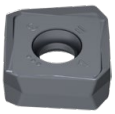
New products for machining technicians

NEW

MaxiMill 271-12



→ Page 24+25

New system size for more economy

NEW

MaxiMill 211-11KN / 211-15KN

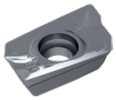


→ Page 65+71

Porcupine cutter update

NEW

MaxiMill 211-20

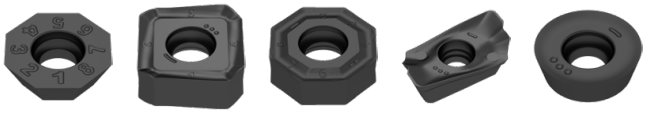


→ Page 76

Indexable insert product extension

NEW

CTCM245



New high-performance grade for machining high-alloy steels



Solid drilling and bore machining

1 HSS drilling

2 Solid carbide drilling

3 Indexable insert drills

4 Reaming and Countersinking

5 Spindle Tooling

Threading

6 Taps and thread formers

7 Circular and Thread Milling

8 Thread turning

Turning

9 Turning Tools

10 Multifunctional Tools – EcoCut and FreeTurn

11 Grooving Tools

12 Miniature turning tools

Milling

13 HSS Milling Cutters

14 Solid Carbide milling cutters

15 Milling tools with indexable inserts

Catalogue – Clamping technology

16 Adaptors and Accessories

17 Workpiece clamping

18 Material examples and article no. Index

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Product programme	12–140
Technical Information	
Cutting data standard values	141–144
Application parameters – Face milling	145–153
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CERATIZIT \ Performance

Premium quality tools for high performance.

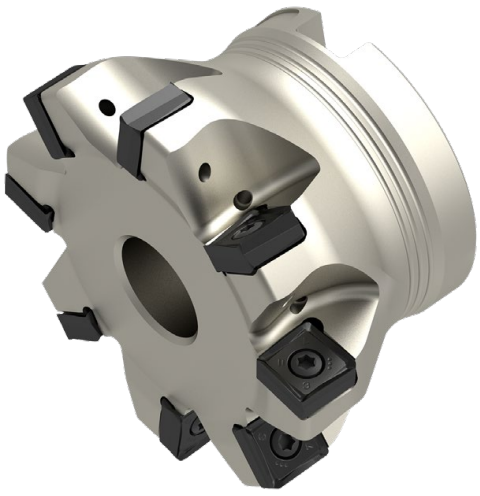
The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium tools in this product line.

Symbol explanation


central internal coolant


lateral internal coolant

κ = 43° Cutting edge angle



ZNF = Number of flutes

● = **Main Application**

○ = Extended application

Application symbols


Face milling


Angled ramping


Circular drill milling


plunge milling


Slot milling


Shoulder milling


Slot milling (45°)


Chamfer milling

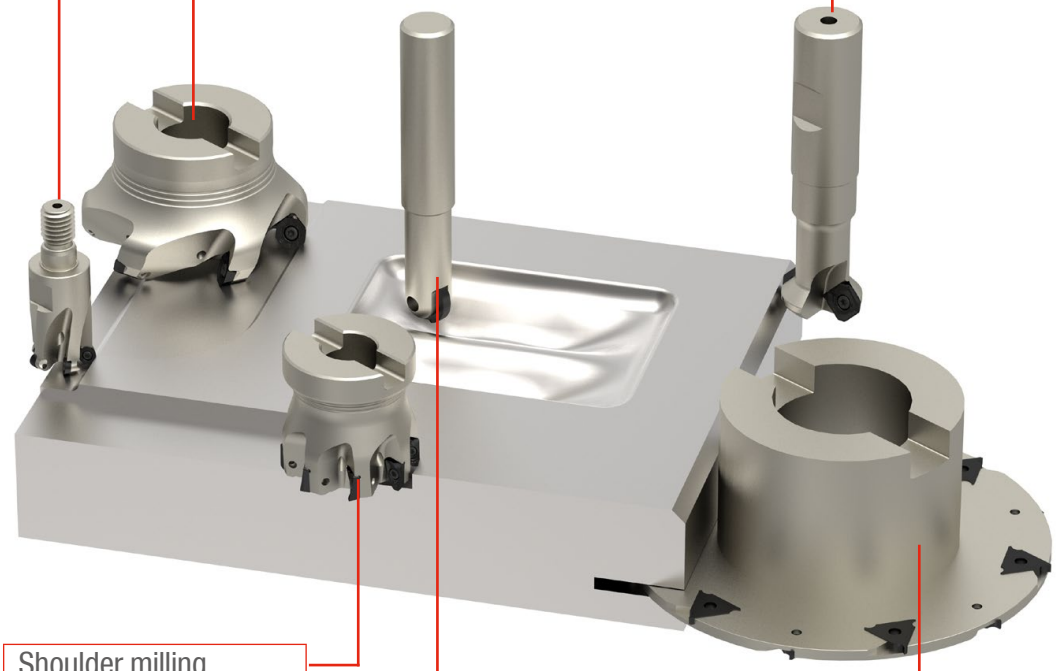

Free form milling

Toolfinder – Application Selection Guide

Form milling
→ System Selection:
8+9

Face milling
→ System Selection:
4+5

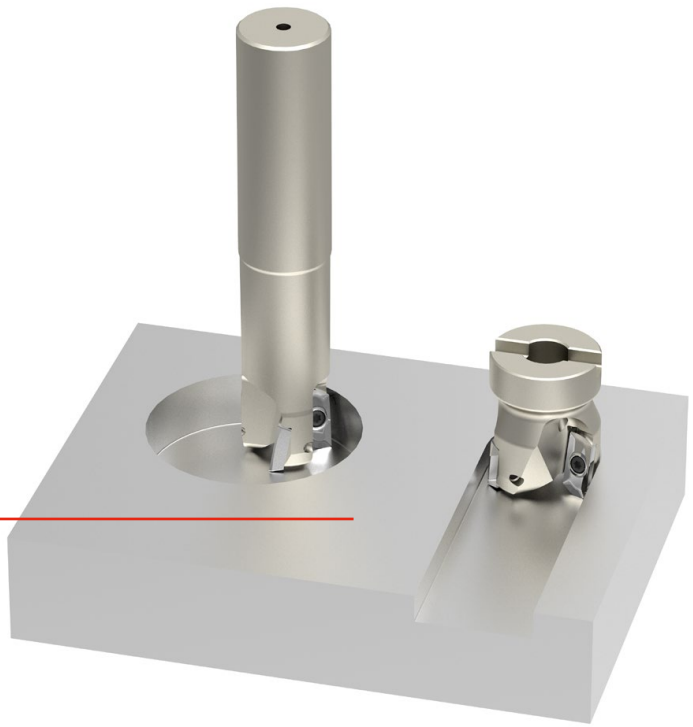
Chamfer/Angle milling cutters
→ System Selection:
10



Shoulder milling
→ System Selection:
6+7

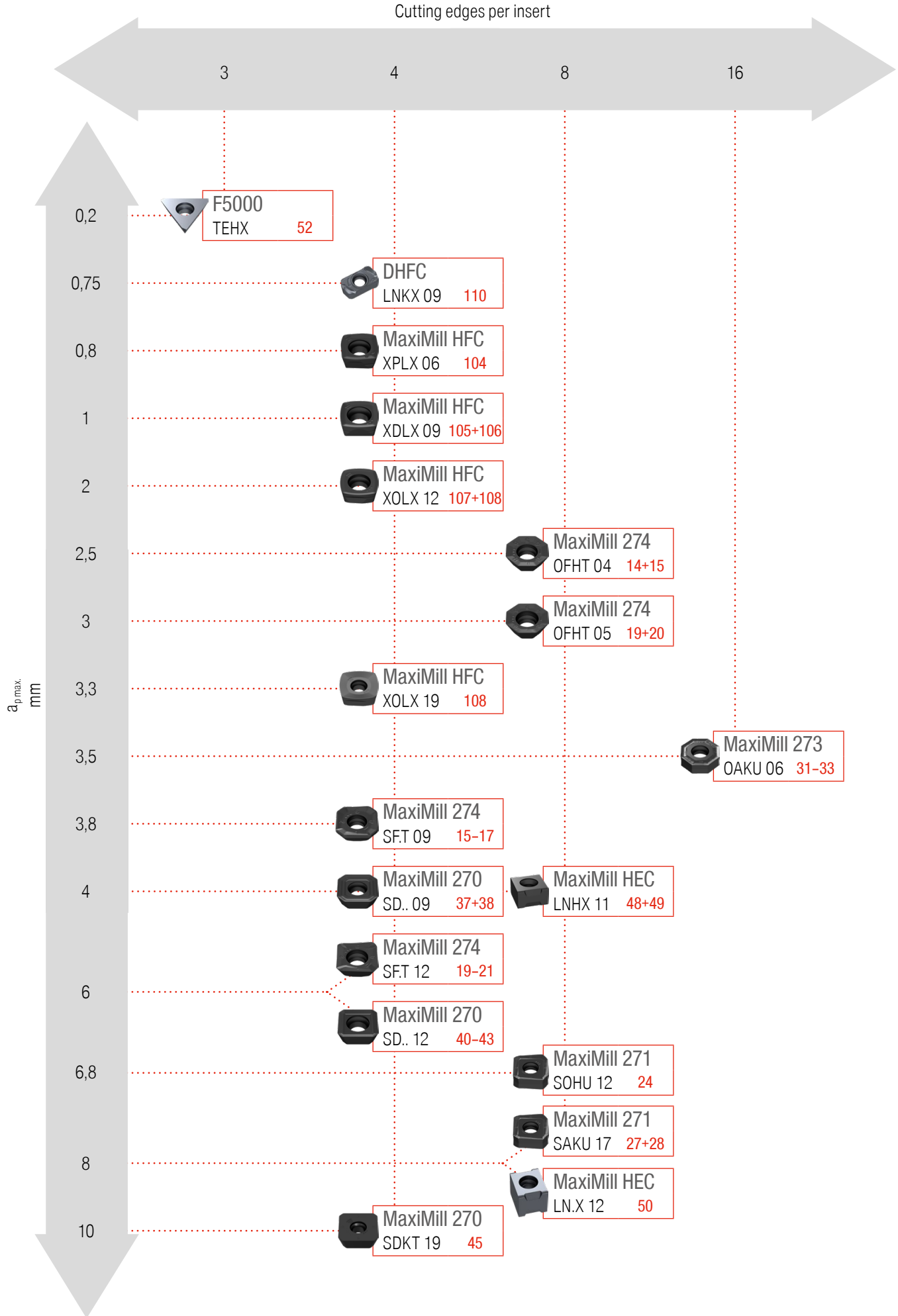
Slot milling and saws
→ System Selection:
10

Form milling
→ System Selection:
8+9



HSC-/HPC-milling
→ System Selection:
6+7

Toolfinder – Face Milling Cutters



Overview – Face Milling Cutters

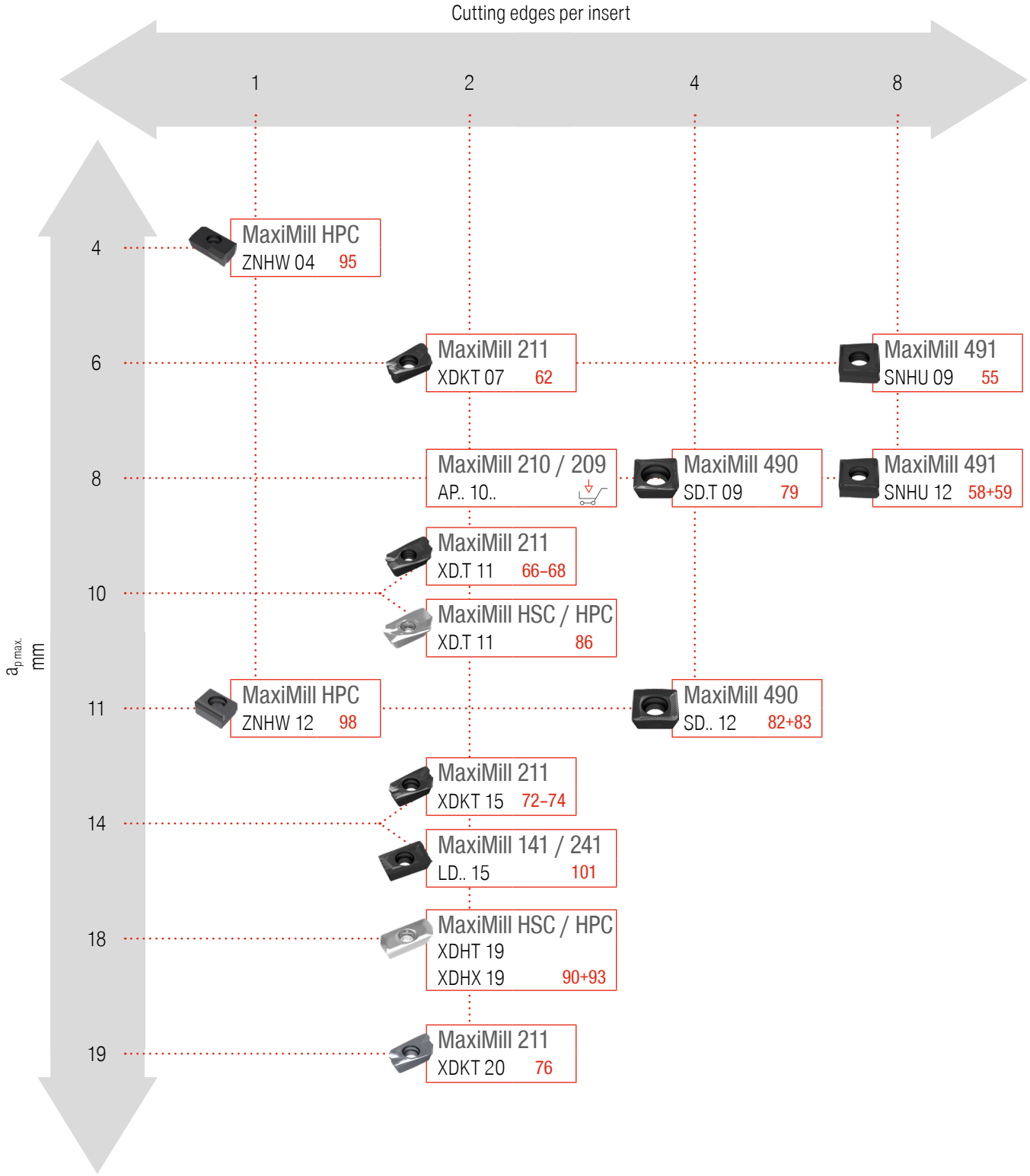
System	Inserts	Cutting edges per insert	$a_{p\,max.}$ mm	Ø-range mm			Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Non metal materials	Page No.
MaxiMill 274	**OFH.** 04.. / 05.. | **SF.T** 09.. / 12..	8 | 4	2,5–6	Ø 20–32	Ø 20–32	Ø 32–160	●	●	●	●	●			12–21
MaxiMill 271	**SOHU** 1204.. | **SAKU** 1706..	8	6,8 | 8,4		Ø 32–40	Ø 40–250	●	●	●		●			22–28
MaxiMill 273	**OAKU** 0605..	16	3,5		Ø 32–40	Ø 40–250	●	●	●		●			29–33
MaxiMill 270	**SD..** 0903.. / 1204.. / 19..	4	4–10	Ø 16–32	Ø 6–32	Ø 32–315	●	●	●	●	●			34–45
MaxiMill HEC	**LNHX** 1106.. | **LN.X** 1210..	8	4–8			Ø 50–160	●	○	●					46–50
F 5000	**TEHX** 16T3..	3	0,2			Ø 42–100	●	○	●	○		●		51+52
MaxiMill HFC	**X..X** 06.. / 09.. / 12.. / 19..	4	0,8–3,3	Ø 16–42	Ø 16–35	Ø 32–160	●	●	●		●			102–108
DHFC	**LNKX** 09..	4	0,75	Ø 16–42	Ø 16–20		●	●	●		●	●		109+110

Additional diameters are available upon request.

Indexable inserts for systems that are no longer listed here can be found in our online shop at cuttingtools.ceratizit.com

15

Toolfinder – shoulder milling



Overview – Shoulder Milling Cutters

System	Inserts	Cutting edges per insert	$a_{p\,max.}$ mm	Ø-range mm			Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Non metal materials	Page No.
MaxiMill 491	**SNHU** 09T3.. / 1204..	8	6–8	Ø 25–32	Ø 25–32	Ø 40–160	●	●	●	●	●			53–59
MaxiMill 211	**XD.T** 0703.. / 11T3.. / 1505.. / 2007..	2	6–19	Ø 16–40	Ø 10–40	Ø 32–160	●	●	●	●	●	○		60–76
MaxiMill 211KN	**XD.T** 11T3.. / 1505.. / 2007..	2	27–75,5		Ø 25–50	Ø 40–50	●	●	●	●	●			65+71
MaxiMill 490	**SD..** 09T3.. / 1205..	4	8–11	Ø 25–40	Ø 25–32	Ø 40–160	●	●	●	●	●			77–83
MaxiMill 490K	**SD..** 09T3..	4	41			Ø 40–63	●	●	●	●	●			78
MaxiMill HSC / HPC	**XD..** 11T3.. / 1904..	2	10–18	Ø 16–40	Ø 16–32	Ø 40–125	Ø 25–50		○	●				84
MaxiMill HPC	**ZNHW** 04T3.. / 1205..	1	4–11	Ø 20–40	Ø 20–40	Ø 40–315	Ø 40–160			●	●		○	94–98
MaxiMill 141 / 241	**LD..** 1504..	2	14	Ø 25–40	Ø 20–32	Ø 40–100		●	●	●	●			99–101
MaxiMill 209 / 210	**AP..** 1003..	2	8	Ø 16,0–31,7	Ø 9,7–32	Ø 40–125		●	●	●	●	●		

Additional diameters are available upon request.

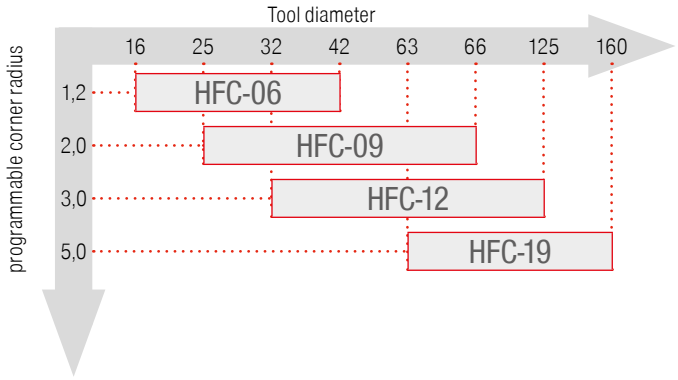
Indexable inserts for systems that are no longer listed here can be found in our online shop at cuttingtools.ceratizit.com

This article can be found in our online shop at cuttingtools.ceratizit.com

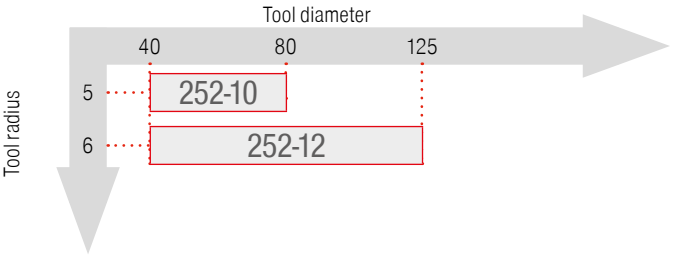
15

Toolfinder – form milling

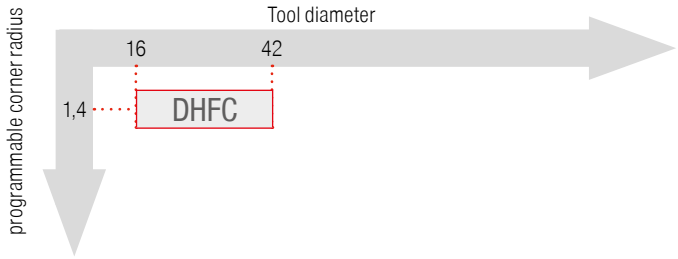
MaxiMill HFC 102–108



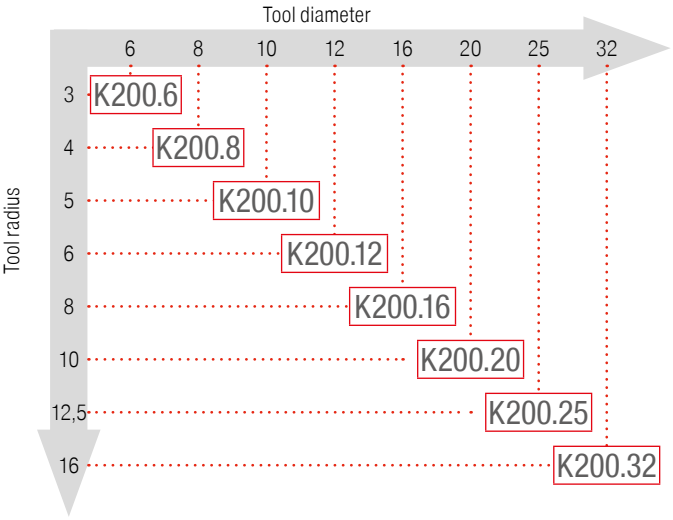
MaxiMill 252 125+126



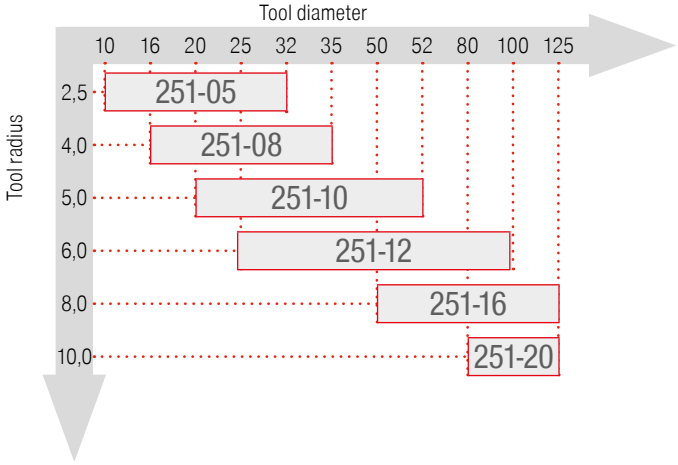
DHFC 109+110



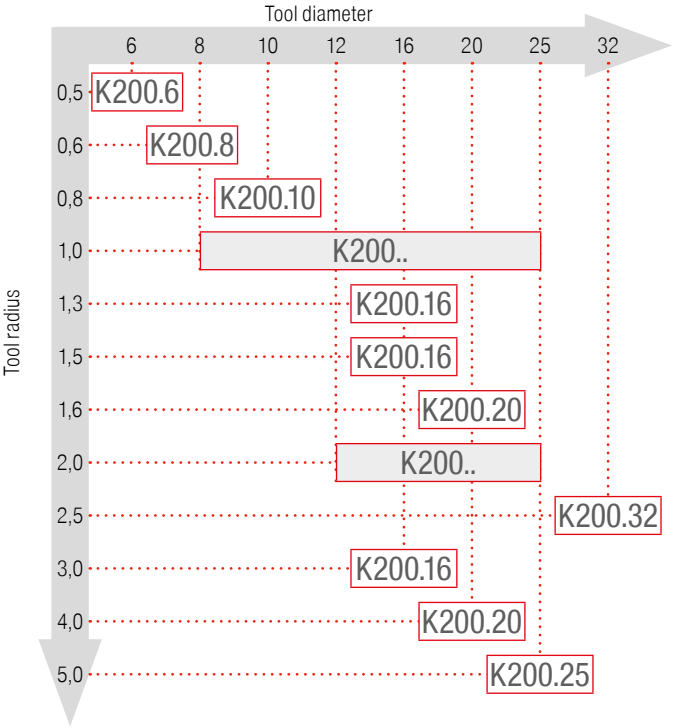
K200. Ball Nosed 127–131



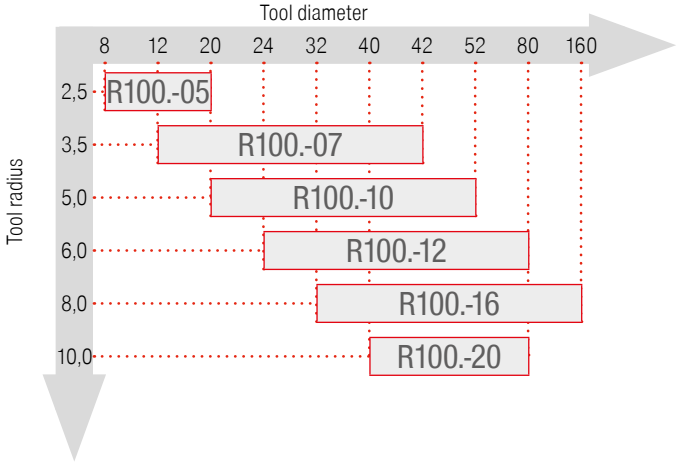
MaxiMill 251 / 251 RS 111–119



K200. Torus 132–135



R100. 120–124



Application range

Tool diameter

Overview – form milling

System	Inserts	Cutting edges per insert	$a_{p\,max.}$ mm	Ø-range mm			Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Non metal materials	Page No.
MaxiMill HFC	**X.LX** 06.. / 09.. / 12.. / 19..	4	0,8–3,3	Ø 16–42	Ø 16–35	Ø 32–160	●	●	●		●			102–108
DHFC	**LNKX** 09..	4	0,75	Ø 16–42	Ø 16–20		●	●	●		○	○		109+110
MaxiMill 251/ 251 RS	**R..X** 05.. / 08.. / 10.. / 12.. / 16.. / 20..	8	2,5–10	Ø 10–42	Ø 10–32	Ø 40–125	●	●	●	●	●			111–119
R100.	**RD.X** 05.. / 07.. / 10.. / 12.. / 16.. / 20..	8	5	Ø 12–42	Ø 8–20	Ø 42–160	●	●	●	●	○	●		120–124
MaxiMill 252	**RNHU** 10.. / 12..	8	3			Ø 40–125	●	●	○		●			125+126
K200. Ball Nosed	**RO.X** .... / **XOHX**	1	0,4–8	Ø 8–32	Ø 6–32		●	●	●	●	●	●		127–131
K200. Torus	**XO.X**	1	0,5–8	Ø 8–32	Ø 8–32		●	●	●	●	●	●		132–135

Additional diameters are available upon request.

Indexable inserts for systems that are no longer listed here can be found in our online shop at cuttingtools.ceratizit.com

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Overview – Chamfer / Angle Milling Cutters

System	Inserts	Cutting edges per insert	$a_{p\ max.}$ mm	Ø-range mm		Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Non metal materials	Page No.
													
MaxiMill 272	**SD..** 0903..	4	4	Ø 6–25		●	●	○	●	●			36–38
													
MaxiMill 242	**LD..** 1504..	2			Ø 50–92	○	●			●			100+101

Additional diameters are available upon request.

Overview – Saw cutters

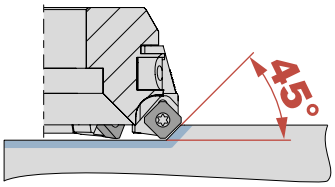
System	Inserts	Cutting edges per insert	$a_{p\ max.}$ mm	Ø-range mm		Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Non metal materials	Page No.
													
TX	**TX..** R/L	3	64	Ø 80–160	Ø 100–200	●	●	●	●	●			136–138

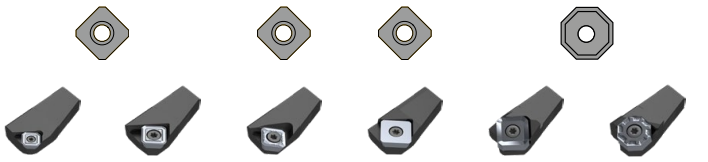
Additional diameters are available upon request.

Overview – Combi Milling Cutters

System	Cutting edges per insert	a_p max. mm	Ø-range mm	Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Non metal materials	Page No.
MaxiMill 260	2–16	0,8–33	Ø 80–400	●	●	●	●	●	●		139

Cartridge no. 041 | 031 | 029 | 032 | 058 | 057

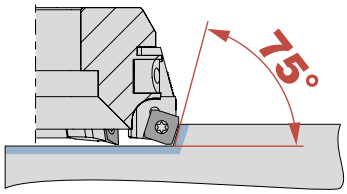




SD.. 0903.. | **SD..** 1204.. **XD..** 1204.. | **SE..** 1204.. | **SD..** 1504.. | **SA..** 1706.. | **OA..** 0605.. **XA..** 0605..

140

Cartridge no. 018

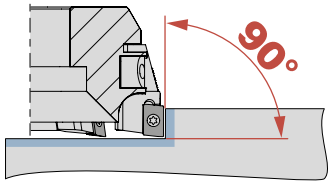


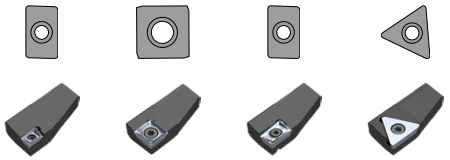


SP.. 1204..

140

Cartridge no. 042 | 039 | 051 | 025

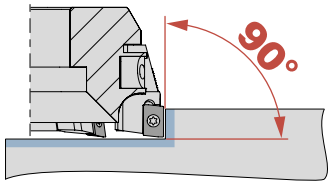




AP.. 1003.. | **SD..** 1205.. | **LD..** 1504.. | **TP..** 2204..

140

Cartridge no. 055 | 054 | 056

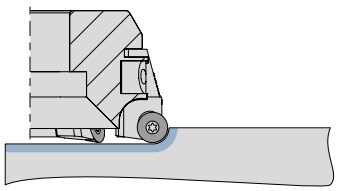


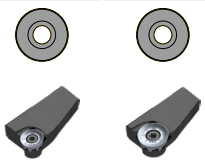


SD.. 09T3 | **XD..** 11T3 | **XD..** 1505

140

Cartridge no. 052 | 053



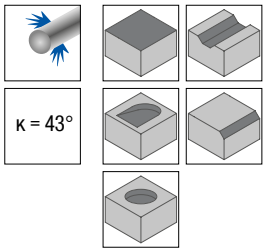


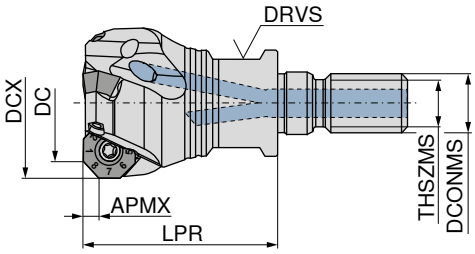
RP.X 1204.. | **RP.X** 1604..

140

15

MaxiMill – Screw in cutter G 274-04/-09

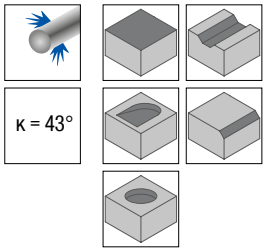


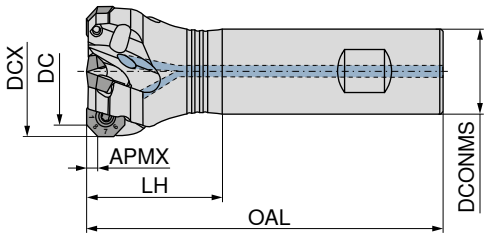




Designation	DC mm	DCX mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 742 ... EUR 2B/40	
G274.20.R.03-09	20	25,5	3	3,8	35	M12	12,5	17	1,2	OF.. 0403 / SF.. 0903	276,10	**020**
G274.25.R.04-09	25	30,6	4	3,8	35	M12	12,5	17	1,2	OF.. 0403 / SF.. 0903	314,50	**025**
G274.32.R.05-09	32	37,6	5	3,8	35	M16	17,0	24	1,2	OF.. 0403 / SF.. 0903	353,00	**032**

MaxiMill – End milling cutter C 274-04/-09

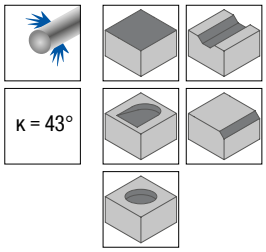


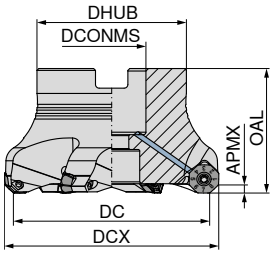


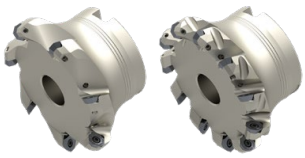


ISO designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	A 50 743 ... EUR 2B/40		B 50 743 ... EUR 2B/40	
C274.20.R.03-09-A20-25	20	25,5	3	3,8	77	25	20	1,2	OF.. 0403 / SF.. 0903	276,10	**020**		
C274.20.R.03-09-B20-25	20	25,5	3	3,8	77	25	20	1,2	OF.. 0403 / SF.. 0903			276,10	**120**
C274.25.R.04-09-A20-32	25	30,6	4	3,8	84	32	20	1,2	OF.. 0403 / SF.. 0903	314,50	**025**		
C274.25.R.04-09-B20-32	25	30,6	4	3,8	84	32	20	1,2	OF.. 0403 / SF.. 0903			314,50	**125**
C274.32.R.05-09-A25-40	32	37,6	5	3,8	98	40	25	1,2	OF.. 0403 / SF.. 0903	353,00	**032**		
C274.32.R.05-09-B25-40	32	37,6	5	3,8	98	40	25	1,2	OF.. 0403 / SF.. 0903			353,00	**132**

MaxiMill – Shell mill A 274-04/-09







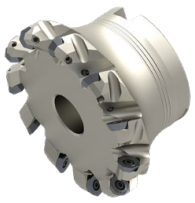
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 744 ... EUR 2B/40		50 744 ... EUR 2B/40	
A274.32.R.05-09	32	37,7	5	3,8	40	38	16	1,2	OF.. 0403 / SF.. 0903			353,00	**032**
A274.40.R.04-09	40	45,7	4	3,8	40	38	16	1,2	OF.. 0403 / SF.. 0903	353,00	**040**		
A274.40.R.06-09	40	45,7	6	3,8	40	38	16	1,2	OF.. 0403 / SF.. 0903			391,30	**140**
A274.50.R.05-09	50	55,7	5	3,8	40	48	22	1,2	OF.. 0403 / SF.. 0903	410,60	**050**		
A274.50.R.07-09	50	55,7	7	3,8	40	48	22	1,2	OF.. 0403 / SF.. 0903			429,90	**150**
A274.63.R.06-09	63	68,7	6	3,8	40	48	22	1,2	OF.. 0403 / SF.. 0903	468,30	**063**		
A274.63.R.09-09	63	68,7	9	3,8	40	48	22	1,2	OF.. 0403 / SF.. 0903			526,00	**163**
A274.80.R.07-09	80	85,7	7	3,8	50	58	27	1,2	OF.. 0403 / SF.. 0903	526,00	**080**		
A274.80.R.11-09	80	85,7	11	3,8	50	58	27	1,2	OF.. 0403 / SF.. 0903			602,90	**180**
A274.100.R.09-09	100	105,7	9	3,8	50	78	32	1,2	OF.. 0403 / SF.. 0903	648,70	**100**		
A274.100.R.13-09	100	105,7	13	3,8	50	78	32	1,2	OF.. 0403 / SF.. 0903			725,60	**200**
A274.125.R.12-09	125	130,7	12	3,8	63	88	40	1,2	OF.. 0403 / SF.. 0903	790,40	**125**		

	TORX® blade		Clamping key - T		Key D		Power Screw		Molykote		Clamping screw		Torque screwdriver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
20 - 32	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**133**	122,50	**191**
32 - 40	4,90	**043**	4,03	**040**	10,51	**125**	13,10	**151**	4,60	**303**	4,29	**133**	122,50	**191**
50 - 125	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**133**	122,50	**191**

Two insert types – ONE Cutter





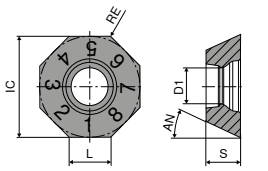




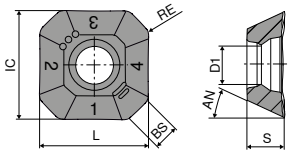
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OFHT / OFHW / SFHT / SFKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
OFH. 0403..	9,52	3,35	3,94	-	3,18	25
SF.T 0903..	9,80	3,35	9,00	2,25	3,50	25



OF..

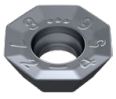
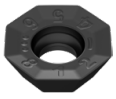


SF.T

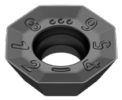
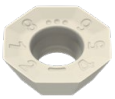
OFHT

		-F50 CTCP220	-F50 CTPP225	-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		OFHT	OFHT	OFHT	OFHT	OFHT	OFHT
		51 002 ...	**51 002 ...**	**51 002 ...**	**51 003 ...**	**51 002 ...**	**51 003 ...**
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
040305SN	0,5	16,55 **255**	16,55 **055**	16,55 **005**	16,55 **005**	16,55 **105**	16,55 **105**
P		●	●	●	●	●	●
M						○	○
K				○	○	○	○
N							
S							
H							
O							

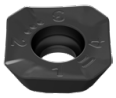
OFHT / OFHW

		-F50 CTPM225	-F50 CTCM235	-F50 CTPM240	-M50 CTPM240	-F50 CTPM245	CTPM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		OFHT	OFHT	OFHT	OFHT	OFHT	OFHW
		51 002 ...	**51 002 ...**	**51 002 ...**	**51 003 ...**	**51 002 ...**	**51 105 ...**
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
040302EN	0,2						18,24 **452**
040305SN	0,5	16,55 **205**	16,55 **305**	16,55 **405**	16,55 **405**	18,24 **455**	
P		●	●	○	○	●	●
M		●	●	●	●	●	●
K							
N							
S							
H							
O							

OFHT / OFHW

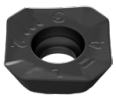
		NEW	NEW					
		-F50 CTCM245 DRAGONSKIN	CTCM245 DRAGONSKIN	-M50 CTCK215 DRAGONSKIN	-F10 CTWN215	-F50 CTC5240 DRAGONSKIN	CTC5240 DRAGONSKIN	-F50 CTCS245 DRAGONSKIN
								
		OFHT	OFHW	OFHT	OFHT	OFHT	OFHW	OFHT
		51 002 ...	51 105 ...	51 003 ...	50 459 ...	51 002 ...	50 457 ...	51 002 ...
ISO	RE mm	EUR 1H/17	EUR 1H/17	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17	EUR 17
040302EN	0,2		18,24 90201				18,24 504	
040305FN	0,5				17,55 505			
040305SN	0,5	18,24 90501		16,55 505		18,24 15500		18,24 555
P		●	●					
M		●	●					
K				●	○			
N					●			
S		○	○			●	●	●
H								
O					○			

SFHT / SFKT

		-F50 CTCP220 DRAGONSKIN	-M50 CTCP220 DRAGONSKIN	-F50 CTPP225 DRAGONSKIN	-M50 CTPP225 DRAGONSKIN
					
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
0903AFSR	1	16,55 270	12,19 270	16,55 070	12,19 070
P		●	●	●	●
M					
K					
N					
S					
H					
O					

15

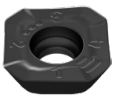
SFHT / SFKT

		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
0903AFSR	1	16,55 020	12,19 020	16,55 120	12,19 120
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

SFHT / SFKT

								NEW
		-F50 CTPM225	-M50 CTPM225	-F50 CTCM235	-F50 CTPM240	-M50 CTPM240	-F50 CTPM245	-F50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		SFHT	SFKT	SFHT	SFHT	SFKT	SFHT	SFHT
		51 012 ...	51 013 ...	51 012 ...	51 012 ...	51 013 ...	51 012 ...	51 012 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
0903AFSR	1	16,55 220	12,19 220	16,55 320	16,55 420	12,19 42000	20,58 470	20,58 92001
P		●	●	●	○	○	●	●
M		●	●	●	●	●	●	●
K								
N								
S								○
H								
O								

SFKT / SFHT

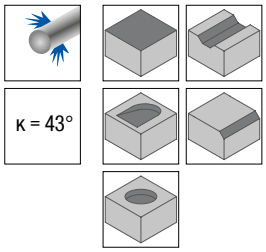
		-R50 CTCK215		-R50 CTPK220		-F10 CTWN215		-F40 CTC5240	
		DRAGONSKIN		DRAGONSKIN				DRAGONSKIN	
									
		SFKT		SFKT		SFHT		SFHT	
		51 065 ...		51 065 ...		50 514 ...		50 514 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 17	
0903AFFR	1					19,85	505		
0903AFSR	1	12,19	520	12,19	620			20,58	504
P									
M									
K		●		●		○			
N						●			
S								●	
H									
O						○			

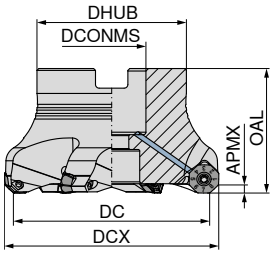
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 145
Starting Parameter	→ 146	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

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MaxiMill – Shell mill A 274-05/-12





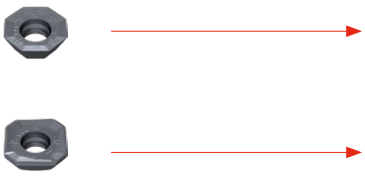


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 772 ... EUR 2B/40		50 772 ... EUR 2B/40	
A274.40.R.03-12	40	48,0	3	6	40	38	16	3,2	OFHT 0504 / SFKT 1204	265,70	**24000**		
A274.40.R.04-12	40	48,0	4	6	40	38	16	3,2	OFHT 0504 / SFKT 1204			348,70	**04000**
A274.50.R.05-12	50	58,0	5	6	40	43	22	3,2	OFHT 0504 / SFKT 1204			442,80	**050**
A274.50.R.04-12	50	58,1	4	6	40	43	22	3,2	OFHT 0504 / SFKT 1204	354,20	**25000**		
A274.63.R.06-12	63	71,0	6	6	40	48	22	3,2	OFHT 0504 / SFKT 1204			531,40	**063**
A274.63.R.05-12	63	71,1	5	6	40	48	22	3,2	OFHT 0504 / SFKT 1204	453,60	**26300**		
A274.80.R.06-12	80	88,0	6	6	50	58	27	3,2	OFHT 0504 / SFKT 1204	553,40	**28000**		
A274.80.R.08-12	80	88,0	8	6	50	58	27	3,2	OFHT 0504 / SFKT 1204			708,50	**080**
A274.100.R.10-12	100	107,9	10	6	50	78	32	3,2	OFHT 0504 / SFKT 1204			874,50	**100**
A274.100.R.08-12	100	108,0	8	6	50	78	32	3,2	OFHT 0504 / SFKT 1204	730,70	**30000**		
A274.125.R.12-12	125	132,9	12	6	63	88	40	3,2	OFHT 0504 / SFKT 1204			1.068,00	**125**
A274.125.R.09-12	125	133,0	9	6	63	88	40	3,2	OFHT 0504 / SFKT 1204	915,90	**32500**		
A274.160.R.14-12	160	167,9	14	6	63	98	40	3,2	OFHT 0504 / SFKT 1204			1.417,00	**16000** [1]
A274.160.R.11-12	160	168,0	11	6	63	98	40	3,2	OFHT 0504 / SFKT 1204	1.113,00	**36000** [1]		

1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

Spare parts DC	TORX® blade 80 950 ... EUR Y7		Key D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
40 - 160	5,42	**054**	12,25	**128**	4,60	**303**	4,84	**340**	135,90	**193**

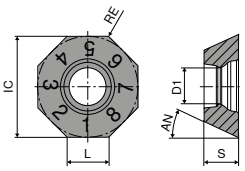
Two insert types – ONE Cutter



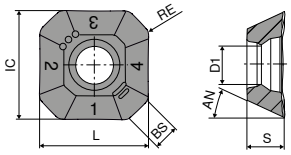


OFHT / SFHT / SFKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
OFHT 0504..	12,7	4,8	4,5	-	4,76	25
SF.T 1204..	12,7	4,8	12,7	1,42	4,76	25

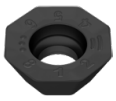


OF..



SF.T

OFHT

	-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
	OFHT	OFHT	OFHT	OFHT
	51 002 ...	**51 003 ...**	**51 002 ...**	**51 003 ...**
ISO RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
050410SN 1	18,20 **010**	18,20 **01000**	18,20 **110**	18,20 **11000**
P	●	●	●	●
M			○	○
K	○	○	○	○
N				
S				
H				
O				

OFHT

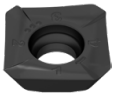
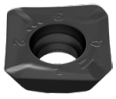
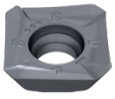
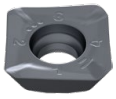
	-F50 CTPM225	-M50 CTPM225	-F50 CTCM235	-F50 CTPM240	-M50 CTPM240	-F50 CTPM245
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	OFHT	OFHT	OFHT	OFHT	OFHT	OFHT
	51 002 ...	**51 003 ...**	**51 002 ...**	**51 002 ...**	**51 003 ...**	**51 002 ...**
ISO RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17
050410SN 1	18,20 **210**	18,20 **210**	18,20 **310**	18,20 **410**	18,20 **41000**	20,06 **460**
P	●	●	●	○	○	●
M	●	●	●	●	●	●
K						
N						
S						
H						
O						

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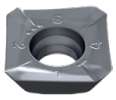
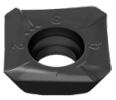
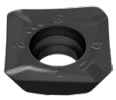
OFHT

		NEW		
		-F50 CTCM245	-F10 CTWN215	-F50 CTC5240
		DRAGONSKIN		DRAGONSKIN
				
		OFHT	OFHT	OFHT
		51 002 ...	51 122 ...	51 002 ...
ISO	RE mm	EUR 1H/17	EUR 1B/61	EUR 17
050410FN	1		21,83 36000	
050410SN	1	20,06 91001		20,06 16000
P		●		
M		●		
K			○	
N			●	
S		○		●
H				
O			○	

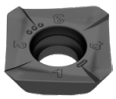
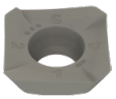
SFHT / SFKT

		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1204AFSR	1	18,20 02500	13,41 025	18,20 12500	13,41 125
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

SFHT / SFKT

		-F50 CTPM225	-M50 CTPM225	-F50 CTCM235	-M50 CTCM235	-F50 CTPM240	-M50 CTPM240
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		SFHT	SFKT	SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1204AFSR	1	18,20 225	13,41 225	18,20 325	13,41 325	18,20 42500	13,41 425
P		●	●	●	●	○	○
M		●	●	●	●	●	●
K							
N							
S							
H							
O							

SFHT

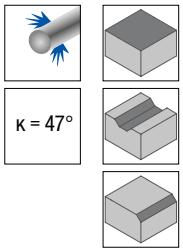
			NEW			
		-F50 CTPM245	-F50 CTCM245	-F10 CTWN215	-F40 CTC5240	
		DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	
						
		SFHT	SFHT	SFHT	SFHT	
		51 012 ...	51 012 ...	51 123 ...	50 514 ...	
ISO	RE mm	EUR 1H/17	EUR 1H/17	EUR 1B/61	EUR 17	
1204AFER	1				22,66 50900	
1204AFFR	1			21,83 37000		
1204AFSR	1	22,21 47500	22,21 92501			
P		●	●			
M		●	●			
K				○		
N				●		
S			○		●	
H						
O				○		

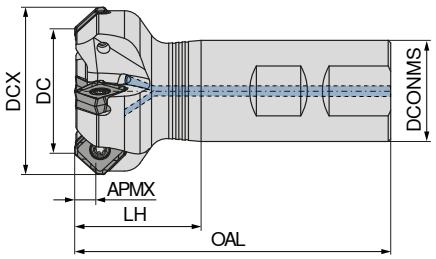
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 147
Starting Parameter	→ 148	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

15

MaxiMill – End milling cutter C 271-12







NEW

B

50 786 ...

Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
C271.32.R.03-12-B-40	32	45	3	6,8	100	40	32	18400	3,2	SOHU 1204.. / XOHU 1204..	335,90	**03203**
C271.40.R.04-12-B32-40	40	53	4	6,8	100	40	32	16800	3,2	SOHU 1204.. / XOHU 1204..	419,80	**04004**

TORX® blade

80 950 ...



Key D

80 950 ...



Molykote

70 950 ...



Clamping screw

70 950 ...



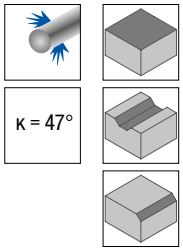
Torque screwdriver

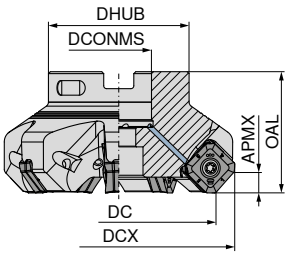
80 950 ...

Spare parts																	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
32 - 40	5,42	**054**	9,42	**120**	4,60	**303**	3,30	**859**	135,90	**193**

MaxiMill – A 271-12 Face mill

▲ 8 cutting edges per insert





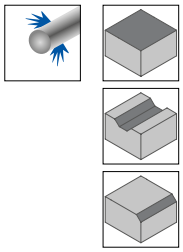


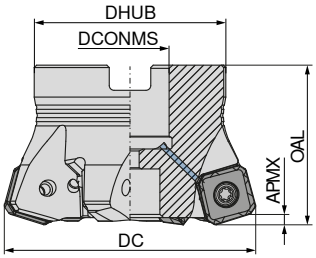
NEW NEW

Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS H6 mm	RPMX 1/min.	torque moment Nm	Insert	50 787 ... EUR 2B/40		50 787 ... EUR 2B/40	
A271.40.R.04-12	40	53	4	6,8	40	38	16	17900	3,2	SOHU 1204.. / XOHU 1204..			419,80	**04004**
A271.50.R.05-12	50	63	5	6,8	40	43	22	15200	3,2	SOHU 1204.. / XOHU 1204..			430,30	**05005**
A271.63.R.07-12	63	76	7	6,8	40	48	22	13100	3,2	SOHU 1204.. / XOHU 1204..			545,80	**06307**
A271.80.R.06-12	80	93	6	6,8	50	58	27	11300	3,2	SOHU 1204.. / XOHU 1204..	545,80	**08006**		
A271.80.R.08-12	80	93	8	6,8	50	58	27	11300	3,2	SOHU 1204.. / XOHU 1204..			629,70	**08008**
A271.100.R.07-12	100	113	7	6,8	63	78	32	9900	3,2	SOHU 1204.. / XOHU 1204..	692,70	**10007**		
A271.100.R.10-12	100	113	10	6,8	63	78	32	9900	3,2	SOHU 1204.. / XOHU 1204..			787,20	**10010**
A271.125.R.08-12	125	138	8	6,8	63	88	40	8700	3,2	SOHU 1204.. / XOHU 1204..	839,70	**12508**		
A271.125.R.12-12	125	138	12	6,8	63	88	40	8700	3,2	SOHU 1204.. / XOHU 1204..			965,60	**12512**
A271.160.R.09-12	160	173	9	6,8	63	98	40	7600	3,2	SOHU 1204.. / XOHU 1204..	976,10	**16009** [1]		
A271.160.R.14-12	160	173	14	6,8	63	98	40	7600	3,2	SOHU 1204.. / XOHU 1204..			1.134,00	**16014** [1]
A271.200.R.11-12	200	213	11	6,8	63	132	60	6700	3,2	SOHU 1204.. / XOHU 1204..	1.224,00	**20011** [1]		
A271.200.R.17-12	200	213	17	6,8	63	132	60	6700	3,2	SOHU 1204.. / XOHU 1204..			1.383,00	**20017** [1]
A271.250.R.13-12	250	263	13	6,8	63	132	60	6000	3,2	SOHU 1204.. / XOHU 1204..	1.473,00	**25013** [1]		
A271.250.R.21-12	250	263	21	6,8	63	132	60	6000	3,2	SOHU 1204.. / XOHU 1204..			1.730,00	**25021** [1]

1) Without Through Coolant

MaxiMill – A 271-12 HFC Face mill







NEW

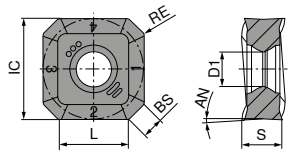
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS H6 mm	RPMX 1/min.	torque moment Nm	Insert	50 788 ... EUR 2B/40	
A271.50.R.04-12-HFC	50	4	2,6	40	43	22	14600	3,2	SOHU 1204..	430,30	**05004**
A271.63.R.06-12-HFC	63	6	2,6	40	48	22	12500	3,2	SOHU 1204..	545,80	**06306**
A271.80.R.07-12-HFC	80	7	2,6	50	58	27	10800	3,2	SOHU 1204..	629,70	**08007**

Spare parts DC	TORX® blade 80 950 ... EUR Y7		Clamping key - T 80 397 ... EUR Y7		Key D 80 950 ... EUR Y7		Power Screw 70 950 ... EUR 2A/28		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
40 (5078704004)	5,42	**054**	4,03	**040**	9,42	**120**	13,10	**151**	4,60	**303**	3,30	**859**	135,90	**193**
50 - 250	5,42	**054**			9,42	**120**			4,60	**303**	3,30	**859**	135,90	**193**
50 (5078805004)	5,42	**054**	4,37	**050**	9,42	**120**	18,00	**154**	4,60	**303**	3,30	**859**	135,90	**193**

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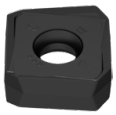
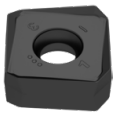
SOHU

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
SOHU 1204..	13,36	4,4	8,8	1,7	5,00	7,4

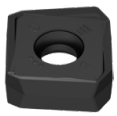
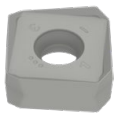


SOHU

SOHU

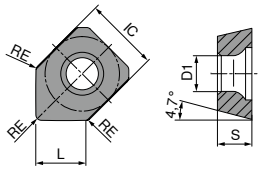
		NEW	NEW	NEW	NEW	NEW	NEW
		-M50 CTCP230	-M50 CTPP235	-M50 CTCM235	-M50 CTPM240	-F50 CTPM245	-F50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		SOHU	SOHU	SOHU	SOHU	SOHU	SOHU
		51 138 ...	51 138 ...	51 138 ...	51 138 ...	51 140 ...	51 140 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
1204ABSR	0,8	27,07 02000	27,07 12000	27,07 32000	27,07 42000	33,29 47000	33,29 92001
P		●	●	●	○	●	●
M			○	●	●	●	●
K		○	○				
N							
S							○
H							
O							

SOHU

		NEW	NEW	NEW	NEW
		-R50 CTCK215	-R50 CTPK220	-F40 CTC5240	-F50 CTC5240
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		SOHU	SOHU	SOHU	SOHU
		51 139 ...	51 139 ...	51 148 ...	51 140 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 17
1204ABSR	0,8	27,07 52000	27,07 62000	33,29 12001	33,29 17000
P					
M					
K		●	●		
N					
S				●	●
H					
O					

XOHU

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XOHU 1204..	13,36	4,4	8,8	1,83	5,00



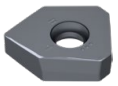
XOHU

XOHU

NEW

-M50
CTPP235

DRAGONSKIN


XOHU

51 141 ...

