indexable insert with circumference fully ground – Chamfered cutting edge for maximum stability for medium machining to roughing operations – Machining high-temperature alloys 						•• •			0.004–0.197	0.004–0.018	
	<p>... T02020</p> <ul style="list-style-type: none"> – Ceramic indexable insert with circumference fully ground – Chamfered cutting edge for maximum stability for medium machining to roughing operations – Machining cast iron 			••						0.004–0.236	0.004–0.016	

•• Primary application
• Additional application

Note: Sectional views show RNGN120700 . .
CNGA120408 . .

Geometry overview of turning inserts – Positive basic shape CBN/PCD/ceramic

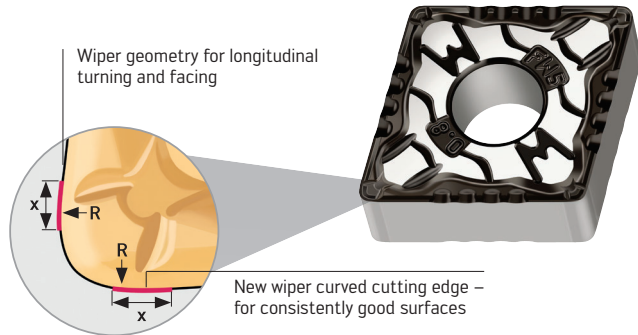
PCD/CBN		Material groups							Main cutting edge section	Corner radius section	a _p [in]	f [in]
Geometry	Remarks/field of applications	P	M	K	N	S	H	O				
	<p>. CGW . . . FSL/R-9</p> <ul style="list-style-type: none"> - PCD indexable insert with circumference fully ground in G tolerance - Cutting edge with guide pad - Maximum depth of cut and shoulder machining 				••	•		••			0.002–0.354	0.001–0.015
	<p>. CGW . . TM-MW2</p> <ul style="list-style-type: none"> - CBN indexable insert with circumference fully ground in G tolerance - Universal CBN indexable insert with chamfered cutting edge - Effective wiper geometry for the best surfaces 							••			0.004–0.020	0.002–0.012
	<p>. CGW . . EM2</p> <ul style="list-style-type: none"> - CBN indexable insert with circumference fully ground - Rounded cutting edge for minimum cutting forces - Machining high-temperature alloys 							••			0.004–0.079	0.002–0.008
	<p>. CGW . . TS2</p> <ul style="list-style-type: none"> - CBN indexable insert with circumference fully ground in G tolerance - Universal CBN indexable insert with chamfered cutting edge - Finishing operations in hardened steel 							••			0.004–0.020	0.002–0.010
	<p>. CGW . . TM2</p> <ul style="list-style-type: none"> - CBN indexable insert with circumference fully ground in G tolerance - Universal CBN indexable insert with chamfered cutting edge - Machining of hardened steel 							••			0.004–0.020	0.002–0.010
Ceramic												
	<p>. . . E</p> <ul style="list-style-type: none"> - Ceramic indexable insert with circumference fully ground - Rounded cutting edge for minimum cutting forces - Machining high-temperature alloys 							••			0.004–0.142	0.004–0.013
	<p>. . . T01020</p> <ul style="list-style-type: none"> - Ceramic indexable insert with circumference fully ground - Chamfered cutting edge for maximum stability for medium machining to roughing operations - Machining high-temperature alloys 							••			0.004–0.142	0.004–0.013

•• Primary application
• Additional application

Note: Sectional views show CCGT09T304 . . . CCGW09T304 . . . or RCGX090700 . . .

Application information for wiper indexable inserts

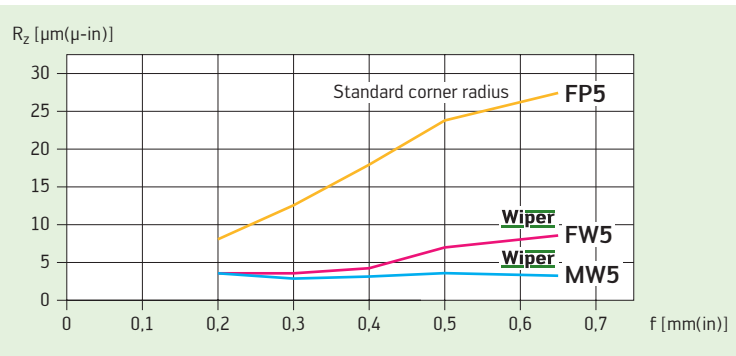
Wiper



Application area:

- Double the surface quality with the same feed compared to the standard corner radius
- Same surface quality with double the feed rate compared to the standard corner radius
- Increased productivity – the higher feeds reduce the machining time
- Fewer tools – there is the option to combine roughing and finishing in a single operation
- Longer tool life as the higher feed reduces the contact time with the workpiece

1. Surface quality that can be achieved with wiper indexable inserts



Material: AISI 4140
 Indexable insert: CNMG432-FP5 WPP20S
 CNMG432-FW5 WPP20S
 CNMG432-MW5 WPP20S

The surface finish values are available in R_z (not R_a)
 There is no direct conversion from R_z to R_a possible

2. Edge formation: Comparison of wiper indexable inserts and standard indexable inserts

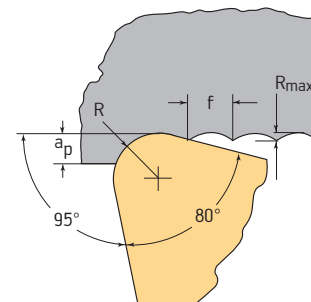
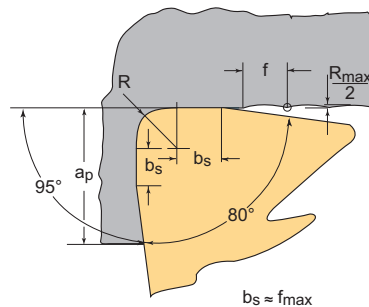
The specified maximum feeds [f_{max}] should not be exceeded with wiper geometries. They approximately correspond to the wiper curved cutting edge length.

Wiper geometry:
 Example of CNMG432-FW5 /
 CNMG432-MW5

Standard geometry with corner radius:
 Example of CNMG432-FP5

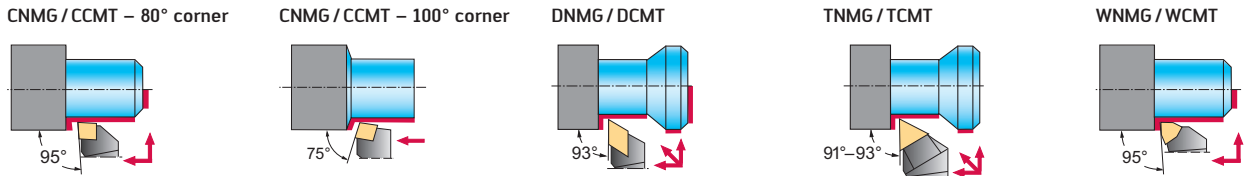
Corner radius

R [mm(in)]	FW5 f_{max} [mm(in)]	MW5 f_{max} [mm(in)]
0.4 (0.016)	0.45 (0.018)	-
0.8 (0.031)	0.55 (0.022)	0.65 (0.026)
1.2 (0.047)	0.65 (0.026)	0.75 (0.030)



3. Turning toolholder for using wiper geometries

To achieve the wiper effect, the wiper indexable insert has to be used in a toolholder with the correct lead angle.



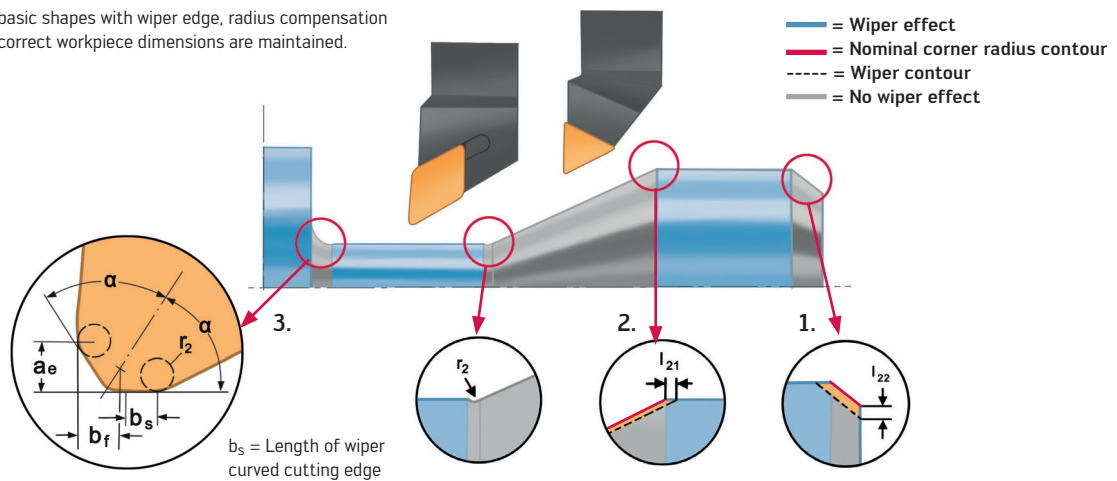
— = Wiper effect

Comments:

- The standard CNC range can be used with CNMG, CCMT, WNMG and WCMT indexable inserts
- The wiper effect is not achieved when profiling and turning inclined surfaces with DNMG, DCMT, TNMG and TCMT indexable inserts
- Please note that compensation is required in the area of radii/inclined surfaces; otherwise contour distortions may occur (see point 4).

4. Effects on the workpiece dimensions when machining with DNMG/DCMT and TNMG/TCMT wiper indexable inserts

When using D and T basic shapes with wiper edge, radius compensation can ensure that the correct workpiece dimensions are maintained.



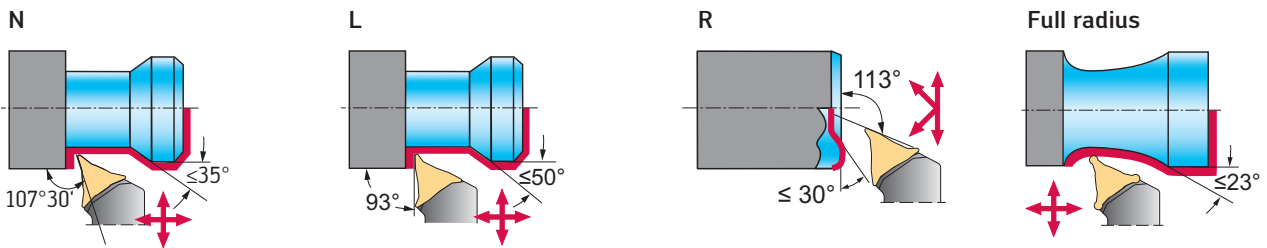
Indexable insert design	Dimensions						Compensation dimensions		
	ANSI Designation	Designation	r_2 [in]	a_e [in]	b_s [in]	b_f [in]	1. Chamfer with 45° inclined surface l_{22} [in]	2. Profiling 27° D basic shape l_{21} [in]	3. Profiling 22° T basic shape l_{21} [in]
	DNMG331-FW5	DNMG110404-FW5	0.012	0.017	0.007	0.016	0.0004	0.0035	
	DNMG332-FW5	DNMG110408-FW5	0.016	0.029	0.017	0.022	0.0024	0.0016	
	DNMG431-FW5	DNMG150404-FW5	0.012	0.017	0.007	0.016	0.0004	0.0035	
	DNMG432-FW5	DNMG150408-FW5	0.016	0.029	0.017	0.022	0.0024	0.0016	
	DNMG441-FW5	DNMG150604-FW5	0.012	0.017	0.007	0.016	0.0004	0.0035	
	DNMG442-FW5	DNMG150608-FW5	0.016	0.029	0.017	0.022	0.0024	0.0016	
	DNMG332-MW5	DNMG110408-MW5	0.014	0.032	0.022	0.024	-0.0004	0.0094	
	DNMG333-MW5	DNMG110412-MW5	0.018	0.041	0.028	0.029	0.0043	0.0024	
	DNMG432-MW5	DNMG150408-MW5	0.012	0.032	0.022	0.024	-0.0004	0.0094	
	DNMG433-MW5	DNMG150412-MW5	0.018	0.041	0.028	0.029	0.0043	0.0024	
	DNMG442-MW5	DNMG150608-MW5	0.014	0.032	0.022	0.024	-0.0004	0.0094	
	DNMG443-MW5	DNMG150612-MW5	0.018	0.041	0.030	0.029	0.0043	0.0024	
	TNMG331-FW5	TNMG160404-FW5	0.012	0.017	0.007	0.013	0.0004		0.0039
	TNMG332-FW5	TNMG160408-FW5	0.016	0.030	0.015	0.022	0.0024		0.0028
	TNMG332-MW5	TNMG160408-MW5	0.014	0.033	0.022	0.023	0.0008		0.0094
	TNMG333-MW5	TNMG160412-MW5	0.022	0.043	0.028	0.028	0.0059		0.0028

Application information: W1011/W1010 Walter Turn copy turning system

On copy turning tools, four different indexable insert types can be fitted in the same tool.
This means that different profiling angles/approach angles can be achieved with the same tool.

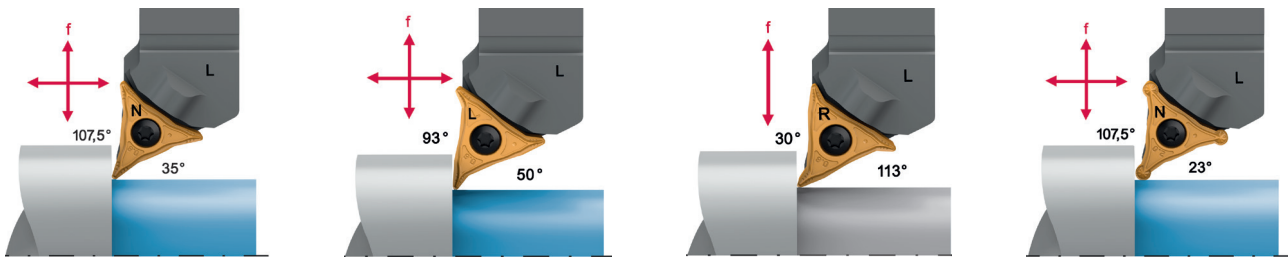


1.1 Application area and profiling angle W1011



1.2 Fitting options and approach angle W1011

Four different indexable inserts can be fitted in the same tool.
The approach angles are formed by fitting the different indexable inserts.
The point angle of the WL25-VC... is 35° , as on a VBMT indexable insert.



Example:
Left-hand tool:
W1011-2525L-WL25-P
Neutral indexable insert:
WL25-VC0708N-MP4 WPP20S

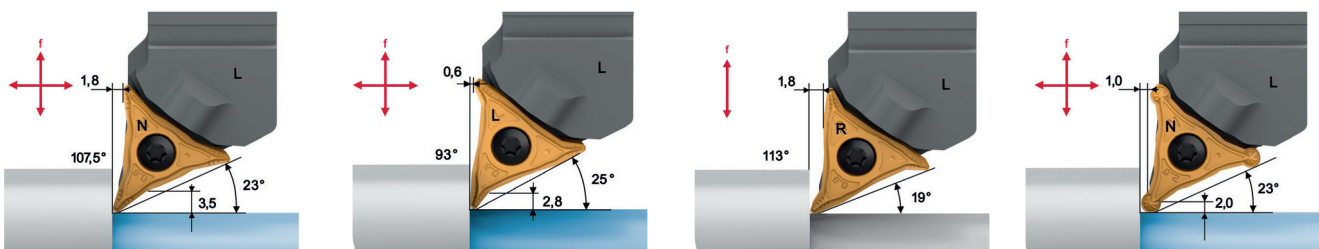
Example:
Left-hand tool:
W1011-2525L-WL25-P
Left-hand indexable insert:
WL25-VC0708L-MP4 WPP20S

Example:
Left-hand tool:
W1011-2525L-WL25-P
Right-hand indexable insert:
WL25-VC0708R-MP4 WPP20S

Example:
Left-hand tool:
W1011-2525L-WL25-P
Neutral indexable insert:
WL25-RC0420N-MU6 WPP20S

1.3 Maximum feed WL25 indexable inserts W1011

Example – left-hand tool



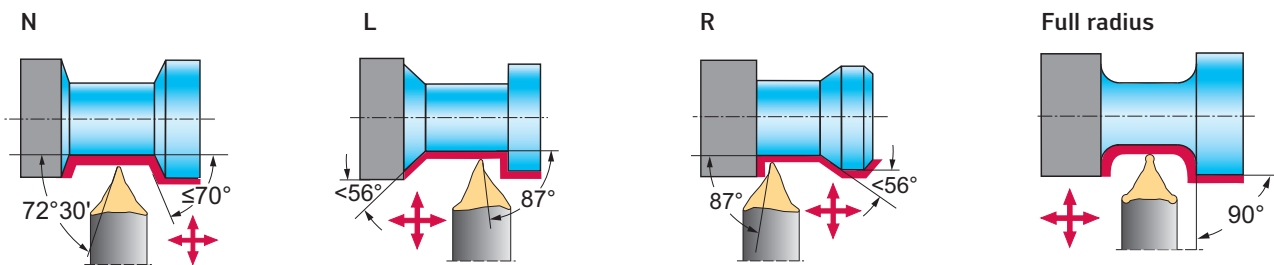


W1011...



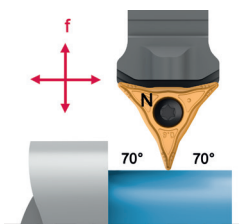
W1010...

2.1 Application area and profiling angle W1010

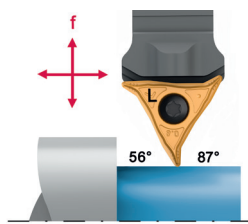


2.2 Fitting options and approach angle W1010

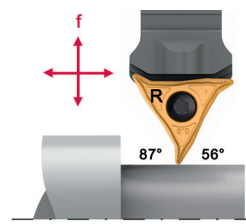
Four different indexable inserts can be fitted in the same tool. The approach angles are formed by fitting the different indexable inserts. The point angle of the WL25-VC... is 35°, as on a VBMT indexable insert.



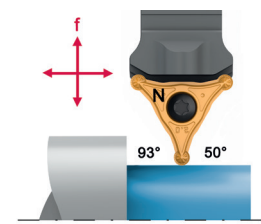
Example:
Neutral tool:
 W1010-2525N-WL25-P
Neutral indexable insert:
 WL25-VC0708N-MP4 WPP20S



Example:
Neutral tool:
 W1010-2525N-WL25-P
Left-hand indexable insert:
 WL25-VC0708L-MP4 WPP20S



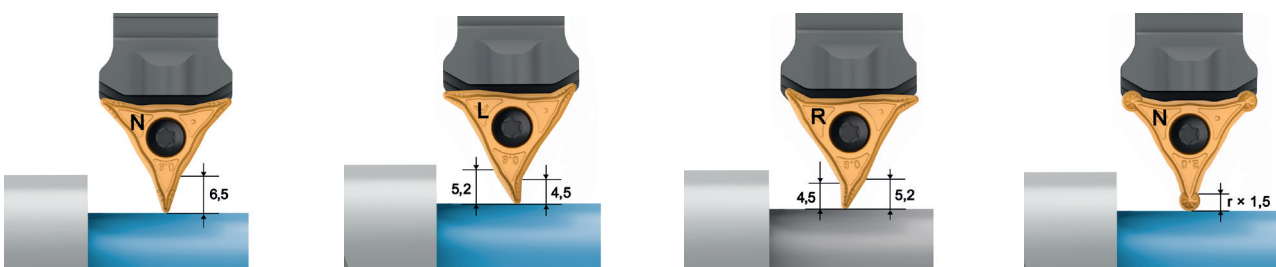
Example:
Neutral tool:
 W1010-2525N-WL25-P
Right-hand indexable insert:
 WL25-VC0708R-MP4 WPP20S



Example:
Neutral tool:
 W1010-2525N-WL25-P
Neutral indexable insert:
 WL25-RC0420N-MU6 WPP20S

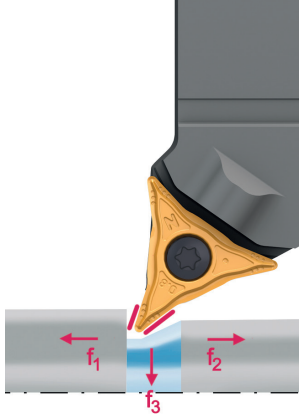
2.3 Maximum feed WL25 indexable inserts W1010

Example – left-hand tool



Application information: W1011/W1010 Walter Turn copy turning system

3. Cutting data for W1010/W1011



f_1 = feed approach angle 93°–113°
 f_2 = feed approach angle 31°–72.5°
 f_3 = plunging

A feed of f 0.2 mm is recommended for plunging into the workpiece (-X).

These values correspond to the depths of cut and feed values on the catalog ordering page.

Geometry/corner radius	FM4 / FP4 – R0.4				
	f_2			f_1	
Approach angle	35°	50°	72.5°	93°	107.5°
$a_{p\ min}$ [mm]	0.1	0.1	0.1	0.1	0.1
$a_{p\ max}$ [mm]	1.1	1.5	1.9	2.0	1.9
$f_{\ min}$ [mm]	0.09	0.07	0.05	0.05	0.05
$f_{\ max}$ [mm]	0.35	0.26	0.21	0.20	0.21

Geometry/corner radius	FM4 / FP4 – R0.8				
	f_2			f_1	
Approach angle	35°	50°	72.5°	93°	107.5°
$a_{p\ min}$ [mm]	0.1	0.1	0.1	0.1	0.1
$a_{p\ max}$ [mm]	1.1	1.5	1.9	2.0	1.9
$f_{\ min}$ [mm]	0.14	0.10	0.08	0.08	0.08
$f_{\ max}$ [mm]	0.44	0.33	0.26	0.25	0.26

Geometry/corner radius	MM4 / MP4 – R 0.016 inches				
	Reverse turning (f_2)			Forward turning (f_1)	
Approach angle	31°/35°	50°	72.5°	93°	107.5/113°
$a_{p\ min}$ [in]	0.008	0.012	0.016	0.016	0.016
$a_{p\ max}$ [in]	0.055	0.075	0.094	0.098	0.094
$f_{\ min}$ [in]	0.006	0.004	0.003	0.003	0.003
$f_{\ max}$ [in]	0.016	0.013	0.010	0.010	0.010

Geometry/corner radius	MM4 / MP4 – R 0.032 inches				
	Reverse turning (f_2)			Forward turning (f_1)	
Approach angle	31°/35°	50°	72.5°	93°	107.5/113°
$a_{p\ min}$ [in]	0.012	0.016	0.020	0.020	0.020
$a_{p\ max}$ [in]	0.055	0.075	0.094	0.098	0.094
$f_{\ min}$ [in]	0.008	0.006	0.005	0.005	0.005
$f_{\ max}$ [in]	0.020	0.017	0.013	0.013	0.013

Geometry/corner radius	MM4 / MP4 – R 0.047 inches				
	f_2			f_1	
Approach angle	35°	50°	72.5°	93°	107.5°
$a_{p\ min}$ [in]	0.012	0.016	0.020	0.020	0.020
$a_{p\ max}$ [in]	0.055	0.075	0.095	0.098	0.095
$f_{\ min}$ [in]	0.008	0.006	0.005	0.005	0.005
$f_{\ max}$ [in]	0.024	0.018	0.015	0.014	0.015

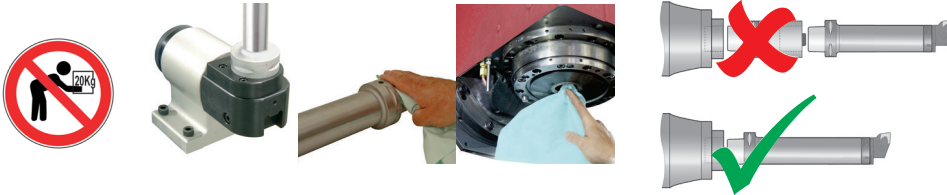
Geometry/corner radius	MM4 / MP4 – R 0.063 inches				
	f_2			f_1	
Approach angle	35°	50°	72.5°	93°	107.5°
$a_{p\ min}$ [in]	0.012	0.016	0.020	0.020	0.020
$a_{p\ max}$ [in]	0.055	0.075	0.095	0.098	0.095
$f_{\ min}$ [in]	0.008	0.006	0.005	0.005	0.005
$f_{\ max}$ [in]	0.026	0.020	0.017	0.016	0.017

Geometry/corner radius	MU6 – R 0.079 inches				
	Reverse turning (f_2)			Forward turning (f_1)	
Approach angle	31°/35°	50°	72.5°	93°	107.5/113°
$a_{p\min}$ [in]	0.012	0.016	0.020	0.020	0.020
$a_{p\max}$ [in]	0.043	0.059	0.075	0.079	0.075
f_{\min} [in]	0.008	0.006	0.005	0.005	0.005
f_{\max} [in]	0.024	0.020	0.017	0.016	0.017

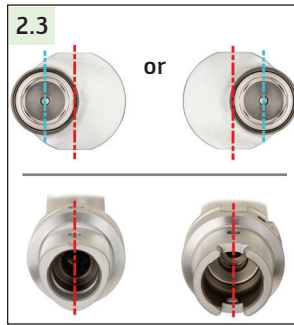
Geometry/corner radius	MU6 – R 0.098 inches				
	f_2			f_1	
Approach angle	35°	50°	72.5°	93°	107.5°
$a_{p\min}$ [in]	0.012	0.016	0.020	0.02	0.020
$a_{p\max}$ [in]	0.055	0.075	0.095	0.098	0.095
f_{\min} [in]	0.008	0.006	0.005	0.005	0.005
f_{\max} [in]	0.026	0.023	0.019	0.018	0.019

Application information:
Accure-tec A3001 – HSK-T and Walter Capto™
vibration-damped boring bars/adaptors with QuadFit Large interface

1. Installation instructions

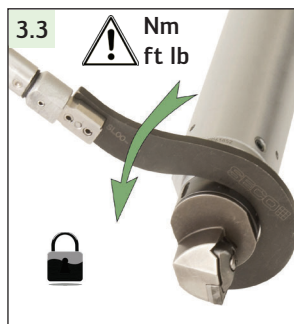


2. Installation of QuadFit Large intermediate adaptor



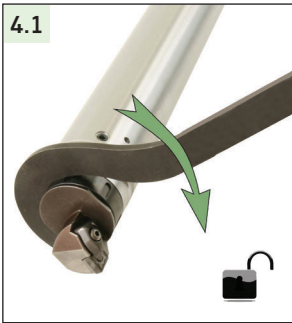
For QL size	4 x bolt 	Tightening torque	
		Nm	ft lb
QL60 / QL64	FS2609	11	8.2
QL80 / QL76	FS2610	16	11.8

3. Installation of QuadFit exchangeable head



For QuadFit size	Tightening torque	
	Nm	ft lb
Q50	55	40.6

4. Removal of QuadFit and QuadFit Large exchangeable heads



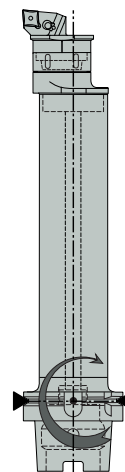
5. Max. permitted operating temperature, speed and load



6. Recommended cutting data and tilting torques

Vibration tendency: low (left) to high (right)

1. Basic insert shape	Positive	Negative, double-sided	Negative, single-sided
2. Insert shape	35°	80°	Circle
3. Approach angle	91°	75°	45°
4. Corner radius	r = 0,2 mm	r = 0,4 mm	r = 0,8–1,2 mm
5. Effective rake angle	Shallow	Medium	Steep
6. Depth of cut	$a_p = 2 \times r$	$a_p = 1 \times r$	$a_p = 0,25 \times r$
7. Coating	Uncoated	PVD	CVD



For QL tool size	Pull-out torque*	
	Nm	ft lb
A3001-H100T-QL60-301	12	8,9
A3001-H100T-QL60-421	24	17,7
A3001-H100T-QL60-541	39	28,8
A3001-H100T-QL80-421	41	30,2
A3001-H100T-QL80-581	77	56,8
A3001-C6-QL60-301	13	9,6
A3001-C6-QL60-421	25	18,4
A3001-C8-QL60-301	13	9,6
A3001-C8-QL60-421	25	18,4
A3001-C8-QL60-541	40	29,5
A3001-C8-QL80-421	42	31
A3001-C8-QL80-581	79	58,3

* Calculated with a standard exchangeable head installed
Pull-out/topple torque "Kippmoment" is the amount of torque that will pull the tool out of a tool changer

7. Safety recommendations

- Risk of injury due to tool cutting edges
- Protective gloves recommended
- Do not exceed the max. speed (see point 5.1)
- Observe the tool manufacturer's recommended cutting speeds



Application information: Accure-tec A3001 – vibration-damped plain cylindrical adaptors with QuadFit Large interface

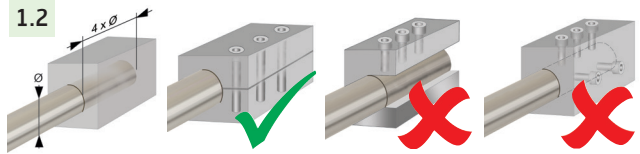


1. Installation instructions

1.1



1.2



2. Installation of QuadFit Large intermediate adaptor

2.1



2.2



2.3



2.4



2.5



For QL size	4 x bolt	Tightening torque	
		Nm	ft lb
QL60 / QL64	FS2609	11	8.2
QL80 / QL76	FS2610	16	11.8
QL100	FS2611	23	16.9

3. Installation of QuadFit exchangeable head

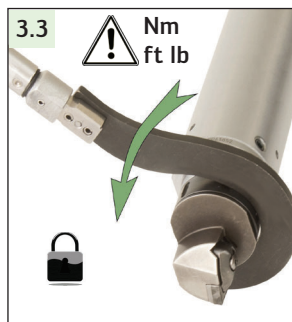
3.1



3.2

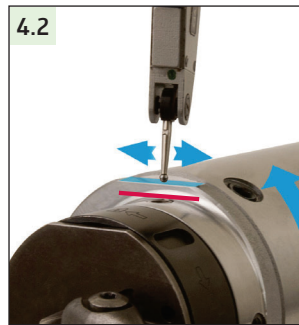
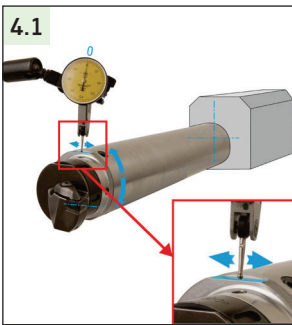


3.3

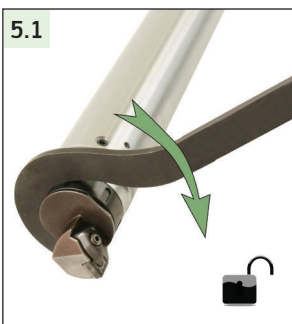


For QuadFit size	Tightening torque	
	Nm	ft lb
GL 50	55	40.6

4. Centre height adjustment



5. Removal of QuadFit (Q) and QuadFit Large (QL) exchangeable heads



6. Max. permitted operating temperature and load

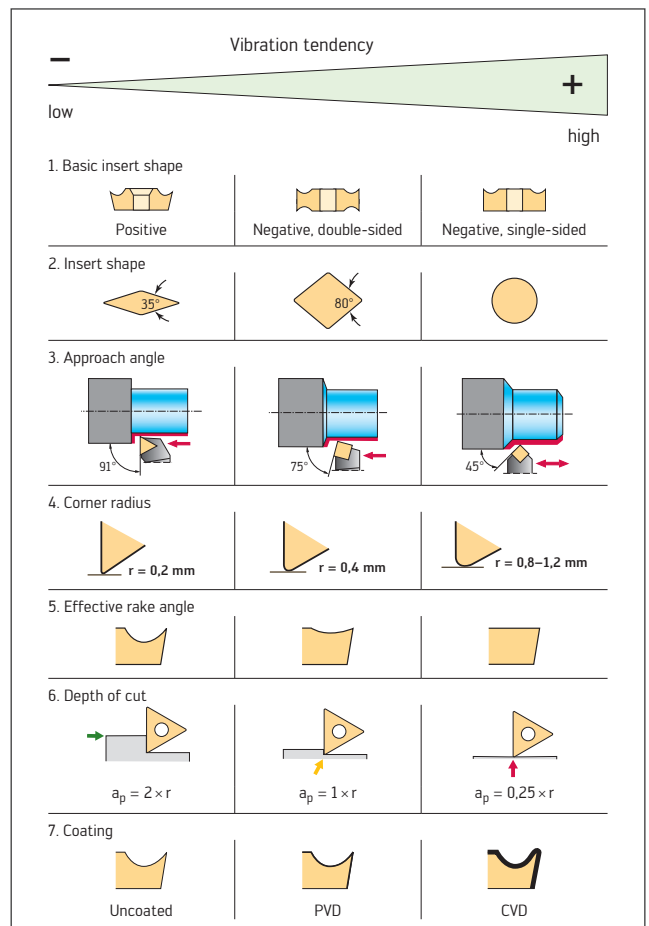


8. Safety recommendations

- Risk of injury due to tool cutting edges
- Protective gloves recommended
- Observe the tool manufacturer's recommended cutting speeds

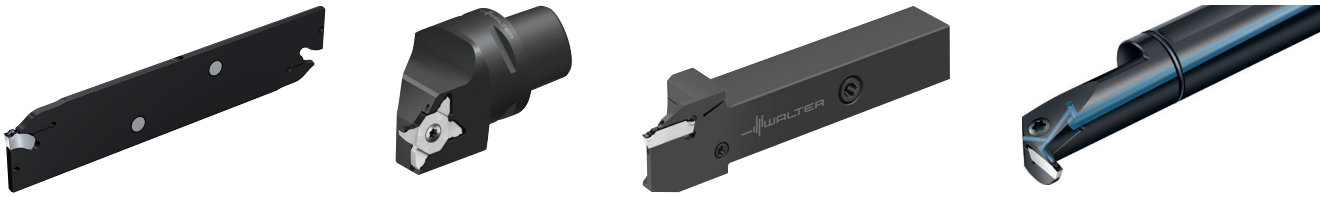


7. Cutting edge and tool design

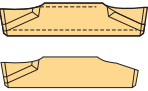
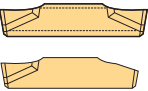


Product range overview of cutting inserts and cutting tool materials: Grooving

A2



Cutting inserts

Insert shape	Description	Page
Parting off/grooving  DX	Walter Cut DX grooving inserts, double-edged/ single-edged	93
 GX	Walter Cut GX grooving inserts, double-edged/ single-edged	97

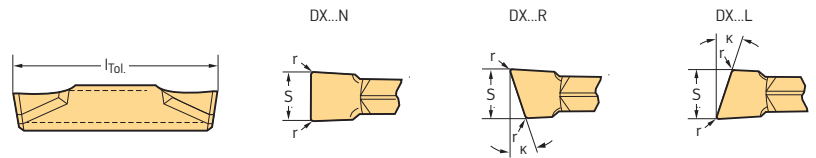
Cutting tool materials: Carbide

Application	Coating	Range of applications										
		01	05	10	15	20	25	30	35	40	45	
ISO P	CVD			WKP13S								
	CVD			WKP23S								
	CVD					WKP33S						
	PVD				WSM23S							
	PVD						WSM33S					
	PVD								WSM43S			
ISO M	PVD			WSM13S								
	PVD				WSM23S							
	PVD					WSM33S						
	PVD							WSM43S				
ISO K	CVD			WKP13S								
	CVD				WKP23S							
	CVD					WKP33S						
ISO N	—			WN13								
	PCD			WDN10								
ISO S	PVD			WSM13S								
	PVD				WSM23S							
	PVD					WSM33S						
	PVD							WSM43S				
	CBN			WBS10								
ISO H	CBN			WBH20								

← Wear resistance

Toughness →

Grooving and parting off DX cutting inserts Tiger-tec® Silver



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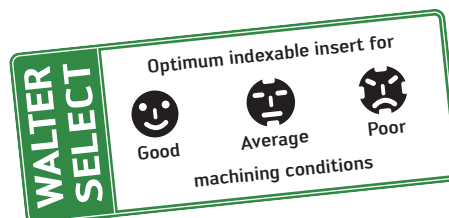
Cutting inserts

Designation	s mm	s in	r in	κ	l in	f in	S _{Tol} in	l _{Tol} in	P		M		K	S		
									HC		HC		HC	HC	HC	
									WKP23S	WKP33S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S
DX18-1E150N01-CF6	1.5	0.059	0.006		0.709	0.001-0.005	±0.002	±0.006			☺	☺		☺	☺	
	DX18-2E200N02-CF6	2	0.079	0.008		0.709	0.001-0.006	±0.002	±0.006			☺	☺		☺	☺
	DX18-2E250N02-CF6	2.5	0.098	0.008		0.709	0.001-0.007	±0.002	±0.006			☺	☺		☺	☺
	DX18-3E300N02-CF6	3	0.118	0.008		0.709	0.002-0.009	±0.002	±0.006			☺	☺		☺	☺
DX18-1E150L10-CF6	1.5	0.059	0	10°	0.709	0.001-0.004	±0.002	±0.006			☺			☺		
	DX18-2E200L6-CF6	2	0.079	0.008	6°	0.709	0.001-0.005	±0.002	±0.006			☺	☺		☺	☺
	DX18-2E200L15-CF6	2	0.079	0	15°	0.720	0.001-0.005	±0.002	±0.006			☺			☺	
	DX18-2E250L6-CF6	2.5	0.098	0.008	6°	0.709	0.001-0.006	±0.002	±0.006			☺	☺		☺	
	DX18-3E300L6-CF6	3	0.118	0.008	6°	0.709	0.002-0.007	±0.002	±0.006			☺	☺		☺	
DX18-1E150R10-CF6	1.5	0.059	0	10°	0.709	0.001-0.004	±0.002	±0.006			☺			☺		
	DX18-2E200R6-CF6	2	0.079	0.008	6°	0.709	0.001-0.005	±0.002	±0.006			☺	☺		☺	☺
	DX18-2E200R15-CF6	2	0.079	0	15°	0.720	0.001-0.005	±0.002	±0.006			☺			☺	
	DX18-2E250R6-CF6	2.5	0.098	0.008	6°	0.709	0.001-0.006	±0.002	±0.006			☺	☺		☺	
DX18-1E150N01-CF5	1.5	0.059	0.006		0.709	0.001-0.005	±0.002	±0.006			☺	☺		☺	☺	
	DX18-2E200N00-CF5	2	0.079	0	0.709	0.001-0.005	±0.002	±0.006			☺			☺		
	DX18-2E200N02-CF5	2	0.079	0.008	0.709	0.002-0.006	±0.002	±0.006			☺	☺		☺	☺	
	DX18-2E250N02-CF5	2.5	0.098	0.008	0.709	0.002-0.007	±0.002	±0.006			☺	☺		☺	☺	
DX18-1E150L10-CF5	1.5	0.059	0	10°	0.709	0.001-0.002	±0.002	±0.006			☺			☺		
	DX18-2E200L6-CF5	2	0.079	0.008	6°	0.709	0.001-0.005	±0.002	±0.006			☺	☺		☺	☺
	DX18-2E200L7-CF5	2	0.079	0	7°	0.709	0.001-0.005	±0.002	±0.006		☺			☺		
	DX18-2E200L15-CF5	2	0.079	0	15°	0.709	0.001-0.005	±0.002	±0.006			☺			☺	
	DX18-2E250L6-CF5	2.5	0.098	0.008	6°	0.709	0.001-0.006	±0.002	±0.006			☺	☺		☺	
	DX18-3E300L6-CF5	3	0.118	0.008	6°	0.709	0.002-0.007	±0.002	±0.006			☺	☺		☺	
	DX18-3E300L7-CF5	3	0.118	0	7°	0.740	0.002-0.006	±0.002	±0.006			☺			☺	
DX18-1E150R10-CF5	1.5	0.059	0	10°	0.709	0.001-0.002	±0.002	±0.006			☺			☺		
	DX18-2E200R6-CF5	2	0.079	0.008	6°	0.709	0.001-0.005	±0.002	±0.006			☺	☺		☺	☺
	DX18-2E200R7-CF5	2	0.079	0	7°	0.709	0.001-0.005	±0.002	±0.006		☺			☺		
	DX18-2E200R15-CF5	2	0.079	0	15°	0.709	0.001-0.005	±0.002	±0.006			☺			☺	
	DX18-2E250R6-CF5	2.5	0.098	0.008	6°	0.709	0.001-0.006	±0.002	±0.006			☺	☺		☺	
	DX18-3E300R6-CF5	3	0.118	0.008	6°	0.709	0.002-0.007	±0.002	±0.006			☺	☺		☺	
	DX18-3E300R7-CF5	3	0.118	0	7°	0.740	0.002-0.006	±0.002	±0.006			☺			☺	
DX18-3F300N02-CF5	3	0.118	0.008		0.709	0.003-0.009	±0.002	±0.006			☺			☺		

l_{Tol} = Repeat accuracy when changing indexable inserts within the same indexable insert batch
Radius tolerance r_{Tol} = ±0.002 in (±0.05 mm)

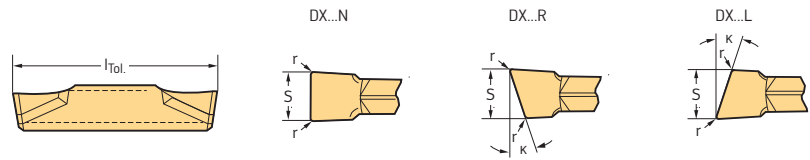
HC = Coated carbide

☺ ☺ ☺ / ★ New addition to the product range



Grooving and parting off DX cutting inserts Tiger-tec® Silver

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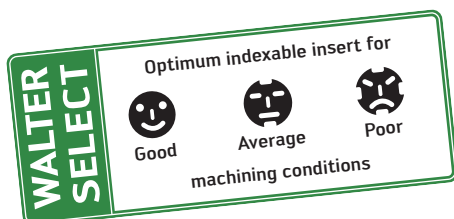


Cutting inserts

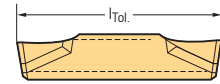
Designation	s mm	s in	r in	k	l in	f in	S _{Tol} in	l _{Tol} in	P		M			K		S		
									HC		HC			HC		HC		
									WKP23S	WKP33S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S	WSM43S	
DX18-1E150N01-CE4	1.5	0.059	0.006		0.709	0.001-0.005	±0.002	±0.006										
DX18-2E200N02-CE4	2	0.079	0.008		0.709	0.002-0.007	±0.002	±0.006	☺		☺	☺	☺	☺	☺	☺	☺	☺
DX18-2E250N02-CE4	2.5	0.098	0.008		0.709	0.003-0.008	±0.002	±0.006	☺		☺	☺	☺	☺	☺	☺	☺	☺
DX18-3E300N02-CE4	3	0.118	0.008		0.709	0.004-0.013	±0.002	±0.006	☺		☺	☺	☺	☺	☺	☺	☺	☺
DX18-2E200L6-CE4	2	0.079	0.008	6°	0.709	0.002-0.005	±0.002	±0.006			☺	☺				☺	☺	
DX18-2E250L6-CE4	2.5	0.098	0.008	6°	0.709	0.002-0.006	±0.002	±0.006			☺					☺	☺	
DX18-3E300L6-CE4	3	0.118	0.008	6°	0.709	0.004-0.011	±0.002	±0.006			☺	☺				☺	☺	
DX18-2E200R6-CE4	2	0.079	0.008	6°	0.709	0.002-0.005	±0.002	±0.006			☺	☺				☺	☺	
DX18-2E250R6-CE4	2.5	0.098	0.008	6°	0.709	0.002-0.006	±0.002	±0.006			☺					☺	☺	
DX18-3E300R6-CE4	3	0.118	0.008	6°	0.709	0.004-0.011	±0.002	±0.006			☺	☺				☺	☺	
DX18-3F300N02-CE4	3	0.118	0.008		0.709	0.004-0.013	±0.002	±0.006				☹						☹
DX18-2E200N02-GD3	2	0.079	0.008		0.709	0.002-0.006	±0.002	±0.006	☹		☺		☺			☺	☺	
DX18-2E250N02-GD3	2.5	0.098	0.008		0.709	0.002-0.007	±0.002	±0.006	☹		☺		☺			☺	☺	
DX18-3E300N03-GD3	3	0.118	0.012		0.709	0.002-0.008	±0.002	±0.006	☹		☺		☺			☺	☺	
DX18-4E400N04-GD3	4	0.157	0.016		0.728	0.004-0.009	±0.002	±0.006	☹		☹		☹			☹	☹	
DX18-2E200N02-GD6	2	0.079	0.008		0.709	0.002-0.006	±0.002	±0.006			☺	☺				☺	☺	
DX18-2E250N02-GD6	2.5	0.098	0.008		0.709	0.002-0.008	±0.002	±0.006			☺	☺				☺	☺	
DX18-3E300N03-GD6	3	0.118	0.008		0.709	0.003-0.008	±0.002	±0.006			☺	☺				☺	☺	
DX18-4E400N04-GD6	4	0.157	0.016		0.728	0.004-0.010	±0.002	±0.006			☹	☹				☹	☹	

l_{Tol} = Repeat accuracy when changing indexable inserts within the same indexable insert batch
Radius tolerance r_{Tol} = ±0.002 in (±0.05 mm)

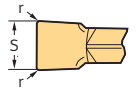
HC = Coated carbide



Grooving and recessing DX cutting inserts Tiger-tec® Silver



DX...N



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Cutting inserts

Designation	s mm	s in	r in	l in	f in	a _p in	S _{Tol} in	l _{Tol} in	P		M		K		S		
									HC		HC		HC		HC		
									WKP13S	WKP23S	WKP33S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S
DX18-2E200N02-UF4	2	0.079	0.008	0.709	0.004-0.007	0.012-0.047	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-2E250N02-UF4	2.5	0.098	0.008	0.709	0.004-0.008	0.012-0.051	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-3E300N03-UF4	3	0.118	0.012	0.709	0.004-0.009	0.016-0.079	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4E400N02-UF4	4	0.157	0.008	0.728	0.004-0.013	0.012-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4E400N04-UF4	4	0.157	0.016	0.728	0.004-0.013	0.020-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4E400N08-UF4	4	0.157	0.031	0.728	0.004-0.013	0.035-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4F400N04-UF4	4	0.157	0.016	0.728	0.004-0.013	0.020-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-2E200N02-UD4	2	0.079	0.008	0.709	0.004-0.007	0.012-0.047	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-3E300N03-UD4	3	0.118	0.012	0.709	0.004-0.009	0.016-0.079	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4E400N04-UD4	4	0.157	0.016	0.728	0.004-0.013	0.020-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4E400N08-UD4	4	0.157	0.031	0.728	0.004-0.013	0.035-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-2E200N02-UA4	2	0.079	0.008	0.709	0.003-0.007	0.012-0.047	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-3E300N03-UA4	3	0.118	0.012	0.709	0.004-0.010	0.016-0.079	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4E400N04-UA4	4	0.157	0.016	0.728	0.004-0.015	0.020-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺
DX18-4E400N08-UA4	4	0.157	0.031	0.728	0.004-0.015	0.035-0.110	±0.002	±0.006	☺	☺	☺	☺	☺	☺	☺	☺	☺

l_{Tol} = Repeat accuracy when changing indexable inserts within the same indexable insert batch
Radius tolerance r_{Tol} = ±0.002 in (±0.05 mm)

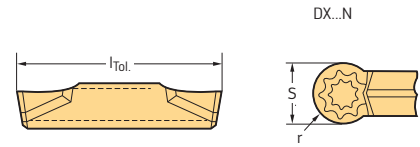
HC = Coated carbide

Grooving and copy turning



DX cutting inserts

Tiger-tec® Silver

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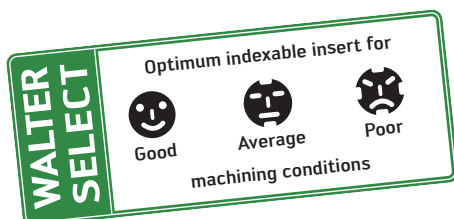


Cutting inserts

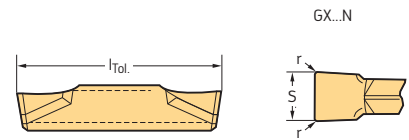
Designation	s mm	s in	r in	l in	f in	a _p in	S _{Tol} in	l _{Tol} in	P		M			K		S		
									HC	HC	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S	WSM43S	
 DX18-2E200N10-RF7 DX18-3E300N15-RF7 DX18-4E400N20-RF7	2	0.079	0.039	0.720	0.031-0.010	0.004-0.039	±0.002	±0.006			☺					☺		
	3	0.118	0.059	0.720	0.004-0.014	0.004-0.059	±0.002	±0.006			☺					☺		
	4	0.157	0.079	0.728	0.005-0.019	0.004-0.079	±0.002	±0.006			☹					☹		
 DX18-2E200N10-RD4 DX18-3E300N15-RD4	2	0.079	0.039	0.720	0.031-0.011	0.008-0.039	±0.002	±0.006	☺		☺				☺		☺	
	3	0.118	0.059	0.720	0.004-0.015	0.020-0.059	±0.002	±0.006			☺	☺				☺	☺	

l_{Tol} = Repeat accuracy when changing indexable inserts within the same indexable insert batch
 Radius tolerance r_{Tol} = ±0.002 in (±0.05 mm)

HC = Coated carbide



Grooving and recessing GX cutting inserts Tiger-tec® Silver



A2

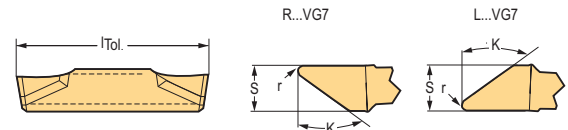
Cutting inserts

Designation	s mm	s in	r in	l in	f in	a _p in	S _{Tol} in	l _{Tol} in	P				M			K	S	
									HC				HC			HC	HC	
									WKP23S	WSM23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S
GX24-2E300N02-UF4	3	0.118	0.008	0.945	0.004-0.008	0.012-0.079	±0.002	±0.006										
GX24-2E300N03-UF4	3	0.118	0.012	0.945	0.004-0.008	0.016-0.079	±0.002	±0.006										
GX24-2E318N03-UF4	3.18	0.125	0.012	0.945	0.004-0.008	0.016-0.079	±0.002	±0.006										
GX24-3E400N02-UF4	4	0.157	0.008	0.945	0.004-0.012	0.012-0.110	±0.002	±0.006										
GX24-3E400N04-UF4	4	0.157	0.016	0.945	0.004-0.012	0.020-0.110	±0.002	±0.006										
GX24-3E400N08-UF4	4	0.157	0.031	0.945	0.004-0.012	0.035-0.110	±0.002	±0.006										
GX24-3E475N04-UF4	4.75	0.187	0.016	0.945	0.005-0.014	0.020-0.118	±0.002	±0.006										
GX24-3E500N04-UF4	5	0.197	0.016	0.945	0.005-0.014	0.020-0.118	±0.002	±0.006										
GX24-3E500N08-UF4	5	0.197	0.031	0.945	0.005-0.014	0.035-0.118	±0.002	±0.006										
GX24-4E600N05-UF4	6	0.236	0.020	0.945	0.006-0.016	0.024-0.138	±0.002	±0.006										
GX24-4E600N08-UF4	6	0.236	0.031	0.945	0.006-0.016	0.035-0.138	±0.002	±0.006										
GX24-4E635N05-UF4	6.35	0.250	0.020	0.945	0.006-0.016	0.024-0.138	±0.002	±0.006										
GX24-2F300N03-UF4	3	0.118	0.012	0.945	0.004-0.008	0.016-0.079	±0.002	±0.006										
GX24-3F400N04-UF4	4	0.157	0.016	0.945	0.004-0.012	0.020-0.110	±0.002	±0.006										
GX24-3F500N04-UF4	5	0.197	0.016	0.945	0.005-0.014	0.020-0.118	±0.002	±0.006										
GX24-4F600N05-UF4	6	0.236	0.020	0.945	0.006-0.016	0.024-0.138	±0.002	±0.006										

l_{Tol} = Repeat accuracy when changing indexable inserts within the same indexable insert batch
 Radius tolerance r_{Tol} = ±0.002 in (±0.05 mm)

HC = Coated carbide

Grooving and recessing GX cutting inserts Tiger-tec® Silver



Cutting inserts

Designation	s mm	s in	r in	κ	l in	f in	a _p in	S _{Tol} in	l _{Tol} in	P				M			K	S	
										HC				HC			HC	HC	
										WKP23S	WSM23S	WSM33S	WSM43S	WSM23S	WSM33S	WSM43S	WKP23S	WSM23S	WSM33S
GX24-2E280R02-VG7	2.8	0.110	0.008	50°	0.945	0.002-0.005	0.008-0.079	±0.0020	±0.0059										
GX24-2E280R04-VG7	2.8	0.110	0.016	50°	0.945	0.003-0.010	0.008-0.098	±0.0020	±0.0059										
GX24-2E280L02-VG7	2.8	0.110	0.008	50°	0.945	0.002-0.005	0.008-0.079	±0.0020	±0.0059										

l_{Tol} = Repeat accuracy when changing indexable insert
 Radius tolerance r_{Tol} = ±0.002 in (±0.05 mm)
 Cutting insert can be used in G15... tools
 With other tools. adapt support to the cutting insert profile

HC = Coated carbide

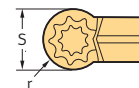
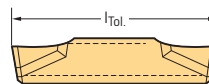
☺ ☹ ☹ / ★ New addition to the product range

Grooving and copy turning

GX cutting inserts






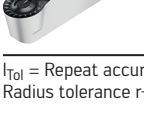
Tiger-tec® Silver

GX...N



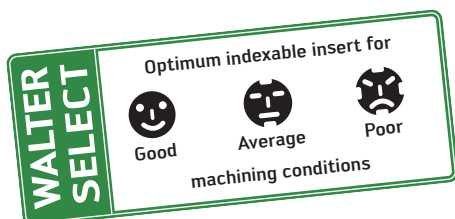
A2

Cutting inserts

Designation	s mm	s in	r in	l in	f in	a _p in	S _{Tol} in	l _{Tol} in	P				M				K	S										
									HC				HC				HC	HC										
									WKP23S	WSM13S	WSM23S	WSM33S	WSM43S	WSP23S	WSM13S	WSM23S	WSM33S	WSM43S	WKP23S	WSM13S	WSM23S	WSM33S	WSM43S					
 GX24-2E300N15-RF7	3	0.118	0.059	0.945	0.004-0.013	0.004-0.059	±0.002	±0.006	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹		
 GX24-3E400N20-RF7	4	0.157	0.079	0.945	0.005-0.019	0.004-0.079	±0.002	±0.006	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	
 GX24-3E500N25-RF7	5	0.197	0.098	0.945	0.005-0.021	0.004-0.098	±0.002	±0.006	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	
 GX24-2F300N15-RF7	3	0.118	0.059	0.945	0.004-0.013	0.004-0.059	±0.002	±0.006	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	
 GX24-3F400N20-RF7	4	0.157	0.079	0.945	0.005-0.019	0.004-0.079	±0.002	±0.006	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹
 GX24-3F500N25-RF7	5	0.197	0.098	0.945	0.005-0.021	0.004-0.098	±0.002	±0.006	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹

l_{Tol} = Repeat accuracy when changing indexable inserts within the same indexable insert batch
 Radius tolerance r_{Tol} = ±0.002 in (±0.05 mm)

HC = Coated carbide



Walter Cut grooving tools product range overview

Shank tools/parting blades/boring bars

Machining						
Type						
Designation	G4014	G4014...-P	G4011	G4011...-P	G4041	G4041...-P
Insert width s [mm]	1.5–3	2–3	2–4	2–4	1.5–3	2
Cutting depth T_{max} [mm]	10–18	12–18	10–17	17	17–21	17–21
Coolant supply	External	Precision cooling	External/ precision cooling	Precision cooling	External	Precision cooling
Shank size h [mm]	10–20	12–20	19–25	20–25	26–32	26–32
Shank size h [inch]	0.394–0.787	0.472–0.787	0.750–1.000	0.787–1.000	1.024–1.260	1.024–1.260
Page	104	105	111	112	115	116

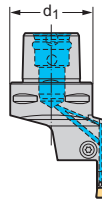
Machining				
Type				
Designation	G4041...C	G4041...C-P	G4634-P	G1634-P
Insert width s [mm]	1.5–3	2	2–3	2–4
Cutting depth T_{max} [mm]	17–21	17	13–16	21–33
Coolant supply	External	Precision cooling	Precision cooling	Precision cooling
Shank size h [mm]	26–32	26	33	33–43
Shank size h [inch]	1.024–1.260	1.024	1.29	1.29–1.69
Page	117	118	119	120

Walter Cut grooving tools product range overview

Walter Capto™ groove turning holders

Machining		
Type		
Designation	G4011-C...-P	G1011-C...-P
Insert width s [mm]	2	3–6
Cutting depth T_{max} [mm]	17	21
Coolant supply	Precision cooling	Precision cooling
Walter Capto™ size	C3 / C4	C3 / C4 / C5 / C6
Page	122	123

Walter Capto™	
C3	$d_1 = 1.260$ in
C4	$d_1 = 1.575$ in
C5	$d_1 = 1.969$ in
C6	$d_1 = 2.362$ in



Designation key for Walter Cut grooving tools

A2

Example:

G	1	1	11	2020	R	3	T33	090	GX24	C	P
1	2	3	4	5	6	7	8	9	10	11	12

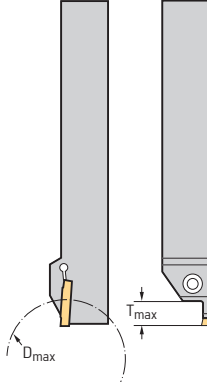
1
Tool group
G Grooving

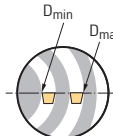
2
Generation
1 GX
2 SX / UX
3 MX
4 DX

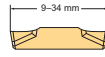




3
Tool type
0 Radial grooving tool
1 Axial grooving tool
5 Grooving tool without support
6 Modular external radial grooving

4
Tool type
11 Angled at 0°, straight clamping screw
12 Angled at 0°, self-clamping system
14 Angled at 0°, clamping screw from the side (SmartLock)
16 Angled at 0°, clamping screw from the front
21 Angled at 90°, straight clamping screw
22 Angled at 90°, self-clamping system
32 Grooving module, self-clamping system
34 Grooving module, angled clamping screw
41 Parting blade, clamping screw
42 Parting blade, self-clamping system
51 Angled, straight clamping screw
61 Clamping block/split

8
Cutting depth/parting off diameter
T06 6 mm
T12 12 mm
T21 21 mm
T32 32 mm
T33 33 mm
T35 35 mm
D16 Ø 16 mm
D32 Ø 32 mm




9	
Minimum axial grooving diameter/ blade height	
Minimum axial grooving diameter	
034 Ø 34 mm	
042 Ø 42 mm	
054 Ø 54 mm	
067 Ø 67 mm	
090 Ø 90 mm	
130 Ø 130 mm	
220 Ø 220 mm	
Blade height	
26 26 mm	
32 32 mm	
52 52 mm	

10	
Type of indexable insert	
GX	
DX	
SX	
MX	
UX	

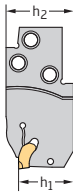
5

Shank size

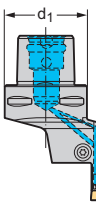
Square shank	
1010	10 × 10 mm
1212	12 × 12 mm
1616	16 × 16 mm
2020	20 × 20 mm
2525	25 × 25 mm
3225	32 × 25 mm
3232	32 × 32 mm
4032	40 × 32 mm



Module size	
h₁	
E12	12 mm
E16	16 mm
E20	20 mm
E25	25 mm
E32	32 mm
h₂	
33	33 mm
43	43 mm

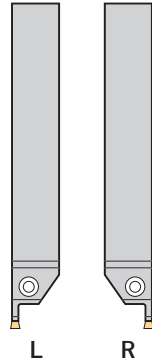


Walter Capto™	
C3	d ₁ = 32 mm
C4	d ₁ = 40 mm
C5	d ₁ = 50 mm
C6	d ₁ = 60 mm



6

Toolholder design



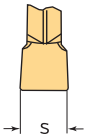
L **R**

R Right-hand
L Left-hand
N Neutral

7

Insert width

1.5	1.5 mm
2	2 mm
3	3 mm
4	4 mm
5	5 mm
6	6 mm
8	8 mm
10	10 mm



11


Version

- **C** Contra

12

Cooling

- **P** Precision cooling

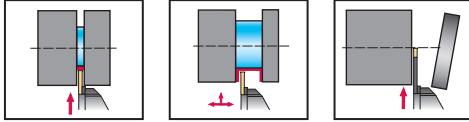
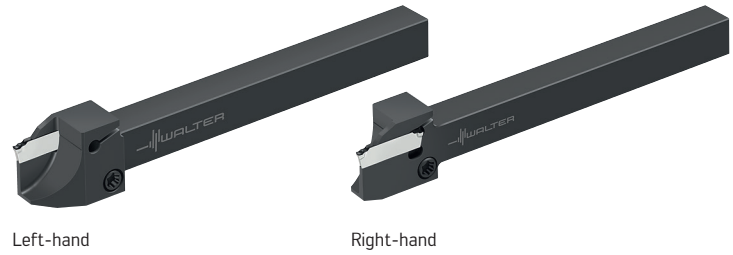


Shank tool – radial grooving

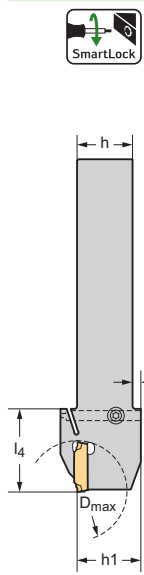
 G4014

Walter Cut

– Side screw clamping



Tool



Designation	s mm	s inch	D _{max} mm	h = h ₁ mm	b mm	f ₁ mm	l ₁ mm	h ₄ mm	l ₄ mm	Type
G4014-1010R-1.5T10DX18	1.5	0.059	20	10	10	9.4	110	4	22	DX18-1E1 ..
G4014-1212R-1.5T12DX18			25	12	12	11.4	110	3	22.3	
G4014-1616R-1.5T12DX18			25	16	16	15.4	120	4	24	
G4014-1010R-2T10DX18	2	0.079	20	10	10	9.2	110	4	22	DX18-2E2 ..
G4014-1212R-2T12DX18			25	12	12	11.2	110	3	22.3	
G4014-1616R-2T12DX18			25	16	16	15.2	120	4	24	
★ G4014-1212R-3T12DX18	3	0.118	25	12	12	10.8	110	3	22.3	DX18-3E3 .. DX18-3F3 ..
G4014-1616R-3T17DX18			35	16	16	14.8	120	4	30	
G4014-2020R-3T17DX18			35	20	20	18.8	120	3	30	
G4014-1010L-1.5T10DX18	1.5	0.059	20	10	10	9.4	110	4	22	DX18-1E1 ..
G4014-1212L-1.5T12DX18			25	12	12	11.4	110	3	22.3	
G4014-1616L-1.5T12DX18			25	16	16	15.4	120	4	24	
G4014-1010L-2T10DX18	2	0.079	20	10	10	9.2	110	4	22	DX18-2E2 ..
G4014-1212L-2T12DX18			25	12	12	11.2	110	3	22.3	
G4014-1616L-2T12DX18			25	16	16	15.2	120	4	24	
★ G4014-1212L-3T12DX18	3	0.118	25	12	12	10.8	110	3	22.3	DX18-3E3 .. DX18-3F3 ..
G4014-1616L-3T17DX18			35	16	16	14.8	120	4	30	
G4014-2020L-3T17DX18			35	20	20	18.8	120	3	30	

Fig. shows right-hand version

$$F = f_1 + s/2$$

 If no D₂ or D_{max} is specified, the tool has no diameter limit.
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	h = h ₁ [mm]	10–12	16–20
	Clamping screw for grooving insert Tightening torque	FS2586 (Torx 15IP) 2.0 Nm	FS2585 (Torx 15IP) 3.0 Nm
	Blanking plug	FS2589	FS2589
	Torx key	FS1465 (Torx 15IP /SW 3.5)	FS1465 (Torx 15IP /SW 3.5)

Accessories

	h = h ₁ [mm]	10–20
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)

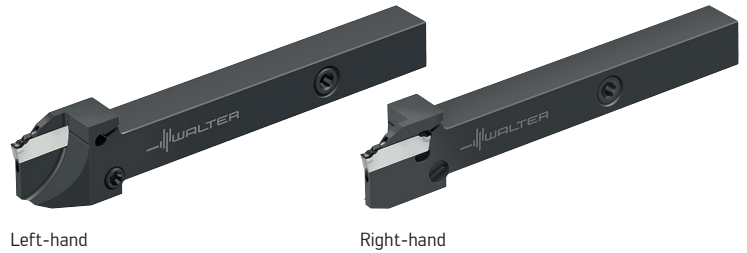
/ ★ New addition to the product range

Shank tool – radial grooving

G4014...-P

Walter Cut

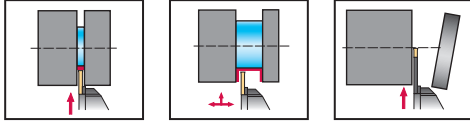
- Side screw clamping
- Precision cooling



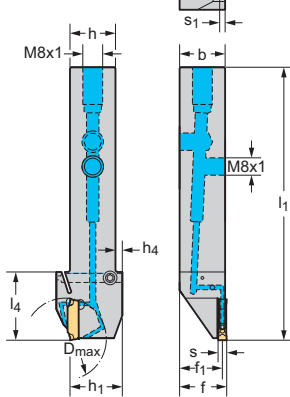
Left-hand

Right-hand

A2



Tool



Designation

Designation	s mm	s inch	D _{max} mm	h = h ₁ mm	b mm	f ₁ mm	l ₁ mm	h ₄ mm	l ₄ mm	Type
G4014-1212R-2T12DX18-P	2	0.079	25	12	12	11.2	110	3	22.3	DX18-2E2 ..
G4014-1212R-2.5T12DX18-P	2.5	0.098	25	12	12	11	110	3	22.3	
G4014-1212R-3T12DX18-P	3	0.118	25	12	12	10.8	110	3	22.3	DX18-3E3 .. DX18-3F3 ..
G4014-1212L-2T12DX18-P	2	0.079	25	12	12	11.2	110	3	22.3	DX18-2E2 ..
G4014-1212L-2.5T12DX18-P	2.5	0.098	25	12	12	11	110	3	22.3	
G4014-1212L-3T12DX18-P	3	0.118	25	12	12	10.8	110	3	22.3	DX18-3E3 .. DX18-3F3 ..

Fig. shows right-hand version

$$f = f_1 + s/2$$

If no D₂ or D_{max} is specified, the tool has no diameter limit.

The maximum recommended coolant pressure is 150 bar (2175 psi)

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

Assembly parts

	h = h ₁ [mm]	12
	Clamping screw for grooving insert Tightening torque	FS2586 (Torx 15IP) 2.0 Nm
	Blanking plug	FS2589
	M8x1 threaded plug	FS2587
	Torx key	FS1465 (Torx 15IP /SW 3.5)

Accessories

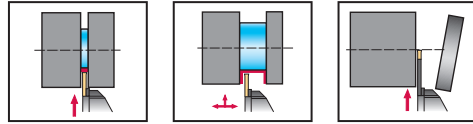
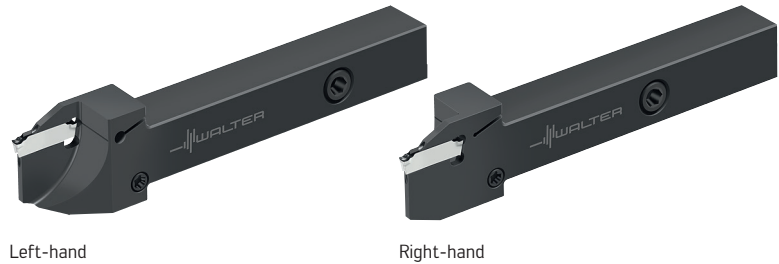
	h = h ₁ [mm]	12
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	M8x1 angle connection	FS2596
	M8x1 connection element	FS2597
	Copper gasket	FS2598

Shank tool – radial grooving

G4014...-P

Walter Cut

- Side screw clamping
- Precision cooling



Tool	Designation	s mm	s inch	D _{max} mm	h = h ₁ mm	b mm	f ₁ mm	l ₁ mm	h ₄ mm	l ₄ mm	Type	
	G4014-1616R-2T12DX18-P	2	0.079	25	16	16	15.2	120	4	24	DX18-2E2 ..	
	G4014-1616R-2T17DX18-P			35	16	16	15.2	120	4	30		
	G4014-1616R-2.5T17DX18-P	2.5	0.098	35	16	16	15	120	4	30	DX18-3E3 .. DX18-3F3 ..	
	G4014-1616R-3T17DX18-P	3	0.118	35	16	16	14.8	120	4	30		
	G4014-1616L-2T12DX18-P	2	0.079	25	16	16	15.2	120	4	24	DX18-2E2 ..	
	G4014-1616L-2T17DX18-P			35	16	16	15.2	120	4	30		
	G4014-1616L-2.5T17DX18-P	2.5	0.098	35	16	16	15	120	4	30	DX18-3E3 .. DX18-3F3 ..	
	G4014-1616L-3T17DX18-P	3	0.118	35	16	16	14.8	120	4	30		

Fig. shows right-hand version

$f = f_1 + s/2$
 If no D₂ or D_{max} is specified, the tool has no diameter limit.
 For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
 The maximum recommended coolant pressure is 150 bar (2175 psi)
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts		h = h ₁ [mm]	16
	Clamping screw for grooving insert Tightening torque		FS2585 (Torx 15IP) 3.0 Nm
	Blanking plug		FS2589
	G 1/8" threaded plug		FS2258 (SW 5)
	Torx key		FS1465 (Torx 15IP /SW 3.5)

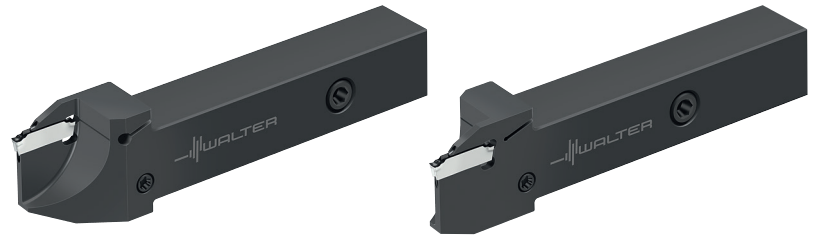
Accessories		h = h ₁ [mm]	16
	Torque screwdriver, analogue Tightening torque		FS2003 1.5–5.0 Nm
	Interchangeable blade		FS2014 (Torx 15IP)

Shank tool – radial grooving

G4014...-P

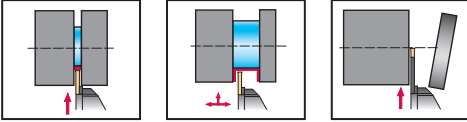
Walter Cut

- Side screw clamping
- Precision cooling

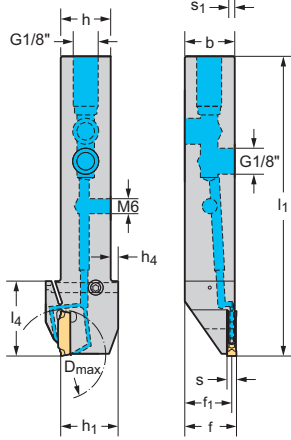


Left-hand

Right-hand



Tool



Designation	s mm	s inch	D _{max} mm	h = h ₁ mm	b mm	f ₁ mm	l ₁ mm	h ₄ mm	l ₄ mm	Type
G4014-2020R-2T17DX18-P	2	0.079	35	20	20	19.2	120	3	30	DX18-2E2 ..
G4014-2020R-3T17DX18-P	3	0.118	35	20	20	18.8	120	3	30	DX18-3E3 .. DX18-3F3 ..
G4014-2020L-2T17DX18-P	2	0.079	35	20	20	19.2	120	3	30	DX18-2E2 ..
G4014-2020L-3T17DX18-P	3	0.118	35	20	20	18.8	120	3	30	DX18-3E3 .. DX18-3F3 ..

Fig. shows right-hand version

$$f = f_1 + s/2$$






If no D₂ or D_{max} is specified, the tool has no diameter limit.

For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"

The maximum recommended coolant pressure is 150 bar (2175 psi)

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

Assembly parts

	h = h ₁ [mm]	20
	Clamping screw for grooving insert Tightening torque	FS2585 (Torx 15IP) 3.0 Nm
	Blanking plug	FS2589
	G 1/8" threaded plug	FS2258 (SW 5)
	M6 threaded plug	FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP /SW 3.5)

Accessories

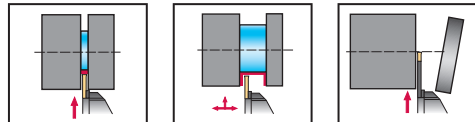
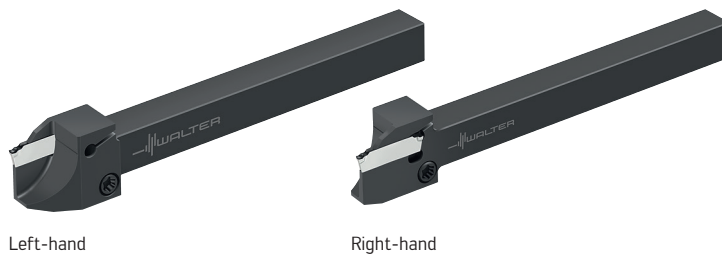
	h = h ₁ [mm]	20
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)

Shank tool – radial grooving

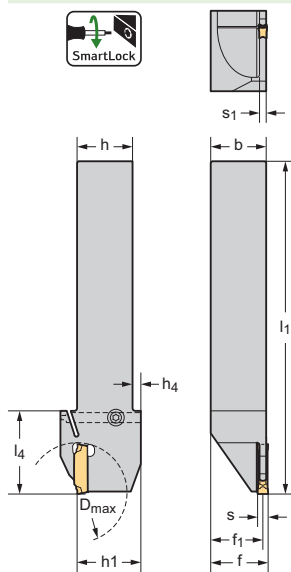
G4014 inch

Walter Cut

– Side screw clamping



Tool



Designation	s inch	s mm	D _{max} inch	h = h ₁ inch	b inch	f ₁ inch	l ₁ inch	h ₄ inch	l ₄ inch	Type
G4014.08R-1.5T12DX18	0.059	1.5	0.984	0.500	0.500	0.476	4.331	0.091	0.878	DX18-1E1 ..
G4014.08L-1.5T12DX18			0.984	0.500	0.500	0.476	4.331	0.091	0.878	

Fig. shows right-hand version

f = f₁ + s/2
 If no D₂ or D_{max} is specified, the tool has no diameter limit.
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	h = h ₁ [inch]	0.500
	Clamping screw for grooving insert Tightening torque	FS2586 (Torx 15IP) 18 in lbs
	Blanking plug	FS2589
	Torx key	FS1465 (Torx 15IP /SW 3.5)

Accessories

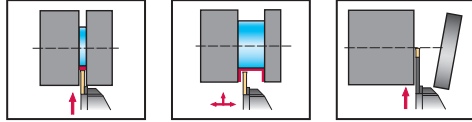
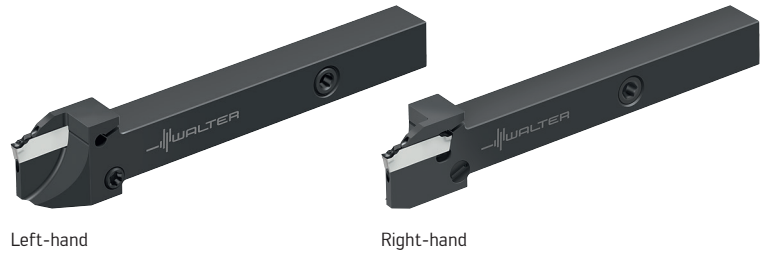
	h = h ₁ [inch]	0.500
	Torque screwdriver, analogue Tightening torque	FS2003 13–44 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)

Shank tool – radial grooving

G4014...-P **inch**

Walter Cut

- Side screw clamping
- Precision cooling



Tool		s	s	D _{max}	h = h ₁	b	f ₁	l ₁	h ₄	l ₄	Type	
		inch	mm	inch	inch	inch	inch	inch	inch	inch		
	Designation	G4014.08R-2T12DX18-P	0.079	2	0.984	0.500	0.500	0.469	4.331	0.091	0.878	DX18-2E2 ..
		G4014.08R-3T12DX18-P	0.118	3	0.984	0.500	0.500	0.453	4.331	0.091	0.878	DX18-3E3 .. DX18-3F3 ..
		G4014.08L-2T12DX18-P	0.079	2	0.984	0.500	0.500	0.469	4.331	0.091	0.878	DX18-2E2 ..
		G4014.08L-3T12DX18-P	0.118	3	0.984	0.500	0.500	0.453	4.331	0.091	0.878	DX18-3E3 .. DX18-3F3 ..

Fig. shows right-hand version

$f = f_1 + s/2$

If no D₂ or D_{max} is specified, the tool has no diameter limit.
 The maximum recommended coolant pressure is 150 bar (2175 psi)
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts		h = h ₁ [inch]	0.500
	Clamping screw for grooving insert Tightening torque		FS2586 (Torx 15IP) 18 in lbs
	Blanking plug		FS2589
	UNF 5/16-24 threaded plug		FS2593
	Torx key		FS1465 (Torx 15IP /SW 3.5)

Accessories		h = h ₁ [inch]	0.500
	Torque screwdriver, analogue Tightening torque		FS2003 13-44 in lbs
	Interchangeable blade		FS2014 (Torx 15IP)
	5/16" UNF angle connection		FS2594
	5/16" UNF connection element		FS2597
	Copper gasket		FS2598

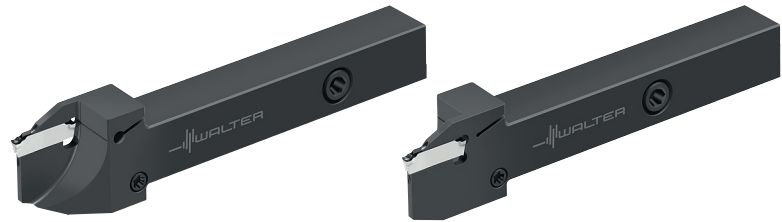
A2

Shank tool – radial grooving

G4014...-P inch

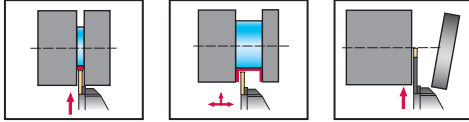
Walter Cut

- Side screw clamping
- Precision cooling



Left-hand

Right-hand



Tool	Designation	s inch	s mm	D _{max} inch	h = h ₁ inch	b inch	f ₁ inch	l ₁ inch	h ₄ inch	l ₄ inch	Type	
	G4014.10R-2T17DX18-P	0.079	2	1.378	0.625	0.625	0.594	4.724	0.161	1.181	DX18-2E2 ..	
	G4014.12R-2T17DX18-P				0.750	0.750	0.717	4.724	0.118	1.181		
	G4014.10R-3T17DX18-P	0.118	3	1.378	0.625	0.625	0.579	4.724	0.161	1.181	DX18-3E3 ..	
	G4014.12R-3T17DX18-P				0.750	0.750	0.701	4.724	0.118	1.181	DX18-3F3 ..	
	G4014.10L-2T17DX18-P	0.079	2	1.378	0.625	0.625	0.594	4.724	0.161	1.181	DX18-2E2 ..	
	G4014.12L-2T17DX18-P				0.750	0.750	0.717	4.724	0.118	1.181		
	G4014.10L-3T17DX18-P	0.118	3	1.378	0.625	0.625	0.579	4.724	0.161	1.181	DX18-3E3 ..	
	G4014.12L-3T17DX18-P				0.750	0.750	0.701	4.724	0.118	1.181	DX18-3F3 ..	

Fig. shows right-hand version

$$f = f_1 + s/2$$

 If no D₂ or D_{max} is specified, the tool has no diameter limit.

For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"

The maximum recommended coolant pressure is 150 bar (2175 psi)

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

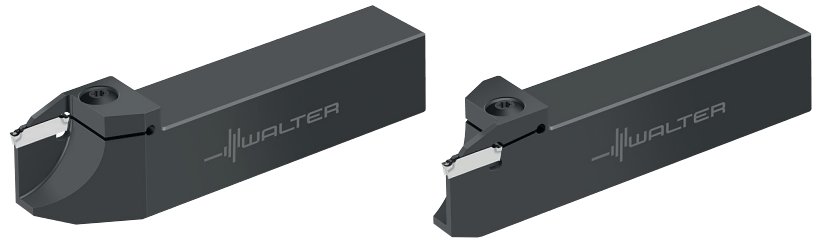
Assembly parts	h = h ₁ [inch]	0.625	0.750
	Clamping screw for grooving insert Tightening torque	FS2585 (Torx 15IP) 27 in lbs	FS2585 (Torx 15IP) 27 in lbs
	Blanking plug	FS2589	FS2589
	G 1/8" threaded plug	FS2258 (SW 5)	FS2258 (SW 5)
	M6 threaded plug		FS2288 (SW 3)
	Torx key	FS1465 (Torx 15IP /SW 3.5)	FS1465 (Torx 15IP /SW 3.5)

Accessories	h = h ₁ [inch]	0.625–0.750
	Torque screwdriver, analogue Tightening torque	FS2003 13–44 in lbs
	Interchangeable blade	FS2014 (Torx 15IP)

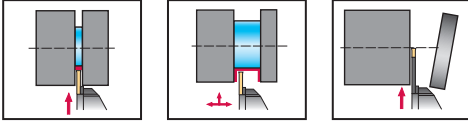
Shank tool – radial grooving

G4011 mm

Walter Cut



– Screw clamping



Left-hand

Right-hand



Tool		s	s	T _{max}	D _{max}	h = h ₁	b	f ₁	l ₁	l ₄	s ₁	Type
Designation		mm	inch	mm	mm	mm	mm	mm	mm	mm	mm	
	G4011-2525R-2T10DX18	2	0.079	10		25	25	24.2	125	28	1.6	DX18-2E2 ..
	G4011-2525R-2T17DX18			17	35	25	25	24.2	125	33.5	1.6	
	G4011-2525R-2.5T17DX18	2.5	0.098	17	35	25	25	24	125	33.5	2.1	
	★ G4011-2020R-3T10DX18	3	0.118	10		20	20	18.8	125	33.5	2.4	DX18-3E3 .. DX18-3F3 ..
	G4011-2525R-3T10DX18			10		25	25	23.8	125	28	2.4	
	G4011-2525R-3T17DX18	17	35	25	25	23.8	125	33.5	2.4			
	★ G4011-2020R-4T10DX18	4	0.157	10		20	20	18.3	125	33.5	3.4	DX18-4E4 .. DX18-4F4 ..
	★ G4011-2020R-4T17DX18			17		20	20	18.3	125	33.5	3.4	
	★ G4011-2525R-4T10DX18			10		25	25	23.2	125	33.5	3.4	
	★ G4011-2525R-4T17DX18			17		25	25	23.2	125	33.5	3.4	
	G4011-2525L-2T10DX18	2	0.079	10		25	25	24.2	125	28	1.6	DX18-2E2 ..
	G4011-2525L-2T17DX18			17	35	25	25	24.2	125	33.5	1.6	
	G4011-2525L-2.5T17DX18	2.5	0.098	17	35	25	25	24	125	33.5	2.1	
	★ G4011-2020L-3T10DX18	3	0.118	10		20	20	18.8	125	33.5	2.4	DX18-3E3 .. DX18-3F3 ..
	G4011-2525L-3T10DX18			10		25	25	23.8	125	28	2.4	
	G4011-2525L-3T17DX18	17	35	25	25	23.8	125	33.5	2.4			
★ G4011-2020L-4T10DX18	4	0.157	10		20	20	18.3	125	33.5	3.4	DX18-4E4 .. DX18-4F4 ..	
★ G4011-2020L-4T17DX18			17		20	20	18.3	125	33.5	3.4		
★ G4011-2525L-4T10DX18			10		25	25	23.2	125	33.5	3.4		
★ G4011-2525L-4T17DX18			17		25	25	23.2	125	33.5	3.4		

Fig. shows right-hand version

$f = f_1 + s/2$

If no D₂ or D_{max} is specified, the tool has no diameter limit.

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

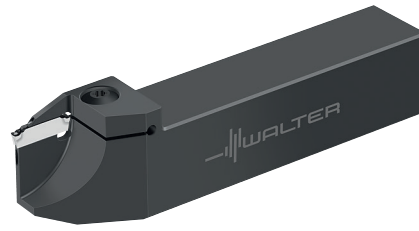
Assembly parts	h = h ₁ [mm] s [mm]	20 3–4	25 2–3	25 4
Clamping screw for grooving insert Tightening torque		FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm
Torx key		FS1464 (Torx 20IP)	FS1464 (Torx 20IP)	FS1464 (Torx 20IP)

Shank tool – radial grooving

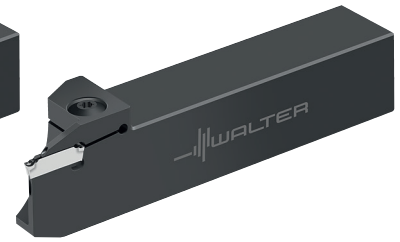
 G4011...-P

Walter Cut

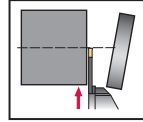
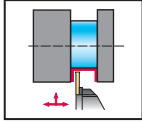
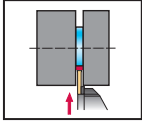
- Screw clamping
- Precision cooling



Left-hand



Right-hand



Tool		s	s	T _{max}	D _{max}	h = h ₁	b	f ₁	l ₁	l ₄	s ₁	Type	
Designation		mm	inch	mm	mm	mm	mm	mm	mm	mm	mm		
	G4011-2525R-2T17DX18-P	2	0.079	17	35	25	25	24.2	125	33.5	1.6	DX18-2E2 ..	
	G4011-2525R-2.5T17DX18-P	2.5	0.098	17	35	25	25	24	125	33.5	2.1	DX18-3E3 .. DX18-3F3 ..	
	G4011-2525R-3T17DX18-P	3	0.118	17	35	25	25	23.8	125	33.5	2.4	DX18-3E3 .. DX18-3F3 ..	
	★ G4011-2020R-4T17DX18-P	4	0.157	17		20	20	18.3	125	33.5	3.4	DX18-4E4 ..	
	★ G4011-2525R-4T17DX18-P			17		25	25	23.3	125	33.5	3.4	DX18-4F4 ..	
	G4011-2525L-2T17DX18-P	2	0.079	17	35	25	25	24.2	125	33.5	1.6	DX18-2E2 ..	
	G4011-2525L-2.5T17DX18-P	2.5	0.098	17	35	25	25	24	125	33.5	2.1	DX18-3E3 .. DX18-3F3 ..	
	G4011-2525L-3T17DX18-P	3	0.118	17	35	25	25	23.8	125	33.5	2.4	DX18-3E3 .. DX18-3F3 ..	
	★ G4011-2020L-4T17DX18-P	4	0.157	17		20	20	18.3	125	33.5	3.4	DX18-4E4 ..	
	★ G4011-2525L-4T17DX18-P			17		25	25	23.3	125	33.5	3.5	DX18-4F4 ..	

Fig. shows right-hand version

$$f = f_1 + s/2$$

 If no D₂ or D_{max} is specified, the tool has no diameter limit.

For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"

The maximum recommended coolant pressure is 150 bar (2175 psi)

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

Assembly parts			h = h ₁ [mm]	20	25
	Clamping screw for grooving insert Tightening torque			FS2118 (Torx 20IP) 5.0 Nm	FS2118 (Torx 20IP) 5.0 Nm
	G 1/8" threaded plug			FS2258 (SW 5)	FS2258 (SW 5)
	M6 threaded plug				FS2288 (SW 3)
	Torx key			FS1464 (Torx 20IP)	FS1464 (Torx 20IP)

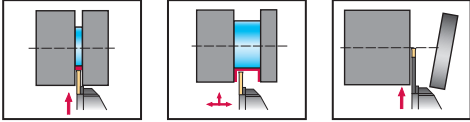
Shank tool – radial grooving

G4011 inch

Walter Cut



– Screw clamping



Left-hand

Right-hand



Tool		s	s	T _{max}	D _{max}	h = h ₁	b	f ₁	l ₁	l ₄	s ₁	Type
Designation		inch	mm	inch	inch	inch	inch	inch	inch	inch	inch	
	G4011.16R-2T10DX18	0.079	2	0.394		1.000	1.000	0.969	4.921	1.102	0.063	DX18-2E2 ..
	G4011.16R-3T10DX18	0.118	3	0.394		1.000	1.000	0.953	4.921	1.102	0.094	DX18-3E3 ..
	G4011.16R-3T17DX18			0.669	1.378	1.000	1.000	0.953	4.921	1.319	0.094	DX18-3F3 ..
	★ G4011.12R-4T17DX18	0.157	4	0.669		0.750	0.750	0.685	4.921	1.319	0.134	DX18-4E4 ..
	★ G4011.16R-4T17DX18			0.669		1.000	1.000	0.933	4.921	1.319	0.134	DX18-4F4 ..
	G4011.16L-2T10DX18	0.079	2	0.394		1.000	1.000	0.969	4.921	1.102	0.063	DX18-2E2 ..
	G4011.16L-3T10DX18	0.118	3	0.394		1.000	1.000	0.953	4.921	1.102	0.094	DX18-3E3 ..
	G4011.16L-3T17DX18			0.669	1.378	1.000	1.000	0.953	4.921	1.319	0.094	DX18-3F3 ..
	★ G4011.12L-4T17DX18	0.157	4	0.669		0.750	0.750	0.685	4.921	1.319	0.134	DX18-4E4 ..
	★ G4011.16L-4T17DX18			0.669		1.000	1.000	0.933	4.921	1.319	0.134	DX18-4F4 ..

