New products for machining technicians

NEW

MaxiMill Slot-SX

→ Page 122–137

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

---

NEW

MaxiMill 242

→ Page 88

Update to chamfer milling cutter

NEW

MaxiMill 490

→ Page 76+78

Update to adjustable single angle milling cutter

NEW

CTPX715

New multi-range grade

Table of contents

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

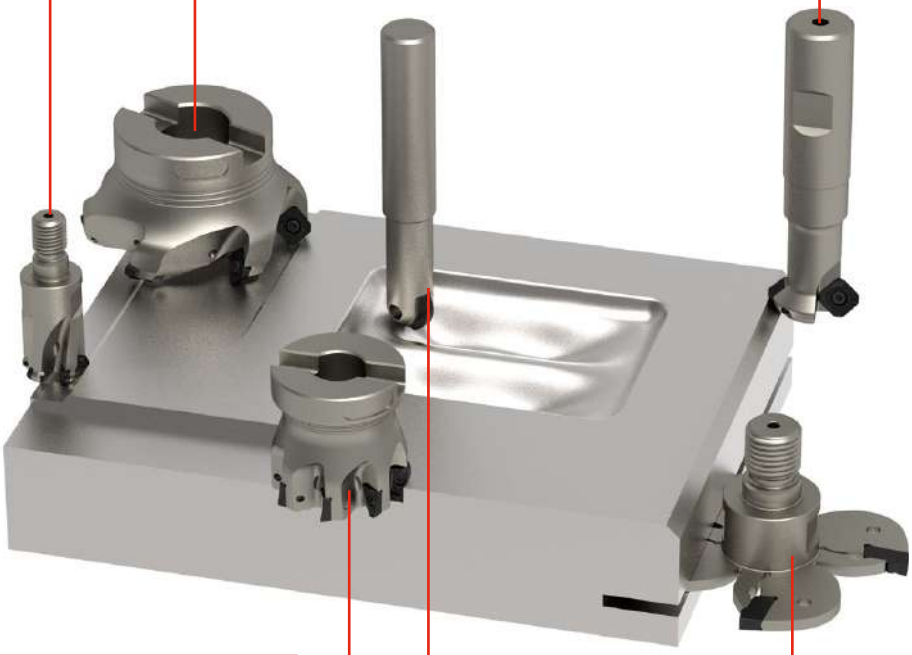

Free form milling

Toolfinder – Application Selection Guide

Form milling
→ System Selection:
10+11

Face milling
→ System Selection:
6+7

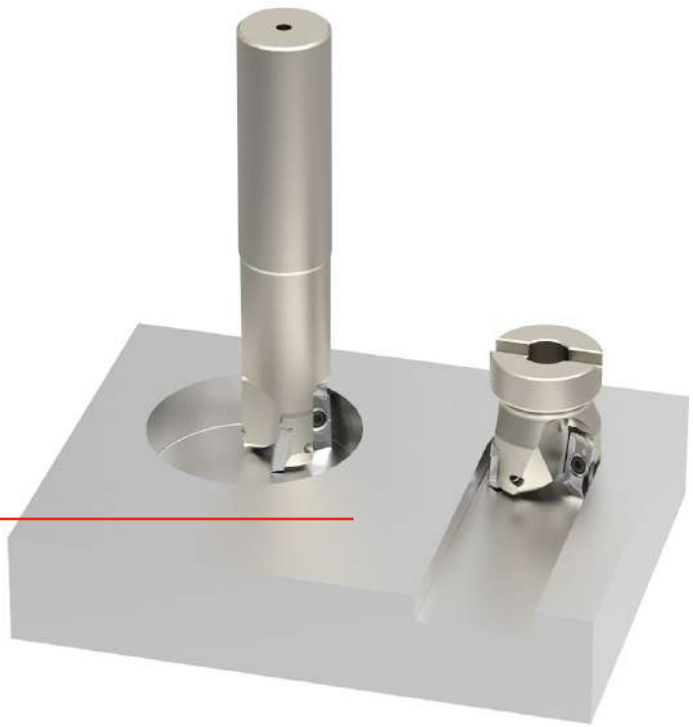
Chamfer/Angle milling cutters
→ System Selection:
12



Shoulder milling
→ System Selection:
8+9

Slot milling and saws
→ System Selection:
12

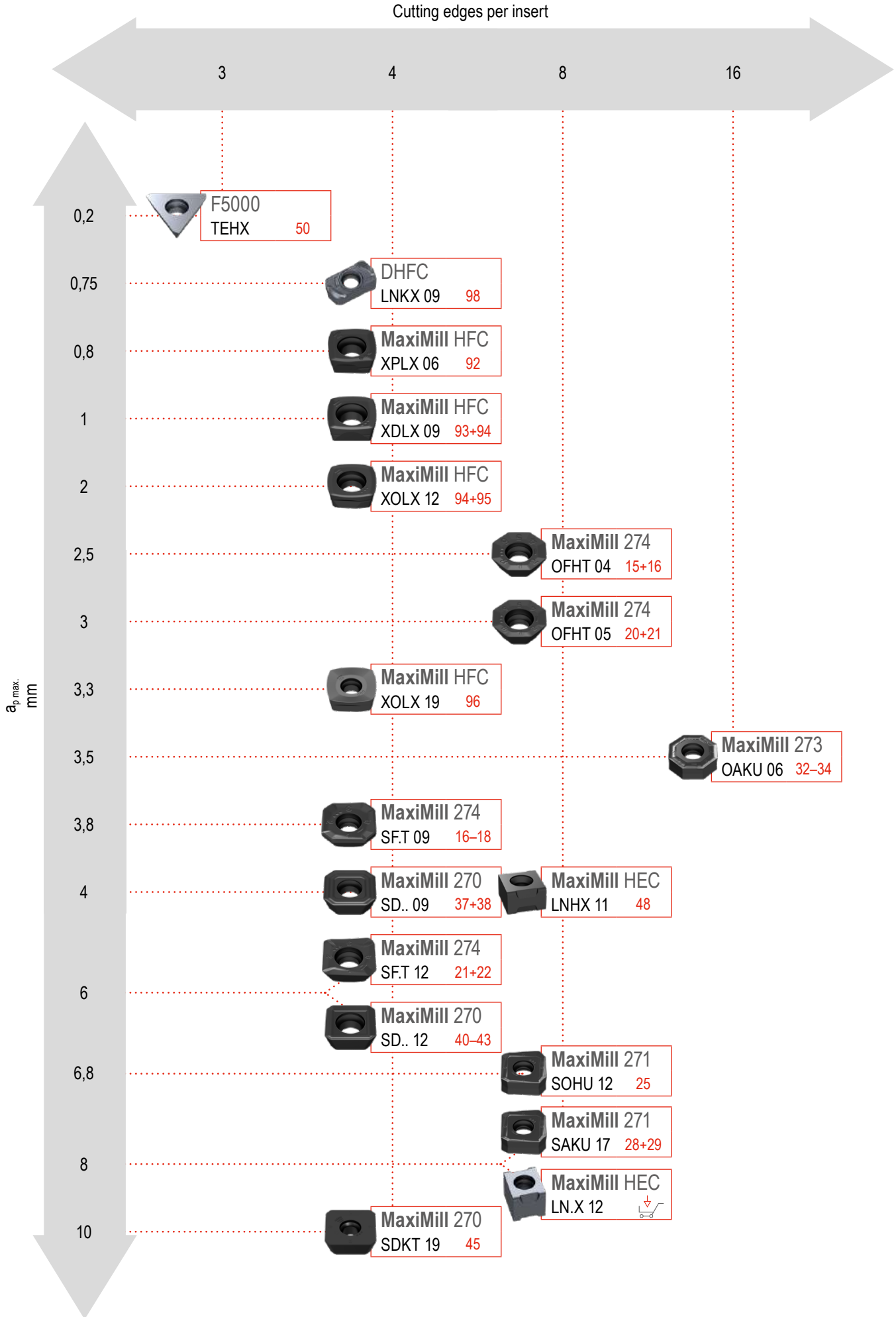
Form milling
→ System Selection:
10+11



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

15

Toolfinder – Face Milling Cutters



Overview – Face Milling Cutters

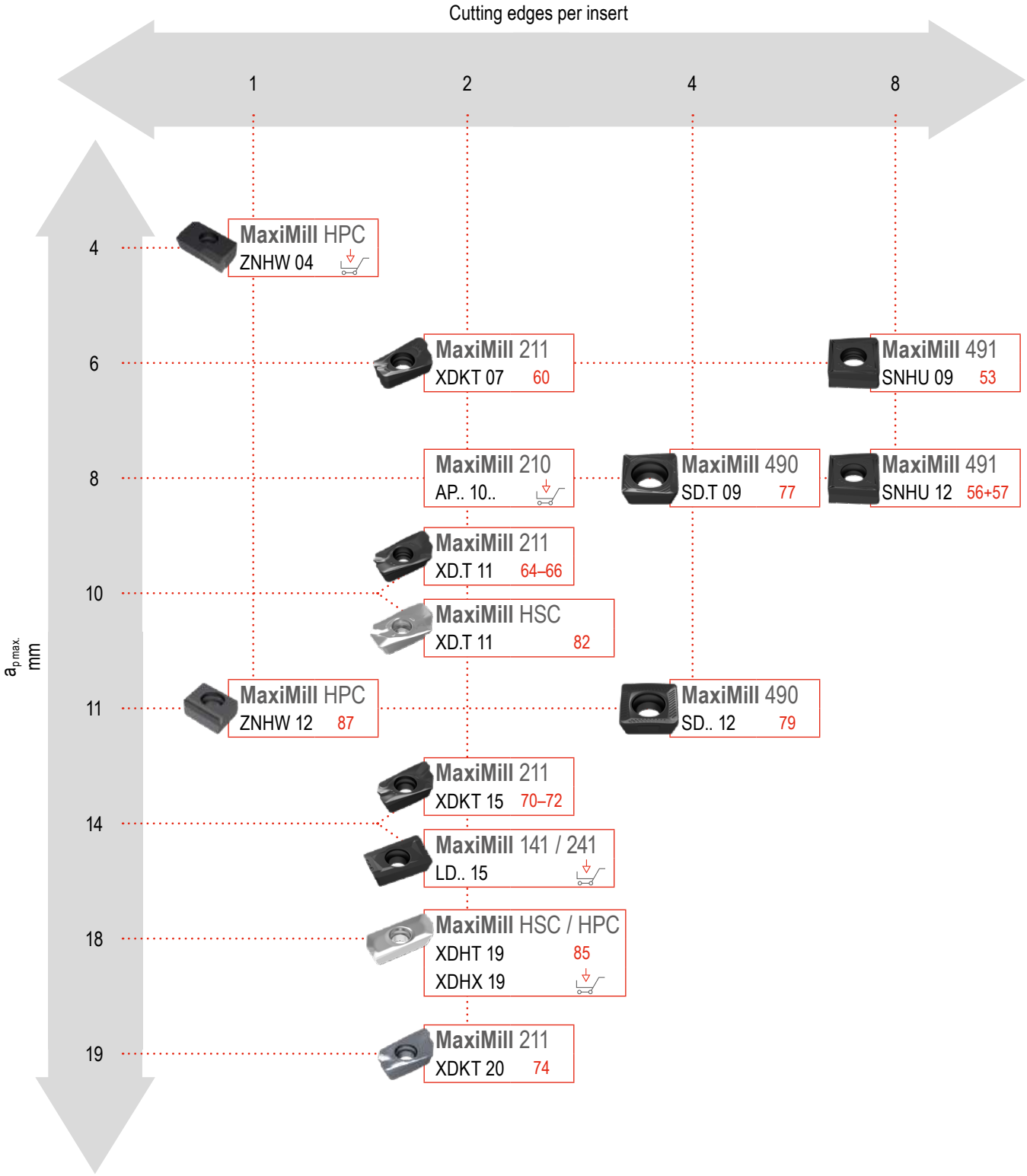
System	Inserts	Cutting edges per insert	$a_{p\,max.}$ mm	Ø-range mm			Steel	Stainless steel	Cast iron	Non-ferrous metals	Heat-resistant	Tempered steel	Non-metal materials	Page No.
MaxiMill 274	**OFH.** 04.. / 05.. | **SF.T** 09.. / 12..	8 | 4	2,5–6	 Ø 20–32	 Ø 20–32	 Ø 32–160	●	●	●	●	●		○	13–22
MaxiMill 271	**SOHU** 1204.. | **SAKU** 1706..	8	6,8 | 8,4		 Ø 32–40	 Ø 40–250	●	●	●		●			23–29
MaxiMill 273	**OAKU** 0605..	16	3,5			 Ø 40–250	●	●	●		●			30–34
MaxiMill 270	**SD..** 0903.. / 1204.. / 19..	4	4–10		 Ø 6–32	 Ø 32–315	●	●	●	●	●			35–45
MaxiMill HEC	**LNHX** 1106..	8	4–8			 Ø 50–160	●		●				○	46–48
MaxiMill HEC	**LN.X** 1210..	8	4–8			 Ø 125–160		●						
F 5000	**TEHX** 16T3..	3	0,2			 Ø 42–100	●	●	●			●		49+50
MaxiMill HFC	**X..X** 06.. / 09.. / 12.. / 19..	4	0,8–3,3	 Ø 16–42	 Ø 16–35	 Ø 32–160	●	●	●		●			90–96
DHFC	**LNKX** 09..	4	0,75	 Ø 16–42	 Ø 16–20		●	●	●		○			97+98

Additional diameters are available upon request.

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

15

Toolfinder – shoulder milling



Overview – Shoulder Milling Cutters

System	Inserts	Cutting edges per insert	$a_{p\ max.}$ mm	Ø-range mm			Steel	Stainless steel	Cast iron	Non-ferrous metals	Heat-resistant	Tempered steel	Non-metal materials	Page No.
MaxiMill 491	**SNHU** 09T3.. / 1204..	8	6–8	 Ø 25–32	 Ø 25–32	 Ø 40–160	●	●	●	●	●		○	51–57
MaxiMill 211	**XD.T** 0703.. / 11T3.. / 1505.. / 2007..	2	6–19	 Ø 16–40	 Ø 10–40	 Ø 32–160	●	●	●	●	●	●	○	58–74
MaxiMill 211KN	**XD.T** 11T3.. / 1505.. / 2007..	2	27–75,5		 Ø 25–50	 Ø 40–80	●	●	●	●	●		○	63+69
MaxiMill 490	**SD..** 09T3.. / 1205..	4	8–11	 Ø 25–32	 Ø 25–32	 Ø 40–125	●	●	●	●	●		○	75
MaxiMill 490K	**SD..** 09T3..	4	41			 Ø 40–63	●	●	●	●	●		○	76
MaxiMill HSC	**XD..** 11T3.. / 1904..	2	10–18	 Ø 16–40	 Ø 16–32	 Ø 40–125		○	●				○	80–85
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			●	●		○	○	86+87
MaxiMill HPC	**ZNHW** 04T3..	1	4–11	 Ø 20–40	 Ø 20–40				●	●		○	○	🛒
MaxiMill 210	**AP..** 1003..	2	8			 Ø 40–80	●	●	●	●	●	●	○	🛒

15

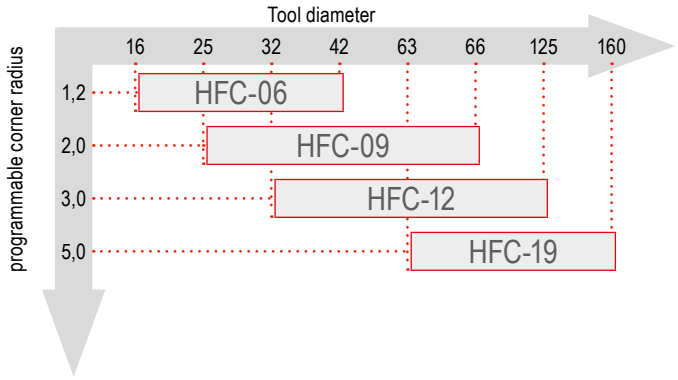
ⓘ Additional diameters are available upon request.