ISO	RE mm	EUR 1B/61	
1204ABSR	0,8	33,51	**12000**

P	●
M	○
K	○
N	
S	
H	
O	

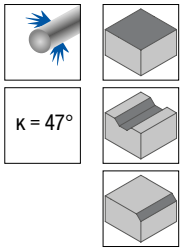
Milling guide

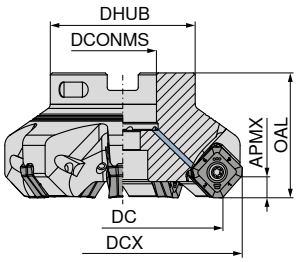
Cutting data standard values	→ 141–144	Starting Parameter	→ 149
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

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MaxiMill – A 271 Face mill

▲ 8 cutting edges per insert







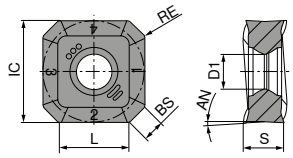
ISO designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	50 767 ... EUR 2B/40	
A271.50.R.04-17	50	66,1	4	8,4	40	22	43	5	SAKU 1706	409,60	**050**
A271.63.R.06-17	63	79,1	6	8,4	40	22	48	5	SAKU 1706	575,70	**063**
A271.80.R.07-17	80	96,1	7	8,4	50	27	58	5	SAKU 1706	658,70	**080**
A271.100.R.08-17	100	116,1	8	6,8	50	32	78	5	SAKU 1706	758,40	**100**
A271.125.R.10-17	125	141,1	10	8,4	63	40	88	5	SAKU 1706	874,50	**125**
A271.160.R.12-17	160	176,1	12	8,4	63	40	104	5	SAKU 1706	1.030,00	**16000**[1]
A271.200.R.13-17	200	216,1	13	8,4	63	60	134	5	SAKU 1706	1.273,00	**20000**[2]
A271.250.R.15-17	250	266,1	15	8,4	63	60	134	5	SAKU 1706	1.539,00	**25000**[2]

1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant
2) With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm / Without Through Coolant

	TORX® blade		Key D		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts	EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		2A/28		2A/28		Y7	
50 - 250	4,90	**037**	10,25	**114**	4,60	**303**	4,29	**302**	135,90	**193**

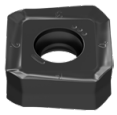
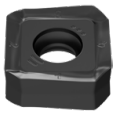
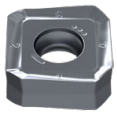
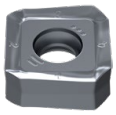
SAKU

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
SAKU 1706..	17	5,8	11,85	3,7	6,35	3

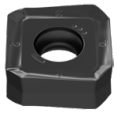
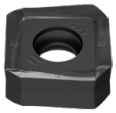
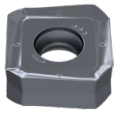
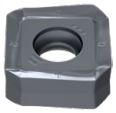


SAKU

SAKU

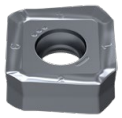
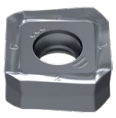
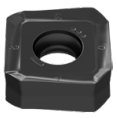
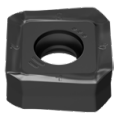
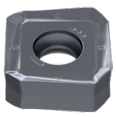
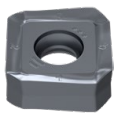
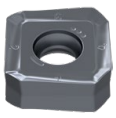
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		SAKU	SAKU	SAKU	SAKU
		51 004 ...	51 005 ...	51 004 ...	51 005 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1706ABSR	0,8	30,59 270	30,59 270	30,59 070	30,59 070
P		●	●	●	●
M					
K					
N					
S					
H					
O					

SAKU

		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		SAKU	SAKU	SAKU	SAKU
		51 004 ...	51 005 ...	51 004 ...	51 005 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1706ABSR	0,8	30,59 020	30,59 020	30,59 120	30,59 120
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

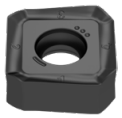
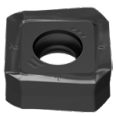
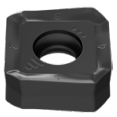
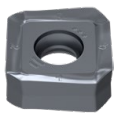
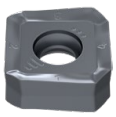
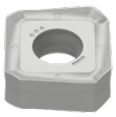
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SAKU

		-F50 CTPM225	-M50 CTPM225	-F50 CTCM235	-M50 CTCM235	-F50 CTPM240	-M50 CTPM240	-F50 CTPM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		SAKU	SAKU	SAKU	SAKU	SAKU	SAKU	SAKU
		51 004 ...	51 005 ...	51 004 ...	51 005 ...	51 004 ...	51 005 ...	51 004 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17
1706ABSR	0,8	30,59 220	30,59 220	30,59 320	30,59 320	30,59 420	30,59 420	37,63 470
P		●	●	●	●	○	○	●
M		●	●	●	●	●	●	●
K								
N								
S								
H								
O								

SAKU

NEW

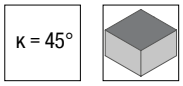
		-F50 CTCM245	-M50 CTCK215	-R50 CTCK215	-M50 CTPK220	-R50 CTPK220	-F50 CTC5240	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		SAKU	SAKU	SAKU	SAKU	SAKU	SAKU	SAKU
		51 004 ...	51 005 ...	51 058 ...	51 005 ...	51 058 ...	50 306 ...	51 004 ...
ISO	RE mm	EUR 1H/17	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17
1706ABSR	0,8	37,63 92001	30,59 520	30,59 520	30,59 620	30,59 620	37,63 520	37,63 570
Steel		●	○	○	○	○		
Stainless steel		●						
Cast iron			●	●	●	●		
Non ferrous metals								
Heat resistant alloys		●					●	●
Hardened materials								

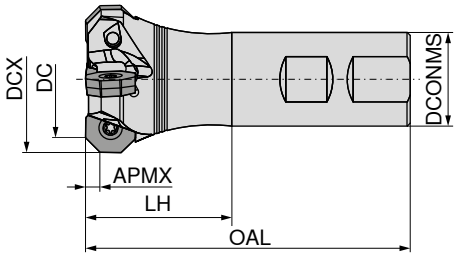
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 149
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

MaxiMill – End milling cutter C 273

▲ 16 cutting edges per insert





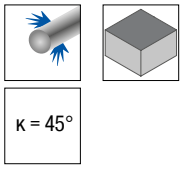


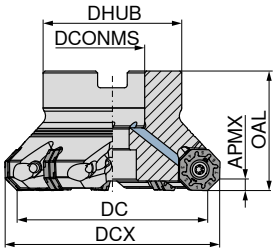
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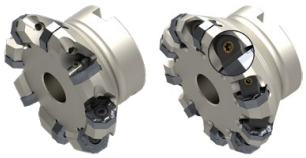
Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS h6 mm	LH mm	OAL mm	torque moment Nm	Insert	50 762 ... EUR 2B/40	
C273.32.R.03-06-B-40	32	42,1	3	3,5	32	40	101	5	OAKU / XAHT 0605	398,70	**032**
C273.40.R.04-06-B32-50	40	50,1	4	3,5	32	50	111	5	OAKU / XAHT 0605	412,00	**040**

MaxiMill – Shell mill A 273

▲ 16 cutting edges per insert







Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	50 741 ... EUR 2B/40		50 741 ... EUR 2B/40	
A273.40.R.04-06	40	50,2	3	3,5	40	16	38	5	OAKU / XAHT 0605	392,80	**040**		
A273.40.R.04-06	40	50,2	4	3,5	40	16	38	5	OAKU / XAHT 0605	412,00	**140** 5)		
A273.50.R.05-06	50	60,2	5	3,5	40	22	43	5	OAKU / XAHT 0605	462,00	**050**		
A273.63.R.07-06	63	73,2	7	3,5	40	22	48	5	OAKU / XAHT 0605	554,60	**063**		
A273.80.R.08-06	80	90,2	8	3,5	50	27	58	5	OAKU / XAHT 0605	646,90	**080**		
A273.80.R.10-06	80	90,2	10	3,5	50	27	58	5	OAKU / XAHT 0605			985,80	**180** 1)
A273.100.R.10-06	100	110,2	10	3,5	50	32	78	5	OAKU / XAHT 0605	762,50	**100**		
A273.100.R.14-06	100	110,2	14	3,5	50	32	78	5	OAKU / XAHT 0605			1.260,00	**200** 1)
A273.125.R.12-06	125	135,2	12	3,5	63	40	88	5	OAKU / XAHT 0605	854,90	**125**		
A273.125.R.17-06	125	135,2	17	3,5	63	40	88	5	OAKU / XAHT 0605			1.462,00	**225** 1)
A273.160.R.14-06	160	170,2	14	3,5	63	40	104	5	OAKU / XAHT 0605	1.013,00	**160** 4)		
A273.160.R.20-06	160	170,2	20	3,5	63	40	104	5	OAKU / XAHT 0605			1.729,00	**260** 2)
A273.200.R.25-06	200	210,2	25	3,5	63	60	153	5	OAKU / XAHT 0605			2.162,00	**300** 3)
A273.250.R.31-06	250	260,2	31	3,5	63	60	153	5	OAKU / XAHT 0605			2.644,00	**25031** 3)

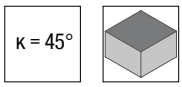
1) Version with Wedge, without internal coolant supply
2) Version with Wedge, without internal coolant supply / With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant
3) Version with Wedge, without internal coolant supply / With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm / Without Through Coolant
4) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant
5) Without Through Coolant

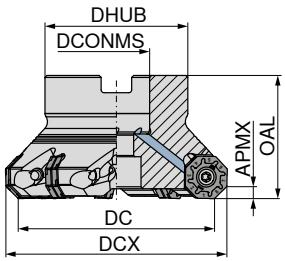
	TORX® blade		Clamping key - T		Clamping wedge screw		Clamping wedge Face mill		Key D		Power Screw		Clamping screw		Torque screwdriver	
	80 950 ...		80 397 ...		70 950 ...		70 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts	EUR		EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		2A/28		2A/28		Y7		2A/28		2A/28		Y7	
40	4,90	**037**	4,03	**040**					10,25	**114**	13,10	**151**	4,29	**302**	135,90	**193**
50	4,90	**037**	4,37	**050**					10,25	**114**	18,00	**154**	4,29	**302**	135,90	**193**
63 - 80	4,90	**037**							10,25	**114**			4,29	**302**	135,90	**193**
80 - 100	4,90	**036**			6,20	**844**	24,73	**845**	9,56	**113**					135,90	**193**
100 - 125	4,90	**037**							10,25	**114**			4,29	**302**	135,90	**193**
125	4,90	**036**			6,20	**844**	24,73	**845**	9,56	**113**					135,90	**193**
160	4,90	**037**							10,25	**114**			4,29	**302**	135,90	**193**
160 - 250	4,90	**036**			6,20	**844**	24,73	**845**	9,56	**113**					135,90	**193**

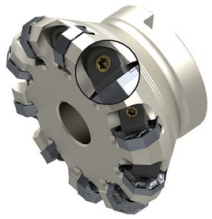
15

MaxiMill – Shell mill A 273

- 16 cutting edges per indexable insert
- Axially adjustable







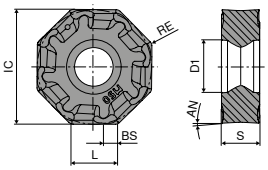
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	torque moment Nm	Insert	50 777 ... EUR 2B/40	
A273.80.R.10A10-06	80	90,2	10	3,5	50	27	58	5	OAKU / XAHT 0605	1.296,00	**08010**[1]
A273.100.R.14A14-06	100	110,2	14	3,5	50	32	78	5	OAKU / XAHT 0605	1.764,00	**10014**[1]
A273.125.R.17A17-06	125	135,2	17	3,5	63	40	88	5	OAKU / XAHT 0605	2.074,00	**12517**[1]
A273.160.R.20A20-06	160	170,2	20	3,5	63	40	104	5	OAKU / XAHT 0605	2.449,00	**16020**[2]
A273.200.R.25A25-06	200	210,2	25	3,5	63	60	153	5	OAKU / XAHT 0605	3.063,00	**20025**[3]
A273.250.R.31A31-06	250	260,2	31	3,5	63	60	153	5	OAKU / XAHT 0605	3.762,00	**25031**[3]

1) Carbide version
2) Carbide version / With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm
3) Carbide version / With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm

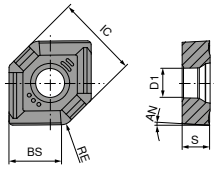
	TORX® blade	 Clamping wedge screw	 Clamping wedge Face mill	Key D	 Molykote	 Wedge	 Torque screwdriver
	80 950 ...	70 950 ...	70 950 ...	80 950 ...	70 950 ...	70 950 ...	80 950 ...
Spare parts	EUR Y7	EUR 2A/28	EUR 2A/28	EUR Y7	EUR 2A/28	EUR 2A/28	EUR Y7
DC							
80 - 250	4,90 **036**	6,20 **844**	24,73 **845**	9,56 **113**	4,60 **303**	38,64 **199**	135,90 **193**

OAKU / XAHT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
XAHT 0605..	17,08	6,0	-	11,95	5,56	3
OAKU 0605..	17,10	5,8	6	2,00	5,66	3

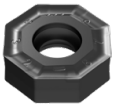
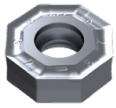


OAKU

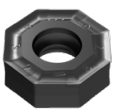
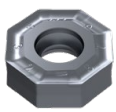


XAHT

OAKU

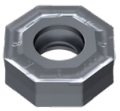
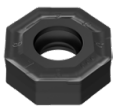
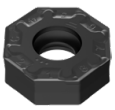
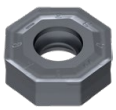
ISO	RE mm	-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		OAKU	OAKU	OAKU	OAKU
		51 000 ...	**51 001 ...**	**51 000 ...**	**51 001 ...**
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060508SR	0,8	25,79 **258**	25,79 **258**	25,79 **058**	25,79 **058**
P		●	●	●	●
M					
K					
N					
S					
H					
O					

OAKU

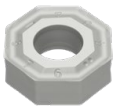
ISO	RE mm	-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		OAKU	OAKU	OAKU	OAKU
		51 000 ...	**51 001 ...**	**51 000 ...**	**51 001 ...**
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060508SR	0,8	25,79 **008**	25,79 **008**	25,79 **108**	25,79 **108**
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

15

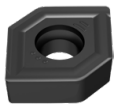
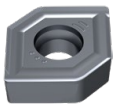
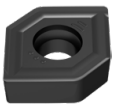
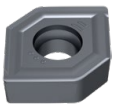
OAKU

		-F50 CTPM225		-M50 CTPM225		-F50 CTCM235		-M50 CTCM235		-F50 CTPM240		-M50 CTPM240		-F40 CTPM245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
															
		OAKU		OAKU		OAKU		OAKU		OAKU		OAKU		OAKU	
		51 000 ...		51 001 ...		51 000 ...		51 001 ...		51 000 ...		51 001 ...		51 104 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1H/17	
060508ER	0,8													32,25	458
060508SR	0,8	25,79	208	25,79	208	25,79	308	25,79	308	25,79	408	25,79	408		
P		●		●		●		●		○		○		●	
M		●		●		●		●		●		●		●	
K															
N															
S															
H															
O															

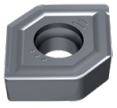
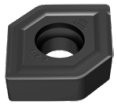
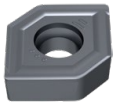
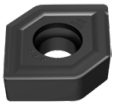
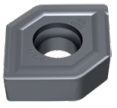
OAKU

		NEW -F40 CTCM245		-M50 CTCK215		-R50 CTCK215		-M50 CTPK220		-R50 CTPK220		-F40 CTC5240		-F40 CTCS245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
															
		OAKU		OAKU		OAKU		OAKU		OAKU		OAKU		OAKU	
		51 104 ...		51 001 ...		51 027 ...		51 001 ...		51 027 ...		50 446 ...		51 104 ...	
ISO	RE mm	EUR 1H/17		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 17		EUR 1H/17	
060508ER	0,8	32,25	90801									32,25	550	32,25	50801
060508SR	0,8			25,79	508	25,79	508	25,79	608	25,79	608				
P		●													
M		●													
K				●		●		●		●					
N															
S		○										●		●	
H															
O															

XAHT

		-M50 CTCP220	-M50 CTPP225	-M50 CTCP230	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XAHT	XAHT	XAHT	XAHT
		51 014 ...	51 014 ...	51 014 ...	51 014 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060525SR	2,5	31,93 275	31,93 075	31,93 025	31,93 125
P		●	●	●	●
M					○
K				○	○
N					
S					
H					
O					

XAHT

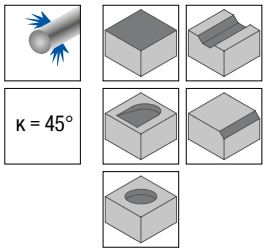
		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-M50 CTCK215	-M50 CTPK220
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XAHT	XAHT	XAHT	XAHT	XAHT
		51 014 ...	51 014 ...	51 014 ...	51 014 ...	51 014 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060525SR	2,5	31,93 225	31,93 325	31,93 425	31,93 525	31,93 625
P		●	●	○		
M		●	●	●		
K					●	●
N						
S						
H						
O						

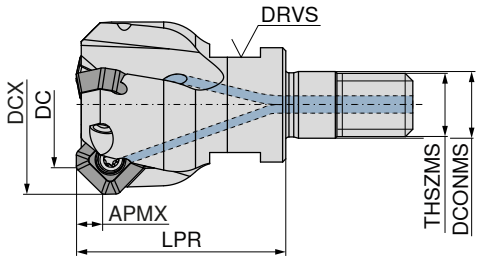
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 150
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

15

MaxiMill – Screw in cutter 45° G 270-09



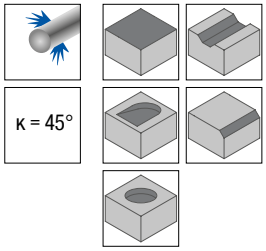


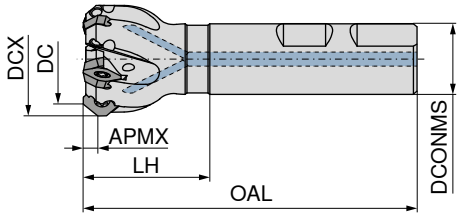


55 202 ...

Designation	DC mm	DCX mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	EUR 2B	
G270.ESF.16.R.02-09	16	24,4	2	4	27	M8	8,5	10	1,8	SD.. 0903..	162,00	016
G270.ESF.20.R.03-09	20	28,4	3	4	33	M10	10,5	15	1,8	SD.. 0903..	190,00	020
G270.ESF.25.R.04-09	25	33,4	4	4	35	M12	12,5	17	1,8	SD.. 0903..	213,90	025
G270.ESF.32.R.05-09	32	40,4	5	4	35	M16	17,0	17	1,8	SD.. 0903..	235,40	032

MaxiMill – End milling cutter 45° C 270-09





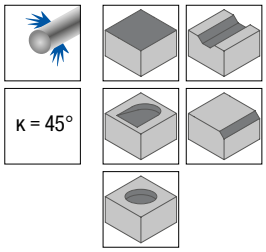


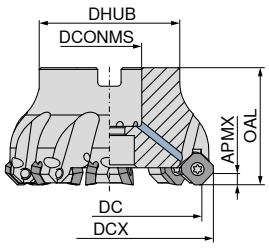


50 666 ...

Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	EUR 2B/40	
C270.06.R.01-09	6	14,4	1	4	80	32	16	1,2	SD.. 0903..	139,90	006
C270.12.R.01-09	12	20,4	1	4	80	32	16	1,2	SD.. 0903..	154,50	012
C270.16.R.02-09	16	24,4	2	4	90	40	20	1,8	SD.. 0903..	175,90	016
C270.20.R.03-09	20	28,4	3	4	90	40	20	1,8	SD.. 0903..	223,80	020
C270.25.R.04-09	25	33,4	4	4	100	44	25	1,8	SD.. 0903..	317,10	025
C270.32.R.05-09	32	40,4	5	4	95	36	25	1,8	SD.. 0903..	373,10	032

MaxiMill – Shell mill 45° A 270-09







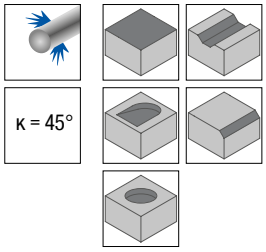
									right		right		right		left	
									50 704 ...		**50 705 ...**		**50 706 ...**		**50 707 ...**	
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	**EUR** 2B/40		**EUR** 2B/40		**EUR** 2B/40		**EUR** 2B	
A270.32.R.05-09	32	40,4	5	4	40	34	16	1,8					357,00	**532**		
A270.40.R.04-09	40	48,4	4	4	40	38	16	1,8			366,40	**540**				
A270.40.R.06-09	40	48,4	6	4	40	38	16	1,8					413,10	**540**		
A270.42.R.06-09	42	50,4	6	4	40	38	16	1,8					427,70	**542**		
A270.50.R.06-09	50	58,4	6	4	40	43	22	1,8			425,10	**550**				
A270.50.R.08-09	50	58,4	8	4	40	43	22	1,8					509,00	**550**		
A270.50.L.08-09	50	58,4	8	4	40	43	22	1,8							527,10	**550**
A270.52.R.08-09	52	60,4	8	4	40	43	22	1,8					527,10	**552**		
A270.63.R.05-09	63	71,4	5	4	40	48	22	1,8	413,10	**563**						
A270.63.R.08-09	63	71,4	8	4	40	48	22	1,8			515,60	**563**				
A270.63.R.10-09	63	71,4	10	4	40	48	22	1,8					642,20	**563**		
A270.63.L.10-09	63	71,4	10	4	40	48	22	1,8							664,30	**563**
A270.66.R.10-09	66	74,4	10	4	40	48	22	1,8					664,30	**566**		
A270.80.R.06-09	80	88,4	6	4	50	58	27	1,8	467,60	**580**						
A270.80.R.10-09	80	88,4	10	4	50	58	27	1,8			651,50	**580**				
A270.80.R.12-09	80	88,4	12	4	50	58	27	1,8					772,60	**580**		
A270.80.L.12-09	80	88,4	12	4	50	58	27	1,8							799,30	**580**
A270.100.R.07-09	100	108,4	7	4	50	78	32	1,8	603,70	**600**						
A270.100.R.12-09	100	108,4	12	4	50	78	32	1,8			786,10	**600**				
A270.100.R.14-09	100	108,4	14	4	50	78	32	1,8					912,80	**600**		
A270.125.R.12-09	125	133,4	12	4	63	88	40	1,8			919,40	**625**				
A270.160.R.12-09	160	168,4	12	4	63	93	40	1,8	1.182,00	**660** [1)]						

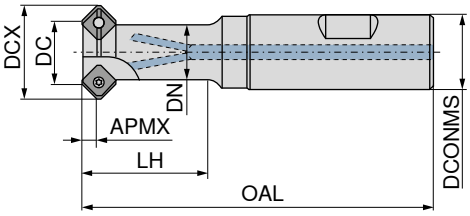
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

- ▲ 50 704 ... Open pitch for use on aluminum alloys, non-ferrous metals and plastics
- ▲ 50 705 ... Normal pitch for a broad spectrum of use on aluminum alloys, non-ferrous metals, and soft steel materials
- ▲ 50 706 ... Fine pitch for highest feed rates, predominantly used on steel and cast materials
- ▲ 50 707 ... As 50 706 ..., but **left hand** version

MaxiMill – Chamfer milling cutter C 272-09

▲ Usable on front and rear cutting edges







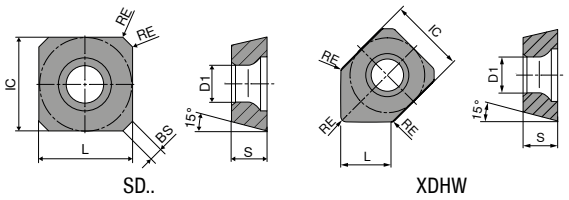
B

Designation	DC mm	DCX mm	ZNF	APMX mm	DN mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	50 669 ... EUR 2B	
C272.06.R.01-09	6	14,4	1	4	10	91	24,0	16	1,2	SD.. 0903..	166,40	**006**
C272.08.R.01-09	8	16,4	1	4	10	91	25,5	16	1,2	SD.. 0903..	185,40	**008**
C272.12.R.01-09	12	20,4	1	4	12	91	26,0	16	1,2	SD.. 0903..	190,60	**012**
C272.16.R.02-09	16	24,4	2	4	15	97	30,0	20	1,8	SD.. 0903..	234,50	**016**
C272.18.R.02-09	18	26,4	2	4	16	97	30,0	20	1,8	SD.. 0903..	234,50	**018**
C272.25.R.03-09	25	33,4	3	4	21	109	35,0	25	1,8	SD.. 0903..	274,40	**025**

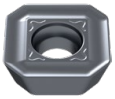
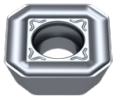
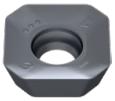
	TORX® blade		 Key D		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		**80 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts	**EUR**		**EUR**		**EUR**		**EUR**		**EUR**	
DC	Y7		Y7		2A/28		2A/28		Y7	
6 - 12	4,90	**033**	8,03	**110**	4,60	**303**	3,30	**365**	122,50	**191**
16 - 25	4,90	**033**	8,03	**110**	4,60	**303**	2,70	**115**	122,50	**191**

SDHW / SDNT / SDHT / XDHW

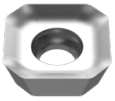
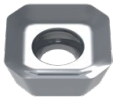
Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDHW 0903..	9,52	3,4	5,50	1,68	3,18
SD.. 0903..	9,52	3,4	9,52	1,68	3,18



SDHW / SDNT / SDHT

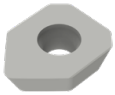
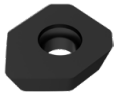
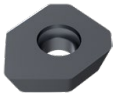
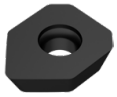
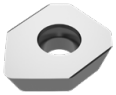
		TCM10	-29 CTCP230	-29 CTPP235	-33 CTPM240	-33P CTPM240	-F50 CTPM245	NEW -F50 CTCM245
			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		CERMET SDHW	SDNT	SDNT	SDHT	SDHT	SDHT	SDHT
		50 428 ...	51 011 ...	51 011 ...	51 028 ...	51 086 ...	51 109 ...	51 109 ...
ISO	RE mm	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
0903AESN	1	16,77 898	14,48 020	14,48 120	16,55 420	17,42 420	20,58 470	20,58 92001
P		●	●	●	○	○	●	●
M				○	●	●	●	●
K		○	○	○				
N								
S								○
H								
O								

SDNT / SDHT

		-31 CTCK215	-27P H216T	-27P AMZ	-M31 CTC5240	-F50 CTCS245
		DRAGONSKIN			DRAGONSKIN	DRAGONSKIN
						
		SDNT	SDHT	SDHT	SDHT	SDHT
		51 029 ...	50 426 ...	50 426 ...	50 421 ...	51 109 ...
ISO	RE mm	EUR 1B/61	EUR 1A/90	EUR 1A/90	EUR 17	EUR 17
0903AEFN	1		16,55 548	19,85 848		
0903AESN	1	13,86 520			20,58 509	20,58 57100
P						
M						
K		●	○	○		
N			●	●		
S					●	●
H						
O			○	○		

15

XDHW

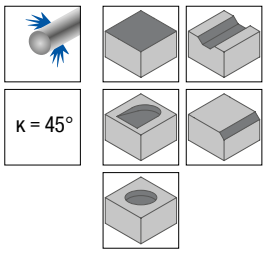
		TCM10	CTCP230	CTPP235	CTCK215	H216T
			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
						
		CERMET				
		XDHW	XDHW	XDHW	XDHW	XDHW
		50 449 ...	51 015 ...	51 015 ...	51 015 ...	50 449 ...
ISO	RE mm	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/18	EUR 1B/61
0903AEEN	1				19,69 **520**	
0903AEFN	1					17,42 **548**
0903AESN	1	18,18 **898**	20,36 **020**	20,36 **120**		
P		●	●	●		
M				○		
K		○	○	○	●	○
N						●
S						
H						
O						○

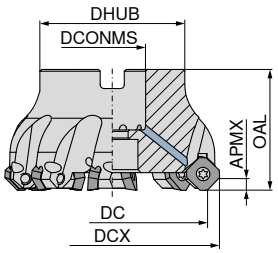
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 151
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

MaxiMill – Shell mill 45° A 270-12

- ▲ 50 705 ... Normal pitch for a broad spectrum of use on aluminum alloys, non-ferrous metals, up to soft steel materials
- ▲ 50 706 ... Predominantly fine pitch for highest feed rates, use on steel and cast materials







										50 705 ...		50 706 ...	
Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	OAL mm	DHUB mm	torque moment Nm	Insert	EUR 2B/40		EUR 2B/40	
A270.32.R.03-12	32	46	3	6	16	40	32	5	SD../XD.. 1204..	409,00	**032**		
A270.40.R.03-12	40	54	3	6	16	40	38	5	SD../XD.. 1204..	418,40	**040**		
A270.40.R.04-12	40	54	4	6	16	40	38	5	SD../XD.. 1204..			418,40	**040**
A270.50.R.04-12	50	64	4	6	22	40	43	5	SD../XD.. 1204..	473,00	**050**		
A270.50.R.05-12	50	64	5	6	22	40	43	5	SD../XD.. 1204..			473,00	**050**
A270.63.R.04-12	63	77	4	6	22	40	48	5	SD../XD.. 1204..	541,00	**063**		
A270.63.R.06-12	63	77	6	6	22	40	48	5	SD../XD.. 1204..			619,60	**063**
A270.80.R.05-12	80	94	5	6	27	50	58	5	SD../XD.. 1204..	627,60	**080**		
A270.80.R.08-12	80	94	8	6	27	50	58	5	SD../XD.. 1204..			772,60	**080**
A270.100.R.06-12	100	114	6	6	32	50	78	5	SD../XD.. 1204..	739,30	**100**		
A270.100.R.10-12	100	114	10	6	32	50	78	5	SD../XD.. 1204..			904,70	**100**
A270.125.R.07-12	125	139	7	6	40	63	88	5	SD../XD.. 1204..	903,30	**125**		
A270.125.R.12-12	125	139	12	6	40	63	88	5	SD../XD.. 1204..			1.222,00	**125**
A270.160.R.08-12	160	174	8	6	40	63	94	5	SD../XD.. 1204..	1.154,00	**160** [1)]		

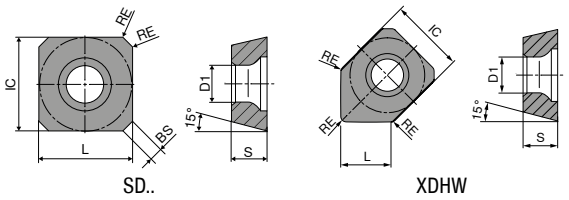
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

	TORX® blade		 Clamping key - T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
32 - 40	4,90	**037**	4,03	**040**	10,25	**114**	13,10	**151**	4,60	**303**	3,30	**01200**	135,90	**193**
50 - 160	4,90	**037**			10,25	**114**			4,60	**303**	3,30	**01200**	135,90	**193**

15

SDHT / SDHW / SDMT / XDHW

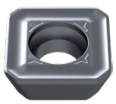
Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDHW 1204..	12,7	5,5	7,5	1,74	4,76
SD.. 1204..	12,7	5,5	12,7	1,74	4,76



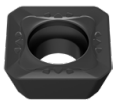
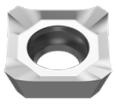
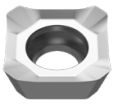
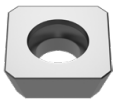
SDHT / SDHW / SDMT

		TCM10	-R TCM10	-29R CTCP230	-R CTCP230	CTCP230
				DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		CERMET SDHT	CERMET SDHW	SDMT	SDHT	SDHW
		50 426 ...	50 428 ...	51 010 ...	51 006 ...	51 008 ...
ISO	RE mm	EUR 1B/79	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/61
1204AESN	0,2	18,05 900				
1204AESN	1,0		18,81 899	15,38 020	17,55 020	18,05 020
P		●	●	●	●	●
M						
K		○	○	○	○	○
N						
S						
H						
O						

SDMT / SDHT / SDHW

							NEW
		-29R CTPP235	-R CTPP235	-R CTPP235	-33 CTPM240	-F50 CTPM245	-F50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		SDMT	SDHT	SDHW	SDHT	SDHT	SDHT
		51 010 ...	51 006 ...	51 008 ...	51 028 ...	51 109 ...	51 109 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
1204AESN	1	15,38 120	17,55 120	18,05 120	18,05 425	23,70 475	23,70 92501
P		●	●	●	○	●	●
M		○	○	○	●	●	●
K		○	○	○			
N							
S							○
H							
O							

SDMT / SDHW / SDHT

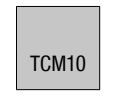
		-31 CTCK215 DRAGONSKIN		-R CTCK215 DRAGONSKIN		-27 H216T		-27P H216T		H216T	
											
		SDMT		SDHW		SDHT		SDHT		SDHW	
		51 059 ...		51 008 ...		50 426 ...		50 426 ...		50 428 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1A/90		EUR 1A/90		EUR 1B/61	
1204AEEN	1,0	14,99	520	18,05	520						
1204AEFN	0,2					18,05	504				
1204AEFN	1,0							18,05	554		
1204AESN	0,2									14,99	600
P											
M											
K		●		●		○		○		○	
N						●		●		●	
S											
H											
O						○		○		○	

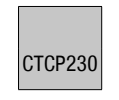
SDHT

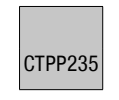
		-M31 CTC5240 DRAGONSKIN		-F50 CTCS245 DRAGONSKIN	
					
		SDHT		SDHT	
		50 421 ...		51 109 ...	
ISO	RE mm	EUR 17		EUR 17	
1204AESN	1	23,70	512	23,70	57600
P					
M					
K					
N					
S		●		●	
H					
O					

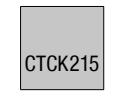
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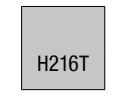
XDHW



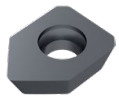
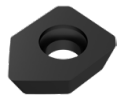
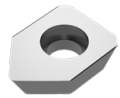








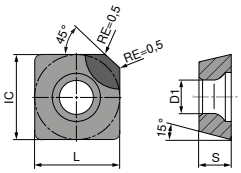


ISO	RE mm	CERMET XDHW 50 449 ... EUR 1B/79		XDHW 51 015 ... EUR 1B/61		XDHW 51 015 ... EUR 1B/61		XDHW 51 015 ... EUR 1B/61		XDHW 50 449 ... EUR 1B/61	
1204AEEN	1							23,77	**525**		
1204AEFN	1									22,49	**600**
1204AESN	1	23,77	**900**	24,93	**025**	24,93	**125**				
P		●		●		●					
M						○					
K		○		○		○		●		○	
N										●	
S											
H											
O										○	

SDHW

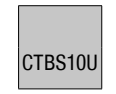
Designation	IC mm	D1 mm	L mm	S mm
SDHW 1204..	12,7	5,5	12,7	4,76

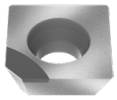
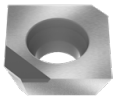


SDHW

SDHW





ISO	DIAMOND SDHW 51 900 ... EUR V9		CBN SDHW 51 900 ... EUR V9	
1204AEFN-2	63,46	100 [1]		
1204AEFN-3	63,46	102 [2]		
1204AETN-2			58,21	300 [1]
P				
M				
K				●
N		●		
S				
H				○
O				

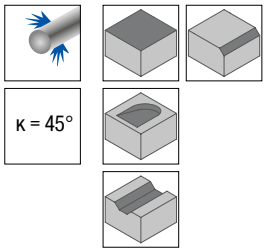
1) $a_{p\,max.}$ = 2.0 mm
2) $a_{p\,max.}$ = 3,5 mm

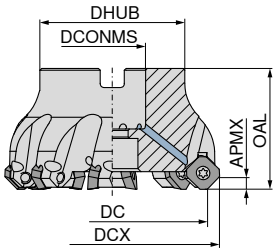
Milling guide

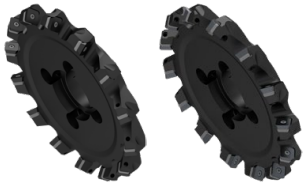
Cutting data standard values	→ 141–144	Machining strategy	→ 151
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

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MaxiMill – Shell mill 45° A 270-19







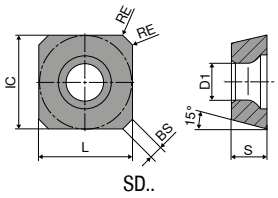
										Left-hand		Right-hand	
										50 698 ...		50 698 ...	
Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	OAL mm	DHUB mm	torque moment Nm	Insert	EUR 2B/40		EUR 2B/40	
A270.125.R.07-19	125	146,4	7	10	40	63	88	5	SD.. 1907..			810,10	**12507**
A270.160.R.09-19	160	181,4	9	10	40	63	104	5	SD.. 1907..			1.026,00	**16009** [1]
A270.200.R.11-19	200	221,1	11	10	60	63	134	5	SD.. 1907..			1.242,00	**20011** [2]
A270.250.L.14-19	250	271,4	14	10	60	63	134	5	SD.. 1907..	2.322,00	**75014** [2]		
A270.250.R.14-19	250	271,4	14	10	60	63	134	5	SD.. 1907..			2.322,00	**25014** [2]
A270.315.L.17-19	315	336,4	17	10	60	63	226	5	SD.. 1907..	2.750,00	**81517** [4]		
A270.315.R.17-19	315	336,4	17	10	60	63	226	5	SD.. 1907..			2.750,00	**31517** [3]

1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant
2) With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm / Without Through Coolant
3) With 4 threaded holes M16 on the front face, pitch circle diameter = 101.6 mm and with 4 threaded holes M20 on the front face, pitch circle diameter = 177.8 mm / Without Through Coolant
4) With 4 threaded holes M16 on the front face, pitch circle diameter = 101.6 mm and with 4 threaded holes M20 on the front face, pitch circle diameter = 177.8 mm

	TORX® blade		 Key D		 Molykote		 Clamping screw		 Solid Carbide support S		 Threaded sleeve		 Torque screwdriver	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		2A/28		2A/28		2A/28		2A/28		Y7	
125 - 315	4,90	**037**	10,25	**114**	4,60	**303**	4,29	**302**	13,43	**01500**	15,19	**01400**	135,90	**193**

SDKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
SDKT 1907..	19,15	6	19,15	1,5	7,35	15
SDKT 1907..	19,15	6	19,15	1,5	7,16	15



SD..

SDKT

	-M50 CTCP220	-R50 CTPP225	-R50 CTCP230	-M50 CTPP235	-R50 CTPP235	-R50 CTPM225	-R50 CTCK215
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	SDKT	SDKT	SDKT	SDKT	SDKT	SDKT	SDKT
	51 131 ...	**51 132 ...**	**51 132 ...**	**51 131 ...**	**51 132 ...**	**51 132 ...**	**51 132 ...**
ISO RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1907AESN 1,6	32,58 **22001**	32,58 **07000**	32,58 **02100**	32,58 **12000**	32,58 **12300**	32,58 **22200**	32,58 **52000**
P	●	●	●	●	●	●	
M				○	○	●	
K			○	○	○		●
N							
S							
H							
O							

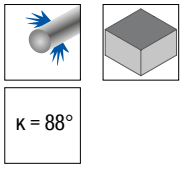
Milling guide

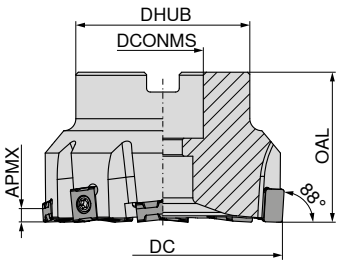
Cutting data standard values	→ 141–144	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

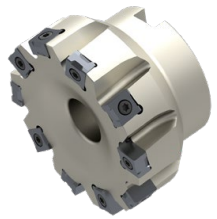
15

MaxiMill – Shell mill HEC 11

▲ not adjustable







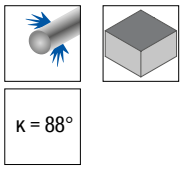
50 725 ...

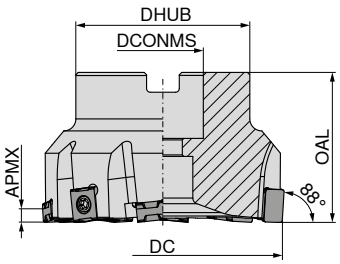
ISO designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
AHEC.50.R.06-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	559,10	**050**
AHEC.63.R.08-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	671,20	**063**
AHEC.80.R.10-11	80	10	6	50	58	27	8000	3,2	LNHX 1106	820,50	**080**
AHEC.100.R.12-11	100	12	6	50	78	32	6400	3,2	LNHX 1106	957,50	**100**
AHEC.125.R.12-11	125	12	6	63	88	40	5100	3,2	LNHX 1106	1.094,00	**125**
AHEC.125.R.16-11	125	16	6	63	88	40	5100	3,2	LNHX 1106	1.102,00	**12516**
AHEC.160.R.20-11	160	20	6	63	100	40	4000	3,2	LNHX 1106	1.606,00	**160** [1]

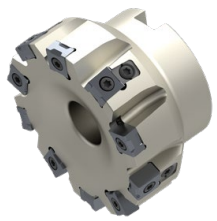
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

MaxiMill – Shell mill HEC 11

▲ Axially adjustable with same tooth pitch







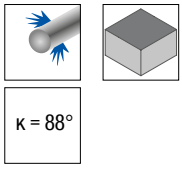
50 733 ...

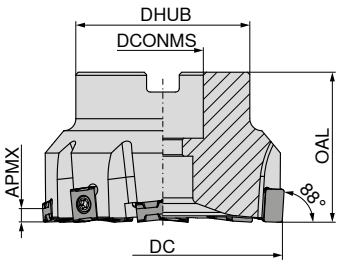
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
AHEC.50.R.06A03-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	847,20	**050**
AHEC.63.R.08A04-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	1.055,00	**063**
AHEC.80.R.10A05-11	80	10	6	50	58	27	8000	3,2	LNHX 1106	1.301,00	**080**
AHEC.100.R.12A06-11	100	12	6	50	78	32	6400	3,2	LNHX 1106	1.535,00	**100**
AHEC.125.R.16A08-11	125	16	6	63	88	40	5100	3,2	LNHX 1106	2.076,00	**125**
AHEC.160.R.20A10-11	160	20	6	63	100	40	4000	3,2	LNHX 1106	2.566,00	**160** [1]

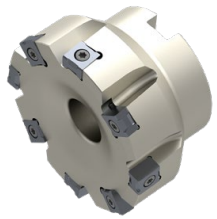
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

MaxiMill – Shell mill HEC 11

▲ with irregular pitch, non adjustable







Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 733 ... EUR 2B/40	
AHEC.50.R.04B-11	50	4	6	40	48	22	12700	3,2	LNHX 1106	436,10	**550**
AHEC.63.R.06B-11	63	6	6	40	48	22	10100	3,2	LNHX 1106	542,00	**563**
AHEC.80.R.08B-11	80	8	6	50	58	27	8000	3,2	LNHX 1106	694,60	**580**
AHEC.100.R.10B-11	100	10	6	50	78	32	6400	3,2	LNHX 1106	892,80	**600**
AHEC.125.R.12B-11	125	12	6	63	88	40	5100	3,2	LNHX 1106	1.092,00	**625**
AHEC.160.R.14B-11	160	14	6	63	100	40	4000	3,2	LNHX 1106	1.355,00	**660** [1]

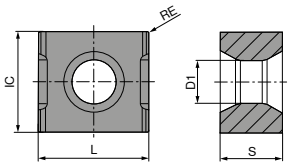
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

	TORX® blade		 Molykote		 Coolant Disc		 Clamping screw		 Wedge		 Torque screwdriver	
	80 950 ...		70 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts DC	EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
50 - 63	4,90	**036**	4,60	**303**	25,94	**852**	3,30	**113**			135,90	**193**
80	4,90	**036**	4,60	**303**	26,50	**853**	3,30	**113**	38,64	**199**	135,90	**193**
100	4,90	**036**	4,60	**303**	29,74	**854**	3,30	**113**			135,90	**193**
125	4,90	**036**	4,60	**303**	39,20	**855**	3,30	**113**			135,90	**193**
160	4,90	**036**	4,60	**303**			3,30	**113**			135,90	**193**

15

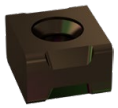
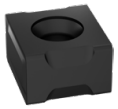
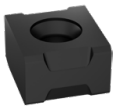
LNHX

Designation	IC mm	D1 mm	L mm	S mm
LNHX 1106..	10	4,27	11	6,35



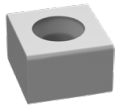
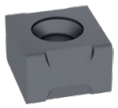
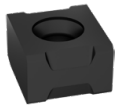
LNHX

LNHX

		CTEP210 DRAGONSKIN		CTCK215 DRAGONSKIN		-R50 CTCK215 DRAGONSKIN		-Q CTCK215 DRAGONSKIN	
									
		CERMET LNHX		LNHX		LNHX		LNHX	
		51 046 ...		51 046 ...		51 024 ...		51 045 ...	
ISO	RE mm	EUR 1B/79		EUR 1B/61		EUR 1B/61		EUR 1B/61	
1106PNER	0,5			27,21	520	27,21	520		
1106ZZER	0,5							27,21	520 1)
1106PNER	0,8	31,54	820						
110616EN	1,6			27,21	51600				
P		●							
M									
K		●		●		●		●	
N									
S									
H									
O									

1) -Q = Wiper insert

LNHX

		CTPK220		-R50 CTPK220		CTN3105		CTL3215		-Q CTL3215	
		DRAGONSKIN		DRAGONSKIN							
											
		LNHX		LNHX		CERAMIC LNHX		CBN LNHX		CBN LNHX	
		51 046 ...		51 024 ...		50 500 ...		51 046 ...		51 045 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1G/55		EUR 1G/21		EUR 1G/21	
110608EN	0,8			27,21	608						
1106PNER	0,5	27,21	620	27,21	620						
1106PNSR	0,5					25,64	904				
1106PNSR								149,80	87200		
1106ZZER										149,80	87000 1)
P											
M											
K		●		●		●		●		●	
N											
S											
H									○		○
O											

1) -Q = Wiper insert

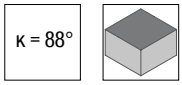
Milling guide

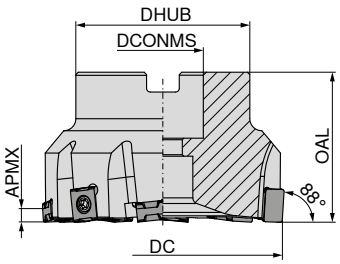
Cutting data standard values	→ 141–144	Assembly instructions	→ 152
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

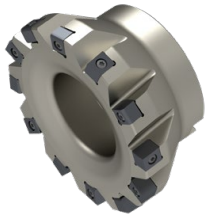
15

MaxiMill – Shell mill HEC 12

▲ not adjustable







Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 725 ... EUR 2B/40	
AHEC.125.R.12-1210	125	12	8	63	88	40	5000	3,2	LN.. 1210..	1.094,00	**32512**
AHEC.160.R.16-1210	160	16	8	63	88	40	3900	3,2	LN.. 1210..	1.284,00	**36016** [1)]

1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant


Key D

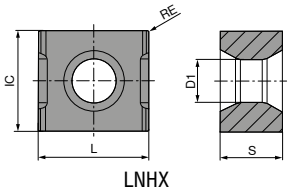

Coolant Disc


Clamping screw

Spare parts	80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
DC						
125 - 160	7,26	**105**	39,20	**855**	4,29	**10800**

LNHX / LNEX

Designation	IC mm	D1 mm	L mm	S mm
LN.X 1210..	10	4,4	12,7	10,00



LNHX

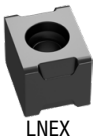
LNHX / LNEX


CTCK215


CTPK220


-R50 CTPK220


LNHX


LNEX


LNHX

ISO	RE mm	51 135 ... EUR 1B/61		51 133 ... EUR 1B/61		51 134 ... EUR 1B/61	
121008EN	0,8					34,00	**60800**
121008SN	0,8	34,00	**50900**				
121020EN	2,0			31,28	**62000**		
121020SN	2,0	34,00	**52100**				

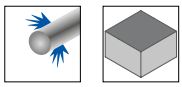
P			
M			
K	●	●	●
N			
S			
H			
O			

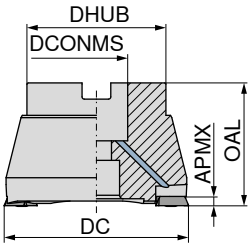
Milling guide

Cutting data standard values	→ 141–144	Assembly instructions	→ 152
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

Finishing cutter F 5000 A

- With µm-adjustable inserts
- Adjust with screw (56 950 017) and set with Torx 20 key (80 950 114)







ISO designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	56 511 ... EUR WA	
F5000A.42.2.43.IK	42	2	0,2	43	16	35	3,2	TEHX 16T3..	331,60	**421**
F5000A.52.2.43.IK	52	2	0,2	43	22	48	3,2	TEHX 16T3..	400,80	**521**
F5000A.66.2.53.IK	66	2	0,2	53	27	60	3,2	TEHX 16T3..	467,60	**661**
F5000A.80.2.53.IK	80	2	0,2	53	27	60	3,2	TEHX 16T3..	535,70	**801**
F5000A.100.2.53	100	2	0,2	53	32	70	3,2	TEHX 16T3..	602,70	**910** 1)

1) Without Through Coolant

	TORX® blade		 Key-T		 Key D		 Power Screw		 Axial runout adjustment screw		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		80 950 ...		80 950 ...		56 950 ...		56 950 ...		70 950 ...		56 950 ...		80 950 ...	
Spare parts DC	EUR Y7		EUR Y7		EUR Y7		EUR WA		EUR WA		EUR 2A/28		EUR WA		EUR Y7	
42	4,90	**036**	4,59	**088**	10,25	**114**	24,84	**121**	3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
52	4,90	**036**	4,59	**088**	9,56	**113**			3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
66	4,90	**036**	4,59	**088**	9,56	**113**			3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
80	4,90	**036**	4,59	**088**	9,56	**113**			3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
100	4,90	**036**	4,59	**088**	9,56	**113**	24,84	**121**	3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**

Description of article

- Tightening torque of the indexable insert clamping screw 56 950 028 is 3.2 Nm.
- This tool produces surfaces with excellent surface quality Rz ≤ 2.5 µm with high axial run-out precision.
- The two precision adjustment screws make adjustment to µm accuracy possible.
- Additional grinding is therefore avoided, so machining time and costs are reduced.
- The tool is also well-suited for unstable workpieces and low power machines.

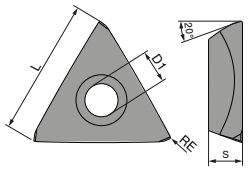
The screws for the adjustment of the axial run-out are mounted on every milling cutter and have to be tightened to a preset value. Otherwise there is the danger that the screws loosen during the machining operation. This can result in damage of the workpiece or tool and also cause danger for the machine operator. Should the screws for fine adjustment not be needed we recommend to remove them from the tool.

Material	v_c m/min	f_z mm	a_p mm
Steel	150–250*)	0,5–2	0,05–0,2
Cast iron	150–250*)	0,5–2	0,05–0,2
Hardened materials ≤ 56 HRC	35–200*)	0,2–1	0,05–0,1

*) Depending on the machining and structural state of the processed workpiece.

TEHX

Designation	L mm	S mm	D1 mm
TEHX 16T3..	14,32	4,00	3,9



TEHX





TEHX

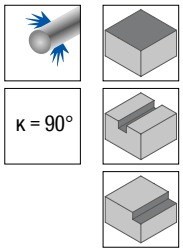
56 327 ...

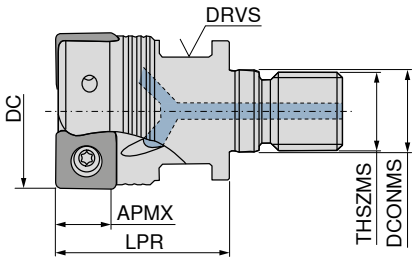
ISO	RE mm	EUR WB	
16T3ZF	0,2	22,24	**151**
P			●
M			●
K			●
N			
S			
H			●
O			

Milling guide

Cutting data standard values	→ 141–144	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

MaxiMill – Screw in cutter G 491

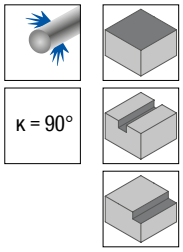


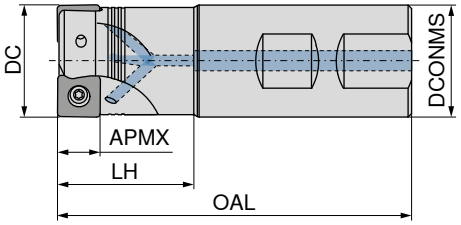




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 773 ... EUR 2B/40	
G491.25.R.03-09	25	3	6	35	M12	12,5	17	2	SNHU 09T3	361,80	125
G491.32.R.03-09	32	3	6	35	M16	17,0	24	2	SNHU 09T3	367,30	132
G491.32.R.04-09	32	4	6	35	M16	17,0	24	2	SNHU 09T3	410,40	232

MaxiMill – End milling cutter C 491







Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	torque moment Nm	Insert	A 50 774 ... EUR 2B/40		B 50 774 ... EUR 2B/40	
C491.25.R.03-09-B-32	25	3	6	89	32	25	23500	2	SNHU 09T3			367,30	425
C491.25.R.03-09-A-50-225	25	3	6	225	50	25	23500	2	SNHU 09T3	367,30	325		
C491.32.R.03-09-B-40	32	3	6	101	40	32	19600	2	SNHU 09T3			378,00	632
C491.32.R.04-09-B-40	32	4	6	101	40	32	19600	2	SNHU 09T3			410,40	432
C491.32.R.03-09-A-63-250	32	3	6	250	63	32	19600	2	SNHU 09T3	378,00	532		
C491.32.R.04-09-A-63-250	32	4	6	250	63	32	19600	2	SNHU 09T3	410,40	332		

TORX® blade


Key D


Molykote

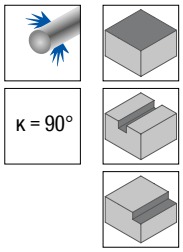

Clamping screw

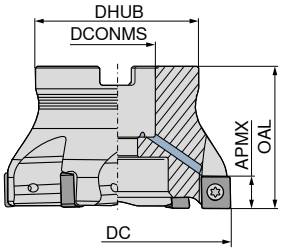

Torque screwdriver

Spare parts DC	80 950 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
25 - 32	5,42	053	9,18	119	4,60	303	3,24	710	135,90	193
32	5,42	054	12,25	128	4,60	303	3,30	859	135,90	193

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MaxiMill – Shell mill A 491







Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 776 ... EUR 2B/40		50 775 ... EUR 2B/40	
A491.40.R.03-09	40	3	6	40	38	16	16800	2	SNHU 09T3			399,50	240
A491.40.R.05-09	40	5	6	40	38	16	16800	2	SNHU 09T3	464,40	240		
A491.50.R.04-09	50	4	6	40	43	22	14600	2	SNHU 09T3			442,80	250
A491.50.R.06-09	50	6	6	40	43	22	14600	2	SNHU 09T3	507,60	250		
A491.63.R.05-09	63	5	6	40	48	22	12700	2	SNHU 09T3			529,20	263
A491.63.R.08-09	63	8	6	40	48	22	12700	2	SNHU 09T3	626,30	263		
A491.80.R.06-09	80	6	6	50	58	27	11100	2	SNHU 09T3			561,70	280
A491.80.R.10-09	80	10	6	50	58	27	11100	2	SNHU 09T3	691,20	280		
A491.100.R.07-09	100	7	6	50	78	32	9800	2	SNHU 09T3			712,80	300
A491.100.R.12-09	100	12	6	50	78	32	9800	2	SNHU 09T3	874,80	300		
A491.125.R.08-09	125	8	6	63	88	40	8700	2	SNHU 09T3			864,00	325
A491.125.R.15-09	125	15	6	63	88	40	8700	2	SNHU 09T3	1.059,00	325		

TORX® blade


Clamping key - T


Key D


Power Screw


Molykote

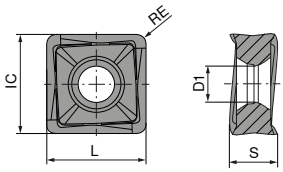

Clamping screw


Torque screwdriver

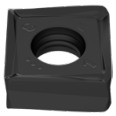
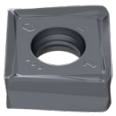
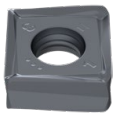
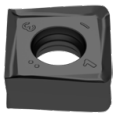
Spare parts DC	80 950 ... EUR Y7		80 397 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
40	5,42	053	4,03	040	9,18	119	13,10	151	4,60	303	3,24	710	135,90	193
50 - 125	5,42	053			9,18	119			4,60	303	3,24	710	135,90	193

SNHU

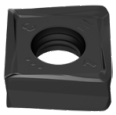
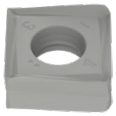
Designation	IC mm	L mm	S mm	D1 mm
SNHU 09T3..	9,15	9,15	3,70	3,85



SNHU

		-M50 CTCP230	-M50 CTPP235	-F50 CTPM240	-M50 CTPM240	-F40 CTPM245	NEW -F40 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		SNHU	SNHU	SNHU	SNHU	SNHU	SNHU
		51 120 ...	51 120 ...	51 119 ...	51 120 ...	51 126 ...	51 126 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
09T308ER	0,8					28,83 45800	28,83 90801
09T308SR	0,8	23,05 008	23,05 108	23,05 408	23,05 408		
09T312SR	1,2	23,05 01200	23,05 11200	23,05 41200	23,05 41200		
09T316SR	1,6	23,05 01600	23,05 11600	23,05 41600	23,05 41600		
P		●	●	○	○	●	●
M			○	●	●	●	●
K		○	○				
N							
S							○
H							
O							

SNHU

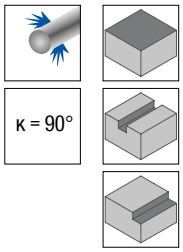
		-R50 CTCK215	NEW -R50 CTPK220	-F10 CTWN215	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN			DRAGONSKIN	DRAGONSKIN
						
		SNHU	SNHU	SNHU	SNHU	SNHU
		51 121 ...	51 121 ...	51 118 ...	51 126 ...	51 126 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17
09T308ER	0,8				28,83 15800	28,83 55800
09T308FR	0,8			23,05 358		
09T308SR	0,8	23,05 508	23,05 60800			
09T312FR	1,2			23,05 36200		
09T312SR	1,2	23,05 51200				
09T316FR	1,6			23,05 36600		
09T316SR	1,6	23,05 51600				
P						
M						
K		●	●	○		
N				●		
S					●	●
H						
O				○		

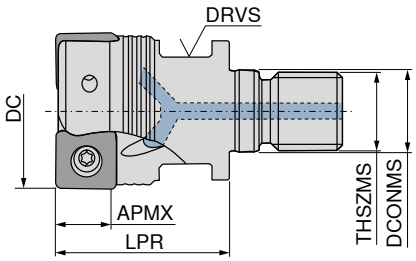
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 154
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

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MaxiMill – Screw in cutter G 491

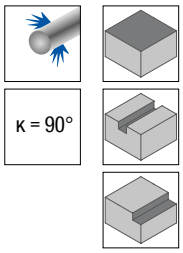


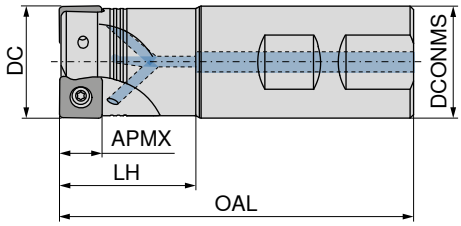




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 773 ... EUR 2B/40	
G491.32.R.02-12	32	2	8	35	M16	17	24	3,2	SNHU 1204	345,70	032

MaxiMill – End milling cutter C 491









Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	torque moment Nm	Insert	A 50 774 ... EUR 2B/40		B 50 774 ... EUR 2B/40	
C491.32.R.02-12-B-40	32	2	8	102	40	32	13600	3,2	SNHU 1204			345,70	032
C491.32.R.02-12-A-63-250	32	2	8	250	63	32	10200	3,2	SNHU 1204	345,70	232		

TORX® blade


Key D

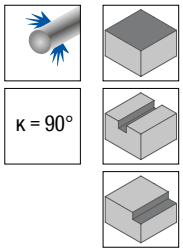

Molykote

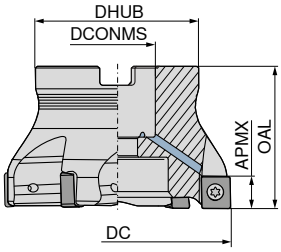

Clamping screw


Torque screwdriver

Spare parts DC	80 950 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
25 - 32	5,42	053	9,18	119	4,60	303	3,24	710	135,90	193
32	5,42	054	12,25	128	4,60	303	3,30	859	135,90	193

MaxiMill – Shell mill A 491







Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS H6 mm	RPMX 1/min.	torque moment Nm	Insert	50 776 ... EUR 2B/40		50 775 ... EUR 2B/40	
A491.40.R.03-12	40	3	8	40	38	16	11500	3,2	SNHU 1204			399,50	**040**
A491.40.R.04-12	40	4	8	40	38	16	11500	3,2	SNHU 1204	432,00	**040**		
A491.50.R.04-12	50	4	8	40	43	22	9800	3,2	SNHU 1204			442,80	**050**
A491.50.R.05-12	50	5	8	40	43	22	9800	3,2	SNHU 1204	475,20	**050**		
A491.63.R.05-12	63	5	8	40	48	22	8500	3,2	SNHU 1204			529,20	**063**
A491.63.R.06-12	63	6	8	40	48	22	8500	3,2	SNHU 1204	561,70	**063**		
A491.80.R.06-12	80	6	8	50	58	27	7400	3,2	SNHU 1204			561,70	**080**
A491.80.R.08-12	80	8	8	50	58	27	7400	3,2	SNHU 1204	648,00	**080**		
A491.100.R.07-12	100	7	8	50	78	32	6500	3,2	SNHU 1204			712,80	**100**
A491.100.R.10-12	100	10	8	50	78	32	6500	3,2	SNHU 1204	810,10	**100**		
A491.125.R.08-12	125	8	8	63	88	40	5700	3,2	SNHU 1204			864,00	**125**
A491.125.R.12-12	125	12	8	63	88	40	5700	3,2	SNHU 1204	993,60	**125**		
A491.160.R.09-12	160	9	8	63	98	40	5000	3,2	SNHU 1204			1.004,00	**160** [1]
A491.160.R.14-12	160	14	8	63	98	40	5000	3,2	SNHU 1204	1.167,00	**160** [1]		

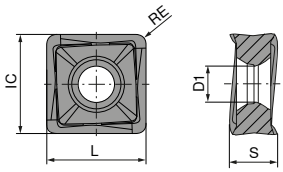
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

Spare parts DC	TORX® blade 80 950 ... EUR Y7		Clamping key - T 80 397 ... EUR Y7		Key D 80 950 ... EUR Y7		Power Screw 70 950 ... EUR 2A/28		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
40	5,42	**054**	4,03	**040**	12,25	**128**	13,10	**151**	4,60	**303**	3,30	**859**	135,90	**193**
50 - 160	5,42	**054**			12,25	**128**			4,60	**303**	3,30	**859**	135,90	**193**

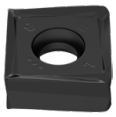
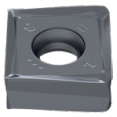
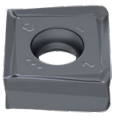
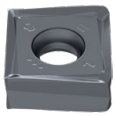
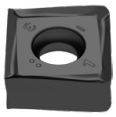
15

SNHU

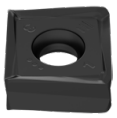
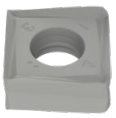
Designation	IC mm	L mm	S mm	D1 mm
SNHU 1204..	12,2	12,2	5,00	4,4



SNHU

		-M50 CTCP230		-M50 CTPP235		-F50 CTPM240		-M50 CTPM240		-F40 CTPM245		NEW -F40 CTCM245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
													
		SNHU		SNHU		SNHU		SNHU		SNHU		SNHU	
		51 100 ...		51 100 ...		51 102 ...		51 100 ...		51 128 ...		51 128 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1H/17		EUR 1H/17	
120408ER	0,8									34,62	45800	34,62	90801
120408SR	0,8	28,15	008	28,15	108	28,15	408	28,15	408				
120412SR	1,2			28,15	112	28,15	412						
120416SR	1,6			28,15	116	28,15	416						
120420SR	2,0			28,15	120	28,15	420						
P		●		●		○		○		●		●	
M				○		●		●		●		●	
K		○		○									
N													
S												○	
H													
O													

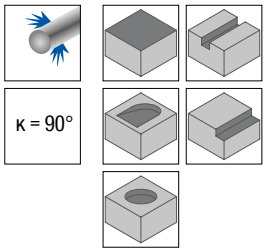
SNHU

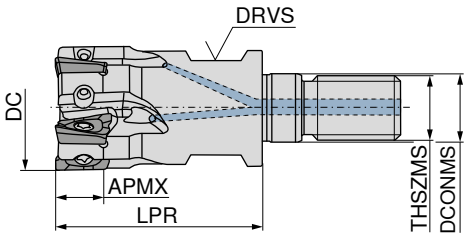
		-R50 CTCK215		-R50 CTPK220		-F10 CTWN215		-F40 CTC5240		-F40 CTCS245	
		DRAGONSKIN		DRAGONSKIN				DRAGONSKIN		DRAGONSKIN	
											
		SNHU		SNHU		SNHU		SNHU		SNHU	
		51 103 ...		51 103 ...		51 101 ...		51 128 ...		51 128 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 17		EUR 17	
120408ER	0,8							34,62	15800	34,62	55800
120408FR	0,8					28,15	358				
120408SR	0,8	28,15	508	28,15	608						
120412FR	1,2					28,15	362				
120412SR	1,2	28,15	512								
120416FR	1,6					28,15	366				
120416SR	1,6	28,15	516								
120420FR	2,0					28,15	370				
120420SR	2,0	28,15	520								
P											
M											
K		●		●		○					
N						●					
S								●		●	
H											
O						○					

Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 154
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

MaxiMill – Screw in cutter G 211-07

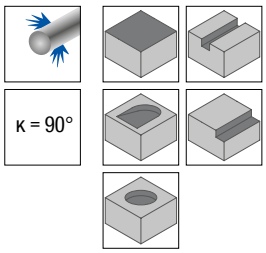


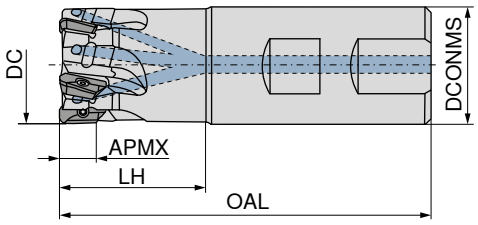




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 751 ... EUR 2B/40	
G211.16.R.04-07	16	4	6	27	8,5	M8	10	50400	1	XD.T 0703	276,00	016
G211.20.R.05-07	20	5	6	33	10,5	M10	15	44280	1	XD.T 0703	308,00	020
G211.25.R.06-07	25	6	6	35	12,5	M12	17	39480	1	XD.T 0703	359,30	025
G211.32.R.08-07	32	8	6	35	17,0	M16	24	36240	1	XD.T 0703	391,20	032

MaxiMill – End milling cutter C 211-07

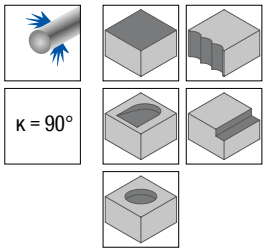


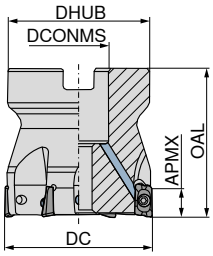


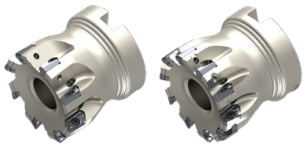


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	torque moment Nm	Insert	A 50 752 ... EUR 2B/40		B 50 752 ... EUR 2B/40	
C211.10.R.01-07-A-20	10	1	6	61,0	20	10	72000	1	XD.T 0703	218,40	010		
C211.12.R.02-07-A-20	12	2	6	66,5	20	12	66600	1	XD.T 0703	250,30	012		
C211.16.R.04-07-A/B-25	16	4	6	74,5	25	16	50400	1	XD.T 0703	276,00	016	276,00	216
C211.16.R.03-07-A-32-165	16	3	6	165,0	32	16	17760	1	XD.T 0703	256,70	116		
C211.20.R.05-07-A/B-25	20	5	6	77,0	25	20	44280	1	XD.T 0703	308,00	020	308,00	220
C211.20.R.04-07-A-40-200	20	4	6	200,0	40	20	12600	1	XD.T 0703	288,70	120		
C211.25.R.06-07-A/B20-32	25	6	6	84,0	32	20	39840	1	XD.T 0703	359,30	025	359,30	225
C211.25.R.05-07-A20-50-225	25	5	6	225,0	50	20	11280	1	XD.T 0703	320,90	125		
C211.32.R.08-07-A/B25-40	32	8	6	98,0	40	25	36240	1	XD.T 0703	391,20	032	391,20	232

MaxiMill – Shell mill A 211-07







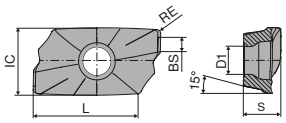
Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 753 ... EUR 2B/40		50 754 ... EUR 2B/40	
A211.32.R.06-07	32	6	6	40	16	38	36240	1	XD.T 0703	327,40	**032**		
A211.32.R.08-07	32	8	6	40	16	38	36240	1	XD.T 0703			365,80	**032**
A211.40.R.08-07	40	8	6	40	16	38	33240	1	XD.T 0703	404,30	**040**		
A211.40.R.10-07	40	10	6	40	16	38	33240	1	XD.T 0703			442,80	**040**
A211.50.R.10-07	50	10	6	40	22	43	30480	1	XD.T 0703	481,20	**050**		
A211.50.R.12-07	50	12	6	40	22	43	30480	1	XD.T 0703			519,60	**050**

Spare parts DC	TORX® blade 80 950 ... EUR Y7		Clamping key - T 80 397 ... EUR Y7		Key D 80 950 ... EUR Y7		Power Screw 70 950 ... EUR 2A/28		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
10 - 32	5,42	**051**			10,53	**124**			4,60	**303**	3,34	**137**	122,50	**191**
32	5,42	**051**	4,03	**040**	10,53	**124**	13,10	**151**	4,60	**303**	3,34	**137**	122,50	**191**
40 - 50	5,42	**051**			10,53	**124**			4,60	**303**	3,34	**137**	122,50	**191**

15

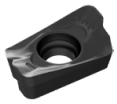
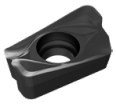
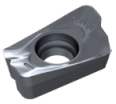
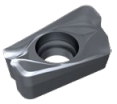
XDKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDKT 0703..	4,9	2,5	7,8	1,2	3,18

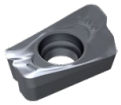
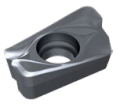
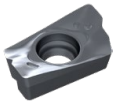
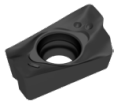


XDKT

XDKT

ISO	RE mm	-F50 CTCP230 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-F50 CTPP235 DRAGONSKIN	-M50 CTPP235 DRAGONSKIN
		 XDKT	 XDKT	 XDKT	 XDKT
		51 033 ...	51 036 ...	51 033 ...	51 036 ...
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
070304SR	0,4	12,14 004	12,14 004	12,14 104	12,14 104
070308SR	0,8	12,14 008	12,14 008	12,14 108	12,14 108
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