Fig. shows right-hand version

f = f₁ + s/2
 If no D₂ or D_{max} is specified, the tool has no diameter limit.
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts		h = h ₁ [inch]	0.750–1.000
	Clamping screw for grooving insert Tightening torque		FS2118 (Torx 20IP) 44 in lbs
	Torx key		FS1464 (Torx 20IP)

A2

Shank tool – radial grooving

G4011...-P inch

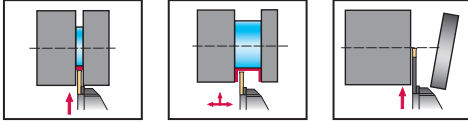
Walter Cut

- Screw clamping
- Precision cooling

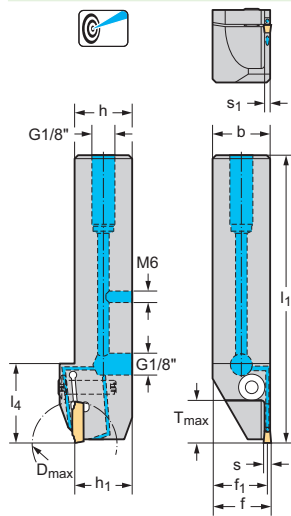


Left-hand

Right-hand



Tool



Designation	s inch	s mm	T _{max} inch	D _{max} inch	h = h ₁ inch	b inch	f ₁ inch	l ₁ inch	l ₄ inch	s ₁ inch	Type
G4011.16R-2T17DX18-P	0.079	2	0.669	1.378	1.000	1.000	0.969	4.921	1.319	0.063	DX18-2E2 ..
G4011.16R-3T17DX18-P	0.118	3	0.669	1.378	1.000	1.000	0.953	4.921	1.319	0.094	DX18-3E3 .. DX18-3F3 ..
G4011.16L-2T17DX18-P	0.079	2	0.669	1.378	1.000	1.000	0.969	4.921	1.319	0.063	DX18-2E2 ..
G4011.16L-3T17DX18-P	0.118	3	0.669	1.378	1.000	1.000	0.953	4.921	1.319	0.094	DX18-3E3 .. DX18-3F3 ..

Fig. shows right-hand version

$f = f_1 + s/2$
 If no D₂ or D_{max} is specified, the tool has no diameter limit.
 For the connection set for coolant supply with G1/8" thread, see "Assembly parts and accessories"
 The maximum recommended coolant pressure is 150 bar (2175 psi)
 Bodies and assembly parts are included in the scope of delivery.

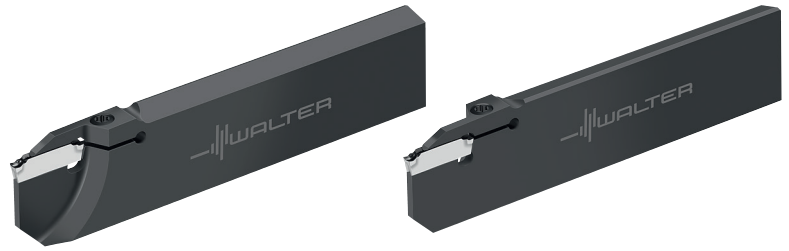
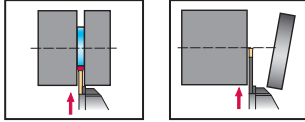
Assembly parts	h = h ₁ [inch]	1.000
Clamping screw for grooving insert Tightening torque		FS2118 (Torx 20IP) 44 in lbs
G 1/8" threaded plug		FS2258 (SW 5)
M6 threaded plug		FS2288 (SW 3)
Torx key		FS1464 (Torx 20IP)

Reinforced parting blade

G4041

Walter Cut

- Screw clamping



Left-hand

Right-hand



Tool	Designation	s mm	s inch	T _{max} mm	D _{max} mm	h ₄ mm	l ₁ mm	h ₁ mm	s ₁ mm	Type	
	G4041-26R-1.5T17DX18	1.5	0.059	17	35	26	110	21.3	1.2	DX18-1E1 ..	
	G4041-26R-2T17DX18	2	0.079	17	35	26	110	21.3	1.6	DX18-2E2 ..	
	G4041-32R-2T21DX18			21	42	32	110	25	2.5	DX18-3E3 .. DX18-3F3 ..	
	G4041-26R-3T17DX18	3	0.118	17	35	26	110	21.3	2.5	DX18-3E3 .. DX18-3F3 ..	
	G4041-26L-1.5T17DX18	1.5	0.059	17	35	26	110	21.3	1.2	DX18-1E1 ..	
	G4041-26L-2T17DX18	2	0.079	17	35	26	110	21.3	1.6	DX18-2E2 ..	
	G4041-26L-3T17DX18	3	0.118	17	35	26	110	21.3	2.5	DX18-3E3 .. DX18-3F3 ..	

Fig. shows right-hand version

If no D₂ or D_{max} is specified, the tool has no diameter limit.
Bodies and assembly parts are included in the scope of delivery.

Assembly parts		h ₄ [mm]	26-32
	Clamping screw for grooving insert Tightening torque		FS2164 (Torx 15IP) 3.5 Nm

Accessories		h ₄ [mm]	26-32
	Screwdriver for grooving insert		FS1485 (Torx 15IP)

A2

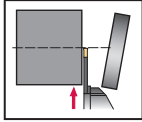
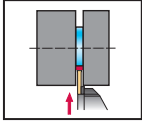
A2

Reinforced parting blade

 G4041...-P

Walter Cut

- Screw clamping
- Precision cooling



Left-hand



Right-hand



Tool

Designation	s mm	s inch	T _{max} mm	D _{max} mm	h ₄ mm	l ₁ mm	h ₁ mm	s ₁ mm	Type
G4041-26R-2T17DX18-P	2	0.079	17	35	26	110	21.3	1.6	DX18-2E2 ..
G4041-26L-2T17DX18-P	2	0.079	17	35	26	110	21.3	1.6	
G4041-32L-2T21DX18-P			21	42	32	110	25	1.6	

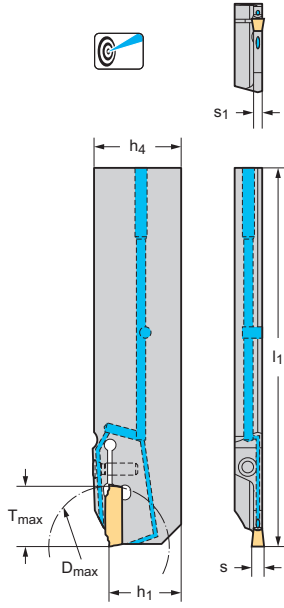


Fig. shows right-hand version

If no D₂ or D_{max} is specified, the tool has no diameter limit.
 The maximum recommended coolant pressure is 80 bar (1160 psi)
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

Clamping screw for grooving insert Tightening torque	h ₄ [mm] 26-32 FS2164 (Torx 15IP) 3.5 Nm
---	---

Accessories

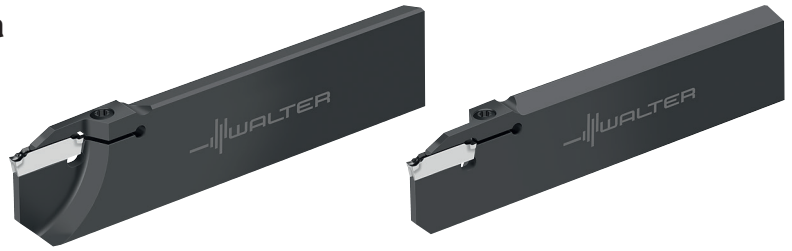
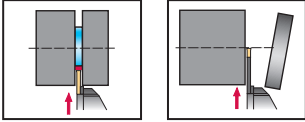
Screwdriver for grooving insert	h ₄ [mm] 26-32 FS1485 (Torx 15IP)
---------------------------------	---

Reinforced parting blade – Contra

G4041...C

Walter Cut

– Screw clamping



Left-hand

Right-hand



Tool		s	s	T _{max}	D _{max}	h ₄	l ₁	h ₁	s ₁	Type	
Designation		mm	inch	mm	mm	mm	mm	mm	mm		
	G4041-26R-1.5T17DX18C	1.5	0.059	17	35	26	110	21.3	1.2	DX18-1E1 ..	
	G4041-26R-2T17DX18C	2	0.079	17	35	26	110	21.3	1.6	DX18-2E2 ..	
	G4041-32R-2T21DX18C			21	42	32	110	25	1.6		
	G4041-26R-3T17DX18C	3	0.118	17	35	26	110	21.3	2.5	DX18-3E3 .. DX18-3F3 ..	
	G4041-26L-1.5T17DX18C	1.5	0.059	17	35	26	110	21.3	1.2	DX18-1E1 ..	
	G4041-26L-2T17DX18C	2	0.079	17	35	26	110	21.3	1.6	DX18-2E2 ..	
	G4041-32L-2T21DX18C			21	42	32	110	25	1.6		
	G4041-26L-3T17DX18C	3	0.118	17	35	26	110	21.3	2.5	DX18-3E3 .. DX18-3F3 ..	

Fig. shows right-hand version

If no D₂ or D_{max} is specified, the tool has no diameter limit.
Bodies and assembly parts are included in the scope of delivery.

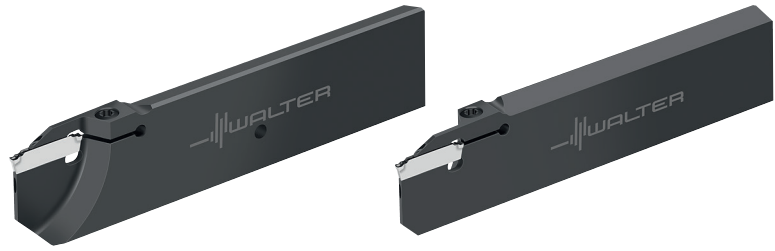
Assembly parts		h ₄ [mm]	26–32
	Clamping screw for grooving insert Tightening torque		FS2164 (Torx 15IP) 3.5 Nm
Accessories		h ₄ [mm]	26–32
	Screwdriver for grooving insert		FS1485 (Torx 15IP)

Reinforced parting blade – Contra

G4041...C-P

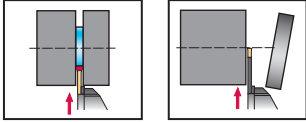
Walter Cut

- Screw clamping
- Precision cooling

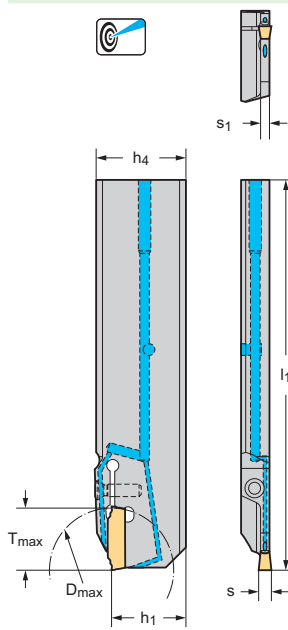


Left-hand

Right-hand



Tool



Designation	s mm	s inch	T _{max} mm	D _{max} mm	h ₄ mm	l ₁ mm	h ₁ mm	s ₁ mm	Type
G4041-26R-2T17DX18C-P	2	0.079	17	35	26	110	21.3	1.6	DX18-2E2 ..
G4041-26L-2T17DX18C-P	2	0.079	17	35	26	110	21.3	1.6	

Fig. shows right-hand version

If no D_2 or D_{max} is specified, the tool has no diameter limit.
 The maximum recommended coolant pressure is 80 bar (1160 psi)
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

	h ₄ [mm]	26
Clamping screw for grooving insert		FS2164 (Torx 15IP)
Tightening torque		3.5 Nm

Accessories

	h ₄ [mm]	26
Screwdriver for grooving insert		FS1485 (Torx 15IP)

Grooving module – radial grooving

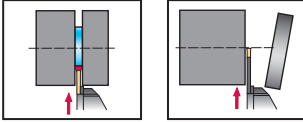
G4634-P

Walter Cut

- Screw clamping
- Replacement module



A2



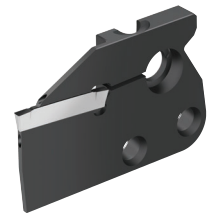
Tool		s	s	T _{max}	D _{max}	h ₁	W	l ₁	s ₁	Type
Designation		mm	inch	mm	mm	mm	mm	mm	mm	
	★ G4634-33L-2T13DX18-P	2	0.079	13	26	24	4	36	1.6	DX18-2E2 ..
	★ G4634-33L-2T16DX18-P			16	32	24	7.2	46	1.6	
	★ G4634-33L-3T16DX18-P	3	0.118	16	32	24	7.2	46	2.4	DX18-3E3 .. DX18-3F3 ..

Fig. shows right-hand version

If no D₂ or D_{max} is specified, the tool has no diameter limit.
The maximum recommended coolant pressure is 150 bar (2175 psi)

Grooving module – radial grooving

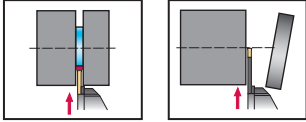
G1634-P



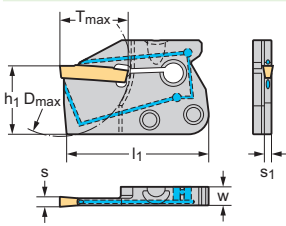
A2

Walter Cut

- Screw clamping
- Replacement module



Tool



Designation	s mm	s inch	T _{max} mm	D _{max} mm	h ₁ mm	W mm	l ₁ mm	s ₁ mm	Type
★ G1634-33R-2T21GX24-P	2	0.079	21	42	24	7.2	49	1.5	GX24-1E2 ..
★ G1634-33L-2T21GX24-P	2	0.079	21	42	24	7.2	49	1.5	
★ G1634-33L-3T21GX24-P	3	0.118	21	42	24	7.2	49	2.4	GX24-2E .. GX24-2F3 ..

Fig. shows right-hand version

If no D₂ or D_{max} is specified, the tool has no diameter limit.

The maximum recommended coolant pressure is 150 bar (2175 psi)

Grooving module – radial grooving

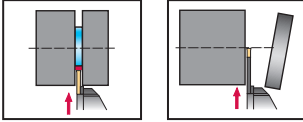
G1634-P

Walter Cut

- Screw clamping
- Replacement module



A2



Tool		s	s	T _{max}	D _{max}	h ₁	W	l ₁	s ₁	Type
Designation		mm	inch	mm	mm	mm	mm	mm	mm	
	★ G1634-43R-3T27GX34-P	3	0.118	27	52	24	7.2	55	2.4	GX34-2E3 ..
	★ G1634-43R-3T33GX34-P			33	65	24	7.2	61	2.4	
	★ G1634-43L-3T27GX34-P	3	0.118	27	52	24	7.2	55	2.4	
	★ G1634-43L-3T33GX34-P			33	65	24	7.2	61	2.4	
	★ G1634-43L-4T33GX34-P	4	0.157	33	65	24	7.2	61	3.3	

Fig. shows right-hand version

If no D₂ or D_{max} is specified, the tool has no diameter limit.
 The maximum recommended coolant pressure is 150 bar (2175 psi)

Groove turning holders – radial grooving

G1011-C...-P

Walter Cut

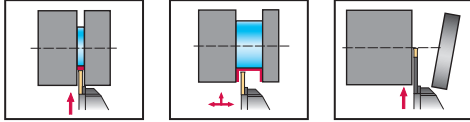
- Walter Capto™
- Screw clamping



Left-hand

Right-hand

A2



Tool	Designation	s mm	s inch	T _{max} mm	D ₂ mm	d ₁	f ₁ mm	l ₄ mm	s ₁ mm	Type
Walter Capto™ in acc. with ISO 26623 	★ G1011-C3R-3T21GX24-P	3	0.118	21	65	C3	20.5	60	2.4	GX24-2E .. GX24-2F3 ..
	★ G1011-C4R-3T21GX24-P			21	65	C4	25.5	65	2.4	
	★ G1011-C5R-3T21GX24-P			21	65	C5	30.5	70	2.4	
	★ G1011-C4R-4T21GX24-P	4	0.157	21	65	C4	25	65	3.4	GX24-3E .. GX24-3F4 ..
	★ G1011-C5R-4T21GX24-P			21		C5	30	70	3.4	
	★ G1011-C6R-4T21GX24-P			21		C6	36	76	3.4	
	★ G1011-C4R-5T21GX24-P	5-6	0.197– 0.236	21		C4	24.5	65	4.2	GX24-3E5 .. GX24-3F5 ..
	★ G1011-C5R-5T21GX24-P			21		C5	30	70	4.2	
	★ G1011-C6R-5T21GX24-P			21		C6	36	76	4.2	
	★ G1011-C3L-3T21GX24-P	3	0.118	21	65	C3	20.5	60	2.4	GX24-2E .. GX24-2F3 ..
	★ G1011-C4L-3T21GX24-P			21	65	C4	25.5	65	2.4	
	★ G1011-C5L-3T21GX24-P			21	65	C5	30.5	70	2.4	
	★ G1011-C4L-4T21GX24-P	4	0.157	21	65	C4	25	65	3.4	GX24-3E .. GX24-3F4 ..
	★ G1011-C5L-4T21GX24-P			21		C5	30	70	3.4	
	★ G1011-C6L-4T21GX24-P			21		C6	36	76	3.4	
	★ G1011-C4L-5T21GX24-P	5-6	0.197– 0.236	21		C4	24.5	65	4.2	GX24-3E5 .. GX24-3F5 ..
	★ G1011-C5L-5T21GX24-P			21		C5	30	70	4.2	
	★ G1011-C6L-5T21GX24-P			21		C6	36	76	4.2	

Fig. shows right-hand version

$$f = f_1 + s/2$$

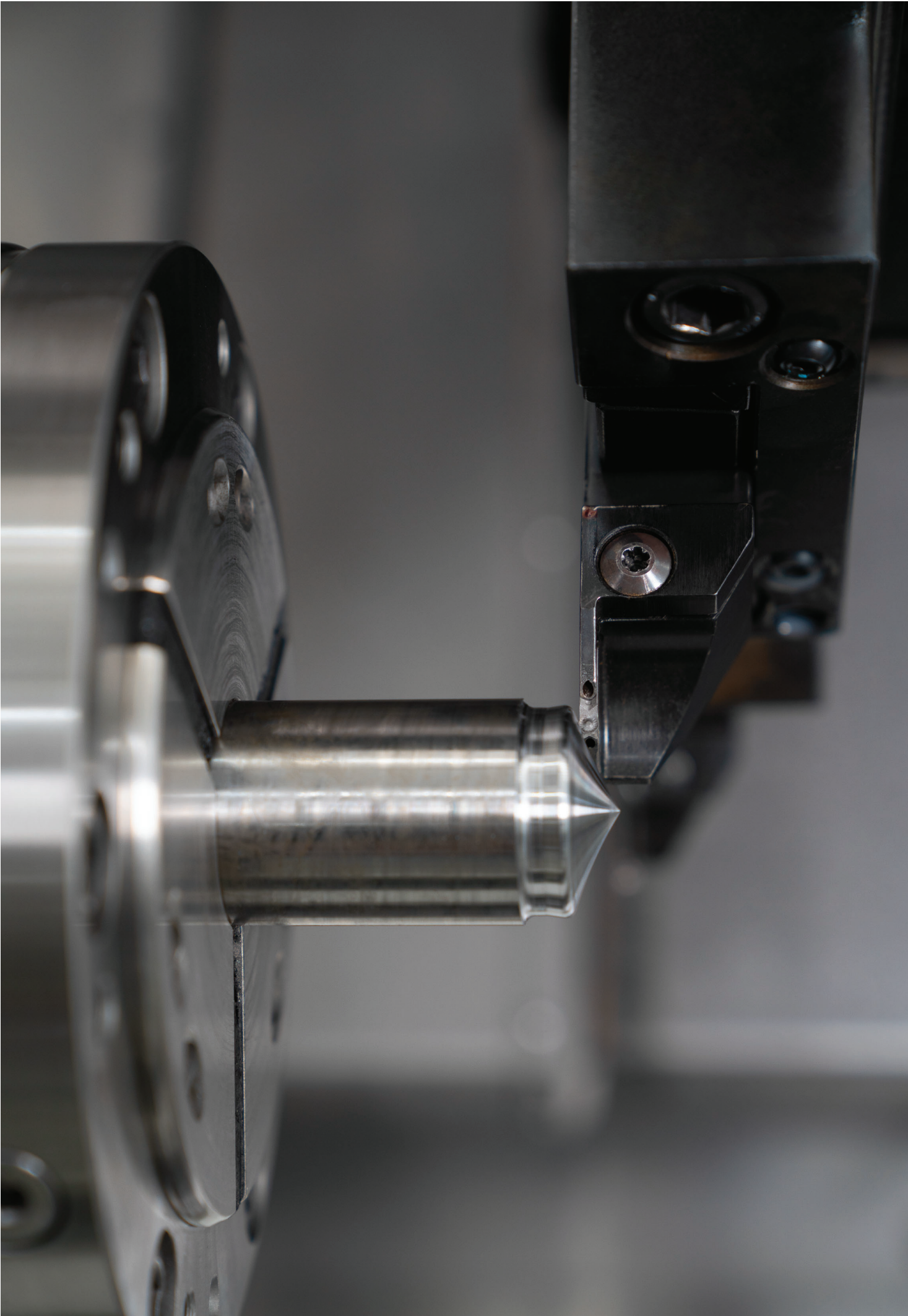
If no D₂ or D_{max} is specified, the tool has no diameter limit.

The maximum recommended coolant pressure is 150 bar (2175 psi)

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


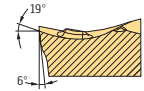


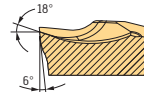


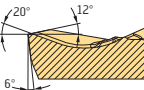


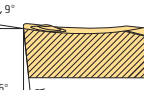


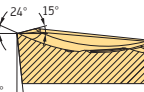

Assembly parts

	s [mm]	3–6
	Clamping screw for grooving insert Tightening torque	FS2118 (Torx 20IP) 5.0 Nm
	Torx key	FS1464 (Torx 20IP)






Geometry overview of cutting inserts

DX system: Grooving and parting off



Geometry	Remarks/ field of applications	Material groups							Section Main cutting edge	View Main cutting edge	s [mm]	s [in]	f [in]
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other					
 <p>CF6 – Low feeds – Low burr/centre pip formation – Low cutting force</p>		●●	●●		●●	●●		●			1.5	0.059	0.001–0.005
											2	0.079	0.001–0.006
											2.5	0.098	0.001–0.007
											3	0.118	0.002–0.009
 <p>CF5 – Grooving and parting off operations – Light to moderate feeds – Good chip control – Low burr/centre pip formation</p>		●●	●●	●	●●	●●		●			1.5	0.059	0.001–0.005
											2	0.079	0.002–0.006
											2.5	0.098	0.002–0.007
											3	0.118	0.003–0.009
 <p>CE4 – Grooving and parting off operations – Moderate to high feeds – Good chip constrictio – Stable cutting edge</p>		●●	●	●●	●	●	●	●			1.5	0.059	0.001–0.005
											2	0.079	0.002–0.007
											2.5	0.098	0.003–0.008
											3	0.118	0.004–0.013
 <p>GD3 – Extremely soft cutting action – Light to moderate feeds – General parting off and grooving operations</p>		●●	●●	●	●	●		●			2	0.079	0.002–0.006
											2.5	0.098	0.002–0.007
											3	0.118	0.002–0.008
											4	0.157	0.004–0.009
 <p>GD6 – Moderate feeds – Long-chipping materials – Medium machining conditions</p>		●●	●●	●	●	●●		●			2	0.079	0.002–0.006
											2.5	0.098	0.002–0.008
											3	0.118	0.003–0.008
											4	0.157	0.004–0.010

- Primary application
- Additional application

DX system: Grooving, parting off and recessing

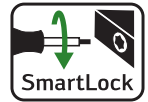
Geometry	Remarks/ field of applications	Material groups							Section Main cutting edge	View Main cutting edge	s [mm]	s [in]	a _p [in]	f [in]
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other						
 <p>UF4 – All grooving operations – Good chip control – Average feed range – Positive cut</p>		••	••	••	•	•				2	0.079	0.012–0.047	0.004–0.007	
										2.5	0.098	0.012–0.051	0.004–0.008	
										3	0.118	0.016–0.079	0.004–0.009	
										4	0.157	0.012–0.110	0.004–0.013	
 <p>UD4 – Large chip breaking range – Optimum chip breaking when machining forged parts – Stable cutting edge – For moderate to high feeds</p>		••	•	••						2	0.079	0.012–0.047	0.004–0.007	
										3	0.118	0.016–0.079	0.004–0.009	
										4	0.157	0.020–0.110	0.004–0.013	
 <p>UA4 – For cast iron machining – For middle to high machining parameters – For maximum process reliability in cast iron machining</p>				••			•			2	0.079	0.012–0.047	0.003–0.007	
										3	0.118	0.016–0.079	0.004–0.010	
										4	0.157	0.020–0.110	0.004–0.015	

DX system: Full radius cutting inserts for grooving and copy turning

Geometry	Remarks/ field of applications	Material groups							Section Main cutting edge	View Main cutting edge	s [mm]	s [in]	a _p [in]	f [in]
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other						
 <p>RF7 – For copy and relief turning – High surface quality – Stable cutting edge</p>		••	••	•	•	••				2	0.079	0.004–0.039	0.003–0.010	
										3	0.118	0.004–0.059	0.004–0.014	
 <p>RD4 – For copy turning – Outstanding chip control when grooving – For moderate to high feeds – Circumference-sintered</p>		••		••		•				2	0.079	0.008–0.039	0.003–0.011	
										3	0.118	0.020–0.059	0.004–0.015	

- Primary application
- Additional application

Assembly instructions for Walter Cut DX



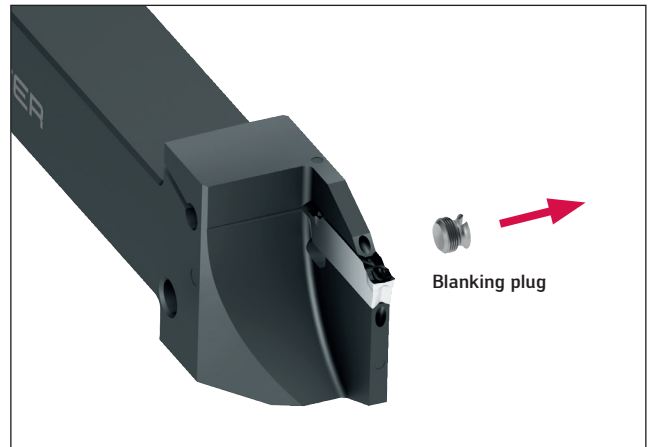
A2

Purpose: The tool activation side can be converted as required.

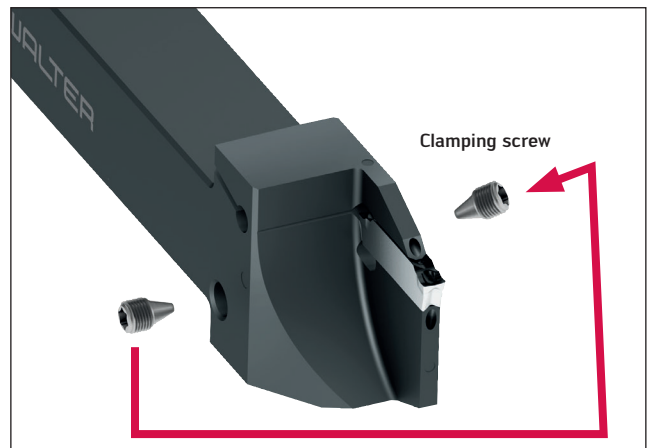
The Torx 15IP clamping screw is delivered fitted on the left-hand side of the toolholder. To fit this screw on the other side, follow the instructions below:

Important: Conversion is only possible when the indexable insert is fitted.

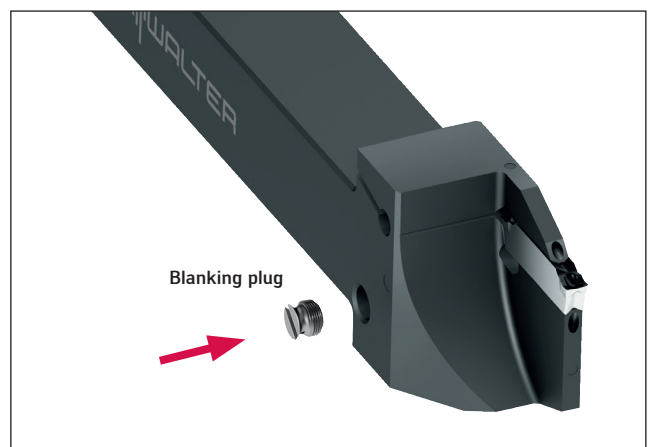
1. Remove the blanking plug on the right-hand side of the toolholder using a slotted screwdriver.



2. Unscrew the Torx 15IP clamping screw from the left-hand side and screw it into the right-hand side at the prescribed torque.



3. Screw the blanking plug back into the left-hand side of the toolholder, which is now free, to protect against contamination.

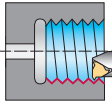




[Link to the video with conversion instructions](#)

Walter NTS threading tools product range overview

Thread turning tools

A3

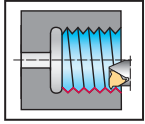
	
Type	 NTS..
Designation	T1820-Q...-P
Clamping system	Toggle
Coolant supply	Precision cooling
QuadFit size	Q25-Q50
Insert size	16-22
Page	129
	

Exchangeable head – internal thread

Q...-T1820...-P

Walter NTS

- QuadFit
- Precision cooling



Left hand

Right hand



A3

Tool		Designation		d_1	D_{min} in	f in	l_4 in	D_{min} mm	f mm	l_4 mm	β	Type	
		T1820-Q25R/L-16I-P		Q25	1.142	0.642	0.984	29	16.3	25	1°	NTS-I . -16 ..	
		T1820-Q32R/L-16I-P		Q32	1.417	0.780	1.260	36	19.8	32	1°		
		T1820-Q40R/L-16I-P		Q40	1.732	0.937	1.260	44	23.8	32	1°		
		T1820-Q50R/L-16I-P		Q50	2.126	1.134	1.260	54	28.8	32	1°		
		T1820-Q32R/L-22I-P		Q32	1.496	0.839	1.260	38	21.3	32	1°	NTS-I . -22 ..	
		T1820-Q40R/L-22I-P		Q40	1.811	0.996	1.260	46	25.3	32	1°		
		T1820-Q50R/L-22I-P		Q50	2.205	1.193	1.260	56	30.3	32	1°		

For information on the inclination angle β and compatible shim, see "Technical information – Thread turning"
 The maximum recommended coolant pressure is 150 bar (2175 psi)
 Ordering example, right-hand tool: T1820-Q25R-16I-P/ordering example, left-hand tool: T1820-Q25L-16I-P
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts		Type	NTS-I . -16 ..	NTS-I . -22 ..
	Shim		GXA16-1	NXA22-1
	Clamping screw		FS2615 (Torx 15IP)	FS2616 (Torx 25IP)
	Tightening torque		18 in lb (2.0 Nm)	44 in lb (5.0 Nm)
	Lever		KN129	KN130
	Pin		RS123	RS124
	Torx key		FS1465 (Torx 15IP /SW 3.5)	
	Allen key			FS1592 (Torx 25IP)

Application information: Thread turning with Walter NTS

Thread turning – Shims

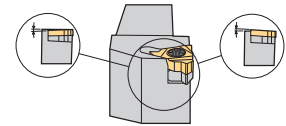
A3

Shims fitted in the tool holder exchangeable head

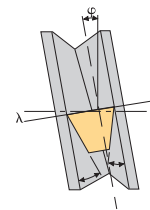
The table shows the shims that are fitted in the tool holder as standard and are used when cutting in the direction of the head stock.

Tool adaptor		QuadFit Q...-T1820... exchangeable head with precision cooling	
Tool adaptor			
Type of indexable insert	Internal thread Single-tooth indexable insert		
Shim			
Indexable insert size	16	GXA 16-1	
	22	NXA 22-1	

By replacing the shim, the inclination angle can be selected between +5 and -2. The same shims should be used for right-hand and left-hand threads. The centre height dimension always remains constant.



To achieve the best possible profile accuracy and even wear, the indexable insert inclination angle (λ) must be correspond to the thread inclination angle (φ) as closely as possible.



Selecting a shim

Tool adaptor		QuadFit Q...-T1820... exchangeable head with precision cooling	
Tool adaptor			
Type of indexable insert	Single-tooth indexable insert		
Shim			
	Direction of cut towards the head stock		Direction of cut towards the tail stock
Indexable insert size	16	GXA16-0, -1, -2, -3, -4	GXA16-0, -99, -98
	22	NXA22-0, -1, -2, -3, -4	NXA22-0, -99, -98

Selecting a shim

Use the diagram below to select the right shim. The diagram shows you the last digit in the shim designation.
Example: GX16-1

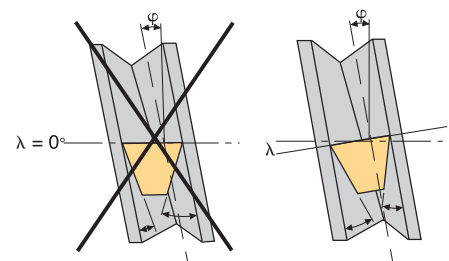
Production method

Direction of cut towards the head stock = see right-hand triangle on the diagram
Direction of cut towards the tail stock = see left-hand triangle on the diagram

Vertical rows – pitch

Single-start thread, pitch height (P_h) = pitch (P)

Multi-start thread, pitch height (P_h) = pitch (P) x number of starts



Application information: Standard values for thread turning with Walter NTS

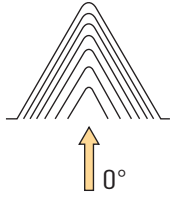
Feed types and their influence on machining

A3

Radial feed

Recommended for:

- Short-chipping materials
- Hard materials

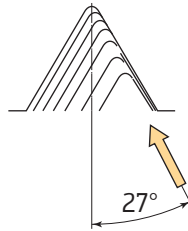


- Formation of V-shaped chips
- Both cutting edges engaged
- High cutting temperature
- Even indexable insert wear on both flanks
- Suitable for small pitches

Feed via flank 27°–29°

Recommended for:

- Pitches greater than 1.5 mm or 16 TPI
- The manufacture of trapezoidal threads

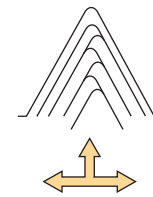


- Good chip formation
- Formation of helical chips
- One cutting edge engaged
- Chips are guided away from the thread
- Thread flanks with excellent surface quality

Alternating feed

Recommended for:

- Steep pitches
- Long-chipping materials



- Good chip formation
- Formation of flat helical chips
- Both cutting edges are evenly engaged, ensuring even wear

Standard values for the number of radial infeeds for each thread turning pass on manual lathes

The recommended cutting passes are only to be regarded as standard values. They were determined under good operating conditions with medium-strength steel materials. In the case of high-strength steel materials, the number of feeds must be increased. It is important to reduce the initial threading cuts in this case. If the operating conditions are different, the feeds should be modified accordingly. This applies to internal thread turning with an overhang of more than 2.5 × the boring bar diameter.

Whitworth (WH), external and internal machining

No. of feeds	Pitch [TPI]														
	28	26	20	19	18	16	14	12	11	10	9	8	7	6	5
Total depth [mm]	0.64	0.68	0.87	0.91	1.07	1.12	1.23	1.42	1.54	1.69	1.87	2.09	2.41	2.80	3.34
16															
15															
14														0.10	0.10
13														0.12	0.12
12												0.08	0.08	0.14	0.15
11											0.08	0.12	0.12	0.14	0.17
10										0.08	0.12	0.12	0.14	0.15	0.18
9									0.08	0.12	0.12	0.13	0.15	0.16	0.19
8						0.08	0.08	0.08	0.12	0.13	0.13	0.14	0.16	0.17	0.20
7				0.08	0.10	0.11	0.13	0.13	0.13	0.14	0.15	0.15	0.18	0.19	0.22
6			0.08	0.08	0.11	0.10	0.12	0.14	0.14	0.15	0.15	0.16	0.19	0.20	0.24
5	0.08	0.08	0.11	0.12	0.13	0.12	0.13	0.15	0.16	0.16	0.17	0.18	0.21	0.21	0.27
4	0.11	0.11	0.13	0.13	0.14	0.14	0.15	0.17	0.18	0.18	0.19	0.20	0.23	0.24	0.30
3	0.12	0.14	0.15	0.16	0.17	0.16	0.18	0.21	0.21	0.21	0.22	0.23	0.27	0.28	0.36
2	0.15	0.16	0.19	0.20	0.21	0.20	0.22	0.26	0.25	0.26	0.27	0.28	0.33	0.34	0.41
1	0.18	0.19	0.21	0.22	0.23	0.22	0.24	0.28	0.27	0.27	0.28	0.30	0.35	0.36	0.43

Radial infeed [mm]

Reduce the cutting speed

Application information: Standard values for thread turning with Walter NTS

(continued)

Internal machining, metric 60°

No. of feeds	Pitch [mm]																	
	0.5	0.6	0.7	0.75	0.8	1.0	1.25	1.5	1.75	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
Total depth [mm]	0.34	0.38	0.44	0.48	0.51	0.63	0.77	0.90	1.07	1.20	1.49	1.77	2.04	2.32	2.62	2.89	3.20	3.46
16																	0.10	0.10
15																	0.12	0.12
14														0.08	0.10	0.10	0.12	0.13
13														0.10	0.11	0.12	0.13	0.14
12												0.08	0.08	0.10	0.12	0.14	0.14	0.15
11												0.09	0.10	0.11	0.12	0.14	0.14	0.15
10											0.08	0.10	0.11	0.12	0.13	0.15	0.15	0.16
9											0.10	0.10	0.12	0.12	0.14	0.15	0.16	0.18
8								0.08	0.08	0.10	0.11	0.13	0.13	0.15	0.16	0.17	0.19	
7								0.09	0.10	0.11	0.12	0.14	0.14	0.16	0.17	0.18	0.20	
6							0.08	0.08	0.09	0.11	0.12	0.13	0.15	0.15	0.19	0.20	0.20	0.22
5						0.08	0.09	0.11	0.10	0.12	0.13	0.14	0.17	0.18	0.21	0.22	0.22	0.24
4	0.07	0.07	0.07	0.07	0.07	0.09	0.10	0.13	0.13	0.14	0.15	0.16	0.19	0.21	0.23	0.25	0.26	0.28
3	0.07	0.08	0.08	0.10	0.11	0.11	0.13	0.15	0.15	0.17	0.18	0.20	0.23	0.24	0.27	0.30	0.32	0.35
2	0.09	0.11	0.13	0.14	0.15	0.16	0.17	0.21	0.21	0.23	0.25	0.26	0.30	0.31	0.33	0.38	0.38	0.41
1	0.11	0.12	0.16	0.17	0.18	0.19	0.20	0.22	0.22	0.25	0.27	0.28	0.32	0.33	0.36	0.41	0.41	0.44

Radial infeed [mm]

← Reduce the cutting speed

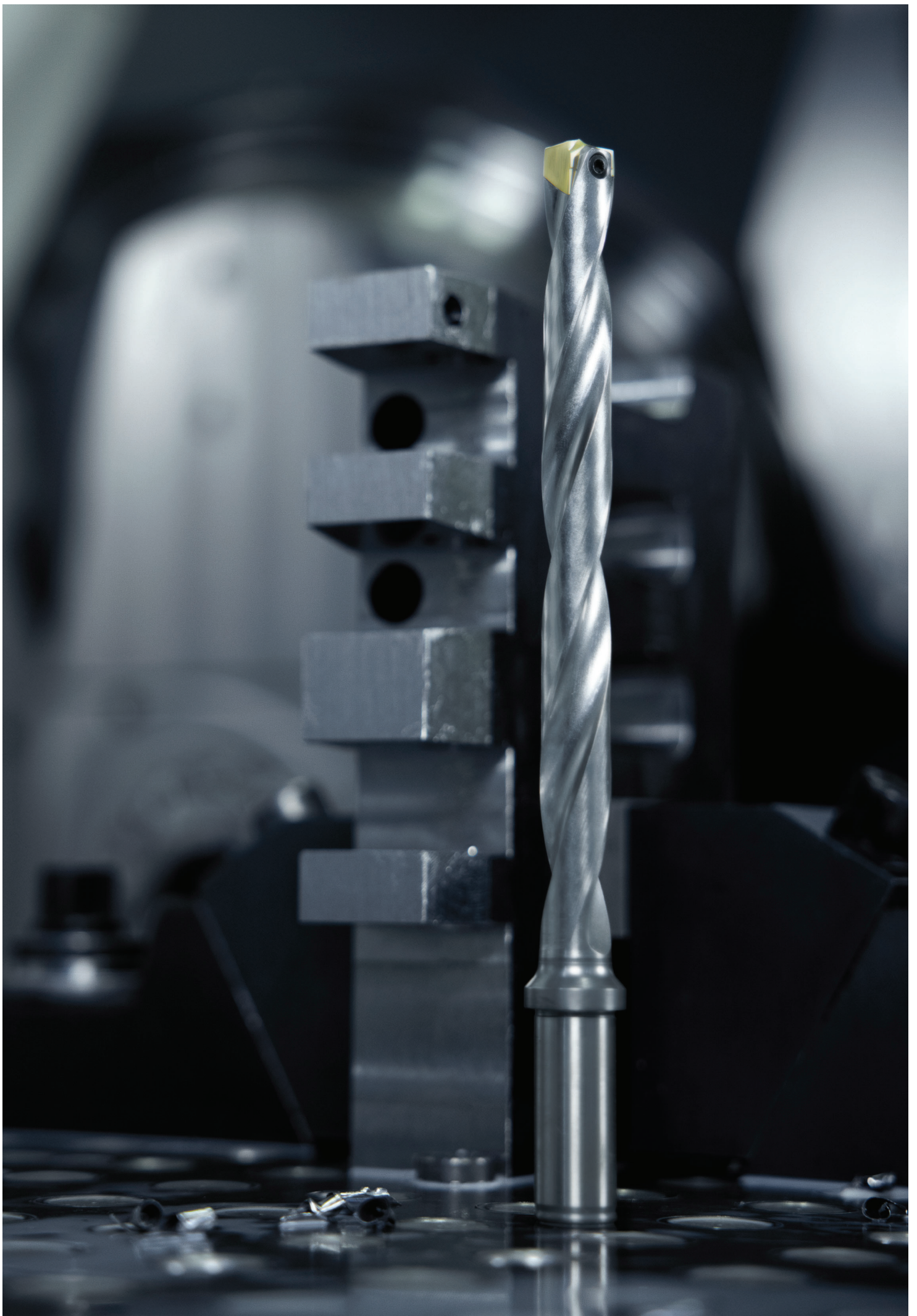
Internal machining, UN 60°

No. of feeds	Pitch [TPI]															
	32	28	24	20	18	16	14	13	12	11	10	9	8	7	6	5
Total depth [mm]	0.49	0.59	0.66	0.78	0.86	0.95	1.10	1.17	1.26	1.38	1.49	1.66	1.86	2.11	2.44	2.93
16																
15																
14															0.10	0.10
13															0.11	0.12
12													0.08	0.08	0.11	0.14
11												0.08	0.10	0.11	0.12	0.14
10											0.08	0.09	0.10	0.12	0.12	0.15
9										0.08	0.10	0.10	0.11	0.12	0.13	0.16
8							0.08	0.08	0.08	0.10	0.10	0.11	0.11	0.13	0.14	0.17
9						0.08	0.09	0.10	0.10	0.11	0.11	0.12	0.12	0.14	0.15	0.18
6				0.08	0.08	0.09	0.10	0.11	0.11	0.12	0.12	0.13	0.13	0.15	0.16	0.20
5		0.08	0.08	0.09	0.10	0.10	0.11	0.12	0.13	0.13	0.13	0.14	0.15	0.17	0.18	0.22
4	0.08	0.10	0.10	0.11	0.12	0.12	0.13	0.13	0.15	0.15	0.15	0.16	0.17	0.20	0.20	0.25
3	0.10	0.10	0.14	0.13	0.14	0.14	0.15	0.16	0.18	0.18	0.18	0.19	0.21	0.23	0.24	0.30
2	0.14	0.14	0.16	0.17	0.19	0.20	0.21	0.22	0.24	0.24	0.25	0.26	0.28	0.28	0.32	0.38
1	0.17	0.17	0.18	0.20	0.23	0.22	0.23	0.25	0.27	0.27	0.27	0.28	0.30	0.34	0.35	0.42

Radial infeed [mm]

← Reduce the cutting speed

A3



Drilling from solid – B1

Indexable inserts for drilling	Product range overview	136
	Designation key	137
	Exchangeable-tip drills	140
	Indexable inserts	142
Boring tools with indexable inserts	Product range overview	148
	Designation key	149
	Exchangeable-tip drills	150
	Indexable insert drills	154
Technical information	Cutting data	174
	Cutting tool material application chart	182
	Drilling strategies	183
	Standard values	185






Boring and precision boring – B2

Indexable inserts for boring and precision boring	Product range overview	186
	Designation key	187
	Indexable inserts for boring	188
	Indexable inserts for precision boring	189
Technical information	Cutting data	192

Product range overview of indexable inserts for drilling from solid



B 1

Machining	Insert shape	Description	Page
Drilling from solid	 L	For drilling from solid	145
	 P284..	For drilling from solid	144
	 P484..	For drilling from solid	142
	 P6006	For drilling from solid	140
	 W	For drilling from solid	146

Designation key for square indexable inserts for drilling from solid

P484	0	C	-	2	R	-	E67
1	2	3		4	5		6

1	2	3	4																												
Walter indexable insert designation	Version	Position	Insert size																												
P284 For D3120 P484 for D4120, D4170 and B421.	0 Fully ground circumference 1 Fully sintered circumference	C Centre insert P Outer insert S Centre insert and outer insert identical	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">P284</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">in</td> </tr> <tr> <td style="text-align: center;">1</td> <td>$D_C = 16.00-20.00$</td> <td>$D_C = 0.630-0.787$</td> </tr> <tr> <td style="text-align: center;">2</td> <td>$D_C = 21.00-25.00$</td> <td>$D_C = 0.827-0.984$</td> </tr> <tr> <td style="text-align: center;">3</td> <td>$D_C = 26.00-30.00$</td> <td>$D_C = 1.024-1.181$</td> </tr> <tr> <td style="text-align: center;">4</td> <td>$D_C = 31.00-36.00$</td> <td>$D_C = 1.220-1.417$</td> </tr> <tr> <td style="text-align: center;">5</td> <td>$D_C = 37.00-42.00$</td> <td>$D_C = 1.457-1.654$</td> </tr> </table>		P284	mm	in	1	$D_C = 16.00-20.00$	$D_C = 0.630-0.787$	2	$D_C = 21.00-25.00$	$D_C = 0.827-0.984$	3	$D_C = 26.00-30.00$	$D_C = 1.024-1.181$	4	$D_C = 31.00-36.00$	$D_C = 1.220-1.417$	5	$D_C = 37.00-42.00$	$D_C = 1.457-1.654$									
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5	6																														
Cutting direction	Walter geometry																														
R RH-cutting N Neutral	A57 The stable one E57 The universal one E67 The sharp one	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">P484</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">in</td> </tr> <tr> <td style="text-align: center;">1</td> <td>$D_C = 13.50-16.00$</td> <td>$D_C = 0.531-0.630$</td> </tr> <tr> <td style="text-align: center;">2</td> <td>$D_C = 16.50-20.00$</td> <td>$D_C = 0.650-0.787$</td> </tr> <tr> <td style="text-align: center;">3</td> <td>$D_C = 20.50-24.00$</td> <td>$D_C = 0.807-0.945$</td> </tr> <tr> <td style="text-align: center;">4</td> <td>$D_C = 24.50-29.00$</td> <td>$D_C = 0.965-0.945$</td> </tr> <tr> <td style="text-align: center;">5</td> <td>$D_C = 29.50-35.00$</td> <td>$D_C = 1.161-1.378$</td> </tr> <tr> <td style="text-align: center;">6</td> <td>$D_C = 36.00-42.00$</td> <td>$D_C = 1.417-1.654$</td> </tr> <tr> <td style="text-align: center;">7</td> <td>$D_C = 43.00-50.00$</td> <td>$D_C = 1.693-1.969$</td> </tr> <tr> <td style="text-align: center;">8</td> <td>$D_C = 51.00-59.00$</td> <td>$D_C = 2.008-2.323$</td> </tr> </table>			P484	mm	in	1	$D_C = 13.50-16.00$	$D_C = 0.531-0.630$	2	$D_C = 16.50-20.00$	$D_C = 0.650-0.787$	3	$D_C = 20.50-24.00$	$D_C = 0.807-0.945$	4	$D_C = 24.50-29.00$	$D_C = 0.965-0.945$	5	$D_C = 29.50-35.00$	$D_C = 1.161-1.378$	6	$D_C = 36.00-42.00$	$D_C = 1.417-1.654$	7	$D_C = 43.00-50.00$	$D_C = 1.693-1.969$	8	$D_C = 51.00-59.00$	$D_C = 2.008-2.323$
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B 1

Designation key for exchangeable tips for drilling from solid

P600	6	-	D 18.50	R	WPP25
1	2		3	4	5

1	2	3	4
Walter indexable insert designation	Walter geometry	Insert diameter	Cutting direction
P600x For D4140 / D4240 / B401 . .	1 For ISO P 3 For ISO M and ISO S 4 For ISO N 5 For ISO K 6 For ISO P	D In mm	R RH-cutting
			5
			Coating

Designation key in accordance with ISO 1832 for indexable inserts for drilling from solid

L	C	M	X	06	T2	04	—	D57
1	2	3	4	5	6	7		8

1
Insert shape

2
Clearance angle

3			
Tolerances			
Permissible deviation in mm for			
	d	m	s
E	± 0.025	± 0.025	± 0.025
M	$\pm 0.05-0.15^2$	$\pm 0.08-0.20^2$	± 0.130
	¹ Inserts with ground planar cutting edges ² Depending on the insert size (see ISO standard 1832)		

4
Machining and fastening features
X Drawing or precise description of the indexable insert is required

5
Cutting edge length

6																					
Insert thickness																					
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">02</td> <td style="width: 45%;">s = 2.38 mm</td> <td style="width: 45%;">s = 0.094 in</td> </tr> <tr> <td>T2</td> <td>s = 2.78 mm</td> <td>s = 0.109 in</td> </tr> <tr> <td>03</td> <td>s = 3.18 mm</td> <td>s = 0.125 in</td> </tr> <tr> <td>T3</td> <td>s = 3.97 mm</td> <td>s = 0.156 in</td> </tr> <tr> <td>04</td> <td>s = 4.76 mm</td> <td>s = 0.187 in</td> </tr> <tr> <td>05</td> <td>s = 5.56 mm</td> <td>s = 0.219 in</td> </tr> <tr> <td>06</td> <td>s = 6.35 mm</td> <td>s = 0.250 in</td> </tr> </table>	02	s = 2.38 mm	s = 0.094 in	T2	s = 2.78 mm	s = 0.109 in	03	s = 3.18 mm	s = 0.125 in	T3	s = 3.97 mm	s = 0.156 in	04	s = 4.76 mm	s = 0.187 in	05	s = 5.56 mm	s = 0.219 in	06	s = 6.35 mm	s = 0.250 in
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06	s = 6.35 mm	s = 0.250 in																			

7									
Corner radius									
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">02</td> <td style="width: 45%;">r = 0.2 mm</td> <td style="width: 45%;">r = 0.008 in</td> </tr> <tr> <td>04</td> <td>r = 0.4 mm</td> <td>r = 0.016 in</td> </tr> <tr> <td>08</td> <td>r = 0.8 mm</td> <td>r = 0.031 in</td> </tr> </table>	02	r = 0.2 mm	r = 0.008 in	04	r = 0.4 mm	r = 0.016 in	08	r = 0.8 mm	r = 0.031 in
02	r = 0.2 mm	r = 0.008 in							
04	r = 0.4 mm	r = 0.016 in							
08	r = 0.8 mm	r = 0.031 in							

8		
Manufacturer specifications		
<p>The ISO code includes nine symbols. The eighth and/or ninth symbols should only be used when required.</p> <p>The manufacturer can add other symbols which can be combined with the ISO code by means of a hyphen (e.g. for the chip breaker form).</p>		
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Drilling from solid</td> <td>A57, B57, D57, E57, E67</td> </tr> </table>	Drilling from solid	A57, B57, D57, E57, E67
Drilling from solid	A57, B57, D57, E57, E67	

B 1

Designation key for cutting material grades – Drilling

W	P	P	25	
Walter	1	2	3	4

1	2	3	4
1. Primary application or coating type	2. Primary application	ISO range of applications	Generation
P Steel M Stainless steel K Cast iron N NF metals S Materials with difficult cutting properties H Hard materials A CVD aluminium coating X PVD coating	P Steel M Stainless steel K Cast iron N NF metals S Materials with difficult cutting properties H Hard materials	Wear resistance 01 10 15 20 25 30 35 45 Toughness	S Tiger-tec® Silver C Color Select G Tiger-tec® Gold

B 1

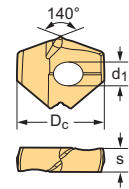
Geometry designation key for indexable inserts for drilling from solid

B	5	7
1	2	3

1	2	3
Chip breaker groove	Cutting edge	Flank face design
Smaller Larger	Heavily ground down Sharp	

Exchangeable-tip drills

P6006



Drill inserts

Designation	Number of cutting edges	D _c mm	D _c in	Seat size	d ₁ mm	d ₁ in	s mm	s in	P6006
									P
P6006									
P60..-D12,00R	2	12	0.472	A	3	0.118	3.6	0.141	☺
P60..-D12,50R	2	12.5	0.492	A	3	0.118	3.6	0.141	☺
P60..-D12,70R	2	12.7	0.500	A	3	0.118	3.6	0.141	☺
P60..-D13,00R	2	13	0.512	A	3	0.118	3.6	0.141	☺
P60..-D13,50R	2	13.5	0.531	A	3	0.118	3.6	0.141	☺
P60..-D13,70R	2	13.7	0.539	A	3	0.118	3.6	0.141	☺
P60..-D14,00R	2	14	0.551	B	3	0.118	4	0.157	☺
P60..-D14,10R	2	14.1	0.555	B	3	0.118	4	0.157	☺
P60..-D14,20R	2	14.2	0.559	B	3	0.118	4	0.157	☺
P60..-D14,30R	2	14.3	0.563	B	3	0.118	4	0.157	☺
P60..-D14,50R	2	14.5	0.571	B	3	0.118	4	0.157	☺
P60..-D14,68R	2	14.68	0.578	B	3	0.118	4	0.157	☺
P60..-D15,00R	2	15	0.591	B	3	0.118	4	0.157	☺
P60..-D15,09R	2	15.09	0.594	B	3	0.118	4	0.157	☺
P60..-D15,20R	2	15.2	0.598	B	3	0.118	4	0.157	☺
P60..-D15,30R	2	15.3	0.602	B	3	0.118	4	0.157	☺
P60..-D15,50R	2	15.5	0.610	B	3	0.118	4	0.157	☺
P60..-D15,70R	2	15.7	0.618	B	3	0.118	4	0.157	☺
P60..-D15,87R	2	15.87	0.625	B	3	0.118	4	0.157	☺
P60..-D16,00R	2	16	0.630	C	4	0.157	4.5	0.177	☺
P60..-D16,26R	2	16.26	0.640	C	4	0.157	4.5	0.177	☺
P60..-D16,50R	2	16.5	0.650	C	4	0.157	4.5	0.177	☺
P60..-D16,66R	2	16.66	0.656	C	4	0.157	4.5	0.177	☺
P60..-D16,70R	2	16.7	0.657	C	4	0.157	4.5	0.177	☺
P60..-D17,00R	2	17	0.669	C	4	0.157	4.5	0.177	☺
P60..-D17,07R	2	17.07	0.672	C	4	0.157	4.5	0.177	☺
P60..-D17,45R	2	17.45	0.687	C	4	0.157	4.5	0.177	☺
P60..-D17,50R	2	17.5	0.689	C	4	0.157	4.5	0.177	☺
P60..-D17,70R	2	17.7	0.697	C	4	0.157	4.5	0.177	☺
P60..-D17,86R	2	17.86	0.703	C	4	0.157	4.5	0.177	☺
P60..-D18,00R	2	18	0.709	D	4	0.157	5	0.197	☺
P60..-D18,24R	2	18.24	0.718	D	4	0.157	5	0.197	☺
P60..-D18,50R	2	18.5	0.728	D	4	0.157	5	0.197	☺
P60..-D18,65R	2	18.65	0.734	D	4	0.157	5	0.197	☺
P60..-D18,70R	2	18.7	0.736	D	4	0.157	5	0.197	☺
P60..-D19,00R	2	19	0.748	D	4	0.157	5	0.197	☺
P60..-D19,05R	2	19.05	0.750	D	4	0.157	5	0.197	☺
P60..-D19,25R	2	19.25	0.758	D	4	0.157	5	0.197	☺
P60..-D19,50R	2	19.5	0.768	D	4	0.157	5	0.197	☺
P60..-D19,70R	2	19.7	0.776	D	4	0.157	5	0.197	☺
P60..-D19,84R	2	19.84	0.781	D	4	0.157	5	0.197	☺
P60..-D20,00R	2	20	0.788	E	5	0.197	5.5	0.216	☺
P60..-D20,24R	2	20.24	0.797	E	5	0.197	5.5	0.216	☺

Ordering example: P60..-D13.00R is available as

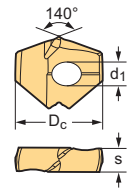
P6006 in the WPP25 grade (ISO P, unalloyed steels); P6006-D13,00R WPP25

Only limited selection of inserts shown here. For complete selection, please refer to Walter online catalog or 2018 Walter catalog

HC = Coated carbide

/ ★ New addition to the product range

Exchangeable-tip drills P6006



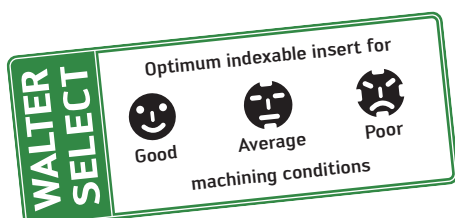
Drill inserts

Designation	Number of cutting edges	D _c mm	D _c in	Seat size	d ₁ mm	d ₁ in	s mm	s in	P6006	
									P	HC WPP25
P6006										
P60..-D20,50R	2	20.5	0.807	E	5	0.197	5.5	0.216	☺	☺
P60..-D20,62R	2	20.62	0.812	E	5	0.197	5.5	0.216	☺	☺
P60..-D20,70R	2	20.7	0.815	E	5	0.197	5.5	0.216	☺	☺
P60..-D21,00R	2	21	0.827	E	5	0.197	5.5	0.216	☺	☺
P60..-D21,50R	2	21.5	0.847	E	5	0.197	5.5	0.216	☺	☺
P60..-D21,70R	2	21.7	0.854	E	5	0.197	5.5	0.216	☺	☺
P60..-D22,00R	2	22	0.866	F	5	0.197	6.0	0.236	☺	☺
P60..-D22,22R	2	22.22	0.875	F	5	0.197	6.0	0.236	☺	☺
P60..-D22,50R	2	22.5	0.886	F	5	0.197	6.0	0.236	☺	☺
P60..-D22,70R	2	22.7	0.894	F	5	0.197	6.0	0.236	☺	☺
P60..-D23,00R	2	23	0.906	F	5	0.197	6.0	0.236	☺	☺
P60..-D23,50R	2	23.5	0.925	F	5	0.197	6.0	0.236	☺	☺
P60..-D23,80R	2	23.8	0.937	F	5	0.197	6.0	0.236	☺	☺
P60..-D24,00R	2	24	0.945	G	5	0.197	6.5	0.256	☺	☺
P60..-D24,50R	2	24.5	0.965	G	5	0.197	6.5	0.256	☺	☺
P60..-D24,70R	2	24.7	0.973	G	5	0.197	6.5	0.256	☺	☺
P60..-D25,00R	2	25	0.985	G	5	0.197	6.5	0.256	☺	☺
P60..-D25,25R	2	25.25	0.994	G	5	0.197	6.5	0.256	☺	☺
P60..-D25,40R	2	25.4	1.000	G	5	0.197	6.5	0.256	☺	☺
P60..-D25,50R	2	25.5	1.004	G	5	0.197	6.5	0.256	☺	☺
P60..-D25,65R	2	25.65	1.010	G	5	0.197	6.5	0.256	☺	☺
P60..-D25,70R	2	25.7	1.012	G	5	0.197	6.5	0.256	☺	☺
P60..-D25,80R	2	25.8	1.016	G	5	0.197	6.5	0.256	☺	☺
P60..-D26,00R	2	26	1.024	H	6	0.236	7.1	0.279	☺	☺
P60..-D26,25R	2	26.25	1.034	H	6	0.236	7.1	0.279	☺	☺
P60..-D26,50R	2	26.5	1.044	H	6	0.236	7.1	0.279	☺	☺
P60..-D27,00R	2	27	1.063	H	6	0.236	7.1	0.279	☺	☺
P60..-D27,50R	2	27.5	1.083	H	6	0.236	7.1	0.279	☺	☺
P60..-D28,00R	2	28	1.103	J	6	0.236	7.7	0.303	☺	☺
P60..-D28,50R	2	28.5	1.122	J	6	0.236	7.7	0.303	☺	☺
P60..-D28,57R	2	28.57	1.125	J	6	0.236	7.7	0.303	☺	☺
P60..-D29,00R	2	29	1.142	J	6	0.236	7.7	0.303	☺	☺
P60..-D29,50R	2	29.5	1.162	J	6	0.236	7.7	0.303	☺	☺

Ordering example: P60..-D13,00R is available as P6006 in the WPP25 grade (ISO P, unalloyed steels): P6006-D13,00R WPP25

HC = Coated carbide

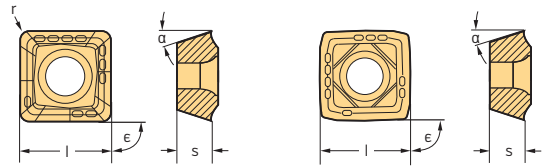
Only limited selection of inserts shown here. For complete selection, please refer to Walter online catalog or 2018 Walter catalog



B 1

Square
P484 .

Tiger-tec® Gold



Indexable inserts – external

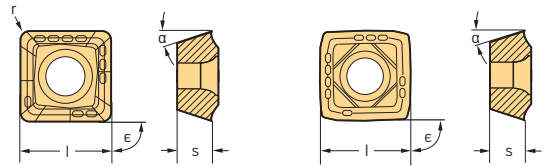
B 1

Designation	Number of cutting edges	l in	s in	r in	α	ε	P					M			K			N			S		
							HC					HC			HC			HC			HC		
							WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-1R-A57	4	0.179	0.077	0.011	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-2R-A57	4	0.217	0.090	0.013	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-3R-A57	4	0.256	0.110	0.016	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-4R-A57	4	0.307	0.132	0.019	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-5R-A57	4	0.376	0.162	0.023	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-6R-A57	4	0.463	0.192	0.028	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-7R-A57	4	0.552	0.218	0.031	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-8R-A57	4	0.650	0.218	0.039	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-1R-E57	4	0.179	0.077	0.011	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-2R-E57	4	0.217	0.090	0.013	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-3R-E57	4	0.256	0.110	0.016	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-4R-E57	4	0.307	0.132	0.019	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-5R-E57	4	0.376	0.162	0.023	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-6R-E57	4	0.463	0.192	0.028	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-7R-E57	4	0.552	0.218	0.031	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-8R-E57	4	0.650	0.218	0.039	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-1R-E67	4	0.179	0.077	0.011	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-2R-E67	4	0.217	0.090	0.013	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-3R-E67	4	0.256	0.110	0.016	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-4R-E67	4	0.307	0.132	0.019	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-5R-E67	4	0.376	0.162	0.023	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-6R-E67	4	0.463	0.192	0.028	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-7R-E67	4	0.552	0.218	0.031	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4840P-8R-E67	4	0.650	0.218	0.039	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-1R-A57	4	0.179	0.077	0.011	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-2R-A57	4	0.217	0.090	0.013	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-3R-A57	4	0.256	0.110	0.016	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-4R-A57	4	0.307	0.132	0.019	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-5R-A57	4	0.376	0.162	0.023	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-6R-A57	4	0.463	0.192	0.028	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-7R-A57	4	0.552	0.218	0.031	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-8R-A57	4	0.650	0.218	0.039	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-1R-E57	4	0.179	0.077	0.011	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-2R-E57	4	0.217	0.090	0.013	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-3R-E57	4	0.256	0.110	0.016	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-4R-E57	4	0.307	0.132	0.019	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-5R-E57	4	0.376	0.162	0.023	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-6R-E57	4	0.463	0.192	0.028	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-7R-E57	4	0.552	0.218	0.031	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		
P4841P-8R-E57	4	0.650	0.218	0.039	11°	90°	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉		




Only limited selection of inserts shown here. For complete selection please refer to the Walter online catalog or 2018 Walter Catalog

HC = Coated carbide

Square P484 . Tiger-tec® Gold

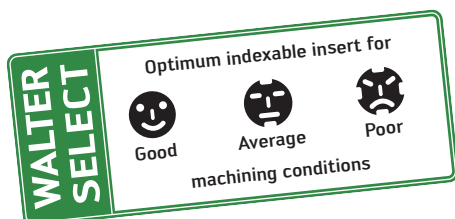


Indexable inserts – internal

Designation	Number of cutting edges	l in	s in	r in	α	ε	P					M			K		N			S			
							HC					HC			HC		HC			HC			
							WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
 P4841C-1R-A57	4	0.193	0.077	0.011	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-2R-A57	4	0.234	0.094	0.013	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-3R-A57	4	0.276	0.110	0.016	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-4R-A57	4	0.331	0.132	0.019	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-5R-A57	4	0.405	0.162	0.023	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-6R-A57	4	0.482	0.192	0.028	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-7R-A57	4	0.578	0.218	0.031	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-8R-A57	4	0.689	0.218	0.039	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
 P4841C-1R-E57	4	0.193	0.077	0.011	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-2R-E57	4	0.234	0.094	0.013	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-3R-E57	4	0.276	0.110	0.016	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-4R-E57	4	0.331	0.132	0.019	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-5R-E57	4	0.405	0.162	0.023	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-6R-E57	4	0.482	0.192	0.028	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-7R-E57	4	0.578	0.218	0.031	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4841C-8R-E57	4	0.689	0.218	0.039	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
 P4840C-1R-E67	4	0.193	0.077	0.011	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4840C-2R-E67	4	0.234	0.094	0.013	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4840C-3R-E67	4	0.276	0.110	0.016	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4840C-4R-E67	4	0.331	0.132	0.019	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4840C-5R-E67	4	0.405	0.162	0.023	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4840C-6R-E67	4	0.482	0.192	0.028	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4840C-7R-E67	4	0.578	0.218	0.031	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P4840C-8R-E67	4	0.689	0.218	0.039	11°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

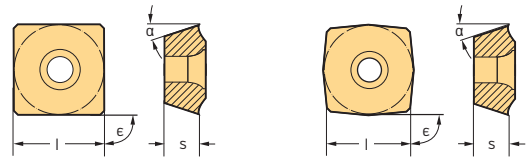
Only limited selection of inserts shown here. For complete selection please refer to the Walter online catalog or 2018 Walter Catalog

HC = Coated carbide



B 1

Square P284.. Tiger-tec® Gold



Indexable inserts

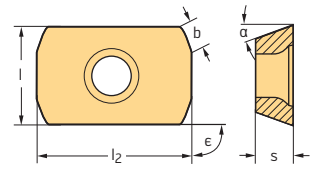
B 1

Designation	Number of cutting edges	l in	s in	α	ε	P					M			K			N		S				
						HC					HC			HC			HC		HC				
						WKP25S	WKP35S	WSP45S	WSP45G	WXP40	WSP45S	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WK40	WSP45G	WK40	WSP45S	WSP45G	WXP40	
P2840S-1N-A57	4	0.250	0.094	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-2N-A57	4	0.307	0.125	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-3N-A57	4	0.375	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-4N-A57	4	0.433	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-5N-A57	4	0.500	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-6N-A57	4	0.591	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-7N-A57	4	0.693	0.219	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-1N-E67	4	0.250	0.094	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-2N-E67	4	0.307	0.125	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-3N-E67	4	0.375	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-4N-E67	4	0.433	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-5N-E67	4	0.500	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-6N-E67	4	0.591	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2840S-7N-E67	4	0.693	0.219	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-1N-A57	4	0.250	0.094	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-2N-A57	4	0.307	0.125	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-3N-A57	4	0.375	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-4N-A57	4	0.433	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-5N-A57	4	0.500	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-6N-A57	4	0.591	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-7N-A57	4	0.693	0.219	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-1N-E57	4	0.250	0.094	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-2N-E57	4	0.307	0.125	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-3N-E57	4	0.375	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-4N-E57	4	0.433	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-5N-E57	4	0.500	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-6N-E57	4	0.591	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-7N-E57	4	0.693	0.219	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-1N-E67	4	0.250	0.094	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-2N-E67	4	0.307	0.125	14°	90°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-3N-E67	4	0.375	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-4N-E67	4	0.433	0.156	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-5N-E67	4	0.500	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-6N-E67	4	0.591	0.187	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P2841S-7N-E67	4	0.693	0.219	11°	96°	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒




Only limited selection of inserts shown here. For complete selection please refer to the Walter online catalog or 2018 Walter Catalog

HC = Coated carbide

Rectangular LCMX Tiger-tec® Gold



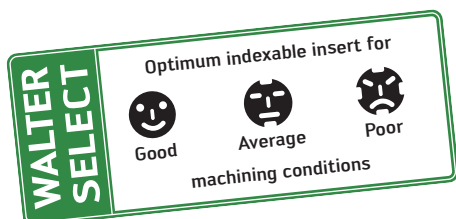
Indexable inserts

Designation	Number of cutting edges	l in	l ₂ in	s in	α	b in	ε	P					M			K			N		S				
								HC					HC			HC			HC		HC				
								WKP25S	WKP35S	WSP45S	WSP45G	WXP40	WSP45S	WSP45G	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45S	WSP45G	WSP45S	WSP45G	WXP40	
 LCMX050203-B57 LCMX06T204-B57	2	0.157	0.205	0.094	7°	0.024	90°	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	2	0.205	0.260	0.109	7°	0.031	90°	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
 LCMX050203-D57 LCMX06T204-D57	2	0.157	0.205	0.094	7°	0.024	90°	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	2	0.205	0.260	0.109	7°	0.031	90°	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
 LCMX050203-E57 LCMX06T204-E57	2	0.157	0.205	0.094	7°	0.024	90°	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	2	0.205	0.260	0.109	7°	0.031	90°	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺

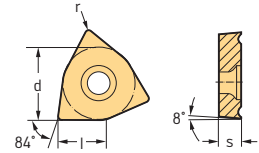
Only limited selection of inserts shown here. For complete selection please refer to the Walter online catalog or 2018 Walter Catalog

HC = Coated carbide

B 1



Trigon
WOMX / WOEX
Tiger-tec® Gold



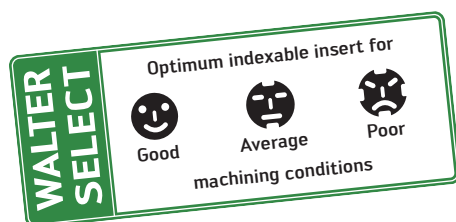
Indexable inserts

B 1

Designation	Number of cutting edges	l in	s in	r in	d in	P				M			K			N		S		
						HC				HC			HC			HC		HC		
						WKP25S	WKP35S	WSP45S	WSP45G	WXP40	WSP45S	WSP45G	WXP40	WAK15	WKP25S	WKP35S	WXP40	WSP45G	WSP45S	WSP45G
WOMX030204-B57	3	0.130	0.091	0.016	0.197	☒	☒	☒	☒		☒							☒		
WOMX040304-B57	3	0.165	0.125	0.016	0.250	☒	☒	☒	☒		☒							☒		
WOMX05T304-B57	3	0.208	0.150	0.016	0.315	☒	☒	☒	☒		☒							☒		
WOMX06T304-B57	3	0.261	0.150	0.016	0.394	☒	☒	☒	☒		☒							☒		
WOMX080408-B57	3	0.313	0.189	0.031	0.472	☒	☒	☒	☒		☒							☒		
WOMX100508-B57	3	0.391	0.209	0.031	0.591	☒	☒	☒	☒		☒							☒		
WOMX120608-B57	3	0.458	0.236	0.031	0.689	☒	☒	☒	☒		☒							☒		
WOMX030204-D57	3	0.130	0.091	0.016	0.197	☒	☒	☒	☒	☒								☒	☒	
WOMX040304-D57	3	0.165	0.125	0.016	0.250	☒	☒	☒	☒	☒								☒	☒	
WOMX05T304-D57	3	0.208	0.150	0.016	0.315	☒	☒	☒	☒	☒	☒							☒	☒	
WOMX06T304-D57	3	0.261	0.150	0.016	0.394	☒	☒	☒	☒	☒	☒	☒						☒	☒	
WOMX080408-D57	3	0.313	0.189	0.031	0.472	☒	☒	☒	☒	☒	☒	☒						☒	☒	
WOMX100508-D57	3	0.391	0.209	0.031	0.591	☒	☒	☒	☒	☒	☒	☒						☒	☒	
WOMX120608-D57	3	0.458	0.236	0.031	0.689	☒	☒	☒	☒	☒	☒	☒						☒	☒	
WOEX030204-E57	3	0.130	0.091	0.016	0.197	☒	☒	☒	☒		☒							☒		
WOEX040304-E57	3	0.165	0.125	0.016	0.250	☒	☒	☒	☒		☒							☒		
WOEX05T304-E57	3	0.208	0.150	0.016	0.315	☒	☒	☒	☒		☒							☒		
WOEX06T304-E57	3	0.261	0.150	0.016	0.394	☒	☒	☒	☒		☒							☒		
WOEX080408-E57	3	0.313	0.189	0.031	0.472	☒	☒	☒	☒		☒							☒		
WOEX100508-E57	3	0.391	0.209	0.031	0.591	☒	☒	☒	☒		☒							☒		
WOEX120608-E57	3	0.458	0.236	0.031	0.689	☒	☒	☒	☒		☒							☒		

Only limited selection of inserts shown here. For complete selection please refer to the Walter online catalog or 2018 Walter Catalog

HC = Coated carbide





Product range overview of boring tools with indexable inserts

Indexable insert drills

Drilling depth	$2.5 \times D_c$	$1.3 \times D_c$	$3 \times D_c$	$5 \times D_c$	$7 \times D_c$	$10 \times D_c$
Designation	D4240-02	D4140-01	D4140	D4140	D4140	D4140
Dia. range [mm]	12–29.99	12–25.99	12–37.99	12–37.99	12–37.99	12.00–25.00
Dia. range [in]	0.472–1.181	0.472–1.023	0.472–1.496	0.472–1.496	0.472–1.496	0.472–1.000
Page	–	–	–	–	–	150

Complete range of tools shown here. For order pages of the tools not displayed in this book, use Walter online catalog or previous i-pac books

Drilling depth	$2 \times D_c$	$3 \times D_c$	$4 \times D_c$	$5 \times D_c$
Designation	D4120.02	D4120.03	D4120.04	D4120.05
Dia. range [mm]	13.5–59	13.5–59	16.5–59	16.5–59
Dia. range [in]	0.531–2.250"	0.531–2.250"	0.656–2.250"	0.656–2.250"
Page	154	160	164	168

Complete range of tools shown here. For order pages of the tools not displayed in this book, use Walter online catalog or previous i-pac books

Drilling depth	$3 \times D_c$
Designation	D4170-03
Dia. range [mm]	65–80
Dia. range [in]	–
Page	172

Designation key for Walter boring tools with indexable inserts

D	4	1	40	-	10	-	15.00	F25	-	G
1	2	3	4	5	6		7	8		9

1
Tool group
D Drilling

2
Generation

3
Tool type
1 Cylindrical drill
2 Chamfer drill
5 Chamfering tool

4
Tool type
20 Indexable insert drill with square indexable insert
40 Exchangeable-tip drill with P600x indexable insert
80 Compact chamfering tool

5
1. Delimiters
- Metric
. Inch

6
Drilling depth/ chamfer angle
01 1,3 × D _c
02 2 × D _c / 2,5 × D _c
03 3 × D _c
04 4 × D _c
05 5 × D _c
07 7 × D _c
10 10 × D _c
45 45° chamfer angle

7
Cutting diameter/ clamping diameter of the chamfering tool

8
Shank type and size, cylindrical
F16 16 mm
F20 20 mm
F25 25 mm
F32 32 mm
F40 40 mm
A12 12 mm
A16 16 mm
A20 20 mm
A25 25 mm
A13 0.500 inch
A15 0.625 inch
A19 0.750 inch
A26 1.000 inch
T14
T18 T14, T18, T22, T28 are Walter ScrewFit connections
T22
T28
A=Cylindrical shank
F=Cylindrical shank with flat

9			
Insert size/ interface size			
Seat size	d ₁ [in]	s [in]	
A	0.118	0.142	
B	0.118	0.157	
C	0.157	0.177	
D	0.157	0.197	
E	0.197	0.217	
F	0.197	0.236	
G	0.197	0.256	
H	0.236	0.280	
J	0.236	0.303	
K	0.236	0.315	
M	0.236	0.327	
N	0.236	0.339	
P	0.236	0.350	
	P41	P484	Size 1
	P48	P484	Size 8
	P21	P284	Size 1
	P25	P284	Size 5

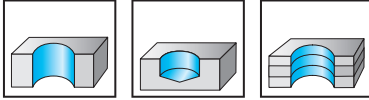
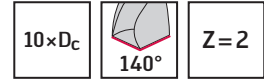
B 1

Exchangeable-tip drills

D4140-10 mm

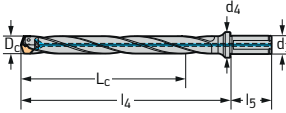


– P6006 – Can be used without pilot drilling up to $10 \times D_c$



	P	M	K	N	S	H	O
D4140-10	●●	●	●●	●●	●		

B 1

Tool	Designation	D_c mm	L_c mm	l_4 mm	l_5 mm	d_1 mm	d_4 mm	kg	No. of indexable inserts	Seat size	Type
Parallel shank with flat 	★ D4140-10-12.00F16-A	12	120	152	48	16	20	0.16	1	A	P600 . -D12, ..
	★ D4140-10-13.00F16-A	13	130	163	48	16	20	0.18	1	A	P600 . -D13, ..
	★ D4140-10-14.00F16-B	14	140	174	48	16	20	0.2	1	B	P600 . -D14, ..
	★ D4140-10-15.00F16-B	15	150	185	48	16	20	0.22	1	B	P600 . -D15, ..
	★ D4140-10-16.00F20-C	16	160	196	50	20	25	0.31	1	C	P600 . -D16, ..
	★ D4140-10-17.00F20-C	17	170	207	50	20	25	0.34	1	C	P600 . -D17, ..
	D4140-10-18.00F20-D	18	180	218	50	20	25	0.40	1	D	P600 . -D18, ..
	★ D4140-10-19.00F20-D	19	190	229	50	20	25	0.4	1	D	P600 . -D19, ..
	D4140-10-20.00F20-E	20	200	240	50	20	25	0.48	1	E	P600 . -D20, ..
	★ D4140-10-21.00F20-E	21	210	251	50	20	25	0.49	1	E	P600 . -D21, ..
	D4140-10-22.00F25-F	22	220	263	56	25	32	0.71	1	F	P600 . -D22, ..
	★ D4140-10-23.00F25-F	23	230	273	56	25	32	0.75	1	F	P600 . -D23, ..
	D4140-10-24.00F25-G	24	240	285	56	25	32	0.83	1	G	P600 . -D24, ..
	★ D4140-10-25.00F25-G	25	250	296	56	25	32	0.87	1	G	P600 . -D25, ..

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

Assembly parts

D _c [mm]	12-13	14-15	16-17	18-19	20-21	22-23	24-25	
	Clamping screw for drill insert	FS1396 (Torx 7IP)	FS1397 (Torx 8IP)	FS1398 (Torx 8IP)	FS1399 (Torx 15IP)	FS1400 (Torx 20IP)	FS1401 (Torx 20IP)	FS1402 (Torx 20IP)
	Tightening torque	1.2 Nm	2.0 Nm	2.0 Nm	4.0 Nm	5.0 Nm	5.0 Nm	5.0 Nm

Accessories

D _c [mm]	12-13	14-17	18	19	20-24	21-25	
	Torque screwdriver, analogue	FS2001	FS2003	FS2004	FS2003	FS2004	FS2003
	Tightening torque	0.4-1.2 Nm	1.5-5.0 Nm	1.5-5.0 Nm	1.5-5.0 Nm	1.5-5.0 Nm	1.5-5.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)	FS2015 (Torx 20IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)	FS1486 (Torx 20IP)

Drill inserts

Designation	D _c mm	Seat size	P		M	K	N	S	
			HC	HC	HC	HC	HC	HC	
			WPP25	WPP45C	WMP35	WMP35	WKK45C	WNN25	WMP35
P6001-D..	12-25.8	A-G		☹					
P6003-D..	12-25.8	A-G			☹	☹			☹
P6004-D..	12-25.5	A-G						☹	
P6005-D..	12-25.8	A-G				☹			
P6006-D..	12-25.8	A-G	☹						

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

☹
Moderate

●● Primary application

● Other application

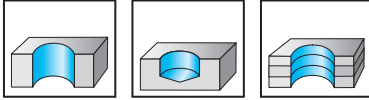
B 1

Exchangeable-tip drills

D4140.10 inch



– P6006 – Can be used without pilot drilling up to $10 \times D_c$

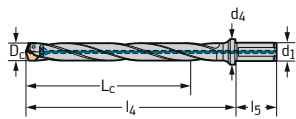


	P	M	K	N	S	H	O
D4140.10	●●	●	●●	●●	●		


B 1

Tool	Designation	D_c in	L_c in	l_4 in	l_5 in	d_1 in	d_4 in	lbs	No. of indexable inserts	Seat size	Type
Parallel shank with flat	★ D4140.10-12.00F15-A	0.472	4.728	5.988	1.891	0.630	0.788	0.35	1	A	P600 . -D12, ..
	★ D4140.10-15.00F15-B	0.591	5.910	7.289	1.891	0.630	0.788	0.49	1	B	P600 . -D15, ..
	★ D4140.10-19.00F19-D	0.748	7.486	9.022	2.048	0.748	0.985	0.88	1	D	P600 . -D19, ..
	★ D4140.10-22.00F26-F	0.866	8.668	10.362	2.285	0.985	1.260	1.54	1	F	P600 . -D22, ..
	★ D4140.10-25.00F26-G	0.985	9.850	11.662	2.285	0.985	1.260	1.98	1	G	P600 . -D25, ..