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

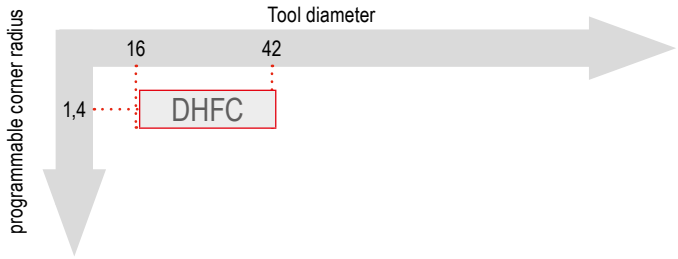
🛒 This article can be found in our online shop at cuttingtools.ceratizit.com

Toolfinder – form milling

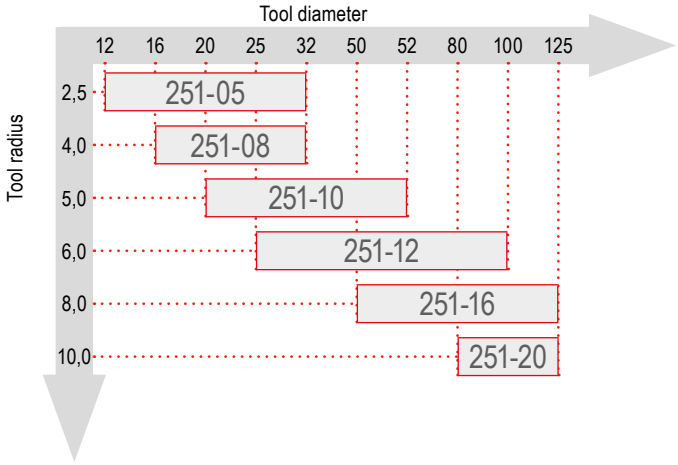
MaxiMill HFC 90–96



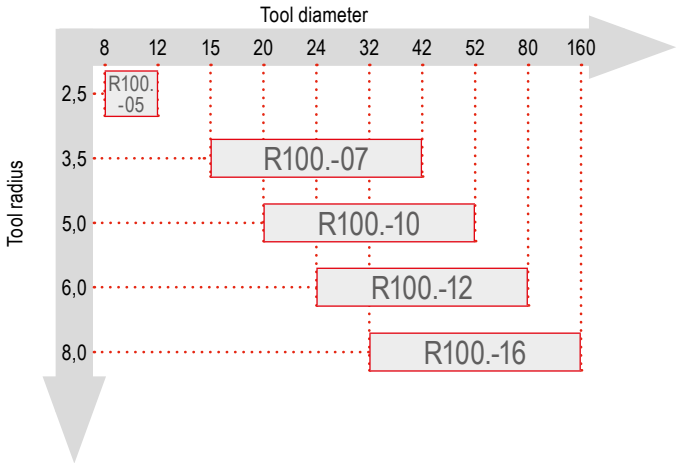
DHFC 97+98



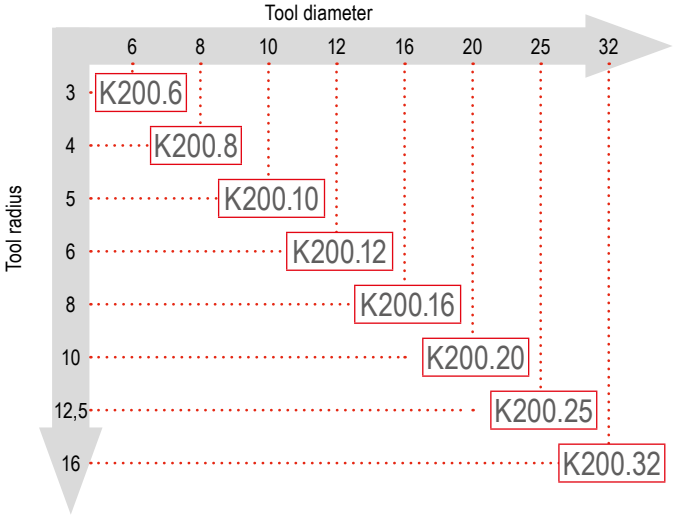
MaxiMill 251 RS 99–107



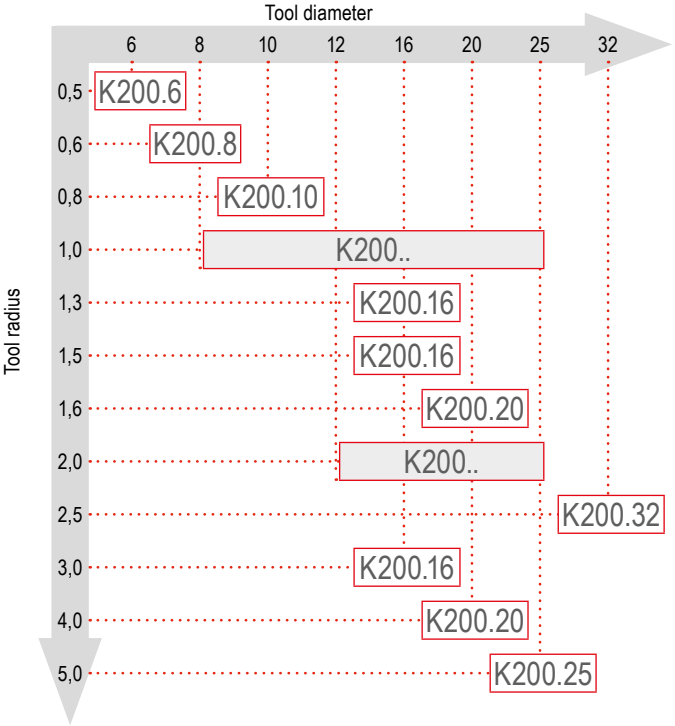
R100. 108–112



K200. Ball Nosed 113–117



K200. Torus 118–121



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	●	●	●		●			90–96
DHFC	**LNKX** 09..	4	0,75	Ø 16–42	Ø 16–20		●	●	●		○			97+98
MaxiMill 251 RS	**R..X** 05.. / 08.. / 10.. / 12.. / 16.. / 20..	8	2,5–10	Ø 10–42	Ø 10–32	Ø 40–125	●	●	●	●	●		●	99–107
R100.	**RD.X** 05.. / 07.. / 10.. / 12.. / 16.. / 20..	8	5	Ø 12–42	Ø 8–20	Ø 42–160	●	●	●	●	●	●	○	108–112
K200. Ball Nosed	**RO.X** .... / **XOHX**	1	0,4–8	Ø 8–32	Ø 6–32		●	●	●	●	○	●	●	113–117
K200. Torus	**XO.X**	1	0,5–8	Ø 8–32	Ø 8–32		●	●	●	●	○	○	●	118–121

Additional diameters are available upon request.

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

15

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		●	●	○	●	●			36–38
MaxiMill 242	**LD..** 1504..	2			 Ø 50–92	●	●	●	●	○		○	88+89
MaxiMill 490	**SD..** 09T3.. / 1205..	4	6–11	 Ø 20,1–31,5		●	●	●	●	●		○	76–79

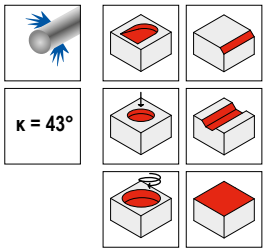
Additional diameters are available upon request.

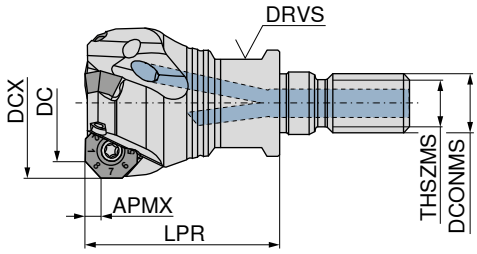
Overview – Saw cutters

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		●	●	●	●	●		○	122–137
TX	**TX..** R/L	3	64		 Ø 80–160	 Ø 100–200	●	●	●	●	○		○	138–140

Additional diameters are available upon request.

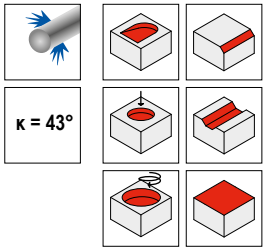
MaxiMill – 274-04/-09 Screw in cutter

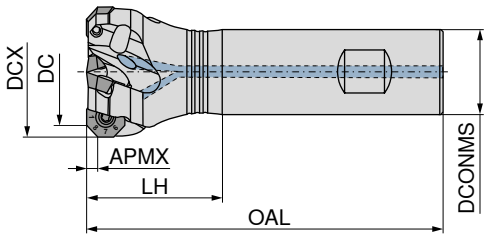




Designation	DC mm	DCX mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 742 ... #CU# *PA*	
G274.20.R.03-09	20	25.5	3	3.8	35	M12	12.5	17	1,2	OF.. 0403 / SF.. 0903	XX,YY	**020**
G274.25.R.04-09	25	30.6	4	3.8	35	M12	12.5	17	1,2	OF.. 0403 / SF.. 0903	XX,YY	**025**
G274.32.R.05-09	32	37.6	5	3.8	35	M16	17.0	24	1,2	OF.. 0403 / SF.. 0903	XX,YY	**032**

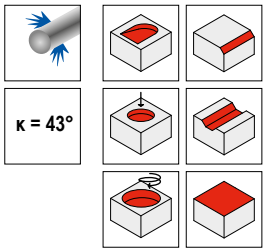
MaxiMill – 274-04/-09 End milling cutter

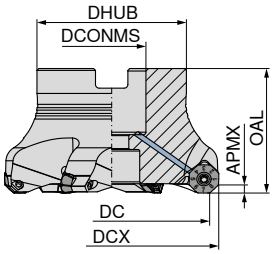




Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	50 743 ... #CU# *PA*		50 743 ... #CU# *PA*	
C274.20.R.03-09-A/B20-25	20	25.5	3	3.8	77	25	20	1,2	OF.. 0403 / SF.. 0903	XX,YY	**020**	XX,YY	**120**
C274.25.R.04-09-A/B20-32	25	30.6	4	3.8	84	32	20	1,2	OF.. 0403 / SF.. 0903	XX,YY	**025**	XX,YY	**125**
C274.32.R.05-09-A/B25-40	32	37.6	5	3.8	98	40	25	1,2	OF.. 0403 / SF.. 0903	XX,YY	**032**	XX,YY	**132**

MaxiMill – 274-04/-09 Shell mill

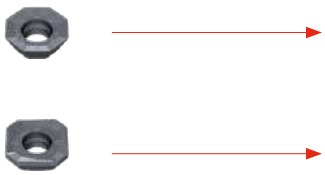




Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 744 ... #CU# *PA*		50 744 ... #CU# *PA*	
A274.32.R.05-09	32	37.7	5	3.8	40	38	16	1,6	OF.. 0403 / SF.. 0903			XX,YY	**032**
A274.40.R.04-09	40	45.7	4	3.8	40	38	16	1,6	OF.. 0403 / SF.. 0903	XX,YY	**040**		
A274.40.R.06-09	40	45.7	6	3.8	40	38	16	1,6	OF.. 0403 / SF.. 0903			XX,YY	**140**
A274.50.R.05-09	50	55.7	5	3.8	40	48	22	1,6	OF.. 0403 / SF.. 0903	XX,YY	**050**		
A274.50.R.07-09	50	55.7	7	3.8	40	48	22	1,6	OF.. 0403 / SF.. 0903			XX,YY	**150**
A274.63.R.06-09	63	68.7	6	3.8	40	48	22	1,6	OF.. 0403 / SF.. 0903	XX,YY	**063**		
A274.63.R.09-09	63	68.7	9	3.8	40	48	22	1,6	OF.. 0403 / SF.. 0903			XX,YY	**163**
A274.80.R.07-09	80	85.7	7	3.8	50	58	27	1,6	OF.. 0403 / SF.. 0903	XX,YY	**080**		
A274.80.R.11-09	80	85.7	11	3.8	50	58	27	1,6	OF.. 0403 / SF.. 0903			XX,YY	**180**
A274.100.R.09-09	100	105.7	9	3.8	50	78	32	1,6	OF.. 0403 / SF.. 0903	XX,YY	**100**		
A274.100.R.13-09	100	105.7	13	3.8	50	78	32	1,6	OF.. 0403 / SF.. 0903			XX,YY	**200**
A274.125.R.12-09	125	130.7	12	3.8	63	88	40	1,6	OF.. 0403 / SF.. 0903	XX,YY	**125**		

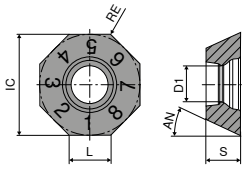
	TORX® blade		Clamping key – T		Key D		Power Screw		Molykote		Clamping screw		Torque screw-driver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts DC	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
20 - 32	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**133**	XX,YY	**191**
32 - 40	XX,YY	**043**	XX,YY	**040**	XX,YY	**125**	XX,YY	**151**	XX,YY	**303**	XX,YY	**133**	XX,YY	**191**
50 - 125	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**133**	XX,YY	**191**

Two insert types – ONE Cutter

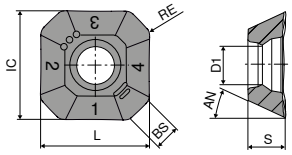


OFHT / OFHW / SFHT / SFKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
OFH. 0403..	9.52	3.35	3.94	-	3.18	25
SF.T 0903..	9.80	3.35	9.00	2.25	3.50	25

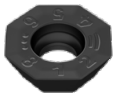


OF..

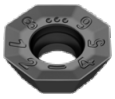


SF.T

OFHT

		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		OFHT	OFHT	OFHT	OFHT
		51 002 ...	**51 003 ...**	**51 002 ...**	**51 003 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
040305SN	0.5	XX,YY **005**	XX,YY **005**	XX,YY **105**	XX,YY **105**
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

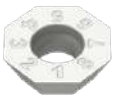
OFHT / OFHW

		-F50 CTCM235	-F50 CTPM240	-M50 CTPM240	-F50 CTPM245	CTPM245	-F50 CTCM245	CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		OFHT	OFHT	OFHT	OFHT	OFHW	OFHT	OFHW
		51 002 ...	**51 002 ...**	**51 003 ...**	**51 002 ...**	**51 105 ...**	**51 002 ...**	**51 105 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
040302EN	0.2					XX,YY **452**		XX,YY **90201**
040305SN	0.5	XX,YY **305**	XX,YY **405**	XX,YY **405**	XX,YY **455**		XX,YY **90501**	
P		●	○	○	●	●	●	●
M		●	●	●	●	●	●	●
K								
N								
S							○	○
H								
O								

15

OFHT / OFHW

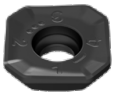
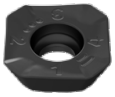
NEW

		-M50 CTCK215	-F10 CTPX715	-F10 CTWN215	-F50 CTC5240	CTC5240	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		OFHT	OFHT	OFHT	OFHT	OFHW	OFHT
		51 003 ...	51 122 ...	50 459 ...	51 002 ...	50 457 ...	51 002 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
040302EN	0.2					XX,YY 504	
040305FN	0.5		XX,YY 00502	XX,YY 505			
040305SN	0.5	XX,YY 505			XX,YY 15500		XX,YY 555
P			○				
M			○				
K		●	●	○			
N			●	●			
S			○		●	●	●
H							
O			○	○			

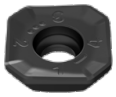
SFHT / SFKT

		-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN
			
		SFHT	SFKT
		51 012 ...	51 013 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*
0903AFSR	1	XX,YY 070	XX,YY 070
P		●	●
M			
K			
N			
S			
H			
O			

SFHT / SFKT

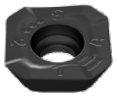
		-F50 CTCP230 DRAGONSKIN	-M50 CTCP230 DRAGONSKIN	-F50 CTPP235 DRAGONSKIN	-M50 CTPP235 DRAGONSKIN
					
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0903AFSR	1	XX,YY 020	XX,YY 020	XX,YY 120	XX,YY 120
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

SFHT / SFKT

		-F50 CTCM235 DRAGONSKIN	-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F50 CTPM245 DRAGONSKIN	-F50 CTCM245 DRAGONSKIN
						
		SFHT	SFHT	SFKT	SFHT	SFHT
		51 012 ...	51 012 ...	51 013 ...	51 012 ...	51 012 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0903AFSR	1	XX,YY 320	XX,YY 420	XX,YY 42000	XX,YY 470	XX,YY 92001
P		●	○	○	●	●
M		●	●	●	●	●
K						
N						
S						○
H						
O						

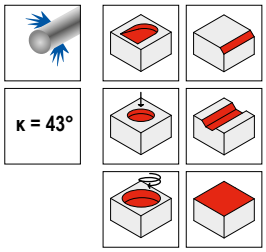
15

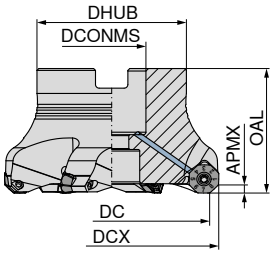
SFKT / SFHT

		NEW				
		-R50 CTCK215	**-R50** CTPK220	**-F10** CTPX715	**-F10** CTWN215	**-F40** CTC5240
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN
						
		SFKT	SFKT	SFHT	SFHT	SFHT
		51 065 ...	**51 065 ...**	**51 123 ...**	**50 514 ...**	**50 514 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0903AFFR	1			XX,YY **01502**	XX,YY **505**	
0903AFSR	1	XX,YY **520**	XX,YY **620**			XX,YY **504**
P				○		
M				○		
K		●	●	●	○	
N				●	●	
S				○		●
H						
O				○	○	