XDKT

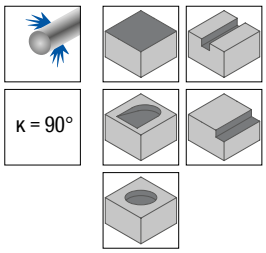
ISO	RE mm	-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F40 CTPM245 DRAGONSKIN	NEW -F40 CTCM245 DRAGONSKIN	-F20 CTWN215	-F40 CTC5240 DRAGONSKIN	-F40 CTCS245 DRAGONSKIN
		 XDKT	 XDKT	 XDKT	 XDKT	 XDKT	 XDKT	 XDKT
		51 033 ...	51 036 ...	51 112 ...	51 112 ...	50 507 ...	50 498 ...	51 112 ...
		EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1A/90	EUR 17	EUR 17
070304ER	0,4			14,50 454	14,50 90401		14,50 544	
070304FR	0,4					14,93 504		
070304SR	0,4	12,14 404	12,14 404					
070308ER	0,8			14,50 458	14,50 90801		14,50 548	14,50 558
070308FR	0,8					14,93 508		
070308SR	0,8	12,14 408	12,14 408					
P		○	○	●	●			
M		●	●	●	●			
K						○		
N						●		
S					○		●	●
H								
O						○		

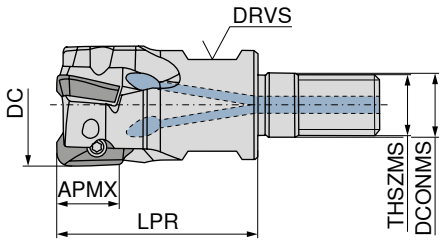
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 155
Starting Parameter	→ 155	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

MaxiMill – Screw in cutter G 211-11

▲ Insert radius >1,6 mm: Modify cutter body



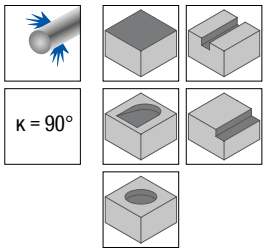


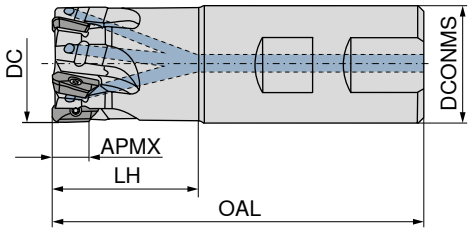


Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 736 ... EUR 2B/40	
G211.16.R.02-11	16	2	10	27	8,5	M8	10	42000	1,6	XD.T 11T3	237,40	016
G211.20.R.03-11	20	3	10	33	10,5	M10	15	36900	1,6	XD.T 11T3	269,60	020
G211.25.R.03-11	25	3	10	35	12,5	M12	17	33200	1,6	XD.T 11T3	282,30	12500
G211.25.R.04-11	25	4	10	35	12,5	M12	17	33200	1,6	XD.T 11T3	301,70	025
G211.32.R.04-11	32	4	10	35	17,0	M16	24	30200	1,6	XD.T 11T3	314,50	13200
G211.32.R.05-11	32	5	10	35	17,0	M16	24	30200	1,6	XD.T 11T3	333,80	032
G211.40.R.06-11	40	6	10	35	17,0	M16	27	27700	1,6	XD.T 11T3	365,80	040

MaxiMill – End milling cutter C 211-11

▲ Insert radius >1,6 mm: Modify cutter body



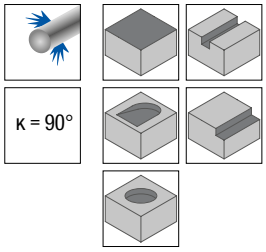


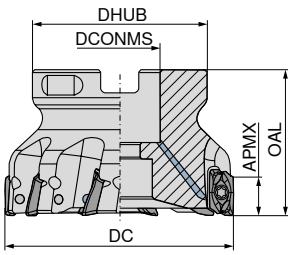


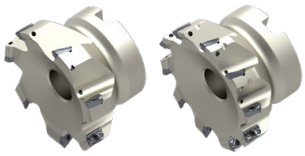
Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	torque moment Nm	Insert	A 50 737 ... EUR 2B/40		B 50 737 ... EUR 2B/40	
C211.12.R.01-11-B-20	12	1	10	75	20	16	55000	1,6	XD.T 11T3			211,80	012
C211.16.R.02-11-A/B-25	16	2	10	75	25	16	42000	1,6	XD.T 11T3	237,40	116	237,40	016
C211.16.R.02-11-A15-32-165	16	2	10	165	32	15	14800	1,6	XD.T 11T3	237,40	316		
C211.16.R.02-11-A-32-165	16	2	10	165	32	16	14800	1,6	XD.T 11T3	237,40	216		
C211.20.R.03-11-A-25	20	3	10	77	25	20	36900	1,6	XD.T 11T3	269,60	120		
C211.20.R.02-11-B-25	20	2	10	77	25	20	36900	1,6	XD.T 11T3			250,30	02002
C211.20.R.02-11-A-25	20	2	10	77	25	20	36900	1,6	XD.T 11T3	250,30	12002		
C211.20.R.03-11-B-25	20	3	10	77	25	20	36900	1,6	XD.T 11T3			269,60	020
C211.20.R.03-11-A-32-165	20	3	10	165	32	20	15800	1,6	XD.T 11T3	269,60	320		
C211.20.R.02-11-A-40-200	20	2	10	200	40	20	10500	1,6	XD.T 11T3	250,30	420		
C211.20.R.02-11-A19-40-200	20	2	10	200	40	19	10500	1,6	XD.T 11T3	250,30	620		
C211.25.R.03-11-A/B-32	25	3	10	90	32	25	33200	1,6	XD.T 11T3	282,40	625	282,40	725
C211.25.R.04-11-A/B-32	25	4	10	90	32	25	33200	1,6	XD.T 11T3	301,70	125	301,70	025
C211.25.R.04-11-A-40-165	25	4	10	165	40	25	19900	1,6	XD.T 11T3	301,70	325		
C211.25.R.03-11-A-50-225	25	3	10	225	50	25	9400	1,6	XD.T 11T3	282,40	425		
C211.25.R.02-11-A-50-225	25	2	10	225	50	25	9400	1,6	XD.T 11T3	263,30	02502		
C211.25.R.03-11-A24-50-225	25	3	10	225	50	24	9400	1,6	XD.T 11T3	282,40	825		
C211.32.R.04-11-A-40	32	4	10	102	40	32	30200	1,6	XD.T 11T3	314,50	13204		
C211.32.R.05-11-B25-40	32	5	10	102	40	25	30200	1,6	XD.T 11T3			333,80	73200
C211.32.R.04-11-B-25	32	4	10	102	40	32	30200	1,6	XD.T 11T3			314,50	83200
C211.32.R.04-11-A25-40	32	4	10	102	40	25	30200	1,6	XD.T 11T3	314,50	53204		
C211.32.R.05-11-A/B-40	32	5	10	102	40	32	30200	1,6	XD.T 11T3	333,80	132	333,80	032
C211.32.R.05-11-A-50-165	32	5	10	165	50	32	20900	1,6	XD.T 11T3	333,80	332		
C211.32.R.04-11-A-64-250	32	4	10	250	64	32	8500	1,6	XD.T 11T3	314,50	432		
C211.40.R.06-11-B32-50	40	6	10	110	50	32	27700	1,6	XD.T 11T3			365,80	04000
C211.40.R.06-11-B-50	40	6	10	122	50	40	27700	1,6	XD.T 11T3			365,80	14000

MaxiMill – Shell mill A 211-11

▲ Insert radius >1,6 mm: Modify cutter body







Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 738 ... EUR 2B/40		50 739 ... EUR 2B/40	
A211.40.R.04-11	40	4	10	40	16	38	27700	1,6	XD.T 11T3	327,40	**040**		
A211.40.R.06-11	40	6	10	40	16	38	27700	1,6	XD.T 11T3			365,80	**040**
A211.50.R.08-11	50	8	10	40	22	43	25400	1,6	XD.T 11T3			442,90	**050**
A211.50.R.05-11	50	5	10	40	22	43	25400	1,6	XD.T 11T3	385,00	**050**		
A211.63.R.10-11	63	10	10	40	22	48	23300	1,6	XD.T 11T3			519,80	**063**
A211.63.R.06-11	63	6	10	40	22	48	23300	1,6	XD.T 11T3	442,90	**063**		
A211.80.R.10-11	80	10	10	50	27	58	21300	1,6	XD.T 11T3			558,40	**180**
A211.80.R.07-11	80	7	10	50	27	58	21300	1,6	XD.T 11T3	500,70	**080**		
A211.80.R.12-11	80	12	10	50	27	58	21300	1,6	XD.T 11T3			596,90	**08012**
A211.100.R.08-11	100	8	10	50	32	78	19600	1,6	XD.T 11T3	558,40	**10000**		
A211.100.R.14-11	100	14	10	50	32	78	19600	1,6	XD.T 11T3			673,90	**10014**
A211.125.R.10-11	125	10	10	63	40	88	17900	1,6	XD.T 11T3	609,70	**12500**		

TORX® blade


Clamping key - T


Key D


Power Screw


Molykote

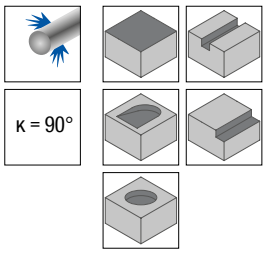

Clamping screw

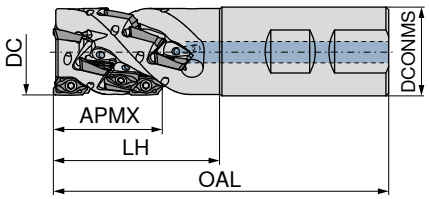

Torque screwdriver

Spare parts DC	80 950 ... EUR Y7		80 397 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
12	4,90	**043**			10,51	**125**			4,60	**303**	2,70	**116**	122,50	**191**
16 - 32	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**128**	122,50	**191**
40	4,90	**043**	4,03	**040**	10,51	**125**	13,10	**151**	4,60	**303**	4,29	**131**	122,50	**191**
50	4,90	**043**	4,37	**050**	10,51	**125**	18,00	**154**	4,60	**303**	4,29	**131**	122,50	**191**
63 - 125	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**131**	122,50	**191**

MaxiMill – Shell end mill C 211-11KN

▲ ZEFP = Number of inserts
▲ ZNP = Number of teeth







NEW

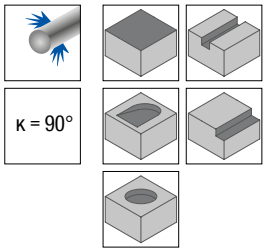
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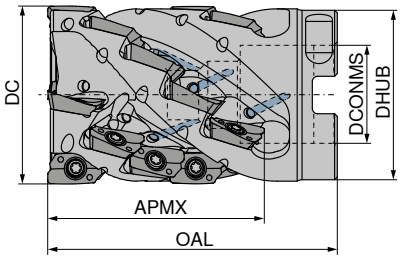
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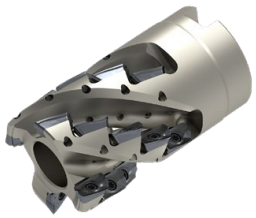
ISO designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	EUR 2B/40	
C211.25.R.02KN3-11-B-40	25	2	28	97	40	25	6	3	1,6	XD.T 11T3	654,40	02523
C211.25.R.02KN4-11-B-50	25	2	37	107	50	25	8	4	1,6	XD.T 11T3	692,80	02524
C211.25.R.02KN5-11-B-60	25	2	46	117	60	25	10	5	1,6	XD.T 11T3	738,90	02525
C211.32.R.02KN4-11-B-50	32	2	37	111	50	32	8	4	1,6	XD.T 11T3	717,70	03224
C211.32.R.03KN5-11-B-60	32	3	46	121	60	32	15	5	1,6	XD.T 11T3	865,90	03235
C211.40.R.03KN4-11-B32-50	40	3	37	111	50	32	12	4	1,6	XD.T 11T3	823,60	04034
C211.40.R.04KN5-11-B32-60	40	4	46	121	60	32	20	5	1,6	XD.T 11T3	992,90	04045

MaxiMill – Shell end mill A 211-11KN

▲ ZEFP = Number of inserts
▲ ZNP = Number of teeth







NEW

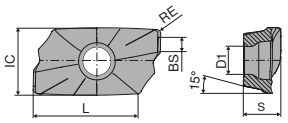
50 794 ...

ISO designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	EUR 2B/40	
A211.40.R.03KN4-11	40	3	37	12	4	65	22	38	1,6	XD.T 11T3	823,60	04034
A211.40.R.04KN4-11	40	4	37	16	4	65	22	38	1,6	XD.T 11T3	900,40	04044
A211.40.R.04KN5-11	40	4	46	20	5	74	22	38	1,6	XD.T 11T3	992,90	04045
A211.50.R.04KN5-11	50	4	46	20	5	75	27	48	1,6	XD.T 11T3	1.086,00	05045
A211.50.R.05KN5-11	50	5	46	25	5	75	27	48	1,6	XD.T 11T3	1.182,00	05055
A211.50.R.05KN6-11	50	5	55	30	6	85	27	48	1,6	XD.T 11T3	1.296,00	05056

Spare parts Designation	 Cylindrical screw 70 950 ... EUR 2A/28		TORX® blade 80 950 ... EUR Y7		Key D 80 950 ... EUR Y7		 Molykote 70 950 ... EUR 2A/28		 Clamping screw 70 950 ... EUR 2A/28		 Socket head screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
A211.40. KN4			4,90	043	10,51	125	4,60	303	7,44	20400	12,08	20900	122,50	191
A211.40. KN5			4,90	043	10,51	125	4,60	303	7,44	20400	12,08	21000	122,50	191
A211.50. KN5	12,08	002	4,90	043	10,51	125	4,60	303	7,44	20400	12,08	20600	122,50	191
A211.50. KN6	12,08	002	4,90	043	10,51	125	4,60	303	7,44	20400	12,08	20600	122,50	191
C211.25			4,90	043	10,51	125	4,60	303	7,44	20700			122,50	191
C211.32			4,90	043	10,51	125	4,60	303	7,44	20700			122,50	191
C211.40			4,90	043	10,51	125	4,60	303	7,44	20400			122,50	191

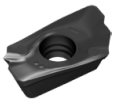
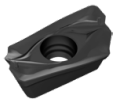
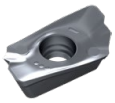
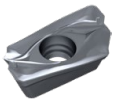
XDKT / XDHT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XD.T 11T302..	6,8	2,8	10,6	2	3,80
XD.T 11T304..	6,8	2,8	10,6	1,8	3,80
XD.T 11T308..	6,8	2,8	10,6	1,4	3,80
XD.T 11T312..	6,8	2,8	10,6	1,4	3,80
XD.T 11T316..	6,8	2,8	10,6	1,4	3,80
XD.T 11T320..	6,8	2,8	10,6	1,4	3,80
XD.T 11T325..	6,8	2,8	10,6	1,4	3,80
XD.T 11T332..	6,8	2,8	10,6	0,8	3,80
XD.T 11T340..	6,8	2,8	10,6	-	3,80
XDHT 11T350..	6,8	2,8	10,6	-	3,80
XDKT 11T332..	6,8	2,8	10,6	1,4	3,80
XDKT 11T332..	6,8	2,8	10,6	-	3,80

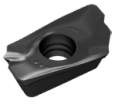
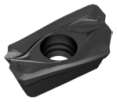
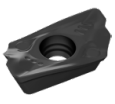
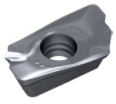
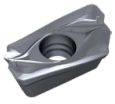
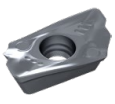


XDKT

XDKT

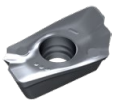
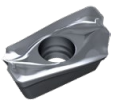
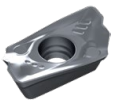
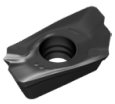
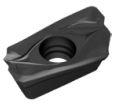
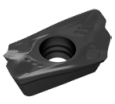
ISO	RE mm	-F50 CTCP220 DRAGONSKIN	-M50 CTCP220 DRAGONSKIN	-F50 CTPP225 DRAGONSKIN	-M50 CTPP225 DRAGONSKIN
		 XDKT	 XDKT	 XDKT	 XDKT
		51 034 ...	51 037 ...	51 034 ...	51 037 ...
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
11T308SR	0,8	14,76 258	14,76 258	14,76 058	14,76 058
P		●	●	●	●
M					
K					
N					
S					
H					
O					

XDKT

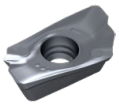
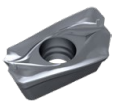
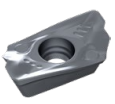
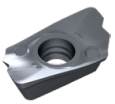
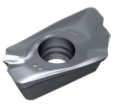
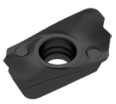
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		 XDKT	 XDKT	 XDKT	 XDKT	 XDKT	 XDKT
		51 034 ...	51 037 ...	51 039 ...	51 034 ...	51 037 ...	51 039 ...
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
11T304SR	0,4	14,76 004	14,76 004	14,76 004	14,76 104	14,76 104	14,76 104
11T308SR	0,8	14,76 008	14,76 008	14,76 008	14,76 108	14,76 108	14,76 108
11T312SR	1,2		14,76 012			14,76 112	
11T320SR	2,0	14,76 020 1)	14,76 020 1)	14,76 020 1)	14,76 120 1)	14,76 120 1)	14,76 120 1)
11T325SR	2,5	14,76 025 1)	14,76 025 1)	14,76 025 1)	14,76 125 1)	14,76 125 1)	14,76 125 1)
11T332SR	3,2				14,76 13200 1)		
11T340SR	4,0				14,76 14000 1)		
P		●	●	●	●	●	●
M					○	○	○
K		○	○	○	○	○	○
N							
S							
H							
O							

1) Insert radius >1.6 mm: Modify cutter body

XDKT

		-F50 CTPM225	-M50 CTPM225	-R50 CTPM225	-F50 CTCM235	-M50 CTCM235	-R50 CTCM235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 039 ...	51 034 ...	51 037 ...	51 039 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
11T308SR	0,8	14,76 208	14,76 208	14,76 208	14,76 308	14,76 308	14,76 308
P		●	●	●	●	●	●
M		●	●	●	●	●	●
K							
N							
S							
H							
O							

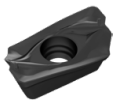
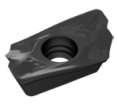
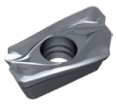
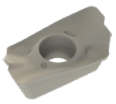
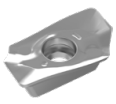
XDKT

		-F50 CTPM240	-M50 CTPM240	-R50 CTPM240	-F40 CTPM245	-F50 CTPM245	NEW -F40 CTCM245	NEW -F50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 039 ...	51 113 ...	51 034 ...	51 113 ...	51 034 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17	EUR 1H/17
11T304ER	0,4				18,99 454		18,99 90401	
11T304SR	0,4		14,76 404					
11T308ER	0,8				18,99 458		18,99 90801	
11T308SR	0,8	14,76 408	14,76 408	14,76 408		18,99 458		18,99 90801
11T312ER	1,2				18,99 462		18,99 91201	
11T312SR	1,2	14,76 412	14,76 412	14,76 412				
11T316ER	1,6				18,99 466		18,99 91601	
11T320ER	2,0				18,99 470 1)		18,99 92001 1)	
11T320SR	2,0	14,76 420 1)	14,76 420 1)	14,76 420 1)				
11T325ER	2,5				18,99 475 1)		18,99 92501 1)	
11T332ER	3,2				18,99 482 1)		18,99 93201 1)	
11T332SR	3,2	14,76 432 1)	14,76 432 1)	14,76 432 1)				
11T340ER	4,0				18,99 490 1)		18,99 94001 1)	
P		○	○	○	●	●	●	●
M		●	●	●	●	●	●	●
K								
N								
S							○	○
H								
O								

1) Insert radius >1.6 mm: Modify cutter body

15

XDKT / XDHT

		-M50 CTCK215 DRAGONSKIN		-R50 CTCK215 DRAGONSKIN		-M50 CTPK220 DRAGONSKIN		-F20 CTWN215		-27P H216T	
											
		XDKT		XDKT		XDKT		XDKT		XDHT	
		51 037 ...		51 039 ...		51 037 ...		50 478 ...		50 477 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1A/90		EUR 1A/90	
11T302FR	0,2							14,76	502	19,45	502
11T304FR	0,4							14,76	504	19,45	504
11T304SR	0,4	14,76	504								
11T308FR	0,8							14,76	508	19,45	508
11T308SR	0,8	14,76	508	14,76	508	14,76	608				
11T312FR	1,2									19,45	512
11T316FR	1,6									19,45	516
11T320FR	2,0							14,76	520 1)	19,45	520 1)
11T325FR	2,5							14,76	525 1)	19,45	525 1)
11T332FR	3,2									19,45	532 1)
11T340FR	4,0									19,45	540 1)
11T350FR	5,0									19,45	550 1)
P											
M											
K		●		●		●		○		○	
N								●		●	
S											
H											
O								○		○	

1) Insert radius >1.6 mm: Modify cutter body

XDKT

		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN		-R60 CTP6215	
							
		XDKT		XDKT		XDKT	
		50 463 ...		51 113 ...		50 464 ...	
ISO	RE mm	EUR 17		EUR 17		EUR 1B/61	
11T304ER	0,4	18,99	504				
11T308ER	0,8	18,99	500	18,99	558		
11T308SR	0,8					19,08	300
11T312ER	1,2	18,99	512	18,99	562		
11T316ER	1,6	18,99	516	18,99	566		
11T320ER	2,0	18,99	520 1)	18,99	570 1)		
11T325ER	2,5	18,99	525 1)	18,99	57500 1)		
11T332ER	3,2	18,99	532 1)	18,99	582 1)		
11T340ER	4,0	18,99	540 1)	18,99	59000 1)		
P							
M							
K						●	
N							
S		●		●			
H						●	
O							

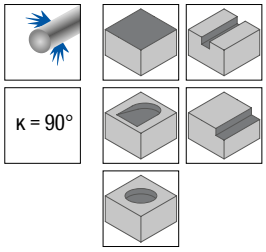
1) Insert radius >1.6 mm: Modify cutter body

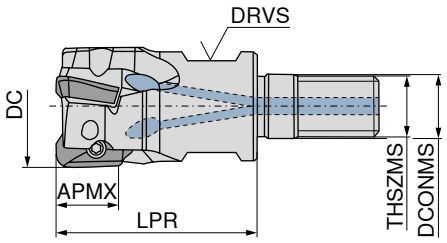
Milling guide

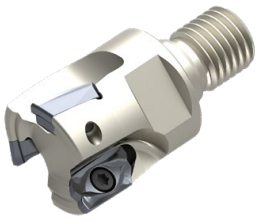
Cutting data standard values	→ 141–144	Machining strategy	→ 156
Starting Parameter	→ 156	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

MaxiMill – Screw in cutter G 211-15

▲ Insert radius >2,5 mm: Modify cutter body



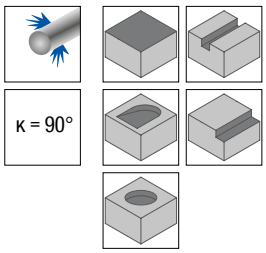


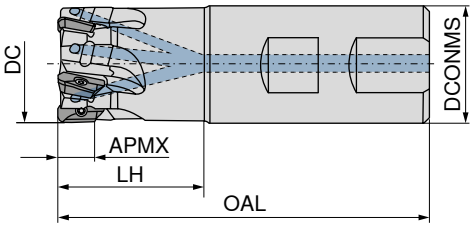


Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 746 ... EUR 2B/40	
G211.25.R.02-15	25	2	14	35	12,5	M12	17	26560	3,2	XD.T 1505	272,60	025
G211.32.R.03-15	32	3	14	35	17,0	M16	24	30200	3,2	XD.T 1505	303,50	032
G211.40.R.04-15	40	4	14	40	17,0	M16	27	27700	3,2	XD.T 1505	334,80	040

MaxiMill – End milling cutter C 211-15

▲ Insert radius >2,5 mm: Modify cutter body





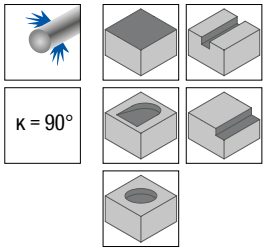


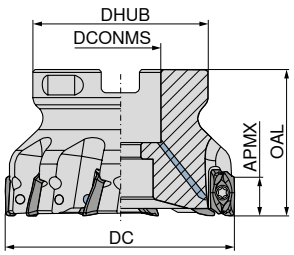
Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	torque moment Nm	Insert	A 50 747 ... EUR 2B/40		B 50 747 ... EUR 2B/40	
C211.25.R.02-15-B20-32	25	2	14	83	32	20	26560	3,2	XD.T 1505			272,60	125
C211.25.R.02-15-B/A-32	25	2	14	90	32	25	26560	3,2	XD.T 1505	272,60	225	272,60	025
C211.25.R.02-15-A-50-225	25	2	14	225	50	25	7520	3,2	XD.T 1505	254,10	325		
C211.32.R.03-15-B25-40	32	3	14	96	40	25	22160	3,2	XD.T 1505			303,50	132
C211.32.R.03-15-A-40	32	3	14	103	40	32	24160	3,2	XD.T 1505	303,50	232		
C211.32.R.03-15-B-40	32	3	14	103	40	32	24160	3,2	XD.T 1505			303,50	032
C211.32.R.03-15-A-63-250	32	3	14	250	63	32	6800	3,2	XD.T 1505	285,10	332		
C211.40.R.04-15-A-50	40	4	14	110	50	32	22160	3,2	XD.T 1505	334,80	240		
C211.40.R.04-15-B32-50	40	4	14	110	50	32	22160	3,2	XD.T 1505			334,80	040
C211.40.R.03-15-A-50-275	40	3	14	275	50	32	6120	3,2	XD.T 1505	315,90	340		

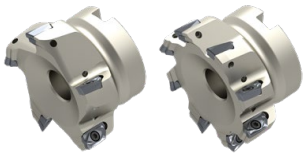
15

MaxiMill – Shell mill A 211-15

▲ Insert radius >2,5 mm: Modify cutter body







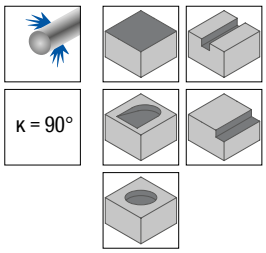
										50 748 ...		50 749 ...	
Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40		EUR 2B/40	
A211.40.R.03-15	40	3	14	40	16	38	22160	3,2	XD.T 1505	297,50	**040**		
A211.40.R.04-15	40	4	14	40	16	38	22160	3,2	XD.T 1505			334,80	**040**
A211.50.R.03-15	50	3	14	40	22	43	20320	3,2	XD.T 1505	353,20	**050**		
A211.50.R.05-15	50	5	14	40	22	43	20320	3,2	XD.T 1505			390,40	**050**
A211.63.R.04-15	63	4	14	45	22	48	18640	3,2	XD.T 1505	427,50	**063**		
A211.63.R.06-15	63	6	14	45	22	48	18640	3,2	XD.T 1505			465,10	**063**
A211.80.R.05-15	80	5	14	50	27	58	17040	3,2	XD.T 1505	483,30	**080**		
A211.80.R.08-15	80	8	14	50	27	58	17040	3,2	XD.T 1505			520,40	**080**
A211.100.R.06-15	100	6	14	50	32	78	15680	3,2	XD.T 1505	539,20	**100**		
A211.100.R.10-15	100	10	14	50	32	78	15680	3,2	XD.T 1505			576,30	**100**
A211.125.R.07-15	125	7	14	63	40	88	14320	3,2	XD.T 1505	570,00	**125**		
A211.125.R.11-15	125	11	14	63	40	88	14320	3,2	XD.T 1505			607,20	**125**
A211.160.R.08-15	160	8	14	63	40	93	13200	3,2	XD.T 1505	798,60	**160** [1]		
A211.160.R.12-15	160	12	14	63	40	93	13200	3,2	XD.T 1505			835,70	**160** [1]

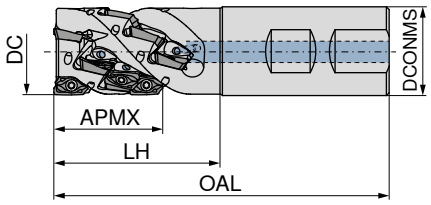
1) Without Through Coolant

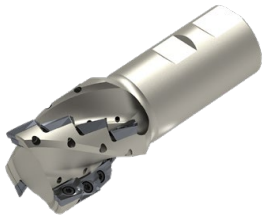
	TORX® blade		 Clamping key - T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
25 - 32	5,42	**054**			12,25	**128**			4,60	**303**	3,34	**839**	135,90	**193**
40	5,42	**054**	4,03	**040**	12,25	**128**	13,10	**151**	4,60	**303**	3,34	**839**	135,90	**193**
50	5,42	**054**	4,37	**050**	12,25	**128**	18,00	**154**	4,60	**303**	3,34	**839**	135,90	**193**
63 - 160	5,42	**054**			12,25	**128**			4,60	**303**	3,34	**839**	135,90	**193**

MaxiMill – Shell end mill C 211-15KN

▲ ZEFP = Number of Inserts
▲ ZNP = Number of rows







NEW

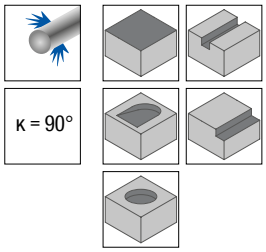
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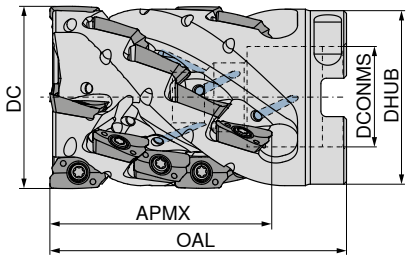
50 783 ...

ISO designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	EUR 2B/40	
C211.40.R.03KN3-15-B32-60	40	3	39,6	121	60	32	9	3	3,2	XD.T 1505	765,90	**04033**
C211.50.R.03KN4-15-B40-68	50	3	52,6	138	67	40	12	4	3,2	XD.T 1505	931,50	**05034**

MaxiMill – Shell end mill A 211-15KN

▲ ZEFP = Number of Inserts
▲ ZNP = Number of rows







NEW

50 781 ...

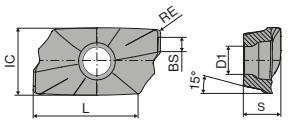
ISO designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	EUR 2B/40	
A211.50.R.03KN4-15	50	3	52,6	12	4	87	27	48	3,2	XD.T 1505	931,50	**05034**
A211.50.R.03KN5-15	50	3	65,8	15	5	100	27	48	3,2	XD.T 1505	989,20	**05035**
A211.50.R.04KN5-15	50	4	65,8	20	5	100	27	48	3,2	XD.T 1505	1.102,00	**05045**
A211.63.R.03KN4-15	63	3	52,6	12	4	76	27	58	3,2	XD.T 1505	1.016,00	**06334**
A211.63.R.03KN5-15	63	3	65,8	15	5	90	27	58	3,2	XD.T 1505	1.073,00	**06335**
A211.63.R.04KN6-15	63	4	78,5	24	6	102	27	58	3,2	XD.T 1505	1.246,00	**06346**
A211.63.R.05KN5-15	63	5	65,8	25	5	90	27	58	3,2	XD.T 1505	1.290,00	**06355**
A211.80.R.04KN5-15	80	4	65,8	20	5	90	32	78	3,2	XD.T 1505	1.252,00	**08045**
A211.80.R.05KN6-15	80	5	78,5	30	6	102	32	78	3,2	XD.T 1505	1.446,00	**08056**

	 Cylindrical screw		TORX® blade		Key D		 Molykote		 Clamping screw		 Socket head screw		Torque screwdriver	
	70 950 ...		**80 950 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts Designation	EUR 2A/28		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
A211.50	12,08	**002**	5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20800**	12,08	**20600**	135,90	**193**
A211.63	12,08	**002**	5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20500**	12,08	**20600**	135,90	**193**
A211.80	27,02	**004**	5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20500**	12,08	**234**	135,90	**193**
C211.40			5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20800**			135,90	**193**
C211.50			5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20800**			135,90	**193**

15

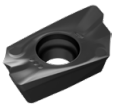
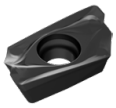
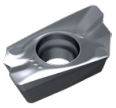
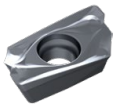
XDKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDKT 150508..	9,3	4,4	14,8	1,6	5,56
XDKT 150512..	9,3	4,4	14,8	1,6	5,56
XDKT 150516..	9,3	4,4	14,8	1,6	5,56
XDKT 150520..	9,3	4,4	14,8	1,6	5,56
XDKT 150525..	9,3	4,4	14,8	1,6	5,56
XDKT 150530..	9,3	4,4	14,8	1,6	5,56
XDKT 150532..	9,3	4,4	14,8	1,9	5,56
XDKT 150540..	9,3	4,4	14,8	1,2	5,56
XDKT 150560..	9,3	4,4	14,8	-	5,56

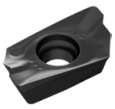
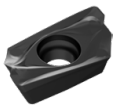
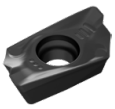
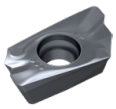
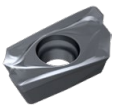
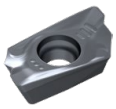


XDKT

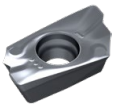
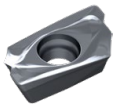
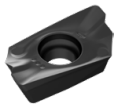
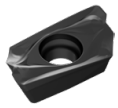
XDKT

		-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XDKT	XDKT	XDKT	XDKT
		51 035 ...	51 038 ...	51 035 ...	51 038 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
150508SR	0,8	19,69 258	19,69 258	19,69 058	19,69 058
P		●	●	●	●
M					
K					
N					
S					
H					
O					

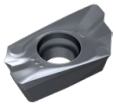
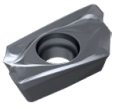
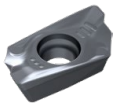
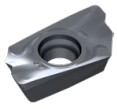
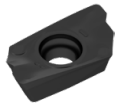
XDKT

		-F50 CTCP230	-M50 CTCP230	-R50 CTCP230	-F50 CTPP235	-M50 CTPP235	-R50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 035 ...	51 038 ...	51 040 ...	51 035 ...	51 038 ...	51 040 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
150508SR	0,8	19,69 008	19,69 008	19,69 008	19,69 108	19,69 108	19,69 108
150512SR	1,2		19,69 012			19,69 112	
150516SR	1,6		19,69 016			19,69 116	
150520SR	2,0			19,69 020		19,69 120	19,69 120
150530SR	3,0		19,69 030			19,69 130	
150540SR	4,0		19,69 040			19,69 140	
P		●	●	●	●	●	●
M					○	○	○
K		○	○	○	○	○	○
N							
S							
H							
O							

XDKT

		-F50 CTPM225		-M50 CTPM225		-F50 CTCM235		-M50 CTCM235	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
									
		XDKT		XDKT		XDKT		XDKT	
		51 035 ...		51 038 ...		51 035 ...		51 038 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61	
150508SR	0,8	19,69	208	19,69	208	19,69	308	19,69	308
P			●		●		●		●
M			●		●		●		●
K									
N									
S									
H									
O									

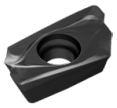
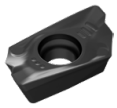
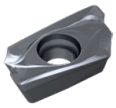
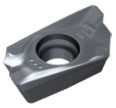
XDKT

			-F50 CTPM240		-M50 CTPM240		-R50 CTPM240		-F40 CTPM245		NEW -F40 CTCM245	
			DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
												
			XDKT		XDKT		XDKT		XDKT		XDKT	
			51 035 ...		51 038 ...		51 040 ...		51 114 ...		51 114 ...	
ISO	RE mm		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1H/17		EUR 1H/17	
150508ER	0,8								23,70	458	23,70	90801
150508SR	0,8	19,69		408	19,69	408	19,69	408				
150512ER	1,2										23,70	91201
150512SR	1,2				19,69	412						
150516ER	1,6										23,70	91601
150516SR	1,6				19,69	416						
150520ER	2,0										23,70	92001
150525ER	2,5										23,70	92501
150530SR	3,0				19,69	430 [1)]						
150532ER	3,2								23,70	482 [1)]	23,70	93201 [1)]
150540ER	4,0								23,70	490 [1)]	23,70	94001 [1)]
150540SR	4,0				19,69	440 [1)]						
150560ER	6,0										23,70	96001 [1)]
P			○		○		○		●		●	
M			●		●		●		●		●	
K												
N												
S											○	
H												
O												

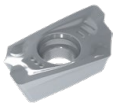
1) Insert radius >2.5 mm: Modify cutter body

15

XDKT

		-M50 CTCK215 DRAGONSKIN		-R50 CTCK215 DRAGONSKIN		-M50 CTPK220 DRAGONSKIN		-R50 CTPK220 DRAGONSKIN		-F20 CTWN215	
											
		XDKT		XDKT		XDKT		XDKT		XDKT	
		51 038 ...		51 040 ...		51 038 ...		51 040 ...		50 479 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1A/90	
150508FR	0,8									19,69	508
150508SR	0,8	19,69	508	19,69	508	19,69	608	19,69	608		
P											
M											
K		●		●		●		●		○	
N										●	
S											
H											
O										○	

XDKT

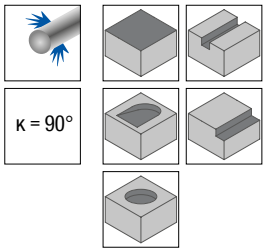
		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN		-R60 CTP6215	
							
		XDKT		XDKT		XDKT	
		50 473 ...		51 114 ...		50 469 ...	
ISO	RE mm	EUR 17		EUR 17		EUR 1B/61	
150508ER	0,8	23,70	508	23,70	558		
150508SR	0,8					19,69	300
150532ER	3,2	23,70	532 [1)]				
150540ER	4,0	23,70	540 [1)]	23,70	59000 [1)]		
P							
M							
K						●	
N							
S		●		●			
H						●	
O							

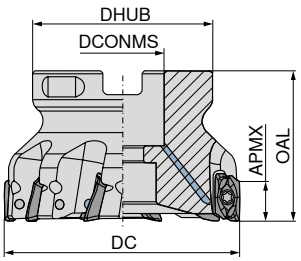
1) Insert radius >2.5 mm: Modify cutter body

Milling guide

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MaxiMill – Shell mill A 211-20



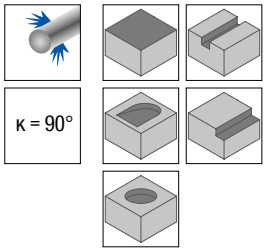


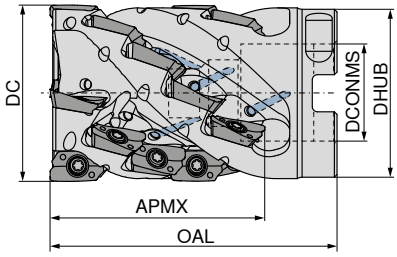


Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 778 ... EUR 2B/40	
A211.63.R.05-20	63	5	19	45	22	48	14400	5	XD.. 2007..	447,10	**06305**
A211.80.R.06-20	80	6	19	50	27	58	12400	5	XD.. 2007..	478,20	**08006**
A211.100.R.07-20	100	7	19	50	32	78	10900	5	XD.. 2007..	513,20	**10007**

MaxiMill – Extended flute cutter A 211-20K

- ZEFP = Number of Inserts
- ZNP = Number of rows







NEW

Designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	50 780 ... EUR 2B/40	
A211.63.R.04K4-20	63	4	68	16	4	92	27	58	5	XD.. 2007..	990,20	**06304**
A211.80.R.05K4-20	80	5	68	20	4	92	32	76	5	XD.. 2007..	1.110,00	**08005**


Cylindrical screw

TORX® blade

Key D


Molykote


Clamping screw

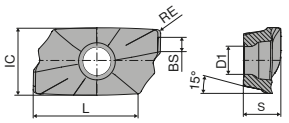

Socket head screw

Torque screw-driver

Spare parts DC	Cylindrical screw 70 950 ... EUR 2A/28		TORX® blade 80 950 ... EUR Y7		Key D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A		Socket head screw 70 950 ... EUR 2A/28		Torque screw-driver 80 950 ... EUR Y7	
63			4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	5,71	**180**	135,90	**193**
80			4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	8,87	**181**	135,90	**193**
63	16,75	**003**	4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	8,87	**181**	135,90	**193**
80	27,02	**004**	4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	12,08	**234**	135,90	**193**
100			4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**			135,90	**193**

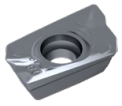
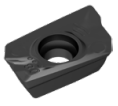
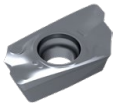
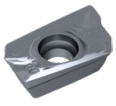
XDKT

Designation	IC mm	D1 mm	L mm	S mm
XDKT 200708..	12,5	5,5	18,8	6,93
XDKT 200716..	12,5	5,5	18,8	6,89
XDKT 200732..	12,5	5,5	18,8	6,82
XDKT 200740..	12,5	5,5	18,8	6,80
XDKT 200760..	12,5	5,5	18,8	6,80



XDKT

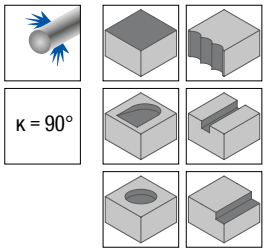
XDKT

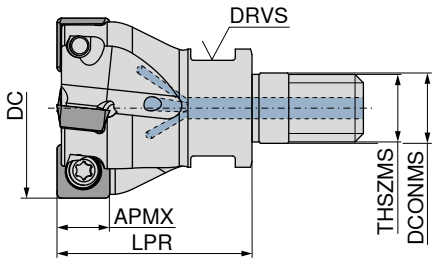
		NEW	NEW		NEW	NEW		
		-M50 CTPP235	-M50 CTCP230	-F40 CTPM245	-F40 CTCM245	-M50 CTPK220	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 145 ...	51 145 ...	51 127 ...	51 127 ...	51 145 ...	51 127 ...	51 127 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1B/61	EUR 17	EUR 17
200708ER	0,8	22,60 10800	22,60 00800	28,02 45800	28,02 90801	22,60 60800	28,02 15800	28,02 55800
200716ER	1,6	22,60 11600	22,60 01600	28,02 46600	28,02 91601	22,60 61600	28,02 16600	28,02 56600
200732ER	3,2			28,02 48200	28,02 93201		28,02 18200	28,02 58200
200740ER	4,0				28,02 94001		28,02 19000	
200760ER	6,0				28,02 96001		28,02 19200	
P		●	●	●	●			
M		○		●	●			
K		○	○			●		
N								
S					○		●	●
H								
O								

Milling guide

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MaxiMill – Screw in cutter G 490-09

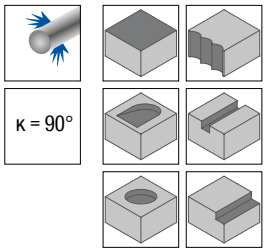


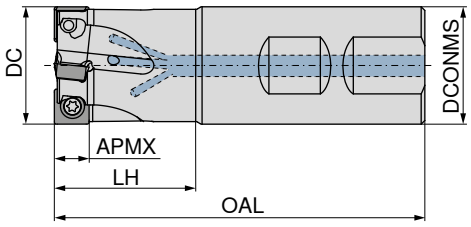




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 726 ... EUR 2B/40	
G490.25.R.03-09	25	3	8	35	M12	12,5	17	3,2	SD.. 09T3..	313,30	025
G490.32.R.04-09	32	4	8	35	M16	17,0	24	3,2	SD.. 09T3..	339,80	032

MaxiMill – End milling cutter C 490-09

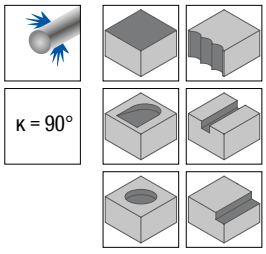


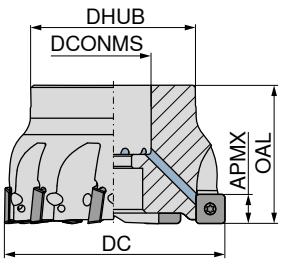


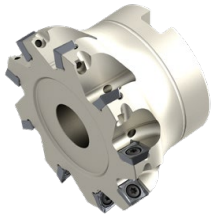


Designation	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	torque moment Nm	Insert	A 50 727 ... EUR 2B/40		B 50 727 ... EUR 2B/40	
C490.25.R.03-09-B-32	25	3	8	25	88	32	3,2	SD.. 09T3..			313,30	025
C490.25.R.02-09-A-20	25	2	8	20	165	40	3,2	SD.. 09T3..	288,90	225		
C490.25.R.02-09-A-40-165	25	2	8	25	165	40	3,2	SD.. 09T3..	299,70	125		
C490.32.R.04-09-B-25	32	4	8	25	100	40	3,2	SD.. 09T3..			327,40	132
C490.32.R.04-09-B-40	32	4	8	32	100	40	3,2	SD.. 09T3..			339,80	032

MaxiMill – Shell mill A 490-09





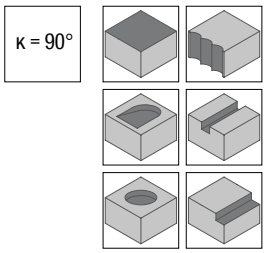


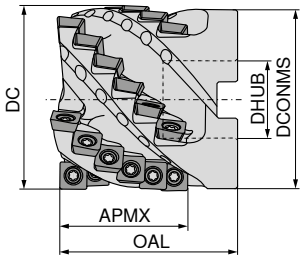
Designation	DC mm	ZNF	APMX mm	DHUB mm	DCONMS H6 mm	OAL mm	torque moment Nm	Insert	50 728 ... EUR 2B/40	
A490.40.R.05-09	40	5	8	38	16	40	3,2	SD.. 09T3..	379,90	040
A490.42.R.06-09	42	6	8	38	16	40	3,2	SD.. 09T3..	406,30	042
A490.50.R.06-09	50	6	8	43	22	40	3,2	SD.. 09T3..	419,70	050
A490.52.R.07-09	52	7	8	43	22	40	3,2	SD.. 09T3..	446,30	052
A490.63.R.07-09	63	7	8	48	22	40	3,2	SD.. 09T3..	459,70	063
A490.66.R.08-09	66	8	8	48	22	40	3,2	SD.. 09T3..	486,30	066
A490.80.R.09-09	80	9	8	58	27	50	3,2	SD.. 09T3..	646,20	080
A490.100.R.10-09	100	10	8	78	32	50	3,2	SD.. 09T3..	706,20	100
A490.160.R.14-09	160	14	8	88	40	62	3,2	SD.. 09T3..	1.043,00	160 [1]

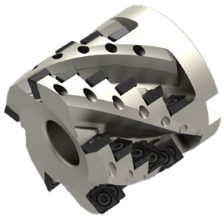
1) Without Through Coolant

MaxiMill – Extended flute cutter A 490K

▲ ZEFP = Number of Inserts
▲ ZNP = Number of rows





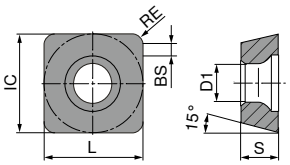


Designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	50 761 ... EUR 2B/40	
A490.40.R.03K6-09	40	3	41	18	6	55	16	38	3,2	SD.. 09T3..	1.053,00	**040**
A490.50.R.04K6-09	50	4	41	24	6	55	22	48	3,2	SD.. 09T3..	1.274,00	**050**
A490.63.R.05K6-09	63	5	41	30	6	60	27	61	3,2	SD.. 09T3..	1.440,00	**063**

	TORX® blade		 Clamping key - T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
25 - 32	4,90	**036**			9,56	**113**			4,60	**303**	3,30	**110**	132,50	**192**
40 - 42	4,90	**036**	4,03	**040**	9,56	**113**	13,10	**151**	4,60	**303**	3,30	**110**	132,50	**192**
50 - 160	4,90	**036**			9,56	**113**			4,60	**303**	3,30	**110**	132,50	**192**

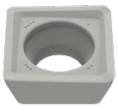
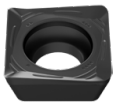
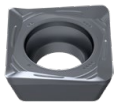
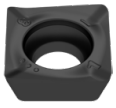
SDHT / SDNT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
SD.T 09T3..	9,52	4,4	9,52	2,5	3,97

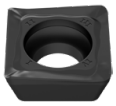
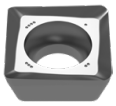


SDHT / SDNT

NEW

	TCM10	-29 CTCP230	CTPP235	-29 CTPP235	-33 CTPM240	-F50 CTPM245	-F50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	CERMET						
	SDHT	SDNT	SDNT	SDNT	SDNT	SDNT	SDNT
	50 424 ...	51 011 ...	51 082 ...	51 011 ...	51 030 ...	51 111 ...	51 111 ...
ISO / RE mm	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
09T308ER 0,8			12,19 108			13,65 458	13,65 90801
09T308SR 0,8	16,55 900	12,19 008		12,19 108	12,19 408		
P	●	●	●	●	○	●	●
M			○	○	●	●	●
K	○	○	○	○			
N							
S							○
H							
O							

SDNT / SDHT

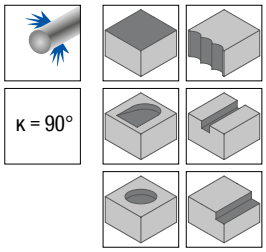
	-31 CTCK215	-27P H216T	-27P AMZ	-27 CTC5240	-M31 CTC5240	-F10 CTCS245
	DRAGONSKIN			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	SDNT	SDHT	SDHT	SDHT	SDNT	SDHT
	51 029 ...	50 424 ...	50 424 ...	50 496 ...	50 425 ...	51 125 ...
ISO / RE mm	EUR 1B/61	EUR 1A/90	EUR 1A/90	EUR 17	EUR 17	EUR 17
09T308ER 0,8				22,82 508	13,65 508	22,82 55800
09T308FR 0,8		16,55 550	19,85 650			
09T308SR 0,8	12,19 508					
P						
M						
K	●	○	○			
N		●	●			
S				●	●	●
H						
O		○	○			

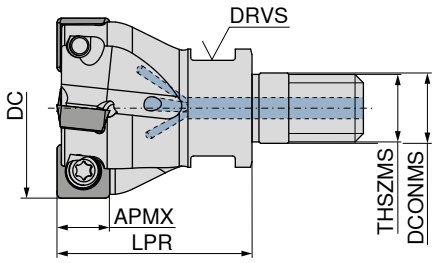
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 159
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

15

MaxiMill – Screw in cutter G 490-12

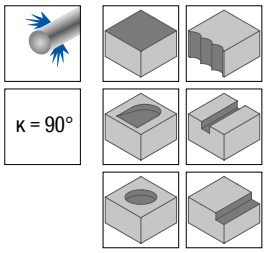


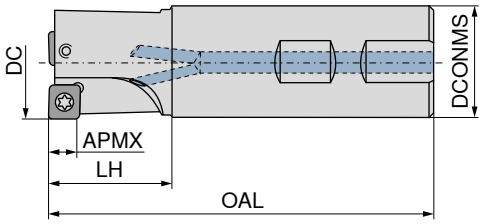




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 726 ... EUR 2B/40	
G490.32.R.03-12	32	3	10,7	35	M16	17	24	3,2	SD.. 1205..	327,30	13200
G490.40.R.04-12	40	4	10,7	40	M16	17	24	3,2	SD.. 1205..	361,60	14000

MaxiMill – End milling cutter C 490-12





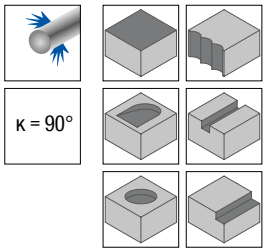


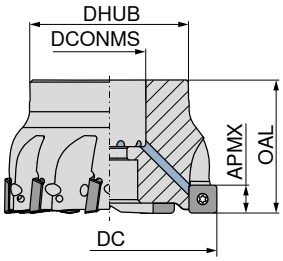
B

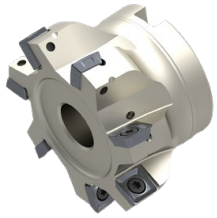
ISO designation	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	torque moment Nm	Insert	50 703 ... EUR 2B	
C490.32.R.02	32	2	11	32	110	40	5	SD.. 1205..	217,00	032
C490.32.R.03-12-B-40	32	3	11	32	101	40	5	SD.. 1205..	327,30	13200
C490.40.R.03	40	3	11	32	115	45	5	SD.. 1205..	256,00	040
C490.40.R.04-12-B32-50	40	4	11	32	112	50	5	SD.. 1205..	361,60	14000

Spare parts	TORX® blade		Key D		Molykote		Clamping screw		Torque screw-driver	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
32	4,90	037	10,25	114	4,60	303	3,30	01200	135,90	193
32	4,90	037					3,30	01200	135,90	193
40	4,90	037	10,25	114	4,60	303	3,30	01200	135,90	193
40	4,90	037					3,30	01200	135,90	193

MaxiMill – Shell mill A 490-12





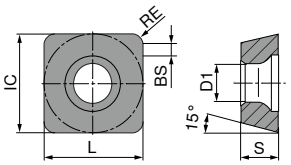


Designation	DC mm	ZNF	APMX mm	DHUB mm	DCONMS mm	OAL mm	torque moment Nm	Insert	50 703 ... EUR 2B/40	
A490.40.R.04-12	40	4	11	38	16	40	5	SD.. 1205..	361,60	**54000**
A490.50.R.05-12	50	5	11	43	22	40	5	SD.. 1205..	401,60	**550**
A490.63.R.06-12	63	6	11	48	22	40	5	SD.. 1205..	441,80	**563**
A490.80.R.07-12	80	7	11	58	27	50	5	SD.. 1205..	610,10	**580**
A490.100.R.08-12	100	8	11	75	32	50	5	SD.. 1205..	670,10	**600**
A490.125.R.10-12	125	10	11	88	40	63	5	SD.. 1205..	718,20	**625**

	TORX® blade		 Clamping key - T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
40	4,90	**037**	4,03	**040**	10,25	**114**	13,10	**151**	4,60	**303**	3,30	**01200**	135,90	**193**
50	4,90	**037**	4,03	**040**	10,25	**114**	18,00	**154**	4,60	**303**	3,30	**01200**	135,90	**193**
63 - 125	4,90	**037**	4,03	**040**	10,25	**114**			4,60	**303**	3,30	**01200**	135,90	**193**

SDHW / SDMT / SDHT

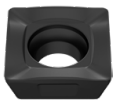
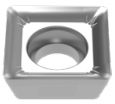
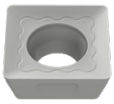
Designation	IC mm	D1 mm	L mm	BS mm	S mm
SDH. 120508..	12,7	5,5	12,7	2,2	5,00
SDHT 120512..	12,7	5,5	12,7	1,8	5,00
SDHT 120520..	12,7	5,5	12,7	1,0	5,00
SDHT 120525..	12,7	5,5	12,7	1,5	5,00
SDMT 120508..	12,7	5,5	12,7	3,0	5,00
SDMT 1205ZZ..	12,7	5,5	12,7	0,9	5,00



SDHW / SDMT / SDHT

		TCM10	-29 CTCP230	-29 CTPP235	-29 CTPM240	-33 CTPM240	-F50 CTPM245	NEW -F50 CTCM245
			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		CERMET SDHW	SDMT	SDMT	SDMT	SDHT	SDMT	SDMT
		50 428 ...	51 081 ...	51 081 ...	51 081 ...	51 028 ...	51 110 ...	51 110 ...
ISO	RE mm	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
120508ER	0,8						19,35 458	19,35 90801
120508SR	0,8	19,69 901						
120512SR	1,2					19,18 412		
120520SR	2,0					19,18 421		
1205ZZSN	0,8		16,55 020	16,55 120	16,02 420			
P		●	●	●	○	○	●	●
M				○	●	●	●	●
K		○	○	○				
N								
S								○
H								
O								

SDMT / SDHT

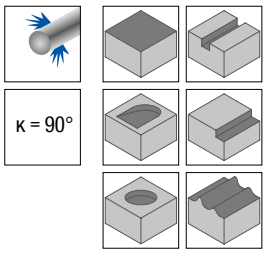
		-31 CTCK215		-27P H216T		-27P AMZ		-M31 CTC5240		-F50 CTCS245	
		DRAGONSKIN						DRAGONSKIN		DRAGONSKIN	
											
		SDMT		SDHT		SDHT		SDMT		SDMT	
		51 059 ...		50 426 ...		50 426 ...		50 580 ...		51 110 ...	
ISO	RE mm	EUR 1B/61		EUR 1A/90		EUR 1A/90		EUR 17		EUR 17	
120508ER	0,8							19,35	508	19,35	55800
120508FR	0,8			19,18	555	23,77	655				
1205025FR	2,5			19,18	559						
1205ZZSN	0,8	16,02	521								
P											
M											
K		●		○		○					
N				●		●					
S								●		●	
H											
O				○		○					

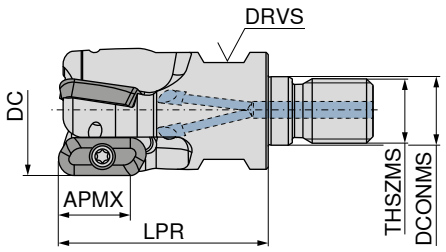
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 160
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

MaxiMill – Screw in cutter 90° G HSC-11

▲ Insert radius >3.2 mm: Modify cutter body



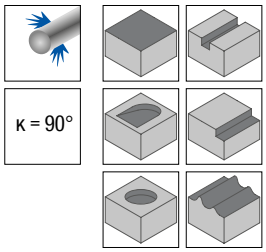


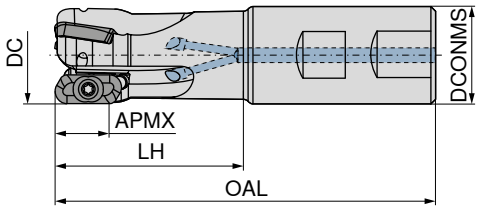


Designation	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	RPMX 1/min.	DRVS mm	torque moment Nm	Insert	55 107 ... EUR 2B/40	
GHSC.16.R.02-11	16	2	10	8,5	27	M8	56000	10	1,8	XDHT 11T3..	275,90	016
GHSC.18.R.02-11	18	2	10	8,5	27	M8	53100	10	1,8	XDHT 11T3..	282,50	018
GHSC.20.R.02-11	20	2	10	10,5	33	M10	50100	15	1,8	XDHT 11T3..	297,10	020
GHSC.25.R.03-11	25	3	10	12,5	35	M12	45000	17	1,8	XDHT 11T3..	334,70	025
GHSC.32.R.03-11	32	3	10	17,0	35	M16	39800	24	1,8	XDHT 11T3..	347,80	032
GHSC.40.R.03-11	40	3	10	17,0	35	M16	35500	24	1,8	XDHT 11T3..	365,10	040

MaxiMill – End milling cutter 90° C HSC-11

▲ Insert radius >3.2 mm: Modify cutter body



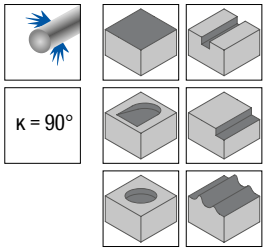


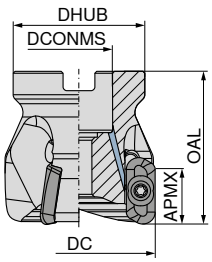


Designation	DC mm	ZNF	APMX mm	DCONMS h6 mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	A 50 675 ... EUR 2B/40		B 50 675 ... EUR 2B/40	
CHSC.16.R.02-11-B/A-25	16	2	10	16	75	25	56200	1,8	XDHT 11T3..	275,90	016	275,90	416
CHSC.16.R.02-11-A-32	16	2	10	16	165	32	18800	1,8	XDHT 11T3..	275,90	116		
CHSC.18.R.02-11-A-25	18	2	10	20	78	25	56100	1,8	XDHT 11T3..	282,50	018		
CHSC.18.R.02-11-A-32	18	2	10	20	165	32	23900	1,8	XDHT 11T3..	282,50	118		
CHSC.19.R.02-11-A-25	19	2	10	20	78	25	51700	1,8	XDHT 11T3..	289,10	019		
CHSC.19.R.02-11-A-32	19	2	10	20	165	32	25400	1,8	XDHT 11T3..	289,10	119		
CHSC.20.R.02-11-A-32	20	2	10	20	84	32	50100	1,8	XDHT 11T3..	297,10	020		
CHSC.20.R.03-11-B-32	20	3	10	20	84	32	50100	1,8	XDHT 11T3..			337,00	420
CHSC.20.R.02-11-A-40	20	2	10	20	165	40	26700	1,8	XDHT 11T3..	297,10	120		
CHSC.22.R.02-11-A-32	22	2	10	25	91	32	47800	1,8	XDHT 11T3..	305,30	022		
CHSC.22.R.02-11-A-40	22	2	10	25	165	40	30200	1,8	XDHT 11T3..	305,30	122		
CHSC.25.R.02-11-A-40	25	2	10	25	98	40	45000	1,8	XDHT 11T3..	319,70	025		
CHSC.25.R.03-11-A-40	25	3	10	25	98	40	45000	1,8	XDHT 11T3..	334,70	225		
CHSC.25.R.04-11-B-40	25	4	10	25	98	40	45000	1,8	XDHT 11T3..			367,80	425
CHSC.25.R.02-11-A-50	25	2	10	25	165	50	31700	1,8	XDHT 11T3..	319,70	125		
CHSC.25.R.03-11-A-50	25	3	10	25	165	50	31700	1,8	XDHT 11T3..	334,70	325		
CHSC.32.R.03-11-A-50	32	3	10	32	112	50	39800	1,8	XDHT 11T3..	347,80	032		
CHSC.32.R.05-11-B-50	32	5	10	25	112	50	39800	1,8	XDHT 11T3..			439,70	432
CHSC.32.R.03-11-A-63	32	3	10	32	165	63	33400	1,8	XDHT 11T3..	347,80	132		

MaxiMill – Shell mill 90° A HSC-11

▲ Insert radius >3.2 mm: Modify cutter body





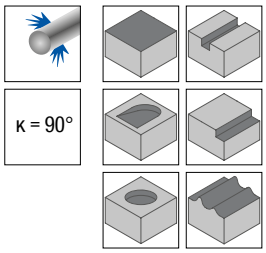


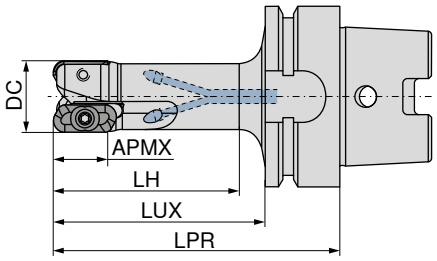
Designation	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	torque moment Nm	Insert	50 718 ... EUR 2B/40	
AHSC.40.R.04-11	40	4	10	16	38	50	35500	1,8	XDHT 11T3..	464,90	**040**
AHSC.50.R.04-11	50	4	10	22	43	50	31800	1,8	XDHT 11T3..	562,40	**050**
AHSC.63.R.05-11	63	5	10	22	43	50	28300	1,8	XDHT 11T3..	626,20	**063**
AHSC.80.R.05-11	80	5	10	27	58	50	25100	1,8	XDHT 11T3..	651,50	**080**
AHSC.100.R.05-11	100	5	10	32	78	50	22400	1,8	XDHT 11T3..	698,20	**100**

MaxiMill – Milling cutter 90° M HSC-11 with HSK 63-A

▲ balanced to G 6,3

▲ Insert radius >3.2 mm: Modify cutter body





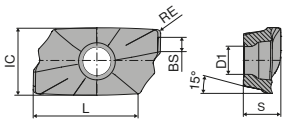


Designation	DC mm	ZNF	APMX mm	LPR mm	LH mm	LUX mm	RPMX 1/min.	torque moment Nm	Insert	50 722 ... EUR 2B/40	
MHSC.25.R.03-11-H63A-50	25	3	10	90	50	64	45000	1,8	XDHT 11T3..	798,20	**025**
MHSC.25.R.03-11-H63A-63	25	3	10	100	63	74	42000	1,8	XDHT 11T3..	798,20	**125**
MHSC.32.R.03-11-H63A-63	32	3	10	100	63	74	39800	1,8	XDHT 11T3..	811,40	**032**
MHSC.32.R.03-11-H63A-80	32	3	10	120	80	94	37200	1,8	XDHT 11T3..	811,40	**132**
MHSC.40.R.04-11-H63A-63	40	4	10	100	63	74	35500	1,8	XDHT 11T3..	842,10	**040**
MHSC.40.R.04-11-H63A-80	40	4	10	120	80	94	35500	1,8	XDHT 11T3..	842,10	**140**
MHSC.50.R.04-11-H63A-63	50	4	10	100	63	74	31800	1,8	XDHT 11T3..	856,70	**050**
MHSC.50.R.04-11-H63A-100	50	4	10	140	100	114	31800	1,8	XDHT 11T3..	856,70	**150**

	TORX® blade		Clamping key - T		Key D		Power Screw		Molykote		Clamping screw		Torque screwdriver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
16 - 25	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**128**	132,50	**192**
32	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**131**	132,50	**192**
40	4,90	**043**	4,03	**040**	10,51	**125**	13,10	**151**	4,60	**303**	4,29	**131**	132,50	**192**
50 - 63	4,90	**043**	4,37	**050**	10,51	**125**	18,00	**154**	4,60	**303**	4,29	**131**	132,50	**192**
80 - 100	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**131**	132,50	**192**

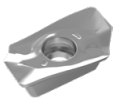
XDKT / XDHT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XD.T 11T302FR	6,8	2,8	10,6	2	3,80
XD.T 11T304FR	6,8	2,8	10,6	1,8	3,80
XD.T 11T308FR	6,8	2,8	10,6	1,4	3,80
XD.T 11T320FR	6,8	2,8	10,6	1,4	3,80
XD.T 11T325FR	6,8	2,8	10,6	1,4	3,80
XDHT 11T312FR	6,8	2,8	10,6	1,4	3,80
XDHT 11T316FR	6,8	2,8	10,6	1,4	3,80
XDHT 11T332FR	6,8	2,8	10,6	0,8	3,80
XDHT 11T340FR	6,8	2,8	10,6	-	3,80
XDHT 11T350FR	6,8	2,8	10,6	-	3,80



XDKT

XDKT / XDHT

	-F20 CTWN215	-27P H216T
		
	XDKT	XDHT
	50 478 ...	50 477 ...

