New products for machining technicians

NEW

MaxiMill Slot-SX

→ Page 126–141

New side and face milling system with SX inserts from SX grooving system

---

NEW

MaxiMill 242

→ Page 90

Update to chamfer milling cutter

NEW

MaxiMill 490

→ Page 78+80

Update to adjustable single angle milling cutter

NEW

CTPX715

New multi-range grade

NEW

MaxiMill 273-08

→ Page 35+36

NEW

MaxiMill 252

→ Page 115+116

Solid drilling and bore machining

1 HSS drilling

2 Solid carbide drilling

3 Indexable insert drilling

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

Clamping technology

16 Adaptors and Accessories

17 Workpiece clamping

18 Material examples and article no. Index

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Application parameters – End milling	159–175
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CERATIZIT \ Performance

Premium quality tools for high performance.

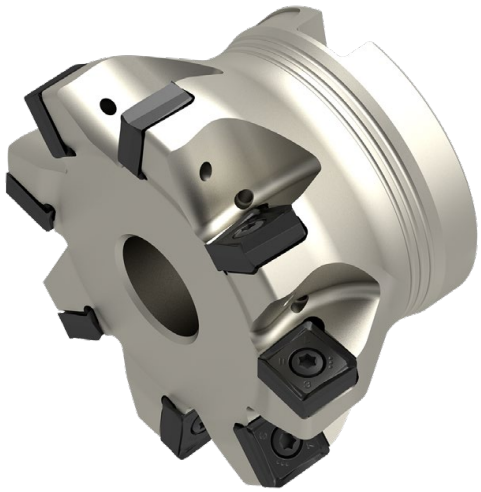
The premium quality tools from the **CERATIZIT Performance** product line have been designed for specific applications and are distinguished by their outstanding performance. If you make high demands on the performance of your production and want to achieve the very best results, we recommend the Premium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

Symbol explanation


central internal coolant


lateral internal coolant

Cutting edge angle



ZNF = Number of flutes

● = **Main Application**

○ = Extended application

Application symbols


Face milling


Angled ramping


Helical plunging


Axial ramping


Plunge milling


Slot milling


Shoulder milling


Slot milling (45°)


Chamfer milling

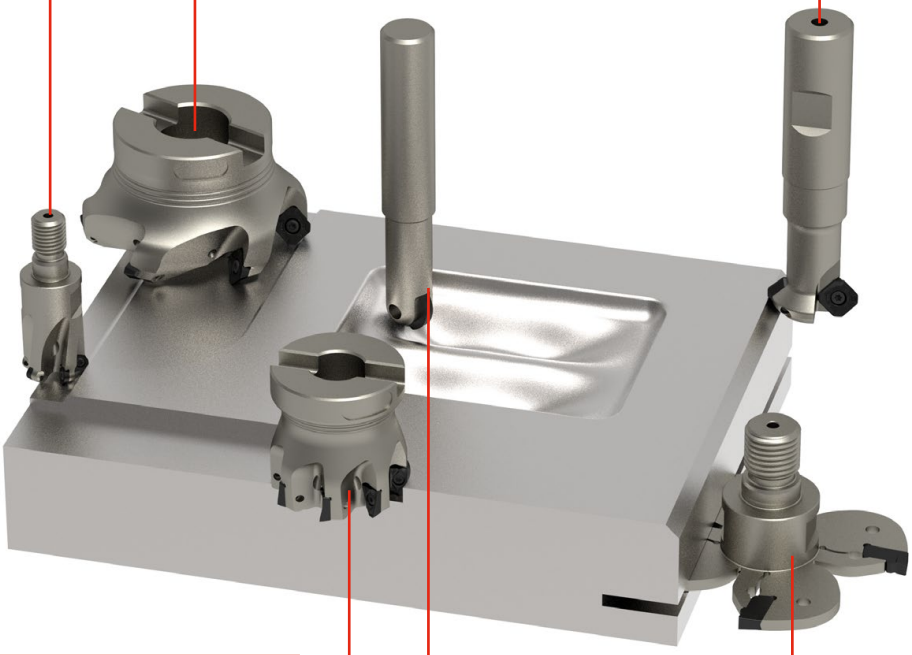

Free form milling

Toolfinder – Application Selection Guide

Form milling
→ System Selection:
10+11

Face milling
→ System Selection:
6+7

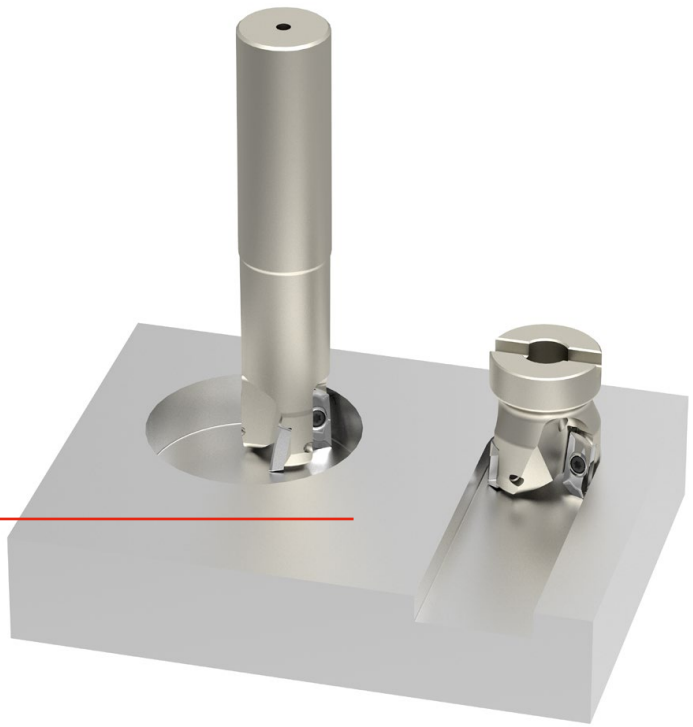
Chamfer/Angle milling cutters
→ System Selection:
12



Shoulder milling
→ System Selection:
8+9

Slot milling and saws
→ System Selection:
12

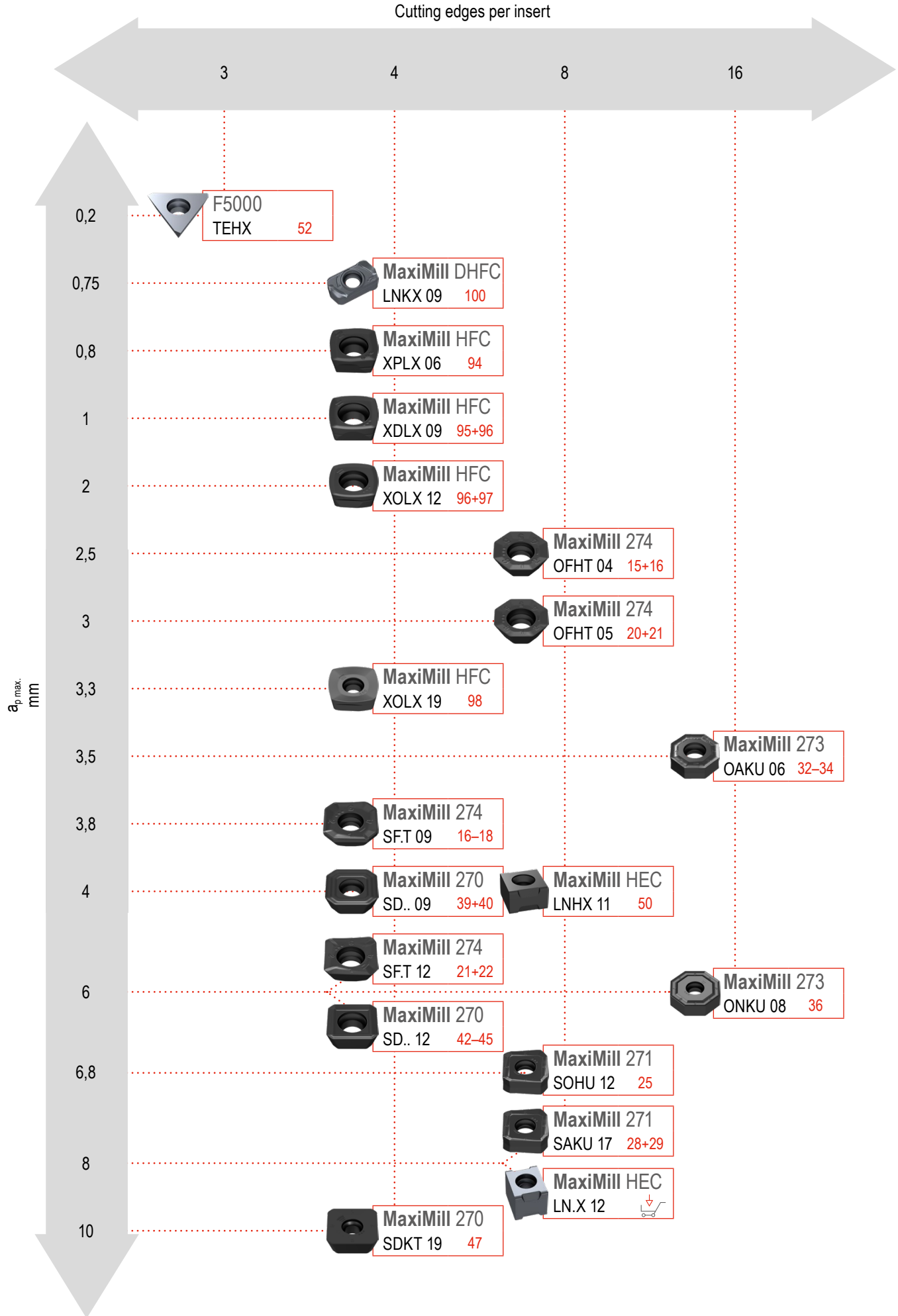
Form milling
→ System Selection:
10+11



HSC-/HPC-milling
→ System Selection:
8+9

15

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	Tempered steel	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	●	●	●	●	●		○	13–22
MaxiMill 271	**SOHU** 1204.. | **SAKU** 1706..	8	6,8 | 8,4		Ø 32–40	Ø 40–250	●	●	●		●			23–29
MaxiMill 273	**OAKU** 0605.. | **ONKU** 0806..	16	3,5 | 6			Ø 40–250	●	●	●		●			30–36
MaxiMill 270	**SD..** 0903.. / 1204.. / 19..	4	4–10		Ø 6–32	Ø 32–315	●	●	●	●	●			37–47
MaxiMill HEC	**LNHX** 1106..	8	4–8			Ø 50–160	●		●				○	48–50
MaxiMill HEC	**LN.X** 1210..	8	4–8			Ø 125–160		●						
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	●	●	●		●			92–98
MaxiMill DHFC	**LNKX** 09..	4	0,75	Ø 16–42	Ø 16–20		●	●	●		○			99+100

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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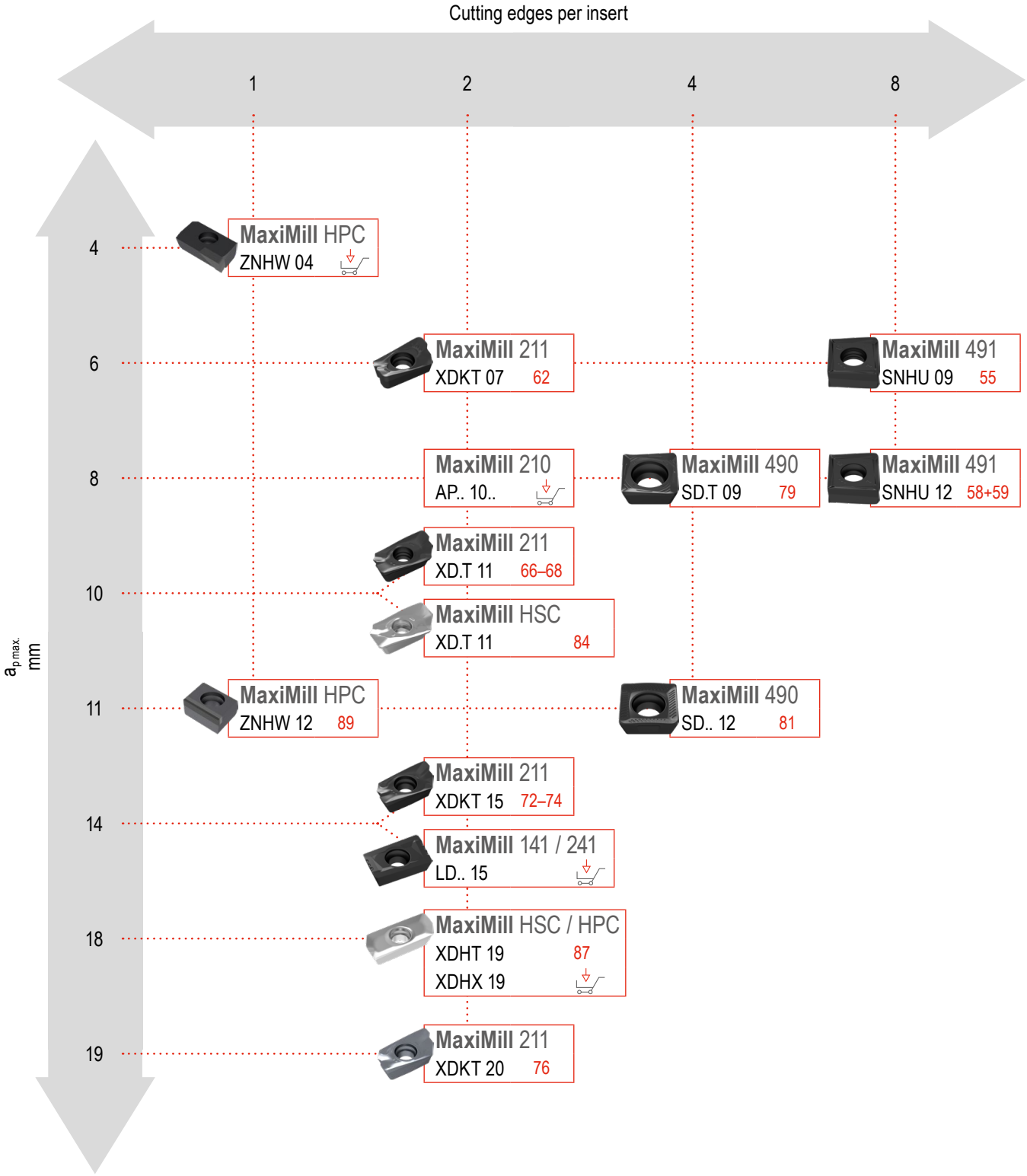
Toolfinder – shoulder milling



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	Tempered steel	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 40–80	●	●	●	●	●		○	65+71
MaxiMill 490	**SD..** 09T3.. / 1205..	4	8–11	 Ø 25–32	 Ø 25–32	 Ø 40–125	●	●	●	●	●		○	77
MaxiMill 490K	**SD..** 09T3..	4	41			 Ø 40–63	●	●	●	●	●		○	78
MaxiMill HSC	**XD..** 11T3.. / 1904..	2	10–18	 Ø 16–40	 Ø 16–32	 Ø 40–125		○	●				○	82–87
MaxiMill HPC	**XD..** 1904..	2	10–18		 Ø 22–32	 Ø 40–63	 Ø 25–50		○	●				○	
MaxiMill HPC	**ZNHW** 1205..	1	4–11			 Ø 40–315			●	●		○	○	88+89
MaxiMill HPC	**ZNHW** 04T3..	1	4–11	 Ø 20–40	 Ø 20–40				●	●		○	○	
MaxiMill 210	**AP..** 1003..	2	8			 Ø 40–80	●	●	●	●	●	●	○	

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

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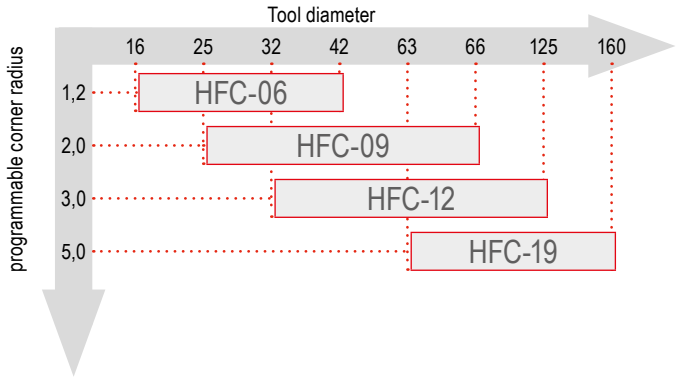
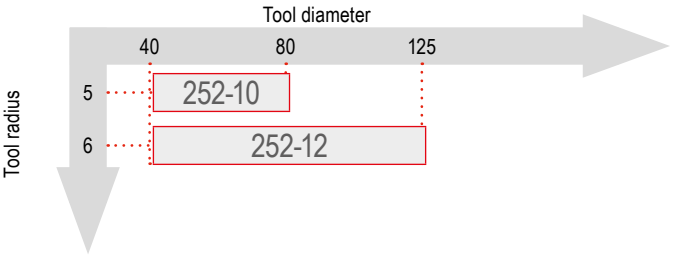
Toolfinder – form milling

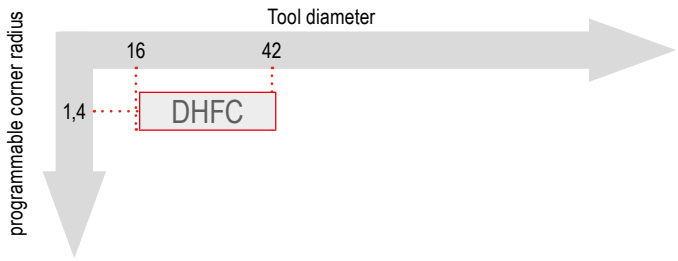
MaxiMill HFC 92–98



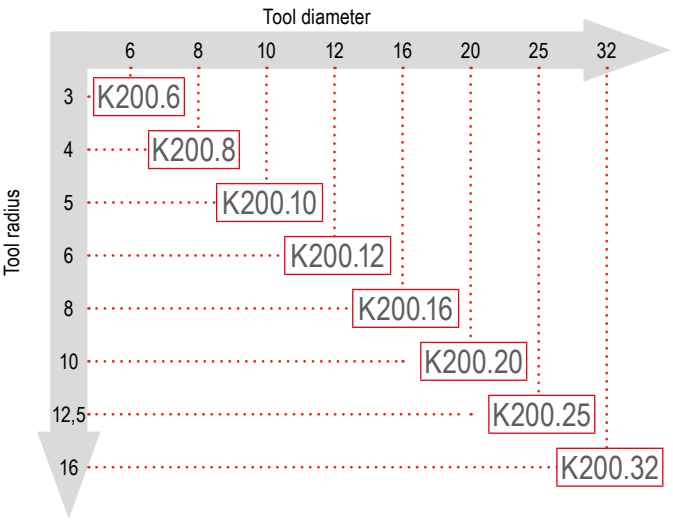
MaxiMill 252 115+116



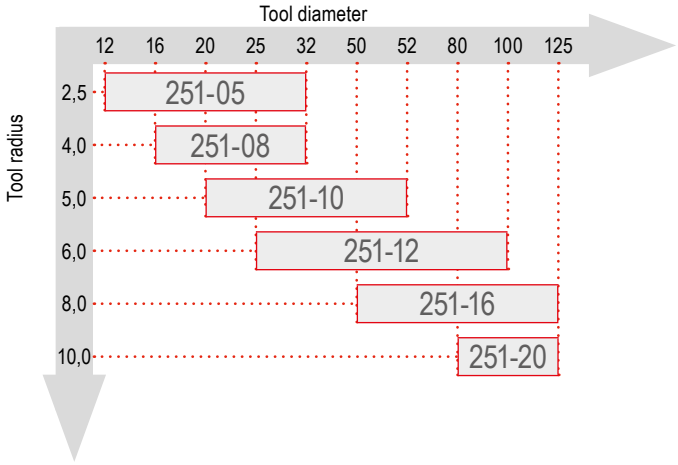
MaxiMill DHFC 99+100



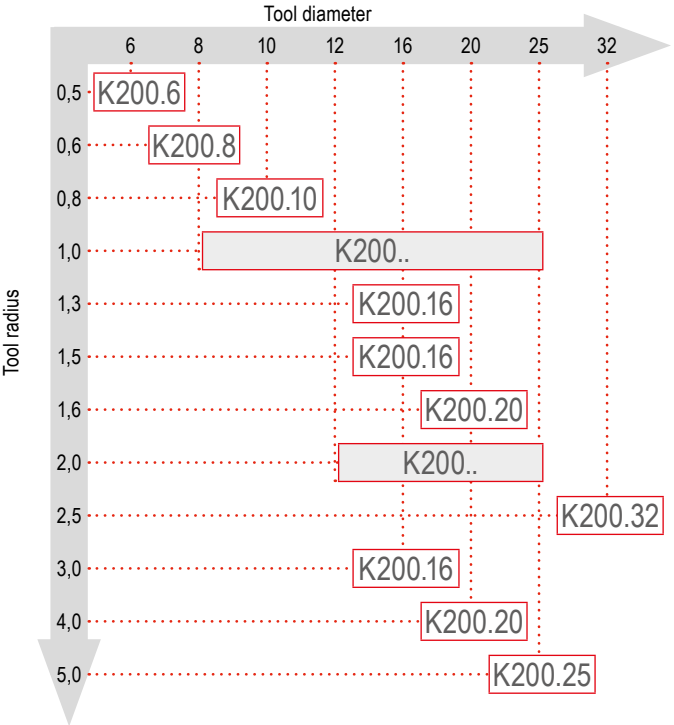
K200. Ball Nosed 117–121



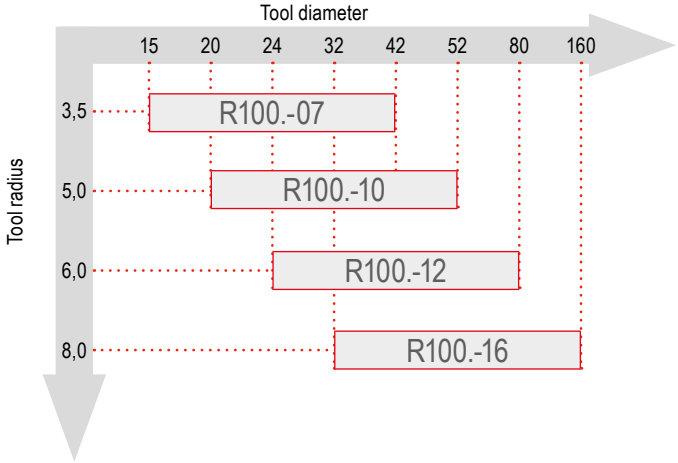
MaxiMill 251 RS 101–109



K200. Torus 122–125



R100. 110–114



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	Tempered steel	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	●	●	●		●			92–98
MaxiMill DHFC	**LNKX** 09..	4	0,75	Ø 16–42	Ø 16–20		●	●	●		○			99+100
MaxiMill 251 RS	**R..X** 05.. / 08.. / 10.. / 12.. / 16.. / 20..	8	2,5–10	Ø 10–42	Ø 10–32	Ø 40–125	●	●	●	●	●		●	101–109
R100.	**RD.X** 07.. / 10.. / 12.. / 16..	8	5	Ø 15–42	Ø 15–20	Ø 42–160	●	●	●	●	●	●	○	110–114
MaxiMill 252	**RNHU** 10.. / 12..	8	3			Ø 40–125	●	●	○		●			115+116
K200. Ball Nosed	**RO.X** .... / **XOHX**	1	0,4–8	Ø 8–32	Ø 6–32		●	●	●	●	○	●	●	117–121
K200. Torus	**XO.X**	1	0,5–8	Ø 8–32	Ø 8–32		●	●	●	●	○	○	●	122–125

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

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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	Tempered steel	Non-metal materials	Page No.
MaxiMill 272	**SD..** 0903..	4	4	 Ø 6–25		●	●	○	●	●			38–40
MaxiMill 242	**LD..** 1504..	2			 Ø 50–92	●	●	●	●	○		○	90+91
MaxiMill 490	**SD..** 09T3.. / 1205..	4	6–11	 Ø 20,1–31,5		●	●	●	●	●		○	78–81

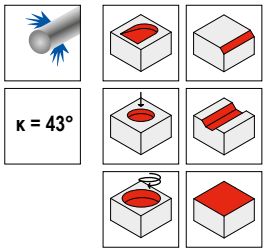
Additional diameters are available upon request.

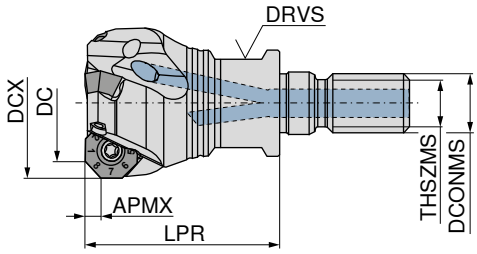
Overview – Saw cutters

System	Inserts	Cutting edges per insert	$a_{p\,max.}$ mm	Ø-range mm			Steel	Stainless steel	Cast iron	Non-ferrous metals	Heat-resistant	Tempered steel	Non-metal materials	Page No.
MaxiMill Slot-SX	**SX** E...	1	115	 Ø 63–100	 Ø 80–315		●	●	●	●	●		○	126–141
TX	**TX..** R/L	3	64		 Ø 80–160	 Ø 100–200	●	●	●	●	○		○	142–144

Additional diameters are available upon request.

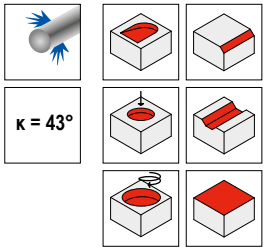
MaxiMill – 274-04/-09 Screw in cutter

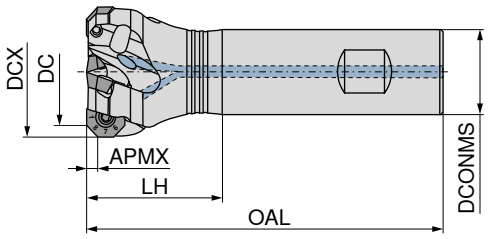




Designation	DC mm	DCX mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 742 ... EUR 2B/40	
G274.20.R.03-09	20	25,8	3	3,8	35	M12	12,5	17	1,2	OF.. 0403 / SF.. 0903	339,00	020
G274.25.R.04-09	25	30,8	4	3,8	35	M12	12,5	17	1,2	OF.. 0403 / SF.. 0903	386,20	025
G274.32.R.05-09	32	37,9	5	3,8	35	M16	17,0	24	1,2	OF.. 0403 / SF.. 0903	433,40	032

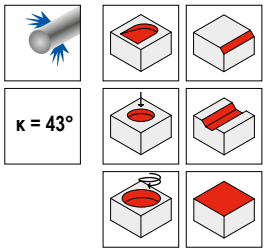
MaxiMill – 274-04/-09 End milling cutter

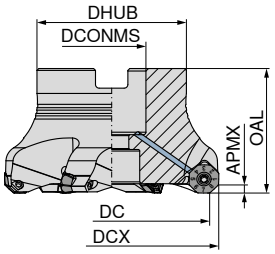


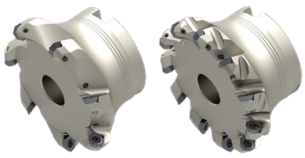


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	50 743 ... EUR 2B/40		50 743 ... EUR 2B/40	
C274.20.R.03-09-A/B20-25	20	25,8	3	3,8	77	25	20	1,2	OF.. 0403 / SF.. 0903	339,00	020	339,00	120
C274.25.R.04-09-A/B20-32	25	30,8	4	3,8	84	32	20	1,2	OF.. 0403 / SF.. 0903	386,20	025	386,20	125
C274.32.R.05-09-A/B25-40	32	37,9	5	3,8	98	40	25	1,2	OF.. 0403 / SF.. 0903	433,40	032	433,40	132

MaxiMill – 274-04/-09 Shell mill



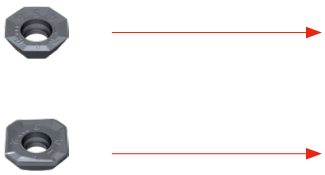


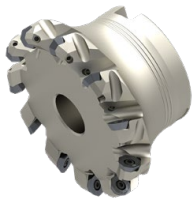


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 744 ... EUR 2B/40		50 744 ... EUR 2B/40	
A274.32.R.05-09	32	37,9	5	3,8	40	38	16	1,6	OF.. 0403 / SF.. 0903			433,40	**032**
A274.40.R.04-09	40	46,0	4	3,8	40	38	16	1,6	OF.. 0403 / SF.. 0903	433,40	**040**		
A274.40.R.06-09	40	46,0	6	3,8	40	38	16	1,6	OF.. 0403 / SF.. 0903			480,50	**140**
A274.50.R.05-09	50	55,9	5	3,8	40	48	22	1,6	OF.. 0403 / SF.. 0903	504,20	**050**		
A274.50.R.07-09	50	55,9	7	3,8	40	48	22	1,6	OF.. 0403 / SF.. 0903			527,90	**150**
A274.63.R.06-09	63	68,9	6	3,8	40	48	22	1,6	OF.. 0403 / SF.. 0903	575,00	**063**		
A274.63.R.09-09	63	68,9	9	3,8	40	48	22	1,6	OF.. 0403 / SF.. 0903			645,90	**163**
A274.80.R.07-09	80	85,9	7	3,8	50	58	27	1,6	OF.. 0403 / SF.. 0903	645,90	**080**		
A274.80.R.11-09	80	85,9	11	3,8	50	58	27	1,6	OF.. 0403 / SF.. 0903			740,30	**180**
A274.100.R.09-09	100	105,9	9	3,8	50	78	32	1,6	OF.. 0403 / SF.. 0903	796,50	**100**		
A274.100.R.13-09	100	105,9	13	3,8	50	78	32	1,6	OF.. 0403 / SF.. 0903			891,00	**200**
A274.125.R.12-09	125	130,9	12	3,8	63	88	40	1,6	OF.. 0403 / SF.. 0903	970,50	**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	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
20 - 32	6,13	**043**			13,16	**125**			5,64	**303**	5,27	**133**	153,30	**191**
32 - 40	6,13	**043**	5,04	**040**	13,16	**125**	16,08	**151**	5,64	**303**	5,27	**133**	153,30	**191**
50 - 125	6,13	**043**			13,16	**125**			5,64	**303**	5,27	**133**	153,30	**191**

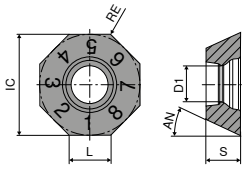
Two insert types – ONE Cutter



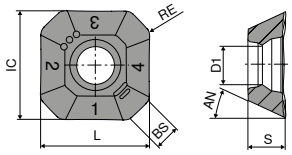


OFHT / OFHW / SFHT / SFKT

Designation	IC	D1	L	BS	S	AN
	mm	mm	mm	mm	mm	°
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

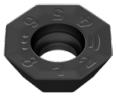
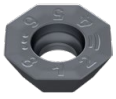


OF..

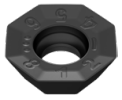
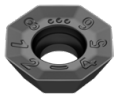


SF.T

OFHT

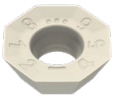
	-F50 CTCP230 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-F50 CTPP235 DRAGONSKIN	-M50 CTPP235 DRAGONSKIN
				
	F	M	F	M
	OFHT	OFHT	OFHT	OFHT
	51 002 ...	51 003 ...	51 002 ...	51 003 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
040305SN 0,5	20,72 005	20,72 005	20,72 105	20,72 105
P	●	●	●	●
M			○	○
K	○	○	○	○
N				
S				
H				
O				

OFHT / OFHW

	-F50 CTCM235 DRAGONSKIN	-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F50 CTPM245 DRAGONSKIN	CTPM245 DRAGONSKIN	-F50 CTCM245 DRAGONSKIN	CTCM245 DRAGONSKIN
							
	F	F	M	F	F	F	F
	OFHT	OFHT	OFHT	OFHT	OFHW	OFHT	OFHW
	51 002 ...	51 002 ...	51 003 ...	51 002 ...	51 105 ...	51 002 ...	51 105 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17	EUR 1H/17
040302EN 0,2					22,84 452		22,84 90201
040305SN 0,5	20,72 305	20,72 405	20,72 405	22,84 455		22,84 90501	
P	●	○	○	●	●	●	●
M	●	●	●	●	●	●	●
K							
N							
S						○	○
H							
O							

15

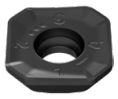
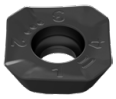
OFHT / OFHW

				NEW									
		-M50 CTCK215		-F10 CTPX715		-F10 CTWN215		-F50 CTC5240		CTC5240		-F50 CTCS245	
		DRAGONSKIN		DRAGONSKIN				DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
													
		M		F		F		F		F		F	
		OFHT		OFHT		OFHT		OFHT		OFHW		OFHT	
		51 003 ...		51 122 ...		50 459 ...		51 002 ...		50 457 ...		51 002 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1H/17		EUR 1H/17		EUR 1H/17	
040302EN	0,2									22,84	504		
040305FN	0,5			26,02	00502	21,97	505						
040305SN	0,5	20,72	505					22,84	15500			22,84	555
P				○									
M				○									
K		●		●		○							
N				●		●							
S				○				●		●		●	
H													
O				○		○							

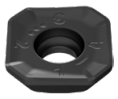
SFHT / SFKT

										-F50 CTPP225		-M50 CTPP225	
										DRAGONSKIN		DRAGONSKIN	
													
										F		M	
										SFHT		SFKT	
										51 012 ...		51 013 ...	
ISO	RE mm									EUR 1B/61		EUR 1B/61	
0903AFSR	1									20,72	070	15,27	070
P										●		●	
M													
K													
N													
S													
H													
O													

SFHT / SFKT

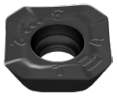
		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		F	M	F	M
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
0903AFSR	1	20,72 020	15,27 020	20,72 120	15,27 120
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

SFHT / SFKT

		-F50 CTCM235	-F50 CTPM240	-M50 CTPM240	-F50 CTPM245	-F50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		F	F	M	F	F
		SFHT	SFHT	SFKT	SFHT	SFHT
		51 012 ...	51 012 ...	51 013 ...	51 012 ...	51 012 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
0903AFSR	1	20,72 320	20,72 420	15,27 42000	25,76 470	25,76 92001
P		●	○	○	●	●
M		●	●	●	●	●
K						
N						
S						○
H						
O						

15

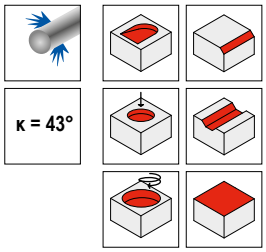
SFKT / SFHT

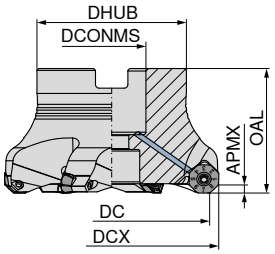
						NEW									
		-R50 CTCK215		-R50 CTPK220		-F10 CTPX715		-F10 CTWN215		-F40 CTC5240					
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN				DRAGONSKIN					
															
		R		R		F		F		F					
		SFKT		SFKT		SFHT		SFHT		SFHT					
		51 065 ...		51 065 ...		51 123 ...		50 514 ...		50 514 ...					
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1H/17					
0903AFFR	1					24,84	01502	24,84	505						
0903AFSR	1	15,27	520	15,27	620					25,76	504				
P						○									
M						○									
K		●		●		●		○							
N						●		●							
S						○				●					
H															
O						○		○							

Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 149
Starting Parameter	→ 150	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

MaxiMill – 274-05/-12 Shell mill



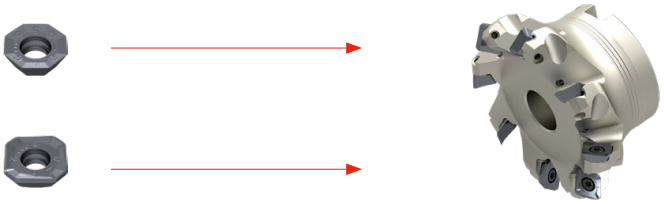


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 772 ... EUR 2B/40		50 772 ... EUR 2B/40	
A274.40.R.03-12	40	48,0	3	6	40	38	16	3,2	OFHT 0504 / SFKT 1204	326,30	**24000**		
A274.40.R.04-12	40	48,0	4	6	40	38	16	3,2	OFHT 0504 / SFKT 1204			428,20	**04000**
A274.50.R.04-12	50	58,0	4	6	40	43	22	3,2	OFHT 0504 / SFKT 1204	434,90	**25000**		
A274.50.R.05-12	50	58,0	5	6	40	43	22	3,2	OFHT 0504 / SFKT 1204			543,70	**050**
A274.63.R.05-12	63	71,1	5	6	40	48	22	3,2	OFHT 0504 / SFKT 1204	557,00	**26300**		
A274.63.R.06-12	63	71,1	6	6	40	48	22	3,2	OFHT 0504 / SFKT 1204			652,50	**063**
A274.80.R.06-12	80	88,0	6	6	50	58	27	3,2	OFHT 0504 / SFKT 1204	679,50	**28000**		
A274.80.R.08-12	80	88,0	8	6	50	58	27	3,2	OFHT 0504 / SFKT 1204			870,00	**080**
A274.100.R.08-12	100	108,0	8	6	50	78	32	3,2	OFHT 0504 / SFKT 1204	897,20	**30000**		
A274.100.R.10-12	100	108,0	10	6	50	78	32	3,2	OFHT 0504 / SFKT 1204			1.074,00	**100**
A274.125.R.09-12	125	133,0	9	6	63	88	40	3,2	OFHT 0504 / SFKT 1204	1.125,00	**32500**		
A274.125.R.12-12	125	133,0	12	6	63	88	40	3,2	OFHT 0504 / SFKT 1204			1.311,00	**125**
A274.160.R.11-12	160	168,0	11	6	63	98	40	3,2	OFHT 0504 / SFKT 1204	1.367,00	**36000**[1)]		
A274.160.R.14-12	160	168,0	14	6	63	98	40	3,2	OFHT 0504 / SFKT 1204			1.740,00	**16000**[1)]

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

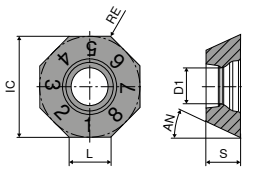
Spare parts	TORX® blade		Key D		Molykote		Clamping screw		Torque screwdriver	
	80 950 ...		**80 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
40 - 160	6,78	**054**	15,33	**128**	5,64	**303**	5,95	**340**	170,10	**193**

Two insert types – ONE Cutter

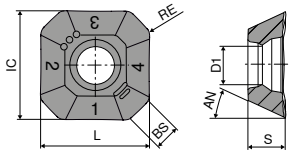


OFHT / SFHT / SFKT

Designation	IC	D1	L	BS	S	AN
	mm	mm	mm	mm	mm	°
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

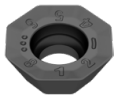
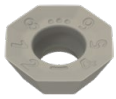
OFHT

	-F50 CTCP230 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-F50 CTPP235 DRAGONSKIN	-M50 CTPP235 DRAGONSKIN
				
	F	M	F	M
	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	22,79 **010**	22,79 **01000**	22,79 **110**	22,79 **11000**
P	●	●	●	●
M			○	○
K	○	○	○	○
N				
S				
H				
O				

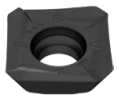
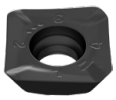
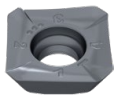
OFHT

	-F50 CTCM235 DRAGONSKIN	-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F50 CTPM245 DRAGONSKIN
				
	F	F	M	F
	OFHT	OFHT	OFHT	OFHT
	51 002 ...	51 002 ...	51 003 ...	51 002 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17
050410SN / 1	22,79 **310**	22,79 **410**	22,79 **41000**	25,11 **460**
P	●	○	○	●
M	●	●	●	●
K				
N				
S				
H				
O				

OFHT

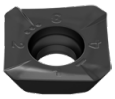
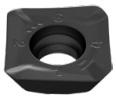
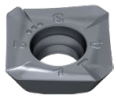
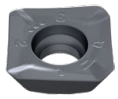
			NEW		
		-F50 CTCM245	-F10 CTPX715	-F10 CTWN215	-F50 CTC5240
		DRAGONSKIN	DRAGONSKIN		DRAGONSKIN
					
		F	F	F	F
		OFHT	OFHT	OFHT	OFHT
		51 002 ...	51 122 ...	51 122 ...	51 002 ...
ISO	RE mm	EUR 1H/17	EUR 1B/61	EUR 1B/61	EUR 1H/17
050410FN	1		29,76 01002	27,32 36000	
050410SN	1	25,11 91001			25,11 16000
P		●	○		
M		●	○		
K			●	○	
N			●	●	
S		○	○		●
H					
O			○	○	

SFHT / SFKT

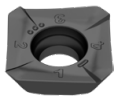
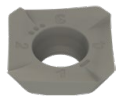
		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		F	M	F	M
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1204AFSR	1	22,79 02500	16,79 025	22,79 12500	16,79 125
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

15

SFHT / SFKT

		-F50 CTCM235	-M50 CTCM235	-F50 CTPM240	-M50 CTPM240
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		F	M	F	M
		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	22,79 325	16,79 325	22,79 42500	16,79 425
P		●	●	○	○
M		●	●	●	●
K					
N					
S					
H					
O					

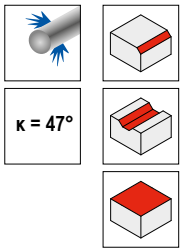
SFHT

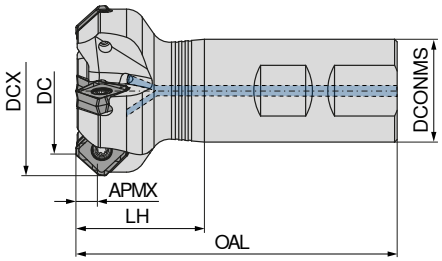
			-F50 CTPM245	-F50 CTCM245	NEW -F10 CTPX715	-F10 CTWN215	-F40 CTC5240
			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN
							
			F	F	F	F	F
			SFHT	SFHT	SFHT	SFHT	SFHT
			51 012 ...	51 012 ...	51 123 ...	51 123 ...	50 514 ...
ISO	RE mm		EUR 1H/17	EUR 1H/17	EUR 1B/61	EUR 1B/61	EUR 1H/17
1204AFER	1						28,36 50900
1204AFFR	1				29,76 02502	27,32 37000	
1204AFSR	1		27,80 47500	27,80 92501			
P			●	●	○		
M			●	●	○		
K					●	○	
N					●	●	
S				○	○		●
H							
O					○	○	

Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 151
Starting Parameter	→ 152	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

MaxiMill – 271-12 End milling cutter



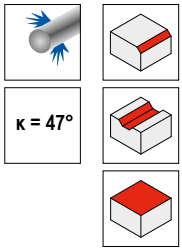


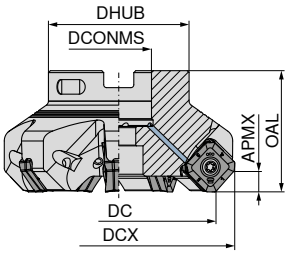
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 786 ... EUR 2B/40	
C271.32.R.03-12-B-40	32	45	3	6,8	100	40	32	18400	3,2	SOHU 1204.. / XOHU 1204..	412,50	**03203**
C271.40.R.04-12-B32-40	40	53	4	6,8	100	40	32	16800	3,2	SOHU 1204.. / XOHU 1204..	515,50	**04004**

	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	
32 - 40	6,78	**054**	11,79	**120**	5,64	**303**	4,14	**859**	170,10	**193**

MaxiMill – 271-12 Face mill

▲ 8 cutting edges per insert

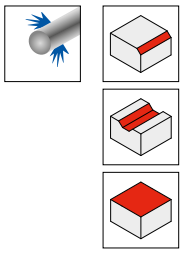


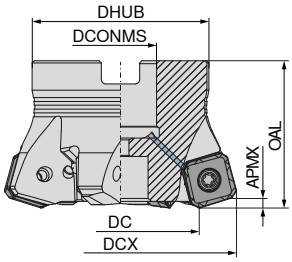


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS H6 mm	RPMX 1/min.	torque moment Nm	Insert	50 787 ... EUR 2B/40		50 787 ... EUR 2B/40	
A271.40.R.04-12	40	53	4	6,8	40	38	16	17900	3,2	SOHU 1204.. / XOHU 1204..			515,50	**04004**
A271.50.R.05-12	50	63	5	6,8	40	43	22	15200	3,2	SOHU 1204.. / XOHU 1204..			528,40	**05005**
A271.63.R.07-12	63	76	7	6,8	40	48	22	13100	3,2	SOHU 1204.. / XOHU 1204..			670,20	**06307**
A271.80.R.06-12	80	93	6	6,8	50	58	27	11300	3,2	SOHU 1204.. / XOHU 1204..	670,20	**08006**		
A271.80.R.08-12	80	93	8	6,8	50	58	27	11300	3,2	SOHU 1204.. / XOHU 1204..			773,20	**08008**
A271.100.R.07-12	100	113	7	6,8	63	78	32	9900	3,2	SOHU 1204.. / XOHU 1204..	850,50	**10007**		
A271.100.R.10-12	100	113	10	6,8	63	78	32	9900	3,2	SOHU 1204.. / XOHU 1204..			966,60	**10010**
A271.125.R.08-12	125	138	8	6,8	63	88	40	8700	3,2	SOHU 1204.. / XOHU 1204..	1.031,00	**12508**		
A271.125.R.12-12	125	138	12	6,8	63	88	40	8700	3,2	SOHU 1204.. / XOHU 1204..			1.186,00	**12512**
A271.160.R.09-12	160	173	9	6,8	63	98	40	7600	3,2	SOHU 1204.. / XOHU 1204..	1.199,00	**16009**[1]		
A271.160.R.14-12	160	173	14	6,8	63	98	40	7600	3,2	SOHU 1204.. / XOHU 1204..			1.392,00	**16014**[1]
A271.200.R.11-12	200	213	11	6,8	63	132	60	6700	3,2	SOHU 1204.. / XOHU 1204..	1.503,00	**20011**[2]		
A271.200.R.17-12	200	213	17	6,8	63	132	60	6700	3,2	SOHU 1204.. / XOHU 1204..			1.698,00	**20017**[2]
A271.250.R.13-12	250	263	13	6,8	63	132	60	6000	3,2	SOHU 1204.. / XOHU 1204..	1.809,00	**25013**[2]		
A271.250.R.21-12	250	263	21	6,8	63	132	60	6000	3,2	SOHU 1204.. / XOHU 1204..			2.124,00	**25021**[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

MaxiMill – 271-12 HFC Face mill





Designation	DC mm	DCX 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	30	50	4	2,6	40	43	22	14600	3,2	SOHU 1204..	528,40	**05004**
A271.63.R.06-12-HFC	43	63	6	2,6	40	48	22	12500	3,2	SOHU 1204..	670,20	**06306**
A271.80.R.07-12-HFC	60	80	7	2,6	50	58	27	10800	3,2	SOHU 1204..	773,20	**08007**

TORX® blade


Clamping key – T


Key D


Power Screw


Molykote

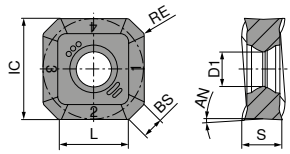

Clamping screw


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 (5078704004)	6,78	**054**	5,04	**040**	11,79	**120**	16,08	**151**	5,64	**303**	4,14	**859**	170,10	**193**
50 - 250	6,78	**054**			11,79	**120**			5,64	**303**	4,14	**859**	170,10	**193**
50 (5078805004)	6,78	**054**	5,46	**050**	11,79	**120**	22,09	**154**	5,64	**303**	4,14	**859**	170,10	**193**

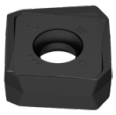
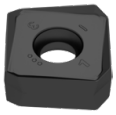
SOHU

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

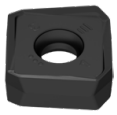
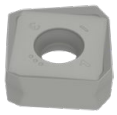


SOHU

SOHU

		-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	33,88 02000	33,88 12000	33,88 32000	33,88 42000	41,67 47000	41,67 92001
P		●	●	●	○	●	●
M			○	●	●	●	●
K		○	○				
N							
S							○
H							
O							

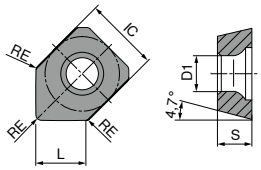
SOHU

		-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 1H/17
1204ABSR	0,8	33,88 52000	33,88 62000	41,67 12001	41,67 17000
P					
M					
K		●	●		
N					
S				●	●
H					
O					

15

XOHU

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



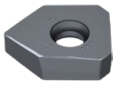
XOHU

XOHU

▲ Masterfinish indexable insert (sweeper insert)

-M50
CTPP235

DRAGONSKIN


XOHU

51 141 ...