Milling guide

MaxiMill – 274-05/-12 Shell mill



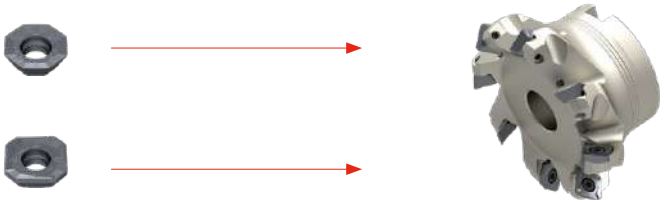


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 772 ... #CU# *PA*		50 772 ... #CU# *PA*	
A274.40.R.03-12	40	48.0	3	6	40	38	16	3,2	OFHT 0504 / SFKT 1204	XX,YY	**24000**		
A274.40.R.04-12	40	48.0	4	6	40	38	16	3,2	OFHT 0504 / SFKT 1204			XX,YY	**04000**
A274.50.R.05-12	50	58.0	5	6	40	43	22	3,2	OFHT 0504 / SFKT 1204			XX,YY	**050**
A274.50.R.04-12	50	58.1	4	6	40	43	22	3,2	OFHT 0504 / SFKT 1204	XX,YY	**25000**		
A274.63.R.06-12	63	71.0	6	6	40	48	22	3,2	OFHT 0504 / SFKT 1204			XX,YY	**063**
A274.63.R.05-12	63	71.1	5	6	40	48	22	3,2	OFHT 0504 / SFKT 1204	XX,YY	**26300**		
A274.80.R.06-12	80	88.0	6	6	50	58	27	3,2	OFHT 0504 / SFKT 1204	XX,YY	**28000**		
A274.80.R.08-12	80	88.0	8	6	50	58	27	3,2	OFHT 0504 / SFKT 1204			XX,YY	**080**
A274.100.R.10-12	100	107.9	10	6	50	78	32	3,2	OFHT 0504 / SFKT 1204			XX,YY	**100**
A274.100.R.08-12	100	108.0	8	6	50	78	32	3,2	OFHT 0504 / SFKT 1204	XX,YY	**30000**		
A274.125.R.12-12	125	132.9	12	6	63	88	40	3,2	OFHT 0504 / SFKT 1204			XX,YY	**125**
A274.125.R.09-12	125	133.0	9	6	63	88	40	3,2	OFHT 0504 / SFKT 1204	XX,YY	**32500**		
A274.160.R.14-12	160	167.9	14	6	63	98	40	3,2	OFHT 0504 / SFKT 1204			XX,YY	**16000** [1]
A274.160.R.11-12	160	168.0	11	6	63	98	40	3,2	OFHT 0504 / SFKT 1204	XX,YY	**36000** [1]		

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

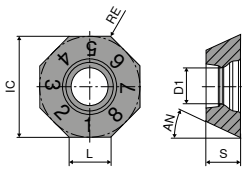
Spare parts **DC**	TORX® blade 80 950 ... #CU# *PA*		Key D 80 950 ... #CU# *PA*		Molykote 70 950 ... #CU# *PA*		Clamping screw 70 950 ... #CU# *PA*		Torque screw-driver 80 950 ... #CU# *PA*	
40 - 160	XX,YY	**054**	XX,YY	**128**	XX,YY	**303**	XX,YY	**340**	XX,YY	**193**

Two insert types – ONE Cutter

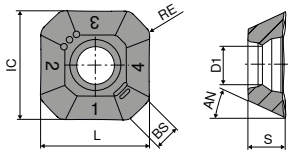


OFHT / SFHT / SFKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
OFHT 0504..	12.7	4.8	4.5	-	4.76	25
SF.T 1204..	12.7	4.8	12.7	1.42	4.76	25



OF..



SF.T

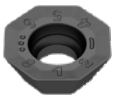
OFHT

	-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
	OFHT	OFHT	OFHT	OFHT
	51 002 ...	**51 003 ...**	**51 002 ...**	**51 003 ...**
ISO RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
050410SN 1	XX,YY **010**	XX,YY **01000**	XX,YY **110**	XX,YY **11000**
P	●	●	●	●
M			○	○
K	○	○	○	○
N				
S				
H				
O				

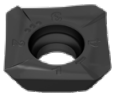
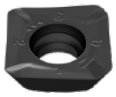
OFHT

	-F50 CTCM235	-F50 CTPM240	-M50 CTPM240	-F50 CTPM245
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
				
	OFHT	OFHT	OFHT	OFHT
	51 002 ...	**51 002 ...**	**51 003 ...**	**51 002 ...**
ISO RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
050410SN 1	XX,YY **310**	XX,YY **410**	XX,YY **41000**	XX,YY **460**
P	●	○	○	●
M	●	●	●	●
K				
N				
S				
H				
O				

OFHT

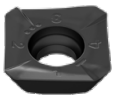
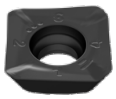
			NEW		
		-F50 CTCM245	-F10 CTPX715	-F10 CTWN215	-F50 CTC5240
		DRAGONSKIN	DRAGONSKIN		DRAGONSKIN
					
		OFHT	OFHT	OFHT	OFHT
		51 002 ...	51 122 ...	51 122 ...	51 002 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
050410FN	1		XX,YY 01002	XX,YY 36000	
050410SN	1	XX,YY 91001			XX,YY 16000
P		●	○		
M		●	○		
K			●	○	
N			●	●	
S		○	○		●
H					
O			○	○	

SFHT / SFKT

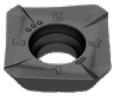
		-F50 CTCP230	-M50 CTCP230	-F50 CTPP235	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204AFSR	1	XX,YY 02500	XX,YY 025	XX,YY 12500	XX,YY 125
P		●	●	●	●
M				○	○
K		○	○	○	○
N					
S					
H					
O					

15

SFHT / SFKT

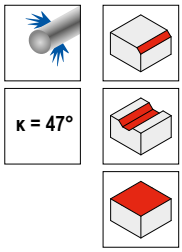
		-F50 CTCM235 DRAGONSKIN	-M50 CTCM235 DRAGONSKIN	-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN
					
		SFHT	SFKT	SFHT	SFKT
		51 012 ...	51 013 ...	51 012 ...	51 013 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204AFSR	1	XX,YY 325	XX,YY 325	XX,YY 42500	XX,YY 425
P		●	●	○	○
M		●	●	●	●
K					
N					
S					
H					
O					

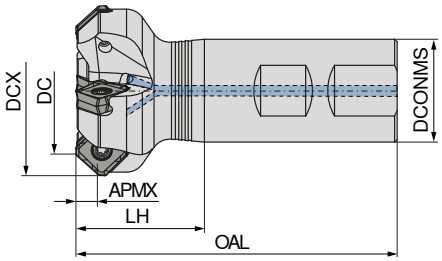
SFHT

			NEW			
		-F50 CTPM245 DRAGONSKIN	-F50 CTCM245 DRAGONSKIN	-F10 CTPX715 DRAGONSKIN	-F10 CTWN215	-F40 CTC5240 DRAGONSKIN
						
		SFHT	SFHT	SFHT	SFHT	SFHT
		51 012 ...	51 012 ...	51 123 ...	51 123 ...	50 514 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204AFER	1					XX,YY 50900
1204AFFR	1			XX,YY 02502	XX,YY 37000	
1204AFSR	1	XX,YY 47500	XX,YY 92501			
P		●	●	○		
M		●	●	○		
K				●	○	
N				●	●	
S			○	○		●
H						
O				○	○	

Milling guide

MaxiMill – 271-12 End milling cutter





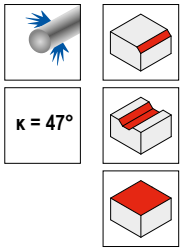
50 786 ...

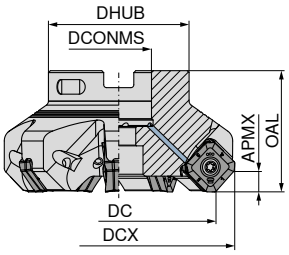
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	RPMX 1/min.	torque moment Nm	Insert	#CU# *PA*	
C271.32.R.03-12-B-40	32	45	3	6.8	100	40	32	18400	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**03203**
C271.40.R.04-12-B32-40	40	53	4	6.8	100	40	32	16800	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**04004**

	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
DC					
32 - 40	XX,YY **054**	XX,YY **120**	XX,YY **303**	XX,YY **859**	XX,YY **193**

MaxiMill – 271-12 Face mill

▲ 8 cutting edges per insert

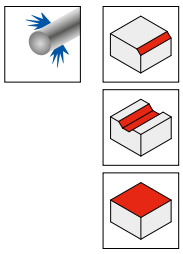


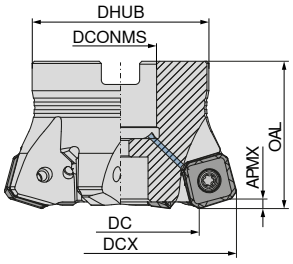


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS H6 mm	RPMX 1/min.	torque moment Nm	Insert	50 787 ... #CU# *PA*		50 787 ... #CU# *PA*	
A271.40.R.04-12	40	53	4	6.8	40	38	16	17900	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**04004**
A271.50.R.05-12	50	63	5	6.8	40	43	22	15200	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**05005**
A271.63.R.07-12	63	76	7	6.8	40	48	22	13100	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**06307**
A271.80.R.06-12	80	93	6	6.8	50	58	27	11300	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**08006**		
A271.80.R.08-12	80	93	8	6.8	50	58	27	11300	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**08008**
A271.100.R.07-12	100	113	7	6.8	63	78	32	9900	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**10007**		
A271.100.R.10-12	100	113	10	6.8	63	78	32	9900	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**10010**
A271.125.R.08-12	125	138	8	6.8	63	88	40	8700	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**12508**		
A271.125.R.12-12	125	138	12	6.8	63	88	40	8700	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**12512**
A271.160.R.09-12	160	173	9	6.8	63	98	40	7600	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**16009** [1]		
A271.160.R.14-12	160	173	14	6.8	63	98	40	7600	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**16014** [1]
A271.200.R.11-12	200	213	11	6.8	63	132	60	6700	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**20011** [1]		
A271.200.R.17-12	200	213	17	6.8	63	132	60	6700	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**20017** [1]
A271.250.R.13-12	250	263	13	6.8	63	132	60	6000	3,2	SOHU 1204.. / XOHU 1204..	XX,YY	**25013** [1]		
A271.250.R.21-12	250	263	21	6.8	63	132	60	6000	3,2	SOHU 1204.. / XOHU 1204..			XX,YY	**25021** [1]

1) 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 ... #CU# *PA*	
A271.50.R.04-12-HFC	30	50	4	2.6	40	43	22	14600	3,2	SOHU 1204..	XX,YY	**05004**
A271.63.R.06-12-HFC	43	63	6	2.6	40	48	22	12500	3,2	SOHU 1204..	XX,YY	**06306**
A271.80.R.07-12-HFC	60	80	7	2.6	50	58	27	10800	3,2	SOHU 1204..	XX,YY	**08007**

TORX® blade


Clamping key – T


Key D


Power Screw


Molykote

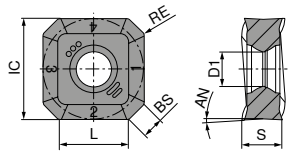

Clamping screw


Torque screw-driver

Spare parts DC	80 950 ... #CU# *PA*		80 397 ... #CU# *PA*		80 950 ... #CU# *PA*		70 950 ... #CU# *PA*		70 950 ... #CU# *PA*		70 950 ... #CU# *PA*		80 950 ... #CU# *PA*	
40 (5078704004)	XX,YY	**054**	XX,YY	**040**	XX,YY	**120**	XX,YY	**151**	XX,YY	**303**	XX,YY	**859**	XX,YY	**193**
50 - 250	XX,YY	**054**			XX,YY	**120**			XX,YY	**303**	XX,YY	**859**	XX,YY	**193**
50 (5078805004)	XX,YY	**054**	XX,YY	**050**	XX,YY	**120**	XX,YY	**154**	XX,YY	**303**	XX,YY	**859**	XX,YY	**193**

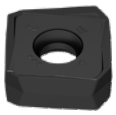
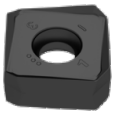
SOHU

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

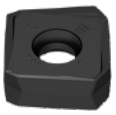


SOHU

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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204ABSR	0.8	XX,YY 02000	XX,YY 12000	XX,YY 32000	XX,YY 42000	XX,YY 47000	XX,YY 92001
P		●	●	●	○	●	●
M			○	●	●	●	●
K		○	○				
N							
S							○
H							
O							

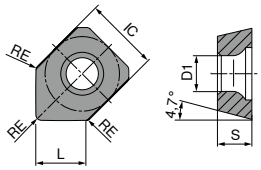
SOHU

		-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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204ABSR	0.8	XX,YY 52000	XX,YY 62000	XX,YY 12001	XX,YY 17000
P					
M					
K		●	●		
N					
S				●	●
H					
O					

15

XOHU

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XOHU 1204..	13.36	4.4	8.8	1.83	5.00



XOHU

XOHU

▲ Masterfinish indexable insert (wiper insert)

-M50
CTPP235

DRAGONSKIN


XOHU

51 141 ...

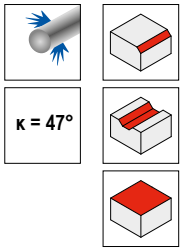
ISO	RE mm	#CU# *PA*	
1204ABSR	0.8	XX,YY	**12000**
P			●
M			○
K			○
N			
S			
H			
O			

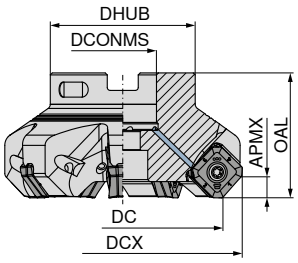
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 149
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

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 ... #CU# *PA*	
A271.50.R.04-17	50	66.1	4	8.4	40	22	43	5	SAKU 1706	XX,YY	**050**
A271.63.R.06-17	63	79.1	6	8.4	40	22	48	5	SAKU 1706	XX,YY	**063**
A271.80.R.07-17	80	96.1	7	8.4	50	27	58	5	SAKU 1706	XX,YY	**080**
A271.100.R.08-17	100	116.1	8	6.8	50	32	78	5	SAKU 1706	XX,YY	**100**
A271.125.R.10-17	125	141.1	10	8.4	63	40	88	5	SAKU 1706	XX,YY	**125**
A271.160.R.12-17	160	176.1	12	8.4	63	40	104	5	SAKU 1706	XX,YY	**16000**[1]
A271.200.R.13-17	200	216.1	13	8.4	63	60	134	5	SAKU 1706	XX,YY	**20000**[2]
A271.250.R.15-17	250	266.1	15	8.4	63	60	134	5	SAKU 1706	XX,YY	**25000**[2]

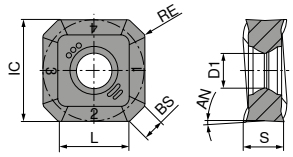
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant
2) With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm / Without Through Coolant

	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
DC					
50 - 250	XX,YY **037**	XX,YY **114**	XX,YY **303**	XX,YY **302**	XX,YY **193**

15

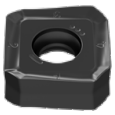
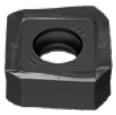
SAKU

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
SAKU 1706..	17	5.8	11.85	3.7	6.35	3

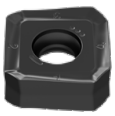
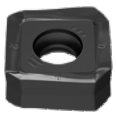


SAKU

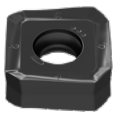
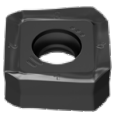
SAKU

		-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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1706ABSR	0.8	XX,YY 270	XX,YY 270	XX,YY 070	XX,YY 070
P		●	●	●	●
M					
K					
N					
S					
H					
O					

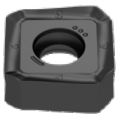
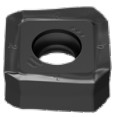
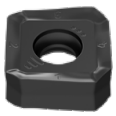
SAKU

		-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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1706ABSR	0.8	XX,YY 020	XX,YY 020	XX,YY 120	XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1706ABSR	0.8	XX,YY 220	XX,YY 220	XX,YY 320	XX,YY 320	XX,YY 420	XX,YY 420	XX,YY 470
P		●	●	●	●	○	○	●
M		●	●	●	●	●	●	●
K								
N								
S								
H								
O								

SAKU

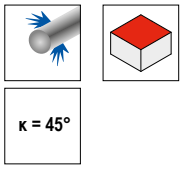
		-F50 CTCM245	-M50 CTCK215	-R50 CTCK215	-M50 CTPK220	-R50 CTPK220	-F50 CTC5240	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		SAKU	SAKU	SAKU	SAKU	SAKU	SAKU	SAKU
		51 004 ...	51 005 ...	51 058 ...	51 005 ...	51 058 ...	50 306 ...	51 004 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1706ABSR	0.8	XX,YY 92001	XX,YY 520	XX,YY 520	XX,YY 620	XX,YY 620	XX,YY 520	XX,YY 570
P		●						
M		●						
K			●	●	●	●		
N								
S		○					●	●
H								
O								