ISO	RE mm	EUR 1A/90		EUR 1A/90	
11T302FR	0,2	14,76	502	19,45	502
11T304FR	0,4	14,76	504	19,45	504
11T308FR	0,8	14,76	508	19,45	508
11T312FR	1,2			19,45	512
11T316FR	1,6			19,45	516
11T320FR	2,0	14,76	520 1)	19,45	520 1)
11T325FR	2,5	14,76	525 1)	19,45	525 1)
11T332FR	3,2			19,45	532 1)
11T340FR	4,0			19,45	540 1)
11T350FR	5,0			19,45	550 1)
P					
M					
K			o		o
N			●		●
S					
H					
O			o		o

1) Insert radius >1.6 mm: Modify cutter body

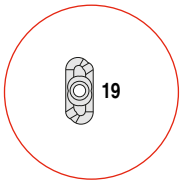
Milling guide

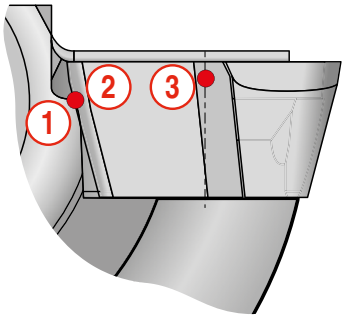
Safety advice	→ 161	Cutting data standard values	→ 162
Machining strategy	→ 163+164	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

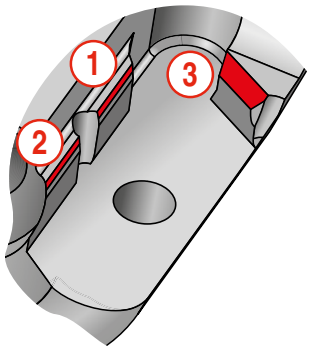
HSC-19

For medium – high number of revolutions

n_{max} = 34400 min^{-1}
$a_{p\,max}$ = 18 mm







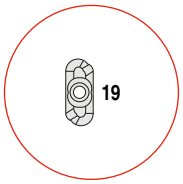
(1) (2) Radial contact points
- ▲ Guaranteed 90° corner angles and exact radial run-out

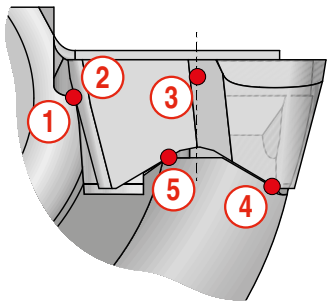
(3) Axial contact point
- ▲ guarantees precise axial run-out

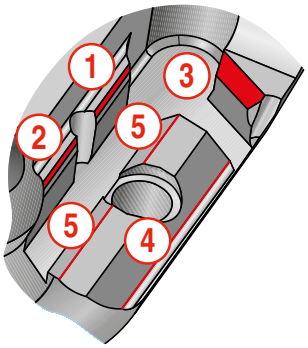
HPC-19

For maximum number of revolutions

n_{max} = 45200 min^{-1}
$a_{p\,max}$ = 18 mm







Roof-shaped surface, included angle 140 °
- ▲ greater stability, higher security
- ▲ guaranteed positive connection between insert and tool

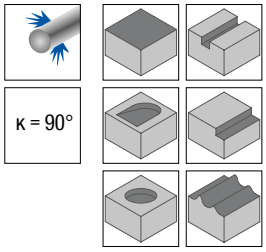
(1) (2) Radial contact points
- ▲ Guaranteed 90° corner angles and exact radial run-out

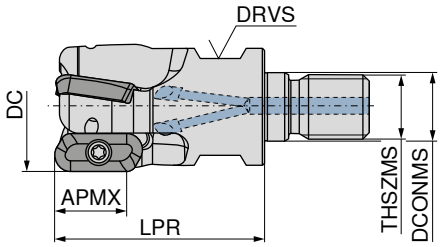
(3) Axial contact point
- ▲ guarantees precise axial run-out

(4) (5) Contact Point
- ▲ resist machining and centrifugal forces

MaxiMill – Screw-in cutter 90° G HSC-19

▲ Insert radius >4.0 mm: Modify cutter body



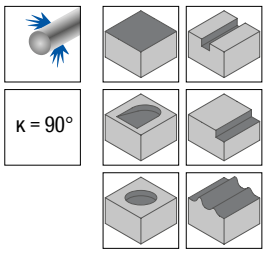


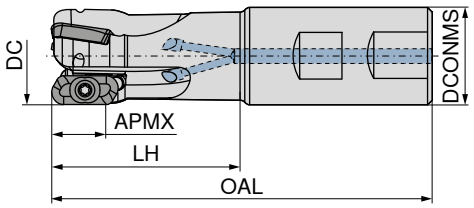


Designation	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	55 108 ... EUR 2B/40	
GHSC.25.R.02-19	25	2	18	12,5	45	M12	17	34400	5	XDHT 1904..	325,10	**025**
GHSC.32.R.03-19	32	3	18	17,0	52	M16	24	29100	5	XDHT 1904..	421,10	**032**
GHSC.40.R.03-19	40	3	18	17,0	52	M16	24	24900	5	XDHT 1904..	447,70	**040**

MaxiMill – End milling cutter 90° C HSC-19

▲ Insert radius >4.0 mm: Modify cutter body



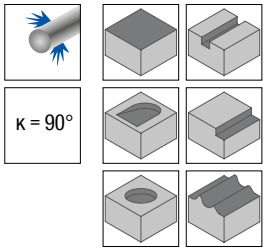


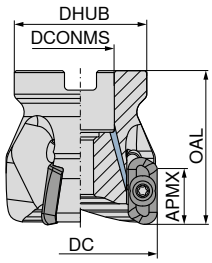


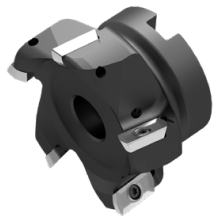
Designation	DC mm	ZNF	APMX mm	DCONMS $_{h5}$ mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	A 50 679 ... EUR 2B/40		B 50 679 ... EUR 2B/40	
CHSC.25.R.02-19-A-50	25	2	18	25	121	50	32400	5	XDHT 1904..	325,10	**225**		
CHSC.25.R.02-19	25	2	18	25	121	65	32400	5	XDHT 1904..			334,70	**025**
CHSC.25.R.02-19-A-63	25	2	18	25	165	63	24700	5	XDHT 1904..	325,10	**325**		
CHSC.32.R.02-19-A-63	32	2	18	32	125	63	28900	5	XDHT 1904..	341,10	**232**		
CHSC.32.R.03-19-A-63	32	3	18	32	125	63	28900	5	XDHT 1904..	421,10	**432**		
CHSC.32.R.03-19	32	3	18	32	125	65	28900	5	XDHT 1904..			429,00	**033**
CHSC.32.R.02-19	32	2	18	32	125	65	28900	5	XDHT 1904..			349,10	**032**
CHSC.32.R.02-19-A-80	32	2	18	32	165	80	24400	5	XDHT 1904..	341,10	**332**		
CHSC.32.R.03-19-A-80	32	3	18	32	165	80	24400	5	XDHT 1904..	421,10	**532**		

MaxiMill – Shell mill 90° A HSC-19

▲ Insert radius >4.0 mm: Modify cutter body







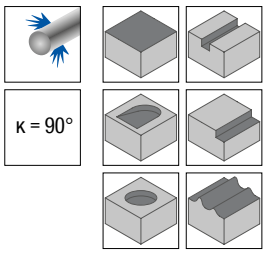
50 716 ...

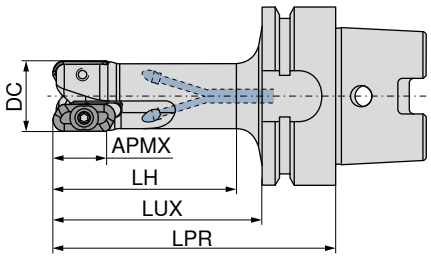
Designation	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
AHSC.40.R.03-19	40	3	18	16	38	50	24900	5	XDHT 1904..	435,70	**040**
AHSC.50.R.04-19	50	4	18	22	43	50	21600	5	XDHT 1904..	547,60	**050**
AHSC.63.R.04-19	63	4	18	22	48	50	18800	5	XDHT 1904..	613,00	**163**
AHSC.63.R.05-19	63	5	18	22	48	50	18800	5	XDHT 1904..	626,20	**063**
AHSC.80.R.04-19	80	4	18	27	58	50	16400	5	XDHT 1904..	636,90	**180**
AHSC.80.R.05-19	80	5	18	27	58	50	16400	5	XDHT 1904..	651,50	**080**
AHSC.100.R.04-19	100	4	18	32	78	50	14500	5	XDHT 1904..	683,60	**200**
AHSC.100.R.05-19	100	5	18	32	78	50	14500	5	XDHT 1904..	698,20	**100**
AHSC.125.R.05-19	125	5	18	40	88	63	12800	5	XDHT 1904..	807,30	**125**
AHSC.125.R.06-19	125	6	18	40	88	63	12800	5	XDHT 1904..	820,70	**225**

MaxiMill – Milling cutter 90° M HSC-19 with HSK 63-A

▲ balanced to G 6,3

▲ Insert radius >4.0 mm: Modify cutter body







50 720 ...

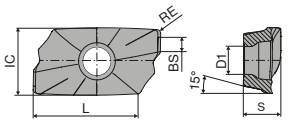
Designation	DC mm	ZNF	APMX mm	LPR mm	LH mm	LUX mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
MHSC.25.R.02-19-H63A-50	25	2	18	90	50	64	35000	5	XDHT 1904..	786,10	**525**
MHSC.25.R.02-19-H63A-63	25	2	18	100	63	74	32700	5	XDHT 1904..	786,10	**625**
MHSC.32.R.02-19-H63A-63	32	2	18	100	63	74	29100	5	XDHT 1904..	802,30	**532**
MHSC.32.R.02-19-H63A-80	32	2	18	120	80	94	27200	5	XDHT 1904..	802,30	**632**
MHSC.32.R.03-19-H63A-63	32	3	18	100	63	74	29100	5	XDHT 1904..	815,60	**732**
MHSC.32.R.03-19-H63A-80	32	3	18	120	80	94	27200	5	XDHT 1904..	815,60	**832**
MHSC.40.R.03-19-H63A-63	40	3	18	100	63	74	24900	5	XDHT 1904..	831,50	**540**
MHSC.40.R.03-19-H63A-80	40	3	18	120	80	94	24900	5	XDHT 1904..	831,50	**640**
MHSC.50.R.03-19-H63A-100	50	3	18	140	100	114	21600	5	XDHT 1904..	831,50	**550**

	TORX® blade	Clamping key - T	Key D	Power Screw	Molykote	Clamping screw	Torque screwdriver
	80 950 ...	**80 397 ...**	**80 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts	EUR	EUR	EUR	EUR	EUR	EUR	EUR
DC	Y7	Y7	Y7	2A/28	2A/28	2A/28	Y7
25	4,90 **036**		9,56 **113**		4,60 **303**	3,00 **172**	135,90 **193**
32	4,90 **036**		9,56 **113**		4,60 **303**	3,57 **173**	135,90 **193**
40	4,90 **036**	4,03 **040**	9,56 **113**	13,10 **151**	4,60 **303**	3,57 **173**	135,90 **193**
50 - 63	4,90 **036**	4,37 **050**	9,56 **113**	18,00 **154**	4,60 **303**	3,57 **174**	135,90 **193**
80 - 125	4,90 **036**		9,56 **113**		4,60 **303**	3,57 **174**	135,90 **193**

15

XDHT

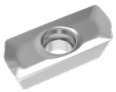
Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDHT 190402..	9,52	4,65	19	2	4,76
XDHT 190404..	9,52	4,65	19	2	4,76
XDHT 190408..	9,52	4,65	19	2	4,76
XDHT 190412..	9,52	4,65	19	2	4,76
XDHT 190416..	9,52	4,65	19	2	4,76
XDHT 190420..	9,52	4,65	19	2	4,76
XDHT 190425..	9,52	4,65	19	1,4	4,76
XDHT 190432..	9,52	4,65	19	1	4,76
XDHT 190440..	9,52	4,65	19	1	4,76
XDHT 190450..	9,52	4,65	19	-	4,76



XDKT

XDHT

-27P
H216T


XDHT

50 487 ...

ISO	RE mm	EUR 1A/90	
190402FR	0,2	28,73	**552**
190404FR	0,4	28,73	**554**
190408FR	0,8	28,73	**556**
190412FR	1,2	28,73	**557**
190416FR	1,6	28,73	**558**
190420FR	2,0	28,73	**560**
190425FR	2,5	28,73	**562**
190432FR	3,2	28,73	**564**
190440FR	4,0	28,73	**566**
190450FR	5,0	28,73	**568** 1)

P	
M	
K	○
N	●
S	
H	
O	○

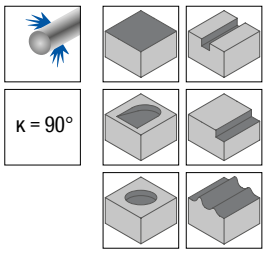
1) Insert radius > 4.0 mm: Modify cutter body

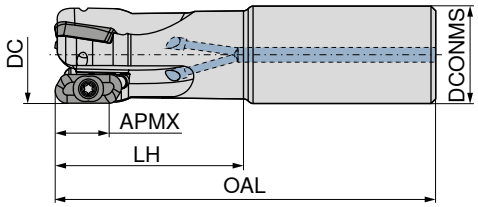
Milling guide

Cutting data standard values	→ 141–144	Safety advice	→ 161
Machining strategy	→ 165–167	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

MaxiMill – End milling cutter 90° C HPC-19

- Shank type to DIN 1835-A
- Insert radius >4.0 mm: Modify cutter body







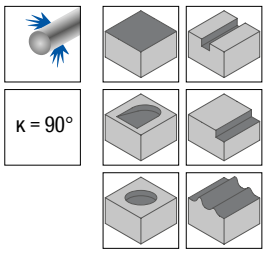
A

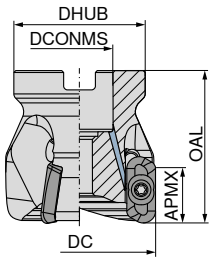
50 680 ...

ISO designation	DC mm	ZNF	APMX mm	DCONMS $_{h5}$ mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
CHPC.22.R.02-19-A-40	22	2	18	22	165	40	31900	5	XDHX 1904..	391,60	**122**
CHPC.25.R.02-19-A-50	25	2	18	25	121	50	41800	5	XDHX 1904..	405,10	**125**
CHPC.25.R.02-19-A-63	25	2	18	25	165	63	31900	5	XDHX 1904..	405,10	**225**
CHPC.32.R.02-19-A-63	32	2	18	32	125	63	39800	5	XDHX 1904..	421,10	**132**
CHPC.32.R.02-19-A-80	32	2	18	32	165	80	33500	5	XDHX 1904..	421,10	**232**
CHPC.32.R.03-19-A-63	32	3	18	32	125	63	39800	5	XDHX 1904..	499,70	**332**
CHPC.32.R.03-19-A-80	32	3	18	32	165	80	33500	5	XDHX 1904..	499,70	**432**

MaxiMill – Shell mill 90° A HPC-19

- Insert radius >4.0 mm: Modify cutter body







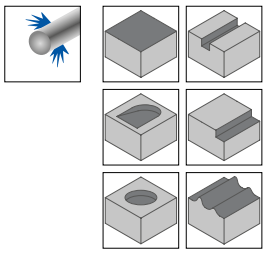
50 717 ...

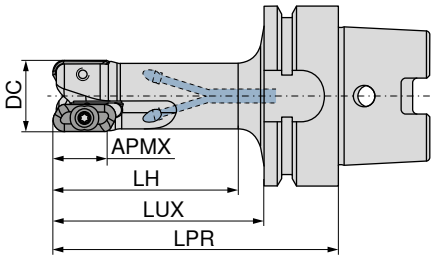
Designation	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
AHPC.40.R.03-19	40	3	18	16	38	50	35700	5	XDHX 1904..	509,00	**040**
AHPC.50.R.03-19	50	3	18	22	43	50	31900	5	XDHX 1904..	530,20	**050**
AHPC.63.R.03-19	63	3	18	22	48	50	28500	5	XDHX 1904..	555,70	**063**
AHPC.63.R.04-19	63	4	18	22	48	50	28500	5	XDHX 1904..	570,30	**163**

15

MaxiMill – Milling cutter 90° M HPC-19 with HSK 63-A

- balanced to G 6,3
- Insert radius >4.0 mm: Modify cutter body





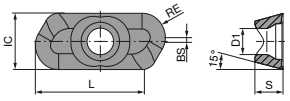


Designation	DC mm	ZNF	APMX mm	LPR mm	LH mm	LUX mm	RPMX 1/min.	torque moment Nm	Insert	50 721 ... EUR 2B/40	
MHPC.25.R.02-19-H63A-50	25	2	18	90	50	64	45200	5	XDHX 1904..	1.014,00	**025**
MHPC.25.R.02-19-H63A-63	25	2	18	100	63	74	42300	5	XDHX 1904..	1.014,00	**125**
MHPC.25.R.02-19-H63A-80	25	2	18	120	80	94	38400	5	XDHX 1904..	1.014,00	**225**
MHPC.25.R.02-19-H63A-100	25	2	18	140	100	114	33900	5	XDHX 1904..	1.014,00	**325**
MHPC.32.R.02-19-H63A-63	32	2	18	100	63	74	40000	5	XDHX 1904..	1.031,00	**032**
MHPC.32.R.03-19-H63A-63	32	3	18	100	63	74	40000	5	XDHX 1904..	1.138,00	**532**
MHPC.32.R.02-19-H63A-80	32	2	18	120	80	94	37500	5	XDHX 1904..	1.031,00	**132**
MHPC.32.R.03-19-H63A-80	32	3	18	120	80	94	37500	5	XDHX 1904..	1.138,00	**632**
MHPC.32.R.02-19-H63A-100	32	2	18	140	100	114	34300	5	XDHX 1904..	1.031,00	**232**
MHPC.40.R.03-19-H63A-63	40	3	18	100	63	74	35700	5	XDHX 1904..	1.170,00	**040**
MHPC.40.R.03-19-H63A-80	40	3	18	120	80	94	35700	5	XDHX 1904..	1.170,00	**140**
MHPC.40.R.03-19-H63A-100	40	3	18	140	100	114	33500	5	XDHX 1904..	1.170,00	**240**
MHPC.50.R.03-19-H63A-63	50	3	18	100	63	74	31900	5	XDHX 1904..	1.190,00	**050**
MHPC.50.R.03-19-H63A-80	50	3	18	120	80	94	31900	5	XDHX 1904..	1.190,00	**150**
MHPC.50.R.03-19-H63A-100	50	3	18	140	100	114	31900	5	XDHX 1904..	1.190,00	**250**

	TORX® blade		 Clamping key - T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
22 - 25	4,90	**036**			9,56	**113**			4,60	**303**	3,00	**172**	135,90	**193**
32	4,90	**036**			9,56	**113**			4,60	**303**	3,57	**173**	135,90	**193**
40	4,90	**036**	4,03	**040**	9,56	**113**	13,10	**151**	4,60	**303**	3,57	**173**	135,90	**193**
50 - 63	4,90	**036**	4,37	**050**	9,56	**113**	18,00	**154**	4,60	**303**	3,57	**174**	135,90	**193**

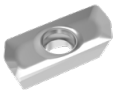
XDHX

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDHX 190402..	9,52	4,65	19	2	4,76
XDHX 190404..	9,52	4,65	19	2	4,76
XDHX 190408..	9,52	4,65	19	2	4,76
XDHX 190412..	9,52	4,65	19	2	4,76
XDHX 190416..	9,52	4,65	19	2	4,76
XDHX 190420..	9,52	4,65	19	2	4,76
XDHX 190425..	9,52	4,65	19	1,4	4,76
XDHX 190432..	9,52	4,65	19	1	4,76
XDHX 190440..	9,52	4,65	19	1	4,76
XDHX 190450..	9,52	4,65	19	-	4,76



XDHX

-27P
H216T



XDHX
50 488 ...

ISO	RE mm	EUR 1H/D4	
190402FR	0,2	37,51	**552**
190404FR	0,4	37,51	**554**
190408FR	0,8	37,51	**556**
190412FR	1,2	37,51	**557**
190416FR	1,6	37,51	**558**
190420FR	2,0	37,51	**560**
190425FR	2,5	37,51	**562**
190432FR	3,2	37,51	**564**
190440FR	4,0	37,51	**566**
190450FR	5,0	37,51	**568** 1)

P	
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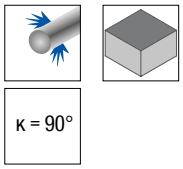
1) Insert radius > 4.0 mm: Modify cutter body

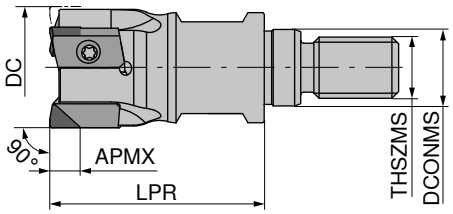
Milling guide

Cutting data standard values	→ 141–144	Safety advice	→ 161
Machining strategy	→ 165–167	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

15

MaxiMill – Screw-in cutter G HPC 04

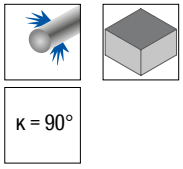


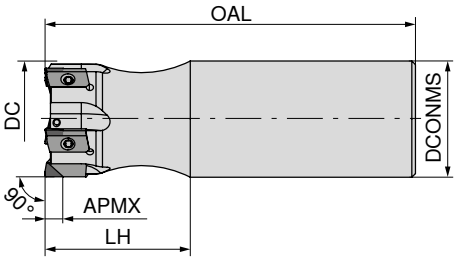




Designation	DC mm	ZNF	APMX mm	THSZMS	DCONMS mm	LPR mm	RPMX 1/min.	torque moment Nm	Insert	50 785 ... EUR 2B/40	
GHPC.20.R.03-04	20	3	4	M10	10,5	35	52000	1,6	ZNHW 04T3..	269,60	**20003**
GHPC.25.R.04-04	25	4	4	M12	12,5	35	45000	1,6	ZNHW 04T3..	301,70	**25004**
GHPC.32.R.05-04	32	5	4	M16	17,0	35	38000	1,6	ZNHW 04T3..	333,80	**32005**
GHPC.40.R.06-04	40	6	4	M16	17,0	35	34000	1,6	ZNHW 04T3..	365,80	**40006**

MaxiMill – End Mill C HPC 04







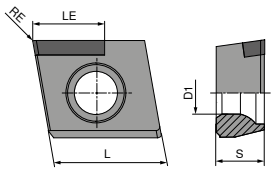


Designation	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	50 680 ... EUR 2B/40	
CHPC.20.R.03-04-A-25	20	3	4	20	77	25	52000	1,6	ZNHW 04T3..	269,60	**02003**
CHPC.25.R.04-04-A-32	25	4	4	25	90	32	45000	1,6	ZNHW 04T3..	301,70	**02504**
CHPC.32.R.05-04-A-40	32	5	4	32	102	40	38000	1,6	ZNHW 04T3..	333,80	**03205**
CHPC.40.R.06-04-A-50	40	6	4	32	112	50	34000	1,6	ZNHW 04T3..	365,80	**04006**

	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screwdriver
	80 950 ...	80 950 ...	70 950 ...	70 950 ...	80 950 ...
Spare parts	EUR Y7	EUR Y7	EUR 2A/28	EUR 2A/28	EUR Y7
DC					
20 - 40	4,90 **043**	10,51 **125**	4,60 **303**	4,29 **131**	122,50 **191**

ZNHW

Designation	LE mm	D1 mm	L mm	S mm
ZNHW 04T3..	4	2,8	11	3,97



ZNHW





ISO	RE mm	DIAMOND ZNHW 51 137 ... EUR 1G/22		CBN ZNHW 51 137 ... EUR 1G/21	
04T304ER	0,4	110,30	75400		
04T305ER	0,5			133,10	85500
04T308ER	0,8	110,30	75800		
04T3POER		110,30	77000		

P		
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N	●	
S		
H		○
O	○	

Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 168
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

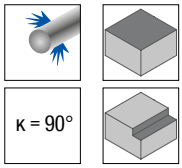
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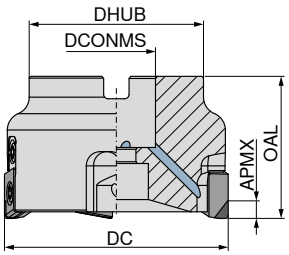
MaxiMill – Shell mill HPC 12

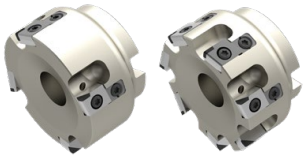
- ▲ 50 723 ... normal pitch
- ▲ 50 724 ... fine pitch

Scope of supply:

Tool, adjustment wedges and setting key; incl. wooden box







Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 723 ... EUR 2B/40		50 724 ... EUR 2B/40	
AHPC.40.R.04-12	40	4	11	40	34	16	32000	5	ZNHW 1205..	672,50	**040**		
AHPC.50.R.04-12	50	4	11	40	49	22	32000	5	ZNHW 1205..	687,90	**050**		
AHPC.50.R.05-12	50	5	11	40	49	22	32000	5	ZNHW 1205..			770,30	**050**
AHPC.63.R.04-12	63	4	11	40	49	22	29000	5	ZNHW 1205..	708,60	**063**		
AHPC.63.R.07-12	63	7	11	40	49	22	29000	5	ZNHW 1205..			955,00	**063**
AHPC.80.R.09-12	80	9	11	50	60	27	26000	5	ZNHW 1205..			1.329,00	**080**
AHPC.80.R.05-12	80	5	11	50	60	27	26000	5	ZNHW 1205..	1.001,00	**080**		
AHPC.100.R.06-12	100	6	11	50	70	32	24000	5	ZNHW 1205..	1.130,00	**100**		
AHPC.100.R.12-12	100	12	11	50	70	32	24000	5	ZNHW 1205..			1.621,00	**100**
AHPC.125.R.08-12	125	8	11	63	72	40	22000	5	ZNHW 1205..	1.340,00	**125**		
AHPC.125.R.14-12	125	14	11	63	72	40	22000	5	ZNHW 1205..			1.832,00	**12514**
AHPC.160.R.10-12	160	10	11	63	118	40	18000	5	ZNHW 1205..	1.669,00	**16010** [1]		
AHPC.160.R.16-12	160	16	11	63	118	40	18000	5	ZNHW 1205..			4.805,00	**16016** [1]
AHPC.200.R.12-12	200	12	11	63	153	60	16000	5	ZNHW 1205..	4.977,00	**20000** [1]		
AHPC.250.R.14-12	250	14	11	63	200	60	14000	5	ZNHW 1205..	5.621,00	**25014** [1]		
AHPC.315.R.18-12	315	18	11	80	265	60	12000	5	ZNHW 1205..	7.080,00	**31518** [1]		

1) Without Through Coolant

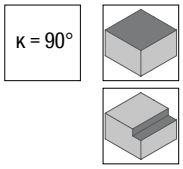
Spare parts DC	TORX® blade 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Wedge 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
40 - 315	4,90	**036**	4,60	**303**	3,57	**174**	38,64	**199**	135,90	**193**

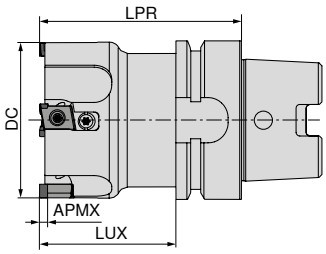
MaxiMill – Monoblock HPC 12

▲ balanced to G 6,3

Scope of supply:

Tool, adjustment wedges and setting key; incl. wooden box







Designation	DC mm	ZNF	APMX mm	LPR mm	LUX mm	RPMX 1/min.	torque moment Nm	Insert	50 721 ... EUR 2B/40		50 721 ... EUR 2B/40	
MHPC.40.R.04-12-H63A-70	40	4	11	70	44	32000	5	ZNHW 1205..			1.001,00	**04004**
MHPC.50.R.04-12-H63A-80	50	4	11	80	54	32000	5	ZNHW 1205..			1.001,00	**05004**
MHPC.50.R.05-12-H63A-80	50	5	11	80	54	32000	5	ZNHW 1205..	1.084,00	**05005**		
MHPC.63.R.04-12-H63A-80	63	4	11	80	54	29000	5	ZNHW 1205..			1.001,00	**06304**
MHPC.63.R.07-12-H63A-80	63	7	11	80	54	29000	5	ZNHW 1205..	1.247,00	**06307**		
MHPC.80.R.05-12-H63A-90	80	5	11	90	64	26000	5	ZNHW 1205..			1.228,00	**08005**
MHPC.80.R.09-12-H63A-90	80	9	11	90	64	26000	5	ZNHW 1205..	1.557,00	**08009**		
MHPC.100.R.06-12-H63A-90	100	6	11	90	64	24000	5	ZNHW 1205..			1.463,00	**10006**
MHPC.100.R.12-12-H63A-90	100	12	11	90	64	24000	5	ZNHW 1205..	1.957,00	**10012**		
MHPC.125.R.08-12-H63A-123	125	8	11	123	97	22000	5	ZNHW 1205..			3.456,00	**12508**
MHPC.160.R.10-12-H63A-123	160	10	11	123	97	18000	5	ZNHW 1205..			4.673,00	**16010** [1]

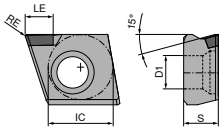
1) Without Through Coolant

	TORX® blade		 Molykote		 Clamping screw		 Wedge		 Torque screwdriver	
	80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts	EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
DC										
40 - 160	4,90	**036**	4,60	**303**	3,57	**174**	38,64	**199**	135,90	**193**

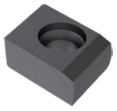
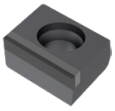
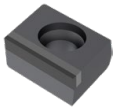
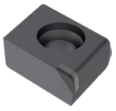
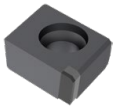
15

ZNHW

Designation	LE mm	D1 mm	IC mm	S mm
ZNHW 120504ER-1503	3	4,85	10	5,40
ZNHW 120504FR-0007	7	4,85	10	5,40
ZNHW 120508ER-1503	3	4,85	10	5,40
ZNHW 120508SR-0003	3	4,85	10	5,40
ZNHW 1205EOER-1002	2	4,85	10	5,40
ZNHW 1205POER-1511	11	4,85	10	5,40
ZNHW 1205POFR-1003	3	4,85	10	5,40
ZNHW 1205POSR-1503	3	4,85	10	5,40
ZNHW 1205POSR-1506	6	4,85	10	5,40
ZNHW 1205POSR-3003	3	4,85	10	5,40
ZNHW 1205ZZSR-5003	3	4,85	10	5,40



ZNHW

	CTL3215	CTD4205	-R CTD4205	CTD4205	-Q CTD4205
					
	CBN ZNHW	DIAMOND ZNHW	DIAMOND ZNHW	DIAMOND ZNHW	DIAMOND ZNHW
	50 515 ...	50 467 ...	50 517 ...	50 468 ...	50 466 ...
ISO / RE mm	EUR 1G/21	EUR 1G/22	EUR 1G/22	EUR 1G/22	EUR 1G/22
120504ER-1503 / 0,4				121,90 906	
120504FR-0007 / 0,4				148,50 904	
120508ER-1503 / 0,8				121,90 910	
120508SR-0003 / 0,8				121,30 908	
1205EOER-1002	140,60 952				
1205POER-1511		175,70 902			
1205POFR-1003		121,90 90600			
1205POSR-1503		110,30 900			
1205POSR-1506		143,00 90800	143,00 90800		
1205POSR-3003		121,30 904			
1205ZZSR-5003					155,20 900 1)
P					
M					
K	●				
N		●	●	●	●
S					
H	○				
O		○	○	○	○

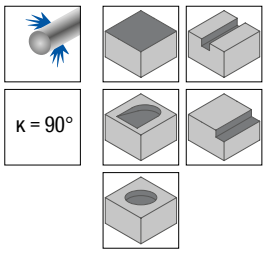
1) -Q = Wiper insert

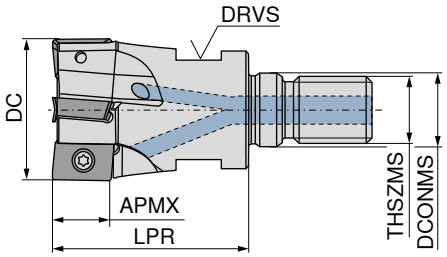
Milling guide

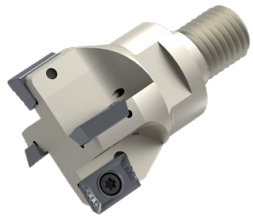
Cutting data standard values	→ 141–144	Machining strategy	→ 168
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

MaxiMill – Screw in cutter G 141

▲ Insert radius >3.2 mm: Modify cutter body



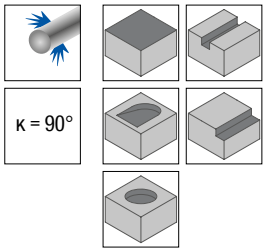


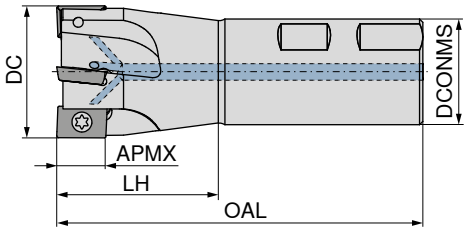


ISO designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 770 ... EUR 2B	
G141.25.R.02.IK	25	2	14	35	M12	12,5	17	3,2	LD.. 1504..	171,70	025
G141.32.R.03.IK	32	3	14	40	M16	17,0	24	3,2	LD.. 1504..	206,20	032
G141.40.R.04.IK	40	4	14	40	M16	17,0	24	3,2	LD.. 1504..	237,60	040

MaxiMill – End milling cutter C 141

▲ Insert radius >3.2 mm: Modify cutter body







B

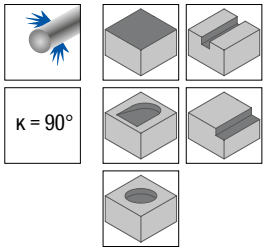
ISO designation	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	torque moment Nm	Insert	50 771 ... EUR 2B	
C141.20.R.01	20	1	14	25	95	39	3,2	LD.. 1504..	176,00	020
C141.25.R.02	25	2	14	25	100	44	3,2	LD.. 1504..	234,30	025
C141.32.R.03	32	3	14	32	108	48	3,2	LD.. 1504..	272,20	032

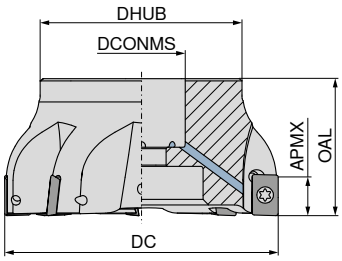
Spare parts DC	TORX® blade 80 950 ... EUR Y7		Key D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
20 - 40	4,90	036	9,56	113	4,60	303	3,00	01100	132,50	192

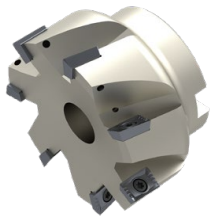
15

MaxiMill – Shell mill A 241

▲ Insert radius >3.2 mm: Modify cutter body







ISO designation	DC mm	ZNF	APMX mm	DHUB mm	DCONMS mm	OAL mm	torque moment Nm	Insert	50 769 ... EUR 2B	
A241.40.R.04	40	4	14	33	16	40	3,2	LD.. 1504..	282,90	**040**
A241.50.R.05	50	5	14	43	22	40	3,2	LD.. 1504..	346,70	**050**
A241.52.R.05	52	5	14	43	22	40	3,2	LD.. 1504..	339,20	**052**
A241.63.R.06	63	6	14	48	22	40	3,2	LD.. 1504..	418,00	**063**
A241.66.R.06	66	6	14	58	27	50	3,2	LD.. 1504..	410,40	**066**
A241.80.R.07	80	7	14	58	27	50	3,2	LD.. 1504..	491,50	**080**
A241.100.R.08	100	8	14	75	32	50	3,2	LD.. 1504..	571,30	**100**

TORX® blade


Key D


Molykote

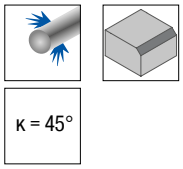

Clamping screw

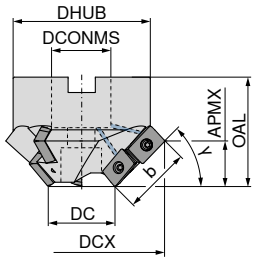

Torque screwdriver

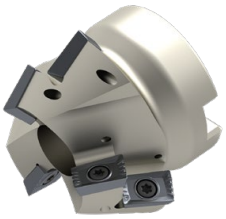
Spare parts DC	80 950 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
40	4,90	**036**	9,56	**113**	4,60	**303**	3,30	**110**	132,50	**192**
50 - 100	4,90	**036**	9,56	**113**	4,60	**303**	3,30	**304**	132,50	**192**

MaxiMill – Chamfer Cutter A 242

▲ Caution: Use only inserts with a corner radius of less than 1.6 mm
▲ ZEFP = number of inserts
▲ ZNP = tooth rows







KAPR °	DC mm	DCX ±0,3 mm	ZNF	APMX ±0,3 mm	ZEFP	b ±0,3 mm	OAL mm	DCONMS mm	DHUB mm	ZNP	torque moment Nm	Insert	50 768 ... EUR 2B	
15	35	92,2	3	7,6	6	29,6	50	27	62,5	2	3,2	LD.. 1504..	387,70	**015**
30	35	86,3	3	14,8	6	29,6	50	27	62,5	2	3,2	LD.. 1504..	387,70	**030**
45	35	76,9	3	20,9	6	29,6	50	27	62,5	2	3,2	LD.. 1504..	387,70	**045**
60	35	64,6	3	25,6	6	29,6	50	22	62,5	2	3,2	LD.. 1504..	387,70	**060** 1)
75	35	50,3	3	28,5	6	29,6	60	22	49,0	2	3,2	LD.. 1504..	387,70	**075** 1)

1) Version with Powerscrew

TORX® blade

Clamping key - T

Key D


Power Screw


Molykote


Clamping screw

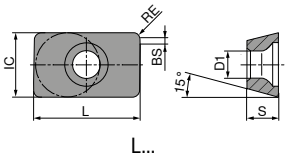

Torque screwdriver


clamping screw

Spare parts KAPR	80 950 ... EUR Y7		80 397 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7		83 950 ... EUR Y8	
15 - 45	4,90	**036**			9,56	**113**			4,60	**303**	3,30	**304**	132,50	**192**	3,78	**125**
60 - 75	4,90	**036**	4,37	**050**	9,56	**113**	18,00	**154**	4,60	**303**	3,30	**304**	132,50	**192**		

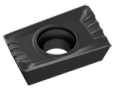
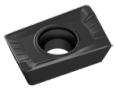
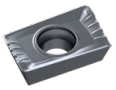
LDFW / LDFT / LDMT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
LD.. 1504PD..	9,52	4,4	15	1,2	4,76
LDFT 150408..	9,52	4,4	15	1,2	4,76
LDFT 150416..	9,52	4,4	15	0,9	4,76
LDFT 150432..	9,52	4,4	15	1,0	4,76
LDFT 1504PD..	9,52	4,4	15	0,8	4,76

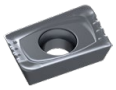
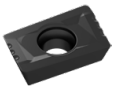
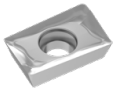


L...

LDFW / LDFT / LDMT

	CTCP230	-29 CTCP230	-29 CTCP230	-29 CTPP235	-29 CTPP235
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
	LDFW	LDFT	LDMT	LDFT	LDMT
	51 043 ...	51 079 ...	51 080 ...	51 079 ...	51 080 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1504PDSR 0,8	16,77 020	20,09 020	10,26 020	20,09 120	10,26 120
P	●	●	●	●	●
M				○	○
K	○	○	○	○	○
N					
S					
H					
O					

LDFT / LDFW

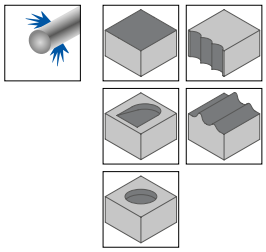
	-33 CTPM240	CTCK215	-27P H216T
	DRAGONSKIN	DRAGONSKIN	
			
	LDFT	LDFW	LDFT
	51 042 ...	51 043 ...	50 409 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1A/90
150408FR 0,8			20,84 550
150416SR 1,6	19,18 41600		
150432SR 3,2	19,18 43200		
1504PDSR 1,2	19,18 420		
1504PDSR 0,8		16,77 520	
P	○		
M	●		
K		●	○
N			●
S			
H			
O			○

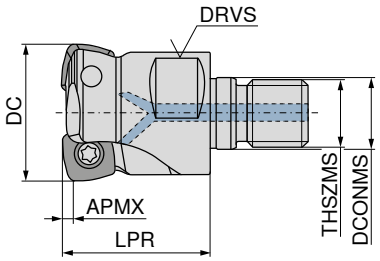
15

Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 170
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

MaxiMill – Screw in cutter G HFC

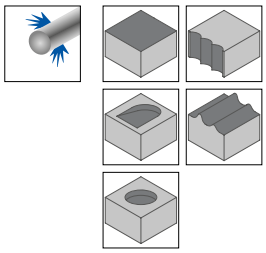


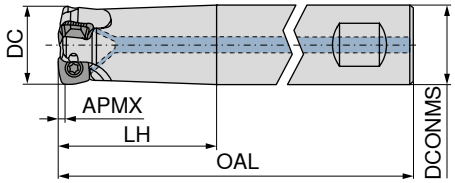




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 682 ... EUR 2B/40	
GHFC.16.R.02-06	16	2	0,8	27	8,5	M8	10	20800	1,2	XPLX 0603..	237,40	616
GHFC.20.R.03-06	20	3	0,8	33	10,5	M10	15	19800	1,2	XPLX 0603..	269,60	620
GHFC.25.R.04-06	25	4	0,8	35	12,5	M12	17	18700	1,2	XPLX 0603..	301,70	625
GHFC.32.R.05-06	32	5	0,8	35	17,0	M16	24	22000	1,2	XPLX 0603..	333,80	632
GHFC.42.R.07-06	42	7	0,8	35	17,0	M16	24	15000	1,2	XPLX 0603..	367,30	04207
GHFC.25.R.02-09	25	2	1,0	35	12,5	M12	17	30000	3,2	XDLX 09T3..	284,30	025
GHFC.25.R.03-09	25	3	1,0	35	12,5	M12	17	30000	3,2	XDLX 09T3..	305,20	125
GHFC.32.R.03-09	32	3	1,0	35	17,0	M16	24	27000	3,2	XDLX 09T3..	318,80	032
GHFC.42.R.05-09	42	5	1,0	35	17,0	M16	24	26100	3,2	XDLX 09T3..	357,10	04205
GHFC.32.R.02-12	32	2	2,0	35	17,0	M16	24	21600	5	XOLX 1204..	298,20	132
GHFC.35.R.03-12	35	3	2,0	35	17,0	M16	24	21360	5	XOLX 1204..	318,80	035
GHFC.42.R.04-12	42	4	2,0	35	17,0	M16	24	20800	5	XOLX 1204..	344,30	04204

MaxiMill – End milling cutter C HFC

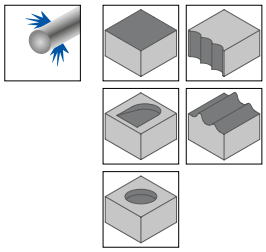


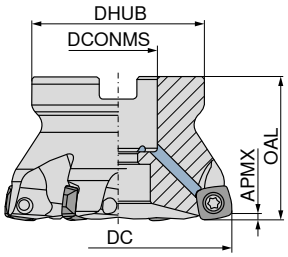


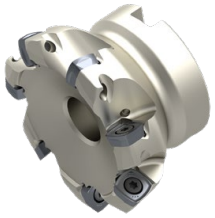


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	torque moment Nm	Insert	A 50 681 ... EUR 2B/40		B 50 681 ... EUR 2B/40	
CHFC.16.R.02-06-A-40-200	16	2	0,8	200	40	16	4600	1,2	XPLX 0603..	237,40	716		
CHFC.16.R.02-06-B-40	16	2	0,8	89	40	16	17300	1,2	XPLX 0603..			237,40	616
CHFC.20.R.03-06-B-50	20	3	0,8	101	50	20	14500	1,2	XPLX 0603..			269,60	620
CHFC.20.R.03-06-A-50-225	20	3	0,8	225	50	20	4200	1,2	XPLX 0603..	269,60	720		
CHFC.25.R.04-06-B-50	25	4	0,8	107	50	25	15600	1,2	XPLX 0603..			301,70	625
CHFC.25.R.04-06-A-50-225	25	4	0,8	225	50	25	4600	1,2	XPLX 0603..	301,70	725		
CHFC.32.R.05-06-B-25-60	32	5	0,8	117	60	25	11000	1,2	XPLX 0603..			333,80	632
CHFC.32.R.05-06-A-25-60-225	32	5	0,8	225	60	25	3900	1,2	XPLX 0603..	333,80	732		
CHFC.25.R.02-09-A-50-225	25	2	1,0	225	50	25	9000	3,2	XDLX 09T3..	284,30	025		
CHFC.25.R.03-09-A-50-225	25	3	1,0	225	50	25	9000	3,2	XDLX 09T3..	305,20	125		
CHFC.32.R.03-09-A-63-250	32	3	1,0	250	63	32	8100	3,2	XDLX 09T3..	318,80	032		
CHFC.32.R.02-12-A-63-250	32	2	2,0	250	63	32	6480	5	XOLX 1204..	298,20	132		
CHFC.35.R.03-12-A-63-250	35	3	2,0	250	63	32	6480	5	XOLX 1204..	318,80	035		

MaxiMill – Shell mill A HFC







Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 683 ... EUR 2B/40	
AHFC.32.R.03-09	32	3	1,0	40	16	38	27700	3,2	XDLX 09T3..	318,80	032
AHFC.35.R.04-09	35	4	1,0	40	16	38	26700	3,2	XDLX 09T3..	339,60	035
AHFC.40.R.04-09	40	4	1,0	40	16	38	26400	3,2	XDLX 09T3..	353,50	140
AHFC.42.R.05-09	42	5	1,0	40	16	38	26100	3,2	XDLX 09T3..	374,20	142
AHFC.50.R.05-09	50	5	1,0	40	22	43	23500	3,2	XDLX 09T3..	415,90	150
AHFC.52.R.06-09	52	6	1,0	40	22	43	23000	3,2	XDLX 09T3..	436,70	152
AHFC.63.R.06-09	63	6	1,0	40	22	48	20500	3,2	XDLX 09T3..	478,20	163
AHFC.66.R.07-09	66	7	1,0	40	22	48	20000	3,2	XDLX 09T3..	499,00	16600
AHFC.40.R.03-12	40	3	2,0	40	16	38	21120	5	XOLX 1204..	332,80	040
AHFC.42.R.04-12	42	4	2,0	40	16	38	20880	5	XOLX 1204..	353,50	042
AHFC.50.R.04-12	50	4	2,0	40	22	43	18800	5	XOLX 1204..	395,00	050
AHFC.52.R.05-12	52	5	2,0	40	22	43	18400	5	XOLX 1204..	415,90	052
AHFC.63.R.05-12	63	5	2,0	40	22	48	16400	5	XOLX 1204..	457,30	063
AHFC.66.R.06-12	66	6	2,0	40	22	48	16000	5	XOLX 1204..	478,20	066
AHFC.80.R.07-12	80	7	2,0	50	27	58	14000	5	XOLX 1204..	540,70	080
AHFC.100.R.08-12	100	8	2,0	50	32	78	12000	5	XOLX 1204..	603,20	100
AHFC.63.R.05-19	63	5	3,3	40	22	48	5500	5	XOLX 1906..	478,90	263
AHFC.80.R.06-19	80	6	3,3	50	27	58	4700	5	XOLX 1906..	581,90	280
AHFC.100.R.08-19	100	8	3,3	52	32	78	4100	5	XOLX 1906..	692,60	300
AHFC.125.R.10-19	125	10	3,3	63	40	88	3600	5	XOLX 1906..	869,90	325
AHFC.160.R.11-19	160	11	3,3	63	40	98	3100	5	XOLX 1906..	1.052,00	360 [1]

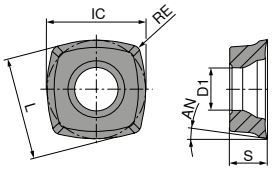
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

Spare parts	TORX® blade 80 950 ... EUR Y7		Clamping key - T 80 397 ... EUR Y7		Key D 80 950 ... EUR Y7		Power Screw 70 950 ... EUR 2A/28		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
XDLX 09T3..	4,90	036			9,56	113			4,60	303	3,30	110	132,50	192
XDLX 09T3.. (Ø32 – Ø42)	4,90	036	4,03	040	9,56	113	13,10	151	4,60	303	3,30	110	132,50	192
XOLX 1204..	4,90	037			10,25	114			4,60	303	3,30	01200	135,90	193
XOLX 1204.. (Ø40 – Ø42)	4,90	037	4,03	040	10,25	114	13,10	151	4,60	303	3,30	01200	135,90	193
XOLX 1906..	4,90	037			10,25	114			4,60	303	4,29	302	135,90	193
XPLX 0603..	4,90	033			8,03	110			4,60	303	2,70	116	132,50	192

15

XPLX / XDLX / XOLX / XOHX

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
XPLX 0603..	6,35	2,8	6	1	2,75	11
XDLX 09T3..	9,52	4,4	9	1,9	3,97	15
XO.X 1204..	12,70	5,5	12	1,3	4,76	10
XOLX 1906..	19,14	6,0	19	-	6,35	10



XPLX

NEW

	-M50 CTCP220	-M50 CTPP225	-M50 CTPP235	-M50 CTPM225	-M50 CTPM240	-F40 CTPM245	-F40 CTCM245
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	XPLX	XPLX	XPLX	XPLX	XPLX	XPLX	XPLX
	51 019 ...	**51 019 ...**	**51 019 ...**	**51 019 ...**	**51 019 ...**	**51 116 ...**	**51 116 ...**
ISO RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
060305ER 0,5						15,81 **455**	15,81 **90501**
060305SR 0,5	12,96 **255**	12,96 **055**	12,96 **105**	12,96 **205**	12,96 **405**		
P	●	●	●	●	○	●	●
M			○	●	●	●	●
K			○				
N							
S							○
H							
O							

XPLX

	-M50 CTCK215	-F40 CTC5240	-F40 CTCS245
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
			
	XPLX	XPLX	XPLX
	51 019 ...	**50 518 ...**	**51 116 ...**
ISO RE mm	EUR 1B/61	EUR 17	EUR 17
060305ER 0,5		15,81 **558**	15,81 **55500**
060305SR 0,5	12,96 **505**		
P			
M			
K	●		
N			
S		●	●
H			
O			

XDLX

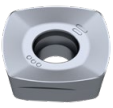
ISO	RE mm	-M50 CTCP220 DRAGONSKIN	-M50 CTPP225 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-M50 CTPP235 DRAGONSKIN
					
		XDLX	XDLX	XDLX	XDLX
		51 016 ...	51 016 ...	51 016 ...	51 016 ...
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
09T308SR	0,8	13,36 258	13,36 058	13,36 008	13,36 108
P		●	●	●	●
M					○
K				○	○
N					
S					
H					
O					

XDLX

ISO	RE mm	-M50 CTPM225 DRAGONSKIN	-M50 CTCM235 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F40 CTPM245 DRAGONSKIN	-M50 CTPM245 DRAGONSKIN	NEW -M50 CTCM245 DRAGONSKIN
							
		XDLX	XDLX	XDLX	XDLX	XDLX	XDLX
		51 016 ...	51 016 ...	51 016 ...	51 115 ...	51 016 ...	51 016 ...
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17
09T308ER	0,8				16,13 458		
09T308SR	0,8	13,36 208	13,36 308	13,36 408		16,13 458	16,13 90801
P		●	●	○	●	●	●
M		●	●	●	●	●	●
K							
N							
S							○
H							
O							

15

XDLX / XOLX

						NEW													
		-M50 CTCK215				-M50 CTPK220				-F40 CTC5240				-F40 CTCS245					
		DRAGONSKIN				DRAGONSKIN				DRAGONSKIN				DRAGONSKIN					
																			
		XDLX				XOLX				XDLX				XDLX					
		51 016 ...				51 017 ...				50 503 ...				51 115 ...					
ISO	RE mm	EUR 1B/61				EUR 1B/61				EUR 17				EUR 17					
09T308ER	0,8									16,13	558			16,13	558				
09T308SR	0,8	13,36	508																
190615SR	1,5					23,28	61500												
P																			
M																			
K			●				●												
N																			
S											●				●				
H																			
O																			

XOLX

		-M50 CTCP220				-M50 CTPP225				-M50 CTCP230				-M50 CTPP235				-R50 CTPP235	
		DRAGONSKIN				DRAGONSKIN				DRAGONSKIN				DRAGONSKIN				DRAGONSKIN	
																			
		XOLX				XOLX				XOLX				XOLX				XOLX	
		51 017 ...				51 017 ...				51 017 ...				51 017 ...				51 018 ...	
ISO	RE mm	EUR 1B/61				EUR 1B/61				EUR 1B/61				EUR 1B/61				EUR 1B/61	
120410SR	1,0	16,02	260			16,02	060			16,02	010			16,02	110			16,02	110
P		●				●				●				●				●	
M														○				○	
K										○				○				○	
N																			
S																			
H																			
O																			

XOLX

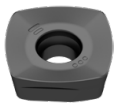
		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-F40 CTPM245	-M50 CTPM245	NEW -F40 CTCM245	NEW -M50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		XOLX	XOLX	XOLX	XOLX	XOLX	XOLX	XOLX
		51 017 ...	51 017 ...	51 017 ...	51 022 ...	51 017 ...	51 022 ...	51 017 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17	EUR 1H/17
120410ER	1,0				18,86 460		18,86 91001	
120410SR	1,0	16,02 210	16,02 310	16,02 410		18,86 460		18,86 91001
P		●	●	○	●	●	●	●
M		●	●	●	●	●	●	●
K								
N								
S							○	○
H								
O								

XOLX / XOHX

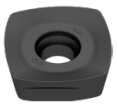
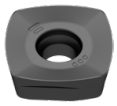
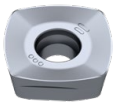
		-M50 CTCK215	-F40 CTC5240	-F50 CTC5240	-F40 CTCS245	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XOLX	XOLX	XOHX	XOLX	XOHX
		51 017 ...	50 504 ...	51 124 ...	51 022 ...	51 124 ...
ISO	RE mm	EUR 1B/61	EUR 17	EUR 17	EUR 17	EUR 17
120410ER	1,0		18,86 558		18,86 560	
120410SR	1,0	16,02 510		24,52 16000		24,52 56000
P						
M						
K		●				
N						
S			●	●	●	●
H						
O						

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XOLX

		-M50 CTCP230	-M50 CTPP235	-M50 CTPM240	-F40 CTPM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XOLX	XOLX	XOLX	XOLX
		51 017 ...	51 017 ...	51 017 ...	51 022 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17
190615ER	1,5				28,62 465
190615SR	1,5	23,28 015	23,28 115	23,28 415	
P		●	●	○	●
M			○	●	●
K		○	○		
N					
S					
H					
O					

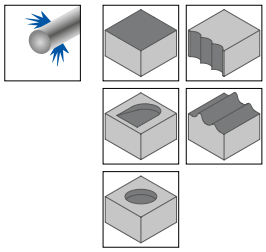
XOLX

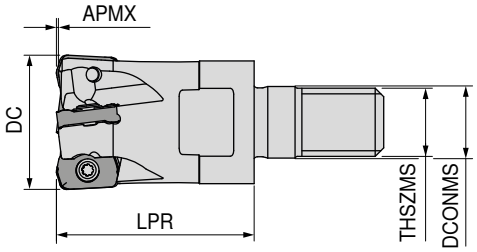
		NEW -F40 CTCM245	-M50 CTCK215	NEW -M50 CTPK220	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XOLX	XOLX	XOLX	XOLX	XOLX
		51 022 ...	51 017 ...	51 017 ...	50 504 ...	51 022 ...
ISO	RE mm	EUR 1H/17	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17
190615ER	1,5	28,62 91501			28,62 515	28,62 56500
190615SR	1,5		23,28 515	23,28 61500		
P		●				
M		●				
K			●	●		
N						
S		○			●	●
H						
O						

Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 172–175
Starting Parameter	→ 172–175	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

MaxiMill – Screw in cutter G DHFC

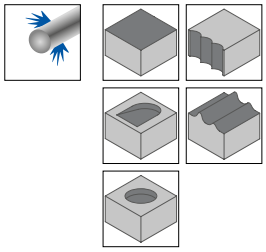


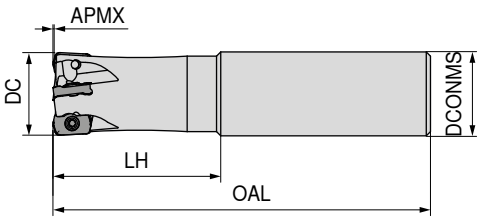




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	torque moment Nm	Insert	56 411 ... EUR WA	
GDHFC.16.R.02-09	16	2	0,75	29	8,5	M8	0,65	LNKX 0925..	219,40	01602
GDHFC.16.R.03-09	16	3	0,75	29	8,5	M8	0,65	LNKX 0925..	239,30	01603
GDHFC.20.R.04-09	20	4	0,75	29	10,5	M10	0,65	LNKX 0925..	274,50	02004
GDHFC.25.R.05-09	25	5	0,75	33	12,5	M12	0,65	LNKX 0925..	318,60	02505
GDHFC.32.R.05-09	32	5	0,75	42	17,0	M16	0,65	LNKX 0925..	340,60	03205
GDHFC.35.R.06-09	35	6	0,75	42	17,0	M16	0,65	LNKX 0925..	360,50	03506
GDHFC.42.R.06-09	42	6	0,75	42	17,0	M16	0,65	LNKX 0925..	376,00	04206

MaxiMill – End milling cutter C DHFC







A

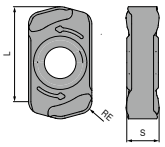
Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	torque moment Nm	Insert	56 417 ... EUR WA	
CDHFC.16.R.05-09-A-32	16	3	0,75	80	32	16	0,65	LNKX 0925..	239,30	01603
CDHFC.20.R.04-09-A-40	20	4	0,75	90	40	20	0,65	LNKX 0925..	274,50	02004

Spare parts DC	TORX® blade 80 950 ... EUR Y7		Key D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Clamping screw 56 950 ... EUR WA		Torque screwdriver 80 950 ... EUR Y7	
16 - 42	5,42	051	8,19	117	4,60	303	3,42	15000	122,50	191

15

LNKX

Designation	L mm	S mm
LNKX 0925..	9	2,50



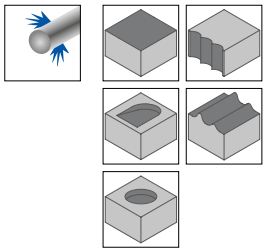
LNKX

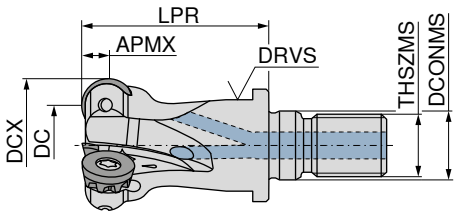
ISO	RE mm	-R50 CTPP231	-M50 CTPP236	-R50 CTPP236	-M50 CTPM241	-R50 CTPK221
						
		LNKX	LNKX	LNKX	LNKX	LNKX
		56 353 ...	56 355 ...	56 353 ...	56 355 ...	56 353 ...
		EUR WB	EUR WB	EUR WB	EUR WB	EUR WB
0925ZSR	1	18,56 12000	18,56 02500	18,56 02000	18,56 42500	18,56 27000
P		●	●	●	○	○
M		○	○	○	●	
K		○	○	○		●
N						
S					○	
H						
O						

Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 176
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

MaxiMill – Screw in cutter G 251



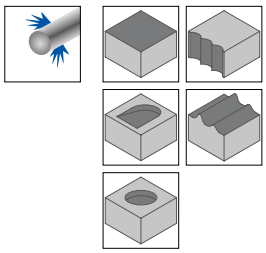


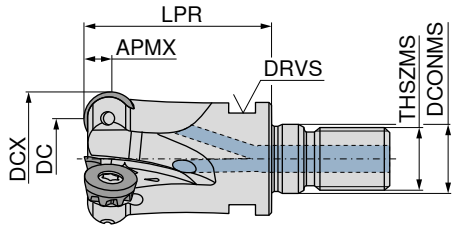


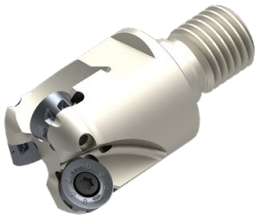
55 112 ...