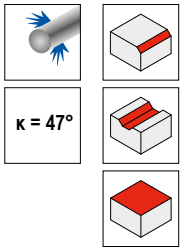
ISO	RE	EUR	
	mm	1B/61	
1204ABSR	0,8	41,95	**12000**
P			●
M			○
K			○
N			
S			
H			
O			

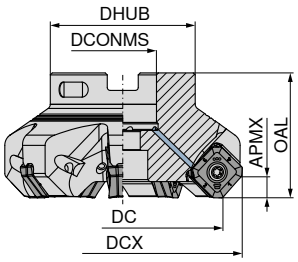
Milling guide

Cutting data standard values	→ 145–148	Starting Parameter	→ 153
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

MaxiMill – 271-17 Face mill

▲ 8 cutting edges per insert





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	502,90	**050**
A271.63.R.06-17	63	79,1	6	8,4	40	22	48	5	SAKU 1706	706,90	**063**
A271.80.R.07-17	80	96,1	7	8,4	50	27	58	5	SAKU 1706	808,80	**080**
A271.100.R.08-17	100	116,1	8	8,4	50	32	78	5	SAKU 1706	931,20	**100**
A271.125.R.10-17	125	141,1	10	8,4	63	40	88	5	SAKU 1706	1.074,00	**125**
A271.160.R.12-17	160	176,1	12	8,4	63	40	104	5	SAKU 1706	1.265,00	**16000**[1)]
A271.200.R.13-17	200	216,1	13	8,4	63	60	134	5	SAKU 1706	1.563,00	**20000**[2)]
A271.250.R.15-17	250	266,1	15	8,4	63	60	134	5	SAKU 1706	1.890,00	**25000**[2)]

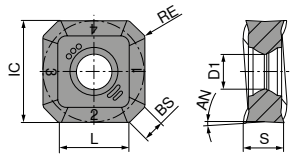
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant
2) With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm / Without Through Coolant

	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	6,13 **037**	12,83 **114**	5,64 **303**	5,27 **302**	170,10 **193**

15

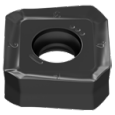
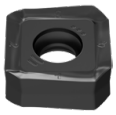
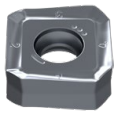
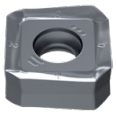
SAKU

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

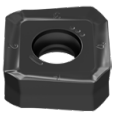
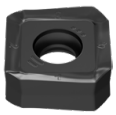
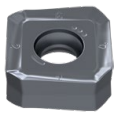


SAKU

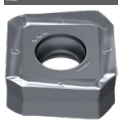
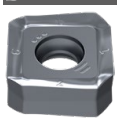
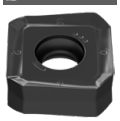
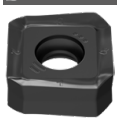
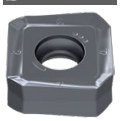
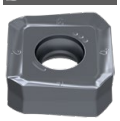
SAKU

		-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		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	38,28 270	38,28 270	38,28 070	38,28 070
P		●	●	●	●
M					
K					
N					
S					
H					
O					

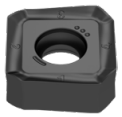
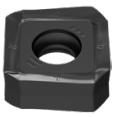
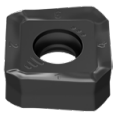
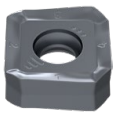
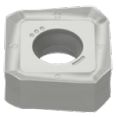
SAKU

		-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	38,28 020	38,28 020	38,28 120	38,28 120
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

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	38,28 220	38,28 220	38,28 320	38,28 320	38,28 420	38,28 420	47,10 470
P		●	●	●	●	○	○	●
M		●	●	●	●	●	●	●
K								
N								
S								
H								
O								

SAKU

		-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 1H/17	EUR 1H/17
1706ABSR	0,8	47,10 92001	38,28 520	38,28 520	38,28 620	38,28 620	47,10 520	47,10 570
P		●						
M		●						
K			●	●	●	●		
N								
S		○					●	●
H								
O								

Milling guide

Cutting data standard values	→ 145–148	Starting Parameter	→ 153
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

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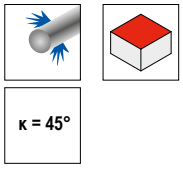
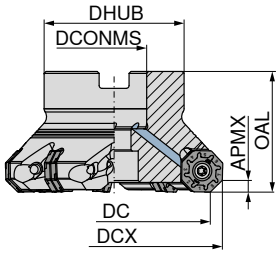
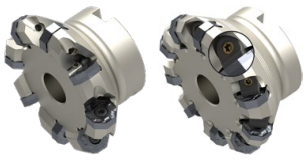
MaxiMill – 273-06 Shell mill

▲ 16 cutting edges per insert







Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	50 741 ... EUR 2B/40		50 741 ... EUR 2B/40	
A273.40.R.03-06	40	50,2	3	3,5	40	16	38	5	OAKU / XAHT 0605	482,30	**040**		
A273.40.R.04-06	40	50,2	4	3,5	40	16	38	5	OAKU / XAHT 0605	505,90	**140** 5)		
A273.50.R.05-06	50	60,2	5	3,5	40	22	43	5	OAKU / XAHT 0605	567,30	**050**		
A273.63.R.07-06	63	73,2	7	3,5	40	22	48	5	OAKU / XAHT 0605	681,00	**063**		
A273.80.R.08-06	80	90,2	8	3,5	50	27	58	5	OAKU / XAHT 0605	794,30	**080**		
A273.80.R.10-06	80	90,2	10	3,5	50	27	58	4	OAKU / XAHT 0605			1.210,00	**180** 1)
A273.100.R.10-06	100	110,2	10	3,5	50	32	78	5	OAKU / XAHT 0605	936,30	**100**		
A273.100.R.14-06	100	110,2	14	3,5	50	32	78	4	OAKU / XAHT 0605			1.547,00	**200** 1)
A273.125.R.12-06	125	135,2	12	3,5	63	40	88	5	OAKU / XAHT 0605	1.050,00	**125**		
A273.125.R.17-06	125	135,2	17	3,5	63	40	88	4	OAKU / XAHT 0605			1.795,00	**225** 1)
A273.160.R.14-06	160	170,2	14	3,5	63	40	104	5	OAKU / XAHT 0605	1.244,00	**160** 4)		
A273.160.R.20-06	160	170,2	20	3,5	63	40	104	4	OAKU / XAHT 0605			2.123,00	**260** 2)
A273.200.R.25-06	200	210,2	25	3,5	63	60	153	4	OAKU / XAHT 0605			2.655,00	**300** 3)
A273.250.R.31-06	250	260,2	31	3,5	63	60	153	4	OAKU / XAHT 0605			3.247,00	**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
3) Version with Wedge, without internal coolant supply / With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm
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

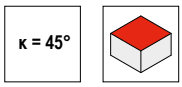

Clamping screw

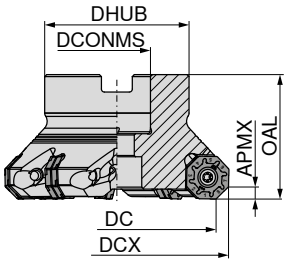

Torque screwdriver

Spare parts DC	TORX® blade 80 950 ... EUR Y7		Clamping key – T 80 397 ... EUR Y7		Clamping wedge screw 70 950 ... EUR 2A/28		Clamping wedge Face mill 70 950 ... EUR 2A/28		Key D 80 950 ... EUR Y7		Power Screw 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
40	6,13	**037**	5,04	**040**					12,83	**114**	16,08	**151**	5,27	**302**	170,10	**193**
50	6,13	**037**	5,46	**050**					12,83	**114**	22,09	**154**	5,27	**302**	170,10	**193**
63 - 80	6,13	**037**							12,83	**114**			5,27	**302**	170,10	**193**
80 - 100	6,13	**036**			7,61	**844**	30,36	**845**	11,96	**113**					170,10	**193**
100 - 125	6,13	**037**							12,83	**114**			5,27	**302**	170,10	**193**
125	6,13	**036**			7,61	**844**	30,36	**845**	11,96	**113**					170,10	**193**
160	6,13	**037**							12,83	**114**			5,27	**302**	170,10	**193**
160 - 250	6,13	**036**			7,61	**844**	30,36	**845**	11,96	**113**					170,10	**193**

MaxiMill – 273-06 Shell mill

▲ 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	4	OAKU / XAHT 0605	1.591,00	**08010**[1]
A273.100.R.14A14-06	100	110,2	14	3,5	50	32	78	4	OAKU / XAHT 0605	2.166,00	**10014**[1]
A273.125.R.17A17-06	125	135,2	17	3,5	63	40	88	4	OAKU / XAHT 0605	2.547,00	**12517**[1]
A273.160.R.20A20-06	160	170,2	20	3,5	63	40	104	4	OAKU / XAHT 0605	3.007,00	**16020**[2]
A273.200.R.25A25-06	200	210,2	25	3,5	63	60	153	4	OAKU / XAHT 0605	3.761,00	**20025**[3]
A273.250.R.31A31-06	250	260,2	31	3,5	63	60	153	4	OAKU / XAHT 0605	4.619,00	**25031**[3]

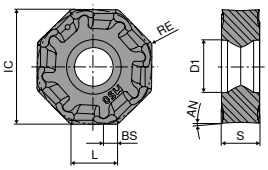
1) Version with Wedge
2) Version with Wedge / With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm
3) Version with Wedge / With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm

	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	6,13 **036**	7,61 **844**	30,36 **845**	11,96 **113**	5,64 **303**	47,44 **199**	170,10 **193**

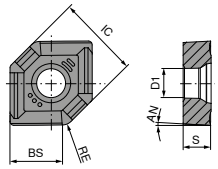
15

OAKU / XAHT

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

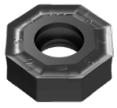
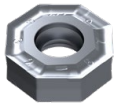


OAKU

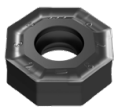
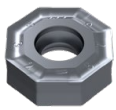


XAHT

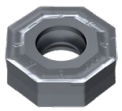
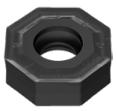
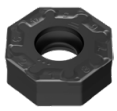
OAKU

		-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		OAKU	OAKU	OAKU	OAKU
		51 000 ...	51 001 ...	51 000 ...	51 001 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060508SR	0,8	32,28 258	32,28 258	32,28 058	32,28 058
P		●	●	●	●
M					
K					
N					
S					
H					
O					

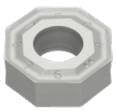
OAKU

		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		OAKU	OAKU	OAKU	OAKU
		51 000 ...	51 001 ...	51 000 ...	51 001 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060508SR	0,8	32,28 008	32,28 008	32,28 108	32,28 108
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

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							40,37 458
060508SR	0,8	32,28 208	32,28 208	32,28 308	32,28 308	32,28 408	32,28 408	
P		●	●	●	●	○	○	●
M		●	●	●	●	●	●	●
K								
N								
S								
H								
O								

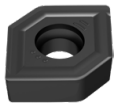
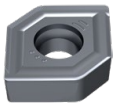
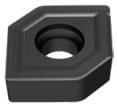
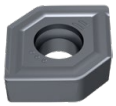
OAKU

		-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 1H/17	EUR 1H/17
060508ER	0,8	40,37 90801					40,37 550	40,37 50801
060508SR	0,8		32,28 508	32,28 508	32,28 608	32,28 608		
P		●						
M		●						
K			●	●	●	●		
N								
S		○					●	●
H								
O								

15

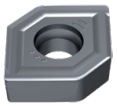
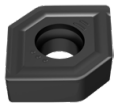
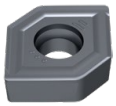
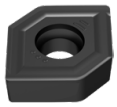
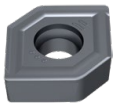
XAHT

▲ Masterfinish indexable insert (sweeper insert)

		-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	39,97 275	39,97 075	39,97 025	39,97 125
P		●	●	●	●
M					○
K				○	○
N					
S					
H					
O					

XAHT

▲ Masterfinish indexable insert (sweeper insert)

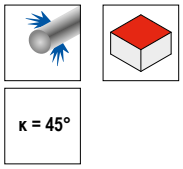
		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-M50 CTCK215	-M50 CTPK220
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XAHT	XAHT	XAHT	XAHT	XAHT
		51 014 ...	51 014 ...	51 014 ...	51 014 ...	51 014 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060525SR	2,5	39,97 225	39,97 325	39,97 425	39,97 525	39,97 625
P		●	●	○		
M		●	●	●		
K					●	●
N						
S						
H						
O						

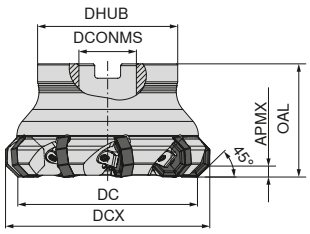
Milling guide

Cutting data standard values	→ 145–148	Starting Parameter	→ 154
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

MaxiMill – 273-08 Shell mill

▲ 16 cutting edges per insert





NEW NEW

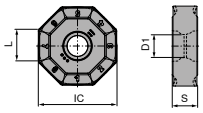
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	torque moment Nm	Insert	50 779 ... EUR 2B/40		50 779 ... EUR 2B/40	
A273.63.R.05-08	63	76,7	5	5	50	22	48	5	ONKU 0806	588,10	**06300**		
A273.63.R.06-08	63	76,7	6	5	50	22	48	5	ONKU 0806			859,00	**16300**[1]
A273.80.R.06-08	80	93,7	6	5	50	27	58	5	ONKU 0806	714,80	**08000**		
A273.80.R.08-08	80	93,7	8	5	50	27	58	4	ONKU 0806			1.086,00	**18000**[1]
A273.100.R.07-08	100	113,7	7	5	63	32	78	5	ONKU 0806	743,70	**10000**		
A273.100.R.09-08	100	113,7	9	5	63	32	78	4	ONKU 0806			1.131,00	**20000**[1]
A273.125.R.08-08	125	138,7	8	5	63	40	88	5	ONKU 0806	865,20	**12500**		
A273.125.R.11-08	125	138,7	11	5	63	40	88	4	ONKU 0806			1.406,00	**22500**[1]
A273.160.R.10-08	160	173,7	10	5	63	40	98	5	ONKU 0806	1.339,00	**16000**[3]		
A273.160.R.14-08	160	173,7	14	5	63	40	98	4	ONKU 0806			1.710,00	**26000**[2]

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

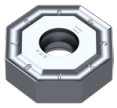
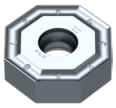
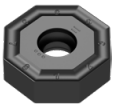
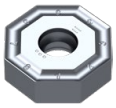
Spare parts for Article no.	TORX® blade 80 950 ... EUR Y7		Clamping wedge screw 70 950 ... EUR 2A/28		Clamping wedge Face mill 70 950 ... EUR 2A/28		Key D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
50 779 06300	6,78	**055**					16,17	**129**	5,64	**303**	5,46	**821**	170,10	**193**
50 779 16300	6,13	**036**	7,61	**844**	30,36	**845**	11,96	**113**	5,64	**303**			170,10	**193**
50 779 08000	6,78	**055**					16,17	**129**	5,64	**303**	5,46	**821**	170,10	**193**
50 779 18000	6,13	**036**	7,61	**844**	30,36	**845**	11,96	**113**	5,64	**303**			170,10	**193**
50 779 10000	6,78	**055**					16,17	**129**	5,64	**303**	5,46	**821**	170,10	**193**
50 779 20000	6,13	**036**	7,61	**844**	30,36	**845**	11,96	**113**	5,64	**303**			170,10	**193**
50 779 12500	6,78	**055**					16,17	**129**	5,64	**303**	5,46	**821**	170,10	**193**
50 779 22500	6,13	**036**	7,61	**844**	30,36	**845**	11,96	**113**	5,64	**303**			170,10	**193**
50 779 16000	6,78	**055**					16,17	**129**	5,64	**303**	5,46	**821**	170,10	**193**
50 779 26000	6,13	**036**	7,61	**844**	30,36	**845**	11,96	**113**	5,64	**303**			170,10	**193**

ONKU

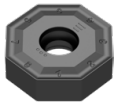
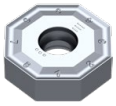
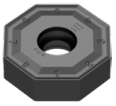
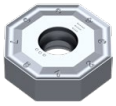
Designation	IC mm	D1 mm	L mm	S mm
ONKU 0806..	22	5,8	8,45	6,45



ONKU

		NEW	NEW	NEW	NEW	NEW
		-M50 CTCP230	-M50 CTPP235	-M50 CTPM240	-M50 CTCK215	-M50 CTPK220
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		ONKU	ONKU	ONKU	ONKU	ONKU
		51 163 ...	51 163 ...	51 163 ...	51 163 ...	51 163 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
080608SN	0,8	32,97 00800	32,97 10800	32,97 20800	32,97 50800	32,97 60800
P		●	●	○		
M			○	●		
K		○	○		●	●
N						
S						
H						
O						

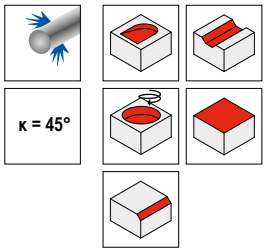
ONKU

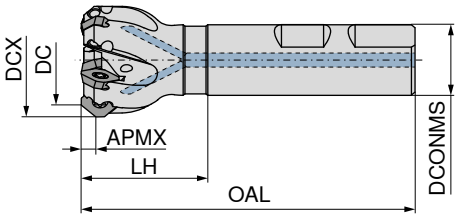
		NEW	NEW	NEW	NEW
		-R50 CTCP230	-R50 CTPP235	-R50 CTCK215	-R50 CTPK220
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		ONKU	ONKU	ONKU	ONKU
		51 164 ...	51 164 ...	51 164 ...	51 164 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
080608SN	0,8	32,97 00800	32,97 10800	32,97 50800	32,97 60800
P		●	●		
M			○		
K		○	○	●	●
N					
S					
H					
O					

Milling guide

Cutting data standard values	→ 145–148	Starting Parameter	→ 155
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

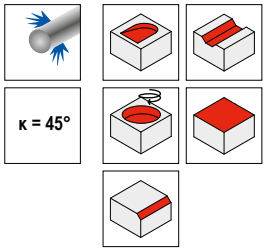
MaxiMill – 270-09 End milling cutter

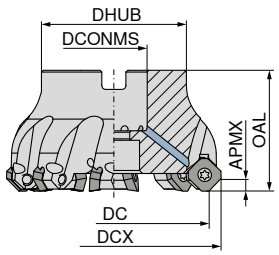




Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	50 666 ... EUR 2B/40	
C270.06.R.01-09	6	14,4	1	4	80	32	16	1,2	SD.. 0903..	171,80	006
C270.12.R.01-09	12	20,4	1	4	80	32	16	1,2	SD.. 0903..	189,70	012
C270.16.R.02-09	16	24,4	2	4	90	40	20	1,8	SD.. 0903..	216,00	016
C270.20.R.03-09	20	28,4	3	4	90	40	20	1,8	SD.. 0903..	274,80	020
C270.25.R.04-09	25	33,4	4	4	100	44	25	1,8	SD.. 0903..	389,40	025
C270.32.R.05-09	32	40,4	5	4	95	36	25	1,8	SD.. 0903..	458,10	032

MaxiMill – 270-09 Shell mill





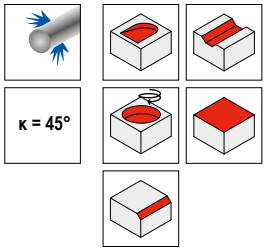
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 705 ... EUR 2B/40		50 706 ... EUR 2B/40	
A270.32.R.05-09	32	40,4	5	4	40	34	16	1,8	SD../XD.. 0903..			438,40	532
A270.40.R.04-09	40	48,4	4	4	40	38	16	1,8	SD../XD.. 0903..	449,90	540		
A270.40.R.06-09	40	48,4	6	4	40	38	16	1,8	SD../XD.. 0903..			507,20	540
A270.50.R.06-09	50	58,4	6	4	40	43	22	1,8	SD../XD.. 0903..	522,00	550		
A270.50.R.08-09	50	58,4	8	4	40	43	22	1,8	SD../XD.. 0903..			625,00	550
A270.63.R.08-09	63	71,4	8	4	40	48	22	1,8	SD../XD.. 0903..	633,10	563		
A270.63.R.10-09	63	71,4	10	4	40	48	22	1,8	SD../XD.. 0903..			788,60	563
A270.80.R.10-09	80	88,4	10	4	50	58	27	1,8	SD../XD.. 0903..	800,00	580		
A270.80.R.12-09	80	88,4	12	4	50	58	27	1,8	SD../XD.. 0903..			948,70	580
A270.100.R.12-09	100	108,4	12	4	50	78	32	1,8	SD../XD.. 0903..	965,20	600		
A270.100.R.14-09	100	108,4	14	4	50	78	32	1,8	SD../XD.. 0903..			1.121,00	600
A270.125.R.12-09	125	133,4	12	4	63	88	40	1,8	SD../XD.. 0903..	1.129,00	625		

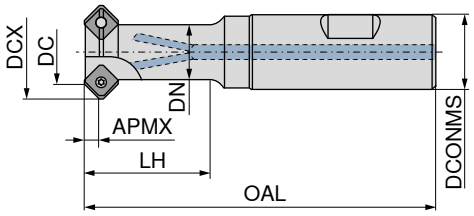
▲ 50 705 ... Normal pitch for a broad spectrum of use on aluminum alloys, non-ferrous metals, and soft steel materials
▲ 50 706 ... Fine pitch for highest feed rates, predominantly used on steel and cast materials

15

MaxiMill – 272-09 Chamfer milling cutter

▲ Usable on front and rear cutting edges





Designation	DC	DCX	ZNF	APMX	DN	OAL	LH	DCONMS	torque moment	Insert	50 669 ... EUR 2B/40	
	mm	mm		mm	mm	mm	mm	mm	Nm			
C272.06.R.01-09	6	14,4	1	4	10	91	24,0	16	1,2	SD.. 0903..	204,30	**10600**
C272.08.R.01-09	8	16,4	1	4	10	91	25,5	16	1,2	SD.. 0903..	227,70	**008**
C272.12.R.01-09	12	20,4	1	4	12	91	26,0	16	1,2	SD.. 0903..	234,00	**012**
C272.16.R.02-09	16	24,4	2	4	15	97	30,0	20	1,8	SD.. 0903..	287,90	**016**
C272.18.R.02-09	18	26,4	2	4	16	97	30,0	20	1,8	SD.. 0903..	287,90	**018**
C272.25.R.03-09	25	33,4	3	4	21	109	35,0	25	1,8	SD.. 0903..	336,90	**025**

TORX® blade

Key D


Molykote

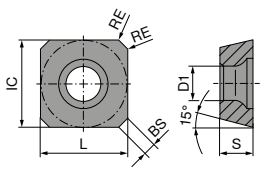

Clamping screw


Torque screwdriver

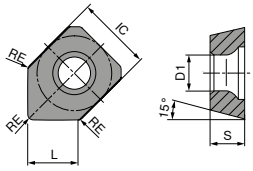
Spare parts	80 950 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
DC										
6 - 12	6,13	**033**	10,05	**110**	5,64	**303**	4,06	**365**	153,30	**191**
16 - 25	6,13	**033**	10,05	**110**	5,64	**303**	3,32	**115**	153,30	**191**

SDHW / SDNT / SDHT / XDHW

Designation	IC	D1	L	BS	S
	mm	mm	mm	mm	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

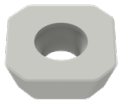
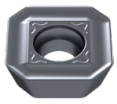
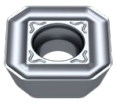
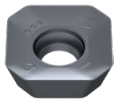


SD..

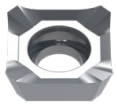
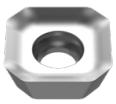


XDHW

SDHW / SDNT / SDHT

	TCM10	-29 CTCP230	-29 CTPP235	-33 CTPM240	-33P CTPM240	-F50 CTPM245	-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	20,99 **898**	18,12 **020**	18,12 **120**	20,72 **420**	21,80 **420**	25,76 **470**	25,76 **92001**
P	●	●	●	○	○	●	●
M			○	●	●	●	●
K	○	○	○				
N							
S							○
H							
O							

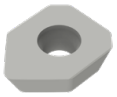
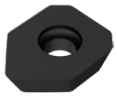
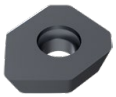
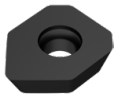
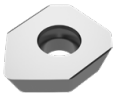
SDNT / SDHT

			-31 CTCK215	NEW -F10 CTPX715	-27P H216T	-M31 CTC5240	-F50 CTCS245
				DRAGONSKIN		DRAGONSKIN	DRAGONSKIN
							
			SDNT	SDHT	SDHT	SDHT	SDHT
			51 029 ...	51 160 ...	50 426 ...	50 421 ...	51 109 ...
ISO	RE mm		EUR 1B/61	EUR 1A/90	EUR 1A/90	EUR 1H/17	EUR 1H/17
0903AEFN	1			24,84 **02002**	20,72 **548**		
0903AESN	1		17,35 **520**			25,76 **509**	25,76 **57100**
P				○			
M				○			
K			●	●	○		
N				●	●		
S				○		●	●
H							
O				○	○		

15

XDHW

▲ Masterfinish indexable insert (sweeper insert)

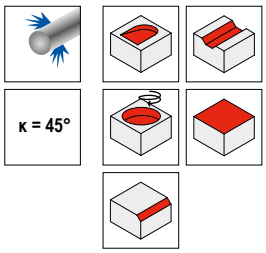
		TCM10	CTCP230	CTPP235	CTCK215	H216T
			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
						
		CERMET				
		XDHW	XDHW	XDHW	XDHW	XDHW
		50 449 ...	**51 015 ...**	**51 015 ...**	**51 015 ...**	**50 449 ...**
ISO	RE mm	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/18	EUR 1B/61
0903AEEN	1				24,65 **520**	
0903AEFN	1					21,80 **548**
0903AESN	1	22,75 **898**	25,48 **020**	25,48 **120**		
P		●	●	●		
M				○		
K		○	○	○	●	○
N						●
S						
H						
O						○

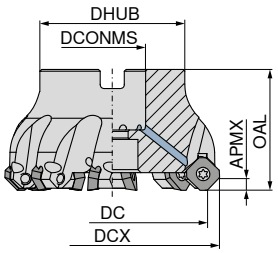
Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 156
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

MaxiMill – 270-12 Shell mill

▲ 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





Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS H6 mm	OAL mm	DHUB mm	torque moment Nm	Insert	50 705 ... EUR 2B/40		50 706 ... EUR 2B/40	
A270.40.R.03-12	40	54	3	6	16	40	38	5	SD../XD.. 1204..	513,70	**040**		
A270.40.R.04-12	40	54	4	6	16	40	38	5	SD../XD.. 1204..			513,70	**040**
A270.50.R.04-12	50	64	4	6	22	40	43	5	SD../XD.. 1204..	580,80	**050**		
A270.50.R.05-12	50	64	5	6	22	40	43	5	SD../XD.. 1204..			580,80	**050**
A270.63.R.04-12	63	77	4	6	22	40	48	5	SD../XD.. 1204..	664,30	**063**		
A270.63.R.06-12	63	77	6	6	22	40	48	5	SD../XD.. 1204..			760,80	**063**
A270.80.R.05-12	80	94	5	6	27	50	58	5	SD../XD.. 1204..	770,60	**080**		
A270.80.R.08-12	80	94	8	6	27	50	58	5	SD../XD.. 1204..			948,70	**080**
A270.100.R.06-12	100	114	6	6	32	50	78	5	SD../XD.. 1204..	907,80	**100**		
A270.100.R.10-12	100	114	10	6	32	50	78	5	SD../XD.. 1204..			1.111,00	**100**
A270.125.R.07-12	125	139	7	6	40	63	88	5	SD../XD.. 1204..	1.109,00	**125**		
A270.125.R.12-12	125	139	12	6	40	63	88	5	SD../XD.. 1204..			1.500,00	**125**
A270.160.R.08-12	160	174	8	6	40	63	94	5	SD../XD.. 1204..	1.417,00	**160** [1]		

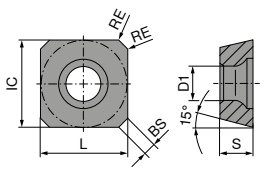
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

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	
DC														
40	6,13	**037**	5,04	**040**	12,83	**114**	16,08	**151**	5,64	**303**	3,19	**01200**	170,10	**193**
50 - 160	6,13	**037**			12,83	**114**			5,64	**303**	3,19	**01200**	170,10	**193**

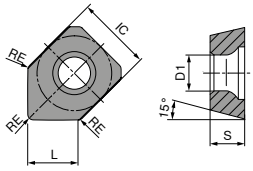
15

SDHT / SDHW / SDMT / XDHW

Designation	IC	D1	L	BS	S
	mm	mm	mm	mm	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



SD..

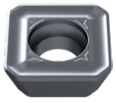


XDHW

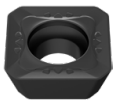
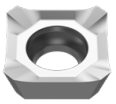
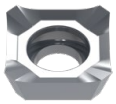
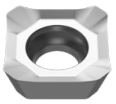
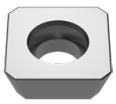
SDHT / SDHW / SDMT

		TCM10	-R TCM10	-29R CTCP230	-R CTCP230	CTCP230
				DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		CERMET	CERMET			
		SDHT	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	22,60 900				
1204AESN	1,0		23,54 899	19,26 020	21,97 020	22,60 020
P		●	●	●	●	●
M						
K		○	○	○	○	○
N						
S						
H						
O						

SDMT / SDHT / SDHW

		-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	19,26 120	21,97 120	22,60 120	22,60 425	29,66 475	29,66 92501
P		●	●	●	○	●	●
M		○	○	○	●	●	●
K		○	○	○			
N							
S							○
H							
O							

SDMT / SDHW / SDHT

		-31 CTCK215	-R CTCK215	-27 H216T	NEW -F10 CTPX715	-27P H216T	H216T
		DRAGONSKIN	DRAGONSKIN		DRAGONSKIN		
							
		SDMT	SDHW	SDHT	SDHT	SDHT	SDHW
		51 059 ...	51 008 ...	50 426 ...	51 160 ...	50 426 ...	50 428 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1A/90	EUR 1A/90	EUR 1A/90	EUR 1B/61
1204AEEN	1,0	18,75 **520**	22,60 **520**				
1204AEFN	0,2			22,60 **504**	27,13 **02502**		
1204AEFN	1,0					22,60 **554**	
1204AESN	0,2						18,75 **600**
P					○		
M					○		
K		●	●	○	●	○	○
N				●	●	●	●
S					○		
H							
O				○	○	○	○

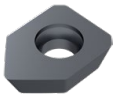
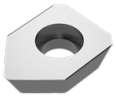
SDHT

		-M31 CTC5240	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN
			
		SDHT	SDHT
		50 421 ...	51 109 ...
ISO	RE mm	EUR 1H/17	EUR 1H/17
1204AESN	1	29,66 **512**	29,66 **57600**
P			
M			
K			
N			
S		●	●
H			
O			

15

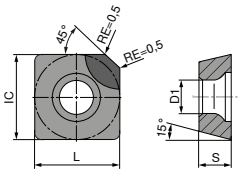
XDHW

▲ Masterfinish indexable insert (sweeper insert)

		TCM10	CTCP230 DRAGONSKIN	CTPP235 DRAGONSKIN	CTCK215 DRAGONSKIN	H216T
						
		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/61	EUR 1B/61
1204AEEN	1				29,76 525	
1204AEFN	1					28,15 600
1204AESN	1	29,76 900	31,20 025	31,20 125		
P		●	●	●		
M				○		
K		○	○	○	●	○
N						●
S						
H						
O						○

SDHW

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



SDHW

SDHW

ISO	CTDPS30 DIAMOND SDHW 51 900 ... EUR V9		CTBS10U CBN SDHW 51 900 ... EUR V9	
1204AEFN-2	75,65	100 [1]		
1204AEFN-3	75,65	102 [2]		
1204AETN-2			69,39	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	→ 145–148	Machining strategy	→ 156
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

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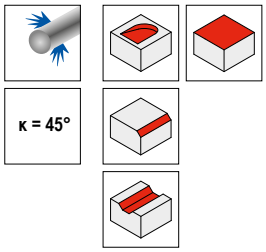
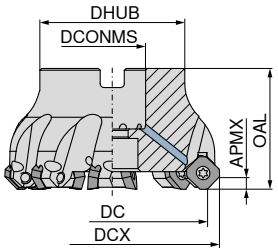
MaxiMill – 270-19 Shell mill





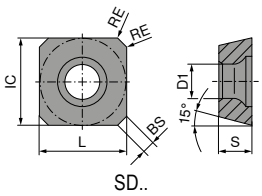
										Left-hand		Right-hand	
										50 698 ...		**50 698 ...**	
Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	OAL mm	DHUB mm	torque moment Nm	Insert	EUR 2B/40		EUR 2B/40	
A270.125.R.07-19	125	146,4	7	10	40	63	88	5	SD.. 1907..			994,70	**12507**
A270.160.R.09-19	160	181,4	9	10	40	63	104	5	SD.. 1907..			1.260,00	**16009**[1)]
A270.200.R.11-19	200	221,1	11	10	60	63	134	5	SD.. 1907..			1.525,00	**20011**[2)]
A270.250.L.14-19	250	271,4	14	10	60	63	134	5	SD.. 1907..	2.851,00	**75014**[2)]		
A270.250.R.14-19	250	271,4	14	10	60	63	134	5	SD.. 1907..			2.851,00	**25014**[2)]
A270.315.L.17-19	315	336,4	17	10	60	63	226	5	SD.. 1907..	3.377,00	**81517**[4)]		
A270.315.R.17-19	315	336,4	17	10	60	63	226	5	SD.. 1907..			3.377,00	**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	6,13	**037**	12,83	**114**	5,64	**303**	5,27	**302**	16,49	**01500**	19,02	**01400**	170,10	**193**

SDKT

Designation	IC	D1	L	BS	S	AN
	mm	mm	mm	mm	mm	°
SDKT 1907..	19,15	6	19,15	1,5	7,15	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	40,78 **22001**	40,78 **07000**	40,78 **02100**	40,78 **12000**	40,78 **12300**	40,78 **22200**	40,78 **52000**
P		●	●	●	●	●	●	
M					○	○	●	
K				○	○	○		●
N								
S								
H								
O								

Milling guide

Cutting data standard values	→ 145–148	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

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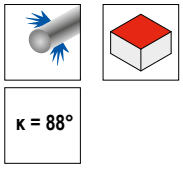
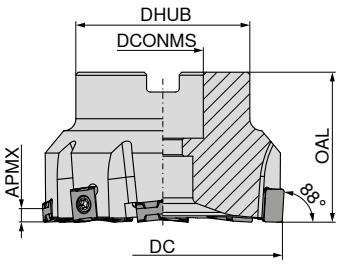
MaxiMill – HEC 11 Shell mill

▲ not adjustable





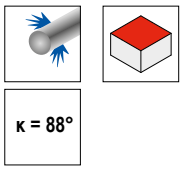
50 725 ...

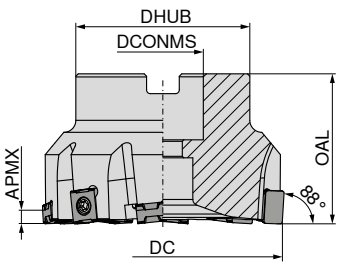
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
AHEC.50.R.06-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	686,50	**050**
AHEC.63.R.08-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	824,20	**063**
AHEC.80.R.10-11	80	10	6	50	58	27	8000	3,2	LNHX 1106	1.007,00	**080**
AHEC.100.R.12-11	100	12	6	50	78	32	6400	3,2	LNHX 1106	1.176,00	**100**
AHEC.125.R.12-11	125	12	6	63	88	40	5100	3,2	LNHX 1106	1.343,00	**125**
AHEC.125.R.16-11	125	16	6	63	88	40	5100	3,2	LNHX 1106	1.353,00	**12516**
AHEC.160.R.20-11	160	20	6	63	100	40	4000	3,2	LNHX 1106	1.972,00	**160** [1)]

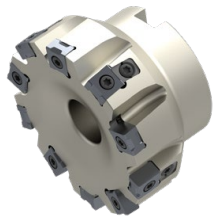
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

MaxiMill – HEC 11 Shell mill

▲ Axially adjustable with same tooth pitch







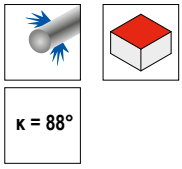
50 733 ...

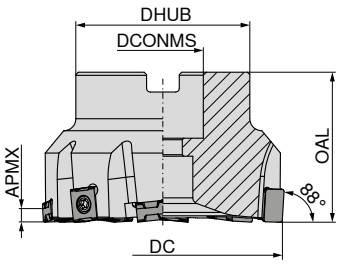
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
AHEC.50.R.06A03-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	1.040,00	**050**
AHEC.63.R.08A04-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	1.295,00	**063**
AHEC.80.R.10A05-11	80	10	6	50	58	27	8000	3,2	LNHX 1106	1.597,00	**080**
AHEC.100.R.12A06-11	100	12	6	50	78	32	6400	3,2	LNHX 1106	1.885,00	**100**
AHEC.125.R.16A08-11	125	16	6	63	88	40	5100	3,2	LNHX 1106	2.549,00	**125**
AHEC.160.R.20A10-11	160	20	6	63	100	40	4000	3,2	LNHX 1106	3.151,00	**160** [1)]

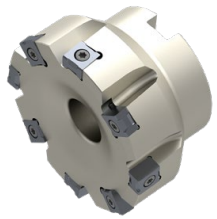
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

MaxiMill – HEC 11 Shell mill

▲ with irregular pitch, non adjustable







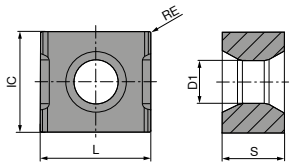
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 733 ... EUR 2B/40	
AHEC.50.R.04B-11	50	4	6	40	48	22	12700	3,2	LNHX 1106	535,50	**550**
AHEC.63.R.06B-11	63	6	6	40	48	22	10100	3,2	LNHX 1106	665,50	**563**
AHEC.80.R.08B-11	80	8	6	50	58	27	8000	3,2	LNHX 1106	852,90	**580**
AHEC.100.R.10B-11	100	10	6	50	78	32	6400	3,2	LNHX 1106	1.096,00	**600**
AHEC.125.R.12B-11	125	12	6	63	88	40	5100	3,2	LNHX 1106	1.341,00	**625**
AHEC.160.R.14B-11	160	14	6	63	100	40	4000	3,2	LNHX 1106	1.664,00	**660** [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		 Molykote 70 950 ... EUR 2A/28		 Coolant Disc 70 950 ... EUR 2A/28		 Clamping screw 70 950 ... EUR 2A/28		 Wedge 70 950 ... EUR 2A/28		 Torque screwdriver 80 950 ... EUR Y7	
50 - 63	6,13	**036**	5,64	**303**	31,86	**852**	4,14	**113**			170,10	**193**
80	6,13	**036**	5,64	**303**	32,54	**853**	4,14	**113**	47,44	**199**	170,10	**193**
100	6,13	**036**	5,64	**303**	36,51	**854**	4,14	**113**			170,10	**193**
125	6,13	**036**	5,64	**303**	48,13	**855**	4,14	**113**			170,10	**193**
160	6,13	**036**	5,64	**303**			4,14	**113**			170,10	**193**

LNHX

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



LNHX

LNHX

ISO	RE mm	CTEP210 DRAGONSKIN CERMET LNHX 51 046 ... EUR 1B/79		CTCK215 DRAGONSKIN LNHX 51 046 ... EUR 1B/61		-R50 CTCK215 DRAGONSKIN LNHX 51 024 ... EUR 1B/61		-Q CTCK215 DRAGONSKIN LNHX 51 045 ... EUR 1B/61	
1106PNER	0,5			34,05	520	34,05	520		
1106ZZER	0,5							34,05	520 1)
1106PNER	0,8	39,48	820						
110616EN	1,6			34,05	51600				
P		●							
M									
K		●		●		●		●	
N									
S									
H									
O									

1) -Q = trailing edge insert

LNHX

ISO	RE mm	CTPK220 DRAGONSKIN LNHX 51 046 ... EUR 1B/61		-R50 CTPK220 DRAGONSKIN LNHX 51 024 ... EUR 1B/61		CTN3105 CERAMIC LNHX 50 500 ... EUR 1G/55		CTL3215 CBN LNHX 51 046 ... EUR 1G/21		-Q CTL3215 CBN LNHX 51 045 ... EUR 1G/21	
110608EN	0,8			34,05	608						
1106PNER	0,5	34,05	620	34,05	620						
1106PNSR	0,5					32,10	904				
1106PNSR								178,60	87200		
1106ZZER										178,60	87000 1)
P											
M											
K		●		●		●		●		●	
N											
S											
H								○		○	
O											

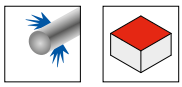
1) -Q = trailing edge insert

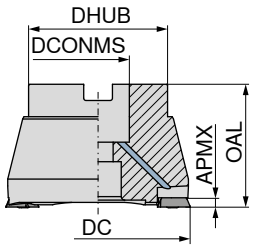
Milling guide

Cutting data standard values	→ 145–148	Assembly instructions	→ 157
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

Finishing cutter F 5000 A

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





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..	407,20	**421**
F5000A.52.2.43.IK	52	2	0,2	43	22	48	3,2	TEHX 16T3..	492,10	**521**
F5000A.66.2.53.IK	66	2	0,2	53	27	60	3,2	TEHX 16T3..	574,20	**661**
F5000A.80.2.53.IK	80	2	0,2	53	27	60	3,2	TEHX 16T3..	657,80	**801**
F5000A.100.2.53	100	2	0,2	53	32	70	3,2	TEHX 16T3..	740,00	**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	6,13 **036**	5,74 **088**	12,83 **114**	30,50 **121**	4,86 **017**	5,64 **303**	4,49 **028**	170,10 **193**
52	6,13 **036**	5,74 **088**	11,96 **113**		4,86 **017**	5,64 **303**	4,49 **028**	170,10 **193**
66	6,13 **036**	5,74 **088**	11,96 **113**		4,86 **017**	5,64 **303**	4,49 **028**	170,10 **193**
80	6,13 **036**	5,74 **088**	11,96 **113**		4,86 **017**	5,64 **303**	4,49 **028**	170,10 **193**
100	6,13 **036**	5,74 **088**	11,96 **113**	30,50 **121**	4,86 **017**	5,64 **303**	4,49 **028**	170,10 **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.

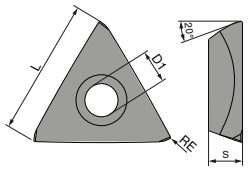
The screws for the adjustment of the axial run-out are mounted on every milling cutter and have to be tightened to a preset value. Otherwise there is the danger that the screws loosen during the machining operation. This can result in damage of the workpiece or tool and also cause danger for the machine 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

WTN1205

TEHX

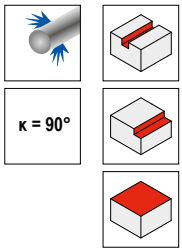
56 327 ...

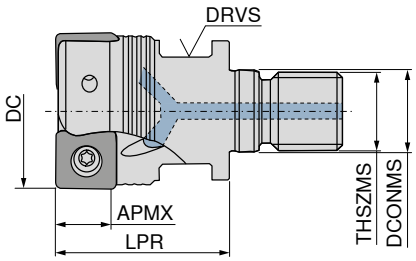
ISO	RE mm	EUR WB	
16T3ZF	0,2	27,85	**151**
P			●
M			●
K			●
N			
S			
H			●
O			

Milling guide

Cutting data standard values	→ 145–148	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

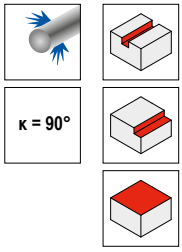
MaxiMill – 491-09 Screw in cutter

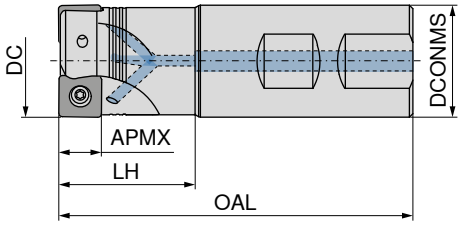




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 773 ... EUR 2B/40	
G491.25.R.03-09	25	3	6	35	M12	12,5	17	2	SNHU 09T3	444,30	125
G491.32.R.03-09	32	3	6	35	M16	17,0	24	2	SNHU 09T3	451,00	132
G491.32.R.04-09	32	4	6	35	M16	17,0	24	2	SNHU 09T3	503,90	232

MaxiMill – 491-09 End milling cutter





Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	torque moment Nm	Insert	50 774 ... EUR 2B/40		50 774 ... EUR 2B/40	
C491.25.R.03-09-B-32	25	3	6	89	32	25	23500	2	SNHU 09T3			451,00	425
C491.25.R.03-09-A-50-225	25	3	6	225	50	25	23500	2	SNHU 09T3	451,00	325		
C491.32.R.03-09-B-40	32	3	6	101	40	32	19600	2	SNHU 09T3			464,10	632
C491.32.R.04-09-B-40	32	4	6	101	40	32	19600	2	SNHU 09T3			503,90	432
C491.32.R.03-09-A-63-250	32	3	6	250	63	32	19600	2	SNHU 09T3	464,10	532		
C491.32.R.04-09-A-63-250	32	4	6	250	63	32	19600	2	SNHU 09T3	503,90	332		

TORX® blade


Key D


Molykote

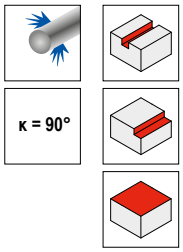

Clamping screw

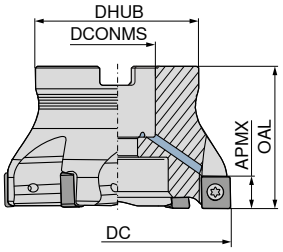

Torque screwdriver

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	6,78	053	11,50	119	5,64	303	3,97	710	170,10	193

15

MaxiMill – 491-09 Shell mill



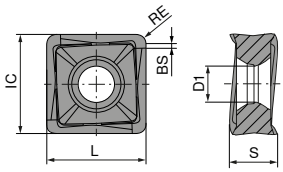


Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 776 ... EUR 2B/40		50 775 ... EUR 2B/40	
A491.40.R.03-09	40	3	6	40	38	16	16800	2	SNHU 09T3			490,50	**240**
A491.40.R.05-09	40	5	6	40	38	16	16800	2	SNHU 09T3	570,20	**240**		
A491.50.R.04-09	50	4	6	40	43	22	14600	2	SNHU 09T3			543,70	**250**
A491.50.R.06-09	50	6	6	40	43	22	14600	2	SNHU 09T3	623,30	**250**		
A491.63.R.05-09	63	5	6	40	48	22	12700	2	SNHU 09T3			649,80	**263**
A491.63.R.08-09	63	8	6	40	48	22	12700	2	SNHU 09T3	769,00	**263**		
A491.80.R.06-09	80	6	6	50	58	27	11100	2	SNHU 09T3			689,70	**280**
A491.80.R.10-09	80	10	6	50	58	27	11100	2	SNHU 09T3	848,70	**280**		
A491.100.R.07-09	100	7	6	50	78	32	9800	2	SNHU 09T3			875,20	**300**
A491.100.R.12-09	100	12	6	50	78	32	9800	2	SNHU 09T3	1.074,00	**300**		
A491.125.R.08-09	125	8	6	63	88	40	8700	2	SNHU 09T3			1.061,00	**325**
A491.125.R.15-09	125	15	6	63	88	40	8700	2	SNHU 09T3	1.300,00	**325**		

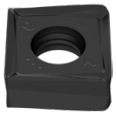
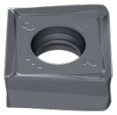
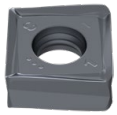
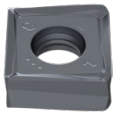
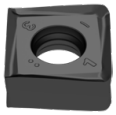
	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screwdriver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
40	6,78	**053**	5,04	**040**	11,50	**119**	16,08	**151**	5,64	**303**	3,97	**710**	170,10	**193**
50 - 125	6,78	**053**			11,50	**119**			5,64	**303**	3,97	**710**	170,10	**193**

SNHU

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

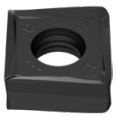


SNHU

		-M50 CTCP230	-M50 CTPP235	-F50 CTPM240	-M50 CTPM240	-F40 CTPM245	-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					36,09 45800	36,09 90801
09T308SR	0,8	28,85 008	28,85 108	28,85 408	28,85 408		
09T312SR	1,2	28,85 01200	28,85 11200	28,85 41200	28,85 41200		
09T316SR	1,6	28,85 01600	28,85 11600	28,85 41600	28,85 41600		
P		●	●	○	○	●	●
M			○	●	●	●	●
K		○	○				
N							
S							○
H							
O							

SNHU

NEW

		-R50 CTCK215	-R50 CTPK220	-F10 CTPX715	-F10 CTWN215	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	DRAGONSKIN
							
		SNHU	SNHU	SNHU	SNHU	SNHU	SNHU
		51 121 ...	51 121 ...	51 118 ...	51 118 ...	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					36,09 15800	36,09 55800
09T308FR	0,8			34,76 00802	28,85 358		
09T308SR	0,8	28,85 508	28,85 60800				
09T312FR	1,2				28,85 36200		
09T312SR	1,2	28,85 51200					
09T316FR	1,6				28,85 36600		
09T316SR	1,6	28,85 51600					
P				○			
M				○			
K		●	●	●	○		
N				●	●		
S				○		●	●
H							
O				○	○		

Milling guide

Cutting data standard values	→ 145–148	Starting Parameter	→ 159
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

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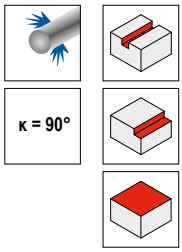
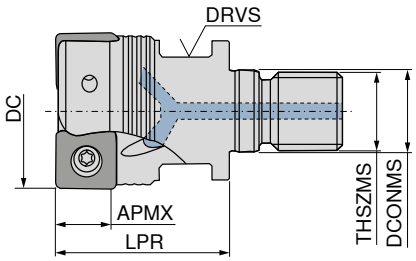
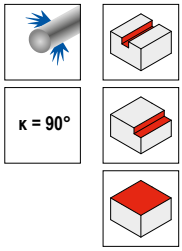
MaxiMill – 491-12 Screw in cutter

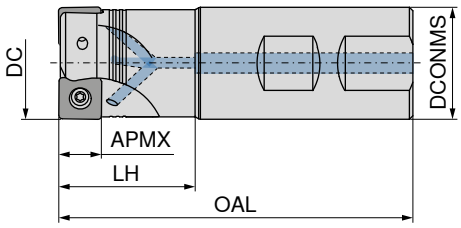




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 773 ... EUR 2B/40	
G491.32.R.02-12	32	2	8	35	M16	17	24	3,2	SNHU 1204	424,50	032

MaxiMill – 491-12 End milling cutter

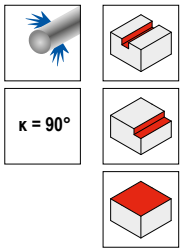


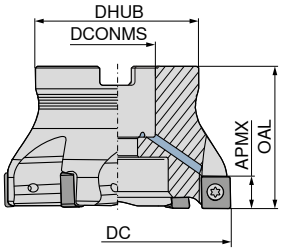


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 774 ... EUR 2B/40		50 774 ... EUR 2B/40	
C491.32.R.02-12-B-40	32	2	8	102	40	32	13600	3,2	SNHU 1204			424,50	032
C491.32.R.02-12-A-63-250	32	2	8	250	63	32	10200	3,2	SNHU 1204	424,50	232		

Spare parts	TORX® blade		Key D		Molykote		Clamping screw		Torque screwdriver	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
32	6,78	054	15,33	128	5,64	303	4,14	859	170,10	193

MaxiMill – 491-12 Shell mill





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			490,50	**040**
A491.40.R.04-12	40	4	8	40	38	16	11500	3,2	SNHU 1204	530,40	**040**		
A491.50.R.04-12	50	4	8	40	43	22	9800	3,2	SNHU 1204			543,70	**050**
A491.50.R.05-12	50	5	8	40	43	22	9800	3,2	SNHU 1204	583,50	**050**		
A491.63.R.05-12	63	5	8	40	48	22	8500	3,2	SNHU 1204			649,80	**063**
A491.63.R.06-12	63	6	8	40	48	22	8500	3,2	SNHU 1204	689,70	**063**		
A491.80.R.06-12	80	6	8	50	58	27	7400	3,2	SNHU 1204			689,70	**080**
A491.80.R.08-12	80	8	8	50	58	27	7400	3,2	SNHU 1204	795,70	**080**		
A491.100.R.07-12	100	7	8	50	78	32	6500	3,2	SNHU 1204			875,20	**100**
A491.100.R.10-12	100	10	8	50	78	32	6500	3,2	SNHU 1204	994,70	**100**		
A491.125.R.08-12	125	8	8	63	88	40	5700	3,2	SNHU 1204			1.061,00	**125**
A491.125.R.12-12	125	12	8	63	88	40	5700	3,2	SNHU 1204	1.220,00	**125**		
A491.160.R.09-12	160	9	8	63	98	40	5000	3,2	SNHU 1204			1.233,00	**160** [1]
A491.160.R.14-12	160	14	8	63	98	40	5000	3,2	SNHU 1204	1.433,00	**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

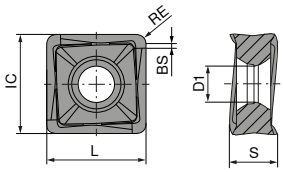

Clamping screw


Torque screwdriver

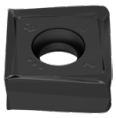
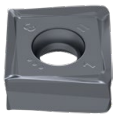
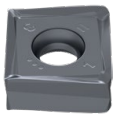
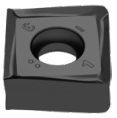
Spare parts DC	80 950 ... EUR Y7		80 397 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
40	6,78	**054**	5,04	**040**	15,33	**128**	16,08	**151**	5,64	**303**	4,14	**859**	170,10	**193**
50 - 160	6,78	**054**			15,33	**128**			5,64	**303**	4,14	**859**	170,10	**193**

SNHU

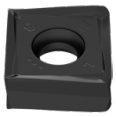
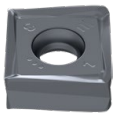
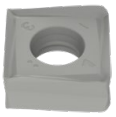
Designation	IC mm	L mm	S mm	D1 mm
SNHU 1204..	12,2	12,2	5,00	4,4



SNHU

ISO	RE mm	-M50 CTCP230		-M50 CTPP235		-F50 CTPM240		-M50 CTPM240		-F40 CTPM245		-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 ...	
		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1H/17		EUR 1H/17	
120408ER	0,8									43,33	45800	43,33	90801
120408SR	0,8	35,25	008	35,25	108	35,25	408	35,25	408				
120412SR	1,2			35,25	112	35,25	412						
120416SR	1,6			35,25	116	35,25	416						
120420SR	2,0			35,25	120	35,25	420						
P		●		●		○		○		●		●	
M				○		●		●		●		●	
K		○		○									
N													
S												○	
H													
O													

SNHU

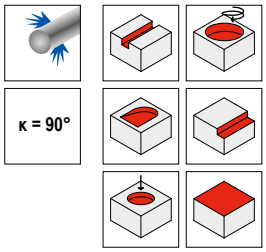
ISO	RE mm	-R50 CTCK215 DRAGONSKIN		-R50 CTPK220 DRAGONSKIN		NEW -F10 CTPX715 DRAGONSKIN		-F10 CTWN215		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN	
		 SNHU		 SNHU		 SNHU		 SNHU		 SNHU		 SNHU	
		51 103 ...		51 103 ...		51 101 ...		51 101 ...		51 128 ...		51 128 ...	
		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1H/17		EUR 1H/17	
120408ER	0,8									43,33	15800	43,33	55800
120408FR	0,8					42,46	00802	35,25	358				
120408SR	0,8	35,25	508	35,25	608								
120412FR	1,2							35,25	362				
120412SR	1,2	35,25	512										
120416FR	1,6							35,25	366				
120416SR	1,6	35,25	516										
120420FR	2,0							35,25	370				
120420SR	2,0	35,25	520										
P						○							
M						○							
K		●		●		●		○					
N						●		●					
S						○				●		●	
H													
O						○		○					

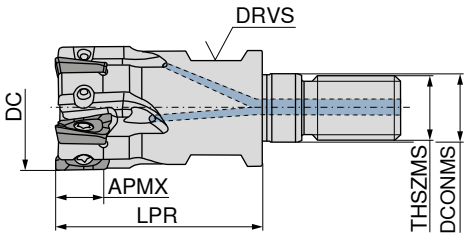
Milling guide

Cutting data standard values	→ 145–148	Starting Parameter	→ 159
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