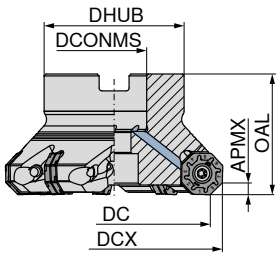
Milling guide

15

MaxiMill – 273 Shell mill

▲ 16 cutting edges per insert





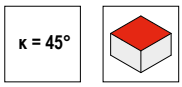
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	torque moment Nm	Insert	50 741 ... #CU# *PA*		50 741 ... #CU# *PA*	
A273.40.R.04-06	40	50.2	3	3.5	40	16	38	5	OAKU / XAHT 0605	XX,YY	**040**		
A273.40.R.04-06	40	50.2	4	3.5	40	16	38	5	OAKU / XAHT 0605	XX,YY	**140** 5)		
A273.50.R.05-06	50	60.2	5	3.5	40	22	43	5	OAKU / XAHT 0605	XX,YY	**050**		
A273.63.R.07-06	63	73.2	7	3.5	40	22	48	5	OAKU / XAHT 0605	XX,YY	**063**		
A273.80.R.08-06	80	90.2	8	3.5	50	27	58	5	OAKU / XAHT 0605	XX,YY	**080**		
A273.80.R.10-06	80	90.2	10	3.5	50	27	58	5	OAKU / XAHT 0605			XX,YY	**180** 1)
A273.100.R.10-06	100	110.2	10	3.5	50	32	78	5	OAKU / XAHT 0605	XX,YY	**100**		
A273.100.R.14-06	100	110.2	14	3.5	50	32	78	5	OAKU / XAHT 0605			XX,YY	**200** 1)
A273.125.R.12-06	125	135.2	12	3.5	63	40	88	5	OAKU / XAHT 0605	XX,YY	**125**		
A273.125.R.17-06	125	135.2	17	3.5	63	40	88	5	OAKU / XAHT 0605			XX,YY	**225** 1)
A273.160.R.14-06	160	170.2	14	3.5	63	40	104	5	OAKU / XAHT 0605	XX,YY	**160** 4)		
A273.160.R.20-06	160	170.2	20	3.5	63	40	104	5	OAKU / XAHT 0605			XX,YY	**260** 2)
A273.200.R.25-06	200	210.2	25	3.5	63	60	153	5	OAKU / XAHT 0605			XX,YY	**300** 3)
A273.250.R.31-06	250	260.2	31	3.5	63	60	153	5	OAKU / XAHT 0605			XX,YY	**25031** 3)

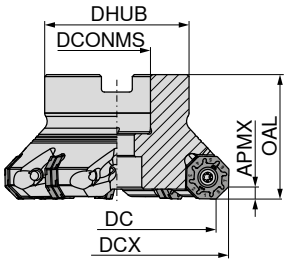
1) Version with Wedge, without internal coolant supply
2) Version with Wedge, without internal coolant supply / With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm
3) Version with Wedge, without internal coolant supply / With threaded holes M16 on the front face, pitch circle diameter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

Spare parts DC	TORX® blade 80 950 ... #CU# *PA*		 Clamping key – T 80 397 ... #CU# *PA*		 Clamping wedge screw 70 950 ... #CU# *PA*		 Clamping wedge Face mill 70 950 ... #CU# *PA*		 Key D 80 950 ... #CU# *PA*		 Power Screw 70 950 ... #CU# *PA*		 Clamping screw 70 950 ... #CU# *PA*		 Torque screw-driver 80 950 ... #CU# *PA*	
40	XX,YY	**037**	XX,YY	**040**					XX,YY	**114**	XX,YY	**151**	XX,YY	**302**	XX,YY	**193**
50	XX,YY	**037**	XX,YY	**050**					XX,YY	**114**	XX,YY	**154**	XX,YY	**302**	XX,YY	**193**
63 - 80	XX,YY	**037**							XX,YY	**114**			XX,YY	**302**	XX,YY	**193**
80 - 100	XX,YY	**036**			XX,YY	**844**	XX,YY	**845**	XX,YY	**113**					XX,YY	**193**
100 - 125	XX,YY	**037**							XX,YY	**114**			XX,YY	**302**	XX,YY	**193**
125	XX,YY	**036**			XX,YY	**844**	XX,YY	**845**	XX,YY	**113**					XX,YY	**193**
160	XX,YY	**037**							XX,YY	**114**			XX,YY	**302**	XX,YY	**193**
160 - 250	XX,YY	**036**			XX,YY	**844**	XX,YY	**845**	XX,YY	**113**					XX,YY	**193**

MaxiMill – 273 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 ... #CU# *PA*	
A273.80.R.10A10-06	80	90.2	10	3.5	50	27	58	5	OAKU / XAHT 0605	XX,YY	**08010**[1)]
A273.100.R.14A14-06	100	110.2	14	3.5	50	32	78	5	OAKU / XAHT 0605	XX,YY	**10014**[1)]
A273.125.R.17A17-06	125	135.2	17	3.5	63	40	88	5	OAKU / XAHT 0605	XX,YY	**12517**[1)]
A273.160.R.20A20-06	160	170.2	20	3.5	63	40	104	5	OAKU / XAHT 0605	XX,YY	**16020**[2)]
A273.200.R.25A25-06	200	210.2	25	3.5	63	60	153	5	OAKU / XAHT 0605	XX,YY	**20025**[3)]
A273.250.R.31A31-06	250	260.2	31	3.5	63	60	153	5	OAKU / XAHT 0605	XX,YY	**25031**[3)]

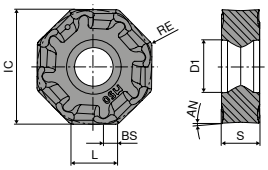
1) Version with Wedge
2) Version with Wedge / With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm
3) Version with Wedge / With threaded holes M16 on the front face, pitch circle diameter = 101.6 mm

	TORX® blade	 Clamping wedge screw	 Clamping wedge Face mill	Key D	 Molykote	 Wedge	 Torque screw-driver
	80 950 ...	**70 950 ...**	**70 950 ...**	**80 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts	#CU#	#CU#	#CU#	#CU#	#CU#	#CU#	#CU#
DC	*PA*	*PA*	*PA*	*PA*	*PA*	*PA*	*PA*
80 - 250	XX,YY **036**	XX,YY **844**	XX,YY **845**	XX,YY **113**	XX,YY **303**	XX,YY **199**	XX,YY **193**

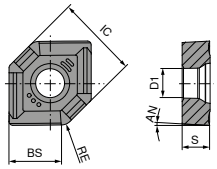
15

OAKU / XAHT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
XAHT 0605..	17.08	6.0	-	11.95	5.56	3
OAKU 0605..	17.10	5.8	6	2.00	5.66	3

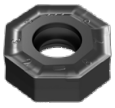


OAKU

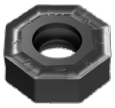


XAHT

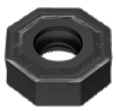
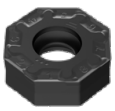
OAKU

		-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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
060508SR	0.8	XX,YY 258	XX,YY 258	XX,YY 058	XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
060508SR	0.8	XX,YY 008	XX,YY 008	XX,YY 108	XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
060508ER	0.8							XX,YY 458
060508SR	0.8	XX,YY 208	XX,YY 208	XX,YY 308	XX,YY 308	XX,YY 408	XX,YY 408	
P		●	●	●	●	○	○	●
M		●	●	●	●	●	●	●
K								
N								
S								
H								
O								

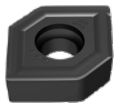
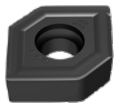
OAKU

		-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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
060508ER	0.8	XX,YY 90801					XX,YY 550	XX,YY 50801
060508SR	0.8		XX,YY 508	XX,YY 508	XX,YY 608	XX,YY 608		
P		●						
M		●						
K			●	●	●	●		
N								
S		○					●	●
H								
O								

15

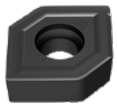
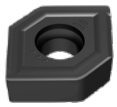
XAHT

▲ Masterfinish indexable insert (wiper 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
060525SR	2.5	XX,YY 275	XX,YY 075	XX,YY 025	XX,YY 125
P		●	●	●	●
M					○
K				○	○
N					
S					
H					
O					

XAHT

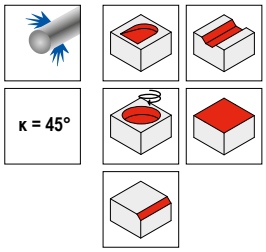
▲ Masterfinish indexable insert (wiper insert)

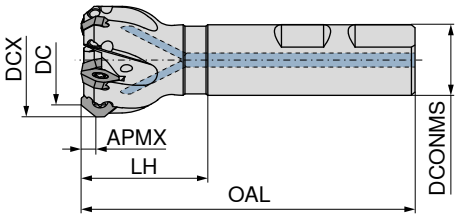
		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-M50 CTCK215	-M50 CTPK220
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XAHT	XAHT	XAHT	XAHT	XAHT
		51 014 ...	51 014 ...	51 014 ...	51 014 ...	51 014 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
060525SR	2.5	XX,YY 225	XX,YY 325	XX,YY 425	XX,YY 525	XX,YY 625
P		●	●	○		
M		●	●	●		
K					●	●
N						
S						
H						
O						

Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 150
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

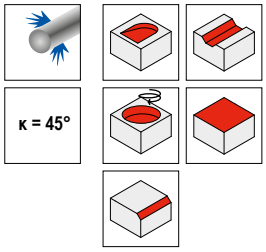
MaxiMill – 270-09 End milling cutter

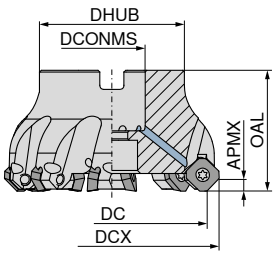




Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	50 666 ... #CU# *PA*	
C270.06.R.01-09	6	14.4	1	4	80	32	16	1,2	SD.. 0903..	XX,YY	**006**
C270.12.R.01-09	12	20.4	1	4	80	32	16	1,2	SD.. 0903..	XX,YY	**012**
C270.16.R.02-09	16	24.4	2	4	90	40	20	1,8	SD.. 0903..	XX,YY	**016**
C270.20.R.03-09	20	28.4	3	4	90	40	20	1,8	SD.. 0903..	XX,YY	**020**
C270.25.R.04-09	25	33.4	4	4	100	44	25	1,8	SD.. 0903..	XX,YY	**025**
C270.32.R.05-09	32	40.4	5	4	95	36	25	1,8	SD.. 0903..	XX,YY	**032**

MaxiMill – 270-09 Shell mill



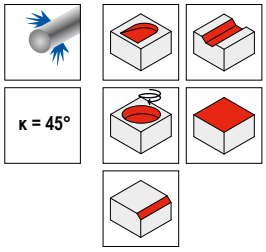


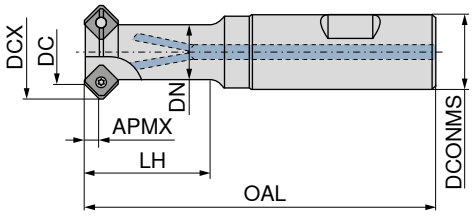
Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	torque moment Nm	Insert	50 705 ... #CU# *PA*		50 706 ... #CU# *PA*	
A270.32.R.05-09	32	40.4	5	4	40	34	16	1,8	SD../XD.. 0903..			XX,YY	**532**
A270.40.R.04-09	40	48.4	4	4	40	38	16	1,8	SD../XD.. 0903..	XX,YY	**540**		
A270.40.R.06-09	40	48.4	6	4	40	38	16	1,8	SD../XD.. 0903..			XX,YY	**540**
A270.50.R.06-09	50	58.4	6	4	40	43	22	1,8	SD../XD.. 0903..	XX,YY	**550**		
A270.50.R.08-09	50	58.4	8	4	40	43	22	1,8	SD../XD.. 0903..			XX,YY	**550**
A270.63.R.08-09	63	71.4	8	4	40	48	22	1,8	SD../XD.. 0903..	XX,YY	**563**		
A270.63.R.10-09	63	71.4	10	4	40	48	22	1,8	SD../XD.. 0903..			XX,YY	**563**
A270.80.R.10-09	80	88.4	10	4	50	58	27	1,8	SD../XD.. 0903..	XX,YY	**580**		
A270.80.R.12-09	80	88.4	12	4	50	58	27	1,8	SD../XD.. 0903..			XX,YY	**580**
A270.100.R.12-09	100	108.4	12	4	50	78	32	1,8	SD../XD.. 0903..	XX,YY	**600**		
A270.100.R.14-09	100	108.4	14	4	50	78	32	1,8	SD../XD.. 0903..			XX,YY	**600**
A270.125.R.12-09	125	133.4	12	4	63	88	40	1,8	SD../XD.. 0903..	XX,YY	**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

MaxiMill – 272-09 Chamfer milling cutter

▲ Usable on front and rear cutting edges





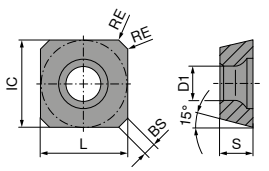
50 669 ...

Designation	DC mm	DCX mm	ZNF	APMX mm	DN mm	OAL mm	LH mm	DCONMS mm	torque moment Nm	Insert	#CU# *PA*	
C272.06.R.01-09	6	14.4	1	4	10	91	24.0	16	1,2	SD.. 0903..	XX,YY	**10600**
C272.08.R.01-09	8	16.4	1	4	10	91	25.5	16	1,2	SD.. 0903..	XX,YY	**008**
C272.12.R.01-09	12	20.4	1	4	12	91	26.0	16	1,2	SD.. 0903..	XX,YY	**012**
C272.16.R.02-09	16	24.4	2	4	15	97	30.0	20	1,8	SD.. 0903..	XX,YY	**016**
C272.18.R.02-09	18	26.4	2	4	16	97	30.0	20	1,8	SD.. 0903..	XX,YY	**018**
C272.25.R.03-09	25	33.4	3	4	21	109	35.0	25	1,8	SD.. 0903..	XX,YY	**025**

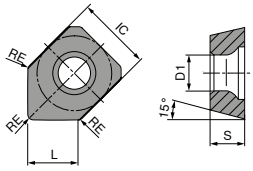
	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts DC	**#CU# *PA***	**#CU# *PA***	**#CU# *PA***	**#CU# *PA***	**#CU# *PA***
6 - 12	XX,YY **033**	XX,YY **110**	XX,YY **303**	XX,YY **365**	XX,YY **191**
16 - 25	XX,YY **033**	XX,YY **110**	XX,YY **303**	XX,YY **115**	XX,YY **191**

SDHW / SDNT / SDHT / XDHW

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDHW 0903..	9.52	3.4	5.50	1.68	3.18
SD.. 0903..	9.52	3.4	9.52	1.68	3.18



SD..