Designation	DC mm	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	DRVS mm	torque moment Nm	Insert	EUR 2B	
G251.10.R.02-05	5	10	2	2,5	M8	20	8,5	10	0,7	RDHX 0501..	155,50	110
G251.12.R.03-05	7	12	3	2,5	M8	20	8,5	10	0,7	RDHX 0501..	209,50	112
G251.15.R.04-05	10	15	4	2,5	M8	20	8,5	10	0,7	RDHX 0501..	245,10	115
G251.16.R.04-05	11	16	4	2,5	M8	20	8,5	10	0,7	RDHX 0501..	245,10	216
G251.20.R.05-05	15	20	5	2,5	M10	25	10,5	15	0,7	RDHX 0501..	289,40	320
G251.20.R.03-08	12	20	3	4,0	M10	28	10,5	15	1,2	RDHX 0802..	209,50	420
G251.25.R.04-08	17	25	4	4,0	M12	28	12,5	17	1,2	RDHX 0802..	262,40	425
G251.32.R.06-08	24	32	6	4,0	M16	28	17,0	24	1,2	RDHX 0802..	346,70	432
G251.35.R.06-08	27	35	6	4,0	M16	28	17,0	24	1,2	RDHX 0802..	346,70	435
G251.20.R.02-10	10	20	2	5,0	M10	33	10,5	15	2	RP.X 10T3..	222,50	220
G251.32.R.04-10	22	32	4	5,0	M16	35	17,0	24	2	RP.X 10T3..	325,10	232
G251.35.R.05-10	25	35	5	5,0	M16	35	17,0	24	2	RP.X 10T3..	364,00	235
G251.25.R.02-12.IK	13	25	2	6,0	M12	35	12,5	17	3,2	RP.X 1204..	219,30	525
G251.32.R.03-12.IK	20	32	3	6,0	M16	35	17,0	24	3,2	RP.X 1204..	266,80	532
G251.35.R.03-12.IK	23	35	3	6,0	M16	35	17,0	24	3,2	RP.X 1204..	266,80	535
G251.42.R.04-12.IK	30	42	4	6,0	M16	42	17,0	24	3,2	RP.X 1204..	317,60	542

MaxiMill – Screw in cutter G 251 RS



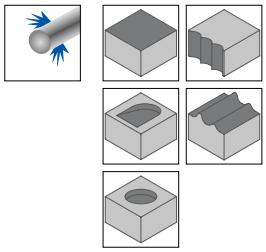


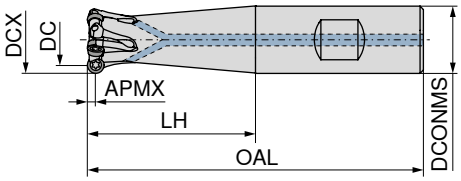


50 684 ...

Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
G251.20.R.05-05-RS	15	20	5	2,5	10,5	33	M10	15	31800	0,7	RDHX 0501..	287,20	220
G251.25.R.06-05-RS	20	25	6	2,5	12,5	35	M12	17	24450	0,7	RDHX 0501..	330,60	225
G251.32.R.07-05-RS	27	32	7	2,5	17,0	35	M16	24	19850	0,7	RDHX 0501..	396,70	232
G251.20.R.03-08-RS	12	20	3	4,0	10,5	33	M10	15	25000	1,2	RDHX 0802..	269,60	120
G251.25.R.04-08-RS	17	25	4	4,0	12,5	35	M12	17	19000	1,2	RDHX 0802..	301,70	125
G251.32.R.05-08-35-RS	24	32	5	4,0	17,0	35	M16	24	19000	1,2	RDHX 0802..	366,80	132
G251.20.R.02-10-RS	10	20	2	5,0	10,5	33	M10	15	30000	2	RP.X 10T3..	218,10	020
G251.25.R.03-10-RS	15	25	3	5,0	12,5	35	M12	17	30000	2	RP.X 10T3..	293,10	025
G251.32.R.04-10-RS	22	32	4	5,0	17,0	35	M16	24	25000	2	RP.X 10T3..	341,10	032
G251.25.R.02-12-35-RS	13	25	2	6,0	12,5	35	M12	17	25000	3,2	RP.X 1204..	211,50	525
G251.32.R.03-12-35-RS	20	32	3	6,0	17,0	35	M16	24	19850	3,2	RP.X 1204..	258,00	532
G251.35.R.03-12-35-RS	23	35	3	6,0	17,0	35	M16	24	15900	3,2	RP.X 1204..	258,00	535
G251.42.R.04-12-42-RS	30	42	4	6,0	17,0	42	M16	24	15000	3,2	RP.X 1204..	306,60	542

MaxiMill – End milling cutter C 251 RS



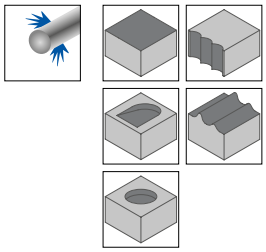


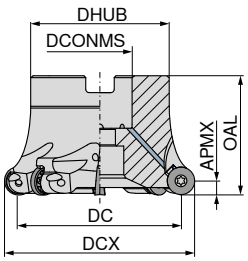


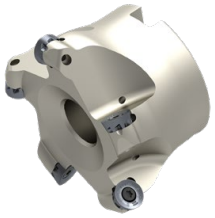
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	Insert	A 50 685 ... EUR 2B/40		B 50 685 ... EUR 2B/40	
C251.10.R-02-05-B-12-20-RS	5	10	2	2,5	67	21,5	12	40000	RDHX 0501..			198,60	010
C251.10.R-02-05-A-25-165-RS	5	10	2	2,5	165	25,0	10	12000	RDHX 0501..	191,80	110		
C251.12.R-03-05-B-16-25-RS	7	12	3	2,5	75	25,0	16	40000	RDHX 0501..			250,50	012
C251.12.R-03-05-A-32-165-RS	7	12	3	2,5	165	32,0	12	16000	RDHX 0501..	241,20	112		
C251.16.R-04-05-B-32-RS	11	16	4	2,5	81	32,0	16	40000	RDHX 0501..			293,10	316
C251.16.R-04-05-A-40-165-RS	11	16	4	2,5	165	40,0	16	18000	RDHX 0501..	286,40	016		
C251.20.R-05-05-B-40-RS	15	20	5	2,5	91	40,0	20	31800	RDHX 0501..			341,10	620
C251.20.R-05-05-A-50-165-RS	15	20	5	2,5	165	50,0	20	18000	RDHX 0501..	334,70	120		
C251.16.R-02-08-B-32-RS	8	16	2	4,0	81	32,0	16	40000	RDHX 0802..			206,60	116
C251.16.R-02-08-A-40-165-RS	8	16	2	4,0	165	40,0	16	18000	RDHX 0802..	198,60	216		
C251.20.R-03-08-B-40-RS	12	20	3	4,0	91	40,0	20	31800	RDHX 0802..			262,60	220
C251.20.R-03-08-A-60-RS	12	20	3	4,0	110	50,0	20	30000	RDHX 0802..	269,60	020		
C251.20.R-03-08-A-50-200-RS	12	20	3	4,0	200	50,0	20	25000	RDHX 0802..	254,50	320		
C251.25.R-04-08-B-50-RS	17	25	4	4,0	107	50,0	25	25500	RDHX 0802..			310,40	625
C251.25.R-04-08-A-60-RS	17	25	4	4,0	116	60,0	25	19000	RDHX 0802..	301,70	125		
C251.25.R-04-08-A-60-225-RS	17	25	4	4,0	225	60,0	25	18000	RDHX 0802..	302,40	225		
C251.20.R-02-10-A-50-RS	10	20	2	5,0	102	50,0	20	25000	RP.X 10T3..	219,90	420		
C251.20.R-02-10-A-50-200-RS	10	20	2	5,0	200	50,0	20	25000	RP.X 10T3..	219,90	520		
C251.25.R.03-10-A-60-RS	15	25	3	5,0	116	60,0	25	25000	RP.X 10T3..	297,20	025		
C251.25.R-03-10-B-60-RS	15	25	3	5,0	116	60,0	25	20000	RP.X 10T3..			297,20	325
C251.25.R-03-10-A-60-225-RS	15	25	3	5,0	225	60,0	25	18000	RP.X 10T3..	297,20	425		
C251.32.R.04-10-A-70-RS	22	32	4	5,0	130	70,0	32	25000	RP.X 10T3..	334,70	032		
C251.25.R-02-12-B-30-RS	13	25	2	6,0	86	30,0	25	25000	RP.X 1204..			271,00	525
C251.32.R-03-12-A-RS	20	32	3	6,0	100	40,0	32	19000	RP.X 1204..	313,40	232		
C251.32.R-03-12-B-40-RS	20	32	3	6,0	100	40,0	32	19000	RP.X 1204..			313,40	132

Spare parts Insert	TORX® blade 80 950 ... EUR Y7		Key D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
RDHX 0501..	4,90	031	8,69	108	4,60	303	2,70	149	122,50	191
RDHX 0802..	4,90	033	8,03	110	4,60	303	2,70	116	122,50	191
RP.X 10T3..	4,90	035	9,41	112	4,60	303	2,70	840	132,50	192
RP.X 1204..	4,90	036	9,56	113	4,60	303	3,30	304	132,50	192

MaxiMill – Shell mill A 251 RS







Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS H6 mm	RPMX 1/min.	torque moment Nm	Insert	50 686 ... EUR 2B/40	
A251.40.R.03-10-RS	30	40	3	5	40	38	16	15900	2	RP.X 10T3..	325,10	**240**
A251.40.R.05-10-RS	30	40	5	5	40	38	16	16000	2	RP.X 10T3..	366,40	**140**
A251.42.R.06-10-RS	32	42	6	5	40	38	16	16000	2	RP.X 10T3..	421,10	**142**
A251.50.R.04-10-RS	40	50	4	5	40	43	22	12700	2	RP.X 10T3..	357,00	**350**
A251.50.R.06-10-RS	40	50	6	5	40	43	22	12500	2	RP.X 10T3..	435,70	**150**
A251.52.R.06-10-RS	42	52	6	5	40	43	22	12500	2	RP.X 10T3..	435,70	**152**
A251.40.R.04-12-RS	28	40	4	6	40	38	16	15900	3,2	RP.X 1204..	337,00	**340**
A251.50.R.04-12-RS	38	50	4	6	40	43	22	12700	3,2	RP.X 1204..	347,80	**250**
A251.50.R.05-12-RS	38	50	5	6	40	43	22	12500	3,2	RP.X 1204..	409,00	**050**
A251.52.R.05-12-RS	40	52	5	6	40	43	22	12500	3,2	RP.X 1204..	429,00	**052**
A251.63.R.06-12-RS	51	63	6	6	40	48	22	10000	3,2	RP.X 1204..	505,00	**063**
A251.66.R.07-12-RS	54	66	7	6	40	48	22	9000	3,2	RP.X 1204..	532,40	**166**
A251.80.R.05-12-RS	68	80	5	6	50	58	27	7950	3,2	RP.X 1204..	460,90	**180**
A251.80.R.07-12-RS	68	80	7	6	50	58	27	8000	3,2	RP.X 1204..	569,70	**080**
A251.100.R.06-12-RS	88	100	6	6	50	78	32	6350	3,2	RP.X 1204..	514,40	**100**
A251.100.R.10-12-RS	88	100	10	6	50	78	32	6350	3,2	RP.X 1204..	751,50	**200**
A251.50.R.04-16-RS	34	50	4	8	40	48	22	12700	5	RP.X 1605..	409,00	**450**
A251.52.R.04-16-RS	36	52	4	8	40	48	22	10100	5	RP.X 1605..	409,00	**452**
A251.63.R.05-16-RS	47	63	5	8	40	48	22	10100	5	RP.X 1605..	515,60	**163**
A251.66.R.05-16-RS	50	66	5	8	40	48	22	7950	5	RP.X 1605..	519,40	**466**
A251.80.R.06-16-RS	64	80	6	8	50	58	27	7950	5	RP.X 1605..	626,20	**280**
A251.100.R.07-16-RS	84	100	7	8	50	78	32	6350	5	RP.X 1605..	731,60	**300**
A251.125.R.08-16-RS	109	125	8	8	63	88	40	5050	5	RP.X 1605..	774,40	**225**
A251.80.R.05-20-RS	60	80	5	10	50	58	27	7950	5	RP.X 2006..	530,20	**380**
A251.100.R.06-20-RS	80	100	6	10	50	78	32	6350	5	RP.X 2006..	634,30	**400**
A251.125.R.06-20-RS	105	125	6	10	63	88	40	5050	5	RP.X 2006..	642,20	**125**

TORX® blade


Clamping key - T


Key D


Power Screw


Molykote


Clamping screw

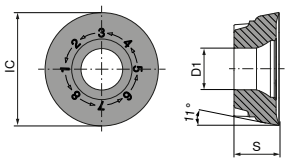

Torque screwdriver

Spare parts Insert	80 950 ... EUR Y7		80 397 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
RP.X 10T3..	4,90	**035**	4,03	**040**	9,41	**112**	13,10	**151**	4,60	**303**	2,70	**840**	132,50	**192**
RP.X 1204..	4,90	**036**	4,03	**040**	9,56	**113**	13,10	**151**	4,60	**303**	3,30	**304**	132,50	**192**
RP.X 1605..	4,90	**037**	4,37	**050**	10,25	**114**	18,00	**154**	4,60	**303**	3,30	**01200**	135,90	**193**
RP.X 2006..	4,90	**037**			10,25	**114**			4,60	**303**	4,29	**302**	135,90	**193**

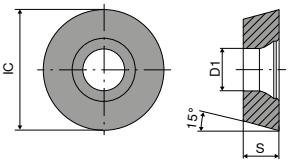
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RDHX / RPHX / RPNX

Designation	IC mm	D1 mm	S mm
RDHX 0501..	5	2,5	1,59
RDHX 0802..	8	2,8	2,38
RP.X 10T3..	10	3,4	3,97
RP.X 1204..	12	4,4	4,76
RP.X 1605..	16	5,5	5,56
RP.X 2006..	20	6,0	6,35



RP.X 10T3.. / RP.X 1204.. / RP.X 1605.. / RPNX 2006..



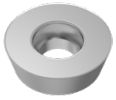
RDHX 0501.. / RDHX0802..

RDHX

NEW

ISO	-SN CTCP230 DRAGONSKIN	-SN CTPP235 DRAGONSKIN	-F50 CTPM240 DRAGONSKIN	-F50 CTPM245 DRAGONSKIN	-F50 CTCM245 DRAGONSKIN
	 RDHX	 RDHX	 RDHX	 RDHX	 RDHX
	51 048 ...	51 048 ...	51 083 ...	51 083 ...	51 083 ...
	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
0501M0SN	12,72 020	12,72 120		11,68 465	
0802M0SN	12,98 025	12,98 125	12,98 420	15,37 470	15,37 92001
0802M4SN				15,37 471	15,37 92101
P	●	●	○	●	●
M		○	●	●	●
K	○	○			
N					
S					○
H					
O					

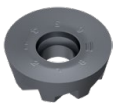
RDHX

ISO	-EN CTCK215 DRAGONSKIN	-FN H216T	-M31 CTC5240 DRAGONSKIN	-F50 CTCS245 DRAGONSKIN
	 RDHX	 RDHX	 RDHX	 RDHX
	51 048 ...	50 481 ...	50 481 ...	51 083 ...
	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17
0501M0FN		10,09 600		
0802M0EN			15,37 500	
0802M0FN		10,41 602		
0802M0SN				15,37 570
0802M4EN	12,98 520		15,37 50100	
P				
M				
K	●	○		
N		●		
S			●	●
H				
O		○		

RPHX / RPNX

	-SN TCM10	-F50 CTCP230 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-SN CTCP230 DRAGONSKIN	-SN CTCP230 DRAGONSKIN
					
	CERMET				
	RPHX	RPNX	RPNX	RPHX	RPNX
	50 483 ...	51 055 ...	51 054 ...	51 052 ...	51 057 ...
ISO	EUR 1B/79	EUR 1B/18	EUR 1B/61	EUR 1B/61	EUR 1B/61
10T3M0SN	13,47 900				
10T3M8SN		13,47 020	10,26 020	13,47 020	
1204M0SN	14,76 902				
1204M8SN		11,78 025	11,78 025	14,76 025	11,78 025
1605M8SN			16,02 030	20,09 030	16,02 030
2006M8SN					20,84 035
P	●	●	●	●	●
M					
K	○	○	○	○	○
N					
S					
H					
O					

RPHX / RPNX

	-F50 CTPP235 DRAGONSKIN	-F50 CTPP235 DRAGONSKIN	-M30 CTPP235 DRAGONSKIN	-M30 CTPP235 DRAGONSKIN
				
	RPHX	RPNX	RPHX	RPNX
	51 051 ...	51 055 ...	51 049 ...	51 053 ...
ISO	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
10T3M8EN			13,47 120	
10T3M8SN	13,47 12000	10,26 120		
1204M8SN	14,76 125	11,78 125		
1605M0SN		16,02 130		
2006M8EN				20,84 120
P	●	●	●	●
M	○	○	○	○
K	○	○	○	○
N				
S				
H				
O				

15

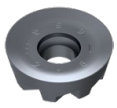
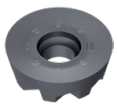
RPNX / RPHX

	-M50 CTPP235 DRAGONSKIN		-M50 CTPP235 DRAGONSKIN		-SN CTPP235 DRAGONSKIN		-SN CTPP235 DRAGONSKIN	
								
	RPNX		RPHX		RPHX		RPNX	
	51 054 ...		51 050 ...		51 052 ...		51 057 ...	
ISO	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/18	
10T3M8SN	10,26	12000	13,47	12000	13,47	120		
1204M8SN	11,78	125			14,76	125	11,78	125
1605M8SN	16,02	130			20,09	130	16,02	130
2006M8SN							20,84	135
P	●		●		●		●	
M	○		○		○		○	
K	○		○		○		○	
N								
S								
H								
O								

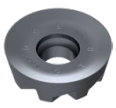
RPHX

	-F50 CTPM225 DRAGONSKIN		-M30 CTPM225 DRAGONSKIN		-SN CTPM225 DRAGONSKIN		-F50 CTCM235 DRAGONSKIN		-M30 CTCM235 DRAGONSKIN	
										
	RPHX		RPHX		RPHX		RPHX		RPHX	
	51 051 ...		51 049 ...		51 052 ...		51 051 ...		51 049 ...	
ISO	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61	
1204M8EN			14,76	225					14,76	325
1204M8SN	14,76	225			14,76	225	14,76	325		
P	●		●		●		●		●	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

RPHX / RPNX

	-F50 CTPM240 DRAGONSKIN		-F50 CTPM240 DRAGONSKIN		-M30 CTPM240 DRAGONSKIN		-M30 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN	
										
	RPHX		RPNX		RPHX		RPNX		RPHX	
	51 051 ...		51 055 ...		51 049 ...		51 053 ...		51 050 ...	
ISO	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61	
10T3M8EN					13,47	420				
10T3M8SN	13,47	420							13,47	420
1204M8EN					14,76	425				
1204M8SN	14,76	425							14,76	425
1605M8EN					20,09	430				
1605M8SN	20,09	430								
2006M8EN							20,84	420		
2006M8SN			20,84	435						
P	○		○		○		○		○	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

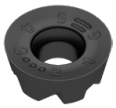
RPHX / RPNX

	CTPM245 DRAGONSKIN		-F50 CTPM245 DRAGONSKIN		-F50 CTPM245 DRAGONSKIN		-M32 CTPM245 DRAGONSKIN		-M50 CTPM245 DRAGONSKIN	
										
	RPHX		RPHX		RPNX		RPHX		RPHX	
	51 052 ...		51 051 ...		51 055 ...		51 108 ...		51 050 ...	
ISO	EUR 1H/17		EUR 1H/17		EUR 1H/17		EUR 1H/17		EUR 1H/17	
10T3M4SN			17,00	470 [1]	14,13	470 [1]			17,00	470 [1]
10T3M8SN			17,00	471	14,13	471			17,00	471
1204M4EN	18,73	475 [1]					18,73	475 [1]		
1204M4SN			18,73	475 [1]	16,63	475 [1]			18,73	475 [1]
1204M6SN			18,73	476					18,73	476
1204M8SN			18,73	477	16,63	476			18,73	477
1605M8SN			25,56	480						
2006M4SN			32,37	485 [1]						
2006M8SN					25,56	485				
P	●		●		●		●		●	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

1) Insert with 4 indexes

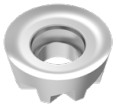
15

RPNX / RPHX

	NEW -F50 CTCM245 DRAGONSKIN		NEW -M50 CTCM245 DRAGONSKIN		NEW -F50 CTCM245 DRAGONSKIN		NEW -M50 CTCM245 DRAGONSKIN	
	 RPNX		 RPNX		 RPHX		 RPHX	
	51 055 ...		51 054 ...		51 051 ...		51 050 ...	
ISO	EUR 1H/17		EUR 1H/17		EUR 1H/17		EUR 1H/17	
10T3M4SN	14,13	92001 [1]			17,00	92001 [1]	17,00	92001 [1]
10T3M8SN	14,13	92101			17,00	92101		
1204M4SN	16,63	92501 [1]			18,73	92501 [1]	18,73	92501 [1]
1204M6SN			16,63	92601	18,73	92601	18,73	92601
1204M8SN	16,63	92601					18,73	92701
1605M8SN	18,73	93001			25,56	93001		
2006M8SN	25,56	93501	25,56	93501				
P	●		●		●		●	
M	●		●		●		●	
K								
N								
S	○		○		○		○	
H								
O								

1) Insert with 4 indexes

RPNX / RPHX

	-R30 CTCK215 DRAGONSKIN		-SN CTCK215 DRAGONSKIN		-SN CTCK215 DRAGONSKIN		-SN CTPK220 DRAGONSKIN		-27P H216T	
	 RPNX		 RPHX		 RPNX		 RPNX		 RPHX	
	51 056 ...		51 052 ...		51 057 ...		51 057 ...		50 483 ...	
ISO	EUR 1B/18		EUR 1B/61		EUR 1B/18		EUR 1B/61		EUR 1A/90	
10T3M8EN	10,26	520								
10T3M8FN									15,38	600
10T3M8SN			13,47	520			10,26	620		
1204M8EN	11,78	525								
1204M8FN									17,05	602
1204M8SN			14,76	525	11,78	525	11,78	625		
1605M8FN									23,27	604
1605M8SN			20,09	530	16,02	530	16,02	630		
2006M8SN					20,84	535	20,84	635		
P										
M										
K	●		●		●		●		○	
N									●	
S										
H										
O									○	

RPNX / RPHX

	NEW				
	-M31 CTC5240 DRAGONSKIN	-M31 CTC5240 DRAGONSKIN	-F50 CTCS245 DRAGONSKIN	-F50 CTCS245 DRAGONSKIN	-R60 CTP6215
					
	RPNX	RPHX	RPHX	RPNX	RPNX
	51 149 ...	50 493 ...	51 051 ...	51 055 ...	50 508 ...
ISO	EUR 1H/17	EUR 17	EUR 17	EUR 17	EUR 1B/61
10T3M4EN		17,00 550 [1]			
10T3M4SN			17,00 570 [1]		
10T3M8EN		17,00 551			
10T3M8SN			17,00 571		
1204M4EN		18,73 552 [1]			
1204M4SN			18,73 575		
1204M6EN		18,73 56200	18,73 57800		
1204M8EN		18,73 582			12,72 300
1204M8SN			18,73 577		
1605M8EN		25,56 555	25,56 58100		
2006M8EN	25,56 12001				
2006M8SN				25,56 585	
P					
M					
K					●
N					
S	●	●	●	●	
H					●
O					

1) Insert with 4 indexes

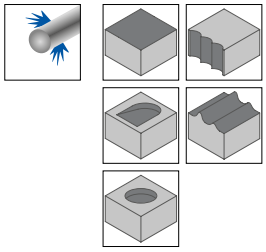
Milling guide

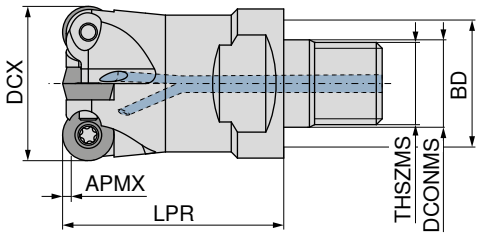
Cutting data standard values	→ 141–144	Machining strategy	→ 177
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

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Button insert milling cutter R 1000 G

▲ Insert angle 0°





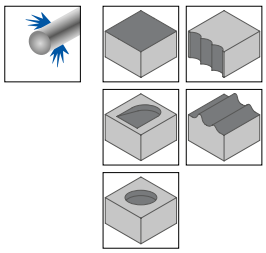


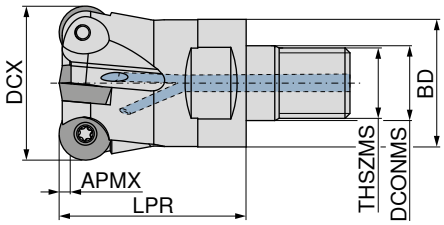
Designation	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	BD mm	torque moment Nm	Insert	56 403 ... EUR WA	
R1000G.15.4.M8-05.IK	15	4	1,3	M8	20,5	8,5	13,8	0,43	RDHX 0501..	171,70	151
R1000G.20.5.M10-05.IK	20	5	1,3	M10	25,5	10,5	18,0	0,43	RDHX 0501..	203,10	201
R1000G.12.2.M8-07.IK	12	2	1,5	M8	28,5	8,5	11,8	0,75	RD.X 07T1..	111,30	123
R1000G.15.3.M8-07.IK	15	3	1,5	M8	28,5	8,5	13,8	0,75	RD.X 07T1..	134,00	152
R1000G.20.4.M10-07.IK	20	4	1,5	M10	28,5	10,5	18,0	0,75	RD.X 07T1..	172,70	202
R1000G.25.5.M12-07.IK	25	5	1,5	M12	28,5	10,5	21,0	0,75	RD.X 07T1..	197,70	251
R1000G.15.2.M8-07.IK	15	2	1,5	M8	28,5	8,5	13,8	0,9	RD.X 0702..	113,40	153
R1000G.16.3.M8-07.IK	16	3	1,5	M8	28,5	8,5	13,8	0,9	RD.X 0702..	137,20	161
R1000G.20.4.M10-07.IK	20	4	1,5	M10	28,5	10,5	18,0	0,9	RD.X 0702..	172,70	203
R1000G.25.5.M12-07.IK	25	5	1,5	M12	28,5	12,5	21,0	0,9	RD.X 0702..	197,70	252
R1000G.30.5.M16-07.IK	30	5	1,5	M16	28,5	17,0	29,0	0,9	RD.X 0702..	200,90	301
R1000G.35.6.M16-07.IK	35	6	1,5	M16	28,5	17,0	29,0	0,9	RD.X 0702..	225,80	351
R1000G.42.7.M16-07.IK	42	7	1,5	M16	42,5	17,0	29,0	0,9	RD.X 0702..	267,80	421
R1000G.20.2.M10-10.IK	20	2	2,8	M10	29,0	10,5	18,0	2,4	RD.X 1003..	120,90	204
R1000G.25.2.M12-10.IK	25	2	2,8	M12	33,0	12,5	21,0	2,4	RD.X 1003..	120,90	253
R1000G.25.3.M12-10.IK	25	3	2,8	M12	33,0	12,5	21,0	2,4	RD.X 1003..	126,40	254
R1000G.30.4.M12-10.IK	30	4	2,3	M12	33,0	12,5	21,0	2,4	RD.X 1003..	174,00	302
R1000G.30.4.M16-10.IK	30	4	2,8	M16	43,0	17,0	23,0	2,4	RD.X 1003..	174,00	303
R1000G.35.5.M16-10.IK	35	5	2,8	M16	43,0	17,0	29,0	2,4	RD.X 1003..	213,90	352
R1000G.42.5.M16-10.IK	42	5	2,8	M16	43,0	17,0	29,0	2,4	RD.X 1003..	225,80	422
R1000G.42.6.M16-10.IK	42	6	2,8	M16	43,0	17,0	29,0	2,4	RD.X 1003..	238,70	423
R1000G.24.2.M12-12.IK	24	2	3,0	M12	33,0	12,5	21,0	2,4	RD.X 12T3..	125,30	241
R1000G.35.3.M16-12.IK	35	3	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	140,40	353
R1000G.35.4.M16-12.IK	35	4	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	181,50	354
R1000G.42.4.M16-12.IK	42	4	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	198,70	424
R1000G.42.5.M16-12.IK	42	5	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	220,30	425
R1000G.32.2.M16-16.IK	32	2	4,0	M16	43,5	17,0	29,0	4,3	RD.X 1604..	145,90	321
R1000G.35.3.M16-16.IK	35	3	4,0	M16	43,5	17,0	29,0	4,3	RD.X 1604..	179,30	355
R1000G.40.2.M16-20.IK	40	2	7,0	M16	53,5	17,0	29,0	4,3	RD.X 2006..	203,10	401

	TORX® blade		 Clamping Screw		 over clamp		 Key D		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		56 950 ...		56 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
Spare parts Insert	EUR Y7		EUR WA		EUR WA		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
RD.X 0702..	4,90	032					8,03	109	4,60	303	2,72	006	122,50	191
RD.X 07T1..	4,90	032					8,03	109	4,60	303	2,72	004	122,50	191
RD.X 1003..	4,90	036					9,56	113	4,60	303	3,50	010	132,50	192
RD.X 12T3..	4,90	036	2,13	022			9,56	113	4,60	303	3,50	010	132,50	192
RD.X 1604..	4,90	037			1,49	210	10,25	114	4,60	303	3,96	012	132,50	192
RD.X 2006..	4,90	037			1,49	210	10,25	114	4,60	303	3,96	012	132,50	192
RDHX 0501..							8,69	108	4,60	303	2,64	002	122,50	191

Button insert milling cutter R 1007 G

- Insert angle 7°
- for Steel < 10 % Cr



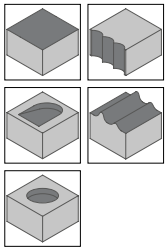


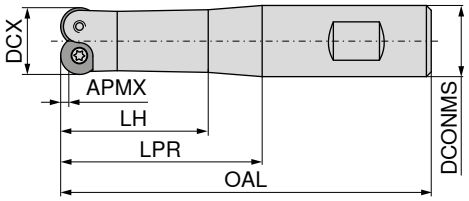


Designation	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	BD mm	torque moment Nm	Insert	56 405 ... EUR WA	
R1007G.25.3.M12-10.IK	25	3	2,5	M12	32,5	12,5	21	2,4	RD.X 1003..	126,40	**251**
R1007G.42.6.M16-10.IK	42	6	2,5	M16	42,5	17,0	29	2,4	RD.X 1003..	238,70	**421**
R1007G.35.3.M16-12.IK	35	3	3,0	M16	42,5	17,0	29	2,4	RD.X 12T3..	158,70	**351**
R1007G.35.4.M16-12.IK	35	4	3,0	M16	42,5	17,0	29	2,4	RD.X 12T3..	181,50	**352**

Button insert milling cutter R 1000 C

- Insert angle 0°







A

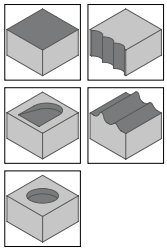
Designation	DCX mm	ZNF	APMX mm	OAL mm	LPR mm	LH mm	DCONMS mm	torque moment Nm	Insert	56 441 ... EUR WA	
R1000C.8.1.30-05	8	1	1,3	75	30	18	10	0,43	RDHX 0501..	124,20	**081**
R1000C.10.2.30-05	10	2	1,3	75	30	23	10	0,43	RDHX 0501..	137,20	**101**
R1000C.12.3.30-05	12	3	1,3	81	30	23	12	0,43	RDHX 0501..	153,40	**121**
R1000C.12.2.30-07	12	2	1,5	76	30	23	12	0,75	RD.X 07T1..	98,18	**122**

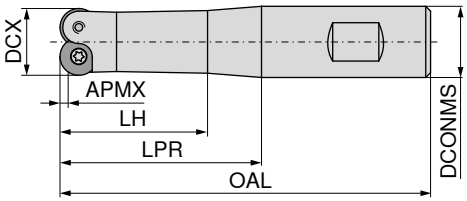
Spare parts	TORX® blade		 Key D		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
Insert	EUR Y7		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
RD.X 07T1..	4,90	**032**	8,03	**109**	4,60	**303**	2,72	**004**	122,50	**191**
RDHX 0501..			8,69	**108**	4,60	**303**	2,64	**002**	122,50	**191**

15

Button insert milling cutter R 1002 C

▲ Insert angle 0°







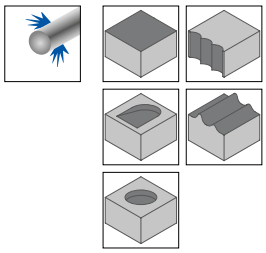
B

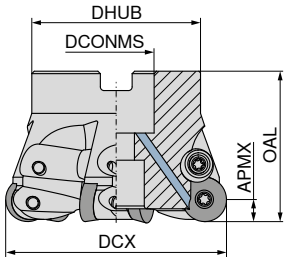
56 443 ...

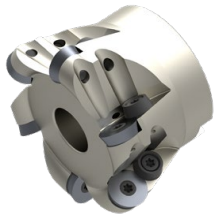
Designation	DCX mm	ZNF	APMX mm	OAL mm	LPR mm	LH mm	DCONMS mm	Insert	EUR WA	
R1002C.12.2.40-07	12	2	1,5	89	40	19,5	16	RD.X 07T1..	100,20	**121**
R1002C.12.2.60-07	12	2	1,5	110	60	19,5	16	RD.X 07T1..	107,40	**122**
R1002C.12.2.80-07	12	2	1,5	129	80	19,5	16	RD.X 07T1..	114,40	**123**
R1002C.15.2.40-07	15	2	2,6	89	40	23,0	16	RD.X 0702..	100,20	**151**
R1002C.15.2.60-07	15	2	2,6	109	60	23,0	16	RD.X 0702..	106,60	**152**
R1002C.15.2.80-07	15	2	2,6	131	80	22,0	20	RD.X 0702..	114,40	**153**
R1002C.15.2.100-07	15	2	2,6	151	100	22,0	20	RD.X 0702..	123,20	**154**
R1002C.20.2.40-10	20	2	4,0	91	40	23,0	20	RD.X 1003..	113,40	**201**
R1002C.20.2.60-10	20	2	4,0	111	60	23,0	20	RD.X 1003..	116,70	**202**
R1002C.20.2.80-10	20	2	4,0	137	80	23,0	25	RD.X 1003..	122,10	**203**
R1002C.20.2.100-10	20	2	4,0	157	100	23,0	25	RD.X 1003..	128,50	**204**
R1002C.20.2.120-10	20	2	4,0	177	125	23,0	25	RD.X 1003..	135,00	**205**

Button insert milling cutter R 1000 A

▲ Insert angle 0°







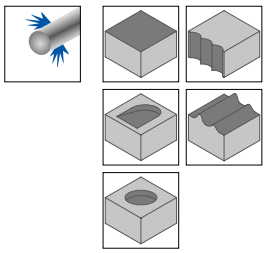
56 407 ...

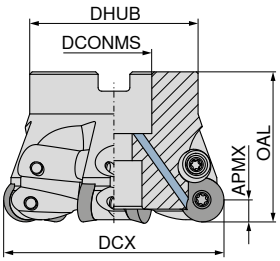
Designation	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	EUR WA	
R1000A.42.6.43-10.IK	42	6	2,8	43,0	16	35	2,4	RD.X 1003..	238,70	**420**
R1000A.42.4.43-12.IK	42	4	3,0	43,0	16	35	2,4	RD.X 12T3..	192,30	**421**
R1000A.42.5.43-12.IK	42	5	3,0	43,0	16	35	2,4	RD.X 12T3..	220,30	**422**
R1000A.52.5.53-12.IK	52	5	3,5	53,0	22	40	2,4	RD.X 12T3..	238,70	**521**
R1000A.52.4.53,5-16.IK	52	4	4,7	53,5	22	40	4,3	RD.X 1604..	234,30	**522**
R1000A.66.5.53,5-16.IK	66	5	5,1	53,5	27	48	4,3	RD.X 1604..	277,60	**661**
R1000A.80.6.53,5-16.IK	80	6	5,8	53,5	27	60	4,3	RD.X 1604..	355,40	**801**

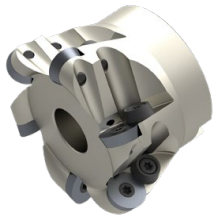
	TORX® blade	 Clamping Screw	 over clamp	 Key D	 Molykote	 Clamping screw	 Torque screwdriver									
	80 950 ...		**56 950 ...**		**56 950 ...**		**80 950 ...**		**70 950 ...**		**56 950 ...**		**80 950 ...**				
Spare parts	**EUR**		**EUR**		**EUR**		**EUR**		**EUR**		**EUR**		**EUR**				
Insert	Y7		WA		WA		Y7		2A/28		WA		Y7				
RD.X 1003..	4,90	**036**					9,56	**113**	4,60	**303**	3,50	**010**	132,50	**192**			
RD.X 12T3..	4,90	**036**	2,13	**022**			9,56	**113**	4,60	**303**	3,50	**010**	132,50	**192**			
RD.X 1604..	4,90	**037**			1,49	**210**	10,25	**114**	4,60	**303**	3,96	**012**	132,50	**192**			

Button insert milling cutter R 1007 A

- Insert angle 7°
- for Steel < 10 % Cr + Milling machines with low power







Designation	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	56 409 ... EUR WA	
R1007A.42.6.42,5-10.IK	42	6	3,5	42,5	16	35	2,4	RD.X 1003..	238,70	**421**
R1007A.52.7.52,5-10.IK	52	7	3,5	52,5	22	40	2,4	RD.X 1003..	348,80	**521**
R1007A.52.5.52,5-12.IK	52	5	3,5	52,5	22	40	2,4	RD.X 12T3..	238,70	**522**
R1007A.66.6.52,5-12.IK	66	6	3,5	52,5	27	48	2,4	RD.X 12T3..	282,90	**661**
R1007A.80.7.54,5-12.IK	80	7	3,5	54,5	27	60	2,4	RD.X 12T3..	355,40	**801**
R1007A.52.5.53-16.IK	52	5	4,1	53,0	22	40	4,3	RD.X 1604..	262,40	**523**
R1007A.66.5.53-16.IK	66	5	4,6	53,0	27	48	4,3	RD.X 1604..	277,60	**662**
R1007A.66.6.53-16.IK	66	6	5,1	53,0	27	48	4,3	RD.X 1604..	317,60	**663**
R1007A.80.6.53-16.IK	80	6	5,1	53,0	27	60	4,3	RD.X 1604..	355,40	**802**
R1007A.100.7.53-16	100	7	5,1	53,0	32	70	4,3	RD.X 1604..	439,50	**910** 1)
R1007A.125.8.53-16	125	8	5,2	53,0	40	90	4,3	RD.X 1604..	497,90	**925** 1)
R1007A.160.9.53-16	160	9	5,1	53,0	40	120	4,3	RD.X 1604..	681,60	**960** 1)
R1007A.66.5.53-20.IK	66	5	7,0	53,0	27	48	4,3	RD.X 2006..	332,70	**664**
R1007A.80.5.53-20.IK	80	5	7,4	53,0	27	60	4,3	RD.X 2006..	411,50	**803**

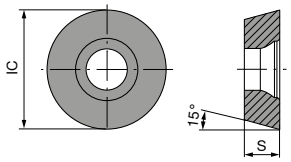
1) Without Through Coolant

	TORX® blade		 Clamping Screw		 over clamp		 Key D		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		56 950 ...		56 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
Spare parts Insert	EUR Y7		EUR WA		EUR WA		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
RD.X 1003..	4,90	**036**					9,56	**113**	4,60	**303**	3,50	**010**	132,50	**192**
RD.X 12T3..	4,90	**036**	2,13	**022**			9,56	**113**	4,60	**303**	3,50	**010**	132,50	**192**
RD.X 1604..	4,90	**037**			1,49	**210**	10,25	**114**	4,60	**303**	3,96	**012**	132,50	**192**
RD.X 2006..	4,90	**037**			1,49	**210**	10,25	**114**	4,60	**303**	3,96	**012**	132,50	**192**

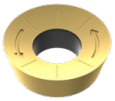
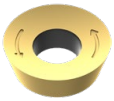
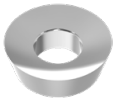
15

RDHX / RDMX / RDEX / RDPX

Designation	IC mm	S mm
RDHX 0501..	5	1,50
RD.X 07T1..	7	1,99
RD.X 0702..	7	2,38
RD.X 1003..	10	3,18
RD.X 12T3..	12	3,97
RD.X 1604..	16	4,76
RDHX 2006..	20	6,00



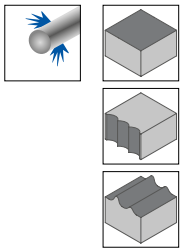
RDHX / RDMX / RDEX / RDPX

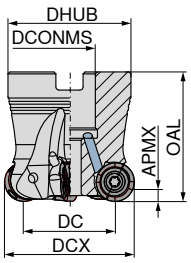
	WTN1205	WAN1240	WAX1240	-HP WAN2225	-F30P WUN4210
					
	RDHX	RDMX	RDEX	RDPX	RDHX
	56 302 ...	56 309 ...	56 314 ...	56 348 ...	56 304 ...
ISO	EUR WB	EUR WB	EUR WB	EUR WB	EUR WB
0501M0T	12,60 100				
0702M0E					12,14 611
0702M0T	12,94 111		9,01 611		
07T1M0E					12,14 621
07T1M0T	12,94 121		8,86 621		
1003M0S				13,05 231	
1003M0T	13,05 131	9,63 731	9,48 631		13,62 631
12T3M0S				13,73 241	
12T3M0T	13,73 141	11,15 741	10,80 641		16,68 641
1604M0S				17,25 251	
1604M0T	13,73 151	12,26 751	12,03 651		20,20 651
2006M0T	18,85 161				22,13 661
P	●	●	●		
M	●	○	○	●	
K	●	○	○		○
N					●
S				●	
H	●				
O					○

Milling guide

Cutting data standard values	→ 178–180	Machining strategy	→ 181+182
Technical Information	→ 189–194	Grade description	→ 195–197
Designation System	→ 198–201		

MaxiMill – Shell mill A 252







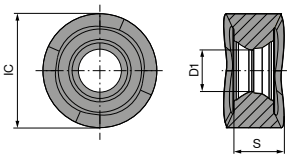
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS mm	torque moment Nm	Insert	50 689 ... EUR 2B/40	
A252.40.R.05-10	30	40	5	2,5	40	38	16	2	RNHU 1004..	421,80	**140**
A252.42.R.05-10	32	42	5	2,5	40	38	16	2	RNHU 1004..	483,70	**142**
A252.50.R.06-10	40	50	6	2,5	40	43	22	2	RNHU 1004..	501,50	**150**
A252.52.R.07-10	42	52	7	2,5	40	43	22	2	RNHU 1004..	544,70	**152**
A252.63.R.08-10	53	63	8	2,5	40	48	22	2	RNHU 1004..	617,30	**16300**
A252.80.R.10-10	70	80	10	2,5	50	58	27	2	RNHU 1004..	702,20	**18000**
A252.40.R.04-12	28	40	4	3,0	40	38	16	3,2	RNHU 1205..	387,50	**240**
A252.50.R.05-12	38	50	5	3,0	40	43	22	3,2	RNHU 1205..	470,50	**250**
A252.52.R.05-12	40	52	5	3,0	40	43	22	3,2	RNHU 1205..	471,60	**252**
A252.63.R.06-12	51	63	6	3,0	40	48	22	3,2	RNHU 1205..	581,20	**263**
A252.66.R.07-12	54	66	7	3,0	40	48	22	3,2	RNHU 1205..	612,20	**266**
A252.80.R.08-12	68	80	8	3,0	50	58	27	3,2	RNHU 1205..	668,70	**280**
A252.100.R.10-12	88	100	10	3,0	50	78	32	3,2	RNHU 1205..	795,80	**30000**
A252.125.R.12-12	113	125	12	3,0	63	88	40	3,2	RNHU 1205..	962,70	**32500**

Spare parts	TORX® blade 80 950 ... EUR Y7		 Clamping key - T 80 397 ... EUR Y7		 Key D 80 950 ... EUR Y7		 Power Screw 70 950 ... EUR 2A/28		 Molykote 70 950 ... EUR 2A/28		 Clamping screw 70 950 ... EUR 2A/28		 Torque screwdriver 80 950 ... EUR Y7	
RNHU 1004.. (Ø40 – Ø80)	5,42	**053**			11,91	**127**			4,60	**303**	3,24	**710**	132,50	**192**
RNHU 1205.. (Ø40)	5,42	**054**	4,03	**040**	12,25	**128**	13,10	**151**	4,60	**303**	3,34	**839**	132,50	**192**
RNHU 1205.. (Ø50 – Ø125)	5,42	**054**			12,25	**128**			4,60	**303**	3,34	**839**	132,50	**192**

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RNHU

Designation	IC mm	D1 mm	S mm
RNHU 1004..	10	3,4	4,60
RNHU 1205..	12	4,4	5,30



RNHU

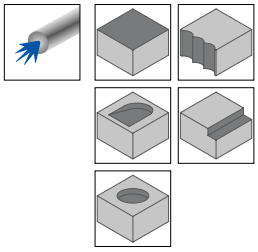
	-M50 CTPP235	-F50 CTPM240	-M31 CTPM245	-M32 CTPM245	-M31 CTC5240	-M31 CTC5240
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	RNHU	RNHU	RNHU	RNHU	RNHU	RNHU
	51 130 ...	51 129 ...	51 106 ...	51 107 ...	50 520 ...	50 521 ...
ISO	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 17	EUR 17
1004M4ER	19,26 12000	19,26 42000	26,05 470	26,05 470	26,05 550	
1205M4ER		20,85 42500	28,52 475	28,52 475		28,52 552
1205M4SR	20,85 12500					
P	●	○	●	●		
M	○	●	●	●		
K	○					
N						
S					●	●
H						
O						

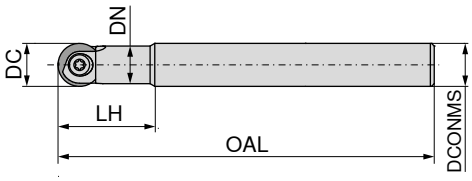
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 183
Technical Information	→ 189+194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

Copy milling cutter K 2000C / K 2001C

▲ with carbide shank







Designation	DC mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	56 100 ... EUR WA		56 101 ... EUR WA	
K2000C.6.16.100	6	5,3	16	100	8	0,5	369,40	**060** [1]		
K2000C.6.20.100	6	5,8	20	100	6	0,5	369,40	**061** [1]		
K2000C.6.70.150	6	5,8	70	150	6	0,5	479,50	**062** [1]		
K2000C.6.100.200	6	5,8	100	200	6	0,5	581,00	**063** [1]		
K2000C.8.25.80	8	7,0	25	80	8	1	391,00	**081** [1]		
K2000C.8.25.100	8	7,0	25	100	8	1	391,00	**082** [1]		
K2000C.8.25.150	8	7,0	40	150	8	1	434,20	**083** [1]		
K2000C.10.35.80	10	8,8	35	80	10	3	472,00	**101** [1]		
K2000C.10.35.120	10	8,8	35	120	10	3	486,10	**102** [1]		
K2000C.10.50.150	10	8,8	50	150	10	3	539,00	**103** [1]		
K2000C/K2001C.12.35.80	12	10,5	35	80	12	4	490,30	**121** [1]	499,80	**121**
K2000C/K2001C.12.35.120	12	10,5	35	120	12	4	511,90	**122** [1]	521,90	**122**
K2000C/K2001C.12.50.160	12	10,5	50	160	12	4	547,60	**123** [1]	558,20	**123**
K2001C.16.40.100	16	14,0	40	100	16	5			688,20	**161**
K2001C.16.40.140	16	14,0	40	140	16	5			688,20	**162**
K2001C.16.55.175	16	14,0	55	175	16	5			749,70	**163**
K2001C.20.50.100	20	18,0	50	100	20	5			876,30	**201**
K2001C.20.50.140	20	18,0	50	140	20	5			876,30	**202**
K2001C.20.75.190	20	18,0	75	190	20	5			1.042,00	**203**
K2001C.25.60.160	25	22,4	60	160	25	8			1.241,00	**252**
K2001C.25.90.210	25	22,4	90	210	25	8			1.552,00	**253**

1) Without Through Coolant

Applicable inserts

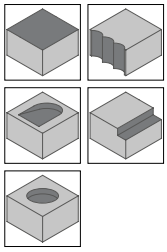
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

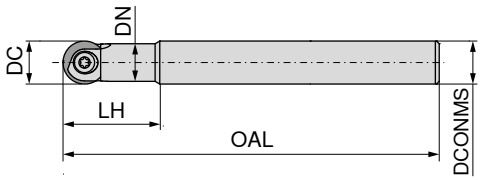
	**XOHX06.. -MR2, XOHX-FM1**

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Copy milling cutter K 2002C

▲ cylindrical steel shank version







56 102 ...

Designation	DC mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	EUR WA	
K2002C.12.32.90	12	10,5	32	90	12	4	96,34	**121**
K2002C.12.32.130	12	10,5	32	130	12	4	96,34	**122**
K2002C.12.46.150	12	10,5	46	150	12	4	100,80	**123**
K2002C.16.36.100	16	14,0	36	100	16	5	102,10	**161**
K2002C.16.36.140	16	14,0	36	140	16	5	102,10	**162**
K2002C.16.53.160	16	14,0	53	160	16	5	107,50	**163**
K2002C.20.45.160	20	18,0	45	160	20	5	106,50	**202**
K2002C.20.61.175	20	18,0	61	175	20	5	127,40	**203**
K2002C.25.45.160	25	22,4	45	160	25	8	150,10	**252**
K2002C.25.70.190	25	22,4	70	190	25	8	155,50	**253**
K2002C.32.56.175	32	28,6	56	175	32	8	191,20	**322**
K2002C.32.80.210	32	28,6	80	210	32	8	200,90	**323**

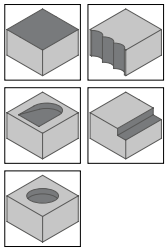
Applicable inserts

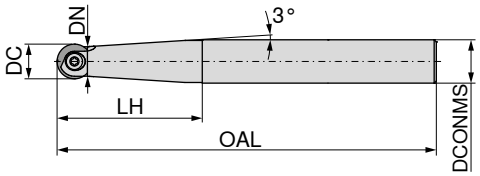
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

	**XOHX-FM1**

Copy milling cutter K 2003C

▲ tapered execution







56 104 ...

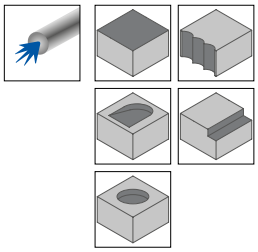
Designation	DC mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	EUR WA	
K2003C.6.16.90	6	5,3	40	90	10	0,5	108,10	**061**
K2003C.8.50.85	8	7,5	50	85	12	1	128,50	**081**
K2003C.8.50.140	8	7,5	50	140	12	1	128,50	**082**
K2003C.10.35.85	10	9,0	35	85	12	3	128,50	**101**
K2003C.10.35.150	10	9,0	35	150	12	3	128,50	**102**
K2003C.12.60.110	12	10,5	60	110	16	4	130,70	**121**
K2003C.12.60.160	12	10,5	60	160	16	4	130,70	**122**
K2003C.16.67.120	16	14,0	67	120	20	5	140,40	**161**
K2003C.16.67.175	16	14,0	67	175	20	5	140,40	**162**
K2003C.20.80.190	20	18,0	80	190	25	5	163,20	**201**
K2003C.25.100.210	25	22,4	100	210	32	8	203,10	**251**
K2003C.32.123.240	32	28,6	123	240	40	8	260,30	**321**

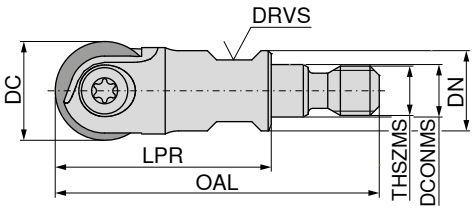
Applicable inserts

	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

	**XOHX-FM1**

Copy milling cutter K 2000G







56 120 ...

Designation	DC mm	LPR mm	DN mm	OAL mm	DCONMS mm	THSZMS	DRVS mm	torque moment Nm	EUR WA	
K2000G.8.25.M6	8	25	10	39,5	6,5	M6	8	1	215,00	**081** [1]
K2000G.10.25.M6	10	25	10	39,5	6,5	M6	8	3	212,70	**101** [1]
K2000G.12.25.M6	12	25	10	39,5	6,5	M6	8	4	219,30	**121** [1]
K2000G.12.26.M8	12	26	13	43,5	8,5	M8	10	4	219,30	**122**
K2000G.16.26.M8	16	26	13	43,5	8,5	M8	10	5	227,80	**161**
K2000G.20.30.M10	20	30	18	49,5	10,5	M10	15	5	232,30	**201**
K2000G.25.40.M12	25	40	21	62,0	12,5	M12	17	8	240,80	**251**
K2000G.32.45.M16	32	45	30	69,0	17,0	M16	26	8	257,00	**321**

1) Without Through Coolant

Applicable inserts



ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4



XOHX-FM1

TORX® blade

80 950 ...



Key D

80 950 ...



Molykote

70 950 ...



Clamping screw

56 950 ...



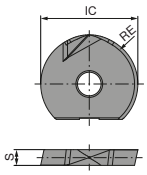
Torque screwdriver

80 950 ...

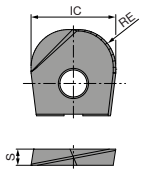
Spare parts DC	EUR Y7		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
6	4,90	**031**	8,69	**108**	4,60	**303**	6,28	**041**	122,50	**191**
8	4,90	**033**	8,03	**110**	4,60	**303**	6,28	**042**	122,50	**191**
10	4,90	**036**	9,56	**113**	4,60	**303**	6,28	**043**	135,90	**193**
12	4,90	**037**	10,25	**114**	4,60	**303**	8,58	**044**	135,90	**193**
16	4,90	**037**	10,25	**114**	4,60	**303**	8,58	**045**	135,90	**193**
20	4,90	**037**	10,25	**114**	4,60	**303**	8,58	**046**	135,90	**193**
25			12,46	**131**	4,60	**303**	8,58	**047**		
32			12,46	**131**	4,60	**303**	8,70	**048**		

ROHX / XOHX / ROGX

Designation	IC mm	S mm
ROHX0616R..	6	1,60
ROHX0820R..	8	2,00
ROHX1025R..	10	2,50
XOHX10254..	10	2,50
XOHX12255..	12	2,50
RO.X1225R..	12	2,50
RO.X1630R..	16	3,00
XOHX16307..	16	3,00
XOHX20309..	20	3,00
RO.X2030R..	20	3,00
RO.X2540R..	25	4,00
RO.X3250R..	32	5,00



RO.X



XOHX

ROHX / XOHX / ROGX

	-MR5 CTPP211	-FM1 CTPP216	-FM3 CTPP216	-FM4 CTPP216	-FM4 CTPK226	-MR4 CTPK231	-FM6 CTCN211
							
	ROHX	XOHX	ROHX	ROHX	ROHX	ROGX	ROHX
	56 149 ...	56 169 ...	56 147 ...	56 141 ...	56 141 ...	56 143 ...	56 145 ...
ISO	RE mm	EUR WB	EUR WB	EUR WB	EUR WB	EUR WB	EUR WB
0616 R3	3,0			32,41 30200	27,02 90200				80,81 602 1)
0820 R4	4,0	32,95 71300		39,30 31300	25,96 71300	27,22 11300		105,20 613 1)
1025 R5	5,0	32,95 72400		39,30 32400	25,96 72400	27,22 12400		105,20 624 1)
102540	4,0		35,58 92400					
1225 R6	6,0			39,93 33500	27,02 73500	27,22 13500	26,48 53500	105,20 635 1)
122550	5,0		38,14 93500					
1630 R8	8,0			43,01 34600	31,04 74600	31,72 14600	31,04 54600	119,20 646 1)
163070	7,0		40,78 94700					
2030 R10	10,0			45,55 35700	35,58 75700	35,46 15700	35,58 55700	
203090	9,0		46,49 95900					
2540 R12,5	12,5			56,68 36800	53,07 76800	52,89 16800	52,44 56800	
3250 R16	16,0			75,95 37900	77,53 77900	78,42 17900	72,35 57900	
P		●	●	●	●	●	●	
M		○	○	○	○	●	●	
K		○	●	●	●	●	●	
N		○	○	○	○		○	○
S		○	○	○	○		○	
H		○	●	●	●	○	○	
O		○	○	○	○			●

1) Specifically for machining graphite !

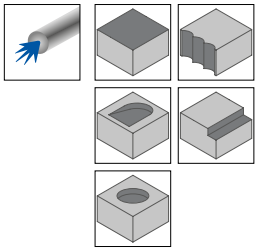
Milling guide

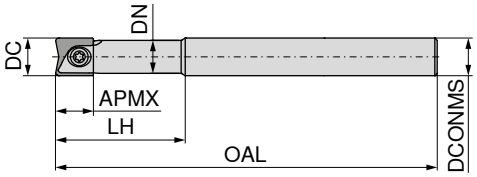
Cutting data standard values	→ 184+185	Depth of Cut	→ 186
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

15

Copy milling cutter K 2005C / K 2006C

▲ with carbide shank







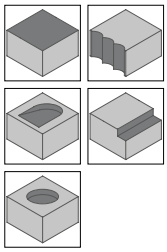
Designation	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	56 110 ... EUR WA		56 111 ... EUR WA	
K2005C.8.27.82	8	9,5	7,0	27	82	8	1	391,00	**081** [1]		
K2005C.8.27.102	8	9,5	7,0	27	102	8	1	391,00	**082** [1]		
K2005C.8.42.152	8	9,5	7,0	42	152	8	1	434,20	**083** [1]		
K2005C.10.37.82	10	11,5	8,8	37	82	10	3	472,00	**101** [1]		
K2005C.10.37.122	10	11,5	8,8	37	122	10	3	486,10	**102** [1]		
K2005C.10.52.152	10	11,5	8,8	52	152	10	3	539,00	**103** [1]		
K2005C/K2006C.12.37.82	12	14,0	10,5	37	82	12	4	490,30	**121** [1]	499,80	**121**
K2005C/K2006C.12.37.122	12	14,0	10,5	37	122	12	4	511,90	**122** [1]	521,90	**122**
K2005C/K2006C.12.52.162	12	14,0	10,5	52	162	12	4	547,60	**123** [1]	558,20	**123**
K2006C.16.42.102	16	16,0	14,0	42	102	16	5			688,20	**161**
K2006C.16.42.142	16	16,0	14,0	42	142	16	5			688,20	**162**
K2006C.16.57.177	16	16,0	14,0	57	177	16	5			749,70	**163**
K2006C.20.52.102	20	18,0	18,0	52	102	20	5			876,30	**201**
K2006C.20.52.142	20	18,0	18,0	52	142	20	5			876,30	**202**
K2006C.20.77.192	20	18,0	18,0	77	192	20	5			1.028,00	**203**
K2006C.25.62.162	25	23,5	22,4	62	162	25	8			1.241,00	**252**
K2006C.25.92.212	25	23,5	22,4	92	212	25	8			1.552,00	**253**

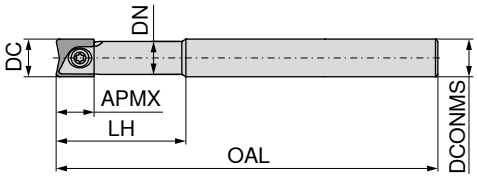
1) Without Through Coolant

Applicable inserts

	XOHX-FM2 / -FM5 / -MR2 / -MR3 / -MR6
	XOGX-MF4

Copy milling cutter K 2007C







56 112 ...

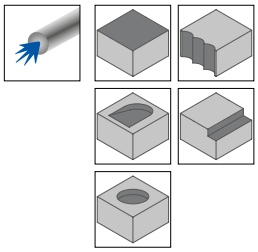
Designation	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS h6 mm	torque moment Nm	EUR WA	
K2007C.12.34.92	12	14,0	10,5	34	92	12	4	105,30	**121**
K2007C.12.34.132	12	14,0	10,5	34	132	12	4	96,34	**122**
K2007C.12.48.152	12	14,0	10,5	48	152	12	4	100,80	**123**
K2007C.16.38.102	16	16,0	14,0	38	102	16	5	102,10	**161**
K2007C.16.38.142	16	16,0	14,0	38	142	16	5	102,10	**162**
K2007C.16.55.162	16	16,0	14,0	55	162	16	5	107,50	**163**
K2007C.20.47.162	20	18,0	18,0	47	162	20	5	106,50	**202**
K2007C.20.63.177	20	18,0	18,0	63	177	20	5	127,40	**203**
K2007C.25.47.162	25	23,5	22,4	47	162	25	8	150,10	**252**
K2007C.25.72.192	25	23,5	22,4	72	192	25	8	155,50	**253**
K2007C.32.58.177	32	28,0	28,6	58	177	32	8	191,20	**322**
K2007C.32.82.212	32	28,0	28,6	82	212	32	8	200,90	**323**

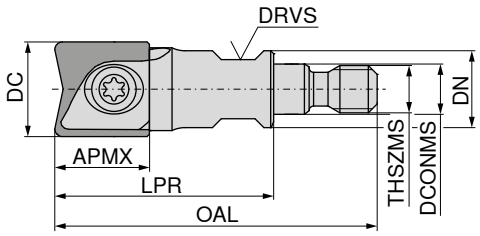
Applicable inserts

	**XOHX-FM2 / -FM5 / -MR2 / -MR3 / -MR6**
	XOGX-MF4

15

Copy milling cutter K 2005G







56 130 ...

Designation	DC mm	APMX mm	DN mm	LPR mm	OAL mm	DCONMS mm	THSZMS	DRVS mm	torque moment Nm	EUR WA	
K2005G.8.25.M6	8	9,5	10	25	39,5	6,5	M6	8	1	215,00	**081** 1)
K2005G.10.25.M6	10	11,5	10	25	39,5	6,5	M6	8	3	212,70	**101** 1)
K2005G.12.25.M6	12	14,0	10	25	39,5	6,5	M6	8	4	219,30	**121** 1)
K2005G.12.28.M8	12	14,0	13	28	45,5	8,5	M8	8	4	219,30	**122**
K2005G.16.28.M8	16	16,0	13	28	45,5	8,5	M8	10	5	227,80	**161**
K2005G.20.32.M10	20	18,0	18	32	51,5	10,5	M10	15	5	232,30	**201**
K2005G.25.42.M12	25	23,5	21	42	64,0	12,5	M12	17	8	240,80	**251**
K2005G.32.47.M16	32	28,0	30	47	71,0	17,0	M16	26	8	257,00	**321**

1) Without Through Coolant

Applicable inserts



XOHX-FM2 / -FM5 / -MR2 / -MR3 / -MR6
XOGX-MF4

TORX® blade

80 950 ...