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




Assembly parts

D _c [in]	0.472	0.591	0.748	0.866	0.985
 Clamping screw for drill insert Tightening torque	FS1396 (Torx 7IP) 11 in lbs	FS1397 (Torx 8IP) 18 in lbs	FS1399 (Torx 15IP) 35 in lbs	FS1401 (Torx 20IP) 44 in lbs	FS1402 (Torx 20IP) 44 in lbs

Accessories

D _c [in]	0.472	0.591	0.748	0.866-0.985
 Torque screwdriver, analogue Tightening torque	FS2002 4-11 in lbs	FS2004 13-44 in lbs	FS2004 13-44 in lbs	FS2004 13-44 in lbs
 Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
 Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Drill inserts

Designation	D _c mm	Seat size	P		M	K	N	S	
			HC	HC	HC	HC	HC		
			WPP25	WPP45C	WMP35	WMP35	WKK45C	WNN25	WMP35
 P6001-D..	12-25.8	A-G		☑					
P6003-D..	12-25.8	A-G			☑	☑			☑
P6004-D..	12-25.5	A-G						☑	
P6005-D..	12-25.8	A-G				☑			
P6006-D..	12-25.8	A-G	☑						

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

😊
Good

😐
Moderate

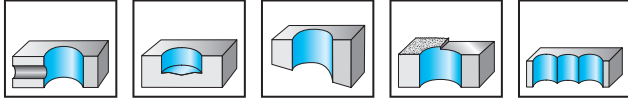
•• Primary application

• Other application

B 1

Indexable insert drills

D4120.02 inch


2×D_C
Z=1


P	M	K	N	S	H	O
●	●	●	●	●	●	●

D4120.02

B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.02-13.49F19-P41	0.531	1.062	1.849	2.031	0.750	1.125	0.51	1 1	P484 . P-1R- ... P484 . C-1R- ...
	D4120.02-13.89F19-P41	0.547	1.094	1.881	2.031	0.750	1.125	0.51	1 1	
	D4120.02-14.27F19-P41	0.562	1.124	1.911	2.031	0.750	1.125	0.52	1 1	
	D4120.02-14.68F19-P41	0.578	1.156	1.943	2.031	0.750	1.125	0.49	1 1	
	D4120.02-15.09F19-P41	0.594	1.188	1.975	2.031	0.750	1.125	0.52	1 1	
	D4120.02-15.47F19-P41	0.609	1.218	2.005	2.031	0.750	1.125	0.53	1 1	
	D4120.02-15.88F19-P41	0.625	1.250	2.037	2.031	0.750	1.125	0.54	1 1	
Parallel shank with flat 	D4120.02-16.66F26-P42	0.656	1.312	2.310	2.281	1.000	1.375	0.92	1 1	P484 . P-2R- ... P484 . C-2R- ...
	D4120.02-17.04F26-P42	0.671	1.342	2.340	2.281	1.000	1.375	0.93	1 1	
	D4120.02-17.45F26-P42	0.687	1.374	2.370	2.281	1.000	1.375	0.77	1 1	
	D4120.02-17.86F26-P42	0.703	1.406	2.410	2.281	1.000	1.375	0.95	1 1	
	D4120.02-18.24F26-P42	0.718	1.436	2.440	2.281	1.000	1.375	0.95	1 1	
	D4120.02-19.05F26-P42	0.750	1.500	2.500	2.281	1.000	1.375	0.99	1 1	
	D4120.02-19.43F26-P42	0.765	1.530	2.530	2.281	1.000	1.375	0.97	1 1	
D4120.02-19.84F26-P42	0.781	1.562	2.560	2.281	1.000	1.375	0.88	1 1		
Parallel shank with flat 	D4120.02-20.62F26-P43	0.812	1.624	2.620	2.281	1.000	1.375	0.10	1 1	P484 . P-3R- ... P484 . C-3R- ...
	D4120.02-21.41F26-P43	0.843	1.686	2.690	2.281	1.000	1.375	0.99	1 1	
	D4120.02-22.23F31-P43	0.875	1.750	2.880	2.281	1.250	1.625	1.43	1 1	
	D4120.02-23.01F31-P43	0.906	1.812	2.940	2.281	1.250	1.625	1.46	1 1	
	D4120.02-23.39F31-P43	0.921	1.842	2.970	2.281	1.250	1.625	1.47	1 1	
	D4120.02-23.80F31-P43	0.937	1.874	3.000	2.281	1.250	1.625	1.48	1 1	

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

Assembly parts

D _c [inch]	0.531–0.625	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.375	1.421–1.625	1.687–2.250
	FS2120 (Torx 6IP)	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	4 in lbs	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.531–0.625	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.625	1.687–2.250
	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs
			FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs
	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC			HC		
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
	P4840P-R-A57	1-3	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒				☒	☒	
	P4840P-R-E57	1-3	☒	☒	☒	☒	☒	☒	☒	☒	☒					☒	☒	
	P4840P-R-E67	1-3	☒	☒	☒	☒	☒	☒	☒	☒	☒		☒	☒		☒	☒	
	P4841P-R-A57	1-3	☒	☒	☒	☒	☒	☒	☒	☒	☒					☒	☒	
	P4841P-R-E57	1-3	☒	☒	☒	☒	☒	☒	☒	☒	☒					☒	☒	
	P4840C-R-E67	1-3		☒		☒	☒	☒		☒	☒				☒	☒		
	P4841C-R-A57	1-3		☒		☒	☒	☒		☒	☒				☒	☒		
	P4841C-R-E57	1-3		☒		☒	☒	☒		☒	☒				☒	☒		

P48 .. C = Centre insert
P48 .. P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

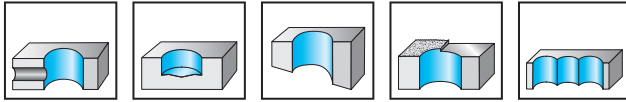
☹
Moderate

●●
Primary application

●
Other application

Indexable insert drills

D4120.02 inch


2×D_C
Z=1


P	M	K	N	S	H	O
●	●	●	●	●	●	●

D4120.02

B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.02-24.59F31-P44	0.968	1.936	3.070	2.281	1.250	1.625	1.55	1 1	P484 . P-4R- ... P484 . C-4R- ...
	D4120.02-24.99F31-P44	0.984	1.968	3.100	2.281	1.250	1.625	1.59	1 1	
	D4120.02-25.40F31-P44	1.000	2.000	3.130	2.281	1.250	1.625	1.58	1 1	
	D4120.02-26.57F31-P44	1.046	2.092	3.220	2.281	1.250	1.625	1.59	1 1	
	D4120.02-26.97F31-P44	1.062	2.124	3.250	2.281	1.250	1.625	1.61	1 1	
	D4120.02-28.17F31-P44	1.109	2.218	3.350	2.281	1.250	1.625	1.66	1 1	
	D4120.02-28.58F31-P44	1.125	2.250	3.380	2.281	1.250	1.625	1.70	1 1	
Parallel shank with flat 	D4120.02-29.74F31-P45	1.171	2.342	3.470	2.281	1.250	1.625	1.70	1 1	P484 . P-5R- ... P484 . C-5R- ...
	D4120.02-30.15F31-P45	1.187	2.374	3.500	2.281	1.250	1.625	1.74	1 1	
	D4120.02-31.75F31-P45	1.250	2.500	3.630	2.281	1.250	1.625	1.81	1 1	
	D4120.02-33.32F31-P45	1.312	2.624	3.750	2.281	1.250	1.625	1.90	1 1	
	D4120.02-34.11F31-P45	1.343	2.686	3.820	2.281	1.250	1.625	1.95	1 1	
Parallel shank with flat 	D4120.02-36.09F31-P46	1.421	2.842	3.970	2.281	1.250	1.625	1.94	1 1	P484 . P-6R- ... P484 . C-6R- ...
	D4120.02-36.50F38-P46	1.437	2.874	4.250	2.688	1.500	1.940	2.86	1 1	
	D4120.02-38.10F38-P46	1.500	3.000	4.380	2.688	1.500	1.940	3.00	1 1	
	D4120.02-39.67F38-P46	1.562	3.124	4.500	2.688	1.500	1.940	2.99	1 1	
Parallel shank with flat 	★ D4120.02-42.85F38-P47	1.687	3.374	4.750	2.688	1.500	1.940	3.02	1 1	P484 . P-7R- ... P484 . C-7R- ...
	★ D4120.02-44.45F38-P47	1.750	3.500	4.880	2.688	1.500	1.940	3.17	1 1	
	★ D4120.02-46.02F38-P47	1.812	3.624	5.000	2.688	1.500	1.940	3.32	1 1	
	★ D4120.02-47.63F38-P47	1.875	3.750	5.130	2.688	1.500	1.940	3.50	1 1	
	★ D4120.02-49.20F38-P47	1.937	3.874	5.250	2.688	1.500	1.940	3.69	1 1	

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

Assembly parts

D _c [inch]	0.531–0.625	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.375	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2120 (Torx 6IP)	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	4 in lbs	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.531–0.625	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs
Torque screwdriver, digital			FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs
Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840C-.R-E67	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	4–7	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48...C = Centre insert
P48...P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

☹
Moderate

●● Primary application

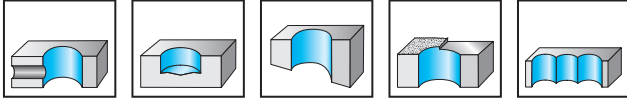
● Other application

Indexable insert drills

D4120.02 inch


 2×D_C

Z=1



D4120.02	P	M	K	N	S	H	O
	●	●	●	●	●		

B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	★ D4120.02-50.80F51-P48	2.000	4.000	5.620	3.250	2.000	2.440	5.94	1 1	P484 . P-8R- .. P484 . C-8R- ..
	★ D4120.02-52.37F51-P48	2.062	4.124	5.740	3.250	2.000	2.440	6.17	1 1	
	★ D4120.02-53.98F51-P48	2.125	4.250	5.870	3.250	2.000	2.440	6.42	1 1	
	★ D4120.02-55.55F51-P48	2.187	4.374	5.990	3.250	2.000	2.440	6.66	1 1	
	★ D4120.02-57.15F51-P48	2.250	4.500	6.120	3.250	2.000	2.440	6.92	1 1	

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

Assembly parts

D _c [inch]	0.531–0.625	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.375	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2120 (Torx 6IP)	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	4 in lbs	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.531–0.625	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs
Torque screwdriver, digital			FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs
Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840P-.R-E57	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840P-.R-E67	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841P-.R-A57	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841P-.R-E57	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840C-.R-E67	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841C-.R-A57	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841C-.R-E57	8–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48...C = Centre insert
P48...P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

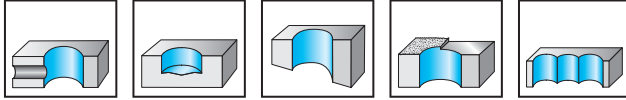
☹
Moderate

●● Primary application

● Other application

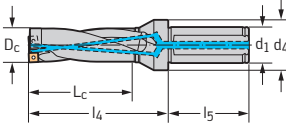
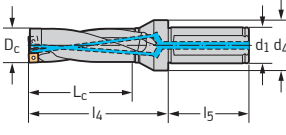
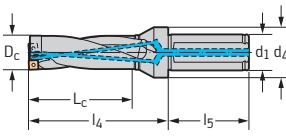
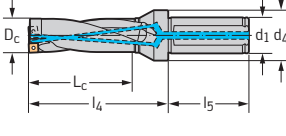
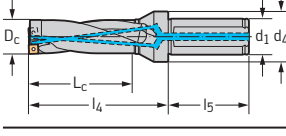
Indexable insert drills

D4120.03 inch


3×D_C
Z=1


D4120.03	P	M	K	N	S	H	O
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B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.03-13.49F19-P41	0.531	1.593	2.380	2.031	0.750	1.125	0.42	1 1	P484 . P-1R- ... P484 . C-1R- ...
	D4120.03-13.89F19-P41	0.547	1.641	2.428	2.031	0.750	1.125	0.37	1 1	
	D4120.03-15.09F19-P41	0.594	1.782	2.569	2.031	0.750	1.125	0.44	1 1	
	D4120.03-15.47F19-P41	0.609	1.827	2.614	2.031	0.750	1.125	0.45	1 1	
Parallel shank with flat 	D4120.03-17.04F26-P42	0.671	2.013	3.010	2.281	1.000	1.375	0.88	1 1	P484 . P-2R- ... P484 . C-2R- ...
	D4120.03-17.45F26-P42	0.687	2.061	3.060	2.281	1.000	1.375	0.90	1 1	
	D4120.03-17.86F26-P42	0.703	2.109	3.110	2.281	1.000	1.375	0.90	1 1	
	D4120.03-18.24F26-P42	0.718	2.154	3.150	2.281	1.000	1.375	0.93	1 1	
Parallel shank with flat 	D4120.03-19.43F26-P42	0.765	2.295	3.300	2.281	1.000	1.375	0.95	1 1	P484 . P-3R- ... P484 . C-3R- ...
	D4120.03-23.01F31-P43	0.906	2.718	3.850	2.281	1.250	1.625	1.54	1 1	
	D4120.03-23.39F31-P43	0.921	2.763	3.890	2.281	1.250	1.625	1.50	1 1	
Parallel shank with flat 	D4120.03-23.80F31-P43	0.937	2.811	3.940	2.281	1.250	1.625	1.52	1 1	P484 . P-4R- ... P484 . C-4R- ...
	D4120.03-24.59F31-P44	0.968	2.904	4.030	2.281	1.250	1.625	1.48	1 1	
	D4120.03-24.99F31-P44	0.984	2.952	4.080	2.281	1.250	1.625	1.50	1 1	
	D4120.03-26.57F31-P44	1.046	3.138	4.270	2.281	1.250	1.625	1.57	1 1	
Parallel shank with flat 	D4120.03-28.17F31-P44	1.109	3.327	4.459	2.281	1.250	1.625	1.73	1 1	P484 . P-5R- ... P484 . C-5R- ...
	D4120.03-29.74F31-P45	1.171	3.513	4.640	2.281	1.250	1.625	1.76	1 1	
	D4120.03-30.15F31-P45	1.187	3.561	4.690	2.281	1.250	1.625	1.85	1 1	
	D4120.03-34.11F31-P45	1.343	4.029	5.160	2.281	1.250	1.625	2.17	1 1	

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

Assembly parts

D _c [inch]	0.531–0.609	0.671–0.765	0.906–0.937	0.968–1.109	1.171–1.343	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2120 (Torx 6IP)	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	4 in lbs	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.531–0.609	0.671–0.765	0.906–0.937	0.968–1.109	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs
Torque screwdriver, digital			FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs
Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841C-.R-A57	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	1-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48...C = Centre insert
P48...P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

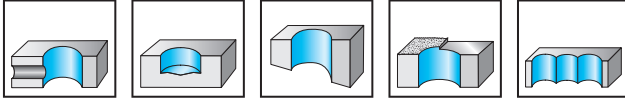
☹
Moderate

●● Primary application

● Other application

Indexable insert drills

D4120.03 inch


3×D_C
Z=1


P	M	K	N	S	H	O
●	●	●	●	●	●	●

B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.03-36.09F31-P46	1.421	4.263	5.390	2.281	1.250	1.625	2.27	1 1	P484 . P-6R- ... P484 . C-6R- ...
	D4120.03-36.50F38-P46	1.437	4.311	5.690	2.688	1.500	1.940	3.09	1 1	
	D4120.03-38.10F38-P46	1.500	4.500	5.880	2.688	1.500	1.940	3.36	1 1	
	D4120.03-39.67F38-P46	1.562	4.686	6.070	2.688	1.500	1.940	3.46	1 1	
	D4120.03-41.28F38-P46	1.625	4.875	6.260	2.688	1.500	1.940	3.89	1 1	
Parallel shank with flat 	★ D4120.03-42.85F38-P47	1.687	5.061	6.440	2.688	1.500	1.940	3.68	1 1	P484 . P-7R- ... P484 . C-7R- ...
	★ D4120.03-44.45F38-P47	1.750	5.250	6.630	2.688	1.500	1.940	3.90	1 1	
	★ D4120.03-46.02F38-P47	1.812	5.436	6.820	2.688	1.500	1.940	4.15	1 1	
	★ D4120.03-47.63F38-P47	1.875	5.625	7.010	2.688	1.500	1.940	4.42	1 1	
	★ D4120.03-49.20F38-P47	1.937	5.811	7.190	2.688	1.500	1.940	4.71	1 1	
Parallel shank with flat 	★ D4120.03-50.80F51-P48	2.000	6.000	7.620	3.250	2.000	2.440	7.00	1 1	P484 . P-8R- ... P484 . C-8R- ...
	★ D4120.03-52.37F51-P48	2.062	6.186	7.810	3.250	2.000	2.440	7.32	1 1	
	★ D4120.03-53.98F51-P48	2.125	6.375	8.000	3.250	2.000	2.440	7.69	1 1	
	★ D4120.03-55.55F51-P48	2.187	6.561	8.180	3.250	2.000	2.440	8.05	1 1	
	★ D4120.03-57.15F51-P48	2.250	6.750	8.370	3.250	2.000	2.440	8.51	1 1	

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

Assembly parts

D _c [inch]	0.531–0.609	0.671–0.765	0.906–0.937	0.968–1.109	1.171–1.343	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2120 (Torx 6IP)	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	4 in lbs	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.531–0.609	0.671–0.765	0.906–0.937	0.968–1.109	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2002 4–11 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs	FS2004 13–44 in lbs
Torque screwdriver, digital			FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs	FS2248 9–53 in lbs
Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840P-.R-E57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840P-.R-E67	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841P-.R-A57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841P-.R-E57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840C-.R-E67	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841C-.R-A57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4841C-.R-E57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48...C = Centre insert
P48...P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

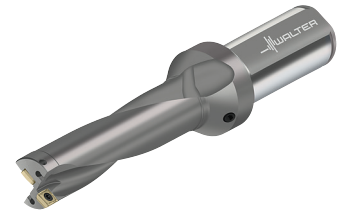
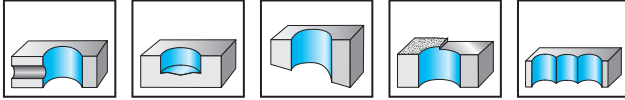
☹
Moderate

●● Primary application

● Other application

Indexable insert drills

D4120.04 inch


4×D_C
Z=1


D4120.04	P	M	K	N	S	H	O
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B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.04-16.66F26-P42	0.656	2.624	3.620	2.281	1.000	1.375	0.90	1 1	P484 . P-2R- ... P484 . C-2R- ...
	D4120.04-17.04F26-P42	0.671	2.684	3.680	2.281	1.000	1.375	0.93	1 1	
	D4120.04-17.45F26-P42	0.687	2.748	3.750	2.281	1.000	1.375	0.93	1 1	
	D4120.04-17.86F26-P42	0.703	2.812	3.810	2.281	1.000	1.375	0.96	1 1	
	D4120.04-18.24F26-P42	0.718	2.872	3.870	2.281	1.000	1.375	0.97	1 1	
	D4120.04-19.05F26-P42	0.750	3.000	4.000	2.281	1.000	1.375	0.99	1 1	
	D4120.04-19.43F26-P42	0.765	3.060	4.060	2.281	1.000	1.375	1.01	1 1	
	D4120.04-19.84F26-P42	0.781	3.124	4.120	2.281	1.000	1.375	1.03	1 1	
Parallel shank with flat 	D4120.04-21.41F26-P43	0.843	3.372	4.370	2.281	1.000	1.375	1.06	1 1	P484 . P-3R- ... P484 . C-3R- ...
	D4120.04-23.01F31-P43	0.906	3.624	4.750	2.281	1.250	1.625	1.62	1 1	
	D4120.04-23.39F31-P43	0.921	3.684	4.810	2.281	1.250	1.625	1.49	1 1	
Parallel shank with flat 	D4120.04-24.59F31-P44	0.968	3.872	5.000	2.281	1.250	1.625	1.59	1 1	P484 . P-4R- ... P484 . C-4R- ...
	D4120.04-26.57F31-P44	1.046	4.184	5.309	2.281	1.250	1.625	1.76	1 1	
	D4120.04-28.17F31-P44	1.109	4.436	5.570	2.281	1.250	1.625	1.90	1 1	
	D4120.04-28.58F31-P44	1.125	4.500	5.630	2.281	1.250	1.625	1.94	1 1	
Parallel shank with flat 	D4120.04-29.74F31-P45	1.171	4.684	5.810	2.281	1.250	1.625	2.03	1 1	P484 . P-5R- ... P484 . C-5R- ...
	D4120.04-33.32F31-P45	1.312	5.248	6.380	2.281	1.250	1.625	2.39	1 1	
	D4120.04-34.11F31-P45	1.343	5.372	6.496	2.281	1.250	1.625	2.36	1 1	

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

Assembly parts

D _c [inch]	0.656–0.781	0.843–0.921	0.968–1.125	1.171–1.343	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.656–0.781	0.843–0.921	0.968–1.125	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002	FS2002	FS2004	FS2004	FS2004
Tightening torque	4–11 in lbs	4–11 in lbs	13–44 in lbs	13–44 in lbs	13–44 in lbs
Torque screwdriver, digital		FS2248	FS2248	FS2248	FS2248
Tightening torque		9–53 in lbs	9–53 in lbs	9–53 in lbs	9–53 in lbs
Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4840P-.R-E57	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4840P-.R-E67	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841P-.R-A57	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841P-.R-E57	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840C-.R-E67	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841C-.R-A57	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841C-.R-E57	2-5	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48...C = Centre insert
P48...P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☹️
Very good

😊
Good

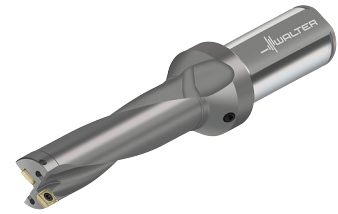
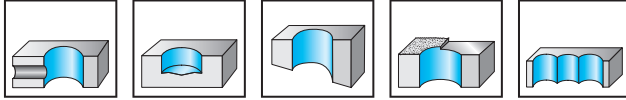
😐
Moderate

●● Primary application

● Other application

Indexable insert drills

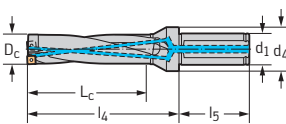
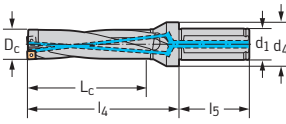
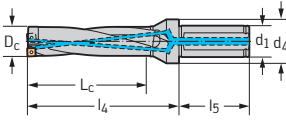
D4120.04 inch


4×D_C
Z=1


P	M	K	N	S	H	O
●	●	●	●	●	●	●

D4120.04

B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.04-36.09F31-P46	1.421	5.684	6.810	2.281	1.250	1.625	2.39	1 1	P484 . P-6R- .. P484 . C-6R- ..
	D4120.04-36.50F38-P46	1.437	5.748	7.130	2.688	1.500	1.940	3.30	1 1	
	D4120.04-38.10F38-P46	1.500	6.000	7.380	2.688	1.500	1.940	3.68	1 1	
	D4120.04-39.67F38-P46	1.562	6.248	7.630	2.688	1.500	1.940	3.92	1 1	
	D4120.04-41.28F38-P46	1.625	6.500	7.880	2.688	1.500	1.940	4.05	1 1	
Parallel shank with flat 	★ D4120.04-42.85F38-P47	1.687	6.748	8.128	2.688	1.500	1.940	4.23	1 1	P484 . P-7R- .. P484 . C-7R- ..
	★ D4120.04-44.45F38-P47	1.750	7.000	8.380	2.688	1.500	1.940	4.54	1 1	
	★ D4120.04-46.02F38-P47	1.812	7.248	8.628	2.688	1.500	1.940	4.87	1 1	
	★ D4120.04-47.63F38-P47	1.875	7.500	8.880	2.688	1.500	1.940	5.23	1 1	
	★ D4120.04-49.20F38-P47	1.937	7.748	9.128	2.688	1.500	1.940	5.63	1 1	
Parallel shank with flat 	★ D4120.04-50.80F51-P48	2.000	8.000	9.620	3.250	2.000	2.440	8.13	1 1	P484 . P-8R- .. P484 . C-8R- ..
	★ D4120.04-52.37F51-P48	2.062	8.248	9.868	3.250	2.000	2.440	8.58	1 1	
	★ D4120.04-53.98F51-P48	2.125	8.500	10.120	3.250	2.000	2.440	9.06	1 1	
	★ D4120.04-55.55F51-P48	2.187	8.748	10.368	3.250	2.000	2.440	9.56	1 1	
	★ D4120.04-57.15F51-P48	2.250	9.000	10.620	3.250	2.000	2.440	10.09	1 1	

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

Assembly parts

D _c [inch]	0.656–0.781	0.843–0.921	0.968–1.125	1.171–1.343	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.656–0.781	0.843–0.921	0.968–1.125	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002	FS2002	FS2004	FS2004	FS2004
Tightening torque	4–11 in lbs	4–11 in lbs	13–44 in lbs	13–44 in lbs	13–44 in lbs
Torque screwdriver, digital		FS2248	FS2248	FS2248	FS2248
Tightening torque		9–53 in lbs	9–53 in lbs	9–53 in lbs	9–53 in lbs
Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4840P-.R-E57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4840P-.R-E67	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841P-.R-A57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841P-.R-E57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840C-.R-E67	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841C-.R-A57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841C-.R-E57	6–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48...C = Centre insert
P48...P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☹️
Very good

😊
Good

😐
Moderate

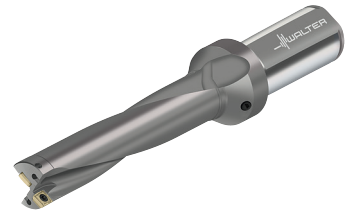
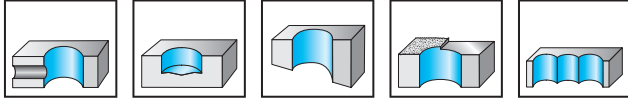
●● Primary application

● Other application

B 1

Indexable insert drills

D4120.05 inch


5×D_C
Z=1


P	M	K	N	S	H	O
●	●	●●	●	●	●	●

D4120.05

B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.05-16.66F26-P42	0.656	3.280	4.280	2.281	1.000	1.375	1.03	1 1	P484 . P-2R- .. P484 . C-2R- ..
	D4120.05-17.04F26-P42	0.671	3.355	4.355	2.281	1.000	1.375	1.05	1 1	
	D4120.05-17.45F26-P42	0.687	3.435	4.435	2.281	1.000	1.375	1.07	1 1	
	D4120.05-17.86F26-P42	0.703	3.515	4.515	2.281	1.000	1.375	1.05	1 1	
	D4120.05-18.24F26-P42	0.718	3.590	4.590	2.281	1.000	1.375	1.11	1 1	
	D4120.05-19.05F26-P42	0.750	3.750	4.750	2.281	1.000	1.375	1.18	1 1	
	D4120.05-19.43F26-P42	0.765	3.825	4.825	2.281	1.000	1.375	1.12	1 1	
	D4120.05-19.84F26-P42	0.781	3.905	4.905	2.281	1.000	1.375	1.14	1 1	
Parallel shank with flat 	D4120.05-20.62F26-P43	0.812	4.060	5.060	2.281	1.000	1.375	1.18	1 1	P484 . P-3R- .. P484 . C-3R- ..
	D4120.05-21.41F26-P43	0.843	4.215	5.215	2.281	1.000	1.375	1.24	1 1	
	D4120.05-22.23F31-P43	0.875	4.375	5.505	2.281	1.250	1.625	1.72	1 1	
	D4120.05-23.01F31-P43	0.906	4.530	5.660	2.281	1.250	1.625	1.77	1 1	
	D4120.05-23.39F31-P43	0.921	4.605	5.735	2.281	1.250	1.625	1.80	1 1	
	D4120.05-23.80F31-P43	0.937	4.685	5.815	2.281	1.250	1.625	1.83	1 1	
Parallel shank with flat 	D4120.05-24.59F31-P44	0.968	4.840	5.970	2.281	1.250	1.625	1.96	1 1	P484 . P-4R- .. P484 . C-4R- ..
	D4120.05-24.99F31-P44	0.984	4.920	6.050	2.281	1.250	1.625	1.98	1 1	
	D4120.05-25.40F31-P44	1.000	5.000	6.130	2.362	1.250	1.625	2.01	1 1	
	D4120.05-26.57F31-P44	1.046	5.230	6.359	2.281	1.250	1.625	2.06	1 1	
	D4120.05-26.97F31-P44	1.062	5.310	6.440	2.281	1.250	1.625	2.07	1 1	
	D4120.05-28.17F31-P44	1.109	5.545	6.675	2.281	1.250	1.625	2.22	1 1	
	D4120.05-28.58F31-P44	1.125	5.625	6.755	2.281	1.250	1.625	2.23	1 1	

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

Assembly parts

D _c [inch]	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.375	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002	FS2002	FS2004	FS2004	FS2004
Tightening torque	4–11 in lbs	4–11 in lbs	13–44 in lbs	13–44 in lbs	13–44 in lbs
Torque screwdriver, digital		FS2248	FS2248	FS2248	FS2248
Tightening torque		9–53 in lbs	9–53 in lbs	9–53 in lbs	9–53 in lbs
Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4840P-.R-E57	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4840P-.R-E67	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841P-.R-A57	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841P-.R-E57	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840C-.R-E67	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841C-.R-A57	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	P4841C-.R-E57	2–4	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48...C = Centre insert
P48...P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☹️
Very good

😊
Good

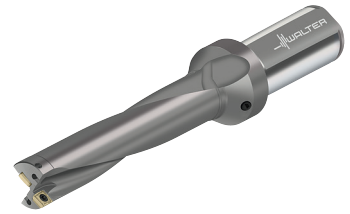
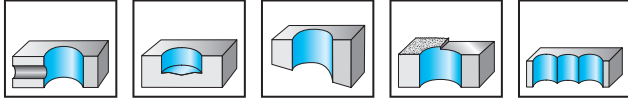
😐
Moderate

●● Primary application

● Other application

Indexable insert drills

D4120.05 inch


5×D_C
Z = 1


P	M	K	N	S	H	O
●	●	●	●	●	●	●

D4120.05

B 1

Tool	Designation	D _C inch	L _C inch	l ₄ inch	l ₅ inch	d ₁ inch	d ₄ inch	lbs	No. of indexable inserts	Type
Parallel shank with flat 	D4120.05-29.74F31-P45	1.171	5.855	6.985	2.281	1.250	1.625	2.33	1 1	P484 . P-5R- ... P484 . C-5R- ...
	D4120.05-30.15F31-P45	1.187	5.935	7.065	2.281	1.250	1.625	2.37	1 1	
	D4120.05-31.75F31-P45	1.250	6.250	7.380	2.281	1.250	1.625	2.58	1 1	
	D4120.05-33.32F31-P45	1.312	6.560	7.690	2.281	1.250	1.625	2.79	1 1	
	D4120.05-34.11F31-P45	1.343	6.715	7.845	2.281	1.250	1.625	2.91	1 1	
	D4120.05-34.93F31-P45	1.375	6.875	8.005	2.281	1.250	1.625	3.03	1 1	
Parallel shank with flat 	D4120.05-36.09F31-P46	1.421	7.105	8.235	2.281	1.250	1.625	2.93	1 1	P484 . P-6R- ... P484 . C-6R- ...
	D4120.05-36.50F38-P46	1.437	7.185	8.565	2.688	1.500	1.940	3.81	1 1	
	D4120.05-38.10F38-P46	1.500	7.500	8.880	2.688	1.500	1.940	4.08	1 1	
	D4120.05-39.67F38-P46	1.562	7.810	9.190	2.688	1.500	1.940	4.60	1 1	
	D4120.05-41.28F38-P46	1.625	8.125	9.505	2.688	1.500	1.940	4.58	1 1	
Parallel shank with flat 	★ D4120.05-42.85F38-P47	1.687	8.435	9.815	2.688	1.500	1.940	4.66	1 1	P484 . P-7R- ... P484 . C-7R- ...
	★ D4120.05-44.45F38-P47	1.750	8.750	10.130	2.688	1.500	1.940	5.15	1 1	
	★ D4120.05-46.02F38-P47	1.812	9.060	10.440	2.688	1.500	1.940	5.54	1 1	
	★ D4120.05-47.63F38-P47	1.875	9.375	10.755	2.688	1.500	1.940	5.98	1 1	
	★ D4120.05-49.20F38-P47	1.937	9.685	11.065	2.688	1.500	1.940	6.45	1 1	
Parallel shank with flat 	★ D4120.05-50.80F51-P48	2.000	10.000	11.620	3.250	2.000	2.440	9.13	1 1	P484 . P-8R- ... P484 . C-8R- ...
	★ D4120.05-52.37F51-P48	2.062	10.310	11.930	3.250	2.000	2.440	9.68	1 1	
	★ D4120.05-53.98F51-P48	2.125	10.625	12.245	3.250	2.000	2.440	10.28	1 1	
	★ D4120.05-55.55F51-P48	2.187	10.935	12.555	3.250	2.000	2.440	10.90	1 1	
	★ D4120.05-57.15F51-P48	2.250	11.250	12.870	3.250	2.000	2.440	11.56	1 1	

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

Assembly parts

D _c [inch]	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.375	1.421–1.625	1.687–2.250
Clamping screw for indexable insert	FS2111 (Torx 7IP)	FS1454 (Torx 8IP)	FS1457 (Torx 9IP)	FS2080 (Torx 15IP)	FS1453 (Torx 15IP)	FS1495 (Torx 20IP)
Tightening torque	8 in lbs	11 in lbs	18 in lbs	22 in lbs	31 in lbs	44 in lbs

Accessories

D _c [inch]	0.656–0.781	0.812–0.937	0.968–1.125	1.171–1.625	1.687–2.250
Torque screwdriver, analogue	FS2002	FS2002	FS2004	FS2004	FS2004
Tightening torque	4–11 in lbs	4–11 in lbs	13–44 in lbs	13–44 in lbs	13–44 in lbs
Torque screwdriver, digital		FS2248	FS2248	FS2248	FS2248
Tightening torque		9–53 in lbs	9–53 in lbs	9–53 in lbs	9–53 in lbs
Interchangeable blade	FS2011 (Torx 7IP)	FS2012 (Torx 8IP)	FS2013 (Torx 9IP)	FS2014 (Torx 15IP)	FS2015 (Torx 20IP)
Screwdriver	FS2088 (Torx 7IP)	FS1483 (Torx 8IP)	FS1484 (Torx 9IP)	FS1485 (Torx 15IP)	FS1486 (Torx 20IP)

Indexable inserts

Designation	Size	P					M			K			N			S		
		HC					HC			HC			HC					
		WKP25S	WKP35S	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40	WKP25S	WKP35S	WXP40	WSP45	WSP45G	WXP40	WSP45	WSP45G	WXP40
P4840P-.R-A57	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
P4840C-.R-E67	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞
	5–8	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞	☞

P48 ... C = Centre insert
 P48 ... P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☹️
Very good

😊
Good

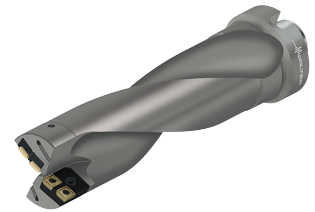
😐
Moderate

•• Primary application

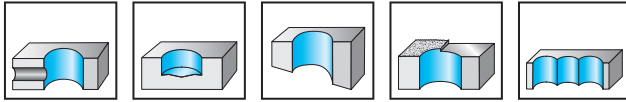
• Other application

Indexable insert drill with cartridge

D4170-03 mm



D_c 65-80	$3 \times D_c$	$Z=1$
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	P	M	K	N	S	H	O
D4170-03	●	●	●	●	●		

B 1

Tool	Designation	D_c mm	L_c mm	l_4 mm	d_1 mm	kg	No. of indexable inserts	Type
Modular NCT boring bar/adaptor 	★ D4170-03-65.00N8-P45	65	195	245	NCT 80	4.3	3 1	P484 . P-5R- .. P484 . C-5R- ..
	★ D4170-03-68.00N8-P46	68	204	254	NCT 80	4.7	3 1	P484 . P-6R- .. P484 . C-6R- ..
	★ D4170-03-70.00N8-P46	70	210	260	NCT 80	4.9	3 1	
	★ D4170-03-78.00N8-P46	78	234	284	NCT 80	6.1	3 1	
	★ D4170-03-80.00N8-P45	80	240	290	NCT 80	6.3	5 1	P484 . P-5R- .. P484 . C-5R- ..

Important: A disc forms where through holes are created by a rotating tool. This disc might then be ejected. Please take precautionary measures. Bodies and assembly parts are included in the scope of delivery.

Assembly parts

D _c [mm]	65	68	70	78	80
	FS1453 (Torx 15IP) 3.5 Nm	FS1453 (Torx 15IP) 3.5 Nm	FS1453 (Torx 15IP) 3.5 Nm	FS1453 (Torx 15IP) 3.5 Nm	FS1453 (Torx 15IP) 3.5 Nm
	FS334	FS334	FS334	FS334	FS334
	FR737C-5	FR743C-6	FR743C-6	FR743C-6	FR737C-5
	FR738P-5	FR744P-6	FR744P-6	FR744P-6	FR738P-5
	FR741P-5	FR745P-6	FR746P-6	FR748P-6	FR739P-5
	FS1149 (SW 4) 5.0 Nm	FS1149 (SW 4) 5.0 Nm	FS1149 (SW 4) 5.0 Nm	FS1149 (SW 4) 5.0 Nm	FS1149 (SW 4) 5.0 Nm
	FS966 (SW 5) 8.0 Nm	FS966 (SW 5) 8.0 Nm	FS966 (SW 5) 8.0 Nm	FS966 (SW 5) 8.0 Nm	FS966 (SW 5) 8.0 Nm

Accessories

D _c [mm]	65–80
	FS2003 1.5–5.0 Nm
	FS2014 (Torx 15IP)
	ISO2936-4 (SW 4)
	ISO2936-5 (SW 5)
	FS1485 (Torx 15IP)

Indexable inserts

Designation	Size	P					M			K			N			S				
		HC	WKP25S	WKP35S	WSP45	WSP45G	WXP40	HC	WSP45	WSP45G	WXP40	HC	WSP45	WSP45G	WXP40	HC	WSP45	WSP45G	WXP40	
	P4840P-.R-A57	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	P4840P-.R-E57	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	P4840P-.R-E67	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	P4841P-.R-A57	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	P4841P-.R-E57	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	P4840C-.R-E67	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	P4841C-.R-A57	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	P4841C-.R-E57	5-6	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺

P48 ... C = Centre insert
P48 ... P = Outer insert

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

☹
Moderate

●● Primary application

● Other application

B 1

Cutting data for D4140

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

Material group			Drilling depth		Designation		Dia. range (in)		 P6006 WPP25	 P6006 WPP25	= Wet machining (E = emulsion, O = oil) = Dry machining is possible (M = MQL, L = dry) The cutting data must be selected from Walter GPS v _c = Cutting speed (sfm) * The classification of the machining groups can be found in the material group comparison table
			10 × D _c		D4140		10-25.0 mm (0.709-0.984)				
Overview of the main material groups and code letters			Brinell hardness HB	Tensile strength R _m PSI x 1000	Machining group *	v _c	VRR				
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	295	7	E O		
		C > 0.25% to ≤ 0.55%	Annealed	190	93	P2	295	7	E O		
		C > 0.25% to ≤ 0.55%	Heat-treated	210	103	P3	262	7	E O		
		C > 0.55%	Annealed	190	93	P4	262	6	E O		
		C > 0.55%	Heat-treated	300	147	P5	207	7	E O		
		Free-machining steel (short-chipping)	Annealed	220	108	P6	295	7	E O		
	Low-alloy steel	Annealed	175	86	P7	295	7	E O			
		Heat-treated	300	147	P8	184	7	E O			
		Heat-treated	380	186	P9						
		Heat-treated	430	214	P10						
High-alloy steel and high-alloy tool steel	Annealed	200	98	P11	207	6	E O				
	Hardened and tempered	300	147	P12	207	7	E O				
	Hardened and tempered	400	197	P13							
Stainless steel	Ferritic/martensitic, annealed	200	98	P14							
	Martensitic, heat-treated	330	162	P15							
M	Stainless steel	Austenitic, quench hardened	200	98	M1						
		Austenitic, precipitation hardened (PH)	300	147	M2						
		Austenitic/ferritic, duplex	230	113	M3						
K	Malleable cast iron	Ferritic	200	98	K1						
		Pearlitic	260	126	K2						
	Grey cast iron	Low tensile strength	180	87	K3						
		High tensile strength/austenitic	245	120	K4						
	Cast iron with spheroidal graphite	Ferritic	155	75	K5						
		Pearlitic	265	128	K6						
	GGV (CGI)		200	98	K7						
N	Wrought aluminium alloys	Not hardenable	30		N1						
		Hardenable, hardened	100	50	N2						
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	38	N3						
		≤ 12% Si, hardenable, hardened	90	46	N4						
		> 12% Si, not hardenable	130	65	N5						
	Magnesium-based alloys		70	36	N6						
		Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	50	N7					
S	Heat-resistant alloys	Fe-based	Annealed	200	98	S1					
			Hardened	280	137	S2					
		Ni- or Co-based	Annealed	250	122	S3					
			Hardened	350	171	S4					
Cast			320	156	S5						
Titanium alloys	Pure titanium	200	98	S6							
	α and β alloys, hardened	375	183	S7							
	β alloys	410	202	S8							
Tungsten alloys		300	147	S9							
Molybdenum alloys		300	147	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						
	Thermosets	Without abrasive fillers			O2						
	Plastic, glass-fibre-reinforced	GFRP			O3						
	Plastic, carbon-fibre-reinforced	CFRP			O4						
	Plastic, aramid-fibre-reinforced	AFRP			O5						
	Graphite (technical)		80 Shore			O6					

B 1

Cutting data for D4170

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

Material group	Overview of the main material groups and code letters						Indexable insert geometry			
							Starting values for feed f [in/rev]			
							A57	E57	E67	
						Size 5 Size 6	Size 5 Size 6	Size 5 Size 6		
						D _c [in]				
						2.374–3.752	2.374–3.752	2.374–3.752		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	●●	0.005	0.005	0.005
		C > 0.25% to ≤ 0.55%	Annealed	190	93	P2	●●	0.008	0.007	0.007
		C > 0.25% to ≤ 0.55%	Heat-treated	210	103	P3	●●	0.008	0.007	0.007
		C > 0.55%	Annealed	190	93	P4	●●	0.008	0.007	0.007
		C > 0.55%	Heat-treated	300	147	P5	●●	0.008	0.007	0.007
	Free-machining steel (short-chipping)	Annealed	220	108	P6	●● ●	0.008	0.007	0.007	
	Low-alloy steel	Annealed	175	86	P7	●●	0.008	0.008	0.008	
		Heat-treated	300	147	P8	●●	0.006	0.006	0.006	
		Heat-treated	380	186	P9	●●	0.006	0.006	0.006	
		Heat-treated	430	214	P10	●●	0.005	0.005	0.005	
	High-alloy steel and high-alloy tool steel	Annealed	200	98	P11	●●	0.008	0.007	0.007	
		Hardened and tempered	300	147	P12	●●	0.006	0.006	0.006	
		Hardened and tempered	400	197	P13	●●	0.006	0.006	0.006	
	Stainless steel	Ferritic/martensitic, annealed	200	98	P14	●●	0.006	0.006	0.006	
		Martensitic, heat-treated	330	162	P15	●●	0.006	0.006	0.006	
M	Stainless steel	Austenitic, quench hardened	200	98	M1	●●	0.006	0.006	0.006	
		Austenitic, precipitation hardened (PH)	300	147	M2	●●	0.006	0.006	0.006	
		Austenitic/ferritic, duplex	230	113	M3	●●	0.006	0.006	0.006	
K	Malleable cast iron	Ferritic	200	98	K1	●● ●	0.009	0.009	0.009	
		Pearlitic	260	126	K2	●● ●	0.008	0.008	0.008	
	Grey cast iron	Low tensile strength	180	87	K3	●● ●	0.010	0.009	0.009	
		High tensile strength/austenitic	245	120	K4	●● ●	0.008	0.008	0.008	
	Cast iron with spheroidal graphite	Ferritic	155	75	K5	●● ●	0.010	0.009	0.009	
		Pearlitic	265	128	K6	●●	0.010	0.009	0.009	
GGV (CGI)		200	98	K7	●● ●	0.009	0.009	0.009		
N	Wrought aluminium alloys	Not hardenable	30		N1					
		Hardenable, hardened	100	50	N2	●●		0.007	0.007	
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	38	N3	●●		0.007	0.007	
		≤ 12% Si, hardenable, hardened	90	46	N4	●●		0.007	0.007	
		> 12% Si, not hardenable	130	65	N5	●● ●		0.007	0.007	
	Magnesium-based alloys		70	36	N6	●●		0.007	0.007	
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	50	N7					
		Brass, bronze, red brass	90	46	N8	●●		0.009	0.009	
		Cu alloys, short-chipping	110	55	N9	●● ●		0.009	0.009	
High tensile, Ampco		300	147	N10	●● ●	0.006	0.006	0.006		
S	Heat-resistant alloys	Fe-based	Annealed	200	98	S1	●●		0.006	0.006
			Hardened	280	137	S2	●●		0.005	0.005
		Ni- or Co-based	Annealed	250	122	S3	●●		0.005	0.005
			Hardened	350	171	S4	●●		0.005	0.005
			Cast	320	156	S5	●●		0.005	0.005
	Titanium alloys	Pure titanium	200	98	S6					
		α and β alloys, hardened	375	183	S7	●●		0.005	0.005	
		β alloys	410	202	S8	●●		0.005	0.005	
Tungsten alloys		300	147	S9	●●	0.005	0.005	0.005		
Molybdenum alloys		300	147	S10	●●	0.005	0.005	0.005		
H	Hardened steel	Hardened and tempered	50 HRC	–	H1	●●	0.004	0.004	0.004	
		Hardened and tempered	55 HRC	–	H2	●●	0.004	0.004	0.004	
		Hardened and tempered	60 HRC	–	H3			0.000	0.000	
	Hardened cast iron	Hardened and tempered	55 HRC	–	H4	●●	0.004	0.004	0.004	
O	Thermoplastics	Without abrasive fillers			O1	●● ●		0.012	0.012	
	Thermosets	Without abrasive fillers			O2	●● ●		0.010	0.010	
	Plastic, glass-fibre-reinforced	GFRP			O3					
	Plastic, carbon-fibre-reinforced	CFRP			O4					
	Plastic, aramid-fibre-reinforced	AFRP			O5					
	Graphite (technical)		80 Shore		O6	●● ●	0.009	0.009	0.009	

- Recommended application (the specified cutting data is regarded as starting values for the recommended application)
- Possible application. Limited to 2 × D_c drilling depth. MQL (minimum quantity lubrication) or compressed air is recommended.

When using drills > 3 × D_c, the following reductions are recommended:
 > 3 × D_c: Cutting speed v_c –20%, feed f –30% when spot drilling, feed f –50% when spot drilling on inclined surfaces.
 > 4 × D_c: Cutting speed v_c –30%, feed f –40% when spot drilling.

B 1

Cutting data for B321.

B 1

Material group	= Wet machining (E = emulsion, O = oil) = Dry machining is possible (M = MQL, L = dry) The cutting data must be selected from Walter GPS * The classification of the machining groups can be found in the material group comparison table		Brinell hardness HB	Tensile strength R_m psi x 1,000	Machining group *			Indexable insert geometry		
	Starting values for feed f [in/rev]									
	LCMX . . . -B57									
Overview of the main material groups and code letters		D _c [in]								
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	62	P1	●●		0.002	0.002
		C > 0.25% to ≤ 0.55%	Annealed	190	93	P2	●●		0.002	0.003
		C > 0.25% to ≤ 0.55%	Heat-treated	210	103	P3	●●			
		C > 0.55%	Annealed	190	93	P4	●●			
		C > 0.55%	Heat-treated	300	146	P5	●●			
	Free-machining steel (short-chipping)	Annealed	220	109	P6	●●	●			
	Low-alloy steel	Annealed	175	86	P7	●●		0.002	0.003	
		Heat-treated	285	139	P8	●●				
		Heat-treated	380	186	P9	●●				
		Heat-treated	430	215	P10	●●				
	High-alloy steel and high-alloy tool steel	Annealed	200	99	P11	●●				
		Hardened and tempered	300	146	P12	●●				
		Hardened and tempered	380	186	P13	●●				
	Stainless steel	Ferritic/martensitic, annealed	200	99	P14	●●				
		Martensitic, heat-treated	330	161	P15	●●				
M	Stainless steel	Austenitic, quench hardened	200	99	M1	●●		0.002	0.002	
		Austenitic, precipitation hardened (PH)	300	146	M2	●●		0.002	0.002	
		Austenitic/ferritic, duplex	230	113	M3	●●		0.002	0.002	
K	Malleable cast iron	Ferritic	200	58	K1	●●	●	0.004	0.004	
		Pearlitic	260	102	K2	●●	●	0.003	0.003	
	Grey cast iron	Low tensile strength	180	29	K3	●●	●	0.004	0.004	
		High tensile strength/austenitic	245	51	K4	●●	●	0.003	0.003	
	Cast iron with spheroidal graphite	Ferritic	155	58	K5	●●	●	0.003	0.004	
		Pearlitic	265	102	K6	●●		0.002	0.003	
GGV (CGI)		230	58	K7	●●	●	0.004	0.004		
N	Wrought aluminium alloys	Not hardenable	30	—	N1					
		Hardenable, hardened	100	49	N2	●●				
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	38	N3	●●				
		≤ 12% Si, hardenable, hardened	90	45	N4	●●				
	Magnesium-based alloys	> 12% Si, not hardenable	130	65	N5	●●	●			
			70	36	N6	●●				
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	49	N7					
		Brass, bronze, red brass	90	45	N8	●●				
		Cu alloys, short-chipping	110	55	N9	●●	●			
		High tensile, Ampco	300	146	N10	●●	●			
S	Heat-resistant alloys	Fe-based	Annealed	200	99	S1	●●		0.002	0.002
			Hardened	280	136	S2	●●			
		Ni- or Co-based	Annealed	250	122	S3	●●			
			Hardened	350	171	S4	●●			
			Cast	320	157	S5	●●			
	Titanium alloys	Pure titanium	200	99	S6					
		α and β alloys, hardened	375	183	S7	●●		0.002	0.002	
		β alloys	410	203	S8	●●		0.002	0.002	
	Tungsten alloys		300	146	S9	●●				
	Molybdenum alloys		300	146	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	●●	●			
	Thermosets	Without abrasive fillers			O2	●●	●			
	Plastic, glass-fibre-reinforced	GFRP			O3					
	Plastic, carbon-fibre-reinforced	CFRP			O4					
	Plastic, aramid-fibre-reinforced	AFRP			O5					
	Graphite (technical)		80 Shore		O6	●●	●	0.003	0.004	

- Recommended application (the specified cutting data is regarded as starting values for the recommended application)
- Possible application. Limited to 2 × D_c drilling depth. MQL (minimum quantity lubrication) or compressed air is recommended.

When using drills > 3 × D_c, the following reductions are recommended:
 > 3 × D_c: Cutting speed v_c -20%, feed f -30% when spot drilling, feed f -50% when spot drilling on inclined surfaces.

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

Indexable insert geometry					Cutting material grades									
Starting values for feed f [in/rev]					Starting values for cutting speed v _c [sfm]									
LCMX...-D57		LCMX...-E57			HC									
D _c [in]		D _c [in]			WKP255 f [in/rev]		WKP355 f [in/rev]		WSP45S f [in/rev]		WSP45G f [in/rev]		WXP40 f [in/rev]	
0.394- 0.472	0.476- 0.709	0.394- 0.472	0.476- 0.709	0.002	0.004	0.002	0.004	0.002	0.004	0.002	0.004	0.002	0.004	
0.002	0.003	0.003	0.004	950	850	850	790	720	660	730	660	660	590	
0.002	0.003	0.003	0.005	850	790	720	660	530	490	530	500	490	460	
0.002	0.003	0.003	0.005	850	790	720	660	530	490	530	500	490	460	
0.002	0.003	0.003	0.005	850	790	720	660	530	490	530	500	490	460	
0.002	0.002	0.003	0.004	660	590	490	430	430	390	430	400	390	360	
0.002	0.002	0.003	0.004	660	590	490	430	430	390	430	400	390	360	
0.003	0.003	0.003	0.005	850	790	720	660	590	560	600	560	490	460	
0.003	0.003	0.003	0.004	720	660	620	560	490	430	500	430	460	390	
0.003	0.003	0.003	0.004	720	660	620	560	490	430	500	430	460	390	
0.002	0.002	0.002	0.003	660	590	490	430	430	390	430	400	390	360	
0.002	0.003	0.003	0.004	720	660	590	560	460	430	460	430	430	390	
0.002	0.003	0.002	0.003	590	560	490	460	430	390	430	400	390	360	
0.002	0.003	0.003	0.004	560	530	460	430	390	360	400	370	360	330	
0.002	0.003	0.003	0.004			590	560	460	430	460	430	430	390	
0.002	0.003	0.003	0.004	560	530	460	430	390	360	400	370	360	330	
0.002	0.003					720	660	590	530	600	530	530	490	
0.002	0.003					490	430	430	360	430	370	360	330	
0.002	0.003					390	330	330	260	330	270	260	230	
0.004	0.005	0.004	0.006	790	720	720	660	560	490	560	500	530	460	
0.003	0.004	0.003	0.005	590	560	590	490	460	430	460	430	430	390	
0.004	0.005	0.004	0.006	790	720	720	660	560	490	560	500	530	460	
0.003	0.004	0.003	0.005	590	560	590	490	460	430	460	430	430	390	
0.003	0.004	0.004	0.005	560	490	490	460	460	430	460	430	430	390	
0.003	0.003	0.003	0.004	460	430	460	430	390	360	400	370	360	330	
0.004	0.005	0.004	0.006	590	560	590	490	460	430			430	390	
0.003	0.004							1480	1480	1480	1480			
0.003	0.004							980	980	990	990			
0.003	0.004							820	820	820	820			
0.003	0.004							660	660	660	660			
0.003	0.004							980	980	980	980			
0.003	0.004	0.003	0.004											
0.003	0.004	0.003	0.004											
0.002	0.003													
0.002	0.002	0.002	0.002			330	330					260	260	
0.002	0.002	0.002	0.002			260	260					200	200	
0.002	0.002	0.002	0.002			200	200					160	160	
0.002	0.002	0.002	0.002			160	160					130	130	
0.002	0.002	0.002	0.002			160	160					130	130	
0.002	0.002							160	130	170	140			
0.002	0.002					160	160	130	130	130	130			
0.002	0.002			230	200									
0.002	0.002			230	200									
0.002	0.002			230	200									
0.002	0.002			200	160									
0.002	0.002			200	160									
0.005	0.006	0.005	0.006			1310	1310	1310	1310	1320	1320	1310	1310	
0.004	0.005	0.004	0.005	980	980	980	980	980	980	980	980	980	980	
0.002	0.003	0.002	0.003	980	820	820	660	820	660	820	660	820	660	

HC = Coated carbide

B 1

Cutting tool material application charts – Drilling and boring

Grades for drilling from solid

Walter grade designation	Standard designation	Material groups							Range of applications							Coating process	Coating composition	Indexable insert example		
		P Steel	M Stainless steel	K Cast iron	N NF metals	S Materials with difficult cutting properties	H Hard materials	O Other	01	05	10	15	20	25	30				35	40
WKP25S	HC – P 25	●●																CVD	TiCN + Al ₂ O ₃ (+ TiCN)	
	HC – K 25			●●																
WKP35S	HC – P 35	●●																CVD	TiCN + Al ₂ O ₃ (+ TiCN)	
	HC – K 35			●●																
WSP45S	HC – P 45	●●																PVD	TiAlN + Al ₂ O ₃ (+ Al)	
	HC – M45		●●																	
	HC – S 45					●●														
WSP45	HC – P 45	●●																PVD	TiAlN + Al ₂ O ₃ (+ ZrN)	
	HC – M45		●●																	
	HC – S 45					●●														
	HC – N 30				●															
WSP45G	HC – P 45	●●																PVD	TiAlN + Al ₂ O ₃ (+ ZrN)	
	HC – M45		●●																	
	HC – S 45					●●														
	HC – N 30				●															
WXP40	HC – P 40	●●																PVD	TiCN	
	HC – M30		●●																	
	HC – K 40			●●																
	HC – S 30					●														
WXP30	HC – P 30	●●																PVD	TiAlN / TiSiN	
	HC – M30		●																	
	HC – K 30			●●																
	HC – N 30				●															
	HC – S 30					●														
WPP45C	HC – P 45	●●																PVD	TiAlN / TiAl	
	HC – K 45			●																
WKK45C	HC – P 45	●																PVD	TiAlN / TiSiAlCrN / TiSiN	
	HC – K 45			●●																
WMP35	HC – P 35	●●																PVD	TiAlN	
	HC – M35		●●																	
	HC – S 35					●●														
WNN25	HC – N 25				●●													PVD	ta-C (DLC)	
	HC – O 25							●												
WPP25	HC – P 25	●●																PVD	AlTiN	

HC = Coated carbide
HW = Uncoated carbide

●● Primary application
● Additional application

Drilling strategies

P6001–P6005 7–10 × D_c

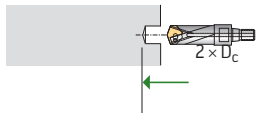
P	M	K	N	S	H	O
✓	✓	✓	✓	✓		✓

Pilot drilling



10–50 bar
145–725 psi
on

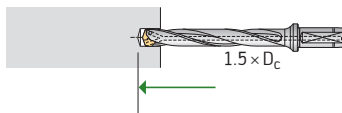
D4140-03
D4140.03



Running in



off

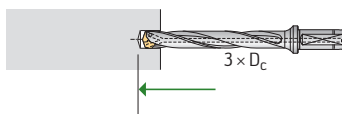


$n_{max} = 100 \text{ rpm}$
 $v_f = 1000 \text{ mm/min}$

Spot drilling



10–50 bar
145–725 psi
on

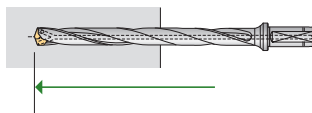


$v_c = 75\%$
 $v_f = 50\%$

Deep-hole drilling



10–50 bar
145–725 psi
on

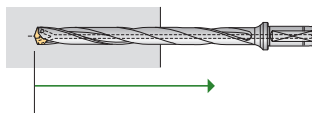


$v_c = 100\%$
 $v_f = 100\%$

Retracting



off



$n_{max} = 100 \text{ rpm}$
 $v_f = 3280 \text{ sfm}$

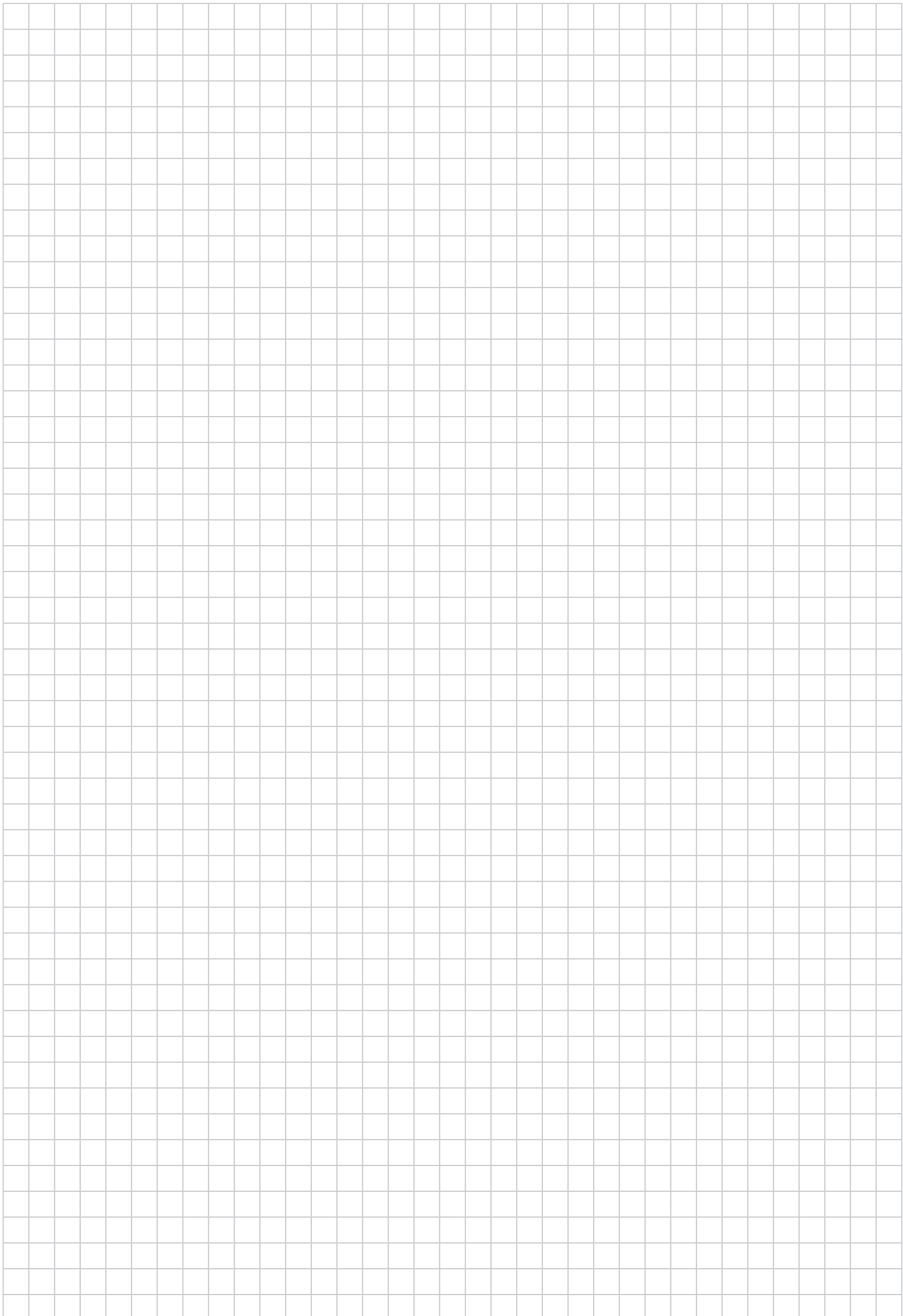
Recommended cutting data can be found in Walter GPS.

P6006 7–10 × D_c

P	M	K	N	S	H	O
✓						

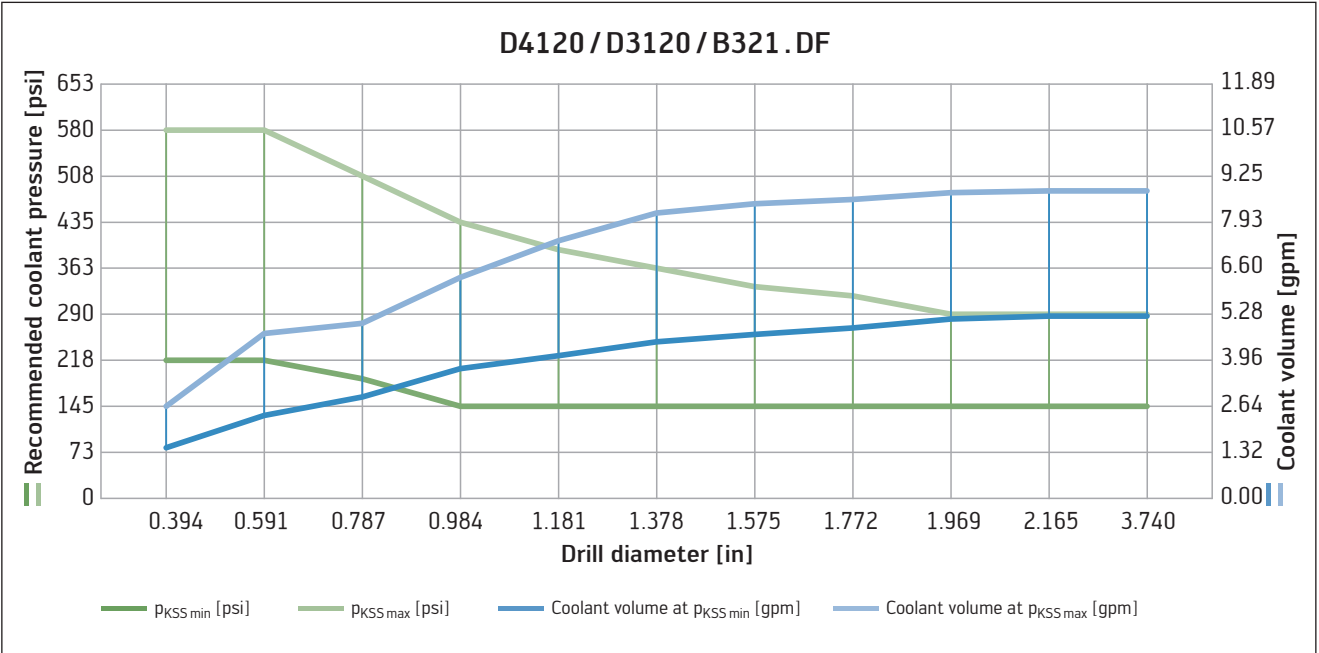
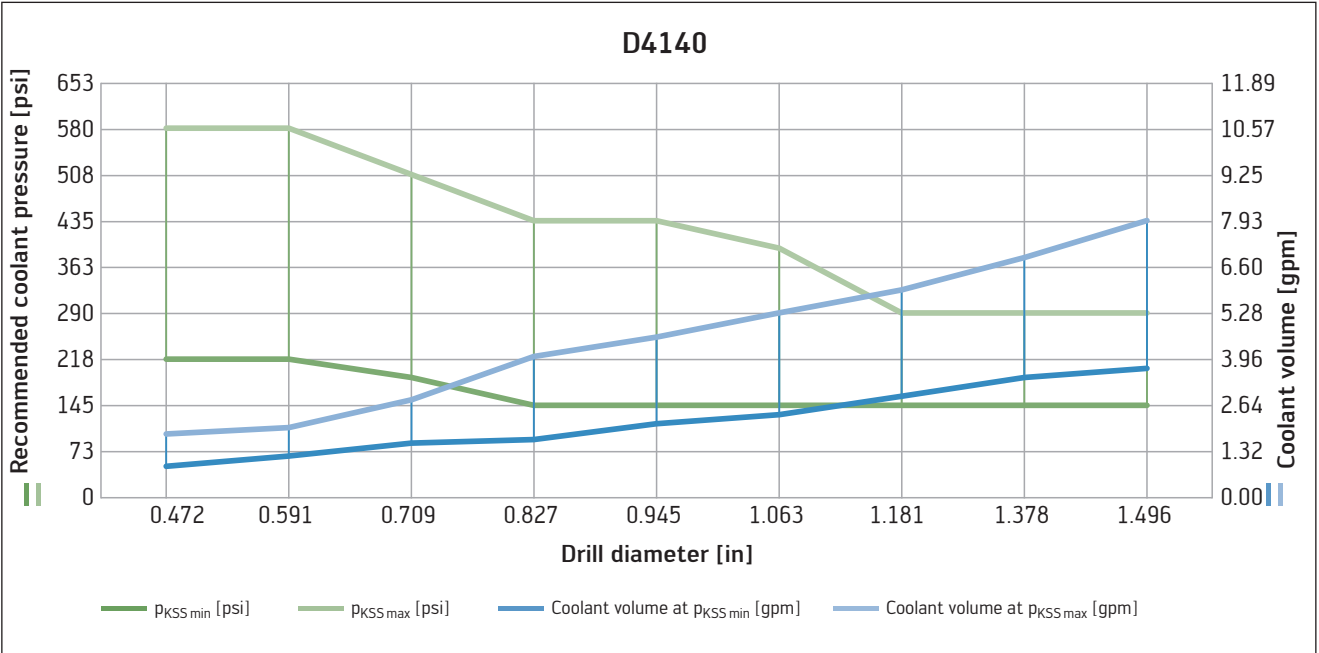
No pilot drilling strategy necessary

B 1



Standard value diagrams for coolant pressure/flow rate information

Indexable insert drilling



Note

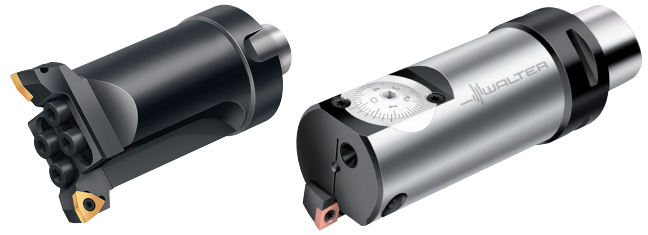
The standard values shown were determined under laboratory conditions. During use, deviations may occur due to factors including the machine type being used, the coolant, the coolant concentration or the coolant pump.




Abbreviations

- KSS Coolant
- L/D Length/Diameter
- p_{KSS} Coolant pressure
- $p_{KSS\ max}$ Maximum coolant pressure
- $p_{KSS\ min}$ Minimum coolant pressure

B 1

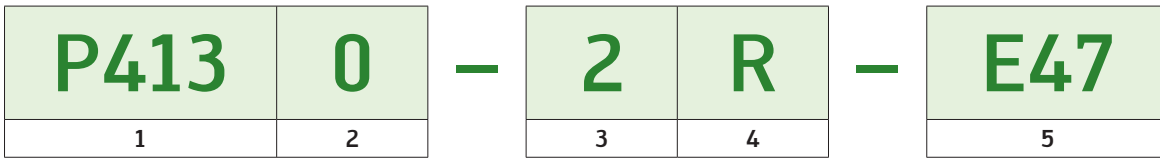
Product range overview of indexable inserts for boring and precision boring



Machining	Insert shape	Description	Page
Boring Precision boring		C Positive rhombic for precision boring	189
			Positive rhombic for precision boring – CBN
		P413x P416x P446x Tangential/lateral rhombic for boring	188
		T Positive rhombic for precision boring	190
			Positive rhombic for precision boring – CBN

B2

Designation key for negative indexable inserts for boring



1
Walter indexable insert designation
P413
P416 Negative boring
P446

2
Version
0 Ground
1 Sintered

3
Insert size
0 08 ...
2 10 ...
3 12 ...
4 14 ...

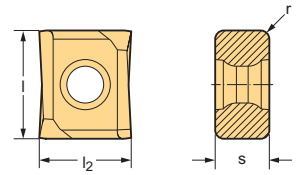
4
Cutting direction
R RH-cutting
L LH-cutting

5
Walter geometry
E47 The universal geometry
G88 The sharp geometry






B2

Tangential rhombic

P4130 / P4160 / P4460



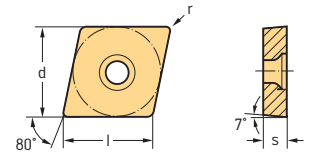
Indexable inserts

Designation	Number of cutting edges	l in	l ₂ in	s in	P		M		K		N	
					HC	WKP30S	HC	WSM20S	HC	WKK10S	HC	WKK20S
 P4130-4R12-E47	4	0.552	0.413	0.276	☺	☺			☺	☺		
 P4160-2R04-E47	4	0.394	0.382	0.197	☺	☺	☺		☺			
 P4160-2R/L08-E47	4	0.394	0.382	0.197	☺	☺	☺		☺			
 P4460-2R08-G88	4	0.394	0.382	0.197							☹	☹
 P4460-2R04-G88	4	0.394	0.382	0.197							☹	☹


HC = Coated carbide
HW = Uncoated carbide

B2

Positive rhombic 80° CCGT



Indexable inserts

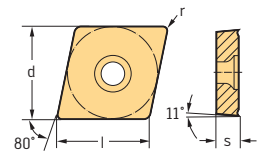
ANSI Designation	Designation	l in	r in	f in	a _p in	P				M			K		S					
						HE				HC			HC			HC		HC		
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S	
 CCGT2(1.5)0.2M-FP2	CCGT060201M-FP2	0.253	0.003	0.001-0.002	0.004-0.059	☺														
CCGT2(1.5)0.5M-FP2	CCGT060202M-FP2	0.253	0.007	0.002-0.005	0.008-0.079	☺														
CCGT2(1.5)1M-FP2	CCGT060204M-FP2	0.253	0.015	0.003-0.010	0.008-0.098	☺														
CCGT3(2.5)0.2M-FP2	CCGT09T301M-FP2	0.380	0.003	0.001-0.002	0.004-0.059	☺														
CCGT3(2.5)0.5M-FP2	CCGT09T302M-FP2	0.380	0.007	0.002-0.005	0.008-0.079	☺														
CCGT3(2.5)1M-FP2	CCGT09T304M-FP2	0.380	0.015	0.003-0.010	0.008-0.098	☺														
CCGT3(2.5)2M-FP2	CCGT09T308M-FP2	0.380	0.030	0.004-0.012	0.012-0.118	☺														

See the ISO 1832 designation key for dimensions


HE = Coated cermet
HC = Coated carbide

B2

Positive rhombic 80° CPGT



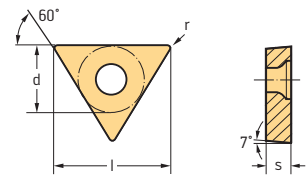
Indexable inserts

ANSI Designation	Designation	l in	r in	f in	a _p in	P				M			K		S					
						HE				HC			HC			HC		HC		
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S	WSM20S	WSM30S	
 CPGT1.8(1.5)0.5M-FP2	CPGT050202M-FP2	0.222	0.007	0.002-0.005	0.008-0.079	☺														
CPGT1.8(1.5)1M-FP2	CPGT050204M-FP2	0.222	0.015	0.003-0.008	0.008-0.079	☺														


See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

Positive triangular 60° TCGT



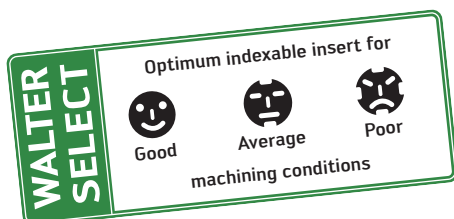
Indexable inserts

ANSI Designation	Designation	l in	r in	f in	a _p in	P				M			K		S		
						HE		HC		HC			HC		HC		
						WEP10C	WPP10S	WPP20S	WPP30S	WMP20S	WMP20S	WSM10S	WSM20S	WSM30S	WKK10S	WKK20S	WSM10S
 TCGT1.2(1.2)1M-FP2	TCGT06T104M-FP2	0.270	0.015	0.003–0.010	0.008–0.079	☺											
TCGT1.8(1.5)1M-FP2	TCGT090204M-FP2	0.378	0.015	0.003–0.010	0.008–0.098	☺											
TCGT2(1.5)0.5M-FP2	TCGT110202M-FP2	0.432	0.007	0.002–0.005	0.008–0.079	☺											
TCGT2(1.5)1M-FP2	TCGT110204M-FP2	0.432	0.015	0.003–0.010	0.008–0.098	☺											

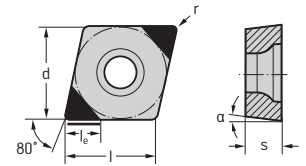
See the ISO 1832 designation key for dimensions

HE = Coated cermet
HC = Coated carbide

B2



CBN – Positive rhombic 80° CCGW



Indexable inserts

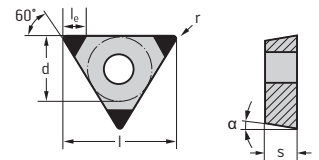
ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K		N		S			H			O	
								CN		BH		DP		BL			DP		
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WDN10		
	CCGW2(1.5)1TM-2	CCGW060204TM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.012											
	CCGW2(1.5)2TM-2	CCGW060208TM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020											
	CCGW3(2.5)1TM-2	CCGW09T304TM-2	2	0.110	0.016	7°	0.002–0.008	0.004–0.020											
	CCGW3(2.5)2TM-2	CCGW09T308TM-2	2	0.106	0.031	7°	0.002–0.010	0.004–0.020											

See the ISO 1832 designation key for dimensions

BH = CBN with high CBN content
 CN = Silicon nitride Si₃N₄
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

B2

CBN – Positive triangular 60° TCGW



Indexable inserts

ANSI Designation	Designation	Number of cutting edges	l_e in	r in	α	f in	a_p in	K		N		S			H			O	
								CN		BH		DP		BL			DP		
								WCK10	WBK20	WBK30	WDN10	WBS10	WBH10C	WBH10	WBH20	WBH30	WDN10		
	TCGW2(1.5)0.5TS-3	TCGW110202TS-3	3	0.110	0.008	7°	0.002–0.006	0.004–0.012											
	TCGW2(1.5)1TS-3	TCGW110204TS-3	3	0.122	0.016	7°	0.002–0.008	0.004–0.012											
	TCGW2(1.5)1TM-3	TCGW110204TM-3	3	0.122	0.016	7°	0.002–0.008	0.004–0.012											
	TCGW2(1.5)2TM-3	TCGW110208TM-3	3	0.110	0.031	7°	0.002–0.010	0.004–0.020											

See the ISO 1832 designation key for dimensions

CN = Silicon nitride Si₃N₄
 BH = CBN with high CBN content
 DP = Polycrystalline diamond
 BL = CBN with low CBN content

Cutting data for boring and precision boring

Material group	Overview of the main material groups and code letters C ≤ 0.25% C > 0.25% to ≤ 0.55% C > 0.55% Free-machining steel (short-chipping)			Brinell hardness HB	Tensile strength R _m PSI x 1000	Machining group ¹	= Cutting data for wet machining = Dry machining is possible		Boring Negative basic shape	
							Starting values for feed f _z [in/rev]		-E47 fz [in]	-G88 fz [in]
							Indexable insert geometry			
									-E47 fz [in]	-G88 fz [in]
P	Non-alloyed steel	Annealed	125	62	P1	●●		0.010		
		Annealed	190	93	P2	●●		0.008		
		Heat-treated	210	103	P3	●●		0.007		
		Annealed	190	93	P4	●●		0.007		
		Heat-treated	300	147	P5	●●		0.006		
		Free-machining steel (short-chipping)	Annealed	220	108	P6	●●	●	0.007	
	Low-alloy steel	Annealed	175	86	P7	●●		0.010		
		Heat-treated	300	147	P8	●●		0.007		
		Heat-treated	380	186	P9	●●		0.006		
		Heat-treated	430	214	P10	●●		0.005		
High-alloy steel and high-alloy tool steel	Annealed	200	98	P11	●●		0.007			
	Hardened and tempered	300	147	P12	●●		0.006			
	Hardened and tempered	400	197	P13	●●		0.005			
Stainless steel	Ferritic/martensitic, annealed	200	98	P14	●●		0.006			
	Martensitic, heat-treated	330	162	P15	●●		0.006			
M	Stainless steel	Austenitic, quench hardened	200	98	M1	●●		0.006		
		Austenitic, precipitation hardened (PH)	300	147	M2	●●		0.006		
		Austenitic/ferritic, duplex	230	113	M3	●●		0.006		
K	Malleable cast iron	Ferritic	200	98	K1	●●	●	0.009		
		Pearlitic	260	126	K2	●●	●	0.008		
	Grey cast iron	Low tensile strength	180	87	K3	●●	●	0.010		
		High tensile strength/austenitic	245	120	K4	●●	●	0.008		
	Cast iron with spheroidal graphite	Ferritic	155	75	K5	●●	●	0.010		
		Pearlitic	265	128	K6	●●		0.008		
	GGV (CGI)	200	98	K7	●●	●	0.009			
N	Wrought aluminium alloys	Not hardenable	30	50	N1	●●			0.010	
		Hardenable, hardened	100	50	N2	●●			0.010	
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	38	N3	●●	●		0.010	
		≤ 12% Si, hardenable, hardened	90	46	N4	●●	●		0.010	
		> 12% Si, not hardenable	130	65	N5	●●	●		0.010	
		Magnesium-based alloys ³	70	36	N6	●●	●		0.010	
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	50	N7	●●			0.010	
Brass, bronze, red brass		90	46	N8	●●	●		0.010		
Cu alloys, short-chipping		110	55	N9	●●	●		0.010		
High tensile, Ampco		300	147	N10	●●					
S	Heat-resistant alloys	Fe-based	Annealed	200	98	S1	●●		0.005	
			Hardened	280	137	S2	●●		0.005	
		Ni- or Co-based	Annealed	250	122	S3	●●		0.005	
			Hardened	350	171	S4	●●		0.005	
			Cast	320	156	S5	●●		0.005	
	Titanium alloys	Pure titanium	200	98	S6	●●				
		α and β alloys, hardened	375	183	S7	●●		0.007		
		β alloys	410	202	S8	●●		0.006		
		Tungsten alloys	300	147	S9					
	Molybdenum alloys	300	147	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					
	Thermosets	Without abrasive fillers			O2					
	Plastic, glass-fibre-reinforced	GFRP			O3					
	Plastic, carbon-fibre-reinforced	CFRP			O4					
	Plastic, aramid-fibre-reinforced	AFRP			O5					
		Graphite (technical)		80 Shore		O6				

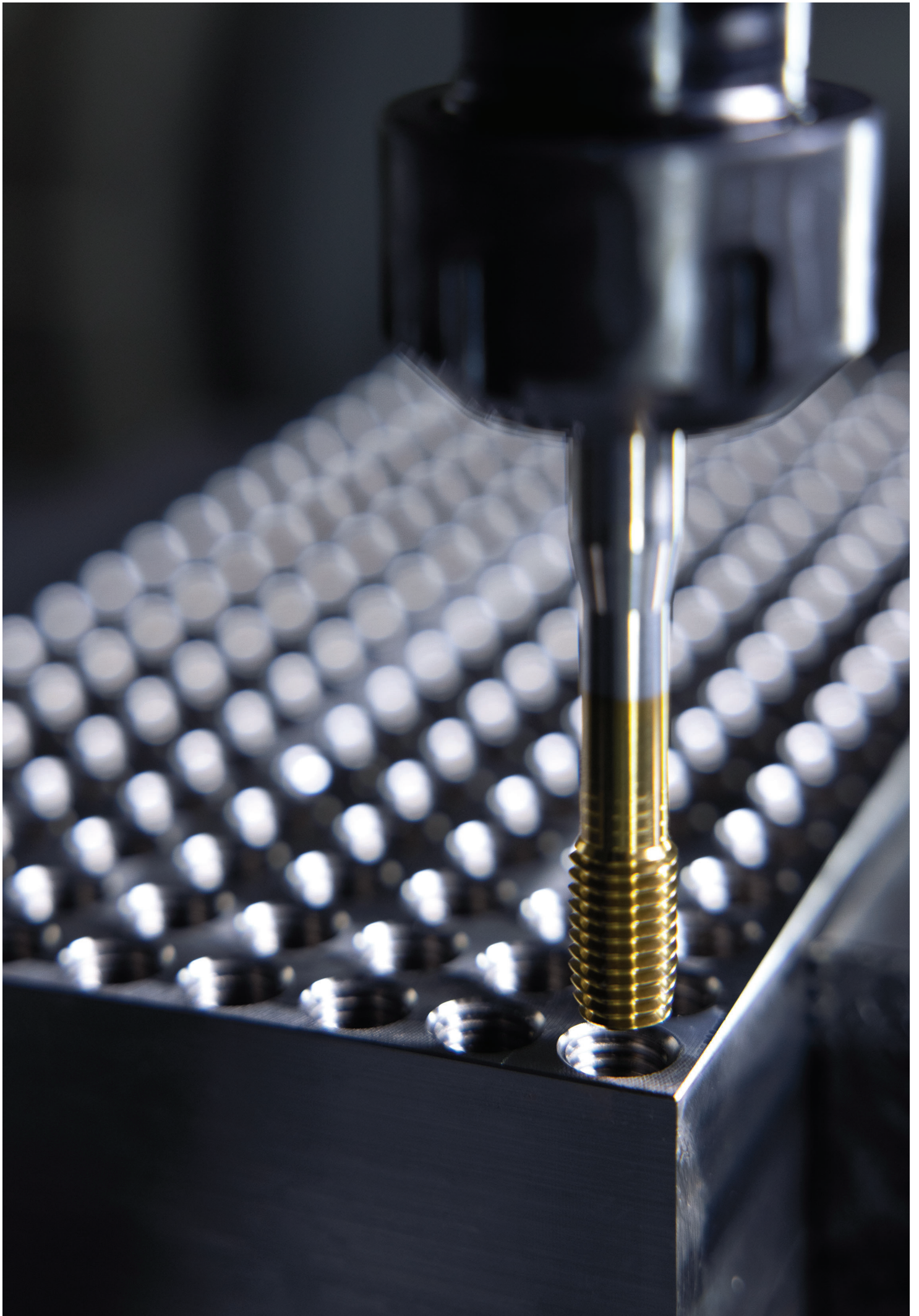
- Recommended application (the specified cutting data is regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase by approx. 70–80% for ISO M)

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

Note: If dry machining is possible, the tool life is reduced by 20–30% on average. For specific applications, adjustment is recommended.

¹ The classification of the machining groups can be found from page B 1329 onwards in the 2018 Walter General Catalog.

³ Water-miscible coolants must not be used when machining magnesium-based alloys.