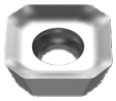


XDHW

SDHW / SDNT / SDHT

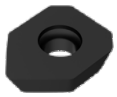
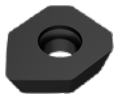
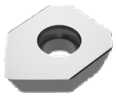
	TCM10	-29 CTCP230	-29 CTPP235	-33 CTPM240	-33P CTPM240	-F50 CTPM245	-F50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
	CERMET SDHW	SDNT	SDNT	SDHT	SDHT	SDHT	SDHT
	50 428 ...	51 011 ...	51 011 ...	51 028 ...	51 086 ...	51 109 ...	51 109 ...
ISO / RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0903AESN 1	XX,YY 898	XX,YY 020	XX,YY 120	XX,YY 420	XX,YY 420	XX,YY 470	XX,YY 92001
P	●	●	●	○	○	●	●
M			○	●	●	●	●
K	○	○	○				
N							
S							○
H							
O							

SDNT / SDHT

			NEW			
	-31 CTCK215	-F10 CTPX715	-27P H216T	-M31 CTC5240	-F50 CTCS245
	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	DRAGONSKIN
					
	SDNT	SDHT	SDHT	SDHT	SDHT
	51 029 ...	51 160 ...	50 426 ...	50 421 ...	51 109 ...
ISO / RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0903AEFN 1		XX,YY 02002	XX,YY 548		
0903AESN 1	XX,YY 520			XX,YY 509	XX,YY 57100
P		○			
M		○			
K	●	●	○		
N		●	●		
S		○		●	●
H					
O		○	○		

XDHW

▲ Masterfinish indexable insert (wiper insert)

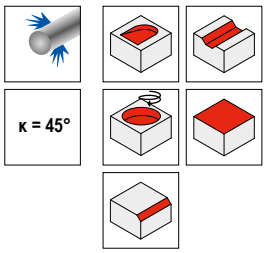
		TCM10	CTCP230	CTPP235	CTCK215	H216T
			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
						
		CERMET XDHW	XDHW	XDHW	XDHW	XDHW
		50 449 ...	**51 015 ...**	**51 015 ...**	**51 015 ...**	**50 449 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0903AEEN	1				XX,YY **520**	
0903AEFN	1					XX,YY **548**
0903AESN	1	XX,YY **898**	XX,YY **020**	XX,YY **120**		
P		●	●	●		
M				○		
K		○	○	○	●	○
N						●
S						
H						
O						○

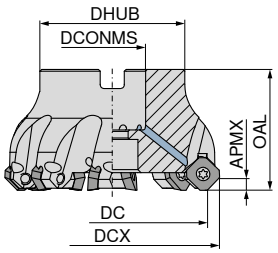
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 151
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

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





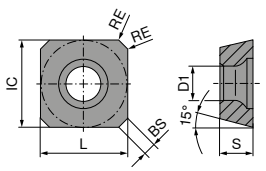
										50 705 ...		50 706 ...	
Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	OAL mm	DHUB mm	torque moment Nm	Insert	#CU# *PA*		#CU# *PA*	
A270.40.R.03-12	40	54	3	6	16	40	38	5	SD../XD.. 1204..	XX,YY	**040**		
A270.40.R.04-12	40	54	4	6	16	40	38	5	SD../XD.. 1204..			XX,YY	**040**
A270.50.R.04-12	50	64	4	6	22	40	43	5	SD../XD.. 1204..	XX,YY	**050**		
A270.50.R.05-12	50	64	5	6	22	40	43	5	SD../XD.. 1204..			XX,YY	**050**
A270.63.R.04-12	63	77	4	6	22	40	48	5	SD../XD.. 1204..	XX,YY	**063**		
A270.63.R.06-12	63	77	6	6	22	40	48	5	SD../XD.. 1204..			XX,YY	**063**
A270.80.R.05-12	80	94	5	6	27	50	58	5	SD../XD.. 1204..	XX,YY	**080**		
A270.80.R.08-12	80	94	8	6	27	50	58	5	SD../XD.. 1204..			XX,YY	**080**
A270.100.R.06-12	100	114	6	6	32	50	78	5	SD../XD.. 1204..	XX,YY	**100**		
A270.100.R.10-12	100	114	10	6	32	50	78	5	SD../XD.. 1204..			XX,YY	**100**
A270.125.R.07-12	125	139	7	6	40	63	88	5	SD../XD.. 1204..	XX,YY	**125**		
A270.125.R.12-12	125	139	12	6	40	63	88	5	SD../XD.. 1204..			XX,YY	**125**
A270.160.R.08-12	160	174	8	6	40	63	94	5	SD../XD.. 1204..	XX,YY	**160** [1)]		

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

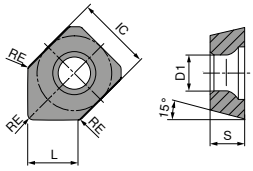
	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts	#CU#		#CU#		#CU#		#CU#		#CU#		#CU#		#CU#	
DC	*PA*		*PA*		*PA*		*PA*		*PA*		*PA*		*PA*	
40	XX,YY	**037**	XX,YY	**040**	XX,YY	**114**	XX,YY	**151**	XX,YY	**303**	XX,YY	**01200**	XX,YY	**193**
50 - 160	XX,YY	**037**			XX,YY	**114**			XX,YY	**303**	XX,YY	**01200**	XX,YY	**193**

SDHT / SDHW / SDMT / XDHW

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDHW 1204..	12.7	5.5	7.5	1.74	4.76
SD.. 1204..	12.7	5.5	12.7	1.74	4.76



SD..



XDHW

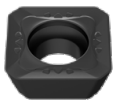
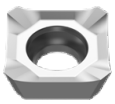
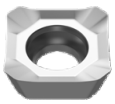
SDHT / SDHW / SDMT

		TCM10	-R TCM10	-29R CTCP230	-R CTCP230	CTCP230
				DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		CERMET SDHT	CERMET SDHW	SDMT	SDHT	SDHW
		50 426 ...	50 428 ...	51 010 ...	51 006 ...	51 008 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204AESN	0.2	XX,YY 900				
1204AESN	1.0		XX,YY 899	XX,YY 020	XX,YY 020	XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204AESN	1	XX,YY 120	XX,YY 120	XX,YY 120	XX,YY 425	XX,YY 475	XX,YY 92501
P		●	●	●	○	●	●
M		○	○	○	●	●	●
K		○	○	○			
N							
S							○
H							
O							

SDMT / SDHW / SDHT

		-31 CTCK215 DRAGONSKIN		-R CTCK215 DRAGONSKIN		-27 H216T		NEW -F10 CTPX715 DRAGONSKIN		-27P H216T		H216T	
													
		SDMT		SDHW		SDHT		SDHT		SDHT		SDHW	
		51 059 ...		51 008 ...		50 426 ...		51 160 ...		50 426 ...		50 428 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
1204AEEN	1.0	XX,YY	520	XX,YY	520								
1204AEFN	0.2					XX,YY	504	XX,YY	02502				
1204AEFN	1.0									XX,YY	554		
1204AESN	0.2											XX,YY	600
P								○					
M								○					
K		●		●		○		●		○		○	
N						●		●		●		●	
S								○					
H													
O						○		○		○		○	

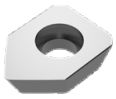
SDHT

		-M31 CTC5240 DRAGONSKIN		-F50 CTCS245 DRAGONSKIN	
					
		SDHT		SDHT	
		50 421 ...		51 109 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*	
1204AESN	1	XX,YY	512	XX,YY	57600
P					
M					
K					
N					
S		●		●	
H					
O					

15

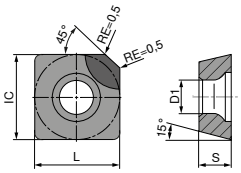
XDHW

▲ Masterfinish indexable insert (wiper 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1204AEEN	1				XX,YY **525**	
1204AEFN	1					XX,YY **600**
1204AESN	1	XX,YY **900**	XX,YY **025**	XX,YY **125**		
P		●	●	●		
M				○		
K		○	○	○	●	○
N						●
S						
H						
O						○

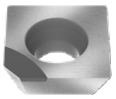
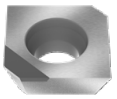
SDHW

Designation	IC mm	D1 mm	L mm	S mm
SDHW 1204..	12.7	5.5	12.7	4.76



SDHW

SDHW

	CTDPS30	CTBS10U
		
	DIAMOND SDHW	**CBN** SDHW
	51 900 ...	**51 900 ...**
ISO	#CU# *PA*	#CU# *PA*
1204AEFN-2	XX,YY **100** [1]	
1204AEFN-3	XX,YY **102** [2]	
1204AETN-2		XX,YY **300** [1]
P		
M		
K		●
N	●	
S		
H		○
O		

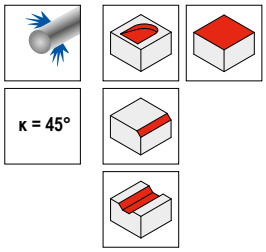
1) $a_{p\,max.}$ = 2.0 mm
2) $a_{p\,max.}$ = 3,5 mm

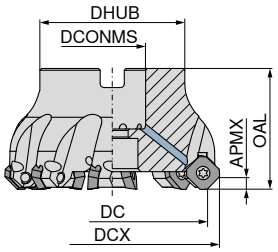
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 151
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

15

MaxiMill – 270-19 Shell mill





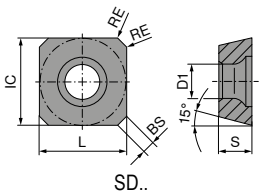
										Left-hand		Right-hand	
										50 698 ...		**50 698 ...**	
Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS H6 mm	OAL mm	DHUB mm	torque moment Nm	Insert	#CU# *PA*		#CU# *PA*	
A270.125.R.07-19	125	146.4	7	10	40	63	88	5	SD.. 1907..			XX,YY	**12507**
A270.160.R.09-19	160	181.4	9	10	40	63	104	5	SD.. 1907..			XX,YY	**16009** [1]
A270.200.R.11-19	200	221.1	11	10	60	63	134	5	SD.. 1907..			XX,YY	**20011** [2]
A270.250.L.14-19	250	271.4	14	10	60	63	134	5	SD.. 1907..	XX,YY	**75014** [2]		
A270.250.R.14-19	250	271.4	14	10	60	63	134	5	SD.. 1907..			XX,YY	**25014** [2]
A270.315.L.17-19	315	336.4	17	10	60	63	226	5	SD.. 1907..	XX,YY	**81517** [4]		
A270.315.R.17-19	315	336.4	17	10	60	63	226	5	SD.. 1907..			XX,YY	**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 screw-driver	
	80 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**	
Spare parts DC	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
125 - 315	XX,YY	**037**	XX,YY	**114**	XX,YY	**303**	XX,YY	**302**	XX,YY	**01500**	XX,YY	**01400**	XX,YY	**193**

SDKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
SDKT 1907..	19.15	6	19.15	1.5	7.15	15



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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
1907AESN	1.6	XX,YY **22001**	XX,YY **07000**	XX,YY **02100**	XX,YY **12000**	XX,YY **12300**	XX,YY **22200**	XX,YY **52000**
P		●	●	●	●	●	●	
M					○	○	●	
K				○	○	○		●
N								
S								
H								
O								

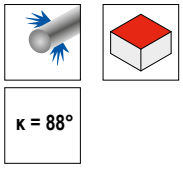
Milling guide

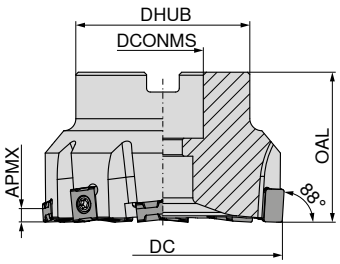
Cutting data standard values	→ 141–144	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

15

MaxiMill – HEC 11 Shell mill

▲ not adjustable





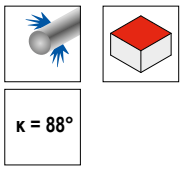
50 725 ...

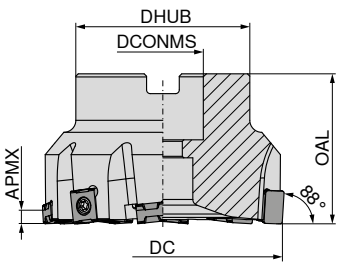
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	#CU# *PA*	
AHEC.50.R.06-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	XX,YY	**050**
AHEC.63.R.08-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	XX,YY	**063**
AHEC.80.R.10-11	80	10	6	50	58	27	8000	3,2	LNHX 1106	XX,YY	**080**
AHEC.100.R.12-11	100	12	6	50	78	32	6400	3,2	LNHX 1106	XX,YY	**100**
AHEC.125.R.12-11	125	12	6	63	88	40	5100	3,2	LNHX 1106	XX,YY	**125**
AHEC.125.R.16-11	125	16	6	63	88	40	5100	3,2	LNHX 1106	XX,YY	**12516**
AHEC.160.R.20-11	160	20	6	63	100	40	4000	3,2	LNHX 1106	XX,YY	**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





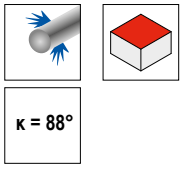
50 733 ...

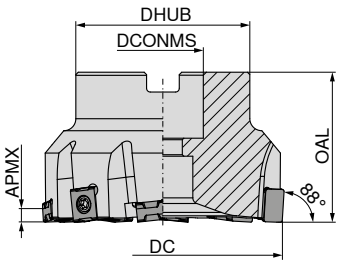
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	#CU# *PA*	
AHEC.50.R.06A03-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	XX,YY	**050**
AHEC.63.R.08A04-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	XX,YY	**063**
AHEC.80.R.10A05-11	80	10	6	50	58	27	8000	3,2	LNHX 1106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





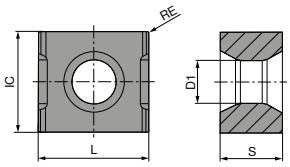
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 733 ... #CU# *PA*	
AHEC.50.R.04B-11	50	4	6	40	48	22	12700	3,2	LNHX 1106	XX,YY	**550**
AHEC.63.R.06B-11	63	6	6	40	48	22	10100	3,2	LNHX 1106	XX,YY	**563**
AHEC.80.R.08B-11	80	8	6	50	58	27	8000	3,2	LNHX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

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

	TORX® blade	 Molykote	 Coolant Disc	 Clamping screw	 Wedge	 Torque screw-driver
	80 950 ...	**70 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts DC	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
50 - 63	XX,YY **036**	XX,YY **303**	XX,YY **852**	XX,YY **113**		XX,YY **193**
80	XX,YY **036**	XX,YY **303**	XX,YY **853**	XX,YY **113**	XX,YY **199**	XX,YY **193**
100	XX,YY **036**	XX,YY **303**	XX,YY **854**	XX,YY **113**		XX,YY **193**
125	XX,YY **036**	XX,YY **303**	XX,YY **855**	XX,YY **113**		XX,YY **193**
160	XX,YY **036**	XX,YY **303**		XX,YY **113**		XX,YY **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 ... #CU# *PA*		CTCK215 DRAGONSKIN LNHX 51 046 ... #CU# *PA*		-R50 CTCK215 DRAGONSKIN LNHX 51 024 ... #CU# *PA*		-Q CTCK215 DRAGONSKIN LNHX 51 045 ... #CU# *PA*	
1106PNER	0.5			XX,YY	520	XX,YY	520		
1106ZZER	0.5							XX,YY	520 [1]
1106PNER	0.8	XX,YY	820						
110616EN	1.6			XX,YY	51600				
P		●							
M									
K		●		●		●		●	
N									
S									
H									
O									

1) -Q = trailing edge insert

LNHX

ISO	RE mm	CTPK220 DRAGONSKIN LNHX 51 046 ... #CU# *PA*		-R50 CTPK220 DRAGONSKIN LNHX 51 024 ... #CU# *PA*		CTN3105 CERAMIC LNHX 50 500 ... #CU# *PA*		CTL3215 CBN LNHX 51 046 ... #CU# *PA*		-Q CTL3215 CBN LNHX 51 045 ... #CU# *PA*	
110608EN	0.8			XX,YY	608						
1106PNER	0.5	XX,YY	620	XX,YY	620						
1106PNSR	0.5					XX,YY	904				
1106PNSR								XX,YY	87200		
1106ZZER										XX,YY	87000 [1]
P											
M											
K		●		●		●		●		●	
N											
S											
H								○		○	
O											

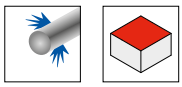
1) -Q = trailing edge insert

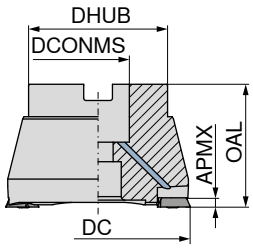
Milling guide

Cutting data standard values	→ 141–144	Assembly instructions	→ 152
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

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 ... #CU# *PA*	
F5000A.42.2.43.IK	42	2	0.2	43	16	35	3,2	TEHX 16T3..	XX,YY	**421**
F5000A.52.2.43.IK	52	2	0.2	43	22	48	3,2	TEHX 16T3..	XX,YY	**521**
F5000A.66.2.53.IK	66	2	0.2	53	27	60	3,2	TEHX 16T3..	XX,YY	**661**
F5000A.80.2.53.IK	80	2	0.2	53	27	60	3,2	TEHX 16T3..	XX,YY	**801**
F5000A.100.2.53	100	2	0.2	53	32	70	3,2	TEHX 16T3..	XX,YY	**910** [1]

1) Without Through Coolant

Spare parts DC	TORX® blade 80 950 ... #CU# *PA*		Key-T 80 950 ... #CU# *PA*		Key D 80 950 ... #CU# *PA*		Power Screw 56 950 ... #CU# *PA*		Axial runout adjustment screw 56 950 ... #CU# *PA*		Molykote 70 950 ... #CU# *PA*		Clamping screw 56 950 ... #CU# *PA*		Torque screwdriver 80 950 ... #CU# *PA*	
42	XX,YY	**036**	XX,YY	**088**	XX,YY	**114**	XX,YY	**121**	XX,YY	**017**	XX,YY	**303**	XX,YY	**028**	XX,YY	**193**
52	XX,YY	**036**	XX,YY	**088**	XX,YY	**113**			XX,YY	**017**	XX,YY	**303**	XX,YY	**028**	XX,YY	**193**
66	XX,YY	**036**	XX,YY	**088**	XX,YY	**113**			XX,YY	**017**	XX,YY	**303**	XX,YY	**028**	XX,YY	**193**
80	XX,YY	**036**	XX,YY	**088**	XX,YY	**113**			XX,YY	**017**	XX,YY	**303**	XX,YY	**028**	XX,YY	**193**
100	XX,YY	**036**	XX,YY	**088**	XX,YY	**113**	XX,YY	**121**	XX,YY	**017**	XX,YY	**303**	XX,YY	**028**	XX,YY	**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.

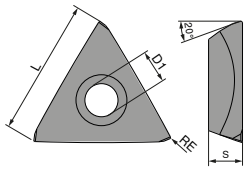
The screws for the adjustment of the axial run-out are mounted on every milling cutter and have to be tightened to a preset value. Otherwise there is the danger that the screws loosen during the machining operation. This can result in damage of the workpiece or tool and also cause danger for the machine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

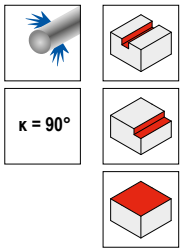
56 327 ...