15

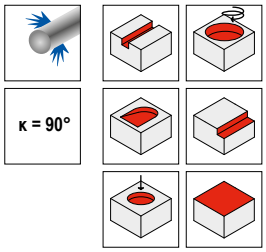
MaxiMill – 211-07 Screw in cutter

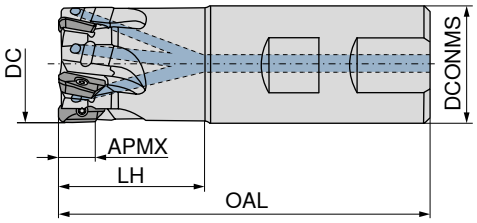




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 751 ... EUR 2B/40	
G211.16.R.04-07	16	4	6	27	8,5	M8	10	50400	1	XD.T 0703	338,90	016
G211.20.R.05-07	20	5	6	33	10,5	M10	15	44280	1	XD.T 0703	378,20	020
G211.25.R.06-07	25	6	6	35	12,5	M12	17	39480	1	XD.T 0703	441,20	025
G211.32.R.08-07	32	8	6	35	17,0	M16	24	36240	1	XD.T 0703	480,30	032

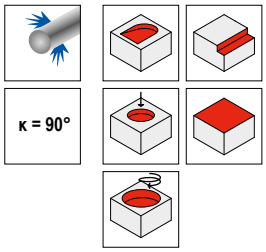
MaxiMill – 211-07 End milling cutter

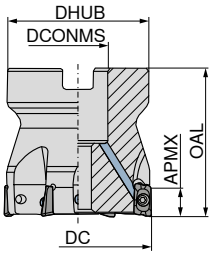


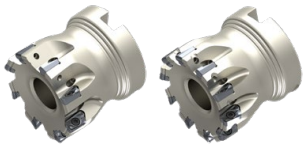


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	torque moment Nm	Insert	50 752 ... EUR 2B/40		50 752 ... EUR 2B/40	
C211.10.R.01-07-A-20	10	1	6	61,0	20	10	72000	1	XD.T 0703	268,20	010		
C211.12.R.02-07-A-20	12	2	6	66,5	20	12	66600	1	XD.T 0703	307,30	012		
C211.16.R.04-07-A/B-25	16	4	6	74,5	25	16	50400	1	XD.T 0703	338,90	016	338,90	216
C211.16.R.03-07-A-32-165	16	3	6	165,0	32	16	17760	1	XD.T 0703	315,20	116		
C211.20.R.05-07-A/B-25	20	5	6	77,0	25	20	44280	1	XD.T 0703	378,20	020	378,20	220
C211.20.R.04-07-A-40-200	20	4	6	200,0	40	20	12600	1	XD.T 0703	354,50	120		
C211.25.R.06-07-A/B20-32	25	6	6	84,0	32	20	39840	1	XD.T 0703	441,20	025	441,20	225
C211.25.R.05-07-A20-50-225	25	5	6	225,0	50	20	11280	1	XD.T 0703	394,00	125		
C211.32.R.08-07-A/B25-40	32	8	6	98,0	40	25	36240	1	XD.T 0703	480,30	032	480,30	232

MaxiMill – 211-07 Shell mill





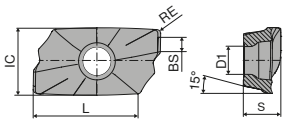


										50 753 ...		50 754 ...		
Designation	DC	ZNF	APMX	OAL	DCONMS $_{H6}$	DHUB	RPMX	torque moment	Insert	EUR		EUR		
	mm		mm	mm	mm	mm	1/min.	Nm		2B/40		2B/40		
A211.32.R.06-07	32	6	6	40	16	38	36240	1	XD.T 0703	402,00	**032**			
A211.32.R.08-07	32	8	6	40	16	38	36240	1	XD.T 0703			449,20	**032**	
A211.40.R.08-07	40	8	6	40	16	38	33240	1	XD.T 0703	496,40	**040**			
A211.40.R.10-07	40	10	6	40	16	38	33240	1	XD.T 0703			543,70	**040**	
A211.50.R.10-07	50	10	6	40	22	43	30480	1	XD.T 0703	590,90	**050**			
A211.50.R.12-07	50	12	6	40	22	43	30480	1	XD.T 0703			638,00	**050**	

	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	
10 - 32	6,78	**051**			13,18	**124**			5,64	**303**	4,19	**137**	153,30	**191**
32	6,78	**051**	5,04	**040**	13,18	**124**	16,08	**151**	5,64	**303**	4,19	**137**	153,30	**191**
40 - 50	6,78	**051**			13,18	**124**			5,64	**303**	4,19	**137**	153,30	**191**

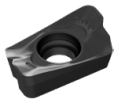
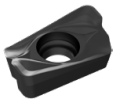
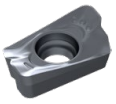
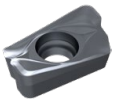
XDKT

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

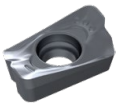
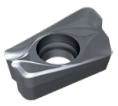
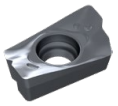
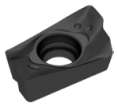
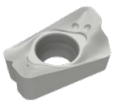


XDKT

XDKT

		-F50 CTCP230 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-F50 CTPP235 DRAGONSKIN	-M50 CTPP235 DRAGONSKIN
					
		F XDKT	M XDKT	F XDKT	M XDKT
		51 033 ...	51 036 ...	51 033 ...	51 036 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
070304SR	0,4	15,19 004	15,19 004	15,19 104	15,19 104
070308SR	0,8	15,19 008	15,19 008	15,19 108	15,19 108
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

XDKT

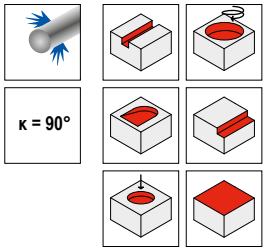
		-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F40 CTPM245 DRAGONSKIN	-F40 CTCM245 DRAGONSKIN	-F20 CTWN215	-F40 CTC5240 DRAGONSKIN	-F40 CTCS245 DRAGONSKIN
								
		F XDKT	M XDKT	F XDKT	F XDKT	F XDKT	F XDKT	F XDKT
		51 033 ...	51 036 ...	51 112 ...	51 112 ...	50 507 ...	50 498 ...	51 112 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1A/90	EUR 1H/17	EUR 1H/17
070304ER	0,4			18,15 454	18,15 90401		18,15 544	
070304FR	0,4					18,69 504		
070304SR	0,4	15,19 404	15,19 404					
070308ER	0,8			18,15 458	18,15 90801		18,15 548	18,15 558
070308FR	0,8					18,69 508		
070308SR	0,8	15,19 408	15,19 408					
P		○	○	●	●			
M		●	●	●	●			
K						○		
N						●		
S					○		●	●
H								
O						○		

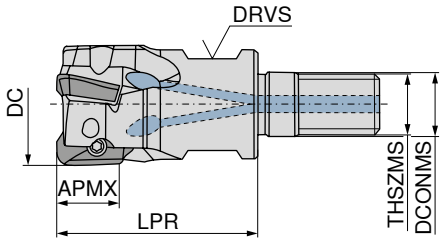
Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 160
Starting Parameter	→ 160	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

MaxiMill – 211-11 Screw in cutter

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

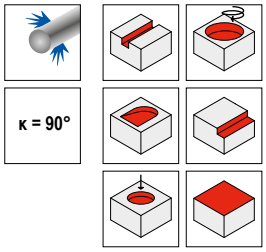


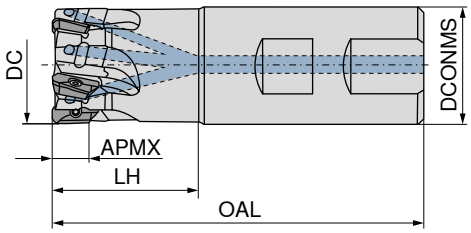


Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 736 ... EUR 2B/40	
G211.16.R.02-11	16	2	10	27	8,5	M8	10	42000	1,6	XD.T 11T3	291,50	016
G211.20.R.03-11	20	3	10	33	10,5	M10	15	36900	1,6	XD.T 11T3	331,00	020
G211.25.R.03-11	25	3	10	35	12,5	M12	17	33200	1,6	XD.T 11T3	346,60	12500
G211.25.R.04-11	25	4	10	35	12,5	M12	17	33200	1,6	XD.T 11T3	370,50	025
G211.32.R.04-11	32	4	10	35	17,0	M16	24	30200	1,6	XD.T 11T3	386,20	13200
G211.32.R.05-11	32	5	10	35	17,0	M16	24	30200	1,6	XD.T 11T3	409,90	032
G211.40.R.06-11	40	6	10	35	17,0	M16	27	27700	1,6	XD.T 11T3	449,20	040

MaxiMill – 211-11 End milling cutter

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

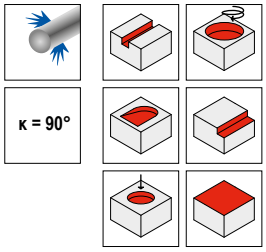


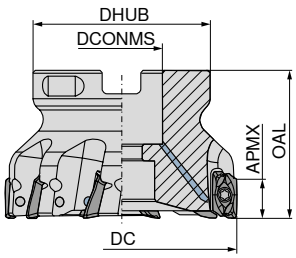


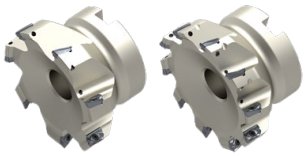
Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	torque moment Nm	Insert	50 737 ... EUR 2B/40		50 737 ... EUR 2B/40	
C211.12.R.01-11-B-20	12	1	10	75	20	16	55000	1,6	XD.T 11T3			260,10	012
C211.16.R.02-11-A/B-25	16	2	10	75	25	16	42000	1,6	XD.T 11T3	291,50	116	291,50	016
C211.16.R.02-11-A15-32-165	16	2	10	165	32	15	14800	1,6	XD.T 11T3	291,50	316		
C211.16.R.02-11-A-32-165	16	2	10	165	32	16	14800	1,6	XD.T 11T3	291,50	216		
C211.20.R.03-11-A-25	20	3	10	77	25	20	36900	1,6	XD.T 11T3	331,00	120		
C211.20.R.03-11-B-25	20	3	10	77	25	20	36900	1,6	XD.T 11T3			331,00	020
C211.20.R.02-11-B-25	20	2	10	77	25	20	36900	1,6	XD.T 11T3			307,30	02002
C211.20.R.02-11-A-25	20	2	10	77	25	20	36900	1,6	XD.T 11T3	307,30	12002		
C211.20.R.03-11-A-32-165	20	3	10	165	32	20	15800	1,6	XD.T 11T3	331,00	320		
C211.20.R.02-11-A-40-200	20	2	10	200	40	20	10500	1,6	XD.T 11T3	307,30	420		
C211.20.R.02-11-A19-40-200	20	2	10	200	40	19	10500	1,6	XD.T 11T3	307,30	620		
C211.25.R.03-11-A/B-32	25	3	10	90	32	25	33200	1,6	XD.T 11T3	346,80	625	346,80	725
C211.25.R.04-11-A/B-32	25	4	10	90	32	25	33200	1,6	XD.T 11T3	370,50	125	370,50	025
C211.25.R.04-11-A-40-165	25	4	10	165	40	25	19900	1,6	XD.T 11T3	370,50	325		
C211.25.R.03-11-A-50-225	25	3	10	225	50	25	9400	1,6	XD.T 11T3	346,80	425		
C211.25.R.03-11-A24-50-225	25	3	10	225	50	24	9400	1,6	XD.T 11T3	346,80	825		
C211.25.R.02-11-A-50-225	25	2	10	225	50	25	9400	1,6	XD.T 11T3	323,30	02502		
C211.32.R.04-11-A-40	32	4	10	102	40	32	30200	1,6	XD.T 11T3	386,20	13204		
C211.32.R.05-11-A/B-40	32	5	10	102	40	32	30200	1,6	XD.T 11T3	409,90	132	409,90	032
C211.32.R.04-11-B-25	32	4	10	102	40	32	30200	1,6	XD.T 11T3			386,20	83200
C211.32.R.05-11-B25-40	32	5	10	102	40	25	30200	1,6	XD.T 11T3			409,90	73200
C211.32.R.04-11-A25-40	32	4	10	102	40	25	30200	1,6	XD.T 11T3	386,20	53204		
C211.32.R.05-11-A-50-165	32	5	10	165	50	32	20900	1,6	XD.T 11T3	409,90	332		
C211.32.R.04-11-A-64-250	32	4	10	250	64	32	8500	1,6	XD.T 11T3	386,20	432		
C211.40.R.06-11-B32-50	40	6	10	110	50	32	27700	1,6	XD.T 11T3			449,20	04000
C211.40.R.06-11-B-50	40	6	10	122	50	40	27700	1,6	XD.T 11T3			449,20	14000

MaxiMill – 211-11 Shell mill

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





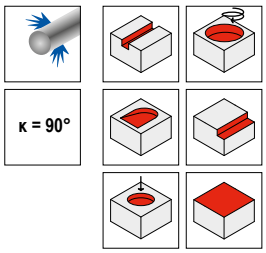


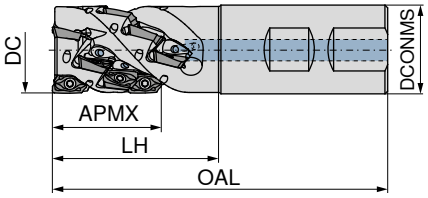
Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 738 ... EUR 2B/40		50 739 ... EUR 2B/40	
A211.40.R.04-11	40	4	10	40	16	38	27700	1,6	XD.T 11T3	402,00	**040**		
A211.40.R.06-11	40	6	10	40	16	38	27700	1,6	XD.T 11T3			449,20	**040**
A211.50.R.05-11	50	5	10	40	22	43	25400	1,6	XD.T 11T3	472,70	**050**		
A211.50.R.08-11	50	8	10	40	22	43	25400	1,6	XD.T 11T3			543,80	**050**
A211.63.R.06-11	63	6	10	40	22	48	23300	1,6	XD.T 11T3	543,80	**063**		
A211.63.R.10-11	63	10	10	40	22	48	23300	1,6	XD.T 11T3			638,30	**063**
A211.80.R.07-11	80	7	10	50	27	58	21300	1,6	XD.T 11T3	614,80	**080**		
A211.80.R.10-11	80	10	10	50	27	58	21300	1,6	XD.T 11T3			685,60	**180**
A211.80.R.12-11	80	12	10	50	27	58	21300	1,6	XD.T 11T3			732,90	**08012**
A211.100.R.08-11	100	8	10	50	32	78	19600	1,6	XD.T 11T3	685,60	**10000**		
A211.100.R.14-11	100	14	10	50	32	78	19600	1,6	XD.T 11T3			827,50	**10014**
A211.125.R.10-11	125	10	10	63	40	88	17900	1,6	XD.T 11T3	748,60	**12500**		

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	
12	6,13	**043**			13,16	**125**			5,64	**303**	5,17	**92000**	153,30	**191**
16 - 32	6,13	**043**			13,16	**125**			5,64	**303**	5,27	**128**	153,30	**191**
40	6,13	**043**	5,04	**040**	13,16	**125**	16,08	**151**	5,64	**303**	5,27	**131**	153,30	**191**
50	6,13	**043**	5,46	**050**	13,16	**125**	22,09	**154**	5,64	**303**	5,27	**131**	153,30	**191**
63 - 125	6,13	**043**			13,16	**125**			5,64	**303**	5,27	**131**	153,30	**191**

MaxiMill – 211-11KN shell end mill shank

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



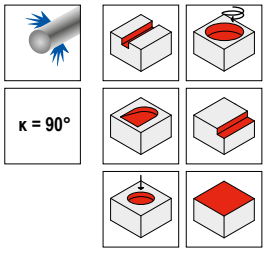


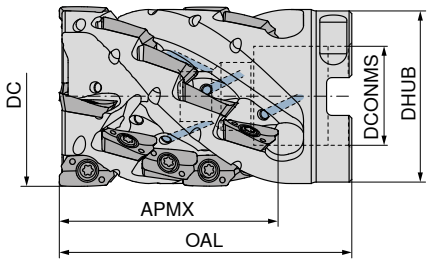
50 784 ...

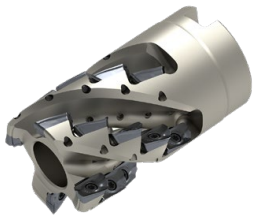
Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	EUR 2B/40	
C211.25.R.02KN3-11-B-40	25	2	28	97	40	25	6	3	1,6	XD.T 11T3	803,50	**02523**
C211.25.R.02KN4-11-B-50	25	2	37	107	50	25	8	4	1,6	XD.T 11T3	850,70	**02524**
C211.25.R.02KN5-11-B-60	25	2	46	117	60	25	10	5	1,6	XD.T 11T3	907,30	**02525**
C211.32.R.02KN4-11-B-50	32	2	37	111	50	32	8	4	1,6	XD.T 11T3	881,30	**03224**
C211.32.R.03KN5-11-B-60	32	3	46	121	60	32	15	5	1,6	XD.T 11T3	1.063,00	**03235**
C211.40.R.03KN4-11-B32-50	40	3	37	111	50	32	12	4	1,6	XD.T 11T3	1.011,00	**04034**
C211.40.R.04KN5-11-B32-60	40	4	46	121	60	32	20	5	1,6	XD.T 11T3	1.219,00	**04045**

MaxiMill – 211-11KN shell end face mill

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







50 794 ...

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	1.011,00	**04034**
A211.40.R.04KN4-11	40	4	37	16	4	65	22	38	1,6	XD.T 11T3	1.106,00	**04044**
A211.40.R.04KN5-11	40	4	46	20	5	74	22	38	1,6	XD.T 11T3	1.219,00	**04045**
A211.50.R.04KN5-11	50	4	46	20	5	75	27	48	1,6	XD.T 11T3	1.333,00	**05045**
A211.50.R.05KN5-11	50	5	46	25	5	75	27	48	1,6	XD.T 11T3	1.451,00	**05055**
A211.50.R.05KN6-11	50	5	55	30	6	85	27	48	1,6	XD.T 11T3	1.591,00	**05056**


Cylindrical screw

TORX® blade


Key D


Molykote


Clamping screw

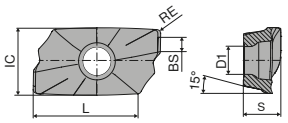

Socket head screw

Torque screwdriver

	70 950 ...		80 950 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
Designation	2A/28		Y7		Y7		2A/28		2A/28		2A/28		Y7	
A211.40.R.03KN4-11			6,13	043	13,16	125	5,64	303	9,14	20400	15,11	20900	153,30	191
A211.40.R.04KN4-11			6,13	043	13,16	125	5,64	303	9,14	20400	15,11	20900	153,30	191
A211.40.R.04KN5-11			6,13	043	13,16	125	5,64	303	9,14	20400	15,11	21000	153,30	191
A211.50.R.04KN5-11	14,82	002	6,13	043	13,16	125	5,64	303	9,14	20400	10,89	181	153,30	191
A211.50.R.05KN5-11	14,82	002	6,13	043	13,16	125	5,64	303	9,14	20400	10,89	181	153,30	191
A211.50.R.05KN6-11	14,82	002	6,13	043	13,16	125	5,64	303	9,14	20400	10,89	181	153,30	191
C211.25.R.02KN3-11-B-40			6,13	043	13,16	125	5,64	303	9,14	20700			153,30	191
C211.25.R.02KN4-11-B-50			6,13	043	13,16	125	5,64	303	9,14	20700			153,30	191
C211.25.R.02KN5-11-B-60			6,13	043	13,16	125	5,64	303	9,14	20700			153,30	191
C211.32.R.02KN4-11-B-50			6,13	043	13,16	125	5,64	303	9,14	20700			153,30	191
C211.32.R.03KN5-11-B-60			6,13	043	13,16	125	5,64	303	9,14	20700			153,30	191
C211.40.R.03KN4-11-B32-50			6,13	043	13,16	125	5,64	303	9,14	20400			153,30	191
C211.40.R.04KN5-11-B32-60			6,13	043	13,16	125	5,64	303	9,14	20400			153,30	191

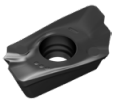
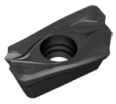
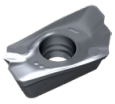
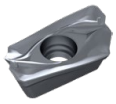
XDKT / XDHT

Designation	IC	D1	L	BS	S
	mm	mm	mm	mm	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

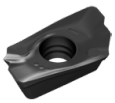
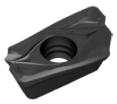
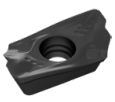
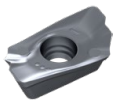
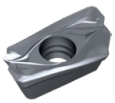
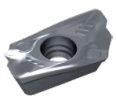


XDKT

XDKT

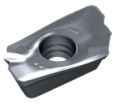
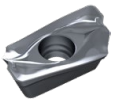
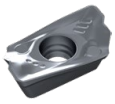
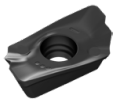
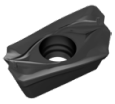
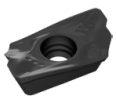
	-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
	F	M	F	M
	XDKT	XDKT	XDKT	XDKT
	51 034 ...	51 037 ...	51 034 ...	51 037 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
11T308SR 0,8	18,48 **258**	18,48 **258**	18,48 **058**	18,48 **058**
P	●	●	●	●
M				
K				
N				
S				
H				
O				

XDKT

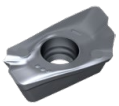
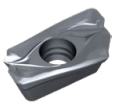
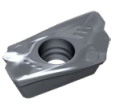
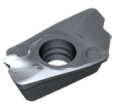
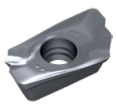
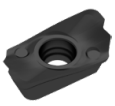
	-F50 CTCP230	-M50 CTCP230	-R50 CTCP230	-F50 CTPP235	-M50 CTPP235	-R50 CTPP235
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	F	M	R	F	M	R
	XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
	51 034 ...	51 037 ...	51 039 ...	51 034 ...	51 037 ...	51 039 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
11T304SR 0,4	18,48 **004**	18,48 **004**	18,48 **004**	18,48 **104**	18,48 **104**	18,48 **104**
11T308SR 0,8	18,48 **008**	18,48 **008**	18,48 **008**	18,48 **108**	18,48 **108**	18,48 **108**
11T312SR 1,2		18,48 **012**			18,48 **112**	
11T320SR 2,0	18,48 **020** 1)	18,48 **020** 1)	18,48 **020** 1)	18,48 **120** 1)	18,48 **120** 1)	18,48 **120** 1)
11T325SR 2,5	18,48 **025** 1)	18,48 **025** 1)	18,48 **025** 1)	18,48 **125** 1)	18,48 **125** 1)	18,48 **125** 1)
P	●	●	●	●	●	●
M				○	○	○
K	○	○	○	○	○	○
N						
S						
H						
O						

1) Insert radius >1.6 mm: Modify cutter body

XDKT

		-F50 CTPM225 DRAGONSKIN		-M50 CTPM225 DRAGONSKIN		-R50 CTPM225 DRAGONSKIN		-F50 CTCM235 DRAGONSKIN		-M50 CTCM235 DRAGONSKIN		-R50 CTCM235 DRAGONSKIN	
													
		F XDKT		M XDKT		R XDKT		F XDKT		M XDKT		R 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	18,48	208	18,48	208	18,48	208	18,48	308	18,48	308	18,48	308
P		●		●		●		●		●		●	
M		●		●		●		●		●		●	
K													
N													
S													
H													
O													

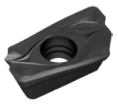
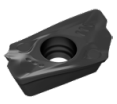
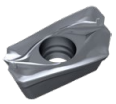
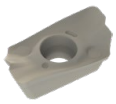
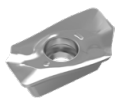
XDKT

		-F50 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN		-R50 CTPM240 DRAGONSKIN		-F40 CTPM245 DRAGONSKIN		-F50 CTPM245 DRAGONSKIN		-F40 CTCM245 DRAGONSKIN		-F50 CTCM245 DRAGONSKIN	
															
		F XDKT		M XDKT		R XDKT		F XDKT		F XDKT		F XDKT		F 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							23,76	454			23,76	90401		
11T304SR	0,4			18,48	404										
11T308ER	0,8							23,76	458			23,76	90801		
11T308SR	0,8	18,48	408	18,48	408	18,48	408			23,76	458			23,76	90801
11T312ER	1,2							23,76	462			23,76	91201		
11T312SR	1,2	18,48	412	18,48	412	18,48	412								
11T316ER	1,6							23,76	466			23,76	91601		
11T320ER	2,0							23,76	470 1)			23,76	92001 1)		
11T320SR	2,0	18,48	420 1)	18,48	420 1)	18,48	420 1)								
11T325ER	2,5							23,76	475 1)			23,76	92501 1)		
11T332ER	3,2							23,76	482 1)			23,76	93201 1)		
11T332SR	3,2	18,48	432 1)	18,48	432 1)	18,48	432 1)								
11T340ER	4,0							23,76	490 1)			23,76	94001 1)		
P		○		○		○		●		●		●		●	
M		●		●		●		●		●		●		●	
K															
N															
S												○		○	
H															
O															

1) Insert radius >1.6 mm: Modify cutter body

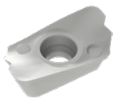
15

XDKT / XDHT

		-M50 CTCK215 DRAGONSKIN		-R50 CTCK215 DRAGONSKIN		-M50 CTPK220 DRAGONSKIN		-F20 CTWN215		NEW -F10 CTPX715 DRAGONSKIN		-27P H216T	
													
		M		R		M		F		F		F	
		XDKT		XDKT		XDKT		XDKT		XDHT		XDHT	
		51 037 ...		51 039 ...		51 037 ...		50 478 ...		51 155 ...		50 477 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1A/90		EUR 1A/90		EUR 1A/90	
11T302FR	0,2							18,48	502	26,51	00202	24,35	502
11T304FR	0,4							18,48	504	26,51	00402	24,35	504
11T304SR	0,4	18,48	504										
11T308FR	0,8							18,48	508	26,51	00802	24,35	508
11T308SR	0,8	18,48	508	18,48	508	18,48	608						
11T312FR	1,2									26,51	01202	24,35	512
11T316FR	1,6									26,51	01602	24,35	516
11T320FR	2,0							18,48	520 1)	26,51	02002 1)	24,35	520 1)
11T325FR	2,5							18,48	525 1)	26,51	02502 1)	24,35	525 1)
11T332FR	3,2									26,51	03202 1)	24,35	532 1)
11T340FR	4,0									26,51	04002 1)	24,35	540 1)
11T350FR	5,0									26,51	05002 1)	24,35	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	
							
		F		F		R	
		XDKT		XDKT		XDKT	
		50 463 ...		51 113 ...		50 464 ...	
ISO	RE mm	EUR 1H/17		EUR 1H/17		EUR 1B/61	
11T304ER	0,4	23,76	504				
11T308ER	0,8	23,76	500	23,76	558		
11T308SR	0,8					23,89	300
11T312ER	1,2	23,76	512	23,76	562		
11T316ER	1,6	23,76	516	23,76	566		
11T320ER	2,0	23,76	520 1)	23,76	570		
11T325ER	2,5	23,76	525 1)	23,76	57500 1)		
11T332ER	3,2	23,76	532 1)	23,76	582		
11T340ER	4,0	23,76	540 1)	23,76	59000 1)		
P							
M							
K						●	
N							
S		●		●			
H						●	
O							

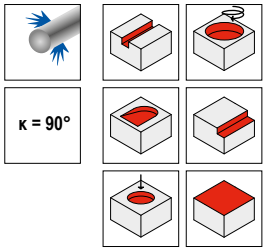
1) Insert radius >1.6 mm: Modify cutter body

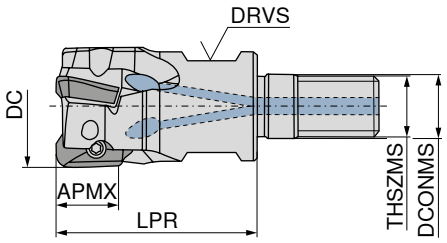
Milling guide

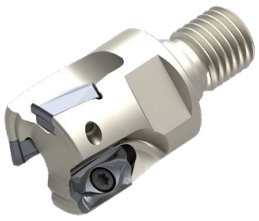
Cutting data standard values	→ 145–148	Machining strategy	→ 161
Starting Parameter	→ 161	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

MaxiMill – 211-15 Screw in cutter

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



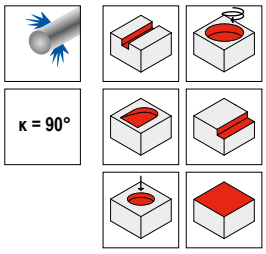


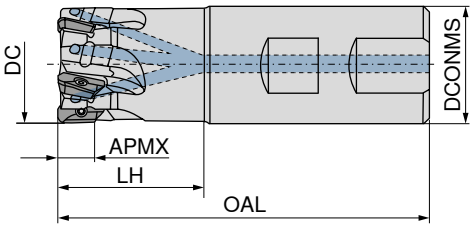


Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 746 ... EUR 2B/40	
G211.25.R.02-15	25	2	14	35	12,5	M12	17	26560	3,2	XD.T 1505	334,70	**025**
G211.32.R.03-15	32	3	14	35	17,0	M16	24	30200	3,2	XD.T 1505	372,70	**032**
G211.40.R.04-15	40	4	14	40	17,0	M16	27	27700	3,2	XD.T 1505	411,10	**040**

MaxiMill – 211-15 End milling cutter

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

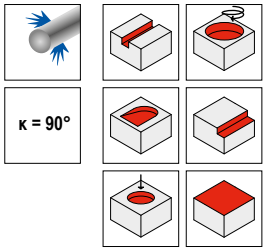


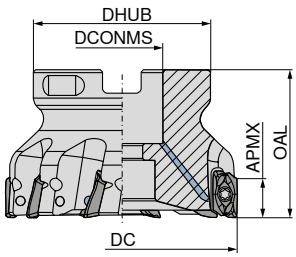


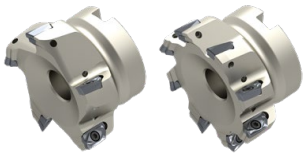
Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	torque moment Nm	Insert	50 747 ... EUR 2B/40		50 747 ... EUR 2B/40	
C211.25.R.02-15-B20-32	25	2	14	83	32	20	26560	3,2	XD.T 1505			334,70	**125**
C211.25.R.02-15-B/A-32	25	2	14	90	32	25	26560	3,2	XD.T 1505	334,70	**225**	334,70	**025**
C211.25.R.02-15-A-50-225	25	2	14	225	50	25	7520	3,2	XD.T 1505	312,00	**325**		
C211.32.R.03-15-B25-40	32	3	14	96	40	25	22160	3,2	XD.T 1505			372,70	**132**
C211.32.R.03-15-A-40	32	3	14	103	40	32	24160	3,2	XD.T 1505	372,70	**232**		
C211.32.R.03-15-B-40	32	3	14	103	40	32	24160	3,2	XD.T 1505			372,70	**032**
C211.32.R.03-15-A-63-250	32	3	14	250	63	32	6800	3,2	XD.T 1505	350,10	**332**		
C211.40.R.04-15-A-50	40	4	14	110	50	32	22160	3,2	XD.T 1505	411,10	**240**		
C211.40.R.04-15-B32-50	40	4	14	110	50	32	22160	3,2	XD.T 1505			411,10	**040**
C211.40.R.03-15-A-50-275	40	3	14	275	50	32	6120	3,2	XD.T 1505	387,90	**340**		

MaxiMill – 211-15 Shell mill

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







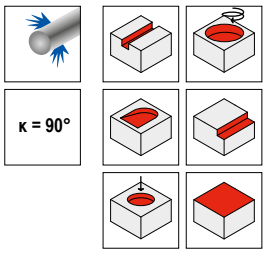
Designation	DC	ZNF	APMX	OAL	DCONMS H6	DHUB	RPMX	torque moment	Insert	50 748 ... EUR 2B/40		50 749 ... EUR 2B/40	
	mm		mm	mm	mm	mm	1/min.	Nm					
A211.40.R.03-15	40	3	14	40	16	38	22160	3,2	XD.T 1505	365,30	**040**		
A211.40.R.04-15	40	4	14	40	16	38	22160	3,2	XD.T 1505			411,10	**040**
A211.50.R.03-15	50	3	14	40	22	43	20320	3,2	XD.T 1505	433,70	**050**		
A211.50.R.05-15	50	5	14	40	22	43	20320	3,2	XD.T 1505			479,40	**050**
A211.63.R.04-15	63	4	14	45	22	48	18640	3,2	XD.T 1505	524,90	**063**		
A211.63.R.06-15	63	6	14	45	22	48	18640	3,2	XD.T 1505			571,10	**063**
A211.80.R.05-15	80	5	14	50	27	58	17040	3,2	XD.T 1505	593,40	**080**		
A211.80.R.08-15	80	8	14	50	27	58	17040	3,2	XD.T 1505			639,00	**080**
A211.100.R.06-15	100	6	14	50	32	78	15680	3,2	XD.T 1505	662,10	**100**		
A211.100.R.10-15	100	10	14	50	32	78	15680	3,2	XD.T 1505			707,60	**100**
A211.125.R.07-15	125	7	14	63	40	88	14320	3,2	XD.T 1505	699,90	**125**		
A211.125.R.11-15	125	11	14	63	40	88	14320	3,2	XD.T 1505			745,60	**125**
A211.160.R.08-15	160	8	14	63	40	93	13200	3,2	XD.T 1505	980,60	**160** 1)		
A211.160.R.12-15	160	12	14	63	40	93	13200	3,2	XD.T 1505			1.026,00	**160** 1)

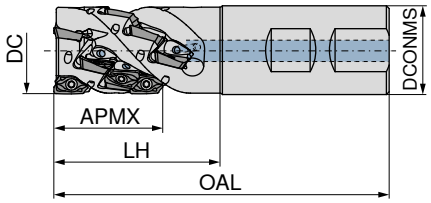
1) Without Through Coolant

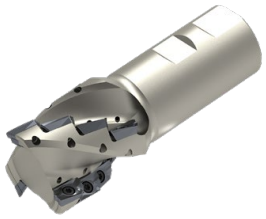
Spare parts DC	TORX® blade 80 950 ... EUR Y7		Clamping key – T 80 397 ... EUR Y7		Key D 80 950 ... EUR Y7		Power Screw 70 950 ... EUR 2A/28		Molykote 70 950 ... EUR 2A/28		Clamping screw 70 950 ... EUR 2A/28		Torque screwdriver 80 950 ... EUR Y7	
25 - 32	6,78	**054**			15,33	**128**			5,64	**303**	4,11	**839**	170,10	**193**
40	6,78	**054**	5,04	**040**	15,33	**128**	16,08	**151**	5,64	**303**	4,11	**839**	170,10	**193**
50	6,78	**054**	5,46	**050**	15,33	**128**	22,09	**154**	5,64	**303**	4,11	**839**	170,10	**193**
63 - 160	6,78	**054**			15,33	**128**			5,64	**303**	4,11	**839**	170,10	**193**

MaxiMill – 211-15KN shell end mill shank

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



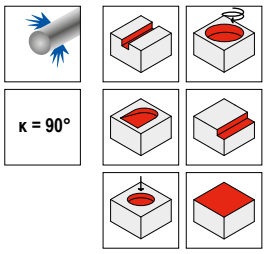


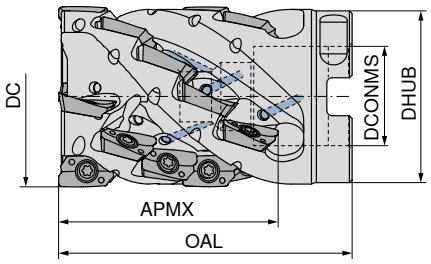


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	50 783 ... EUR 2B/40	
C211.40.R.03KN3-15-B32-60	40	3	39,6	121	60	32	9	3	3,2	XD.T 1505	940,40	04033
C211.50.R.03KN4-15-B40-68	50	3	52,6	138	67	40	12	4	3,2	XD.T 1505	1.144,00	05034

MaxiMill – 211-15KN shell end face mill

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





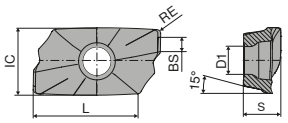
Designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	50 781 ... EUR 2B/40	
A211.50.R.03KN4-15	50	3	52,6	12	4	87	27	48	3,2	XD.T 1505	1.144,00	05034
A211.50.R.03KN5-15	50	3	65,8	15	5	100	27	48	3,2	XD.T 1505	1.215,00	05035
A211.50.R.04KN5-15	50	4	65,8	20	5	100	27	48	3,2	XD.T 1505	1.353,00	05045
A211.63.R.03KN4-15	63	3	52,6	12	4	76	27	58	3,2	XD.T 1505	1.248,00	06334
A211.63.R.03KN5-15	63	3	65,8	15	5	90	27	58	3,2	XD.T 1505	1.318,00	06335
A211.63.R.04KN6-15	63	4	78,5	24	6	102	27	58	3,2	XD.T 1505	1.530,00	06346
A211.63.R.05KN5-15	63	5	65,8	25	5	90	27	58	3,2	XD.T 1505	1.584,00	06355
A211.80.R.04KN5-15	80	4	65,8	20	5	90	32	78	3,2	XD.T 1505	1.537,00	08045
A211.80.R.05KN6-15	80	5	78,5	30	6	102	32	78	3,2	XD.T 1505	1.776,00	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.R.03KN4-15	14,82	002	6,78	054	15,33	128	5,64	303	11,57	20800	10,89	181	170,10	193
A211.50.R.03KN5-15	14,82	002	6,78	054	15,33	128	5,64	303	11,57	20800	10,89	181	170,10	193
A211.50.R.04KN5-15	14,82	002	6,78	054	15,33	128	5,64	303	11,57	20800	10,89	181	170,10	193
A211.63.R.03KN4-15	14,82	002	6,78	054	15,33	128	5,64	303	11,57	20500	10,89	181	170,10	193
A211.63.R.03KN5-15	14,82	002	6,78	054	15,33	128	5,64	303	11,57	20500	10,89	181	170,10	193
A211.63.R.04KN6-15	14,82	002	6,78	054	15,33	128	5,64	303	11,57	20500	10,89	181	170,10	193
A211.63.R.05KN5-15	14,82	002	6,78	054	15,33	128	5,64	303	11,57	20500	10,89	181	170,10	193
A211.80.R.04KN5-15	33,19	004	6,78	054	15,33	128	5,64	303	11,57	20500	14,82	234	170,10	193
A211.80.R.05KN6-15	33,19	004	6,78	054	15,33	128	5,64	303	11,57	20500	14,82	234	170,10	193
C211.40.R.03KN3-15-B32-60			6,78	054	15,33	128	5,64	303	11,57	20800			170,10	193
C211.50.R.03KN4-15-B40-68			6,78	054	15,33	128	5,64	303	11,57	20800			170,10	193

15

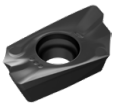
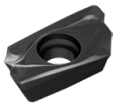
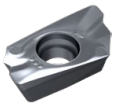
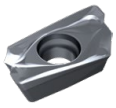
XDKT

Designation	IC	D1	L	BS	S
	mm	mm	mm	mm	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

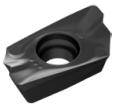
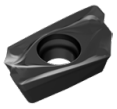
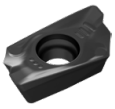
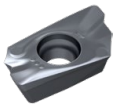
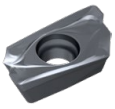
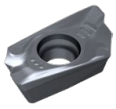


XDKT

XDKT

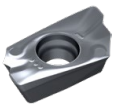
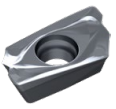
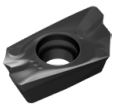
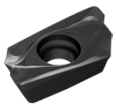
		-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		F	M	F	M
		XDKT	XDKT	XDKT	XDKT
		51 035 ...	51 038 ...	51 035 ...	51 038 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
150508SR	0,8	24,65 258	24,65 258	24,65 058	24,65 058
P		●	●	●	●
M					
K					
N					
S					
H					
O					

XDKT

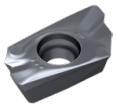
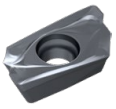
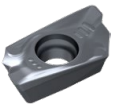
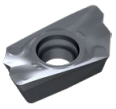
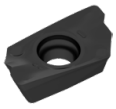
		-F50 CTCP230	-M50 CTCP230	-R50 CTCP230	-F50 CTPP235	-M50 CTPP235	-R50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		F	M	R	F	M	R
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 035 ...	51 038 ...	51 040 ...	51 035 ...	51 038 ...	51 040 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
150508SR	0,8	24,65 008	24,65 008	24,65 008	24,65 108	24,65 108	24,65 108
150512SR	1,2		24,65 012			24,65 112	
150516SR	1,6		24,65 016			24,65 116	
150520SR	2,0			24,65 020		24,65 120	24,65 120
150530SR	3,0		24,65 030 1)			24,65 130 1)	
150540SR	4,0		24,65 040 1)			24,65 140 1)	
P		●	●	●	●	●	●
M					○	○	○
K		○	○	○	○	○	○
N							
S							
H							
O							

1) Insert radius >2.5 mm: Modify cutter body

XDKT

		-F50 CTPM225 DRAGONSKIN		-M50 CTPM225 DRAGONSKIN		-F50 CTCM235 DRAGONSKIN		-M50 CTCM235 DRAGONSKIN	
									
		F XDKT		M XDKT		F XDKT		M 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	24,65	208	24,65	208	24,65	308	24,65	308
P			●		●		●		●
M			●		●		●		●
K									
N									
S									
H									
O									

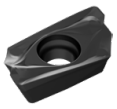
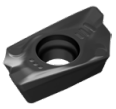
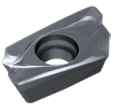
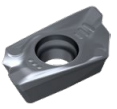
XDKT

		-F50 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN		-R50 CTPM240 DRAGONSKIN		-F40 CTPM245 DRAGONSKIN		-F40 CTCM245 DRAGONSKIN	
											
		F XDKT		M XDKT		R XDKT		F XDKT		F 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							29,66	458	29,66	90801
150508SR	0,8	24,65	408	24,65	408	24,65	408				
150512ER	1,2									29,66	91201
150512SR	1,2			24,65	412						
150516ER	1,6									29,66	91601
150516SR	1,6			24,65	416						
150520ER	2,0									29,66	92001
150525ER	2,5									29,66	92501
150530SR	3,0			24,65	430 [1)]						
150532ER	3,2							29,66	482 [1)]	29,66	93201[1)]
150540ER	4,0							29,66	490 [1)]	29,66	94001[1)]
150540SR	4,0			24,65	440 [1)]						
150560ER	6,0									29,66	96001[1)]
P			○		○		○		●		●
M			●		●		●		●		●
K											
N											
S											○
H											
O											

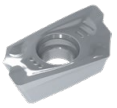
1) Insert radius >2.5 mm: Modify cutter body

15

XDKT

	-M50 CTCK215	-R50 CTCK215	-M50 CTPK220	-R50 CTPK220	-F20 CTWN215
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
					
	M	R	M	R	F
	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					24,65 **508**
150508SR 0,8	24,65 **508**	24,65 **508**	24,65 **608**	24,65 **608**	
P					
M					
K	●	●	●	●	○
N					●
S					
H					
O					○

XDKT

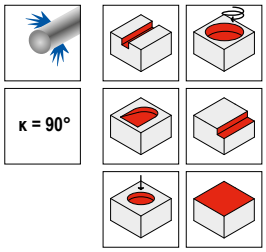
	-F40 CTC5240	-F40 CTCS245	-R60 CTP6215
	DRAGONSKIN	DRAGONSKIN	
			
	F	F	R
	XDKT	XDKT	XDKT
	50 473 ...	51 114 ...	50 469 ...
ISO / RE mm	EUR 1H/17	EUR 1H/17	EUR 1B/61
150508ER 0,8	29,66 **508**	29,66 **558**	
150508SR 0,8			24,65 **300**
150532ER 3,2	29,66 **532** [1]	29,66 **58201**[1]	
150540ER 4,0	29,66 **540** [1]	29,66 **59000**[1]	
P			
M			
K			●
N			
S	●	●	
H			●
O			

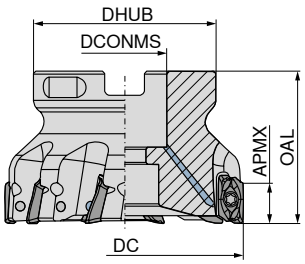
1) Insert radius >2.5 mm: Modify cutter body

Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 162
Starting Parameter	→ 162	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

MaxiMill – 211-20 Shell mill

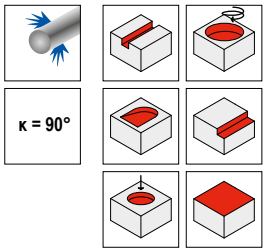


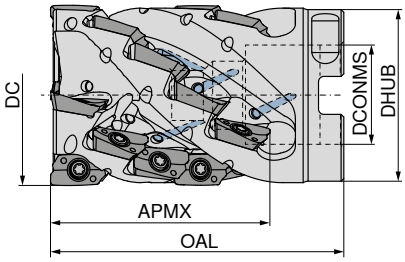


Designation	DC	ZNF	APMX	OAL	DCONMS $_{H6}$	DHUB	RPMX	torque moment	Insert	50 778 ... EUR 2B/40	
	mm		mm	mm	mm	mm	1/min.	Nm			
A211.63.R.05-20	63	5	19	45	22	48	14400	5	XD.. 2007..	549,00	**06305**
A211.80.R.06-20	80	6	19	50	27	58	12400	5	XD.. 2007..	587,20	**08006**
A211.100.R.07-20	100	7	19	50	32	78	10900	5	XD.. 2007..	630,10	**10007**

MaxiMill – 211-20K shell end face mill

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



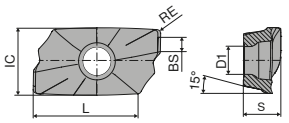


Designation	DC	ZNF	APMX	ZEFP	ZNP	OAL	DCONMS $_{H6}$	DHUB	torque moment	Insert	50 780 ... EUR 2B/40	
	mm		mm			mm	mm	mm	Nm			
A211.63.R.04K4-20	63	4	68	16	4	92	27	58	5	XD.. 2007..	1.216,00	**06304**
A211.80.R.05K4-20	80	5	68	20	4	92	32	76	5	XD.. 2007..	1.363,00	**08005**

	 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	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	2A/28		Y7		Y7		2A/28		2A/28		2A/28		Y7	
63			6,13	**037**	9,69	**106**	5,64	**303**	3,19	**01200**	7,01	**180**	170,10	**193**
80			6,13	**037**	9,69	**106**	5,64	**303**	3,19	**01200**	10,89	**181**	170,10	**193**
63	20,57	**003**	6,13	**037**	9,69	**106**	5,64	**303**	3,19	**01200**	10,89	**181**	170,10	**193**
80	33,19	**004**	6,13	**037**	9,69	**106**	5,64	**303**	3,19	**01200**	14,82	**234**	170,10	**193**
100			6,13	**037**	9,69	**106**	5,64	**303**	3,19	**01200**			170,10	**193**

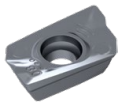
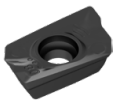
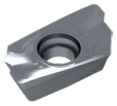
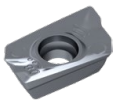
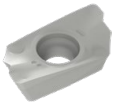
XDKT

Designation	IC	D1	L	S
	mm	mm	mm	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

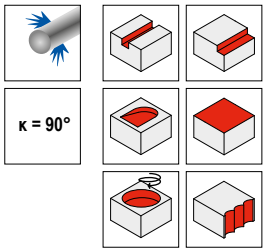
XDKT

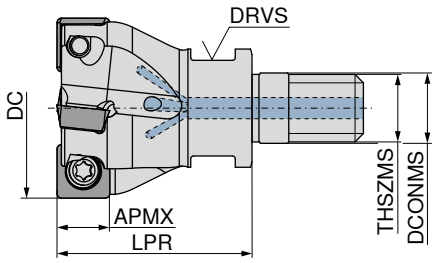
		-M50 CTPP235	-M50 CTCP230	-F40 CTPM245	-F40 CTCM245	-M50 CTPK220	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		M	M	F	F	M	F	F
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 145 ...	51 145 ...	51 127 ...	51 127 ...	51 145 ...	51 127 ...	51 127 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1B/61	EUR 1H/17	EUR 1H/17
200708ER	0,8	28,29 **10800**	28,29 **00800**	35,07 **45800**	35,07 **90801**	28,29 **60800**	35,07 **15800**	35,07 **55800**
200716ER	1,6	28,29 **11600**	28,29 **01600**	35,07 **46600**	35,07 **91601**	28,29 **61600**	35,07 **16600**	35,07 **56600**
200732ER	3,2			35,07 **48200**	35,07 **93201**		35,07 **18200**	35,07 **58200**
200740ER	4,0				35,07 **94001**		35,07 **19000**	
200760ER	6,0				35,07 **96001**		35,07 **19200**	
P		●	●	●	●			
M		○		●	●			
K		○	○			●		
N								
S					○		●	●
H								
O								

Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 163
Starting Parameter	→ 163	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

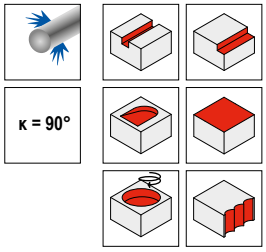
MaxiMill – 490-09 Screw in cutter

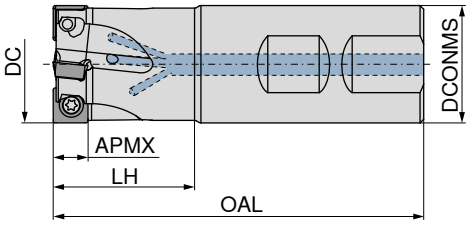




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 726 ... EUR 2B/40	
G490.25.R.03-09	25	3	8	35	M12	12,5	17	3,2	SD.. 09T3..	384,70	025
G490.32.R.04-09	32	4	8	35	M16	17,0	24	3,2	SD.. 09T3..	417,20	032

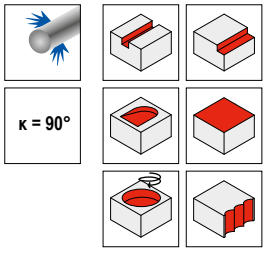
MaxiMill – End milling cutter C 490-09

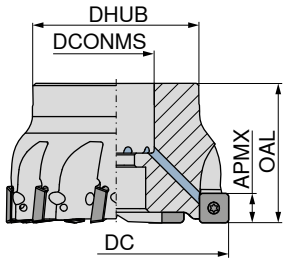


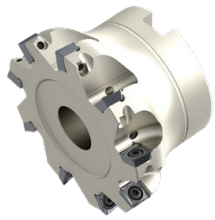


Designation	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	torque moment Nm	Insert	50 727 ... EUR 2B/40		50 727 ... EUR 2B/40	
C490.25.R.03-09-B-32	25	3	8	25	88	32	3,2	SD.. 09T3..			384,70	025
C490.25.R.02-09-A-20	25	2	8	20	165	40	3,2	SD.. 09T3..	354,70	225		
C490.25.R.02-09-A-40-165	25	2	8	25	165	40	3,2	SD.. 09T3..	368,00	125		
C490.32.R.04-09-B-25	32	4	8	25	100	40	3,2	SD.. 09T3..			402,00	132
C490.32.R.04-09-B-40	32	4	8	32	100	40	3,2	SD.. 09T3..			417,20	032

MaxiMill – 490-09 Shell mill



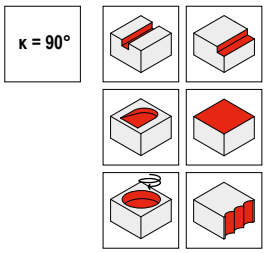


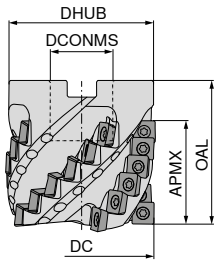


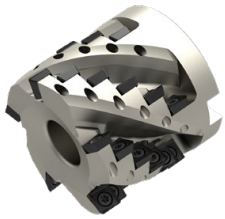
Designation	DC mm	ZNF	APMX mm	DHUB mm	DCONMS H6 mm	OAL mm	torque moment Nm	Insert	50 728 ... EUR 2B/40	
A490.40.R.05-09	40	5	8	38	16	40	3,2	SD.. 09T3..	466,50	040
A490.42.R.06-09	42	6	8	38	16	40	3,2	SD.. 09T3..	498,90	042
A490.50.R.06-09	50	6	8	43	22	40	3,2	SD.. 09T3..	515,40	050
A490.52.R.07-09	52	7	8	43	22	40	3,2	SD.. 09T3..	548,00	052
A490.63.R.07-09	63	7	8	48	22	40	3,2	SD.. 09T3..	564,50	063
A490.66.R.08-09	66	8	8	48	22	40	3,2	SD.. 09T3..	597,10	066
A490.80.R.09-09	80	9	8	58	27	50	3,2	SD.. 09T3..	793,50	080
A490.100.R.10-09	100	10	8	78	32	50	3,2	SD.. 09T3..	867,10	100

MaxiMill – 490-09K shell end face mill

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



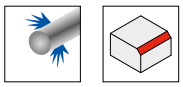


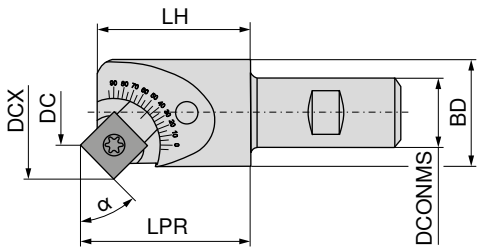


Designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	50 761 ... EUR 2B/40	
A490.40.R.03K6-09	40	3	41	18	6	55	16	38	3,2	SD.. 09T3..	1.293,00	**040**
A490.50.R.04K6-09	50	4	41	24	6	55	22	48	3,2	SD.. 09T3..	1.564,00	**050**
A490.63.R.05K6-09	63	5	41	30	6	60	27	61	3,2	SD.. 09T3..	1.768,00	**063**

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	
25 - 32	6,13	**036**			11,96	**113**			5,64	**303**	4,14	**110**	165,90	**192**
40 - 42	6,13	**036**	5,04	**040**	11,96	**113**	16,08	**151**	5,64	**303**	4,14	**110**	165,90	**192**
50 - 100	6,13	**036**			11,96	**113**			5,64	**303**	4,14	**110**	165,90	**192**

MaxiMill – 490-09 Adjustable single angle milling cutter





NEW

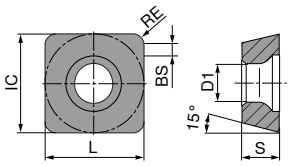
Designation	DC mm	DCX mm	LH mm	BD mm	LPR mm	ZNF	DCONMS mm	torque moment Nm	Insert	50 690 ... EUR 2B/40	
C490.20.R.01	1,6 - 11,1	20,1 - 23,6	32	18,65	32,9 - 34,6	1	16	3,2	SD.. 09T3..	185,40	**01600**

Spare parts for Article no.	Cylindrical screw 70 950 ... EUR 2A/28		Adjustment wedge 70 950 ... EUR 2B/40		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	
50 690 01600	5,27	**87500**	22,17	**87200**	6,13	**036**	11,96	**113**	5,64	**303**	4,14	**110**	165,90	**192**

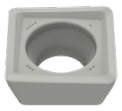
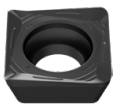
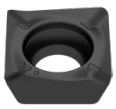
Angle-dependent dimensions can be found on → **Page 164**

SDHT / SDNT

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

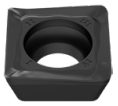
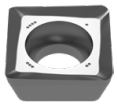


SDHT / SDNT

	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			15,27 108			17,08 458	17,08 90801
09T308SR 0,8	20,72 900	15,27 008		15,27 108	15,27 408		
P	●	●	●	●	○	●	●
M			○	○	●	●	●
K	○	○	○	○			
N							
S							○
H							
O							

SDNT / SDHT

NEW

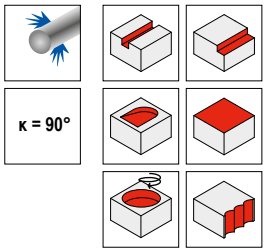
	-31 CTCK215	-F10 CTPX715	-27P H216T	-27 CTC5240	-M31 CTC5240	-F10 CTCS245
	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	SDNT	SDHT	SDHT	SDHT	SDNT	SDHT
	51 029 ...	51 125 ...	50 424 ...	50 496 ...	50 425 ...	51 125 ...
ISO / RE mm	EUR 1B/61	EUR 1A/90	EUR 1A/90	EUR 1H/17	EUR 1H/17	EUR 1H/17
09T308ER 0,8				28,57 508	17,08 508	28,57 55800
09T308FR 0,8		24,84 00802	20,72 550			
09T308SR 0,8	15,27 508					
P		○				
M		○				
K	●	●	○			
N		●	●			
S		○		●	●	●
H						
O		○	○			

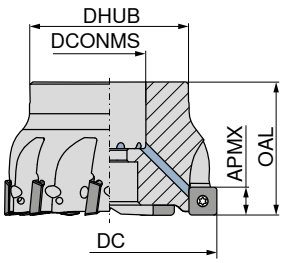
Milling guide

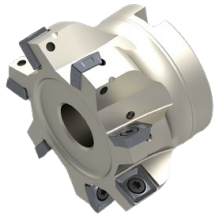
Cutting data standard values	→ 145–148	Starting Parameter	→ 164
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

15

MaxiMill – 490-12 Shell mill







50 703 ...