Spare parts DC	EUR Y7	
8	4,90	**033**
10	4,90	**036**
12	4,90	**037**
16	4,90	**037**
20	4,90	**037**
25		
32		



Key D

80 950 ...

EUR Y7	
8,03	**110**
9,56	**113**
10,25	**114**
10,25	**114**
10,25	**114**
12,46	**131**
12,46	**131**



Molykote

70 950 ...

EUR 2A/28	
4,60	**303**
4,60	**303**
4,60	**303**
4,60	**303**
4,60	**303**
4,60	**303**
4,60	**303**



Clamping screw

56 950 ...

EUR WA	
6,28	**042**
6,28	**043**
8,58	**044**
8,58	**045**
8,58	**046**
8,58	**047**
8,70	**048**



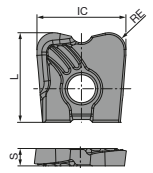
Torque screwdriver

80 950 ...

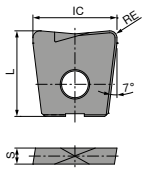
EUR Y7	
122,50	**191**
135,90	**193**
135,90	**193**
135,90	**193**
135,90	**193**

XOHX / XOGX

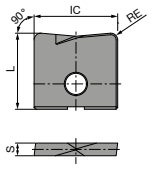
Designation	IC mm	S mm	L mm
XO.X10251..	10	2,50	11,5
XO.X12251..	12	2,50	14,0
XO.X16301..	16	3,00	16,0
XO.X16303..	16	3,00	16,0
XO.X20301..	20	3,00	18,0
XO.X20304..	20	3,00	18,0
XOGX12252..	12	2,50	14,0
XOHX06160..	6	1,60	8,0
XOHX08200..	8	2,00	9,5
XOHX08201..	8	2,00	9,5
XOHX10250..	10	2,50	11,5
XOHX12252..	12	3,00	14,0
XOHX20302..	20	3,00	18,0
XOHX25401..	25	4,00	23,5
XOHX25402..	25	4,00	23,5
XOHX25405..	25	4,00	23,5
XOHX32502..	32	5,00	28,0



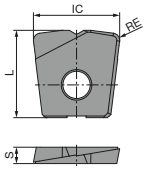
XOGX



XOHX



XOHX



XOHX

XOHX / XOGX

ISO	RE mm	-MR2 CTPP211		-MR6 CTPP211		-FM2 CTPP216		-FM5 CTPP216		-MF4 CTPP216		-MR3 CTPK231		-MR2 CTCN211	
		XOHX		XOHX		XOHX		XOHX		XOGX		XOHX		XOHX	
		56 167 ...		56 163 ...		56 165 ...		56 159 ...		56 161 ...		56 171 ...		56 168 ...	
		EUR WB		EUR WB		EUR WB		EUR WB		EUR WB		EUR WB		EUR WB	
061605	0,5	33,68	71000											80,81	610 1)
082006	0,6			36,23	71000	31,89	71000	27,86	71000						
082010	1,0	36,87	71200			31,89	71200							96,71	612 1)
102508	0,8			36,23	72100	31,89	72100	27,54	72100			40,14	32100		
102510	1,0	36,87	72200			31,89	72200			32,20	92200			102,80	622 1)
122510	1,0	39,51	73200	39,51	73200	32,95	73200	31,04	73200	34,95	93200	40,14	53200	111,40	632 1)
122520	2,0	39,51	73500			32,95	73500			34,95	93500				
163010	1,0	42,68	74200			38,14	74200			39,51	94200			138,50	642 1)
163013	1,3			42,05	74300	38,14	74300	35,58	74300						
163015	1,5											42,68	54400		
163030	3,0	42,68	74700			38,14	74500			39,51	94700				
203010	1,0	49,15	75200			42,05	75200			44,59	95200				
203016	1,6			47,87	75400	42,05	75400	40,78	75400						
203020	2,0											50,42	55500		
203040	4,0	49,15	75800			42,05	75800			44,59	95800				
254010	1,0	62,71	76200			54,34	76200								
254020	2,0			65,88	76500	54,34	76500	56,88	76500						
254050	5,0	62,71	76900			54,34	76900								
325025	2,5			93,10	77600			78,92	77600						
P		●		●		●		●		●		●			
M		○		○		○		○		○		●			
K		○		○		●		●		●		●			
N		○		○		○		○		○		○		○	
S		○		○		○		○		○		○			
H		○		○		●		●		●		○			
O		○		○		○		○		○				●	

1) Specifically for machining graphite !

Milling guide

Cutting data standard values	→ 184+185	Depth of Cut	→ 186
Technical Information	→ 189–194	Chip groove description and overview	→ 195–197
Grade description and overview	→ 198–201		

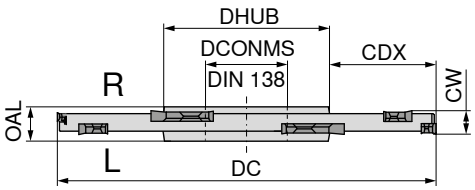
15

Saw Cutter TX

▲ Note: side and face milling cutters TX are cross-pitched and equipped with indexable inserts for both right-hand and left-hand version.
▲ ZEFP = number of inserts

Scope of supply:
side and face milling cutter, 2 spare clamping screws and 1 Torx key







Designation	DC mm	CW mm	ZNF	CDX mm	DCONMS mm	DHUB mm	OAL mm	ZEFP	Insert	torque moment Nm	50 730 ... EUR V5	
TX.STF.80X27.03.Z4	80	3	4	18,0	27	40	8	8	TX. 161702	0,7	508,70	**083**
TX.STF.100X32.03.Z5	100	3	5	25,0	32	46	8	10	TX. 161702	0,7	640,50	**103**
TX.STF.125X40.03.Z6	125	3	6	32,0	40	54	10	12	TX. 161702	0,7	699,90	**123**
TX.STF.160X40.03.Z8	160	3	8	50,0	40	54	10	16	TX. 161702	0,7	817,60	**163** 1)
TX.STF.80X27.04.Z4	80	4	4	18,0	27	40	8	8	TX. 162302	1,3	501,10	**084**
TX.STF.100X32.04.Z5	100	4	5	25,0	32	46	8	10	TX. 162302	1,3	631,80	**104**
TX.STF.125X40.04.Z6	125	4	6	32,0	40	54	10	12	TX. 162302	1,3	689,10	**124**
TX.STF.160X40.04.Z8	160	4	8	50,0	40	54	10	16	TX. 162302	1,3	806,80	**164** 1)
TX.STF.80X27.06.Z4	80	6	4	21,0	27	36	10	8	TX. 223202	2	329,40	**086**
TX.STF.80X22.06.Z4	80	6	4	22,0	22	33	10	8	TX. 223202	2	329,40	**080**
TX.STF.100X32.06.Z5	100	6	5	25,5	32	47	10	10	TX. 223202	2	392,00	**106**
TX.STF.125X40.06.Z6	125	6	6	32,5	40	58	10	12	TX. 223202	2	529,20	**136**
TX.STF.160X40.06.Z8	160	6	8	50,0	40	58	10	16	TX. 223202	2	702,10	**166** 1)
TX.STF.80X27.08.Z4	80	8	4	21,0	27	36	12	8	TX. 224302	2,8	329,40	**088**
TX.STF.100X32.08.Z5	100	8	5	25,5	32	47	12	10	TX. 224302	2,8	392,00	**108**
TX.STF.125X40.08.Z6	125	8	6	32,5	40	58	12	12	TX. 224302	2,8	529,20	**138**
TX.STF.160X40.08.Z8	160	8	8	50,0	40	58	12	16	TX. 224302	2,8	680,40	**168** 1)
TX.STF.80X27.10.Z4	80	10	4	21,0	27	36	12	8	TX. 225402	3	329,40	**090**
TX.STF.100X32.10.Z5	100	10	5	25,5	32	47	12	10	TX. 225402	3	392,00	**110**
TX.STF.125X40.10.Z6	125	10	6	32,5	40	58	14	12	TX. 225402	3	529,20	**140**
TX.STF.160X40.10.Z8	160	10	8	50,0	40	58	14	16	TX. 225402	3	702,10	**170** 1)

1) Without Through Coolant

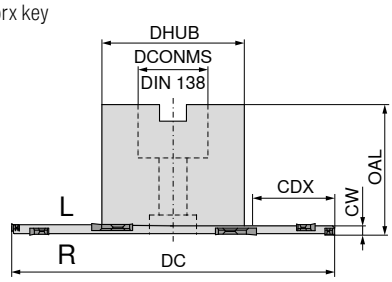
	TORX® blade		 Key D		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		**80 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts CW	**EUR** Y7		**EUR** Y7		**EUR** 2A/28		**EUR** V5		**EUR** Y7	
3	4,90	**032**	8,03	**109**	4,60	**303**	4,85	**858**	122,50	**191**
4	4,90	**033**	8,03	**110**	4,60	**303**	2,22	**218**	122,50	**191**
6	4,90	**036**	9,56	**113**	4,60	**303**	2,89	**101**	132,50	**192**
8	4,90	**037**	10,25	**114**	4,60	**303**	2,89	**135**	132,50	**192**
10	4,90	**037**	10,25	**114**	4,60	**303**	2,84	**146**	132,50	**192**

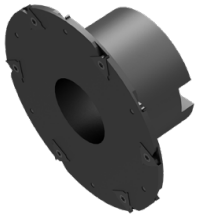
TX shell / side and face milling cutter

▲ Note: side and face milling cutters TX are cross-pitched and equipped with indexable inserts for both right-hand and left-hand version.
▲ ZEFP = number of inserts

Scope of supply:
side and face milling cutter, 2 spare clamping screws and 1 Torx key







Designation	DC mm	CW mm	ZNF	CDX mm	DCONMS mm	DHUB mm	OAL mm	ZEFP	torque moment Nm	Insert	50 734 ... EUR V5	
TX.ASF.100.R.03.Z5	100	3	5	25,0	27	48	50	10	0,7	TX. 161702	582,10	**300**
TX.ASF.125.R.03.Z6	125	3	6	37,5	27	48	50	12	0,7	TX. 161702	903,90	**225**
TX.ASF.160.R.03.Z8	160	3	8	44,0	40	70	50	16	0,7	TX. 161702	968,70	**260** 1)
TX.ASF.100.R.04.Z5	100	4	5	25,0	27	48	50	10	3,2	TX. 162302	573,50	**100**
TX.ASF.125.R.04.Z6	125	4	6	37,5	27	48	50	12	3,2	TX. 162302	828,40	**025**
TX.ASF.125.R.04.Z6	125	4	6	26,5	40	70	50	12	3,2	TX. 162302	806,80	**125**
TX.ASF.160.R.04.Z8	160	4	8	55,0	27	48	50	16	3,2	TX. 162302	1.010,00	**060** 1)
TX.ASF.160.R.04.Z8	160	4	8	44,0	40	70	50	16	3,2	TX. 162302	954,70	**160** 1)
TX.ASF.180.R.04.Z9	180	4	9	54,0	40	70	50	18	3,2	TX. 162302	1.104,00	**180** 1)
TX.ASF.200.R.04.Z10	200	4	10	64,0	40	70	50	20	3,2	TX. 162302	1.230,00	**200** 1)

1) Without Through Coolant


Washer

TORX® blade


Clamping Screw

Key D


Molykote

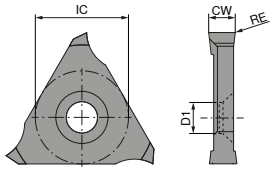

Clamping screw


Torque screwdriver

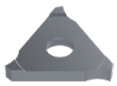
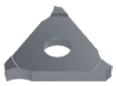
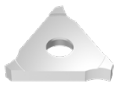
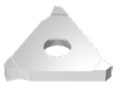
Spare parts CW	DCONMS	70 950 ... EUR V5		80 950 ... EUR Y7		70 950 ... EUR V5		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR V5		80 950 ... EUR Y7	
3	27	1,13	**221**	4,90	**032**	1,68	**219**	8,03	**109**	4,60	**303**	4,85	**858**	122,50	**191**
3	40	1,71	**222**	4,90	**032**	7,24	**220**	8,03	**109**	4,60	**303**	4,85	**858**	122,50	**191**
4	27	1,13	**221**	4,90	**033**	1,68	**219**	8,03	**110**	4,60	**303**	2,22	**218**	132,50	**192**
4	40	1,71	**222**	4,90	**033**	7,24	**220**	8,03	**110**	4,60	**303**	2,22	**218**	132,50	**192**

TX-L / TX-R

Designation	IC mm	D1 mm	CW mm
TX . 1617..	10	3,95	1,7
TX . 1623..	10	3,95	2,3
TX . 2232..	13	5,50	3,2
TX . 2243..	13	5,50	4,3
TX . 2254..	13	5,50	5,4



TX-L / TX-R

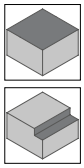
		CWX500		CWX500		CWK10		CWK10	
									
		TX-L		TX-R		TX-L		TX-R	
		50 382 ...		**50 381 ...**		**50 382 ...**		**50 381 ...**	
ISO	RE mm	EUR V5		EUR V5		EUR V5		EUR V5	
TX 161702	0,2	20,77	**217**	20,77	**217**				
TX 162302	0,2	20,54	**223**	20,54	**223**				
TX 223202	0,2	31,00	**232**	31,00	**232**	27,47	**532**	27,47	**532**
TX 224302	0,2	31,32	**243**	31,32	**243**	28,04	**543**	28,04	**543**
TX 225402	0,2	23,27	**254**	23,27	**254**	19,97	**554**	19,97	**554**
P		●		●					
M		●		●					
K		●		●					
N		●		●		●		●	
S		○		○					
H									
O		○		○		○		○	

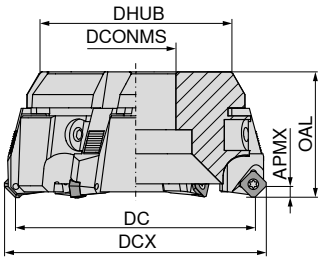
Milling guide

Cutting data standard values	→ 187	Technical Information	→ 189–194
Chip groove description and overview	→ 195–197	Grade description and overview	→ 198–201

MaxiMill – Combi Mill Base Holder 260

▲ Basic body with clamping wedges, without cartridges







DC mm	ZNF	DCONMS mm	DHUB mm	OAL mm	WT kg	50 715 ... EUR 2B/40	
80	5	27	66	52	1	378,30	**080**
100	6	32	86	52	2	414,40	**100**
125	7	40	95	63	3	577,00	**125**
160	10	40	130	63	6	632,80	**160** 1)
200	12	60	172	63	9	808,80	**200** 1)
250	14	60	222	63	17	1.048,00	**250** 1)
315	18	60	280	80	31	1.095,00	**315** 1)
400	22	60	365	80	52	2.361,00	**400** 1)

1) Without Through Coolant

For information on axial runout setting, see → **page 188**

Spare parts DC	 Clamping wedge screw 70 950 ... EUR 2A/28		 Clamping Wedge 70 950 ... EUR 2A/28		 Key-T 70 950 ... EUR 2A/28		 Molykote 70 950 ... EUR 2A/28		 Eccentric Key 70 950 ... EUR 2A/28	
80 - 400	3,13	**297**	18,34	**296**	7,44	**317**	4,60	**303**	12,99	**298**

Insert related diameter

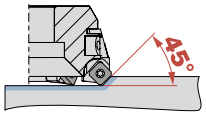
	Inserts	Nominal Ø in mm 80 DC mm	80 DCX mm	100 DC mm	100 DCX mm	120 DC mm	120 DCX mm	160 DC mm	160 DCX mm	200 DC mm	200 DCX mm	250 DC mm	250 DCX mm	315 DC mm	315 DCX mm	400 DC mm	400 DCX mm
	SD.. 0903..	80	88,4	100	108,4	123	131,4	158	166,4	198	206,4	248	256,4	313	321,4	398	406,4
	SD.. 1204..	80	94,5	100	114,5	123	137,5	158	172,5	198	212,5	248	262,5	313	327,5	398	412,5
	SE.. 1204..	80	93	100	113	123	136	158	171	198	211	248	261	313	326	398	411
	SD.. 1504..	75	94	95	114	118	137	153	172	193	212	243	262	308	327	393	412
	SP.. 1204..	82	88	102	108	125	131	160	166	200	206	250	256	315	321	400	406
	OA.. 0605..	80	85,6	100	105,6	123	128,6	158	163,6	198	203,6	248	253,6	313	318,6	398	403,6
	RP.X 1204..	80	92	100	112	123	135	158	170	198	210	248	260	313	325	398	410
	RP.X 16..	76	92	96	112	119	135	154	170	194	210	244	260	309	325	394	410
	SD.. 1205..	89		109		132		167		207		257		322		407	
	SD.. 09T3	89		109		132		167		207		257		322		407	
	LD..1504..	89		109		132		167		207		257		322		407	
	XD.T 11T3	89		109		132		167		207		257		322		407	
	XDKT 1505	89		109		132		167		207		257		322		407	
	AP.. 1003..	89		109		132		167		207		257		322		407	
	TPKW 2204..	89		109		132		167		207		257		322		407	

15

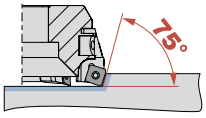
MaxiMill 260/combi cutter system

Cassette for inserts

Face milling

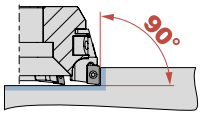


	SD.. 0903..	SD.. 1204.. XD.. 1204..	SE.. 1204..	SD.. 1504..	SA.. 1706..	OA.. 0605..
Cartridge no.	041	031	029	032	058	057
Article no. 70 950 ...	329	411	306	412	30800	338



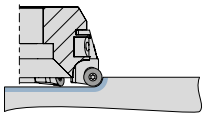
	SP.. 1204..
Cartridge no.	018
Article no. 70 950 ...	310

Shoulder milling



	AP.. 1003..	LD.. 1504..	XD.T 11T3..	XDKT 1505..	SD.. 1205..	SD.. 09T3..	TPKW 2204..
Cartridge no.	042	051	054	056	039	055	025
Article no. 70 950 ...	307	300	336	339	311	337	313

Face/Copy milling



	RP.X 1204..	RP.X 16....
Cartridge no.	052	053
Article no. 70 950 ...	333	707

Insert	APMX mm	Cassette 70 950 ... EUR 2B/40	
AP.. 1003..	8,0	86,79	307
LD.. 1504..	14,0	86,79	300
OA.. 0605..	3,5	86,79	338
RP.X 1204..	6,0	86,79	333
RP.X 16..	8,0	86,79	707
SAKU 1706	8,4	86,79	30800
SD.. 0903..	4,0	86,79	329
SD.. 09T3..	8,0	86,79	337
SD.. 1204..	6,0	86,79	411
SD.. 1205..	6,0	86,79	311
SD.. 1504..	9,0	86,79	412
SE.. 1204..	6,0	86,79	306
SP.. 1204..	9,0	86,79	310
TPKW 2204..	18,0	86,79	313
XD.T 11T3	10,0	88,47	336
XDKT 1505..	14,0	86,79	339

	TORX® blade	Key D	Molykote	Clamping screw	Torque screwdriver
	80 950 ...	80 950 ...	70 950 ...	70 950 ...	80 950 ...
Spare parts Insert	EUR Y7	EUR Y7	EUR 2A/28	EUR 2A	EUR Y7
AP.. 1003..	4,90 033	8,03 110	4,60 303	2,43 112	122,50 191
OA.. 0605..	4,90 037	10,25 114	4,60 303	4,29 302	135,90 193
RP.X 1204.. / LD.. 1504..	4,90 036	9,56 113	4,60 303	3,30 304	132,50 192
SD.. 0903..	4,90 033	8,03 110	4,60 303	2,70 115	122,50 191
SD.. 09T3..	4,90 036	9,56 113	4,60 303	3,30 110	132,50 192
SD.. 1204.. / SE.. 1204.. / SP.. 1204.. / SD.. 1205.. / SD.. 1504.. / RP.X 16.. / TPKW 2204..	4,90 037	10,25 114	4,60 303	2,60 280	135,90 193
XD.T.. 11T3..	4,90 043	10,51 125	4,60 303	4,29 131	122,50 191
XDKT 1505..	5,42 054	12,25 128	4,60 303	3,34 839	132,50 192

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm²* / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	680 N/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
H	Hardened steel	H.1.1		Hardened and tempered	46–55 HRC				
		H.1.2		Hardened and tempered	56–60 HRC				
		H.1.3		Hardened and tempered	61–65 HRC				
		H.1.4		Hardened and tempered	66–70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 150 N/mm²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm²				
		O.3.1	Graphite						

*** Tensile strength**

Cutting data standard values

Cutting Material **hard** (v_c↑) → **tough** (v_c↓)

	DRAGONSKIN CERMET CTEP210		DRAGONSKIN CERMET TCM10		DRAGONSKIN CTCP220		DRAGONSKIN CTPP225		DRAGONSKIN CTCP230		DRAGONSKIN CTPP231		DRAGONSKIN CTPP235		DRAGONSKIN CTPP236	
Index																
P.1.1	344		292		339	170	263	157	286	150	200	100	246	137	300	180
P.1.2	302		257		308	154	234	143	242	133	170	90	208	121	270	160
P.1.3	263		224		280	140	207	129	202	118	140	80	172	106	225	130
P.1.4	250		214		270	135	198	125	189	112	170	90	160	101	270	160
P.1.5	230		197		256	128	185	118	169	105	160	90	143	94	240	140
P.2.1	308		262		313	157	238	145	249	136	170	90	214	123	270	160
P.2.2	246		211		268	134	196	124	185	111	130	70	157	100	200	120
P.2.3	230		197		256	128	185	118	169	105	170	90	143	94	270	160
P.2.4	181		157		220	110	151	102	118	85	120	60	98	76	180	110
P.3.1					140	70	130	65	140	87	170	90	121	97	270	160
P.3.2					95	50	100	50	90	55	140	80	108	83	180	140
P.3.3					50	30	70	35	40	22	120	70	96	69	150	120
P.4.1					140	70	130	65	140	87	140	80	121	97	180	140
P.4.2					118	60	115	58	115	71	130	70	114	90	170	130
M.1.1											170	90	121	97	270	160
M.2.1													108	83		
M.3.1													117	93		
K.1.1									310	190	150	110	160	110	360	90
K.1.2	300		240						160	100	150	110	150	110	360	90
K.2.1	350		280						200	120	150	110	150	110	230	170
K.2.2	300		240						130	80	150	110	150	110	160	110
K.3.1	300		240						190	115					210	160
K.3.2									160	100					210	160
N.1.1																
N.1.2																
N.2.1																
N.2.2																
N.2.3																
N.3.1																
N.3.2																
N.3.3																
N.4.1																
S.1.1																
S.1.2																
S.2.1																
S.2.2																
S.2.3																
S.3.1																
S.3.2																
S.3.3																
H.1.1																
H.1.2																
H.1.3																
H.1.4																
H.2.1																
H.3.1																
O.1.1																
O.1.2																
O.2.1																
O.2.2																
O.3.1																

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine.
The specified values represent guideline cutting data that can be adjusted by approx. **± 20 %** according to the usage conditions.

Cutting data standard values

Cutting Material **hard** (v_c↑) → **tough** (v_c↓)

	DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN					
	CTPM225		CTCM235		CTPM240		CTPM241		CTPM245		CTCM245		CERAMIC CTN3105		CBN CTL3215	
Index																
P.1.1	272	191	251	184	226	141	200	100	244	139	279	134				
P.1.2	231	163	210	152	188	126	170	90	207	124	242	119				
P.1.3	193	137	172	123	152	112	140	70	173	109	208	104				
P.1.4	180	129	160	113	140	107	170	90	161	104	196	99				
P.1.5	161	116	141	99	123	100	150	80	144	97	179	92				
P.2.1	237	167	217	157	194	128	170	90	212	126	247	121				
P.2.2	177	127	157	111	137	106	120	60	158	103	193	98				
P.2.3	161	116	141	99	123	100	170	90	144	97	179	92				
P.2.4	114	84	94	62	78	83	110	60	101	78	136	73				
P.3.1	148	121	136	115	126	105	210	100	155	107	175	122				
P.3.2	121	101	128	110	112	95	180	100	143	93	163	108				
P.3.3	95	81	120	105	98	85	160	90	131	79	151	94				
P.4.1	148	121	136	115	126	105	140	90	155	107	175	122				
P.4.2	134	111	132	113	119	100	130	80	149	100	169	115				
M.1.1	**148**	**121**	**136**	**115**	**126**	**105**	**210**	**100**	**155**	**107**	**175**	**122**				
M.2.1	**121**	**101**	**128**	**110**	**112**	**95**	**180**	**90**	**143**	**93**	**163**	**108**				
M.3.1	**140**	**115**	**134**	**114**	**121**	**102**	**210**	**100**	**152**	**103**	**172**	**118**				
K.1.1													**800**		**800**	
K.1.2													**600**		**600**	
K.2.1																
K.2.2															**450**	
K.3.1																
K.3.2																
N.1.1																
N.1.2																
N.2.1																
N.2.2																
N.2.3																
N.3.1																
N.3.2																
N.3.3																
N.4.1																
S.1.1								60				80				
S.1.2								60				70				
S.2.1								60				35				
S.2.2								60				25				
S.2.3								60				30				
S.3.1								60				80				
S.3.2								60				50				
S.3.3								60				40				
H.1.1																
H.1.2															150	
H.1.3																
H.1.4																
H.2.1															280	
H.3.1																
O.1.1																
O.1.2																
O.2.1																
O.2.2																
O.3.1																

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Cutting data standard values

Cutting Material **hard** (v_c↑) → **tough** (v_c↓)

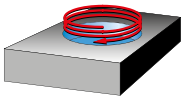
Index	CTCK215		CTPK220		CTPK221		AMZ		H216T		CTWN215		CTC5240		CTCS245		CTP6215	
	DRAGONSKIN		DRAGONSKIN										DRAGONSKIN					
	✗	🚰	✗	🚰	✗	🚰	✗	🚰	✗	🚰	✗	🚰	✗	🚰	✗	🚰	✗	🚰
P.1.1					190	120												
P.1.2					180	100												
P.1.3					150	80												
P.1.4					180	100												
P.1.5					170	90												
P.2.1					180	100												
P.2.2					140	80												
P.2.3					180	100												
P.2.4					130	80												
P.3.1					210	120												
P.3.2					160	90												
P.3.3					130	80												
P.4.1					210	120												
P.4.2					190	100												
M.1.1																		
M.2.1																		
M.3.1																		
K.1.1	**360**	**210**	**320**	**190**	**270**	**200**	200		130	130	130	130					280	250
K.1.2	**220**	**130**	**170**	**100**	**270**	**200**	160		110	110	110	110					190	160
K.2.1	**230**	**140**	**210**	**130**	**250**	**180**	185		130	130	130	130					180	150
K.2.2	**160**	**100**	**140**	**90**	**180**	**120**	150		120	120	120	120					180	150
K.3.1	**250**	**150**	**200**	**120**	**220**	**170**	200		130	130	130	130					250	220
K.3.2	**210**	**130**	**170**	**100**	**220**	**170**	175		110	120	110	110					190	160
N.1.1								**1500**		**1500**		**1500**						
N.1.2								**1000**		**1000**		**1000**						
N.2.1								**1200**		**1100**		**1100**						
N.2.2								**1200**		**1000**		**1000**						
N.2.3								**300**		**280**		**280**						
N.3.1								**350**		**350**		**350**						
N.3.2								**350**		**350**		**350**						
N.3.3								**320**		**320**		**320**						
N.4.1								**320**		**320**		**320**						
S.1.1														**80**		**64**		
S.1.2														**70**		**56**		
S.2.1														**35**		**28**		
S.2.2														**25**		**20**		
S.2.3														**30**		**24**		
S.3.1														**80**		**64**		
S.3.2														**50**		**40**		
S.3.3														**40**		**32**		
H.1.1																	**50**	
H.1.2																	**40**	
H.1.3																		
H.1.4																		
H.2.1																		
H.3.1																		
O.1.1								160	160	160	160	160						
O.1.2																		
O.2.1								180	240	240	240	240						
O.2.2																		
O.3.1																		

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine.
The specified values represent guideline cutting data that can be adjusted by approx. **± 20 %** according to the usage conditions.

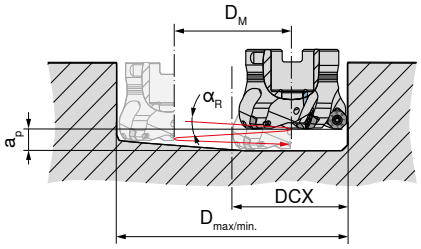
System MaxiMill 274-04/-09

Machining strategy

Helical plunge milling



$D_{max.}$ in mm = largest diameter for flat bottom hole
$D_{min.}$ in mm = smallest hole diameter for flat bottom surface
D_M = D_{max} – DCX and D_{min} – DCX



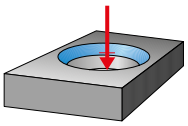
OF..04

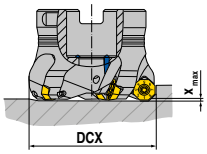
DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
25,6	45	39	2,3
30,7	55	49	1,9
37,7	69	63	1,4
45,7	85	79	1,2
55,7	105	99	0,9
68,7	131	125	0,7
85,7	165	159	0,6
105,7	205	199	0,5
130,7	255	249	0,4

SF..09

DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
27,4	45,00	42,0	1,9
32,5	55,00	52,0	1,5
39,2	69,00	66,0	1,1
47,6	85,00	82,0	0,9
57,6	105,00	102,0	0,7
70,5	131,00	128,0	0,5
87,5	165,00	162,0	0,4
107,5	205,00	202,0	0,3
132,5	255,00	252,0	0,3

Axial plunging





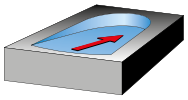
OF..04

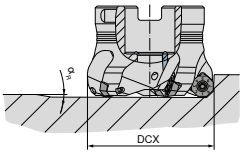
DCX mm	x_{max} mm
25,6	2,5
30,7	2,5
37,7	2,5
45,7	2,5
55,7	2,5
68,7	2,5
85,7	2,5
105,7	2,5
130,7	2,5

SF..09

DCX mm	x_{max} mm
27,4	3,7
32,5	3,5
39,2	3,2
47,6	3,1
57,6	3,1
70,5	3,0
87,5	2,9
107,5	2,7
132,5	2,7

Angled ramping





OF..04

DCX mm	$\alpha_{R\,max}$ °
25,6	14,2
30,7	9,5
37,7	6,5
45,7	4,7
55,7	3,5
68,7	2,7
85,7	2,0
105,7	1,6
130,7	1,2

SF..09

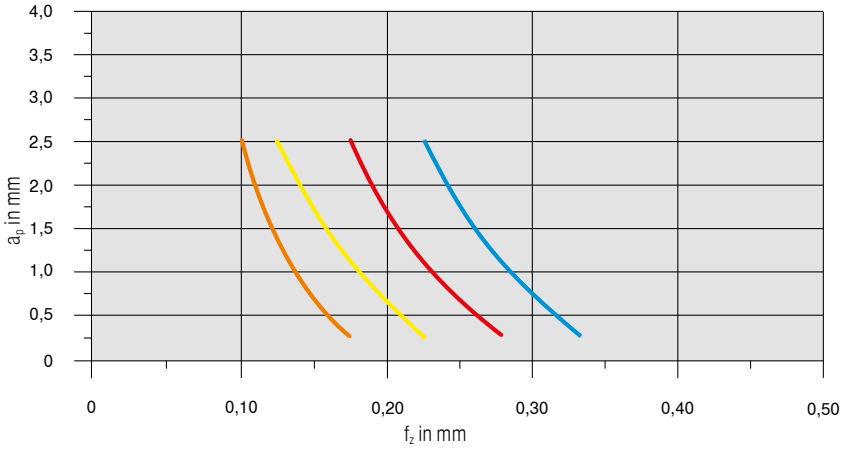
DCX mm	$\alpha_{R\,max}$ °
27,4	20,4
32,5	13,0
39,2	8,0
47,6	5,8
57,6	4,3
70,5	3,2
87,5	2,3
107,5	1,7
132,5	1,3

System MaxiMill 274-04

Starting Parameter



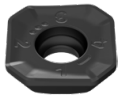
OF.. 04



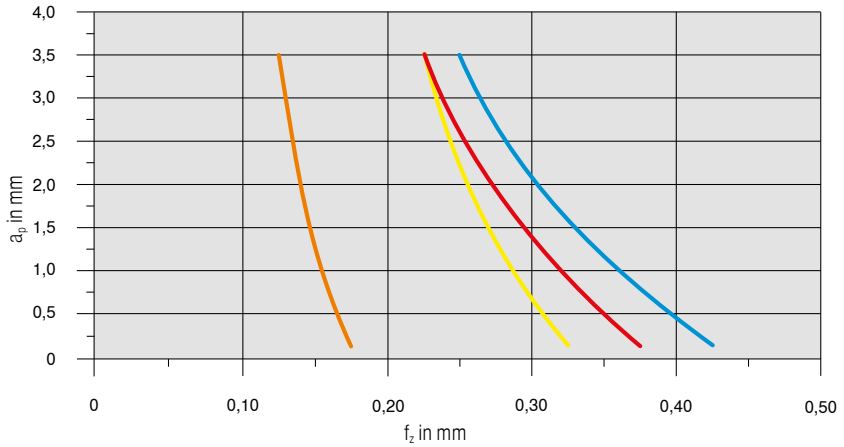
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**OFHT040305SN-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT040305SN-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**OFHT040305SN-M50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**OFHT040305SN-F50**	**CTC5240**	35	Emulsion

System MaxiMill 274-09

Starting Parameter



SF.. 09



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SFKT0903AFSR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SFHT0903AFSR-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SFKT0903AFSR-R50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**SFHT0903AFSR-F50**	**CTC5240**	35	Emulsion

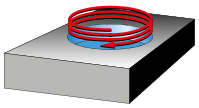
Detailed information on cutting speed for each grade can be found on → page 142–144

From v_c > 400 m/min, the tool must be balanced!

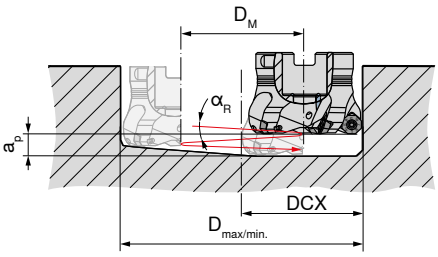
System MaxiMill 274-05/-12

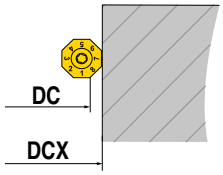
Machining strategy

Helical plunge milling



$D_{max.}$ in mm = largest diameter for flat bottom hole
$D_{min.}$ in mm = smallest hole diameter for flat bottom surface
D_M = D_{max} – DCX and D_{min} – DCX





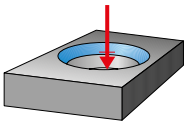
OF..05

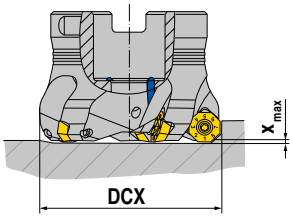
DC mm	DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
50	**58**	107	99	1,1
63	**71**	133	125	0,9
80	**88**	167	159	0,7
100	**107,9**	207	199	0,5
125	**132,9**	257	249	0,4

SF..12

DC mm	DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
47,0	**61,0**	107	105	0,5
59,9	**74,0**	133	131	0,4
76,9	**90,9**	167	165	0,3
96,9	**110,9**	207	205	0,25
121,9	**135,9**	257	255	0,2

Axial plunging





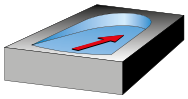
OF..05

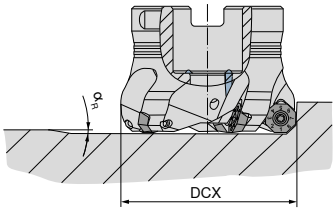
DC mm	DCX mm	X_{max} mm
50	**58**	2,2
63	**71**	1,9
80	**88**	1,8
100	**107,9**	1,1
125	**132,9**	1,4

SF..12

DC mm	DCX mm	X_{max} mm
47,0	**61,0**	3,4
59,9	**74,0**	3,2
76,9	**90,9**	3,0
96,9	**110,9**	2,5
121,9	**135,9**	2,6

Angled ramping





OF..05

DC mm	DCX mm	$\alpha_{R\,max}$ °
50	**58**	3,2
63	**71**	2,0
80	**88**	1,5
100	**107,9**	0,7
125	**132,9**	0,7

SF..12

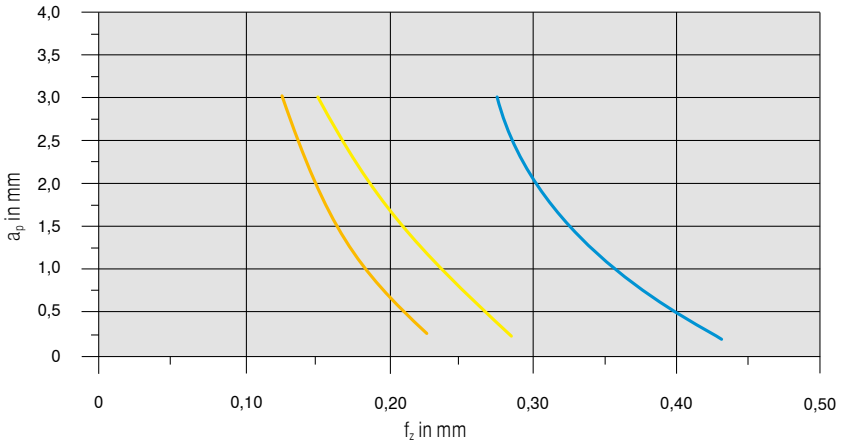
DC mm	DCX mm	$\alpha_{R\,max}$ °
47,0	**61,0**	4,9
59,9	**74,0**	3,4
76,9	**90,9**	2,4
96,9	**110,9**	1,6
121,9	**135,9**	1,3

System MaxiMill 274-05

Starting Parameter



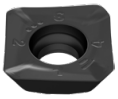
OF.. 05



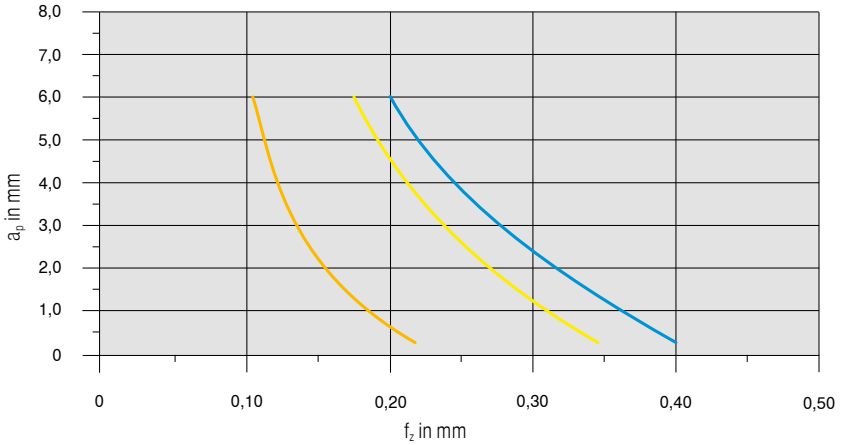
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**OFHT050410SN-M50**	**CTCP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT050410SN-F50**	**CTPM240**	180	Dry
Heat resistant	**S.2.2**	Inconel 718	**OFHT050410SN-F50**	**CTC5240**	35	Emulsion

System MaxiMill 274-12

Starting Parameter



SF.. 12



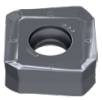
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SFKT1204AFSR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SFKT1204AFSR-M50**	**CTPM240**	180	Dry
Heat resistant	**S.2.2**	Inconel 718	**SFHT1204AFER-F40**	**CTC5240**	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 142–144

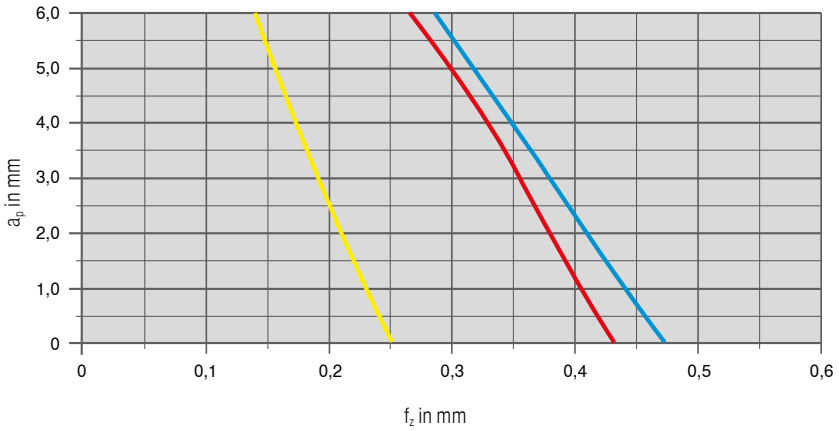
From v_c > 400 m/min, the tool must be balanced!

MaxiMill 271-12 system

Starting Parameter



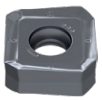
SOHU 12



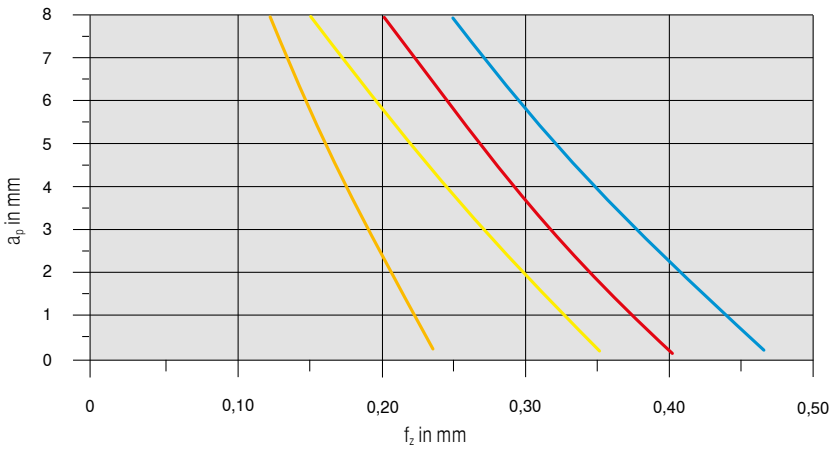
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SOHU 1204ABSR-M50**	**CTPP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SOHU 1204ABSR**	**CTPM240**		Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SOHU 1204ABSR-R50**	**CTCK215**	300	Dry
Heat resistant	**S.2.2**	Inconel 718	**SOHU 1204ABSR-F50**	**CTC5240**	30	Emulsion

System MaxiMill 271-17

Starting Parameter



SAKU 17



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SAKU 1706ABSR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SAKU 1706ABSR-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SAKU 1706ABSR-R50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**SAKU 1706ABSR-F50**	**CTC5240**	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 142–144

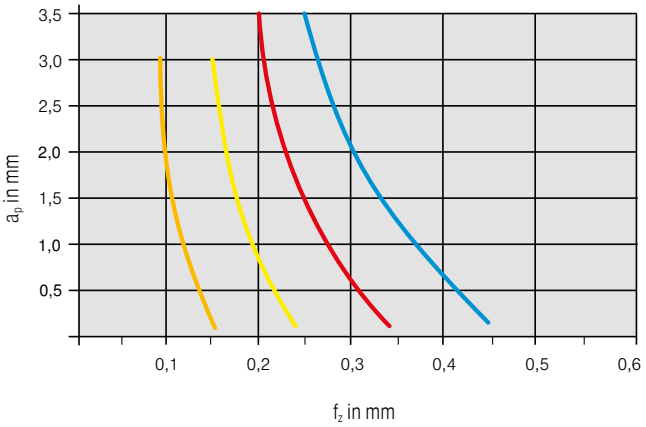
From v_c > 400 m/min, the tool must be balanced!

MaxiMill 273 system

Starting Parameter



OAKU



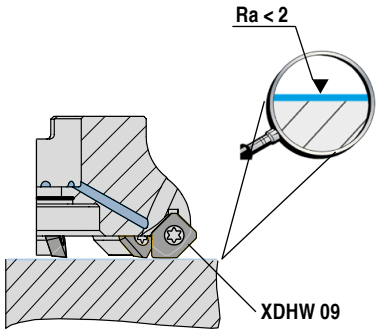
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**OAKU 060508SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OAKU 060508SR-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**OAKU 060508SR-R50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**OAKU 060508ER-F40**	**CTC5240**	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 142–144

From v_c > 400 m/min, the tool must be balanced!

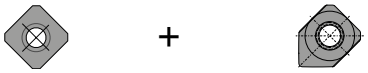
MaxiMill 270 system

Machining strategy



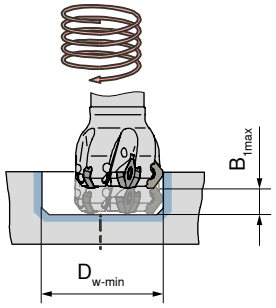
Finish milling with wiper inserts

Two wiper inserts are mounted in each 125 mm head



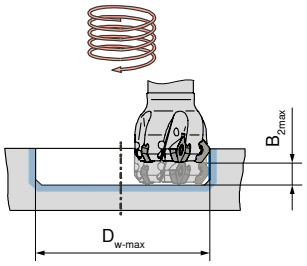
Steel	SDNT	0903AESN-29	CTPP235	+	XDHW	0903AESN	CTPP235
	SDNT	0903AESN-29	CTCP230	+	XDHW	0903AESN	CTCP230
	SDHT	0903AESN-33	CTCP230	+	XDHW	0903AESN	CTCP230
	SDHW	0903AESN	TCM10	+	XDHW	0903AESN	TCM10
Cast iron	SDNT	0903AESN-31	CTCK215	+	XDHW	0903AEEN	CTCK215
Non ferrous metals	SDHT	0903AEFN-ALP	-27P H216T	+	XDHW	0903AEFN	-27P H216T

Helical plunge milling (without start hole)



C 270-09

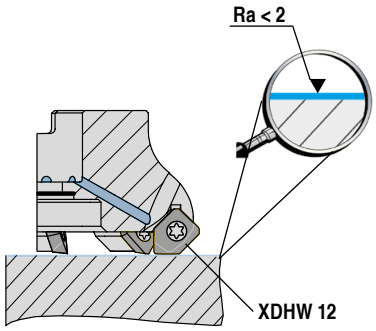
DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm
6	14,4	1,5	19,0	1,5
12	28,5	1,5	31,0	1,5
16	36,5	1,5	39,0	1,5
20	44,5	1,5	47,0	1,5
25	54,5	1,5	57,0	1,5
32	68,5	1,5	71,0	1,5



A 270-09

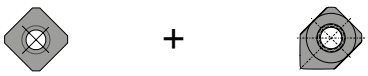
DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm
32	68,5	1,5	71,0	1,5
40	84,5	1,5	87,0	1,5
50	104,5	1,5	107,0	1,5
63	130,5	1,5	133,0	1,5
80	164,5	1,5	167,0	1,5
100	204,5	1,5	207,0	1,5
125	254,5	1,5	257,0	1,5
160	324,5	1,5	327,0	1,5

System MaxiMill 270-12



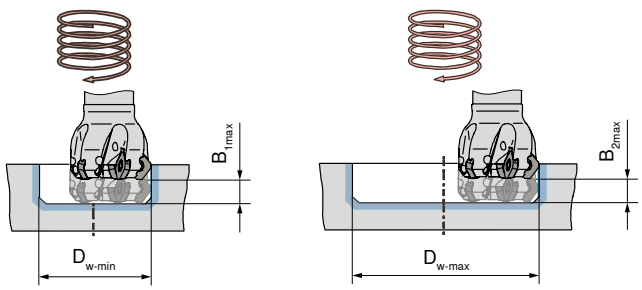
Finish milling with wiper inserts

Two wiper inserts are mounted in each 125 mm head



Steel	SDMT	1204AESN-29R	CTPP235	+	XDHW	1204AESN	CTPP235
	SDMT	1204AESN-29R	CTCP230	+	XDHW	1204AESN	CTCP230
	SDHW	1204AESN-R	TCM10	+	XDHW	1204AESN	TCM10
Cast iron	SDMT	1204AEEN-31	CTCK215	+	XDHW	1204AEEN	CTCK215
	SDHW	1204AESN-R	CTCK215	+	XDHW	1204AEEN	CTCK215
Non ferrous metals	SDHT	1204AEFN-ALP	-27P H216T	+	XDHW	1204AEFN	-27P H216T

Helical plunge milling (without start hole)

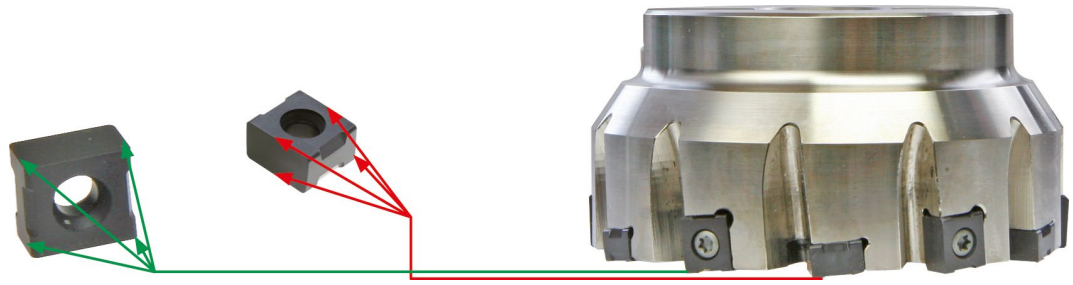


DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm
32	74,5	1,5	78,0	1,5
40	90,5	1,5	94,0	1,5
50	110,5	1,5	114,0	1,5
63	136,5	1,5	140,0	1,5
80	170,5	1,5	174,0	1,5
100	210,5	1,5	214,0	1,5
125	260,5	1,5	264,0	1,5
160	330,5	1,5	334,0	1,5

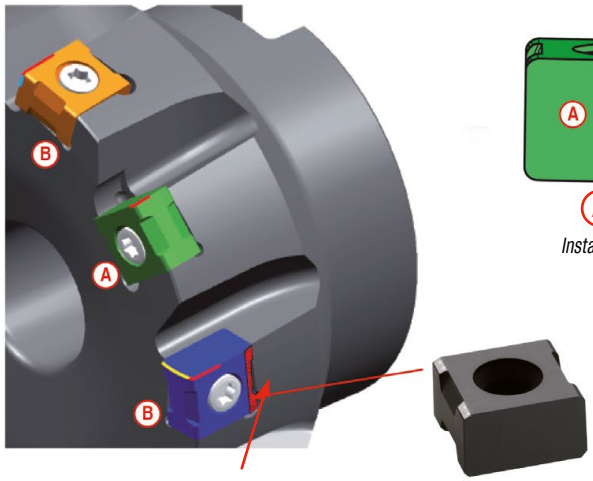
From v_c > 400 m/min, the tool must be balanced!

MaxiMill HEC 11 / HEC 12 system

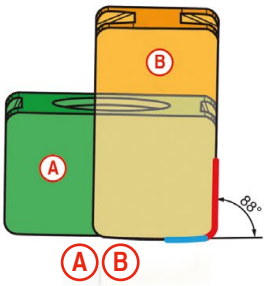
4 cutting edges per installation position



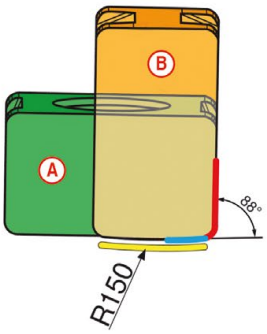
Correct assembly of standard and wiper inserts



Marking for the correct assembly



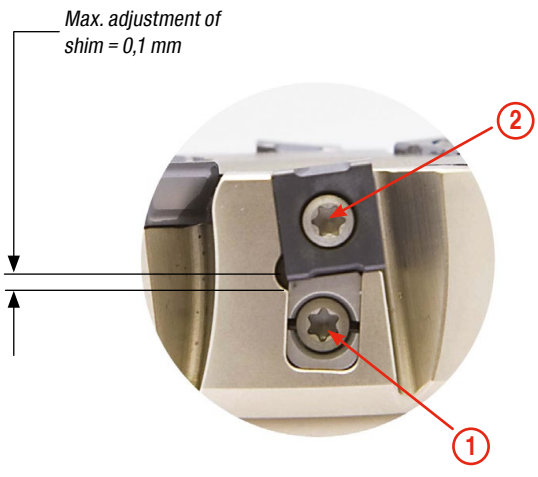
Installation position



Face machining insert — B
Insert main cutting edge — A B
Wiper Facet — B

Adjust the tools in axial direction

- Install the wedge into the cutter body and lightly clamp the clamping screw so as not to clamp. (1)
- Install the inserts as shown and tighten to 1,0 Nm torque. (2)
- Using pre-setting equipment, mark the highest cutting edge. (1)
- With small adjustments of the setting screw set all cutting edges to the same height by 0,005 mm or better. (1)
- Clamp insert with 3,2 Nm torque. (2)



Average chip thickness [h_m] – the approach

Face milling

1 Select appropriate average chip thickness [h_m] for the steel from the table.

Material	Tensile strength N/mm²	h_m mm
for steel	...–800	0,2
for steel	800–1000	0,18
for steel	1000–1200	0,16
for steel	1200–...	0,14
for stainless steel	... –750	0,21
for stainless steel	750–900	0,19
for stainless steel	900–1150	0,17
for stainless steel	1150– ...	0,15

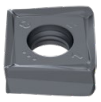
2 Select the corrected feed rate value from the table based on the appropriate chip thickness [h_m] and depth of cut [a_e].

h_m mm	Corrected feed value f_z for h_m			
0,20	0,40 **	0,40 **	0,33	0,28
0,18	0,40 **	0,40 **	0,29	0,25
0,16	0,40 **	0,36	0,26	0,23
0,14	0,36	0,31	0,23	0,20
0,21	0,40 **	0,40 **	0,34	0,30
0,19	0,40 **	0,40 **	0,31	0,27
0,17	0,40 **	0,38	0,28	0,24
0,15	0,39	0,34	0,24	0,21
a_e =	**0,3 x DC**	**0,4 x DC**	**0,75 x DC**	**1 x DC**

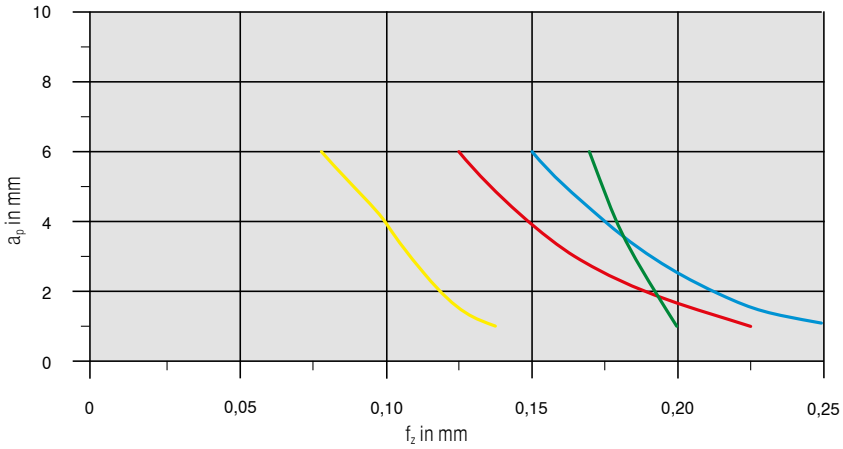
** f_z > 0,4 mm: Danger of an open space contact

MaxiMill 491-09 system

Starting Parameter



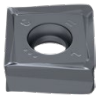
SNHU 09



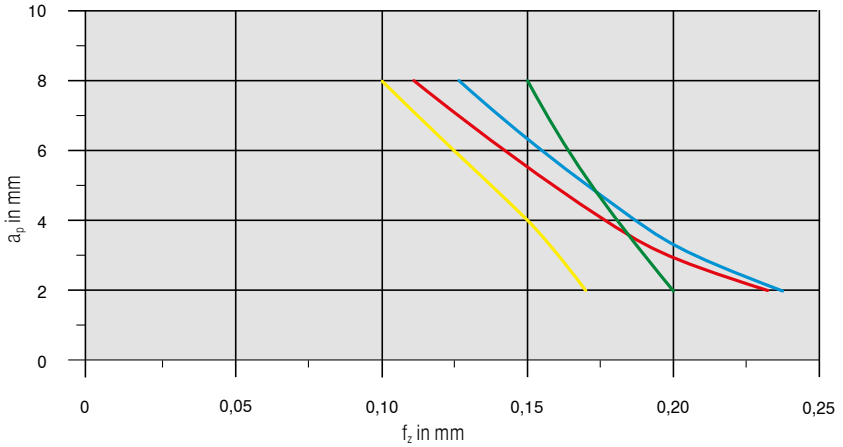
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SNHU09T308SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SNHU09T308SR-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SNHU09T308SR-R50**	**CTCK215**	250	Dry
Non ferrous metals	**N.1.2**	AlMgSi1	**SNHU09T308FR-F10**	**CTWN215**	500	Emulsion

MaxiMill 491-12 system

Starting Parameter



SNHU 12



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SNHU120408SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SNHU120408SR-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SNHU120408SR-R50**	**CTCK215**	250	Dry
Non ferrous metals	**N.1.2**	AlMgSi1	**SNHU120408FR-F10**	**CTC5240**	500	Emulsion

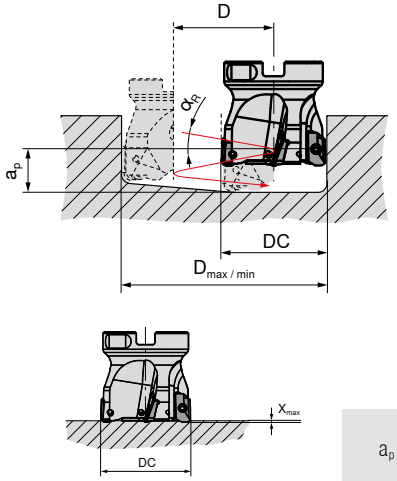
Detailed information on cutting speed for each grade can be found on → page 142–144

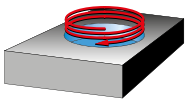
From v_c > 400 m/min, the tool must be balanced!

System MaxiMill 211-07

Machining strategy

Helical plunge milling



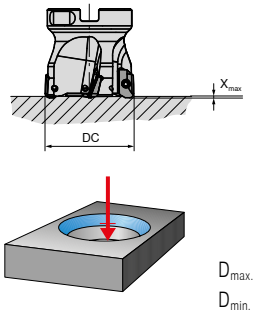


a_p in mm = $D * \pi * \tan \alpha_R$

DC mm	D_{max} / RE 0,4 mm	D_{min} mm	$\alpha_{R\,max}$ °
10	19	13	5,5
12	23	17	6,0
16	31	25	3,0
20	39	33	2,0
25	49	43	1,5
32	63	57	1,2
40	79	73	0,8
50	99	93	0,7

DC mm	D mm	$\alpha_{R\,max\,360°}$ °
10	13	5,5
12	17	6,0
16	25	3,0
20	33	2,0
25	43	1,5
32	57	1,2
40	73	0,8
50	93	0,7

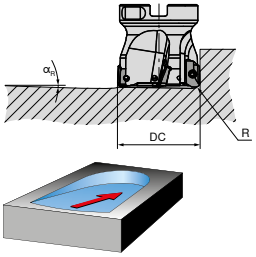
Axial plunging



DC mm	X_{max} mm
10	0,8
12	0,8
16	0,8
20	0,8
25	0,8
32	0,8
40	0,8
50	0,8

$D_{max.}$ in mm = largest diameter for flat bottom hole
$D_{min.}$ in mm = smallest hole diameter for flat bottom surface

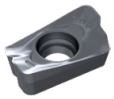
Angled ramping



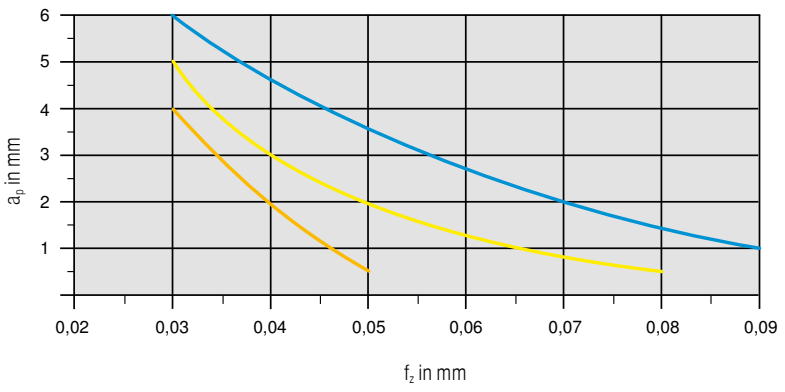
DC mm	α °
10	11,0
12	7,9
16	4,3
20	3,0
25	2,5
32	1,6
40	1,2
50	1,0

$D = D_{max} - DC / D_{min} - DC$

Starting Parameter



XDKT 07



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**XDKT070308SR-M50**	**CTCP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XDKT070308SR-F50**	**CTPM240**	180	Dry
Heat resistant	**S.2.2**	Inconel 718	**XDKT070308ER-F50**	**CTC5240**	35	Emulsion

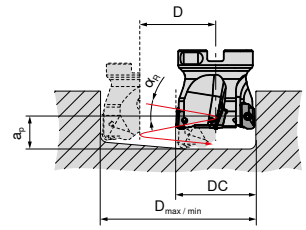
15

Detailed information on cutting speed for each grade can be found on → page 142–144

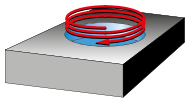
From v_c > 400 m/min, the tool must be balanced!