B – Threading

Tapping – B3

HSS-E taps	Product range overview	196
	UNF	197
Technical information	Cutting data	212

Thread forming – B4

HSS-E-PM thread formers	Product range overview	213
	Designation key	214
	M – Metric thread	215
	MF – Metric fine-pitch thread	224
Technical information	Cutting data	226

Thread milling – B5





Thread milling cutters	Product range overview	227
	Designation key	229
	Indexable insert thread milling cutter	230
Technical information	Cutting data	246
	Radius correction values	247
	Application information	248

B 3



B 4

B 5







Product range overview of HSS-E taps UNF

Machining		
Thread depth	$3.5 \times D_N$	$3 \times D_N$
Designation	TC216 Perform	TC115 Perform
Dimension range	UNF 6-40– UNF 1/2-20	UNF 6-40– UNF 1/2-20
Tolerance	2B	2B
Coolant supply	External	External
Chamfer form	B	C
Coating/grade	WY80AA	WY80AA
Version length	M	M
Page	202	203
		






Product overview HSS-E (-PM) taps M – Metric thread

Machining	
Thread depth	$2 \times D_N$
Designation	Paradur® Ti
Dimension range	M 8
Tolerance	6HX
Coolant supply	external
Chamfer form	C
Coating/grade	VAP
Version length	M
Page	198
	

Product overview HSS-E (-PM) taps UNC/UNF/UN 8

Machining					
Thread depth	$2 \times D_N$	$1.5 \times D_N$	$2 \times D_N$	$1.5 \times D_N$	$2 \times D_N$
Designation	Paradur® Ti	Paradur® Ni	Paradur® Ti	Paradur® Ni	Paradur® Ti
Dimension range	STIUNC 1/4-20	UNC 6-32– UNC 5/8-11	UNC 2-56– UNC 1"-8	UNF 0-80– UNF 3/4-16	UNF 0-80– UNF 1"-12
Tolerance	3B	3B	3B	3B	3B
Coolant supply	external	external	external	external	external
Chamfer form	C	E	C / E	C / E	C / E
Coating/grade	VAP	VAP	TICN / VAP	VAP	TICN / VAP
Version length	M	M	M	M	M
Page	201	199	200	204	206
					

Product overview HSS-E (-PM) taps Thread insert

Machining				
Thread depth	$1.5 \times D_N$	$2 \times D_N$	$1.5 \times D_N$	$2 \times D_N$
Designation	Paradur® Ni	Paradur® Ti	Paradur® Ni	Paradur® Ti
Dimension range	STIUNC 2-56– STIUNC 1/4-20	STIUNC 2-56– STIUNC 10-24	STIUNF 10-32– STIUNF 3/8-24	STIUNF 8-36– STIUNF 3/8-24
Tolerance	3B	3B	3B	3B
Coolant supply	external	external	external	external
Chamfer form	C	C	C	C
Coating/grade	VAP	VAP	VAP	VAP
Version length	M	M	M	M
Page	208	209	210	211
				

HSS-E machine taps Paradur® Ti



- Recommended with oil
- For long-chipping materials

M
DIN 13

6HX

$\leq 2 \times D_N$

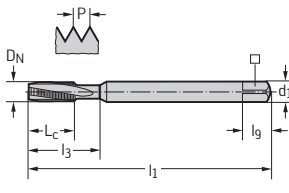
$C=2-3$

15°

410HB
200HB

	P	M	K	N	S	H	O
VAP	●●			●	●●		

ANSI B94.9	Designation VAP	D _N	P mm	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank	A20416S-M8	M 8	1.25	2.717	0.748	1.299	0.318	0.238	0.380	3

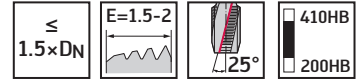
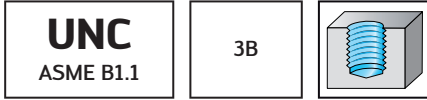


B3

HSS-E machine taps Paradur® Ni



- For long-chipping materials



P	M	K	N	S	H	O
●				●●		

ANSI B94.9		Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank		A224003S-UNC6	UNC 6-32	0.138	2.000	0.512	0.512	0.141	0.110	0.190	3
		A224003S-UNC8	UNC 8-32	0.164	2.126	0.591	1.283	0.168	0.131	0.250	3
		A224003S-UNC10	UNC 10-24	0.190	2.378	0.709	0.709	0.194	0.152	0.250	3
		A224003S-UNC1/4	UNC 1/4-20	0.250	2.500	0.630	1.102	0.255	0.191	0.313	3
		A224003S-UNC5/16	UNC 5/16-18	0.313	2.717	0.748	1.299	0.318	0.238	0.380	3
		A224003S-UNC3/8	UNC 3/8-16	0.375	2.937	0.748	1.398	0.381	0.286	0.437	3

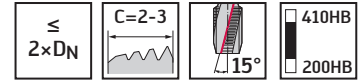
ANSI B94.9		Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank		A224503S-UNC7/16	UNC 7/16-14	0.438	3.157	0.866	2.083	0.323	0.242	0.406	4
		A224503S-UNC1/2	UNC 1/2-13	0.500	3.378	0.945	2.272	0.367	0.275	0.437	4
		A224503S-UNC5/8	UNC 5/8-11	0.625	3.811	1.102	2.067	0.480	0.360	0.563	4

B3

HSS-E machine taps Paradur® Ti



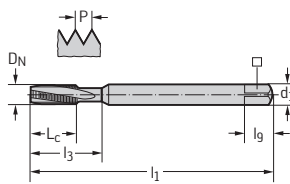
- Recommended with oil
- For long-chipping materials



	P	M	K	N	S	H	O
TICN	●●			●	●●		
VAP	●●			●	●●		

ANSI B94.9

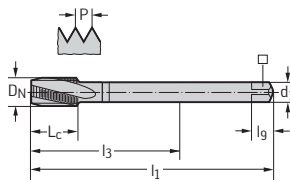
Cylindrical shank



Designation TICN	Designation VAP	D_N -P	D_N in	l_1 in	l_c in	l_3 in	d_1 h9 in	\square in	l_g in	N
A2240606S-UNC2	A22406S-UNC2	UNC 2-56	0.086	1.752	0.315	0.315	0.141	0.110	0.190	2
A2240606S-UNC4	A22406S-UNC4	UNC 4-40	0.112	1.878	0.394	0.394	0.141	0.110	0.190	2
A2240606S-UNC5	A22406S-UNC5	UNC 5-40	0.125	1.937	0.433	1.157	0.141	0.110	0.190	3
A2240606S-UNC6	A22406S-UNC6	UNC 6-32	0.138	2.000	0.512	1.220	0.141	0.110	0.190	3
A2240606S-UNC8	A22406S-UNC8	UNC 8-32	0.164	2.126	0.591	1.283	0.168	0.131	0.250	3
A2240606S-UNC10	A22406S-UNC10	UNC 10-24	0.190	2.378	0.709	0.709	0.194	0.152	0.250	3
A2240606S-UNC1/4	A22406S-UNC1/4	UNC 1/4-20	0.250	2.500	0.630	1.102	0.255	0.191	0.313	3
A2240606S-UNC5/16	A22406S-UNC5/16	UNC 5/16-18	0.313	2.717	0.748	1.299	0.318	0.238	0.380	3
A2240606S-UNC3/8	A22406S-UNC3/8	UNC 3/8-16	0.375	2.937	0.748	1.398	0.381	0.286	0.437	3

ANSI B94.9

Cylindrical shank



Designation TICN	Designation VAP	D_N -P	D_N in	l_1 in	l_c in	l_3 in	d_1 h9 in	\square in	l_g in	N
A2245606S-UNC7/16	A22456S-UNC7/16	UNC 7/16-14	0.438	3.157	0.866	2.083	0.323	0.242	0.406	4
A2245606S-UNC1/2	A22456S-UNC1/2	UNC 1/2-13	0.500	3.378	0.945	2.272	0.367	0.275	0.437	4
	A22456S-UNC9/16	UNC 9/16-12	0.563	3.594	1.024	2.425	0.429	0.322	0.500	4
A2245606S-UNC5/8	A22456S-UNC5/8	UNC 5/8-11	0.625	3.811	1.102	2.067	0.480	0.360	0.563	4
A2245606S-UNC3/4	A22456S-UNC3/4	UNC 3/4-10	0.750	4.252	1.181	2.382	0.590	0.442	0.689	4
	A22456S-UNC1	UNC 1"-8	1.000	5.126	1.457	2.583	0.800	0.600	0.811	4



HSS-E machine taps Paradur® Ti



- Recommended with oil
- For long-chipping materials

$\leq 2 \times D_N$

$E=1.5-2$

15°

410HB
200HB

UNC
ASME B1.1

3B

	P	M	K	N	S	H	O
VAP	●●			●	●●		

ANSI B94.9	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank 	A2240661S-UNC2	UNC 2-56	0.086	1.752	0.315	0.315	0.141	0.110	0.190	2
	A2240661S-UNC4	UNC 4-40	0.112	1.878	0.394	0.394	0.141	0.110	0.190	2
	A2240661S-UNC6	UNC 6-32	0.138	2.000	0.512	0.512	0.141	0.110	0.190	3
	A2240661S-UNC8	UNC 8-32	0.164	2.126	0.591	0.591	0.168	0.131	0.250	3
	A2240661S-UNC10	UNC 10-24	0.190	2.378	0.709	0.709	0.194	0.152	0.250	3
	A2240661S-UNC5/16	UNC 5/16-18	0.313	2.717	0.748	1.299	0.318	0.238	0.380	3
	A2240661S-UNC1/4	STIUNC 1/4-20	0.315	2.717	0.748	1.299	0.318	0.238	0.380	3

ANSI B94.9	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank 	A2245661S-UNC1/2	UNC 1/2-13	0.500	3.378	0.945	2.272	0.367	0.275	0.437	4
	A2245661S-UNC5/8	UNC 5/8-11	0.625	3.811	1.102	2.067	0.480	0.360	0.563	4
	A2245661S-UNC3/4	UNC 3/4-10	0.750	4.252	1.181	2.382	0.590	0.442	0.689	4

B3

HSS-E machine taps
TC216 Perform mm



- For long-chipping materials

UNF
ASME B1.1

2B

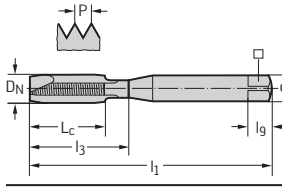


$\leq 3 \times D_N$

$B=3,5-5$

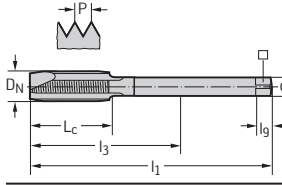
32HRC
1000
-350
N/mm²

	P	M	K	N	S	H	O
WY80AA	●	●	●	●			

DIN 371	Designation	D _N -P	D _N mm	l ₁ h9 mm	L _c mm	l ₃ mm	d ₁ mm	□ mm	l _g mm	N	WY80AA
	TC216-UNF6-C0-	UNF 6-40	3.505	56	11	20	4	3	6	3	☼
	TC216-UNF10-C0-	UNF 10-32	4.826	70	13	25	6	4.9	8	3	☼
	TC216-UNF1/4-C0-	UNF 1/4-28	6.35	80	15	30	7	5.5	8	3	☼
	TC216-UNF5/16-C0-	UNF 5/16-24	7.938	90	18	35	8	6.2	9	3	☼
	TC216-UNF3/8-C0-	UNF 3/8-24	9.525	100	20	39	10	8	11	3	☼

Ordering example for the WY80AA grade: TC216-UNF6-C0-WY80AA


B3


DIN 376	Designation	D _N -P	D _N mm	l ₁ h9 mm	L _c mm	l ₃ mm	d ₁ mm	□ mm	l _g mm	N	WY80AA
	TC216-UNF7/16-L0-	UNF 7/16-20	11.113	100	20	76	8	6.2	9	3	☼
	TC216-UNF1/2-L0-	UNF 1/2-20	12.7	100	21	73	9	7	10	4	☼


Ordering example for the WY80AA grade: TC216-UNF7/16-L0-WY80AA

WALTER SELECT

Best tool for


Good


Average


Poor

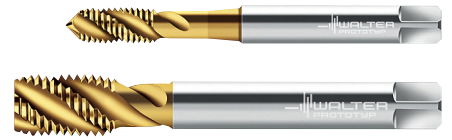
machining conditions

●● Primary application

● Other application

HSS-E machine taps

TC115 Perform



- For long-chipping materials

UNF
ASME B1.1

2B

$\leq 3 \times DN$

$C=2-3$

45°

32HRC
1000
-350
N/mm²

	P	M	K	N	S	H	O
WY80AA	●	●	●	●			

DIN 371	Designation	D _N -P	D _N mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WY80AA
	TC115-UNF6-C0-	UNF 6-40	3.505	56	6.5	20	4	3	6	3	
	TC115-UNF10-C0-	UNF 10-32	4.826	70	8	25	6	4.9	8	3	
	TC115-UNF1/4-C0-	UNF 1/4-28	6.35	80	10	30	7	5.5	8	3	
	TC115-UNF5/16-C0-	UNF 5/16-24	7.938	90	12	35	8	6.2	9	3	
	TC115-UNF3/8-C0-	UNF 3/8-24	9.525	100	15	39	10	8	11	3	

Ordering example for the WY80AA grade: TC115-UNF6-C0-WY80AA

DIN 376	Designation	D _N -P	D _N mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WY80AA
	TC115-UNF7/16-L0-	UNF 7/16-20	11.113	100	15	76	8	6.2	9	3	
	TC115-UNF1/2-L0-	UNF 1/2-20	12.7	100	13	73	9	7	10	4	

Ordering example for the WY80AA grade: TC115-UNF7/16-L0-WY80AA

WALTER SELECT

Best tool for

Good

Average

Poor

machining conditions

●● Primary application

● Other application

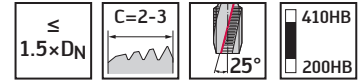
B3

HSS-E machine taps

Paradur® Ni



– For long-chipping materials



	P	M	K	N	S	H	O
VAP	●				●●		

ANSI B94.9		Designation	D_N -P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	\square in	l_g in	N
Cylindrical shank	A234002S-UNF6	UNF 6-40	0.138	2.000	0.512	1.220	0.141	0.110	0.190	3	
	A234002S-UNF8	UNF 8-36	0.164	2.126	0.591	1.283	0.168	0.131	0.250	3	
	A234002S-UNF10	UNF 10-32	0.190	2.378	0.709	0.709	0.194	0.152	0.250	3	
	A234002S-UNF12	UNF 12-28	0.216	2.378	0.787	1.504	0.220	0.165	0.281	3	
	A234002S-UNF1/4	UNF 1/4-28	0.250	2.500	0.630	1.102	0.255	0.191	0.313	3	
	A234002S-UNF5/16	UNF 5/16-24	0.313	2.717	0.748	1.299	0.318	0.238	0.380	3	
	A234002S-UNF3/8	UNF 3/8-24	0.375	2.937	0.748	1.398	0.381	0.286	0.437	3	

B3

ANSI B94.9		Designation	D_N -P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	\square in	l_g in	N
Cylindrical shank	A234502S-UNF7/16	UNF 7/16-20	0.438	3.157	0.866	2.083	0.323	0.242	0.406	4	
	A234502S-UNF1/2	UNF 1/2-20	0.500	3.378	0.945	2.272	0.367	0.275	0.437	4	
	A234502S-UNF9/16	UNF 9/16-18	0.563	3.594	1.024	2.425	0.429	0.322	0.500	4	
	A234502S-UNF3/4	UNF 3/4-16	0.750	4.252	1.181	2.382	0.590	0.442	0.689	5	



HSS-E machine taps Paradur® Ni



– For long-chipping materials

UNF
ASME B1.1

3B

$\leq 1.5 \times D_N$

$E=1.5-2$

25°

410HB
200HB

	P	M	K	N	S	H	O
VAP	●				●●		

	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank 	A234003S-UNF0	UNF 0-80	0.060	1.626	0.217	0.217	0.141	0.110	0.190	2
	A234003S-UNF10	UNF 10-32	0.190	2.378	0.709	0.709	0.194	0.152	0.250	3
	A234003S-UNF1/4	UNF 1/4-28	0.250	2.500	0.630	1.102	0.255	0.191	0.313	3
	A234003S-UNF5/16	UNF 5/16-24	0.313	2.717	0.748	1.299	0.318	0.238	0.380	3
	A234003S-UNF3/8	UNF 3/8-24	0.375	2.937	0.748	1.398	0.381	0.286	0.437	3

	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank 	A234503S-UNF7/16	UNF 7/16-20	0.438	3.157	0.866	2.083	0.323	0.242	0.406	4
	A234503S-UNF1/2	UNF 1/2-20	0.500	3.378	0.945	2.272	0.367	0.275	0.437	4
	A234503S-UNF9/16	UNF 9/16-18	0.563	3.594	1.024	2.425	0.429	0.322	0.500	4
	A234503S-UNF3/4	UNF 3/4-16	0.750	4.252	1.181	2.382	0.590	0.442	0.689	5

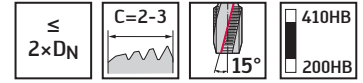
B3

HSS-E machine taps

Paradur® Ti



- Recommended with oil
- For long-chipping materials



	P	M	K	N	S	H	O
TICN	●●			●	●●		
VAP	●●			●	●●		

ANSI B94.9	Designation TICN	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N	
												Cylindrical shank
	A2340606S-UNF0	A23406S-UNF0	UNF 0-80	0.060	1.626	0.217	0.217	0.141	0.110	0.190	2	
		A23406S-UNF1	UNF 1-72	0.073	1.689	0.276	0.276	0.141	0.110	0.190	2	
		A23406S-UNF6	UNF 6-40	0.138	2.000	0.512	1.220	0.141	0.110	0.190	3	
	A2340606S-UNF8		UNF 8-36	0.164	2.126	0.591	1.283	0.168	0.131	0.250	3	
	A2340606S-UNF10	A23406S-UNF10	UNF 10-32	0.190	2.378	0.709	0.709	0.194	0.152	0.250	3	
	A2340606S-UNF1/4	A23406S-UNF1/4	UNF 1/4-28	0.250	2.500	0.630	1.102	0.255	0.191	0.313	3	
	A2340606S-UNF5/16	A23406S-UNF5/16	UNF 5/16-24	0.313	2.717	0.748	1.299	0.318	0.238	0.380	3	
		A23406S-UNF3/8	UNF 3/8-24	0.375	2.937	0.748	1.398	0.381	0.286	0.437	3	

ANSI B94.9	Designation TICN	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
	A2345606S-UNF7/16	A23456S-UNF7/16	UNF 7/16-20	0.438	3.157	0.866	2.083	0.323	0.242	0.406	4
	A2345606S-UNF1/2	A23456S-UNF1/2	UNF 1/2-20	0.500	3.378	0.945	2.272	0.367	0.275	0.437	4



HSS-E machine taps Paradur® Ti



- Recommended with oil
- For long-chipping materials

UNF
ASME B1.1

3B

$\leq 2 \times D_N$

$E=1.5-2$

15°

410HB
200HB

	P	M	K	N	S	H	O
VAP	●●			●	●●		

ANSI B94.9	Designation	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank 	A2340661S-UNF0	UNF 0-80	0.060	1.626	0.217	0.217	0.141	0.110	0.190	2
	A2340661S-UNF1	UNF 1-72	0.073	1.689	0.276	0.276	0.141	0.110	0.190	2
	A2340661S-UNF10	UNF 10-32	0.190	2.378	0.709	0.709	0.194	0.152	0.250	3
	A2340661S-UNF1/4	UNF 1/4-28	0.250	2.500	0.630	1.102	0.255	0.191	0.313	3
	A2340661S-UNF5/16	UNF 5/16-24	0.313	2.717	0.748	1.299	0.318	0.238	0.380	3

ANSI B94.9	Designation	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank 	A2345661S-UNF7/16	UNF 7/16-20	0.438	3.157	0.866	2.083	0.323	0.242	0.406	4
	A2345661S-UNF1/2	UNF 1/2-20	0.500	3.378	0.945	2.272	0.367	0.275	0.437	4

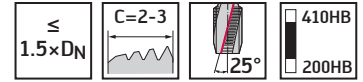
B3

HSS-E machine taps

Paradur® Ni

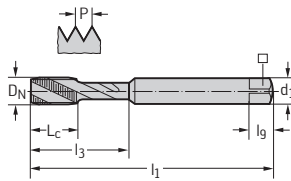


– For long-chipping materials



	P	M	K	N	S	H	O
VAP	●●		●●	●	●		

ANSI B94.9		Designation	D_N -P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	l_g in	N
Cylindrical shank	A224089S-STIUNC2	STIUNC 2-56		0.109	1.878	0.394	0.394	0.141	0.110	3
	A224089S-STIUNC4	STIUNC 4-40		0.144	2.000	0.512	1.220	0.141	0.110	3
	A224089S-STIUNC6	STIUNC 6-32		0.179	2.378	0.709	0.709	0.194	0.152	3
	A224089S-STIUNC8	STIUNC 8-32		0.205	2.378	0.787	0.787	0.220	0.165	3
	A224089S-STIUNC1/4	STIUNC 1/4-20		0.315	2.717	0.748	1.299	0.318	0.238	3



B3

HSS-E machine taps Paradur® Ti



- Recommended with oil
- For long-chipping materials

$\leq 2 \times D_N$

$C=2-3$

410HB
200HB

STIUNC
NASM 33537

3B

	P	M	K	N	S	H	O
VAP	●●			●	●●		

ANSI B94.9	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h9 in	□ in	l _g in	N
Cylindrical shank 	A224060S-STIUNC2	STIUNC 2-56	0.109	1.878	0.394	0.394	0.141	0.110	0.190	2
	A224060S-STIUNC4	STIUNC 4-40	0.144	2.000	0.512	1.220	0.141	0.110	0.190	3
	A224060S-STIUNC6	STIUNC 6-32	0.179	2.378	0.709	0.709	0.194	0.152	0.250	3
	A224060S-STIUNC8	STIUNC 8-32	0.205	2.378	0.787	1.504	0.220	0.165	0.281	3
	A224060S-STIUNC10	STIUNC 10-24	0.244	2.500	0.630	1.102	0.255	0.191	0.313	3

B3

WALTER SELECT

●● Primary application

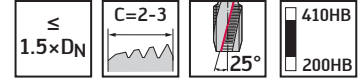
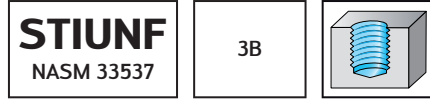
● Additional application

HSS-E machine taps

Paradur® Ni

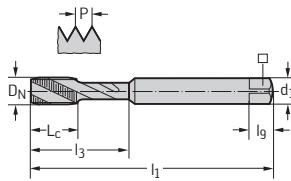


– For long-chipping materials



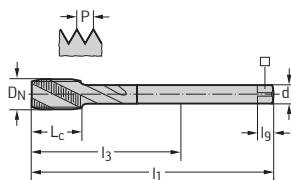
	P	M	K	N	S	H	O
VAP	●●	●	●●	●	●	●	●

ANSI B94.9		Designation	D_N -P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	\square in	l_g in	N
Cylindrical shank		A234000S-STIUNF10	STIUNF 10-32	0.231	2.500	0.630	1.102	0.255	0.191	0.313	3
		A234000S-STIUNF1/4	STIUNF 1/4-28	0.296	2.717	0.748	1.299	0.318	0.238	0.380	3
		A234000S-STIUNF5/16	STIUNF 5/16-24	0.367	2.937	0.748	1.398	0.381	0.286	0.437	3



B3

ANSI B94.9		Designation	D_N -P	D_N in	l_1 in	L_c in	l_3 in	d_1 h9 in	\square in	l_g in	N
Cylindrical shank		A234589S-STIUNF3/8	STIUNF 3/8-24	0.429	3.157	0.866	2.083	0.323	0.242	0.406	4



HSS-E machine taps Paradur® Ti



- Recommended with oil
- For long-chipping materials

STIUNF
NASM 33537

3B

$\leq 2 \times D_N$

$C=2-3$

15°

410HB
200HB

	P	M	K	N	S	H	O
VAP	●●			●	●●		

ANSI B94.9	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h ₉ in	□ in	l _g in	N
Cylindrical shank 	A234060S-STIUNF8	STIUNF 8-36	0.200	2.378	0.787	0.787	0.220	0.165	0.281	3
	A234060S-STIUNF10	STIUNF 10-32	0.231	2.500	0.630	1.102	0.255	0.191	0.313	3
	A234060S-STIUNF1/4	STIUNF 1/4-28	0.296	2.717	0.748	1.299	0.318	0.238	0.380	3
	A234060S-STIUNF5/16	STIUNF 5/16-24	0.367	2.937	0.748	1.398	0.381	0.286	0.437	3

ANSI B94.9	Designation VAP	D _N -P	D _N in	l ₁ in	L _c in	l ₃ in	d ₁ h ₉ in	□ in	l _g in	N
Cylindrical shank 	A234560S-STIUNF3/8	STIUNF 3/8-24	0.429	3.157	0.866	2.083	0.323	0.242	0.406	4



B3

Cutting data Tapping

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

Material group	Overview of the main material groups and code letters		Brinell hardness HB	Tensile strength R _m N/mm ²	Machining group ¹	HSS-E (PM) taps				
						Coated				
						v _c [sfm]				
						1,5 × D _N	2 × D _N	2,5 × D _N		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	E	121	98	85
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2	E	121	102	85
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3	E	75	62	56
		C > 0.55%	Annealed	190	639	P4	E	75	62	52
		C > 0.55%	Heat-treated	300	1013	P5	E	46	39	33
		Free-machining steel (short-chipping)	Annealed	220	745	P6	E	75	62	52
	Low-alloy steel	Annealed		175	591	P7	E	121	98	85
		Heat-treated		285	960	P8	E	39	33	30
		Heat-treated		380	1282	P9	E	23	20	16
		Heat-treated		430	1477	P10	O	16		
	High-alloy steel and high-alloy tool steel	Annealed		200	675	P11	E	75	62	52
		Hardened and tempered		300	1013	P12	E	46	39	33
		Hardened and tempered		380	1282	P13	O	23	20	16
	Stainless steel	Ferritic/martensitic, annealed		200	675	P14	E	23	20	16
		Martensitic, heat-treated		330	1114	P15	E	16	13	10
M	Stainless steel	Austenitic, quench hardened		200	675	M1	E	26	23	20
		Austenitic, precipitation hardened (PH)		300	1013	M2	E	16	13	10
		Austenitic/ferritic, duplex		230	778	M3	E	20	16	13
K	Malleable cast iron	Ferritic		200	400	K1	E	72	59	52
		Pearlitic		260	700	K2	E	36	30	26
	Grey cast iron	Low tensile strength		180	200	K3	E	144	118	105
		High tensile strength/austenitic		245	350	K4	E	56	46	39
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	E	72	59	52
		Pearlitic		265	700	K6	E	39	33	30
	GGV (CGI)			230	400	K7	E	33	26	23
N	Wrought aluminium alloys	Not hardenable		30	-	N1	E	26	23	20
		Hardenable, hardened		100	343	N2	E	105	85	72
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	E	72	59	52
		≤ 12% Si, hardenable, hardened		90	314	N4	E	72	59	52
		> 12% Si, not hardenable		130	447	N5	E	82	69	59
	Magnesium-based alloys ³			70	250	N6	O	112	92	79
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	343	N7	E	46	39	33
Brass, bronze, red brass		90	314	N8	E	118	95	82		
Cu alloys, short-chipping		110	382	N9	E	157	131	112		
High tensile, Ampco		300	1013	N10	E					
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	E			
			Hardened	280	943	S2	E	10		
		Ni- or Co-based	Annealed	250	839	S3	E			
			Hardened	350	1177	S4	O	10		
			Cast	320	1076	S5	O	10		
	Titanium alloys	Pure titanium		200	675	S6	E	26	23	20
		α and β alloys, hardened		375	1262	S7	O	13	13	
		β alloys		410	1396	S8	O	13	13	
	Tungsten alloys			300	1013	S9	O	7	7	
	Molybdenum alloys			300	1013	S10	O	23	16	
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	E	72	59	49
	Thermosets	Without abrasive fillers				O2	E	43	33	30
	Plastic, glass-fibre-reinforced	GFRP				O3	E	26	20	16
	Plastic, carbon-fibre-reinforced	CFRP				O4	E	26	20	16
	Plastic, aramid-fibre-reinforced	AFRP				O5	E	26	20	16
	Graphite (technical)			65 Shore		O6	E	62	52	43

¹ The classification of the machining groups can be found from page B 1174 onwards in the General Catalogue 2017.

³ Water-miscible coolants must not be used when machining magnesium-based alloys.

*For materials with a hardness of more than 63 HRC, reduce the cutting speed by 50–75%.

B3

Product range overview of HSS-E (-PM) thread formers M – Metric thread

Machining							
Thread depth	$3 \times D_N$	$3.5 \times D_N$			$3.5 \times D_N$		
Designation	TC430 Supreme	TC420 Supreme	TC430 Supreme	TC440 Supreme	TC420 Supreme	TC430 Supreme	TC440 Supreme
Dimension range	M 3–M 10	M 5–M 24	M 5–M 16	M 2–M 12	M 5–M 16	M 5–M 16	M 5–M 12
Tolerance	6HX	6HX	6HX	6HX	6GX / 6HX	6HX	6HX
Coolant supply	External	Radial	Radial	External/radial	Axial	Axial	Axial
Chamfer form	C	C	C	C	E	C	C
Coating/grade	WW60EL	WW60AD / WW60BA	WW60AD / WW60EL	WY80AD	WW60AD / WW60BA	WW60AD / WW60EL	WY80AD
Cutting tool material	HSS-E-PM	HSS-E-PM	HSS-E-PM	HSS-E	HSS-E-PM	HSS-E-PM	HSS-E
Page	218	215	219	221	216	220	222

Product range overview of HSS-E (-PM) thread formers MF – Metric fine-pitch thread

Machining			
Thread depth	$3.5 \times D_N$		$3.5 \times D_N$
Designation	TC430 Supreme	TC440 Supreme	TC430 Supreme
Dimension range	MF 8x1–MF 16x1.5	MF 8x1–MF 16x1.5	MF 8x1–MF 16x1.5
Tolerance	6HX	6HX	6HX
Coolant supply	Radial	Radial	Axial
Chamfer form	C	C	C
Coating/grade	WW60AD / WW60EL	WY80AD	WW60AD / WW60EL
Cutting tool material	HSS-E-PM	HSS-E	HSS-E-PM
Page	224	225	224

Designation key for HSS-E(-PM) and solid carbide thread formers

Example:

T	C	4	40	-	M10	-	C	1	-	W	W	60	AD
1	2	3	4	5	6		7	8		Grade			

1	2	3	4						
Tool group	Generation	Tool type	Tool type						
T Threading		4 Thread former	<table border="0"> <tr> <td>10 Universal, Advance</td> <td>30 ISO P, Supreme</td> </tr> <tr> <td>20 Universal, Supreme</td> <td>40 ISO M, Supreme</td> </tr> <tr> <td></td> <td>70 ISO P, Supreme</td> </tr> </table>	10 Universal, Advance	30 ISO P, Supreme	20 Universal, Supreme	40 ISO M, Supreme		70 ISO P, Supreme
10 Universal, Advance	30 ISO P, Supreme								
20 Universal, Supreme	40 ISO M, Supreme								
	70 ISO P, Supreme								

5	6	7	8																												
1. Delimiters	Thread dimensions	Tolerance/shank type	Modification																												
- Metric . DIN/ANSI		<table border="0"> <tr> <td>C</td> <td>6HX, 2BX</td> <td>Reinforced shank</td> </tr> <tr> <td>E</td> <td>6GX</td> <td>Reinforced shank</td> </tr> <tr> <td>F</td> <td>7GX</td> <td>Reinforced shank</td> </tr> <tr> <td>L</td> <td>6HX, 2BX</td> <td>Reduced shank</td> </tr> <tr> <td>N</td> <td>6GX</td> <td>Reduced shank</td> </tr> <tr> <td>P</td> <td>7GX</td> <td>Reduced shank</td> </tr> </table>	C	6HX, 2BX	Reinforced shank	E	6GX	Reinforced shank	F	7GX	Reinforced shank	L	6HX, 2BX	Reduced shank	N	6GX	Reduced shank	P	7GX	Reduced shank	<table border="0"> <tr> <td>0 External coolant without lubrication grooves</td> <td>D Chamfer form D</td> </tr> <tr> <td>1 Axial internal coolant, without lubrication grooves</td> <td>E Chamfer form E</td> </tr> <tr> <td>2 Radial internal coolant</td> <td>F Axial internal coolant, without lubrication grooves</td> </tr> <tr> <td>5 Axial internal coolant, with lubrication grooves</td> <td>L Left-hand thread</td> </tr> <tr> <td>6 External coolant with lubrication grooves</td> <td>H Extended shank XL</td> </tr> </table>	0 External coolant without lubrication grooves	D Chamfer form D	1 Axial internal coolant, without lubrication grooves	E Chamfer form E	2 Radial internal coolant	F Axial internal coolant, without lubrication grooves	5 Axial internal coolant, with lubrication grooves	L Left-hand thread	6 External coolant with lubrication grooves	H Extended shank XL
C	6HX, 2BX	Reinforced shank																													
E	6GX	Reinforced shank																													
F	7GX	Reinforced shank																													
L	6HX, 2BX	Reduced shank																													
N	6GX	Reduced shank																													
P	7GX	Reduced shank																													
0 External coolant without lubrication grooves	D Chamfer form D																														
1 Axial internal coolant, without lubrication grooves	E Chamfer form E																														
2 Radial internal coolant	F Axial internal coolant, without lubrication grooves																														
5 Axial internal coolant, with lubrication grooves	L Left-hand thread																														
6 External coolant with lubrication grooves	H Extended shank XL																														

B4

Grade designation key for solid carbide and HSS-E(-PM) cutting tool materials

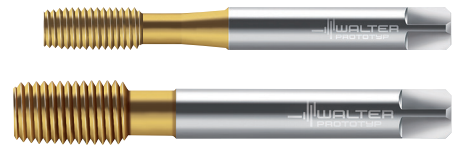
Example:

W	W	80	AD
Walter	1	2	3

1	2	3												
Substrate	Range of applications	Coating												
<table border="0"> <tr> <td>G</td> <td>Solid carbide</td> </tr> <tr> <td>W</td> <td>HSS-E-PM</td> </tr> <tr> <td>Y</td> <td>HSS-E</td> </tr> </table>	G	Solid carbide	W	HSS-E-PM	Y	HSS-E		<table border="0"> <tr> <td>AD</td> <td>TiN</td> </tr> <tr> <td>BA</td> <td>TiCN</td> </tr> <tr> <td>EL</td> <td>AlCrN</td> </tr> </table>	AD	TiN	BA	TiCN	EL	AlCrN
G	Solid carbide													
W	HSS-E-PM													
Y	HSS-E													
AD	TiN													
BA	TiCN													
EL	AlCrN													

HSS-E-PM machine thread formers

TC420 Supreme



– For long-chipping materials

$\leq 3.5 \times DN$	E=1.5-2		36HRC 1200 -200 N/mm ²
----------------------	---------	--	--

M DIN 13	6HX	
--------------------	-----	--

	P	M	K	N	S	H	O
WW60AD	●	●	■	●	●	■	■
WW60BA	●	●	■	●	●	■	■

DIN 2174

Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WW60AD	WW60BA
TC420-M5-CF-	M 5	0.8	70	8	25	6	4.9	8	5		
TC420-M6-CF-	M 6	1	80	10	30	6	4.9	8	5		
TC420-M8-CF-	M 8	1.25	90	12	35	8	6.2	9	5		
TC420-M10-CF-	M 10	1.5	100	15	39	10	8	11	6		

Ordering example for the WW60AD grade: TC420-M5-CF-WW60AD

DIN 2174

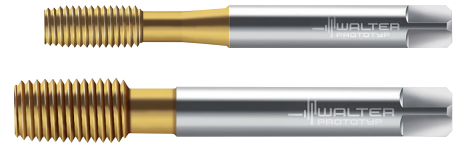
Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WW60AD	WW60BA
TC420-M12-LF-	M 12	1.75	110	16	83	9	7	10	6		
TC420-M16-LF-	M 16	2	110	20	68	12	9	12	6		

Ordering example for the WW60AD grade: TC420-M12-LF-WW60AD

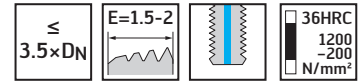
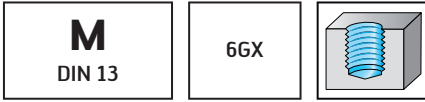
B4

HSS-E-PM machine thread formers

TC420 Supreme mm

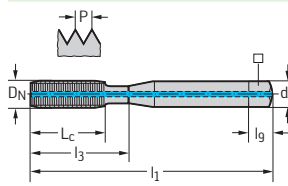


- For long-chipping materials



	P	M	K	N	S	H	O
WW60AD	●●	●●	●●	●●	●		
WW60BA	●●	●●	●●	●●	●		

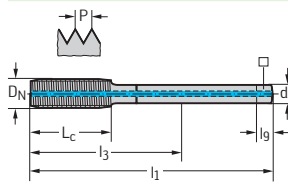
DIN 2174



Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WW60AD	WW60BA
TC420-M5-EF-	M 5	0.8	70	8	25	6	4.9	8	5	●●	●●
TC420-M6-EF-	M 6	1	80	10	30	6	4.9	8	5	●●	●●
TC420-M8-EF-	M 8	1.25	90	12	35	8	6.2	9	5	●●	●●
TC420-M10-EF-	M 10	1.5	100	15	39	10	8	11	6	●●	●●

Ordering example for the WW60AD grade: TC420-M5-EF-WW60AD

DIN 2174



Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WW60AD	WW60BA
TC420-M12-NF-	M 12	1.75	110	16	83	9	7	10	6	●●	
TC420-M16-NF-	M 16	2	110	20	68	12	9	12	6	●●	

Ordering example for the WW60AD grade: TC420-M12-NF-WW60AD

B4

WALTER SELECT

Best tool for

Good

Average

Poor

machining conditions

●● Primary application

● Other application

HSS-E-PM machine thread formers

TC420 Supreme



- For long-chipping materials

$\leq 3.5 \times DN$	C=2-3		
----------------------	-------	--	--

M DIN 13	6HX		
--------------------	------------	--	--

	P	M	K	N	S	H	O
WW60AD	●	●	●	●	●		
WW60BA	●	●	●	●	●		

DIN 2174											WW60AD	WW60BA
Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	\square mm	l_g mm	N			
TC420-M5-C2-	M 5	0.8	70	8	25	6	4.9	8	5			
TC420-M6-C2-	M 6	1	80	10	30	6	4.9	8	5			
TC420-M8-C2-	M 8	1.25	90	12	35	8	6.2	9	5			
TC420-M10-C2-	M 10	1.5	100	15	39	10	8	11	6			

Ordering example for the WW60AD grade: TC420-M5-C2-WW60AD

DIN 2174											WW60AD	WW60BA
Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	\square mm	l_g mm	N			
TC420-M12-L2-	M 12	1.75	110	16	83	9	7	10	6			
TC420-M14-L2-	M 14	2	110	20	81	11	9	12	6			
TC420-M16-L2-	M 16	2	110	20	68	12	9	12	6			
TC420-M20-L2-	M 20	2.5	140	25	95	16	12	15	7			
TC420-M24-L2-	M 24	3	160	30	113	18	14.5	17	8			

Ordering example for the WW60AD grade: TC420-M12-L2-WW60AD

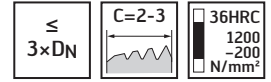
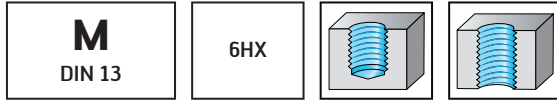
B4

HSS-E-PM machine thread formers

TC430 Supreme



- For long-chipping materials
- ISO M with oil only



	P	M	K	N	S	H	O
WW60EL	●	●	●	●			

DIN 2174		Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WW60EL
		TC430-M3-C0-	M 3	0.5	56	6	18	3.5	2.7	6	4	
		TC430-M4-C0-	M 4	0.7	63	7	21	4.5	3.4	6	5	
		TC430-M5-C0-	M 5	0.8	70	8	25	6	4.9	8	5	
		TC430-M6-C0-	M 6	1	80	10	30	6	4.9	8	5	
		TC430-M8-C0-	M 8	1.25	90	12	35	8	6.2	9	6	
		TC430-M10-C0-	M 10	1.5	100	15	39	10	8	11	7	

Ordering example for the WW60EL grade: TC430-M3-C0-WW60EL

B4

WALTER SELECT

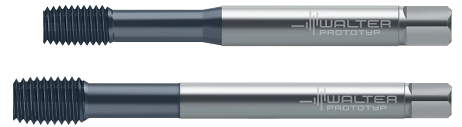
Best tool for machining conditions

Good
 Average
 Poor

●● Primary application
 ● Other application

HSS-E-PM machine thread formers

TC430 Supreme



- For long-chipping materials
- ISO M with oil only

$\leq 3.5 \times DN$	C=2-3		36HRC 1200 -200 N/mm ²
----------------------	-------	--	--

M DIN 13	6HX	
--------------------	------------	--

	P	M	K	N	S	H	O
WW60EL	●	●	●	●			
WW60AD	●	●	●	●			

DIN 2174

Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	mm	l _g mm	N	WW60EL	WW60AD
TC430-M5-C1-	M 5	0.8	70	8	25	6	4.9	8	5		
TC430-M6-C1-	M 6	1	80	10	30	6	4.9	8	5		
TC430-M8-C1-	M 8	1.25	90	12	35	8	6.2	9	6		
TC430-M10-C1-	M 10	1.5	100	15	39	10	8	11	7		

Ordering example for the WW60AD grade: TC430-M8-C1-WW60AD

DIN 2174

Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	mm	l _g mm	N	WW60EL	WW60AD
TC430-M12-L1-	M 12	1.75	110	16	83	9	7	10	8		
TC430-M16-L1-	M 16	2	110	20	68	12	9	12	8		

Ordering example for the WW60AD grade: TC430-M12-L1-WW60AD

B4

HSS-E-PM machine thread formers

TC430 Supreme



- For long-chipping materials
- ISO M with oil only

≤
3.5×DN

C=2-3

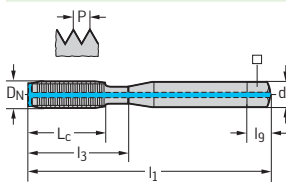
36HRC
1200
-200
N/mm²

M
DIN 13

6HX

	P	M	K	N	S	H	O
WW60EL	●	●	●	●			
WW60AD	●	●	●	●			

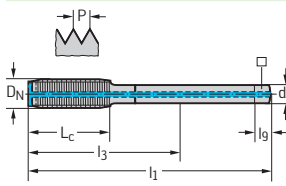
DIN 2174



Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WW60EL	WW60AD
TC430-M5-C2-	M 5	0.8	70	8	25	6	4.9	8	5	●	
TC430-M6-C2-	M 6	1	80	10	30	6	4.9	8	5	●	
TC430-M8-C2-	M 8	1.25	90	12	35	8	6.2	9	6	●	●
TC430-M10-C2-	M 10	1.5	100	15	39	10	8	11	7	●	●

Ordering example for the WW60AD grade: TC430-M8-C2-WW60AD

DIN 2174



Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WW60EL	WW60AD
TC430-M12-L2-	M 12	1.75	110	16	83	9	7	10	8	●	●
TC430-M16-L2-	M 16	2	110	20	68	12	9	12	8	●	●

Ordering example for the WW60AD grade: TC430-M12-L2-WW60AD

B4

WALTER SELECT

Best tool for

😊
Good

😐
Average

😞
Poor

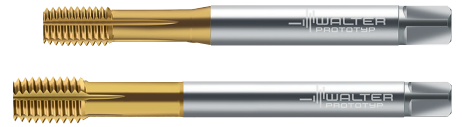
machining conditions

●● Primary application

● Other application

HSS-E machine thread formers

TC440 Supreme



- For long-chipping materials
- For stainless steels when using emulsion

$\leq 3.5 \times D_N$

$C=2-3$

32HRC
 1000
 -200
 N/mm²

M
DIN 13

6HX

WY80AD	P	M	K	N	S	H	O
--------	---	---	---	---	---	---	---

DIN 2174											WY80AD
Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	mm	l_g mm	N		
TC440-M2-C6-	M 2	0.4	45	6	6	2.8	2.1	5	3		
TC440-M2.5-C6-	M 2.5	0.45	50	8	8	2.8	2.1	5	3		
TC440-M3-C6-	M 3	0.5	56	6	18	3.5	2.7	6	3		
TC440-M4-C6-	M 4	0.7	63	7	21	4.5	3.4	6	3		
TC440-M5-C6-	M 5	0.8	70	8	25	6	4.9	8	4		
TC440-M6-C6-	M 6	1	80	10	30	6	4.9	8	5		
TC440-M8-C6-	M 8	1.25	90	12	35	8	6.2	9	5		
TC440-M10-C6-	M 10	1.5	100	15	39	10	8	11	5		

$\leq M2.5$ max. thread depth $3 \times D_N$
 Ordering example for the WY80AD grade: TC440-M2-C6-WY80AD

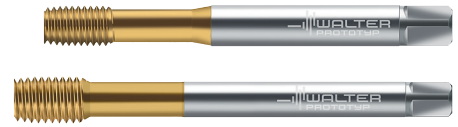
DIN 2174											WY80AD
Designation	D_N	P mm	l_1 mm	L_c mm	l_3 mm	d_1 h9 mm	mm	l_g mm	N		
TC440-M12-L6-	M 12	1.75	110	16	83	9	7	10	5		

Ordering example for the WY80AD grade: TC440-M12-L6-WY80AD

B4

HSS-E machine thread formers

TC440 Supreme



- For long-chipping materials
- For stainless steels when using emulsion

M
DIN 13

6HX

$\leq 3.5 \times DN$

$C=2-3$

32HRC
1000
-200
N/mm²

	P	M	K	N	S	H	O
WY80AD	●	●●		●	●		

DIN 2174											WY80AD
Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N		
TC440-M5-C1-	M 5	0.8	70	8	25	6	4.9	8	4	☞	
TC440-M6-C1-	M 6	1	80	10	30	6	4.9	8	5	☞	
TC440-M8-C1-	M 8	1.25	90	12	35	8	6.2	9	5	☞	
TC440-M10-C1-	M 10	1.5	100	15	39	10	8	11	5	☞	

Ordering example for the WY80AD grade: TC440-M5-C1-WY80AD

DIN 2174											WY80AD
Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N		
TC440-M12-L1-	M 12	1.75	110	16	83	9	7	10	5	☞	

Ordering example for the WY80AD grade: TC440-M12-L1-WY80AD

B4

WALTER SELECT

Best tool for

Good

Average

Poor

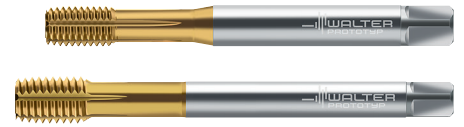
machining conditions

●● Primary application

● Other application

HSS-E machine thread formers

TC440 Supreme mm



- For long-chipping materials
- For stainless steels when using emulsion



≤
3.5×DN

C=2-3

32HRC
1000
-200
N/mm²

	P	M	K	N	S	H	O
WY80AD	●	●●	●	●	●	●	●

DIN 2174											WY80AD
Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N		
TC440-M5-C2-	M 5	0.8	70	8	25	6	4.9	8	4	✱	
TC440-M6-C2-	M 6	1	80	10	30	6	4.9	8	5	✱	
TC440-M8-C2-	M 8	1.25	90	12	35	8	6.2	9	5	✱	
TC440-M10-C2-	M 10	1.5	100	15	39	10	8	11	5	✱	

Ordering example for the WY80AD grade: TC440-M5-C2-WY80AD

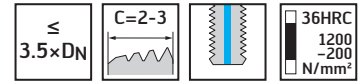
DIN 2174											WY80AD
Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N		
TC440-M12-L2-	M 12	1.75	110	16	83	9	7	10	5	✱	

Ordering example for the WY80AD grade: TC440-M12-L2-WY80AD

HSS-E-PM machine thread formers TC430 Supreme

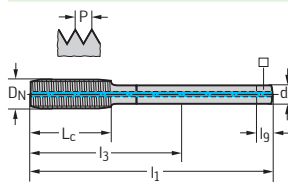


- For long-chipping materials
- ISO M with oil only



	P	M	K	N	S	H	O
WW60EL	●	●	●	●			
WW60AD	●	●	●	●			

DIN 2174



Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	mm	l _g mm	N	WW60EL	WW60AD
TC430-M8X1-L1-	MF 8x1	1	90	12	67	6	4.9	8	6	●	●
TC430-M10X1-L1-	MF 10x1	1	90	12	67	7	5.5	8	7	●	●
TC430-M10X1.25-L1-	MF 10x1.25	1.25	100	15	77	7	5.5	8	7	●	●
TC430-M12X1-L1-	MF 12x1	1	100	13	73	9	7	10	8	●	●
TC430-M12X1.25-L1-	MF 12x1.25	1.25	100	13	73	9	7	10	8	●	●
TC430-M12X1.5-L1-	MF 12x1.5	1.5	100	13	73	9	7	10	8	●	●
TC430-M14X1.5-L1-	MF 14x1.5	1.5	100	15	71	11	9	12	8	●	●
TC430-M16X1.5-L1-	MF 16x1.5	1.5	100	15	58	12	9	12	8	●	●

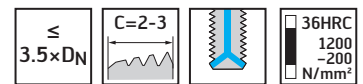
Ordering example for the WW60AD grade: TC430-M8X1-L1-WW60AD

B4

HSS-E-PM machine thread formers TC430 Supreme

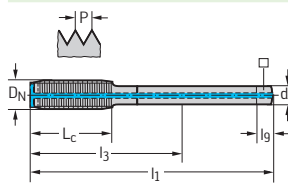


- For long-chipping materials
- ISO M with oil only



	P	M	K	N	S	H	O
WW60EL	●	●	●	●			
WW60AD	●	●	●	●			

DIN 2174



Designation	DN	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	mm	l _g mm	N	WW60EL	WW60AD
TC430-M8X1-L2-	MF 8x1	1	90	12	67	6	4.9	8	6	●	●
TC430-M10X1-L2-	MF 10x1	1	90	12	67	7	5.5	8	7	●	●
TC430-M10X1.25-L2-	MF 10x1.25	1.25	100	15	77	7	5.5	8	7	●	●
TC430-M12X1-L2-	MF 12x1	1	100	13	73	9	7	10	8	●	●
TC430-M12X1.25-L2-	MF 12x1.25	1.25	100	13	73	9	7	10	8	●	●
TC430-M12X1.5-L2-	MF 12x1.5	1.5	100	13	73	9	7	10	8	●	●
TC430-M14X1.5-L2-	MF 14x1.5	1.5	100	15	71	11	9	12	8	●	●
TC430-M16X1.5-L2-	MF 16x1.5	1.5	100	15	58	12	9	12	8	●	●

Ordering example for the WW60AD grade: TC430-M8X1-L2-WW60AD

WALTER SELECT

Best tool for

Good

Average

Poor

machining conditions

●● Primary application

● Other application

HSS-E machine thread formers

TC440 Supreme



- For long-chipping materials
- For stainless steels when using emulsion

≤
3.5×DN

C=2-3

32HRC
1000
-200
N/mm²

MF
DIN 13

6HX

	P	M	K	N	S	H	O
WY80AD	●	●●	●●●	●	●		

DIN 2174	Designation	D _N	P mm	l ₁ mm	L _c mm	l ₃ mm	d ₁ h9 mm	□ mm	l _g mm	N	WY80AD
	TC440-M8X1-L2-	MF 8x1	1	90	12	67	6	4.9	8	5	✱
	TC440-M10X1-L2-	MF 10x1	1	90	12	67	7	5.5	8	5	✱
	TC440-M12X1.5-L2-	MF 12x1.5	1.5	100	13	73	9	7	10	5	✱
	TC440-M14X1.5-L2-	MF 14x1.5	1.5	100	15	58	11	9	12	6	✱
	TC440-M16X1.5-L2-	MF 16x1.5	1.5	100	15	58	12	9	12	6	✱

Ordering example for the WY80AD grade: TC440-M8X1-L2-WY80AD

B4

WALTER SELECT

Best tool for

Good

Average

Poor

machining conditions

●● Primary application

● Other application

Cutting data

Thread forming

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

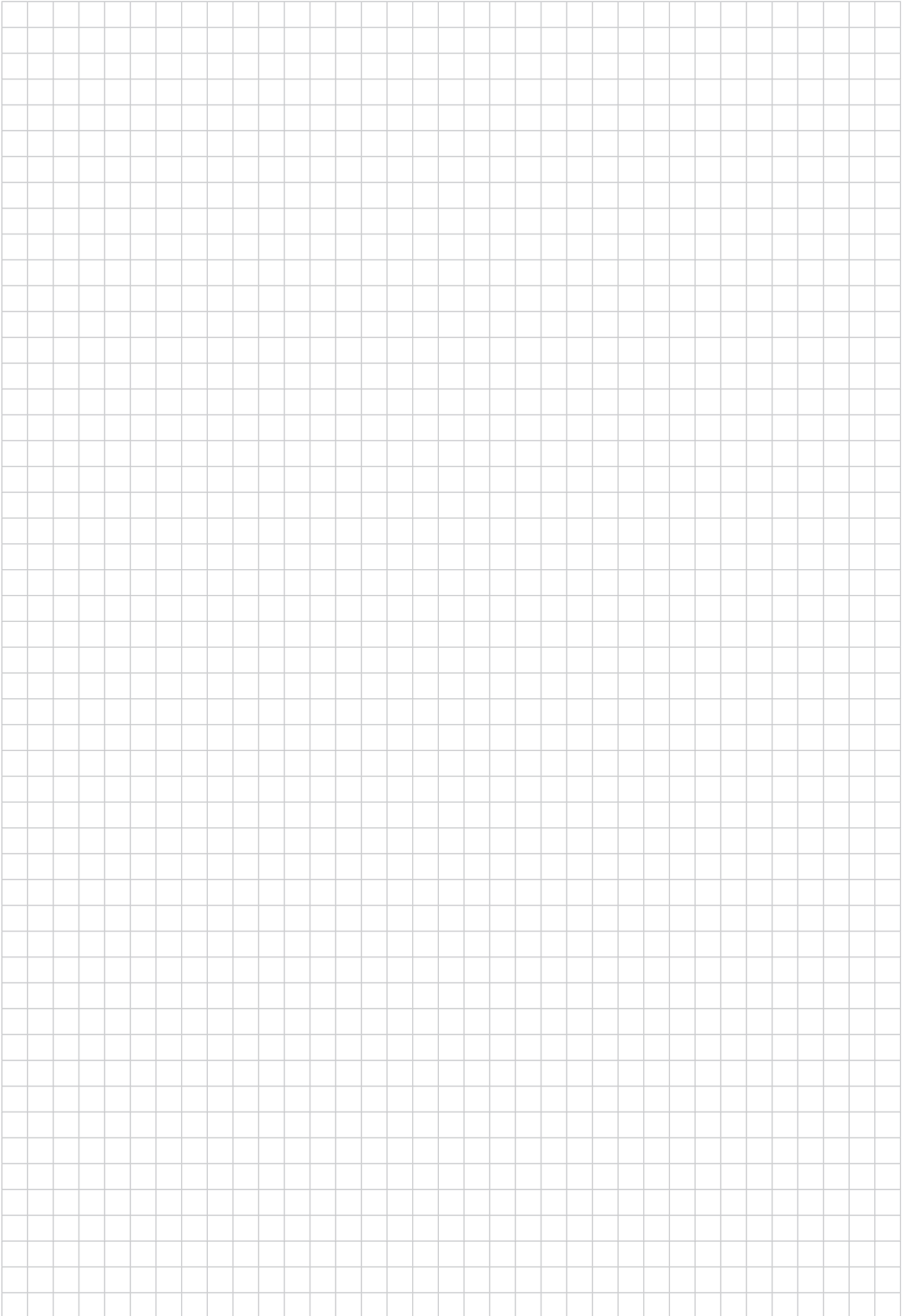
Material group	Overview of the main material groups and code letters		Brinell hardness HB	Tensile strength R _m N/mm ²	Machining group ¹	TC410 / TC420 / TC430 / TC440				
						Coated				
						v _c [sfm]				
						1.5 × D _N	2 × D _N	2.5 × D _N		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	E	157	128	112
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2	E	148	121	102
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3	E	164	134	115
		C > 0.55%	Annealed	190	639	P4	E	102	82	69
		C > 0.55%	Heat-treated	300	1013	P5	E	59	49	43
		Free-machining steel (short-chipping)	Annealed	220	745	P6	E	102	82	69
	Low-alloy steel	Annealed		175	591	P7	E	92	75	62
		Heat-treated		285	960	P8	E	59	49	43
		Heat-treated		380	1282	P9				
		Heat-treated		430	1477	P10				
	High-alloy steel and high-alloy tool steel	Annealed		200	675	P11	E	102	82	69
		Hardened and tempered		300	1013	P12	E	59	49	43
		Hardened and tempered		380	1282	P13				
	Stainless steel	Ferritic/martensitic, annealed		200	675	P14	E O	10/20	7/16	7/13
		Martensitic, heat-treated		330	1114	P15	O	16	13	13
M	Stainless steel	Austenitic, quench hardened		200	675	M1	E O	23/52	20/43	16/36
		Austenitic, precipitation hardened (PH)		300	1013	M2	O	16	13	13
		Austenitic/ferritic, duplex		230	778	M3	E O	7/16	7/13	7/13
K	Malleable cast iron	Ferritic		200	400	K1				
		Pearlitic		260	700	K2				
	Grey cast iron	Low tensile strength		180	200	K3				
		High tensile strength/austenitic		245	350	K4				
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	E	102	82	69
		Pearlitic		265	700	K6	E	49	43	36
	GGV (CGI)			230	400	K7				
N	Wrought aluminium alloys	Not hardenable		30	–	N1	E	200	164	141
		Hardenable, hardened		100	343	N2	E	187	154	131
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	E	177	144	121
		≤ 12% Si, hardenable, hardened		90	314	N4	E	177	144	121
		> 12% Si, not hardenable		130	447	N5				
	Magnesium-based alloys ³			70	250	N6				
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	343	N7	E	75	62	52
Brass, bronze, red brass		90	314	N8						
Cu alloys, short-chipping		110	382	N9						
High tensile, Ampco		300	1013	N10						
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	O	26	20	16
			Hardened	280	943	S2				
		Ni- or Co-based	Annealed	250	839	S3	O	26	20	16
			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				
	Thermosets	Without abrasive fillers				O2				
	Plastic, glass-fibre-reinforced	GFRP				O3				
	Plastic, carbon-fibre-reinforced	CFRP				O4				
	Plastic, aramid-fibre-reinforced	AFRP				O5				
	Graphite (technical)			65 Shore		O6				

¹ The classification of the machining groups can be found from page B 1174 onwards in the General Catalogue 2017.

³ Water-miscible coolants must not be used when machining magnesium-based alloys.

Product range overview of thread milling cutters

Machining	Universal 				
Thread depth	1.5 × D_N	2.0 × D_N	2.5 × D_N		3.0 × D_N
Designation	T2710	T2711	T2712		T2713
Description	Multi-row thread milling cutter with indexable inserts	Multi-row thread milling cutter with indexable inserts	Multi-row thread milling cutter with indexable inserts	Single-row thread milling cutter with indexable inserts	Single-row thread milling cutter with indexable inserts
Coolant supply	Axial/radial	Axial/radial	Axial/radial	Axial/radial	Axial/radial
Coating/grade	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
Shank	DIN 1835 B	DIN 1835 B	DIN 1835 B	DIN 1835 B	DIN 1835 B / Walter Capto™
Thread type Page	M / MF 230 UNC / UNF / UN 232	M / MF 234 UNC / UNF / UN 236	M / MF 238 UNC / UNF / UN 240	M / MF 242 UNC / UNF / UN 242	M / MF 244 UNC / UNF / UN 244
					



B5

Designation key for indexable insert thread milling cutters

Tool:

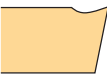

T	2	7	11	-	29	-	W	32	-	3	-	09	-	3	-	24
1	2	3	4	5	6		7	8		9		10		11		12



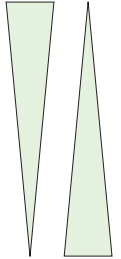
1	2	3	4	5	6
Tool group	Generation	Tool type	Tool type	1. Delimiters	Cutting diameter
T Threading		7 Indexable insert thread milling cutter	10 Universal with triangular insert 1.5 × D _N 11 Universal with triangular insert 2.0 × D _N 12 Universal with triangular insert 2.5 × D _N 13 Universal with triangular insert 3.0 × D _N /modular	- Metric · Inch	

7	8	9	10	11	12
Boring bar/adaptor type	Boring bar/adaptor size	Number of teeth	Insert size	Number of cutting rows	Cutting row spacing
W Weldon shank C Walter Capto™					

Indexable insert:

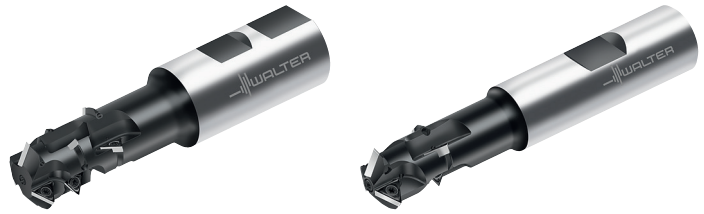
P26300	-	09	02	-	D	6	7		W	SM	37	S
1		2	3		4	5	6		Walter	7	8	9

1	2	3	4	5
Family	Insert size	Insert radius/thread specification	Chip breaker groove	Cutting edge
P26300 Triangular positive thread milling cutter insert P26310 Triangular positive thread milling cutter insert, for single-row tools	06 09 11 14 22	01 = 0,1 mm 02 = 0,2 mm 04 = 0,4 mm G11 = G thread, 11 TPI	 D = 10°	 6

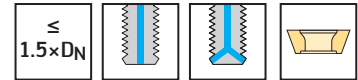
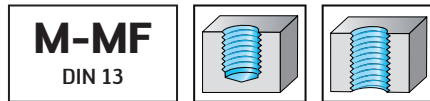
6	7	8	9
Flank face design	Application	ISO range of applications	Generation
 1  7	SM Universal application with ISO P, M, K, N, S and H materials	Wear resistance  37 Toughness Cutting tool materials for: 7 thread milling	S Tiger-tec® Silver

B5

Indexable insert thread milling cutter

T2710


- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



	P	M	K	N	S	H	O
T2710	●	●	●	●	●	●	●

Tool	Designation	D _N	P _{max} mm	D _c mm	l ₂₁ mm	l ₃ mm	l ₁ mm	d ₁ mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B 	★ T2710-17-W16-3-06-2-15	M 20	2.50	16.5	15	33	88	16	3	6	P26300-06 ..
Shank DIN 1835 B 	★ T2710-19-W20-3-06-3-12	M 24	3.00	19	12	39.1	98	20	3	9	P26300-06 ..
	★ T2710-24-W25-3-09-3-14	M 30	3.50	24	14	49.5	117	25	3	9	P26300-09 ..
	★ T2710-29-W32-3-09-3-16	M 36	4.00	29	16	58.5	131	32	3	9	P26300-09 ..
	★ T2710-35-W32-3-11-3-18	M 42	4.50	35	18	68.5	139	32	3	9	P26300-11 ..
	★ T2710-40-W40-3-14-3-20	M 48	5.00	40	20	79	163	40	3	9	P26300-11 ..
	★ T2710-44-W40-3-14-3-22	M 56	5.50	44	22	91	174	40	3	9	P26300-14 ..
	★ T2710-52-W40-4-14-3-24	M 64	6.00	52	24	103	185	40	4	12	P26300-14 ..

Variable coolant supply: Remove the face-side coolant screw for blind hole machining
Bodies and assembly parts are included in the scope of delivery.

B5

Assembly parts		D _c [mm]	16,5–19	24–29	35	40–52
	Clamping screw for indexable insert		FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque		0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm
	Coolant screw		FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque		0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm

Accessories		D _c [mm]	16,5–19	24–35	40–52
	Torque screwdriver, analogue		FS2001	FS2001	FS2003
	Tightening torque		0.4–1.2 Nm	0.4–1.2 Nm	1.5–5.0 Nm
	Torque screwdriver, digital				FS2248
	Tightening torque				1.0–6.0 Nm
	Interchangeable blade		FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
	Screwdriver		FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

/ ★ New addition to the product range

Thread milling cutter inserts P26300

Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O
							HC	HC	HC	HC	HC	HC	HC
	P26300-0601-D67	6	0.1	1.40-2.90	18-9	6.73	3	HC	HC	HC	HC	HC	HC
	P26300-0602-D67	6	0.2	3.00-3.20	8	6.58	3	HC	HC	HC	HC	HC	HC
	P26300-0901-D67	9	0.1	1.40-2.90	18-9	9.48	3	HC	HC	HC	HC	HC	HC
	P26300-0902-D67	9	0.2	3.00-4.30	8-6	9.34	3	HC	HC	HC	HC	HC	HC
	P26300-1102-D67	11	0.2	3.00-4.50	8-6	10.71	3	HC	HC	HC	HC	HC	HC
	P26300-1401-D67	14	0.1	1.40-2.90	18-9	13.87	3	HC	HC	HC	HC	HC	HC
	P26300-1402-D67	14	0.2	3.00-5.20	8-5	13.72	3	HC	HC	HC	HC	HC	HC
	P26300-1404-D67	14	0.4	5.50-6.40	4.5-4	13.43	3	HC	HC	HC	HC	HC	HC
	P26300-0601-D61	6	0.1	1.40-2.90	18-9	6.73	3	HC	HC	HC	HC	HC	HC
	P26300-0602-D61	6	0.2	3.00-3.20	8	6.58	3	HC	HC	HC	HC	HC	HC
	P26300-0901-D61	9	0.1	1.40-2.90	18-9	9.48	3	HC	HC	HC	HC	HC	HC
	P26300-0902-D61	9	0.2	3.00-4.30	8-6	9.34	3	HC	HC	HC	HC	HC	HC
	P26300-1101-D61	11	0.1	1.40-2.90	18-9	10.85	3	HC	HC	HC	HC	HC	HC
	P26300-1102-D61	11	0.2	3.00-4.50	8-6	10.71	3	HC	HC	HC	HC	HC	HC
	P26300-1401-D61	14	0.1	1.40-2.90	18-9	13.87	3	HC	HC	HC	HC	HC	HC
	P26300-1402-D61	14	0.2	3.00-5.20	8-5	13.72	3	HC	HC	HC	HC	HC	HC
P26300-1404-D61	14	0.4	5.50-6.40	4.5-4	13.43	3	HC	HC	HC	HC	HC	HC	

HC = Coated carbide

Tool selection

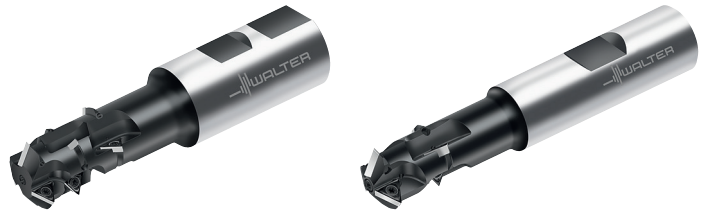
Metric thread	l ₃ [mm]	Coarse-pitch thread								D _N [mm]	Fine-pitch thread									
		M20/M22	M24/M27	M30/M33	M36/M39	M42/M45	M48/M52	M56/M59	M64/M68		P [mm]									
Body designation										1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	
T2710-17-W16-3-06-2-15	33.0	0601								≥ 20	0601		0601							
T2710-19-W20-3-06-3-12	39.1		0602							≥ 24	0601	0601		0602						
T2710-24-W25-3-09-3-14	49.5			0902						≥ 30		0901			0902					
T2710-29-W32-3-09-3-16	58.5				0902					≥ 36		0901				0902				
T2710-35-W32-3-11-3-18	68.5					1102				≥ 42	1101	1101		1102			1102			
T2710-40-W40-3-14-3-20	79.0						1402			≥ 48		1401	1401			1402		1402		
T2710-44-W40-3-14-3-22	91.0							1404		≥ 56		1401							1404	
T2710-52-W40-4-14-3-24	103.0								1404	≥ 64	1401	1401		1402		1402				1404

Example: With the T2710-35-W32-3-11-3-18 body and the size 11 indexable insert with 0.2 mm radius (1102 -> P26300-1102..), an M42 or M45 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 and 4.5 mm, when the nominal diameter is ≥ 42 mm.

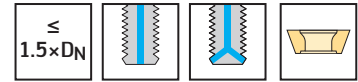
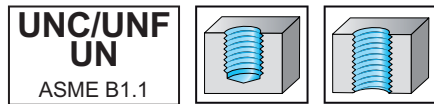
B5

Indexable insert thread milling cutter

T2710



- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



	P	M	K	N	S	H	O
T2710	●	●	●	●	●	●	●

Tool	Designation	D _N	P _{max} TPI	D _c mm	l ₂₁ mm	l ₃ mm	l ₁ mm	d ₁ mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B	★ T2710-18-W16-3-06-2-11.3	UNC 7/8-9	9	18	11.3	36.5	92	16	3	6	P26300-06 ..
Shank DIN 1835 B	★ T2710-20-W20-3-06-3-12.7	UNC 1-8	8	20	12.7	41.1	100	20	3	9	P26300-06 ..
	★ T2710-26-W25-3-09-3-12.7	UN 1.1/4-8	8	26	12.7	52.2	119	25	3	9	P26300-09 ..
	★ T2710-31-W32-3-09-3-19.1	UN 1.1/2-8	8	31	19.05	63.7	135	32	3	9	
	★ T2710-43-W40-4-09-3-25.4	UN 2-6	6	43	25.4	80.7	160	40	4	12	

Variable coolant supply: Remove the face-side coolant screw for blind hole machining
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

D _c [mm]		18–20	26–43
	Clamping screw for indexable insert	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)
	Tightening torque	0.6 Nm	0.9 Nm
	Coolant screw	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)
	Tightening torque	0.6 Nm	0.9 Nm

Accessories

D _c [mm]		18–20	26–43
	Torque screwdriver, analogue	FS2001	FS2001
	Tightening torque	0.4–1.2 Nm	0.4–1.2 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)

Thread milling cutter inserts P26300

Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O
							HC	HC	HC	HC	HC	HC	HC
 P26300-0601-D67 P26300-0602-D67 P26300-0901-D67 P26300-0902-D67	6	0.1	1.40–2.90	18–9	6.73	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
	6	0.2	3.00–3.20	8	6.58	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
	9	0.1	1.40–2.90	18–9	9.48	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
	9	0.2	3.00–4.30	8–6	9.34	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
 P26300-0601-D61 P26300-0602-D61 P26300-0901-D61 P26300-0902-D61	6	0.1	1.40–2.90	18–9	6.73	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
	6	0.2	3.00–3.20	8	6.58	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
	9	0.1	1.40–2.90	18–9	9.48	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S
	9	0.2	3.00–4.30	8–6	9.34	3	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S	WSM37S

HC = Coated carbide

Tool selection

UN threads	UNC	UNF				UN							
		7/8 -9	1-8	1 1/8 -12	1 1/4 -12	1 3/8 -12	1 1/2 -12	TPI					
Body designation	l ₃ [mm]						D _N	18*	16	14	12	8	6
T2710-18-W16-3-06-2-11.3	36.5	0601					≥ 0.87"	0601					
T2710-20-W20-3-06-3-12.7	41.1		0602	0601	0601	0601	≥ 1.00"	0601	0601	0601	0601	0602	
T2710-26-W25-3-09-3-12.7	52.2				0601	0601	≥ 1.25"	0901	0901	0901	0901	0902	
T2710-31-W32-3-09-3-19.1	63.7					0601	≥ 1.50"		0901		0901	0902	
T2710-43-W40-4-09-3-25.4	80.7						≥ 2.00"	0901	0901	0901	0901	0902	0902

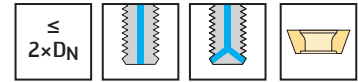
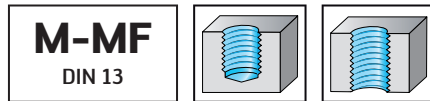
Example: With the T2710-20-W20-3-06-3-12.7 body and the size 06 indexable insert with 0.2 mm radius (0602 -> P26300-0602..), a UNC 1" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 TPI, when their nominal diameter is ≥ 1".

* = UNEF

Indexable insert thread milling cutter

T2711 mm


- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



T2711	P	M	K	N	S	H	O
	●	●	●	●	●	●	●

Tool	Designation	D _N	P _{max} mm	D _c mm	l ₂₁ mm	l ₃ mm	l ₁ mm	d ₁ mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B 	★ T2711-17-W16-3-06-2-20	M 20	2.50	16.5	20	43	98	16	3	6	P26300-06 ..
	T2711-19-W20-3-06-2-24	M 24	3.00	19	24	51	110	20	3	6	P26300-09 ..
	T2711-24-W25-3-09-2-31.5	M 30	3.50	24	31.5	64.5	132	25	3	6	P26300-14 ..
	T2711-52-W40-4-14-2-60	M 64	6.00	52	60	135	217	40	4	8	P26300-14 ..
Shank DIN 1835 B 	T2711-29-W32-3-09-3-24	M 36	4.00	29	24	76.5	149	32	3	9	P26300-09 ..
	T2711-35-W32-3-11-3-27	M 42	4.50	35	27	89.5	160	32	3	9	P26300-11 ..
	T2711-40-W40-3-14-3-30	M 48	5.00	40	30	103	187	40	3	9	P26300-14 ..
	T2711-44-W40-3-14-3-33	M 56	5.50	44	33	119	202	40	3	9	P26300-14 ..

Variable coolant supply: Remove the face-side coolant screw for blind hole machining
Bodies and assembly parts are included in the scope of delivery.

B5

Assembly parts	D _c [mm]	16.5–19	24–29	35	40–52
	Clamping screw for indexable insert	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque	0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm
	Coolant screw	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque	0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm

Accessories	D _c [mm]	16.5–19	24–35	40–52
	Torque screwdriver, analogue	FS2001	FS2001	FS2003
	Tightening torque	0.4–1.2 Nm	0.4–1.2 Nm	1.5–5.0 Nm
	Torque screwdriver, digital			FS2248
	Tightening torque			1.0–6.0 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

Thread milling cutter inserts P26300

Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O
							HC	HC	HC	HC	HC	HC	HC
 P26300-0601-D67 P26300-0602-D67 P26300-0901-D67 P26300-0902-D67 P26300-1102-D67 P26300-1401-D67 P26300-1402-D67 P26300-1404-D67	6	0.1	1.40-2.90	18-9	6.73	3	HC	HC	HC	HC	HC	HC	HC
	6	0.2	3.00-3.20	8	6.58	3	HC	HC	HC	HC	HC	HC	HC
	9	0.1	1.40-2.90	18-9	9.48	3	HC	HC	HC	HC	HC	HC	HC
	9	0.2	3.00-4.30	8-6	9.34	3	HC	HC	HC	HC	HC	HC	HC
	11	0.2	3.00-4.50	8-6	10.71	3	HC	HC	HC	HC	HC	HC	HC
	14	0.1	1.40-2.90	18-9	13.87	3	HC	HC	HC	HC	HC	HC	HC
	14	0.2	3.00-5.20	8-5	13.72	3	HC	HC	HC	HC	HC	HC	HC
	14	0.4	5.50-6.40	4.5-4	13.43	3	HC	HC	HC	HC	HC	HC	HC
 P26300-0601-D61 P26300-0602-D61 P26300-0901-D61 P26300-0902-D61 P26300-1101-D61 P26300-1102-D61 P26300-1401-D61 P26300-1402-D61 P26300-1404-D61	6	0.1	1.40-2.90	18-9	6.73	3	HC	HC	HC	HC	HC	HC	HC
	6	0.2	3.00-3.20	8	6.58	3	HC	HC	HC	HC	HC	HC	HC
	9	0.1	1.40-2.90	18-9	9.48	3	HC	HC	HC	HC	HC	HC	HC
	9	0.2	3.00-4.30	8-6	9.34	3	HC	HC	HC	HC	HC	HC	HC
	11	0.1	1.40-2.90	18-9	10.85	3	HC	HC	HC	HC	HC	HC	HC
	11	0.2	3.00-4.50	8-6	10.71	3	HC	HC	HC	HC	HC	HC	HC
	14	0.1	1.40-2.90	18-9	13.87	3	HC	HC	HC	HC	HC	HC	HC
	14	0.2	3.00-5.20	8-5	13.72	3	HC	HC	HC	HC	HC	HC	HC
14	0.4	5.50-6.40	4.5-4	13.43	3	HC	HC	HC	HC	HC	HC	HC	

HC = Coated carbide

Tool selection

Metric thread	Body designation	l ₃ [mm]	Coarse-pitch thread							D _N [mm]	Fine-pitch thread									
			M20/M22	M24/M27	M30/M33	M36/M39	M42/M45	M48/M52	M56/M59		M64/M68	P [mm]								
			1.5	2	2.5	3	3.5	4	4.5		5	5.5	6							
T2711-17-W16-3-06-2-20	43	0601							≥ 20		0601	0601								
T2711-19-W20-3-06-2-24	51	0602							≥ 24	0601	0601		0602							
T2711-24-W25-3-09-2-31.5	64.5			0902					≥ 30	0901				0902						
T2711-29-W32-3-09-3-24	76.5				0902				≥ 36	0901	0901		0902		0902					
T2711-35-W32-3-11-3-27	89.5					1102			≥ 42	1101			1102		1102					
T2711-40-W40-3-14-3-30	103						1402		≥ 48	1401	1401	1401	1402					1402		
T2711-44-W40-3-14-3-33	119							1404	≥ 56	1401			1402						1404	
T2711-52-W40-4-14-2-60	135							1404	≥ 64	1401	1401	1401	1402		1402			1402		1404

Example: With the T2711-29-W32-3-09-3-24 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..), an M36 or M39 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 or 4 mm, when the nominal diameter is ≥ 36 mm.

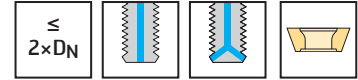
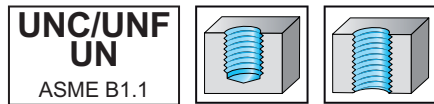
B5

Indexable insert thread milling cutter

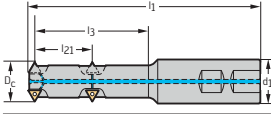
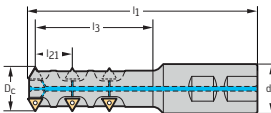
T2711 mm



- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



	P	M	K	N	S	H	O
T2711	●	●	●	●	●	●	●

Tool	Designation	D_N	P_{max} TPI	D_c mm	l_{21} mm	l_3 mm	l_1 mm	d_1 mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B 	★ T2711-18-W16-3-06-2-25.4	UNC 7/8-9	9	18	25.4	47.5	103	16	3	6	P26300-06 ..
	T2711-20-W20-3-06-2-25.4	UNC 1-8	8	20	25.4	53.9	113	20	3	6	P26300-06 ..
	T2711-26-W25-3-09-2-32.7	UNC 1.1/4-7	7	26	32.66	68	135	25	3	6	P26300-09 ..
Shank DIN 1835 B 	T2711-31-W32-3-09-3-25.4	UNC 1.1/2-6	6	31	25.4	80.7	153	32	3	9	P26300-09 ..

Variable coolant supply: Remove the face-side coolant screw for blind hole machining
Bodies and assembly parts are included in the scope of delivery.

B5

Assembly parts

D _c [mm]		18–20	26–31
	Clamping screw for indexable insert	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)
	Tightening torque	0.6 Nm	0.9 Nm
	Coolant screw	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)
	Tightening torque	0.6 Nm	0.9 Nm

Accessories

D _c [mm]		18–20	26–31
	Torque screwdriver, analogue	FS2001	FS2001
	Tightening torque	0.4–1.2 Nm	0.4–1.2 Nm
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)

Thread milling cutter inserts P26300

Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O
							HC	HC	HC	HC	HC	HC	HC
 P26300-0601-D67 P26300-0602-D67 P26300-0901-D67 P26300-0902-D67	6	0.1	1.40–2.90	18–9	6.73	3	HC	HC	HC	HC	HC	HC	HC
	6	0.2	3.00–3.20	8	6.58	3	HC	HC	HC	HC	HC	HC	HC
	9	0.1	1.40–2.90	18–9	9.48	3	HC	HC	HC	HC	HC	HC	HC
	9	0.2	3.00–4.30	8–6	9.34	3	HC	HC	HC	HC	HC	HC	HC
 P26300-0601-D61 P26300-0602-D61 P26300-0901-D61 P26300-0902-D61	6	0.1	1.40–2.90	18–9	6.73	3	HC	HC	HC	HC	HC	HC	HC
	6	0.2	3.00–3.20	8	6.58	3	HC	HC	HC	HC	HC	HC	HC
	9	0.1	1.40–2.90	18–9	9.48	3	HC	HC	HC	HC	HC	HC	HC
	9	0.2	3.00–4.30	8–6	9.34	3	HC	HC	HC	HC	HC	HC	HC

HC = Coated carbide

Tool selection

UN threads	UNC				UNF						UN							
	l ₃ [mm]	7/8 -9	1-8	1 1/4 -7	1 1/2 -6	7/8 -14	1-12	1 1/8 -12	1 1/4 -12	1 3/8 -12	1 1/2 -12	D _N	18*	16	14	12	8	6
T2711-18-W16-3-06-2-25.4	47.5	0601				0601	0601	0601	0601	0601	0601	≥ 0.87"	0601	0601	0601	0601		
T2711-20-W20-3-06-2-25.4	53.9		0602				0601	0601	0601	0601	0601	≥ 1.00"	0601	0601	0601	0601	0602	
T2711-26-W25-3-09-2-32.7	68			0902								≥ 1.25"			0901			
T2711-31-W32-3-09-3-25.4	80.7				0902							≥ 1.50"	0901	0901	0901	0901	0902	0902

* = UNEF

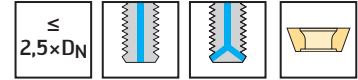
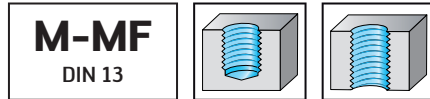
Example: With the T2711-31-W32-3-09-3-25.4 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902.), a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 and 6 TPI, when their nominal diameter is ≥ 1.5".

B5

Indexable insert thread milling cutter

 T2712


- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



	P	M	K	N	S	H	O
T2712	●	●	●	●	●	●	●

Tool	Designation	D _N	P _{max} mm	D _c mm	l ₂₁ mm	L _c mm	l ₃ mm	l ₁ mm	d ₁	Z	No. of indexable inserts	Type
Shank DIN 1835 B 	T2712-24-W25-3-09-2-31.5	M 30	3.50	24	31.5	63	79.5	147	25	3	6	P26300-09 ..
	T2712-29-W32-3-09-2-36	M 36	4.00	29	36	72	94.5	167	32	3	6	
	T2712-35-W32-3-11-2-40.5	M 42	4.50	35	40.5	81	110.5	180	32	3	6	P26300-11 ..
	T2712-40-W40-3-14-2-50	M 48	5.00	40	50	100	127	211	40	3	6	P26300-14 ..

Variable coolant supply: Remove the face-side coolant screw for blind hole machining
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

D _c [mm]	24–29	35	40	
	Clamping screw for indexable insert	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque	0.9 Nm	0.9 Nm	2.0 Nm
	Coolant screw	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque	0.9 Nm	0.9 Nm	2.0 Nm

Accessories

D _c [mm]	24–35	40	
	Torque screwdriver, analogue	FS2001	FS2003
	Tightening torque	0.4–1.2 Nm	1.5–5.0 Nm
	Torque screwdriver, digital		FS2248
	Tightening torque		1.0–6.0 Nm
	Interchangeable blade	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
	Screwdriver	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

Thread milling cutter inserts P26300

Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O	
							HC	HC	HC	HC	HC	HC	HC	
	P26300-0901-D67	9	0.1	1.40–2.90	18–9	9.48	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-0902-D67	9	0.2	3.00–4.30	8–6	9.34	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1401-D67	14	0.1	1.40–2.90	18–9	13.87	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1402-D67	14	0.2	3.00–5.20	8–5	13.72	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1404-D67	14	0.4	5.50–6.40	4.5–4	13.43	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-0901-D61	9	0.1	1.40–2.90	18–9	9.48	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-0902-D61	9	0.2	3.00–4.30	8–6	9.34	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1101-D61	11	0.1	1.40–2.90	18–9	10.85	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1102-D61	11	0.2	3.00–4.50	8–6	10.71	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1401-D61	14	0.1	1.40–2.90	18–9	13.87	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1402-D61	14	0.2	3.00–5.20	8–5	13.72	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-1404-D61	14	0.4	5.50–6.40	4.5–4	13.43	3	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375

HC = Coated carbide

Tool selection

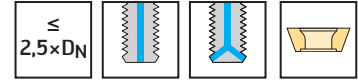
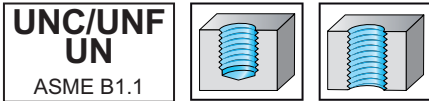
Metric thread	l ₃ [mm]	Coarse-pitch thread				D _N [mm]	Fine-pitch thread						
		M30 / M33	M36 / M39	M42 / M45	M48 / M52		P [mm]						
Body designation						1.5	2	2.5	3	3.5	4	4.5	5
T2712-24-W25-3-09-2-31.5	79.5	0902				≥ 30	0901			0902			
T2712-29-W32-3-09-2-36	94.5		0902			≥ 36	0901	0901		0902	0902		
T2712-35-W32-3-11-2-40.5	110.5			1102		≥ 42	1101					1102	
T2712-40-W40-3-14-2-50	127				1402	≥ 48		1401	1401				1402

Example: With the T2712-29-W32-3-09-2-36 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..), an M36 or M39 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 or 4 mm, when the nominal diameter is ≥ 36 mm.

Indexable insert thread milling cutter

 T2712

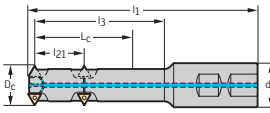

- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



	P	M	K	N	S	H	O
T2712	●	●	●	●	●	●	●

Tool

	Designation	D _N	P _{max} TPI	D _c mm	l ₂₁ mm	L _c mm	l ₃ mm	l ₁ mm	d ₁ mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B	T2712-26-W25-3-09-2-32.7	UNC 1 1/4-7	7	26	32.66	65.32	84	151	25	3	6	P26300-09 ..
	T2712-31-W32-3-09-2-38.1	UNC 1 1/2-6	6	31	38.1	76.2	99.8	172	32	3	6	



Variable coolant supply: Remove the face-side coolant screw for blind hole machining
 Bodies and assembly parts are included in the scope of delivery.

Assembly parts

D _c [mm]		26–31
	Clamping screw for indexable insert	FS2111 (Torx 7IP)
	Tightening torque	0.9 Nm
	Coolant screw	FS2111 (Torx 7IP)
	Tightening torque	0.9 Nm

Accessories

D _c [mm]		26–31
	Torque screwdriver, analogue	FS2001
	Tightening torque	0.4–1.2 Nm
	Interchangeable blade	FS2011 (Torx 7IP)
	Screwdriver	FS2088 (Torx 7IP)

Thread milling cutter inserts P26300

Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O
							HC	HC	HC	HC	HC	HC	HC
 P26300-0901-D67	9	0.1	1.40–2.90	18–9	9.48	3							
	P26300-0902-D67	9	0.2	3.00–4.30	8–6	9.34	3						
 P26300-0901-D61	9	0.1	1.40–2.90	18–9	9.48	3							
	P26300-0902-D61	9	0.2	3.00–4.30	8–6	9.34	3						

HC = Coated carbide

Tool selection

UN threads		UNC		UNF	UN								
Body designation	l ₃ [mm]	1 1/4–7	1 1/2–6	1 1/2–12	D _N	18*	16	TPI				8	6
								14	12	8	6		
T2712-26-W25-3-09-2-32.7	84	0902			≥ 1.25"			0901					
T2712-31-W32-3-09-2-38.1	99.8		0902	0901	≥ 1.50"	0901	0901	0901	0901	0902	0902		

Example: With the T2712-31-W32-3-09-2-38.1 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902.), a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 and 6 TPI, when their nominal diameter is ≥ 1.5".

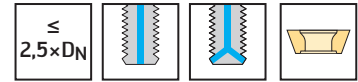
* UNEF

B5

Indexable insert thread milling cutter

 T2712 mm


- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



	P	M	K	N	S	H	O
T2712	●●	●●	●●	●	●●	●	●

Tool	Designation	D _N [mm]	D _N [inches]	P _{max} mm	P _{max} TPI	D _c mm	l ₃ mm	l ₁ mm	d ₁ mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B 	★ T2712-17-W16-3-06	M 20	0.87"	2.50	9	16.5	53	108	16	3	3	P26300-06 ..
	T2712-19-W20-3-06	M 24	1.00"	3.00	8	19	63	123	20	3	3	
	T2712-24-W25-3-09	M 30	1.25"	3.50	7	24	79.5	148	25	3	3	P263 . 0-09 ..
	T2712-29-W32-3-09	M 36	1.50"	4.00	6	29	94.5	167	32	3	3	
	T2712-35-W32-3-11	M 42	1.75"	4.50	6	35	110.5	181	32	3	3	P26300-11 ..
	T2712-40-W40-3-14	M 48	2.00"	5.00	5	40	127	211	40	3	3	
	T2712-44-W40-3-14	M 56	2.25"	5.50	4.5	44	147	230	40	3	3	P263 . 0-14 ..
	T2712-52-W40-4-14	M 64	2.75"	6.00	4	52	167	249	40	4	4	

Variable coolant supply: Remove the face-side coolant screw for blind hole machining
 G (BSP) threads are presented on a separate double page in the Product Innovations catalogue 2020.
 Bodies and assembly parts are included in the scope of delivery.

B5

Assembly parts		D _c [mm]	16.5–19	24–29	35	40–52
	Clamping screw for indexable insert		FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque		0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm
	Coolant screw		FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)
	Tightening torque		0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm

Accessories		D _c [mm]	16.5–19	24–35	40–52
	Torque screwdriver, analogue		FS2001	FS2001	FS2003
	Tightening torque		0.4–1.2 Nm	0.4–1.2 Nm	1.5–5.0 Nm
	Torque screwdriver, digital				FS2248
	Tightening torque				1.0–6.0 Nm
	Interchangeable blade		FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)
	Screwdriver		FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)

/ ★ New addition to the product range

Thread milling cutter inserts P26300

	Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O
								HC	HC	HC	HC	HC	HC	HC
								WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-0601-D67	6	0.1	1.40–2.90	18–9	6.73	3	✘	✘	✘	✘	✘	✘	✘
	P26300-0602-D67	6	0.2	3.00–3.20	8	6.58	3	✘	✘	✘	✘	✘	✘	✘
	P26300-0901-D67	9	0.1	1.40–2.90	18–9	9.48	3	✘	✘	✘	✘	✘	✘	✘
	P26300-0902-D67	9	0.2	3.00–4.30	8–6	9.34	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1401-D67	14	0.1	1.40–2.90	18–9	13.87	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1402-D67	14	0.2	3.00–5.20	8–5	13.72	3	✘	✘	✘	✘	✘	✘	✘
P26300-1404-D67	14	0.4	5.50–6.40	4.5–4	13.43	3	✘	✘	✘	✘	✘	✘	✘	
	P26300-0601-D61	6	0.1	1.40–2.90	18–9	6.73	3	✘	✘	✘	✘	✘	✘	✘
	P26300-0602-D61	6	0.2	3.00–3.20	8	6.58	3	✘	✘	✘	✘	✘	✘	✘
	P26300-0901-D61	9	0.1	1.40–2.90	18–9	9.48	3	✘	✘	✘	✘	✘	✘	✘
	P26300-0902-D61	9	0.2	3.00–4.30	8–6	9.34	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1101-D61	11	0.1	1.40–2.90	18–9	10.85	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1102-D61	11	0.2	3.00–4.50	8–6	10.71	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1401-D61	14	0.1	1.40–2.90	18–9	13.87	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1402-D61	14	0.2	3.00–5.20	8–5	13.72	3	✘	✘	✘	✘	✘	✘	✘
	P26300-1404-D61	14	0.4	5.50–6.40	4.5–4	13.43	3	✘	✘	✘	✘	✘	✘	✘

HC = Coated carbide

Tool selection

Metric thread	l ₃ [mm]	Coarse-pitch thread								Fine-pitch thread								
		M20 / M22	M24 / M27	M30 / M33	M36 / M39	M42 / M45	M48 / M52	M56 / M59	M64 / M68	P [mm]								
		D _N [mm]	1.5–2.5	3	3.5	4	4.5	5	5.5	6								
T2712-17-W16-3-06	53	0601								≥ 20	0601							
T2712-19-W20-3-06	63		0602							≥ 24	0601	0602						
T2712-24-W25-3-09	79.5			0902						≥ 30	0901	0902						
T2712-29-W32-3-09	94.5				0902					≥ 36	0901	0902						
T2712-35-W32-3-11	110.5					1102				≥ 42	1101	1102						
T2712-40-W40-3-14	127						1402			≥ 48	1401	1402						
T2712-44-W40-3-14	147							1404		≥ 56	1401	1402				1404		
T2712-52-W40-4-14	167								1404	≥ 64	1401	1402				1404		

Example: With the T2712-29-W32-3-09-2-36 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902.), an M36 or M39 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 or 4 mm, when the nominal diameter is ≥ 36 mm.

UN threads	l ₃ [mm]	UNC							UNF					UN						
		7/8-9	1-8	1 1/4-7	1 1/2-6	2 1/4-4.5	≥ 2 3/4-4	7/8-14	1-12	1 1/8-12	1 1/4-12	1 3/8-12	1 1/2-12	D _N	TPI					
		18-9	8	6	5	4.5	4													
T2712-17-W16-3-06	53	0601						0601	0601	0601	0601	0601	0601	≥ 0.87"	0601					
T2712-19-W20-3-06	63		0602						0601	0601	0601	0601	0601	≥ 1.00"	0601	0602				
T2712-24-W25-3-09	79.5			0902						0901	0901	0901	0901	≥ 1.25"	0901	0902				
T2712-29-W32-3-09	94.5				0902							0901	0901	≥ 1.50"	0901	0902				
T2712-35-W32-3-11	110.5													≥ 1.75"	1101	1102				
T2712-40-W40-3-14	127													≥ 2.00"	1401	1402				
T2712-44-W40-3-14	147					1404								≥ 2.25"	1401	1402			1404	
T2712-52-W40-4-14	167						1404							≥ 2.75"	1401	1402			1404	

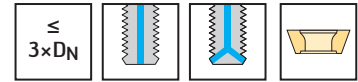
Example: With the T2712-29-W32-3-09 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902.), a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 and 6 TPI, when their nominal diameter is ≥ 1.5 ".

B5

Indexable insert thread milling cutter

T2713 mm


- Universal indexable insert thread milling cutter
- Radius correction values: Walter GPS/Technical information



	P	M	K	N	S	H	O
T2713	●	●	●	●	●	●	●

Tool	Designation	D _N [mm]	D _N [inches]	P _{max} mm	P _{max} TPI	D _c mm	l ₃ mm	l ₁ mm	d ₁ mm	Z	No. of indexable inserts	Type
Shank DIN 1835 B 	★ T2713-17-W16-3-06	M 20	0.87"	2.50	9	16.5	63	118	16	3	3	P26300-06 ..
	T2713-19-W20-3-06	M 24	1.00"	3.00	8	19	75	135	20	3	3	P263 . 0-09 ..
	T2713-24-W25-3-09	M 30	1.25"	3.50	7	24	94.5	163	25	3	3	P26300-09 ..
	T2713-29-W32-3-09	M 36	1.50"	4.00	6	29	112.5	185	32	3	3	P26300-09 ..
	T2713-35-W32-3-11	M 42	1.75"	4.50	6	35	131.5	202	32	3	3	P26300-11 ..
	T2713-40-W40-3-14	M 48	2.00"	5.00	5	40	151	235	40	3	3	P263 . 0-14 ..
	T2713-44-W40-3-14	M 56	2.25"	5.50	4.5	44	175	258	40	3	3	
Walter Capto™ in acc. with ISO 26623 	T2713-52-W40-4-14	M 64	2.75"	6.00	4	52	199	281	40	4	4	P263 . 0-14 ..
	T2713-60-C5-4-14	M 72	3.00"	6.00	4	60	115	152	50	4	4	
	T2713-73-C6-5-14	M 85	3.50"	6.00	4	73	125	170	63	5	5	P26300-22 ..
	T2713-94-C8-5-22	M 125	5.00"	10.00	3	94	140	199	80	5	5	

Variable coolant supply: Remove the face-side coolant screw for blind hole machining
 G (BSP) threads are presented on a separate double page in the Product Innovations catalogue 2020.
 Bodies and assembly parts are included in the scope of delivery.

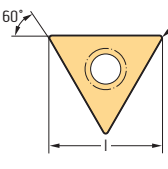
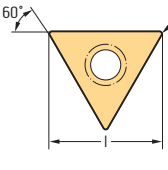
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Assembly parts	D _c [mm]	16.5–19	24–29	35	40–73	94
	Clamping screw for indexable insert	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)	FS1495 (Torx 20IP)
	Tightening torque	0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm	5.0 Nm
	Coolant screw	FS2147 (Torx 6IP)	FS2111 (Torx 7IP)	FS2061 (Torx 7IP)	FS1457 (Torx 9IP)	FS1495 (Torx 20IP)
	Tightening torque	0.6 Nm	0.9 Nm	0.9 Nm	2.0 Nm	5.0 Nm

Accessories	D _c [mm]	16.5–19	24–35	40–73	94
	Torque screwdriver, analogue	FS2001	FS2001	FS2003	FS2003
	Tightening torque	0.4–1.2 Nm	0.4–1.2 Nm	1.5–5.0 Nm	1.5–5.0 Nm
	Torque screwdriver, digital			FS2248	
	Tightening torque			1.0–6.0 Nm	
	Interchangeable blade	FS2085 (Torx 6IP)	FS2011 (Torx 7IP)	FS2013 (Torx 9IP)	FS2015 (Torx 20IP)
	Screwdriver	FS2086 (Torx 6IP)	FS2088 (Torx 7IP)	FS1484 (Torx 9IP)	FS1486 (Torx 20IP)

/ ★ New addition to the product range

Thread milling cutter inserts P26300

Designation	Size	r mm	Pitch P mm	Pitch P TPI	l mm	Number of cutting edges	P	M	K	N	S	H	O
							HC	HC	HC	HC	HC	HC	HC
							WSM375	WSM375	WSM375	WSM375	WSM375	WSM375	WSM375
	P26300-0601-D67	6	0.1	1.40–2.90	18–9	6.73	3						
	P26300-0602-D67	6	0.2	3.00–3.20	8	6.58	3						
	P26300-0901-D67	9	0.1	1.40–2.90	18–9	9.48	3						
	P26300-0902-D67	9	0.2	3.00–4.30	8–6	9.34	3						
	P26300-1102-D67	11	0.2	3.00–4.50	8–6	10.71	3						
	P26300-1401-D67	14	0.1	1.40–2.90	18–9	13.87	3						
	P26300-1402-D67	14	0.2	3.00–5.20	8–5	13.72	3						
	P26300-1404-D67	14	0.4	5.50–6.40	4.5–4	13.43	3						
	P26300-0601-D61	6	0.1	1.40–2.90	18–9	6.73	3						
	P26300-0602-D61	6	0.2	3.00–3.20	8	6.58	3						
	P26300-0901-D61	9	0.1	1.40–2.90	18–9	9.48	3						
	P26300-0902-D61	9	0.2	3.00–4.30	8–6	9.34	3						
	P26300-1101-D61	11	0.1	1.40–2.90	18–9	10.85	3						
	P26300-1102-D61	11	0.2	3.00–4.50	8–6	10.71	3						
	P26300-1401-D61	14	0.1	1.40–2.90	18–9	13.87	3						
	P26300-1402-D61	14	0.2	3.00–5.20	8–5	13.72	3						
	P26300-1404-D61	14	0.4	5.50–6.40	4.5–4	13.43	3						
	P26300-2204-D61	22	0.4	5.50–10.00	4.5–4	21.41	3						

HC = Coated carbide

Tool selection

Metric thread		Coarse-pitch thread							Fine-pitch thread												
Body designation	l ₃ [mm]	M20 / M22	M24 / M27	M30 / M33	M36 / M39	M42 / M45	M48 / M52	M56 / M59	M64 / M68	D _N [mm]	P [mm]										
											1.5– 2.5	3	3.5	4	4.5	5	5.5	6	7–10		
T2713-17-W16-3-06	63	0601								≥ 20	0601										
T2713-19-W20-3-06	75		0602							≥ 24	0601	0602									
T2713-24-W25-3-09	94.5			0902						≥ 30	0901	0902									
T2713-29-W32-3-09	112.5				0902					≥ 36	0901	0902									
T2713-35-W32-3-11	131.5					1102				≥ 42	1101	1102									
T2713-40-W40-3-14	151						1402			≥ 48	1401	1402									
T2713-44-W40-3-14	175							1404		≥ 56	1401	1402				1404					
T2713-52-W40-4-14	199								1404	≥ 64	1401	1402					1404				
T2713-60-C5-4-14	115									≥ 72	1401	1402					1404				
T2713-73-C6-5-14	125									≥ 85	1401	1402					1404				
T2713-94-C8-5-22	140									≥ 125							2204				

Example: With the T2713-29-W32-3-09 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..), an M36 or M39 thread can be produced. Additionally, this body/indexable insert combination can be used to produce fine-pitch threads with a pitch of 3 or 4 mm, when the nominal diameter is ≥ 36 mm.

UN threads		UNC							UNF				UN								
Body designation	l ₃ [mm]	7/8-9	1-8	1 1/4- 7	1 1/2- 6	2 1/4- 4.5	2 3/4- 4	≥ 3-4	≥ 3 1/2- 4	D _N	TPI										
											7/8-14	1-12	≥ 1 1/8- 12	≥ 1 3/8-12	18-9	8	6	5	4.5	4	
T2713-17-W16-3-06	63	0601								0601	0601	0601	0601	≥ 0.87"	0601						
T2713-19-W20-3-06	75		0602								0601	0601	0601	≥ 1.00"	0601	0602					
T2713-24-W25-3-09	94.5			0902										≥ 1.25"	0901	0902					
T2713-29-W32-3-09	112.5				0902									≥ 1.50"	0901	0902					
T2713-35-W32-3-11	131.5													≥ 1.75"	1101	1102					
T2713-40-W40-3-14	151													≥ 2.00"	1401	1402					
T2713-44-W40-3-14	175					1404								≥ 2.25"	1401	1402	1404				
T2713-52-W40-4-14	199						1404	1404	1404					≥ 2.75"	1401	1402		1404			
T2713-60-C5-4-14	115							1404	1404					≥ 3.00"	1401	1402		1404			
T2713-73-C6-5-14	125								1404					≥ 3.50"	1401	1402		1404			
T2713-94-C8-5-22	140													≥ 5.00"						2204	

Example: With the T2713-29-W32-3-09 body and the size 09 indexable insert with 0.2 mm radius (0902 -> P26300-0902..), a UNC 1 1/2" thread can be produced. Additionally, this body/indexable insert combination can be used to produce UN threads with 8 to 6 TPI, when their nominal diameter is ≥ 1.5".