Designation	DC	ZNF	APMX	DHUB	DCONMS	OAL	torque moment	Insert	EUR 2B/40	
	mm		mm	mm	mm	mm	Nm			
A490.40.R.04-12	40	4	11	38	16	40	5	SD.. 1205..	444,00	**54000**
A490.50.R.05-12	50	5	11	43	22	40	5	SD.. 1205..	493,10	**550**
A490.63.R.06-12	63	6	11	48	22	40	5	SD.. 1205..	542,50	**563**
A490.80.R.07-12	80	7	11	58	27	50	5	SD.. 1205..	749,10	**580**
A490.100.R.08-12	100	8	11	75	32	50	5	SD.. 1205..	822,80	**600**
A490.125.R.10-12	125	10	11	88	40	63	5	SD.. 1205..	881,90	**625**

TORX® blade


Clamping key – T


Key D


Power Screw

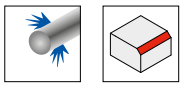

Molykote

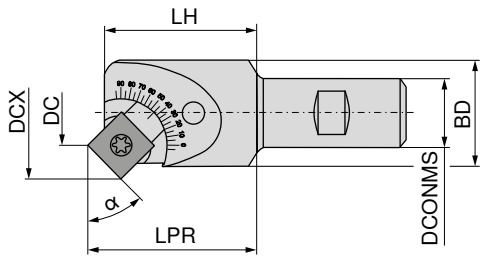

Clamping screw


Torque screwdriver

Spare parts																			
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**						
DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7						
40	6,13	**037**	5,04	**040**	12,83	**114**	16,08	**151**	5,64	**303**	3,19	**01200**	170,10	**193**					
50	6,13	**037**	5,04	**040**	12,83	**114**	22,09	**154**	5,64	**303**	3,19	**01200**	170,10	**193**					
63 - 125	6,13	**037**	5,04	**040**	12,83	**114**			5,64	**303**	3,19	**01200**	170,10	**193**					

MaxiMill – 490-12 Adjustable single angle milling cutter





NEW

50 690 ...

Designation	DC	DCX	LH	BD	LPR	ZNF	DCONMS	torque moment	Insert	EUR 2B/40	
	mm	mm	mm	mm	mm		mm	Nm			
C490.26.R.01	1,1 - 14,1	26,6 - 31,5	37	25	38,2 - 40,6	1	20	5	SD.. 1205..	217,60	**02000**


Cylindrical screw


Adjustment wedge

TORX® blade


Key D


Molykote


Clamping screw

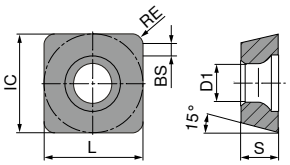

Torque screwdriver

Spare parts for Article no.																			
	70 950 ...		**70 950 ...**		**80 950 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**						
	EUR 2A/28		EUR 2B/40		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7						
50 690 02000	4,15	**87400**	22,17	**87300**	6,13	**037**	12,83	**114**	5,64	**303**	3,19	**01200**	170,10	**193**					

Angle-dependent dimensions can be found on → **Page 165**

SDHW / SDMT / SDHT

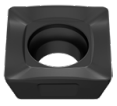
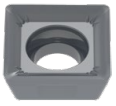
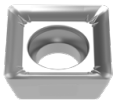
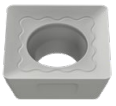
Designation	IC	D1	L	BS	S
	mm	mm	mm	mm	mm
SDH. 120508..	12,7	5,5	12,7	2,2	5,00
SDHT 120512..	12,7	5,5	12,7	1,8	5,00
SDHT 120520..	12,7	5,5	12,7	1,0	5,00
SDHT 120525..	12,7	5,5	12,7	1,5	5,00
SDMT 120508..	12,7	5,5	12,7	3,0	5,00
SDMT 1205ZZ..	12,7	5,5	12,7	0,9	5,00



SDHW / SDMT / SDHT

	TCM10	-29 CTCP230	-29 CTPP235	-29 CTPM240	-33 CTPM240	-F50 CTPM245	-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						24,22 458	24,22 90801
120508SR 0,8	24,65 901						
120512SR 1,2					24,00 412		
120520SR 2,0					24,00 421		
1205ZZSN 0,8		20,72 020	20,72 120	20,04 420			
P	●	●	●	○	○	●	●
M			○	●	●	●	●
K	○	○	○				
N							
S							○
H							
O							

SDMT / SDHT

			NEW			
	-31 CTCK215	-F10 CTPX715	-27P H216T	-M31 CTC5240	-F50 CTCS245
	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	DRAGONSKIN
					
	SDMT	SDHT	SDHT	SDMT	SDMT
	51 059 ...	51 161 ...	50 426 ...	50 580 ...	51 110 ...
ISO / RE mm	EUR 1B/61	EUR 1A/90	EUR 1A/90	EUR 1H/17	EUR 1H/17
120508ER 0,8				24,22 508	24,22 55800
120508FR 0,8		29,76 00802	24,00 555		
120525FR 2,5			24,00 559		
1205ZZSN 0,8	20,04 521				
P		○			
M		○			
K	●	●	○		
N		●	●		
S		○		●	●
H					
O		○	○		

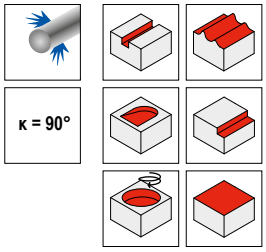
Milling guide

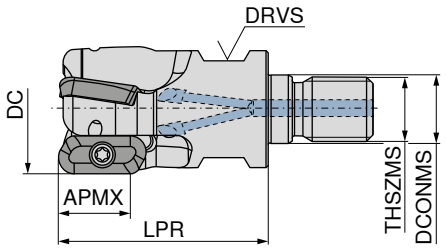
Cutting data standard values	→ 145–148	Starting Parameter	→ 165
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

15

MaxiMill – HSC-11 Screw in cutter

▲ Insert radius >3.2 mm: Modify cutter body

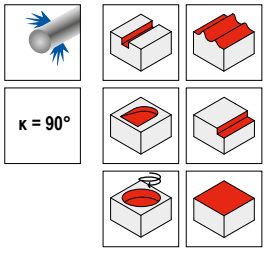


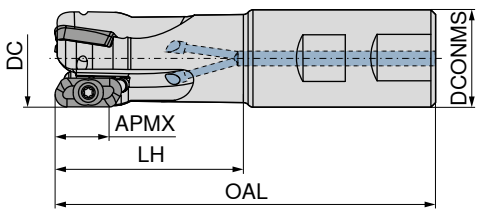


Designation	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	RPMX 1/min.	DRVS mm	torque moment Nm	Insert	55 107 ... EUR 2B/40	
GHSC.16.R.02-11	16	2	10	8,5	27	M8	56000	10	1,8	XDHT 11T3..	338,80	**016**
GHSC.20.R.02-11	20	2	10	10,5	33	M10	50100	15	1,8	XDHT 11T3..	364,80	**020**
GHSC.25.R.03-11	25	3	10	12,5	35	M12	45000	17	1,8	XDHT 11T3..	411,00	**025**
GHSC.32.R.03-11	32	3	10	17,0	35	M16	39800	24	1,8	XDHT 11T3..	427,10	**032**
GHSC.40.R.03-11	40	3	10	17,0	35	M16	35500	24	1,8	XDHT 11T3..	448,30	**040**

MaxiMill – HSC-11 End milling cutter

▲ Insert radius >3.2 mm: Modify cutter body

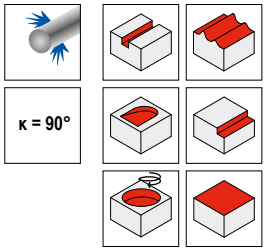


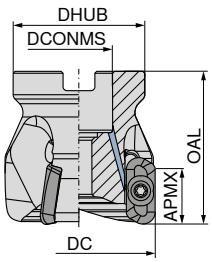


Designation	DC mm	ZNF	APMX mm	DCONMS h6 mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	50 675 ... EUR 2B/40		50 675 ... EUR 2B/40	
CHSC.16.R.02-11-B/A-25	16	2	10	16	75	25	56200	1,8	XDHT 11T3..	338,80	**016**	338,80	**416**
CHSC.16.R.02-11-A-32	16	2	10	16	165	32	18800	1,8	XDHT 11T3..	338,80	**116**		
CHSC.20.R.02-11-A-32	20	2	10	20	84	32	50100	1,8	XDHT 11T3..	364,80	**020**		
CHSC.20.R.03-11-B-32	20	3	10	20	84	32	50100	1,8	XDHT 11T3..			413,80	**420**
CHSC.20.R.02-11-A-40	20	2	10	20	165	40	26700	1,8	XDHT 11T3..	364,80	**120**		
CHSC.25.R.03-11-A-40	25	3	10	25	98	40	45000	1,8	XDHT 11T3..	411,00	**225**		
CHSC.25.R.04-11-B-40	25	4	10	25	98	40	45000	1,8	XDHT 11T3..			451,60	**425**
CHSC.25.R.02-11-A-50	25	2	10	25	165	50	31700	1,8	XDHT 11T3..	392,60	**125**		
CHSC.25.R.03-11-A-50	25	3	10	25	165	50	31700	1,8	XDHT 11T3..	411,00	**325**		

MaxiMill – HSC-11 Shell mill

▲ Insert radius >3.2 mm: Modify cutter body



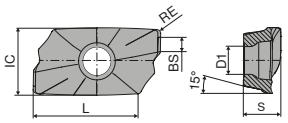


Designation	DC mm	ZNF	APMX mm	DCONMS H6 mm	DHUB mm	OAL mm	RPMX 1/min.	torque moment Nm	Insert	50 718 ... EUR 2B/40	
AHSC.40.R.04-11	40	4	10	16	38	50	35500	1,8	XDHT 11T3..	570,90	**040**
AHSC.50.R.04-11	50	4	10	22	43	50	31800	1,8	XDHT 11T3..	690,60	**050**
AHSC.63.R.05-11	63	5	10	22	43	50	28300	1,8	XDHT 11T3..	768,90	**063**
AHSC.80.R.05-11	80	5	10	27	58	50	25100	1,8	XDHT 11T3..	800,00	**080**
AHSC.100.R.05-11	100	5	10	32	78	50	22400	1,8	XDHT 11T3..	857,30	**100**

	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	
16 - 25	6,13	**043**			13,16	**125**			5,64	**303**	5,27	**128**	165,90	**192**
32	6,13	**043**			13,16	**125**			5,64	**303**	5,27	**131**	165,90	**192**
40	6,13	**043**	5,04	**040**	13,16	**125**	16,08	**151**	5,64	**303**	5,27	**131**	165,90	**192**
50 - 63	6,13	**043**	5,46	**050**	13,16	**125**	22,09	**154**	5,64	**303**	5,27	**131**	165,90	**192**
80 - 100	6,13	**043**			13,16	**125**			5,64	**303**	5,27	**131**	165,90	**192**

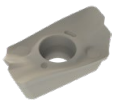
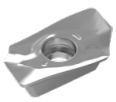
XDKT / XDHT

Designation	IC	D1	L	BS	S
	mm	mm	mm	mm	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
		
	F XDKT	F XDHT
	50 478 ...	50 477 ...

ISO	RE	EUR 1A/90		EUR 1A/90	
	mm				
11T302FR	0,2	18,48	502	24,35	502
11T304FR	0,4	18,48	504	24,35	504
11T308FR	0,8	18,48	508	24,35	508
11T312FR	1,2			24,35	512
11T316FR	1,6			24,35	516
11T320FR	2,0	18,48	520 1)	24,35	520 1)
11T325FR	2,5	18,48	525 1)	24,35	525 1)
11T332FR	3,2			24,35	532 1)
11T340FR	4,0			24,35	540 1)
11T350FR	5,0			24,35	550 1)
P					
M					
K			○		○
N			●		●
S					
H					
O			○		○

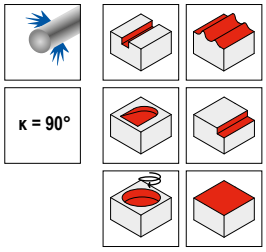
1) Insert radius >1.6 mm: Modify cutter body

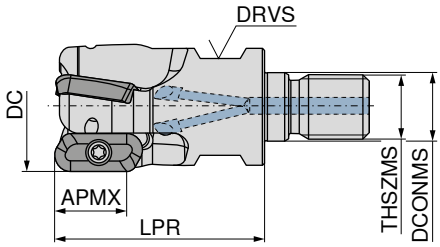
Milling guide

Safety advice	→ 166	Cutting data standard values	→ 167
Machining strategy	→ 168+169	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

MaxiMill – HSC-19 Screw-in cutter

▲ Insert radius >4.0 mm: Modify cutter body

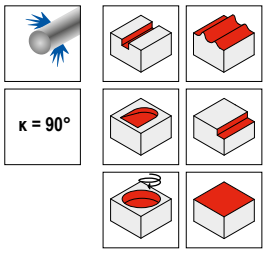


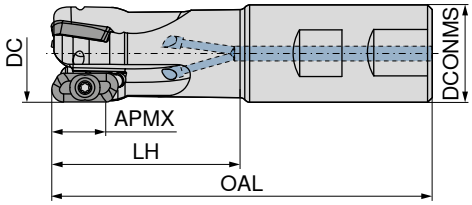


Designation	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	55 108 ... EUR 2B/40	
GHSC.25.R.02-19	25	2	18	12,5	45	M12	17	34400	5	XDHT 1904..	399,20	**025**
GHSC.32.R.03-19	32	3	18	17,0	52	M16	24	29100	5	XDHT 1904..	517,10	**032**
GHSC.40.R.03-19	40	3	18	17,0	52	M16	24	24900	5	XDHT 1904..	549,70	**040**

MaxiMill – HSC-19 End milling cutter

▲ Insert radius >4.0 mm: Modify cutter body

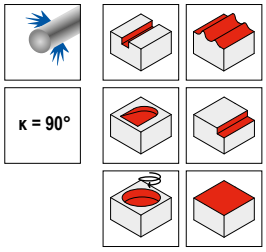


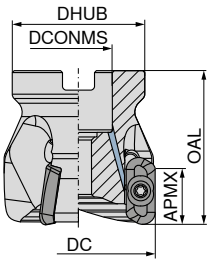


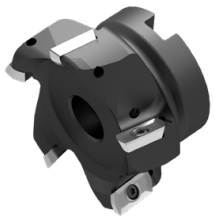
Designation	DC mm	ZNF	APMX mm	DCONMS $_{h5}$ mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	50 679 ... EUR 2B/40		50 679 ... EUR 2B/40	
CHSC.25.R.02-19-A-50	25	2	18	25	121	50	32400	5	XDHT 1904..	399,20	**225**		
CHSC.25.R.02-19	25	2	18	25	121	65	32400	5	XDHT 1904..			411,00	**025**
CHSC.25.R.02-19-A-63	25	2	18	25	165	63	24700	5	XDHT 1904..	399,20	**325**		
CHSC.32.R.02-19-A-63	32	2	18	32	125	63	28900	5	XDHT 1904..	418,80	**232**		
CHSC.32.R.03-19-A-63	32	3	18	32	125	63	28900	5	XDHT 1904..	517,10	**432**		
CHSC.32.R.03-19	32	3	18	32	125	65	28900	5	XDHT 1904..			526,80	**033**
CHSC.32.R.02-19	32	2	18	32	125	65	28900	5	XDHT 1904..			428,60	**032**
CHSC.32.R.02-19-A-80	32	2	18	32	165	80	24400	5	XDHT 1904..	418,80	**332**		
CHSC.32.R.03-19-A-80	32	3	18	32	165	80	24400	5	XDHT 1904..	517,10	**532**		

MaxiMill – HSC-19 Shell mill

▲ Insert radius >4.0 mm: Modify cutter body





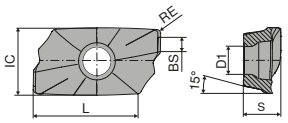


Designation	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	torque moment Nm	Insert	50 716 ... EUR 2B/40	
AHSC.40.R.03-19	40	3	18	16	38	50	24900	5	XDHT 1904..	535,00	**040**
AHSC.50.R.04-19	50	4	18	22	43	50	21600	5	XDHT 1904..	672,40	**050**
AHSC.63.R.04-19	63	4	18	22	48	50	18800	5	XDHT 1904..	752,70	**163**
AHSC.63.R.05-19	63	5	18	22	48	50	18800	5	XDHT 1904..	768,90	**063**
AHSC.80.R.04-19	80	4	18	27	58	50	16400	5	XDHT 1904..	782,00	**180**
AHSC.80.R.05-19	80	5	18	27	58	50	16400	5	XDHT 1904..	800,00	**080**
AHSC.100.R.04-19	100	4	18	32	78	50	14500	5	XDHT 1904..	839,40	**200**
AHSC.100.R.05-19	100	5	18	32	78	50	14500	5	XDHT 1904..	857,30	**100**
AHSC.125.R.05-19	125	5	18	40	88	63	12800	5	XDHT 1904..	991,30	**125**
AHSC.125.R.06-19	125	6	18	40	88	63	12800	5	XDHT 1904..	1.008,00	**225**

	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	6,13	**036**			11,96	**113**			5,64	**303**	3,69	**172**	170,10	**193**
32	6,13	**036**			11,96	**113**			5,64	**303**	4,38	**173**	170,10	**193**
40	6,13	**036**	5,04	**040**	11,96	**113**	16,08	**151**	5,64	**303**	4,38	**173**	170,10	**193**
50 - 63	6,13	**036**	5,46	**050**	11,96	**113**	22,09	**154**	5,64	**303**	4,46	**174**	170,10	**193**
80 - 125	6,13	**036**			11,96	**113**			5,64	**303**	4,46	**174**	170,10	**193**

XDHT

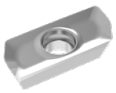
Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDHT 190402..	9,52	4,65	19	2	4,76
XDHT 190404..	9,52	4,65	19	2	4,76
XDHT 190408..	9,52	4,65	19	2	4,76
XDHT 190412..	9,52	4,65	19	2	4,76
XDHT 190416..	9,52	4,65	19	2	4,76
XDHT 190420..	9,52	4,65	19	2	4,76
XDHT 190425..	9,52	4,65	19	1,4	4,76
XDHT 190432..	9,52	4,65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

NEW

	-F10 CTPX715	-27P H216T
	DRAGONSKIN	
		
	F	F
	XDHT	XDHT
	51 159 ...	50 487 ...

ISO	RE mm	EUR 1A/90		EUR 1A/90	
190402FR	0,2	41,38	00202	35,97	552
190404FR	0,4	41,38	00402	35,97	554
190408FR	0,8	41,38	00802	35,97	556
190412FR	1,2	41,38	01202	35,97	557
190416FR	1,6	41,38	01602	35,97	558
190420FR	2,0	41,38	02002	35,97	560
190425FR	2,5	41,38	02502	35,97	562
190432FR	3,2	41,38	03202	35,97	564
190440FR	4,0	41,38	04002	35,97	566
190450FR	5,0	41,38	05002[1)]	35,97	568 [1)]

P	○	
M	○	
K	●	○
N	●	●
S	○	
H		
O	○	○

1) Insert radius > 4.0 mm: Modify cutter body

Milling guide

Cutting data standard values	→ 145–148	Safety advice	→ 166
Machining strategy	→ 170–172	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

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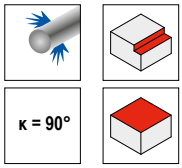
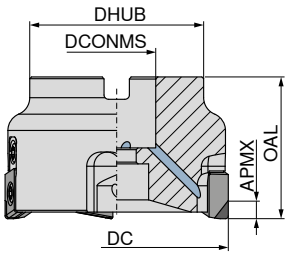
MaxiMill – HPC 12 Shell mill

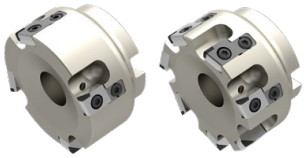
▲ 50 723 ... normal pitch
▲ 50 724 ... fine pitch

Scope of supply:

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







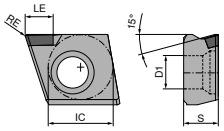
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 723 ... EUR 2B/40		50 724 ... EUR 2B/40	
AHPC.40.R.04-12	40	4	11	40	34	16	32000	5	ZNHW 1205..	825,80	**040**		
AHPC.50.R.04-12	50	4	11	40	49	22	32000	5	ZNHW 1205..	844,70	**050**		
AHPC.50.R.05-12	50	5	11	40	49	22	32000	5	ZNHW 1205..			945,80	**050**
AHPC.63.R.04-12	63	4	11	40	49	22	29000	5	ZNHW 1205..	870,10	**063**		
AHPC.63.R.07-12	63	7	11	40	49	22	29000	5	ZNHW 1205..			1.173,00	**063**
AHPC.80.R.05-12	80	5	11	50	60	27	26000	5	ZNHW 1205..	1.229,00	**080**		
AHPC.80.R.09-12	80	9	11	50	60	27	26000	5	ZNHW 1205..			1.632,00	**080**
AHPC.100.R.06-12	100	6	11	50	70	32	24000	5	ZNHW 1205..	1.388,00	**100**		
AHPC.100.R.12-12	100	12	11	50	70	32	24000	5	ZNHW 1205..			1.990,00	**100**
AHPC.125.R.08-12	125	8	11	63	72	40	22000	5	ZNHW 1205..	1.645,00	**125**		
AHPC.125.R.14-12	125	14	11	63	72	40	22000	5	ZNHW 1205..			2.249,00	**12514**
AHPC.160.R.10-12	160	10	11	63	118	40	18000	5	ZNHW 1205..	2.049,00	**16010**[1)]		
AHPC.160.R.16-12	160	16	11	63	118	40	18000	5	ZNHW 1205..			5.900,00	**16016**[1)]
AHPC.200.R.12-12	200	12	11	63	153	60	16000	5	ZNHW 1205..	6.111,00	**20000**[1)]		
AHPC.250.R.14-12	250	14	11	63	200	60	14000	5	ZNHW 1205..	6.902,00	**25014**[1)]		
AHPC.315.R.18-12	315	18	11	80	265	60	12000	5	ZNHW 1205..	8.693,00	**31518**[1)]		

1) Without Through Coolant

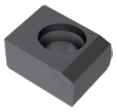
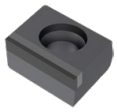
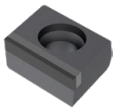
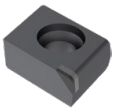
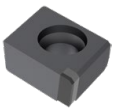
Spare parts	TORX® blade		 Molykote		 Clamping screw		 Wedge		 Torque screwdriver	
	80 950 ...		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
DC	EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
40 - 315	6,13	**036**	5,64	**303**	4,46	**174**	47,44	**199**	170,10	**193**

ZNHW

Designation	LE	D1	IC	S
	mm	mm	mm	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				145,30 **906**	
120504FR-0007 0,4				177,00 **904**	
120508ER-1503 0,8				145,30 **910**	
120508SR-0003 0,8				144,60 **908**	
1205EOER-1002	167,60 **952**				
1205POER-1511		209,50 **902**			
1205POFR-1003		145,30 **90600**			
1205POSR-1503		131,50 **900**			
1205POSR-1506		170,50 **90800**	170,50 **90800**		
1205POSR-3003		144,60 **904**			
1205ZZSR-5003					185,00 **900** 1)
P					
M					
K	●				
N		●	●	●	●
S					
H	○				
O		○	○	○	○

1) -Q = trailing edge insert

Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 173
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

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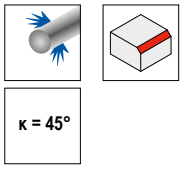
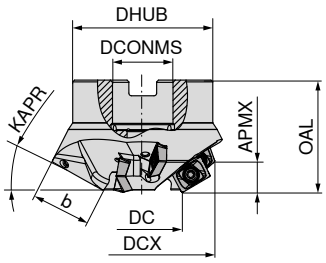
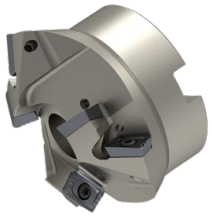
MaxiMill – 242 Chamfer Cutter

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







NEW

50 768 ...

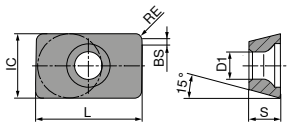
KAPR	DC mm	DCX mm	ZNF	APMX mm	ZEFP	b ±0,3 mm	OAL mm	DCONMS mm	DHUB mm	ZNP	torque moment Nm	Insert	EUR 2B/40	
15°	35	89,60	3	7,0	6	27,6	50	27	62,5	2	3,2	LD.. 15...	476,10	**11503**
30°	35	83,60	3	13,6	6	27,6	50	27	62,5	2	3,2	LD.. 15...	476,10	**13003**
45°	35	74,60	3	19,3	6	27,6	50	27	62,5	2	3,2	LD.. 15...	476,10	**14503**
60°	35	62,70	3	23,6	6	27,6	50	22	49,0	2	3,2	LD.. 15...	476,10	**16003**
75°	35	49,48	3	26,7	6	27,6	60	22	49,0	2	3,2	LD.. 15...	476,10	**17503**[1)]

1) Version with Powerscrew

	TORX® blade	 Clamping key – T	 Key D	 Power Screw	 Molykote	 Clamping screw	 Torque screwdriver	 clamping screw
	80 950 ...	**80 397 ...**	**80 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**	**83 950 ...**
Spare parts	EUR	EUR	EUR	EUR	EUR	EUR	EUR	EUR
KAPR	Y7	Y7	Y7	2A/28	2A/28	2A/28	Y7	Y8/3B
15 - 60	6,13 **036**		11,96 **113**		5,64 **303**	4,06 **304**	165,90 **192**	4,73 **125**
75	6,13 **036**	5,46 **050**	11,96 **113**	22,09 **154**	5,64 **303**	4,06 **304**	165,90 **192**	

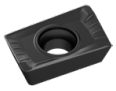
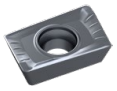
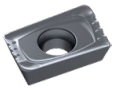
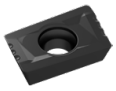
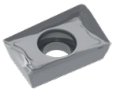
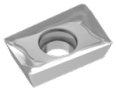
LDFT / LDFW / LDMT

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



L...

LDMT / LDFT / LDFW

ISO	RE	-29 CTCP230 DRAGONSKIN		-29 CTPP235 DRAGONSKIN		-33 CTPM240 DRAGONSKIN		CTCK215 DRAGONSKIN		NEW -F10 CTPX715 DRAGONSKIN		-27P H216T	
													
		LDMT		LDMT		LDFT		LDFW		LDFT		LDFT	
		51 080 ...		51 080 ...		51 042 ...		51 043 ...		51 157 ...		50 409 ...	
	mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1A/90		EUR 1A/90	
150408FR	0,8									29,44	00802	26,09	550
1504PDSR	0,8	12,84	020	12,84	120			20,99	520				
1504PDSR	1,2					24,00	420						
P		●		●		○				○			
M				○		●				○			
K		○		○				●		●		○	
N										●		●	
S										○			
H													
O										○		○	

Milling guide

Cutting data standard values	→ 145–148	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

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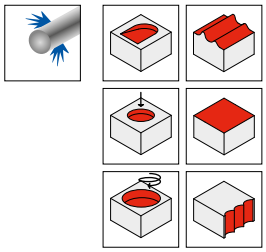
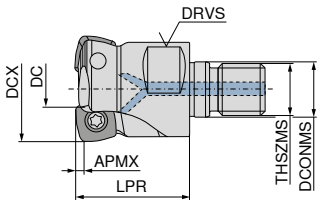
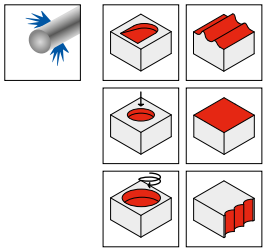
MaxiMill – HFC high-feed screw-in cutter

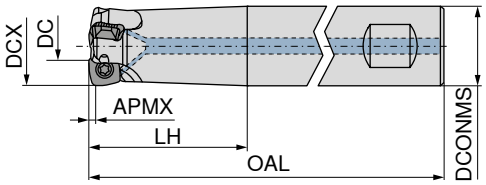




Designation	DC	DCX	ZNF	APMX	LPR	DCONMS	THSZMS	DRVS	RPMX	torque moment	Insert	50 682 ... EUR 2B/40	
	mm	mm		mm	mm	mm		mm	1/min.	Nm			
GHFC.16.R.02-06	7	16	2	0,8	27	8,5	M8	10	20800	1,2	XPLX 0603..	291,50	**616**
GHFC.20.R.03-06	11	20	3	0,8	33	10,5	M10	15	19800	1,2	XPLX 0603..	331,00	**620**
GHFC.25.R.04-06	16	25	4	0,8	35	12,5	M12	17	18700	1,2	XPLX 0603..	370,50	**625**
GHFC.32.R.05-06	23	32	5	0,8	35	17,0	M16	24	22000	1,2	XPLX 0603..	409,90	**632**
GHFC.42.R.07-06	33	42	7	0,8	35	17,0	M16	24	15000	1,2	XPLX 0603..	451,00	**04207**
GHFC.25.R.02-09	12	25	2	1,0	35	12,5	M12	17	30000	3,2	XDLX 09T3..	349,10	**025**
GHFC.25.R.03-09	12	25	3	1,0	35	12,5	M12	17	30000	3,2	XDLX 09T3..	374,70	**125**
GHFC.32.R.03-09	19	32	3	1,0	35	17,0	M16	24	27000	3,2	XDLX 09T3..	391,50	**032**
GHFC.42.R.05-09	19	42	5	1,0	35	17,0	M16	24	26100	3,2	XDLX 09T3..	438,50	**04205**
GHFC.32.R.02-12	15	32	2	2,0	35	17,0	M16	24	21600	5	XOLX 1204..	366,20	**132**
GHFC.35.R.03-12	18	35	3	2,0	35	17,0	M16	24	21360	5	XOLX 1204..	391,50	**035**
GHFC.42.R.04-12	25	42	4	2,0	35	17,0	M16	24	20800	5	XOLX 1204..	422,80	**04204**

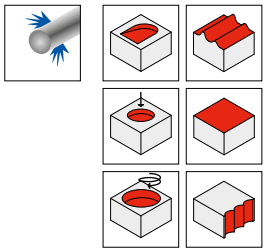
MaxiMill – HFC high-feed end mill

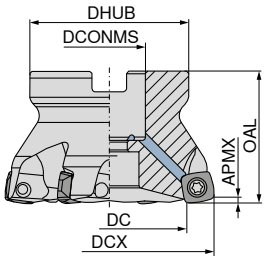


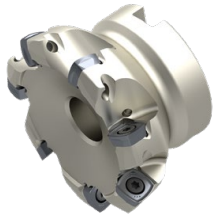


Designation	DC	DCX	ZNF	APMX	OAL	LH	DCONMS $_{h6}$	RPMX	torque moment	Insert	50 681 ... EUR 2B/40		50 681 ... EUR 2B/40	
	mm	mm		mm	mm	mm	mm	1/min.	Nm					
CHFC.16.R.02-06-B-40	7,0	16	2	0,8	89	40	16	17300	1,2	XPLX 0603..			291,50	**616**
CHFC.16.R.02-06-A-40-200	7,0	16	2	0,8	200	40	16	4600	1,2	XPLX 0603..	291,50	**716**		
CHFC.20.R.03-06-B-50	11,0	20	3	0,8	101	50	20	14500	1,2	XPLX 0603..			331,00	**620**
CHFC.20.R.03-06-A-50-225	11,0	20	3	0,8	225	50	20	4200	1,2	XPLX 0603..	331,00	**720**		
CHFC.25.R.04-06-B-50	16,0	25	4	0,8	107	50	25	15600	1,2	XPLX 0603..			370,50	**625**
CHFC.25.R.04-06-A-50-225	16,0	25	4	0,8	225	50	25	4600	1,2	XPLX 0603..	370,50	**725**		
CHFC.32.R.05-06-B-25-60	23,0	32	5	0,8	117	60	25	11000	1,2	XPLX 0603..			409,90	**632**
CHFC.32.R.05-06-A-25-60-225	23,0	32	5	0,8	225	60	25	3900	1,2	XPLX 0603..	409,90	**732**		
CHFC.25.R.02-09-A-50-225	12,3	25	2	1,0	225	50	25	9000	3,2	XDLX 09T3..	349,10	**025**		
CHFC.25.R.03-09-A-50-225	12,3	25	3	1,0	225	50	25	9000	3,2	XDLX 09T3..	374,70	**125**		
CHFC.32.R.03-09-A-63-250	19,3	32	3	1,0	250	63	32	8100	3,2	XDLX 09T3..	391,50	**032**		
CHFC.32.R.02-12-A-63-250	14,8	32	2	2,0	250	63	32	6480	5	XOLX 1204..	366,20	**132**		
CHFC.35.R.03-12-A-63-250	17,8	35	3	2,0	250	63	32	6480	5	XOLX 1204..	391,50	**035**		

MaxiMill – HFC high-feed face mill







50 683 ...

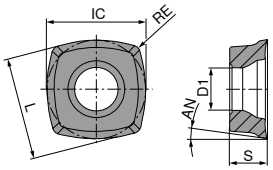
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	EUR 2B/40	
AHFC.32.R.03-09	19,3	32	3	1,0	40	16	38	27700	3,2	XDLX 09T3..	391,50	**032**
AHFC.35.R.04-09	19,3	35	4	1,0	40	16	38	26700	3,2	XDLX 09T3..	417,00	**035**
AHFC.40.R.04-09	27,3	40	4	1,0	40	16	38	26400	3,2	XDLX 09T3..	434,10	**140**
AHFC.42.R.05-09	29,3	42	5	1,0	40	16	38	26100	3,2	XDLX 09T3..	459,50	**142**
AHFC.50.R.05-09	37,3	50	5	1,0	40	22	43	23500	3,2	XDLX 09T3..	510,70	**150**
AHFC.52.R.06-09	39,3	52	6	1,0	40	22	43	23000	3,2	XDLX 09T3..	536,20	**152**
AHFC.63.R.06-09	50,3	63	6	1,0	40	22	48	20500	3,2	XDLX 09T3..	587,20	**163**
AHFC.66.R.07-09	53,3	66	7	1,0	40	22	48	20000	3,2	XDLX 09T3..	612,70	**16600**
AHFC.40.R.03-12	22,8	40	3	2,0	40	16	38	21120	5	XOLX 1204..	408,60	**040**
AHFC.42.R.04-12	24,8	42	4	2,0	40	16	38	20880	5	XOLX 1204..	434,10	**042**
AHFC.50.R.04-12	32,8	50	4	2,0	40	22	43	18800	5	XOLX 1204..	485,00	**050**
AHFC.52.R.05-12	34,8	52	5	2,0	40	22	43	18400	5	XOLX 1204..	510,70	**052**
AHFC.63.R.05-12	45,8	63	5	2,0	40	22	48	16400	5	XOLX 1204..	561,50	**063**
AHFC.66.R.06-12	48,8	66	6	2,0	40	22	48	16000	5	XOLX 1204..	587,20	**066**
AHFC.80.R.07-12	62,8	80	7	2,0	50	27	58	14000	5	XOLX 1204..	663,90	**080**
AHFC.100.R.08-12	82,8	100	8	2,0	50	32	78	12000	5	XOLX 1204..	740,70	**100**
AHFC.63.R.05-19	36,7	63	5	3,3	40	22	48	5500	5	XOLX 1906..	588,00	**263**
AHFC.80.R.06-19	53,7	80	6	3,3	50	27	58	4700	5	XOLX 1906..	714,50	**280**
AHFC.100.R.08-19	73,7	100	8	3,3	52	32	78	4100	5	XOLX 1906..	850,40	**300**
AHFC.125.R.10-19	98,7	125	10	3,3	63	40	88	3600	5	XOLX 1906..	1.068,00	**325**
AHFC.160.R.11-19	133,7	160	11	3,3	63	40	98	3100	5	XOLX 1906..	1.292,00	**360** [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 **Insert**	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
XDLX 09T3..	6,13	**036**			11,96	**113**			5,64	**303**	4,14	**110**	165,90	**192**
XDLX 09T3.. (Ø32 – Ø42)	6,13	**036**	5,04	**040**	11,96	**113**	16,08	**151**	5,64	**303**	4,06	**304**	165,90	**192**
XOLX 1204..	6,13	**037**			12,83	**114**			5,64	**303**	3,19	**01200**	170,10	**193**
XOLX 1204.. (Ø40 – Ø42)	6,13	**037**	5,04	**040**	12,83	**114**	16,08	**151**	5,64	**303**	3,19	**01200**	170,10	**193**
XOLX 1906..	6,13	**037**			12,83	**114**			5,64	**303**	5,27	**302**	170,10	**193**
XPLX 0603..	6,13	**033**			10,05	**110**			5,64	**303**	3,32	**116**	165,90	**192**

XPLX / XDLX / XOLX / XOHX

Designation	IC	D1	L	BS	S	AN
	mm	mm	mm	mm	mm	°
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

		-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	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
	mm							
060305ER	0,5						19,78 455	19,78 90501
060305SR	0,5	16,22 255	16,22 055	16,22 105	16,22 205	16,22 405		
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	EUR 1B/61	EUR 1H/17	EUR 1H/17
	mm			
060305ER	0,5		19,78 558	19,78 55500
060305SR	0,5	16,22 505		
P				
M				
K		●		
N				
S			●	●
H				
O				

XDLX

		-M50 CTCP220 DRAGONSKIN	-M50 CTPP225 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-M50 CTPP235 DRAGONSKIN
					
		XDLX	XDLX	XDLX	XDLX
		51 016 ...	51 016 ...	51 016 ...	51 016 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
09T308SR	0,8	16,73 258	16,73 058	16,73 008	16,73 108
P		●	●	●	●
M					○
K				○	○
N					
S					
H					
O					

XDLX

		-M50 CTPM225 DRAGONSKIN	-M50 CTCM235 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F40 CTPM245 DRAGONSKIN	-M50 CTPM245 DRAGONSKIN	-M50 CTCM245 DRAGONSKIN
							
		XDLX	XDLX	XDLX	XDLX	XDLX	XDLX
		51 016 ...	51 016 ...	51 016 ...	51 115 ...	51 016 ...	51 016 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17
09T308ER	0,8				20,19 458		
09T308SR	0,8	16,73 208	16,73 308	16,73 408		20,19 458	20,19 90801
P		●	●	○	●	●	●
M		●	●	●	●	●	●
K							
N							
S							○
H							
O							

15

XDLX

		-M50 CTCK215		-F40 CTC5240		-F40 CTCS245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
							
		XDLX		XDLX		XDLX	
		51 016 ...		50 503 ...		51 115 ...	
ISO	RE mm	EUR 1B/61		EUR 1H/17		EUR 1H/17	
09T308ER	0,8			20,19	558	20,19	558
09T308SR	0,8	16,73	508				
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	20,04	260	20,04	060	20,04	010	20,04	110	20,04	110
P		●		●		●		●		●	
M								○		○	
K						○		○		○	
N											
S											
H											
O											

XOLX

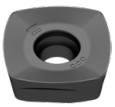
		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-F40 CTPM245	-M50 CTPM245	-F40 CTCM245	-M50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		XOLX	XOLX	XOLX	XOLX	XOLX	XOLX	XOLX
		51 017 ...	51 017 ...	51 017 ...	51 022 ...	51 017 ...	51 022 ...	51 017 ...
ISO	RE 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				23,61 460		23,61 91001	
120410SR	1,0	20,04 210	20,04 310	20,04 410		23,61 460		23,61 91001
P		●	●	○	●	●	●	●
M		●	●	●	●	●	●	●
K								
N								
S							○	○
H								
O								

XOLX / XOHX

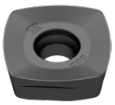
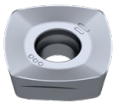
		-M50 CTCK215	-F40 CTC5240	-F50 CTC5240	-F40 CTCS245	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XOLX	XOLX	XOHX	XOLX	XOHX
		51 017 ...	50 504 ...	51 124 ...	51 022 ...	51 124 ...
ISO	RE mm	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17	EUR 1H/17
120410ER	1,0		23,61 558		23,61 560	
120410SR	1,0	20,04 510		30,69 16000		30,69 56000
P						
M						
K		●				
N						
S			●	●	●	●
H						
O						

15

XOLX

		-M50 CTCP230 DRAGONSKIN		-M50 CTPP235 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN		-F40 CTPM245 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							35,82	465
190615SR	1,5	29,14	015	29,14	115	29,14	415		
P		●		●		○		●	
M				○		●		●	
K		○		○					
N									
S									
H									
O									

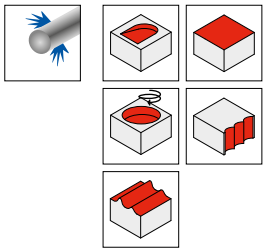
XOLX

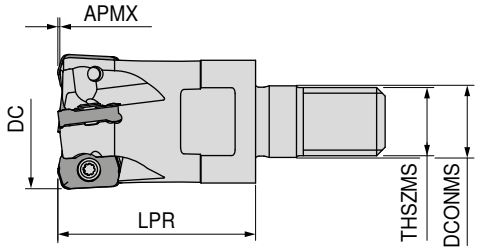
		-F40 CTCM245 DRAGONSKIN		-M50 CTCK215 DRAGONSKIN		-M50 CTPK220 DRAGONSKIN		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN	
											
		XOLX		XOLX		XOLX		XOLX		XOLX	
		51 022 ...		51 017 ...		51 017 ...		50 504 ...		51 022 ...	
ISO	RE mm	EUR 1H/17		EUR 1B/61		EUR 1B/61		EUR 1H/17		EUR 1H/17	
190615ER	1,5	35,82	91501					35,82	515	35,82	56500
190615SR	1,5			29,14	515	29,14	61500				
P		●									
M		●									
K				●		●					
N											
S		○						●		●	
H											
O											

Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 176–179
Starting Parameter	→ 176–179	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

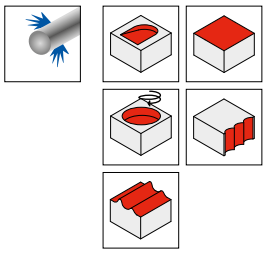
MaxiMill – DHFC high-feed screw-in cutter

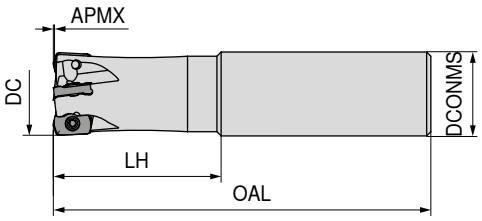




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	torque moment Nm	Insert	56 411 ... EUR WA	
GDHFC.16.R.02-09	16	2	0,75	29	8,5	M8	0,65	LNKX 0925..	269,40	01602
GDHFC.16.R.03-09	16	3	0,75	29	8,5	M8	0,65	LNKX 0925..	293,80	01603
GDHFC.20.R.04-09	20	4	0,75	29	10,5	M10	0,65	LNKX 0925..	337,10	02004
GDHFC.25.R.05-09	25	5	0,75	33	12,5	M12	0,65	LNKX 0925..	391,20	02505
GDHFC.32.R.05-09	32	5	0,75	42	17,0	M16	0,65	LNKX 0925..	418,20	03205
GDHFC.35.R.06-09	35	6	0,75	42	17,0	M16	0,65	LNKX 0925..	442,70	03506
GDHFC.42.R.06-09	42	6	0,75	42	17,0	M16	0,65	LNKX 0925..	461,70	04206

MaxiMill – DHFC high-feed end mill



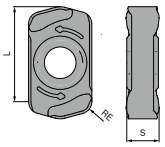


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	torque moment Nm	Insert	56 417 ... EUR WA	
CDHFC.16.R.05-09-A-32	16	3	0,75	80	32	16	0,65	LNKX 0925..	293,80	01603
CDHFC.20.R.04-09-A-40	20	4	0,75	90	40	20	0,65	LNKX 0925..	337,10	02004

Spare parts	TORX® blade		Key D		Molykote		Clamping screw		Torque screwdriver	
	80 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
16 - 42	6,78	051	10,26	117	5,64	303	4,19	15000	153,30	191

LNKX

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



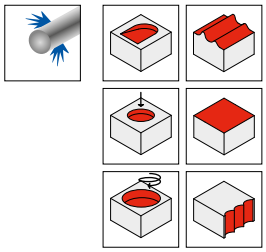
LNKX

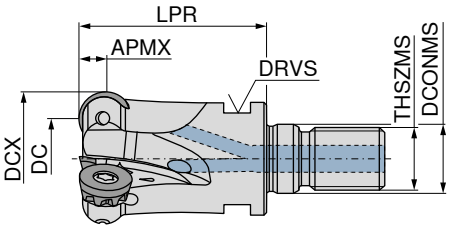
		-R50 CTPP231	-M50 CTPP236	-R50 CTPP236	-M50 CTPM241	-R50 CTPK221
						
		LNKX	LNKX	LNKX	LNKX	LNKX
		56 353 ...	56 355 ...	56 353 ...	56 355 ...	56 353 ...
ISO	RE mm	EUR WB	EUR WB	EUR WB	EUR WB	EUR WB
0925ZSR	1	23,23 12000	23,23 02500	23,23 02000	23,23 42500	23,23 27000
P		●	●	●	○	○
M		○	○	○	●	
K		○	○	○		●
N						
S					○	
H						
O						

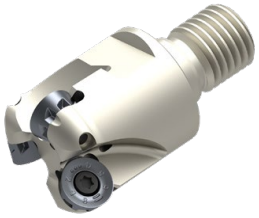
Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 180
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

MaxiMill – 251 RS Screw in cutter



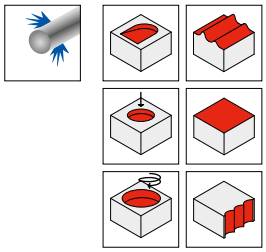


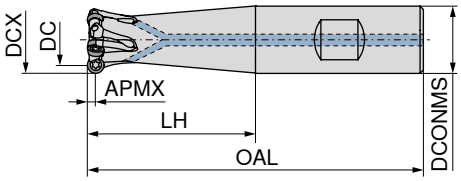


Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 684 ... EUR 2B/40	
G251.20.R.05-05-RS	15	20	5	2,5	10,5	33	M10	15	31800	0,7	RDHX 0501..	352,70	**220**
G251.25.R.06-05-RS	20	25	6	2,5	12,5	35	M12	17	24450	0,7	RDHX 0501..	405,90	**225**
G251.32.R.07-05-RS	27	32	7	2,5	17,0	35	M16	24	19850	0,7	RDHX 0501..	487,10	**232**
G251.20.R.03-08-RS	12	20	3	4,0	10,5	33	M10	15	25000	1,2	RDHX 0802..	331,00	**120**
G251.25.R.04-08-RS	17	25	4	4,0	12,5	35	M12	17	19000	1,2	RDHX 0802..	370,50	**125**
G251.32.R.05-08-35-RS	24	32	5	4,0	17,0	35	M16	24	19000	1,2	RDHX 0802..	450,40	**132**
G251.20.R.02-10-RS	10	20	2	5,0	10,5	33	M10	15	30000	2	RP.X 10T3..	267,80	**020**
G251.25.R.03-10-RS	15	25	3	5,0	12,5	35	M12	17	30000	2	RP.X 10T3..	359,90	**025**
G251.32.R.04-10-RS	22	32	4	5,0	17,0	35	M16	24	25000	2	RP.X 10T3..	418,80	**032**
G251.25.R.02-12-35-RS	13	25	2	6,0	12,5	35	M12	17	25000	3,2	RP.X 1204..	259,70	**525**
G251.32.R.03-12-35-RS	20	32	3	6,0	17,0	35	M16	24	19850	3,2	RP.X 1204..	316,80	**532**
G251.35.R.03-12-35-RS	23	35	3	6,0	17,0	35	M16	24	15900	3,2	RP.X 1204..	316,80	**535**
G251.42.R.04-12-42-RS	30	42	4	6,0	17,0	42	M16	24	15000	3,2	RP.X 1204..	376,50	**542**

	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/28		EUR Y7	
RDHX 0501..	6,13	**031**	10,87	**108**	5,64	**303**	3,32	**149**	153,30	**191**
RDHX 0802..	6,13	**033**	10,05	**110**	5,64	**303**	3,32	**116**	153,30	**191**
RP.X 10T3..	6,13	**035**	11,78	**112**	5,64	**303**	3,32	**840**	165,90	**192**
RP.X 1204..	6,13	**036**	11,96	**113**	5,64	**303**	4,06	**304**	165,90	**192**