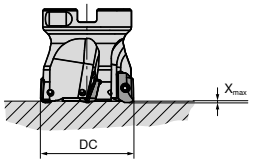
System MaxiMill 211-11

Machining strategy

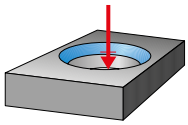


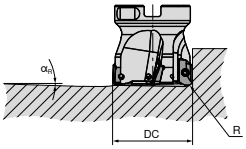
① Helical plunge milling



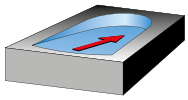


② Axial plunging





③ Angled ramping



DC mm	① Helical plunge milling RE = 0,8 mm	② Axial plunging X_{max}	③ Angled ramping α_R
12	α_R 16 ° $D_{max.}$ 21 mm $D_{min.}$ 14 mm	1,3 mm	18 °
16	α_R 9,5 ° $D_{max.}$ 29 mm $D_{min.}$ 21 mm	1,5 mm	10,8 °
20	α_R 7 ° $D_{max.}$ 37 mm $D_{min.}$ 30 mm	2,0 mm	9,8 °
25	α_R 4,5 ° $D_{max.}$ 47 mm $D_{min.}$ 40 mm	2,0 mm	7,5 °
32	α_R 3,2 ° $D_{max.}$ 61 mm $D_{min.}$ 53 mm	1,0 mm	4,8 °
40	α_R 2,2 ° $D_{max.}$ 77 mm $D_{min.}$ 72 mm	1,6 mm	2,9 °
50	α_R 1,7 ° $D_{max.}$ 98 mm $D_{min.}$ 93 mm	1,6 mm	2,2 °
63	α_R 1,5 ° $D_{max.}$ 123 mm $D_{min.}$ 116 mm	1,6 mm	1,8 °
80	α_R 1,0 ° $D_{max.}$ 157 mm $D_{min.}$ 153 mm	1,6 mm	1,4 °
100	α_R 0,8 ° $D_{max.}$ 107 mm $D_{min.}$ 101 mm	1,6 mm	1,1 °

$D_{max.}$ in mm = largest diameter for flat bottom hole

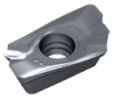
$D_{min.}$ in mm = Smallest diameter for flat bottom surface

a_p in mm = D x π x tan (α_R) = Pitch

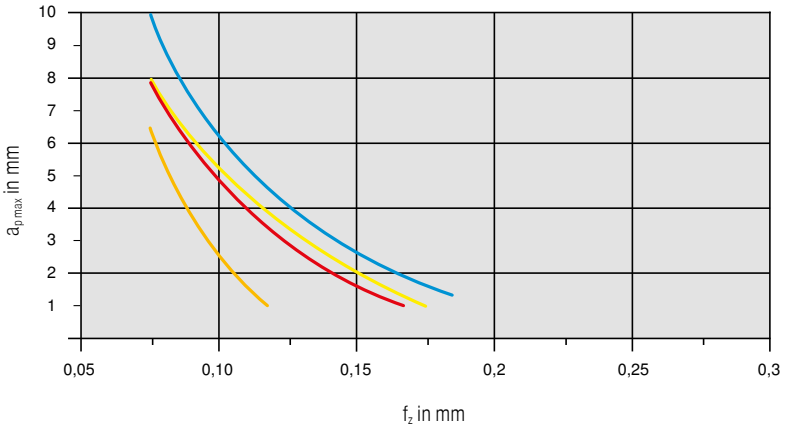
l_a in mm = Overhang length

DC mm	Maximum speed related to projection length n_{max} in min^{-1} l_a = 1–2 x Ø mm	l_a = 2,5 x Ø mm	l_a = 3 x Ø mm	l_a = 4 x Ø mm	l_a = 5 x Ø mm
12	55000	51500	47000	42000	37000
16	42000	38500	34100	28900	24200
20	36900	33000	28500	23900	19500
25	33200	29000	24400	19900	15400
32	30200	26000	20900	16600	11900
40	27700	23000	18000	13500	9000
50	25400	20400	15400	10800	6100
63	23300	18300	12900	8300	3700
80	21300	16100	10600	5800	
100	19600	14100	8400		

Starting Parameter



XDKT 11



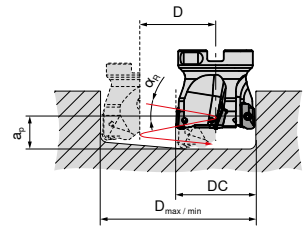
Material			Inserts		v_c in m/min	Cooling
Steel	P.4.1	40CrMnMoS 8-6	XDKT11T308SR-M50	CTCP230	200	Dry
Stainless steel	M.1.1	X6CrNiMoTi 1712 2	XDKT11T308SR-F50	CTPM240	180	Dry
Cast iron	K.1.1	EN-GJL-250 (GG25)	XDKT11T308SR-R50	CTCK215	250	Dry
Heat resistant	S.2.2	Inconel 718	XDKT11T308ER-F50	CTC5240	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 142–144

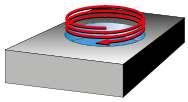
From v_c > 400 m/min, the tool must be balanced!

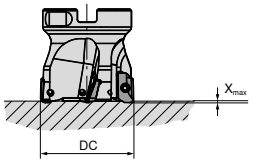
System MaxiMill 211-15

Machining strategy

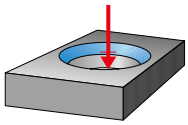


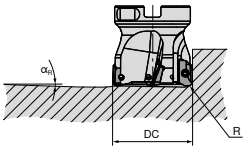
1 Helical plunge milling



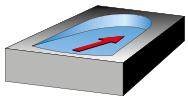


2 Axial plunging





3 Angled ramping



DC mm	1 Helical plunge milling RE = 0,8 mm	2 Axial plunging X_{max}	3 Angled ramping α_R
25	α_R 7,5 ° $D_{max.}$ 48 mm $D_{min.}$ 37 mm	2,7 mm	9,5 °
32	α_R 5 ° $D_{max.}$ 62 mm $D_{min.}$ 47 mm	2,5 mm	6,8 °
40	α_R 3,2 ° $D_{max.}$ 78 mm $D_{min.}$ 63 mm	2,5 mm	5,1 °
50	α_R 2,5 ° $D_{max.}$ 98 mm $D_{min.}$ 86 mm	2,5 mm	2,5 °
63	α_R 1,5 ° $D_{max.}$ 124 mm $D_{min.}$ 111 mm	2,5 mm	2,5 °
80	α_R 1,3 ° $D_{max.}$ 158 mm $D_{min.}$ 147 mm	2,5 mm	2,0 °
100	α_R 1,1 ° $D_{max.}$ 198 mm $D_{min.}$ 190 mm	2,5 mm	1,5 °
125	α_R 0,9 ° $D_{max.}$ 248 mm $D_{min.}$ 240 mm	2,5 mm	0,9 °
160	α_R 0,6 ° $D_{max.}$ 318 mm $D_{min.}$ 310 mm	2,5 mm	0,7 °
100	α_R 0,8 ° $D_{max.}$ 107 mm $D_{min.}$ 101 mm	1,6 mm	1,1 °

$D_{max.}$ in mm = largest diameter for flat bottom hole

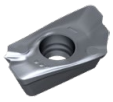
$D_{min.}$ in mm = Smallest diameter for flat bottom surface

a_p in mm = $D \times \pi \times \tan(\alpha_R)$ = Pitch

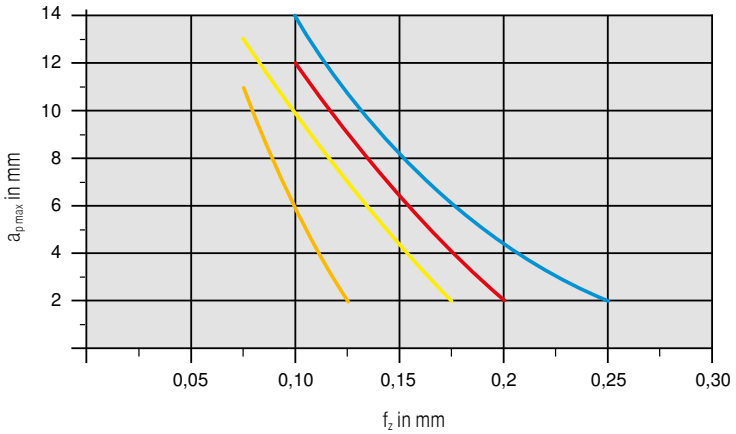
l_a in mm = Overhang length

DC mm	Maximum speed related to projection length n_{max} in min^{-1} $l_a = 2 \times Ø$ mm	$l_a = 3 \times Ø$ mm	$l_a = 5 \times Ø$ mm
25	26560	19520	13320
32	24160	16720	9520
40	22160	14400	7200
50	20320	12320	4880
63	18640	10320	2960
80	17040	8480	
100	15680	6720	
125	14320		
160	13200		

Starting Parameter



XDKT 15



Material			Inserts		v_c in m/min	Cooling
Steel	P.4.1	40CrMnMoS 8-6	XDKT150508SR-M50	CTCP230	200	Dry
Stainless steel	M.1.1	X6CrNiMoTi 1712 2	XDKT150508SR-F50	CTPM240	180	Dry
Cast iron	K.1.1	EN-GJL-250 (GG25)	XDKT150508SR-R50	CTCK215	250	Dry
Heat resistant	S.2.2	Inconel 718	XDKT150508ER-F40	CTC5240	35	Emulsion

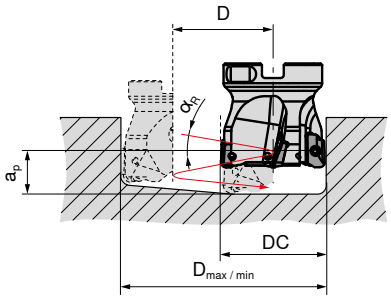
Detailed information on cutting speed for each grade can be found on → page 142–144

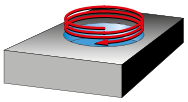
From v_c > 400 m/min, the tool must be balanced!

System MaxiMill 211-20

Machining strategy

Helical plunge milling

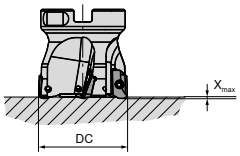


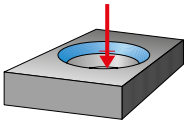


DC mm	D_{max} / RE 0,4 mm	D_{min} mm	$\alpha_{R\,max}$ °
63	124	107	2,2
80	158	143	1,7
100	198	183	1,3

a_p in mm = $D * \pi * \tan \alpha_R$

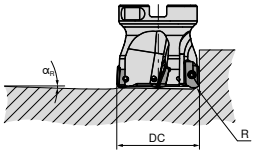
Axial plunging

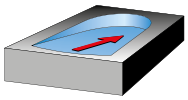




DC mm	X_{max} mm
63	2,0
80	2,0
100	2,0

Angled ramping



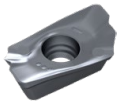


DC mm	α °
63	2,2
80	1,7
100	1,3

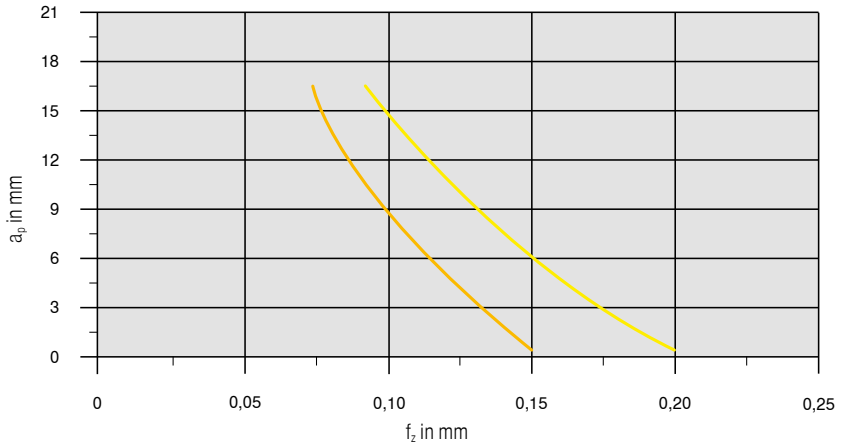
D = D_{max} - DC / D_{min} - DC

$D_{max.}$ in mm = largest diameter for flat bottom hole
$D_{min.}$ in mm = smallest hole diameter for flat bottom surface

Starting Parameter



XDKT 20



Material			Inserts		v_c in m/min	Cooling
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XDKT200708ER-F40**	**CTPM240**	180	Dry
Heat resistant	**S.2.2**	Inconel 718	**XDKT200708ER-F40**	**CTC5240**	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 142–144

From v_c > 400 m/min, the tool must be balanced!

System MaxiMill 490-09

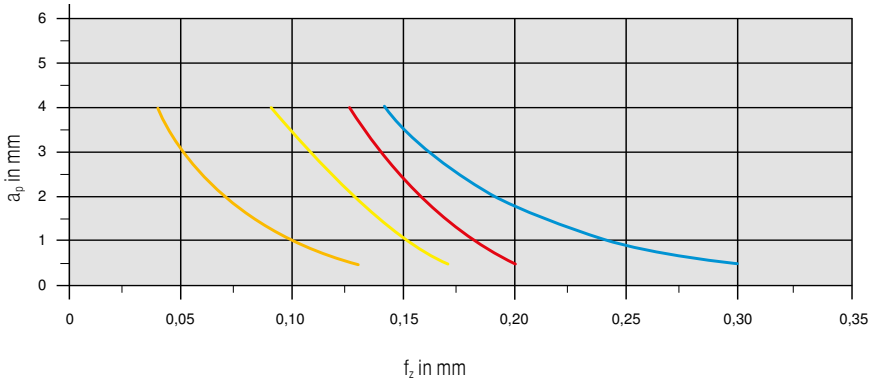
Machining strategy

System MaxiMill 490-09 is not suitable for plunging!

Starting Parameter



SDNT 09



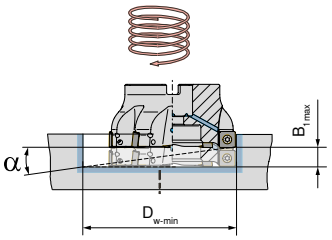
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SDNT09T308SR-29**	**CTCP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SDNT09T308SR-33**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SDNT09T308SR-31**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**SDNT09T308ER-M31**	**CTC5240**	35	Emulsion

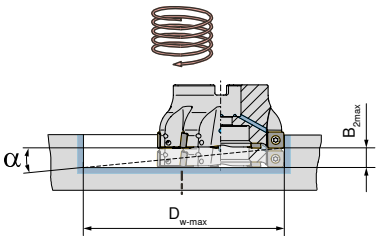
Detailed information on cutting speed for each grade can be found on → page 142–144

System MaxiMill 490-12

Machining strategy

Helical plunge milling (without start hole)





$$B = (D_W - DC) \times \pi \times \tan \alpha$$

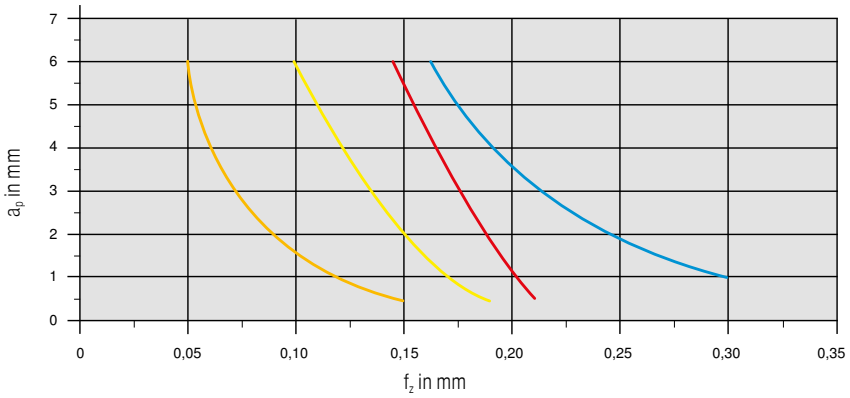
D_w = Diameter of the hole to be produced
DC = Nominal diameter of the milling tool
B = Axial feed to 360° circular movement

DC mm	D_{w-min} mm	$B_{1\,max}$ mm	D_{w-max} mm	$B_{2\,max}$ mm	α °
50	77	2,5	98	4,8	2,0
63	103	1,8	124	3,0	1,0
80	137	2,1	158	3,0	0,8
100	177	2,1	198	2,9	0,6
125	227	1,8	248	2,4	0,4

Starting Parameter



SDMT 12



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SDMT1205ZZSN-29**	**CTCP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SDMT120512SR-33**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SDMT1205ZZSN-31**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**SDMT120508ER-M31**	**CTC5240**	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 142–144

HSC/HPC machining

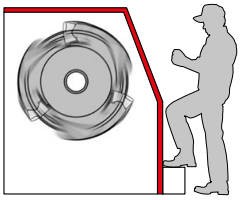
Safety advice

Suitability of the tool for HSC machining

HSC tools from CERATIZIT have been specially developed for this machining strategy and guarantee maximum operational reliability.

Observation of safety precautions of the machine manufacturer

Make sure that all safety precautions of the machine-manufacturer are observed (e.g.: closed machine guards).

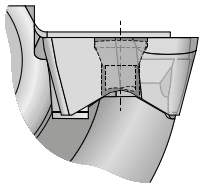


Suitability of the adapters for HSC machining

According to the milling situation, choose the optimum tool/clamping device combination.
For high speed milling applications it is necessary to dynamically balance tool and tool adapter together (see ISO 1940 directives).

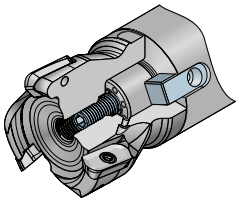
Mounting the indexable insert with centrifugal force protection

Insert clamping: EURO-patent EP 1083017A1
Make sure that the insert pocket is cleaned and the threading bore for the clamping screw is in good condition.
Check the axial and radial contact points of the insert in the pocket.
The clamping screws for positive insert clamping must be tightened with a torque of (XDHT11 = 1,8 Nm; XDH.19 = 6,0 Nm).



Optimum mounting of HSC milling cutters (DC = Ø 40–63) to milling arbors using power screw

The power screw guarantees a stable connection of tool and milling adapter and is easy to use.



Power Screw

Maximum admissible number of revolutions

Please note the maximum number of revolutions stated on the tool. This number is exclusively valid for the specific tool and must be adapted according to the selected tool adapter, total overhang length and the respective machining situation.



Optimum application range of the tool (a_e, a_p, f_z, n)

In order to guarantee productive milling, please observe the recommendations regarding the cutting parameters.

Failure to comply with these safety regulations automatically excludes CERATIZIT from any liability

System MaxiMill HSC-11

Cutting data standard values

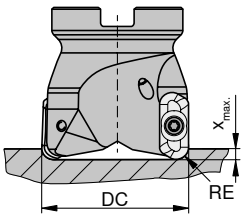
Workpiece material		Treatment / alloy		VDI 3323 Group	Hardness HB	H216T (CWK26) v_c in m/min (dry)	H216T (CWK26) v_c in m/min (lubricated)
N	Aluminum alloys,	non hardenable		21	60		200–3000
		hardenable		22	100		200–2000
	Cast aluminum alloy	non hardenable	< 12 % Si	23	80		200–2000
		hardenable	< 12 % Si	24	90		200–1800
		non hardenable	> 12 % Si	25	130		200–1000
	Copper and copper alloys (Bronze, Brass)		Free-cutting steel alloy (1 % Pb)	26			200–600
			brass, red bronze	27	90	250–1000	250–1000
			bronze	28	100		150–400
			lead-free copper and electrolytic copper	29	100		300–800
O	Non metal materials		Duroplastics	29		80–1000	80–1000
			Fibre-reinforced plastics	29		70–500	70–500
			hard rubber	30		80–300	80–300

= full lubricant = Minimum quantity lubrication = dry machining

System MaxiMill HSC-11

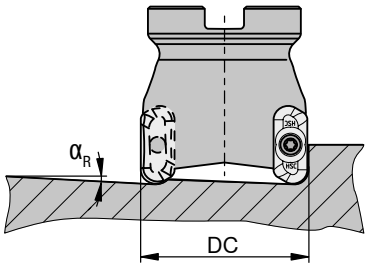
Machining strategy

Axial ramping



DC mm	11 RE 0,2–4,0 $x_{max.}$ mm
16	1,70
18	2,11
19	2,24
20	2,39
22	2,70
25	2,55
32	2,40
40	2,28
50	2,26
63	2,10
80	1,75
100	1,79

Linear ramping



DC mm	α_R °
16	18,8
18	16,3
19	15,3
20	14,8
22	13,8
25	10,3
32	6,8
40	4,8
50	3,5
63	2,5
80	1,8
100	1,3

Milling strategy for roughing and finishing

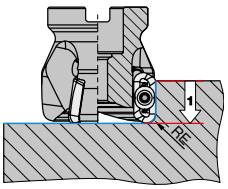
With maximum chip volume

Indexable Insert	RE mm	1 a_p mm	2 3 4 $a_{p\,max.}$ mm
XDHT 11T302FR-ALP	0,2	10	9,8
XDHT 11T304FR-ALP	0,4	10	9,6
XDHT 11T308FR-ALP	0,8	10	9,2
XDHT 11T312FR-ALP	1,2	10	8,8
XDHT 11T316FR-ALP	1,6	10	8,4
XDHT 11T320FR-ALP	2,0	10	8,0
XDHT 11T325FR-ALP	2,5	10	7,5
XDHT 11T332FR-ALP	3,2	10	6,8
XDHT 11T340FR-ALP	4,0	10	6,0
XDHT 11T350FR-ALP	5,0	10	5,0

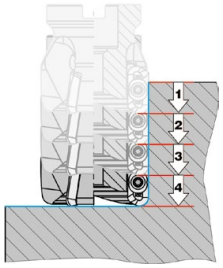
With maximum side wall quality

Indexable Insert	RE mm	2 3 4 $a_{p\,max.}$ mm
XDHT 11T302FR-ALP	0,2	7,8
XDHT 11T304FR-ALP	0,4	7,6
XDHT 11T308FR-ALP	0,8	7,2
XDHT 11T312FR-ALP	1,2	6,5
XDHT 11T316FR-ALP	1,6	6,8
XDHT 11T320FR-ALP	2,0	6,4
XDHT 11T325FR-ALP	2,5	5,5
XDHT 11T332FR-ALP	3,2	4,8
XDHT 11T340FR-ALP	4,0	4,0
XDHT 11T350FR-ALP	5,0	3,0

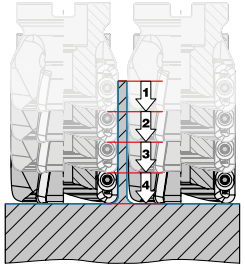
Shoulder milling



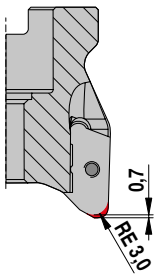
Pocket milling

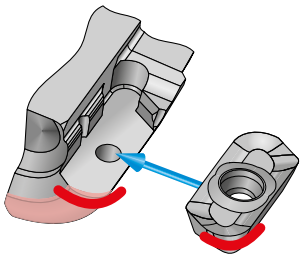


Pocket milling with thin walled components



Modification to front profile



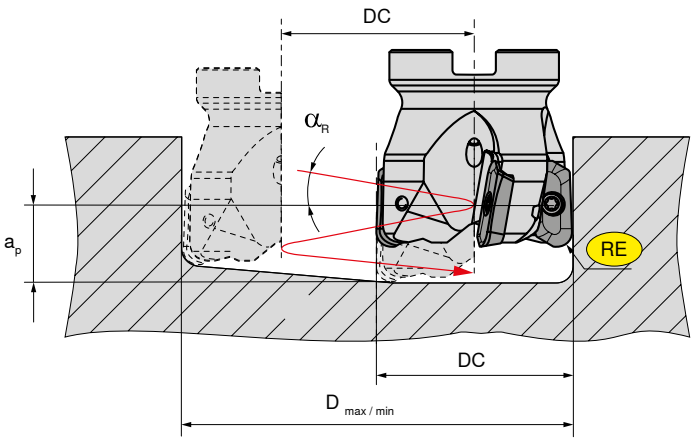


For inserts with a corner radius larger than 3.2 mm the basic body of the tool must be modified according to the drawing above.

System MaxiMill HSC-11

Machining strategy

Helical plunging



RE = Insert radius
α_R in mm = Maximum ramping angle (related to centre of tool)

a_p in mm = pitch → D x π x tan (α_R)

D in mm = → D_{max} – DC and/or D_{min} – DC

For flat bottom hole

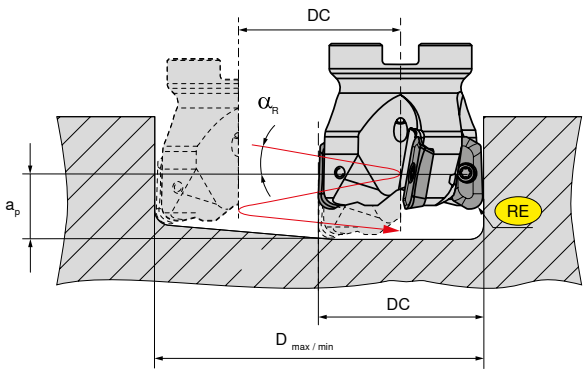
$D_{max.}$ in mm = largest drilling diameter
$D_{min.}$ in mm = smallest drilling diameter
$DN_{max.}$ in mm = Maximum hole diameter for non flat bottom

DC mm		XDHT-11 (HSC-11)								
(DN_{max})		RE = 0,2	RE = 0,4	RE = 0,8	RE = 1,2	RE = 1,6	RE = 2,0	RE = 2,5	RE = 3,2	RE = 4,0
16	α_R	9,7°	10,0°	9,9°	9,4°	8,9°	8,4°	7,9°	7,0°	6,1°
	$D_{max..}$	30	30	29	28	27	27	26	24	23
(31)	$D_{min..}$	18	18	18	18	18	18	18	18	18
18	α_R	9,4°	9,1°	8,7°	8,3°	7,9°	7,5°	6,9°	6,2°	5,3°
	$D_{max.}$	34	34	33	32	31	31	30	28	27
(35)	$D_{min.}$	22	22	22	22	22	22	22	22	22
19	α_R	8,8°	8,6°	8,3°	7,9°	7,5°	7,5°	6,5°	5,9°	5,1°
	$D_{max..}$	36	36	35	34	33	33	32	30	29
(37)	$D_{min..}$	24	24	24	24	24	24	24	24	24
20	α_R	8,4°	8,2°	7,8°	7,4°	7,7°	6,7°	6,2°	5,5°	4,8°
	$D_{max.}$	38	38	37	36	35	35	34	32	31
(39)	$D_{min.}$	26	26	26	26	26	26	26	26	26
22	α_R	7,6°	7,4°	7,8°	6,7°	6,4°	6,5°	5,6°	5,2°	4,3°
	$D_{max..}$	42	42	41	40	39	39	38	36	35
(43)	$D_{min..}$	30	30	30	30	30	30	30	30	30
25	α_R	6,7°	6,5°	6,2°	5,9°	5,6°	5,3°	4,9°	4,4°	3,8°
	$D_{max.}$	48	48	47	46	45	45	44	42	41
(49)	$D_{min.}$	36	36	36	36	36	36	36	36	36
32	α_R	4,7°	4,7°	4,8°	4,6°	4,3°	4,1°	3,8°	3,4°	2,9°
	$D_{max.}$	62	62	61	60	59	59	58	56	55
(63)	$D_{min.}$	50	50	50	50	50	50	50	50	50
40	α_R	3,3°	3,3°	3,4°	3,4°	3,5°	3,3°	3,0°	2,7°	2,3°
	$D_{max.}$	78	78	77	76	75	75	74	72	71
(79)	$D_{min.}$	66	66	66	66	66	66	66	66	66
50	α_R	2,4°	2,5°	2,5°	2,5°	2,6°	2,6°	2,4°	2,2°	1,9°
	$D_{max.}$	98	98	97	96	95	95	94	92	91
(99)	$D_{min.}$	86	86	86	86	86	86	86	86	86
63	α_R	1,7°	1,7°	1,7°	1,8°	1,8°	1,8°	1,8°	1,7°	1,5°
	$D_{max.}$	124	124	123	122	121	121	120	118	117
(125)	$D_{min.}$	112	112	112	112	112	112	112	112	112
80	α_R	1,1°	1,1°	1,1°	1,1°	1,1°	1,1°	1,1°	1,2°	1,2°
	$D_{max.}$	158	158	157	156	155	155	154	152	151
(159)	$D_{min.}$	146	146	146	146	146	146	146	146	146
100	α_R	0,8°	0,8°	0,9°	0,9°	0,9°	0,9°	0,9°	0,9°	0,9°
	D_{max}	198	198	197	196	195	195	194	192	191
(199)	$D_{min.}$	186	186	186	186	186	186	186	186	186

System MaxiMill HSC/HPC-19

Machining strategy

Helical plunging



RE = Insert radius
α_R in mm = Maximum ramping angle (related to centre of tool)

a_p in mm = pitch → D x π x tan (α_R)

D in mm = → D_{max} – DC and/or D_{min} – DC

For flat bottom hole

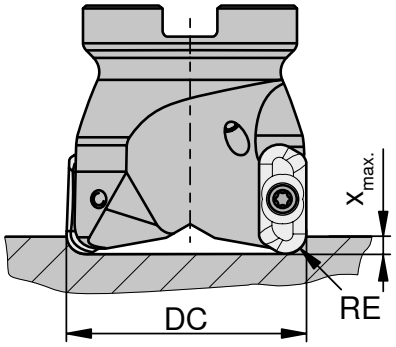
$D_{max.}$ in mm = largest drilling diameter
$D_{min.}$ in mm = smallest drilling diameter
$DN_{max.}$ in mm = Maximum hole diameter for non flat bottom

	DC mm	DN_{max} mm	α_R °	D_{max} mm	D_{min} mm
RE = 0,2 mm	**25**	49	7°02‘	48	32
	32	63	4°34‘	62	46
	40	79	3°47‘	78	62
	50	99	3°01‘	97	81
	63	125	2°17‘	124	107
	80	159		158	141
	100	199		198	181
RE = 0,4 mm	**25**	49	7°08‘	48	32
	32	63	4°37‘	62	46
	40	79	3°49‘	78	62
	50	99	3°02‘	98	81
	63	125	2°18‘	124	107
	80	159		158	141
	100	199		198	181
RE = 0,8 mm	**25**	49	7°21‘	47	32
	32	63	4°44‘	61	46
	40	79	3°53‘	77	62
	50	99	3°05‘	97	81
	63	125	2°20‘	123	107
	80	159		157	141
	100	199		197	181
RE = 2,0 mm	**25**	49	8°40‘	45	32
	32	63	5°04‘	59	46
	40	79	4°06‘	75	62
	50	99	3°13‘	95	81
	63	125	2°25‘	121	107
	80	159		155	141
	100	199		195	181
RE = 2,5 mm	**25**	49	8°24‘	44	32
	32	63	5°13‘	58	46
	40	79	4°12‘	74	62
	50	99	3°17‘	94	81
	63	125	2°27‘	120	107
	80	159		154	141
	100	199		194	181
RE = 3,2 mm	**25**	49	8°54‘	42	32
	32	63	5°26‘	56	46
	40	79	4°20‘	72	62
	50	99	3°21‘	92	81
	63	125	2°30‘	118	107
	80	159		152	141
	100	199		192	181
RE = 4,0 mm	**25**	49	9°32‘	41	32
	32	63	5°42‘	55	46
	40	79	4°30‘	71	62
	50	99	3°28‘	91	81
	63	125	2°33‘	117	107
	80	159		151	141
	100	199		191	181
RE = 5,0 mm	**25**	49	6°49‘	39	32
	32	63	3°59‘	53	46
	40	79	3°20‘	69	62
	50	99	2°13‘	89	81
	63	125	1°52‘	115	107
	80	159		149	141
	100	199		189	181

System MaxiMill HSC/HPC-19

Machining strategy

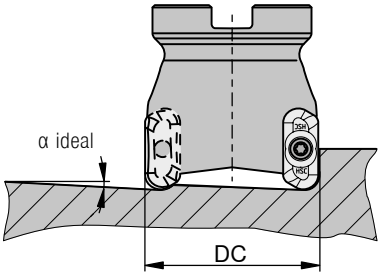
Axial ramping



HSC 19	DC mm	19 RE 0,2–4,0 $x_{max.}$ mm	19 RE 5,0 $x_{max.}$ mm
CHSC 19 / GHSC 19 / MHSC 19	25	5,0	4,0
CHSC 19 / GHSC 19 / MHSC 19	32–40	4,0	3,0
AHSC 19	40–100	4,0	3,0

HPC 19	DC mm	19 RE 0,2–4,0 $x_{max.}$ mm	19 RE 5,0 $x_{max.}$ mm
CHPC 19 / MHPC 19	22–25	5,0	4,0
CHPC 19 / MHPC 19	32–50	6,0	5,0
AHPC 19	40–63	6,0	5,0

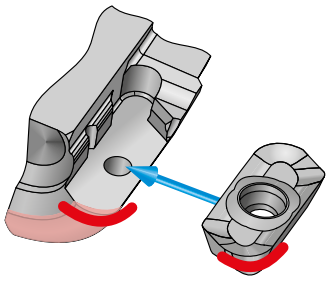
Linear ramping

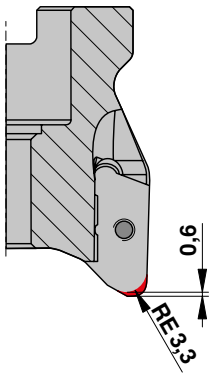


DC mm	α ideal HSC 19	α ideal HPC 19
25	11°	11°
32	7°	7°
40	5°	5°
50	4°	4°
63	3°	3°
80	2°	
100	2°	

Modification to basic body

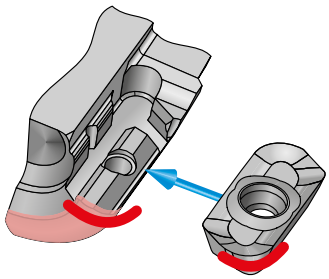
HSC 19





Modification to front profile

HPC 19

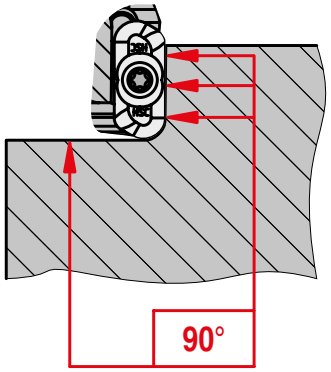


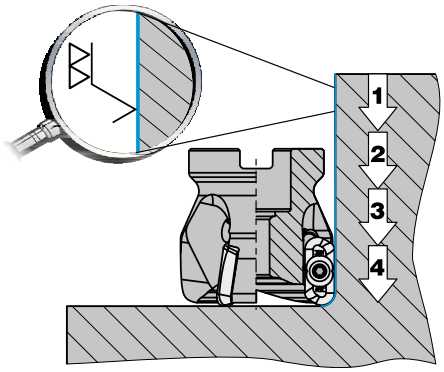
For inserts with a corner radius larger than 4.0 mm the basic body of the tool must be modified according to the drawing above.

System MaxiMill HSC/HPC-19

Machining strategy

Excellent side wall quality after roughing operation.
Additional finishing operations minimized or no longer required.





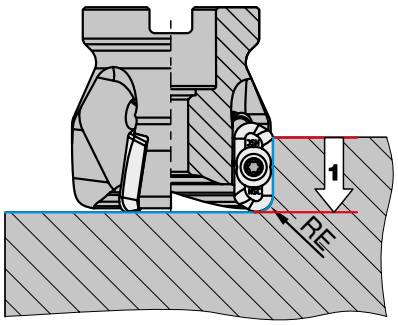
With maximum chip volume

Indexable Insert	RE mm	a_p mm	$a_{p\ max.}$ mm
XDH. 190402FR-ALP	0,2	18,0	17,8
XDH. 190404FR-ALP	0,4	18,0	17,6
XDH. 190408FR-ALP	0,8	18,0	17,2
XDH. 190420FR-ALP	2,0	18,0	16,0
XDH. 190425FR-ALP	2,5	18,0	15,0
XDH. 190432FR-ALP	3,2	18,0	14,8
XDH. 190440FR-ALP	4,0	18,0	14,0
XDH. 190450FR-ALP	5,0	17,0	13,0

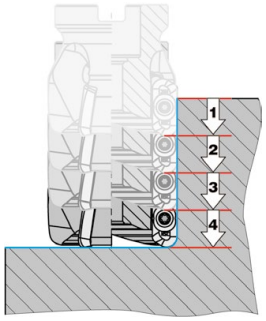
With maximum side wall quality

Indexable Insert	RE mm	$a_{p\ max.}$ mm
XDH. 190402FR-ALP	0,2	11,8
XDH. 190404FR-ALP	0,4	11,6
XDH. 190408FR-ALP	0,8	11,2
XDH. 190420FR-ALP	2,0	10,0
XDH. 190425FR-ALP	2,5	9,5
XDH. 190432FR-ALP	3,2	8,8
XDH. 190440FR-ALP	4,0	8,0
XDH. 190450FR-ALP	5,0	7,0

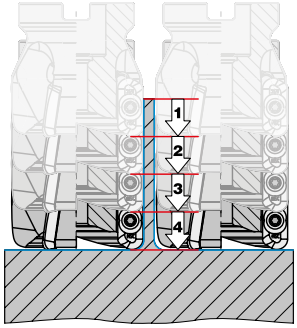
Shoulder milling



Pocket milling



Pocket milling with
thin walled components



15

This information applies to the inserts type XDHT 19 and XDHX 19.

System MaxiMill HPC-04/12

Machining strategy

What do you have to take into account?

- Machine stability.
- Stable work piece clamping and tool adapter.
- Use of coolant generally not necessary, however, this will facilitate the removal of the chips - also improved surface quality.
- Take into account thermal stress and critical temperature of 600°C! If required for material, work with coolant.
- Avoid vibration.
- Observe balancing quality class.
- Observe chemical reactions of diamond to carbide forming elements (Fe, Ti, Ta, Co, Ni)

Excellent suitability

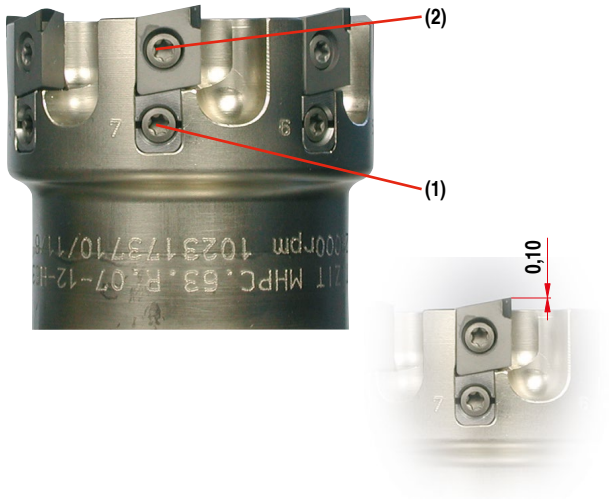
- for components made of light metals and non-ferrous metals, plastic, fibre composite materials, graphite ...
- when the simplest setting method saves cost for tool presetting.
- for high-volume production.
- for high surface quality of the work pieces.
- when long tool life is necessary to reduce tool changes and expensive machine downtime.
- when the tool is already on site (presetting, etc.)

Quality class check

After assembly, clamping of the inserts and adjustment of the axial run-out the balancing quality class of the tools should be checked. When applying shell milling cutters, after assembly with an adapter balancing is necessary.

Setting wiper inserts

As in the setting procedure described above the standard inserts are adjusted to a radial run-out of = 0.02 mm. The inserts with wiper edge are then set to 0.02–0.03 mm above the highest cutting edge.



The adjustment procedure

1 Mount Adjustment wedgesin the tools (as delivered).
Tighten adjustment screw (1) without deforming the wedges.

2 Mount the PCD inserts and tighten the clamping screws (2) with 1.0 Nm.

3 Mark „ highest edge“ with the help of pre-setting equipment.

4 Adjust the PCD insert by 0.02 mm turning the clamping screw (1) clockwise. Pre-loading must be reached. Use the angled TORX screwdrivers

5 Set other cutting edges to this level, maximum deviation of 0.005 mm. Maximum length adjustment = 0.10 mm.

6 Tighten all insert tightening screws (2) to 5,0 Nm.

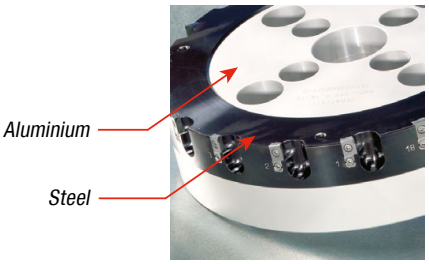
7 Check axial run-out of all inserts: Target = 0.005 mm.

Perfect precision – MaxiMill HPC-12

The adjustable high-performance tool for the finishing of aluminium components

Tool body made of steel

- For highest stability
- Maximum abrasion resistance
- Bimetallic version from diameter 160 mm easier handling and spindle protection with large tools



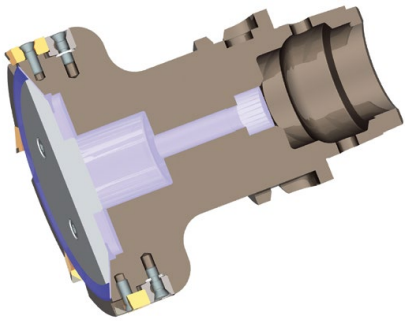
Picture shows bimetallic version

Available as shell milling cutters and monobloc type

- Direct HSK63 connection as monobloc type
- Monobloc tools balanced to G 2.5 at n=20,000 min^{-1} (ISO1940)

Particularly for HSC applications with internal coolant supply

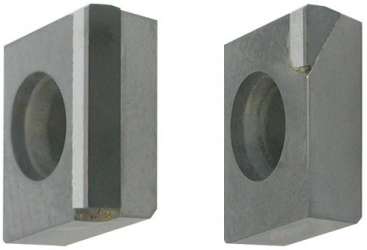
- Improved chip evacuation
- High surface quality
- Optimum application conditions
- Suitability for minimum quantity lubrication



Time is money – the system MaxiMill HPC-12 is simple and quick to adjust!

Highly positive rake angle of +25°

- Low cutting forces
- Increased parallelism of surfaces
- Minimised component deformation



Tangential concept

- Stable location for the PCD segment and maximum process security

Adapted PCD cutting edge

- High impact strength when milling!
- Maximum edge stability
- Reduced built-up edge on the work piece
- The machining of Al-Si alloys with over 12 % silicon is possible without problems

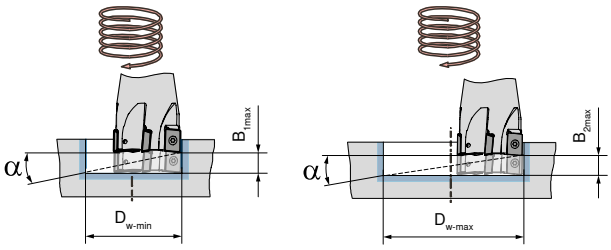
Inserts Selection

- Standard insert
- Insert with corner radius
- Insert with wiper edge

System MaxiMill 141 / 241

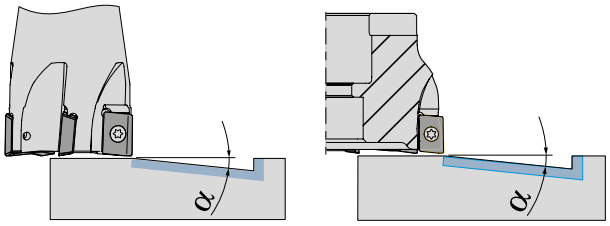
Machining strategy

Helical plunge milling (without start hole)



D_w = Diameter of bore to be produced
DC = Nominal diameter of milling cutter
B = Depth of cut calculated for 360° helical movement

Angled ramping



$$B = (D_w - DC) \times \pi \times \tan \alpha$$

C 141

DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm	α °
16	20,0	0,4	30,0	1,5	2,0
20	24,0	0,4	38,0	1,9	2,0
25	34,0	0,9	48,0	2,5	2,0
32	48,0	1,7	62,0	3,2	2,0
40	64,0	1,9	78,0	3,1	1,5

A 241

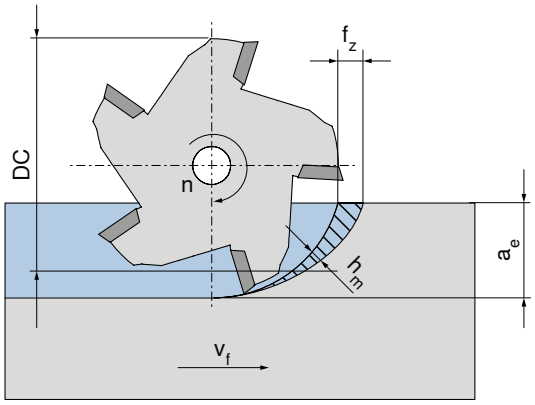
DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm	α °
40	64,0	1,9	78,0	3,1	1,5
50	84,0	1,8	98,0	2,6	1,0
63	110,0	1,2	124,0	1,6	0,5
80	144,0	1,4	158,0	1,7	0,4
100	184,0	1,3	198,0	1,6	0,3
125	234,0	1,2	248,0	1,3	0,2

Average chip thickness [h_m] – the approach

Shoulder milling

1 Select appropriate average chip thickness [h_m] for the steel from the table.

Material	Tensile strength N/mm²	h_m mm
for steel	...–800	0,16
for steel	800–1000	0,14
for steel	1000–1200	0,12
for steel	1200–...	0,10
for stainless steel	...–750	0,15
for stainless steel	750–900	0,13
for stainless steel	900–1150	0,11
for stainless steel	1150–...	0,09 *

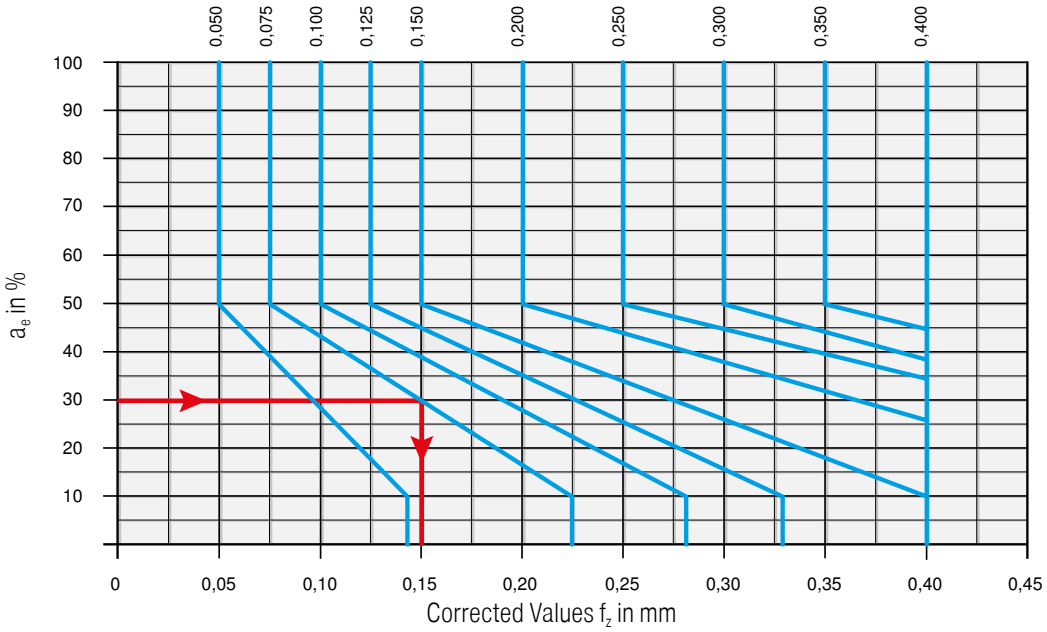


2 Select the corrected feed rate value from the table based on the appropriate chip thickness [h_m] and depth of cut [a_e].

h_m mm	Corrected feed value f_z for h_m				
0,16	0,36	0,29	0,25	0,18	0,16
0,14	0,31	0,26	0,22	0,16	0,14
0,12	0,27	0,22	0,19	0,14	0,12
0,10	0,22	0,18	0,16	0,12	0,10
0,15	0,34	0,27	0,24	0,17	0,15
0,13	0,29	0,24	0,21	0,15	0,13
0,11	0,25	0,20	0,17	0,13	0,11
0,09 *	0,20	0,16	0,14	0,10	0,09 *
a_e =	**0,2 x DC**	**0,3 x DC**	**0,4 x DC**	**0,75 x DC**	**1 x DC**

* f_z < 0,08 mm: Danger, as tool is not working and cutting

Start values f_z in mm from starting parameter diagram



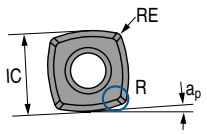
Example:
Start value (f_z) = 0.075 mm
a_e = 30 %
corrected value (f_z) = 0.15 mm

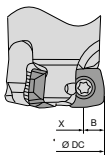
15

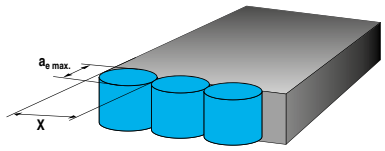
System MaxiMill HFC-06

Machining strategy

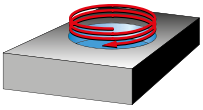
Programmed radius R = 1.2 mm



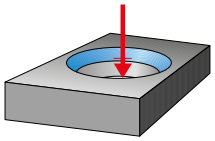


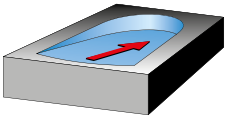


Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\ max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\ max.}$ in mm	f_z in mm			X
							initial	min.	max.	
6,35	0,5	0,8	16–32	DC–(2 x B)	4,3	5,3	0,10	0,08	0,15	<0,7 x DC

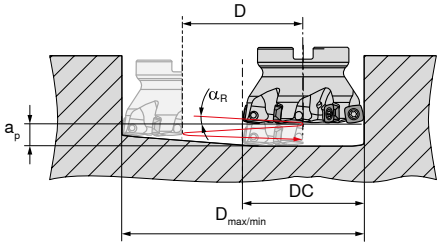


	circular		
	Helical plunging (helical plunging into solid material)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\ max.}$ °
16	31	22	4,5°
20	39	30	2,3°
25	49	40	1,3°
32	63	54	0,9°





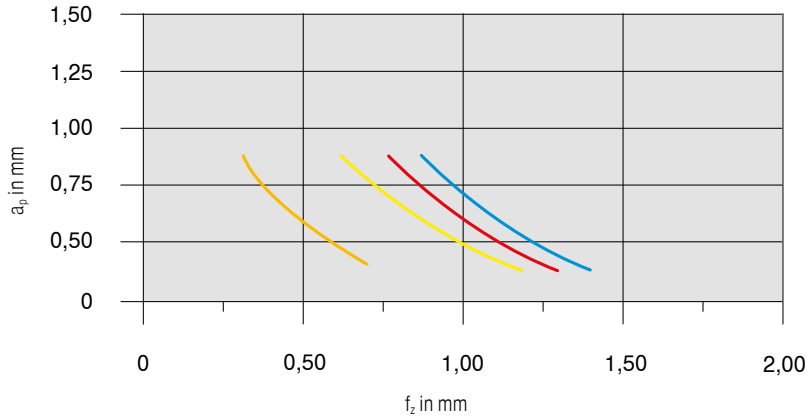
	axial	Angled
	Plunging	
DC mm	$X_{max.}$ mm	$\alpha_{R\ max.}$ °
16	0,5	5,9°
20		3,2°
25		2°
32		1,3°



Starting Parameter



XPLX 06



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**XPLX 060305SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XPLX 060305ER-M40**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**XPLX 060305ER-M50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**XPLX 060305SR-F40**	**CTC5240**	35	Emulsion

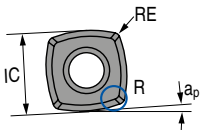
Detailed information on cutting speed for each grade can be found on → page 142–144

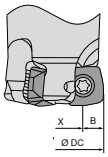
From v_c > 400 m/min, the tool must be balanced!

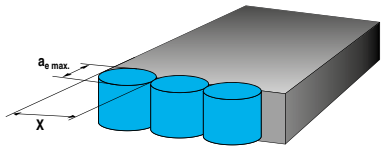
System MaxiMill HFC-09

Machining strategy

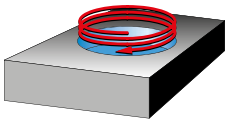
Programmed radius R = 2 mm

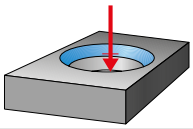


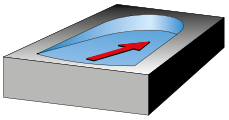




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
9	0,8	1	25–66	DC–(2 x B)	5,9	7,5	0,10	0,08	0,15	<0,7 x DC

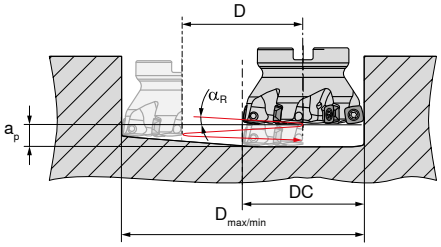






	circular		
	Helical plunging (helical plunging into solid material)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
25	48	35	3,1°
32	62	49	1,7°
35	68	55	1,4°
40	78	65	1,0°
42	82	69	0,9°
50	98	85	0,8°
52	102	89	0,7°
63	124	111	0,7°
66	130	117	0,6°

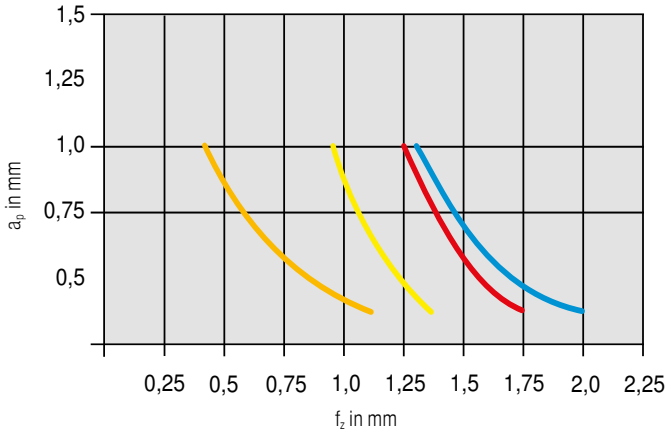
	axial	Angled
	Plunging	
DC mm	$X_{max.}$ mm	$\alpha_{R\,max.}$ °
25		3,6°
32		2,0°
35		1,6°
40		1,2°
42	0,75	1,1°
50		0,9°
52		0,8°
63		0,8°
66		0,7°



Starting Parameter



XDLX 09



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**XDLX09T308SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XDLX09T308SR-M50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**XDLX09T308SR-M50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**XDLX09T308ER-F40**	**CTC5240**	35	Emulsion

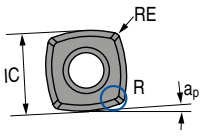
Detailed information on cutting speed for each grade can be found on → page 142–144

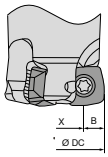
From v_c > 400 m/min, the tool must be balanced!

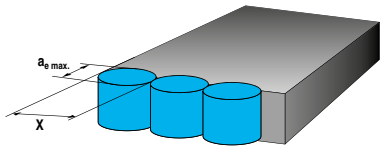
System MaxiMill HFC-12

Machining strategy

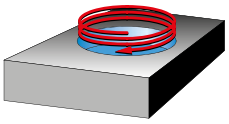
Programmed radius R = 3 mm

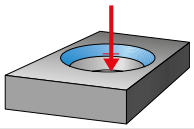


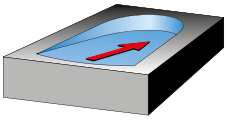




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
12	1,0	2	32–100	DC–(2 x B)	8,3	10	0,15	0,10	0,20	<0,7 x DC

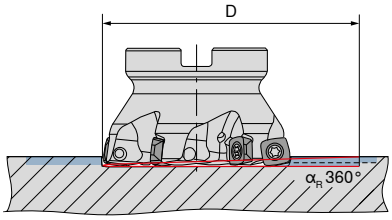






	circular	
	Helical plunging (helical plunging into solid material)	
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
32	62	44	6,1°
35	68	50	3,7°
40	78	60	2,5°
42	82	64	2,3°
50	98	80	1,3°
52	102	84	1,3°
63	124	106	0,9°
66	130	112	0,9°
80	158	140	1,1°
100	198	180	0,6°

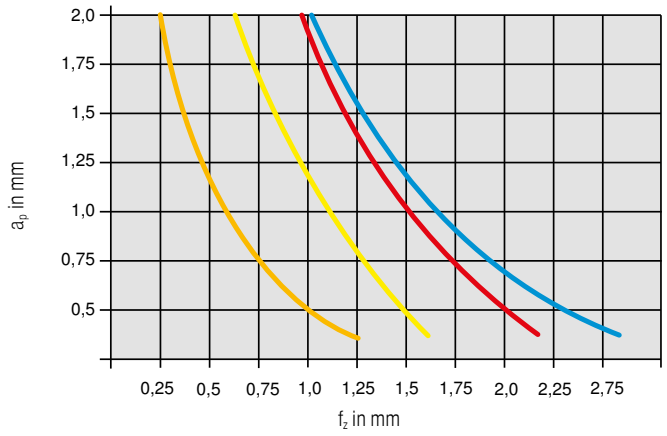
	axial	Angled
	Plunging	
DC mm	$X_{max.}$ mm	$\alpha_{R\,max.}$ °
32	1,15	7,2°
35		4,4°
40		2,9°
42		2,7°
50 + 52		1,5°
63 + 66		1,1°
80		1,3°
100		0,7°



Starting Parameter



XOLX 12



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**XOLX120410SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XOLX120410ER-M50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**XOLX120410ER-M50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**XOLX120410ER-F40**	**CTC5240**	35	Emulsion

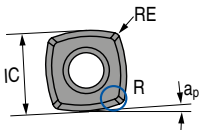
Detailed information on cutting speed for each grade can be found on → page 142–144

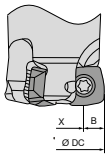
From v_c > 400 m/min, the tool must be balanced!

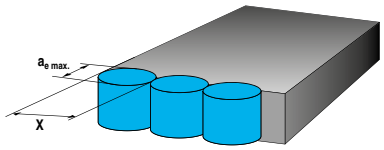
System MaxiMill HFC-19

Machining strategy

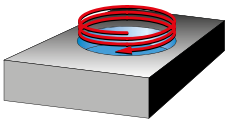
Programmed radius R = 5 mm

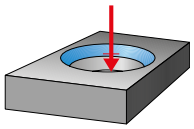


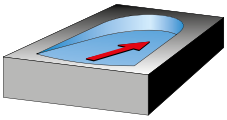




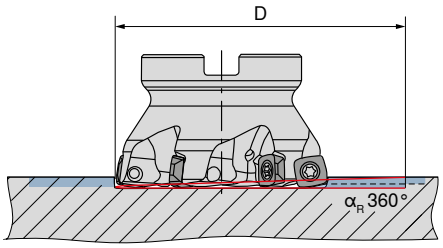
Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
19,14	1,5	3,3	63–160	DC–(2 x B)	13,1	12	0,2	0,10	0,25	<0,65 x DC







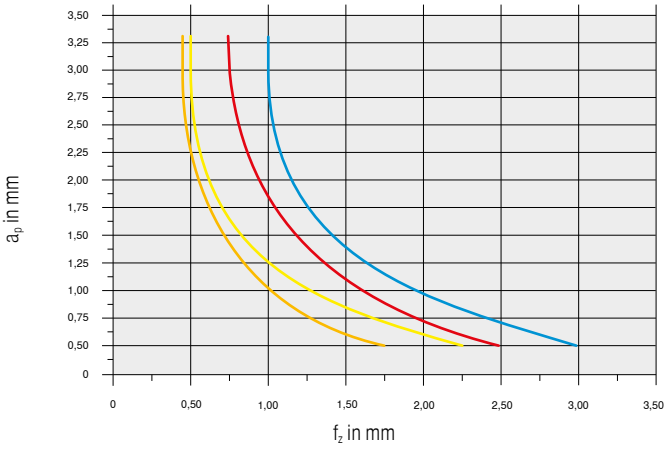
	circular			axial	Angled	
	Helical plunging (helical plunging into solid material)				Plunging	
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °	$X_{max.}$ mm	$\alpha_{R\,max.}$ °	$a_{p\,max}$ mm
63	97	123	2,5		2,9	
80	131	157	1,4		1,8	
100	171	197	1,0	1,7	1,3	3,3
125	221	247	0,7		1,0	
160	291	317	0,5		0,7	



Starting Parameter



XOLX 19



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**XOLX190615SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XOLX190615SR-M50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**XOLX190615SR-M50**	**CTCK215**	250	Dry
Heat resistant	**S.2.2**	Inconel 718	**XOLX190615ER-F40**	**CTC5240**	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 142–144

From v_c > 400 m/min, the tool must be balanced!

System DHFC

Cutting data standard values

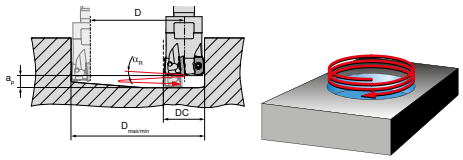
for standard inserts

	F			M			R		
Material	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm
Steel	130–300	0,25–1,0	0,70	130–300	0,25–1,0	0,75			
Stainless steel				90–210	0,25–1,0	0,60			
Cast iron				120–270	0,2–1,1	0,70	120–270	0,2–1,2	0,75
Non ferrous metals									
Heat resistant				40–80	0,15–0,75	0,60			
Hardened materials									
Non metal materials									

Machining strategy

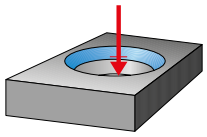
Programmed Radius R = 1,4 mm

Circular Milling



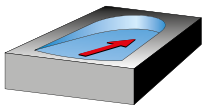
DC mm	D_{min} mm	D_{max} mm
16	23	31
20	31	39
25	41	49
32	55	63
35	61	69
42	75	83

Axial plunging into solid material



DC mm	X_{max} mm
16	0,35
20	0,40
25	0,45
32–35	0,50
40	0,55

Angled ramping



DC mm	α°	y mm
16	<2,5	7
20	<1,9	11
25	<1,5	16
32	<1,2	23
35	<1,0	26
42	<0,9	33

Detailed information on cutting speed for each grade can be found on → page 142–144

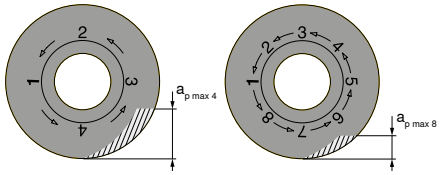
MaxiMill 251/251 RS system

Technical data

Recommended cutting depth

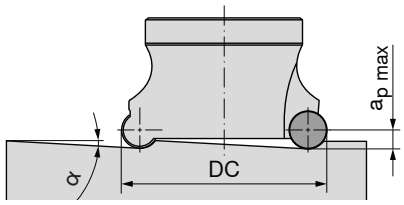
Ø mm	4-position $a_{p\,max.}$ mm	4-position $a_{p\,max}$ theoretical mm	8-face $a_{p\,max.}$ mm
5	1,0	2,0	0,7
8	1,5	3,5	1,1
10	2,5	4,5	1,4
12	3,0	5,5	1,7
16	4,0	7,5	2,3
20	4,0	9,5	2,9

Average depth for the 4/8 index use of the insert



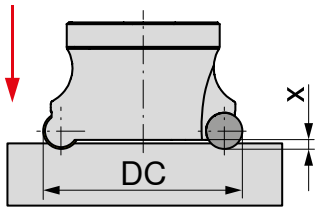
Detailed information on cutting speed for each grade can be found on → page 142–144

Linear ramping



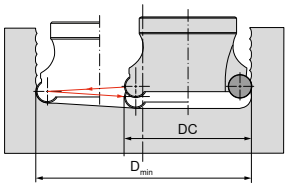
Ø DC mm	05 α °	08 α °	10 α °	12 α °	16 α °	20 α °
10	3,4					
12	16,0					
16	8,0	5,0				
20	5,5	20,0	1,3			
25	4,0	13,0	2,0	6,0		
32	3,0	8,0	3,0	4,0		
40			3,3	2,8		
42			3,1			
50			2,4	2,6	4,0	
52			2,2	2,3		
63				1,9	2,8	
66				1,6		
80				1,3	2,0	3,2
100				1,0	1,5	2,3
125						1,7

Axial ramping

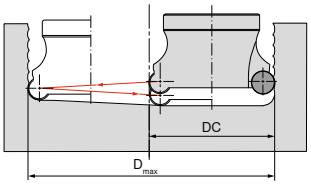


Ø DC mm	05 $X_{max.}$ mm	08 $X_{max.}$ mm	10 $X_{max.}$ mm	12 $X_{max.}$ mm	16 $X_{max.}$ mm	20 $X_{max.}$ mm
10	0,5					
12	1,3					
16	1,3	0,5				
20	1,3	2,7	0,2			
25	1,3	2,7	0,4	1,0		
32	1,3	2,7	0,8	1,1		
40			1,5	1,2		
42			1,5	1,5		
50			1,5	1,5	2,0	
52			1,5	1,5	2,0	
63				1,5	2,0	
66				1,5	2,0	
80				1,5	2,0	3,0
100				1,5	2,0	3,0
125						3,0

Circular milling into solid



$D_{min.}$ = smallest drilling diameter depending on the tool diameter



$D_{max.}$ = Maximum hole diameter Depending on the tool diameter

maximum possible hole diameter = 2 x DC – 1 mm

Ø DC mm	05 D_{min} mm	05 D_{max} mm	05 α_R °	08 D_{min} mm	08 D_{max} mm	08 α_R °	10 D_{min} mm	10 D_{max} mm	10 α_R °	12 D_{min} mm	12 D_{max} mm	12 α_R °	16 D_{min} mm	16 D_{max} mm	16 α_R °	20 D_{min} mm	20 D_{max} mm	20 α_R °
10	12	15	2,5															
12	16	19	2,1															
16	24	27	1,5	21	24	2,4												
20	32	35	1,2	27	32	1,9	26	30	1,3									
25	42	45	1,0	37	42	1,5	37	40	1,8	31	38	2,2						
32	56	59	0,7	51	56	1,2	50	54	1,5	46	52	1,7						
40							64	70	1,1	62	68	1,4						
42							68	74	1,1									
50							84	90	0,9	81	88	1,1	75	84	1,5			
52							88	94	0,9	86	92	1,0						
63										107	114	0,9	101	110	1,1			
66										113	120	0,8						
80										142	148	0,7	135	144	0,9	128	140	1,1
100										181	188	0,5	175	184	0,7	168	180	0,9
125																218	230	0,7

R100. system

Cutting data standard values

Index	WTN1205	WTN1205	WAN2225	WAN2225	WAN1240	WAN1240	WAX1240	WAX1240	WUN4210	WUN4210
P.1.1	**275**	150			**300**	180	**200**	100		
P.1.2	**230**	130			**270**	160	**170**	90		
P.1.3	**190**	100			**225**	130	**140**	80		
P.1.4	**230**	130			**270**	160	**170**	90		
P.1.5	**210**	110			**240**	140	**160**	90		
P.2.1	**230**	130			**270**	160	**170**	90		
P.2.2	**170**	100			**200**	120	**130**	70		
P.2.3	**230**	130			**270**	160	**170**	90		
P.2.4	**160**	90			**180**	110	**120**	60		
P.3.1	**230**	130			**270**	160	**170**	90		
P.3.2	**150**	110			**180**	140	**140**	80		
P.3.3	**130**	90			**150**	120	**120**	70		
P.4.1	**150**	110			**180**	140	**140**	80		
P.4.2	**150**	100			**170**	130	**130**	70		
M.1.1	**230**	130	**230**	**140**	270	160	170	90		
M.2.1			**200**	**120**						
M.3.1										
K.1.1	**275**	200			360	90	150	110	200	150
K.1.2	**150**	100			360	90	150	110	150	120
K.2.1	**180**	100			230	170	150	110	200	150
K.2.2	**150**	100			160	110	150	110	160	130
K.3.1	**180**	100			210	160			200	150
K.3.2	**180**	100			210	160			150	120
N.1.1										**1200**
N.1.2										**800**
N.2.1										**880**
N.2.2										**800**
N.2.3										**230**
N.3.1										**280**
N.3.2										**280**
N.3.3										**160**
N.4.1										**260**
S.1.1				**50**						
S.1.2				**45**						
S.2.1				**24**						
S.2.2				**16**						
S.2.3				**20**						
S.3.1				**50**						
S.3.2				**32**						
S.3.3				**25**						
H.1.1	**140**	80								
H.1.2	**120**	70								
H.1.3	80	40								
H.1.4										
H.2.1										
H.3.1										
O.1.1									180	150
O.1.2										
O.2.1									260	230
O.2.2										
O.3.1									450	

The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine.
The specified values represent guideline cutting data that can be adjusted by approx. **± 20 %** according to the usage conditions.