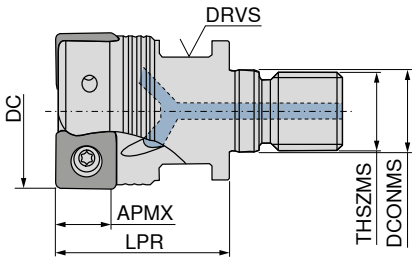
ISO	RE mm	#CU# *PA*	
16T3ZF	0.2	XX,YY	**151**
P			●
M			●
K			●
N			
S			
H			●
O			

Milling guide

Cutting data standard values	→ 141–144	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

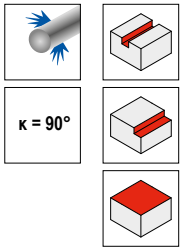
MaxiMill – 491-09 Screw in cutter

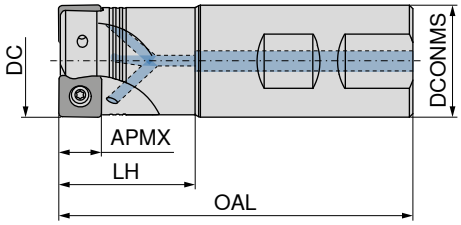




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 773 ... #CU# *PA*	
G491.25.R.03-09	25	3	6	35	M12	12.5	17	2	SNHU 09T3	XX,YY	125
G491.32.R.03-09	32	3	6	35	M16	17.0	24	2	SNHU 09T3	XX,YY	132
G491.32.R.04-09	32	4	6	35	M16	17.0	24	2	SNHU 09T3	XX,YY	232

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 ... #CU# *PA*		50 774 ... #CU# *PA*	
C491.25.R.03-09-B-32	25	3	6	89	32	25	23500	2	SNHU 09T3			XX,YY	425
C491.25.R.03-09-A-50-225	25	3	6	225	50	25	23500	2	SNHU 09T3	XX,YY	325		
C491.32.R.03-09-B-40	32	3	6	101	40	32	19600	2	SNHU 09T3			XX,YY	632
C491.32.R.04-09-B-40	32	4	6	101	40	32	19600	2	SNHU 09T3			XX,YY	432
C491.32.R.03-09-A-63-250	32	3	6	250	63	32	19600	2	SNHU 09T3	XX,YY	532		
C491.32.R.04-09-A-63-250	32	4	6	250	63	32	19600	2	SNHU 09T3	XX,YY	332		

TORX® blade


Key D


Molykote

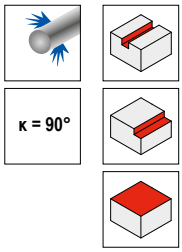

Clamping screw

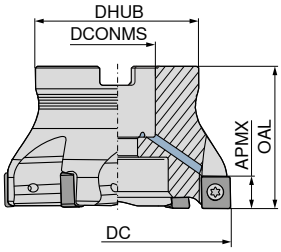

Torque screw-driver

Spare parts DC	TORX® blade 80 950 ... #CU# *PA*		Key D 80 950 ... #CU# *PA*		Molykote 70 950 ... #CU# *PA*		Clamping screw 70 950 ... #CU# *PA*		Torque screw-driver 80 950 ... #CU# *PA*	
25 - 32	XX,YY	053	XX,YY	119	XX,YY	303	XX,YY	710	XX,YY	193
32	XX,YY	054	XX,YY	128	XX,YY	303	XX,YY	859	XX,YY	193

15

MaxiMill – 491-09 Shell mill



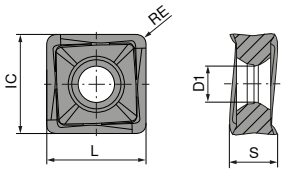


Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 776 ... #CU# *PA*		50 775 ... #CU# *PA*	
A491.40.R.03-09	40	3	6	40	38	16	16800	2	SNHU 09T3			XX,YY	240
A491.40.R.05-09	40	5	6	40	38	16	16800	2	SNHU 09T3	XX,YY	240		
A491.50.R.04-09	50	4	6	40	43	22	14600	2	SNHU 09T3			XX,YY	250
A491.50.R.06-09	50	6	6	40	43	22	14600	2	SNHU 09T3	XX,YY	250		
A491.63.R.05-09	63	5	6	40	48	22	12700	2	SNHU 09T3			XX,YY	263
A491.63.R.08-09	63	8	6	40	48	22	12700	2	SNHU 09T3	XX,YY	263		
A491.80.R.06-09	80	6	6	50	58	27	11100	2	SNHU 09T3			XX,YY	280
A491.80.R.10-09	80	10	6	50	58	27	11100	2	SNHU 09T3	XX,YY	280		
A491.100.R.07-09	100	7	6	50	78	32	9800	2	SNHU 09T3			XX,YY	300
A491.100.R.12-09	100	12	6	50	78	32	9800	2	SNHU 09T3	XX,YY	300		
A491.125.R.08-09	125	8	6	63	88	40	8700	2	SNHU 09T3			XX,YY	325
A491.125.R.15-09	125	15	6	63	88	40	8700	2	SNHU 09T3	XX,YY	325		

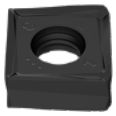
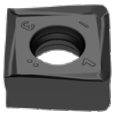
	TORX® blade		Clamping key – T		Key D		 Power Screw		 Molykote		 Clamping screw		Torque screw-driver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts	#CU#		#CU#		#CU#		#CU#		#CU#		#CU#		#CU#	
DC	*PA*		*PA*		*PA*		*PA*		*PA*		*PA*		*PA*	
40	XX,YY	053	XX,YY	040	XX,YY	119	XX,YY	151	XX,YY	303	XX,YY	710	XX,YY	193
50 - 125	XX,YY	053			XX,YY	119			XX,YY	303	XX,YY	710	XX,YY	193

SNHU

Designation	IC mm	L mm	S mm	D1 mm
SNHU 09T3..	9.15	9.15	3.70	3.85

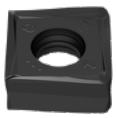


SNHU

		-M50 CTCP230	-M50 CTPP235	-F50 CTPM240	-M50 CTPM240	-F40 CTPM245	-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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
09T308ER	0.8					XX,YY 45800	XX,YY 90801
09T308SR	0.8	XX,YY 008	XX,YY 108	XX,YY 408	XX,YY 408		
09T312SR	1.2	XX,YY 01200	XX,YY 11200	XX,YY 41200	XX,YY 41200		
09T316SR	1.6	XX,YY 01600	XX,YY 11600	XX,YY 41600	XX,YY 41600		
P		●	●	○	○	●	●
M			○	●	●	●	●
K		○	○				
N							
S							○
H							
O							

SNHU

NEW

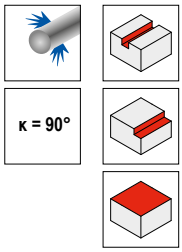
		-R50 CTCK215	-R50 CTPK220	-F10 CTPX715	-F10 CTWN215	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	DRAGONSKIN
							
		SNHU	SNHU	SNHU	SNHU	SNHU	SNHU
		51 121 ...	51 121 ...	51 118 ...	51 118 ...	51 126 ...	51 126 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
09T308ER	0.8					XX,YY 15800	XX,YY 55800
09T308FR	0.8			XX,YY 00802	XX,YY 358		
09T308SR	0.8	XX,YY 508	XX,YY 60800				
09T312FR	1.2				XX,YY 36200		
09T312SR	1.2	XX,YY 51200					
09T316FR	1.6				XX,YY 36600		
09T316SR	1.6	XX,YY 51600					
P				○			
M				○			
K		●	●	●	○		
N				●	●		
S				○		●	●
H							
O				○	○		

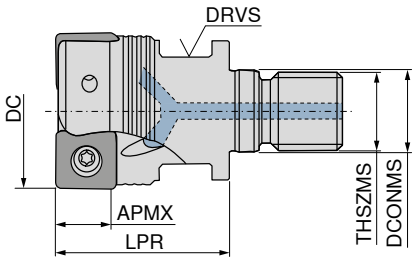
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 154
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

15

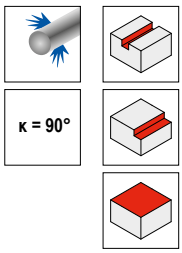
MaxiMill – 491-12 Screw in cutter

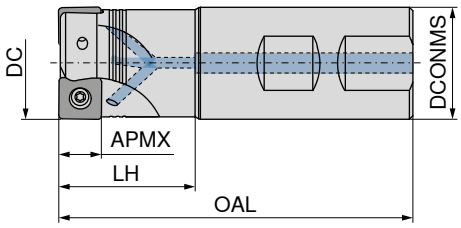




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 773 ... #CU# *PA*	
G491.32.R.02-12	32	2	8	35	M16	17	24	3,2	SNHU 1204	XX,YY	**032**

MaxiMill – 491-12 End milling cutter

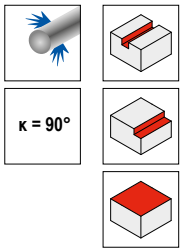


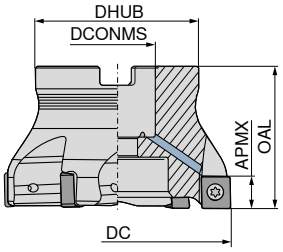


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 774 ... #CU# *PA*		50 774 ... #CU# *PA*	
C491.32.R.02-12-B-40	32	2	8	102	40	32	13600	3,2	SNHU 1204			XX,YY	**032**
C491.32.R.02-12-A-63-250	32	2	8	250	63	32	10200	3,2	SNHU 1204	XX,YY	**232**		

Spare parts DC	TORX® blade 80 950 ... #CU# *PA*		Key D 80 950 ... #CU# *PA*		Molykote 70 950 ... #CU# *PA*		Clamping screw 70 950 ... #CU# *PA*		Torque screw-driver 80 950 ... #CU# *PA*	
25 - 32	XX,YY	**053**	XX,YY	**119**	XX,YY	**303**	XX,YY	**710**	XX,YY	**193**
32	XX,YY	**054**	XX,YY	**128**	XX,YY	**303**	XX,YY	**859**	XX,YY	**193**

MaxiMill – 491-12 Shell mill





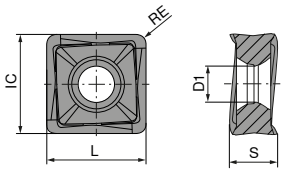
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 776 ... #CU# *PA*		50 775 ... #CU# *PA*	
A491.40.R.03-12	40	3	8	40	38	16	11500	3,2	SNHU 1204			XX,YY	**040**
A491.40.R.04-12	40	4	8	40	38	16	11500	3,2	SNHU 1204	XX,YY	**040**		
A491.50.R.04-12	50	4	8	40	43	22	9800	3,2	SNHU 1204			XX,YY	**050**
A491.50.R.05-12	50	5	8	40	43	22	9800	3,2	SNHU 1204	XX,YY	**050**		
A491.63.R.05-12	63	5	8	40	48	22	8500	3,2	SNHU 1204			XX,YY	**063**
A491.63.R.06-12	63	6	8	40	48	22	8500	3,2	SNHU 1204	XX,YY	**063**		
A491.80.R.06-12	80	6	8	50	58	27	7400	3,2	SNHU 1204			XX,YY	**080**
A491.80.R.08-12	80	8	8	50	58	27	7400	3,2	SNHU 1204	XX,YY	**080**		
A491.100.R.07-12	100	7	8	50	78	32	6500	3,2	SNHU 1204			XX,YY	**100**
A491.100.R.10-12	100	10	8	50	78	32	6500	3,2	SNHU 1204	XX,YY	**100**		
A491.125.R.08-12	125	8	8	63	88	40	5700	3,2	SNHU 1204			XX,YY	**125**
A491.125.R.12-12	125	12	8	63	88	40	5700	3,2	SNHU 1204	XX,YY	**125**		
A491.160.R.09-12	160	9	8	63	98	40	5000	3,2	SNHU 1204			XX,YY	**160** [1]
A491.160.R.14-12	160	14	8	63	98	40	5000	3,2	SNHU 1204	XX,YY	**160** [1]		

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

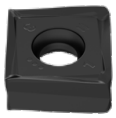
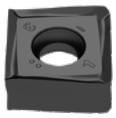
Spare parts DC	TORX® blade 80 950 ... #CU# *PA*		 Clamping key – T 80 397 ... #CU# *PA*		 Key D 80 950 ... #CU# *PA*		 Power Screw 70 950 ... #CU# *PA*		 Molykote 70 950 ... #CU# *PA*		 Clamping screw 70 950 ... #CU# *PA*		 Torque screw-driver 80 950 ... #CU# *PA*	
40	XX,YY	**054**	XX,YY	**040**	XX,YY	**128**	XX,YY	**151**	XX,YY	**303**	XX,YY	**859**	XX,YY	**193**
50 - 160	XX,YY	**054**			XX,YY	**128**			XX,YY	**303**	XX,YY	**859**	XX,YY	**193**

SNHU

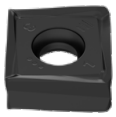
Designation	IC mm	L mm	S mm	D1 mm
SNHU 1204..	12.2	12.2	5.00	4.4



SNHU

		-M50 CTCP230		-M50 CTPP235		-F50 CTPM240		-M50 CTPM240		-F40 CTPM245		-F40 CTCM245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
													
		SNHU		SNHU		SNHU		SNHU		SNHU		SNHU	
		51 100 ...		51 100 ...		51 102 ...		51 100 ...		51 128 ...		51 128 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
120408ER	0.8									XX,YY	45800	XX,YY	90801
120408SR	0.8	XX,YY	008	XX,YY	108	XX,YY	408	XX,YY	408				
120412SR	1.2			XX,YY	112	XX,YY	412						
120416SR	1.6			XX,YY	116	XX,YY	416						
120420SR	2.0			XX,YY	120	XX,YY	420						
P		●		●		○		○		●		●	
M				○		●		●		●		●	
K		○		○									
N													
S												○	
H													
O													

SNHU

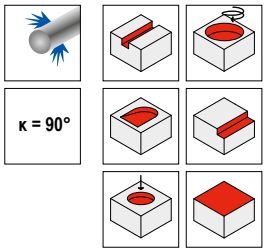
		NEW					
		-R50 CTCK215	**-R50** CTPK220	**-F10** CTPX715	**-F10** CTWN215	**-F40** CTC5240	**-F40** CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	DRAGONSKIN
							
		SNHU	SNHU	SNHU	SNHU	SNHU	SNHU
		51 103 ...	**51 103 ...**	**51 101 ...**	**51 101 ...**	**51 128 ...**	**51 128 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
120408ER	0.8					XX,YY **15800**	XX,YY **55800**
120408FR	0.8			XX,YY **00802**	XX,YY **358**		
120408SR	0.8	XX,YY **508**	XX,YY **608**				
120412FR	1.2				XX,YY **362**		
120412SR	1.2	XX,YY **512**					
120416FR	1.6				XX,YY **366**		
120416SR	1.6	XX,YY **516**					
120420FR	2.0				XX,YY **370**		
120420SR	2.0	XX,YY **520**					
P				○			
M				○			
K		●	●	●	○		
N				●	●		
S				○		●	●
H							
O				○	○		

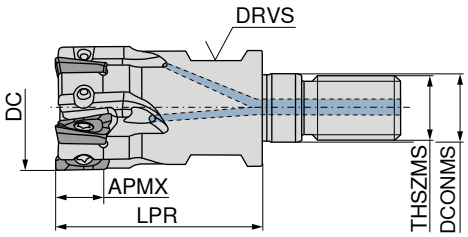
Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 154
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

15

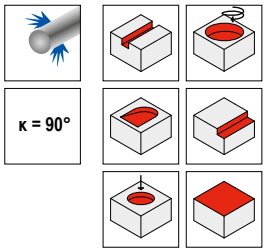
MaxiMill – 211-07 Screw in cutter

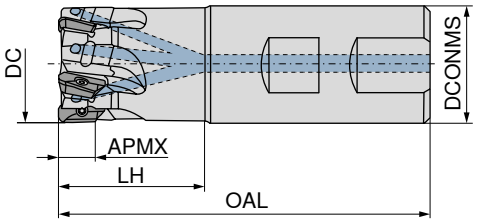




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 751 ... #CU# *PA*	
G211.16.R.04-07	16	4	6	27	8.5	M8	10	50400	1	XD.T 0703	XX,YY	**016**
G211.20.R.05-07	20	5	6	33	10.5	M10	15	44280	1	XD.T 0703	XX,YY	**020**
G211.25.R.06-07	25	6	6	35	12.5	M12	17	39480	1	XD.T 0703	XX,YY	**025**
G211.32.R.08-07	32	8	6	35	17.0	M16	24	36240	1	XD.T 0703	XX,YY	**032**