MaxiMill – 251 RS End milling cutter





Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	Insert	50 685 ... EUR 2B/40		50 685 ... EUR 2B/40	
C251.12.R-03-05-B-16-25-RS	7	12	3	2,5	75	25	16	40000	RDHX 0501..			307,60	**012**
C251.12.R-03-05-A-32-165-RS	7	12	3	2,5	165	32	12	16000	RDHX 0501..	296,20	**112**		
C251.16.R-04-05-B-32-RS	11	16	4	2,5	81	32	16	40000	RDHX 0501..			359,90	**316**
C251.16.R-04-05-A-40-165-RS	11	16	4	2,5	165	40	16	18000	RDHX 0501..	351,70	**016**		
C251.20.R-05-05-B-40-RS	15	20	5	2,5	91	40	20	31800	RDHX 0501..			418,80	**620**
C251.20.R-05-05-A-50-165-RS	15	20	5	2,5	165	50	20	18000	RDHX 0501..	411,00	**120**		
C251.16.R-02-08-B-32-RS	8	16	2	4,0	81	32	16	40000	RDHX 0802..			253,70	**116**
C251.16.R-02-08-A-40-165-RS	8	16	2	4,0	165	40	16	18000	RDHX 0802..	243,90	**216**		
C251.20.R-03-08-B-40-RS	12	20	3	4,0	91	40	20	31800	RDHX 0802..			322,40	**220**
C251.20.R-03-08-A-60-RS	12	20	3	4,0	110	50	20	30000	RDHX 0802..	331,00	**020**		
C251.20.R-03-08-A-50-200-RS	12	20	3	4,0	200	50	20	25000	RDHX 0802..	312,50	**320**		
C251.25.R-04-08-B-50-RS	17	25	4	4,0	107	50	25	25500	RDHX 0802..			381,10	**625**
C251.25.R-04-08-A-60-RS	17	25	4	4,0	116	60	25	19000	RDHX 0802..	370,50	**125**		
C251.25.R-04-08-A-60-225-RS	17	25	4	4,0	225	60	25	18000	RDHX 0802..	371,30	**225**		
C251.20.R-02-10-A-50-RS	10	20	2	5,0	102	50	20	25000	RP.X 10T3..	270,00	**420**		
C251.20.R-02-10-A-50-200-RS	10	20	2	5,0	200	50	20	25000	RP.X 10T3..	270,00	**520**		
C251.25.R.03-10-A-60-RS	15	25	3	5,0	116	60	25	25000	RP.X 10T3..	364,90	**025**		
C251.25.R-03-10-B-60-RS	15	25	3	5,0	116	60	25	20000	RP.X 10T3..			364,90	**325**
C251.25.R-03-10-A-60-225-RS	15	25	3	5,0	225	60	25	18000	RP.X 10T3..	364,90	**425**		
C251.32.R.04-10-A-70-RS	22	32	4	5,0	130	70	32	25000	RP.X 10T3..	411,00	**032**		
C251.25.R-02-12-B-30-RS	13	25	2	6,0	86	30	25	25000	RP.X 1204..			332,80	**525**
C251.32.R-03-12-A-RS	20	32	3	6,0	100	40	32	19000	RP.X 1204..	384,80	**232**		
C251.32.R-03-12-B-40-RS	20	32	3	6,0	100	40	32	19000	RP.X 1204..			384,80	**132**

TORX® blade


Key D

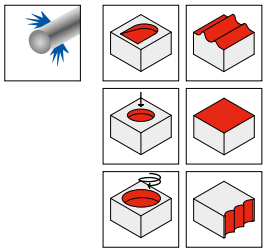

Molykote

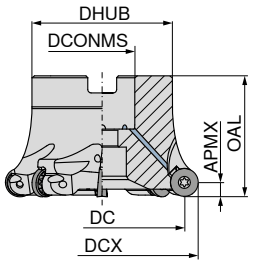

Clamping screw

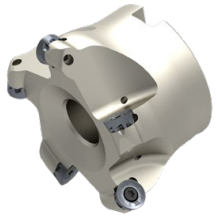

Torque screwdriver

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..	6,13	**031**	10,87	**108**	5,64	**303**	3,32	**149**	153,30	**191**
RDHX 0802..	6,13	**033**	10,05	**110**	5,64	**303**	3,32	**116**	153,30	**191**
RP.X 10T3..	6,13	**035**	11,78	**112**	5,64	**303**	3,32	**840**	165,90	**192**
RP.X 10T3..			11,78	**112**	5,64	**303**	3,32	**840**		
RP.X 1204..	6,13	**036**	11,96	**113**	5,64	**303**	4,06	**304**	165,90	**192**

MaxiMill – 251 RS Shell mill







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..	399,20	**240**
A251.40.R.05-10-RS	30	40	5	5	40	38	16	16000	2	RP.X 10T3..	449,90	**140**
A251.42.R.06-10-RS	32	42	6	5	40	38	16	16000	2	RP.X 10T3..	517,10	**142**
A251.50.R.04-10-RS	40	50	4	5	40	43	22	12700	2	RP.X 10T3..	438,40	**350**
A251.50.R.06-10-RS	40	50	6	5	40	43	22	12500	2	RP.X 10T3..	535,00	**150**
A251.52.R.06-10-RS	42	52	6	5	40	43	22	12500	2	RP.X 10T3..	535,00	**152**
A251.40.R.04-12-RS	28	40	4	6	40	38	16	15900	3,2	RP.X 1204..	413,80	**340**
A251.50.R.04-12-RS	38	50	4	6	40	43	22	12700	3,2	RP.X 1204..	427,10	**250**
A251.50.R.05-12-RS	38	50	5	6	40	43	22	12500	3,2	RP.X 1204..	502,20	**050**
A251.52.R.05-12-RS	40	52	5	6	40	43	22	12500	3,2	RP.X 1204..	526,80	**052**
A251.63.R.06-12-RS	51	63	6	6	40	48	22	10000	3,2	RP.X 1204..	620,10	**063**
A251.66.R.07-12-RS	54	66	7	6	40	48	22	9000	3,2	RP.X 1204..	653,70	**166**
A251.80.R.05-12-RS	68	80	5	6	50	58	27	7950	3,2	RP.X 1204..	565,90	**180**
A251.80.R.07-12-RS	68	80	7	6	50	58	27	8000	3,2	RP.X 1204..	699,50	**080**
A251.100.R.06-12-RS	88	100	6	6	50	78	32	6350	3,2	RP.X 1204..	631,60	**100**
A251.100.R.10-12-RS	88	100	10	6	50	78	32	6350	3,2	RP.X 1204..	922,80	**200**
A251.50.R.04-16-RS	34	50	4	8	40	48	22	12700	5	RP.X 1605..	502,20	**450**
A251.52.R.04-16-RS	36	52	4	8	40	48	22	10100	5	RP.X 1605..	502,20	**452**
A251.63.R.05-16-RS	47	63	5	8	40	48	22	10100	5	RP.X 1605..	633,10	**163**
A251.66.R.05-16-RS	50	66	5	8	40	48	22	7950	5	RP.X 1605..	637,80	**466**
A251.80.R.06-16-RS	64	80	6	8	50	58	27	7950	5	RP.X 1605..	768,90	**280**
A251.100.R.07-16-RS	84	100	7	8	50	78	32	6350	5	RP.X 1605..	898,30	**300**
A251.125.R.08-16-RS	109	125	8	8	63	88	40	5050	5	RP.X 1605..	950,90	**225**
A251.80.R.05-20-RS	60	80	5	10	50	58	27	7950	5	RP.X 2006..	651,00	**380**
A251.100.R.06-20-RS	80	100	6	10	50	78	32	6350	5	RP.X 2006..	778,80	**400**
A251.125.R.06-20-RS	105	125	6	10	63	88	40	5050	5	RP.X 2006..	788,60	**125**

TORX® blade


Clamping key – T


Key D


Power Screw


Molykote


Clamping screw

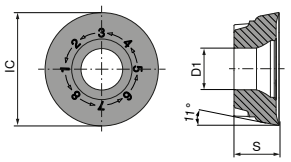

Torque screwdriver

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..	6,13	**035**	5,04	**040**	11,78	**112**	16,08	**151**	5,64	**303**	3,32	**840**	165,90	**192**
RP.X 1204..	6,13	**036**	5,04	**040**	11,96	**113**	16,08	**151**	5,64	**303**	4,06	**304**	165,90	**192**
RP.X 1605..	6,13	**037**	5,46	**050**	12,83	**114**	22,09	**154**	5,64	**303**	3,19	**01200**	170,10	**193**
RP.X 2006..	6,13	**037**			12,83	**114**			5,64	**303**	5,27	**302**	170,10	**193**

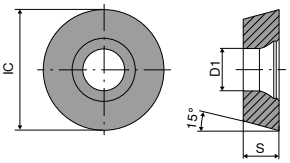
15

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..

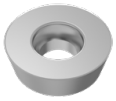


RDHX 0501.. / RDHX0802..

RDHX

	-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 ...
ISO	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
0501M0SN	15,93 020	15,93 120		14,62 465	
0802M0SN	16,24 025	16,24 125	16,24 420	19,25 470	19,25 92001
0802M4SN				19,25 471	19,25 92101
P	●	●	○	●	●
M		○	●	●	●
K	○	○			
N					
S					○
H					
O					

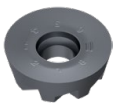
RDHX

	-FN H216T	-M31 CTC5240 DRAGONSKIN	-F50 CTCS245 DRAGONSKIN
			
	RDHX	RDHX	RDHX
	50 481 ...	50 481 ...	51 083 ...
ISO	EUR 1B/61	EUR 1H/17	EUR 1H/17
0501M0FN	12,62 600		
0802M0EN		19,25 500	
0802M0FN	13,03 602		
0802M0SN			19,25 570
0802M4EN		19,25 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	16,85 900				
10T3M8SN		16,85 020	12,84 020	16,85 020	
1204M0SN	18,48 902				
1204M8SN		14,74 025	14,74 025	18,48 025	14,74 025
1605M8SN			20,04 030	25,15 030	20,04 030
2006M8SN					26,09 035
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			16,85 120	
10T3M8SN	16,85 12000	12,84 120		
1204M8SN	18,48 125	14,74 125		
1605M0SN		20,04 130		
2006M8EN				26,09 120
P	●	●	●	●
M	○	○	○	○
K	○	○	○	○
N				
S				
H				
O				

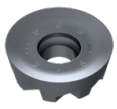
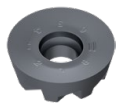
RPNX / RPHX

	-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	12,84	12000	16,85	12000	16,85	120		
1204M8SN	14,74	125			18,48	125	14,74	125
1605M8SN	20,04	130			25,15	130	20,04	130
2006M8SN							26,09	135
P	●		●		●		●	
M	○		○		○		○	
K	○		○		○		○	
N								
S								
H								
O								

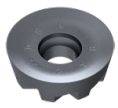
RPHX

	-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			18,48	225					18,48	325
1204M8SN	18,48	225			18,48	225	18,48	325		
P	●		●		●		●		●	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

RPHX / RPNX

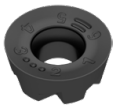
ISO	-F50 CTPM240 DRAGONSKIN		-F50 CTPM240 DRAGONSKIN		-M30 CTPM240 DRAGONSKIN		-M30 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN	
	 RPHX		 RPNX		 RPHX		 RPNX		 RPHX	
	51 051 ...		51 055 ...		51 049 ...		51 053 ...		51 050 ...	
	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61	
10T3M8EN					16,85	420				
10T3M8SN	16,85	420							16,85	420
1204M8EN					18,48	425				
1204M8SN	18,48	425							18,48	425
1605M8EN					25,15	430				
1605M8SN	25,15	430								
2006M8EN							26,09	420		
2006M8SN			26,09	435						
P	○		○		○		○		○	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

RPHX / RPNX

ISO	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 ...	
	EUR 1H/17		EUR 1H/17		EUR 1H/17		EUR 1H/17		EUR 1H/17	
10T3M4SN			21,28	470 [1]	17,68	470 [1]			21,28	470 [1]
10T3M8SN			21,28	471	17,68	471			21,28	471
1204M4EN	23,45	475 [1]					23,45	475 [1]		
1204M4SN			23,45	475 [1]	20,81	475 [1]			23,45	475 [1]
1204M6SN			23,45	476					23,45	476
1204M8SN			23,45	477	20,81	476			23,45	477
1605M8SN			31,99	480						
2006M4SN			40,51	485 [1]						
2006M8SN					31,99	485				
P	●		●		●		●		●	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

1) Insert with 4 indexes

RPNX / RPHX

	-F50 CTCM245 DRAGONSKIN	-M50 CTCM245 DRAGONSKIN	-F50 CTCM245 DRAGONSKIN	-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	17,68 92001[1)]		21,28 92001[1)]	21,28 92001[1)]
10T3M8SN	17,68 92101		21,28 92101	
1204M4SN	20,81 92501[1)]		23,45 92501[1)]	23,45 92501[1)]
1204M6SN		20,81 92601	23,45 92601	23,45 92601
1204M8SN	20,81 92601			23,45 92701
1605M8SN	23,45 93001		31,99 93001	
2006M8SN	31,99 93501	31,99 93501		
P	●	●	●	●
M	●	●	●	●
K				
N				
S	○	○	○	○
H				
O				

1) Insert with 4 indexes

RPHX / RPNX

NEW

	-SN CTCK215 DRAGONSKIN	-SN CTCK215 DRAGONSKIN	-SN CTPK220 DRAGONSKIN	-F10 CTPX715 DRAGONSKIN	-27P H216T
					
	RPHX	RPNX	RPNX	RPHX	RPHX
	51 052 ...	51 057 ...	51 057 ...	51 156 ...	50 483 ...
ISO	EUR 1B/61	EUR 1B/18	EUR 1B/61	EUR 1A/90	EUR 1A/90
10T3M8FN				22,82 02002	19,26 600
10T3M8SN	16,85 520		12,84 620		
1204M8FN				25,31 02502	21,34 602
1204M8SN	18,48 525	14,74 525	14,74 625		
1605M8FN				34,53 03002	29,13 604
1605M8SN	25,15 530	20,04 530	20,04 630		
2006M8SN		26,09 535	26,09 635		
P				○	
M				○	
K	●	●	●	●	○
N				●	●
S				○	
H					
O				○	○

RPNX / RPHX

	-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 1H/17		EUR 1H/17		EUR 1H/17		EUR 1B/61	
10T3M4EN			21,28	550 [1]						
10T3M4SN					21,28	570 [1]				
10T3M8EN			21,28	551						
10T3M8SN					21,28	571				
1204M4EN			23,45	552 [1]						
1204M4SN					23,45	575				
1204M6EN			23,45	56200						
1204M6SN					23,45	57800				
1204M8EN			23,45	582					15,93	300
1204M8SN					23,45	577				
1605M8EN			31,99	555	31,99	58100				
2006M8EN	31,99	12001								
2006M8SN							31,99	585		
P										
M										
K										●
N										
S		●		●		●		●		
H										●
O										

1) Insert with 4 indexes

Milling guide

Cutting data standard values	→ 145–148	Machining strategy	→ 181
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

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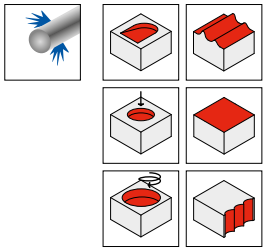
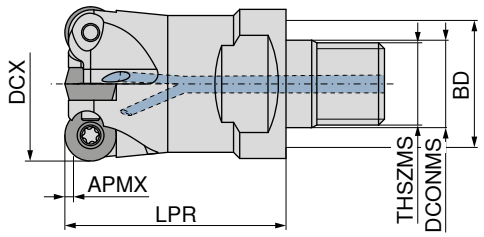
R 1000 screw-in button insert milling cutter

▲ Insert angle 0°



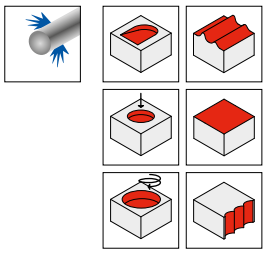


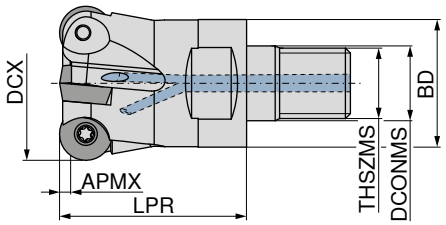
Designation	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	BD mm	torque moment Nm	Insert	56 403 ... EUR WA	
R1000G.15.2.M8-07.IK	15	2	1,5	M8	28,5	8,5	13,8	0,9	RD.X 0702..	139,30	**153**
R1000G.16.3.M8-07.IK	16	3	1,5	M8	28,5	8,5	13,8	0,9	RD.X 0702..	168,50	**161**
R1000G.20.4.M10-07.IK	20	4	1,5	M10	28,5	10,5	18,0	0,9	RD.X 0702..	212,10	**203**
R1000G.25.5.M12-07.IK	25	5	1,5	M12	28,5	12,5	21,0	0,9	RD.X 0702..	242,80	**252**
R1000G.30.5.M16-07.IK	30	5	1,5	M16	28,5	17,0	29,0	0,9	RD.X 0702..	246,70	**301**
R1000G.35.6.M16-07.IK	35	6	1,5	M16	28,5	17,0	29,0	0,9	RD.X 0702..	277,30	**351**
R1000G.42.7.M16-07.IK	42	7	1,5	M16	42,5	17,0	29,0	0,9	RD.X 0702..	328,80	**421**
R1000G.20.2.M10-10.IK	20	2	2,8	M10	29,0	10,5	18,0	2,4	RD.X 1003..	148,40	**204**
R1000G.25.2.M12-10.IK	25	2	2,8	M12	33,0	12,5	21,0	2,4	RD.X 1003..	148,40	**253**
R1000G.25.3.M12-10.IK	25	3	2,8	M12	33,0	12,5	21,0	2,4	RD.X 1003..	155,20	**254**
R1000G.30.4.M12-10.IK	30	4	2,3	M12	33,0	12,5	21,0	2,4	RD.X 1003..	213,60	**302**
R1000G.30.4.M16-10.IK	30	4	2,8	M16	43,0	17,0	23,0	2,4	RD.X 1003..	213,60	**303**
R1000G.35.5.M16-10.IK	35	5	2,8	M16	43,0	17,0	29,0	2,4	RD.X 1003..	262,70	**352**
R1000G.42.5.M16-10.IK	42	5	2,8	M16	43,0	17,0	29,0	2,4	RD.X 1003..	277,30	**422**
R1000G.42.6.M16-10.IK	42	6	2,8	M16	43,0	17,0	29,0	2,4	RD.X 1003..	293,10	**423**
R1000G.24.2.M12-12.IK	24	2	3,0	M12	33,0	12,5	21,0	2,4	RD.X 12T3..	153,90	**241**
R1000G.35.3.M16-12.IK	35	3	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	172,40	**353**
R1000G.35.4.M16-12.IK	35	4	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	222,90	**354**
R1000G.42.4.M16-12.IK	42	4	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	244,00	**424**
R1000G.42.5.M16-12.IK	42	5	3,0	M16	43,0	17,0	29,0	2,4	RD.X 12T3..	270,50	**425**
R1000G.32.2.M16-16.IK	32	2	4,0	M16	43,5	17,0	29,0	4,3	RD.X 1604..	179,20	**321**
R1000G.35.3.M16-16.IK	35	3	4,0	M16	43,5	17,0	29,0	4,3	RD.X 1604..	220,20	**355**

	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 0702..	6,13 **032**			10,05 **109**	5,64 **303**	3,35 **006**	153,30 **191**
RD.X 1003..	6,13 **036**			11,96 **113**	5,64 **303**	4,30 **010**	165,90 **192**
RD.X 12T3..	6,13 **036**	2,62 **022**		11,96 **113**	5,64 **303**	4,30 **010**	165,90 **192**
RD.X 1604..	6,13 **037**		1,83 **210**	12,83 **114**	5,64 **303**	4,86 **012**	165,90 **192**

R 1007 screw-in button insert milling cutter

▲ 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..	155,20	**251**
R1007G.42.6.M16-10.IK	42	6	2,5	M16	42,5	17,0	29	2,4	RD.X 1003..	293,10	**421**
R1007G.35.4.M16-12.IK	35	4	3,0	M16	42,5	17,0	29	2,4	RD.X 12T3..	222,90	**352**

	TORX® blade		Clamping Screw		Key D		Molykote		Clamping screw		Torque screwdriver	
	80 950 ...		56 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
Spare parts	EUR		EUR		EUR		EUR		EUR		EUR	
Insert	Y7		WA		Y7		2A/28		WA		Y7	
RD.X 1003..	6,13	**036**			11,96	**113**	5,64	**303**	4,30	**010**	165,90	**192**
RD.X 12T3..	6,13	**036**	2,62	**022**	11,96	**113**	5,64	**303**	4,30	**010**	165,90	**192**

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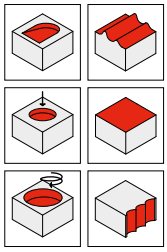
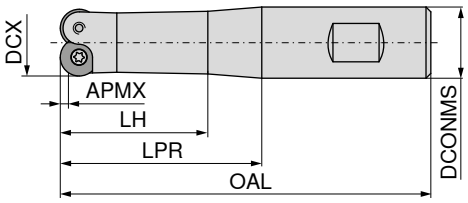
R 1002 shank button insert milling cutter

▲ Insert angle 0°



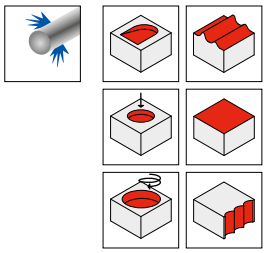


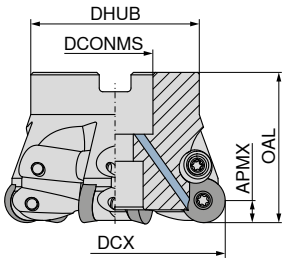
56 443 ...

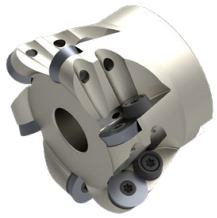
Designation	DCX mm	ZNF	APMX mm	OAL mm	LPR mm	LH mm	DCONMS mm	Insert	EUR WA	
R1002C.15.2.40-07	15	2	2,6	89	40	23	16	RD.X 0702..	123,00	**151**
R1002C.15.2.60-07	15	2	2,6	109	60	23	16	RD.X 0702..	130,90	**152**
R1002C.15.2.80-07	15	2	2,6	131	80	22	20	RD.X 0702..	140,50	**153**
R1002C.15.2.100-07	15	2	2,6	151	100	22	20	RD.X 0702..	151,30	**154**
R1002C.20.2.40-10	20	2	4,0	91	40	23	20	RD.X 1003..	139,30	**201**
R1002C.20.2.60-10	20	2	4,0	111	60	23	20	RD.X 1003..	143,30	**202**
R1002C.20.2.80-10	20	2	4,0	137	80	23	25	RD.X 1003..	149,90	**203**
R1002C.20.2.100-10	20	2	4,0	157	100	23	25	RD.X 1003..	157,80	**204**
R1002C.20.2.120-10	20	2	4,0	177	125	23	25	RD.X 1003..	165,80	**205**

R 1000 shell button insert milling cutter

▲ Insert angle 0°







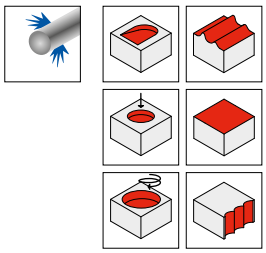
56 407 ...

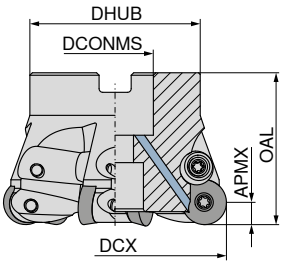
Designation	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	EUR WA	
R1000A.42.6.43-10.IK	42	6	2,8	43,0	16	35	2,4	RD.X 1003..	293,10	**420**
R1000A.42.4.43-12.IK	42	4	3,0	43,0	16	35	2,4	RD.X 12T3..	236,10	**421**
R1000A.42.5.43-12.IK	42	5	3,0	43,0	16	35	2,4	RD.X 12T3..	270,50	**422**
R1000A.52.5.53-12.IK	52	5	3,5	53,0	22	40	2,4	RD.X 12T3..	293,10	**521**
R1000A.52.4.53,5-16.IK	52	4	4,7	53,5	22	40	4,3	RD.X 1604..	287,70	**522**
R1000A.66.5.53,5-16.IK	66	5	5,1	53,5	27	48	4,3	RD.X 1604..	340,90	**661**
R1000A.80.6.53,5-16.IK	80	6	5,8	53,5	27	60	4,3	RD.X 1604..	436,40	**801**

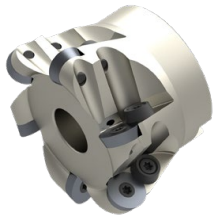
	TORX® blade	Clamping Screw	over clamp	Key D	Molykote	Clamping screw	Torque screwdriver
	80 950 ...	**56 950 ...**	**56 950 ...**	**80 950 ...**	**70 950 ...**	**56 950 ...**	**80 950 ...**
Spare parts	EUR Y7	EUR WA	EUR WA	EUR Y7	EUR 2A/28	EUR WA	EUR Y7
Insert							
RD.X 1003..	6,13 **036**			11,96 **113**	5,64 **303**	4,30 **010**	165,90 **192**
RD.X 12T3..	6,13 **036**	2,62 **022**		11,96 **113**	5,64 **303**	4,30 **010**	165,90 **192**
RD.X 1604..	6,13 **037**		1,83 **210**	12,83 **114**	5,64 **303**	4,86 **012**	165,90 **192**

R 1007 shell button insert milling cutter

▲ 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..	293,10	**421**
R1007A.52.7.52,5-10.IK	52	7	3,5	52,5	22	40	2,4	RD.X 1003..	428,30	**521**
R1007A.52.5.52,5-12.IK	52	5	3,5	52,5	22	40	2,4	RD.X 12T3..	293,10	**522**
R1007A.66.6.52,5-12.IK	66	6	3,5	52,5	27	48	2,4	RD.X 12T3..	347,40	**661**
R1007A.80.7.54,5-12.IK	80	7	3,5	54,5	27	60	2,4	RD.X 12T3..	436,40	**801**
R1007A.52.5.53-16.IK	52	5	4,1	53,0	22	40	4,3	RD.X 1604..	322,20	**523**
R1007A.66.5.53-16.IK	66	5	4,6	53,0	27	48	4,3	RD.X 1604..	340,90	**662**
R1007A.66.6.53-16.IK	66	6	5,1	53,0	27	48	4,3	RD.X 1604..	390,00	**663**
R1007A.80.6.53-16.IK	80	6	5,1	53,0	27	60	4,3	RD.X 1604..	436,40	**802**
R1007A.100.7.53-16	100	7	5,1	53,0	32	70	4,3	RD.X 1604..	539,70	**910** 1)
R1007A.125.8.53-16	125	8	5,2	53,0	40	90	4,3	RD.X 1604..	611,40	**925** 1)
R1007A.160.9.53-16	160	9	5,1	53,0	40	120	4,3	RD.X 1604..	836,90	**960** 1)

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..	6,13	**036**					11,96	**113**	5,64	**303**	4,30	**010**	165,90	**192**
RD.X 12T3..	6,13	**036**	2,62	**022**			11,96	**113**	5,64	**303**	4,30	**010**	165,90	**192**
RD.X 1604..	6,13	**037**			1,83	**210**	12,83	**114**	5,64	**303**	4,86	**012**	165,90	**192**

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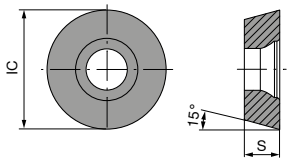
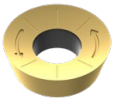
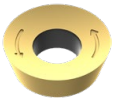
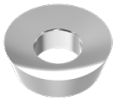
RDHX / RDMX / RDEX / RDPX

Designation	IC mm	S mm
RD.X 0702..	7	2,38
RD.X 1003..	10	3,18
RD.X 12T3..	12	3,97
RD.X 1604..	16	4,76



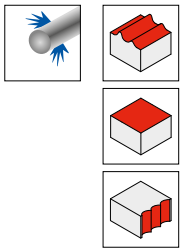
RDHX / RDMX / RDEX / RDPX

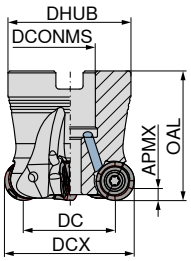
	WTN1205	WAN1240	WAX1240	-HP WAN2225	-F30P WUN4210
					
	RDHX	RDMX	RDEX	RDPX	RDHX
	56 302 ...	56 309 ...	56 314 ...	56 348 ...	56 304 ...
ISO	EUR WB	EUR WB	EUR WB	EUR WB	EUR WB
0702M0E					15,19 611
0702M0T	16,20 111		11,29 611		
1003M0S				16,34 231	
1003M0T	16,34 131	12,06 731	11,87 631		17,05 631
12T3M0S				17,19 241	
12T3M0T	17,19 141	13,97 741	13,52 641		20,87 641
1604M0S				21,58 251	
1604M0T	17,19 151	15,34 751	15,06 651		25,28 651
P	●	●	●		
M	●	○	○	●	
K	●	○	○		○
N					●
S				●	
H	●				
O					○

Milling guide

Cutting data standard values	→ 182–184	Machining strategy	→ 185+186
Technical Information	→ 193–198	Grade description	→ 199–201
Designation System	→ 202–208		

MaxiMill – 252 Shell mill





NEW

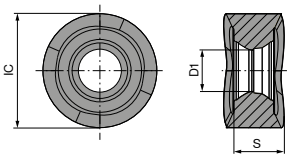
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	50 689 ... EUR 2B/40	
A252.40.R.05-10	30	40	5	2,5	40	16	38	2	RNHU 1004..	517,90	**140**
A252.42.R.05-10	32	42	5	2,5	40	16	38	2	RNHU 1004..	593,90	**142**
A252.50.R.06-10	40	50	6	2,5	40	22	43	2	RNHU 1004..	615,80	**150**
A252.52.R.07-10	42	52	7	2,5	40	22	43	2	RNHU 1004..	668,80	**152**
A252.63.R.08-10	53	63	8	2,5	40	22	48	2	RNHU 1004..	758,00	**16300**
A252.80.R.10-10	70	80	10	2,5	50	27	58	2	RNHU 1004..	862,20	**18000**
A252.40.R.04-12	28	40	4	3,0	40	16	38	3,2	RNHU 1205..	475,80	**240**
A252.50.R.05-12	38	50	5	3,0	40	22	43	3,2	RNHU 1205..	577,70	**250**
A252.52.R.05-12	40	52	5	3,0	40	22	43	3,2	RNHU 1205..	579,10	**252**
A252.63.R.06-12	51	63	6	3,0	40	22	48	3,2	RNHU 1205..	713,70	**263**
A252.66.R.07-12	54	66	7	3,0	40	22	48	3,2	RNHU 1205..	751,70	**266**
A252.80.R.08-12	68	80	8	3,0	50	27	58	3,2	RNHU 1205..	821,10	**280**
A252.100.R.10-12	88	100	10	3,0	50	32	78	3,2	RNHU 1205..	977,10	**30000**
A252.125.R.12-12	113	125	12	3,0	63	40	88	3,2	RNHU 1205..	1.182,00	**32500**

	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 Insert	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
RNHU 1004.. (Ø40 – Ø80)	6,78	**053**			14,91	**127**			5,64	**303**	3,97	**710**	165,90	**192**
RNHU 1205.. (Ø40)	6,78	**054**	5,04	**040**	15,33	**128**	16,08	**151**	5,64	**303**	4,11	**839**	165,90	**192**
RNHU 1205.. (Ø50 – Ø125)	6,78	**054**			15,33	**128**			5,64	**303**	4,11	**839**	165,90	**192**

15

RNHU

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



RNHU

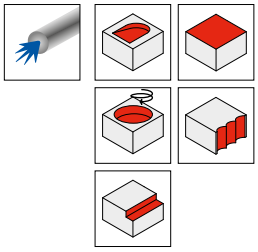
	NEW	NEW	NEW	NEW	NEW	NEW
	-M50 CTPP235	-F50 CTPM240	-M31 CTPM245	-M32 CTPM245	-M31 CTC5240	-M31 CTC5240
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
	 RNHU	 RNHU	 RNHU	 RNHU	 RNHU	 RNHU
	51 130 ...	51 129 ...	51 106 ...	51 107 ...	50 520 ...	50 521 ...
ISO	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17	EUR 1H/17
1004M4ER	24,11 12000	24,11 42000	32,60 470	32,60 470	32,60 550	
1205M4ER		26,10 42500	35,71 475	35,71 475		35,71 552
1205M4SR	26,10 12500					
P	●	○	●	●		
M	○	●	●	●		
K	○					
N						
S					●	●
H						
O						

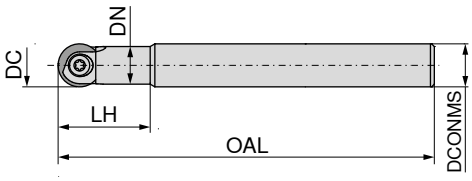
Milling guide

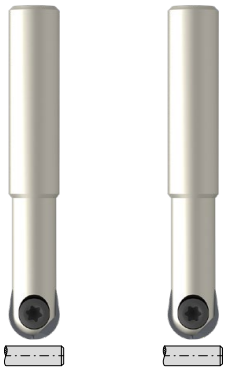
Cutting data standard values	→ 145–148	Machining strategy	→ 187
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

K 2000 / K 2001 shank copy milling cutter

▲ with carbide shank







ISO designation	DC mm	DN mm	LH mm	OAL mm	DCONMS mm	torque moment Nm	56 100 ... EUR WA		56 101 ... EUR WA	
K2000C.6.16.100	6	5,3	16	100	8	0,5	453,60	060 [1]		
K2000C.6.20.100	6	5,8	20	100	6	0,5	453,60	061 [1]		
K2000C.6.70.150	6	5,8	70	150	6	0,5	588,80	062 [1]		
K2000C.6.100.200	6	5,8	100	200	6	0,5	713,40	063 [1]		
K2000C.8.25.80	8	7,0	25	80	8	1	480,10	081 [1]		
K2000C.8.25.100	8	7,0	25	100	8	1	480,10	082 [1]		
K2000C.8.40.150	8	7,0	40	150	8	1	533,20	083 [1]		
K2000C.10.35.80	10	8,8	35	80	10	3	579,60	101 [1]		
K2000C.10.35.120	10	8,8	35	120	10	3	596,90	102 [1]		
K2000C.10.50.150	10	8,8	50	150	10	3	661,80	103 [1]		
K2000C.12.35.80	12	10,5	35	80	12	4	602,00	121 [1]		
K2001C.12.35.80	12	10,5	35	80	12	4			613,70	121
K2000C.12.35.120	12	10,5	35	120	12	4	628,60	122 [1]		
K2001C.12.35.120	12	10,5	35	120	12	4			640,80	122
K2000C.12.50.160	12	10,5	50	160	12	4	672,40	123 [1]		
K2001C.12.50.160	12	10,5	50	160	12	4			685,40	123
K2001C.16.40.100	16	14,0	40	100	16	5			845,00	161
K2001C.16.40.140	16	14,0	40	140	16	5			845,00	162
K2001C.16.55.175	16	14,0	55	175	16	5			920,50	163
K2001C.20.50.100	20	18,0	50	100	20	5			1.076,00	201
K2001C.20.50.140	20	18,0	50	140	20	5			1.076,00	202
K2001C.20.75.190	20	18,0	75	190	20	5			1.279,00	203
K2001C.25.60.160	25	22,4	60	160	25	8			1.524,00	252
K2001C.25.90.210	25	22,4	90	210	25	8			1.906,00	253

1) Without Through Coolant

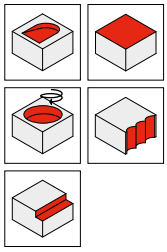
Applicable inserts

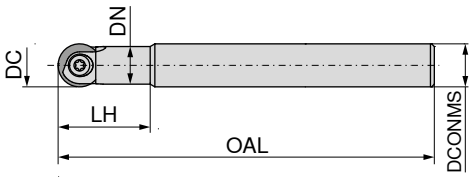
	ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4

	XOHX06.. -MR2, XOHX-FM1

K 2002 shank copy milling cutter

▲ cylindrical steel shank version





56 102 ...

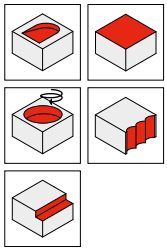
Designation	DC mm	DN mm	LH mm	OAL mm	DCONMS mm	torque moment Nm	EUR WA	
K2002C.12.32.90	12	10,5	32	90	12	4	118,30	**121**
K2002C.12.32.130	12	10,5	32	130	12	4	118,30	**122**
K2002C.12.46.150	12	10,5	46	150	12	4	123,80	**123**
K2002C.16.36.100	16	14,0	36	100	16	5	125,40	**161**
K2002C.16.36.140	16	14,0	36	140	16	5	125,40	**162**
K2002C.16.53.160	16	14,0	53	160	16	5	132,00	**163**
K2002C.20.45.160	20	18,0	45	160	20	5	130,80	**202**
K2002C.20.61.175	20	18,0	61	175	20	5	156,40	**203**
K2002C.25.45.160	25	22,4	45	160	25	8	184,30	**252**
K2002C.25.70.190	25	22,4	70	190	25	8	190,90	**253**
K2002C.32.56.175	32	28,6	56	175	32	8	234,80	**322**
K2002C.32.80.210	32	28,6	80	210	32	8	246,70	**323**

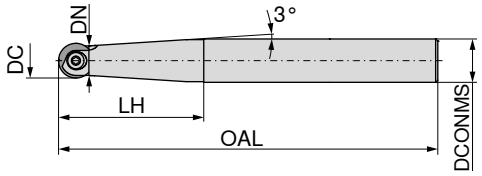
Applicable inserts

	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**
	**XOHX-FM1**

K 2003 shank copy milling cutter

▲ tapered execution





56 104 ...

Designation	DC mm	DN mm	LH mm	OAL mm	DCONMS mm	torque moment Nm	EUR WA	
K2003C.6.16.90	6	5,3	40	90	10	0,5	132,70	**061**
K2003C.8.50.85	8	7,5	50	85	12	1	157,80	**081**
K2003C.8.50.140	8	7,5	50	140	12	1	157,80	**082**
K2003C.10.35.85	10	9,0	35	85	12	3	157,80	**101**
K2003C.10.35.150	10	9,0	35	150	12	3	157,80	**102**
K2003C.12.60.110	12	10,5	60	110	16	4	160,50	**121**
K2003C.12.60.160	12	10,5	60	160	16	4	160,50	**122**
K2003C.16.67.120	16	14,0	67	120	20	5	172,40	**161**
K2003C.16.67.175	16	14,0	67	175	20	5	172,40	**162**
K2003C.20.80.190	20	18,0	80	190	25	5	200,40	**201**
K2003C.25.100.210	25	22,4	100	210	32	8	249,40	**251**
K2003C.32.123.240	32	28,6	123	240	40	8	319,60	**321**

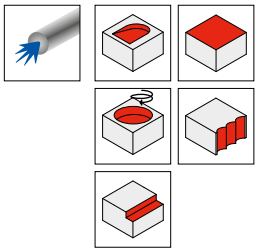
Applicable inserts

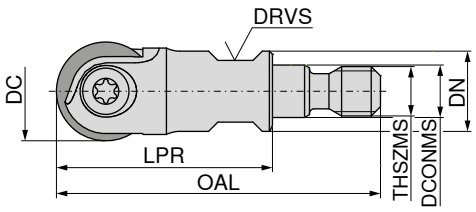
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

	**XOHX-FM1**

15

K 2000 screw-in copy milling cutter





Designation	DC mm	LPR mm	DN mm	OAL mm	DCONMS mm	THSZMS	DRVS mm	torque moment Nm	56 120 ... EUR WA	
K2000G.8.25.M6	8	25	10	39,5	6,5	M6	8	1	264,00	**081** 1)
K2000G.10.25.M6	10	25	10	39,5	6,5	M6	8	3	261,20	**101** 1)
K2000G.12.25.M6	12	25	10	39,5	6,5	M6	8	4	269,30	**121** 1)
K2000G.12.26.M8	12	26	13	43,5	8,5	M8	10	4	269,30	**122**
K2000G.16.26.M8	16	26	13	43,5	8,5	M8	10	5	279,70	**161**
K2000G.20.30.M10	20	30	18	49,5	10,5	M10	15	5	285,20	**201**
K2000G.25.40.M12	25	40	21	62,0	12,5	M12	17	8	295,70	**251**
K2000G.32.45.M16	32	45	30	69,0	17,0	M16	26	8	315,60	**321**

1) Without Through Coolant

Applicable inserts

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

XOHX-FM1

TORX® blade


Key D


Molykote

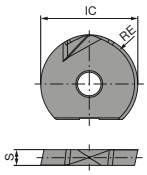

Clamping screw


Torque screwdriver

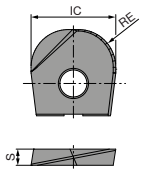
Spare parts DC	80 950 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		56 950 ... EUR WA		80 950 ... EUR Y7	
6	6,13	**031**	10,87	**108**	5,64	**303**	7,71	**041**	153,30	**191**
8	6,13	**033**	10,05	**110**	5,64	**303**	7,71	**042**	153,30	**191**
10	6,13	**036**	11,96	**113**	5,64	**303**	7,71	**043**	170,10	**193**
12	6,13	**037**	12,83	**114**	5,64	**303**	10,54	**044**	170,10	**193**
16	6,13	**037**	12,83	**114**	5,64	**303**	10,54	**045**	170,10	**193**
20	6,13	**037**	12,83	**114**	5,64	**303**	10,54	**046**	170,10	**193**
25			15,60	**131**	5,64	**303**	10,54	**047**		
32			15,60	**131**	5,64	**303**	10,68	**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	EUR WB
0616 R3	3,0			40,56 30200	33,83 90200			101,20 602 1)
0820 R4	4,0	41,24 71300		49,19 31300	32,50 71300	34,07 11300		131,70 613 1)
1025 R5	5,0	41,24 72400		49,19 32400	32,50 72400	34,07 12400		131,70 624 1)
102540	4,0		44,54 92400					
1225 R6	6,0			49,99 33500	33,83 73500	34,07 13500	33,15 53500	131,70 635 1)
122550	5,0		47,73 93500					
1630 R8	8,0			53,84 34600	38,85 74600	39,71 14600	38,85 54600	149,20 646 1)
163070	7,0		51,05 94700					
2030 R10	10,0			57,02 35700	44,54 75700	44,38 15700	44,54 55700	
203090	9,0		58,20 95900					
2540 R12,5	12,5			70,94 36800	66,43 76800	66,20 16800	65,65 56800	
3250 R16	16,0			95,07 37900	97,04 77900	98,15 17900	90,56 57900	
P		●	●	●	●	●	●	
M		○	○	○	○	●	●	
K		○	●	●	●	●	●	
N		○	○	○	○		○	○
S		○	○	○	○		○	
H		○	●	●	●	○	○	
O		○	○	○	○			●

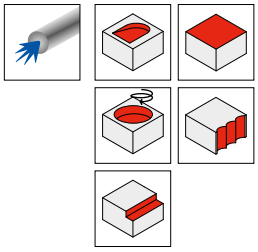
1) Specifically for machining graphite !

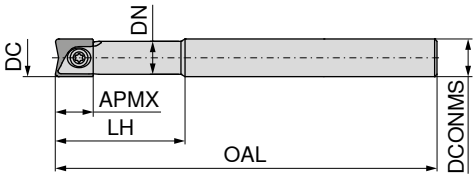
Milling guide

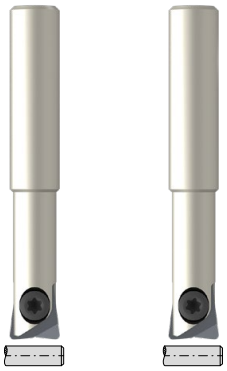
Cutting data standard values	→ 188+189	Depth of Cut	→ 190
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

K 2005 / K 2006 shank copy milling cutter

▲ with carbide shank







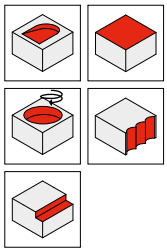
Designation	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS mm	torque moment Nm	56 110 ... EUR WA		56 111 ... EUR WA	
K2005C.8.27.82	8	9,5	7,0	27	82	8	1	480,10	**081** [1]		
K2005C.8.27.102	8	9,5	7,0	27	102	8	1	480,10	**082** [1]		
K2005C.8.42.152	8	9,5	7,0	42	152	8	1	533,20	**083** [1]		
K2005C.10.37.82	10	11,5	8,8	37	82	10	3	579,60	**101** [1]		
K2005C.10.37.122	10	11,5	8,8	37	122	10	3	596,90	**102** [1]		
K2005C.10.52.152	10	11,5	8,8	52	152	10	3	661,80	**103** [1]		
K2005C/K2006C.12.37.82	12	14,0	10,5	37	82	12	4	602,00	**121** [1]	613,70	**121**
K2005C/K2006C.12.37.122	12	14,0	10,5	37	122	12	4	628,60	**122** [1]	640,80	**122**
K2005C/K2006C.12.52.162	12	14,0	10,5	52	162	12	4	672,40	**123** [1]	685,40	**123**
K2006C.16.42.102	16	16,0	14,0	42	102	16	5			845,00	**161**
K2006C.16.42.142	16	16,0	14,0	42	142	16	5			845,00	**162**
K2006C.16.57.177	16	16,0	14,0	57	177	16	5			920,50	**163**
K2006C.20.52.102	20	18,0	18,0	52	102	20	5			1.076,00	**201**
K2006C.20.52.142	20	18,0	18,0	52	142	20	5			1.076,00	**202**
K2006C.20.77.192	20	18,0	18,0	77	192	20	5			1.262,00	**203**
K2006C.25.62.162	25	23,5	22,4	62	162	25	8			1.524,00	**252**
K2006C.25.92.212	25	23,5	22,4	92	212	25	8			1.906,00	**253**

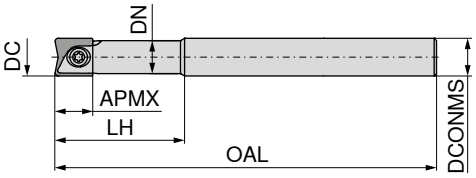
1) Without Through Coolant

Applicable inserts

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

K 2007 shank copy milling cutter





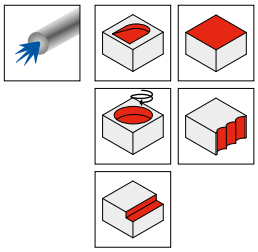
56 112 ...

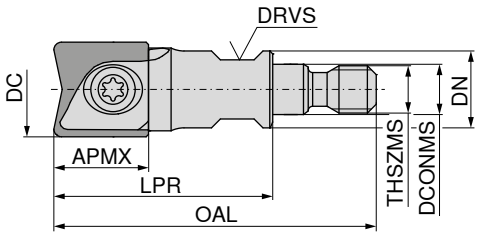
Designation	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS mm	torque moment Nm	EUR WA	
K2007C.12.34.132	12	14,0	10,5	34	132	12	4	118,30	**122**
K2007C.12.34.92	12	14,0	10,5	34	92	12	4	129,30	**121**
K2007C.12.48.152	12	14,0	10,5	48	152	12	4	123,80	**123**
K2007C.16.38.102	16	16,0	14,0	38	102	16	5	125,40	**161**
K2007C.16.38.142	16	16,0	14,0	38	142	16	5	125,40	**162**
K2007C.16.55.162	16	16,0	14,0	55	162	16	5	132,00	**163**
K2007C.20.47.162	20	18,0	18,0	47	162	20	5	130,80	**202**
K2007C.20.63.177	20	18,0	18,0	63	177	20	5	156,40	**203**
K2007C.25.47.162	25	23,5	22,4	47	162	25	8	184,30	**252**
K2007C.25.72.192	25	23,5	22,4	72	192	25	8	190,90	**253**
K2007C.32.58.177	32	28,0	28,6	58	177	32	8	234,80	**322**
K2007C.32.82.212	32	28,0	28,6	82	212	32	8	246,70	**323**

Applicable inserts

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

K 2005 screw-in copy milling cutter





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	264,00	**081** [1]
K2005G.10.25.M6	10	11,5	10	25	39,5	6,5	M6	8	3	261,20	**101** [1]
K2005G.12.25.M6	12	14,0	10	25	39,5	6,5	M6	8	4	269,30	**121** [1]
K2005G.12.28.M8	12	14,0	13	28	45,5	8,5	M8	8	4	269,30	**122**
K2005G.16.28.M8	16	16,0	13	28	45,5	8,5	M8	10	5	279,70	**161**
K2005G.20.32.M10	20	18,0	18	32	51,5	10,5	M10	15	5	285,20	**201**
K2005G.25.42.M12	25	23,5	21	42	64,0	12,5	M12	17	8	295,70	**251**
K2005G.32.47.M16	32	28,0	30	47	71,0	17,0	M16	26	8	315,60	**321**

1) Without Through Coolant

Applicable inserts

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

TORX® blade

80 950 ...

Key D

80 950 ...

Molykote

70 950 ...

Clamping screw

56 950 ...

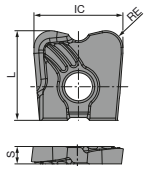
Torque screwdriver

80 950 ...

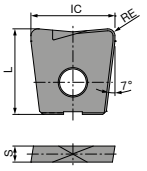
Spare parts DC	EUR Y7		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
8	6,13	**033**	10,05	**110**	5,64	**303**	7,71	**042**	153,30	**191**
10	6,13	**036**	11,96	**113**	5,64	**303**	7,71	**043**	170,10	**193**
12	6,13	**037**	12,83	**114**	5,64	**303**	10,54	**044**	170,10	**193**
16	6,13	**037**	12,83	**114**	5,64	**303**	10,54	**045**	170,10	**193**
20	6,13	**037**	12,83	**114**	5,64	**303**	10,54	**046**	170,10	**193**
25			15,60	**131**	5,64	**303**	10,54	**047**		
32			15,60	**131**	5,64	**303**	10,68	**048**		

XOHX / XOGX

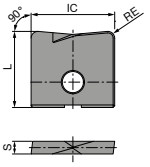
Designation	IC mm	S mm	L mm
XO.X10251..	10	2,50	11,5
XO.X12251..	12	2,50	14,0
XO.X16301..	16	3,00	16,0
XO.X16303..	16	3,00	16,0
XO.X20301..	20	3,00	18,0
XO.X20304..	20	3,00	18,0
XOGX12252..	12	2,50	14,0
XOHX06160..	6	1,60	8,0
XOHX08200..	8	2,00	9,5
XOHX08201..	8	2,00	9,5
XOHX10250..	10	2,50	11,5
XOHX12252..	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



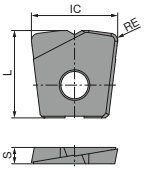
XOGX



XOHX



XOHX



XOHX

XOHX / XOGX

ISO	RE mm	-MR2 CTPP211 XOHX 56 167 ... EUR WB		-MR6 CTPP211 XOHX 56 163 ... EUR WB		-FM2 CTPP216 XOHX 56 165 ... EUR WB		-FM5 CTPP216 XOHX 56 159 ... EUR WB		-MF4 CTPP216 XOGX 56 161 ... EUR WB		-MR3 CTPK231 XOHX 56 171 ... EUR WB		-MR2 CTCN211 XOHX 56 168 ... EUR WB	
061605	0,5	42,16	71000											101,20	610 1)
082006	0,6			45,36	71000	39,92	71000	34,87	71000						
082010	1,0	46,15	71200			39,92	71200							121,00	612 1)
102508	0,8			45,36	72100	39,92	72100	34,47	72100			50,24	32100		
102510	1,0	46,15	72200			39,92	72200			40,31	92200			128,70	622 1)
122510	1,0	49,44	73200	49,44	73200	41,24	73200	38,85	73200	43,74	93200	50,24	53200	139,40	632 1)
122520	2,0	49,44	73500			41,24	73500			43,74	93500				
163010	1,0	53,41	74200			47,73	74200			49,44	94200			173,40	642 1)
163013	1,3			52,63	74300	47,73	74300	44,54	74300						
163015	1,5											53,41	54400		
163030	3,0	53,41	74700			47,73	74500			49,44	94700				
203010	1,0	61,52	75200			52,63	75200			55,81	95200				
203016	1,6			59,92	75400	52,63	75400	51,05	75400						
203020	2,0											63,11	55500		
203040	4,0	61,52	75800			52,63	75800			55,81	95800				
254010	1,0	78,49	76200			68,02	76200								
254020	2,0			82,47	76500	68,02	76500	71,19	76500						
254050	5,0	78,49	76900			68,02	76900								
325025	2,5			116,50	77600			98,78	77600						
P		●		●		●		●		●		●			
M		○		○		○		○		○		●			
K		○		○		●		●		●		●			
N		○		○		○		○		○		○		○	
S		○		○		○		○		○		○			
H		○		○		●		●		●		○			
O		○		○		○		○		○				●	

1) Specifically for machining graphite !