B5

Cutting data Thread milling

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

Material group	Overview of the main material groups and code letters		Birnell hardness HB	Tensile strength R _m N/mm ²	Machining group ¹	T2710 / T2711 / T2712 / T2713				
						v _c [sfm]	f _z [in]		Insert size	
							06	09/11/14/22		
= Coolant recommended E = Emulsion O = Oil v _c = Cutting speed										
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	E M	656	0.012	0.016
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2	E M	656	0.012	0.016
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3	E M	656	0.012	0.016
		C > 0.55%	Annealed	190	639	P4	E M	656	0.012	0.016
		C > 0.55%	Heat-treated	300	1013	P5	E M	656	0.012	0.016
		Free-machining steel (short-chipping)	Annealed	220	745	P6	E M	656	0.012	0.016
	Low-alloy steel	Annealed		175	591	P7	E M	656	0.012	0.016
		Heat-treated		285	960	P8	E M	656	0.012	0.016
		Heat-treated		380	1282	P9	E M	492	0.010	0.014
		Heat-treated		430	1477	P10	E M	328	0.008	0.012
	High-alloy steel and high-alloy tool steel	Annealed		200	675	P11	E M	656	0.012	0.016
		Hardened and tempered		300	1013	P12	E M	656	0.012	0.016
		Hardened and tempered		380	1282	P13	E M	492	0.012	0.016
	Stainless steel	Ferritic/martensitic, annealed		200	675	P14	E M	656	0.010	0.014
Martensitic, heat-treated		330	1114	P15	E M	492	0.010	0.014		
M	Stainless steel	Austenitic, quench hardened		200	675	M1	E	656	0.008	0.012
		Austenitic, precipitation hardened (PH)		300	1013	M2	E	492	0.008	0.012
		Austenitic/ferritic, duplex		230	778	M3	E	262	0.008	0.012
K	Malleable cast iron	Ferritic		200	400	K1	E M	656	0.012	0.016
		Pearlitic		260	700	K2	E M	656	0.012	0.016
	Grey cast iron	Low tensile strength		180	200	K3	E M	820	0.012	0.016
		High tensile strength/austenitic		245	350	K4	E M	656	0.012	0.016
	Cast iron with spheroidal graphite	Ferritic		155	400	K5	E M	656	0.012	0.016
		Pearlitic		265	700	K6	E M	656	0.012	0.016
		GGV (CGI)		230	400	K7	E M	656	0.012	0.016
N	Wrought aluminium alloys	Not hardenable		30	–	N1	E M	656	0.012	0.016
		Hardenable, hardened		100	343	N2	E M	656	0.012	0.016
	Cast aluminium alloys	≤ 12% Si, not hardenable		75	260	N3	E M	656	0.012	0.016
		≤ 12% Si, hardenable, hardened		90	314	N4	E M	656	0.012	0.016
		> 12% Si, not hardenable		130	447	N5	E M	656	0.012	0.016
	Magnesium-based alloys ³			70	250	N6	A	820	0.012	0.016
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	343	N7	E M	656	0.012	0.016
		Brass, bronze, red brass		90	314	N8	E M	656	0.012	0.016
Cu alloys, short-chipping		110	382	N9	E M	656	0.012	0.016		
High tensile, Ampco		300	1013	N10	E M	164	0.012	0.016		
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	E	131	0.010	0.010
			Hardened	280	943	S2	E	82	0.006	0.006
		Ni- or Co-based	Annealed	250	839	S3	E	131	0.010	0.010
			Hardened	350	1177	S4	E	82	0.006	0.006
			Cast	320	1076	S5	E	98	0.008	0.008
	Titanium alloys	Pure titanium		200	675	S6	E	131	0.010	0.010
		α and β alloys, hardened		375	1262	S7	E	131	0.010	0.010
		β alloys		410	1396	S8	E	98	0.008	0.008
	Tungsten alloys			300	1013	S9	E	131	0.010	0.010
	Molybdenum alloys			300	1013	S10	E	131	0.010	0.010
H	Hardened steel	Hardened and tempered		50 HRC	–	H1	M A	148	0.008	0.012
		Hardened and tempered		55 HRC	–	H2	M			
		Hardened and tempered		60 HRC	–	H3	M			
	Hardened cast iron		Hardened and tempered		55 HRC	–	H4	M A	148	0.008
O	Thermoplastics		Without abrasive fillers			O1	E M	656	0.012	0.016
	Thermosets		Without abrasive fillers			O2	E M	492	0.012	0.016
	Plastic, glass-fibre-reinforced		GFRP			O3	E M	164	0.012	0.016
	Plastic, carbon-fibre-reinforced		CFRP			O4	E M	164	0.012	0.016
	Plastic, aramid-fibre-reinforced		AFRP			O5	E M	164	0.012	0.016
	Graphite (technical)				65 Shore		O6	E M	656	0.012

¹ The classification of the machining groups can be found from page B 1174 onwards in the General Catalogue 2017.

³ Water-miscible coolants must not be used when machining magnesium-based alloys.

Machining must be performed synchronously. The specified cutting data are target values under good machining conditions.

Remedy for vibration:


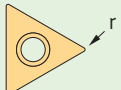
- Use indexable inserts with D61 geometry
- Reduce v_c by 25–50% and/or increase f_z by 25–50%
- Radial cutting pass

T2710/T2711/T2712: One radial cut is recommended

T2713: Radial cutting pass may be required

Radius correction values for thread milling Walter T2710/T2711/T2712/T2713


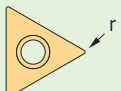
Metric thread in accordance with DIN 13

Thread nominal diameter D_N [mm]			Radius correction		
			Minimum dimension for H tolerances [mm]	Middle of the tolerance range for a 6H tolerance [mm]	Middle of the tolerance range for a 6G tolerance [mm]
≥ 20	1.5	0.1	-0.05	-0.10	-0.12
	2	0.1	-0.10	-0.15	-0.17
	2.5	0.1	-0.15	-0.20	-0.22
	3	0.2	-0.10	-0.16	-0.19
	3.5	0.2	-0.15	-0.22	-0.24
	4	0.2	-0.20	-0.27	-0.30
	4.5	0.2	-0.25	-0.33	-0.36
	5*	0.2	-0.30	-0.38	-0.42
		0.4	-0.10	-0.18	-0.22
	5.5	0.4	-0.15	-0.24	-0.27
	6	0.4	-0.20	-0.29	-0.33
	8	0.4	-0.40	-0.51	-0.56
10	0.4	-0.59	-0.71	-	

Based on the pitch diameter tolerances in accordance with DIN ISO 965-1. Valid from M20.

* IMPORTANT: For P = 5 mm, we recommend an insert radius $r = 0.2$ mm. Please take this into account when selecting the radius correction values.


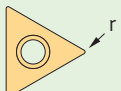
UN/UNC/UNF/UNEF thread in accordance with ASME B1.1

Thread nominal diameter D_N [inches]			Radius correction		
			Minimum dimension [mm]	Middle of the tolerance range for a 2B tolerance [mm]	Middle of the tolerance range for a 3B tolerance [mm]
≥ 7/8"	18	0.1	-0.04	-0.08	-0.07
	16	0.1	-0.06	-0.10	-0.09
	14	0.1	-0.08	-0.12	-0.11
	12	0.1	-0.11	-0.16	-0.15
	9	0.1	-0.18	-0.23	-0.22
	8	0.2	-0.12	-0.17	-0.16
	7	0.2	-0.16	-0.22	-0.21
	6	0.2	-0.22	-0.29	-0.27
	5*	0.2	-0.31	-0.38	-0.36
		0.4	-0.11	-0.18	-0.16
	4.5	0.4	-0.16	-0.24	-0.22
	4	0.4	-0.23	-0.32	-0.30

Based on the pitch diameter tolerances in accordance with ASME B1.1. Valid from UNC 7/8.

* IMPORTANT: For P = 5 TPI, we recommend an insert radius $r = 0.2$ mm. Please take this into account when selecting the radius correction values.

Pipe thread G (BSP) in accordance with DIN EN ISO 228

Thread nominal diameter D_N [inches]			Radius correction	
			Minimum dimension [mm]	Middle of the tolerance range [mm]
≥ 1" and < 2 1/4"	11	0.2	-0.11	-0.16
≥ 2 1/4"	11	0.2	-0.11	-0.17

Based on the pitch diameter tolerances in accordance with DIN ISO 228. Valid from $D_N 1"$.

If the measured tool radius is reduced by the value stated in the "Minimum dimension" column, the thread is still in the lower tolerance range after machining and is usually too narrow. If the thread has to be milled to bring it to the middle of the tolerance range, the measured tool radius must be reduced by the value stated in the "Middle of the tolerance range" column. The thread is generally true to gauge after machining. Radius correction values can also be determined in Walter GPS.

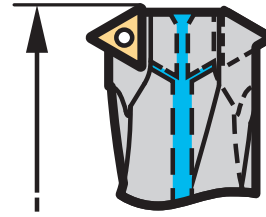
Example of an M36 - 6H thread	P	4 mm
	r	0.2 mm
Measured tool radius	14.53 mm	
Radius correction in the middle of the 6H tolerance range	- 0.27 mm	
Tool radius to be used	= 14.26 mm	

Application information

Walter T2710/T2711/T2712/T2713

TOOL GAUGING

If the CNC program is created using Walter GPS, the tool must be gauged as shown in the diagram on the right. The thread depth that was entered is then reached.



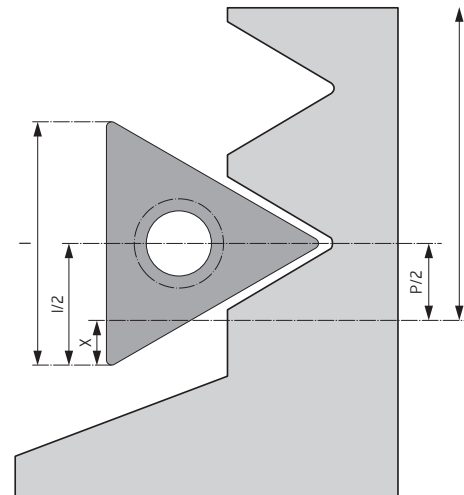
UNUSABLE LENGTH

The thread length includes the last thread ridge plus half a pitch. Since $l/2$ is greater than $P/2$, this results in an "unusable length" (X), which must be taken into consideration during programming.

This is calculated as half of the insert length ($l/2$) minus half of the thread pitch ($P/2$). When creating CNC programs, Walter GPS takes the "unusable length" into account.

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

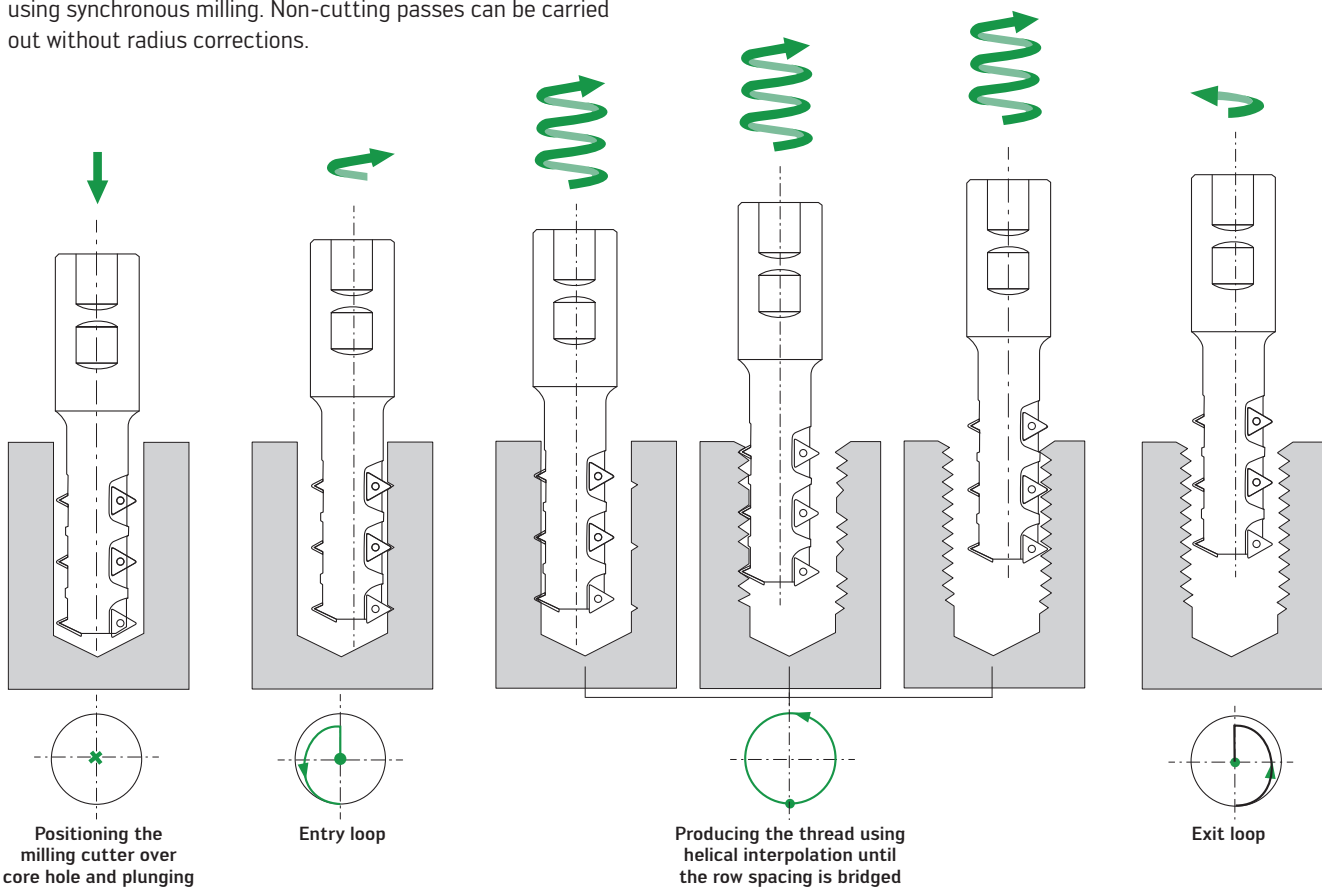
$$\text{Unusable length } X = l/2 - P/2 = \frac{9.34 \text{ mm}}{2} - \frac{4 \text{ mm}}{2} = 2.67 \text{ mm}$$



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

THE STRATEGY

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

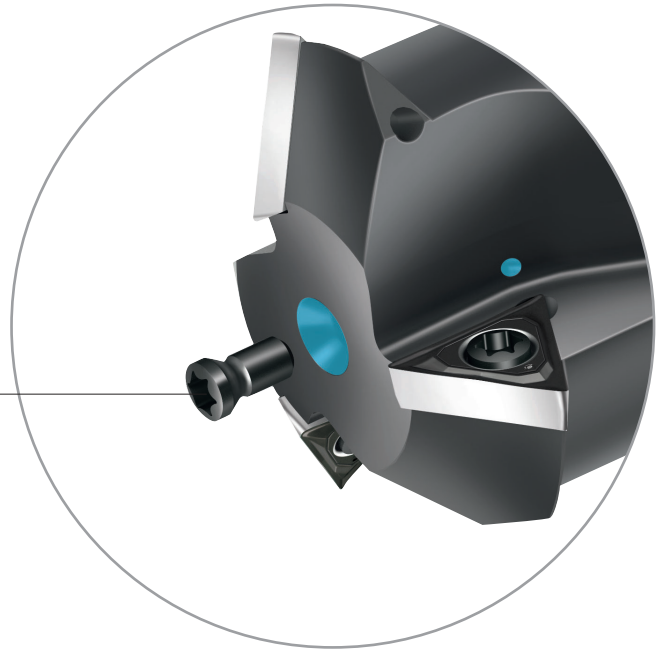


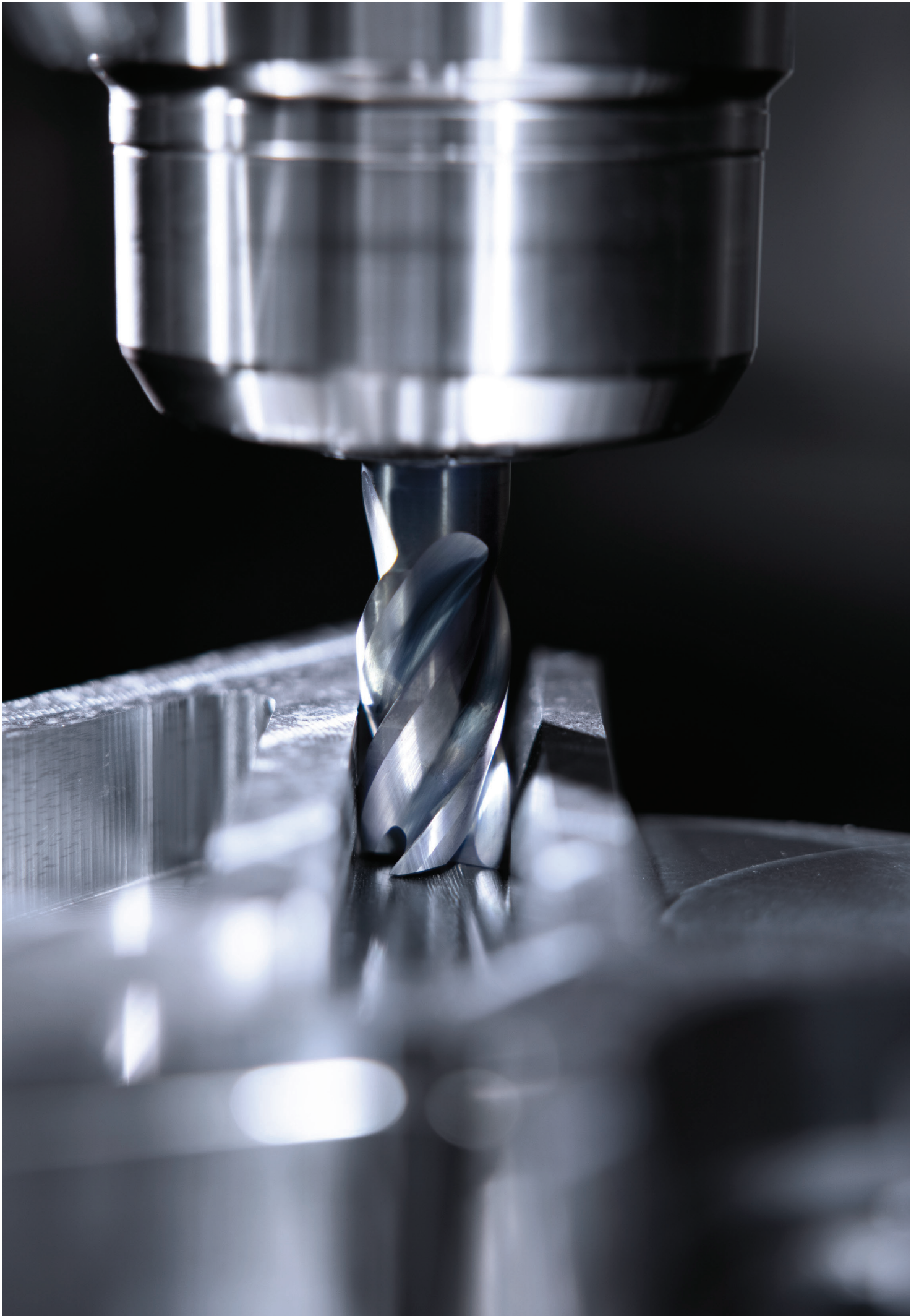
Application information

Adjustable coolant supply

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

Coolant screw





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Technical information	Cutting data	384
	Feed determination	388
	Application information	392
	Notes on high-speed cutting	400

Product range overview of solid carbide milling tools

Shoulder milling cutters

Machining		
Helix angle	50°	
Designation	MD128 Supreme	MC128 Advance
Dia. range [mm]	6–25	2–25
Dia. range (in)	1/4–3/4	1/4–3/4
Z	6–8	4–8
Corner radius [mm]	0–4	0–6.35
Page	255	256

Circle segment milling cutters

Machining		
Helix angle	30°	
Designation	MD838 Supreme	MD839 Supreme
Dia. range [mm]	1–8	2–8
Z	4–8	4
Corner radius [mm]	0.5–4	1–4
Page	267	268

Shoulder/slot milling cutters

Machining					
Helix angle	30°	45°	40°		35° / 38°
Designation	MD266 Supreme	MC267 Advance	MD377 Supreme	MC377 Advance	MC230 Advance Xill-tec™
Dia. range [mm]	2–25	1–20	6–25	2–25	2–25
Z	2–3	2–3	5	3–4	4
Corner radius [mm]	0–4	0–4	0.5–6.35	0–4	0–4
Page	258	260	262	263	264

Designation key – Solid carbide and PCD milling tools

Example:

M	C	3	26	–	12.0	A	4	B	200	A	–	W	K	40	TF
1	2	3	4	5	6	7	8	9	10	11	Grade				

1	2	3	4
Tool group	Generation	Tool type	Tool type
M Milling	P Tools with brazed cutting edge	0 Face milling cutter, high-feed milling cutter 1 Shoulder milling cutter 2 Shoulder/slot/helical milling cutter 3 Shoulder/slot/helical milling cutter Helix angle $\geq 40^\circ$ 4 Ball nose mill/copy milling cutter 5 Profiling cutter 7 Routing cutter/circular interpolation mill 8 Conical/circle segment milling cutter	00 Universal 0° helix angle, 60° chamfer milling cutter 01 Universal 0° helix angle, 90° chamfer milling cutter 02 Universal 0° helix angle, 120° chamfer milling cutter 03 Universal 0° helix angle, quadrant profiling cutter 04 Universal 0° helix angle, front/back deburrer 11 Universal 30° helix angle, type N 12 Universal 30° helix angle, type HSC 13 Universal 30° helix angle, type HSC, long version 16 Universal 30° helix angle, type 30 19 Universal 40° helix angle, knurled profile with internal coolant 20 Universal 40° helix angle, knurled profile 21 Universal 45° helix angle, short version 22 Universal 45° helix angle, type N 24 Universal 45° helix angle, type 45 25 Universal 50° helix angle, high-feed 26 Universal 50° helix angle, unequal groove depth, differential pitch 28 Universal 50° helix angle, type N, multipurpose cutter 29 Universal 60° helix angle, type N, multipurpose cutter 30 Universal Helix angle 35°/38° UNI HPC geometry 32 Universal 35° helix angle 33 Universal 35° helix angle + chip breaker 38 Universal 30° helix angle, conical circle segment milling cutter 39 Universal 30° helix angle, tangential circle segment milling cutter 41 ISO P 50° helix angle, HPC, differential pitch 51 ISO M 35°/38° helix angle, without internal coolant 60 ISO N PCD brazed, continuous cutting edge 65 ISO N 30° helix angle, AI geometry, RAPAX G30 roughing profile, axial internal coolant 66 ISO N 30°–35° helix angle, AI geometry 67 ISO N 45° helix angle, AI geometry 77 ISO S 40° helix angle, titanium 80 ISO H 30° helix angle, HSC, type H = 30° helix angle, HSC, type H 81 ISO H 30° helix angle, mini HSC T, type H = 30° helix angle, mini HSC T, type H 82 ISO H 30° helix angle, mini HSC R, type H = 30° helix angle, mini HSC R, type H 83 ISO H 30° helix angle, multi-flute, type H = 30° helix angle, multi-flute, type H 87 ISO H 50° helix angle, multi-flute, type H = 50° helix angle, multi-flute, type H 88 ISO H 50° helix angle, HPC, type H = 50° helix angle, HPC, type H 89 ISO H 50° helix angle, high-feed, type H = 50° helix angle, high-feed, type H
5	6	7	
Delimiters	Cutting diameter	Shank type	
– Metric · Inch		A Parallel shank B Bore E ConeFit T ScrewFit W Weldon shank	
8	9	10	11
Number of teeth	Design standard	Corner radius	Variant
	A DIN 6527 K B DIN 6527 L C ANSI stub D ANSI standard L P standard L M P standard mini P P standard S P standard S X P standard XL		A I3 XS B I3 S / 2 × D _c * C I3 M / 3 × D _c * D I3 L / 4 × D _c * E I3 XL / 5 × D _c * F I3 XXL / 6 × D _c * G I3 XXXL / 8 × D _c * H I3 XXXXL / 10 × D _c * J Lc S / 3 × D _c * K Lc M / 4 × D _c * L Lc L / 5 × D _c * V Conical neck $\alpha \leq 3^\circ$ W Conical neck $\alpha \leq 6^\circ$ X Conical neck $\alpha \leq 12^\circ$

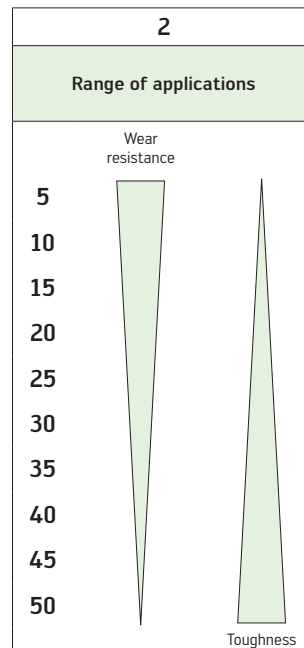
* Standard values

Grade designation key for solid carbide cutting tool materials

Example:

W	K	40	TF
Walter	1	2	3

1
Substrate
B
J
K



3
Coating
TF TiAlN
UU Uncoated
CA CrN
RC TiAlN + AlTi
TZ AlTiN + ZrN
ED AlCrN
TG TiAlSiN
RD AlTiN + ZrN
RA TiAlN + TiAl
EA AlCN

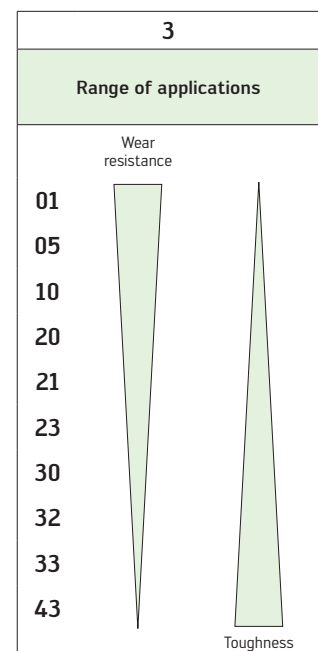
Grade designation key for PCD cutting tool materials

Example:

W	D	N	20
Walter	1	2	3

1
Cutting tool material
D Diamond

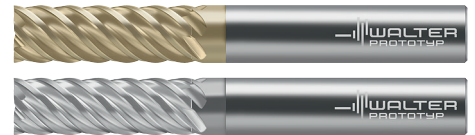
2
Primary application
P Steel
M Stainless steel
K Cast iron
N NF metals
S Materials with difficult cutting properties
H Hard materials



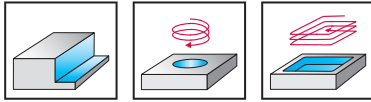
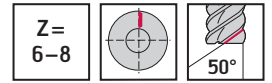
C 1

Solid carbide shoulder milling cutters

MD128 Supreme



- Type N 50



	P	M	K	N	S	H	O
WJ30RA		●●			●●		
WJ30RD	●●		●				

PROTOTYP TOOLS STANDARD		D _c h10 mm	L _c mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30RA	WJ30RD
Shank DIN 6535 HA	Designation								
	MD128-06.0A6LJ-	6	18	65	29	6	6	☺	☹
	MD128-08.0A6LJ-	8	24	68	32	8	6	☺	☹
	MD128-10.0A6LJ-	10	30	80	40	10	6	☺	☹
	MD128-12.0A6LJ-	12	36	93	48	12	6	☺	☹
	MD128-16.0A6LJ-	16	48	115	67	16	6	☺	☹
	MD128-20.0A8LJ-	20	60	125	75	20	8	☺	☹
	MD128-25.0A8LJ-	25	75	150	94	25	8	☺	☹

Ordering example for the WJ30RA grade: MD128-06.0A6LJ-WJ30RA

PROTOTYP TOOLS STANDARD		D _c h9 mm	R mm	L _c mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30RA	WJ30RD
Shank DIN 6535 HA	Designation									
	MD128-06.0A6L050J-	6	0.5	18	65	29	6	6	☺	☹
	MD128-08.0A6L050J-	8	0.5	24	68	32	8	6	☺	☹
	MD128-10.0A6L050J-	10	0.5	30	80	40	10	6	☺	☹
	MD128-10.0A6L100J-	10	1	30	80	40	10	6	☺	☹
	MD128-12.0A6L050J-	12	0.5	36	93	48	12	6	☺	☹
	MD128-12.0A6L100J-	12	1	36	93	48	12	6	☺	☹
	MD128-12.0A6L200J-	12	2	36	93	48	12	6	☺	☹
	MD128-16.0A6L050J-	16	0.5	48	115	67	16	6	☺	☹
	MD128-16.0A6L100J-	16	1	48	115	67	16	6	☺	☹
	MD128-16.0A6L200J-	16	2	48	115	67	16	6	☺	☹
	MD128-20.0A8L100J-	20	1	60	125	75	20	8	☺	☹
	MD128-20.0A8L400J-	20	4	60	125	75	20	8	☺	☹
	MD128-25.0A8L100J-	25	1	75	150	94	25	8	☺	☹
MD128-25.0A8L400J-	25	4	75	150	94	25	8	☺	☹	

Ordering example for the WJ30RA grade: MD128-06.0A6L050J-WJ30RA

WALTER SELECT

Best tool for

☺
Good

⚖️
Average

☹️
Poor

machining conditions

●● Primary application

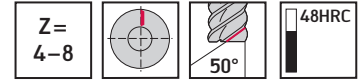
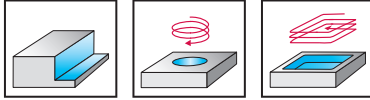
● Other application

Solid carbide shoulder milling cutters

MC128 Advance /
 MC128 Advance



- Type N 50



	P	M	K	N	S	H	O
WJ30TF	●	●	●	●	●		

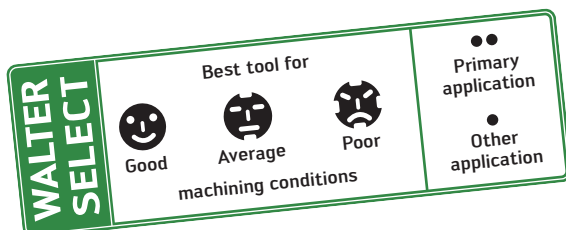
DIN 6527 L		D _c h10 mm	L _c mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30TF
Shank DIN 6535 HA	MC128-02.0A4B-	2	7	57	21	6	4	●
	MC128-03.0A4B-	3	8	57	21	6	4	●
	MC128-04.0A4B-	4	11	57	21	6	4	●
	MC128-05.0A5B-	5	13	57	21	6	5	●
	MC128-06.0A6B-	6	13	57	21	6	6	●
	MC128-08.0A6B-	8	19	63	27	8	6	●
	MC128-10.0A6B-	10	22	72	32	10	6	●
	MC128-12.0A6B-	12	26	83	38	12	6	●
	MC128-16.0A6B-	16	32	92	44	16	6	●
	MC128-20.0A8B-	20	38	104	54	20	8	●
	MC128-25.0A8B-	25	45	121	65	25	8	●

Ordering example for the WJ30TF grade: MC128-02.0A4B-WJ30TF

DIN 6527 L		D _c h9 mm	R mm	L _c mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30TF
Shank DIN 6535 HA	MC128-06.0A6B050-	6	0.5	13	57	21	6	6	●
	MC128-08.0A6B050-	8	0.5	19	63	27	8	6	●
	MC128-08.0A6B100-	8	1	19	63	27	8	6	●
	MC128-10.0A6B050-	10	0.5	22	72	32	10	6	●
	MC128-10.0A6B100-	10	1	22	72	32	10	6	●
	MC128-10.0A6B200-	10	2	22	72	32	10	6	●
	MC128-12.0A6B050-	12	0.5	26	83	38	12	6	●
	MC128-12.0A6B100-	12	1	26	83	38	12	6	●
	MC128-12.0A6B200-	12	2	26	83	38	12	6	●
	MC128-12.0A6B300-	12	3	26	83	38	12	6	●
	MC128-16.0A6B050-	16	0.5	32	92	44	16	6	●
	MC128-16.0A6B100-	16	1	32	92	44	16	6	●
	MC128-16.0A6B200-	16	2	32	92	44	16	6	●
	MC128-16.0A6B300-	16	3	32	92	44	16	6	●
	MC128-20.0A8B100-	20	1	38	104	54	20	8	●
	MC128-20.0A8B200-	20	2	38	104	54	20	8	●
	MC128-20.0A8B300-	20	3	38	104	54	20	8	●
	MC128-20.0A8B400-	20	4	38	104	54	20	8	●

Ordering example for the WJ30TF grade: MC128-06.0A6B050-WJ30TF

Continued



Continued

STANDARD		D_c h10 Inch/No.	L_c inch	l_1 inch	l_4 inch	d_1 h6 inch	Z	WJ30TF
Shank DIN 6535 HA	MC128.6.35A6C-	1/4"	0.500	2.500	1.083	0.250	6	⊗
	MC128.9.53A6C-	3/8"	0.500	2.500	0.937	0.375	6	⊗
Shank DIN 6535 HA	MC128.9.53A6D-	3/8"	1.000	3.000	1.437	0.375	6	⊗
	MC128.12.7A6DI-	1/2"	1.000	3.500	1.717	0.500	6	⊗
	MC128.12.7A6D-	1/2"	1.250	3.500	1.717	0.500	6	⊗
	MC128.15.9A6DI-	5/8"	1.250	4.000	2.094	0.625	6	⊗
	MC128.15.9A6D-	5/8"	1.625	4.000	2.094	0.625	6	⊗
	MC128.19.1A8D-	3/4"	1.625	4.500	2.469	0.750	8	⊗
Shank DIN 6535 HA	MC128.6.35A6L-	1/4"	1.000	3.000	1.583	0.250	6	⊗
	MC128.19.1A8L-	3/4"	2.250	5.000	2.969	0.750	8	⊗

Ordering example for the WJ30TF grade: MC128.6.35A6C-WJ30TF

STANDARD		D_c h9 Inch/No.	R inch	L_c inch	l_1 inch	l_4 inch	d_1 h6 inch	Z	WJ30TF
Shank DIN 6535 HA	MC128.6.35A6D038-	1/4"	0.015	0.625	2.500	1.083	0.250	6	⊗
	MC128.6.35A6D076-	1/4"	0.030	0.625	2.500	1.083	0.250	6	⊗
	MC128.9.53A6D038-	3/8"	0.015	1.000	3.000	1.437	0.375	6	⊗
	MC128.9.53A6D076-	3/8"	0.030	1.000	3.000	1.437	0.375	6	⊗
	MC128.12.7A6D076-	1/2"	0.030	1.250	3.500	1.717	0.500	6	⊗
	MC128.12.7A6D152-	1/2"	0.060	1.250	3.500	1.717	0.500	6	⊗
	MC128.12.7A6D228-	1/2"	0.090	1.250	3.500	1.717	0.500	6	⊗
	MC128.12.7A6D318-	1/2"	0.125	1.250	3.500	1.717	0.500	6	⊗
	MC128.15.9A6D076-	5/8"	0.030	1.625	4.000	2.094	0.625	6	⊗
	MC128.15.9A6D152-	5/8"	0.060	1.625	4.000	2.094	0.625	6	⊗
	MC128.19.1A8D076-	3/4"	0.030	1.750	4.500	2.469	0.750	8	⊗
	MC128.19.1A8D318-	3/4"	0.125	1.750	4.500	2.469	0.750	8	⊗
	MC128.19.1A8D635-	3/4"	0.250	1.750	4.500	2.469	0.750	8	⊗

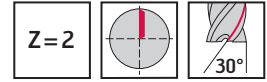
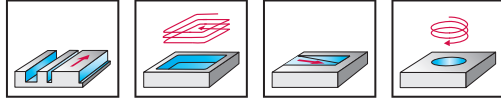
Ordering example for the WJ30TF grade: MC128.6.35A6D038-WJ30TF

Solid carbide shoulder/slot milling cutters

MD266 Supreme



- Long reach



	P	M	K	N	S	H	O
WJ30UU				●●			

PROTOTYP TOOLS STANDARD		D _c mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30UU
Shank DIN 6535 HA 	MD266-02.0A2BE-	2	6	10	1.9	57	20	6	2	☺
	MD266-03.0A2BD-	3	7.5	12	2.9	57	20	6	2	☺
	MD266-04.0A2BD-	4	8	16	3.8	57	20	6	2	☺
	MD266-05.0A2LD-	5	7.5	20	4.8	65	26	6	2	☺
	MD266-05.0A2BC-	5	10	18	4.8	57	20	6	2	☺
Shank DIN 6535 HA 	MD266-06.0A2LD-	6	10.5	25	5.7	65	26	6	2	☺
	MD266-08.0A2LE-	8	12	42	7.6	80	43	8	2	☺
	MD266-10.0A2LD-	10	15	48	9.5	90	49	10	2	☺
	MD266-10.0A2BC-	10	20	30	9.5	72	31	10	2	☺
	MD266-12.0A2LD-	12	18	53	11.4	100	54	12	2	☺
	MD266-16.0A2LD-	16	24	65	15.2	115	66	16	2	☺
	MD266-20.0A2LC-	20	25	73	19	125	74	20	2	☺

Ordering example for the WJ30UU grade: MD266-02.0A2BE-WJ30UU

PROTOTYP TOOLS STANDARD		D _c mm	R mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30UU
Shank DIN 6535 HA 	MD266-02.0A2B020E-	2	0.2	6	10	1.9	57	20	6	2	☺
	MD266-03.0A2B030D-	3	0.3	8	12	2.9	57	20	6	2	☺
	MD266-04.0A2B030D-	4	0.3	8	16	3.8	57	20	6	2	☺
	MD266-05.0A2L050D-	5	0.5	8	20	4.8	65	26	6	2	☺
	MD266-05.0A2B050C-	5	0.5	10	18	4.8	57	20	6	2	☺
Shank DIN 6535 HA 	MD266-06.0A2L050D-	6	0.5	11	25	5.7	65	26	6	2	☺
	MD266-06.0A2L100D-	6	1	11	25	5.7	65	26	6	2	☺
	MD266-08.0A2L050E-	8	0.5	12	42	7.6	80	43	8	2	☺
	MD266-08.0A2L100E-	8	1	12	42	7.6	80	43	8	2	☺
	MD266-08.0A2L200E-	8	2	12	42	7.6	80	43	8	2	☺
	MD266-10.0A2L050D-	10	0.5	15	48	9.5	90	49	10	2	☺
	MD266-10.0A2B050C-	10	0.5	20	30	9.5	72	31	10	2	☺
	MD266-10.0A2L100D-	10	1	15	48	9.5	90	49	10	2	☺
	MD266-10.0A2B100C-	10	1	20	30	9.5	72	31	10	2	☺
	MD266-10.0A2L200D-	10	2	15	48	9.5	90	49	10	2	☺
	MD266-10.0A2B200C-	10	2	20	30	9.5	72	31	10	2	☺
	MD266-12.0A2L050D-	12	0.5	18	53	11.4	100	54	12	2	☺
	MD266-12.0A2L200D-	12	2	18	53	11.4	100	54	12	2	☺
	MD266-12.0A2L300D-	12	3	18	53	11.4	100	54	12	2	☺
	MD266-16.0A2L050D-	16	0.5	24	65	15.2	115	66	16	2	☺
	MD266-16.0A2L200D-	16	2	24	65	15.2	115	66	16	2	☺
	MD266-16.0A2L300D-	16	3	24	65	15.2	115	66	16	2	☺
MD266-16.0A2L400D-	16	4	24	65	15.2	115	66	16	2	☺	
MD266-20.0A2L050C-	20	0.5	25	73	19	125	74	20	2	☺	
MD266-20.0A2L300C-	20	3	25	73	19	125	74	20	2	☺	
MD266-20.0A2L400C-	20	4	25	73	19	125	74	20	2	☺	

Ordering example for the WJ30UU grade: MD266-02.0A2B020E-WJ30UU

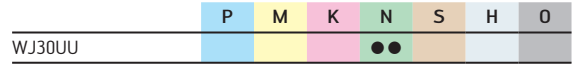
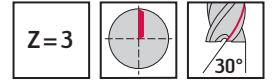
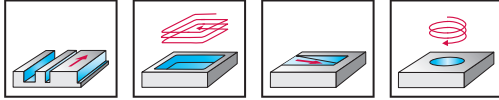
☺ ☺ ☺ / ★ New addition to the product range

Solid carbide shoulder/slot milling cutters

MD266 Supreme



– Long reach



PROTOTYP TOOLS STANDARD		D _c mm	R mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30UU
Shank DIN 6535 HA											
	MD266-10.0A3L050D-	10	0.5	15	48	9.5	90	49	10	3	☺
	MD266-10.0A3B050C-	10	0.5	20	30	9.5	72	31	10	3	☺
	MD266-10.0A3L100D-	10	1	15	48	9.5	90	49	10	3	☺
	MD266-10.0A3B100C-	10	1	20	30	9.5	72	31	10	3	☺
	MD266-10.0A3L200D-	10	2	15	48	9.5	90	49	10	3	☺
	MD266-10.0A3B200C-	10	2	20	30	9.5	72	31	10	3	☺
	MD266-12.0A3X050E-	12	0.5	12	68	11.4	115	69	12	3	☺
	MD266-12.0A3L050D-	12	0.5	18	53	11.4	100	54	12	3	☺
	MD266-12.0A3B050C-	12	0.5	24	36	11.4	83	37	12	3	☺
	MD266-12.0A3X200E-	12	2	12	68	11.4	115	69	12	3	☺
	MD266-12.0A3L200D-	12	2	18	53	11.4	100	54	12	3	☺
	MD266-12.0A3B200C-	12	2	24	36	11.4	83	37	12	3	☺
	MD266-12.0A3X300E-	12	3	12	68	11.4	115	69	12	3	☺
	MD266-12.0A3L300D-	12	3	18	53	11.4	100	54	12	3	☺
	MD266-12.0A3B300C-	12	3	24	36	11.4	83	37	12	3	☺
	MD266-16.0A3X050E-	16	0.5	16	80	15.2	130	81	16	3	☺
	MD266-16.0A3L050D-	16	0.5	24	65	15.2	115	66	16	3	☺
	MD266-16.0A3B050C-	16	0.5	32	42	15.2	92	43	16	3	☺
	MD266-16.0A3X200E-	16	2	16	80	15.2	130	81	16	3	☺
	MD266-16.0A3L200D-	16	2	24	65	15.2	115	66	16	3	☺
	MD266-16.0A3B200C-	16	2	32	42	15.2	92	43	16	3	☺
	MD266-16.0A3X300E-	16	3	16	80	15.2	130	81	16	3	☺
	MD266-16.0A3L300D-	16	3	24	65	15.2	115	66	16	3	☺
	MD266-16.0A3B300C-	16	3	32	42	15.2	92	43	16	3	☺
	MD266-16.0A3X400E-	16	4	16	80	15.2	130	81	16	3	☺
	MD266-16.0A3L400D-	16	4	24	65	15.2	115	66	16	3	☺
	MD266-16.0A3B400C-	16	4	32	42	15.2	92	43	16	3	☺
	MD266-20.0A3X050D-	20	0.5	20	88	19	140	89	20	3	☺
	MD266-20.0A3L050C-	20	0.5	25	73	19	125	74	20	3	☺
	MD266-20.0A3X300D-	20	3	20	88	19	140	89	20	3	☺
MD266-20.0A3L300C-	20	3	25	73	19	125	74	20	3	☺	
MD266-20.0A3X400D-	20	4	20	88	19	140	89	20	3	☺	
MD266-20.0A3L400C-	20	4	25	73	19	125	74	20	3	☺	
MD266-25.0A3X050C-	25	0.5	25	92	23.8	150	93	25	3	☺	
MD266-25.0A3L050B-	25	0.5	38	72	23.8	130	73	25	3	☺	
MD266-25.0A3B050B-	25	0.5	44	52	23.8	110	53	25	3	☺	
MD266-25.0A3X300C-	25	3	25	92	23.8	150	93	25	3	☺	
MD266-25.0A3L300B-	25	3	38	72	23.8	130	73	25	3	☺	
MD266-25.0A3B300B-	25	3	44	52	23.8	110	53	25	3	☺	
MD266-25.0A3X400C-	25	4	25	92	23.8	150	93	25	3	☺	
MD266-25.0A3L400B-	25	4	38	72	23.8	130	73	25	3	☺	
MD266-25.0A3B400B-	25	4	44	52	23.8	110	53	25	3	☺	

Ordering example for the WJ30UU grade: MD266-10.0A3L050D-WJ30UU

WALTER SELECT

Best tool for

☺
Good

☹
Average

☹
Poor

machining conditions

●● Primary application

● Other application

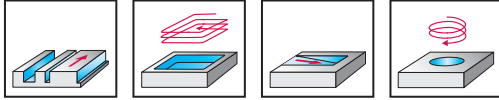
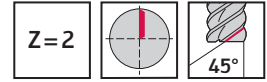
C 1

Solid carbide shoulder/slot milling cutters

MC267 Advance



– Type Al 45



	P	M	K	N	S	H	O
WJ30UU				●●			

DIN 6527 L

	Designation	D _c mm	L _c mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30UU
Shank DIN 6535 HA 	MC267-01.0A2B-	1	3	57	21	6	2	☺
	MC267-01.5A2B-	1.5	3	57	21	6	2	☺
	MC267-02.0A2B-	2	6	57	21	6	2	☺
	MC267-02.5A2B-	2.5	7	57	21	6	2	☺
	MC267-03.0A2B-	3	7	57	21	6	2	☺
	MC267-03.5A2B-	3.5	7	57	21	6	2	☺
	MC267-04.0A2B-	4	8	57	21	6	2	☺

Ordering example for the WJ30UU grade: MC267-01.0A2B-WJ30UU

DIN 6527 L

	Designation	D _c mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30UU
Shank DIN 6535 HA 	MC267-01.0A2BC-	1	3	7	1.0	57	21	6	2	☺
	MC267-01.5A2BC-	1.5	3	7	1.4	57	21	6	2	☺
	MC267-02.0A2BC-	2	6	10	1.9	57	21	6	2	☺
	MC267-02.5A2BC-	2.5	7	10	2.4	57	21	6	2	☺
	MC267-03.0A2BC-	3	7	10	2.9	57	21	6	2	☺
	MC267-03.5A2BC-	3.5	7	15	3.3	57	21	6	2	☺
	MC267-04.0A2BC-	4	8	15	3.8	57	21	6	2	☺
	MC267-05.0A2BC-	5	10	16	4.8	57	21	6	2	☺
	MC267-06.0A2BC-	6	10	19	5.7	57	21	6	2	☺
	MC267-08.0A2BC-	8	16	25	7.6	63	27	8	2	☺
	MC267-10.0A2BC-	10	19	30	9.5	72	32	10	2	☺
	MC267-12.0A2BC-	12	22	36	11.4	83	38	12	2	☺
	MC267-16.0A2BC-	16	26	42	15.2	92	44	16	2	☺
	MC267-20.0A2BC-	20	32	52	19	104	54	20	2	☺

Ordering example for the WJ30UU grade: MC267-01.0A2BC-WJ30UU

DIN 6527 L

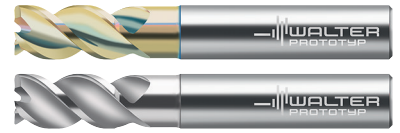
	Designation	D _c mm	R mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30UU
Shank DIN 6535 HA 	MC267-05.0A2B050C-	5	0.5	10	16	4.8	57	21	6	2	☺
	MC267-06.0A2B050C-	6	0.5	10	19	5.7	57	21	6	2	☺
	MC267-08.0A2B050C-	8	0.5	16	25	7.6	63	27	8	2	☺
	MC267-10.0A2B050C-	10	0.5	19	30	9.5	72	32	10	2	☺
	MC267-10.0A2B100C-	10	1	19	30	9.5	72	32	10	2	☺
	MC267-10.0A2B200C-	10	2	19	30	9.5	72	32	10	2	☺
	MC267-12.0A2B050C-	12	0.5	22	36	11.4	83	38	12	2	☺
	MC267-12.0A2B100C-	12	1	22	36	11.4	83	38	12	2	☺
	MC267-12.0A2B200C-	12	2	22	36	11.4	83	38	12	2	☺
	MC267-12.0A2B300C-	12	3	22	36	11.4	83	38	12	2	☺
	MC267-16.0A2B050C-	16	0.5	26	42	15.2	92	44	16	2	☺
	MC267-16.0A2B300C-	16	3	26	42	15.2	92	44	16	2	☺
	MC267-16.0A2B400C-	16	4	26	42	15.2	92	44	16	2	☺
	MC267-20.0A2B050C-	20	0.5	32	52	19	104	54	20	2	☺
	MC267-20.0A2B300C-	20	3	32	52	19	104	54	20	2	☺
	MC267-20.0A2B400C-	20	4	32	52	19	104	54	20	2	☺

Ordering example for the WJ30UU grade: MC267-05.0A2B050C-WJ30UU

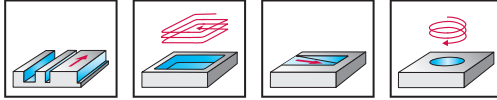
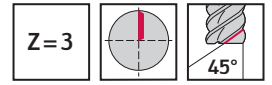
/ ★ New addition to the product range

Solid carbide shoulder/slot milling cutters

MC267 Advance



- Type AI 45



	P	M	K	N	S	H	O
WJ30CA				••			
WJ30UU				••			

DIN 6527 L		D _c mm	R mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h6 mm	Z	WJ30CA	WJ30UU
Shank DIN 6535 HA	MC267-01.0A3B020C-	1	0.2	3	7	1.0	57	21	6	3	☹	☹
	MC267-02.0A3B020C-	2	0.2	6	10	1.9	57	21	6	3	☹	☹
	MC267-03.0A3B020C-	3	0.2	7	10	2.9	57	21	6	3	☹	☹
	MC267-04.0A3B030C-	4	0.3	8	15	3.8	57	21	6	3	☹	☹
	MC267-05.0A3B050C-	5	0.5	10	16	4.8	57	21	6	3	☹	☹
	MC267-06.0A3B050C-	6	0.5	10	19	5.7	57	21	6	3	☹	☹
	MC267-08.0A3B050C-	8	0.5	16	25	7.6	63	27	8	3	☹	☹
	MC267-10.0A3B050C-	10	0.5	19	30	9.5	72	32	10	3	☹	☹
	MC267-12.0A3B050C-	12	0.5	22	36	11.4	83	38	12	3	☹	☹
	MC267-16.0A3B050C-	16	0.5	26	42	15.2	92	44	16	3	☹	☹
MC267-20.0A3B050C-	20	0.5	32	52	19	104	54	20	3	☹	☹	

Ordering example for the WJ30CA grade: MC267-01.0A3B020C-WJ30CA

WALTER SELECT

Best tool for

Good

Average

Poor

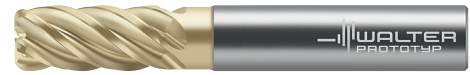
machining conditions

•• Primary application

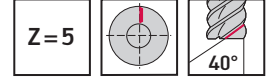
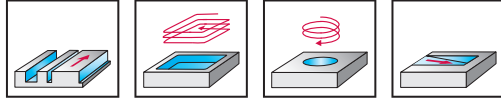
• Other application

Solid carbide shoulder/slot milling cutters

MD377 Supreme



- Long reach
- Type HPC Ti40



	P	M	K	N	S	H	O
WK40TZ		●			●●		

DIN 6527 L		D_c h9 mm	R mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h5 mm	Z	WK40TZ
Shank DIN 6535 HA	Designation										
	MD377-06.0A5B050C-	6	0.5	13	19	5.7	57	21	6	5	●●
	MD377-06.0A5B100C-	6	1	13	19	5.7	57	21	6	5	●●
	MD377-08.0A5B050C-	8	0.5	19	25	7.6	63	27	8	5	●●
	MD377-08.0A5B100C-	8	1	19	25	7.6	63	27	8	5	●●
	MD377-10.0A5B050C-	10	0.5	22	30	9.5	72	32	10	5	●●
	MD377-10.0A5B100C-	10	1	22	30	9.5	72	32	10	5	●●
	MD377-12.0A5B050C-	12	0.5	26	36	11.4	83	38	12	5	●●
	MD377-12.0A5B100C-	12	1	26	36	11.4	83	38	12	5	●●
	MD377-12.0A5B200C-	12	2	26	36	11.4	83	38	12	5	●●
	MD377-12.0A5B300C-	12	3	26	36	11.4	83	38	12	5	●●
	MD377-16.0A5B300C-	16	3	32	42	15.2	92	44	16	5	●●
	MD377-16.0A5B400C-	16	4	32	42	15.2	92	44	16	5	●●
	MD377-20.0A5B300C-	20	3	38	52	19	104	54	20	5	●●
	MD377-20.0A5B400C-	20	4	38	52	19	104	54	20	5	●●
MD377-25.0A5B300C-	25	3	45	63	23.8	121	65	25	5	●●	
MD377-25.0A5B400C-	25	4	45	63	23.8	121	65	25	5	●●	
MD377-25.0A5B635C-	25	6.35	45	63	23.8	121	65	25	5	●●	
Shank DIN 6535 HB	MD377-16.0W5B300C-	16	3	32	42	15.2	92	44	16	5	●●
	MD377-16.0W5B400C-	16	4	32	42	15.2	92	44	16	5	●●
	MD377-20.0W5B300C-	20	3	38	52	19	104	54	20	5	●●
	MD377-20.0W5B400C-	20	4	38	52	19	104	54	20	5	●●
	MD377-25.0W5B300C-	25	3	45	63	23.8	121	65	25	5	●●
MD377-25.0W5B400C-	25	4	45	63	23.8	121	65	25	5	●●	

Ordering example for the WK40TZ grade: MD377-06.0A5B050C-WK40TZ

WALTER SELECT

Best tool for

Good

Average

Poor

machining conditions

●● Primary application

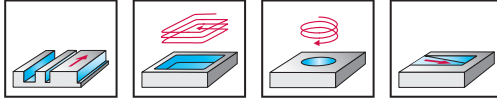
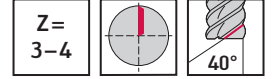
● Other application

Solid carbide shoulder/slot milling cutters

MC377 Advance



- Long reach
- Type Ti 40



	P	M	K	N	S	H	O
Wk40EA	●	●			●●		

DIN 6527 L		D _c h9 mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h5 mm	Z	Wk40EA
Shank DIN 6535 HA	Designation									
	MC377-02.0A3BC-	2	6	10	1.9	57	21	6	3	●
	MC377-03.0A4BC-	3	8	10	2.9	57	21	6	4	●
	MC377-04.0A4BC-	4	11	15	3.8	57	21	6	4	●
	MC377-05.0A4BC-	5	13	16	4.8	57	21	6	4	●
	MC377-06.0A4BC-	6	13	19	5.7	57	21	6	4	●
	MC377-08.0A4BC-	8	19	25	7.6	63	27	8	4	●
	MC377-10.0A4BC-	10	22	30	9.5	72	32	10	4	●
	MC377-12.0A4BC-	12	26	36	11.4	83	38	12	4	●

Ordering example for the WK40EA grade: MC377-02.0A3BC-WK40EA

DIN 6527 L		D _c h9 mm	R mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h5 mm	Z	Wk40EA
Shank DIN 6535 HA	Designation										
	MC377-02.0A3B020C-	2	0.2	6	10	1.9	57	21	6	3	●
	MC377-03.0A4B030C-	3	0.3	8	10	2.9	57	21	6	4	●
	MC377-04.0A4B050C-	4	0.5	11	15	3.8	57	21	6	4	●
	MC377-05.0A4B050C-	5	0.5	13	16	4.8	57	21	6	4	●
	MC377-06.0A4B050C-	6	0.5	13	19	5.7	57	21	6	4	●
	MC377-06.0A4B080C-	6	0.8	13	19	5.7	57	21	6	4	●
	MC377-06.0A4B100C-	6	1	13	19	5.7	57	21	6	4	●
	MC377-08.0A4B050C-	8	0.5	19	25	7.6	63	27	8	4	●
	MC377-08.0A4B100C-	8	1	19	25	7.6	63	27	8	4	●
	MC377-10.0A4B050C-	10	0.5	22	30	9.5	72	32	10	4	●
	MC377-10.0A4B100C-	10	1	22	30	9.5	72	32	10	4	●
	MC377-12.0A4B050C-	12	0.5	26	36	11.4	83	38	12	4	●
	MC377-12.0A4B100C-	12	1	26	36	11.4	83	38	12	4	●
	MC377-12.0A4B200C-	12	2	26	36	11.4	83	38	12	4	●
	MC377-12.0A4B300C-	12	3	26	36	11.4	83	38	12	4	●
	MC377-16.0A4B100C-	16	1	32	42	15.2	92	44	16	4	●
	MC377-16.0A4B300C-	16	3	32	42	15.2	92	44	16	4	●
	MC377-16.0A4B400C-	16	4	32	42	15.2	92	44	16	4	●
	MC377-20.0A4B300C-	20	3	38	52	19	104	54	20	4	●
MC377-20.0A4B400C-	20	4	38	52	19	104	54	20	4	●	
MC377-25.0A4B300C-	25	3	45	63	23.8	121	65	25	4	●	
MC377-25.0A4B400C-	25	4	45	63	23.8	121	65	25	4	●	
Shank DIN 6535 HB	Designation										
	MC377-16.0W4B300C-	16	3	32	42	15.2	92	44	16	4	●
	MC377-16.0W4B400C-	16	4	32	42	15.2	92	44	16	4	●
	MC377-20.0W4B300C-	20	3	38	52	19	104	54	20	4	●
	MC377-20.0W4B400C-	20	4	38	52	19	104	54	20	4	●
MC377-25.0W4B300C-	25	3	45	63	23.8	121	65	25	4	●	
MC377-25.0W4B400C-	25	4	45	63	23.8	121	65	25	4	●	

Ordering example for the WK40EA grade: MC377-02.0A3B020C-WK40EA

C1

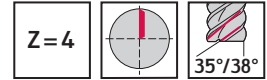
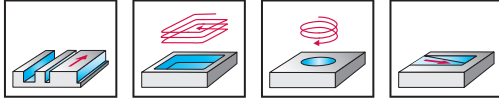
Solid carbide shoulder/slot milling cutters

MC230 Advance

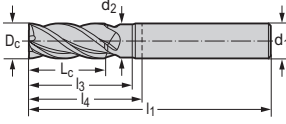
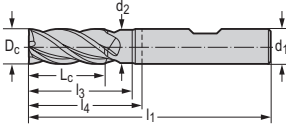


Xill-tec™

– Long reach



	P	M	K	N	S	H	O
WK40TF	●	●	●	●	●		

DIN 6527 L		D _c h10 mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h5 mm	Z	WK40TF
Shank DIN 6535 HA 	MC230-02.0A4BC-	2	7	11	1.9	57	21	6	4	●
	MC230-02.5A4BC-	2.5	8	12	2.4	57	21	6	4	●
	MC230-03.0A4BC-	3	8	12	2.9	57	21	6	4	●
	MC230-03.5A4BC-	3.5	10	15	3.3	57	21	6	4	●
	MC230-04.0A4BC-	4	11	15	3.8	57	21	6	4	●
	MC230-04.5A4BC-	4.5	11	18	4.3	57	21	6	4	●
	MC230-05.0A4BC-	5	13	18	4.8	57	21	6	4	●
	MC230-05.5A4BC-	5.5	13	19	5.2	57	21	6	4	●
	MC230-06.0A4BC-	6	13	19	5.7	57	21	6	4	●
	MC230-06.5A4BC-	6.5	16	25	6.2	63	27	8	4	●
	MC230-07.0A4BC-	7	16	25	6.7	63	27	8	4	●
	MC230-08.0A4BC-	8	19	25	7.6	63	27	8	4	●
	MC230-09.0A4BC-	9	19	30	8.6	72	32	10	4	●
	MC230-10.0A4BC-	10	22	30	9.5	72	32	10	4	●
	MC230-12.0A4BC-	12	26	36	11.4	83	38	12	4	●
	MC230-14.0A4BC-	14	26	36	13.3	83	38	14	4	●
	MC230-16.0A4BC-	16	32	42	15.2	92	44	16	4	●
	MC230-18.0A4BC-	18	32	42	17.1	92	44	18	4	●
	MC230-20.0A4BC-	20	38	52	19	104	54	20	4	●
	Shank DIN 6535 HB 	MC230-02.0W4BC-	2	7	11	1.9	57	21	6	4
MC230-02.5W4BC-		2.5	8	12	2.4	57	21	6	4	●
MC230-03.0W4BC-		3	8	12	2.9	57	21	6	4	●
MC230-04.0W4BC-		4	11	15	3.8	57	21	6	4	●
MC230-05.0W4BC-		5	13	18	4.8	57	21	6	4	●
MC230-06.0W4BC-		6	13	19	5.7	57	21	6	4	●
MC230-07.0W4BC-		7	16	25	6.7	63	27	8	4	●
MC230-08.0W4BC-		8	19	25	7.6	63	27	8	4	●
MC230-09.0W4BC-		9	19	30	8.6	72	32	10	4	●
MC230-10.0W4BC-		10	22	30	9.5	72	32	10	4	●
MC230-12.0W4BC-		12	26	36	11.4	83	38	12	4	●
MC230-14.0W4BC-		14	26	36	13.3	83	38	14	4	●
MC230-16.0W4BC-		16	32	42	15.2	92	44	16	4	●
MC230-18.0W4BC-		18	32	42	17.1	92	44	18	4	●
MC230-20.0W4BC-		20	38	52	19	104	54	20	4	●
MC230-25.0W4BC-	25	45	63	23.8	121	65	25	4	●	

Ordering example for the WK40TF grade: MC230-02.0A4BC-WK40TF

Continued

WALTER SELECT

Best tool for

 Good
 Average
 Poor

●● Primary application

● Other application

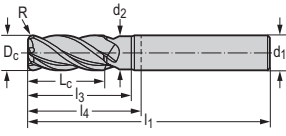
machining conditions

●●● / ★ New addition to the product range

DIN 6527 L		D _c h9 mm	R mm	L _c mm	l ₃ mm	d ₂ mm	l ₁ mm	l ₄ mm	d ₁ h5 mm	Z	WK40TF
Designation											
Shank DIN 6535 HA											
	MC230-02.0A4B020C-	2	0.2	7	11	1.9	57	21	6	4	
	MC230-03.0A4B030C-	3	0.3	8	12	2.9	57	21	6	4	
	MC230-03.0A4B050C-	3	0.5	8	12	2.9	57	21	6	4	
	MC230-04.0A4B020C-	4	0.2	11	15	3.8	57	21	6	4	
	MC230-04.0A4B050C-	4	0.5	11	15	3.8	57	21	6	4	
	MC230-05.0A4B050C-	5	0.5	13	18	4.8	57	21	6	4	
	MC230-05.0A4B100C-	5	1	13	18	4.8	57	21	6	4	
	MC230-06.0A4B050C-	6	0.5	13	19	5.7	57	21	6	4	
	MC230-06.0A4B080C-	6	0.8	13	19	5.7	57	21	6	4	
	MC230-06.0A4B100C-	6	1	13	19	5.7	57	21	6	4	
	MC230-08.0A4B050C-	8	0.5	19	25	7.6	63	27	8	4	
	MC230-08.0A4B080C-	8	0.8	19	25	7.6	63	27	8	4	
	MC230-08.0A4B100C-	8	1	19	25	7.6	63	27	8	4	
	MC230-08.0A4B150C-	8	1.5	19	25	7.6	63	27	8	4	
	MC230-08.0A4B200C-	8	2	19	25	7.6	63	27	8	4	
	MC230-10.0A4B050C-	10	0.5	22	30	9.5	72	32	10	4	
	MC230-10.0A4B080C-	10	0.8	22	30	9.5	72	32	10	4	
	MC230-10.0A4B100C-	10	1	22	30	9.5	72	32	10	4	
	MC230-10.0A4B150C-	10	1.5	22	30	9.5	72	32	10	4	
	MC230-10.0A4B200C-	10	2	22	30	9.5	72	32	10	4	
	MC230-12.0A4B050C-	12	0.5	26	36	11.4	83	38	12	4	
	MC230-12.0A4B080C-	12	0.8	26	36	11.4	83	38	12	4	
	MC230-12.0A4B100C-	12	1	26	36	11.4	83	38	12	4	
	MC230-12.0A4B150C-	12	1.5	26	36	11.4	83	38	12	4	
	MC230-12.0A4B200C-	12	2	26	36	11.4	83	38	12	4	
	MC230-12.0A4B250C-	12	2.5	26	36	11.4	83	38	12	4	
	MC230-12.0A4B300C-	12	3	26	36	11.4	83	38	12	4	
	MC230-16.0A4B050C-	16	0.5	32	42	15.2	92	44	16	4	
	MC230-16.0A4B100C-	16	1	32	42	15.2	92	44	16	4	
	MC230-16.0A4B200C-	16	2	32	42	15.2	92	44	16	4	
	MC230-16.0A4B250C-	16	2.5	32	42	15.2	92	44	16	4	
	MC230-16.0A4B300C-	16	3	32	42	15.2	92	44	16	4	
	MC230-16.0A4B400C-	16	4	32	42	15.2	92	44	16	4	
	MC230-20.0A4B050C-	20	0.5	38	52	19	104	54	20	4	
	MC230-20.0A4B100C-	20	1	38	52	19	104	54	20	4	
	MC230-20.0A4B200C-	20	2	38	52	19	104	54	20	4	
	MC230-20.0A4B250C-	20	2.5	38	52	19	104	54	20	4	
	MC230-20.0A4B300C-	20	3	38	52	19	104	54	20	4	
	MC230-20.0A4B400C-	20	4	38	52	19	104	54	20	4	
Shank DIN 6535 HB											
	MC230-05.0W4B050C-	5	0.5	13	18	4.8	57	21	6	4	
	MC230-06.0W4B050C-	6	0.5	13	19	5.7	57	21	6	4	
	MC230-06.0W4B080C-	6	0.8	13	19	5.7	57	21	6	4	
	MC230-06.0W4B100C-	6	1	13	19	5.7	57	21	6	4	
	MC230-08.0W4B050C-	8	0.5	19	25	7.6	63	27	8	4	
	MC230-08.0W4B080C-	8	0.8	19	25	7.6	63	27	8	4	
	MC230-08.0W4B100C-	8	1	19	25	7.6	63	27	8	4	
	MC230-08.0W4B150C-	8	1.5	19	25	7.6	63	27	8	4	
	MC230-08.0W4B200C-	8	2	19	25	7.6	63	27	8	4	
	MC230-10.0W4B050C-	10	0.5	22	30	9.5	72	32	10	4	
	MC230-10.0W4B080C-	10	0.8	22	30	9.5	72	32	10	4	
	MC230-10.0W4B100C-	10	1	22	30	9.5	72	32	10	4	
	MC230-10.0W4B150C-	10	1.5	22	30	9.5	72	32	10	4	
	MC230-10.0W4B200C-	10	2	22	30	9.5	72	32	10	4	
	MC230-12.0W4B050C-	12	0.5	26	36	11.4	83	38	12	4	
	MC230-12.0W4B080C-	12	0.8	26	36	11.4	83	38	12	4	
	MC230-12.0W4B100C-	12	1	26	36	11.4	83	38	12	4	
	MC230-12.0W4B150C-	12	1.5	26	36	11.4	83	38	12	4	
	MC230-12.0W4B200C-	12	2	26	36	11.4	83	38	12	4	
	MC230-12.0W4B250C-	12	2.5	26	36	11.4	83	38	12	4	
	MC230-12.0W4B300C-	12	3	26	36	11.4	83	38	12	4	
	MC230-16.0W4B050C-	16	0.5	32	42	15.2	92	44	16	4	

Ordering example for the WK40TF grade: MC230-02.0A4B020C-WK40TF

Continued



C 1

Continued

DIN 6527 L		D_c h9 mm	R mm	L_c mm	l_3 mm	d_2 mm	l_1 mm	l_4 mm	d_1 h5 mm	Z	WK40TF
Shank DIN 6535 HB 	MC230-16.0W4B100C-	16	1	32	42	15.2	92	44	16	4	
	MC230-16.0W4B200C-	16	2	32	42	15.2	92	44	16	4	
	MC230-16.0W4B250C-	16	2.5	32	42	15.2	92	44	16	4	
	MC230-16.0W4B300C-	16	3	32	42	15.2	92	44	16	4	
	MC230-16.0W4B400C-	16	4	32	42	15.2	92	44	16	4	
	MC230-20.0W4B050C-	20	0.5	38	52	19	104	54	20	4	
	MC230-20.0W4B100C-	20	1	38	52	19	104	54	20	4	
	MC230-20.0W4B200C-	20	2	38	52	19	104	54	20	4	
	MC230-20.0W4B250C-	20	2.5	38	52	19	104	54	20	4	
	MC230-20.0W4B300C-	20	3	38	52	19	104	54	20	4	
	MC230-20.0W4B400C-	20	4	38	52	19	104	54	20	4	
	MC230-25.0W4B100C-	25	1	45	63	23.8	121	65	25	4	
	MC230-25.0W4B200C-	25	2	45	63	23.8	121	65	25	4	
	MC230-25.0W4B300C-	25	3	45	63	23.8	121	65	25	4	
	MC230-25.0W4B400C-	25	4	45	63	23.8	121	65	25	4	

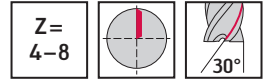
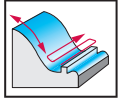
Ordering example for the WK40TF grade: MC230-02.0A4B020C-WK40TF

Solid carbide circle segment milling cutters

MD838 Supreme



- Conical



	P	M	K	N	S	H	O
WJ30RA		●●		●	●●		
WJ30RD	●●		●				

PROTOTYP TOOLS STANDARD		$\alpha/2$	D_a mm	R mm	R_w mm	R_3 mm	L_c mm	l_1 mm	d_1 h5 mm	Z	WJ30RA	WJ30RD
Shank DIN 6535 HA	MD838-06A4P050250-	20°	6	0.5	250	3	7.79	65	6	4	☺	☺
	MD838-06A4P100250-	20°	6	1	250	3	6.83	65	6	4	☺	☺
	MD838-08A4P050300-	20°	8	0.5	300	3	10.55	80	8	4	☺	☺
	MD838-08A4P100300-	20°	8	1	300	3	9.57	80	8	4	☺	☺
	MD838-10A4P200400-	20°	10	2	400	3	10.42	90	10	4	☺	☺
	MD838-10A8P200400-	20°	10	2	400	3	10.42	90	10	8	☺	☺
	MD838-12A4P200500-	20°	12	2	500	3	13.15	100	12	4	☺	☺
	MD838-12A8P200500-	20°	12	2	500	3	13.15	100	12	8	☺	☺
	MD838-12A4P300500-	20°	12	3	500	3	11.23	100	12	4	☺	☺
	MD838-12A8P300500-	20°	12	3	500	3	11.23	100	12	8	☺	☺
	MD838-16A4P301000-	20°	16	3	1000	5	17.07	115	16	4	☺	☺
	MD838-16A4P401000-	20°	16	4	1000	5	15.17	115	16	4	☺	☺

Ordering example for the WJ30RD grade: MD838-06A4P050250-WJ30RD

WALTER SELECT

Best tool for

☺
Good

☹
Average

☹
Poor

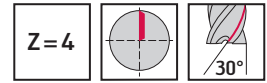
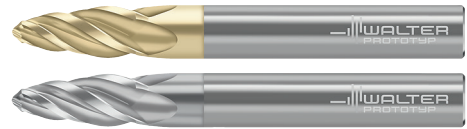
machining conditions

●● Primary application

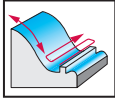
● Other application

Solid carbide circle segment milling cutters

MD839 Supreme



- Tangential

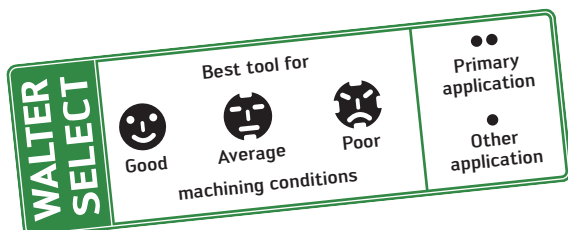
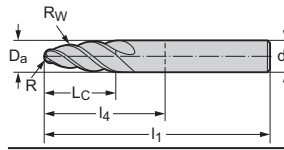


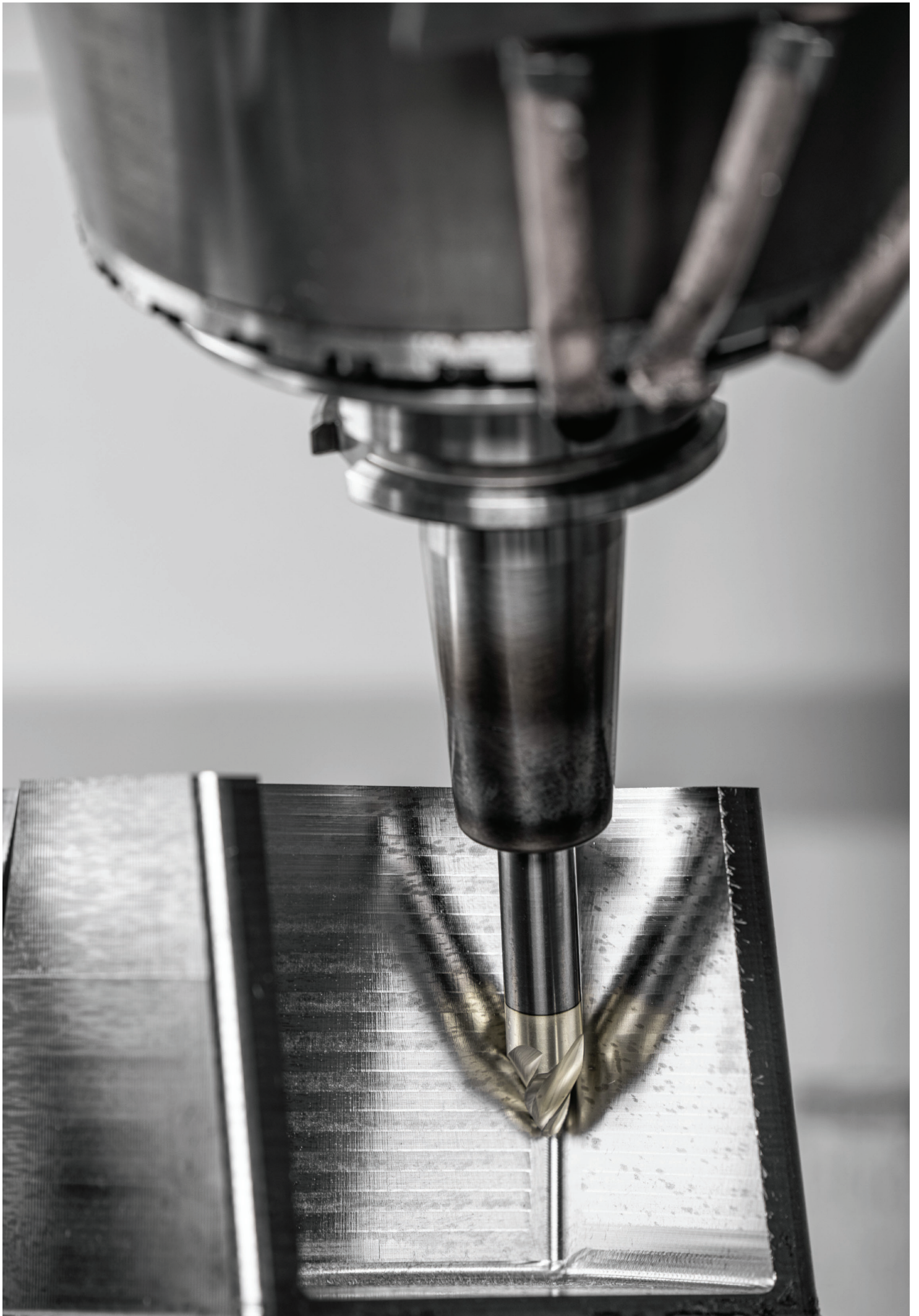
	P	M	K	N	S	H	O
WJ30RA		●●		●	●●		
WJ30RD	●●		●				

PROTOTYP TOOLS STANDARD

	Designation	D _a mm	R mm	R _w mm	L _c mm	l ₁ mm	d ₁ h5 mm	Z	WJ30RA	WJ30RD
Shank DIN 6535 HA	MD839-06A4P10100-	6	1	100	20.8	65	6	4	☺	☹
	MD839-08A4P15100-	8	1.5	100	23.55	80	8	4	☺	☹
	MD839-10A4P20100-	10	2	100	26.06	90	10	4	☺	☹
	MD839-12A4P20100-	12	2	100	29.71	100	12	4	☺	☹
	MD839-12A4P30100-	12	3	100	26.94	100	12	4	☺	☹
	MD839-16A4P30100-	16	3	100	33.74	115	16	4	☺	☹
	MD839-16A4P40100-	16	4	100	31.42	115	16	4	☺	☹


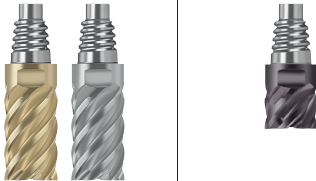
Ordering example for the WJ30RD grade: MD839-06A4P10100-WJ30RD




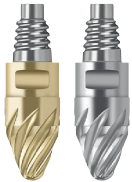


Solid carbide milling tools with ConeFit interface product range overview

Shoulder milling cutters

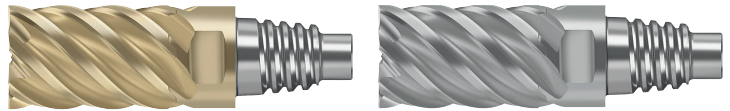
Machining		
Helix angle	50°	
Designation	MD128	MC128
Dia. range [mm]	10–25	10–25
Z	6–8	6–8
Corner radius [mm]	0–4	0–4
Page	271	272
		

Circle segment milling cutters

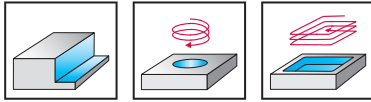
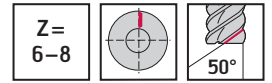
Machining	
Helix angle	30°
Designation	MD838
Dia. range [mm]	4–8
Z	8
Corner radius [mm]	2–4
Page	273
	

Solid carbide shoulder milling cutters

MD128 mm

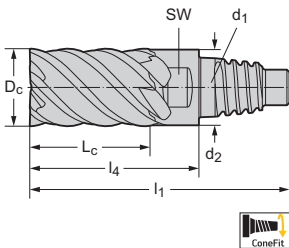


- Type N 50



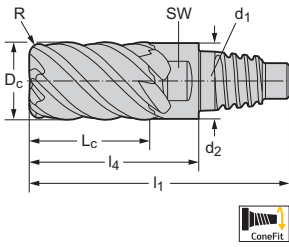
	P	M	K	N	S	H	O
WJ30RA		●●			●●		
WJ30RD	●●		●				

PROTOTYP TOOLS STANDARD		D _c h10 mm	L _c mm	d ₂ mm	l ₁ mm	l ₄ mm	SW mm	d ₁ mm	Z	WJ30RA	WJ30RD
ConeFit	MD128-10.0E6X-	10	15	9.7	33.1	21.9	8	E10	6	☺	☹
	MD128-12.0E6X-	12	18	11.7	39.8	26	10	E12	6	☺	☹
	MD128-16.0E6X-	16	24	15.5	51.2	34.2	12	E16	6	☺	☹
	MD128-20.0E8X-	20	30	19.3	59.8	40.3	16	E20	8	☺	☹
	MD128-25.0E8X-	25	37.5	24.2	73.6	49.8	20	E25	8	☺	☹



Ordering example for the WJ30RA grade: MD128-10.0E6X-WJ30RA

PROTOTYP TOOLS STANDARD		D _c h9 mm	R mm	L _c mm	d ₂ mm	l ₁ mm	l ₄ mm	SW mm	d ₁ mm	Z	WJ30RA	WJ30RD
ConeFit	MD128-10.0E6X050-	10	0.5	15	9.7	33.1	21.9	8	E10	6	☺	☹
	MD128-10.0E6X100-	10	1	15	9.7	33.1	21.9	8	E10	6	☺	☹
	MD128-12.0E6X050-	12	0.5	18	11.7	39.8	26	10	E12	6	☺	☹
	MD128-12.0E6X100-	12	1	18	11.7	39.8	26	10	E12	6	☺	☹
	MD128-12.0E6X200-	12	2	18	11.7	39.8	26	10	E12	6	☺	☹
	MD128-16.0E6X050-	16	0.5	24	15.5	51.2	34.2	12	E16	6	☺	☹
	MD128-16.0E6X100-	16	1	24	15.5	51.2	34.2	12	E16	6	☺	☹
	MD128-16.0E6X200-	16	2	24	15.5	51.2	34.2	12	E16	6	☺	☹
	MD128-20.0E8X100-	20	1	30	19.3	59.8	40.3	16	E20	8	☺	☹
	MD128-20.0E8X400-	20	4	30	19.3	59.8	40.3	16	E20	8	☺	☹
	MD128-25.0E8X100-	25	1	37.5	24.2	73.6	49.8	20	E25	8	☺	☹
	MD128-25.0E8X400-	25	4	37.5	24.2	73.6	49.8	20	E25	8	☺	☹



Ordering example for the WJ30RA grade: MD128-10.0E6X050-WJ30RA

WALTER SELECT

Best tool for

 Good
 Average
 Poor

●● Primary application

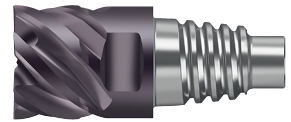
● Other application

maching conditions

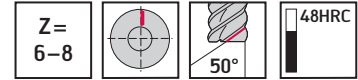
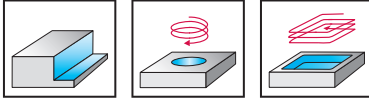
C 1

Solid carbide shoulder milling cutters

MC128



- Type N 50



	P	M	K	N	S	H	O
WJ30TF	●	●	●	●	●		

PROTOTYP TOOLS STANDARD

	Designation	D _c h10 mm	L _c mm	d ₂ mm	l ₁ mm	l ₄ mm	SW mm	d ₁ mm	Z	WJ30TF
ConeFit	MC128-10.0E6P-	10	5.5	9.7	23.6	12.4	8	E10	6	●
	MC128-12.0E6P-	12	6.5	11.7	28.3	14.5	10	E12	6	●
	MC128-16.0E6P-	16	8.5	15.5	35.7	18.7	12	E16	6	●
	MC128-20.0E8P-	20	11	19.3	40.8	21.3	16	E20	8	●
	MC128-25.0E8P-	25	13.5	24.2	49.6	25.6	20	E25	8	●

Ordering example for the WJ30TF grade: MC128-10.0E6P-WJ30TF

PROTOTYP TOOLS STANDARD

	Designation	D _c h9 mm	R mm	L _c mm	d ₂ mm	l ₁ mm	l ₄ mm	SW mm	d ₁ mm	Z	WJ30TF
ConeFit	MC128-10.0E6P050-	10	0.5	5.5	9.7	23.6	12.4	8	E10	6	●
	MC128-10.0E6P100-	10	1	5.5	9.7	23.6	12.4	8	E10	6	●
	MC128-12.0E6P050-	12	0.5	6.5	11.7	28.3	14.5	10	E12	6	●
	MC128-12.0E6P100-	12	1	6.5	11.7	28.3	14.5	10	E12	6	●
	MC128-12.0E6P150-	12	1.5	6.5	11.7	28.3	14.5	10	E12	6	●
	MC128-12.0E6P200-	12	2	6.5	11.7	28.3	14.5	10	E12	6	●
	MC128-16.0E6P050-	16	0.5	8.5	15.5	35.7	18.7	12	E16	6	●
	MC128-16.0E6P100-	16	1	8.5	15.5	35.7	18.7	12	E16	6	●
	MC128-16.0E6P150-	16	1.5	8.5	15.5	35.7	18.7	12	E16	6	●
	MC128-16.0E6P200-	16	2	8.5	15.5	35.7	18.7	12	E16	6	●
	MC128-20.0E8P100-	20	1	11	19.3	40.8	21.3	16	E20	8	●
	MC128-20.0E8P200-	20	2	11	19.3	40.8	21.3	16	E20	8	●
	MC128-20.0E8P400-	20	4	11	19.3	40.8	21.3	16	E20	8	●
	MC128-25.0E8P100-	25	1	13.5	24.2	49.6	25.6	20	E25	8	●
	MC128-25.0E8P200-	25	2	13.5	24.2	49.6	25.6	20	E25	8	●
	MC128-25.0E8P400-	25	4	13.5	24.2	49.6	25.6	20	E25	8	●

Ordering example for the WJ30TF grade: MC128-10.0E6P050-WJ30TF

WALTER SELECT

Best tool for machining conditions

Good
 Average
 Poor

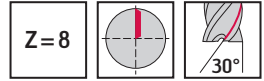
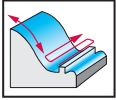
Primary application
 Other application

Solid carbide circle segment milling cutters

MD838 mm

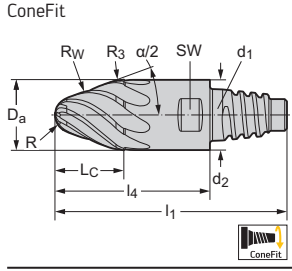


- Conical



	P	M	K	N	S	H	O
WJ30RA		●●	●	●	●●		
WJ30RD	●●	●	●	●	●		








PROTOTYP TOOLS STANDARD		Designation	$\alpha/2$	D_a mm	R mm	R_w mm	R_3 mm	L_c mm	l_4 mm	l_1 mm	SW mm	d_1 mm	Z	WJ30RA	WJ30RD
ConeFit		MD838-16E8P201000-	20°	16	2	1000	5	18.99	34.2	51.2	12	E16	8	⊕	⊕
		MD838-16E8P301000-	20°	16	3	1000	5	17.07	34.2	51.2	12	E16	8	⊕	⊕
		MD838-16E8P401000-	20°	16	4	1000	5	15.17	34.2	51.2	12	E16	8	⊕	⊕



Ordering example for the WJ30RD grade: MD838-16E8P201000-WJ30RD

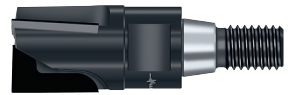
Product range overview of PCD milling tools

Shoulder milling cutters

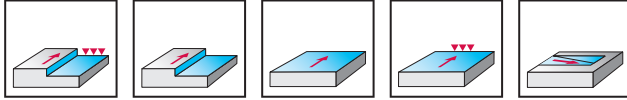
Machining					
Designation	MP260	MP260	MP160	MP160	MP060
Dia. range [mm]	16–20	4–20	20–40	16–25	40–125
Z	2–3	2–3	4	3–4	10–22
Shank [mm]	ScrewFit	Parallel shank	ScrewFit	Parallel shank	Parallel bore
Page	275	275	276	276	277
					

PCD shoulder milling cutters

MP260 mm



Z= 2-3



	P	M	K	N	S	H	O
WDN20				●●			●

Tool		Designation	D _c mm	L _c mm	l ₁ mm	l ₄ mm	d ₁ mm	Z	kg	WDN20
ScrewFit 		MP260-016T02P	16	15	48	30	T14	2	0.04	
		MP260-016T03P	16	15	48	30	T14	3	0.03	
		MP260-020T03P	20	18	51	30	T18	3	0.05	

Pre-balanced to G6.3 where n = 16,000 rpm
 Ordering example for the WDN20 grade: MP260-016T02P WDN20

Tool		Designation	D _c mm	L _c mm	l ₁ mm	l ₄ mm	d ₁ mm	Z	kg	WDN20
Parallel shank 		MP260-004A02P	4	6	52	12	4	2	0.02	
		MP260-005A02P	5	8	55	15	5	2	0.02	
		MP260-006A02P	6	8	60	20	6	2	0.02	
		MP260-008A02P	8	10	70	15	8	2	0.04	
		MP260-010A02P	10	12	80	17	10	2	0.08	
		MP260-012A02P	12	16	80	21	12	2	0.11	
		MP260-016A02P	16	20	90	25	16	2	0.22	
		MP260-016A03P	16	20	90	25	16	3	0.22	
		MP260-020A03P	20	20	100	49	20	3	0.38	

Ordering example for the WDN20 grade: MP260-004A02P WDN20

WALTER SELECT

Best tool for

Good

Average

Poor

machining conditions

●● Primary application

● Other application

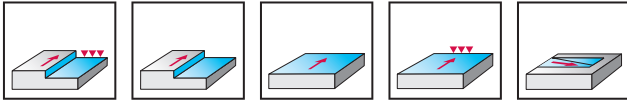
/ ★ New addition to the product range

PCD routing cutters

MP160 mm



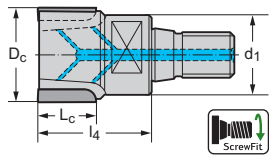
Z =
3-4



	P	M	K	N	S	H	O
WDN20				●●			●

Tool

ScrewFit



Designation

MP160-020T04P
MP160-025T04P
MP160-032T04P
MP160-040T04P

D_c
mm

20
25
32
40

L_c
mm

18
20
20
20

l₁
mm

51
58
69
75

l₄
mm

30
35
40
40

d₁
mm

T18
T22
T28
T36

Z

4
4
4
4

kg

0.05
0.11
0.94
0.37

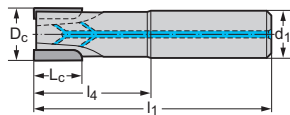
WDN20

●●
●●
●●
●●

Pre-balanced to G6.3 where n = 16,000 rpm
Ordering example for the WDN20 grade: MP160-020T04P WDN20

Tool

Parallel shank



Designation

MP160-016A03P
MP160-020A04P
MP160-025A04P

D_c
mm

16
20
25

L_c
mm

20
20
20

l₁
mm

90
100
100

l₄
mm

25
49
43

d₁
mm

16
20
25

Z

3
4
4

kg

0.22
0.39
0.62

WDN20

●●
●●
●●

Ordering example for the WDN20 grade: MP160-016A03P WDN20

C 1

WALTER SELECT

Best tool for

Good

Average

Poor

machining conditions

●● Primary application

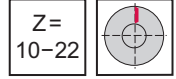
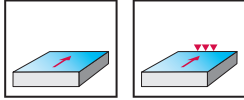
● Other application

PCD face milling cutters

MP060

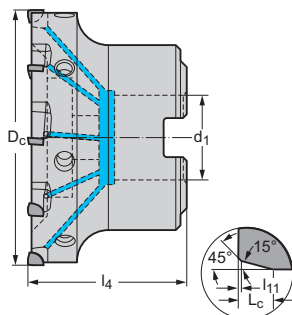


- $\kappa = 75^\circ$ to $L_c = 1.1$ mm



	P	M	K	N	S	H	O
WDN20				●●			●

Tool		Designation	D _c mm	l ₁₁ mm	L _c mm	l ₄ mm	d ₁ mm	Z	kg	WDN20
Parallel bore		MP060-040B10P	40	0.1	1.1	40	16	10	0.3	⊕
DIN 138 transverse keyway		MP060-050B12P	50	0.1	1.1	40	22	12	0.4	⊕
		MP060-063B14P	63	0.1	1.1	40	22	14	0.5	⊕
		MP060-080B16P	80	0.1	1.1	50	27	16	1.0	⊕
		MP060-100B18P	100	0.1	1.1	50	32	18	1.4	⊕
		MP060-125B22P	125	0.1	1.1	63	40	22	3.2	⊕



Pre-balanced to G6.3 where n = 16,000 rpm
 Ordering example for the WDN20 grade: MP060-040B10P WDN20

Cutting data for solid carbide shoulder/slot milling

						Product family		λ		
						MD128 Supreme MD128 ConeFit		50°		
Material group	Overview of the main material groups and code letters					Brinell hardness HB	Tensile strength R_m N/mm ²	Machining group ¹	Starting values for cutting speed v_c [sfm]	
									3 × D _c	
						Ø 6–25 mm				
						Z = 6–8				
						WJ30RD				
						PHIS [°]		VC		
								[in] per tooth		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	40	738	0.0039	
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2	40	1164	0.0039	
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3	40	1164	0.0039	
		C > 0.55%	Annealed	190	639	P4	40	984	0.0039	
		C > 0.55%	Heat-treated	300	1013	P5	40	705	0.0035	
		Free-machining steel (short-chipping)	Annealed	220	745	P6	40	984	0.0039	
	Low-alloy steel	Annealed	175	591	P7	40	984	0.0039		
		Heat-treated	300	1013	P8	35	722	0.0039		
		Heat-treated	380	1282	P9	40	590	0.0032		
		Heat-treated	430	1477	P10	35	525	0.0047		
	High-alloy steel and high-alloy tool steel	Annealed	200	675	P11	35	1017	0.0035		
		Hardened and tempered	300	1013	P12	30	787	0.0043		
		Hardened and tempered	400	1361	P13	30	640	0.0039		
	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	40	853	0.0043		
		Pearlitic	260	867	K2	35	689	0.0039		
	Grey cast iron	Low tensile strength	180	602	K3	40	853	0.0043		
		High tensile strength/austenitic	245	825	K4	35	738	0.0039		
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	40	853	0.0043		
		Pearlitic	265	885	K6	30	722	0.0043		
GGV (CGI)		200	675	K7	40	574	0.0039			
N	Wrought aluminium alloys	Not hardenable	30	–	N1					
		Hardenable, hardened	100	343	N2					
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	260	N3					
		≤ 12% Si, hardenable, hardened	90	314	N4					
		> 12% Si, not hardenable	130	447	N5					
	Magnesium-based alloys		70	250	N6					
			100	343	N7					
	Copper and copper alloys (bronze/brass)	Brass, bronze, red brass	90	314	N8					
		Cu alloys, short-chipping	110	382	N9					
		High tensile, Ampco	300	1013	N10					
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1				
			Hardened	280	943	S2				
		Ni- or Co-based	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					
	Thermosets	Without abrasive fillers			O2					
	Plastic, glass-fibre-reinforced	GFRP			O3					
	Plastic, carbon-fibre-reinforced	CFRP			O4					
	Plastic, aramid-fibre-reinforced	AFRP			O5					
	Graphite (technical)		80 Shore		O6					

¹ The classification of the machining groups can be found in the General Catalogue from page C 671 onwards.