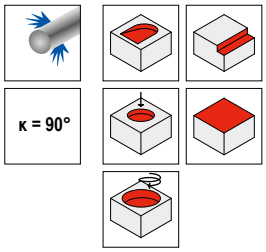
MaxiMill – 211-07 End milling cutter

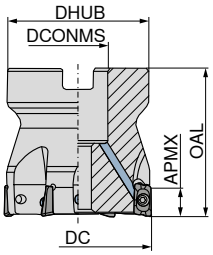




Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	torque moment Nm	Insert	50 752 ... #CU# *PA*		50 752 ... #CU# *PA*	
C211.10.R.01-07-A-20	10	1	6	61.0	20	10	72000	1	XD.T 0703	XX,YY	**010**		
C211.12.R.02-07-A-20	12	2	6	66.5	20	12	66600	1	XD.T 0703	XX,YY	**012**		
C211.16.R.04-07-A/B-25	16	4	6	74.5	25	16	50400	1	XD.T 0703	XX,YY	**016**	XX,YY	**216**
C211.16.R.03-07-A-32-165	16	3	6	165.0	32	16	17760	1	XD.T 0703	XX,YY	**116**		
C211.20.R.05-07-A/B-25	20	5	6	77.0	25	20	44280	1	XD.T 0703	XX,YY	**020**	XX,YY	**220**
C211.20.R.04-07-A-40-200	20	4	6	200.0	40	20	12600	1	XD.T 0703	XX,YY	**120**		
C211.25.R.06-07-A/B20-32	25	6	6	84.0	32	20	39840	1	XD.T 0703	XX,YY	**025**	XX,YY	**225**
C211.25.R.05-07-A20-50-225	25	5	6	225.0	50	20	11280	1	XD.T 0703	XX,YY	**125**		
C211.32.R.08-07-A/B25-40	32	8	6	98.0	40	25	36240	1	XD.T 0703	XX,YY	**032**	XX,YY	**232**

MaxiMill – 211-07 Shell mill



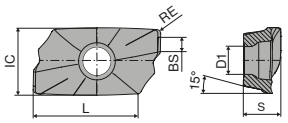


										50 753 ...		**50 754 ...**		
Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	#CU# *PA*		#CU# *PA*		
A211.32.R.06-07	32	6	6	40	16	38	36240	1	XD.T 0703	XX,YY	**032**			
A211.32.R.08-07	32	8	6	40	16	38	36240	1	XD.T 0703			XX,YY	**032**	
A211.40.R.08-07	40	8	6	40	16	38	33240	1	XD.T 0703	XX,YY	**040**			
A211.40.R.10-07	40	10	6	40	16	38	33240	1	XD.T 0703			XX,YY	**040**	
A211.50.R.10-07	50	10	6	40	22	43	30480	1	XD.T 0703	XX,YY	**050**			
A211.50.R.12-07	50	12	6	40	22	43	30480	1	XD.T 0703			XX,YY	**050**	

	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts DC	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
10 - 32	XX,YY	**051**			XX,YY	**124**			XX,YY	**303**	XX,YY	**137**	XX,YY	**191**
32	XX,YY	**051**	XX,YY	**040**	XX,YY	**124**	XX,YY	**151**	XX,YY	**303**	XX,YY	**137**	XX,YY	**191**
40 - 50	XX,YY	**051**			XX,YY	**124**			XX,YY	**303**	XX,YY	**137**	XX,YY	**191**

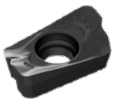
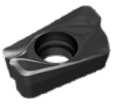
XDKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDKT 0703..	4.9	2.5	7.8	1.2	3.18

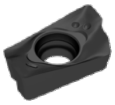


XDKT

XDKT

		-F50 CTCP230 DRAGONSKIN		-M50 CTCP230 DRAGONSKIN		-F50 CTPP235 DRAGONSKIN		-M50 CTPP235 DRAGONSKIN	
		 XDKT		 XDKT		 XDKT		 XDKT	
		51 033 ...		51 036 ...		51 033 ...		51 036 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
070304SR	0.4	XX,YY	004	XX,YY	004	XX,YY	104	XX,YY	104
070308SR	0.8	XX,YY	008	XX,YY	008	XX,YY	108	XX,YY	108
P			●		●		●		●
M							○		○
K			○		○		○		○
N									
S									
H									
O									

XDKT

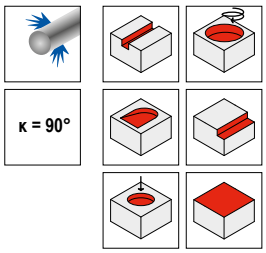
		-F50 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN		-F40 CTPM245 DRAGONSKIN		-F40 CTCM245 DRAGONSKIN		-F20 CTWN215		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN	
		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT	
		51 033 ...		51 036 ...		51 112 ...		51 112 ...		50 507 ...		50 498 ...		51 112 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
070304ER	0.4					XX,YY	454	XX,YY	90401			XX,YY	544		
070304FR	0.4									XX,YY	504				
070304SR	0.4	XX,YY	404	XX,YY	404										
070308ER	0.8					XX,YY	458	XX,YY	90801			XX,YY	548	XX,YY	558
070308FR	0.8									XX,YY	508				
070308SR	0.8	XX,YY	408	XX,YY	408										
P			○		○		●		●						
M			●		●		●		●						
K											○				
N											●				
S									○				●		●
H															
O											○				

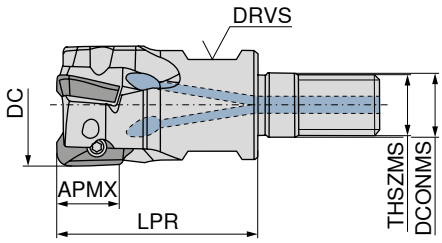
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 155
Starting Parameter	→ 155	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

MaxiMill – 211-11 Screw in cutter

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

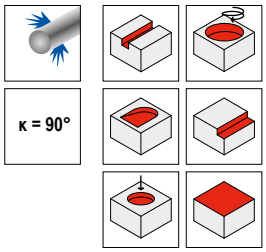


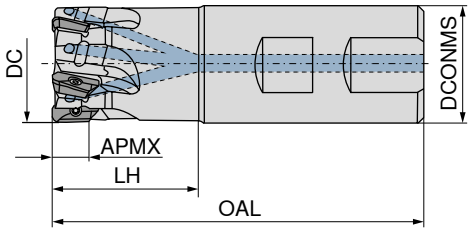


Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 736 ... #CU# *PA*	
G211.16.R.02-11	16	2	10	27	8.5	M8	10	42000	1,6	XD.T 11T3	XX,YY	016
G211.20.R.03-11	20	3	10	33	10.5	M10	15	36900	1,6	XD.T 11T3	XX,YY	020
G211.25.R.03-11	25	3	10	35	12.5	M12	17	33200	1,6	XD.T 11T3	XX,YY	12500
G211.25.R.04-11	25	4	10	35	12.5	M12	17	33200	1,6	XD.T 11T3	XX,YY	025
G211.32.R.04-11	32	4	10	35	17.0	M16	24	30200	1,6	XD.T 11T3	XX,YY	13200
G211.32.R.05-11	32	5	10	35	17.0	M16	24	30200	1,6	XD.T 11T3	XX,YY	032
G211.40.R.06-11	40	6	10	35	17.0	M16	27	27700	1,6	XD.T 11T3	XX,YY	040

MaxiMill – 211-11 End milling cutter

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

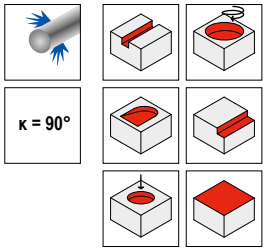


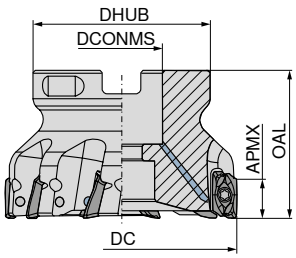


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	torque moment Nm	Insert	50 737 ... #CU# *PA*		50 737 ... #CU# *PA*	
C211.12.R.01-11-B-20	12	1	10	75	20	16	55000	1,6	XD.T 11T3			XX,YY	012
C211.16.R.02-11-A/B-25	16	2	10	75	25	16	42000	1,6	XD.T 11T3	XX,YY	116	XX,YY	016
C211.16.R.02-11-A15-32-165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

MaxiMill – 211-11 Shell mill

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



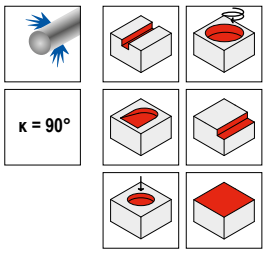


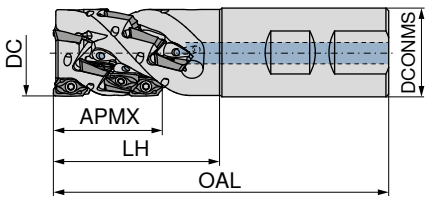
Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 738 ... #CU# *PA*		50 739 ... #CU# *PA*	
A211.40.R.04-11	40	4	10	40	16	38	27700	1,6	XD.T 11T3	XX,YY	**040**		
A211.40.R.06-11	40	6	10	40	16	38	27700	1,6	XD.T 11T3			XX,YY	**040**
A211.50.R.05-11	50	5	10	40	22	43	25400	1,6	XD.T 11T3	XX,YY	**050**		
A211.50.R.08-11	50	8	10	40	22	43	25400	1,6	XD.T 11T3			XX,YY	**050**
A211.63.R.06-11	63	6	10	40	22	48	23300	1,6	XD.T 11T3	XX,YY	**063**		
A211.63.R.10-11	63	10	10	40	22	48	23300	1,6	XD.T 11T3			XX,YY	**063**
A211.80.R.07-11	80	7	10	50	27	58	21300	1,6	XD.T 11T3	XX,YY	**080**		
A211.80.R.10-11	80	10	10	50	27	58	21300	1,6	XD.T 11T3			XX,YY	**180**
A211.80.R.12-11	80	12	10	50	27	58	21300	1,6	XD.T 11T3			XX,YY	**08012**
A211.100.R.08-11	100	8	10	50	32	78	19600	1,6	XD.T 11T3	XX,YY	**10000**		
A211.100.R.14-11	100	14	10	50	32	78	19600	1,6	XD.T 11T3			XX,YY	**10014**
A211.125.R.10-11	125	10	10	63	40	88	17900	1,6	XD.T 11T3	XX,YY	**12500**		

	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts DC	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
12	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**92000**	XX,YY	**191**
16 - 32	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**128**	XX,YY	**191**
40	XX,YY	**043**	XX,YY	**040**	XX,YY	**125**	XX,YY	**151**	XX,YY	**303**	XX,YY	**131**	XX,YY	**191**
50	XX,YY	**043**	XX,YY	**050**	XX,YY	**125**	XX,YY	**154**	XX,YY	**303**	XX,YY	**131**	XX,YY	**191**
63 - 125	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**131**	XX,YY	**191**

MaxiMill – 211-11KN shell end mill shank

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

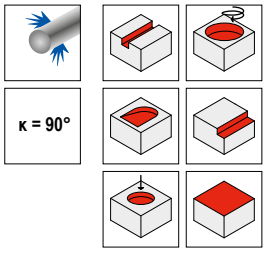


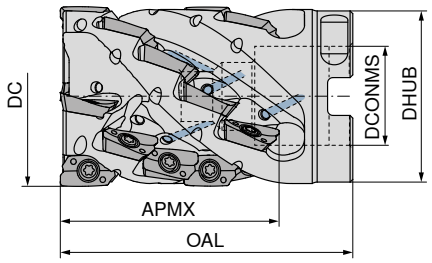


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	50 784 ... #CU# *PA*	
C211.25	25	2	28	97	40	25	6	3	1,6	XD.T 11T3	XX,YY	**02523**
C211.25	25	2	37	107	50	25	8	4	1,6	XD.T 11T3	XX,YY	**02524**
C211.25	25	2	46	117	60	25	10	5	1,6	XD.T 11T3	XX,YY	**02525**
C211.32	32	2	37	111	50	32	8	4	1,6	XD.T 11T3	XX,YY	**03224**
C211.32	32	3	46	121	60	32	15	5	1,6	XD.T 11T3	XX,YY	**03235**
C211.40	40	3	37	111	50	32	12	4	1,6	XD.T 11T3	XX,YY	**04034**
C211.40	40	4	46	121	60	32	20	5	1,6	XD.T 11T3	XX,YY	**04045**

MaxiMill – 211-11KN shell end face mill

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





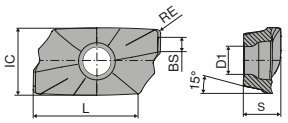
Designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	torque moment Nm	Insert	50 794 ... #CU# *PA*	
A211.40. KN4	40	3	37	12	4	65	22	38	1,6	XD.T 11T3	XX,YY	**04034**
A211.40. KN4	40	4	37	16	4	65	22	38	1,6	XD.T 11T3	XX,YY	**04044**
A211.40. KN5	40	4	46	20	5	74	22	38	1,6	XD.T 11T3	XX,YY	**04045**
A211.50. KN5	50	4	46	20	5	75	27	48	1,6	XD.T 11T3	XX,YY	**05045**
A211.50. KN5	50	5	46	25	5	75	27	48	1,6	XD.T 11T3	XX,YY	**05055**
A211.50. KN6	50	5	55	30	6	85	27	48	1,6	XD.T 11T3	XX,YY	**05056**

	 Cylindrical screw		TORX® blade		Key D		 Molykote		 Clamping screw		 Socket head screw		 Torque screw-driver	
	70 950 ...		**80 950 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts Designation	**#CU# *PA***		**#CU# *PA***		**#CU# *PA***		**#CU# *PA***		**#CU# *PA***		**#CU# *PA***		**#CU# *PA***	
A211.40. KN4			XX,YY	**043**	XX,YY	**125**	XX,YY	**303**	XX,YY	**20400**	XX,YY	**20900**	XX,YY	**191**
A211.40. KN5			XX,YY	**043**	XX,YY	**125**	XX,YY	**303**	XX,YY	**20400**	XX,YY	**21000**	XX,YY	**191**
A211.50. KN5	XX,YY	**002**	XX,YY	**043**	XX,YY	**125**	XX,YY	**303**	XX,YY	**20400**	XX,YY	**20600**	XX,YY	**191**
A211.50. KN6	XX,YY	**002**	XX,YY	**043**	XX,YY	**125**	XX,YY	**303**	XX,YY	**20400**	XX,YY	**20600**	XX,YY	**191**
C211.25			XX,YY	**043**	XX,YY	**125**	XX,YY	**303**	XX,YY	**20700**			XX,YY	**191**
C211.32			XX,YY	**043**	XX,YY	**125**	XX,YY	**303**	XX,YY	**20700**			XX,YY	**191**
C211.40			XX,YY	**043**	XX,YY	**125**	XX,YY	**303**	XX,YY	**20400**			XX,YY	**191**

15

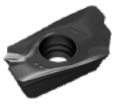
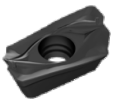
XDKT / XDHT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XD.T 11T302..	6.8	2.8	10.6	2	3.80
XD.T 11T304..	6.8	2.8	10.6	1.8	3.80
XD.T 11T308..	6.8	2.8	10.6	1.4	3.80
XD.T 11T312..	6.8	2.8	10.6	1.4	3.80
XD.T 11T316..	6.8	2.8	10.6	1.4	3.80
XD.T 11T320..	6.8	2.8	10.6	1.4	3.80
XD.T 11T325..	6.8	2.8	10.6	1.4	3.80
XD.T 11T332..	6.8	2.8	10.6	0.8	3.80
XD.T 11T340..	6.8	2.8	10.6	-	3.80
XDHT 11T350..	6.8	2.8	10.6	-	3.80
XDKT 11T332..	6.8	2.8	10.6	1.4	3.80

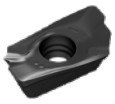
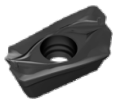
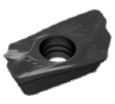


XDKT

XDKT

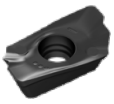
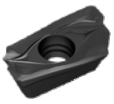
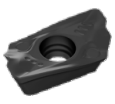
ISO	RE mm	-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 034 ...	51 037 ...
		#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
11T308SR	0.8	XX,YY 258	XX,YY 258	XX,YY 058	XX,YY 058
P		●	●	●	●
M					
K					
N					
S					
H					
O					

XDKT

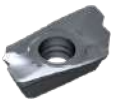
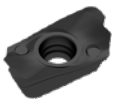
ISO	RE mm	-F50 CTCP230	-M50 CTCP230	-R50 CTCP230	-F50 CTPP235	-M50 CTPP235	-R50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 039 ...	51 034 ...	51 037 ...	51 039 ...
		#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
11T304SR	0.4	XX,YY 004	XX,YY 004	XX,YY 004	XX,YY 104	XX,YY 104	XX,YY 104
11T308SR	0.8	XX,YY 008	XX,YY 008	XX,YY 008	XX,YY 108	XX,YY 108	XX,YY 108
11T312SR	1.2		XX,YY 012			XX,YY 112	
11T320SR	2.0	XX,YY 020 1)	XX,YY 020 1)	XX,YY 020 1)	XX,YY 120 1)	XX,YY 120 1)	XX,YY 120 1)
11T325SR	2.5	XX,YY 025 1)	XX,YY 025 1)	XX,YY 025 1)	XX,YY 125 1)	XX,YY 125 1)	XX,YY 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
							