Milling guide

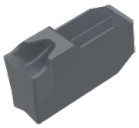
Cutting data standard values	→ 188+189	Depth of Cut	→ 190
Technical Information	→ 193–198	Chip groove description and overview	→ 199–201
Grade description and overview	→ 202–208		

15

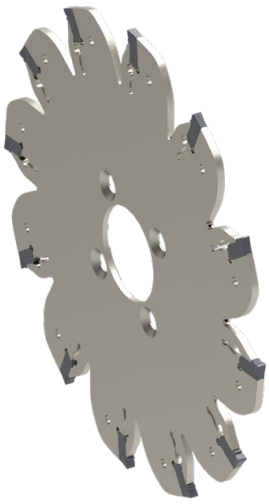
Application tips – **MaxiMill** – Slot-SX

▲ The following components are required to complete the tool:

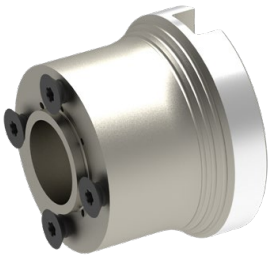
Spanner



Grooving insert



Saw cutters

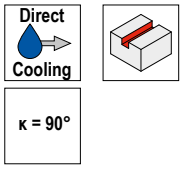


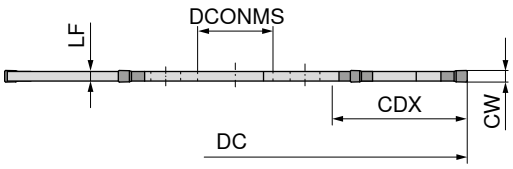
Multipurpose milling cutter adapter

MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws





NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 383 ... EUR 2B/40	
ASLOT.80.R.6.13.DC-SX2	80	2	23	13	1,65	6	SX E2 ..	AD.SLOT.13...	605,00	**08002**
ASLOT.80.R.6.13.DC-SX3	80	3	23	13	2,50	6	SX E3 ..	AD.SLOT.13...	605,00	**08003**
ASLOT.80.R.4.13.DC-SX4	80	4	23	13	3,50	4	SX E4 ..	AD.SLOT.13...	605,00	**08004**
ASLOT.80.R.4.13.DC-SX5	80	5	23	13	4,50	4	SX E5 ..	AD.SLOT.13...	605,00	**08005**

Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 383 08002	5,57	**00100**	33,63	**836**
50 383 08003	5,57	**00100**	33,63	**836**
50 383 08004	5,57	**00100**	34,31	**837**
50 383 08005	5,57	**00100**	34,31	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 136**

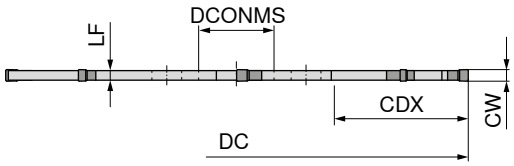
MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws

Direct Cooling

κ = 90°



NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 384 ... EUR 2B/40	
ASLOT.100.R.8.22.DC-SX2	100	2	29	22	1,65	8	SX E2 ..	AD.SLOT.22...	806,70	**10002**
ASLOT.100.R.8.22.DC-SX3	100	3	29	22	2,50	8	SX E3 ..	AD.SLOT.22...	806,70	**10003**
ASLOT.100.R.6.22.DC-SX4	100	4	29	22	3,50	6	SX E4 ..	AD.SLOT.22...	806,70	**10004**
ASLOT.100.R.6.22.DC-SX5	100	5	29	22	4,50	6	SX E5 ..	AD.SLOT.22...	806,70	**10005**
ASLOT.100.R.4.22.DC-SX6	100	6	29	22	5,40	4	SX E6 ..	AD.SLOT.22...	806,70	**10006**


Clamping screw


Ejector SX

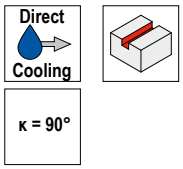
Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 384 10002	5,57	**00100**	33,63	**836**
50 384 10003	5,57	**00100**	33,63	**836**
50 384 10004	5,57	**00100**	34,31	**837**
50 384 10005	5,57	**00100**	34,31	**837**
50 384 10006	5,57	**00100**	34,31	**837**

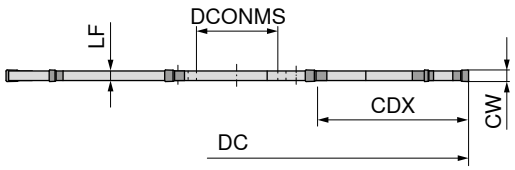
Suitable multipurpose milling cutter adapters can be found on → **Page 136**

MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws





NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 385 ... EUR 2B/40	
ASLOT.125.R.10.22.DC-SX2	125	2	42	22	1,65	10	SX E2 ..	AD.SLOT.22...	1.008,00	**12502**
ASLOT.125.R.10.22.DC-SX3	125	3	42	22	2,50	10	SX E3 ..	AD.SLOT.22...	1.008,00	**12503**

Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 385 12502	5,57	**00100**	33,63	**836**
50 385 12503	5,57	**00100**	33,63	**836**

Suitable multipurpose milling cutter adapters can be found on → **Page 136**

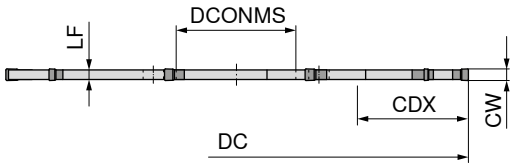
MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws

Direct Cooling

κ = 90°



NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 386 ... EUR 2B/40	
ASLOT.125.R.10.32.DC-SX2	125	2	30	32	1,65	10	SX E2 ..	AD.SLOT.32...	1.008,00	**12502**
ASLOT.125.R.10.32.DC-SX3	125	3	30	32	2,50	10	SX E3 ..	AD.SLOT.32...	1.008,00	**12503**
ASLOT.125.R.8.32.DC-SX4	125	4	30	32	3,50	8	SX E4 ..	AD.SLOT.32...	1.008,00	**12504**
ASLOT.125.R.8.32.DC-SX5	125	5	30	32	4,50	8	SX E5 ..	AD.SLOT.32...	1.008,00	**12505**
ASLOT.125.R.8.32.DC-SX6	125	6	30	32	5,40	8	SX E6 ..	AD.SLOT.32...	1.008,00	**12506**


Clamping screw


Ejector SX

Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 386 12502	5,76	**00200**	33,63	**836**
50 386 12503	5,76	**00200**	33,63	**836**
50 386 12504	5,76	**00200**	34,31	**837**
50 386 12505	5,76	**00200**	34,31	**837**
50 386 12506	5,76	**00200**	34,31	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 136**

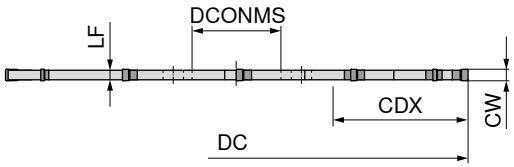
MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws

Direct Cooling

κ = 90°



NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 387 ... EUR 2B/40	
ASLOT.160.R.12.32.DC-SX2	160	2	48	32	1,65	12	SX E2 ..	AD.SLOT.32...	1.139,00	**16002**
ASLOT.160.R.12.32.DC-SX3	160	3	48	32	2,50	12	SX E3 ..	AD.SLOT.32...	1.139,00	**16003**


Clamping screw


Ejector SX

Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 387 16002	5,76	**00200**	33,63	**836**
50 387 16003	5,76	**00200**	33,63	**836**

Suitable multipurpose milling cutter adapters can be found on → **Page 136**

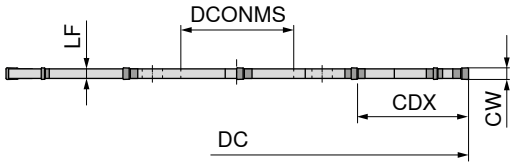
MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws

Direct Cooling

κ = 90°



NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 388 ... EUR 2B/40	
ASLOT.160.R.12.40.DC-SX2	160	2	39	40	1,65	12	SX E2 ..	AD.SLOT.40...SK	1.139,00	**16002**
ASLOT.160.R.12.40.DC-SX3	160	3	39	40	2,50	12	SX E3 ..	AD.SLOT.40...SK	1.139,00	**16003**
ASLOT.160.R.10.40.DC-SX4	160	4	39	40	3,50	10	SX E4 ..	AD.SLOT.40...SK	1.139,00	**16004**
ASLOT.160.R.10.40.DC-SX5	160	5	39	40	4,50	10	SX E5 ..	AD.SLOT.40...SK	1.139,00	**16005**
ASLOT.160.R.10.40.DC-SX6	160	6	39	40	5,40	10	SX E6 ..	AD.SLOT.40...SK	1.139,00	**16006**

Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 388 16002	20,76	**00300**	33,63	**836**
50 388 16003	20,76	**00300**	33,63	**836**
50 388 16004	20,76	**00300**	34,31	**837**
50 388 16005	20,76	**00300**	34,31	**837**
50 388 16006	20,76	**00300**	34,31	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 136**

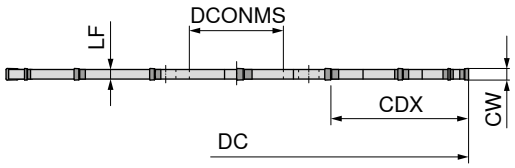
MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws

Direct Cooling

κ = 90°



NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 389 ... EUR 2B/40	
ASLOT.200.R.16.40.DC-SX2	200	2	59	40	1,65	16	SX E2 ..	AD.SLOT.40...SK	1.519,00	**20002**
ASLOT.200.R.16.40.DC-SX3	200	3	59	40	2,50	16	SX E3 ..	AD.SLOT.40...SK	1.519,00	**20003**
ASLOT.200.R.14.40.DC-SX4	200	4	59	40	3,50	14	SX E4 ..	AD.SLOT.40...SK	1.519,00	**20004**
ASLOT.200.R.14.40.DC-SX5	200	5	59	40	4,50	14	SX E5 ..	AD.SLOT.40...SK	1.519,00	**20005**
ASLOT.200.R.14.40.DC-SX6	200	6	59	40	5,40	14	SX E6 ..	AD.SLOT.40...SK	1.519,00	**20006**

Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 389 20002	20,76	**00300**	33,63	**836**
50 389 20003	20,76	**00300**	33,63	**836**
50 389 20004	20,76	**00300**	34,31	**837**
50 389 20005	20,76	**00300**	34,31	**837**
50 389 20006	20,76	**00300**	34,31	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 136**

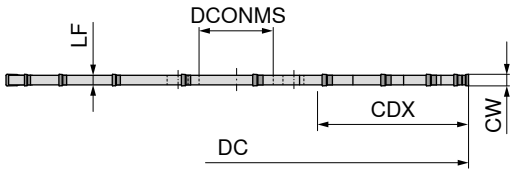
MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws

Direct Cooling

κ = 90°



NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 380 ... EUR 2B/40	
ASLOT.250.R.20.40.DC-SX3	250	3	84	40	2,5	20	SX E3 ..	AD.SLOT.40...ZK	2.669,00	**25003**
ASLOT.250.R.18.40.DC-SX4	250	4	84	40	3,5	18	SX E4 ..	AD.SLOT.40...ZK	2.669,00	**25004**
ASLOT.250.R.18.40.DC-SX5	250	5	84	40	4,5	18	SX E5 ..	AD.SLOT.40...ZK	2.670,00	**25005**
ASLOT.250.R.18.40.DC-SX6	250	6	84	40	5,4	18	SX E6 ..	AD.SLOT.40...ZK	3.535,00	**25006**[1)]

1) Not ex-stock

Clamping screw

Ejector SX

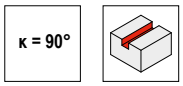
Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 380 25003	20,76	**00400**	33,63	**836**
50 380 25004	20,76	**00400**	34,31	**837**
50 380 25005	20,76	**00400**	34,31	**837**
50 380 25006	20,76	**00400**	34,31	**837**

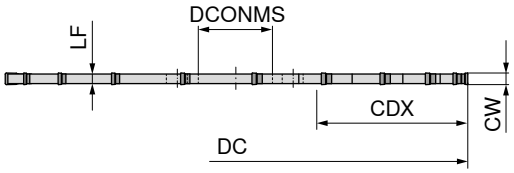
Suitable multipurpose milling cutter adapters can be found on → **Page 136**

MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws





NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 390 ... EUR 2B/40	
ASLOT.250.R.20.40-SX3	250	3	84	40	2,5	20	SX E3 ..	AD.SLOT.40...ZK	1.827,00	**25003**
ASLOT.250.R.18.40-SX4	250	4	84	40	3,5	18	SX E4 ..	AD.SLOT.40...ZK	1.827,00	**25004**
ASLOT.250.R.18.40-SX5	250	5	84	40	4,5	18	SX E5 ..	AD.SLOT.40...ZK	1.827,00	**25005**
ASLOT.250.R.18.40-SX6	250	6	84	40	5,4	18	SX E6 ..	AD.SLOT.40...ZK	2.729,00	**25006**[1)]

1) Not ex-stock

Clamping screw

Ejector SX

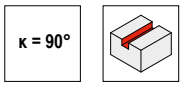
Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 390 25003	20,76	**00400**	33,63	**836**
50 390 25004	20,76	**00400**	34,31	**837**
50 390 25005	20,76	**00400**	34,31	**837**
50 390 25006	20,76	**00400**	34,31	**837**

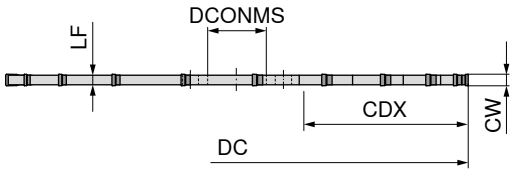
Suitable multipurpose milling cutter adapters can be found on → **Page 136**

MaxiMill – Slot-SX slot milling and parting off cutter

Scope of supply:

Slot milling and parting off cutters **without** assembly key, **without** clamping screws





NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 391 ... EUR 2B/40	
ASLOT.315.R.22.40-SX4	315	4	115	40	3,5	22	SX E4 ..	AD.SLOT.40...ZK	2.041,00	**31504**
ASLOT.315.R.22.40-SX5	315	5	115	40	4,5	22	SX E5 ..	AD.SLOT.40...ZK	2.041,00	**31505**
ASLOT.315.R.22.40-SX6	315	6	115	40	5,4	22	SX E6 ..	AD.SLOT.40...ZK	3.535,00	**31506**[1)]

1) Not ex-stock

Clamping screw

Ejector SX

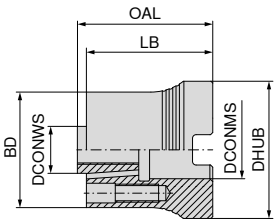
Spare parts for Article no.	50 950 ... EUR 2A/28		70 950 ... EUR 2A/28	
50 391 31504	20,76	**00400**	34,31	**837**
50 391 31505	20,76	**00400**	34,31	**837**
50 391 31506	20,76	**00400**	34,31	**837**

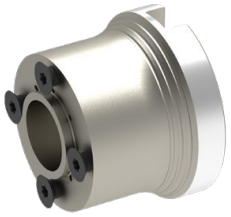
Suitable multipurpose milling cutter adapters can be found on → **Page 136**

MaxiMill – Slot-SX multipurpose milling cutter adapter

Scope of supply:

Multipurpose milling cutter adapter including screws





NEW

Designation	DCONMS mm	DCONWS h6 mm	DHUB mm	LB mm	OAL mm	BD mm	50 395 ... EUR 2E/45	
AD.SLOT.13.32.A16	16	13	38	35	37,5	32	188,90	**01300**
AD.SLOT.22.40.A22	22	22	48	35	37,5	40	193,90	**02200**
AD.SLOT.22.40.A22.40	22	22	40	35	37,5	40	193,90	**02300**
AD.SLOT.32.63.A27	27	32	58	45	47,5	63	211,60	**03200**
AD.SLOT.40.80.A32.SK	32	40	78	55	57,5	80	268,10	**04000**
AD.SLOT.40.80.A32.ZK	32	40	78	55	57,5	80	268,10	**04100**

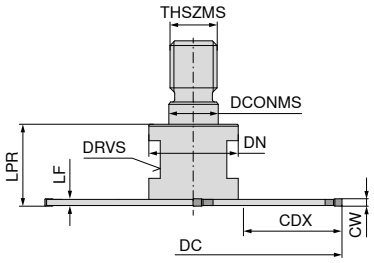
Spare parts for Article no.	Clamping screw 50 950 ... EUR 2A/28		Clamping screw 50 950 ... EUR 2A/28		Clamping screw 50 950 ... EUR 2A/28		Power Screw 70 950 ... EUR 2A/28	
50 395 01300	5,57	**00100**					16,08	**151**
50 395 02200	5,57	**00100**						
50 395 03200	5,76	**00200**						
50 395 04000					20,76	**00300**		
50 395 04100			20,76	**00400**				

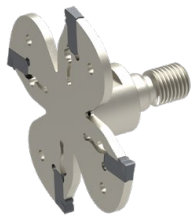
MaxiMill – Slot-SX screw-in multipurpose milling cutter

Scope of supply:

Screw-in multipurpose milling cutter **without** assembly key

κ = 90°





NEW

50 392 ...

Designation	DC mm	CW mm	CDX mm	DCONMS mm	THSZMS	LF mm	DN mm	LPR mm	DRVS mm	ZEFP	Insert	EUR 2B/40	
GSLOT.63.R.4.M10.DC-SX2	63	2	21	10,5	M10	1,65	19	18	15	4	SX E2 ..	700,00	**06302**
GSLOT.63.R.4.M10.DC-SX3	63	3	21	10,5	M10	2,50	19	18	15	4	SX E3 ..	700,00	**06303**

Ejector SX

70 950 ...

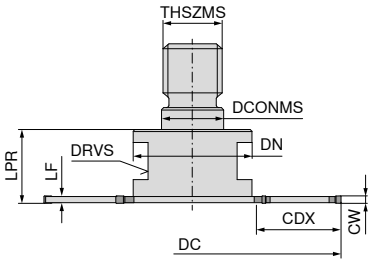
Spare parts for Article no.	EUR 2A/28	
50 392 06302	33,63	**836**
50 392 06303	33,63	**836**

MaxiMill – Slot-SX screw-in multipurpose milling cutter

Scope of supply:

Screw-in multipurpose milling cutter **without** assembly key

κ = 90°



NEW

50 393 ...

Designation	DC mm	CW mm	CDX mm	DCONMS mm	THSZMS	LF mm	DN mm	LPR mm	DRVS mm	ZEFP	Insert	EUR 2B/40	
GSLOT.80.R.6.M16.DC-SX2	80	2	23	17	M16	1,65	32	20	24	6	SX E2 ..	877,90	**08002**
GSLOT.80.R.6.M16.DC-SX3	80	3	23	17	M16	2,50	32	20	24	6	SX E3 ..	877,90	**08003**
GSLOT.80.R.4.M16.DC-SX4	80	4	23	17	M16	3,50	32	20	24	4	SX E4 ..	877,90	**08004**

Ejector SX

70 950 ...

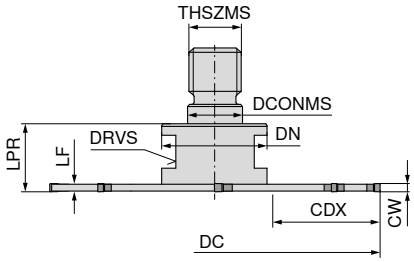
Spare parts for Article no.	EUR 2A/28	
50 393 08002	33,63	**836**
50 393 08003	33,63	**836**
50 393 08004	34,31	**837**

MaxiMill – Slot-SX screw-in multipurpose milling cutter

Scope of supply:

Screw-in multipurpose milling cutter **without** assembly key

κ = 90°



NEW

Designation	DC mm	CW mm	CDX mm	DCONMS mm	THSZMS	LF mm	DN mm	LPR mm	DRVS mm	ZEFP	Insert	50 394 ... EUR 2B/40	
GSLOT.100.R.8.M16.DC-SX2	100	2	33	17	M16	1,65	32	20	24	8	SX E2 ..	1.044,00	**10002**
GSLOT.100.R.8.M16.DC-SX3	100	3	33	17	M16	2,50	32	20	24	8	SX E3 ..	1.044,00	**10003**
GSLOT.100.R.6.M16.DC-SX4	100	4	33	17	M16	3,50	32	20	24	6	SX E4 ..	1.044,00	**10004**

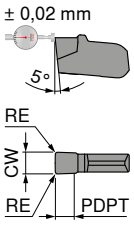
Ejector SX

Spare parts for Article no.	70 950 ... EUR 2A/28	
50 394 10002	33,63	**836**
50 394 10003	33,63	**836**
50 394 10004	34,31	**837**

Suitable adapters for screw-in cutters can be found in – Chapter 16 Adapters and accessories

Insert SX

F	M	R
◢		

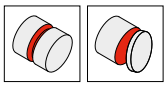


-F2
CTP1340
DRAGONSKIN

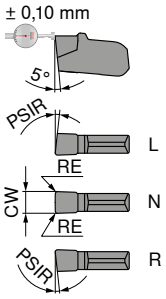
Designation	CW mm	RE mm	PDPT mm	for tool holder	70 346 ... EUR 1C/72	
SX E2.00 N 0.20	2	0,2	1,5	-SX2	23,67	**622**
SX E3.00 N 0.30	3	0,3	2,0	-SX3	25,44	**623**
SX E4.00 N 0.40	4	0,4	2,5	-SX4	26,91	**624**

P	●
M	●
K	○
N	○
S	●
H	
O	

Insert SX



F	M	R
	◢	



-M1
CTCP335
DRAGONSKIN

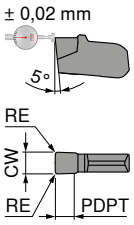
-M1
CTP1340
DRAGONSKIN

Designation	IH	CW mm	RE mm	for tool holder	70 342 ... EUR 1C/72		70 342 ... EUR 1C/72	
SX E2.00 N 0.20	N	2	0,2	-SX2	15,87	**52200**	15,87	**622**
SX E3.00 N 0.20	N	3	0,2	-SX3	16,89	**523**	16,89	**623**
SX E4.00 N 0.30	N	4	0,3	-SX4	17,80	**524**	17,80	**624**
SX E5.00 N 0.30	N	5	0,3	-SX5	18,95	**52500**	18,95	**625**
SX E6.00 N 0.40	N	6	0,4	-SX6	20,44	**52600**	20,44	**626**

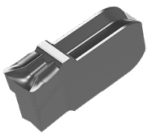
P	●	●
M	○	●
K	●	○
N		○
S		●
H		
O		

Insert SX

F	M	R
	◢	



-27P
H216T

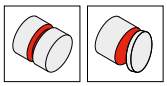


70 349 ...

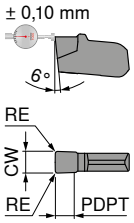
Designation	CW mm	RE mm	PDPT mm	for tool holder	EUR 1C/72	
SX E2.00 N 0.20	2	0,2	2,0	-SX2	18,83	**122**
SX E3.00 N 0.30	3	0,3	2,5	-SX3	20,15	**123**
SX E4.00 N 0.40	4	0,4	3,0	-SX4	21,33	**124**

P	
M	
K	○
N	●
S	
H	
O	○

Insert SX



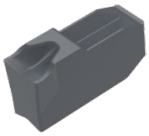
F	M	R
	◢	



NEW

-M7
CTP1340

DRAGONSKIN

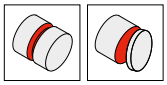


70 347 ...

Designation	CW mm	RE mm	PDPT mm	for tool holder	EUR 1C/72	
SX E2.00 N 0.20	2	0,2	1,5	-SX2	15,87	**62200**
SX E3.00 N 0.20	3	0,2	2,0	-SX3	16,89	**62300**
SX E4.00 N 0.30	4	0,3	2,5	-SX4	17,80	**62400**
SX E5.00 N 0.30	5	0,3	2,7	-SX5	18,95	**62500**
SX E6.00 N 0.40	6	0,4	3,0	-SX6	20,44	**62600**

P	●
M	●
K	○
N	○
S	●
H	
O	

Insert SX

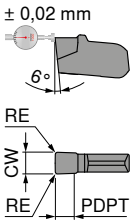


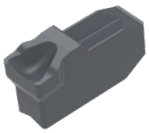
F	M	R

NEW

-M8
CTP1340

DRAGONSKIN





Designation	CW mm	RE mm	PDPT mm	for tool holder	70 348 ... EUR 1C/72	
SX E2.00 N 0.20	2	0,2	1,5	-SX2	23,67	**62200**
SX E3.00 N 0.20	3	0,2	2,0	-SX3	25,44	**62300**
SX E4.00 N 0.30	4	0,3	2,5	-SX4	26,91	**62400**
SX E5.00 N 0.30	5	0,3	2,7	-SX5	28,65	**62500**
SX E6.00 N 0.40	6	0,4	3,0	-SX6	30,90	**62600**

P	●
M	●
K	○
N	○
S	●
H	
O	

Milling guide

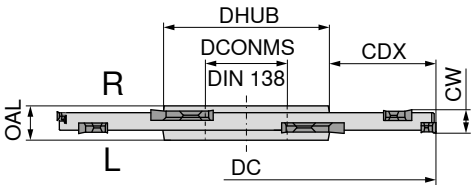
Cutting data standard values	→ 191	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

TX slot milling and parting off cutter

▲ Note: slot milling and parting off 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:

slot milling and parting off 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	624,60	**083**
TX.STF.100X32.03.Z5	100	3	5	25,0	32	46	8	10	TX. 161702	0,7	786,50	**103**
TX.STF.125X40.03.Z6	125	3	6	32,0	40	54	10	12	TX. 161702	0,7	859,40	**123**
TX.STF.160X40.03.Z8	160	3	8	50,0	40	54	10	16	TX. 161702	0,7	1.004,00	**163** 1)
TX.STF.80X27.04.Z4	80	4	4	18,0	27	40	8	8	TX. 162302	1,3	615,30	**084**
TX.STF.100X32.04.Z5	100	4	5	25,0	32	46	8	10	TX. 162302	1,3	775,80	**104**
TX.STF.125X40.04.Z6	125	4	6	32,0	40	54	10	12	TX. 162302	1,3	846,10	**124**
TX.STF.160X40.04.Z8	160	4	8	50,0	40	54	10	16	TX. 162302	1,3	990,70	**164** 1)
TX.STF.80X27.06.Z4	80	6	4	21,0	27	36	10	8	TX. 223202	2	404,50	**086**
TX.STF.80X22.06.Z4	80	6	4	22,0	22	33	10	8	TX. 223202	2	404,50	**080**
TX.STF.100X32.06.Z5	100	6	5	25,5	32	47	10	10	TX. 223202	2	481,30	**106**
TX.STF.125X40.06.Z6	125	6	6	32,5	40	58	10	12	TX. 223202	2	649,80	**136**
TX.STF.160X40.06.Z8	160	6	8	50,0	40	58	10	16	TX. 223202	2	862,10	**166** 1)
TX.STF.80X27.08.Z4	80	8	4	21,0	27	36	12	8	TX. 224302	2,8	404,50	**088**
TX.STF.100X32.08.Z5	100	8	5	25,5	32	47	12	10	TX. 224302	2,8	481,30	**108**
TX.STF.125X40.08.Z6	125	8	6	32,5	40	58	12	12	TX. 224302	2,8	649,80	**138**
TX.STF.160X40.08.Z8	160	8	8	50,0	40	58	12	16	TX. 224302	2,8	835,40	**168** 1)
TX.STF.80X27.10.Z4	80	10	4	21,0	27	36	12	8	TX. 225402	3	404,50	**090**
TX.STF.100X32.10.Z5	100	10	5	25,5	32	47	12	10	TX. 225402	3	481,30	**110**
TX.STF.125X40.10.Z6	125	10	6	32,5	40	58	14	12	TX. 225402	3	649,80	**140**
TX.STF.160X40.10.Z8	160	10	8	50,0	40	58	14	16	TX. 225402	3	862,10	**170** 1)

1) Without Through Coolant

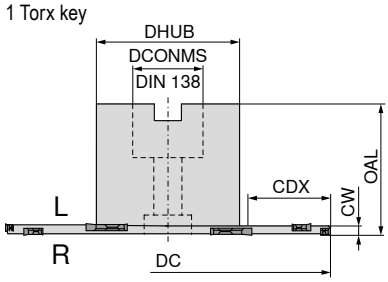
	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screwdriver
	80 950 ...	80 950 ...	70 950 ...	70 950 ...	80 950 ...
Spare parts	EUR	EUR	EUR	EUR	EUR
CW	Y7	Y7	2A/28	V5	Y7
3	6,13 **032**	10,05 **109**	5,64 **303**	5,96 **858**	153,30 **191**
4	6,13 **033**	10,05 **110**	5,64 **303**	2,73 **218**	153,30 **191**
6	6,13 **036**	11,96 **113**	5,64 **303**	3,55 **101**	165,90 **192**
8	6,13 **037**	12,83 **114**	5,64 **303**	3,55 **135**	165,90 **192**
10	6,13 **037**	12,83 **114**	5,64 **303**	3,48 **146**	165,90 **192**

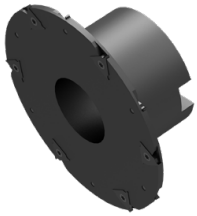
TX shell / slot milling and parting off cutter

▲ Note: slot milling and parting off 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:

slot milling and parting off cutter, 2 spare clamping screws and 1 Torx key





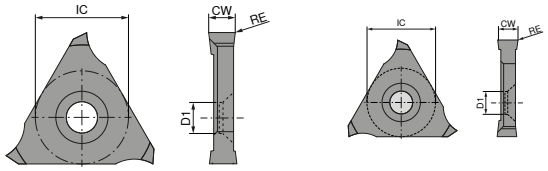
Designation	DC mm	CW mm	ZNF	CDX mm	DCONMS mm	DHUB mm	OAL mm	ZEFP	torque moment Nm	Insert	50 734 ... EUR V5	
TX.ASF.100.R.03.Z5	100	3	5	25,0	27	48	50	10	0,7	TX. 161702	714,80	**300**
TX.ASF.125.R.03.Z6	125	3	6	37,5	27	48	50	12	0,7	TX. 161702	1.110,00	**225**
TX.ASF.160.R.03.Z8	160	3	8	44,0	40	70	50	16	0,7	TX. 161702	1.189,00	**260** 1)
TX.ASF.100.R.04.Z5	100	4	5	25,0	27	48	50	10	3,2	TX. 162302	704,20	**100**
TX.ASF.125.R.04.Z6	125	4	6	37,5	27	48	50	12	3,2	TX. 162302	1.017,00	**025**
TX.ASF.125.R.04.Z6	125	4	6	26,5	40	70	50	12	3,2	TX. 162302	990,70	**125**
TX.ASF.160.R.04.Z8	160	4	8	55,0	27	48	50	16	3,2	TX. 162302	1.240,00	**060** 1)
TX.ASF.160.R.04.Z8	160	4	8	44,0	40	70	50	16	3,2	TX. 162302	1.172,00	**160** 1)
TX.ASF.180.R.04.Z9	180	4	9	54,0	40	70	50	18	3,2	TX. 162302	1.356,00	**180** 1)
TX.ASF.200.R.04.Z10	200	4	10	64,0	40	70	50	20	3,2	TX. 162302	1.510,00	**200** 1)

1) Without Through Coolant

Spare parts CW	DCONMS	 Washer 70 950 ... EUR V5		TORX® blade 80 950 ... EUR Y7		 Clamping Screw 70 950 ... EUR V5		 Key D 80 950 ... EUR Y7		 Molykote 70 950 ... EUR 2A/28		 Clamping screw 70 950 ... EUR V5		 Torque screwdriver 80 950 ... EUR Y7	
3	27	1,39	**221**	6,13	**032**	2,07	**219**	10,05	**109**	5,64	**303**	5,96	**858**	153,30	**191**
3	40	2,10	**222**	6,13	**032**	8,89	**220**	10,05	**109**	5,64	**303**	5,96	**858**	153,30	**191**
4	27	1,39	**221**	6,13	**033**	2,07	**219**	10,05	**110**	5,64	**303**	2,73	**218**	165,90	**192**
4	40	2,10	**222**	6,13	**033**	8,89	**220**	10,05	**110**	5,64	**303**	2,73	**218**	165,90	**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

ISO	RE mm	TX-L 50 382 ... EUR V5		TX-R 50 381 ... EUR V5		TX-L 50 382 ... EUR V5		TX-R 50 381 ... EUR V5	
TX 161702	0,15	26,00	217	26,00	217				
TX 162302	0,15	25,71	223	25,71	223				
TX 223202	0,15	38,81	232	38,81	232				
TX 223202	0,20					34,38	532	34,38	532
TX 224302	0,15	39,21	243	39,21	243				
TX 224302	0,20					35,09	543	35,09	543
TX 225402	0,15	29,13	254	29,13	254				
TX 225402	0,20					24,99	554	24,99	554
P		●		●					
M		●		●					
K		●		●					
N		●		●		●		●	
S		○		○					
H									
O		○		○		○		○	

Milling guide

Cutting data standard values	→ 192	Technical Information	→ 193–198
Chip groove description and overview	→ 199–201	Grade description and overview	→ 202–208

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

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Cutting data standard values

Index	CTEP210 CERMET DRAGONSKIN		TCM10 CERMET		CTCP220 DRAGONSKIN		CTPP225 DRAGONSKIN		CTCP230 DRAGONSKIN		CTPP231		CTPP235 DRAGONSKIN		CTPP236	
	Cutting Material **hard** (v_c↑) → **tough** (v_c↓)															
	v_c (m/min)															
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																
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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

Index	CTPM225		CTCM235		CTPM240		CTPM241		CTPM245		CTCM245		CTN3105 CERAMIC		CTL3215 CBN	
	DRAGONSKIN															
	Cutting Material **hard** (v_c↑) → **tough** (v_c↓)															
	v_c (m/min)															
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																

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

Index	CTCK215		CTPK220		CTPK221		CTPX715		H216T		CTWN215		CTC5240		CTCS245		CTP6215	
	DRAGONSKIN		DRAGONSKIN				DRAGONSKIN						DRAGONSKIN					
	Cutting Material **hard** (v_c↑) → **tough** (v_c↓)																	
	v_c (m/min)																	
P.1.1					190	120	240	130										
P.1.2					180	100	200	120										
P.1.3					150	80	170	100										
P.1.4					180	100	160	100										
P.1.5					170	90	140	90										
P.2.1					180	100	210	120										
P.2.2					140	80	150	100										
P.2.3					180	100	140	90										
P.2.4					130	80	100	70										
P.3.1					210	120	120	90										
P.3.2					160	90	100	80										
P.3.3					130	80	90	70										
P.4.1					210	120	120	90										
P.4.2					190	100	110	90										
M.1.1							120	100										
M.2.1							110	90										
M.3.1							120	100										
K.1.1	360	210	320	190	270	200	**320**	190	130	130	130	130					280	250
K.1.2	220	130	170	100	270	200	**170**	100	110	110	110	110					190	160
K.2.1	230	140	210	130	250	180	**210**	130	130	130	130	130					180	150
K.2.2	160	100	140	90	180	120	**140**	90	120	120	120	120					180	150
K.3.1	250	150	200	120	220	170	**200**	120	130	130	130	130					250	220
K.3.2	210	130	170	100	220	170	**170**	100	110	120	110	110					190	160
N.1.1								**1500**		**1500**		**1500**						
N.1.2								**1000**		**1000**		**1000**						
N.2.1								**1100**		**1100**		**1100**						
N.2.2								**1000**		**1000**		**1000**						
N.2.3								**280**		**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								60						**80**		**64**		
S.1.2								50						**70**		**56**		
S.2.1								30						**35**		**28**		
S.2.2								20						**25**		**20**		
S.2.3								20						**30**		**24**		
S.3.1								60						**80**		**64**		
S.3.2								40						**50**		**40**		
S.3.3								30						**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	160						
O.1.2																		
O.2.1							240	240	240	240	240	240						
O.2.2																		
O.3.1																		

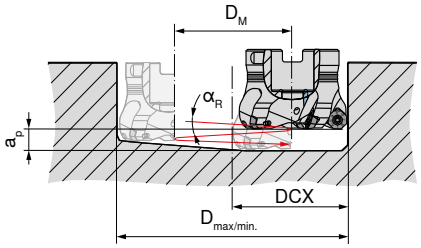
The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

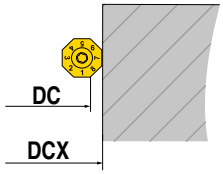
System MaxiMill 274-04/-09

Machining strategy

Helical plunging

$D_{max.}$ 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





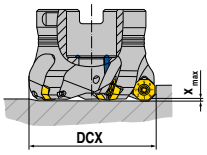
OF..04

DC mm	DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
20	**25,5**	45	39	2,3
25	**30,6**	55	49	1,9
32	**37,6**	69	63	1,4
40	**45,7**	85	79	1,2
50	**55,7**	105	99	0,9
63	**68,7**	131	125	0,7
80	**85,7**	165	159	0,6
100	**105,7**	205	199	0,5
125	**130,7**	255	249	0,4

SF..09

DC mm	DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
18,8	**27,4**	45,00	42,0	1,9
23,8	**32,5**	55,00	52,0	1,5
30,7	**39,5**	69,00	66,0	1,1
38,7	**47,6**	85,00	82,0	0,9
48,6	**57,6**	105,00	102,0	0,7
61,7	**70,6**	131,00	128,0	0,5
78,7	**87,5**	165,00	162,0	0,4
98,7	**107,5**	205,00	202,0	0,3
123,7	**132,5**	255,00	252,0	0,3

Axial ramping



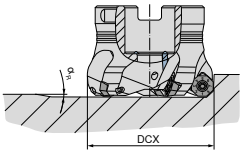
OF..04

DC mm	DCX mm	x_{max} mm
20	**25,6**	2,5
25	**30,7**	2,5
32	**37,7**	2,5
40	**45,7**	2,5
50	**55,7**	2,5
63	**68,7**	2,5
80	**85,7**	2,5
100	**105,7**	2,5
125	**130,7**	2,5

SF..09

DC mm	DCX mm	x_{max} mm
18,8	**27,4**	3,7
23,8	**32,5**	3,5
30,7	**39,5**	3,2
38,7	**47,6**	3,1
48,6	**57,6**	3,1
61,7	**70,6**	3,0
78,7	**87,5**	2,9
98,7	**107,5**	2,7
123,7	**132,5**	2,7

Angled ramping



OF..04

DC mm	DCX mm	$\alpha_{R\,max}$ °
20	**25,6**	14,2
25	**30,7**	9,5
32	**37,7**	6,5
40	**45,7**	4,7
50	**55,7**	3,5
63	**68,7**	2,7
80	**85,7**	2,0
100	**105,7**	1,6
125	**130,7**	1,2

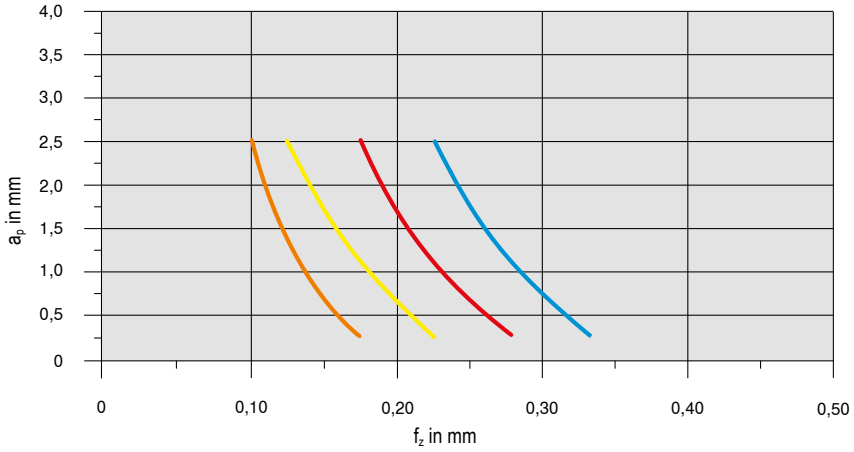
SF..09

DC mm	DCX mm	$\alpha_{R\,max}$ °
18,8	**27,4**	20,4
23,8	**32,5**	13,0
30,7	**39,5**	8,0
38,7	**47,6**	5,8
48,6	**57,6**	4,3
61,7	**70,6**	3,2
78,7	**87,5**	2,3
98,7	**107,5**	1,7
123,7	**132,5**	1,3

System MaxiMill 274-04

Starting Parameter

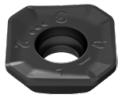
OF.. 04



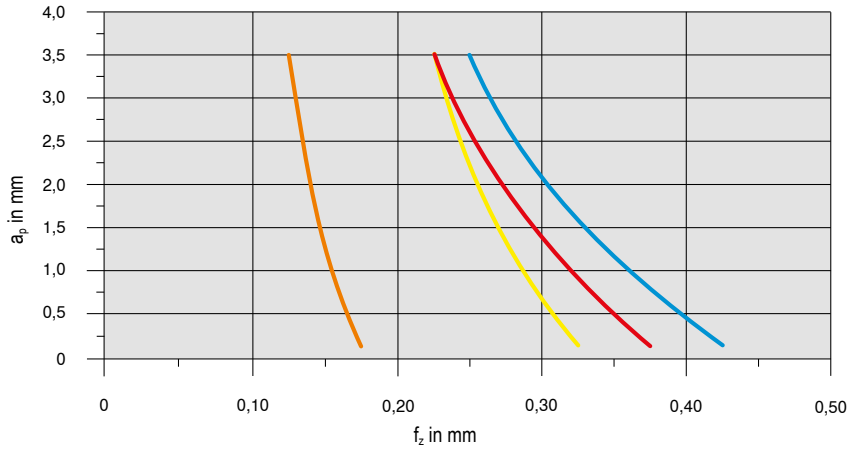
Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**OFHT040305SN-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT040305SN-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**OFHT040305SN-M50**	**CTCK215**	250	Dry
Heat-resistant	**S.2.2**	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.2.2**	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 146–148

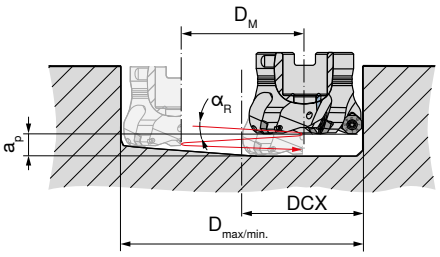
From v_c > 400 m/min, the tool must be balanced!

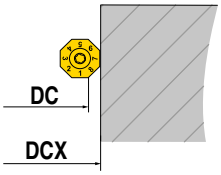
System MaxiMill 274-05/-12

Machining strategy

Helical plunging

$D_{max.}$ 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





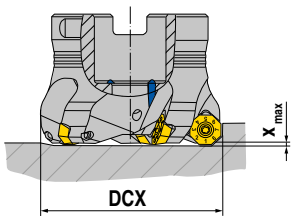
OF..05

DC mm	DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
40	**48**	87	85	1,6
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
160	**167,9**	327	325	0,35

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 ramping



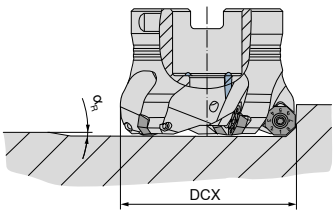
OF..05

DC mm	DCX mm	X_{max} mm
40	**48**	2,5
50	**58**	2,2
63	**71**	1,9
80	**88**	1,8
100	**107,9**	1,1
125	**132,9**	1,4
160	**167,9**	1,1

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	$\alpha_{R\,max}$ °
40	**48**	6,5
50	**58**	3,2
63	**71**	2,0
80	**88**	1,5
100	**107,9**	0,7
125	**132,9**	0,7
160	**167,9**	0,4

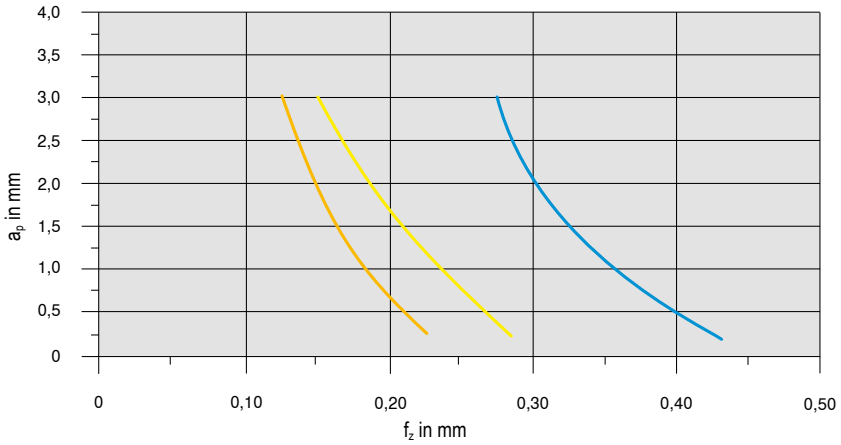
SF..12

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

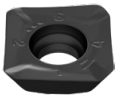
OF.. 05



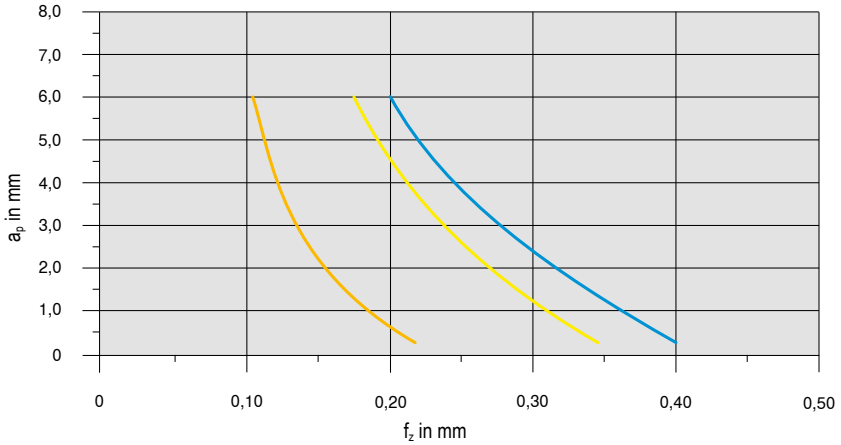
Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**OFHT050410SN-M50**	**CTCP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT050410SN-F50**	**CTPM240**	180	Dry
Heat-resistant	**S.2.2**	Inconel 718	**OFHT050410SN-F50**	**CTC5240**	35	Emulsion

System MaxiMill 274-12

Starting Parameter



SF.. 12



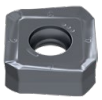
Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**SFKT1204AFSR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SFKT1204AFSR-M50**	**CTPM240**	180	Dry
Heat-resistant	**S.2.2**	Inconel 718	**SFHT1204AFER-F40**	**CTC5240**	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 146–148

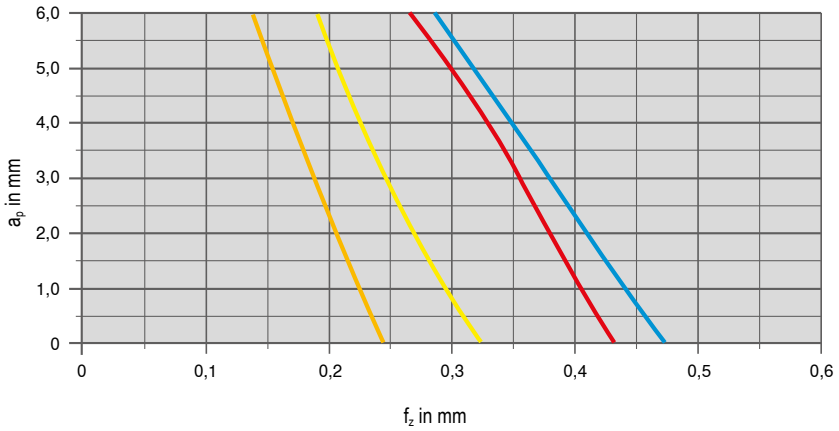
From v_c > 400 m/min, the tool must be balanced!