Cutting data for solid carbide shoulder/slot milling

						Product family		λ		
						MC267 Advance		45°		
Material group	Overview of the main material groups and code letters					Brinell hardness HB	Tensile strength R _m N/mm ²	Machining group ¹	Ø 1–20 mm	
									Z = 2–3	
									WJ30CA / WJ30UU	
									Starting values for cutting speed v _c [sfm]	
						a _e / D _c			VT	
						1/1	1/2	1/10		
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1				
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2				
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3				
		C > 0.55%	Annealed	190	639	P4				
		C > 0.55%	Heat-treated	300	1013	P5				
		Free-machining steel (short-chipping)	Annealed	220	745	P6				
	Low-alloy steel	Annealed	175	591	P7					
		Heat-treated	300	1013	P8					
		Heat-treated	380	1282	P9					
		Heat-treated	430	1477	P10					
	High-alloy steel and high-alloy 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					
		Pearlitic	260	867	K2					
	Grey cast iron	Low tensile strength	180	602	K3					
		High tensile strength/austenitic	245	825	K4					
	Cast iron with spheroidal graphite	Ferritic	155	518	K5					
		Pearlitic	265	885	K6					
	GGV (CGI)		200	675	K7					
N	Wrought aluminium alloys	Not hardenable	30	–	N1	4625	5740	7347	C	
		Hardenable, hardened	100	343	N2	4625	5740	7347	C	
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	260	N3	1158	1440	2057	C	
		≤ 12% Si, hardenable, hardened	90	314	N4	1158	1440	2057	C	
		> 12% Si, not hardenable	130	447	N5	462	574	823	C	
	Magnesium-based alloys		70	250	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	343	N7					
Brass, bronze, red brass		90	314	N8						
Cu alloys, short-chipping		110	382	N9						
High tensile, Ampco		300	1013	N10						
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1				
			Hardened	280	943	S2				
		Ni- or Co-based	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					
	Thermosets	Without abrasive fillers			O2					
	Plastic, glass-fibre-reinforced	GFRP			O3					
	Plastic, carbon-fibre-reinforced	CFRP			O4					
	Plastic, aramid-fibre-reinforced	AFRP			O5					
	Graphite (technical)		80 Shore		O6					

¹ The classification of the machining groups can be found in the General Catalogue from page C 671 onwards.

Product family				λ	Product family				λ	Product family				λ
MD377 Supreme				40°	MC377 Advance				40°	MC230 Advance Xill-tec™				35°/38°
Ø 6–25 mm					Ø 2–25 mm					Ø 2–25 mm				
Z = 5					Z = 3–4					Z = 4				
WK40TZ					WK40EA					WK40TF				
Starting values for cutting speed v_c [sfm]				VT	Starting values for cutting speed v_c [sfm]				VT	Starting values for cutting speed v_c [sfm]				VT
a_e / D_c					a_e / D_c					a_e / D_c				
1/1	1/2	1/10		1/1	1/2	1/10		1/1	1/2	1/10				
					492	607	866	A	492	607	866	A		
					676	830	1191	A	676	830	1191	A		
					574	708	1017	A	574	708	1017	A		
					574	708	1017	A	574	708	1017	A		
					407	502	718	A	407	502	718	A		
					574	708	1017	A	574	708	1017	A		
					574	708	1017	A	574	708	1017	A		
					358	443	630	A	358	443	630	A		
					335	417	594	A	335	417	594	A		
					285	351	502	A	285	351	502	A		
					574	708	1017	A	574	708	1017	A		
					407	502	718	A	407	502	718	A		
					335	417	594	A	335	417	594	A		
					197	243	348	A	197	243	348	A		
					161	200	285	A	161	200	285	A		
	285	367	525	B	233	285	410	B	233	285	410	B		
	177	226	325	B	144	180	256	B	144	180	256	B		
	239	308	443	B	200	246	351	B	200	246	351	B		
									538	666	951	A		
									423	522	741	A		
									538	666	951	A		
									453	558	797	A		
									538	666	951	A		
									423	522	741	A		
									361	446	636	A		
									1899	2362	3378	C		
									1899	2362	3378	C		
									1368	1699	2427	C		
									1368	1699	2427	C		
									184	230	325	C		
	177	220	315	B	148	184	262	B	151	187	266	B		
	105	134	194	B	89	112	161	B	95	115	164	B		
	177	220	315	B	148	184	262	B	151	187	266	B		
	105	134	194	B	89	112	161	B	95	115	164	B		
	105	134	194	B	89	112	161	B	95	115	164	B		
									161	200	285	B		
	213	312	426	B	197	279	394	B	161	200	285	B		
	148	180	262	B	131	164	230	B	85	105	151	B		
									213	262	374	B		
									213	262	374	B		

C 1

Cutting data for solid carbide circle segment milling cutters

Material group	Overview of the main material groups and code letters					Product family		λ						
						MD838 Supreme		MD838 ConeFit		30°				
						Ø 6–16 mm								
						Z = 4–8								
					WJ30RD									
					Starting values for cutting speed v _c [sfm]									
					a _e / D _c									
					1/5	1/20	1/50	VT						
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	754	1082	1279	A				
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2	754	1017	1246	A				
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3	689	918	1017	A				
		C > 0.55%	Annealed	190	639	P4	689	918	1017	A				
		C > 0.55%	Heat-treated	300	1013	P5	558	656	722	A				
		Free-machining steel (short-chipping)	Annealed	220	745	P6	689	918	1082	A				
	Low-alloy steel	Annealed	175	591	P7	689	918	1082	A					
		Heat-treated	300	1013	P8	558	656	787	A					
		Heat-treated	380	1282	P9	459	558	656	A					
		Heat-treated	430	1477	P10	394	492	558	A					
		High-alloy steel and high-alloy tool steel	Annealed	200	675	P11	689	918	1082	A				
	Stainless steel	Hardened and tempered	300	1013	P12	558	656	787	A					
		Hardened and tempered	400	1361	P13	394	492	558	A					
		Ferritic/martensitic, annealed	200	675	P14	295	361	394	A					
	M	Stainless steel	Martensitic, heat-treated	330	1114	P15	230	262	328	A				
Austenitic, quench hardened			200	675	M1									
Austenitic, precipitation hardened (PH)			300	1013	M2									
K	Malleable cast iron	Austenitic/ferritic, duplex	230	778	M3									
		Ferritic	200	675	K1	590	787	951	A					
	Grey cast iron	Pearlitic	260	867	K2	492	623	722	A					
		Low tensile strength	180	602	K3	590	787	951	A					
	Cast iron with spheroidal graphite	High tensile strength/austenitic	245	825	K4	492	656	787	A					
Ferritic		155	518	K5	590	787	951	A						
N	GGV (CGI)	Pearlitic	265	885	K6	492	623	722	A					
		High tensile, Ampco	200	675	K7	426	525	623	A					
		Wrought aluminium alloys	Not hardenable	30	–	N1								
S	Cast aluminium alloys	Hardenable, hardened	100	343	N2									
		≤ 12% Si, not hardenable	75	260	N3									
	Magnesium-based alloys	≤ 12% Si, hardenable, hardened	90	314	N4									
		> 12% Si, not hardenable	130	447	N5									
	Heat-resistant alloys	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	70	250	N6								
			Brass, bronze, red brass	100	343	N7								
		Tungsten alloys	Cu alloys, short-chipping	90	314	N8								
High tensile, Ampco			110	382	N9									
Molybdenum alloys			300	1013	N10									
H	Heat-resistant alloys	Fe-based	Annealed	200	675	S1								
		Hardened	280	943	S2									
		Ni- or Co-based	Annealed	250	839	S3								
	Titanium alloys	Hardened	350	1177	S4									
		Cast	320	1076	S5									
		Pure titanium	200	675	S6									
O	Thermoplastics	α and β alloys, hardened	375	1262	S7									
		β alloys	410	1396	S8									
H	Thermoplastics	Tungsten alloys	300	1013	S9									
		Molybdenum alloys	300	1013	S10									
		Without abrasive fillers			O1									
	Thermosets	Without abrasive fillers			O2									
		Plastic, glass-fibre-reinforced	GFRP		O3									
		Plastic, carbon-fibre-reinforced	CFRP		O4									
O	Thermoplastics	Plastic, aramid-fibre-reinforced	AFRP		O5									
		Graphite (technical)	80 Shore		O6									

¹ The classification of the machining groups can be found in the General Catalogue from page C 671 onwards.

Product family		λ		Product family		λ		Product family		λ	
MD838 Supreme MD838 ConeFit		30°		MD839 Supreme		30°		MD839 Supreme		30°	
Ø 6–16 mm				Ø 6–16 mm				Ø 6–16 mm			
Z = 4–8				Z = 4				Z = 4			
WJ30RA				WJ30RD				WJ30RA			
Starting values for cutting speed v _c [sfm]				Starting values for cutting speed v _c [sfm]				Starting values for cutting speed v _c [sfm]			
a _e / D _c				a _e / D _c				a _e / D _c			
1/5	1/20	1/50	VT	1/5	1/20	1/50	VT	1/1	1/2	1/10	VT
				754	1082	1279	A				
				754	1017	1246	A				
				689	918	1017	A				
				689	918	1017	A				
				558	656	722	A				
				689	918	1082	A				
				689	918	1082	A				
				558	656	787	A				
				459	558	656	A				
				394	492	558	A				
				689	918	1082	A				
				558	656	787	A				
				394	492	558	A				
				295	361	394	A				
				230	262	328	A				
361	492	623	B					361	492	623	B
230	295	426	B					230	295	426	B
328	459	590	B					328	459	590	B
				590	787	951	A				
				492	623	722	A				
				590	787	951	A				
				492	656	787	A				
				590	787	951	A				
				492	623	722	A				
				426	525	623	A				
3280	3936	4920	C					3280	3936	4920	C
3280	3936	4920	C					3280	3936	4920	C
2263	3018	3608	C					2263	3018	3608	C
2263	3018	3608	C					2263	3018	3608	C
787	1050	1279	C					787	1050	1279	C
2624	3477	4198	C					2624	3477	4198	C
1640	2132	2624	C					1640	2132	2624	C
1640	2132	2624	C					1640	2132	2624	C
1640	2132	2624	C					1640	2132	2624	C
262	295	361	C					262	295	361	C
262	361	426	B					262	361	426	B
197	230	295	B					197	230	295	B
262	295	361	B					262	295	361	B
197	262	361	B					197	262	361	B
197	262	361	B					197	262	361	B
262	361	426	B					262	361	426	B
197	328	426	B					197	328	426	B
197	361	426	B					197	361	426	B

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Cutting data for PCD milling

						Product family		λ		
						MP060 MP160 MP260				
Material group	Overview of the main material groups and code letters					Ø 6–125 mm				
						Z = 2–22				
						WDN20				
						Starting values for cutting speed v_c [m/min]				
						a_e / D_c				
						1/1 1/2	1/4	1/10	VT	
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1				
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2				
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3				
		C > 0.55%	Annealed	190	639	P4				
		C > 0.55%	Heat-treated	300	1013	P5				
		Free-machining steel (short-chipping)	Annealed	220	745	P6				
	Low-alloy steel	Annealed	175	591	P7					
		Heat-treated	300	1013	P8					
		Heat-treated	380	1282	P9					
		Heat-treated	430	1477	P10					
	High-alloy steel and high-alloy 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					
		Pearlitic	260	867	K2					
	Grey cast iron	Low tensile strength	180	602	K3					
		High tensile strength/austenitic	245	825	K4					
	Cast iron with spheroidal graphite	Ferritic	155	518	K5					
		Pearlitic	265	885	K6					
	GGV (CGI)		200	675	K7					
N	Wrought aluminium alloys	Not hardenable	30	–	N1	3936	3936	4920	G	
		Hardenable, hardened	100	343	N2	3280	3936	3936	G	
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	260	N3	3280	3280	3280	H	
		≤ 12% Si, hardenable, hardened	90	314	N4	3280	3280	3280	H	
		> 12% Si, not hardenable	130	447	N5	2624	2624	2624	H	
	Magnesium-based alloys		70	250	N6					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	343	N7					
		Brass, bronze, red brass	90	314	N8					
		Cu alloys, short-chipping	110	382	N9					
		High tensile, Ampco	300	1013	N10					
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1				
			Hardened	280	943	S2				
		Ni- or Co-based	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	1312	1312	1312	I	
	Thermosets	Without abrasive fillers			O2	1640	1640	1640	I	
	Plastic, glass-fibre-reinforced	GFRP			O3					
	Plastic, carbon-fibre-reinforced	CFRP			O4					
	Plastic, aramid-fibre-reinforced	AFRP			O5					
	Graphite (technical)		80 Shore		O6	1968	2624	2624	I	

¹ The classification of the machining groups can be found in the General Catalogue from page C 671 onwards.

Feed determination - INCH

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

A Material groups ISO P, ISO K and titanium alloys

a _e [inch]*	Feed per tooth f _z inch													
	Dia. 1/64	Dia. 1/32	Dia. 1/16	Dia. 1/8	Dia. 3/16	Dia. 1/4	Dia. 5/16	Dia. 3/8	Dia. 1/2	Dia. 9/16	Dia. 5/8	Dia. 11/16	Dia. 3/4	Dia. 1
0.0005	0.0008	0.0012	0.0024	0.0035	0.0047	0.0059	0.0059	0.0079						
0.0020	0.0006	0.0010	0.0016	0.0028	0.0039	0.0047	0.0059	0.0079						
0.0040	0.0005	0.0008	0.0014	0.0020	0.0031	0.0039	0.0059	0.0079	0.0079	0.0079	0.0079			
0.0080	0.0004	0.0006	0.0012	0.0016	0.0024	0.0031	0.0059	0.0071	0.0079	0.0079	0.0079	0.0079	0.0098	
0.0156	0.0004	0.0005	0.0010	0.0012	0.0020	0.0028	0.0047	0.0059	0.0059	0.0059	0.0059	0.0079	0.0098	0.0098
0.0312		0.0004	0.0010	0.0012	0.0016	0.0024	0.0035	0.0047	0.0047	0.0047	0.0047	0.0059	0.0079	0.0098
0.0625			0.0008	0.0012	0.0012	0.0020	0.0031	0.0043	0.0047	0.0047	0.0047	0.0059	0.0079	0.0079
0.1250				0.0008	0.0010	0.0018	0.0030	0.0041	0.0047	0.0047	0.0047	0.0053	0.0069	0.0079
0.1875					0.0008	0.0016	0.0028	0.0039	0.0047	0.0047	0.0047	0.0047	0.0059	0.0079
0.2500						0.0012	0.0024	0.0031	0.0039	0.0039	0.0047	0.0047	0.0059	0.0079
0.3125							0.0020	0.0028	0.0035	0.0039	0.0047	0.0047	0.0059	0.0079
0.3750								0.0024	0.0031	0.0039	0.0047	0.0047	0.0055	0.0063
0.5000									0.0028	0.0035	0.0043	0.0047	0.0055	0.0063
0.5625										0.0031	0.0039	0.0047	0.0051	0.0059
0.6250											0.0035	0.0039	0.0047	0.0059
0.6875												0.0039	0.0043	0.0051
0.7500													0.0039	0.0047
1.0000														0.0039

B Material groups ISO M, ISO H, heat-resistant alloys, tungsten alloys and molybdenum alloys

a _e [inch]*	Feed per tooth f _z inch													
	Dia. 1/64	Dia. 1/32	Dia. 1/16	Dia. 1/8	Dia. 3/16	Dia. 1/4	Dia. 5/16	Dia. 3/8	Dia. 1/2	Dia. 9/16	Dia. 5/8	Dia. 11/16	Dia. 3/4	Dia. 1
0.0005	0.0006	0.0012	0.0020	0.0031	0.0039	0.0047	0.0047	0.0063						
0.0020	0.0005	0.0008	0.0016	0.0024	0.0031	0.0039	0.0047	0.0063						
0.0040	0.0004	0.0006	0.0012	0.0016	0.0024	0.0031	0.0047	0.0063	0.0063	0.0063	0.0063			
0.0080	0.0003	0.0005	0.0010	0.0014	0.0020	0.0024	0.0047	0.0055	0.0063	0.0063	0.0063	0.0063	0.0079	
0.0156	0.0003	0.0004	0.0008	0.0010	0.0016	0.0024	0.0039	0.0047	0.0047	0.0047	0.0047	0.0063	0.0079	0.0079
0.0312		0.0004	0.0008	0.0010	0.0012	0.0019	0.0031	0.0039	0.0039	0.0039	0.0039	0.0047	0.0063	0.0079
0.0625			0.0006	0.0008	0.0010	0.0020	0.0028	0.0035	0.0039	0.0039	0.0039	0.0047	0.0063	0.0063
0.1250				0.0006	0.0009	0.0018	0.0026	0.0033	0.0039	0.0039	0.0039	0.0043	0.0055	0.0063
0.1875					0.0008	0.0016	0.0024	0.0031	0.0039	0.0039	0.0039	0.0039	0.0047	0.0063
0.2500						0.0012	0.0020	0.0028	0.0031	0.0031	0.0039	0.0039	0.0047	0.0063
0.3125							0.0016	0.0024	0.0031	0.0031	0.0039	0.0039	0.0047	0.0063
0.3750								0.0020	0.0028	0.0031	0.0039	0.0039	0.0047	0.0055
0.5000									0.0024	0.0028	0.0035	0.0039	0.0047	0.0055
0.5625										0.0028	0.0031	0.0039	0.0047	0.0055
0.6250											0.0028	0.0031	0.0039	0.0047
0.6875												0.0031	0.0039	0.0047
0.7500													0.0031	0.0039
1.0000														0.0039

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Feed determination - METRIC

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

A Material groups ISO P, ISO K and titanium alloys

a _e [mm]*	Feed per tooth f _z [mm]																							
	Dia. 0.3 mm	Dia. 0.5 mm	Dia. 1 mm	Dia. 2 mm	Dia. 3 mm	Dia. 4 mm	Dia. 6 mm	Dia. 8 mm	Dia. 10 mm	Dia. 12 mm	Dia. 14 mm	Dia. 16 mm	Dia. 18 mm	Dia. 20 mm	Dia. 25 mm	Dia. 32 mm	Dia. 40 mm	Dia. 50 mm	Dia. 63 mm	Dia. 80 mm	Dia. 100 mm	Dia. 160 mm	Dia. 200 mm	
0.01	0.02	0.02	0.03	0.06	0.09	0.12	0.15	0.15	0.20															
0.05	0.01	0.01	0.02	0.04	0.07	0.10	0.12	0.15	0.20															
0.1	0.01	0.01	0.02	0.03	0.05	0.08	0.10	0.15	0.20	0.20	0.20	0.20												
0.2	0.01	0.01	0.01	0.03	0.04	0.06	0.08	0.15	0.18	0.20	0.20	0.20	0.20	0.25										
0.5		0.01	0.01	0.02	0.03	0.05	0.07	0.12	0.15	0.15	0.15	0.15	0.20	0.25	0.25									
1			0.01	0.02	0.03	0.04	0.06	0.09	0.12	0.12	0.12	0.12	0.15	0.20	0.25	0.25	0.30	0.30	0.30	0.40	0.40	0.50	0.50	0.50
2				0.02	0.03	0.03	0.05	0.08	0.11	0.12	0.12	0.12	0.15	0.20	0.20	0.25	0.25	0.25	0.30	0.30	0.40	0.40	0.40	0.40
3					0.02	0.02	0.04	0.07	0.10	0.12	0.12	0.12	0.14	0.18	0.20	0.20	0.25	0.25	0.25	0.30	0.30	0.40	0.40	0.40
5						0.02	0.04	0.07	0.10	0.12	0.12	0.12	0.12	0.15	0.20	0.20	0.20	0.25	0.25	0.25	0.30	0.30	0.30	0.30
6							0.03	0.06	0.08	0.10	0.10	0.12	0.12	0.15	0.20	0.20	0.20	0.20	0.25	0.25	0.25	0.30	0.30	0.30
8								0.05	0.07	0.09	0.10	0.12	0.12	0.15	0.20	0.20	0.20	0.20	0.25	0.25	0.25	0.30	0.30	0.30
10									0.06	0.08	0.10	0.12	0.12	0.14	0.16	0.20	0.20	0.20	0.20	0.20	0.25	0.25	0.25	0.25
12										0.07	0.09	0.11	0.12	0.14	0.16	0.16	0.20	0.20	0.20	0.20	0.20	0.25	0.25	0.25
14											0.08	0.10	0.12	0.13	0.15	0.16	0.16	0.20	0.20	0.20	0.20	0.20	0.20	0.25
16												0.09	0.10	0.12	0.15	0.15	0.16	0.16	0.20	0.20	0.20	0.20	0.20	0.20
18													0.10	0.11	0.13	0.15	0.15	0.16	0.16	0.20	0.20	0.20	0.20	0.20
20														0.10	0.12	0.13	0.15	0.15	0.16	0.16	0.20	0.20	0.20	0.20
25															0.10	0.12	0.13	0.15	0.15	0.16	0.16	0.20	0.20	0.20
32																0.10	0.12	0.13	0.15	0.15	0.16	0.16	0.20	0.20
40																	0.10	0.12	0.13	0.15	0.15	0.16	0.16	0.20
50																		0.10	0.12	0.13	0.15	0.15	0.16	0.16
63																			0.10	0.12	0.13	0.15	0.15	0.16
80																				0.10	0.12	0.13	0.15	0.15
100																					0.10	0.12	0.13	0.15
160																						0.10	0.12	0.13
200																							0.10	0.12

B Material groups ISO M, ISO H, heat-resistant alloys, tungsten alloys and molybdenum alloys

a _e [mm]*	Feed per tooth f _z [mm]																							
	Dia. 0.3 mm	Dia. 0.5 mm	Dia. 1 mm	Dia. 2 mm	Dia. 3 mm	Dia. 4 mm	Dia. 6 mm	Dia. 8 mm	Dia. 10 mm	Dia. 12 mm	Dia. 14 mm	Dia. 16 mm	Dia. 18 mm	Dia. 20 mm	Dia. 25 mm	Dia. 32 mm	Dia. 40 mm	Dia. 50 mm	Dia. 63 mm	Dia. 80 mm	Dia. 100 mm	Dia. 160 mm	Dia. 200 mm	
0.01	0.02	0.02	0.02	0.05	0.07	0.10	0.12	0.12	0.16															
0.05	0.01	0.01	0.02	0.03	0.06	0.08	0.10	0.12	0.16															
0.1	0.01	0.01	0.02	0.03	0.04	0.06	0.08	0.12	0.16	0.16	0.16	0.16												
0.2	0.01	0.01	0.01	0.02	0.03	0.05	0.06	0.12	0.14	0.16	0.16	0.16	0.16	0.20										
0.5		0.01	0.01	0.02	0.02	0.04	0.06	0.10	0.12	0.12	0.12	0.12	0.16	0.20	0.20									
1			0.01	0.02	0.02	0.03	0.05	0.07	0.10	0.10	0.10	0.10	0.12	0.16	0.20	0.20	0.24	0.24	0.24	0.32	0.32	0.40	0.40	0.40
2				0.02	0.02	0.02	0.04	0.06	0.09	0.10	0.10	0.10	0.12	0.16	0.16	0.20	0.20	0.20	0.24	0.24	0.32	0.32	0.32	0.32
3					0.02	0.02	0.04	0.06	0.08	0.10	0.10	0.10	0.11	0.14	0.16	0.16	0.20	0.20	0.20	0.24	0.24	0.32	0.32	0.32
5						0.02	0.03	0.06	0.08	0.10	0.10	0.10	0.10	0.12	0.16	0.16	0.16	0.20	0.20	0.20	0.24	0.24	0.24	0.24
6							0.02	0.05	0.06	0.08	0.08	0.10	0.10	0.12	0.16	0.16	0.16	0.16	0.20	0.20	0.20	0.24	0.24	0.24
8								0.04	0.06	0.07	0.08	0.10	0.10	0.12	0.16	0.16	0.16	0.16	0.16	0.20	0.20	0.20	0.20	0.20
10									0.05	0.06	0.08	0.10	0.10	0.11	0.13	0.16	0.16	0.16	0.16	0.16	0.20	0.20	0.20	0.20
12										0.06	0.07	0.09	0.10	0.11	0.13	0.13	0.16	0.16	0.16	0.16	0.16	0.20	0.20	0.20
14											0.06	0.08	0.10	0.10	0.12	0.13	0.13	0.16	0.16	0.16	0.16	0.16	0.20	0.20
16												0.07	0.08	0.10	0.12	0.13	0.13	0.16	0.16	0.16	0.16	0.16	0.16	0.16
18													0.08	0.09	0.10	0.12	0.12	0.13	0.13	0.16	0.16	0.16	0.16	0.16
20														0.08	0.10	0.10	0.12	0.12	0.13	0.13	0.16	0.16	0.16	0.16
25															0.08	0.10	0.10	0.12	0.12	0.13	0.13	0.16	0.16	0.16
32																0.08	0.10	0.10	0.12	0.12	0.13	0.13	0.16	0.16
40																	0.08	0.10	0.10	0.12	0.12	0.13	0.13	0.16
50																		0.08	0.10	0.10	0.12	0.12	0.13	0.16
63																			0.08	0.10	0.10	0.12	0.12	0.16
80																				0.08	0.10	0.10	0.12	0.16
100																					0.08	0.10	0.10	0.16
160																						0.08	0.10	0.16
200																							0.08	0.16

C1

Feed determination - INCH

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

C Material groups ISO N and ISO O

a _e [inch]*	Feed per tooth f _z inch													
	Dia. 1/64	Dia. 1/32	Dia. 1/16	Dia. 1/8	Dia. 3/16	Dia. 1/4	Dia. 5/16	Dia. 3/8	Dia. 1/2	Dia. 9/16	Dia. 5/8	Dia. 11/16	Dia. 3/4	Dia. 1
0.0005	0.0016	0.0024	0.0039	0.0063	0.0079	0.0098	0.0098	0.0098						
0.0020	0.0012	0.0020	0.0031	0.0047	0.0071	0.0079	0.0098	0.0098						
0.0040	0.0010	0.0016	0.0024	0.0039	0.0055	0.0071	0.0098	0.0098	0.0098	0.0098	0.0098			
0.0080	0.0008	0.0012	0.0020	0.0031	0.0039	0.0055	0.0098	0.0098	0.0098	0.0098	0.0098	0.0098	0.0098	
1/64	0.0008	0.0008	0.0020	0.0024	0.0035	0.0047	0.0079	0.0098	0.0098	0.0098	0.0098	0.0098	0.0098	0.0098
1/32		0.0006	0.0020	0.0024	0.0028	0.0039	0.0063	0.0087	0.0087	0.0087	0.0087	0.0087	0.0098	0.0098
1/16			0.0016	0.0020	0.0024	0.0031	0.0055	0.0087	0.0087	0.0087	0.0087	0.0098	0.0098	0.0098
1/8				0.0016	0.0020	0.0030	0.0051	0.0087	0.0087	0.0087	0.0087	0.0093	0.0098	0.0098
3/16					0.0016	0.0028	0.0047	0.0087	0.0087	0.0087	0.0087	0.0087	0.0098	0.0098
1/4						0.0020	0.0039	0.0055	0.0071	0.0079	0.0087	0.0087	0.0098	0.0098
5/16							0.0035	0.0047	0.0063	0.0079	0.0087	0.0087	0.0098	0.0098
3/8								0.0039	0.0055	0.0071	0.0087	0.0087	0.0098	0.0098
1/2									0.0047	0.0063	0.0079	0.0087	0.0098	0.0098
9/16										0.0055	0.0071	0.0087	0.0098	0.0098
5/8											0.0063	0.0071	0.0087	0.0098
11/16												0.0071	0.0079	0.0098
3/4													0.0071	0.0079
1														0.0079

D Protostar® Flash ISO P, M, K, N, S, O

a _e [inch]*	Feed per tooth f _z inch									
	Dia. 1/8	Dia. 3/16	Dia. 1/4	Dia. 5/16	Dia. 3/8	Dia. 1/2	Dia. 9/16	Dia. 5/8	Dia. 11/16	Dia. 3/4
1/32	0.0028	0.0039								
1/16	0.0028	0.0039	0.0063	0.0098						
1/8	0.0028	0.0039	0.0063	0.0098						
3/16		0.0039	0.0063	0.0098	0.0118	0.0138	0.0000	0.0000	0.0000	0.0000
1/4			0.0063	0.0098	0.0118	0.0138	0.0157	0.0197	0.0000	0.0000
5/16				0.0098	0.0118	0.0138	0.0157	0.0197	0.0236	0.0276
3/8					0.0118	0.0138	0.0157	0.0197	0.0236	0.0276
1/2							0.0157	0.0197	0.0236	0.0276
9/16								0.0157	0.0197	0.0236
5/8									0.0197	0.0236
11/16										0.0236
3/4										0.0276

E Protostar® Flash ISO H

a _e [inch]*	Feed per tooth f _z inch									
	Dia. 1/8	Dia. 3/16	Dia. 1/4	Dia. 5/16	Dia. 3/8	Dia. 1/2	Dia. 9/16	Dia. 5/8	Dia. 11/16	Dia. 3/4
1/32	0.0024	0.0031								
1/16	0.0024	0.0031	0.0051	0.0079						
1/8	0.0024	0.0031	0.0051	0.0079	0.0094					
3/16		0.0031	0.0051	0.0079	0.0094	0.0110				
1/4			0.0051	0.0079	0.0094	0.0110	0.0126	0.0157	0.0189	
5/16				0.0079	0.0094	0.0110	0.0126	0.0157	0.0189	0.0220
3/8					0.0094	0.0110	0.0126	0.0157	0.0189	0.0220
1/2							0.0126	0.0157	0.0189	0.0220
9/16								0.0126	0.0157	0.0189
5/8									0.0157	0.0189
11/16										0.0189
3/4										0.0220

Feed determination - METRIC

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

C Material groups ISO N and ISO O

a _e [mm]*	Feed per tooth f _z [mm]																							
	Dia. 0.3 mm	Dia. 0.5 mm	Dia. 1 mm	Dia. 2 mm	Dia. 3 mm	Dia. 4 mm	Dia. 6 mm	Dia. 8 mm	Dia. 10 mm	Dia. 12 mm	Dia. 14 mm	Dia. 16 mm	Dia. 18 mm	Dia. 20 mm	Dia. 25 mm	Dia. 32 mm	Dia. 40 mm	Dia. 50 mm	Dia. 63 mm	Dia. 80 mm	Dia. 100 mm	Dia. 160 mm	Dia. 200 mm	
0.01	0.04	0.04	0.07	0.13	0.20	0.26	0.33	0.33	0.44															
0.05	0.03	0.03	0.06	0.09	0.15	0.22	0.26	0.33	0.44															
0.1	0.02	0.03	0.04	0.08	0.11	0.18	0.22	0.33	0.44	0.44	0.44													
0.2	0.02	0.02	0.03	0.07	0.09	0.13	0.18	0.33	0.40	0.44	0.44	0.44	0.44	0.50										
0.5		0.02	0.03	0.06	0.07	0.11	0.15	0.26	0.33	0.33	0.33	0.33	0.44	0.50	0.50									
1			0.02	0.06	0.07	0.09	0.13	0.20	0.26	0.26	0.26	0.26	0.33	0.44	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
2				0.04	0.07	0.07	0.11	0.18	0.24	0.26	0.26	0.26	0.33	0.44	0.44	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
3					0.04	0.06	0.10	0.17	0.23	0.26	0.26	0.26	0.30	0.39	0.44	0.44	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
5					0.04	0.09	0.15	0.22	0.26	0.26	0.26	0.26	0.33	0.44	0.44	0.44	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
6						0.07	0.13	0.18	0.22	0.22	0.26	0.26	0.33	0.44	0.44	0.44	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
8							0.11	0.15	0.20	0.22	0.26	0.26	0.33	0.44	0.44	0.44	0.44	0.55	0.55	0.55	0.55	0.55	0.55	0.55
10								0.13	0.18	0.22	0.26	0.26	0.31	0.35	0.44	0.44	0.44	0.44	0.44	0.50	0.55	0.55	0.55	0.55
12									0.15	0.20	0.24	0.26	0.31	0.35	0.35	0.44	0.44	0.44	0.44	0.44	0.50	0.50	0.50	0.50
14										0.18	0.22	0.26	0.29	0.33	0.35	0.35	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.50
16											0.20	0.22	0.26	0.33	0.33	0.35	0.35	0.44	0.44	0.44	0.44	0.44	0.44	0.44
18												0.22	0.26	0.33	0.33	0.33	0.35	0.35	0.44	0.44	0.44	0.44	0.44	0.44
20													0.22	0.24	0.29	0.33	0.33	0.35	0.35	0.44	0.44	0.44	0.44	0.44
25														0.22	0.26	0.29	0.33	0.33	0.35	0.35	0.44	0.44	0.44	0.44
32															0.22	0.26	0.29	0.33	0.33	0.35	0.35	0.35	0.35	0.44
40																0.22	0.26	0.29	0.33	0.33	0.35	0.35	0.35	0.35
50																	0.22	0.26	0.29	0.33	0.33	0.33	0.33	0.35
63																		0.22	0.26	0.29	0.33	0.33	0.33	0.33
80																			0.22	0.26	0.29	0.33	0.33	0.33
100																				0.22	0.26	0.29	0.29	0.33
160																					0.22	0.26	0.26	0.26
200																						0.22	0.26	0.22

D Protostar® Flash ISO P, M, K, N, S, O

a _e [mm]*	Feed per tooth f _z [mm]										
	Dia. 3 mm	Dia. 4 mm	Dia. 6 mm	Dia. 8 mm	Dia. 10 mm	Dia. 12 mm	Dia. 14 mm	Dia. 16 mm	Dia. 18 mm	Dia. 20 mm	Dia. 25 mm
0.8	0.07	0.10									
1.5	0.07	0.10	0.16	0.25							
3	0.07	0.10	0.16	0.25	0.30						
5		0.10	0.16	0.25	0.30	0.35					
6			0.16	0.25	0.30	0.35	0.40	0.50	0.60		
8				0.25	0.30	0.35	0.40	0.50	0.60	0.70	0.70
10					0.30	0.35	0.40	0.50	0.60	0.70	0.70
12						0.30	0.35	0.40	0.50	0.60	0.70
14							0.40	0.50	0.60	0.70	0.70
16								0.40	0.50	0.60	0.70
18									0.50	0.60	0.70
20										0.60	0.70
25											0.70

E Protostar® Flash ISO-H

a _e [mm]*	Feed per tooth f _z [mm]										
	Dia. 3 mm	Dia. 4 mm	Dia. 6 mm	Dia. 8 mm	Dia. 10 mm	Dia. 12 mm	Dia. 14 mm	Dia. 16 mm	Dia. 18 mm	Dia. 20 mm	Dia. 25 mm
0.8	0.06	0.08									
1.5	0.06	0.08	0.13	0.20							
3	0.06	0.08	0.13	0.20	0.24						
5		0.08	0.13	0.20	0.24	0.28					
6			0.13	0.20	0.24	0.28	0.32	0.40	0.48		
8				0.20	0.24	0.28	0.32	0.40	0.48	0.56	0.56
10					0.24	0.28	0.32	0.40	0.48	0.56	0.56
12						0.24	0.28	0.32	0.40	0.48	0.56
14							0.32	0.40	0.48	0.56	0.56
16								0.32	0.40	0.48	0.56
18									0.40	0.48	0.56
20										0.48	0.56
25											0.56

Feed determination for brazed tools - INCH

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

F Proto-max TM _{ST}													
a _e [inch]*	Feed per tooth f _z inch												
	Dia. 1/32	Dia. 1/16	Dia. 1/8	Dia. 3/16	Dia. 1/4	Dia. 5/16	Dia. 3/8	Dia. 1/2	Dia. 9/16	Dia. 5/8	Dia. 11/16	Dia. 3/4	Dia. 1
0.0005	0.0016	0.0031	0.0043	0.0055	0.0071	0.0071	0.0094						
0.0020	0.0012	0.0020	0.0035	0.0047	0.0055	0.0071	0.0094						
0.0040	0.0008	0.0016	0.0024	0.0039	0.0047	0.0071	0.0094	0.0094	0.0094	0.0094			
0.0080	0.0008	0.0016	0.0020	0.0028	0.0039	0.0071	0.0087	0.0094	0.0094	0.0094	0.0094	0.0118	
1/64	0.0004	0.0012	0.0016	0.0024	0.0031	0.0055	0.0071	0.0071	0.0071	0.0071	0.0094	0.0118	0.0118
1/32	0.0004	0.0012	0.0016	0.0020	0.0028	0.0043	0.0055	0.0055	0.0055	0.0055	0.0071	0.0094	0.0118
1/16		0.0008	0.0016	0.0016	0.0024	0.0039	0.0051	0.0055	0.0055	0.0055	0.0071	0.0094	0.0094
1/8			0.0008	0.0012	0.0020	0.0035	0.0051	0.0055	0.0055	0.0055	0.0063	0.0083	0.0094
3/16				0.0008	0.0020	0.0031	0.0047	0.0055	0.0055	0.0055	0.0055	0.0071	0.0094
1/4					0.0016	0.0028	0.0039	0.0047	0.0047	0.0055	0.0055	0.0071	0.0094
5/16						0.0024	0.0031	0.0043	0.0047	0.0055	0.0055	0.0071	0.0094
3/8							0.0028	0.0039	0.0047	0.0055	0.0055	0.0067	0.0075
1/2								0.0031	0.0043	0.0051	0.0055	0.0067	0.0075
9/16									0.0039	0.0047	0.0055	0.0063	0.0071
5/8										0.0043	0.0047	0.0055	0.0071
11/16											0.0047	0.0051	0.0063
3/4												0.0047	0.0055
1													0.0047

G Wrought aluminum alloys														
a _e / D _c	Feed per tooth f _z inch													
	Ø 0.2362 in	Ø 0.3150 in	Ø 0.3937 in	Ø 0.4724 in	Ø 0.6299 in	Ø 0.7874 in	Ø 0.9843 in	Ø 1.2598 in	Ø 1.5748 in	Ø 1.9685 in	Ø 2.4803 in	Ø 3.1496 in	Ø 3.9370 in	Ø 4.9213 in
1/50	0.0031	0.0028	0.0035	0.0035	0.0047	0.0047	0.0047	0.0059	0.0059					
1/20	0.0028	0.0024	0.0031	0.0031	0.0039	0.0039	0.0039	0.0051	0.0051					
1/10	0.0024	0.0024	0.0028	0.0028	0.0039	0.0028	0.0039	0.0047	0.0047	0.0047	0.0047	0.0047	0.0047	0.0047
1/5	0.0024	0.0024	0.0028	0.0028	0.0035	0.0035	0.0035	0.0043	0.0043	0.0043	0.0043	0.0043	0.0043	0.0043
1/2	0.0020	0.0020	0.0024	0.0024	0.0031	0.0031	0.0031	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039
1/1	0.0020	0.0020	0.0024	0.0024	0.0031	0.0031	0.0031	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039

H Magnesium-based alloys/copper and copper alloys														
a _e / D _c	Feed per tooth f _z inch													
	Ø 0.2362 in	Ø 0.3150 in	Ø 0.3937 in	Ø 0.4724 in	Ø 0.6299 in	Ø 0.7874 in	Ø 0.9843 in	Ø 1.2598 in	Ø 1.5748 in	Ø 1.9685 in	Ø 2.4803 in	Ø 3.1496 in	Ø 3.9370 in	Ø 4.9213 in
1/50	0.04	0.04	0.0024	0.0024	0.0035	0.0035	0.0035	0.0043	0.0043					
1/20	0.04	0.04	0.05	0.05	0.0031	0.0031	0.0031	0.0039	0.0039					
1/10	0.04	0.04	0.05	0.05	0.0028	0.0028	0.0028	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035
1/5	0.03	0.03	0.04	0.04	0.0028	0.0028	0.0028	0.0031	0.0031	0.0031	0.0031	0.0031	0.0031	0.0031
1/2	0.03	0.03	0.04	0.04	0.0024	0.0024	0.0024	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028
1/1	0.03	0.03	0.04	0.04	0.0024	0.0024	0.0024	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028

I Thermoplasts. thermosetting plastics. plastic. graphite														
a _e / D _c	Feed per tooth f _z inch													
	Ø 0.2362 in	Ø 0.3150 in	Ø 0.3937 in	Ø 0.4724 in	Ø 0.6299 in	Ø 0.7874 in	Ø 0.9843 in	Ø 1.2598 in	Ø 1.5748 in	Ø 1.9685 in	Ø 2.4803 in	Ø 3.1496 in	Ø 3.9370 in	Ø 4.9213 in
1/50	0.0020	0.0020	0.0016	0.0016	0.0039	0.0039	0.0039	0.0051	0.0051					
1/20	0.0020	0.0020	0.0024	0.0024	0.0035	0.0035	0.0035	0.0043	0.0043					
1/10	0.0016	0.0016	0.0024	0.0024	0.0031	0.0031	0.0031	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039	0.0039
1/5	0.0016	0.0016	0.0020	0.0020	0.0031	0.0031	0.0031	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035	0.0035
1/2	0.0012	0.0012	0.0020	0.0020	0.0016	0.0016	0.0016	0.0031	0.0031	0.0031	0.0031	0.0031	0.0031	0.0031
1/1	0.0012	0.0012	0.0020	0.0020	0.0016	0.0016	0.0016	0.0031	0.0031	0.0031	0.0031	0.0031	0.0031	0.0031

C 1

Feed determination for brazed tools - METRIC

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

F Proto-max TM _{ST}		Feed per tooth f_z inch												
		Dia. 1 mm	Dia. 2 mm	Dia. 3 mm	Dia. 4 mm	Dia. 6 mm	Dia. 8 mm	Dia. 10 mm	Dia. 12 mm	Dia. 14 mm	Dia. 16 mm	Dia. 18 mm	Dia. 20 mm	Dia. 25 mm
a _e [mm]*														
0.01	0.04	0.08	0.11	0.14	0.18	0.18	0.24							
0.05	0.03	0.05	0.09	0.12	0.14	0.18	0.24							
0.1	0.02	0.04	0.06	0.10	0.12	0.18	0.24	0.24	0.24	0.24				
0.2	0.02	0.04	0.05	0.07	0.10	0.18	0.22	0.24	0.24	0.24	0.24	0.24	0.3	
0.5	0.01	0.03	0.04	0.06	0.08	0.14	0.18	0.18	0.18	0.18	0.18	0.24	0.3	0.30
1	0.01	0.03	0.04	0.05	0.07	0.11	0.14	0.14	0.14	0.14	0.14	0.18	0.24	0.30
2		0.02	0.04	0.04	0.06	0.10	0.13	0.14	0.14	0.14	0.14	0.18	0.24	0.24
3			0.02	0.03	0.05	0.09	0.13	0.14	0.14	0.14	0.14	0.16	0.21	0.24
5				0.02	0.05	0.08	0.12	0.14	0.14	0.14	0.14	0.14	0.18	0.24
6					0.04	0.07	0.10	0.12	0.12	0.14	0.14	0.14	0.18	0.24
8						0.06	0.08	0.11	0.12	0.14	0.14	0.14	0.18	0.24
10							0.07	0.10	0.12	0.14	0.14	0.14	0.17	0.19
12								0.08	0.11	0.12	0.13	0.14	0.17	0.19
14									0.10	0.12	0.14	0.14	0.16	0.18
16										0.11	0.12	0.14	0.16	0.18
18											0.12	0.14	0.16	0.18
20												0.13	0.16	0.18
25													0.14	0.18

G Wrought aluminum alloys		Feed per tooth f_z mm													
		Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm	Ø 50 mm	Ø 63 mm	Ø 80 mm	Ø 100 mm	Ø 125 mm
a _e /D _c															
1/50	0.08	0.07	0.09	0.09	0.12	0.12	0.12	0.15	0.15						
1/20	0.07	0.06	0.08	0.08	0.10	0.10	0.10	0.13	0.13						
1/10	0.06	0.06	0.07	0.07	0.10	0.07	0.10	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
1/5	0.06	0.06	0.07	0.07	0.09	0.09	0.09	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
1/2	0.05	0.05	0.06	0.06	0.08	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
1/1	0.05	0.05	0.06	0.06	0.08	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

H Magnesium-based alloys/copper and copper alloys		Feed per tooth f_z mm													
		Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm	Ø 50 mm	Ø 63 mm	Ø 80 mm	Ø 100 mm	Ø 125 mm
a _e /D _c															
1/50	0.04	0.04	0.06	0.06	0.09	0.09	0.09	0.11	0.11						
1/20	0.04	0.04	0.05	0.05	0.08	0.08	0.08	0.10	0.10						
1/10	0.04	0.04	0.05	0.05	0.07	0.07	0.07	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
1/5	0.03	0.03	0.04	0.04	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
1/2	0.03	0.03	0.04	0.04	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
1/1	0.03	0.03	0.04	0.04	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07

I Thermoplasts. thermosetting plastics. plastic. graphite		Feed per tooth f_z mm													
		Ø 6 mm	Ø 8 mm	Ø 10 mm	Ø 12 mm	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm	Ø 50 mm	Ø 63 mm	Ø 80 mm	Ø 100 mm	Ø 125 mm
a _e /D _c															
1/50	0.05	0.05	0.07	0.07	0.10	0.10	0.10	0.13	0.13						
1/20	0.05	0.05	0.06	0.06	0.09	0.09	0.09	0.11	0.11						
1/10	0.04	0.04	0.06	0.06	0.08	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
1/5	0.04	0.04	0.05	0.05	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
1/2	0.03	0.03	0.05	0.05	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
1/1	0.03	0.03	0.05	0.05	0.07	0.07	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08

Feed determination for brazed tools - INCH

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

(continued)

J

Non-alloyed steel. malleable cast iron. ductile cast iron and CGI

a _e inch*	Feed per tooth f _z inch								
	Ø 0.6299 in	Ø 0.7874 in	Ø 0.9843 in	Ø 1.2598 in	Ø 1.5748 in	Ø 1.9685 in	Ø 62.4803 in	Ø 3.1496 in	Ø 3.9370 in
0.0394 in	0.0047	0.0047	0.0047	0.0047	0.0051				
0.0787 in	0.0047	0.0047	0.0047	0.0047	0.0047	0.0079			
0.1181 in	0.0043	0.0047	0.0047	0.0047	0.0047	0.0075	0.0079		
0.1575 in	0.0039	0.0043	0.0047	0.0047	0.0047	0.0071	0.0075	0.0079	
0.1969 in	0.0039	0.0039	0.0043	0.0047	0.0047	0.0071	0.0071	0.0075	0.0079
0.2362 in	0.0039	0.0039	0.0039	0.0043	0.0047	0.0067	0.0071	0.0071	0.0075
0.3150 in	0.0039	0.0039	0.0039	0.0039	0.0043	0.0067	0.0067	0.0071	0.0071
0.3937 in	0.0039	0.0039	0.0039	0.0039	0.0039	0.0067	0.0067	0.0067	0.0071
0.4724 in	0.0039	0.0039	0.0039	0.0039	0.0039	0.0063	0.0067	0.0067	0.0067
0.6299 in	0.0039	0.0039	0.0039	0.0039	0.0039	0.0059	0.0063	0.0067	0.0067
0.7874 in		0.0039	0.0039	0.0039	0.0039	0.0059	0.0059	0.0063	0.0067
0.9843 in			0.0039	0.0039	0.0039	0.0059	0.0059	0.0059	0.0063
1.2598 in				0.0039	0.0039	0.0059	0.0059	0.0059	0.0059
1.5748 in					0.0039	0.0059	0.0059	0.0059	0.0059
1.9685 in						0.0059	0.0059	0.0059	0.0059
2.4803 in							0.0059	0.0059	0.0059
3.1496 in								0.0059	0.0059
3.9370 in									0.0059

* Radial feed in mm

K

Grey cast iron

a _e inch*	Feed per tooth f _z inch								
	Ø 0.6299 in	Ø 0.7874 in	Ø 0.9843 in	Ø 1.2598 in	Ø 1.5748 in	Ø 1.9685 in	Ø 2.4803 in	Ø 3.1496 in	Ø 3.9370 in
0.0394 in	0.0051	0.0051	0.0051	0.0055	0.0059				
0.0787 in	0.0051	0.0051	0.0051	0.0051	0.0055	0.0102			
0.1181 in	0.0051	0.0051	0.0051	0.0051	0.0051	0.0098	0.0102		
0.1575 in	0.0047	0.0051	0.0051	0.0051	0.0051	0.0094	0.0098	0.0102	
0.1969 in	0.0047	0.0047	0.0051	0.0051	0.0051	0.0094	0.0094	0.0098	0.0102
0.2362 in	0.0047	0.0047	0.0047	0.0051	0.0051	0.0091	0.0094	0.0094	0.0098
0.3150 in	0.0047	0.0047	0.0047	0.0047	0.0051	0.0087	0.0091	0.0094	0.0094
0.3937 in	0.0047	0.0047	0.0047	0.0047	0.0047	0.0087	0.0087	0.0091	0.0094
0.4724 in	0.0047	0.0047	0.0047	0.0047	0.0047	0.0083	0.0087	0.0087	0.0091
0.6299 in	0.0047	0.0047	0.0047	0.0047	0.0047	0.0079	0.0083	0.0087	0.0087
0.7874 in		0.0047	0.0047	0.0047	0.0047	0.0079	0.0079	0.0083	0.0087
0.9843 in			0.0047	0.0047	0.0047	0.0079	0.0079	0.0079	0.0083
1.2598 in				0.0047	0.0047	0.0079	0.0079	0.0079	0.0079
1.5748 in					0.0047	0.0079	0.0079	0.0079	0.0079
1.9685 in						0.0079	0.0079	0.0079	0.0079
2.4803 in							0.0079	0.0079	0.0079
3.1496 in								0.0079	0.0079
3.9370 in									0.0079

Feed determination for brazed tools - METRIC

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

(continued)

J

Non-alloyed steel, malleable cast iron, ductile cast iron and CGI

a _e mm*	Feed per tooth f _z mm								
	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm	Ø 50 mm	Ø 63 mm	Ø 80 mm	Ø 100 mm
1.0	0.12	0.12	0.12	0.12	0.13				
2.0	0.12	0.12	0.12	0.12	0.12	0.20			
3.0	0.11	0.12	0.12	0.12	0.12	0.19	0.20		
4.0	0.10	0.11	0.12	0.12	0.12	0.18	0.19	0.20	
5.0	0.10	0.10	0.11	0.12	0.12	0.18	0.18	0.19	0.20
6.0	0.10	0.10	0.10	0.11	0.12	0.17	0.18	0.18	0.19
8.0	0.10	0.10	0.10	0.10	0.11	0.17	0.17	0.18	0.18
10.0	0.10	0.10	0.10	0.10	0.10	0.17	0.17	0.17	0.18
12.0	0.10	0.10	0.10	0.10	0.10	0.16	0.17	0.17	0.17
16.0	0.10	0.10	0.10	0.10	0.10	0.15	0.16	0.17	0.17
20.0		0.10	0.10	0.10	0.10	0.15	0.15	0.16	0.17
25.0			0.10	0.10	0.10	0.15	0.15	0.15	0.16
32.0				0.10	0.10	0.15	0.15	0.15	0.15
40.0					0.10	0.15	0.15	0.15	0.15
50.0						0.15	0.15	0.15	0.15
63.0							0.15	0.15	0.15
80.0								0.15	0.15
100.0									0.15

* Radial feed in mm

K

Grey cast iron

a _e mm*	Feed per tooth f _z mm								
	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm	Ø 50 mm	Ø 63 mm	Ø 80 mm	Ø 100 mm
1.0	0.13	0.13	0.13	0.14	0.15				
2.0	0.13	0.13	0.13	0.13	0.14	0.26			
3.0	0.13	0.13	0.13	0.13	0.13	0.25	0.26		
4.0	0.12	0.13	0.13	0.13	0.13	0.24	0.25	0.26	
5.0	0.12	0.12	0.13	0.13	0.13	0.24	0.24	0.25	0.26
6.0	0.12	0.12	0.12	0.13	0.13	0.23	0.24	0.24	0.25
8.0	0.12	0.12	0.12	0.12	0.13	0.22	0.23	0.24	0.24
10.0	0.12	0.12	0.12	0.12	0.12	0.22	0.22	0.23	0.24
12.0	0.12	0.12	0.12	0.12	0.12	0.21	0.22	0.22	0.23
16.0	0.12	0.12	0.12	0.12	0.12	0.20	0.21	0.22	0.22
20.0		0.12	0.12	0.12	0.12	0.20	0.20	0.21	0.22
25.0			0.12	0.12	0.12	0.20	0.20	0.20	0.21
32.0				0.12	0.12	0.20	0.20	0.20	0.20
40.0					0.12	0.20	0.20	0.20	0.20
50.0						0.20	0.20	0.20	0.20
63.0							0.20	0.20	0.20
80.0								0.20	0.20
100.0									0.20

Feed determination for brazed tools - INCH

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

(continued)

L Low-alloy steel, high-alloy steel and high-alloy tool steel

a _e inch	Feed per tooth f _z inch								
	Ø 0.6299 in	Ø 0.7874 in	Ø 0.9843 in	Ø 1.2598 in	Ø 1.5748 in	Ø 1.9685 in	Ø 2.4803 in	Ø 3.1496 in	Ø 3.9370 in
0.0394 in	0.0035	0.0035	0.0035	0.0039	0.0039				
0.0787 in	0.0035	0.0035	0.0035	0.0035	0.0039	0.0067			
0.1181 in	0.0035	0.0035	0.0035	0.0035	0.0035	0.0063	0.0067		
0.1575 in	0.0031	0.0035	0.0035	0.0035	0.0035	0.0059	0.0063	0.0067	
0.1969 in	0.0031	0.0031	0.0035	0.0035	0.0035	0.0055	0.0059	0.0063	0.0067
0.2362 in	0.0031	0.0031	0.0031	0.0035	0.0035	0.0055	0.0055	0.0059	0.0063
0.3150 in	0.0031	0.0031	0.0031	0.0031	0.0035	0.0055	0.0055	0.0055	0.0059
0.3937 in	0.0031	0.0031	0.0031	0.0031	0.0031	0.0051	0.0055	0.0055	0.0055
0.4724 in	0.0031	0.0031	0.0031	0.0031	0.0031	0.0055	0.0055	0.0055	0.0055
0.6299 in	0.0031	0.0031	0.0031	0.0031	0.0031	0.0055	0.0055	0.0055	0.0055
0.7874 in		0.0031	0.0031	0.0031	0.0031	0.0055	0.0055	0.0055	0.0055
0.9843 in			0.0031	0.0031	0.0031	0.0047	0.0055	0.0055	0.0055
1.2598 in				0.0031	0.0031	0.0047	0.0047	0.0055	0.0055
1.5748 in					0.0031	0.0047	0.0047	0.0047	0.0055
1.9685 in						0.0047	0.0047	0.0047	0.0047
2.4803 in							0.0047	0.0047	0.0047
3.1496 in								0.0047	0.0047
3.9370 in									0.0047

M Stainless steel (ISO P)

a _e inch*	Feed per tooth f _z inch								
	Ø 0.6299 in	Ø 0.7874 in	Ø 0.9843 in	Ø 1.2598 in	Ø 1.5748 in	Ø 1.9685 in	Ø 2.4803 in	Ø 3.1496 in	Ø 3.9370 in
0.0394 in	0.0028	0.0028	0.0028	0.0031	0.0031				
0.0787 in	0.0028	0.0028	0.0028	0.0028	0.0031	0.0055			
0.1181 in	0.0028	0.0028	0.0028	0.0028	0.0028	0.0051	0.0055		
0.1575 in	0.0028	0.0028	0.0028	0.0028	0.0028	0.0047	0.0051	0.0055	
0.1969 in	0.0028	0.0028	0.0028	0.0028	0.0028	0.0047	0.0047	0.0051	0.0055
0.2362 in	0.0024	0.0024	0.0024	0.0028	0.0028	0.0047	0.0047	0.0047	0.0051
0.3150 in	0.0024	0.0024	0.0024	0.0024	0.0028	0.0047	0.0047	0.0047	0.0047
0.3937 in	0.0024	0.0024	0.0024	0.0024	0.0024	0.0043	0.0047	0.0047	0.0047
0.4724 in	0.0024	0.0024	0.0024	0.0024	0.0024	0.0043	0.0043	0.0047	0.0047
0.6299 in	0.0024	0.0024	0.0024	0.0024	0.0024	0.0043	0.0043	0.0043	0.0047
0.7874 in		0.0024	0.0024	0.0024	0.0024	0.0043	0.0043	0.0043	0.0043
0.9843 in			0.0024	0.0024	0.0024	0.0039	0.0043	0.0043	0.0043
1.2598 in				0.0024	0.0024	0.0039	0.0039	0.0043	0.0043
1.5748 in					0.0024	0.0039	0.0039	0.0039	0.0043
1.9685 in						0.0039	0.0039	0.0039	0.0039
2.4803 in							0.0039	0.0039	0.0039
3.1496 in								0.0039	0.0039
3.9370 in									0.0039

* Radial feed in mm

C 1

Feed determination for brazed tools - METRIC

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

(continued)

L Low-alloy steel, high-alloy steel and high-alloy tool steel

a _e mm*	Feed per tooth f _z mm								
	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm	Ø 50 mm	Ø 63 mm	Ø 80 mm	Ø 100 mm
1.0	0.09	0.09	0.09	0.1	0.10				
2.0	0.09	0.09	0.09	0.09	0.10	0.17			
3.0	0.09	0.09	0.09	0.09	0.09	0.16	0.17		
4.0	0.08	0.09	0.09	0.09	0.09	0.15	0.16	0.17	
5.0	0.08	0.08	0.09	0.09	0.09	0.14	0.15	0.16	0.17
6.0	0.08	0.08	0.08	0.09	0.09	0.14	0.14	0.15	0.16
8.0	0.08	0.08	0.08	0.08	0.09	0.14	0.14	0.14	0.15
10.0	0.08	0.08	0.08	0.08	0.08	0.13	0.14	0.14	0.14
12.0	0.08	0.08	0.08	0.08	0.08	0.13	0.13	0.14	0.14
16.0	0.08	0.08	0.08	0.08	0.08	0.13	0.13	0.13	0.14
20.0		0.08	0.08	0.08	0.08	0.13	0.13	0.13	0.13
25.0			0.08	0.08	0.08	0.12	0.13	0.13	0.13
32.0				0.08	0.08	0.12	0.12	0.13	0.13
40.0					0.08	0.12	0.12	0.12	0.13
50.0						0.12	0.12	0.12	0.12
63.0							0.12	0.12	0.12
80.0								0.12	0.12
100.0									0.12

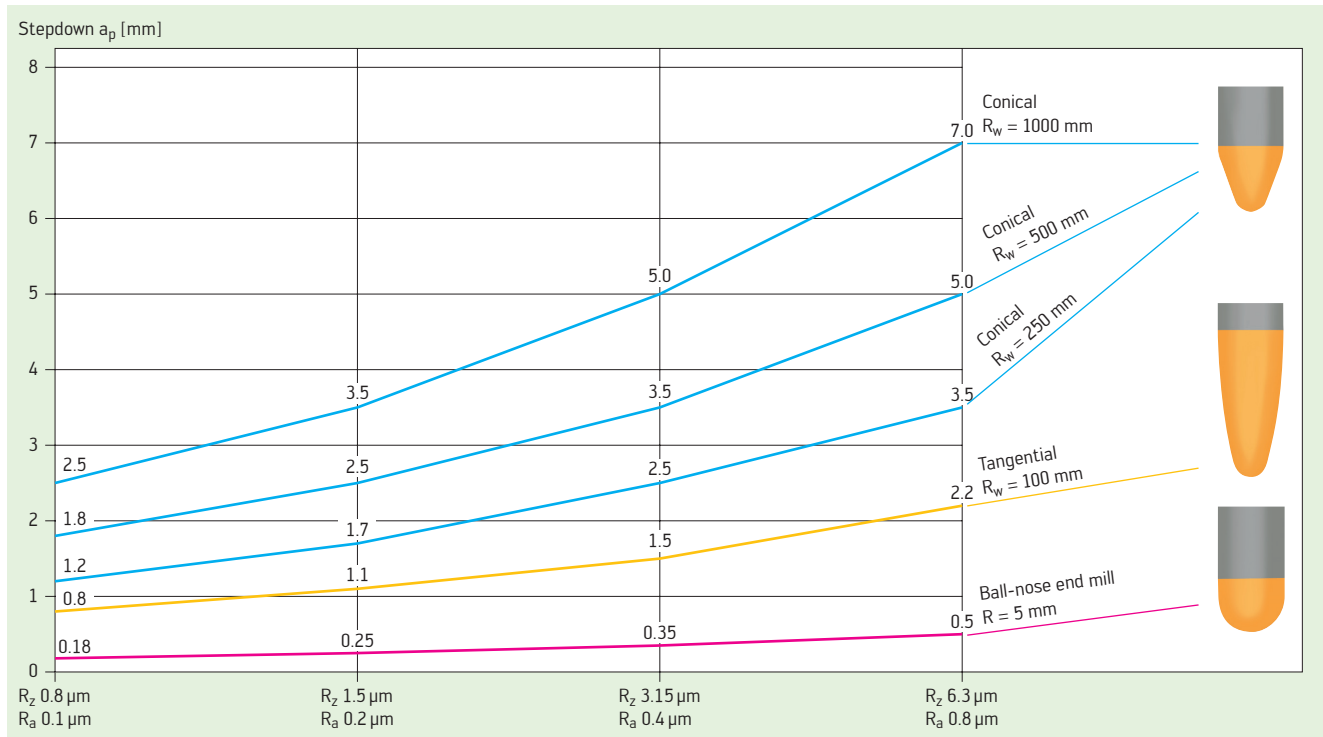
M Stainless steel (ISO P)

a _e mm*	Feed per tooth f _z mm								
	Ø 16 mm	Ø 20 mm	Ø 25 mm	Ø 32 mm	Ø 40 mm	Ø 50 mm	Ø 63 mm	Ø 80 mm	Ø 100 mm
1.0	0.07	0.07	0.07	0.08	0.08				
2.0	0.07	0.07	0.07	0.07	0.08	0.14			
3.0	0.07	0.07	0.07	0.07	0.07	0.13	0.14		
4.0	0.06	0.07	0.07	0.07	0.07	0.12	0.13	0.14	
5.0	0.06	0.06	0.07	0.07	0.07	0.12	0.12	0.13	0.14
6.0	0.06	0.06	0.06	0.07	0.07	0.12	0.12	0.12	0.13
8.0	0.06	0.06	0.06	0.06	0.07	0.12	0.12	0.12	0.12
10.0	0.06	0.06	0.06	0.06	0.06	0.11	0.12	0.12	0.12
12.0	0.06	0.06	0.06	0.06	0.06	0.11	0.11	0.12	0.12
16.0	0.06	0.06	0.06	0.06	0.06	0.11	0.11	0.11	0.12
20.0		0.06	0.06	0.06	0.06	0.11	0.11	0.11	0.11
25.0			0.06	0.06	0.06	0.10	0.11	0.11	0.11
32.0				0.06	0.06	0.10	0.10	0.11	0.11
40.0					0.06	0.10	0.10	0.10	0.11
50.0						0.10	0.10	0.10	0.10
63.0							0.10	0.10	0.10
80.0								0.10	0.10
100.0									0.10

* Radial feed in mm

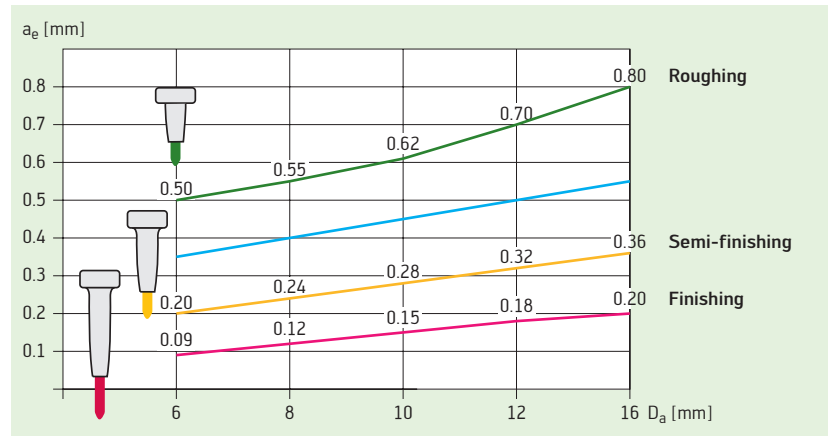
Recommendations for the use of circle segment milling cutters

Standard values for axial depth of cut a_p [mm] depending on the tool type and depth of surface roughness



Example using feed b_f/a_p of 5 mm
With lower a_p , higher a_e is possible due to the effect of force.

Standard values a_e [mm] depending on the outer diameter D_a [mm] and projection length





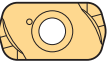







Standard values for cutting speed and feed per tooth


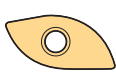




	Material designation	Tensile strength/hardness	v_c [sfm]	f_z [in]
ISO P	A570.36	800 N/mm ²	984	0.0230
	4140	1000 N/mm ²	722	0.0197
		1400 N/mm ²	590	0.0164
ISO M	304		656	0.0230
	316		590	0.0164
ISO K			1148	0.0492
ISO S	TiAl6V4		361	0.0262
	Inconel 718		164	0.0115
ISO N			1312	0.0656
ISO H	H13	Up to 54 HRC	492	0.0098

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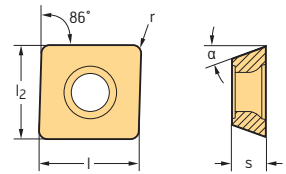
Indexable inserts for milling product range overview



Insert shape	Description	Page
	A Positive rhombic for Xtra-tec® XT	298
	B Positive rhombic for Xtra-tec® XT	311
	E Double-sided rhombic for Xtra-tec® XT	314
	L Double-sided rhombic for Xtra-tec®	314
		325
	M Positive rhombic	301
	O Positive octagonal for Xtra-tec® XT	301
		312
	R Positive round	305
	S Positive square Double-sided square for Xtra-tec® XT	307
		316
	T Double-sided triangular for Xtra-tec® XT	319

Insert shape	Description	Page
	X Double-sided heptagon for Walter BLAXX	320
	X Tangential rhombic for Walter BLAXX	322
	X Positive form inserts for copy milling cutters	311
	P 236 . . Double-sided triangular for Xtra-tec® high-feed milling cutters	291
	P 263 . . Positive triangular for high-feed milling cutters for copy milling cutters	303
	P 32 . . Indexable inserts for profile milling cutters	304
	Positive finishing inserts Double-sided finishing inserts Tangential finishing inserts	329

Positive rhombic MPMX / MPMT Tiger-tec® Gold

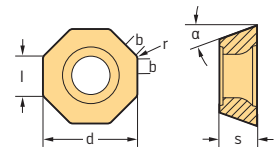


Indexable inserts

Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	α	r in	P				M			K			S	
								HC				HC			HC			HC	
								WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WKP25S	WKP35G	WKP35S	WSM35S
MPMX060304-F57	M	2	0.250	0.250	0.125	11°	0.016	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	
MPMX080305-F57	M	2	0.327	0.327	0.125	11°	0.020	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	
MPMT120408-F57	M	2	0.500	0.500	0.188	11°	0.032	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	

HC = Coated carbide

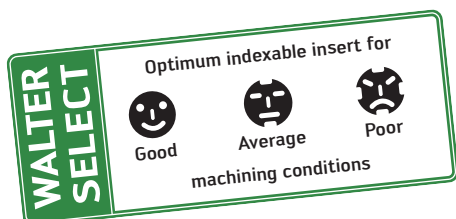
Positive octagonal ODHW / ODHT / ODMT / ODMW Tiger-tec® Gold



Indexable inserts

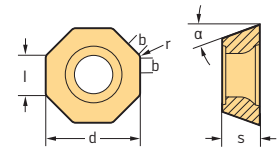
Designation	Tolerance class	Number of cutting edges	l in	d in	s in	α	r in	b in	P				M		K				N			S	
									HC				HC		HC				CN			HC HW	
									WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSM45X	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSN10	WXN15	WK10
ODHW050408-A57	H	8	0.207	0.500	0.188	15°	0.032		☒	☒	☒	☒											
ODHW060512-A57	H	8	0.259	0.626	0.219	15°	0.047		☒														
ODHW050412-A57	H	8	0.207	0.500	0.188	15°	0.047												☒				
ODHW060516-A57	H	8	0.259	0.626	0.219	15°	0.063												☒				
ODHT050408-F57	H	8	0.207	0.500	0.188	15°	0.032		☒	☒	☒	☒											☒
ODHT060512-F57	H	8	0.259	0.626	0.219	15°	0.047		☒	☒	☒	☒											☒

HC = Coated carbide
CN = Silicon nitride Si₃N₄
HW = Uncoated carbide











Positive octagonal ODHW / ODHT / ODMT / ODMW

Tiger-tec® Gold

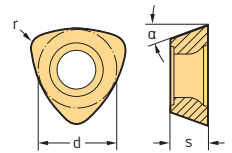


Indexable inserts

Designation	Tolerance class	Number of cutting edges	l in	d in	s in	α	r in	b in	P				M			K				N			S				
									HC	HC	HC	WSP45G	WSM35S	WSM45X	WSP45G	WAK15	HC	HC	CN	HC	HW	HC	HC	HC			
 ODHW0504ZZN-A57	H	8	0.207	0.500	0.188	15°	0.032	0.047	☉	☉	☉					☉	☉	☉	☉								
	H	8	0.259	0.626	0.219	15°	0.032	0.063	☉	☉	☉					☉	☉	☉	☉								
 ODHT0504ZZN-F57	H	8	0.207	0.500	0.188	15°	0.032	0.047	☉	☉	☉	☉	☉				☉	☉	☉	☉				☉	☉		
	H	8	0.259	0.626	0.219	15°	0.032	0.063	☉	☉	☉	☉	☉	☉				☉	☉	☉	☉				☉	☉	
 ODHT0605ZZN-G88	H	8	0.259	0.626	0.219	15°	0.032	0.063													☉	☉					
	H	8	0.207	0.500	0.188	15°	0.032	0.047													☉	☉					
 ODMT0504ZZN-F57	M	8	0.207	0.500	0.188	15°	0.032	0.047	☉	☉	☉	☉	☉	☉		☉		☉	☉	☉				☉	☉		
	M	8	0.259	0.626	0.219	15°	0.032	0.063	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉				☉	☉		
 ODMT050408-D57	M	8	0.207	0.500	0.188	15°	0.032		☉	☉	☉	☉	☉	☉			☉	☉	☉	☉				☉	☉		
	M	8	0.259	0.626	0.219	15°	0.047		☉	☉	☉	☉	☉	☉				☉	☉	☉	☉				☉	☉	
 ODMT0504ZZN-D57	M	8	0.207	0.500	0.188	15°	0.032	0.047	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉				☉	☉	☉
	M	8	0.259	0.626	0.219	15°	0.032	0.063	☉	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉				☉	☉
 ODMW050408T-A27	M	8	0.207	0.500	0.188	15°	0.032		☉	☉	☉						☉	☉	☉	☉							
	M	8	0.259	0.626	0.219	15°	0.032		☉	☉	☉							☉	☉	☉	☉						
 ODMW050408-A57	M	8	0.207	0.500	0.188	15°	0.032		☉	☉	☉						☉	☉	☉	☉							
	M	8	0.259	0.626	0.219	15°	0.032		☉	☉	☉						☉	☉	☉	☉							

HC = Coated carbide
 CN = Silicon nitride Si₃N₄
 HW = Uncoated carbide

Positive triangular P26335 / P26339 Tiger-tec® Gold

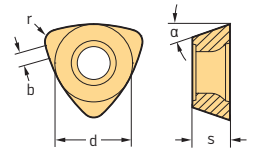


Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	α	r in	P				M		K			S		
							HC				HC		HC			HC		
							WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WKP25S	WKP35G	WKP35S	WSM35S
P26335R10	M	3	0.266	0.125	14°	0.032	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P26335R14	M	3	0.375	0.156	14°	0.047	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P26335R25	M	3	0.512	0.219	14°	0.079	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P26339R10	M	3	0.266	0.125	14°	0.032	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P26339R14	M	3	0.375	0.156	14°	0.047	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P26339R25	M	3	0.512	0.219	14°	0.079	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

HC = Coated carbide

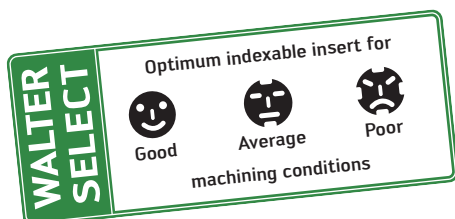
Positive triangular P26379 Tiger-tec® Gold



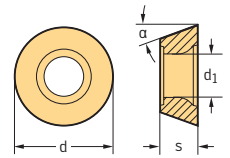
Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	α	r in	b in	P				M		K			S	
								HC				HC		HC			HC	
								WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WKP25S	WKP35G	WKP35S
P26379-R10	M	3	0.266	0.125	14°	0.032	0.035	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P26379-R14	M	3	0.375	0.156	14°	0.047	0.039	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒
P26379-R25	M	3	0.512	0.219	14°	0.079	0.043	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

HC = Coated carbide



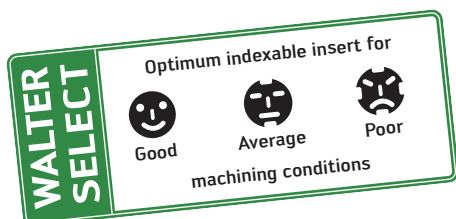
Positive round ROHX / ROMX / ROGX Tiger-tec® Gold



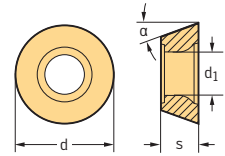
Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	α	d ₁ in	P						M				K			N	S				H			
							HC						HC				HC			HW	HC				HC			
							WKP25S	WKP35G	WKP35S	WMP45G	WSP45S	WSP45G	WMP45G	WSM35S	WSM45X	WSP45S	WSP45G	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WSM35S	WSM45X	WSP45S	WSP45G	WHH15X	
ROHX0803M0-D57	H	4	0.315	0.125	11°	0.134	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX10T3M0-D57	H	4	0.394	0.156	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX1204M0-D57	H	4	0.473	0.188	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX1605M0-D57	H	6	0.630	0.219	15°	0.217	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX2006M0-D57	H	8	0.788	0.250	15°	0.256	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX0803M0-D67	H	4	0.315	0.125	11°	0.134	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX10T3M0-D67	H	4	0.394	0.156	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX1204M0-D67	H	4	0.473	0.188	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX1605M0-D67	H	6	0.630	0.219	15°	0.217	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX10T3M0-F67	H	4	0.394	0.156	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROHX1204M0-F67	H	4	0.473	0.188	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROMX0803M0-D57	M	4	0.315	0.125	11°	0.134	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROMX10T3M0-D57	M	4	0.394	0.156	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROMX1204M0-D57	M	4	0.473	0.188	11°	0.173	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROMX1605M0-D57	M	6	0.630	0.219	15°	0.217	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROMX2006M0-D57	M	8	0.788	0.250	15°	0.256	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
ROGX10T3M08-G88	G	8	0.394	0.156	11°	0.154																⊕						
ROGX1204M08-G88	G	8	0.473	0.188	11°	0.173																⊕						
ROHX10T3M08-A57	H	8	0.394	0.156	11°	0.154	⊕	⊕	⊕									⊕	⊕	⊕	⊕							⊕
ROHX1204M08-A57	H	8	0.473	0.188	11°	0.173	⊕	⊕	⊕									⊕	⊕	⊕	⊕							⊕
ROMX10T3M0T8-A27	M	8	0.394	0.156	11°	0.154	⊕	⊕	⊕									⊕	⊕	⊕	⊕							
ROMX1204M0T8-A27	M	8	0.473	0.188	11°	0.173	⊕	⊕	⊕									⊕	⊕	⊕	⊕							
ROMX10T3M08-D57	M	8	0.394	0.156	11°	0.154	⊕	⊕	⊕			⊕	⊕				⊕	⊕	⊕	⊕	⊕		⊕					⊕
ROMX1204M08-D57	M	8	0.473	0.188	11°	0.173	⊕	⊕	⊕			⊕	⊕				⊕	⊕	⊕	⊕	⊕		⊕					⊕
ROMX10T3M08-F67	M	8	0.394	0.156	11°	0.154						⊕	⊕				⊕	⊕	⊕	⊕	⊕		⊕					⊕
ROMX1204M08-F67	M	8	0.473	0.188	11°	0.173						⊕	⊕				⊕	⊕	⊕	⊕	⊕		⊕					⊕


HC = Coated carbide
HW = Uncoated carbide



Positive round RDMT Tiger-tec® Gold

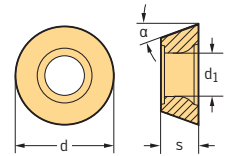


Indexable inserts




Designation	Tolerance class	d in	s in	α	d ₁ in	P				M		K			S	
						HC				HC		HC			HC	
						WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WKP25S	WKP35G	WKP35S
 RDMT0803M0-D57	M	0.315	0.125	15°	0.134											
RDMT10T3M0-D57	M	0.394	0.156	15°	0.173	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
RDMT1204M0-D57	M	0.473	0.188	15°	0.173	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
RDMT1605M0-D57	M	0.630	0.219	15°	0.217	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
RDMT2006M0-D57	M	0.788	0.250	15°	0.256	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉

HC = Coated carbide

Positive round RDHX / RDGX / RDMX Tiger-tec® Gold

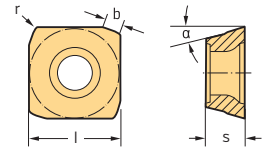


Indexable inserts


Designation	Tolerance class	d in	s in	α	d ₁ in	P				M		K		N	S	H
						HC				HC		HC		HW	HC	HC
						WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSP45G	WKP25S	WKP35G	WKP35S	WK10	WSM35S
 RDHX0501M0-A57	H	0.197	0.059	15°	0.087	☉	☉	☉								☉
RDHX07T1M0-A57	H	0.276	0.078	15°	0.110	☉	☉	☉								☉
RDHX0702M0-A57	H	0.276	0.093	15°	0.110											☉
RDHX1003M0-A57	H	0.394	0.125	15°	0.173	☉	☉	☉								☉
RDHX12T3M0-A57	H	0.473	0.156	15°	0.173	☉	☉	☉								☉
RDHX1604M0-A57	H	0.630	0.188	15°	0.217	☉	☉	☉								☉
RDHX2006M0-A57	H	0.788	0.236	15°	0.217	☉	☉	☉								☉
 RDGX0501M0-G88	G	0.197	0.059	15°	0.087								☉			
RDGX07T1M0-G88	G	0.276	0.078	15°	0.110								☉			
RDGX1003M0-G88	G	0.394	0.125	15°	0.173								☉			
RDGX12T3M0-G88	G	0.473	0.156	15°	0.173								☉			
RDGX1604M0-G88	G	0.630	0.188	15°	0.217								☉			
RDGX2006M0-G88	G	0.788	0.236	15°	0.217								☉			
 RDMX0501M0-D57	M	0.197	0.059	15°	0.087		☉	☉	☉	☉					☉	
RDMX07T1M0-D57	M	0.276	0.078	15°	0.110		☉	☉	☉	☉					☉	
RDMX1003M0-D57	M	0.394	0.125	15°	0.173		☉	☉	☉	☉					☉	
RDMX12T3M0-D57	M	0.473	0.156	15°	0.173		☉	☉	☉	☉					☉	
RDMX1604M0-D57	M	0.630	0.188	15°	0.217		☉	☉	☉	☉					☉	
RDMX2006M0-D57	M	0.788	0.236	15°	0.217		☉	☉	☉	☉					☉	

 HC = Coated carbide
 HW = Uncoated carbide

Positive square SDMT Tiger-tec® Gold

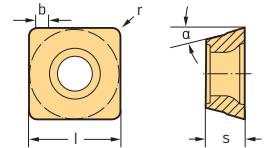


Indexable inserts


Designation	Tolerance class	Number of cutting edges	l in	s in	α	r in	b in	P				M			K			S		
								HC				HC			HC			HC		
								WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WKP25S	WKP35G	WKP35S	WSM35S	WSP45S
 SDMT06T2ZDR-D57	M	4	0.252	0.110	15°	0.016	0.047	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SDMT09T3ZDR-D57	M	4	0.374	0.156	15°	0.032	0.047	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SDMT1204ZDR-D57	M	4	0.500	0.188	15°	0.032	0.071	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗

HC = Coated carbide

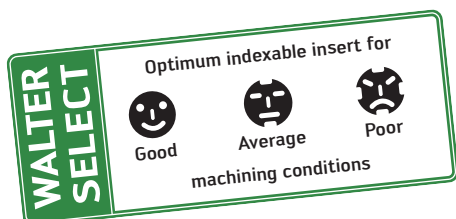
Positive square SDGT Tiger-tec® Gold



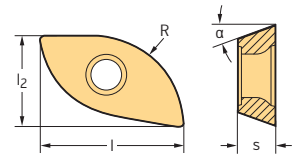
Indexable inserts

Designation	Tolerance class	Number of cutting edges	l in	s in	α	r in	b in	P				M			K			S		
								HC				HC			HC			HC		
								WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WKP25S	WKP35G	WKP35S	WSM35S	WSP45S
 SDGT06T2PDR-D57	G	4	0.252	0.110	15°	0.016	0.047	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SDGT09T3PDR-D57	G	4	0.374	0.156	15°	0.032	0.047	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
SDGT1204PDR-D57	G	4	0.500	0.188	15°	0.032	0.063	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗

HC = Coated carbide



Positive form inserts XDMT Tiger-tec® Gold

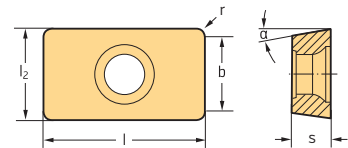


Indexable inserts

Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	α	R in	P				M		K			S	
								HC				HC		HC			HC	
								WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WKP25S	WKP35G	WKP35S
XDMT1303080R-F55	M	2	0.335	0.517	0.118	15°	0.315	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
XDMT16T3100R-F55	M	2	0.355	0.628	0.147	15°	0.394	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
XDMT2004125R-F55	M	2	0.445	0.786	0.184	15°	0.493	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
XDMT2405150R-F55	M	2	0.532	0.943	0.221	15°	0.591	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
XDMT2506160R-F55	M	2	0.567	1.006	0.236	15°	0.630	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
XDMT3207200R-F55	M	2	0.709	1.259	0.296	15°	0.788	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
XDMT4009250R-F55	M	2	0.887	1.574	0.370	15°	0.985	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉

HC = Coated carbide

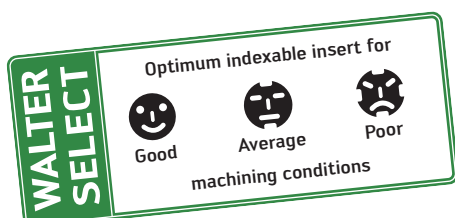
Positive rhombic BCGX Tiger-tec®



Indexable inserts

Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	α	r in	b in	P		M	K		S	H	O
									HC		HC	HC		HC	HC	HC
									WKP25S	WKP35S	WSM35S	WAK15	WKP25S	WKP35S	WSM35S	WHH15
BCGX0903PDR-G55	G	2	0.248	0.406	0.126	7°	0.016	0.197	☉	☉	☉	☉	☉	☉	☉	☉
BCGX1605PDR-G55	G	2	0.390	0.682	0.229	7°	0.032	0.315	☉	☉	☉	☉	☉	☉	☉	☉

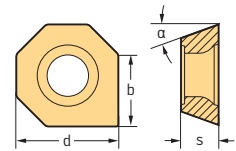
HC = Coated carbide






Finishing inserts

ODHX

Tiger-tec® Gold



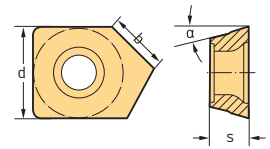
Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	α	b in	P		M		K		S	H		O
							HC		HC		HC		HC	HC		HC
							WKP25S	WKP35G	WKP35S	WSM35S	WAK15	WKP25S	WKP35G	WKP35S	WSM35S	WHH15
 ODHX0504ZZR-A57 ODHX0605ZZR-A57	H	1	0.500	0.188	15°	0.284	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
	H	1	0.626	0.219	15°	0.370	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
 ODHX0605ZZN-A57	H	8	0.626	0.219	15°	0.236				☉				☉	☉	
 ODHX0605ZZN-A88	H	8	0.626	0.219	15°	0.236				☉				☉	☉	☉


* ZZN for κ = 45° only

HC = Coated carbide

Positive square SDHX Tiger-tec®

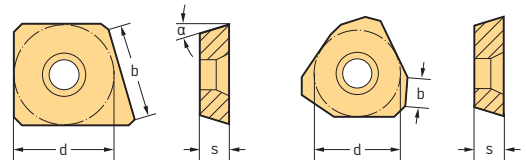


Indexable inserts




Designation	Tolerance class	Number of cutting edges	d in	s in	α	b in	P		M		K		S		H		O
							HC	HC	HC	HC	HC	HC	HC	HC			
							WKP25S	WKP35S	WSM35S	WAK15	WKP25S	WKP35S	WSM35S	WHH15	WHH15X	WXM15	
 SDHX09T3AZR-A88	H	1	0.375	0.156	15°	0.221				☺				☺	☺	☺	
SDHX1204AZR-A88	H	1	0.500	0.188	15°	0.296				☺				☺	☺	☺	

HC = Coated carbide

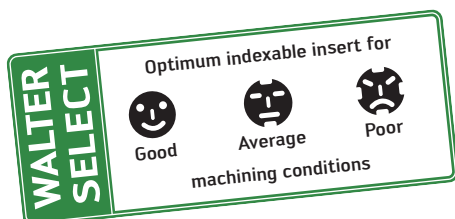
Finishing inserts P2901 / P2903 / P2905 Tiger-tec®



Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	α	b in	P		M		K		N		S		H		O
							HC	HC	HC	HC	HW	HC	HC	HC	HC				
							WKP25S	WKP35S	WSM35S	WAK15	WKP25S	WKP35S	WK10	WSM35S	WHH15	WHH15X	WXM15		
 P2901-1R	H	1	0.500	0.188	11°	0.433				☺					☺	☺	☺		
 P2903-2R	A	3	0.375	0.188	11°	0.138				☺			☺		☺	☺	☺		
 P2905-1	F	4	0.500	0.188	11°	0.394				☺			☺		☺	☺	☺		