System R 1000, 1002, 1007

Cutting data standard values

		f_z / a_p mm	WTN1205	WAN2225	WAN1240	WAX1240	WUN4210
Steel							
	0501	f_z	**0,1–0,3**				
		a_p	**0,1–0,3**				
	07T1	f_z	**0,1–0,3**			**0,1–0,3**	0,1–0,2
		a_p	**0,1–0,3**			**0,1–0,7**	0,1–0,2
	0702	f_z	**0,1–0,7**			**0,2–0,5**	0,1–0,2
		a_p	**0,1–0,7**			**0,1–0,75**	0,1–0,2
	1003	f_z	**0,1–0,3**		**0,2–0,9**	**0,2–0,7**	0,15–0,3
		a_p	**0,1–1,0**		**0,2–1,5**	**0,2–1,5**	0,1–0,3
	12T3	f_z	**0,1–0,3**		**0,25–1,0**	**0,–0,8**	0,15–0,3
		a_p	**0,1–1,5**		**0,2–2,0**	**0,2–2,0**	0,1–0,3
	1604	f_z	**0,2–0,3**		**0,3–1,2**	**0,25–1,0**	0,15–0,3
		a_p	**0,2–1,5**		**0,25–3,0**	**0,2–3,0**	0,1–0,4
	2006	f_z	**0,25–0,4**				0,15–0,4
		a_p	**0,2–2,0**				0,1–0,3
Stainless steel							
	0501	f_z	0,1–0,15				
		a_p	0,1–0,15				
	07T1	f_z	0,1–0,2			0,1–0,3	0,1–0,2
		a_p	0,1–0,2			0,1–0,7	0,1–0,2
	0702	f_z	0,1–0,2			0,2–0,5	0,1–0,2
		a_p	0,1–0,2			0,1–0,75	0,1–0,2
	1003	f_z	0,15–0,3	**0,15–0,6**		0,2–0,7	0,15–0,3
		a_p	0,1–0,3	**0,4–1,0**		0,2–1,5	0,1–0,3
	12T3	f_z	0,15–0,3	**0,2–0,8**		0,–0,8	0,15–0,3
		a_p	0,1–0,3	**0,5–2,0**		0,2–2,0	0,1–0,3
	1604	f_z	0,15–0,3	**0,3–1,0**		0,25–1,0	0,15–0,3
		a_p	0,1–0,3	**0,6–3,0**		0,2–3,0	0,1–0,3
	2006	f_z	0,15–0,4				0,15–0,4
		a_p	0,1–0,4				0,1–0,4
Cast iron							
	**0501**	f_z	**0,1–0,2**				
		a_p	**0,1–0,3**				
	**07T1**	f_z	**0,1–0,3**			0,1–0,3	0,1–0,3
		a_p	**0,1–0,5**			0,1–0,5	0,1–0,5
	**0702**	f_z	**0,1–0,3**			0,1–0,3	0,1–0,3
		a_p	**0,1–0,7**			0,1–0,7	0,1–0,7
	**1003**	f_z	**0,15–0,3**		0,1–0,3	0,1–0,3	0,15–0,3
		a_p	**0,1–1,0**		0,1–1,0	0,1–1,0	0,1–1,0
	**12T3**	f_z	**0,15–0,4**		0,1–0,4	0,1–0,4	0,15–0,4
		a_p	**0,1–1,5**		0,1–1,15	0,1–1,5	0,1–1,5
	**1604**	f_z	**0,2–0,5**		0,2–0,5	0,2–0,5	0,2–0,5
		a_p	**0,2–3,0**		0,2–2,0	0,2–3,0	0,2–3,0
	**2006**	f_z	**0,25–0,6**				0,25–0,6
		a_p	**0,2–4,0**				0,2–4,0

System R 1000, 1002, 1007

Cutting data standard values

		f_z / a_p mm	WTN1205	WAN2225	WAN1240	WAX1240	WUN4210
Non ferrous metals							
	07T1	f_z					**0,1–0,3**
		a_p					**0,1–0,7**
	0702	f_z					**0,1–0,3**
		a_p					**0,1–1,0**
	1003	f_z					**0,1–0,3**
		a_p					**0,1–1,5**
	12T3	f_z					**0,1–0,4**
		a_p					**0,1–2,0**
	1604	f_z					**0,2–0,5**
		a_p					**0,2–4,0**
	2006	f_z					**0,25–0,6**
		a_p					**0,2–5,0**
Heat resistant							
	1003	f_z		**0,1–0,4**			
		a_p		**0,2–1,0**			
	12T3	f_z		**0,15–0,5**			
		a_p		**0,3–1,5**			
	1604	f_z		**0,15–0,5**			
		a_p		**0,3–2,0**			
Hardened materials							
	**0501**	f_z	**0,1–0,15**				
		a_p	**0,1–0,2**				
	**07T1**	f_z	**0,1–0,15**				
		a_p	**0,1–0,2**				
	**0702**	f_z	**01–0,2**				
		a_p	**0,1–0,3**				
	**1003**	f_z	**0,1–0,2**				
		a_p	**0,1–0,5**				
	**12T3**	f_z	**0,1–0,25**				
		a_p	**0,1–0,7**				
	**1604**	f_z	**0,15–0,3**				
		a_p	**0,2–1,0**				
	**2006**	f_z	**0,2–0,4**				
		a_p	**0,2–1,0**				
Non metal materials							
	**07T1**	f_z					0,1–0,3
		a_p					0,1–0,7
	**0702**	f_z					0,1–0,3
		a_p					0,1–1,0
	**1003**	f_z					0,1–0,3
		a_p					0,1–1,5
	**12T3**	f_z					0,1–0,4
		a_p					0,1–2,0
	**1604**	f_z					0,2–0,5
		a_p					0,2–4,0
	**2006**	f_z					0,25–0,6
		a_p					0,2–5,0

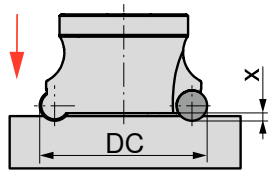
WTN 1205

Up to 48 HRC: a_p-range as indicated in the table
Up to 55 HRC: maximum value a_p x 0,7
Up to 65 HRC: maximum value a_p x 0,5

System R 1000, 1002, 1007

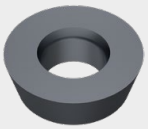
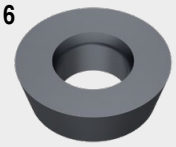
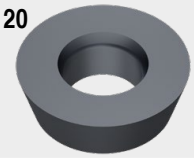
Machining strategy

Axial ramping

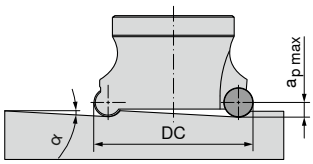


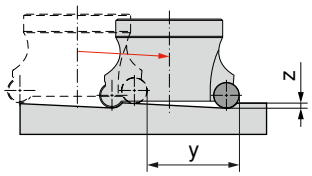
reduce f_z according to table by 30 %

→ v_c Page 178–180

	05	07	10	12	16	20
						
ØDC mm	$X_{max.}$ mm	$X_{max.}$ mm	$X_{max.}$ mm	$X_{max.}$ mm	$X_{max.}$ mm	$X_{max.}$ mm
8–160	1,0	1,2	2,5	3,0	4,0	5,0

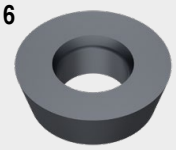
Linear ramping





y = minimum cutter movement
z = minimum cutter movement
a_p / f_z application table

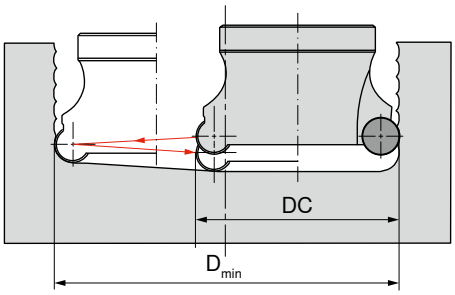
→ v_c Page 178–180

	05	07	10	12	16	20
						
ØDC mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm
8	26,5	2	< 1,0															
10																		
12	14,0	4	< 1,0															
14	9,5	6	< 1,0															
15	8,1	7	< 1,0	26,5	2	< 1,2												
16	7,1	8	< 1,0	14,0	4	< 1,2												
18	5,7	10	< 1,0	11,3	6	< 1,2												
20	4,7	12	< 1,0	8,5	8	< 1,2												
22																		
24																		
25				5,3	13	< 1,2	19,7	7	< 2,5									
30				3,8	18	< 1,2	11,7	12	< 2,5									
32																		
35				3,0	23	< 1,2	8,4	17	< 2,5	13,0	13	< 3,0	38,7	5	< 4,0			
40																		
42				2,3	30	< 1,2	5,9	24	< 2,5	8,5	20	< 3,0						
50																22,6	12	< 5,0
52							4,2	34	< 2,5	5,7	30	< 3,0	10,3	22	< 4,0			
66										3,9	44	< 3,0	6,4	36	< 4,0	10,1	28	< 5,0
80										3,0	58	< 3,0	4,6	50	< 4,0	6,8	42	< 5,0
100													3,3	70	< 4,0	4,6	62	< 5,0
125													2,4	95	< 4,0	3,3	87	< 5,0
160													1,8	130	< 4,0	2,3	122	< 5,0

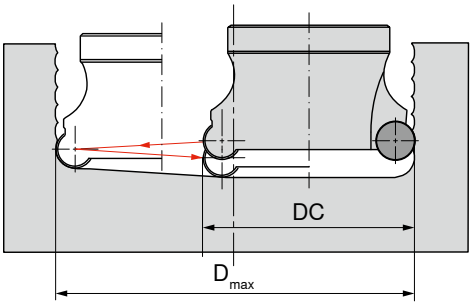
System R 1000, 1002, 1007

Machining strategy

Helical plunging



D_{min} = smallest drilling diameter depending on the tool diameter



D_{max} = largest drilling diameter depending on the tool diameter

a_p / f_z according to table
→ v_c Page 178–180

	05			07			10			12			16			20		
ØDC mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm
8	10	16																
10	12	20																
12	16	24	14	24														
14	20	28	16	28														
15	22	30	17	30														
16	24	30	20	32														
18	28	36	24	36	20	36												
20	32	40	28	40	22	40												
22							24	44										
24							26	48										
25			38	50	32	50												
30			48	60	42	60												
32									34	64								
35			58	80	72	70	48	70	40	70			38,7	5	< 4,0			
40											42	80						
42			72	84	66	84	62	84										
50											62	100				22,6	12	< 5,0
52					86	104	82	104	74	104			10,3	22	< 4,0			
66							110	132	102	132	94	132	6,4	36	< 4,0	10,1	28	< 5,0
80							138	160	130	160	122	160	4,6	50	< 4,0	6,8	42	< 5,0
100									170	200	162	200	3,3	70	< 4,0	4,6	62	< 5,0
125									220	250	212	250	2,4	95	< 4,0	3,3	87	< 5,0
160									290	320	282	320	1,8	130	< 4,0	2,3	122	< 5,0

System MaxiMill 252

Machining strategy

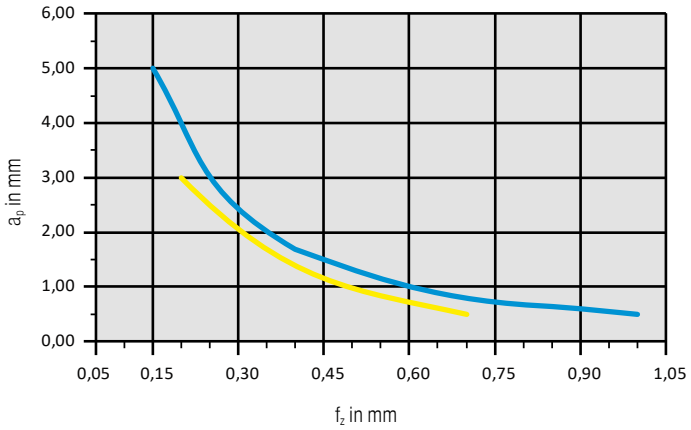
Recommended cutting depth

Ø	4-position	
	$a_{p\,max}$	
mm	mm	mm
10	2,5	4,5
12	3,0	5,5

Starting Parameter



RNHU 10

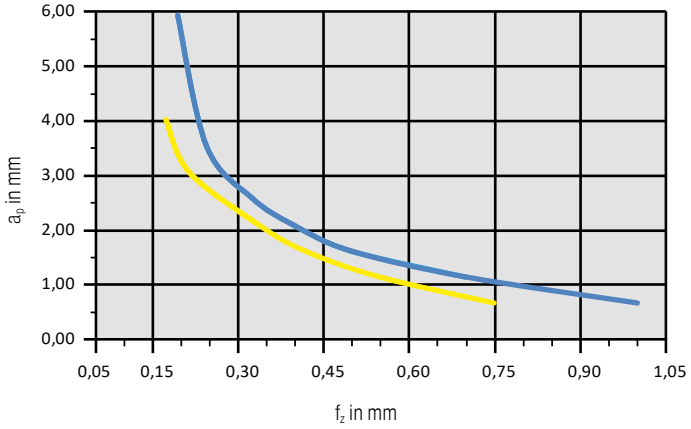


Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**RNHU1005M4SR-M50**	**CTPP235**	180	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**RNHU1005M4ER-F50**	**CTPM240**	180	Dry

Starting Parameter



RNHU 12



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**RNHU1205M4SR-M50**	**CTPP235**	180	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**RNHU1205M4ER-F50**	**CTPM240**	180	Dry

Detailed information on cutting speed for each grade can be found on → page 142–144

From v_c > 400 m/min, the tool must be balanced!

Cutting data standard values for copy milling cutter K200.

	R	F	R	F	R	F	R	F	R	F	● 1st choice	○ suitable	
	CTPK226		CTPP211		CTPK231		CTCN211		CTPP216		Emulsion	Compressed air	MMS
Index	v_c m/min		v_c m/min		v_c m/min		v_c m/min		v_c m/min				
P.1.1		280–300	180–220	220–280	160–200				220–300	280–300	○	●	●
P.1.2		220–240	180–220	220–280	160–200				220–300	280–300	○	●	●
P.1.3		220–240	180–220	220–280	160–200				220–300	280–300	○	●	
P.1.4		220–240	180–220	220–280	160–200				220–300	280–300	○	●	
P.1.5		220–240	180–220	220–280	160–200				220–300	280–300	○	●	
P.2.1		280–300	180–220	220–280	160–200				220–300	280–300	○	●	●
P.2.2		280–300	180–220	220–300	160–200				220–300	280–300	○	●	●
P.2.3		280–300	180–220	240–320	160–200				250–360	240–320	○	●	
P.2.4		280–300	180–220	240–320	160–200				250–360	240–320	○	●	
P.3.1		280–300	180–220	220–280	160–200				220–300	280–300	○	●	
P.3.2		280–320	180 – 220	240–320	160–200				250–360	240–320	○	●	●
P.3.3		280–320	180 – 220	240–320	160–200				250–360	240–320	○	●	●
P.4.1		220–220	140–180	200–240	120–180				140–180	200–240	○	●	
P.4.2		220–220	140–180	200–240	120–180				140–180	200–240	○	●	
M.1.1		180–200	140–160	180–200	120–160				220–250	220–240	●	○	
M.2.1		180–200	140–160	180–240	120–160				220–250	220–240	●		
M.3.1		220–220	140–180	200–240	120–180				140–180	200–240	●		
K.1.1		280–300	160–200	200–300	120–200				240–350	240–260		●	○
K.1.2		280–300	160–200	200–300	120–200				240–350	240–260		●	○
K.2.1		280–300	160–200	200–300	120–200				240–350	240–260		●	○
K.2.2		300–350	180–220	240–350	180–200				340–400	240–360		●	○
K.3.1		300–350	180–220	240–350	180–200				340–400	240–360		●	○
K.3.2		240–260	160–200	220–260	160–200				280–340	220–300		●	○
N.1.1			240–280	300–600	300–600					400–450	●		
N.1.2			240–280	300–600	300–600					400–450	●		
N.2.1			240–280	300–600	300–600					400–450	●		
N.2.2			240–280	300–600	300–600					400–450	●		
N.2.3										300–400	●		
N.3.1			240–280	280–320	240–280					300–400	●		
N.3.2			240–280	280–320	240–280					300–400	●		
N.3.3			240–280	280–320	240–280					300–400	●		
N.4.1			300–400	300–400				300–400			●		
S.1.1				80–120	80–120					60–80	●		
S.1.2				80–120	80–120					60–80	●		
S.2.1				80–120	80–120					60–80	●		
S.2.2				80–120	80–120					60–80	●		
S.2.3				80–120	80–120					60–80	●		
S.3.1				60–80	80–120					60–80	●		
S.3.2				60–80	60–80					60–80	●	○	
S.3.3				60–80	60–80					60–80	●	○	
H.1.1		240–260		280–300	140–160				240–260	240–260		●	
H.1.2		240–260		280–300	80–100				220–240	160–240		●	○
H.1.3		200–220		240–260					120–140	100–140		●	○
H.1.4		120–140		160–200								●	○
H.2.1		240–260		280–300	80–100				220–240	160–240		●	○
H.3.1		240–260		280–300	80–100				220–240	160–240		●	
O.1.1			300–400	300–400						300–350		●	
O.1.2			500–600	500–600						600–800		●	
O.2.1			300–400	300–400								●	
O.2.2			300–400	300–400								●	
O.3.1							400–600	600–800				●	

Cutting data standard values for copy milling cutter K200.

	Roughing (R)		Finishing (F)		only for -MR3 Roughing (R)		● 1st choice	○ suitable	
	Ø 6-16	Ø 20-32	Ø 6-16	Ø 20-32	Ø 6-16	Ø 20-32	Emulsion	Compressed air	MMS
Index	f_z in mm		f_z in mm		f_z in mm				
P.1.1	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○	●	●
P.1.2	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○	●	●
P.1.3	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○		●
P.1.4	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.1.5	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.2.1	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○	●	●
P.2.2	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○	●	●
P.2.3	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.2.4	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.3.1	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○		●
P.3.2	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○	●	●
P.3.3	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○	●	●
P.4.1	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○		●
P.4.2	0,08–0,04	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○		●
M.1.1	0,08–0,4	**0,25–0,5**	0,08–0,3	0,2–0,5	**0,3–0,6**	0,8–1,5	●	○	
M.2.1	0,08–0,4	**0,25–0,5**	0,08–0,4	0,2–0,6	**0,3–0,6**	0,8–1,25	●		
M.3.1	0,08–0,4	**0,25–0,5**	0,08–0,5	0,2–0,7	**0,3–0,6**	0,8–1,25	●		
K.1.1	0,08–0,4	**0,25–0,5**	0,08–0,3	0,2–0,5	**0,3–0,8**	1,0–1,5		●	○
K.1.2	0,08–0,5	**0,25–0,6**	0,08–0,4	0,2–0,6	**0,3–0,8**	1,0–1,5		●	○
K.2.1	0,08–0,6	**0,25–0,7**	0,08–0,5	0,2–0,7	**0,3–0,8**	1,0–1,5		●	○
K.2.2	0,08–0,7	**0,25–0,8**	0,08–0,6	0,2–0,8	**0,3–0,6**	0,8–1,25		●	○
K.3.1	0,08–0,8	**0,25–0,9**	0,08–0,7	0,2–0,9	**0,3–0,6**	0,8–1,25		●	○
K.3.2	0,08–0,9	**0,25–0,10**	0,08–0,8	0,2–0,10	**0,3–0,6**	0,8–1,25		●	○
N.1.1	0,08–0,35	0,25–0,45	0,06–0,25	0,025–0,45			●		
N.1.2	0,08–0,36	0,25–0,46	0,06–0,26	0,025–0,46			●		
N.2.1	0,08–0,37	0,25–0,47	0,06–0,27	0,025–0,47			●		
N.2.2	0,08–0,38	0,25–0,48	0,06–0,28	0,025–0,48			●		
N.2.3	0,08–0,39	0,25–0,49	0,06–0,29	0,025–0,49			●		
N.3.1	0,08–0,40	0,25–0,50	0,06–0,30	0,025–0,50			●		
N.3.2	0,08–0,41	0,25–0,51	0,06–0,31	0,025–0,51			●		
N.3.3	0,08–0,42	0,25–0,52	0,06–0,32	0,025–0,52			●		
N.4.1	0,08–0,43	0,25–0,53	0,06–0,33	0,025–0,53			●		
S.1.1	0,08–0,3	0,15–0,4	0,05–0,2	0,15–0,25	0,25–0,5	0,6–1,0	●		
S.1.2	0,08–0,3	0,15–0,4	0,05–0,2	0,15–0,25	0,25–0,5	0,6–1,0	●		
S.2.1	0,08–0,3	0,15–0,4	0,05–0,2	0,15–0,25	0,25–0,5	0,6–1,0	●		
S.2.2	0,08–0,3	0,15–0,4	0,05–0,2	0,15–0,25	0,25–0,5	0,6–1,0	●		
S.2.3	0,08–0,3	0,15–0,4	0,05–0,2	0,15–0,25	0,25–0,5	0,6–1,0	●		
S.3.1	0,08–0,3	0,15–0,4	0,05–0,2	0,15–0,25	0,25–0,5	0,6–1,0	●		
S.3.2	0,08–0,35	0,4–0,5	0,08–0,3	0,25–0,5	0,25–0,5	0,6–1,0	●	○	
S.3.3	0,08–0,35	0,4–0,5	0,08–0,3	0,25–0,5	0,25–0,5	0,6–1,0	●	○	
H.1.1								●	
H.1.2								●	○
H.1.3								●	○
H.1.4								●	○
H.2.1								●	○
H.3.1								●	
O.1.1								●	
O.1.2								●	
O.2.1								●	
O.2.2								●	
O.3.1								●	

15

Maximum axial depths of cut a_p for copy milling cutter K200.



Ball nose insert									
Insert Ø in mm		6	8	10	12	16	20	25	32
		$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$
ROHX-FM3	**R**	0,8	1,0	1,5	2,0	3,0	4,0	5,0	6,0
	F	0,4	0,8	1,0	1,2	1,5	1,5	2,0	2,0
ROHX-FM4	**R**	0,8	1,0	2,0	3,0	4,0	5,0	6,0	8,0
	F	0,4	0,8	1,0	1,2	1,5	1,5	2,0	2,0
ROHX-FM6	**R**	0,8	1,0	1,5	2,0	3,0	4,0	5,0	6,0
	F	0,4	0,8	1,0	1,2	1,5	1,5	2,0	2,0
ROGX-MR4	**R***				4,0	6,0	8,0	12,0	16,0
	F				2,0	3,0	4,0	5,0	6,0
ROHX-MR5	**R**		1,5	2,0					
	F		0,8	1,0					

*a_p with full interference 25 % of Ø DC maximum!



Torus inserts									
Insert Ø in mm		6	8	10	12	16	20	25	32
		$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$	$a_{p\ max.}$
XOHX-FM5	**R**		2,0	3,0	3,0	4,0	5,0	6,0	8,0
	F		0,6	2,0	2,4	3,2	4,0	5,0	6,4
XOHX-MR6	**R**		2,0	3,0	3,0	4,0	5,0	6,0	8,0
	F		0,6	2,0	2,4	3,2	4,0	5,0	6,4
XOHX-FM1	**R**			1,5	2,0	3,0	4,0		
	F			0,8	0,8	1,0	1,0		
XOHX-FM2	**R**		1,0	1,5	2,0	3,0	4,0	5,0	
	F		0,5	0,7	0,8	1,0	1,0	1,5	
XOHX-MR2	**R**	0,8	1,0	1,5	2,0	3,0	4,0	5,0	
	F	0,5	0,5	0,7	0,8	1,0	1,0	1,5	
XOGX-MF4	**R**			1,5	2,0	3,0	4,0		
	F			0,7	0,8	1,0	1,0		
XOHX-MR3	**R**			0,5	0,6	0,8	1,0		
	F								

Ranges of application of geometry

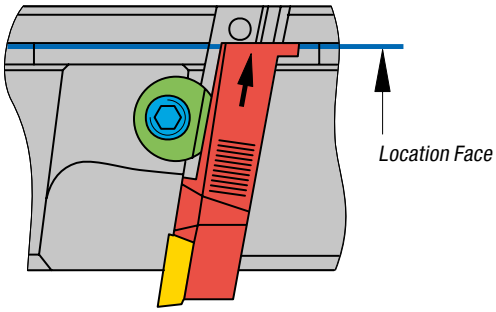
Inserts	F	M	R	Main Application
XOHX-FM1	●	●		Steel, steel casting, heat resistant steel, hardened steel to 63 HRc
XOHX-FM2	●	●		Steel, steel casting, heat resistant steel, hardened steel to 60 HRc
ROHX-FM3	●	●		Steel, steel casting, heat resistant steel
ROHX-FM4	●	●		Steel, steel casting, heat resistant steel, hardened steel to 60 HRc
XOHX-FM5	●	●		Steel, steel casting, heat resistant steel, hardened steel to 60 HRc
ROHX-FM6	●	●	●	Non ferrous metals, plastics, graphite
XOHX-MR2		●	●	long-chipping ferrous metals
XOHX-MR3		●	●	Steel, steel casting, heat resistant steel
ROGX-MR4		●	●	Steel, steel casting, heat resistant steel
XOGX-MF4	●	●		Steel, steel casting, heat resistant steel
ROHX-MR5		●	●	long-chipping ferrous metals
XOHX-MR6		●	●	long-chipping ferrous metals

Cutting data for side and face milling cutters TX

Index	CWX500 v_c m/min	CWK10 v_c m/min
P.1.1	160	
P.1.2	140	
P.1.3	110	
P.1.4	110	
P.1.5	90	
P.2.1	110	
P.2.2	90	
P.2.3	90	
P.2.4	80	
P.3.1	80	
P.3.2	60	
P.3.3	50	
P.4.1	100	
P.4.2	90	
M.1.1	110	
M.2.1	90	
M.3.1	70	
K.1.1	140	
K.1.2	100	
K.2.1	90	
K.2.2	80	
K.3.1	140	
K.3.2	120	
N.1.1	600	250
N.1.2	400	230
N.2.1	220	210
N.2.2	180	190
N.2.3	140	120
N.3.1	240	200
N.3.2	200	180
N.3.3	180	160
N.4.1	180	160
S.1.1	60	
S.1.2	50	
S.2.1	60	
S.2.2	50	
S.2.3	40	
S.3.1	60	
S.3.2	40	
S.3.3	30	
H.1.1		
H.1.2		
H.1.3		
H.1.4		
H.2.1		
H.3.1		
O.1.1	180	160
O.1.2	180	160
O.2.1	150	120
O.2.2	110	100
O.3.1	170	160

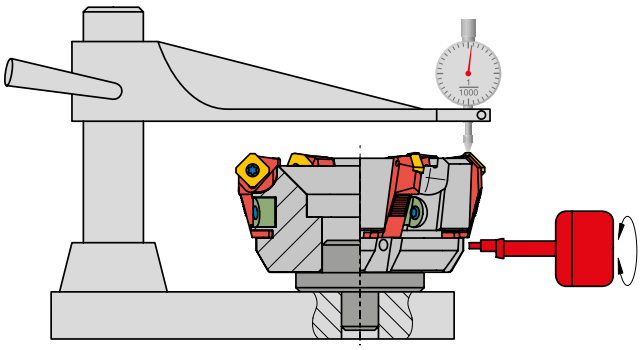
System MaxiMill 260

Setting of axial run-out for roughing



For assembly simply press cartridges onto the location face of the radial groove. The axial run-out amounts to 0.03 mm measured on the master insert.

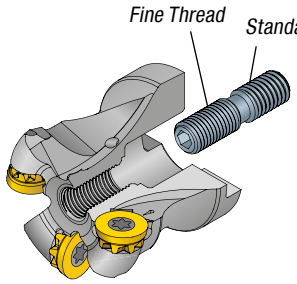
Setting of axial run-out with eccentric key and clock gauge or on optical presetting equipment



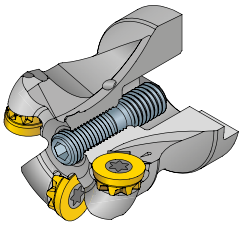
Exact setting of axial run-out up to 0.002 mm

- Clean the milling tools
- Mount cutter on appropriate setting equipment.
- Loosen clamping wedge, push cassette to face and tighten wedge lightly.
- Insert ecentric key into hole and turn until cassette is in desired position.
- Keep ecentric key in contact with the cassette so that it remains in position.
  Tighten wedge (torque moment 10 Nm).
- The tool is now ready for use.

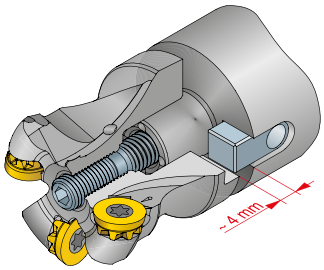
Easy and safe clamping – with the CERATIZIT power screw



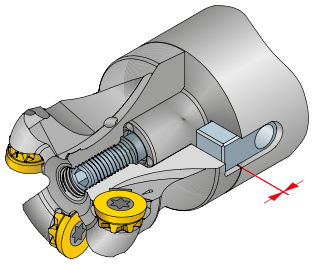
The fine-pitch part of the power screw is threaded into the milling cutter.



The power screw is turned carefully until the stop (as screw was delivered).



In order to guarantee an optimum connection of tool and shank, a gap of 4 mm is required between cutter body and adapter prior to final clamping. Using standardised adpaters this is automatically guaranteed. If necessary, you can readjust by means of the power screw with 0.5 mm/rev.



Turn clamping screw to tighten.

Torque moments for clamping screws for mounting the milling cutter to the shell mill adapter

	10				12				16			
Cutter Ø mm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm
40			70 950 151	10			70 950 151	10				
42			70 950 151	10			70 950 151	10				
50	M10x25	80			M10x25	80					70 950 154	15
52					M10x25	80					70 950 154	15
63					M10x25	80			M10x25	80		
66					M10x25	80			M10x25	80		

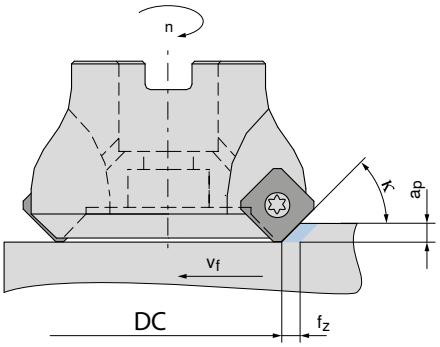
	12				16				20			
Cutter Ø mm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm
80	M12x30	140			M12x30	140			M12x30	140		
100	M16x35	180			M16x35	180			M16x35	180		
125					M16x35	180			M16x35	180		

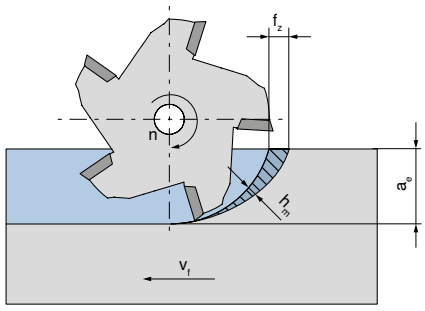
15

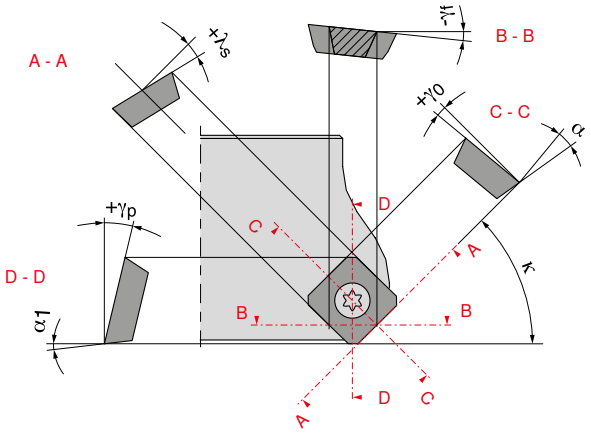
Abbreviations & dimensions

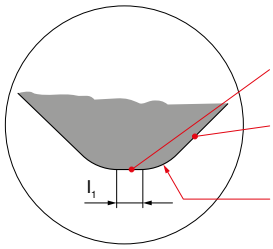
a_e	Cutting width	mm
a_p	Cutting depth	mm
DC	Tool diameter	mm
D_w	Workpiece diameter	mm
f_z	Feed per tooth	mm
h_m	Average Chip Thickness	mm
k	Number of teeth	
k_c	Specific cutting force	N/mm²
$k_{c1.1}$	Specific cutting force for 1 mm ² chip area	N/mm²
BS	Length of wiper land	mm
m_c	Increase of specific cutting force	
n	rpm	rpm
Q	Chip volume	cm³/min
v_c	Cutting speed	m/min
v_f	Feed rate	mm/min.
ZNF	Number of Effective Teeth	

γ_0	Effective cutting angle	degree
γ_f	Side clearance angle	degree
γ_p	Axial cutting angle	degree
κ	Cutting edge angle	degree
λ_s	Angle of inclination	degree
α	Clearance angle	degree
α_1	Side clearance angle	degree









Wiper land

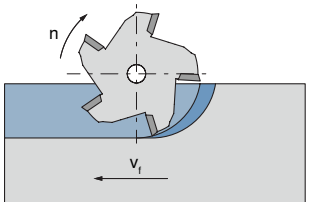
Main cutting edge

Corner radius

Engagement conditions

Recommended

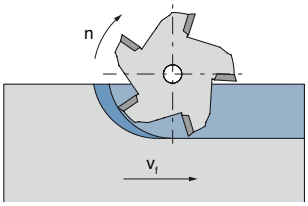
Climb milling



The feed direction of the workpiece is the same as the direction of rotation of the milling cutter in the cutting zone. The chips have maximum thickness at the beginning, chip thickness then decreases until it becomes zero at the end of the cut.

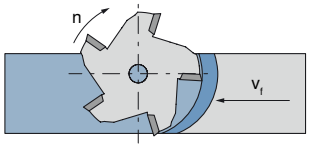
Unsuitable

Conventional milling

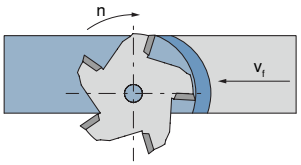


The feed direction of the workpiece is opposite to the direction of rotation of the milling cutter in the cutting zone. Chip thickness is zero at the beginning and increases until it reaches its maximum at the end of the cut.

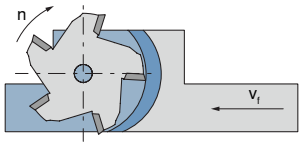
Cutter positioning



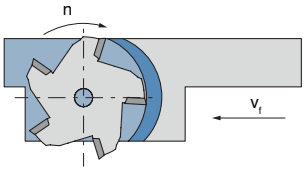
If possible the cutter should exit tangentially of the workpiece.



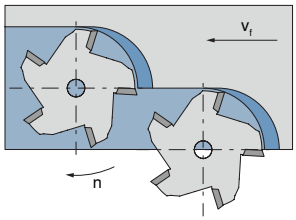
Workpiece situation



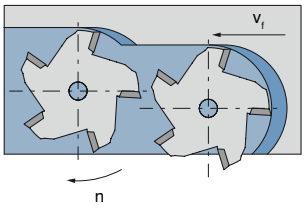
The workpiece should be clamped in such a way as to allow the cutter to emerge tangentially of the workpiece along the whole machining length.



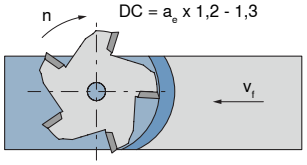
Overlapping



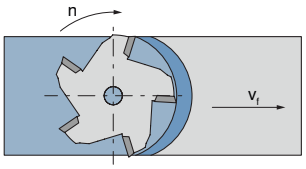
Either employ climb milling or ensure that the cutter comes out of the workpiece tangentially, as in the illustration on the left.



Cutter size



When face milling the diameter of the cutter should be 20–30 % larger than that of the workpiece.



ISO designation indexable milling inserts

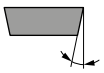
X	D	K	T	11	T3	08	S	R	-	F50
1	2	3	4	5	6	7	8	9		10

Z	N	H	W	12	05	PO	S	R	-	15	06	-	R
1	2	3	4	5	6	7	8	9		11	12		13

1 Insert shape

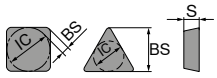
A	85°	
B	82°	
K	55°	
H	120°	
L	90°	
O	135°	
P	108°	
C	80°	
D	55°	
E	75°	
M	86°	
V	35°	
R		
S	90°	
T	60°	
W	80°	
X Z	Special version	

2 Clearance angle

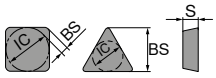


	α
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special version

3 Tolerances

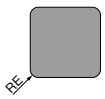


	IC ±mm	BS ±mm	S ±mm	IC = 6,35 / 9,52	IC = 12,7	IC = 15,8 / 19,05
A	0,025	0,005	0,025	●	●	●
C	0,025	0,013	0,025	●	●	●
E	0,025	0,025	0,025	●	●	●
F	0,013	0,005	0,025	●	●	●
G	0,025	0,025	0,13	●	●	●
H	0,013	0,013	0,025	●	●	●
J	0,05	0,005	0,025	●		
	0,08	0,005	0,025		●	
	0,10	0,005	0,025			●
K	0,05	0,013	0,025	●		
	0,08	0,013	0,02		●	
	0,10	0,013	0,02			●



	IC ±mm	BS ±mm	S ±mm	IC = 6,35 / 9,52	IC = 12,7	IC = 15,8 / 19,05
M	0,05	0,08	0,13	●		
	0,08	0,13	0,13		●	
	0,10	0,15	0,13			●
N	0,05	0,08	0,025	●		
	0,08	0,13	0,025		●	
	0,10	0,15	0,025			●
U	0,08	0,13	0,13	●		
	0,13	0,20	0,13		●	
	0,18	0,27	0,13			●

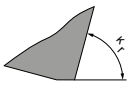
7 Wiper land / corner radius



Radius

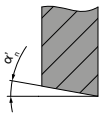
	RE in mm
M0*	
02	0,2
04	0,4
08	0,8
12	1,2

* Only with insert type "R"



1. Designation

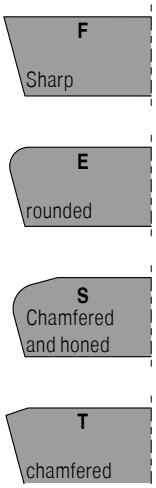
	K_r
A	45°
D	60°
E	75°
F	85°
P	90°
Z	Alternative



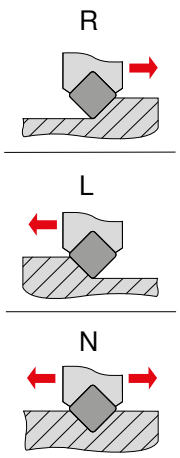
2. Designation

	α_n
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
Z O	Alternative

8 Cutting edge

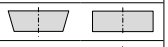


9 Direction of cut



4

Characteristics

A	
F	
G	
M	
N	
Q	
R	
T	
U	
W	
X	Special version

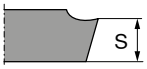
5

Cutting length

IC mm	A	T	C/S	H	L	R	V	W	O	X	Z
4,90										07	
5,00						05					
5,56			05		08			03			
6,00											
6,35		11	06		10			04		06	
6,65	10										
6,80										11	
7,00											04
7,94			07								
8,00						08					
9,00					12						
9,30										15	
9,52	16	16	09		15			06	04		
9,57	15										
9,60										09	
10,00			10		11	10					12
12,00						12					
12,50										20	
12,70		12/22	12		20		22	08		12	
15,81			15		22			10			
16,00						16					
16,20				09							
16,74			16								
17,00			17								
17,18									06		
18,18									07		
19,05			19					13			
20,00						20					

6

Insert thickness



	S mm
01	1,59
T1	1,98
02	2,38
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
09	9,52

10

Chip groove

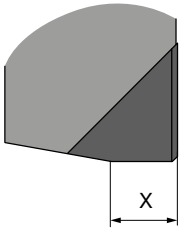
Chip breaker designation
F.. = fine
M.. = medium
R.. = roughing

Additional characteristics:
R = transition radius main/ secondary cutting edge
Q = Masterfinish

11

Manufacturer specification

Length of the finishing cutting edge

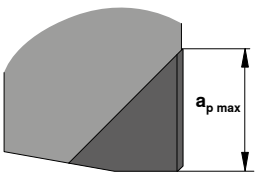


00 = 0,0 mm
10 = 1,0 mm
12 = 1,2 mm
15 = 1,5 mm
30 = 3,0 mm
50 = 5,0 mm

12

Manufacturer specification

$a_{p\,max}$



02 = 2,0 mm
03 = 3,0 mm
04 = 4,0 mm
06 = 6,0 mm
07 = 7,0 mm
11 = 11,0 mm

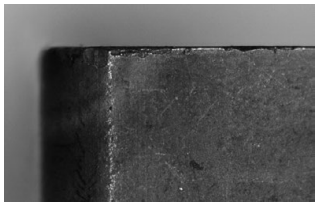
13

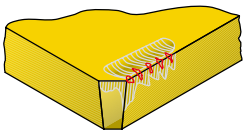
Manufacturer specification

F = Fine
M = Medium
R = Rough

15

Cutting demands when milling

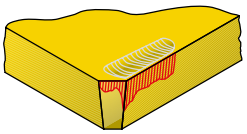




Edge chipping

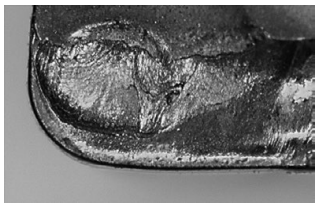
Cutting speed ↑
Feed per tooth ↓
Toughness of grade ↑
Cutting edge chamfer ↑

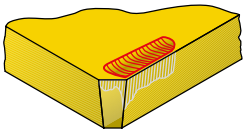




Wear on clearance face

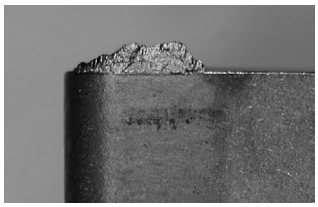
Cutting speed ↓
Feed per tooth ↑
Abrasion resistant grade ↑

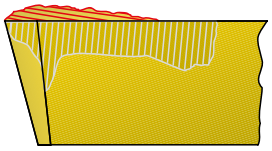




Cratering

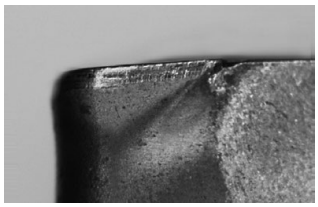
Cutting speed ↓
Feed per tooth ↓
Abrasion resistant grade ↑

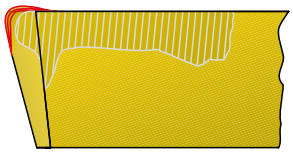




Built-up edge

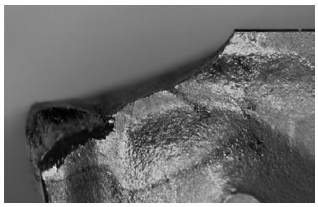
Cutting speed ↑
Feed per tooth ↑
Wear resistance ↑

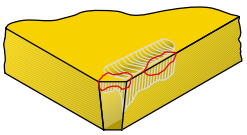




Cutting-edge deformation

Cutting speed ↓
Feed per tooth ↓
Abrasion resistant grade ↑

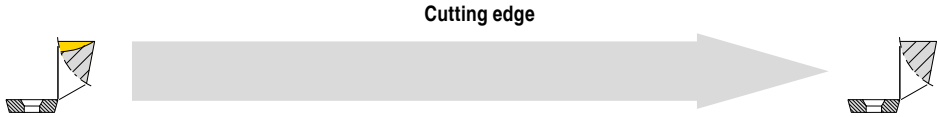




Cutting Edge Breakage

Cutting speed ↓
Toughness of grade ↑

Chip Breakers Overview



			Sharp ●		medium ● ●		stable ● ● ●	
			10	20	30	40	50	60
increasing wedge angle	fine	F	**-F10 -27 -27P**	**-F20**		**-F40**	**-F50**	**-ER -FN -33P -33**
	medium	M			**-M31 -M30 -M32**		**-M50 -31**	**-EN -29**
	rough	R			**-R30**		**-R50**	**-SN -R60 -SR**

Chip breaker code

			Cutting edge		
			Sharp 10–20	medium 30–40	stable 50–60
Application type	light	F	●	● ●	● ● ●
	universal	M	●	● ●	● ● ●
	difficult	R	●	● ●	● ● ●

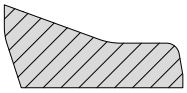
Example: Chip breaker -M50



Chip groove description

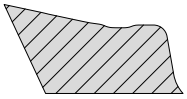
-27P

- Highly positive geometry
- Sharp cutting edges
- Reduced built up edge
- First choice for non-ferrous metals



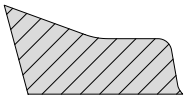
-F10

- Very positive geometry
- Sharp cutting edge
- Prevents sticking and edge build up
- First Choice for non-ferrous metal



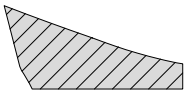
-27

- Highly positive geometry
- Sharp cutting edges
- First choice for non-ferrous metals



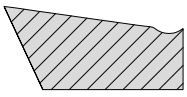
-F20

- Extremely positive geometry
- Lightly rounded cutting edge
- First choice for non-ferrous metals



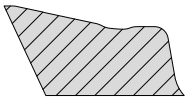
-F40

- Positive geometry
- Rounded cutting edge
- Finish and rough machining
- For unstable clamping situations
- For heat-resistant materials, titanium and super alloys



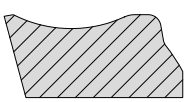
-F50

- Positive geometry with small positive protective chamfer
- Rounded cutting edge
- Low cutting force and good stability
- For unstable clamping situations
- Light rough machining
- First choice for stainless steels



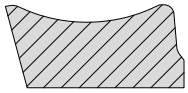
-33P

- Positive geometry with small neutral protective chamfer
- Low adhesion
- Rounded cutting edge
- Low cutting force and good stability
- For unstable clamping situations
- Light rough machining
- First choice for stainless steels



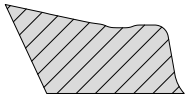
-33

- Positive geometry with small neutral protective chamfer
- Rounded cutting edge
- Low cutting force and good stability
- For unstable clamping situations
- Light rough machining
- First choice for stainless steels



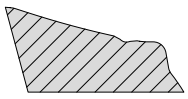
-M30

- Positive geometry
- Rounded cutting edge
- Medium rough machining
- First choice for martensitic stainless steels



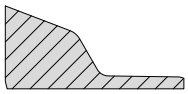
-M31

- Positive geometry
- Rounded cutting edge
- Finish and rough machining
- For unstable clamping situations
- For heat-resistant materials, titanium and super alloys



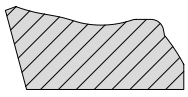
-M32

- Positive geometry
- Rounded cutting edge
- Low cutting force and good stability
- Medium rough machining
- First choice for martensitic stainless steels



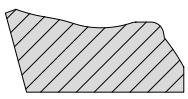
-M50

- Positive geometry with slightly negative protective chamfer
- Rounded cutting edge
- Low cutting force and good stability
- Light to medium rough machining
- First choice for general steels



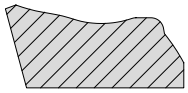
-31

- Positive geometry with neutral protective chamfer
- Rounded cutting edge
- Heavy rough machining
- Strongly interrupted cuts
- First choice for cast iron materials



-29

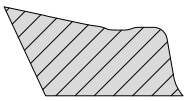
- Positive geometry with slightly negative protective chamfer
- Rounded cutting edge
- Low cutting force and good stability
- Light to medium rough machining
- First choice for general steels



Chip groove description

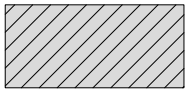
-29R

- Positive geometry with slightly negative protective chamfer
- Heavily rounded cutting edge
- Low cutting force and good stability
- Light to medium rough machining
- First choice for general steels



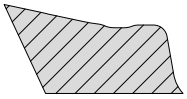
-ER

- Neutral Geometry
- Rounded cutting edge
- Universal application
- High surface quality due to face chamfer
- First choice for machining cast iron and non-ferrous metals



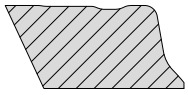
-R30

- Positive geometry with slightly negative protective chamfer
- Heavily rounded cutting edge
- Low cutting force and good stability
- Light to medium rough machining
- First choice for general steels



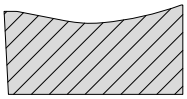
-EN

- Neutral geometry
- Rounded cutting edge
- High surface quality due to face chamfer (radial protective chamfer on indexable insert)
- First choice for machining cast iron and -ferrous metals



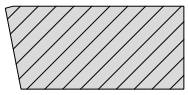
-R50

- Slightly positive geometry
- Rounded cutting edge
- Medium rough machining
- Strongly interrupted cuts
- First choice for cast iron materials



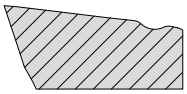
-SN

- Neutral geometry
- Rounded cutting edge
- High surface quality due to face chamfer (radial protective chamfer on indexable insert)
- Low cutting forces
- First choice for good flatness



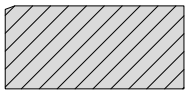
-R60

- Positive geometry with negative stable protective chamfer
- Heavily rounded cutting edge
- For stable machining conditions
- First choice for heavily interrupted cuts
- Heavy rough machining
- First choice for cast iron materials



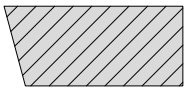
-SR

- Neutral geometry with negative protective chamfer
- Rounded cutting edge
- Robust indexable insert
- For poor machining conditions
- First choice for machining cast iron and steels



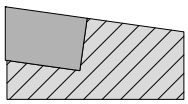
-FN

- Neutral and highly stable geometry
- Heavily rounded cutting edge
- For stable machining conditions
- First choice for hard machining up to approx. 50 HRC



-FR

- Neutral Geometry
- Slightly rounded and stable cutting edge
- Associated with Ceramic and CBN cutting materials.
- For stable machining situations
- First choice for machining cast irons



Grades Overview

Grade designation	Standard designation	ISO application range	Steel	Stainless steel	Cast iron	Non ferrous metals	Heat resistant	hardened materials	Non metal materials
		01 05 10 15 20 25 30 35 40 45 50	P	M	K	N	S	H	O
CTEP210	HE-P10		●		●				
	HE-K05								
TCM10 (CWC10)	HT-P15		●		○				
	HT-K10								
WTN1205	HC-P10		●	○	●			●	
	HC-M15								
	HC-K05								
	HC-H10								
CTPP211	HC-P10		●	○	○	○	○	○	○
	HC-K10								
	HC-M15								
	HC-N10								
	HC-S15								
	HC-H10								
	HC-O10								
CTPP216	HC-P15		●	○	●	○	○	●	○
	HC-M20								
	HC-K15								
	HC-N15								
	HC-S20								
	HC-H15								
	HC-O15								
CTCP220	HC-P20		●		●				
	HC-K20								
CTPP225	HC-P25		●		●				
	HC-K25								
CTCP230	HC-P30		●		●				
	HC-K25								
CTPP231	HC-P30		●		○				
	HC-K25								
CTPP235	HC-P35		●	○	○				
	HC-M30								
	HC-K30								
CTPP236	HC-P35		●	○	○				
	HC-M35								
	HC-K30								
WAN1240	HC-P40		●	○	○				
	HC-M35								
	HC-K30								
WAX1240	HC-P30		●	○	○				
	HC-M25								
	HC-K25								
CTPM225	HC-P25		●	●					
	HC-M25								
WAN2225	HC-M25			●			●		
	HC-S30								
CTCM235	HC-P40		●	●					
	HC-M35								
CTPM240	HC-P40		○	●					
	HC-M40								
CWK10	HC-N10					●			○
	HC-O10								

● **Main Application**
○ Extended application

wear-resistant v_c+ ⟷ v_c− tough

Grades Overview

Grade designation	Standard designation	ISO application range	Steel P	Stainless steel M	Cast iron K	Non ferrous metals N	Heat resistant S	hardened materials H	Non metal materials O
CTPM241	HC-P40	05 15 25 35 45 / 01 10 20 30 40 50	●	●			○		
	HC-M40								
	HC-S40								
CTPM245	HC-P45		●	●					
	HC-M50								
CTCM245	HC-P45		●	●			○		
	HC-M50								
	HC-S35								
CTN3105	CN-K05				●				
CTL3215	BC-K10				●			○	
	BC-H10								
CTCK215	HC-K15				●				
CTPK220	HC-K20				●				
CTPK221	HC-P15		○		●				
	HC-K10								
CTPK226	HC-P15		●	●	●			○	
	HC-M20								
	HC-K15								
	HC-H15								
CTPK231	HC-P30		●	●	●	○	○	○	
	HC-M35								
	HC-K30								
	HC-N30								
	HC-S35								
	HC-H30								
CTD4205	DP-N05					●			○
	DP-005								
AMZ	HC-K10				○	●			○
	HC-N10								
	HC-O10								
WUN4210	HT-K10				○	●			
	HT-N15								
CTCN211	HC-N10					○			●
	HC-O10								
CTWN215	HC-K15				○	●			○
	HC-N10								
	HC-O10								
H216T	HW-K15				○	●			○
	HW-N15								
	HW-O15								
CTC5240	HC-S35						●		
CTCS245	HC-S45						●		
CTP6215	HC-K15				●			●	
	HC-H15								
CWX500	HC-P15		●	●	○	●	○		○
	HC-M15								
	HC-K15								
	HC-N15								
	HC-S15								
	HC-O15								

● **Main Application**
○ Extended application

wear-resistant v_c+ ◯ ⟷ ◌ v_c− tough

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Grade description

AMZ
- Carbide, TiAlN-coated
- ISO | K10 | **N10** | O10
- The coated carbide grade for aluminium machining

CTC5240
- Carbide, TiN-TiB_2-coated
- ISO | **S35**
- The special grade for machining titanium and titanium alloys

CTCK215
- Carbide, TiCN-Al_2O_3-coated
- ISO | **K15**
- The first choice for machining cast iron materials at high cutting speeds

CTCN211
- Carbide, coated
- ISO | N10 | **O10**
- Diamond-coated carbide grade especially for machining graphite and non-ferrous metals

CTCM235
- Carbide, TiCN-Al_2O_3-coated
- ISO | **P40** | **M35**
- The tough alternative for general steel machining
- Well suited to martensitic steel materials

CTCM245
- Carbide, TiCN-Al_2O_3 coated
- ISO | **P5** | **M45** | S35
- Special grade for machining high-alloy steel materials

CTCP220
- Carbide, TiCN-Al_2O_3-coated
- ISO | **P20** | **K20**
- The wear-resistant grade for dry machining steels

CTCP225
- Carbide, TiAlTaN-coated
- ISO | **P25** | **K25**
- The wear-resistant grade for wet machining of steels

CTCP230
- Carbide, TiCN-Al_2O_3-coated
- ISO | **P30** | K25
- The first choice for dry machining steel at high cutting speeds

CTD4205
- Carbide, uncoated
- ISO | **N05** | O05
- Polycrystalline diamond grade for machining non-ferrous metals and non-metallic materials

CTEP210
- Cermet, TiCN-Al_2O_3-coated
- ISO | **P10** | **K05**
- The coated cermet grade with reserves of toughness for finish machining at high cutting speeds

CTP6215
- Carbide, TiAlN-coated
- ISO | **K15** | **H15**
- The coated carbide grade for hard machining

CTPK220
- Carbide, TiAlTaN-coated
- ISO | **K20**
- Optimal for machining high-strength cast iron materials in the tougher application range

CTPK221
- Carbide, TiAlN-coated
- ISO | P15 | **K10**
- The coated standard grade for fine machining of cast iron and non-ferrous metals at medium cutting speeds

CTPK226
- Carbide, coated
- ISO | **P15** | **M20** | **K15** | H15
- Extremely wear-resistant ultra-fine grain carbide grade for machining cast iron materials and hardened steels up to 62 HRC

CTPK231
- Carbide, coated
- ISO | **P30** | **M35** | **K30** | N30 | S35 | H30
- Tough carbide grade for medium and rough machining of steel and cast iron materials
- Well suited to dry machining

CTPM225
- Carbide, TiAlTaN-coated
- ISO | **P25** | **M25**
- The wear-resistant choice for machining austenitic steels

CTPM240
- Carbide, TiAlTaN-coated
- ISO | P40 | **M40**
- The first choice for machining austenitic steels

CTPM241
- Carbide, AlTiN-coated
- ISO | **P40** | **M40** | S40
- The tough carbide grade for machining stainless and heat-resistant steels

CTPM245
- Carbide, TiAlTaN-coated
- ISO | **M45** | **P50**
- The first choice for machining martensitic steels

Grade description

CTPP211
- Carbide, coated
- ISO | **P10** | M15 | K10 | N10 | S15 | H10 | O10
- Wear-resistant carbide grade for medium and rough machining of steel and stainless steel
- Well suited to dry machining

CTPP216
- Carbide, TiAlN-coated
- ISO | **P10** | M20 | **K15** | N15 | S20 | **H15** | O15
- Highly wear-resistant carbide grade with high cutting edge stability for finish machining of high-strength materials, unalloyed tool steels, cast iron and hardened steel up to 54 HRC

CTPP231
- Carbide, coated
- ISO | **P30** | K25
- A very tough special grade for medium and rough machining of steel at medium cutting speeds and an extremely high feed per tooth

CTPP235
- Carbide, TiAlTaN-coated
- ISO | **P35** | M30 | K30
- The wear-resistant grade for wet machining of steels

CTPP236
- Carbide, TiAlN-TiN coated
- ISO | **P35** | M35 | K30
- The tough special grade for medium and rough machining of steel at high cutting speeds
- This grade is also suitable for machining cast iron and stainless steel

CTWN215
- Carbide, uncoated
- ISO | K15 | **N10** | O10
- Uncoated carbide grade for machining non-ferrous metals

H216T
- Carbide, uncoated
- ISO | K15 | **N15** | O15
- The uncoated carbide grade for machining aluminium and other non-ferrous metals
- Also highly suitable for HSC machining

TCM10
- Cermet, uncoated
- ISO | **P15** | **M10** | K10
- The uncoated cermet grade for finish machining stainless and hardened steel
- Particularly wear resistant thanks to high heat resistance

WAN1240
- Carbide, coated
- ISO | **P40** | M35 | K30
- Coated, tough special grade for machining steel at medium to high cutting speeds
- Also suitable for machining cast iron as a secondary application

WAN2225
- Carbide, coated
- ISO | **M25** | **S25**
- Fine grain size with high toughness and temperature resistance
- For rough and finish machining of rust and acid-resistant steels in both wet and dry cutting

WAX1240
- Carbide, coated
- ISO | **P40** | M25 | K30
- High-strength special grades for medium and rough machining of steel at medium cutting speeds and an extremely high feed per tooth

WTN1205
- Carbide, coated
- ISO | **P10** | M15 | **K05** | **H10**
- Coated special grade for machining steel, hardened steel, cast iron, graphite and plastics

WUN4210
- Carbide, uncoated
- ISO | K15 | **N10** | O10
- Uncoated standard grade for medium machining of non-ferrous metals and graphite

CTCS245
- Carbide, CVD TiN-TiB2 coated
- ISO | **S45**
- The special grade for machining nickel-based alloys

Grade description

C T C P 2 2 0 (Example)

Main application – material

1|P	Steel
2|M	Stainless steel
3|K	Cast iron
4|N	Light and non ferrous metals
5|S	Super alloys, titanium
6|H	Hard materials
7|X	Universal application

Application

1	Turning
2	Milling
3	Grooving
4	Drilling
5	Thread turning
6	Others
7	Several processes

Degree of hardness

05	ISO 05
10	ISO 10
15	ISO 15
	...