MaxiMill 271-12 system

Starting Parameter



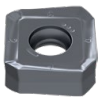
SOHU 12



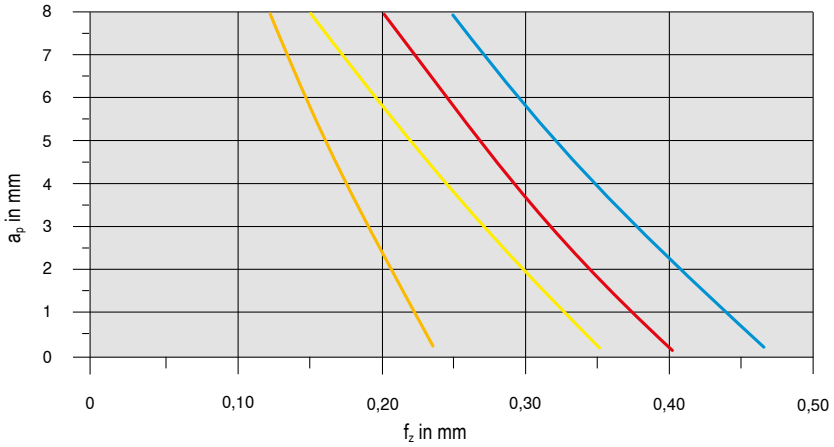
Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**SOHU 1204ABSR-M50**	**CTPP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SOHU 1204ABSR-M50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SOHU 1204ABSR-R50**	**CTCK215**	300	Dry
Heat-resistant	**S.2.2**	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.2.2**	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

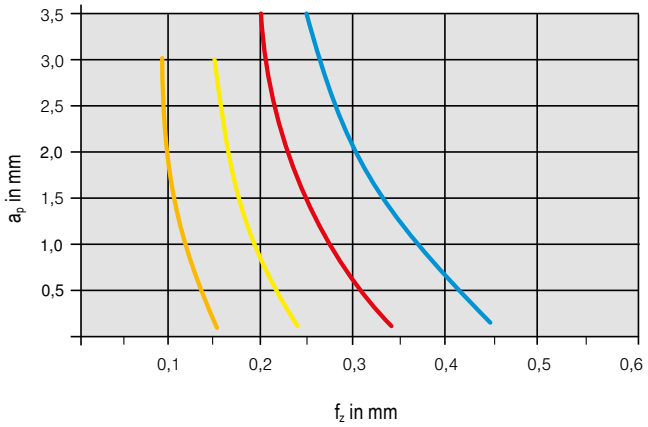
Detailed information on cutting speed for each grade can be found on → page 146–148

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

MaxiMill 273-06 system

Starting Parameter

OAKU 06



Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	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

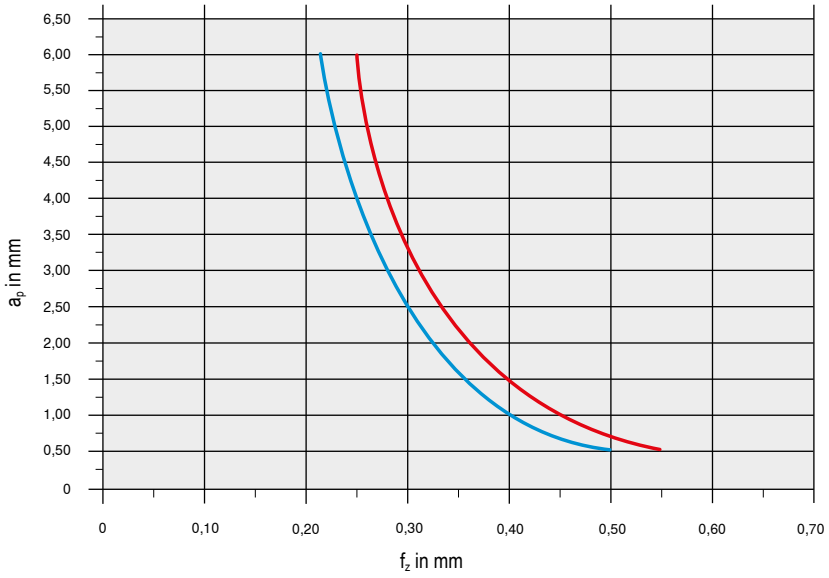
Detailed information on cutting speed for each grade can be found on → page 146–148

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

MaxiMill 273-08 system

Starting Parameter

ONKU 08



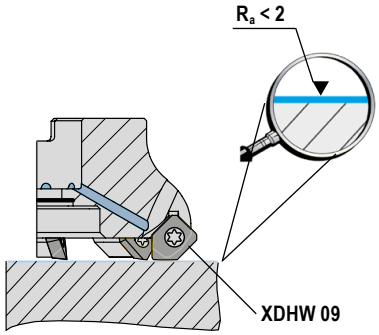
Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**ONKU 080608SR-M50**	**CTPP235**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**ONKU 080608SR-R50**	**CTCK215**	250	Dry

Detailed information on cutting speed for each grade can be found on → page 146–148

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

MaxiMill 270 system

Machining strategy

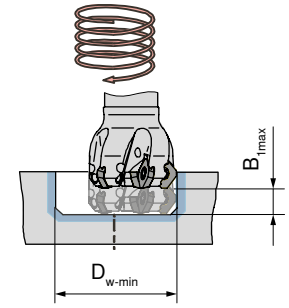


Finish milling with trailing edge inserts

Two Masterfinish inserts are mounted in each 125mm head

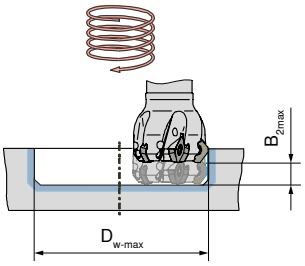
Steel	SDNT	0903AESN-29	CTPP235	+	XDHW	0903AESN CTPP235
	SDNT	0903AESN-29	CTCP230	+	XDHW	0903AESN CTCP230
	SDHT	0903AESN-33	CTCP230	+	XDHW	0903AESN CTCP230
	SDHW	0903AESN	TCM10	+	XDHW	0903AESN TCM10
Cast iron	SDNT	0903AESN-31	CTCK215	+	XDHW	0903AEEN CTCK215
Non-ferrous metals	SDHT	0903AEFN-ALP	-27P H216T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

Helical plunging (without pilot hole)



C 270-09

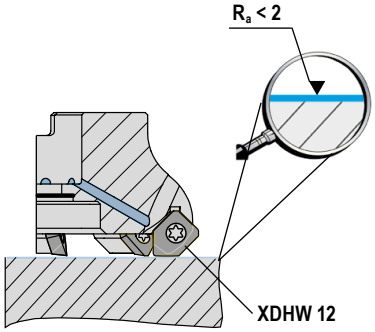
DC mm	D_{w-min} mm	$B_{1\,max}$ mm	D_{w-max} mm	$B_{2\,max}$ mm
6	14,4	1,5	19,0	1,5
12	28,5	1,5	31,0	1,5
16	36,5	1,5	39,0	1,5
20	44,5	1,5	47,0	1,5
25	54,5	1,5	57,0	1,5
32	68,5	1,5	71,0	1,5



A 270-09

DC mm	D_{w-min} mm	$B_{1\,max}$ mm	D_{w-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

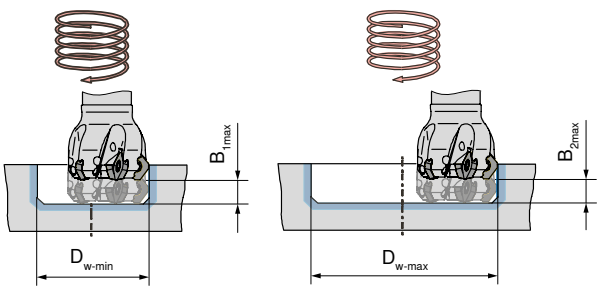


Finish milling with trailing edge inserts

Two Masterfinish inserts are mounted in each 125mm 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 plunging (without pilot hole)

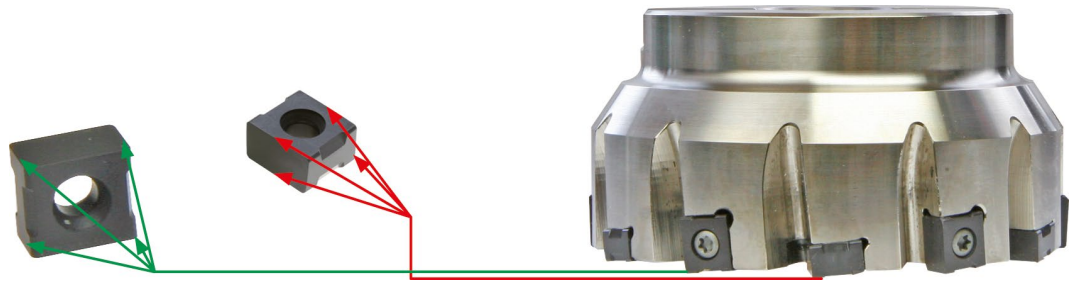


DC mm	D_{w-min} mm	$B_{1\,max}$ mm	D_{w-max} mm	$B_{2\,max}$ mm
32	74,5	1,5	78,0	1,5
40	90,5	1,5	94,0	1,5
50	110,5	1,5	114,0	1,5
63	136,5	1,5	140,0	1,5
80	170,5	1,5	174,0	1,5
100	210,5	1,5	214,0	1,5
125	260,5	1,5	264,0	1,5
160	330,5	1,5	334,0	1,5

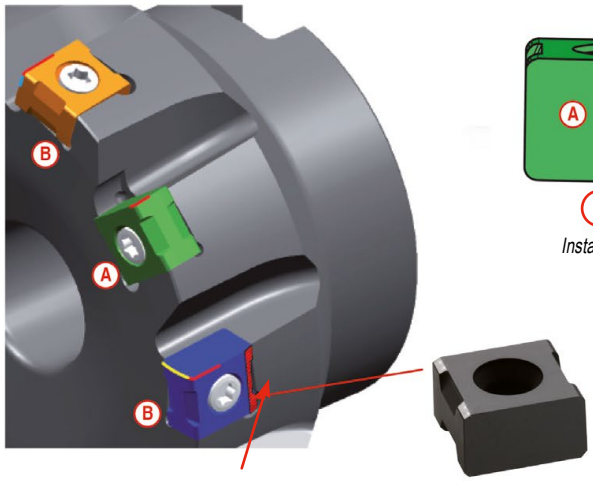
From v_c > 400 m/min, the tool must be balanced!

MaxiMill HEC 11 / HEC 12 system

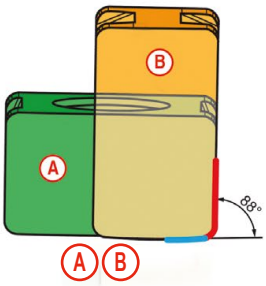
4 cutting edges per installation position



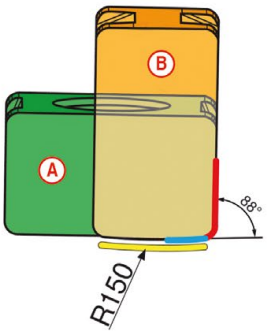
Correct assembly of standard and trailing edge inserts



Marking for the correct assembly



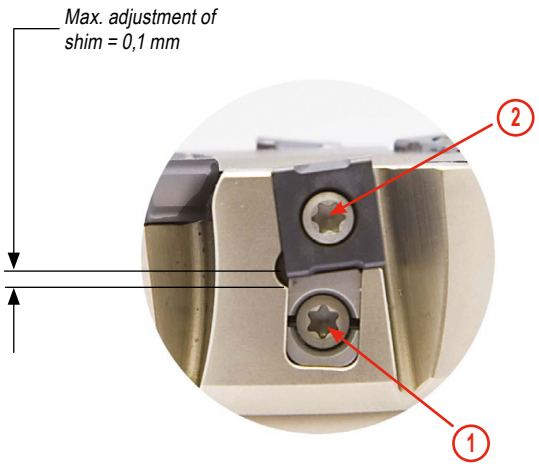
Installation position



Face machining insert — B
Insert main cutting edge — A B
Trailing edge 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

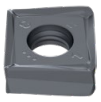
2 Select the corrected feed rate value from the table based on the appropriate chip thickness [h_m] and depth of cut [a_e].

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**

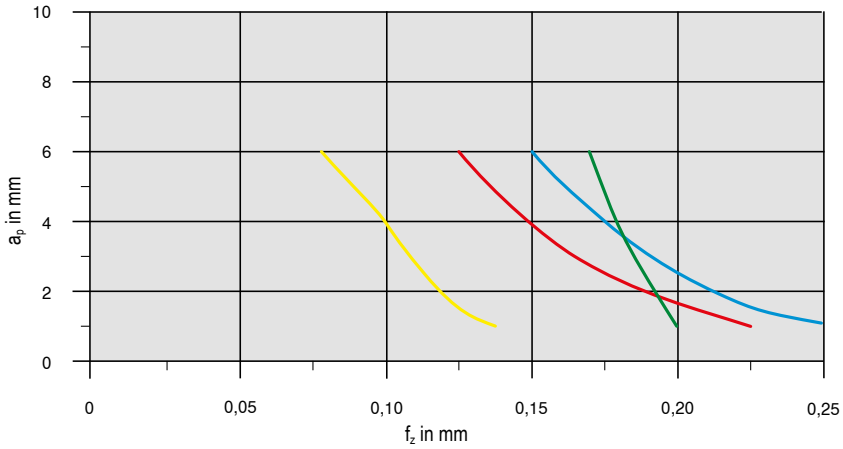
** f_z > 0,4 mm: Danger of an open space contact

MaxiMill 491-09 system

Starting Parameter



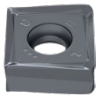
SNHU 09



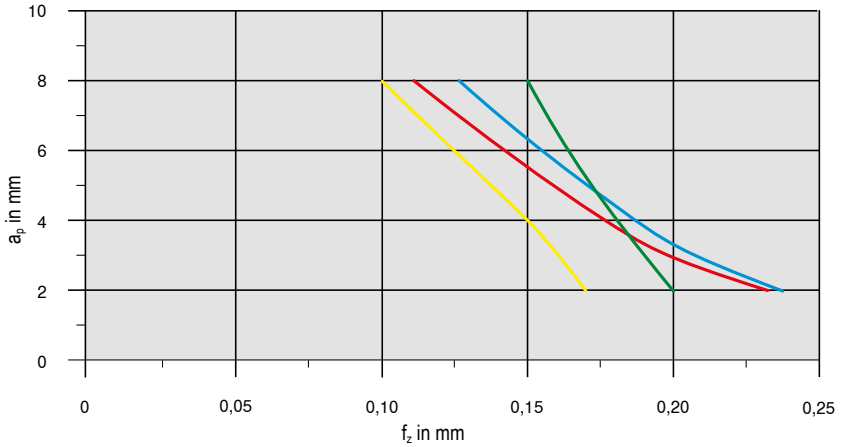
Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**SNHU09T308SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SNHU09T308SR-F50**	**CTPM240**	180	Emulsion
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SNHU09T308SR-R50**	**CTCK215**	250	Dry
Non-ferrous metals	**N.1.2**	AlMgSi1	**SNHU09T308FR-F10**	**CTWN215**	500	Emulsion

MaxiMill 491-12 system

Starting Parameter



SNHU 12



Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**SNHU120408SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SNHU120408SR-F50**	**CTPM240**	180	Emulsion
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

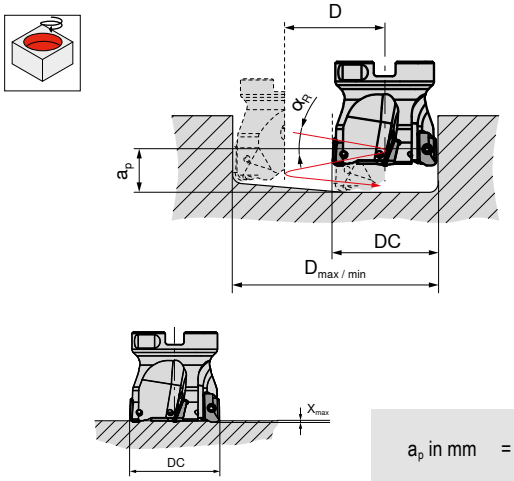
Detailed information on cutting speed for each grade can be found on → page 146–148

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

System MaxiMill 211-07

Machining strategy

Helical plunging

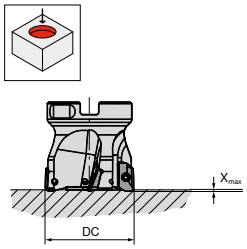


DC mm	D_{max} / RE 0,4 mm	D_{min} mm	$\alpha_{R\,max}$ °
10	19	13	5,5
12	23	17	6,0
16	31	25	3,0
20	39	33	2,0
25	49	43	1,5
32	63	57	1,2
40	79	73	0,8
50	99	93	0,7

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

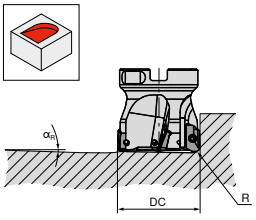
a_p in mm $= D * \pi * \tan \alpha_R$

Axial ramping



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

Angled ramping

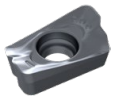


DC mm	α °
10	11,0
12	7,9
16	4,3
20	3,0
25	2,5
32	1,6
40	1,2
50	1,0

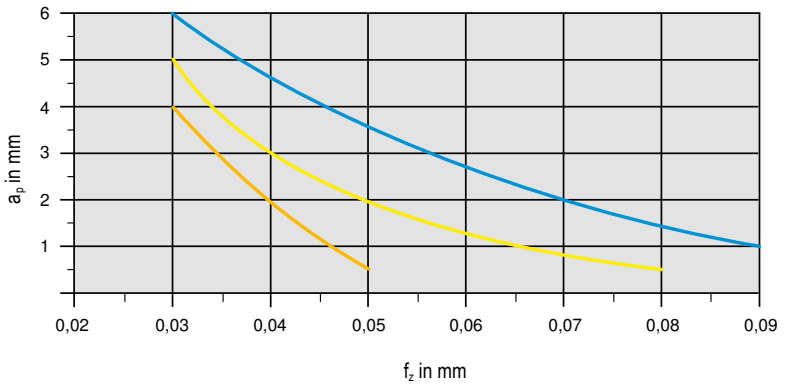
$D_{max.}$ in mm = largest diameter for flat bottom hole
$D_{min.}$ in mm = smallest hole diameter for flat bottom surface

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

Starting Parameter



XDKT 07



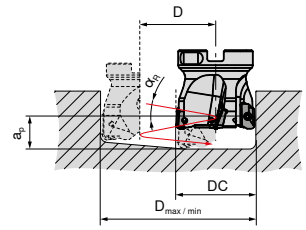
Material			Inserts		v_c in m/min	Cooling
Steel	P.2.2	40CrMnMoS 8-6	XDKT070308SR-M50	CTCP230	200	Dry
Stainless steel	M.1.1	X6CrNiMoTi 1712 2	XDKT070308SR-F50	CTPM240	180	Dry
Heat-resistant	S.2.2	Inconel 718	XDKT070308ER-F50	CTC5240	35	Emulsion

Detailed information on cutting speed for each grade can be found on → page 146–148

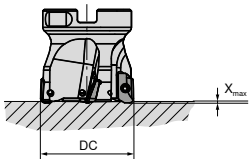
From v_c > 400 m/min, the tool must be balanced!

System MaxiMill 211-11

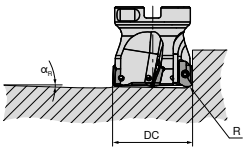
Machining strategy



1 Helical plunging



2 Axial ramping



3 Angled ramping

DC mm	1 Helical plunging RE = 0,8 mm	2 Axial ramping 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 ° $D_{max.}$ 197 mm $D_{min.}$ 193 mm	1,6 mm	1,1 °
125	α_R 0,6 ° $D_{max.}$ 247 mm $D_{min.}$ 243 mm	1,6 mm	0,8 °

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

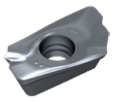
$D_{min.}$ in mm = Smallest diameter for flat bottom surface

a_p in mm = D x π x tan (α_R) = Pitch

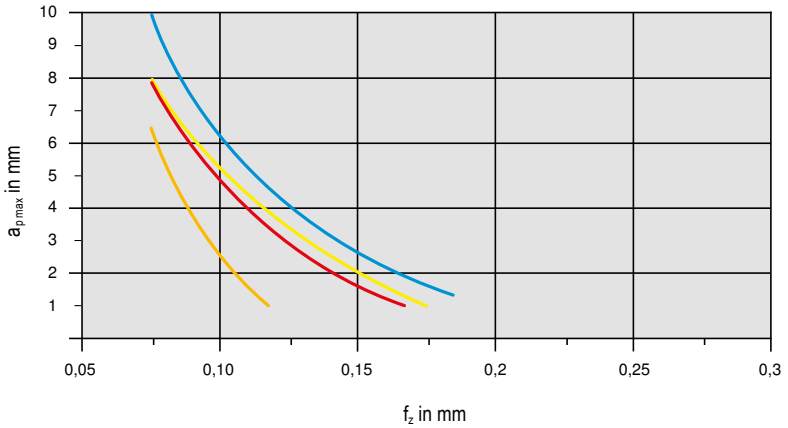
l_s in mm = Overhang length

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		
125	17900	12800	7600		

Starting Parameter



XDKT 11



Material			Inserts		v_c in m/min	Cooling
Steel	P.2.2	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

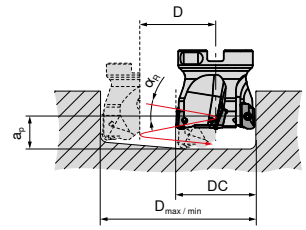
Detailed information on cutting speed for each grade can be found on → page 146–148

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

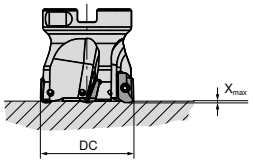
15

System MaxiMill 211-15

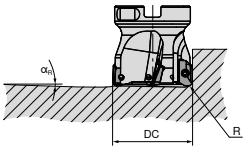
Machining strategy



1 Helical plunging



2 Axial ramping



3 Angled ramping

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

Maximum speed related to projection length n_{max} in min^{-1}			
DC mm	l_a = 2 x Ø mm	l_a = 3 x Ø mm	l_a = 5 x 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		

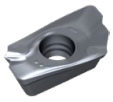
$D_{max.}$ in mm = largest diameter for flat bottom hole

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

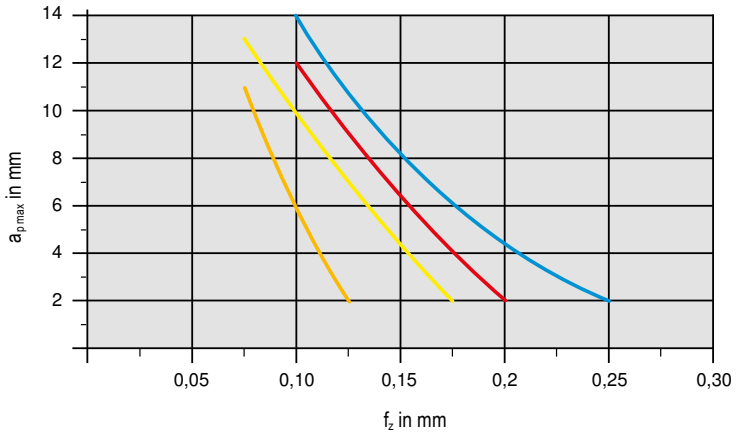
a_p in mm = D x π x tan (α_R) = Pitch

l_a in mm = Overhang length

Starting Parameter



XDKT 15



Material			Inserts		v_c in m/min	Cooling
Steel	P.2.2	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

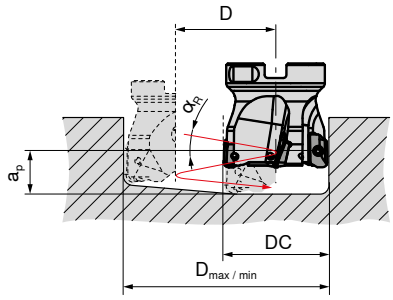
Detailed information on cutting speed for each grade can be found on → page 146–148

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

System MaxiMill 211-20

Machining strategy

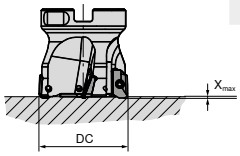
Helical plunging



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

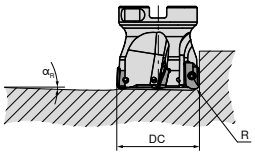
a_p in mm $= D * \pi * \tan \alpha_R$

Axial ramping



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

Angled ramping

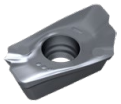


DC mm	α °
63	2,2
80	1,7
100	1,3

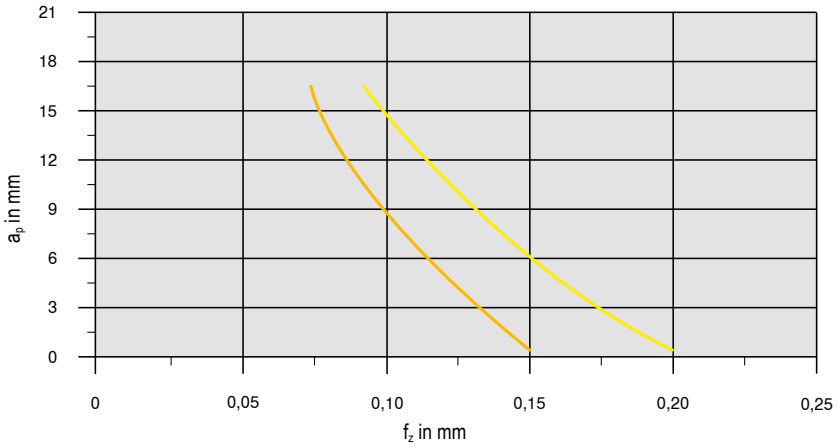
$D = D_{max} - DC / D_{min} - DC$

$D_{max.}$ 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 146–148

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

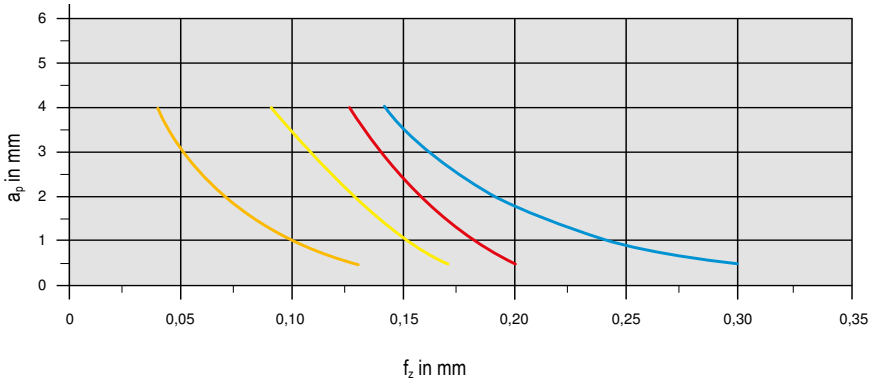
System MaxiMill 490-09

Machining strategy

System MaxiMill 490-09 is not suitable for plunging!

Starting Parameter

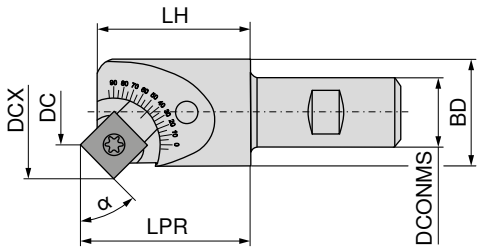
SDNT 09



Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	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 146–148

MaxiMill 490-09 adjustable angle milling cutter – dimensions



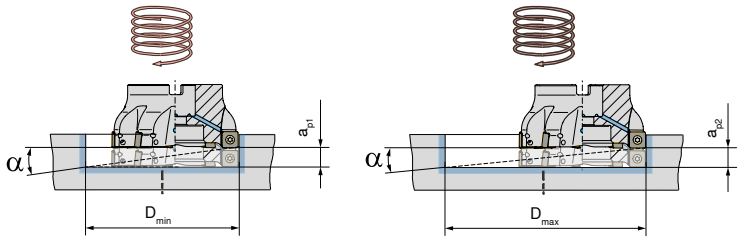
Constant dimensions			Angle-dependent dimensions*			
BD	DCONMS	LH	α	DC*	DCX	LPR*
18,6	16	32	**0°**	**9,35/1,60****	**20,14**	**33,07**
			5°	3,81	20,82	33,40
			10°	4,59	21,44	33,69
			15°	**5,42**	**21,98**	**33,95**
			20°	6,30	22,45	34,17
			25°	7,23	22,85	34,35
			30°	**8,18**	**23,16**	**34,49**
			35°	9,15	23,39	34,58
			40°	10,14	23,53	34,64
			45°	**11,13**	**23,59**	**34,65**
			50°	12,12	23,56	34,61
			55°	13,09	23,44	34,54
			60°	**14,04**	**23,24**	**34,42**
			65°	14,96	22,96	34,26
			70°	15,84	22,60	34,06
			75°	**16,68**	**22,16**	**33,83**
			80°	17,46	21,65	33,56
			85°	18,19	21,07	33,25
			90°	**10,07/1,90****	**20,44**	**32,93**

* Tangential cutting point at deepest engagement point
** Smallest diameter in centre

System MaxiMill 490-12

Machining strategy

Helical plunging (without pilot hole)



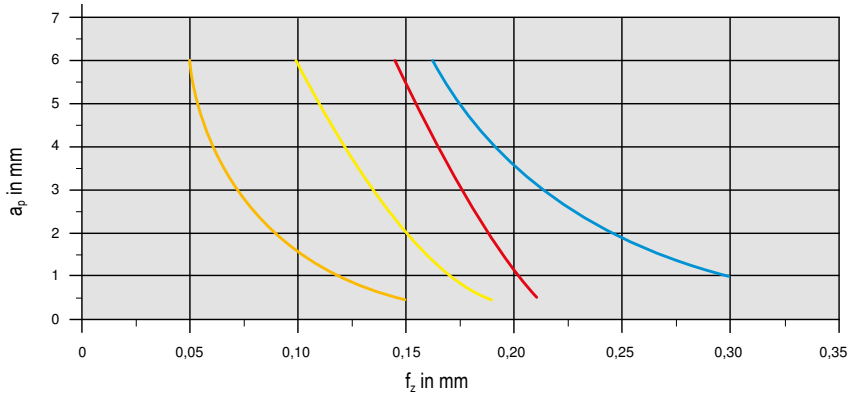
$$B = (D_W - DC) \times \pi \times \tan \alpha$$

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_{min} mm	a_{p1} mm	D_{max} mm	a_{p2} 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

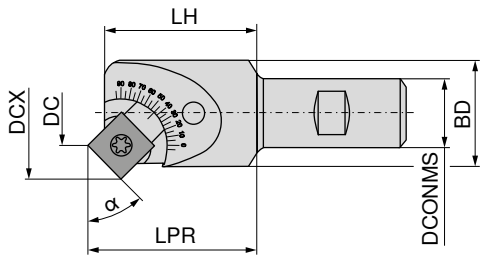
SDMT 12



Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	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 146–148

MaxiMill 490-12 adjustable angle milling cutter – dimensions



Constant dimensions			Angle-dependent dimensions*			
BD	DCONMS	LH	α	DC*	DCX	LPR*
25	20	37	**0°**	**25,07/1,12****	**26,64**	**38,36**
			5°	3,72	27,61	38,79
			10°	4,84	28,48	39,21
			15°	**6,03**	**29,25**	**39,58**
			20°	7,27	29,92	39,90
			25°	8,57	30,48	40,16
			30°	**9,91**	**30,92**	**40,37**
			35°	11,28	31,25	40,51
			40°	12,67	31,45	40,60
			45°	**14,08**	**31,54**	**40,62**
			50°	15,48	31,50	40,58
			55°	16,86	31,34	40,48
			60°	**18,23**	**31,06**	**40,33**
			65°	19,56	30,66	40,11
			70°	20,85	30,15	39,83
			75°	**22,08**	**29,52**	**39,51**
			80°	23,26	28,79	39,12
			85°	24,35	27,95	38,69
			90°	**25,37/1,42****	**26,94**	**38,21**

* Tangential cutting point at deepest engagement point
** Smallest diameter in centre

HSC/HPC machining

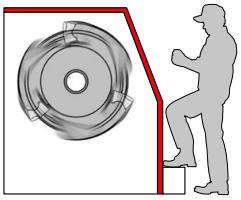
Safety advice

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).

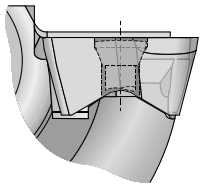


Suitability of the adapters for HSC machining

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).

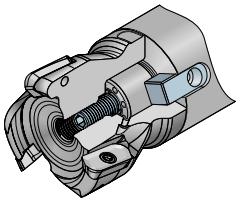
Mounting the indexable insert with centrifugal force protection

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 (CTWN215) v_c in m/min (dry)	H216T (CTWN215) v_c in m/min (lubricated)
N	Aluminum alloys	non hardenable		21	60		660–9840
		hardenable		22	100		660–6560
	Cast aluminum alloy	non hardenable	< 12% Si	23	80		660–6560
		hardenable	< 12% Si	24	90		660–5900
		non hardenable	> 12% Si	25	130		660–3280
	Copper and copper alloys (Bronze, Brass)		Free-cutting steel alloy (1% Pb)	26			660–1970
			brass, red bronze	27	90	820–3280	820–3280
			bronze	28	100		490–1310
			lead-free copper and electrolytic copper	29	100		980–2620
O	Non metal materials		Duroplastics	29		260–3280	260–3280
			Fibre-reinforced plastics	29		230–1640	230–1640
			hard rubber	30		100–260	100–260

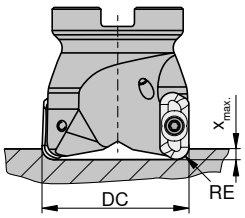
= full lubricant = Minimum quantity lubrication = dry machining

15

System MaxiMill HSC-11

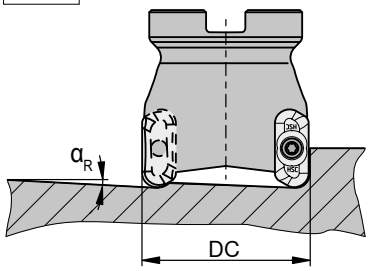
Machining strategy

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

Angled 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

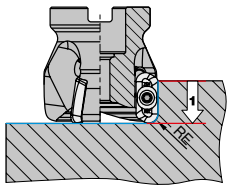
With maximum chip volume

Indexable Insert	RE mm	a_p mm	$a_{p\,max.}$ 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

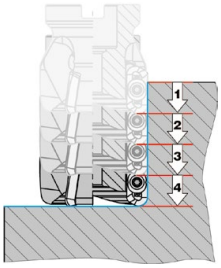
With maximum side wall quality

Indexable Insert	RE mm	$a_{p\,max.}$ 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

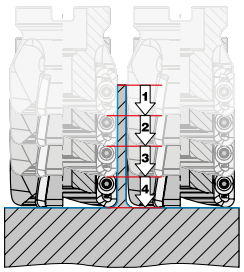
Shoulder milling



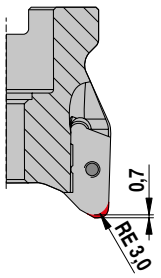
Pocket milling

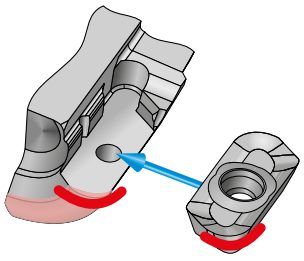


Pocket milling with thin walled components



Modification to front profile



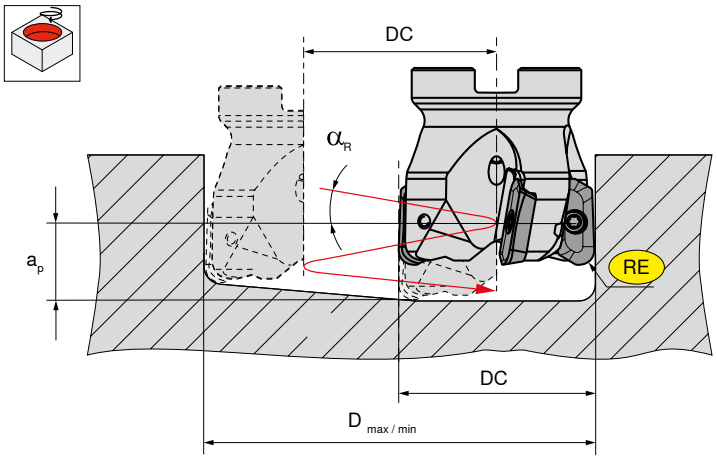


For inserts with a corner radius larger than 3.2 mm the basic body of the tool must be modified according to the drawing above.

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

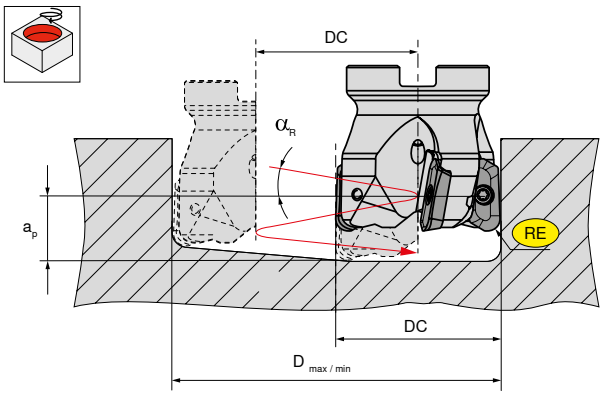
$D_{max.}$ in mm = largest drilling diameter
$D_{min.}$ in mm = smallest drilling diameter
$DN_{max.}$ in mm = Maximum hole diameter for non flat bottom

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

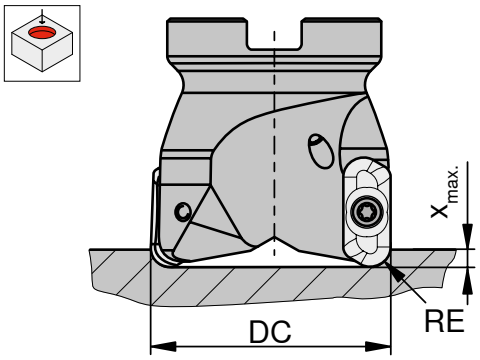
$D_{max.}$ in mm = largest drilling diameter
$D_{min.}$ in mm = smallest drilling diameter
$DN_{max.}$ in mm = Maximum hole diameter for non flat bottom

	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

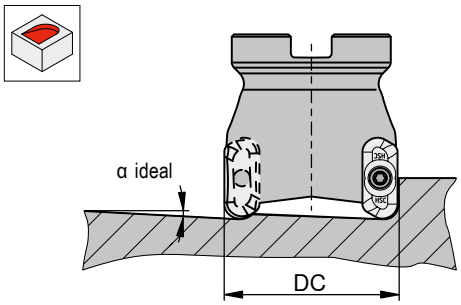
Axial ramping



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

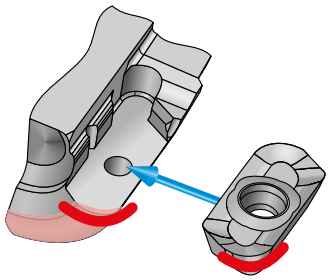
Angled ramping

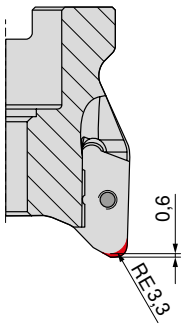


DC mm	α ideal HSC 19	α ideal HPC 19
25	11°	11°
32	7°	7°
40	5°	5°
50	4°	4°
63	3°	3°
80	2°	
100	2°	

Modification to basic body

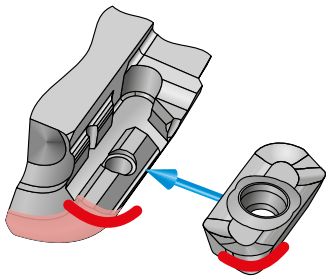
HSC 19





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.

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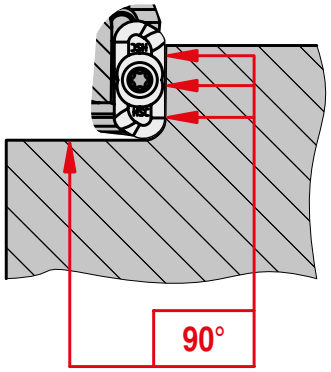
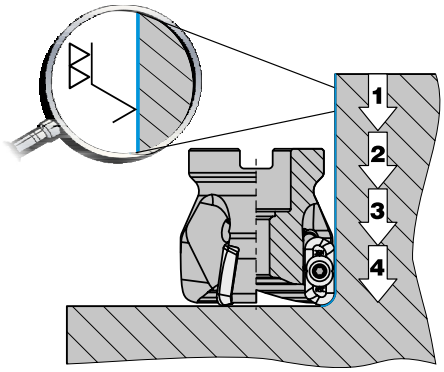
System MaxiMill HSC/HPC-19

Machining strategy

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





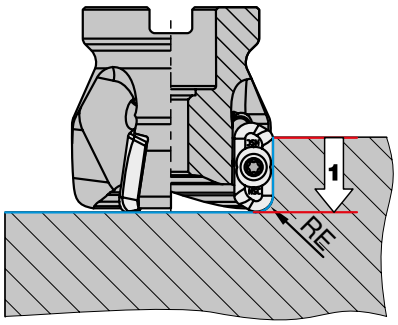
With maximum chip volume

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

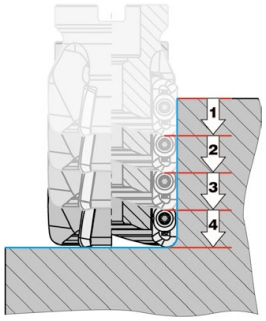
With maximum side wall quality

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

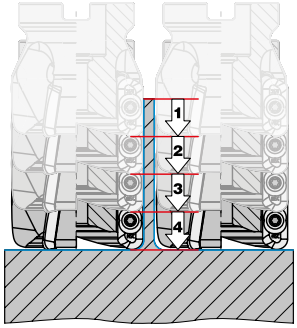
Shoulder milling



Pocket milling



Pocket milling with
thin walled components



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

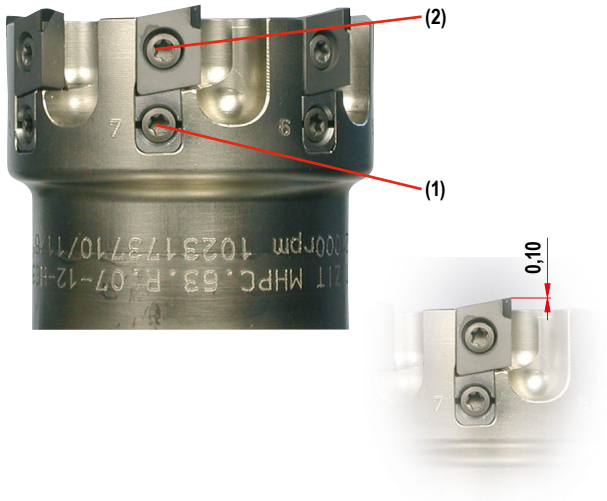
- ▲ for components made of light metals and non-ferrous metals, plastic, fibre composite materials, graphite ...
- ▲ when the simplest setting method saves cost for tool presetting.
- ▲ for high-volume production.
- ▲ for high surface quality of the work pieces.
- ▲ when long tool life is necessary to 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 trailing edge 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 Masterfinish 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.

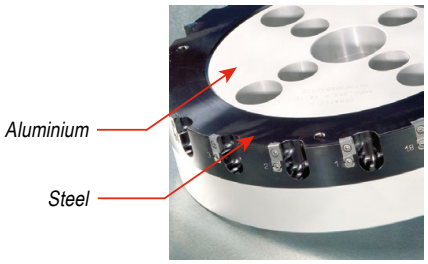
7 Check axial run-out of all inserts: Target = 0.005 mm.

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



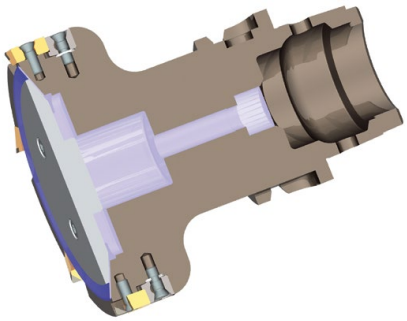
Picture shows bimetallic version

Available as shell milling cutters and monobloc type

- Direct HSK63 connection as monobloc type
- Monobloc tools balanced to G2.5 at n=20,000 min^{-1} (ISO1940)

Particularly for HSC applications with internal coolant supply

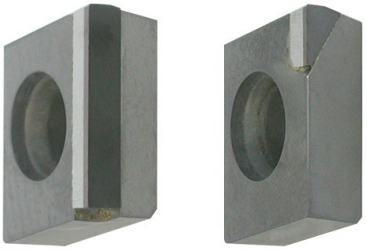
- Improved chip evacuation
- High surface quality
- Optimum application conditions
- Suitability for minimum quantity lubrication



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

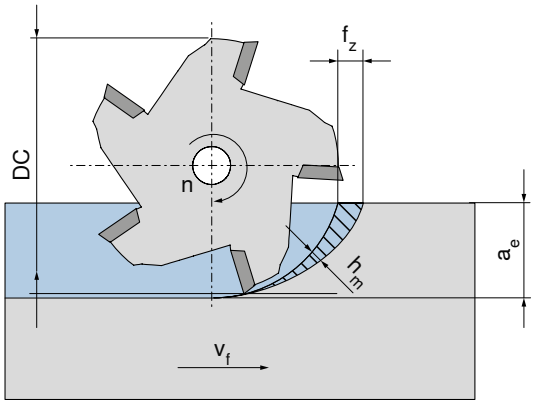
- Standard insert
- Insert with corner radius
- Insert with trailing edge

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 *

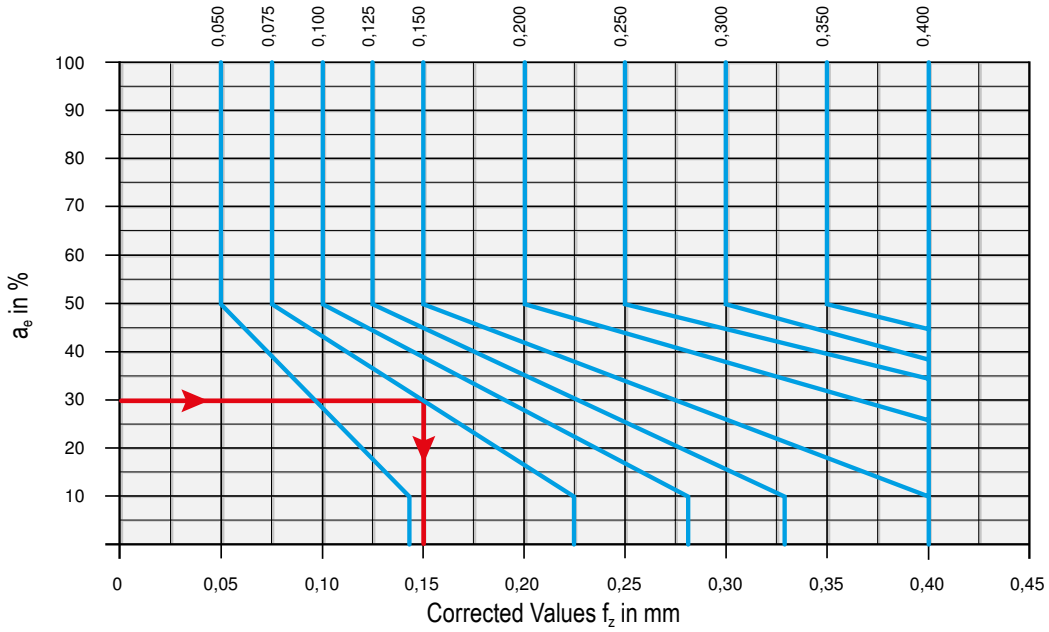


2 Select the corrected feed rate value from the table based on the appropriate chip thickness [h_m] and depth of cut [a_e].

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

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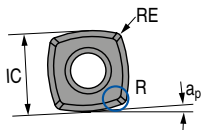
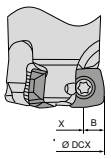
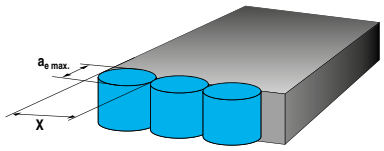
System MaxiMill HFC-06

Machining strategy

Programmed radius R = 1.2 mm



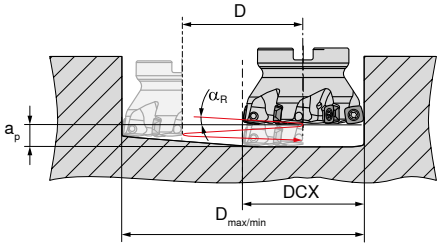




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\ max.}$ in mm	DCX in mm	X in mm	B in mm	$a_{e\ max.}$ in mm	f_z in mm			X
							initial	min.	max.	
6,35	0,5	0,8	16–32	DCX–(2 x B)	4,3	5,3	0,10	0,08	0,15	<0,7 x DCX

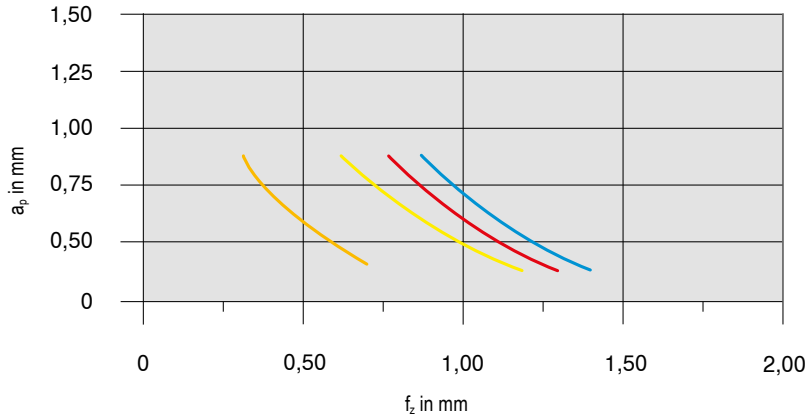
	circular		
	Helical plunging (helical plunging into solid material)		
DCX	$D_{min.}$	$D_{max.}$	$\alpha_{R\ max.}$
mm	mm	mm	°
16	22	31	4,5°
20	30	39	2,3°
25	40	49	1,3°
32	54	63	0,9°
42	74	83	0,6°

	axial	Angled
	Plunging	
DCX	$X_{max.}$	$\alpha_{R\ max.}$
mm	mm	°
16		5,9°
20		3,2°
25	0,5	2°
32		1,3°
42		0,7°



Starting Parameter

XPLX 06



Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	40CrMnMoS 8-6	**XPLX 060305SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XPLX 060305ER-M50**	**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

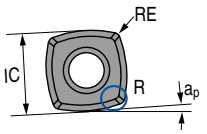
Detailed information on cutting speed for each grade can be found on → page 146–148

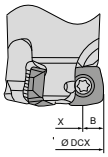
From v_c > 400 m/min, the tool must be balanced!

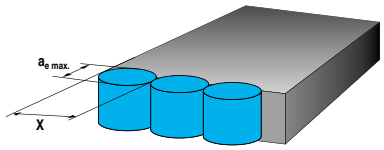
System MaxiMill HFC-09

Machining strategy

Programmed radius R = 2 mm



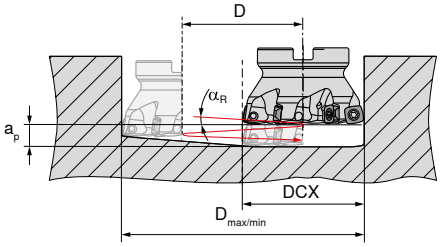




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DCX in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
9	0,8	1	25–66	DCX–(2 x B)	5,9	7,5	0,10	0,08	0,15	<0,7 x DCX

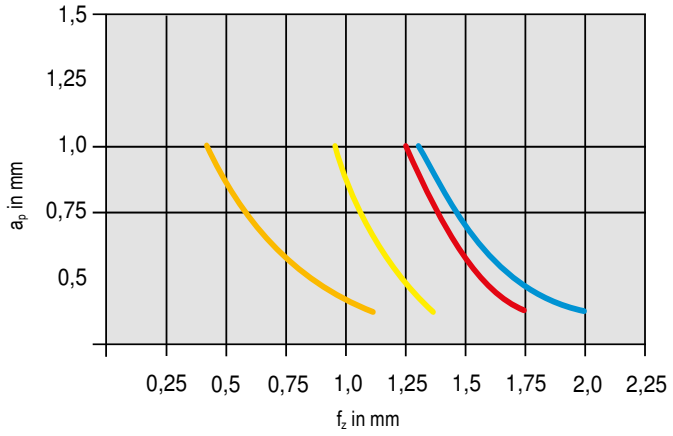
	circular		
	Helical plunging (helical plunging into solid material)		
DCX mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
25	35	48	3,1°
32	49	62	1,7°
35	55	68	1,4°
40	65	78	1,0°
42	69	82	0,9°
50	85	98	0,8°
52	89	102	0,7°
63	111	124	0,7°
66	117	130	0,6°

	axial	Angled
	Plunging	
DCX 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.2.2**	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

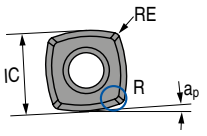
Detailed information on cutting speed for each grade can be found on → page 146–148

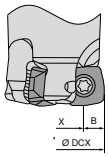
From v_c > 400 m/min, the tool must be balanced!

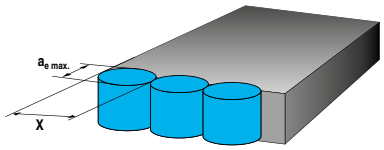
System MaxiMill HFC-12

Machining strategy

Programmed radius R = 3 mm



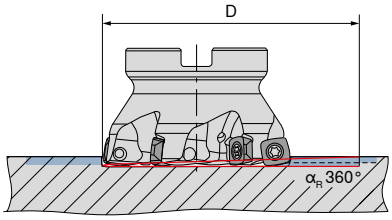




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DCX in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
12	1,0	2	32–100	DCX–(2 x B)	8,3	10	0,15	0,10	0,20	<0,7 x DCX

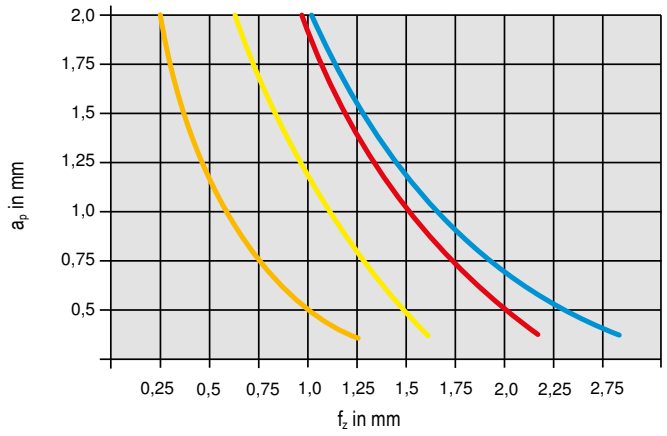
	circular		
	Helical plunging (helical plunging into solid material)		
DCX mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
32	44	62	6,1°
35	50	68	3,7°
40	60	78	2,5°
42	64	82	2,3°
50	80	98	1,3°
52	84	102	1,3°
63	106	124	0,9°
66	112	130	0,9°
80	140	158	1,1°
100	180	198	0,6°

	axial	Angled
	Plunging	
DCX 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.2.2**	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

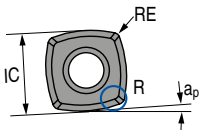
Detailed information on cutting speed for each grade can be found on → page 146–148

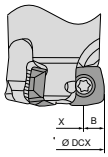
From v_c > 400 m/min, the tool must be balanced!