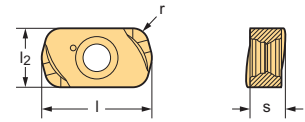
HC = Coated carbide
HW = Uncoated carbide





C 2

Negative rhombic ENMX

Tiger-tec® Gold



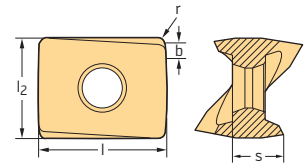
Indexable inserts

Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	r in	P				M			K				N		S			H	
							WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G
 ENMX08T316R-D27	M	4	0.236	0.433	0.142	0.063	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
 ENMX08T316R-F47	M	4	0.236	0.433	0.142	0.063	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕


HC = Coated carbide
HW = Uncoated carbide

Negative rhombic LNGX

Tiger-tec® Gold

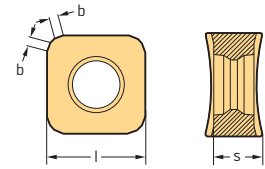


Indexable inserts


Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	r in	b in	P				M			K				N		S			
								WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S
 LNGX130708R-L55 LNGX130712R-L55 LNGX130716R-L55 LNGX130720R-L55 LNGX130725R-L55 LNGX130730R-L55	G	4	0.433	0.540	0.305	0.032	0.047	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	G	4	0.433	0.540	0.305	0.047	0.039	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	G	4	0.433	0.540	0.305	0.063	0.035	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	G	4	0.433	0.540	0.305	0.079	0.028	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	G	4	0.433	0.540	0.305	0.099	0.024	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	G	4	0.433	0.540	0.305	0.118	0.028	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
	G	4	0.433	0.540	0.305	0.118	0.028	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕

HC = Coated carbide
HW = Uncoated carbide

Negative square SNGX Tiger-tec® Gold

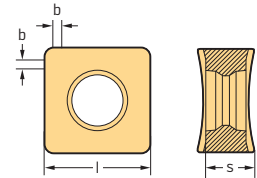


Indexable inserts










Designation	Number of cutting edges	l in	s in	b in	P					M			K				N		S			
					WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G
 SNGX1205ENN-F57	8	0.500	0.221	0.047	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉

HC = Coated carbide
HW = Uncoated carbide

Negative square SNGX / SNHX / SNMX Tiger-tec® Gold



Indexable inserts

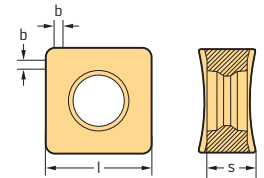
Designation	Number of cutting edges	l in	s in	b in	P					M			K				N		S		
					WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S
 SNGX1205ZNN-F27	8	0.500	0.227	0.047	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
 SNGX0904ZNN-F57	8	0.375	0.193	0.039	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
 SNGX1205ZNN-F57	8	0.500	0.227	0.047	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
 SNGX0904ZNN-F67	8	0.375	0.194	0.039	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
 SNGX1205ZNN-F67	8	0.500	0.229	0.047	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉
 SNHX0904ZNN-K88	8	0.375	0.197	0.039														☉	☉		
 SNHX1205ZNN-K88	8	0.500	0.232	0.047														☉	☉		
 SNMX0904ZNN-F57	8	0.375	0.193	0.039	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	
 SNMX1205ZNN-F57	8	0.500	0.227	0.047	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	

HC = Coated carbide
HW = Uncoated carbide


☉ ☉ ☉ / ★ New addition to the product range

Negative square SNGX / SNHX / SNMX

Tiger-tec® Gold



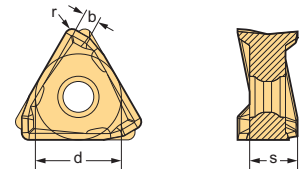
Indexable inserts

Designation	Number of cutting edges	l in	s in	b in	P					M			K			N		S					
					HC					HC			HC			HW	HC	HC					
					WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	
 SNGX0904ZNN-F67	8	0.375	0.194	0.039	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉


HC = Coated carbide
HW = Uncoated carbide

Negative triangular TNMU

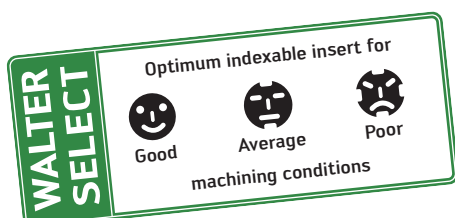
Tiger-tec® Gold



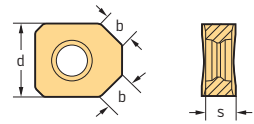
Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	b in	r in	P					M			K			N		S					
							HC					HC			HC			HW	HC	HC					
							WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	
 TNMU160508R-G57	M	6	0.378	0.211	0.063	0.032	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉

HC = Coated carbide
HW = Uncoated carbide



Finishing inserts XNGX Tiger-tec®

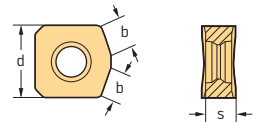


Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	b in	P				M			K			N		S		H		O	
						WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X
XNGX0904ANN-F67	G	2	0.375	0.184	0.197																		
XNGX1205ANN-F67	G	2	0.500	0.212	0.185																		

HC = Coated carbide
HW = Uncoated carbide

Finishing inserts XNGX Tiger-tec®



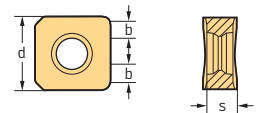
Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	b in	P				M			K			N		S		H		O
						WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15
XNGX1205ENN-F67	G	2	0.500	0.214	0.177																	

HC = Coated carbide
HW = Uncoated carbide

Finishing inserts XNGX

Tiger-tec®



Indexable inserts

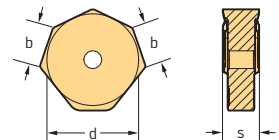
Designation	Tolerance class	Number of cutting edges	d in	s in	b in	P			M			K			N		S		H		O
						HC			HC			HC			HW	HC	HC		HC		HC
						WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G
XNGX0904ZNN-F67	G	2	0.375	0.190	0.138																
XNGX1205ZNN-F67	G	2	0.500	0.221	0.158																



HC = Coated carbide
HW = Uncoated carbide

Finishing inserts XNHX

Tiger-tec®

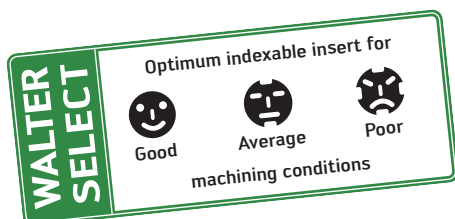


Indexable inserts

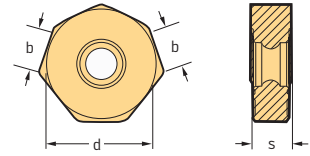
Designation	Tolerance class	Number of cutting edges	d in	s in	b in	P			M			K			N		S		H	
						HC			HC			HC			HW	HC	HC		HC	
						WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WK10	WXN15	WSM35S	WSP45S
XNHX0705ANN-D67	H	2	0.571	0.196	0.229															
XNHX0906ANN-D67	H	2	0.751	0.219	0.296															



HC = Coated carbide
HW = Uncoated carbide



Finishing inserts
XNGX
Tiger-tec®



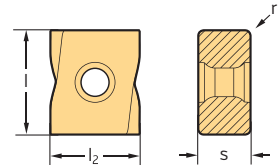
Indexable inserts

Designation	Tolerance class	Number of cutting edges	d in	s in	b in	P			M			K			N		S		H		O			
						HC	HC	HC	HC	HC	HC	HC	HW	HC	HC	HC	HC	HC	HC					
XNGX0705ANN-F67	G	2	0.571	0.197	0.225	WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X	WXM15



HC = Coated carbide
HW = Uncoated carbide

Tangential rhombic LNMX Tiger-tec® Gold



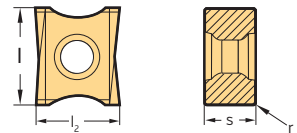
Indexable inserts

Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	r in	P					M			K			N		S					
							HC					HC			HC			HC	HW	HC					
							WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WXN15	WK10	WSM35S	WSP45S	WSP45G	
LNMX201012R-F57T	M	4	0.672	0.788	0.394	0.047	☉	☉	☉	☉	☉		☉	☉		☉	☉	☉	☉						☉



HC = Coated carbide
HW = Uncoated carbide

Tangential rhombic LNHX Tiger-tec® Gold

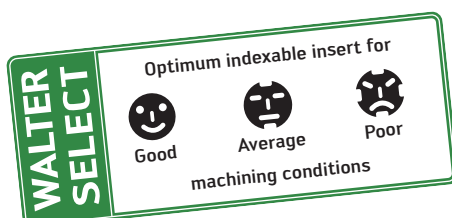


Indexable inserts

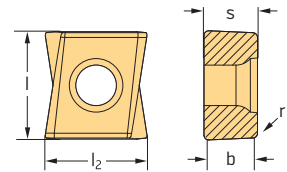
Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	r in	P					M			K			N		S					
							HC					HC			HC			HC	HW	HC					
							WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G	
LNHX120604R-L65T	H	4	0.433	0.500	0.268	0.016																	☉	☉	☉



HC = Coated carbide
HW = Uncoated carbide



Finishing inserts LNHX Tiger-tec®



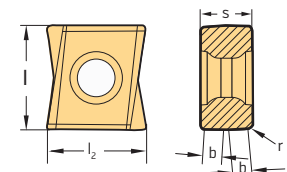
Indexable inserts

Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	r in	b in	P				M			K			N		S		H		O
								WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	
LNHX0904PDR-L55T	H	2	0.335	0.355	0.177	0.016	0.138	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC
LNHX1306PDR-L55T	H	2	0.473	0.512	0.268	0.024	0.197	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC



HC = Coated carbide
HW = Uncoated carbide

Finishing inserts LNHX Tiger-tec®

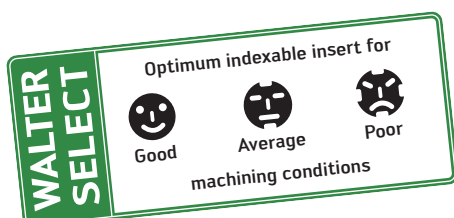


Indexable inserts

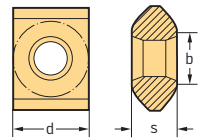
Designation	Tolerance class	Number of cutting edges	l ₂ in	l in	s in	r in	b in	P				M			K			N		S		H		O
								WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	
LNHX130608R-L55T	H	4	0.473	0.512	0.268	0.032	0.087	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC	HC	WC




HC = Coated carbide
HW = Uncoated carbide



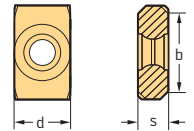
Finishing inserts P45420 Tiger-tec®




Indexable inserts							P			M			K			N		S		H		O
Designation	Tolerance class	Number of cutting edges	d in	s in	b in	HC			HC			HC			HC	HW	HC		HC	HC		
						WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSP45S	WSP45G	WHH15
 P45420-G67	H	4	0.375	0.188	0.276								⊕							⊕	⊕	⊕

HC = Coated carbide
HW = Uncoated carbide

Finishing inserts P45424 Tiger-tec®



Indexable inserts							P			M			K			N		S		H		
Designation	Tolerance class	Number of cutting edges	d in	s in	b in	HC			HC			HC			HC	HW	HC		HC	HC		
						WKP25S	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35S	WXN15	WK10	WSM35S	WSP45S	WSP45G	WHH15
 P45424-1-G67	G	4	0.473	0.197	0.315								⊕							⊕	⊕	
P45424-2-G67	G	4	0.788	0.256	0.591								⊕								⊕	⊕

HC = Coated carbide
HW = Uncoated carbide

Indexable insert milling cutters product range overview

	Face milling cutters			Shoulder milling cutters	
Machining					
Lead angle κ	43°	45°	88°	90°	
Designation	M5004 Xtra-tec® XT	M5009 Xtra-tec® XT	M5012 Xtra-tec® XT	M5130 Xtra-tec® XT	M5137 Xtra-tec® XT
D _c [mm]	24–160	40–160	50–160	16–63	51–102
D _c [inch]	0.935–6.299	1.575–6.299	1.969–6.299	0.625–2.480	2.000–4.000
Page	332	342	352	356	362

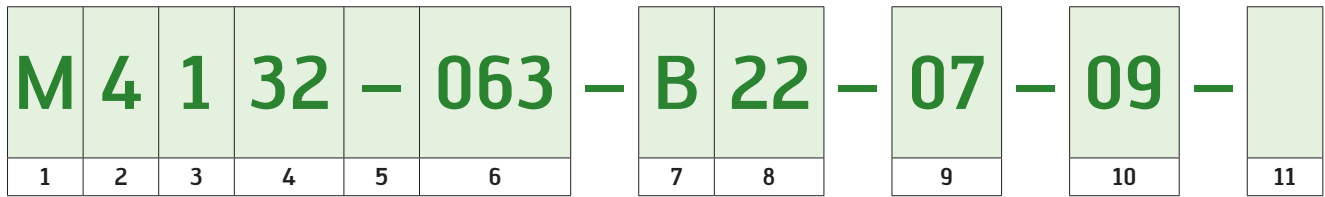
	Slot milling cutters	Copy milling cutters			
Machining					
Lead angle κ	90°				
Designation	M4791	M5468 Xtra-tec® XT	F2239	F2239B	F2339
D _c [mm]	19–44	10–90	20–32	20–40	16–32
D _c [inch]	0.750–1.750	0.394–3.528	0.787–1.260	0.787–1.575	0.625–1.260
Page	364	366	374	374	376

Profiling cutters

Machining	
Lead angle κ	30° + 60°
Designation	M4574
D _c [mm]	8–20 mm
D _c [inch]	0.315"–0.787"
Page	380

Designation key for Walter milling tools

Example:



1	2	3	4	
Tool group	Generation	Tool type	Type	
<p>M Milling</p>	<p>2</p> <p>3 Walter BLAXX</p> <p>4 M4000</p> <p>5 Xtra-tec® XT</p>	<p>0 Face milling cutter</p> <p>1 Shoulder milling cutter</p> <p>2 Shoulder/slot/helical milling cutter</p> <p>3 Other milling cutters</p> <p>4 Copy milling cutter</p> <p>5 Profiling cutter</p> <p>7 Routing cutter</p>	<p>02 High-feed milling cutter $\kappa = 15^\circ$, radial, positive, 4 cutting edges per indexable insert</p> <p>03 Face milling cutter $\kappa = 45^\circ$, radial, positive, 4 cutting edges per indexable insert</p> <p>04 Octagon face milling cutter $\kappa = 43^\circ$, radial, positive, 8 cutting edges per indexable insert</p> <p>08 High-feed milling cutter $\kappa = 17^\circ$, radial, double-sided, 4 cutting edges per indexable insert</p> <p>09 Face milling cutter $\kappa = 45^\circ$, radial, double-sided, 8 cutting edges per indexable insert</p> <p>12 Face milling cutter $\kappa = 88^\circ$, radial, double-sided, 8 cutting edges per indexable insert</p> <p>16 Heavy-duty cutter $\kappa = 60^\circ$, tangential, double-sided, 4 cutting edges per indexable insert</p> <p>24 Heptagon face milling cutter $\kappa = 45^\circ$, radial, double-sided, 14 cutting edges per indexable insert, screw clamping</p> <p>25 Octagon face milling cutter for finishing $\kappa = 42^\circ$, radial, double-sided, 16 cutting edges per indexable insert</p> <p>26 Octagon face milling cutter for finishing $\kappa = 42^\circ$, radial, double-sided, 16 cutting edges per indexable insert</p> <p>30 Shoulder milling cutter $\kappa = 90^\circ$, radial, positive, 2 cutting edges per indexable insert</p> <p>31 Ramping milling cutter $\kappa = 90^\circ$, radial, positive, 2 cutting edges per indexable insert</p>	<p>32 Shoulder milling cutter $\kappa = 89^\circ 45'$, radial, positive, 4 cutting edges per indexable insert</p> <p>37 Shoulder milling cutter $\kappa = 90^\circ$, radial, double-sided, 6 cutting edges per indexable insert</p> <p>55 Helical milling cutter $\kappa = 90^\circ$, tangential, double-sided, two or four cutting edges per indexable insert</p> <p>56 Helical milling cutter $\kappa = 90^\circ$, radial, positive, two or four cutting edges per indexable insert</p> <p>57 Helical milling cutter $\kappa = 90^\circ$, radial, positive, two or four cutting edges per indexable insert</p> <p>58 Helical milling cutter $\kappa = 90^\circ$, radial, positive, two or four cutting edges per indexable insert</p> <p>68 Round insert milling cutter radial, positive, four or eight cutting edges per indexable insert</p> <p>74 Chamfer milling cutter $\kappa = 30^\circ, 45^\circ, 60^\circ$, radial, positive, 4 cutting edges per indexable insert</p> <p>75 T-slot milling cutter $\kappa = 90^\circ$, radial, positive, 4 cutting edges per indexable insert</p> <p>91 Routing cutter $\kappa = 90^\circ$, radial, positive, 4 cutting edges per indexable insert</p> <p>92 Routing cutter $\kappa = 90^\circ$, radial, positive, two or four cutting edges per indexable insert</p>
5	6	7		
1. Delimiters	Cutting diameter	Boring bar/adaptor type		
<p>- Metric</p> <p>. Inch</p>		<p>A Parallel shank</p> <p>B Bore adaptor</p> <p>T ScrewFit</p> <p>TC Cylindrical-modular interface</p> <p>W Weldon shank</p> <p>H HSK</p>		
8	9	10		
Boring bar/adaptor size	Number of teeth	Depth of cut		
11				
Version acc. to length or manufacturer-specific adaptors or other tool characteristics				
<p>S Short version</p> <p>L Long version</p> <p>D Dörries Scharmann machines</p> <p>MA Makino machines</p>	<p>For helical milling cutters</p> <p>M Modular tool design</p> <p>B Basic body</p> <p>F Front piece</p>			

Octagon face milling cutters

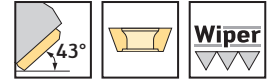
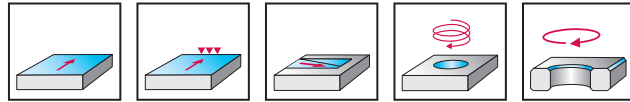
M5004

OD .. 0504 ..

Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5004	●	●	●	●	●	●	●

Tool	Designation	D _c mm	D _a mm	d ₁ mm	l ₄ mm	l ₁ mm	L _c mm	L _{c2} mm	Z	kg	No. of indexable inserts	Type
ScrewFit 	★ M5004-032-T28-02-03	24	32	T28	40		3	8	2	0.2	2	OD .. 0504 ..
	★ M5004-040-T36-03-03	32	40	T36	40		3	8	3	0.3	3	OD .. 0504ZZ ..
Cylindrical. modular 	★ M5004-032-TC16-02-03	24	32	M16	40		3	8	2	0.1	2	OD .. 0504 .. OD .. 0504ZZ ..
Parallel shank 	★ M5004-032-A20-02-03	24	32	20	35	110	3	8	2	0.2	2	OD .. 0504 ..
	★ M5004-032-A25-02-03	24	32	25	35	150	3	8	2	0.5	2	
	★ M5004-040-A20-03-03	32	40	20	35	110	3	8	3	0.3	3	OD .. 0504ZZ ..
	★ M5004-040-A25-03-03	32	40	25	35	150	3	8	3	0.5	3	

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

Assembly parts

D _c [mm]		24–32
	Clamping screw for indexable insert Tightening torque	FS2119 (Torx 15IP) 3.0 Nm

Accessories

D _c [mm]		24–32
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

Designation	r mm	b mm	P					M				K					N		S			H		O	
			HC					HC				HC					HC	HW	HC			HC	HC		
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSN10	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G	WHH15	WHH15X
ODHX0504ZZR-A57		7.2	☉	☉						☉			☉	☉									☉	☉	☉
ODHT050408-F57	0.8							☉																	
ODHT050408-G88	0.8															☉									
ODHW050408-A57	0.8			☉	☉								☉	☉											
ODHW050412-A57	1.2														☉										
ODMT050408-D57	0.8		☉	☉	☉	☉	☉	☉		☉	☉	☉	☉	☉				☉	☉	☉	☉				
ODMW050408-A57	0.8		☉	☉	☉					☉	☉	☉	☉	☉											
ODMW050408T-A27	0.8		☉	☉	☉					☉	☉	☉	☉	☉											
ODHT0504ZZN-F57	0.8	1.2	☉	☉	☉	☉	☉	☉					☉	☉				☉	☉	☉	☉				
ODHT0504ZZN-G77	0.8	1.6				☉																			
ODHT0504ZZN-G88	0.8	1.2														☉	☉								
ODHW0504ZZN-A57	0.8	1.2	☉	☉	☉					☉	☉	☉	☉	☉											
ODMT0504ZZN-D57	0.8	1.2	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉				☉	☉	☉	☉				
ODMT0504ZZN-F57	0.8	1.2	☉	☉	☉		☉	☉		☉	☉	☉	☉	☉				☉	☉	☉	☉				

HC = Coated carbide
 CN = Silicon nitride Si₃N₄
 HW = Uncoated carbide

WALTER
SELECT

Stability of machine, workpiece
and clamping arrangement

☹️
Very good

😊
Good

😐
Moderate

•• Primary application

• Other application

Octagon face milling cutters

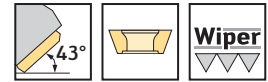
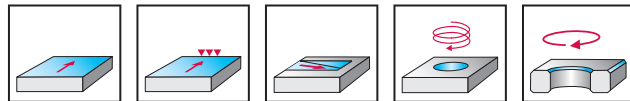
M5004

OD .. 0504 ..

Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5004	●●	●●	●●	●●	●●	●	●

Tool	Designation	D _c mm	D _a mm	d ₁ mm	l ₄ mm	l ₁ mm	L _c mm	L _{c2} mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	★ M5004-050-B16-04-03	42	50	16	40		3	8	4	0.2	4	OD .. 0504 .. OD .. 0504ZZ ..
	★ M5004-050-B16-05-03	42	50	16	40		3	8	5	0.2	5	
	★ M5004-052-B22-04-03	44	52	22	40		3	8	4	0.4	4	
	★ M5004-052-B22-05-03	44	52	22	40		3	8	5	0.4	5	
	★ M5004-058-B16-04-03	50	58	16	40		3	8	4	0.3	4	
	★ M5004-058-B16-05-03	50	58	16	40		3	8	5	0.3	5	
	★ M5004-063-B22-05-03	55	63	22	40		3	8	5	0.4	5	
	★ M5004-063-B22-06-03	55	63	22	40		3	8	6	0.4	6	
	★ M5004-063-B22-07-03	55	63	22	40		3	8	7	0.4	7	
	★ M5004-066-B27-06-03	58	66	27	50		3	8	6	0.6	6	
	★ M5004-066-B27-07-03	58	66	27	50		3	8	7	0.6	7	
	★ M5004-071-B22-06-03	63	71	22	40		3	8	6	0.5	6	
	★ M5004-071-B22-07-03	63	71	22	40		3	8	7	0.5	7	
	★ M5004-080-B27-06-03	72	80	27	50		3	8	6	0.9	6	
	★ M5004-080-B27-07-03	72	80	27	50		3	8	7	0.9	7	
	★ M5004-080-B27-08-03	72	80	27	50		3	8	8	0.9	8	
	★ M5004-088-B27-07-03	80	88	27	50		3	8	7	1.1	7	
	★ M5004-088-B27-08-03	80	88	27	50		3	8	8	1.1	8	
	★ M5004-100-B32-08-03	92	100	32	50		3	8	8	1.6	8	
	★ M5004-100-B32-10-03	92	100	32	50		3	8	10	1.6	10	
	★ M5004-108-B32-08-03	100	108	32	50		3	8	8	1.8	8	
	★ M5004-108-B32-10-03	100	108	32	50		3	8	10	1.8	10	
	★ M5004-125-B40-10-03	117	125	40	63		3	8	10	3.1	10	
	★ M5004-125-B40-12-03	117	125	40	63		3	8	12	3.0	12	

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

Assembly parts

D _c [mm]		42–117
	Clamping screw for indexable insert Tightening torque	FS2119 (Torx 15IP) 3.0 Nm

Accessories

D _c [mm]		42–117
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

Designation	r mm	b mm	P					M				K				N		S			H		O		
			HC					HC				HC				HC	HW	HC			HC	HC			
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSN10	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G	WHH15	WHH15X
ODHX0504ZZR-A57		7.2	☉	☉						☉			☉	☉									☉	☉	☉
ODHT050408-F57	0.8							☉																	
ODHT050408-G88	0.8															☉									
ODHW050408-A57	0.8			☉	☉								☉	☉											
ODHW050412-A57	1.2														☉										
ODMT050408-D57	0.8		☉	☉	☉	☉	☉	☉		☉	☉	☉	☉	☉				☉	☉	☉	☉				
ODMW050408-A57	0.8		☉	☉	☉					☉	☉	☉	☉	☉											
ODMW050408T-A27	0.8		☉	☉	☉					☉	☉	☉	☉	☉											
ODHT0504ZZN-F57	0.8	1.2	☉	☉	☉	☉	☉	☉					☉	☉				☉	☉	☉	☉				
ODHT0504ZZN-G77	0.8	1.6				☉																			
ODHT0504ZZN-G88	0.8	1.2														☉	☉								
ODHW0504ZZN-A57	0.8	1.2	☉	☉	☉					☉	☉	☉	☉	☉											
ODMT0504ZZN-D57	0.8	1.2	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉				☉	☉	☉	☉				
ODMT0504ZZN-F57	0.8	1.2	☉	☉	☉					☉	☉	☉	☉	☉				☉	☉	☉	☉				

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 CN = Silicon nitride Si₃N₄
 HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

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😐
Moderate

•• Primary application

• Other application

Octagon face milling cutters

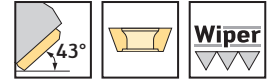
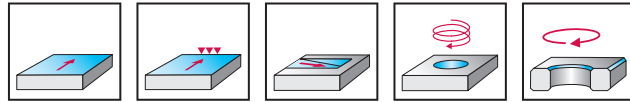
M5004 inch

OD .. 0504 ..

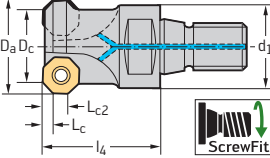
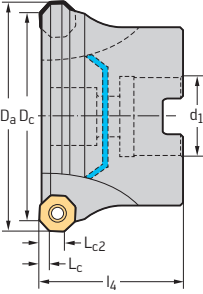
Xtra-tec® XT



– Eight cutting edges per indexable insert





	P	M	K	N	S	H	O
M5004	●	●	●	●	●	●	●




Tool	Designation	D _c inch	D _a inch	d ₁ inch	l ₄ inch	L _c inch	L _{c2} inch	Z	lbs	No. of indexable inserts	Type
ScrewFit 	★ M5004.031-T28-02-03	0.935	1.250	T28	1.575	0.118	0.315	2	0.4	2	OD .. 0504 ..
	★ M5004.038-T36-03-03	1.185	1.500	T36	1.575	0.118	0.315	3	0.6	3	OD .. 0504ZZ ..
Parallel bore DIN 138 transverse keyway 	★ M5004.059-B19-04-03	2.000	2.315	0.750	1.575	0.118	0.315	4	0.8	4	OD .. 0504 .. OD .. 0504ZZ ..
	★ M5004.059-B19-05-03	2.000	2.315	0.750	1.575	0.118	0.315	5	0.8	5	
	★ M5004.072-B19-06-03	2.500	2.815	0.750	1.575	0.118	0.315	6	1.1	6	
	★ M5004.072-B19-07-03	2.500	2.815	0.750	1.575	0.118	0.315	7	1.0	7	
	★ M5004.084-B26-07-03	3.000	3.315	1.000	1.575	0.118	0.315	7	1.6	7	
	★ M5004.084-B26-08-03	3.000	3.315	1.000	1.575	0.118	0.315	8	1.7	8	

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




Assembly parts

D _c [inch]	0.935–1.185	2.000–2.500	3.000
 Clamping screw for indexable insert Tightening torque	FS2119 (Torx 15IP) 3.0 Nm	FS2119 (Torx 15IP) 3.0 Nm	FS2119 (Torx 15IP) 3.0 Nm
 Clamping screw for arbour-mounted tools		FS1518	FS1519

Accessories

D _c [inch]	0.935–3.000
 Torque screwdriver. analogue Tightening torque	FS2004 1.5–5.0 Nm
 Torque screwdriver. digital Tightening torque	FS2248 1.0–6.0 Nm
 Interchangeable blade	FS2014 (Torx 15IP)
 Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

Designation	r mm	b mm	P				M				K				N		S				H		O
			HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	
 ODHX0504ZZR-A57		7.2	☺	☺						☺		☺	☺								☺	☺	☺
 ODHT050408-F57	0.8																						
ODHT050408-G88	0.8																						
ODHW050408-A57	0.8		☺	☺								☺	☺										
ODHW050412-A57	1.2													☺									
ODMT050408-D57	0.8		☺	☺	☺	☺	☺				☺	☺	☺	☺									
ODMW050408-A57	0.8		☺	☺	☺					☺	☺	☺	☺	☺									
ODMW050408T-A27	0.8		☺	☺	☺					☺	☺	☺	☺	☺									
 ODHT0504ZZN-F57	0.8	1.2	☺	☺	☺	☺	☺				☺	☺	☺										
ODHT0504ZZN-G77	0.8	1.6																					
ODHT0504ZZN-G88	0.8	1.2												☺	☺								
ODHW0504ZZN-A57	0.8	1.2	☺	☺	☺					☺		☺	☺										
ODMT0504ZZN-D57	0.8	1.2	☺	☺	☺	☺	☺				☺	☺	☺	☺									
ODMT0504ZZN-F57	0.8	1.2	☺	☺	☺	☺	☺				☺	☺	☺	☺									

HC = Coated carbide
 CN = Silicon nitride Si₃N₄
 HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●● Primary application

● Other application

C 2

Octagon face milling cutters

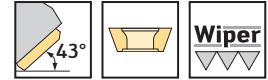
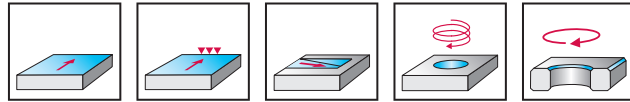
M5004

OD .. 0605 ..

Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5004	●	●	●	●	●	●	●

Tool	Designation	D _c mm	D _a mm	d ₁ mm	l ₄ mm	L _c mm	L _{c2} mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	★ M5004-050-B16-03-04	40	50	16	40	4	10	3	0.2	3	OD .. 0605 .. ODHX0605ZZR
	★ M5004-052-B22-03-04	42	52	22	45	4	10	3	0.3	3	
	★ M5004-060-B16-03-04	50	60	16	40	4	10	3	0.3	3	
	★ M5004-063-B22-04-04	53	63	22	40	4	10	4	0.4	4	
	★ M5004-063-B22-05-04	53	63	22	40	4	10	5	0.3	5	
	★ M5004-063-B22-06-04	53	63	22	40	4	10	6	0.3	6	
	★ M5004-066-B27-05-04	56	66	27	50	4	10	5	0.6	5	
	★ M5004-066-B27-06-04	56	66	27	50	4	10	6	0.6	6	
	★ M5004-073-B22-05-04	63	73	22	40	4	10	5	0.5	5	
	★ M5004-073-B22-06-04	63	73	22	40	4	10	6	0.5	6	
	★ M5004-080-B27-05-04	70	80	27	50	4	10	5	0.8	5	
	★ M5004-080-B27-06-04	70	80	27	50	4	10	6	0.8	6	
	★ M5004-080-B27-07-04	70	80	32	50	4	10	7	0.8	7	
	★ M5004-090-B27-06-04	80	90	27	50	4	10	6	1	6	
	★ M5004-090-B27-07-04	80	90	27	50	4	10	7	1.0	7	
	★ M5004-100-B32-07-04	90	100	32	50	4	10	7	1.4	7	
	★ M5004-100-B32-09-04	90	100	32	50	4	10	9	1.4	9	
	★ M5004-110-B32-07-04	100	110	32	50	4	10	7	1.6	7	
	★ M5004-110-B32-09-04	100	110	32	50	4	10	9	1.7	9	
	★ M5004-125-B40-08-04	115	125	40	63	4	10	8	2.8	8	
	★ M5004-125-B40-10-04	115	125	40	63	4	10	10	2.8	10	
	★ M5004-135-B40-08-04	125	135	40	63	4	10	8	3.2	8	
	★ M5004-135-B40-10-04	125	135	40	63	4	10	10	3.1	10	

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

Assembly parts

D _c [mm]		40–125
	Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 5.0 Nm

Accessories

D _c [mm]		40–125
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2015 (Torx 20IP)
	Screwdriver	FS1486 (Torx 20IP)

Indexable inserts

Designation	r mm	b mm	P					M				K					N		S			H		O		
			HC					HC				HC					CN	HC	HW	HC			HC	HC		
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSN10	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G	WHH15	WHH15X	WXM15
ODHX0605ZZR-A57		9.4	☺	☺							☺			☺	☺									☺	☺	☺
ODHT060512-F57	1.2		☺	☺	☺	☺								☺	☺							☺	☺			
ODHW060512-A57	1.2		☺	☺										☺	☺											
ODHW060516-A57	1.6																	☺								
ODMT060512-D57	1.2		☺	☺	☺	☺	☺					☺	☺	☺	☺					☺		☺	☺			
ODMW060508-A57	0.8		☺	☺	☺						☺	☺	☺	☺	☺											
ODMW060508T-A27	0.8		☺	☺	☺							☺	☺	☺	☺											
ODHT0605ZZN-F57	0.8	1.6	☺	☺	☺	☺	☺							☺	☺				☺		☺	☺				
ODHT0605ZZN-G77	0.8	1.6				☺																☺				
ODHT0605ZZN-G88	0.8	1.6																☺	☺							
ODHW0605ZZN-A57	0.8	1.6	☺	☺	☺						☺	☺	☺	☺	☺											
ODMT0605ZZN-D57	0.8	1.6	☺	☺	☺	☺	☺					☺	☺	☺	☺					☺		☺	☺			
ODMT0605ZZN-F57	0.8	1.6	☺	☺	☺	☺	☺					☺	☺	☺	☺					☺		☺	☺			

HC = Coated carbide
 CN = Silicon nitride Si₃N₄
 HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●●
Primary application

●
Other application

Octagon face milling cutters

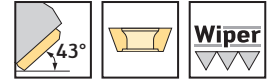
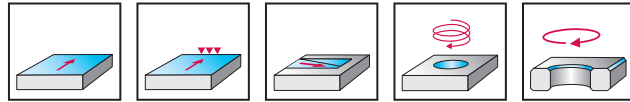
M5004

OD .. 0605 ..

Xtra-tec® XT

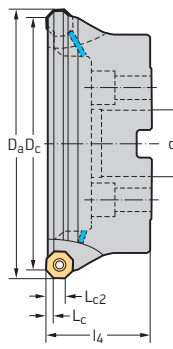


– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5004	●	●	●	●	●	●	●

Tool	Designation	D _c mm	D _a mm	d ₁ mm	l ₄ mm	L _c mm	L _{c2} mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway	★ M5004-160-B40-09-04	150	160	40/40 B	63	4	10	9	4.2	9	OD .. 0605 .. ODHX0605ZZR
	★ M5004-160-B40-11-04	150	160	40/40 B	63	4	10	11	4.2	11	
	★ M5004-170-B40-09-04	160	170	40/40 B	63	4	10	9	4.7	9	
	★ M5004-170-B40-11-04	160	170	40/40 B	63	4	10	11	4.7	11	



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

C 2

Assembly parts

D _c [mm]		150–160
	Clamping screw for indexable insert Tightening torque	FS1495 (Torx 20IP) 5.0 Nm

Accessories

D _c [mm]		150–160
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2015 (Torx 20IP)
	Screwdriver	FS1486 (Torx 20IP)

Indexable inserts

Designation	r mm	b mm	P					M				K					N		S			H		O	
			HC					HC				HC					HC	HW	HC			HC	HC		
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WSN10	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G	WHH15	WHH15X
ODHX0605ZZR-A57		9.4	☺	☺						☺			☺	☺									☺	☺	☺
ODHT060512-F57	1.2			☺	☺	☺	☺						☺	☺											
ODHW060512-A57	1.2			☺	☺								☺	☺											
ODHW060516-A57	1.6														☺										
ODMT060512-D57	1.2		☺	☺	☺	☺	☺			☺	☺	☺	☺	☺				☺		☺	☺				
ODMW060508-A57	0.8		☺	☺	☺					☺	☺	☺	☺	☺											
ODMW060508T-A27	0.8		☺	☺	☺					☺	☺	☺	☺	☺											
ODHT0605ZZN-F57	0.8	1.6	☺	☺	☺	☺	☺						☺	☺				☺		☺	☺				
ODHT0605ZZN-G77	0.8	1.6				☺																			
ODHT0605ZZN-G88	0.8	1.6													☺	☺									
ODHW0605ZZN-A57	0.8	1.6	☺	☺	☺					☺	☺	☺	☺	☺											
ODMT0605ZZN-D57	0.8	1.6	☺	☺	☺	☺	☺			☺	☺	☺	☺	☺				☺		☺	☺				
ODMT0605ZZN-F57	0.8	1.6	☺	☺	☺	☺	☺			☺	☺	☺	☺	☺				☺		☺	☺				

HC = Coated carbide
 CN = Silicon nitride Si₃N₄
 HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●●
Primary application

●
Other application

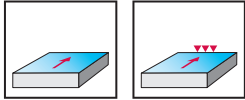
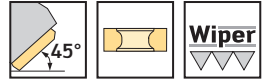
Face milling cutters

M5009 mm

SN . X1205 ..
Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5009	●	●	●	●	●	●	●

Tool	Designation	D _c mm	d ₁ mm	l ₄ mm	L _c mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	★ M5009-050-B22-06-06	50	22	40	6	6	0.4	6	SN . X1205 .. SN . X1205ANN XNGX1205ANN
	★ M5009-063-B22-08-06	63	22	40	6	8	0.5	8	
	★ M5009-063-B27-08-06	63	27	50	6	8	0.8	8	
	★ M5009-080-B27-10-06	80	27	50	6	10	1.1	10	
	★ M5009-100-B32-12-06	100	32	50	6	12	1.8	12	
Parallel bore DIN 138 transverse keyway 	★ M5009-125-B40-16-06	125	40	63	6	16	3.3	16	SN . X1205 .. SN . X1205ANN XNGX1205ANN
	★ M5009-160-B40-20-06	160	40/40 B	63	6	20	5.0	20	

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

Assembly parts

D _c [mm]	50-160	
	Clamping screw for indexable insert Tightening torque	FS1459 (Torx 15IP) 4.0 Nm

Accessories

D _c [mm]	50-125	160	
	Torque screwdriver, analogue Tightening torque	FS2003 1.5-5.0 Nm	FS2003 1.5-5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0-6.0 Nm	FS2248 1.0-6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)	FS1485 (Torx 15IP)
	Key for screw for shim	ISO2936-4 (SW 4)	ISO2936-4 (SW 4)
	Sealing disc set (incl. gasket and screws)	FS936 COMPLETE SET	
	Gasket	O-R 96X4	

Indexable inserts

Designation	r mm	b mm	P		M		K		N		S		H		O									
			HC		HC		HC		HW	HC	HC		HC	HC										
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X	WXM15	
		1.5																						
	SNHX1205ANN-K88		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNGX1205ANN-F57		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNGX1205ANN-F67		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNMX1205ANN-F57		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNMX1205ANN-F67		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNGX1205ANN-F27		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SNMX1205ANN-F27		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
		1.2																						
	SNMX120512-F57	1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNMX120520-F57	2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNMX120512-D27	1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNMX120520-D27	2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNGX120512-F57	1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
	SNMX120512-F67	1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
SNMX120512-F27	1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	
	XNGX1205ANN-F67		4.7								☺											☺	☺	☺

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

☹
Moderate

●● Primary application

● Other application

C 2

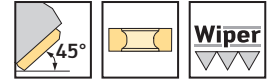
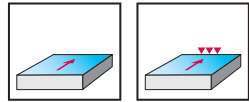
Face milling cutters

M5009 mm

SN . X1205 ..
Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5009	●	●	●	●	●	●	●

Tool	Designation	D _c mm	d ₁ mm	l ₄ mm	L _c mm	Z	kg	No. of indexable inserts	Type
ScrewFit 	★ M5009-040-T36-04-06-AP	40	T36	40	6	4	0.4	4	SN . X1205 .. SN . X1205ANN XNGX1205ANN
Parallel bore DIN 138 transverse keyway 	★ M5009-050-B22-04-06-AP	50	22	40	6	4	0.4	4	SN . X1205 .. SN . X1205ANN XNGX1205ANN
	★ M5009-063-B22-06-06-AP	63	22	40	6	6	0.5	6	
	★ M5009-063-B27-06-06-AP	63	27	50	6	6	0.8	6	
	★ M5009-080-B27-05-06-AP	80	27	50	6	5	1.2	5	
	★ M5009-080-B27-07-06-AP	80	27	50	6	7	1.2	7	
	★ M5009-100-B32-06-06-AP	100	32	50	6	6	1.9	6	
	★ M5009-100-B32-08-06-AP	100	32	50	6	8	1.8	8	

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

Assembly parts

D _c [mm]		40–100
	Shim for indexable insert	AP800-SN1205 H81
	Clamping screw for shim	FS2069 (SW 4)
	Clamping screw for indexable insert Tightening torque	FS2617 (Torx 15IP) 4.0 Nm

Accessories

D _c [mm]		40–100
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)
	Key for screw for shim	ISO2936-4 (SW 4)

Indexable inserts

Designation	r mm	b mm	P			M			K			N		S		H		O				
			HC			HC			HC			HW	HC	HC		HC	HC					
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X
	SNHX1205ANN-K88		1.5																			
	SNGX1205ANN-F57		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNGX1205ANN-F67		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX1205ANN-F57		1.5	☺	☺	☺				☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX1205ANN-F67		1.5	☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNGX1205ANN-F27		1.5	☺	☺	☺				☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX1205ANN-F27		1.5	☺	☺	☺				☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX120512-F57	1.2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX120520-F57	2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX120512-D27	1.2		☺	☺	☺				☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX120520-D27	2		☺	☺	☺				☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNGX120512-F57	1.2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX120512-F67	1.2		☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				
	SNMX120512-F27	1.2		☺	☺	☺				☺	☺	☺	☺	☺	☺	☺	☺	☺				
	XNGX1205ANN-F67		4.7						☺										☺	☺	☺	

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●● Primary application

● Other application

C 2

Face milling cutters

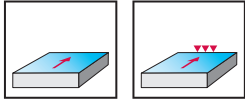
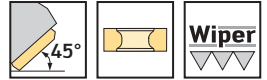
M5009

SN . X1205 ..

Xtra-tec® XT

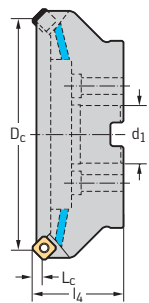


– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5009	●	●	●	●	●	●	●

Tool	Designation	D _c mm	d ₁ mm	l ₄ mm	L _c mm	Z	kg	No. of indexable inserts	
								Type	
Parallel bore DIN 138 transverse keyway	★ M5009-125-B40-07-06-AP	125	40	63	6	7	3.5	7	SN . X1205 .. SN . X1205ANN XNGX1205ANN
	★ M5009-125-B40-10-06-AP	125	40	63	6	10	3.4	10	
	★ M5009-160-B40-08-06-AP	160	40/40 B	63	6	8	5.2	8	
	★ M5009-160-B40-12-06-AP	160	40/40 B	63	6	12	5.1	12	



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

C 2

Assembly parts

D _c [mm]		125–160
	Shim for indexable insert	AP800-SN1205 H81
	Clamping screw for shim	FS2069 (SW 4)
	Clamping screw for indexable insert Tightening torque	FS2617 (Torx 15IP) 4.0 Nm

Accessories

D _c [mm]		125	160
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)	FS1485 (Torx 15IP)
	Key for screw for shim	ISO2936-4 (SW 4)	ISO2936-4 (SW 4)
	Sealing disc set (incl. gasket and screws)	FS936 COMPLETE SET	
	Gasket	O-R 96X4	

Indexable inserts

Designation	r mm	b mm	P			M			K			N		S		H		O						
			HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC	HC							
		1.5	WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X	WXM15	
	SNHX1205ANN-K88															☉	☉							
	SNGX1205ANN-F57		1.5	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉				
	SNGX1205ANN-F67		1.5	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉			☉	☉	☉				
	SNMX1205ANN-F57		1.5	☉	☉	☉					☉	☉	☉	☉	☉				☉	☉	☉			
	SNMX1205ANN-F67		1.5	☉	☉	☉					☉	☉	☉	☉	☉				☉	☉	☉			
	SNGX1205ANN-F27		1.5	☉	☉	☉						☉	☉	☉	☉				☉	☉	☉			
SNMX1205ANN-F27		1.5	☉	☉	☉						☉	☉	☉	☉				☉	☉	☉				
		1.2	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉				
	SNMX120512-F57	1.2	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉				
	SNMX120520-F57	2	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉				
	SNMX120512-D27	1.2	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉				
	SNMX120520-D27	2	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉				
	SNGX120512-F57	1.2	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉				
	SNMX120512-F67	1.2	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉	☉			☉	☉	☉				
SNMX120512-F27	1.2	☉	☉	☉	☉	☉	☉	☉	☉		☉	☉	☉	☉			☉	☉	☉					
	XNGX1205ANN-F67		4.7								☉										☉	☉	☉	

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

☹
Moderate

●● Primary application

● Other application

C 2

Face milling cutters

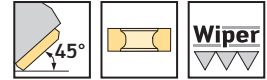
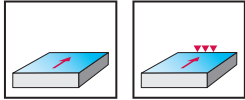
M5009 inch

SN . X1205 ..

Xtra-tec® XT



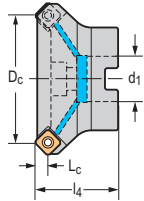
– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5009	●	●	●	●	●	●	●

Tool	Designation	D _c inch	d ₁ inch	l ₄ inch	L _c inch	Z	lbs	No. of indexable inserts	Type
									Parallel bore DIN 138 transverse keyway

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



Assembly parts

D _c [inch]	2.000	2.500–3.000	4.000–6.000
	Clamping screw for indexable insert Tightening torque FS1459 (Torx 15IP) 4.0 Nm	FS1459 (Torx 15IP) 4.0 Nm	FS1459 (Torx 15IP) 4.0 Nm
	FS1518	FS1519	FS1583

Accessories

D _c [inch]	2.000–6.000
	Torque screwdriver. analogue Tightening torque FS2003 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque FS2248 1.0–6.0 Nm
	Interchangeable blade FS2014 (Torx 15IP)
	Screwdriver FS1485 (Torx 15IP)
	Key for screw for shim ISO2936-4 (SW 4)

Indexable inserts

Designation	r mm	b mm	P		M			K				N		S		H		O					
			HC		HC			HC			HW	HC	HC		HC		HC						
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X	WXM15
SNHX1205ANN-K88		1.5																					
SNGX1205ANN-F57		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
SNGX1205ANN-F67		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
SNMX1205ANN-F57		1.5	☺	☺	☺						☺	☺	☺	☺	☺			☺	☺	☺			
SNMX1205ANN-F67		1.5	☺	☺	☺						☺	☺	☺	☺	☺			☺	☺	☺			
SNGX1205ANN-F27		1.5	☺	☺	☺						☺	☺	☺	☺	☺			☺	☺	☺			
SNMX1205ANN-F27		1.5	☺	☺	☺						☺	☺	☺	☺	☺			☺	☺	☺			
SNMX120512-F57	1.2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺	☺			
SNMX120520-F57	2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺	☺			
SNMX120512-D27	1.2		☺	☺	☺						☺	☺	☺	☺	☺			☺	☺	☺			
SNMX120520-D27	2		☺	☺	☺						☺	☺	☺	☺	☺			☺	☺	☺			
SNGX120512-F57	1.2		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺	☺			
SNMX120512-F67	1.2		☺	☺	☺			☺	☺	☺	☺	☺	☺	☺	☺			☺	☺	☺			
SNMX120512-F27	1.2		☺	☺	☺						☺	☺	☺	☺	☺			☺	☺	☺			
XNGX1205ANN-F67		4.7									☺										☺	☺	☺

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●● Primary application

● Other application

Face milling cutters

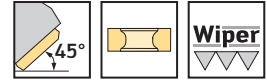
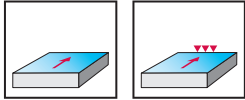
M5009 inch

SN . X1205 ..

Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5009	●	●	●	●	●	●	●

Tool	Designation	D _c inch	d ₁ inch	l ₄ inch	L _c inch	Z	lbs	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	★ M5009.051-B19-04-06-AP	2.000	0.750	1.500	0.236	4	0.9	4	SN . X1205 .. SN . X1205ANN XNGX1205ANN
	★ M5009.064-B26-06-06-AP	2.500	1.000	2.000	0.236	6	1.8	6	
	★ M5009.076-B26-07-06-AP	3.000	1.000	2.000	0.236	7	2.4	7	
	★ M5009.102-B38-08-06-AP	4.000	1.500	2.500	0.236	8	6.1	8	
	★ M5009.127-B38-10-06-AP	5.000	1.500	2.500	0.236	10	8.2	10	
	★ M5009.152-B38-12-06-AP	6.000	1.500	2.500	0.236	12	10.3	12	

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

Assembly parts

D _c [inch]		2.000	2.500–3.000	4.000–6.000
	Shim for indexable insert	AP800-SN1205 H81	AP800-SN1205 H81	AP800-SN1205 H81
	Clamping screw for shim	FS2069 (SW 4)	FS2069 (SW 4)	FS2069 (SW 4)
	Clamping screw for indexable insert Tightening torque	FS2617 (Torx 15IP) 4.0 Nm	FS2617 (Torx 15IP) 4.0 Nm	FS2617 (Torx 15IP) 4.0 Nm
	Clamping screw for arbour-mounted tools	FS1518	FS1519	FS1583

Accessories

D _c [inch]		2.000–6.000
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)
	Key for screw for shim	ISO2936-4 (SW 4)

Indexable inserts

Designation	r mm	b mm	P		M			K				N		S			H		O				
			HC	HC	HC	HC	HC	HC	HW	HC	HC	HC	HC	HC	HC	HC							
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X	WXM15
		1.5																					
		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.5	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.5	☺	☺	☺						☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.5	☺	☺	☺						☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.5	☺	☺	☺						☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
		4.7									☺										☺	☺	☺

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●● Primary application

● Other application

C 2

Face milling cutters

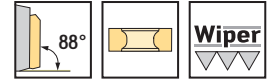
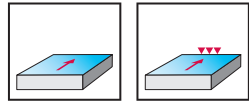
M5012 mm

SN . X1205 ..

Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5012	●	●	●	●	●	●	●

Tool	Designation	D _c mm	d ₁ mm	l ₄ mm	L _c mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	★ M5012-063-B22-07-10	63	22	40	10	7	0.4	7	SN . X1205 .. XNGX1205ZNN
	★ M5012-063-B27-07-10	63	27	50	10	7	0.7	7	
	★ M5012-080-B27-09-10	80	27	50	10	9	1.0	9	
	★ M5012-100-B32-11-10	100	32	50	10	11	1.7	11	
	★ M5012-125-B40-14-10	125	40	63	10	14	3.2	14	
Parallel bore DIN 138 transverse keyway 	★ M5012-160-B40-18-10	160	40/40 B	63	10	18	4.7	18	SN . X1205 .. XNGX1205ZNN

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

Assembly parts

D _c [mm]	63–160	
	Clamping screw for indexable insert Tightening torque	FS1459 (Torx 15IP) 4.0 Nm

Accessories

D _c [mm]	63–125	160
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)
	Sealing disc set	FS936 COMPLETE SET
	Gasket	O-R 96X4

Indexable inserts

Designation	r mm	b mm	P		M		K			N		S		H		O						
			HC		HC		HC			HW	HC	HC		HC	HC							
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X
SNGX1205ZNN-F27		1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNGX1205ZNN-F57		1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNMX1205ZNN-F57		1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNGX1205ZNN-F67		1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNHX1205ZNN-K88		1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNMX120512-F57	1.2		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNMX120520-F57	2		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNMX120512-D27	1.2		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNMX120520-D27	2		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNGX120512-F57	1.2		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNMX120512-F67	1.2		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
SNMX120512-F27	1.2		⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
XNGX1205ZNN-F67		4	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

●● Primary application

● Other application

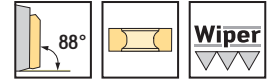
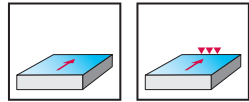
Face milling cutters

M5012 mm

SN . X1205 ..
Xtra-tec® XT



– Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5012	●	●	●	●	●	●	●

Tool	Designation	D _c mm	d ₁ mm	l ₄ mm	L _c mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	★ M5012-050-B22-04-10-AP	50	22	40	10	4	0.3	4	SN . X1205 .. XNGX1205ZNN
	★ M5012-063-B22-05-10-AP	63	22	40	10	5	0.4	5	
	★ M5012-063-B27-05-10-AP	63	27	50	10	5	0.7	5	
	★ M5012-080-B27-07-10-AP	80	27	50	10	7	1.0	7	
	★ M5012-100-B32-08-10-AP	100	32	50	10	8	1.7	8	
	★ M5012-125-B40-10-10-AP	125	40	63	10	10	3.3	10	
Parallel bore DIN 138 transverse keyway 	★ M5012-160-B40-12-10-AP	160	40/40 B	63	10	12	4.8	12	SN . X1205 .. XNGX1205ZNN

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

Assembly parts

D _c [mm]		50–160
	Shim for indexable insert	AP800-SN1205 H81
	Clamping screw for shim	FS2069 (SW 4)
	Clamping screw for indexable insert Tightening torque	FS2617 (Torx 15IP) 4.0 Nm

Accessories

D _c [mm]		50–125	160
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)	FS1485 (Torx 15IP)
	Key for screw for shim	ISO2936-4 (SW 4)	ISO2936-4 (SW 4)
	Sealing disc set	FS936 COMPLETE SET	
	Gasket	O-R 96X4	

Indexable inserts

Designation	r mm	b mm	P		M			K			N		S		H		O					
			HC		HC			HC			HW	HC	HC		HC		HC					
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G	WHH15	WHH15X
		1.2	☺	☺	☺					☺	☺	☺	☺									
		1.2	☺	☺	☺	☺	☺	☺		☺	☺	☺	☺			☺	☺	☺				
		1.2	☹	☹	☹						☹	☹	☹									
		1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺	☺				
		1.2												☹	☹							
		1.2	☺	☺	☺	☺	☺	☺		☺	☺	☺	☺			☺	☺	☺				
		2	☺	☺	☺	☺	☺	☺		☺	☺	☺	☺			☺	☺	☺				
		1.2	☺	☺	☺					☺	☺	☺	☺									
		2	☺	☺	☺					☺	☺	☺	☺									
		1.2	☺	☺	☺	☺	☺	☺		☺	☺	☺	☺			☺	☺	☺				
		1.2	☺	☺	☺					☺	☺	☺	☺			☺	☺	☺				
		1.2	☺	☺	☺					☺	☺	☺	☺									
		4							☺										☺	☺	☺	

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●●
Primary application

●
Other application

C 2

Shoulder milling cutters

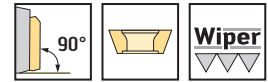
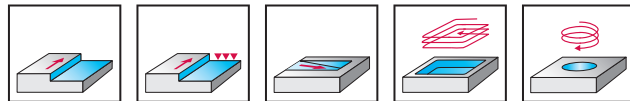
M5130 mm

BC .. 0903 .. R

Xtra-tec® XT



– Two cutting edges per indexable insert



	P	M	K	N	S	H	O
M5130	●	●	●	●	●	●	●

Tool	Designation	D _c mm	d ₁ mm	l ₄ mm	L _c mm	l ₁ mm	Z	kg	No. of indexable inserts	Type
ScrewFit 	M5130-016-T14-02-09	16	T14	25	9		2	0.03	2	BC .. 0903 .. R
	M5130-020-T18-02-09	20	T18	30	9		2	0.05	2	
	M5130-020-T18-03-09	20	T18	30	9		3	0.05	3	
	M5130-025-T22-03-09	25	T22	35	9		3	0.09	3	
	M5130-025-T22-04-09	25	T22	35	9		4	0.09	4	
	M5130-032-T28-04-09	32	T28	40	9		4	0.18	4	
	M5130-032-T28-05-09	32	T28	40	9		5	0.19	5	
Cylindrical. modular 	M5130-016-TC08-02-09	16	M8	25	9		2	0.03	2	BC .. 0903 .. R
	M5130-020-TC10-02-09	20	M10	30	9		2	0.05	2	
	M5130-020-TC10-03-09	20	M10	30	9		3	0.05	3	
	M5130-025-TC12-03-09	25	M12	35	9		3	0.09	3	
	M5130-025-TC12-04-09	25	M12	35	9		4	0.09	4	
	M5130-032-TC16-04-09	32	M16	40	9		4	0.17	4	
	M5130-032-TC16-05-09	32	M16	40	9		5	0.18	5	
Shank DIN 1835 B 	M5130-016-W16-02-09	16	16	41	9	90	2	0.12	2	BC .. 0903 .. R
	M5130-020-W20-03-09	20	20	39	9	90	3	0.18	3	
	M5130-025-W25-04-09	25	25	43	9	100	4	0.31	4	
	M5130-032-W32-05-09	32	32	49	9	110	5	0.57	5	
Parallel shank 	M5130-016-A16-02-09	16	16	41	9	180	2	0.25	2	BC .. 0903 .. R
	M5130-018-A16-02-09	18	16	41	9	180	2	0.26	2	
	M5130-020-A20-02-09	20	20	39	9	200	2	0.44	2	
	M5130-020-A20-03-09	20	20	39	9	200	3	0.44	3	
	M5130-022-A20-03-09	22	20	39	9	200	3	0.44	3	
	M5130-025-A25-03-09	25	25	43	9	200	3	0.68	3	
	M5130-025-A25-04-09	25	25	43	9	200	4	0.68	4	

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

Assembly parts

	D_c [mm]	16–32
	Clamping screw for indexable insert Tightening torque	FS2576 (Torx 8IP) 1.2 Nm

Accessories

	D_c [mm]	16–32
	Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2012 (Torx 8IP)
	Screwdriver	FS1483 (Torx 8IP)

Indexable inserts

Designation	r mm	b mm	P		M		K			N		S		H		O
			HC	HC	HC	HC	HC	HW	HC	HW	HC	HW	HC	HW		
BCGT090304R-G55	0.4	1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕			
BCGT090304R-K85	0.4	1.2									⊕	⊕				
BCMT090302R-G55	0.2	1.4														
BCMT090304R-F55	0.4	1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕						
BCMT090304R-G55	0.4	1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕			⊕	⊕		
BCMT090304R-K55	0.4	1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕		⊕	⊕			
BCMT090308R-G55	0.8	0.8														
BCMT090312R-G55	1.2	0.4														
BCMT090316R-G55	1.6	0.4														
BCMT090320R-G55	2	0.4														
BCGX0903PDR-G55	0.4	5													⊕	⊕

HC = Coated carbide
HW = Uncoated carbide

WALTER
SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

•• Primary application

• Other application

Shoulder milling cutters

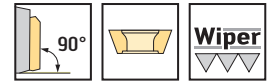
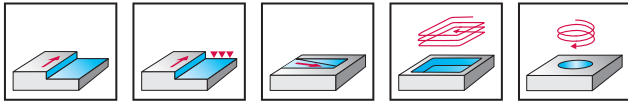
M5130

BC .. 0903 .. R

Xtra-tec® XT



– Two cutting edges per indexable insert



	P	M	K	N	S	H	O
M5130	●	●	●	●	●	●	●

Tool	Designation	D _c mm	d ₁ mm	l ₄ mm	L _c mm	l ₁ mm	Z	kg	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	M5130-032-B16-03-09	32	16	40	9		3	0.12	3	BC .. 0903 .. R
	M5130-032-B16-06-09	32	16	40	9		6	0.12	6	
	M5130-040-B16-04-09	40	16	40	9		4	0.19	4	
	M5130-040-B16-07-09	40	16	40	9		7	0.21	7	
	M5130-050-B22-05-09	50	22	40	9		5	0.32	5	
	M5130-050-B22-08-09	50	22	40	9		8	0.34	8	
	M5130-063-B22-07-09	63	22	40	9		7	0.50	7	
	M5130-063-B22-11-09	63	22	40	9		11	0.51	11	

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

Assembly parts

	D _c [mm]	32–63
	Clamping screw for indexable insert Tightening torque	FS2576 (Torx 8IP) 1.2 Nm

Accessories

	D _c [mm]	32–63
	Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2012 (Torx 8IP)
	Screwdriver	FS1483 (Torx 8IP)

Indexable inserts

Designation	r mm	b mm	P		M		K			N		S		H		O				
			HC	HC	HC	HC	HC	HW	HC	HW	HC	HW	HC	HW	HC					
			WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WXN15	WK10	WSM35S	WSP45G	WHH15	WHH15X	WXM15
BCGT090304R-G55	0.4	1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕						
BCGT090304R-K85	0.4	1.2												⊕	⊕					
BCMT090302R-G55	0.2	1.4																		
BCMT090304R-F55	0.4	1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕							
BCMT090304R-G55	0.4	1.2	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕			⊕	⊕			
BCMT090304R-K55	0.4	1.2		⊕	⊕	⊕	⊕								⊕	⊕				
BCMT090308R-G55	0.8	0.8		⊕	⊕	⊕	⊕									⊕	⊕			
BCMT090312R-G55	1.2	0.4		⊕	⊕	⊕	⊕									⊕	⊕			
BCMT090316R-G55	1.6	0.4		⊕	⊕	⊕	⊕									⊕	⊕			
BCMT090320R-G55	2	0.4		⊕	⊕	⊕	⊕									⊕	⊕			
								⊕										⊕	⊕	⊕
BCGX0903PDR-G55	0.4	5																		

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

●● Primary application

● Other application

Shoulder milling cutters

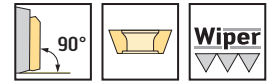
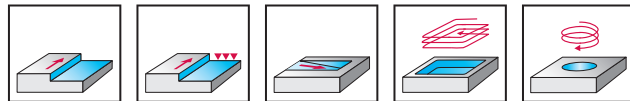
M5130 inch

BC .. 0903 .. R

Xtra-tec® XT



– Two cutting edges per indexable insert



	P	M	K	N	S	H	O
M5130	●	●	●	●	●	●	●

Tool	Designation	D _c inch	d ₁ inch	l ₄ inch	l ₁ inch	L _c inch	Z	lbs	No. of indexable inserts	Type
Shank DIN 1835 B 	M5130.015-W15-02-09	0.625	0.625	0.945	2.851	0.354	2	0.2	2	BC .. 0903 .. R
	M5130.019-W19-03-09	0.750	0.750	1.535	3.567	0.354	3	0.4	3	
	M5130.026-W26-04-09	1.000	1.000	1.181	3.462	0.354	4	0.6	4	
	M5130.026-W26-03-09	1.000	1.000	1.181	3.462	0.354	3	0.6	3	
Parallel shank 	M5130.015-A15-02-09	0.625	0.625	1.630	7.000	0.354	2	0.5	2	BC .. 0903 .. R
	M5130.019-A19-02-09	0.750	0.750	1.630	8.000	0.354	2	0.9	2	
	M5130.026-A26-03-09	1.000	1.000	1.750	8.000	0.354	3	1.6	3	
Parallel bore DIN 138 transverse keyway 	M5130.051-B19-05-09	2.000	0.750	1.575		0.354	5	0.8	5	BC .. 0903 .. R
	M5130.051-B19-08-09	2.000	0.750	1.575		0.354	8	0.8	8	

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

Assembly parts

	D _c [inch]	0.625–1.000	2.000
	Clamping screw for indexable insert Tightening torque	FS2576 (Torx 8IP) 1.2 Nm	FS2576 (Torx 8IP) 1.2 Nm
	Clamping screw for arbour-mounted tools		FS1523

Accessories

	D _c [inch]	0.625–2.000
	Torque screwdriver, analogue Tightening torque	FS2002 0.4–1.2 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2012 (Torx 8IP)
	Screwdriver	FS1483 (Torx 8IP)

Indexable inserts

Designation	r mm	b mm	P				M		K			N		S		H		O		
			HC	HC	HC	HC	HC	HC	HC	HW	HC	HC	HC	HC	HC	HC				
			WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WXN15	WK10	WSM35S	WSP45G	WHH15	WHH15X	WXM15
	0.4	1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			
BCGT090304R-K85	0.4	1.2												☺	☺					
BCMT090302R-G55	0.2	1.4		☺	☺	☺		☺												
BCMT090304R-F55	0.4	1.2	☺	☺	☺	☺		☺	☺	☺	☺	☺	☺							
BCMT090304R-G55	0.4	1.2	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺			☺	☺			
BCMT090304R-K55	0.4	1.2		☺	☺	☺	☺								☺	☺				
BCMT090308R-G55	0.8	0.8		☺	☺	☺		☺												
BCMT090312R-G55	1.2	0.4		☺	☺	☺		☺												
BCMT090316R-G55	1.6	0.4		☺	☺	☺		☺												
BCMT090320R-G55	2	0.4		☺	☺	☺		☺												
	0.4	5						☺										☺	☺	☺

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

•• Primary application

• Other application

Shoulder milling cutters

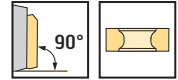
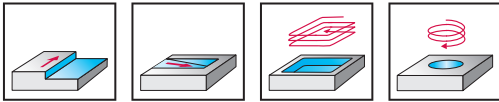
M5137 inch

TNMMU160508R

Xtra-tec® XT



– Six cutting edges per indexable insert


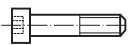


	P	M	K	N	S	H	O
M5137	●●	●●	●●	●●	●●	●●	●●




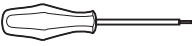
Tool	Designation	D _c inch	d ₁ inch	l ₄ inch	L _c inch	Z	lbs	No. of indexable inserts	Type
Parallel bore DIN 138 transverse keyway 	M5137.051-B19-04-08	2.000	0.750	1.500	0.315	4	0.64	4	TNMMU160508R
	M5137.064-B26-05-08	2.500	1.000	1.500	0.315	5	1.06	5	
	M5137.076-B26-07-08	3.000	1.000	2.000	0.315	7	1.81	7	
	M5137.102-B38-08-08	4.000	1.500	2.500	0.315	8	5.47	8	

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

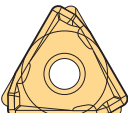
Assembly parts

D _c [inch]	2.000	2.500–3.000	4.000
	Clamping screw for indexable insert Tightening torque FS2079 (Torx 9IP) 2.0 Nm	FS2079 (Torx 9IP) 2.0 Nm	FS2079 (Torx 9IP) 2.0 Nm
	Clamping screw for arbour-mounted tools FS1518	FS1519	FS1583

Accessories

D _c [inch]	2.000–4.000
	Torque screwdriver. analogue Tightening torque FS2004 1.5–5.0 Nm
	Torque screwdriver. digital Tightening torque FS2248 1.0–6.0 Nm
	Interchangeable blade FS2013 (Torx 9IP)
	Screwdriver FS1484 (Torx 9IP)

Indexable inserts

Designation	b mm	r mm	P					M		K				N		S				
			HC					HC		HC				HW	HC	HC				
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WXN15	WSM35S	WSP45S	WSP45G
 TNMU160508R-G57	1.6	0.8	☺	☺	☺	☹	☹		☹	☹			☺	☹	☹				☹	☹

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☹
Moderate

●●
Primary application

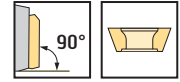
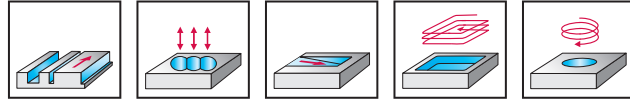
●
Other application

Routing cutters

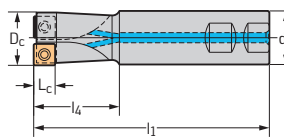
M4791 inch



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4791	●	●	●	●	●	●	●

Tool	Designation	D _c inch	d ₁ inch	l ₄ inch	l ₁ inch	L _c inch	Z	lbs	No. of indexable inserts	Type
Shank DIN 1835 B	M4791.019-W19-01-06	0.750	0.750	1.529	3.560	0.220	1	0.3	2	SD .. 06T204
	M4791.026-W26-01-09	1.000	1.000	2.844	5.125	0.331	1	0.9	2	SD .. 09T30 ..
	M4791.028-W19-01-09	1.125	0.750	1.250	3.310	0.331	1	0.3	2	SD .. 120408
	M4791.031-W31-01-12	1.250	1.250	3.219	5.500	0.457	1	1.4	2	
	M4791.035-W31-01-12	1.375	1.250	1.500	3.820	0.457	1	1.0	2	
	M4791.038-W31-01-12	1.500	1.250	3.219	5.500	0.457	1	1.5	2	
	M4791.044-W31-01-12	1.750	1.250	2.000	5.500	0.457	1	1.6	2	

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

Assembly parts

Type	SD .. 06T204	SD .. 09T30 ..	SD .. 120408
Clamping screw for indexable insert Tightening torque	FS2084 (Torx 7IP) 0.9 Nm	FS2266 (Torx 10IP) 2.0 Nm	FS1453 (Torx 15IP) 3.5 Nm

Accessories

Type	SD .. 06T204	SD .. 09T30 ..	SD .. 120408
Torque screwdriver, analogue Tightening torque	FS2002 0.4–1.2 Nm	FS2004 1.5–5.0 Nm	FS2004 1.5–5.0 Nm
Torque screwdriver, digital Tightening torque		FS2248 1.0–6.0 Nm	FS2248 1.0–6.0 Nm
Interchangeable blade	FS2011 (Torx 7IP)	FS2268 (Torx 10IP)	FS2014 (Torx 15IP)
Screwdriver	FS2088 (Torx 7IP)	FS2267 (Torx 10IP)	FS1485 (Torx 15IP)

Indexable inserts

Designation	r mm	P					M				K			N		S					
		HC					HC				HC			HC	HW	HC					
		WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G
SDHT06T204-G88	0.4														☺	☺					
SDMT06T204-D51	0.4	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMT06T204-D57	0.4	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMT06T204-F57	0.4	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMW06T204-A57	0.4	☺	☺	☺								☺	☺	☺							
SDHT09T304-G88	0.4														☺	☺					
SDHT09T308-G88	0.8														☺	☺					
SDMT09T308-D51	0.8	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMT09T308-D57	0.8	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMT09T308-F57	0.8	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMW09T308-A57	0.8	☺	☺	☺								☺	☺	☺							
SDHT120408-G88	0.8														☺	☺					
SDMT120408-D51	0.8	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMT120408-D57	0.8	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMT120408-F57	0.8	☺	☺	☺	☺	☺					☺	☺	☺	☺						☺	☺
SDMW120408-A57	0.8	☺	☺	☺								☺	☺	☺							

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●●
Primary application

●
Other application

Round insert milling cutters

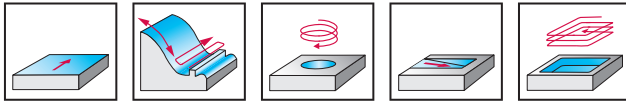
M5468 mm

RO . X10T3M0 ..

Xtra-tec® XT



- With indexing surfaces
- Eight cutting edges per indexable insert




M5468	P	M	K	N	S	H	O
	●	●	●	●	●	●	●

Tool	Designation	R mm	D _a mm	d ₁ mm	l ₄ mm	L _c mm	l ₁ mm	Z	kg	No. of indexable inserts	Type
ScrewFit 	★ M5468-020-T18-02-05	5	20	T18	30	5		2	0.05	2	RO . X10T3 M08/M0T8 ..
	★ M5468-025-T22-03-05	5	25	T22	35	5		3	0.09	3	
	★ M5468-030-T28-04-05	5	30	T28	40	5		4	0.16	4	
	★ M5468-032-T28-04-05	5	32	T28	40	5		4	0.17	4	
	★ M5468-035-T28-05-05	5	35	T28	40	5		5	0.19	5	
	★ M5468-040-T36-05-05	5	40	T36	40	5		5	0.31	5	
Cylindrical. modular 	★ M5468-020-TC10-02-05	5	20	M10	30	5		2	0.05	2	RO . X10T3 M08/M0T8 ..
	★ M5468-025-TC12-03-05	5	25	M12	35	5		3	0.08	3	
	★ M5468-030-TC16-04-05	5	30	M16	40	5		4	0.15	4	
	★ M5468-032-TC16-04-05	5	32	M16	40	5		4	0.16	4	
	★ M5468-035-TC16-05-05	5	35	M16	40	5		5	0.18	5	
	★ M5468-040-TC16-05-05	5	40	M16	40	5		5	0.19	5	
Shank DIN 1835 B 	★ M5468-020-W20-02-05	5	20	20	59	5	110	2	0.21	2	RO . X10T3 M08/M0T8 ..
	★ M5468-032-W32-04-05	5	32	32	114	5	175	4	0.89	4	
Parallel bore DIN 138 transverse keyway 	★ M5468-040-B16-05-05	5	40	16	40	5		5	0.14	5	RO . X10T3 M08/M0T8 ..
	★ M5468-050-B22-06-05	5	50	22	50	5		6	0.33	6	
	★ M5468-052-B22-06-05	5	52	22	50	5		6	0.38	6	



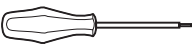
Bodies and assembly parts are included in the scope of delivery.

/ ★ New addition to the product range


Assembly parts

D _a [mm]		20–52
	Clamping screw for indexable insert Tightening torque	FS2181 (Torx 15IP) 3.0 Nm

Accessories

D _a [mm]		20–52
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)


Indexable inserts


Designation	d mm	P		M		K			N	S	H		
		HC		HC		HC			HW	HC	HC		
		WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSP45G	WKP25S	WKP35G	WKP35S	WK10	WSM35S	WSP45G
 ROGX10T3M08-G88	10												
ROHX10T3M08-A57	10	⊕	⊕	⊕			⊕	⊕	⊕				⊕
ROMX10T3M08-D57	10	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕		⊕	⊕	
ROMX10T3M08-F67	10				⊕	⊕					⊕	⊕	
ROMX10T3M0T8-A27	10	⊕	⊕	⊕			⊕	⊕	⊕				


HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement


Very good


Good


Moderate

●● Primary application

● Other application

Round insert milling cutters

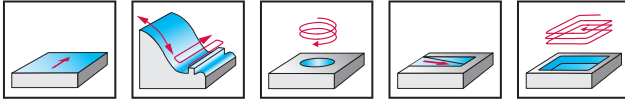
M5468 inch

RO . X10T3M0 ..

Xtra-tec® XT



- With indexing surfaces
- Eight cutting edges per indexable insert



	P	M	K	N	S	H	O
M5468	●	●	●	●	●	●	●

Tool	Designation	R inch	D _a inch	d ₁ inch	l ₄ inch	L _c inch	Z	lbs	No. of indexable inserts	Type
Shank DIN 1835 B 	★ M5468.026-W26-03-05	0.197	1.000	1.000	2.500	0.197	3	0.8	3	RO . X10T3 M08/M0T8 ..
	★ M5468.031-W31-04-05	0.197	1.250	1.250	2.500	0.197	4	1.3	4	
	★ M5468.038-W31-05-05	0.197	1.500	1.250	2.500	0.197	5	1.4	5	
Parallel bore DIN 138 transverse keyway 	★ M5468.051-B19-06-05	0.197	2.000	0.750	1.750	0.197	6	0.6	6	RO . X10T3 M08/M0T8 ..

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

Assembly parts

	D _a [inch]	1.000–1.500	2.000
	Clamping screw for indexable insert	FS2181 (Torx 15IP)	FS2181 (Torx 15IP)
	Tightening torque	3.0 Nm	3.0 Nm
	Clamping screw for arbour-mounted tools		FS1518

Accessories

	D _a [inch]	1.000–2.000
	Torque screwdriver. analogue	FS2004
	Tightening torque	1.5–5.0 Nm
	Torque screwdriver. digital	FS2248
	Tightening torque	1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

Designation	d mm	P		M		K		N	S	H				
		HC		HC		HC		HW	HC	HC				
		WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSP45G	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WSM35S	WSP45G
	ROGX10T3M08-G88													
	ROHX10T3M08-A57	☹	☹	☹			☹	☹	☹	☹				☹
	ROMX10T3M08-D57	☹	☹	☹	☹	☹	☹	☹	☹	☹				
	ROMX10T3M08-F67			☹	☹	☹	☹	☹	☹	☹				
	ROMX10T3M0T8-A27	☹	☹	☹			☹	☹	☹	☹				

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

😊
Good

😐
Moderate

•• Primary application

• Other application

Round insert milling cutters

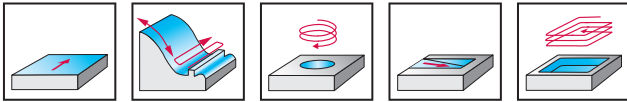
M5468

RO . X1204M0 ..

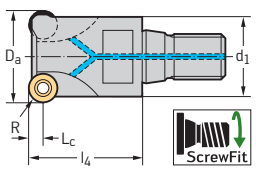
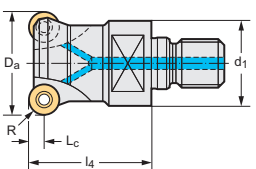
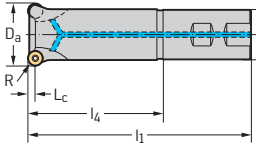
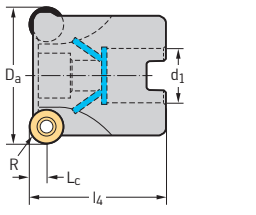
Xtra-tec® XT



- With indexing surfaces
- Eight cutting edges per indexable insert



M5468	P	M	K	N	S	H	O
	●	●	●	●	●	●	●

Tool	Designation	R mm	D _a mm	d ₁ mm	l ₄ mm	L _c mm	l ₁ mm	Z	kg	No. of indexable inserts	Type
ScrewFit 	★ M5468-024-T22-02-06	6	24	T22	35	6		2	0.08	2	RO . X1204 M08/M0T8 ..
	★ M5468-032-T28-03-06	6	32	T28	40	6		3	0.17	3	
	★ M5468-040-T36-05-06	6	40	T36	40	6		5	0.30	5	
	★ M5468-042-T36-05-06	6	42	T36	40	6		5	0.31	5	
Cylindrical, modular 	★ M5468-024-TC12-02-06	6	24	M12	35	6		2	0.07	2	RO . X1204 M08/M0T8 ..
	★ M5468-032-TC16-03-06	6	32	M16	40	6		3	0.16	3	
	★ M5468-040-TC16-05-06	6	40	M16	40	6		5	0.18	5	
	★ M5468-042-TC16-05-06	6	42	M16	40	6		5	0.19	5	
Shank DIN 1835 B 	★ M5468-024-W25-02-06	6	24	25	73	6	130	2	0.36	2	RO . X1204 M08/M0T8 ..
Parallel bore DIN 138 transverse keyway 	★ M5468-040-B16-04-06	6	40	16	40	6		4	0.13	4	RO . X1204 M08/M0T8 ..
	★ M5468-040-B16-05-06	6	40	16	40	6		5	0.13	5	
	★ M5468-042-B16-05-06	6	42	16	40	6		5	0.15	5	
	★ M5468-050-B22-05-06	6	50	22	50	6		5	0.31	5	
	★ M5468-050-B22-06-06	6	50	22	50	6		6	0.31	6	
	★ M5468-052-B22-05-06	6	52	22	50	6		5	0.35	5	
	★ M5468-052-B22-06-06	6	52	22	50	6		6	0.35	6	
	★ M5468-063-B22-06-06	6	63	22	50	6		6	0.52	6	
	★ M5468-063-B22-07-06	6	63	22	50	6		7	0.51	7	
	★ M5468-066-B27-06-06	6	66	27	50	6		6	0.63	6	
	★ M5468-066-B27-07-06	6	66	27	50	6		7	0.62	7	
	★ M5468-080-B27-07-06	6	80	27	50	6		7	0.87	7	
	★ M5468-080-B27-08-06	6	80	27	50	6		8	0.87	8	
★ M5468-100-B32-08-06	6	100	32	50	6		8	1.53	8		

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

/ ★ New addition to the product range

Assembly parts

	D _a [mm]	24–80	100
	Clamping screw for indexable insert Tightening torque	FS2080 (Torx 15IP) 2.5 Nm	FS1453 (Torx 15IP) 3.5 Nm

Accessories

	D _a [mm]	24–100
	Torque screwdriver, analogue Tightening torque	FS2003 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2014 (Torx 15IP)
	Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

Designation	d mm	P		M		K			N	S	H			
		HC		HC		HC			HW	HC	HC			
		WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSP45G	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WSM35S	WSP45G
	ROGX1204M08-G88													
	ROHX1204M08-A57	⊕	⊕	⊕			⊕	⊕	⊕	⊕				⊕
	ROMX1204M08-D57	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕		⊕	⊕	
	ROMX1204M08-F67				⊕	⊕						⊕	⊕	
	ROMX1204M0T8-A27	⊕	⊕	⊕			⊕	⊕	⊕	⊕				

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

Very good

Good

Moderate

•• Primary application

• Other application

Round insert milling cutters

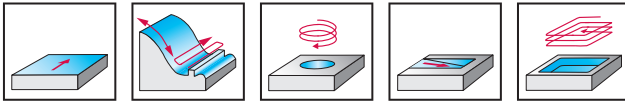
M5468 inch

RO . X1204M0 ..

Xtra-tec® XT



- With indexing surfaces
- Eight cutting edges per indexable insert





	P	M	K	N	S	H	O
M5468	●	●	●	●	●	●	●



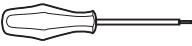
Tool	Designation	R inch	D _a inch	d ₁ inch	l ₄ inch	L _c inch	Z	lbs	No. of indexable inserts	Type
Shank DIN 1835 B	★ M5468.038-W31-04-06	0.236	1.500	1.250	2.500	0.236	6	1.4	6	RO . X1204 M08/M0T8 ..
Parallel bore DIN 138 transverse keyway	★ M5468.051-B19-06-06	0.236	2.000	0.750	1.750	0.236	6	0.6	6	RO . X1204 M08/M0T8 ..
	★ M5468.064-B26-07-06	0.236	2.500	1.000	2.000	0.236	7	1.1	7	
	★ M5468.076-B26-08-06	0.236	3.000	1.000	2.000	0.236	8	1.7	8	
	★ M5468.102-B38-08-06	0.236	4.000	1.500	2.500	0.236	8	4.2	8	

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


Assembly parts

D _a [inch]	1.500	2.000	2.500–3.000	4.000
 Clamping screw for indexable insert Tightening torque	FS2080 (Torx 15IP) 2.5 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS2080 (Torx 15IP) 2.5 Nm	FS2080 (Torx 15IP) 2.5 Nm
 Clamping screw for arbour-mounted tools		FS1518	FS1519	FS1583

Accessories

D _a [inch]	1.500–4.000
 Torque screwdriver, analogue Tightening torque	FS2004 1.5–5.0 Nm
 Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
 Interchangeable blade	FS2014 (Torx 15IP)
 Screwdriver	FS1485 (Torx 15IP)

Indexable inserts

Designation	d mm	P		M		K		N	S	H				
		HC		HC		HC		HW	HC	HC				
		WKP25S	WKP35G	WKP35S	WSP45G	WSM35S	WSP45G	WKK25S	WKP25S	WKP35G	WKP35S	WK10	WSM35S	WSP45G
 ROGX1204M08-G88	12													
ROHX1204M08-A57	12	☹	☹	☹			☹	☹	☹	☹				☹
ROMX1204M08-D57	12	☹	☹	☹	☹	☹	☹	☹	☹	☹				
ROMX1204M08-F67	12				☹	☹	☹	☹	☹	☹			☹	☹
ROMX1204M0T8-A27	12	☹	☹	☹			☹	☹	☹	☹				

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☹
Very good

☹☹
Good

☹☹☹
Moderate

●● Primary application

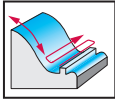
● Other application

Copy milling cutters

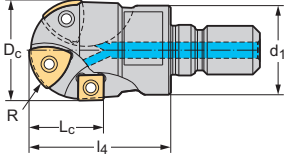
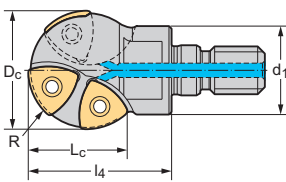
F2239 / F2239B mm



- With peripheral cutting edges
- Three or four cutting edges per indexable insert




	P	M	K	N	S	H	O
F2239	●●	●	●●	■	●	■	■
F2239B	●●	●	●●	■	●	■	■


Tool	Designation	D _c mm	R mm	d ₁ mm	l ₄ mm	L _c mm	Z	kg	No. of indexable inserts	Type
Cylindrical, modular 	F2239.TC10.020.Z01.15	20	10	M10	30	15	1	0.04	1 2	SP .. 060304 P26315R10
	F2239.TC12.025.Z01.18	25	12.5	M12	35	18	1	0.08	1 2	SP .. 060304 P26315R12
	F2239.TC16.030.Z01.23	30	15	M16	40	23	1	0.13	1 2	SP .. 09T308 P26315R15
	F2239.TC16.032.Z01.24	32	16	M16	40	24	1	0.14	1 2	SP .. 09T308 P26315R16
Cylindrical, modular 	F2239B.TC08.020.Z01.10	20	10	M8	25	15	1	0.03	3	P26315R10
	F2239B.TC10.025.Z01.12	25	12.5	M10	30	20	1	0.05	3	P26315R12
	F2239B.TC12.030.Z01.15	30	15	M12	40	24	1	0.09	3	P26315R15
	F2239B.TC12.032.Z01.16	32	16	M12	40	26	1	0.09	3	P26315R16
	F2239B.TC16.040.Z01.20	40	20	M16	45	32	1	0.18	3	P26315R20

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



Assembly parts

D _c [mm]	20	25	30–32	40
 Clamping screw for indexable insert Tightening torque	FS1129 (Torx 8) 0.8 Nm	FS923 (Torx 8) 1.2 Nm	FS359 (Torx 15) 2.5 Nm	FS1030 (Torx 20) 5.0 Nm

Accessories

D _c [mm]	20–25	30–32	40
 Screwdriver for indexable insert	FS230 (Torx 8)	FS229 (Torx 15)	FS228 (Torx 20)

Indexable inserts

Designation	R mm	r mm	P		M			K			N		S						
			HC	HC	HC	HC	HC	HC	HW	HC	HC								
			WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSP45S	WSP45G	WAK15	WKP25S	WKP35G	WKP35S	WXN15	WK10	WSM35S	WSP45S	WSP45G
 P26315R10	10		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	
P26315R12	12.5		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	
P26315R15	15		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	
P26315R16	16		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	
P26315R20	20		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	
 SPHT060304-G88		0.4	☺									☺	☺						
SPMT060304-D51		0.4	☺		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	☺
SPMT060304-F55		0.4	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	☺
SPMW060304-A57		0.4	☺		☺						☺	☺	☺	☺					
SPMW060304T-A27		0.4	☺		☺						☺	☺	☺	☺					
SPHT09T308-G88		0.8	☺									☺	☺						
SPMT09T308-D51		0.8	☺		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	☺
SPMT09T308-F55		0.8	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺				☺	☺
SPMW09T308-A57		0.8	☺		☺						☺	☺	☺	☺					
SPMW09T308T-A27		0.8	☺		☺						☺	☺	☺	☺					

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

•• Primary application

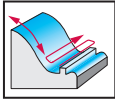
• Other application

Copy milling cutters

F2339 mm

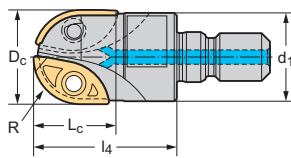


- With anti-twist protection
- Two cutting edges per indexable insert



	P	M	K	N	S	H	O
F2339	●	●	●	●	●	●	●

Tool	Designation	D _c mm	R mm	d ₁ mm	l ₄ mm	L _c mm	Z	kg	No. of indexable inserts	Type
										Cylindrical, modular
	F2339.TC10.020.Z02.15	20	10	M10	30	15	2	0.04	2	XD . T16T3100R
	F2339.TC12.025.Z02.20	25	12.5	M12	35	20	2	0.07	2	XD . T2004125R
	F2339.TC16.030.Z02.24	30	15	M16	40	24	2	0.12	2	XD . T2405150R
	F2339.TC16.032.Z02.25	32	16	M16	40	25	2	0.13	2	XD . T2506160R

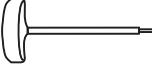



Bodies and assembly parts are included in the scope of delivery.