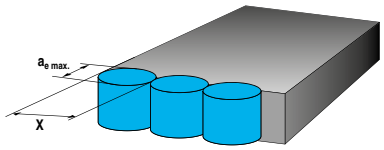
System MaxiMill HFC-19

Machining strategy

Programmed radius R = 5 mm



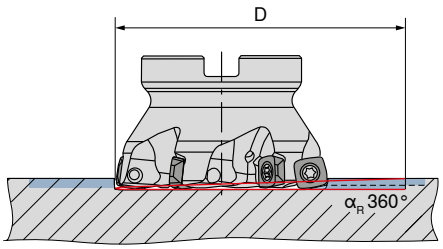




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DCX in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
19,14	1,5	3,3	63–160	DCX–(2 x B)	13,1	12	0,2	0,10	0,25	<0,65 x DCX

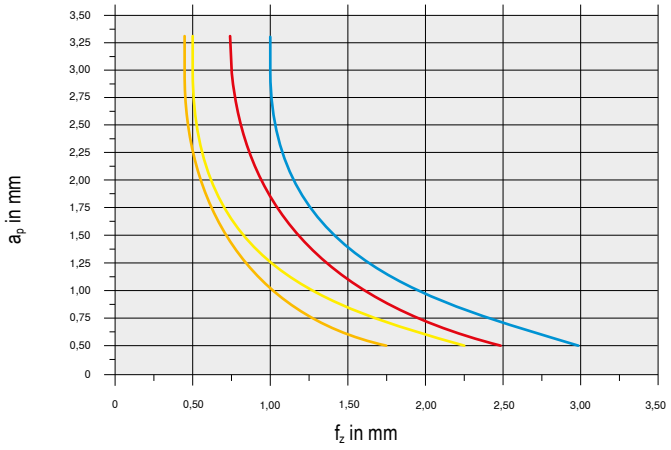
	circular		
	Helical plunging (helical plunging into solid material)		
DCX	$D_{min.}$	$D_{max.}$	$\alpha_{R\,max.}$
mm	mm	mm	°
63	97	123	2,5°
80	131	157	1,4°
100	171	197	1,0°
125	221	247	0,7°
160	291	317	0,5°

	axial	Angled	
		Plunging	
DCX	$X_{max.}$	$\alpha_{R\,max.}$	$a_{p\,max}$
mm	mm	°	mm
63		2,9°	
80		1,8°	
100	1,7	1,3°	3,3
125		1,0°	
160		0,7°	



Starting Parameter

XOLX 19



Material			Inserts		v_c in m/min	Cooling
Steel	**P.2.2**	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 146–148

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

System MaxiMill DHFC

Cutting data standard values

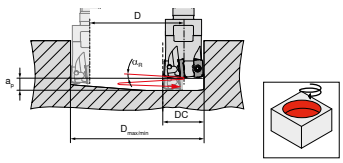
for standard inserts

	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	0,7	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	0,6			
Tempered steel									
Non-metal materials									

Machining strategy

Programmed Radius R = 1,4 mm

Helical plunging



DC mm	D_{min} mm	D_{max} mm	α°
16	23	31	2,5
20	31	39	1,9
25	41	49	1,5
32	55	63	1,2
35	61	69	1,0
42	75	83	0,9

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 146–148

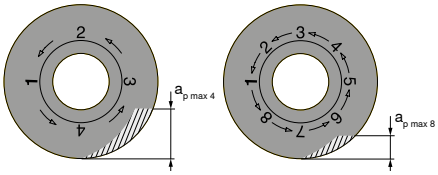
MaxiMill 251/251 RS system

Technical data

Recommended cutting depth

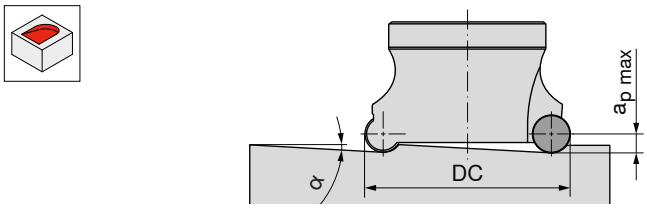
Ø mm	4-position $a_{p\,max.}$ mm	4-position $a_{p\,max}$ theoretical mm	8-face $a_{p\,max.}$ mm
5	1,0	2,0	0,7
8	1,5	3,5	1,1
10	2,5	4,5	1,4
12	3,0	5,5	1,7
16	4,0	7,5	2,3
20	4,0	9,5	2,9

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



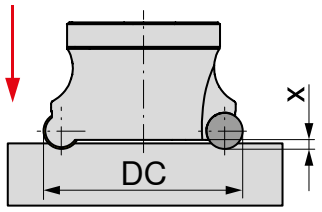
Detailed information on cutting speed for each grade can be found on → page 146–148

Angled ramping



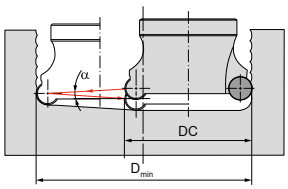
Ø DC mm	05 α °	08 α °	10 α °	12 α °	16 α °	20 α °
10	3,4					
12	16,0					
16	8,0	5,0				
20	5,5	20,0	1,3			
25	4,0	13,0	2,0	6,0		
32	3,0	8,0	3,0	4,0		
40			3,3	2,8		
42			3,1			
50			2,4	2,6	4,0	
52			2,2	2,3		
63				1,9	2,8	
66				1,6		
80				1,3	2,0	3,2
100				1,0	1,5	2,3
125						1,7

Axial ramping

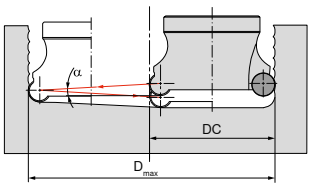


Ø DC mm	05 $X_{max.}$ mm	08 $X_{max.}$ mm	10 $X_{max.}$ mm	12 $X_{max.}$ mm	16 $X_{max.}$ mm	20 $X_{max.}$ mm
10	0,5					
12	1,3					
16	1,3	0,5				
20	1,3	2,7	0,2			
25	1,3	2,7	0,4	1,0		
32	1,3	2,7	0,8	1,1		
40			1,5	1,2		
42			1,5	1,5		
50			1,5	1,5	2,0	
52			1,5	1,5	2,0	
63				1,5	2,0	
66				1,5	2,0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

Helical plunging



$D_{min.}$ = 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
										
	v_c (m/min)									
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							
	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
Stainless steel							
	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
Cast iron							
	**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**		0,2–0,05	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

System R 1000, 1002, 1007

Cutting data standard values

		f_z / a_p mm	WTN1205	WAN2225	WAN1240	WAX1240	WUN4210
Non-ferrous metals							
	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**
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**			
Tempered steel							
	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**				
Non-metal materials							
	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

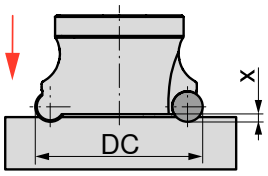
WTN 1205

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

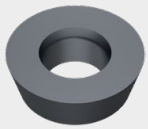
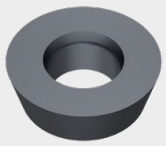
Machining strategy

Axial ramping

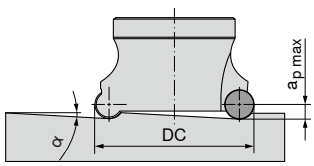


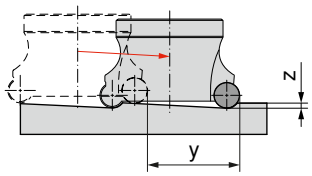
reduce f_z to 30% according to application table

→ v_c Page 182–184

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

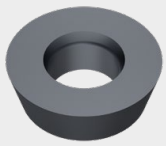
Angled ramping





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

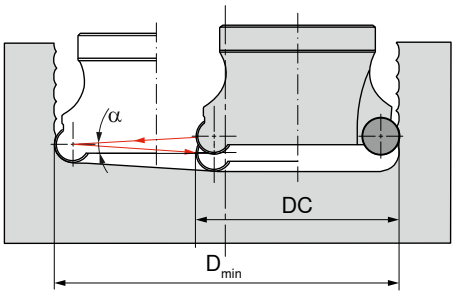
→ v_c Page 182–184

	07 			10 			12 			16 		
Ø DC mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm	α°	y mm	z mm
8												
10												
12												
14												
15	26,5	2	< 1,2									
16	14,0	4	< 1,2									
18	11,3	6	< 1,2									
20	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												
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
80							3,0	58	< 3,0	4,6	50	< 4,0
100										3,3	70	< 4,0
125										2,4	95	< 4,0
160										1,8	130	< 4,0

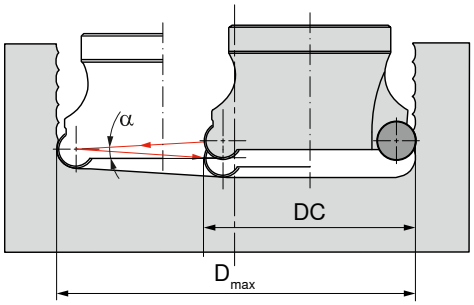
System R 1000, 1002, 1007

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 182–184

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

System MaxiMill 252

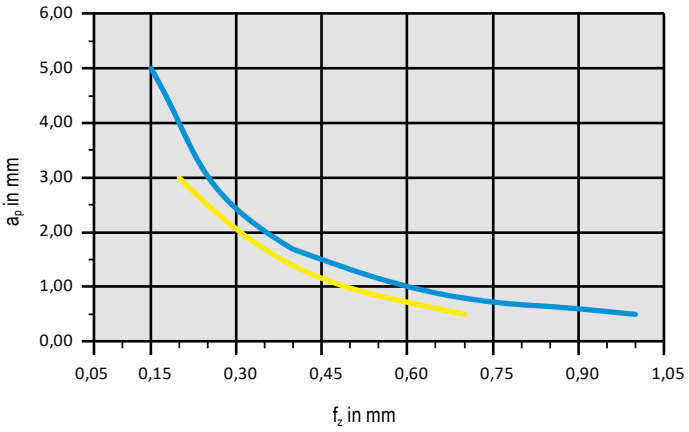
Machining strategy

Recommended cutting depth

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

Starting Parameter

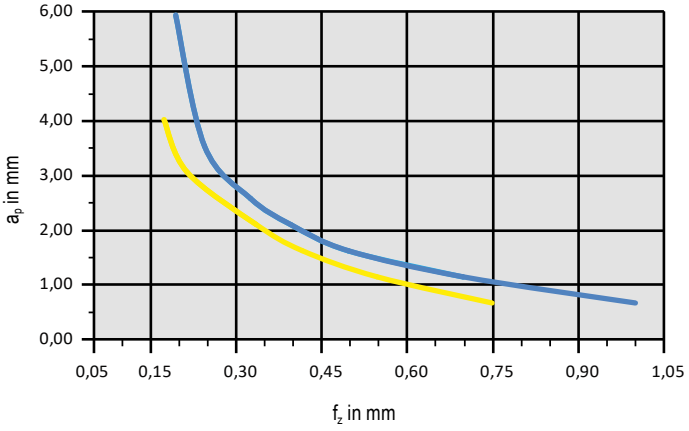
RNHU 10



Material			Inserts		v_c in m/min	Cooling
Steel	P.2.2	40CrMnMoS 8-6	XOLX120410SR-M50	CTPP235	180	Dry
Stainless steel	M.1.1	X6CrNiMoTi 1712 2	XOLX120410ER-M50	CTPM240	180	Dry

Starting Parameter

RNHU 12



Material			Inserts		v_c in m/min	Cooling
Steel	P.2.2	40CrMnMoS 8-6	XOLX120410SR-M50	CTPP235	180	Dry
Stainless steel	M.1.1	X6CrNiMoTi 1712 2	XOLX120410ER-M50	CTPM240	180	Dry

Detailed information on cutting speed for each grade can be found on → page 146–148

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

Cutting data standard values for copy milling cutter K200.

Index	CTPK226		CTPP211		CTPK231		CTCN211		CTPP216		● 1st choice ○ suitable		
	R	F	R	F	R	F	R	F	R	F	Emulsion	Compressed air	MMS
	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.

Index	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
	f_z (mm/tooth)								
P.1.1	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○	●	●
P.1.2	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○	●	●
P.1.3	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○		●
P.1.4	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.1.5	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.2.1	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○	●	●
P.2.2	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○	●	●
P.2.3	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.2.4	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○		●
P.3.1	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○		●
P.3.2	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○	●	●
P.3.3	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,6**	**0,8–1,25**	○	●	●
P.4.1	0,08–0,4	**0,25–0,5**	**0,08–0,3**	**0,2–0,8**	**0,3–0,8**	**1,2–1,5**	○		●
P.4.2	0,08–0,4	**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								●	

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 standard values for MaxiMill Slot-SX saws

Index	CTCP335	CTP1340	H216T
	v_c in m/min.		
P.1.1	**240**	**190**	
P.1.2	**210**	**160**	
P.1.3	**180**	**140**	
P.1.4	**160**	**130**	
P.1.5	**140**	**120**	
P.2.1	**220**	**170**	
P.2.2	**160**	**130**	
P.2.3	**140**	**120**	
P.2.4	**100**	**80**	
P.3.1	**130**	**120**	
P.3.2	**110**	**100**	
P.3.3	**90**	**80**	
P.4.1	**140**	**120**	
P.4.2	**120**	**110**	
M.1.1	110	**130**	
M.2.1	100	**120**	
M.3.1	80	**100**	
K.1.1	**300**	200	140
K.1.2	**240**	180	115
K.2.1	**200**	120	150
K.2.2	**160**	100	110
K.3.1	**190**	120	170
K.3.2	**160**	100	140
N.1.1		300	**500**
N.1.2		200	**330**
N.2.1		250	**370**
N.2.2		220	**330**
N.2.3		200	**280**
N.3.1		300	**350**
N.3.2		300	**350**
N.3.3		200	**320**
N.4.1		200	**320**
S.1.1		**70**	
S.1.2		**60**	
S.2.1		**35**	
S.2.2		**25**	
S.2.3		**30**	
S.3.1		**60**	
S.3.2		**50**	
S.3.3		**40**	
H.1.1			
H.1.2			
H.1.3			
H.1.4			
H.2.1			
H.3.1			
O.1.1			160
O.1.2			
O.2.1			240
O.2.2			
O.3.1			

average chip thickness

h_m in mm

$$h_m = f_z \sqrt{\frac{a_e}{DC}}$$

Feed per tooth

f_z in mm

$$f_z = h_m \sqrt{\frac{DC}{a_e}}$$

Feed rate

v_f in mm/min

$$v_f = f_z \times ZNF \times n$$

DC = Ø of the disc cutters

ZNF = Number of teeth of the cutter

	Reference tool 50 386 12504 – ASLOT.125.R.8.32.DC-SX4											
	SX4 -F2				SX4 -M1				SX4 -M7			
	a_e	10	20	30	a_e	10	20	30	a_e	10	20	30
	hm	f_z in mm			**hm**	f_z in mm			**hm**	f_z in mm		
P	**0,08**	0,28	0,20	0,16	**0,1**	0,30	0,25	0,20	**0,09**	0,30	0,23	0,18
M	**0,05**	0,18	0,13	0,10					**0,06**	0,21	0,15	0,12
K					**0,12**	0,30	0,30	0,24	**0,09**	0,30	0,23	0,18
N	**0,08**	0,28	0,20	0,16								
S	**0,04**	0,14	0,10	0,08								
H												
O												

	Reference tool 50 386 12504 – ASLOT.125.R.8.32.DC-SX4							
	SX4 -M8				SX4 -27P			
	a_e	10	20	30	a_e	10	20	30
	hm	f_z in mm			**hm**	f_z in mm		
P	**0,08**	0,28	0,20	0,16				
M	**0,05**	0,18	0,13	0,10				
K					**0,06**	0,21	0,15	0,12
N	**0,08**	0,28	0,20	0,16	**0,09**	0,30	0,23	0,18
S	**0,04**	0,14	0,10	0,08				
H								
O					**0,05**	0,18	0,13	0,10

Caution: For narrower and wider indexable inserts, reduce or increase the feed per tooth accordingly!

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 for side and face milling cutters TX

Index	CWX500		CWK10
	v_c (m/min)	hm (mm)	v_c (m/min)
P.1.1	160	0,10	
P.1.2	140	0,10	
P.1.3	110	0,08	
P.1.4	110	0,10	
P.1.5	90	0,08	
P.2.1	110	0,10	
P.2.2	90	0,08	
P.2.3	90	0,10	
P.2.4	80	0,08	
P.3.1	80	0,05	
P.3.2	60	0,10	
P.3.3	50	0,08	
P.4.1	100	0,05	
P.4.2	90	0,08	
M.1.1	110	0,08	
M.2.1	90	0,08	
M.3.1	70	0,08	
K.1.1	140	0,10	
K.1.2	100	0,10	
K.2.1	90	0,08	
K.2.2	80	0,05	
K.3.1	140	0,10	
K.3.2	120	0,10	
N.1.1	600	0,12	250
N.1.2	400	0,12	230
N.2.1	220	0,10	210
N.2.2	180	0,10	190
N.2.3	140	0,10	120
N.3.1	240	0,12	200
N.3.2	200	0,12	180
N.3.3	180	0,12	160
N.4.1	180	0,12	160
S.1.1	60	0,05	
S.1.2	50	0,05	
S.2.1	60	0,05	
S.2.2	50	0,05	
S.2.3	40	0,05	
S.3.1	60	0,06	
S.3.2	40	0,06	
S.3.3	30	0,06	
H.1.1			
H.1.2			
H.1.3			
H.1.4			
H.2.1			
H.3.1			
O.1.1	180	0,10	160
O.1.2	180	0,10	160
O.2.1	150	0,10	120
O.2.2	110	0,10	100
O.3.1	170	0,10	160

average chip thickness

h_m in mm

$$h_m = f_z \sqrt{\frac{a_e}{DC}}$$

Feed per tooth

f_z in mm

$$f_z = h_m \sqrt{\frac{DC}{a_e}}$$

Feed rate

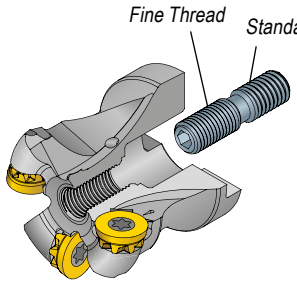
v_f in mm/min

$$v_f = f_z \times ZNF \times n$$

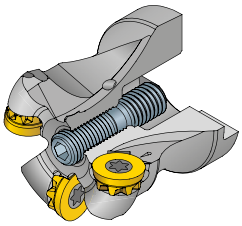
DC = Ø of the disc cutters

ZNF = Number of teeth of the cutter

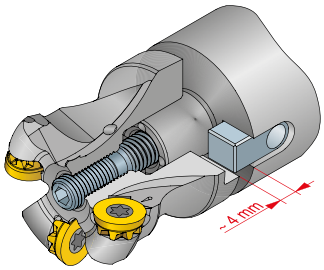
Easy and safe clamping – with the CERATIZIT power screw



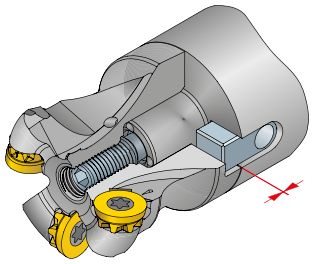
The fine-pitch part of the power screw is threaded into the milling cutter.



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

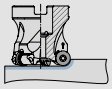


In order to guarantee an optimum connection of tool and shank, a gap of 4 mm is required between cutter body and adapter prior to final clamping. Using standardised adpaters this is automatically guaranteed. If necessary, you can read just by means of the power screw with 0.5 mm/rev.

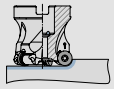


Turn clamping screw to tighten

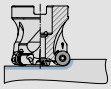
Torque moments for clamping screws for mounting the milling cutter to the shell mill adapter




10

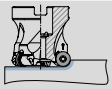



12

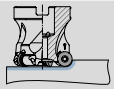



16

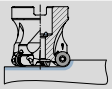
Cutter Ø mm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm
40			70 950 151	15			70 950 151	15				
42			70 950 151	15			70 950 151	15				
50	M10x25	80			M10x25	80					70 950 154	20
52					M10x25	80					70 950 154	20
63					M10x25	80			M10x25	80		
66					M10x25	80			M10x25	80		




12




16



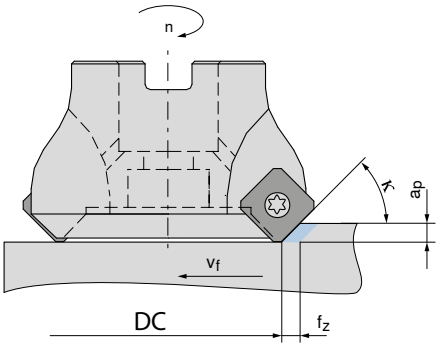

20

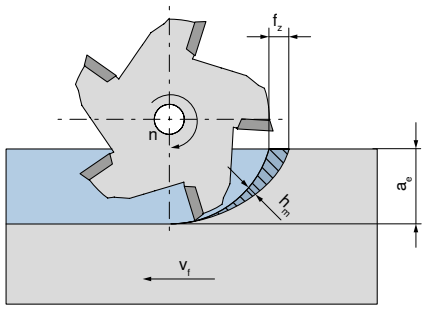
Cutter Ø mm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm
80	M12x30	140			M12x30	140			M12x30	140		
100	M16x35	180			M16x35	180			M16x35	180		
125					M16x35	180			M16x35	180		

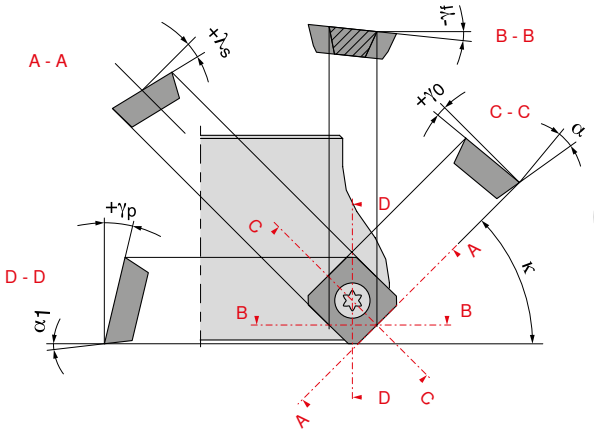
Abbreviations & dimensions

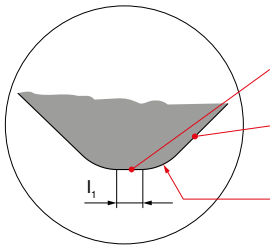
a_e	cutting width	mm
a_p	Cutting depth	mm
DC	Tool diameter	mm
D_w	Workpiece diameter	mm
f_z	Feed per tooth	mm
h_m	Average Chip Thickness	mm
k	Number of teeth	
k_c	Specific cutting force	N/mm²
$k_{c1.1}$	Specific cutting force for 1 mm ² chip area	N/mm²
BS	Length of trailing edge land	mm
m_c	Increase 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









Trailing edge land

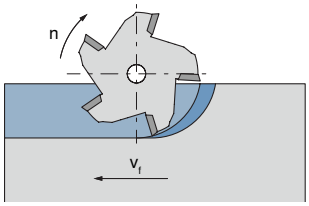
Main cutting edge

Corner radius

Engagement conditions

Recommended

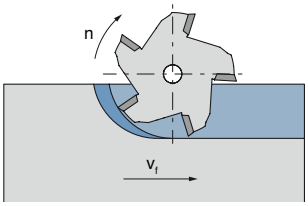
Climb milling



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.

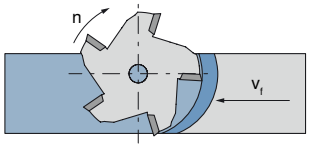
Unsuitable

Conventional milling

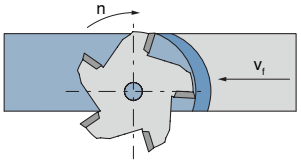


The feed direction of the workpiece is opposite to the direction of rotation of the milling cutter in the cutting zone. Chip thickness is zero at the beginning and increases until it reaches its maximum at the end of the cut.

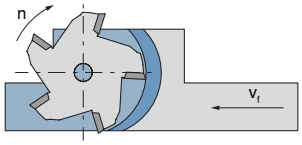
Cutter positioning



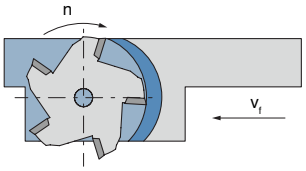
If possible the cutter should exit tangentially of the workpiece.



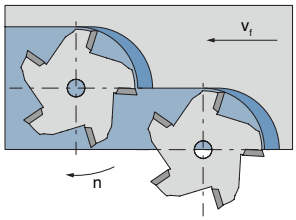
Workpiece situation



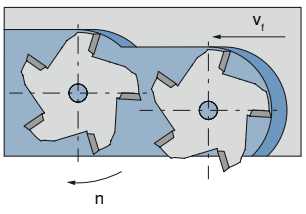
The workpiece should be clamped in such a way as to allow the cutter to emerge tangentially of the workpiece along the whole machining length.



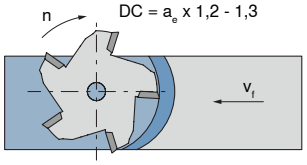
Overlapping



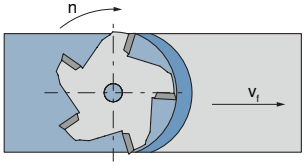
Either employ climb milling or ensure that the cutter comes out of the workpiece tangentially, as in the illustration on the left.



Cutter size



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



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ISO designation indexable milling inserts

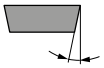
X	D	K	T	11	T3	08	S	R	-	F50
1	2	3	4	5	6	7	8	9		10

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

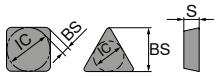
A	85°	
B	82°	
K	55°	
H	120°	
L	90°	
O	135°	
P	108°	
C	80°	
D	55°	
E	75°	
M	86°	
V	35°	
R		
S	90°	
T	60°	
W	80°	
X Z	Special version	

2 Clearance angle

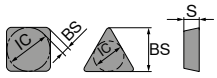


	α
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special version

3 Tolerances

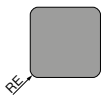


	IC ±mm	BS ±mm	S ±mm	IC = 6,35 / 9,52	IC = 12,7	IC = 15,8 / 19,05
A	0,025	0,005	0,025	●	●	●
C	0,025	0,013	0,025	●	●	●
E	0,025	0,025	0,025	●	●	●
F	0,013	0,005	0,025	●	●	●
G	0,025	0,025	0,13	●	●	●
H	0,013	0,013	0,025	●	●	●
J	0,05	0,005	0,025	●		
	0,08	0,005	0,025		●	
	0,10	0,005	0,025			●
K	0,05	0,013	0,025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

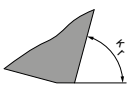
7 Trailing edge land / corner radius



Radius

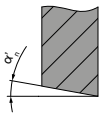
	RE in mm
M0*	
02	0,2
04	0,4
08	0,8
12	1,2

* Only with insert type "R"



1. Designation

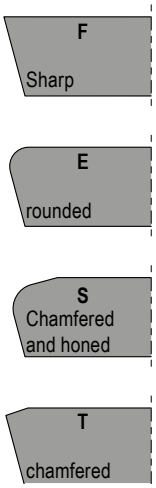
	K_r
A	45°
D	60°
E	75°
F	85°
P	90°
Z	Alternative



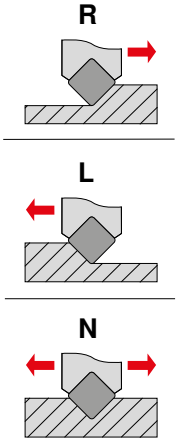
2. Designation

	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

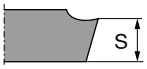
5

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

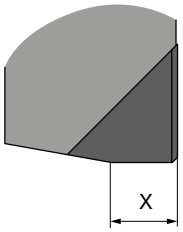
Chip breaker designation
F.. = fine
M.. = medium
R.. = roughing

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

11

Manufacturer specification

Length of the finishing cutting edge

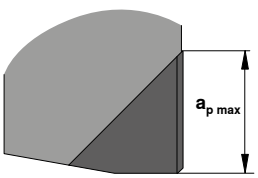


00 = 0,0 mm
10 = 1,0 mm
12 = 1,2 mm
15 = 1,5 mm
30 = 3,0 mm
50 = 5,0 mm

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

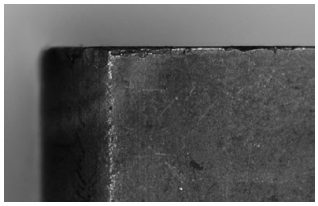
13

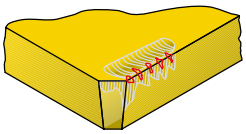
Manufacturer specification

F = Fine
M = Medium
R = Rough

15

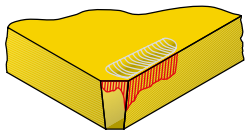
Cutting demands when milling





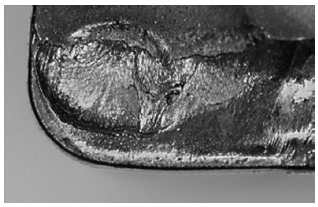
Edge chipping

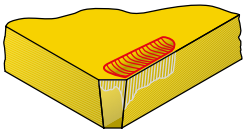
Cutting speed ↑
Feed per tooth ↓
Toughness of grade ↑
Cutting edge chamfer ↑



Wear on clearance face

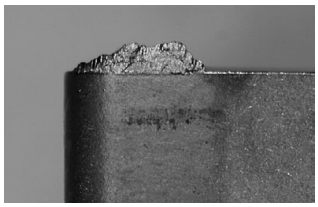
Cutting speed ↓
Feed per tooth ↑
Abrasion resistant grade ↑

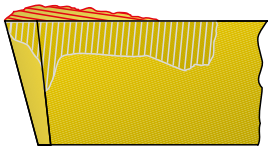




Cratering

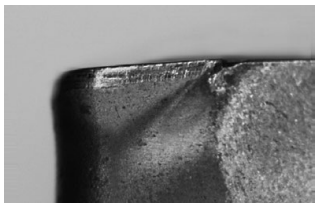
Cutting speed ↓
Feed per tooth ↓
Abrasion resistant grade ↑

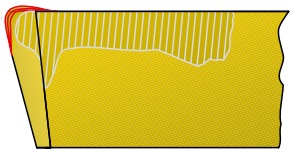




Built-up edge

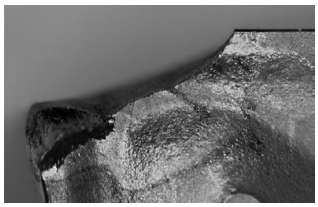
Cutting speed ↑
Feed per tooth ↑
Wear resistance ↑

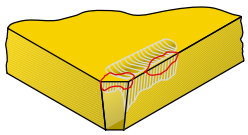




Cutting-edge deformation

Cutting speed ↓
Feed per tooth ↓
Abrasion resistant grade ↑

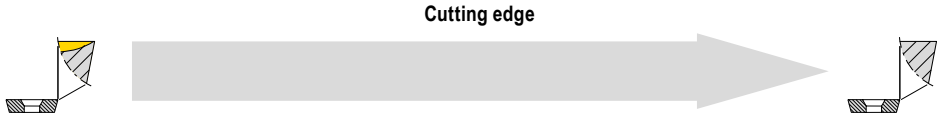




Cutting Edge Breakage

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

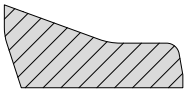
			Cutting edge		
			Sharp	medium	stable
			10–20	30–40	50–60
Application type	light	F	●	● ●	● ● ●
	universal	M	●	● ●	● ● ●
	difficult	R	●	● ●	● ● ●

Example: Chip breaker -M50

Chip breaker description

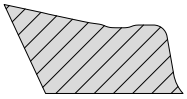
-27P

- Highly positive geometry
- Ground, sharp cutting edge
- Low adhesion
- Recommendation for non-ferrous metals



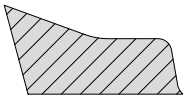
-F10

- Highly positive geometry
- Ground, sharp cutting edge
- Low adhesion
- Recommendation for non-ferrous metals



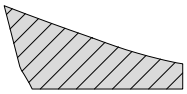
-27

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



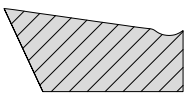
-F20

- Highly positive geometry
- Lightly rounded cutting edge
- Recommendation for non-ferrous metals



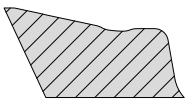
-F40

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



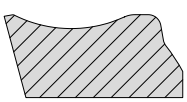
-F50

- Streamlined geometry with protective chamfer
- Rounded cutting edge
- Light rough machining
- For unstable clamping situations
- Recommendation for stainless steel materials



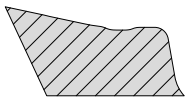
-33P

- 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



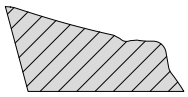
-M30

- Positive geometry
- Rounded cutting edge
- Medium rough machining
- For unstable clamping situations
- Recommendation for martensitic stainless steels (blade machining only with MaxiMill 251)



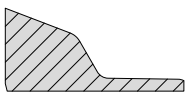
-M31

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



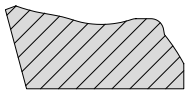
-M32

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



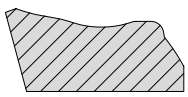
-M50

- Universal geometry with protective chamfer
- Rounded cutting edge
- Light to medium rough machining
- Recommendation for general steel materials



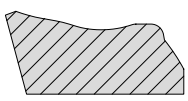
-31

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



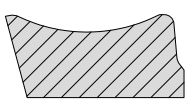
-29

- 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



-33

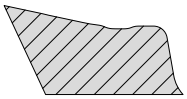
- Positive geometry with small neutral protective chamfer
- Rounded cutting edge
- Low cutting force and good stability
- For unstable clamping situations
- Light rough machining
- First choice for stainless steels



Chip breaker description

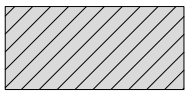
-29R

- 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



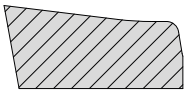
-ER

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



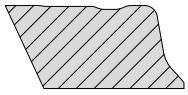
-R30

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



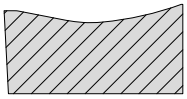
-EN

- 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 non-ferrous metals



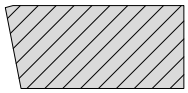
-R50

- Rugged geometry with protective chamfer
- Rounded cutting edge
- Rough machining
- Interrupted cuts
- Recommendation for cast iron materials



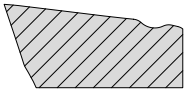
-SN

- 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



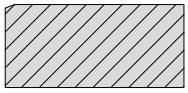
-R60

- Rugged geometry with protective chamfer
- Rounded cutting edge
- Rough machining
- For stable clamping situations
- Recommendation for high-strength steel materials



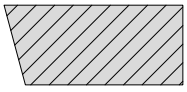
-SR

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



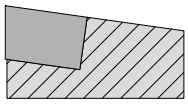
-FN

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



-FR

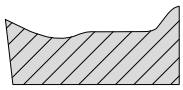
- Neutral Geometry
- Slightly rounded and stable cutting edge
- Associated with Ceramic and CBN cutting materials.
- For stable machining situations
- First choice for machining cast irons



Chip breaker description for MaxiMill Slot-SX

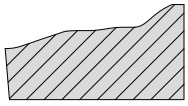
-27P

- Positive geometry
- Ground, sharp cutting edge
- Polished chip breaker
- Low cutting forces
- Fine to medium machining
- First choice for non-ferrous metals



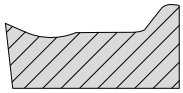
-M8

- Extremely positive geometry
- Ground cutting edge
- Low cutting forces
- Fine to medium machining
- First choice for difficult-to-machine and stainless materials
- Alternatively, can also be used for non-ferrous metals



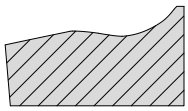
-F2

- Positive geometry
- Ground cutting edge
- Low cutting forces
- Fine to medium machining
- For stainless and steel materials



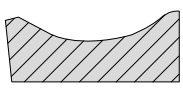
-M7

- Positive geometry
- Medium machining
- Universal application



-M1

- Stable cutting edge
- Medium to rough machining
- Best suited to steel materials



Grades Overview

Grade designation	Standard designation	ISO application range 01 10 20 30 40 50 / 05 15 25 35 45	Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O
CTEP210	HE-P10 HE-K05		●		●				
TCM10	HT-P15 HT-K10		●		○				
WTN1205	HC-P10 HC-M15 HC-K05 HC-H10		●	○	●			●	
CTPP211	HC-P10 HC-M15 HC-K10 HC-N10 HC-S15 HC-H10 HC-O10		●	○	○	○	○	○	○
CTPP216	HC-P10 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	Tempered steel H	Non-metal materials O
CTPM241	HC-P40	01 05 10 15 20 25 30 35 40 45 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-O05								
CTPX715	HC-P15		○	○	●	●	○		○
	HC-M15								
	HC-K15								
	HC-N15								
	HC-S20								
	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								

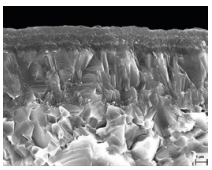
● **Main Application**
○ Extended application

wear-resistant v_c+ ⟷ v_c− tough

15

Grade description

CTEP210



P10 | **K05**

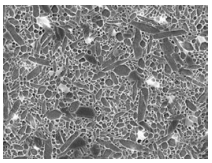
Specification:
Composition: Cermet Co/Ni 12.2%; mixed carbide 71.4%; others; WC balance | Fine grain size | Hardness: HV_{30} 1620 |
Layer system: CVD TiCN-Al_3O_3
Application:
Coated Cermet grade with reserves of toughness for finish machining at high cutting speeds

TCM10

P15 | K10

Specification:
Composition: Co/Ni 12.2%; WC 15; TaNbC10.0%; TiCn balance | Hardness: HV_{30} 1620 | Layer system: uncoated
Application:
Uncoated Cermet grade for the finishing of hardened steel

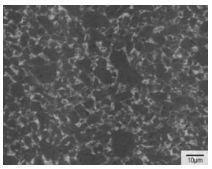
CTN3105



CN-K05

Specification:
Composition: ß – Si_3N_4 | Fine grain size | Hardness: HV_{30} 1620 | Layer system: uncoated
Application:
Universal silicon nitride for the machining of cast iron materials

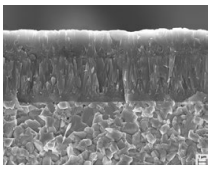
CTL3215



BC-K10 | BC-H10

Specification:
Composition: Cubic boron nitride (CBN) | 85 vol. + metallic binder phase | Cutting system: PVD
Application:
Coated cubic boron nitride with very good cutting toughness and good wear resistance for the machining of cast iron materials

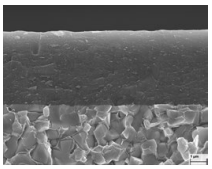
CTCP220



HC-P20 | **HC-K20**

Specification:
Composition: Co 8.0%; mixed carbide 2.0%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1500 |
Layer system: CVD TiCN-Al_3O_2
Application:
Dry machining, high cutting speed + more wear resistant grades to CTCP230
Material example:
Low material strength up to approx. 250 HB / 840 N/mm²

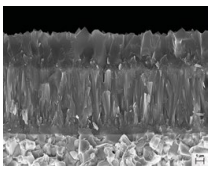
CTPP225



HC-P25 | **HC-K25**

Specification:
Composition: Co 8.0%; mixed carbide 2.0%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1500 | Layer system: PVD TiAlTaN
Application:
Dry or wet machining, face milling of steel materials, higher cutting speeds + more wear resistant grades to CTPP235
Material example:
Medium material strength up to approx. 300 HB / 1000 N/mm²

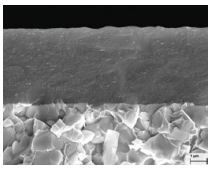
CTCP230



HC-P30 | HC-M25 | **HC-K25**

Specification:
Composition: Co 10.5%; mixed carbide 2.0%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1400 |
Layer system: CVD TiCN-Al_2O_3
Application:
Dry machining, universal grade for higher cutting speeds

CTPP235

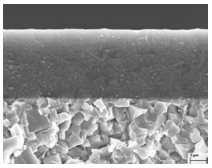


HC-P35 | HC-M30

Specification:
Composition: Co 10.5%; mixed carbide 2.0%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1400 | Layer system: PVD TiAlTaN
Application:
Wet machining, universal grade for medium cutting speeds

Grade description

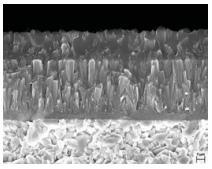
CTPM225



HC-P25 | **HC-M25**

Specification:
Composition: Co 9.0%; mixed carbide 0.75%; WC balance | Fine grain size 0.7-1µm | Hardness: HV_{30} 1590 | Layer system: PVD TiAlTaN
Application:
Dry or wet machining at medium cutting speeds
Material example:
Austenitic stainless steels

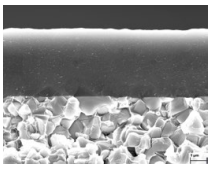
CTCM235



HC-P40 | **HC-M35**

Specification:
Composition: Co 12.5%; mixed carbide 2.0%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1380 | Layer system: CVD TiCN-Al_2O_3
Application:
Dry machining for medium cutting speeds
Material example:
Martensitic stainless steels

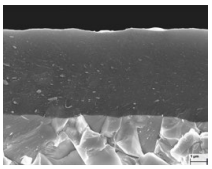
CTPM240



HC-P40 | **HC-M40**

Specification:
Composition: Co 12.0%; mixed carbide 2.0%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1380 | Layer system: PVD TiAlTaN
Application:
Wet machining, universal grade for higher cutting speeds
Material example:
Austenitic stainless steels

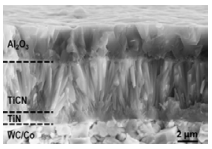
CTPM245



HC-P45 | **HC-M45**

Specification:
Composition: Co 10.0%; others 1.5%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1330 | Layer system: PVD TiAlTaN
Application:
Dry or wet machining
Material example:
High-alloy martensitic and austenitic stainless steel

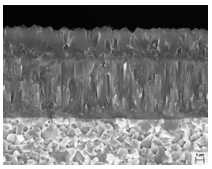
CTCM245



HC-P45 | **HC-M50** | HC-S35

Specification:
Composition: Co 10.0%; others 1.5%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1330 | Layer system: CVD TiCN-Al_2O_3
Application:
Dry machining
Material example:
High-alloy martensitic and austenitic stainless steel

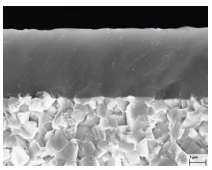
CTCK215



HC-K15

Specification:
Composition: Co 6.0%; mixed carbide 2.0%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1630 | Layer system: CVD TiCN-Al_2O_3
Application:
Special grade for the dry machining of cast iron materials at high cutting speeds
Material example:
Cast iron materials such as GG25 and GGG40

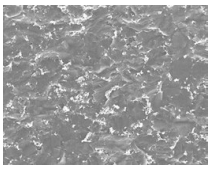
CTPK220



HC-K20

Specification:
Composition: Co 6.0%; mixed carbide 2.0%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1630 | Layer system: PVD TiAlTaN
Application:
Special grade for the wet machining of cast iron materials in demanding application ranges
Material example:
High-strength cast iron materials such as GGG50 and GGG70

CTD4205

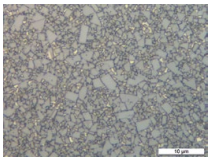


DP-N05

Specification:
Composition: Polycrystalline diamond (PKD) | grain size 2-5µm | Layer system: uncoated
Application:
For the machining of aluminium and non-ferrous metals
Material example:
Non-ferrous metals such as AlMgSi1

Grade description

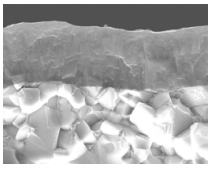
CTWN215 (H216T)



K15 | **N15** | O15

Specification:
Composition: Co 6.0%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1650 | Layer system: uncoated
Application:
Uncoated carbide for the machining of aluminium and non-ferrous metals
Material example:
Non-ferrous metals such as AlMgSi1

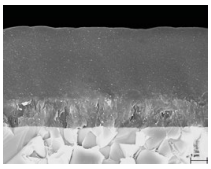
CTPX715



ISO | **P15** | **M15** | K15 | **N15** | **S20** | O10

Specification:
Composition: Co 6.0%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1650 | Layer system: PVD AlTiN
Application:
For the machining of aluminium and non-ferrous metals
Material example:
Non-ferrous metals such as AlMgSi1 or GGG30 cast iron

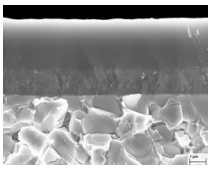
CTC5240



HC-S40

Specification:
Composition: Co 10.0%; WC balance | Medium grain size 2µm | Hardness: HV_{30} 1330 | Layer system: CVD TiN-TiB_2
Application:
Special wet machining grade for the machining of titanium materials
Material example:
Titanium Ti6Al4V

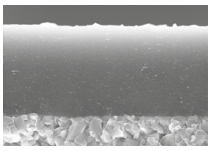
CTCS245



HC-S45

Specification:
Composition: Co 12.0%; mixed carbide 1.8%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1260 | Layer system: CVD TiN-TiB_2
Application:
Wet machining special grade for the machining of nickel-based alloys or the dry machining of austenitic stainless steels
Material example:
Heat-resistant materials such as Inconel, Rene, Nimonic, etc.

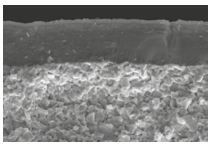
CTP6215



HC-H15 | **HC-K15**

Specification:
Composition: Co 12.0%; WC balance | Ultra-fine grain size 0.4µm | Hardness: HV_{30} 1630 | Layer system: PVD TiAlN
Application:
For the machining of high-strength martensitic tool steels 400HB / 1300 N/mm²
Material example:
Tool steel 1.2379, 1.2312

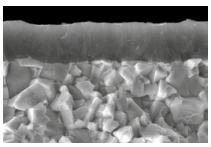
CTPK231



P30 | **M35** | **K30** | N30 | S35 | H30

Specification:
Composition: Co 9.8%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1612 | Layer system: PVD TiN / TiAlN / ZS / TiAlN / Al_2O_3 / TiN
Application:
Dry machining, tough carbide grade for the medium and rough machining of steel and cast iron metals

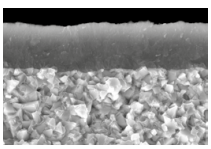
CTPP216



P10 | M20 | **K15** | N15 | S20 | **H15** | O15

Specification:
Composition: Co 9.6%; WC balance | Fine grain size 0,7-1µm | Hardness: HV_{30} 1824 | Layer system: PVD TiN / TiAlN / DS
Application:
Highly wear-resistant carbide grade with high cutting edge stability for the machining of high-strength materials, non-alloyed tool steels, cast iron and hardened steel up to 54 HRC

CTPK226

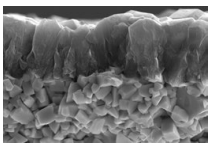


P10 | M20 | **K15** | H15

Specification:
Composition: Co 11.6%; WC balance | Fine grain size 0.7-1µm | Hardness: HV_{30} 1711 | Layer system: PVD TiN / AlTiN / DS
Application:
Highly wear-resistant ultra-fine grain carbide grade for the machining of cast iron metals and hardened steels up to 62 HRC

Grade description

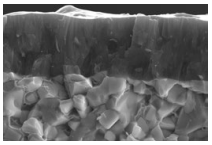
CTCN211



N10 | **O15**

Specification:
Composition: Co 6.5%; WC balance | Fine grain size 0.7-1µm | Hardness: HV_{30} 1827 | Layer system: PVD diamond
Application:
Diamond-coated carbide grade for the machining of graphite and non-ferrous metals

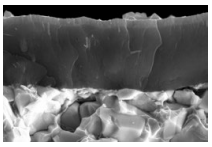
WAN1240



P40 | M35 | K30

Specification:
Composition: Co 9%; mixed carbide 3.8%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1449 | Layer system: PVD TiAlN / TiN
Application:
Tough special grade for the machining of steel at medium to high cutting speeds. Also suitable for the machining of cast iron in secondary applications

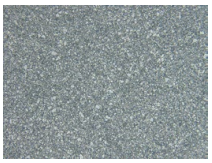
WAN2225



M25 | **S25**

Specification:
Composition: Co 11.3%; WC balance | Medium grain size 2µm | Hardness: HV_{30} 1307 | Layer system: PVD TiAlN / TiN
Application:
Dry and wet machining, fine grain grade with high toughness and temperature resistance. For rough and finish machining of rust and acid-resistant steels

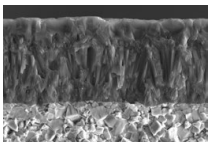
WUN4210



K15 | **N10** | O10

Specification:
Composition: Co 8.1%; WC balance | Fine grain size 0.7-1µm | Hardness: HV_{30} 1715 | Layer system: uncoated
Application:
Uncoated carbide for the machining of aluminium and non-ferrous metals
Material example:
Non-ferrous metals such as AlMgSi1

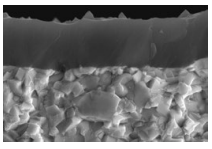
WAX1240



P40 | M25 | K30

Specification:
Composition: Co 10.5%; mixed carbide 2.1%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1345 |
Layer system: CVD TiN / TiCN / TiN / Al_2O_3
Application:
High-strength special grade for medium and rough machining at medium cutting speeds and extreme feed rates per tooth

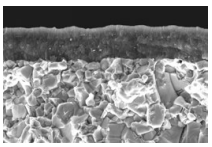
WTN1205



P10 | M15 | **K05** | **H10**

Specification:
Composition: Co 7.3%; WC balance | Fine grain size 0.7-1µm | Hardness: HV_{30} 1801 | Layer system: PVD TiN / TiAlN
Application:
Special grade for the machining of steel, hardened steel, cast iron, and non-ferrous metals and graphite

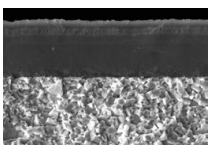
CTPP231



P30 | K25

Specification:
Composition: Co 9.5%; mixed carbide 2%; WC balance | Medium grain size 2-3µm | Hardness: HV_{30} 1400 | Layer system: PVD TiAlN
Application:
A very tough special grade for the medium and rough machining of steel at medium cutting speeds and extremely high feed rates

CTPP211

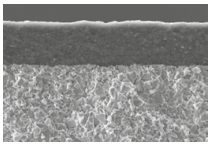


P10 | M15 | K10 | N10 | S15 | H10 | O10

Specification:
Co 6.3%; WC balance | Fine grain size 0.7-1µm | Hardness: HV_{30} 1843 | Layer system: PVD TiN / TiAlN / ZS / TiAN / Al_2O_3 / ZS / TiN
Application:
universal grade for medium cutting speeds

Grade description

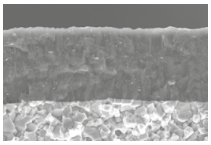
CTPP236



P35 | M35 | K30

Specification:
Composition: Co 9.5%; mixed carbide 2%; WC balance | Medium grain size 2-3µm | Hardness: HV_{30} 1370 | Layer system: PVD TiAlN
Application:
Tough special grade for the medium and rough machining of steel at high cutting speeds. Also suitable for the machining of cast iron and stainless steels in secondary applications

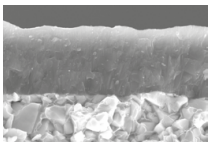
CTPK221



P15 | **K10**

Specification:
Composition: Co 6%; WC balance | Medium grain size 1µm | Hardness: HV_{30} 1600 | Layer system: PVD TiAlN
Application:
Standard grade for the fine machining of cast iron and non-ferrous metals at medium cutting speeds

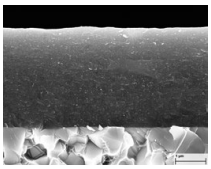
CTPM241



P40 | **M40** | S40

Specification:
Composition: Co 12%; WC balance | Medium grain size 1-2µm | Hardness: HV_{30} 1450 | Layer system: PVD TiAlN
Application:
Tough special grade for the machining of stainless and heat-resistant steels

CTP1340

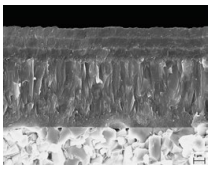


ISO | **P30** | **K30** | N30 | **S30** | O30

Specifications:
Composition: Co 9.0%; mixed carbide 0.75%; WC balance | grain size: 0.7–1 µm | Hardness: HV_{30} 1590 | Layer system: PVD TiAlTaN

Recommended use:
The universal high-performance grade for steels, austenitic steel, cast iron materials and heat-resistant alloys

CTCP335

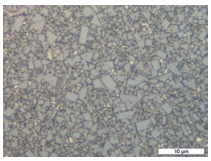


ISO | **P35** | M30 | **K35**

Specifications:
Composition: Co 10.5%; mixed carbide 1.9%; WC balance | grain size: 1 µm | Hardness: HV_{30} 1370 |
Layer system: CVD TiCN-Al_2O_3 Multilayer

Recommended use:
The reliable choice for machining steel and cast iron materials.

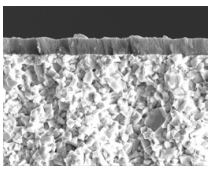
CWK10



N10 | O10

Specification:
Composition: Co 6.0%; WC balance | Fine grain size 1µm | Hardness: HV_{30} 1650 | Layer system: uncoated
Application:
Uncoated carbide for the machining of aluminium and non-ferrous metals
Material example:
Non-ferrous metals such as AlMgSi1

CWX500



ISO | **P30** | **M30** | **K35** | **N35** | **S15** | H05 | **O10**

Specification:
Composition: Co 10.0%; Others 0.7 %, WC balance | Grain size: 1 µm | Hardness: HV_{30} 1660

Recommended application:
The universal carbide grade for almost all materials

Grade description