Assembly parts

D _c [mm]	16	20	25	30–32
 Clamping screw for indexable insert Tightening torque	FS1454 (Torx 8IP) 1.2 Nm	FS1013 (Torx 8) 1.0 Nm	FS378 (Torx 15) 3.0 Nm	FS1165 (Torx 20) 6.0 Nm

Accessories

D _c [mm]	16	20	25	30–32
 Handle key for indexable insert				FS1173 (Torx 20)
 Screwdriver for indexable insert	FS1483 (Torx 8IP)	FS230 (Torx 8)	FS229 (Torx 15)	

Indexable inserts

Designation	R mm	P		M		K		S	
		HC		HC		HC		HC	
		WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSP45S	WSP45G	WSP45S
 XDGT1303080R-D57	8			☒	☒				
XDMT1303080R-F55	8	☒	☒	☒	☒	☒	☒	☒	☒
XDGT16T3100R-D57	10			☒	☒				
XDMT16T3100R-F55	10	☒	☒	☒	☒	☒	☒	☒	☒
XDGT2004125R-D57	12.5			☒	☒				
XDMT2004125R-F55	12.5	☒	☒	☒	☒	☒	☒	☒	☒
XDGT2405150R-D57	15			☒	☒				
XDMT2405150R-F55	15	☒	☒	☒	☒	☒	☒	☒	☒
XDGT2506160R-D57	16			☒	☒				
XDMT2506160R-F55	16	☒	☒	☒	☒	☒	☒	☒	☒

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

☹
Moderate

●● Primary application

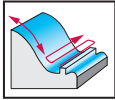
● Other application

Copy milling cutters

F2339 inch



- With anti-twist protection
- Two cutting edges per indexable insert




	P	M	K	N	S	H	O
F2339	●●	●●	●●	●●	●●	●●	●●

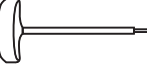

Tool	Designation	D_c	R	d_1	l_4	L_c	Z		No. of indexable inserts	Type
		inch	inch	inch	inch	inch				
Cylindrical, modular	F2339.UTC08.015.Z02.11	0.625	0.313	M8	0.984	0.433	2	0.1	2	XDMT1303079R
	F2339.UTC10.019.Z02.15	0.750	0.375	M10	1.181	0.591	2	0.1	2	XD . T16T3095R
	F2339.UTC12.026.Z02.20	1.000	0.500	M12	1.378	0.787	2	0.2	2	XD . T2004127R
	F2339.UTC16.031.Z02.25	1.250	0.625	M16	1.575	0.984	2	0.3	2	XD . T2506159R

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


Assembly parts

D _c [inch]	0,625	0,750	1,000	1,250
 Clamping screw for indexable insert Tightening torque	FS1454 (Torx 8IP) 1.2 Nm	FS1013 (Torx 8) 1.0 Nm	FS378 (Torx 15) 3.0 Nm	FS1165 (Torx 20) 6.0 Nm

Accessories

D _c [inch]	0,625	0,750	1,000	1,250
 Handle key for indexable insert				FS1173 (Torx 20)
 Screwdriver for indexable insert	FS1483 (Torx 8IP)	FS230 (Torx 8)	FS229 (Torx 15)	

Indexable inserts

Designation	R mm	P				M		K			S	
		HC				HC		HC			HC	
		WKP25S	WKP35G	WKP35S	WSP45S	WSM35S	WSP45S	WKP25S	WKP35G	WKP35S	WSM35S	WSP45S
 XDMT1303079R-F55	7.92	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
XDGT16T3095R-D57	9.53	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
XDMT16T3095R-F55	9.53	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
XDGT2004127R-D57	12.7	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
XDMT2004127R-F55	12.7	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
XDGT2506159R-D57	15.88	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
XDMT2506159R-F55	15.88	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑

HC = Coated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☹
Good

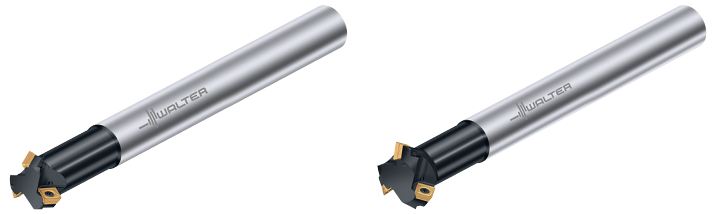
☹
Moderate

●● Primary application

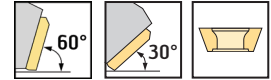
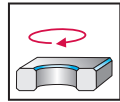
● Other application

Chamfer milling cutters

M4574 mm



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4574	●	●	●	●	●		

Tool	Designation	D _c mm	D _a mm	d ₁ mm	l ₄ mm	l ₁ mm	L _c mm	κ	Z	kg	No. of indexable inserts	Type
Parallel shank 	M4574-008-A12-01-03-30	8	18.4	12	30	120	2.7	30°	1	0.10	1	
	M4574-012-A16-02-03-30	12	22.4	16	40	160	2.7	30°	2	0.23	2	SD .. 06T204
	M4574-016-A16-03-03-30	16	26.4	16	40	160	2.7	30°	3	0.24	3	
	M4574-020-A20-02-05-30	20	35.3	20	40	200	4	30°	2	0.48	2	SD .. 09T308
Parallel shank 	M4574-008-A12-01-03-60	8	14.3	12	30	120	4.8	60°	1	0.09	1	
	M4574-012-A16-02-03-60	12	18.3	16	40	160	4.8	60°	2	0.22	2	SD .. 06T204
	M4574-016-A16-03-03-60	16	22.3	16	40	160	4.8	60°	3	0.23	3	
	M4574-020-A20-02-05-60	20	29.5	20	40	200	6.8	60°	2	0.46	2	SD .. 09T308

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

Assembly parts

Type	SD .. 06T204	SD .. 09T308
Clamping screw for indexable insert Tightening torque	FS2084 (Torx 7IP) 0.9 Nm	FS2266 (Torx 10IP) 2.0 Nm

Accessories

Type	SD .. 06T204	SD .. 09T308
Torque screwdriver, analogue Tightening torque	FS2001 0.4–1.2 Nm	FS2003 1.5–5.0 Nm
Torque screwdriver, digital Tightening torque		FS2248 1.0–6.0 Nm
Interchangeable blade	FS2011 (Torx 7IP)	FS2268 (Torx 10IP)
Screwdriver	FS2088 (Torx 7IP)	FS2267 (Torx 10IP)

Indexable inserts

Designation	r mm	P					M				K			N		S					
		HC					HC				HC			HC	HW	HC					
		WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G
SDHT06T204-G88	0.4														☺	☺					
SDMT06T204-D51	0.4	☺	☺	☺	☺	☺						☺	☺	☺						☺	☺
SDMT06T204-D57	0.4	☺	☺	☺	☺	☺	☺				☺	☺	☺	☺			☺			☺	☺
SDMT06T204-F57	0.4	☺	☺	☺	☺	☺	☺				☺	☺	☺	☺			☺			☺	☺
SDMW06T204-A57	0.4	☺	☺	☺								☺	☺	☺							
SDHT09T308-G88	0.8														☺	☺					
SDMT09T308-D51	0.8	☺	☺	☺	☺	☺						☺	☺	☺						☺	☺
SDMT09T308-D57	0.8	☺	☺	☺	☺	☺	☺				☺	☺	☺	☺			☺			☺	☺
SDMT09T308-F57	0.8	☺	☺	☺	☺	☺	☺				☺	☺	☺	☺			☺			☺	☺
SDMW09T308-A57	0.8	☺	☺	☺								☺	☺	☺							

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

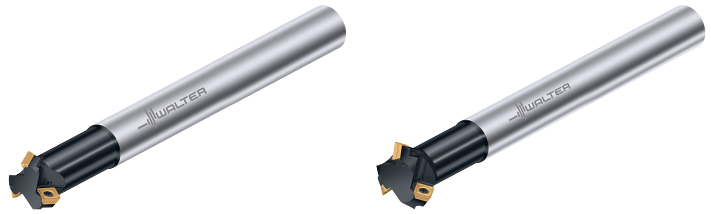
●●
Primary application

●
Other application

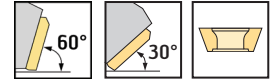
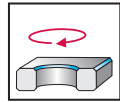
Chamfer milling cutters

M4574 inch

SD .. 09T308



– Four cutting edges per indexable insert



	P	M	K	N	S	H	O
M4574	●	●	●	●	●		

Tool	Designation	D _c inch	D _a inch	d ₁ inch	l ₄ inch	l ₁ inch	L _c inch	κ	Z	lbs	No. of indexable inserts	Type
Parallel shank	M4574.019-A19-02-05-30	0.750	1.353	0.750	1.575	7.874	0.157	30°	2	0.97	2	SD .. 09T308
Parallel shank	M4574.019-A19-02-05-60	0.750	1.124	0.750	1.575	7.874	0.268	60°	2	0.93	2	SD .. 09T308

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

Assembly parts

	D_c [inch]	0.750
	Clamping screw for indexable insert Tightening torque	FS2266 (Torx 10IP) 2.0 Nm

Accessories

	D_c [inch]	0.750
	Torque screwdriver, analogue Tightening torque	FS2004 1.5–5.0 Nm
	Torque screwdriver, digital Tightening torque	FS2248 1.0–6.0 Nm
	Interchangeable blade	FS2268 (Torx 10IP)
	Screwdriver	FS2267 (Torx 10IP)

Indexable inserts

Designation	r mm	P		M				K			N		S										
		HC		HC				HC			HC	HW	HC										
		WKP25S	WKP35G	WKP35S	WSP45S	WSP45G	WSM35S	WSM45X	WSP45S	WSP45G	WAK15	WKK25S	WKP25S	WKP35G	WKP35S	WXN15	WK10	WSM35S	WSM45X	WSP45S	WSP45G		
SDHT09T308-G88	0.8														☺	☺							
SDMT09T308-D51	0.8	☺	☺	☺	☺	☺			☺	☺		☺	☺	☺						☺	☺		
SDMT09T308-D57	0.8	☺	☺	☺	☺	☺	☺				☺	☺	☺	☺			☺			☺	☺		
SDMT09T308-F57	0.8	☺	☺	☺	☺	☺	☺			☺	☺	☺	☺	☺			☺			☺	☺		
SDMW09T308-A57	0.8	☺	☺	☺						☺	☺	☺	☺							☺	☺		

HC = Coated carbide
HW = Uncoated carbide

WALTER SELECT

Stability of machine, workpiece and clamping arrangement

☺
Very good

☺
Good

☺
Moderate

●● Primary application

● Other application

Cutting data for roughing

WSP45G / WHH15X

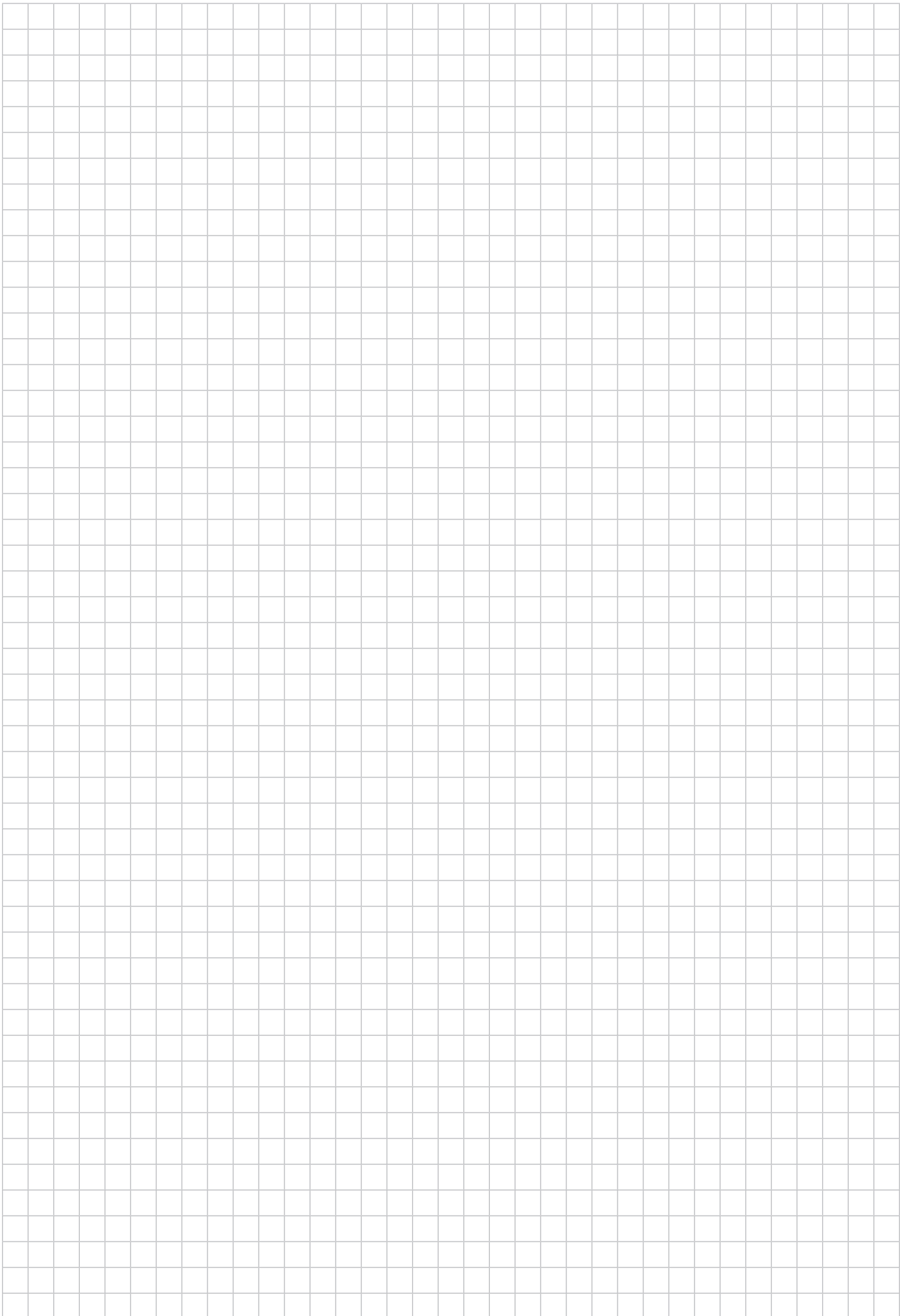
Material group	Overview of the main material groups and code letters				Brinell hardness HB	Tensile strength R_m N/mm ²	Machining group ¹	Cutting material grades	
								Starting values for cutting speed v_c [sfm]	
								HC Face/shoulder milling	
								WSP45G a_g / D_c^*	
				1/1	1/5				
				1/2					
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	428	P1	● ●●	754	951
		C > 0.25% to ≤ 0.55%	Annealed	190	639	P2	● ●●	623	820
		C > 0.25% to ≤ 0.55%	Heat-treated	210	708	P3	● ●●	590	754
		C > 0.55%	Annealed	190	639	P4	● ●●	623	820
		C > 0.55%	Heat-treated	300	1013	P5	● ●●	426	476
	Free-machining steel (short-chipping)	Annealed	220	745	P6	● ●●	574	738	
	Low-alloy steel	Annealed	175	591	P7	● ●●	623	787	
		Heat-treated	300	1013	P8	● ●●	426	476	
		Heat-treated	380	1282	P9	● ●●	328	361	
		Heat-treated	430	1477	P10	● ●●	262	295	
	High-alloy steel and high-alloy tool steel	Annealed	200	675	P11	● ●●	377	459	
		Hardened and tempered	300	1013	P12	● ●●	246	295	
		Hardened and tempered	400	1361	P13	● ●●	213	262	
	Stainless steel	Ferritic/martensitic, annealed	200	675	P14	● ●●	377	459	
		Martensitic, heat-treated	330	1114	P15	● ●●	262	328	
M	Stainless steel	Austenitic, quench hardened	200	675	M1	●● ●	361	426	
		Austenitic, precipitation hardened (PH)	300	1013	M2	●● ●	295	328	
		Austenitic/ferritic, duplex	230	778	M3	●● ●	328	394	
K	Malleable cast iron	Ferritic	200	675	K1	● ●●			
		Pearlitic	260	867	K2	● ●●			
	Grey cast iron	Low tensile strength	180	602	K3	● ●●			
		High tensile strength/austenitic	245	825	K4	● ●●			
	Cast iron with spheroidal graphite	Ferritic	155	518	K5	● ●●			
		Pearlitic	265	885	K6	● ●●			
	GGV (CGI)		200	675	K7	● ●●			
N	Wrought aluminium alloys	Not hardenable	30	–	N1	●●			
		Hardenable, hardened	100	343	N2	●●			
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	260	N3	●●			
		≤ 12% Si, hardenable, hardened	90	314	N4	●●			
		> 12% Si, not hardenable	130	447	N5	●●			
	Magnesium-based alloys ³		70	250	N6	●●			
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	343	N7	●●			
		Brass, bronze, red brass	90	314	N8	●●			
		Cu alloys, short-chipping	110	382	N9	●●			
		High tensile, Ampco	300	1013	N10	●●			
S	Heat-resistant alloys	Fe-based	Annealed	200	675	S1	●●	213	230
			Hardened	280	943	S2	●●	148	164
		Ni- or Co-based	Annealed	250	839	S3	●●	164	180
			Hardened	350	1177	S4	●●	98	115
			Cast	320	1076	S5	●●	131	148
	Titanium alloys	Pure titanium	200	675	S6	●●	213	230	
		α and β alloys, hardened	375	1262	S7	●●	98	115	
		β alloys	410	1396	S8	●●	98	115	
	Tungsten alloys		300	1013	S9	●●	230	262	
	Molybdenum alloys		300	1013	S10	●●	230	262	
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	●● ●	1312	1312	
	Thermosets	Without abrasive fillers			O2	●● ●	984	984	
	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 is regarded as starting values for the recommended application)
- Possible application, reduce cutting data by 30–50% (increase by approx. 70–80% for ISO M)

¹ The classification of the machining groups can be found from page C 833 onwards in the General Catalog 2018.

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

³ Water-miscible coolants must not be used when machining magnesium-based alloys.



C 2

Cutting data for semi-finishing and finishing WSP45G/WHH15X

Material group	Overview of the main material groups and code letters		Brinell hardness HB	Tensile strength R _m N/mm ²	Machining group ¹		Cutting material grades							
							Starting values for cutting speed v _c [sfm]							
							HC							
							WSP45G			WHH15X				
						a _e / D _c * 1/1		a _e / D _c * 1/5		a _e / D _c * 1/20				
P	Non-alloyed steel	C ≤ 0.25%	Annealed	125	430	P1	●	●●	1132	1427	1788	689	918	1246
		C > 0.25% to ≤ 0.55%	Annealed	190	640	P2	●	●●	935	1230	1542	623	820	1115
		C > 0.25% to ≤ 0.55%	Heat-treated	210	710	P3	●	●●	771	984	1230	492	656	886
		C > 0.55%	Annealed	190	640	P4	●	●●	722	836	1050	426	558	771
		C > 0.55%	Heat-treated	300	1010	P5	●	●●	640	722	886	328	426	590
		Free-machining steel (short-chipping)	Annealed	220	750	P6	●	●●	951	1246	1542	590	787	1082
	Low-alloy steel	Annealed	175	590	P7	●	●●	935	1181	1476	558	754	1017	
		Heat-treated	285	960	P8	●	●●	722	836	1050	492	656	886	
		Heat-treated	380	1280	P9	●	●●	640	722	886	459	623	820	
		Heat-treated	430	1480	P10	●	●●	492	541	672	426	558	771	
	High-alloy steel and high-alloy tool steel	Annealed	200	680	P11	●	●●	574	689	869	426	558	771	
		Hardened and tempered	300	1010	P12	●	●●	377	443	558	394	525	722	
		Hardened and tempered	380	1280	P13	●	●●	361	426	492	361	492	689	
	Stainless steel	Ferritic/martensitic, annealed	200	680	P14	●	●●	574	689	853	492	656	886	
		Martensitic, heat-treated	330	1110	P15	●	●●	443	525	672	394	525	722	
M	Stainless steel	Austenitic, quench hardened	200	680	M1	●●	●	541	640	804				
		Austenitic, precipitation hardened (PH)	300	1010	M2	●●	●	426	525	689				
		Austenitic/ferritic, duplex	230	780	M3	●●	●	492	590	754				
K	Malleable cast iron	Ferritic	200	400	K1	●	●●				426	558	771	
		Pearlitic	260	700	K2	●	●●				361	492	656	
	Grey cast iron	Low tensile strength	180	200	K3	●	●●				459	623	820	
		High tensile strength/austenitic	245	350	K4	●	●●				361	492	656	
	Cast iron with spheroidal graphite	Ferritic	155	400	K5	●	●●				459	623	820	
Pearlitic		265	700	K6	●	●●				394	525	722		
GGV (CGI)		230	400	K7	●	●●				361	492	656		
N	Wrought aluminium alloys	Not hardenable	30	–	N1	●●								
		Hardenable, hardened	100	340	N2	●●								
	Cast aluminium alloys	≤ 12% Si, not hardenable	75	260	N3	●●								
		≤ 12% Si, hardenable, hardened	90	310	N4	●●								
		> 12% Si, not hardenable	130	450	N5	●●								
	Magnesium-based alloys ²		70	250	N6	●● ²								
		Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	340	N7	●●							
Brass, bronze, red brass			90	310	N8	●●								
Cu alloys, short-chipping			110	380	N9	●●								
High tensile, Ampco	300		1010	N10	●●									
S	Heat-resistant alloys	Fe-based	Annealed	200	680	S1	●●		328	344	426			
			Hardened	280	940	S2	●●		230	246	312			
		Ni- or Co-based	Annealed	250	840	S3	●●		246	279	344			
			Hardened	350	1180	S4	●●		148	180	230			
			Cast	320	1080	S5	●●		197	230	295			
	Titanium alloys	Pure titanium	200	680	S6	●●		328	394	492				
		α and β alloys, hardened	375	1260	S7	●●		197	230	295				
		β alloys	410	1400	S8	●●		164	197	262				
	Tungsten alloys		300	1010	S9	●●		230	262	328				
	Molybdenum alloys		300	1010	S10	●●		230	262	328				
H	Hardened steel	Hardened and tempered	50 HRC	–	H1		●●				197	262	361	
		Hardened and tempered	55 HRC	–	H2		●●				131	164	230	
		Hardened and tempered	60 HRC	–	H3		●●				131	148	197	
	Hardened cast iron	Hardened and tempered	55 HRC	–	H4		●●				164	230	295	
O	Thermoplastics	Without abrasive fillers			O1	●●	●	1804	2132	2460	2624	2952	3280	
	Thermosets	Without abrasive fillers			O2	●●	●	1476	1804	2132	2296	2624	2952	
	Plastic, glass-fibre-reinforced	GFRP			O3									
	Plastic, carbon-fibre-reinforced	CFRP			O4									
	Plastic, aramid-fibre-reinforced	AFRP			O5									
	Graphite (technical)		80 Shore		O6		●●				2296	2624	3280	

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

¹ The classification of the machining groups can be found from page C 833 onwards in the General Catalog 2018.

² Water-miscible coolants must not be used when machining magnesium-based alloys.

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

Feed determination (starting values) Face milling cutters

Material group	Cutter type	M4002		M4002	
	<p>Feed per tooth f_{z0} for $a_e = D_c$ $a_p = a_{p \max} = L_c$</p>	<p>For face milling operations</p>	<p>For plunging</p>		
	Lead angle κ	15°		75°	
	Tool diameter or diameter range [mm]	f_{z0} [in]		f_{z0} [in]	
	Maximum depth of cut $a_{p \max} = L_c$ [in]	25-66	50-125	25-66	50-125
		0.059	0.079	$a_r \max = 8.4$	$a_r \max = 11.4$
P	Non-alloyed steel ¹	0.071	0.095	0.011	0.013
	Low-alloy steel	0.066	0.085	0.009	0.011
	High-alloy steel and tool steel	0.057	0.076	0.007	0.009
	Stainless steel	0.038	0.047	0.005	0.007
M	Stainless steel ²	0.024	0.038	0.005	0.007
K	Malleable cast iron	0.024	0.038	0.009	0.012
	Grey cast iron	0.066	0.076	0.011	0.013
	Cast iron with spheroidal graphite	0.057	0.066	0.009	0.012
	GGV (CGI)	0.057	0.066	0.009	0.012
N	Wrought aluminium alloys	0.000	0.000	0.000	0.000
	Cast aluminium alloys	0.000	0.000	0.000	0.000
	Magnesium-based alloys	0.000	0.000	0.000	0.000
	Copper and copper alloys (bronze/brass)	0.000	0.000	0.000	0.000
S	Heat-resistant alloys	0.028	0.038	0.004	0.005
	Titanium alloys	0.028	0.038	0.004	0.005
	Tungsten alloys	0.028	0.038	0.004	0.005
	Molybdenum alloys	0.028	0.038	0.004	0.005
H	Hardened steel	0.024	0.038	0.004	0.005
	Hardened cast iron	0.024	0.039	0.005	0.006
O	Thermoplastics				
	Plastic, carbon-fibre-reinforced				
	Graphite (technical)				
Indexable insert types		SDMX0904ZDR	SDMX1205ZDR	SDMX0904ZDR	SDMX1205ZDR
Correction factor K_{a_e}					
$a_e / D_c = 1/1-1/2$		1.0	1.0		
$1/5$		1.4	1.4		
For the feed per tooth depending on the ratio of width of cut a_e to milling cutter diameter D_c					
$1/10$		1.8	1.8		
$1/20$					
$1/50$					
Correction factor K_{a_p}					
$a_p = 1$					
for the feed per tooth depending on the depth of cut a_p					
2					
3					
4					
6					
8					
$f_z = f_{z0} \cdot K_{a_e} \cdot K_{a_p}$					
$a_{p \max} = L_c$					
Correction factor K					
$1 < (L : D_c) \leq 2$		1.4	1.4	1.0	1.0
$2 < (L : D_c) \leq 4$		1.0	1.0	0.7	0.7
$f_z = f_{z0} \cdot K_{a_e} \cdot K_{a_p} \cdot K$					
$4 < (L : D_c) \leq 6$		0.7	0.7	0.5	0.5

¹ and steel casting
² and austenitic/ferritic

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

M5004		M5009	M5009...-AP	M5012	M5012...-AP
Xtra-tec® XT		Xtra-tec® XT		Xtra-tec® XT	
43°		45°		88°	
f _{z0} [in]		f _{z0} [in]		f _{z0} [in]	
50-160		50-160		50-160	
0.118	0.158	0.236	0.236	0.236	0.236
0.018	0.020	0.010	0.012	0.008	0.009
0.016	0.018	0.008	0.009	0.007	0.009
0.012	0.014	0.008	0.009	0.007	0.009
0.008	0.010	0.006	0.007	0.005	0.006
0.006	0.006	0.005	0.006	0.004	0.005
0.016	0.018	0.010	0.012	0.008	0.009
0.020	0.022	0.012	0.014	0.009	0.010
0.016	0.018	0.010	0.012	0.008	0.009
0.010	0.010	0.008	0.009	0.007	0.009
0.010	0.010	0.006	0.007	0.005	0.006
0.008	0.008	0.006	0.007	0.005	0.006
0.006	0.006	0.005	0.006	0.004	0.005
0.006	0.006	0.005	0.006	0.004	0.005
0.006	0.006	0.005	0.006	0.003	0.004
0.006	0.006	0.005	0.006	0.003	0.004
0.006	0.006	0.005	0.006	0.003	0.004
0.006	0.006	0.005	0.006	0.003	0.004
0.006	0.006	0.005	0.006	0.003	0.004
0.006	0.006	0.005	0.006	0.003	0.004
0.007	0.007	0.006	0.007	0.004	0.005
0.008	0.008	0.006	0.007	0.005	0.006
0.006	0.006	0.006	0.007	0.005	0.006
		SN.X1205ANN SN.X120512.. SN.X120520..	SN.X1205ANN SN.X120512.. SN.X120520..	SN.X1205ZNN SN.X120512.. SN.X120520..	SN.X1205ZNN SN.X120512.. SN.X120520..
OD..0504..	OD..0605..				
1.0	1.0	1.0	1.0	1.0	1.0
1.1	1.1	1.1	1.1	1.1	1.1
1.2	1.2	1.2	1.2	1.2	1.2
1.3	1.3	1.3	1.3	1.3	1.3
1.0	1.0				
1.0	1.0				
1.0	1.0				
0.6	1.0				
0.6	0.6				
0.6	0.6				
0.6	0.6				

C 2

Feed determination (starting values) Shoulder milling cutters/chamfer milling cutters

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

Cutter type		M5130		M5468		M5137		M4574	
Material group	<p>Feed per tooth f_{z0} for $a_e = D_c$ $a_p = a_{p \max} = L_c$</p>	<p>Shoulder milling cutters</p>		<p>Chamfer milling cutters</p>		<p>Shoulder milling cutters</p>		<p>Chamfer milling cutters</p>	
	Lead angle κ	90°		-		90°		30° / 45° / 60°	
	Tool diameter or diameter range [mm]	f_{z0} [in]		f_{z0} [in]		f_{z0} [in]		f_{z0} [in]	
	Maximum depth of cut $a_{p \max} = L_c$ [in]	16-50		20-52 24-100		25-63		12-16 20-40 32-40	
P	Non-alloyed steel ¹	0.006	0.007	0.009	0.006	0.008	0.006	0.008	0.010
	Low-alloy steel	0.004	0.005	0.006	0.004	0.006	0.005	0.006	0.008
	High-alloy steel and tool steel	0.004	0.005	0.006	0.004	0.006	0.005	0.006	0.008
	Stainless steel	0.003	0.004	0.004	0.004	0.005	0.004	0.005	0.006
M	Stainless steel ²	0.003	0.004	0.004	0.003	0.004	0.003	0.004	0.005
K	Malleable cast iron	0.005	0.007	0.009	0.006	0.008	0.006	0.008	0.010
	Grey cast iron	0.006	0.009	0.011	0.007	0.010	0.008	0.010	0.012
	Cast iron with spheroidal graphite	0.005	0.007	0.009	0.006	0.008	0.006	0.008	0.010
	GGV (CGI)	0.004	0.007	0.009	0.004	0.006	0.006	0.008	0.010
N	Wrought aluminium alloys	0.004	0.005	0.006			0.004	0.005	0.006
	Cast aluminium alloys	0.005	0.005	0.006			0.004	0.005	0.006
	Magnesium-based alloys	0.004	0.005	0.006			0.003	0.004	0.005
	Copper and copper alloys (bronze/brass)	0.003	0.004	0.005			0.003	0.004	0.005
S	Heat-resistant alloys	0.003	0.004	0.004	0.004	0.005	0.003	0.004	0.005
	Titanium alloys	0.003	0.004	0.004	0.004	0.005	0.003	0.004	0.005
	Tungsten alloys	0.003	0.004	0.004	0.004	0.005	0.003	0.004	0.005
	Molybdenum alloys	0.003	0.004	0.004	0.004	0.005	0.003	0.004	0.005
H	Hardened steel	0.003	0.002	0.002					
	Hardened cast iron	0.004	0.003	0.003					
O	Thermoplastics	0.005	0.004	0.006			0.004	0.005	0.006
	Plastic, carbon-fibre-reinforced								0.006
	Graphite (technical)	0.004	0.004	0.006			0.004	0.005	0.006
Indexable insert types		BC..0903..	RO.X 10T3M08..	RO.X 1204M08..	TNMU 11T304R	TNMU 160408R	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	1.0	1.0	1.0	1.0	1.0
	$1/5$	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1
	$1/10$	1.2	1.5	1.5	1.2	1.2	1.2	1.2	1.2
	$1/20$	1.3	1.8	1.8	1.3	1.3	1.3	1.3	1.3
Correction factor K_{a_p}	$a_p = 1$		1.5	1.6					
	2		1.2	1.3					
	3		1.0	1.1					
	4		1.0	1.0					
for the feed per tooth depending on the depth of cut a_p	6			1.0					
	8								
	10								
$f_z = f_{z0} \cdot K_{a_e} \cdot K_{a_p}$									

¹ and steel casting
² and austenitic/ferritic

Feed determination (starting values) Circular interpolation cutters

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

Cutter type		M5004		M5137		M5130		M5468	
Material group	Feed per tooth f_{z0} for $a_e = D_c$ $a_p = a_{p\ max} = L_c$								
	Lead angle κ	43°		90°		90°		-	
	Tool diameter or diameter range [mm]	f_{z0} [in] 50-160		f_{z0} [in] 25-63		f_{z0} [in] 16-50		f_{z0} [in] 20-52 24-100	
	Maximum depth of cut $a_{p\ max} = L_c$ [in]	3	4	8	9	5	6		
P	Non-alloyed steel ¹	0.016	0.018	0.007	0.006	0.007	0.009		
	Low-alloy steel	0.014	0.016	0.006	0.004	0.005	0.006		
	High-alloy steel and tool steel	0.011	0.013	0.006	0.004	0.005	0.006		
	Stainless steel	0.007	0.013	0.005	0.004	0.004	0.004		
M	Stainless steel ²	0.005	0.005	0.004	0.004	0.004	0.004		
K	Malleable cast iron	0.013	0.014	0.007	0.005	0.007	0.009		
	Grey cast iron	0.016	0.018	0.008	0.006	0.009	0.011		
	Cast iron with spheroidal graphite	0.013	0.014	0.007	0.005	0.007	0.009		
	GGV (CGI)	0.013	0.014	0.007	0.005	0.007	0.009		
N	Wrought aluminium alloys	0.009	0.009		0.004	0.005	0.006		
	Cast aluminium alloys	0.009	0.009		0.004	0.005	0.006		
	Magnesium-based alloys	0.005	0.005		0.004	0.005	0.006		
	Copper and copper alloys (bronze/brass)	0.005	0.005		0.003	0.004	0.005		
S	Heat-resistant alloys	0.005	0.005	0.004	0.003	0.004	0.004		
	Titanium alloys	0.005	0.005	0.004	0.003	0.004	0.004		
	Tungsten alloys	0.005	0.005	0.004	0.003	0.004	0.004		
	Molybdenum alloys	0.005	0.005	0.004	0.003	0.004	0.004		
H	Hardened steel						0.002	0.002	
	Hardened cast iron						0.002	0.002	
O	Thermoplastics	0.008	0.008		0.005	0.004	0.006		
	Plastic, carbon-fibre-reinforced								
	Graphite (technical)	0.006	0.006		0.004	0.004	0.006		
Indexable insert types		OD..0504..	OD..0605..	TNMU160408R	BC..0903..	RO.X10T3M08..	RO.X1204M08..		
Correction factor K_{a_e} for the feed per tooth depending on the ratio of width of cut a_e to milling cutter diameter D_c	$a_e / D_c = 1/1-1/2$	0.039	0.039	0.039	0.039	0.039	0.039		
	1/5	0.043	0.043	0.043	0.047	0.047	0.047		
	1/10	0.047	0.047	0.047	0.059	0.059	0.059		
	1/20	0.051	0.051	0.051	0.071	0.071	0.071		
Correction factor K_{a_p} for the feed per tooth depending on the depth of cut a_p	1/50				0.079	0.079	0.079		
	$a_p = 1$								
	2								
	3								
$f_z = f_{z0} \cdot K_{a_e} \cdot K_{a_p}$	4								
	6								
	8								
	$a_{p\ max} = L_c$								
Correction factor K	$1 < (L : D_c) \leq 2$								
	$2 < (L : D_c) \leq 4$								
$f_z = f_{z0} \cdot K_{a_e} \cdot K_{a_p} \cdot K$	$4 < (L : D_c) \leq 6$								

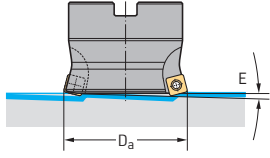
¹ and steel casting
² and austenitic/ferritic

C 2

Application information for the M4002 high-feed face milling cutter

Ramping

Maximum feed angle E [°]



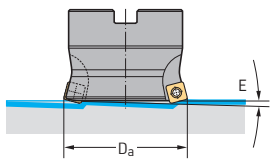
D _a [mm]	SD..06T2..						
	r = 0.4	r = 0.8	r = 1.2	r = 1.6	r = 2.0	r = 2.5	ZDR
20	3.7	2.9	2.2				1.5
25	2.2	1.8	1.4				0.6
32	1.3	1	0.7				0.4
35	1.2	1	0.7				0.5
40	1.1	0.9	0.7				0.3
42	0.8	0.7	0.5				0.3
50	0.8	0.7	0.5				0.3
52	0.7	0.6	0.5				0.3
63	0.6	0.4	0.3				0.2
66	0.5	0.4	0.3				0.2

D _a [mm]	SD..09T3..							SDMX0904ZDR
	r = 0.4	r = 0.8	r = 1.2	r = 1.6	r = 2.0	r = 2.5	ZDR	
25	4.3	3.5	2.8	2.3	1.2		1.2	2
32	3.6	3.1	2.7	2.3	1.9		1.8	2.1
35	2.9	2.5	2.2	1.9	1.5		1.6	1.7
40	2.2	1.9	1.6	1.4	1.2		1.2	1.3
42	2	1.7	1.5	1.3	1		1	0.9
50	1.5	1.3	1.1	1	0.8		0.8	0.9
52	1.3	1.2	1	0.8	0.7		0.7	0.8
63	1	0.8	0.7	0.6	0.5		0.5	0.5
66	0.9	0.8	0.7	0.6	0.4		0.4	0.4

D _a [mm]	SD..120408..							SDMX1205ZDR
	r = 0.4	r = 0.8	r = 1.2	r = 1.6	r = 2.0	r = 2.5	ZDR	
50		1.9	1.7	1.5	1.3	1	1	1.5
52		1.8	1.6	1.4	1.2	0.9	0.9	1.4
63		1.2	1.1	0.9	0.8	0.6	0.6	1
66		1.1	1	0.9	0.7	0.6	0.6	0.9
80		0.8	0.7	0.6	0.5	0.4	0.4	0.6
85		0.7	0.7	0.6	0.5	0.4	0.3	0.6
100		0.5	0.4	0.4	0.3	0.2	0.2	0.4
125		0.4	0.4	0.3	0.3	0.2	0.2	0.3

Ramping

Maximum feed angle E [°]

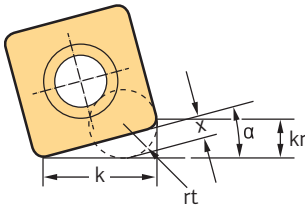


D _a [inch]	SD..06T2..						
	r = 0.016	r = 0.031	r = 0.047	r = 0.063	r = 0.079	r = 0.098	ZDR
0.750	4.2	3.3	2.5				1.5
1.000	2.2	1.6	1.2				0.7
1.250	1.4	1.1	0.8				0.5
1.500	1.2	0.9	0.7				0.3
2.000	0.7	0.6	0.4				0.3
2.500	0.4	0.3	0.2				0.1

D _a [inch]	SD..09T3..							SDMX0904ZDR
	r = 0.016	r = 0.031	r = 0.047	r = 0.063	r = 0.079	r = 0.098	ZDR	
1.000	4	3.3	2.6	1.9	1.3		1.2	1.5
1.250	3.6	3.2	2.8	2.3	2		2	2.2
1.500	2.4	2.1	1.8	1.5	1.3		1.3	1.4
2.000	1.4	1.2	1	0.9	0.7		0.7	0.8
2.500	1	0.8	0.7	0.6	0.5		0.5	0.5

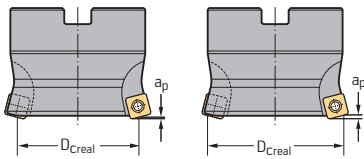
D _a [inch]	SD..1204..							SDMX1205ZDR
	r = 0.0157	r = 0.0315	r = 0.0472	r = 0.0623	r = 0.0787	r = 0.0984	ZDR	
2.000		1.9	1.6	1.4	1.2	1.0	1.0	1
2.500		1.2	1.1	0.9	0.8	0.6	0.6	0.7
3.000		0.9	0.8	0.7	0.6	0.5	0.4	0.4
4.000		0.5	0.4	0.3	0.3	0.2	0.2	1.5

Programming information



Indexable insert	α [°]	rt		x		kr		k	
		[mm]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]	[inch]
SD . . 06T212	15	2.1	0.083	0.68	0.027	2.2	0.087	4.86	0.191
SD . . 06T2ZDR	15	1.3	0.051	0.72	0.028	2.63	0.104	4.29	0.169
SD . . 06T204	15	1.7	0.067	1	0.039	1.83	0.072	5.7	0.224
SD . . 09T320	15	3.3	0.130	0.94	0.037	3.41	0.134	7.07	0.278
SD . . 09T3ZDR	15	2.4	0.094	1.09	0.043	3.65	0.144	6.9	0.272
SD . . 09T308	15	2.7	0.106	1.43	0.056	2.83	0.111	8.37	0.330
SD . . 120425	15	4.3	0.169	1.32	0.052	4.46	0.176	9.61	0.378
SD . . 1204ZDR	15	3.1	0.122	1.58	0.062	4.85	0.191	9.31	0.367
SD . . 120408	15	3.5	0.138	2.02	0.080	3.65	0.144	11.44	0.450
SD . . 1205ZDR	15	3.9	0.153	1.4	0.055	3.9	0.153	10.8	0.425
SD . . 0904ZDR	15	2.8	0.11	1.2	0.04724	2.8	0.11	8.3	0.327

Increase in productivity



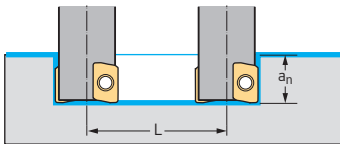
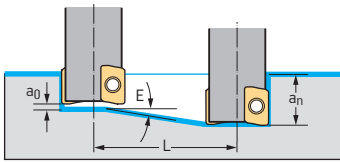
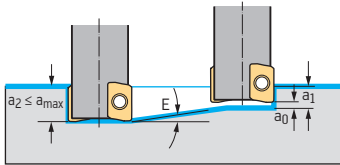
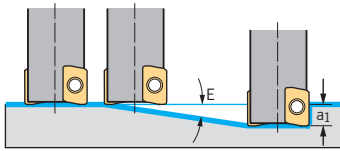
$$D_{c \text{ real}} \approx D_c + 8 \cdot a_p$$

- In order to achieve an increase in productivity, it is recommended to use the $D_{c \text{ real}}$ when calculating the cutting data.
- The $D_{c \text{ real}}$ depends on the depth of cut a_p (see figure).

Application information for the Xtra-tec® XT M5130 shoulder milling cutter

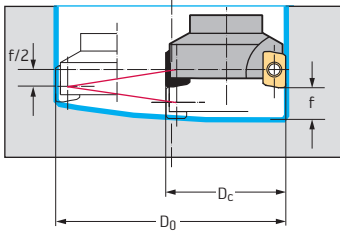
Ramping and circular plunging into solid material

Plunging angle E_{max} [°]



Milling cutter dia. D_c [mm]	BC..0903.. $a_{p \max} = 9 \text{ mm}$			
	E_{\max} [°]	$D_{0 \min}$ [mm]	$D_{0 \max}$ [mm]	a_0 [mm]
16	8.4	20.2	32	1.2
18	6.7	24.2	36	1.2
20	5.4	28.2	40	1.1
22	4.6	32.2	44	1.1
25	3.8	38.2	50	1.1
32	2.6	52.2	64	1.1
40	2.0	68.2	80	1.1
50	1.6	88.2	100	1.1
63	1.2	114.2	126	1.1
D_c [inch]	$a_{p \max} = 0.354 \text{ inch}$			
	E_{\max} [°]	$D_{0 \min}$ [inch]	$D_{0 \max}$ [inch]	a_0 [inch]
0.625	8.5	0.785	1.250	0.047
0.750	6.1	1.035	1.500	0.047
1.000	3.7	1.535	2.000	0.043
2.000	1.5	3.535	4.000	0.043

**Circular interpolation
of a hole into solid material**



Max. axial feed per tool revolution ("thread pitch") f [mm]

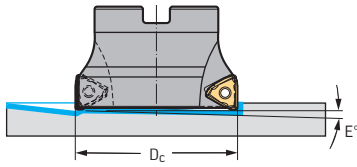
Machined bore diameter D ₀ [mm]	BC..0903.. D _c [mm]									
	16	18	20	25	32	40	50	63		
25	3.0	1.5								
30	6.1	4.0	1.5							
40	8.8	8.2	5.5	1.7						
50	8.8	8.8	8.2	5.0						
60	8.8	8.8	8.8	6.5	3.5					
70	8.8	8.8	8.8	8.8	5.5	1.5				
80	8.8	8.8	8.8	8.8	7.5	4.0				
90	8.8	8.8	8.8	8.8	8.8	5.5	1.5			
100	8.8	8.8	8.8	8.8	8.8	6.7	3.8			
120	8.8	8.8	8.8	8.8	8.8	8.8	6.0	3.0		
150	8.8	8.8	8.8	8.8	8.8	8.8	8.8	5.5		
180	8.8	8.8	8.8	8.8	8.8	8.8	8.8	7.5		
200	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8		
250	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8		

Max. axial feed per tool revolution ("thread pitch") f [inch]

Machined bore diameter D ₀ [inch]	BC..0903.. D _c [inch]									
	0.625	0.750	1.000	1.250	1.500	2.000				
0.984	0.110									
1.181	0.240	0.590								
1.575	0.346	0.215	0.066							
1.969	0.346	0.322	0.190							
2.362	0.346	0.346	0.255	0.135						
2.756	0.346	0.346	0.346	0.215	0.055					
3.150	0.346	0.346	0.346	0.295	0.155					
3.543	0.346	0.346	0.346	0.346	0.215	0.055				
3.937	0.346	0.346	0.346	0.346	0.261	0.145				
4.724	0.346	0.346	0.346	0.346	0.346	0.235				
5.906	0.346	0.346	0.346	0.346	0.346	0.346				
7.087	0.346	0.346	0.346	0.346	0.346	0.346				
7.874	0.346	0.346	0.346	0.346	0.346	0.346				
9.843	0.346	0.346	0.346	0.346	0.346	0.346				

Application information for M5137 shoulder milling cutter

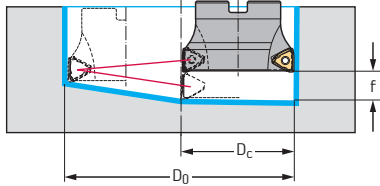
Ramping and circular plunging into solid material



Plunging angle E_{max} [°]

Milling cutter dia. D_c [inch]	TNMU160508R. $a_{p \max} = 0.315$ inch			
	E_{max} [°]	$D_{0 \min}$ [inch]	$D_{0 \max}$ [inch]	a_0 [inch]
2.000	1.3	3.625	4.000	0.039
2.500	1.0	4.625	5.000	0.039
3.000	0.8	5.625	6.000	0.039
4.000	0.6	7.625	8.000	0.039

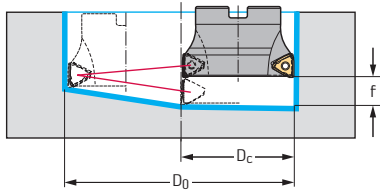
Circular interpolation of a bore into solid material



Max. axial feed per tool revolution ("thread pitch") f [mm]

Machined drilled hole diameter D_0 [mm]	TNMU160508R . . D_c [mm]			
	50	63	80	100
100	3.6			
120	5.0	3.1		
150	7.8	5.3	3.5	
180	8.0	6.4	4.4	
200	8.0	7.5	5.3	3.3
250	8.0	8.0	7.5	4.9
300	8.0	8.0	8.0	6.6
350	8.0	8.0	8.0	8.0
400	8.0	8.0	8.0	8.0

Circular interpolation of a bore into solid material



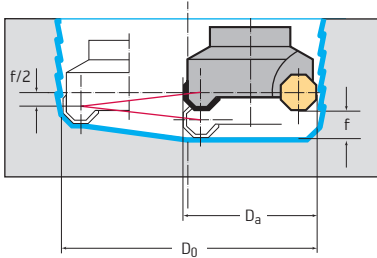
Max. axial feed per tool revolution ("thread pitch") f [in]

Machined drilled hole diameter D_0 [in]	TNMU160508R . . D_c [in]			
	2	2.5	3	4
2.250	0.018			
2.500	0.036	0.000		
3.000	0.071	0.027	0.000	
3.500	0.107	0.055	0.022	
4.000	0.143	0.082	0.044	
5.000	0.214	0.137	0.088	0.033
6.000	0.285	0.192	0.132	0.066
7.000	0.315	0.247	0.175	0.099
8.000	0.315	0.302	0.219	0.132
10.000	0.315	0.315	0.307	0.197
12.000	0.315	0.315	0.315	0.263
14.000	0.315	0.315	0.315	0.315
16.000	0.315	0.315	0.315	0.315
18.000	0.315	0.315	0.315	0.315
20.000	0.315	0.315	0.315	0.315

Application information for the Xtra-tec® XT M5004 octagon cutter

Ramping and circular plunging into solid material

M5004



Plunging with the Xtra-tec® XT M5004 octagon cutters [mm]

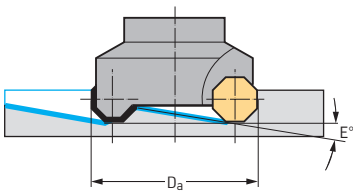
D _a [mm]	Indexable insert					
	OD...0504... a _{pmax} = 3 mm			OD...0605... a _{pmax} = 4 mm		
	D _{0min} [mm]	D _{0max} [mm]	f _{max} [mm]	D _{0min} [mm]	D _{0max} [mm]	f _{max} [mm]
32	46	64	4.5			
40	62	80	4.5			
50	82	100	4.5	77.2	100	5.8
52	86	104	4.5	81.2	104	5.8
58	98	116	4.5			
60				97.2	120	5.8
63	108	126	4.5	103.2	126	5.8
66	114	132	4.5	109.2	132	5.8
71	124	142	4.5			
73				123.2	146	5.8
80	142	160	4.5	137.2	160	5.8
88	158	176	4.5			
90				157.2	180	5.8
100	182	200	4.5	177.2	200	5.8
108	198	216	4.5			
110				197.2	220	5.8
125	232	250	4.5	227.2	250	5.8
135				247.2	270	5.8
160				297.2	320	5.8
170				317.2	340	5.8

Plunging with the Xtra-tec® XT M5004 octagon cutters [inch]

D _a [inch]	Indexable insert OD...0504... a _{pmax} = 3 mm					
	D _{0min} [inch]	D _{0max} [inch]	f _{max} [inch]			
	1.250	1.791	2.500	0.177		
1.500	2.291	3.000	0.177			
2.315	3.921	4.630	0.177			
2.815	4.921	5.630	0.177			
3.315	5.921	6.630	0.177			

Ramping

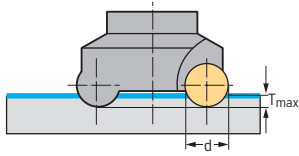
Maximum feed angle E [°]



D _a [mm]	OD...0504... OD...0605...		D _a [mm]	OD...050408... OD...0605...		D _a [inch]	OD...0504...	
32	14.0		80	2.7	4.3	1.250	13.2	
40	8.3		88	2.4		1.500	8.0	
50	5.5	9.6	90		4.0	2.315	3.8	
52	5.1	8.9	100	2.0	3.1	2.815	2.7	
58	4.6		108	2.0		3.315	2.3	
60		7.7	110		3.1			
63	3.8	6.2	125	1.5				
66	3.5	5.8	135		2.3			
71	3.2		160		1.7			
73		5.4	170		1.7			

Application information for the Xtra-tec® XT M5468 copy milling cutter

Vertical plunging

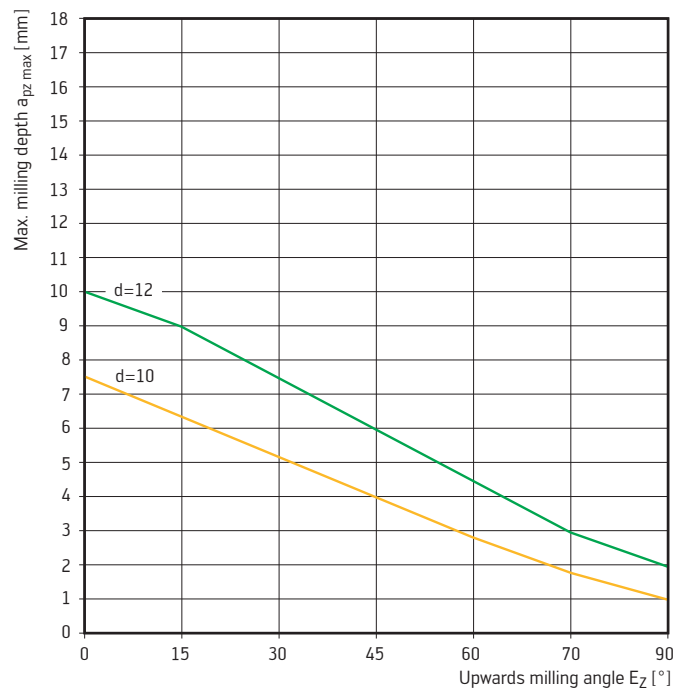
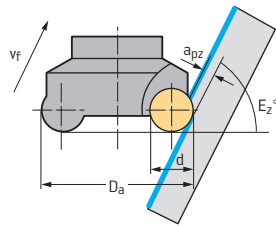


Max. plunging depth T_{max} [mm]

	Indexable insert diameter d [mm]	
	RO . X10T3M08 .. d = 10	RO . X1204M08 .. d = 12
T_{max} [mm]	2.5	$D_a < 40 = 3.5$ $D_a \geq 40 = 4.5$

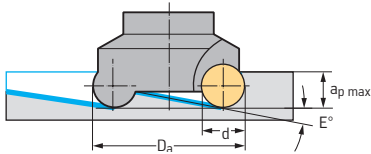
Milling upwards on inclined surfaces

Max. plunging depth T_{max} [mm]

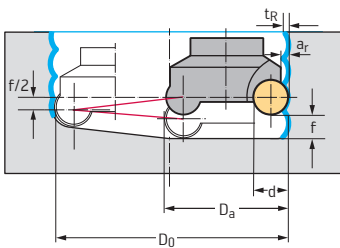


Ramping and circular plunging into solid material

Ramping



Circular interpolation of a hole into solid material

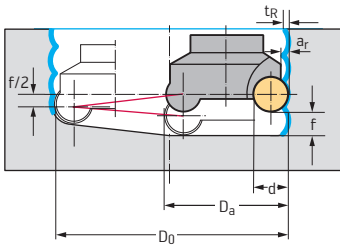


Plunging

Indexable insert diameter d [mm]

D _a [mm]	E _{max} [°]	RO . X10T3M08 . . a _{p max} = 5 mm		RO . X1204M08 . . a _{p max} = 6 mm		
		D _{0 min} [mm]	D _{0 max} [mm]	E _{max} [°]	D _{0 min} [mm]	D _{0 max} [mm]
20	11	20	40			
24				15	24	48
25	17.3	31	50			
30	11.8	41	60			
32	10.5	45	64	14.4	41	64
35	8.9	51	70			
40	8.3	61	80	14.5	57	80
42				13.4	61	84
50	6.0	81	100	10.1	77	100
52	5.6	85	104	9.5	81	104
63				7.2	103	126
66				6.7	109	132
80				5.2	137	160
100				3.9	177	200
D _a [inch]	E _{max} [°]	D _{0 min} [inch]	D _{0 max} [inch]	E _{max} [°]	D _{0 min} [inch]	D _{0 max} [inch]
0.750						
1.000	16.7	1.250	2.000			
1.250	10.6	1.750	2.500			
1.500	9.0	2.250	3.000	15.9	2.096	3.000
2.000	5.8	3.250	4.000	9.8	3.097	4.000
2.500				7.1	4.098	5.000
3.000				5.6	5.098	6.000
4.000				3.9	7.100	8.000

Groove depth on the wall of the bore t_R [mm]



Axial feed per revolution f [mm]	Indexable insert diameter d [mm]	
	RO . X10T3M08 . . d = 10	RO . X1204M08 . . d = 12
1	0.025	0.020
2	0.100	0.080
3	0.230	0.190
4	0.417	0.340
5	0.670	0.540
6	(1.000)	0.800
7	(1.429)	(1.120)
8		(1.530)
a _{r max}	1.5	2.0

The values in brackets only apply to short bores.

C 2

Notes on high-speed cutting

- Maximum permissible speeds:
The limit values specified in the tables should not be exceeded. Otherwise correct operation and/or reliability are no longer guaranteed.
- Only use original Walter indexable inserts and assembly parts (screws, etc.). New screws should be used after having replaced the indexable inserts five times at the most.
- Observe the tightening torques specified in the catalogue.
- Balancing:
Balancing in two steps is required when milling at fast speeds (> 6000 rpm) or at circumferential speeds of > 1000 m/min:
 - 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.
 - Fine balancing of the tool when fully mounted on the adaptor. The fine balancing operation is strongly recommended, as even the smallest concentricity fault can seriously affect the balance status.
- Short projection lengths reduce concentricity faults or an imbalance, and increase spindle service life. The specified speeds only apply to the use of tools without additional extensions and for tools with a neck length of $\leq 2.2 \times D_c$. For tools with longer neck lengths, the speeds must be reduced upon consultation with Walter.

Part 1: Metric

		n_{\max} [rpm] with D											
Tool	Safety-related parts	In relation to	Ø 10	Ø 12	Ø 14	Ø 16	Ø 18	Ø 20	Ø 22	Ø 24	Ø 25	Ø 28	Ø 30
M5130	AC.T0602..	D_c	40.000	40.000	40.000	40.000	40.000	40.000	40.000		40.000		
	BC.T0903..	D_c				40.000	40.000	40.000	38.700		36.000		
	BC.T1204..	D_c									28.100		
	BC.T1605..	D_c									22.300	20.900	
M5009	SN.X1205..	D_c											
M5009...-AP	SN.X1205..	D_c											
M5012	SN.X1205..	D_c											
M5012...-AP	SN.X1205..	D_c											
M5004	OD..0504..	D_a											
	OD..0605..	D_a											
M5468	RO..10T3M08..	D_c				40.000					40.000		38.400
	RO..1204M08..	D_c								36.400			

Part 2: Inch

		n_{\max} [rpm] with D							
Tool	Safety-related parts	In relation to	Ø 0.375	Ø 0.5	Ø 0.625	Ø 0.750	Ø 1.000	Ø 1.250	Ø 1.500
M5130	AC.T0602..	D_c		40.000	40.000	40.000	40.000	36.800	33.400
	BC.T0903..	D_c			40.000	40.000	35.700		
	BC.T1204..	D_c				33.100	27.900	24.500	22.100
	BC.T1605..	D_c					22.100	19.300	17.400
M5137	TNMU160508R	D_c							
M5009	SN.X1205..	D_c							
M5009...-AP	SN.X1205..	D_c							
M5004	OD..0504..	D_a					29.400	26.300	
M5468	RO..10T3M08..	D_c					40.000	37.300	34.000
	RO..1204M08..	D_c							28.900

6. Safety guard:
Appropriate safety guards or machine encapsulations must be used to safely collect particles which spin off, such as chips or cutting edge parts that are broken as a result of collisions.
7. Damaged tools:
The operating speed must be specified for the repair of an HSC tool. The table values only apply to tools with a condition equivalent to new condition following repair.

8. Application of standards:
Walter recommends using the balancing standard DIN 69888, which describes the balancing of tools and the requirements in the cutting 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.

n_{max} [rpm] with D

	Ø 32	Ø 35	Ø 40	Ø 42	Ø 50	Ø 52	Ø 63	Ø 66	Ø 80	Ø 85	Ø 100	Ø 125	Ø 160	Ø 200	Ø 250	Ø 315
	36.600		32.500		28.900		25.700									
	31.300		27.700		24.600		21.800									
	24.400															
	19.300	18.300														
			20.000		17.900		16.000		14.100		12.600	11.300	10.000			
					15.300		13.700		12.100		10.800	9.700	8.500			
					16.800		15.000		13.300		11.900	10.600	9.400			
					14.500		13.000		11.500		10.300	9.200	8.100			
	29.400		26.300		23.500		21.000		18.600		16.600	14.900				
					19.600		17.500		15.500		13.800	12.400	10.900	9.800		
	37.100	35.500	33.200		29.700	29.100	26.500									
	31.500		28.200	27.500	25.200	24.700	22.500	21.900	19.900		17.800					

n_{max} [rpm] with D

	Ø 2.000	Ø 2.315	Ø 2.500	Ø 2.815	Ø 3.000	Ø 3.315	Ø 4.000	Ø 5.000	Ø 6.000	Ø 8.000	Ø 10.000	Ø 12.000
	28.700		25.500									
	24.000											
	18.900		13.100		15.200							
	14.800		13.100		11.900		10.200	9.100	8.200			
	10.600		9.500		8.700		7.500					
	17.800		15.900		14.500		12.500	11.200	10.200			
	15.200		13.600		12.400		10.700	9.600	8.800			
		23.500		21.000		18.600						
	29.500											
	25.000		22.400		20.400		17.700					



Stationary boring bars/adaptors – D1


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Rotating boring bars/adaptors – D2







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Product range overview of stationary boring bars/adaptors


Walter Capto™ tool adaptors

Designation	A3000-C
Tool type	Accure-tec boring bars/adaptors
Machine-side	Walter Capto™ in acc. with ISO 26623
Tool-side	QuadFit
Alignment	Straight
	


Accure-tec vibration-damped boring bars/adaptors

Designation	A3000	A3001	A3000-C	A3001-C	A3000-HSK-T	A3001-HSK-T
Tool type	Accure-tec boring bars/adaptors					
Machine-side	Parallel shank	Parallel shank	Walter Capto™ in acc. with ISO 26623	Walter Capto™ in acc. with ISO 26623	HSK-T DIN 69893-7	HSK-T DIN 69893-7
Tool-side	QuadFit	QuadFit	QuadFit	QuadFit	QuadFit	QuadFit
Alignment	Straight	Straight	Straight	Straight	Straight	Straight
						

Boring bar/adaptor





Designation	A2140-W
Tool type	Boring bars/adaptors
Machine-side	Parallel shank with flat
Tool-side [mm]	6–25
	

Intermediate adaptor – QuadFit Large



Designation	A2201
Machine-side	QuadFit Large
Tool-side	QuadFit
	

Product range overview of rotating boring bars/adaptors







ScrewFit boring bars/adaptors for front pieces

Designation	AC060-C	AC060-H	AC060-S	AC060-J
Tool type	Accure-tec boring bars/adaptors			
Machine-side	Walter Capto™ in acc. with ISO 26623	HSK DIN 69893-1 A	SK DIN 69871 AD/B	JIS B 6339 AD/B
Tool-side	T18 / T22 / T28			
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One-piece boring bars/adaptors – HSK, SK

Designation	AC001.K	AC001.K
Tool type	Accure-tec boring bars/adaptors	
Machine-side	ASME B 5.50	ASME B 5.50
Tool-side	B19 / B26 / B38	B19 / B26
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Accure-tec vibration-damped end mill adaptors

Designation	AC001.K	AC001.K	AC060-C	AC060-H	AC060-S	AC060-J
Tool type	Accure-tec boring bars/adaptors					
Machine-side	ASME B 5.50	ASME B 5.50	Walter Capto™ in acc. with ISO 26623	HSK DIN 69893-1 A	SK DIN 69871 AD/B	JIS B 6339 AD/B
Tool-side	B19 / B26 / B38	B19 / B26	T18 / T22 / T28			
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CAT-V boring bar/adaptor – vibration-damped AC001.K inch



- For milling tools with parallel bore according to DIN 138
- With preset vibration damping

Tool	Designation	d ₁	d ₁₁ inch	d ₁₂ inch	l ₄ inch	l ₁₉ inch	d ₁₃	lbs	
	ASME B 5.50	AC001.K40-B19-191	CAT40	0.750	1.750	7.500	0.690	5/8"-11	6.83
		AC001.K40-B26-229	CAT40	1.000	2.250	9.000	0.690	5/8"-11	13.01
		AC001.K50-B19-191	CAT50	0.750	1.750	7.500	0.690	1"-8	11.02
		AC001.K50-B26-229	CAT50	1.000	2.250	9.000	0.690	1"-8	17.64
		AC001.K50-B38-349	CAT50	1.500	3.500	13.750	0.940	1"-8	44.09

CAT-V boring bar/adaptor, conical – vibration-damped AC001.K inch



- For milling tools with parallel bore according to DIN 138
- With preset vibration damping

Tool	Designation	d ₁	d ₁₁ inch	d ₁₂ inch	l ₄ inch	l ₁₆ inch	l ₁₉ inch	d ₁₃	lbs	
	ASME B 5.50	AC001.K40-B19-229	CAT40	0.750	1.750	9.000	3.125	0.690	5/8"-11	10.10
		AC001.K50-B19-229	CAT50	0.750	1.750	9.000	3.125	0.690	1"-8	13.89
		AC001.K50-B26-305	CAT50	1.000	2.250	12.000	3.096	0.690	1"-8	24.03

Walter Capto™ boring bar/adaptor – vibration-damped

AC060-C



- For ScrewFit front pieces
- With preset vibration damping

Tool	Designation	d ₁	d ₁₁	d ₁₄ mm	l ₄ mm	l ₁₆ mm	l ₁₈ mm	kg
Walter Capto™ in acc. with ISO 26623 	★ AC060-C6-T18-185	C6	T18	18.5	185	24	20	2
	★ AC060-C6-T22-185	C6	T22	22	185	24	19.5	2.1
	★ AC060-C6-T28-185	C6	T28	28	185	24	18.75	2.8
	★ AC060-C6-T28-235	C6	T28	28	235	24	18.75	3.6

For the tightening torques of screw-fit front pieces, see "Rotating boring bars/adaptors/Assembly parts and accessories"

HSK boring bar/adaptor – vibration-damped

AC060-H



- For ScrewFit front pieces
- With preset vibration damping

Tool	Designation	d ₁	d ₁₁	d ₁₄ mm	l ₄ mm	l ₁₆ mm	l ₁₈ mm	kg
HSK DIN 69893-1 A 	★ AC060-H63-T18-185	HSK-A63	T18	18.5	185	24	20	1.51
	★ AC060-H63-T22-185	HSK-A63	T22	22	185	24	19.5	1.9
	★ AC060-H63-T28-185	HSK-A63	T28	28	185	24	18.75	2.59
	★ AC060-H63-T28-235	HSK-A63	T28	28	235	24	18.75	3.5
	★ AC060-H100-T22-235	HSK-A100	T22	22	235	24	19.5	4
	★ AC060-H100-T28-235	HSK-A100	T28	28	235	24	18.75	4.8
	★ AC060-H100-T28-285	HSK-A100	T28	28	285	24	18.75	5.9

For accessories for HSK, see "Assembly parts and accessories"
 For the tightening torques of screw-fit front pieces, see "Rotating boring bars/adaptors/Assembly parts and accessories"

SK boring bar/adaptor – vibration-damped

AC060-S



- For ScrewFit front pieces
- With preset vibration damping

Tool	Designation	d ₁	d ₁₁	d ₁₄ mm	l ₄ mm	l ₁₆ mm	l ₁₈ mm	d ₁₃	kg
SK DIN 69871 AD/B 	★ AC060-S40-T18-185	SK40	T18	18.5	185	24	20	M16	2.2
	★ AC060-S40-T22-185	SK40	T22	22	185	24	20	M16	2.2
	★ AC060-S40-T28-185	SK40	T28	28	185	24	20	M16	2.8
	★ AC060-S40-T28-235	SK40	T28	28	235	24	20	M16	3.7
	★ AC060-S50-T22-235	SK50	T22	22	235	24	19.5	M24	5.5
	★ AC060-S50-T28-235	SK50	T28	28	235	24	18.75	M24	5.5
	★ AC060-S50-T28-285	SK50	T28	28	285	24	18.75	M24	6.6

For pull studs for steep tapers, see "Assembly parts and accessories/Steep taper pull studs"

For the tightening torques of screw-fit front pieces, see "Rotating boring bars/adaptors/Assembly parts and accessories"

MAS-BT boring bar/adaptor – vibration-damped

AC060-J

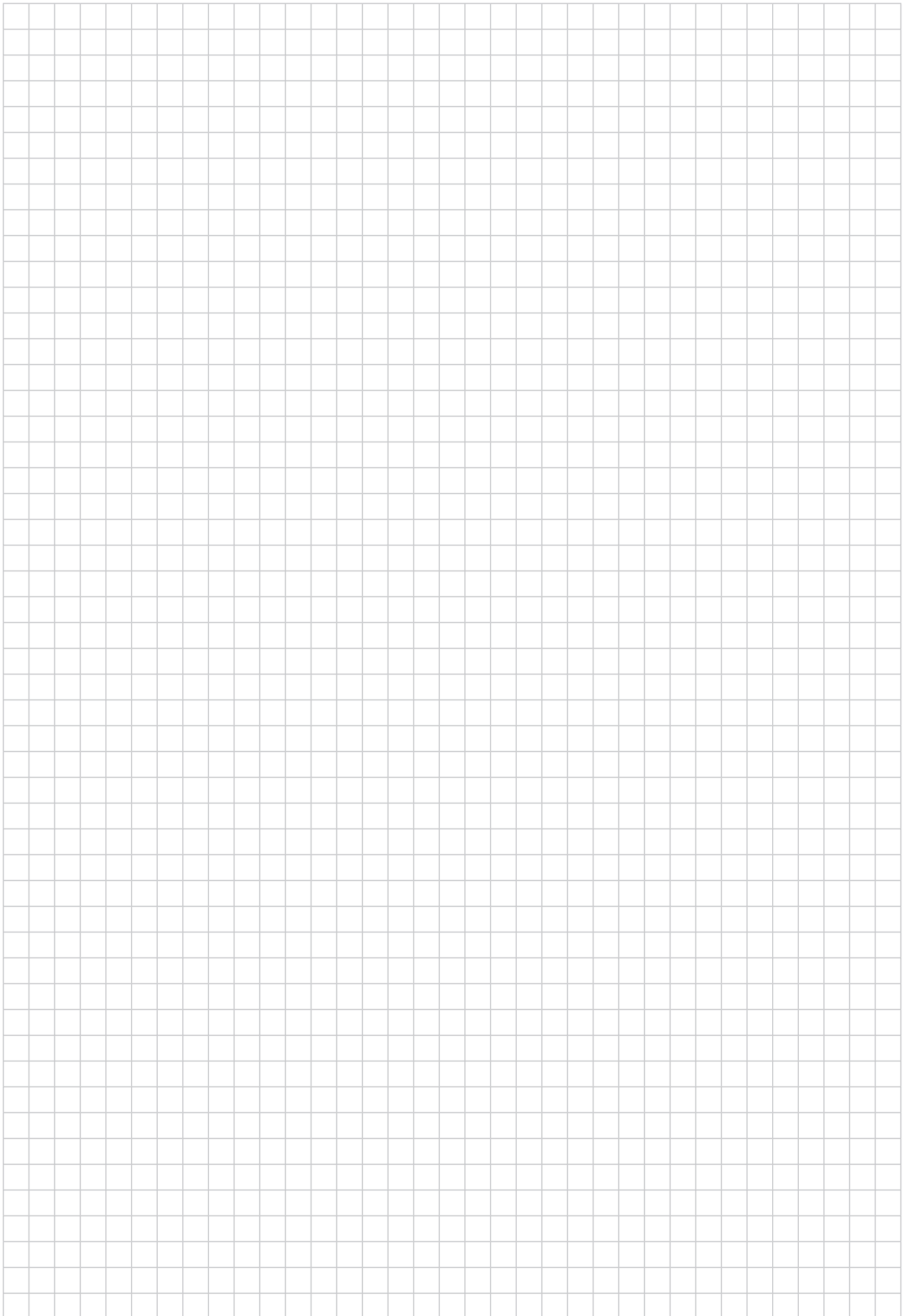


- For ScrewFit front pieces
- With preset vibration damping

Tool	Designation	d ₁	d ₁₁	d ₁₄ mm	l ₄ mm	l ₁₆ mm	l ₁₈ mm	d ₁₃	kg
JIS B 6339 AD/B 	★ AC060-J40-T18-185	BT40	T18	18.5	185	24	20	M16	2.2
	★ AC060-J40-T22-185	BT40	T22	22	185	24	19.5	M16	2.2
	★ AC060-J40-T28-185	BT40	T28	28	185	24	18.75	M16	2.8
	★ AC060-J40-T28-235	BT40	T28	30	235	24	18.75	M16	3.7
	★ AC060-J50-T22-235	BT50	T22	22	235	24	19.5	M24	6
	★ AC060-J50-T28-235	BT50	T28	28	235	24	18.75	M24	6.1
	★ AC060-J50-T28-285	BT50	T28	28	285	24	18.75	M24	7.2

For pull studs for steep tapers, see "Assembly parts and accessories/Steep taper pull studs"

For the tightening torques of screw-fit front pieces, see "Rotating boring bars/adaptors/Assembly parts and accessories"



Application information: Accure-tec AC060 – vibration-damped boring bars/adaptors for ScrewFit exchangeable heads



The Accure-tec boring bars/adaptors for ScrewFit exchangeable heads feature dynamic passive vibration damping in order to increase the dynamic rigidity of milling tools with a long projection length. They enable higher cutting parameters than conventional boring bars/adaptors with ScrewFit exchangeable heads. For optimal use of Accure-tec boring bars/adaptors, please ensure you follow the operating instructions below.

Note: Vibration-damped Accure-tec boring bars/adaptors for ScrewFit exchangeable heads are instantly ready for use. No adjustments are required.



1. Installation recommendations

The Accure-tec AC060 boring bar/adaptor is a "Plug and Play" system. The integrated damping system is ready for immediate use and is set to provide optimal results.

We strongly recommend that you do not fit any extensions/reducers as this may lead to a loss of the damping effect.



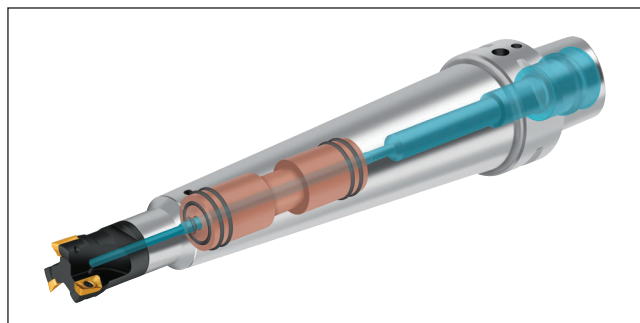
2. Walter ScrewFit exchangeable head system

Due to the high cutting conditions that can be achieved, the ScrewFit exchangeable head must be reliably secured in the Accure-tec boring bar/adaptor.

We advise you to use a torque wrench to tighten the ScrewFit exchangeable head to the recommended torque (see Table A below).

A Tightening torque

Connecting thread	T 9	T 14	T 18	T 22	T 28	T 36	T 45
Key size for installation [SW]	8	12	14	17	21	30	36
Tightening torque	Nm	6	25	50	80	150	200
	ft lb	6	25	50	80	150	200



3. Recommended machining parameters

Make sure that you never exceed the maximum speed of the boring bar/adaptor (specified on the boring bar/adaptor and in Table B below).

B Maximum speed (rpm*)

A Length of the boring bar/adaptor (mm)	≤ 185	> 185 ≤ 235	> 235 ≤ 285
Max. rpm	10.000	8.000	6.000

* Depending on the rigidity of the spindle, it may be necessary to reduce the maximum speed specified above. Improper cutting conditions may cause the complete tool to vibrate, which would prevent the damper from working efficiently and may potentially damage the components of the boring bar/adaptor. Adapt the cutting conditions for vibration-free operation.

4. Optimization of the cutting conditions

To optimise the cutting conditions, take the following steps:

1. Cutting speed v_c and feed per tooth f_z :

Select the starting values depending on the milling cutter and indexable insert (see Walter General Catalog or Walter GPS tool navigation system).

2. Select values for maximum depth of cut a_p and cutting width a_e .

The width and depth of cut can be increased, bearing in mind the specified recommendations for milling cutters and indexable inserts, so long as no vibration occurs.

Take care:

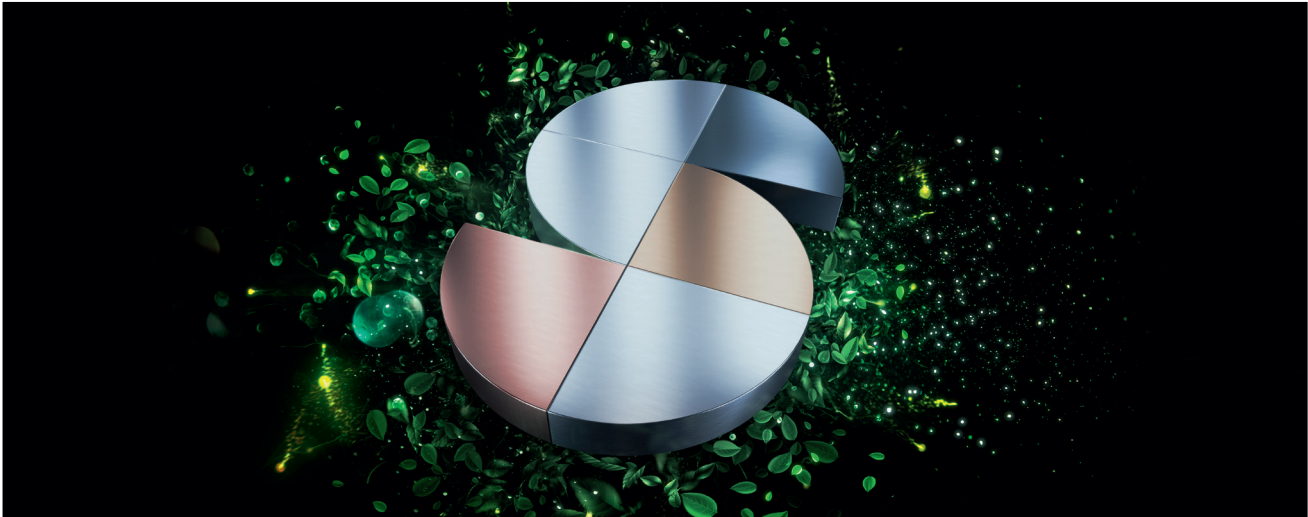
In contrast to the use of conventional long boring bars/adaptors, the machining process cannot be stabilised using additional radial forces (e.g. by increasing the feed).

5. Maximum temperature in use

The temperature of the Accure-tec boring bar/adaptor when in use must not exceed the maximum permissible temperature (see Table C), as this would damage the damping system.

C Maximum temperature in use

80 °C / 176 °F



Sustainable products and services – certified and transparent

Walter is a company that takes responsibility for people and the environment. Sustainability is a central component of our corporate strategy. It pervades our products and business divisions and is reviewed and certified by independent third parties on a regular basis.

Proven to be produced to high standards

All processes, procedures, methods and instruments that we use are checked and certified by an independent body according to strict criteria. Occupational health and safety, quality assurance and environmentally friendly actions (for example through resource-saving, energy-efficient and CO₂-offset production) are examples of this. Our social commitment shows that Walter has a broader definition of responsibility.

Transparency throughout the entire process chain – for your peace of mind

The integrated management system at Walter includes the sustainable use of resources and production equipment as well as of people – our customers, partners and employees. So that you can count on all of our products meeting these requirements throughout the entire process chain, we apply our own benchmarks to our suppliers too.

Certification

The integrated management system at Walter includes certification in accordance with:

- ISO 9001 (Quality management)
- VDA 6.4 (Production equipment for the automotive industry)
- ISO 14001 (Environmental management)
- ISO 45001 (Occupational health and safety management)
- ISO 50001 (Energy management)



You can find more information on Walter certification here:



Occupational health and safety

Walter protects its employees against health hazards. To prevent accidents, we continuously review our processes and take proactive measures as a precaution.



Environmental and energy management

Environmental protection is an important company objective for Walter. We use energy efficiently and deploy practical methods to sustainably reduce the consumption of energy, water and resources.



Quality management

Walter is continuously improving its products and processes. We ensure our product quality using effective measures and procedures – and check it on a regular basis with our comprehensive quality management system.

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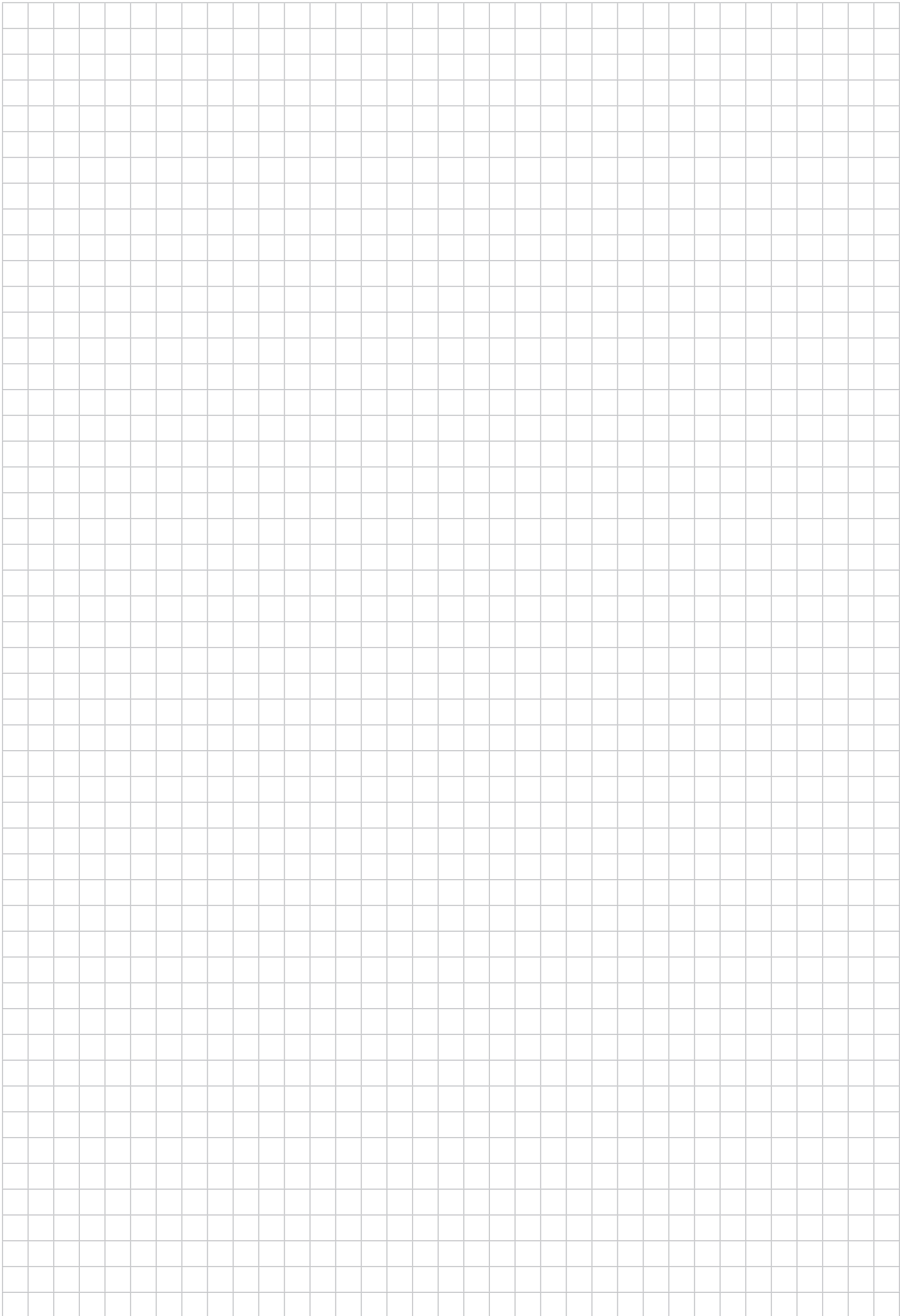
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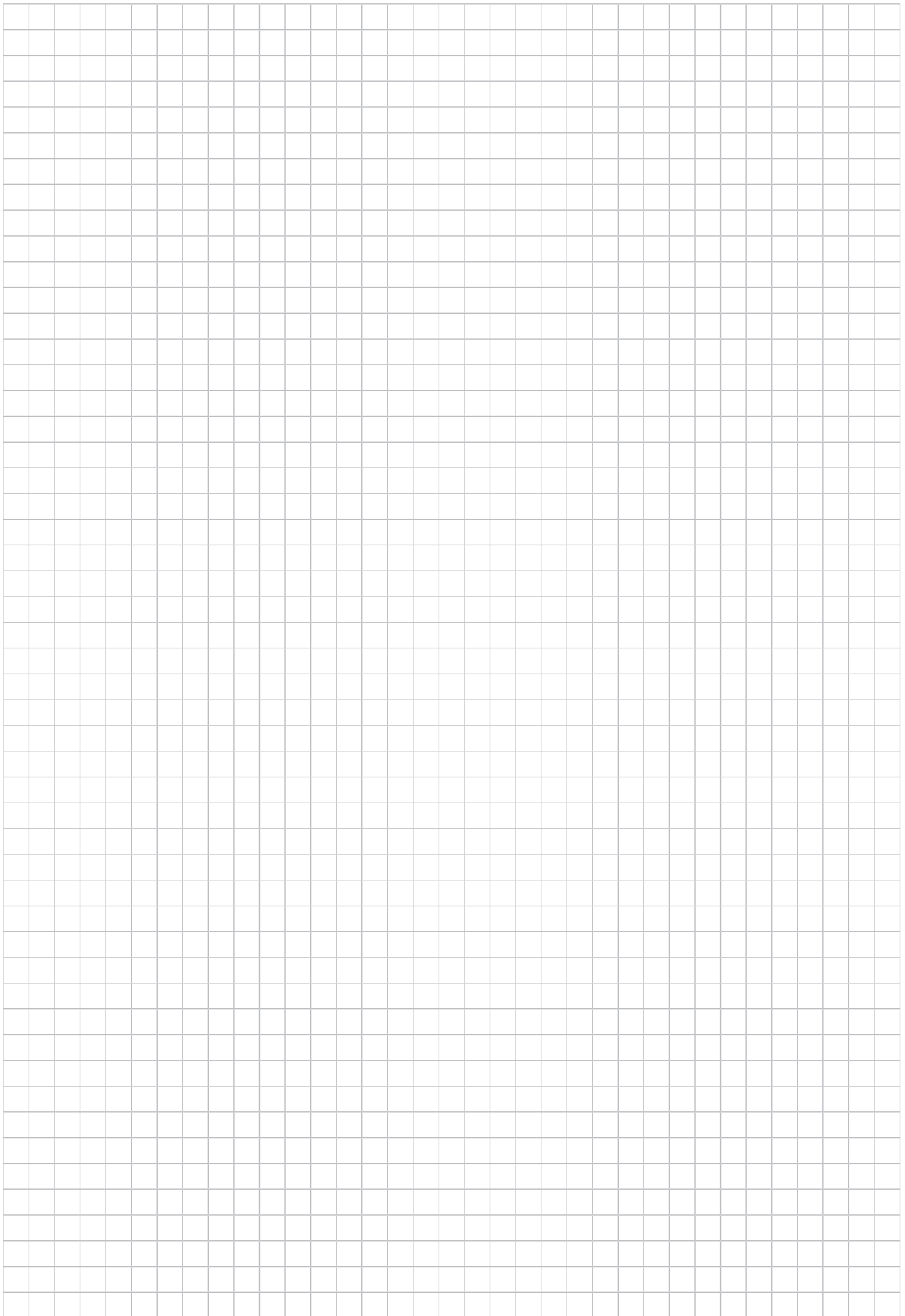
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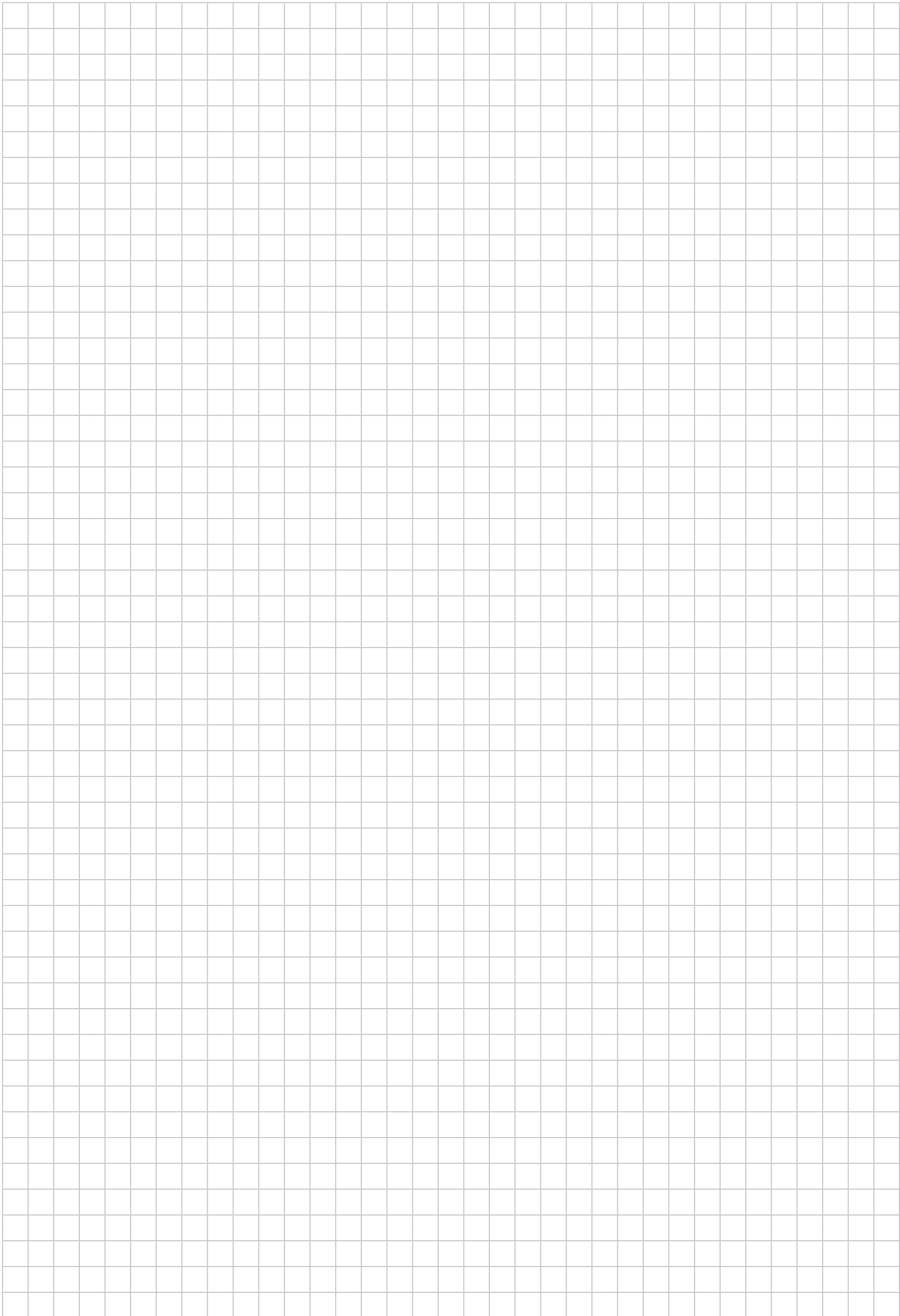
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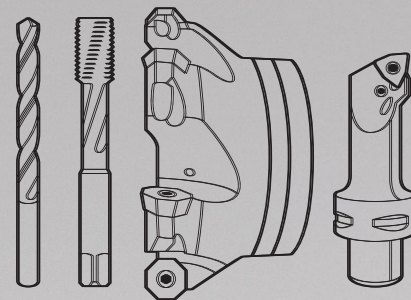
WALTER
Engineering Kompetenz

Walter USA

N22W23977 RidgeView Parkway West
Waukesha, WI 53188, USA

Phone: 800-945-5554
Fax: 262-347-2500
service.us@walter-tools.com

walter-tools.com/us
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Americas

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

Walter Mexico
El Marqués, Querétaro, México
service.mx@walter-tools.com

Walter Brazil
Sorocaba – SP, Brazil
service.br@walter-tools.com