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 039 ...	51 034 ...	51 037 ...	51 039 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
11T308SR	0.8	XX,YY 208	XX,YY 208	XX,YY 208	XX,YY 308	XX,YY 308	XX,YY 308
P		●	●	●	●	●	●
M		●	●	●	●	●	●
K							
N							
S							
H							
O							

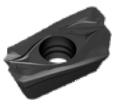
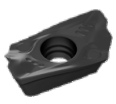
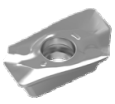
XDKT

		-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-R50 CTPM240 DRAGONSKIN	-F40 CTPM245 DRAGONSKIN	-F50 CTPM245 DRAGONSKIN	-F40 CTCM245 DRAGONSKIN	-F50 CTCM245 DRAGONSKIN
								
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 039 ...	51 113 ...	51 034 ...	51 113 ...	51 034 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
11T304ER	0.4				XX,YY 454		XX,YY 90401	
11T304SR	0.4		XX,YY 404					
11T308ER	0.8				XX,YY 458		XX,YY 90801	
11T308SR	0.8	XX,YY 408	XX,YY 408	XX,YY 408		XX,YY 458		XX,YY 90801
11T312ER	1.2				XX,YY 462		XX,YY 91201	
11T312SR	1.2	XX,YY 412	XX,YY 412	XX,YY 412				
11T316ER	1.6				XX,YY 466		XX,YY 91601	
11T320ER	2.0				XX,YY 470 1)		XX,YY 92001 1)	
11T320SR	2.0	XX,YY 420 1)	XX,YY 420 1)	XX,YY 420 1)				
11T325ER	2.5				XX,YY 475 1)		XX,YY 92501 1)	
11T332ER	3.2				XX,YY 482 1)		XX,YY 93201 1)	
11T332SR	3.2	XX,YY 432 1)	XX,YY 432 1)	XX,YY 432 1)				
11T340ER	4.0				XX,YY 490 1)		XX,YY 94001 1)	
P		○	○	○	●	●	●	●
M		●	●	●	●	●	●	●
K								
N								
S							○	○
H								
O								

1) Insert radius >1.6 mm: Modify cutter body

15

XDKT / XDHT

		-M50 CTCK215	-R50 CTCK215	-M50 CTPK220	-F20 CTWN215	NEW -F10 CTPX715	-27P H216T
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	
							
		XDKT	XDKT	XDKT	XDKT	XDHT	XDHT
		51 037 ...	51 039 ...	51 037 ...	50 478 ...	51 155 ...	50 477 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
11T302FR	0.2				XX,YY 502	XX,YY 00202	XX,YY 502
11T304FR	0.4				XX,YY 504	XX,YY 00402	XX,YY 504
11T304SR	0.4	XX,YY 504					
11T308FR	0.8				XX,YY 508	XX,YY 00802	XX,YY 508
11T308SR	0.8	XX,YY 508	XX,YY 508	XX,YY 608			
11T312FR	1.2					XX,YY 01202	XX,YY 512
11T316FR	1.6					XX,YY 01602	XX,YY 516
11T320FR	2.0				XX,YY 520 1)	XX,YY 02002 1)	XX,YY 520 1)
11T325FR	2.5				XX,YY 525 1)	XX,YY 02502 1)	XX,YY 525 1)
11T332FR	3.2					XX,YY 03202 1)	XX,YY 532 1)
11T340FR	4.0					XX,YY 04002 1)	XX,YY 540 1)
11T350FR	5.0					XX,YY 05002 1)	XX,YY 550 1)
P						○	
M						○	
K		●	●	●	○	●	○
N					●	●	●
S						○	
H							
O					○	○	○

1) Insert radius >1.6 mm: Modify cutter body

XDKT

		-F40 CTC5240	-F40 CTCS245	-R60 CTP6215
		DRAGONSKIN	DRAGONSKIN	
				
		XDKT	XDKT	XDKT
		50 463 ...	51 113 ...	50 464 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*
11T304ER	0.4	XX,YY 504		
11T308ER	0.8	XX,YY 500	XX,YY 558	
11T308SR	0.8			XX,YY 300
11T312ER	1.2	XX,YY 512	XX,YY 562	
11T316ER	1.6	XX,YY 516	XX,YY 566	
11T320ER	2.0	XX,YY 520 1)	XX,YY 570	
11T325ER	2.5	XX,YY 525 1)	XX,YY 57500 1)	
11T332ER	3.2	XX,YY 532 1)	XX,YY 582	
11T340ER	4.0	XX,YY 540 1)	XX,YY 59000 1)	
P				
M				
K				●
N				
S		●	●	
H				●
O				

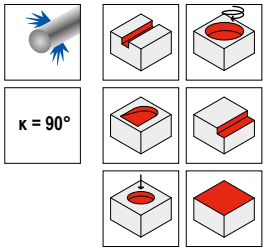
1) Insert radius >1.6 mm: Modify cutter body

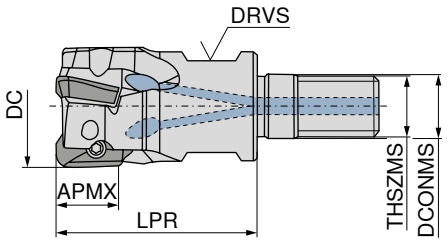
Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 156
Starting Parameter	→ 156	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

MaxiMill – 211-15 Screw in cutter

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

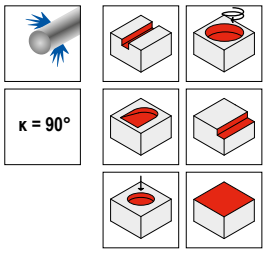


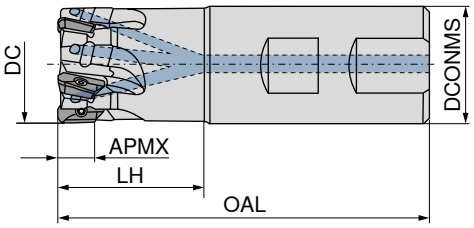


Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 746 ... #CU# *PA*	
G211.25.R.02-15	25	2	14	35	12.5	M12	17	26560	3,2	XD.T 1505	XX,YY	**025**
G211.32.R.03-15	32	3	14	35	17.0	M16	24	30200	3,2	XD.T 1505	XX,YY	**032**
G211.40.R.04-15	40	4	14	40	17.0	M16	27	27700	3,2	XD.T 1505	XX,YY	**040**

MaxiMill – 211-15 End milling cutter

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

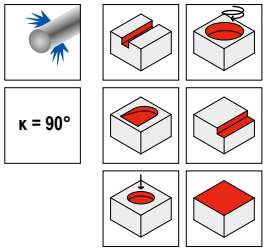


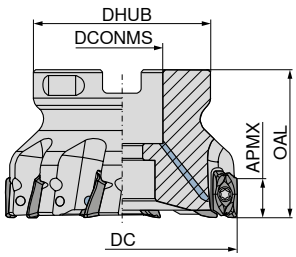


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	torque moment Nm	Insert	50 747 ... #CU# *PA*		50 747 ... #CU# *PA*	
C211.25.R.02-15-B20-32	25	2	14	83	32	20	26560	3,2	XD.T 1505			XX,YY	**125**
C211.25.R.02-15-B/A-32	25	2	14	90	32	25	26560	3,2	XD.T 1505	XX,YY	**225**	XX,YY	**025**
C211.25.R.02-15-A-50-225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

MaxiMill – 211-15 Shell mill

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





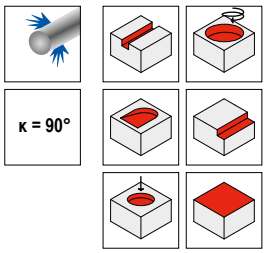
Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 748 ... #CU# *PA*		50 749 ... #CU# *PA*	
A211.40.R.03-15	40	3	14	40	16	38	22160	3,2	XD.T 1505	XX,YY	040		
A211.40.R.04-15	40	4	14	40	16	38	22160	3,2	XD.T 1505			XX,YY	040
A211.50.R.03-15	50	3	14	40	22	43	20320	3,2	XD.T 1505	XX,YY	050		
A211.50.R.05-15	50	5	14	40	22	43	20320	3,2	XD.T 1505			XX,YY	050
A211.63.R.04-15	63	4	14	45	22	48	18640	3,2	XD.T 1505	XX,YY	063		
A211.63.R.06-15	63	6	14	45	22	48	18640	3,2	XD.T 1505			XX,YY	063
A211.80.R.05-15	80	5	14	50	27	58	17040	3,2	XD.T 1505	XX,YY	080		
A211.80.R.08-15	80	8	14	50	27	58	17040	3,2	XD.T 1505			XX,YY	080
A211.100.R.06-15	100	6	14	50	32	78	15680	3,2	XD.T 1505	XX,YY	100		
A211.100.R.10-15	100	10	14	50	32	78	15680	3,2	XD.T 1505			XX,YY	100
A211.125.R.07-15	125	7	14	63	40	88	14320	3,2	XD.T 1505	XX,YY	125		
A211.125.R.11-15	125	11	14	63	40	88	14320	3,2	XD.T 1505			XX,YY	125
A211.160.R.08-15	160	8	14	63	40	93	13200	3,2	XD.T 1505	XX,YY	160 [1]		
A211.160.R.12-15	160	12	14	63	40	93	13200	3,2	XD.T 1505			XX,YY	160 [1]

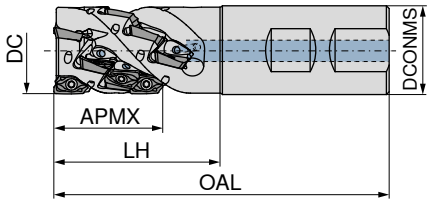
1) Without Through Coolant

Spare parts DC	TORX® blade 80 950 ... #CU# *PA*		Clamping key – T 80 397 ... #CU# *PA*		Key D 80 950 ... #CU# *PA*		Power Screw 70 950 ... #CU# *PA*		Molykote 70 950 ... #CU# *PA*		Clamping screw 70 950 ... #CU# *PA*		Torque screw-driver 80 950 ... #CU# *PA*	
25 - 32	XX,YY	054			XX,YY	128			XX,YY	303	XX,YY	839	XX,YY	193
40	XX,YY	054	XX,YY	040	XX,YY	128	XX,YY	151	XX,YY	303	XX,YY	839	XX,YY	193
50	XX,YY	054	XX,YY	050	XX,YY	128	XX,YY	154	XX,YY	303	XX,YY	839	XX,YY	193
63 - 160	XX,YY	054			XX,YY	128			XX,YY	303	XX,YY	839	XX,YY	193

MaxiMill – 211-15KN shell end mill shank

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

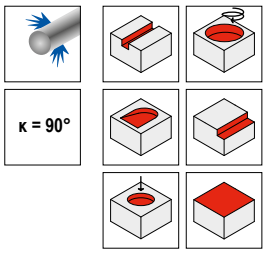


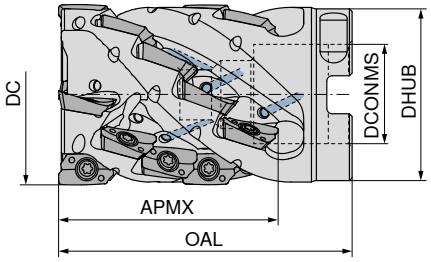


Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	torque moment Nm	Insert	50 783 ... #CU# *PA*	
C211.40	40	3	39.6	121	60	32	9	3	3,2	XD.T 1505	XX,YY	**04033**
C211.50	50	3	52.6	138	67	40	12	4	3,2	XD.T 1505	XX,YY	**05034**

MaxiMill – 211-15KN shell end face mill

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





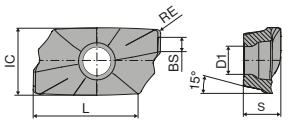
Designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	torque moment Nm	Insert	50 781 ... #CU# *PA*	
A211.50	50	3	52.6	12	4	87	27	48	3,2	XD.T 1505	XX,YY	**05034**
A211.50	50	3	65.8	15	5	100	27	48	3,2	XD.T 1505	XX,YY	**05035**
A211.50	50	4	65.8	20	5	100	27	48	3,2	XD.T 1505	XX,YY	**05045**
A211.63	63	3	52.6	12	4	76	27	58	3,2	XD.T 1505	XX,YY	**06334**
A211.63	63	3	65.8	15	5	90	27	58	3,2	XD.T 1505	XX,YY	**06335**
A211.63	63	4	78.5	24	6	102	27	58	3,2	XD.T 1505	XX,YY	**06346**
A211.63	63	5	65.8	25	5	90	27	58	3,2	XD.T 1505	XX,YY	**06355**
A211.80	80	4	65.8	20	5	90	32	78	3,2	XD.T 1505	XX,YY	**08045**
A211.80	80	5	78.5	30	6	102	32	78	3,2	XD.T 1505	XX,YY	**08056**

Spare parts Designation	 Cylindrical screw 70 950 ... #CU# *PA*		TORX® blade 80 950 ... #CU# *PA*		 Key D 80 950 ... #CU# *PA*		 Molykote 70 950 ... #CU# *PA*		 Clamping screw 70 950 ... #CU# *PA*		 Socket head screw 70 950 ... #CU# *PA*		 Torque screw-driver 80 950 ... #CU# *PA*	
A211.50	XX,YY	**002**	XX,YY	**054**	XX,YY	**128**	XX,YY	**303**	XX,YY	**20800**	XX,YY	**20600**	XX,YY	**193**
A211.63	XX,YY	**002**	XX,YY	**054**	XX,YY	**128**	XX,YY	**303**	XX,YY	**20500**	XX,YY	**20600**	XX,YY	**193**
A211.80	XX,YY	**004**	XX,YY	**054**	XX,YY	**128**	XX,YY	**303**	XX,YY	**20500**	XX,YY	**234**	XX,YY	**193**
C211.40			XX,YY	**054**	XX,YY	**128**	XX,YY	**303**	XX,YY	**20800**			XX,YY	**193**
C211.50			XX,YY	**054**	XX,YY	**128**	XX,YY	**303**	XX,YY	**20800**			XX,YY	**193**

15

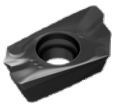
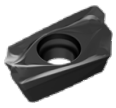
XDKT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XDKT 150508..	9.3	4.4	14.8	1.6	5.56
XDKT 150512..	9.3	4.4	14.8	1.6	5.56
XDKT 150516..	9.3	4.4	14.8	1.6	5.56
XDKT 150520..	9.3	4.4	14.8	1.6	5.56
XDKT 150525..	9.3	4.4	14.8	1.6	5.56
XDKT 150530..	9.3	4.4	14.8	1.6	5.56
XDKT 150532..	9.3	4.4	14.8	1.9	5.56
XDKT 150540..	9.3	4.4	14.8	1.2	5.56
XDKT 150560..	9.3	4.4	14.8	-	5.56

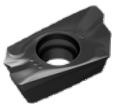
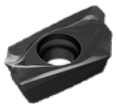
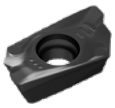


XDKT

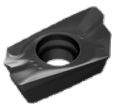
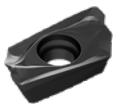
XDKT

ISO	RE mm	-F50 CTCP220		-M50 CTCP220		-F50 CTPP225		-M50 CTPP225	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
		 XDKT		 XDKT		 XDKT		 XDKT	
		51 035 ...		51 038 ...		51 035 ...		51 038 ...	
		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
150508SR	0.8	XX,YY	258	XX,YY	258	XX,YY	058	XX,YY	058
P			●		●		●		●
M									
K									
N									
S									
H									
O									

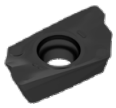
XDKT

ISO	RE mm	-F50 CTCP230		-M50 CTCP230		-R50 CTCP230		-F50 CTPP235		-M50 CTPP235		-R50 CTPP235	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT	
		51 035 ...		51 038 ...		51 040 ...		51 035 ...		51 038 ...		51 040 ...	
		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
150508SR	0.8	XX,YY	008	XX,YY	008	XX,YY	008	XX,YY	108	XX,YY	108	XX,YY	108
150512SR	1.2			XX,YY	012					XX,YY	112		
150516SR	1.6			XX,YY	016					XX,YY	116		
150520SR	2.0					XX,YY	020			XX,YY	120	XX,YY	120
150530SR	3.0			XX,YY	030					XX,YY	130		
150540SR	4.0			XX,YY	040					XX,YY	140		
P			●		●		●		●		●		●
M									○		○		○
K			○		○		○		○		○		○
N													
S													
H													
O													

XDKT

		-F50 CTPM225 DRAGONSKIN		-M50 CTPM225 DRAGONSKIN		-F50 CTCM235 DRAGONSKIN		-M50 CTCM235 DRAGONSKIN	
									
		XDKT		XDKT		XDKT		XDKT	
		51 035 ...		51 038 ...		51 035 ...		51 038 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
150508SR	0.8	XX,YY	208	XX,YY	208	XX,YY	308	XX,YY	308
P			●		●		●		●
M			●		●		●		●
K									
N									
S									
H									
O									

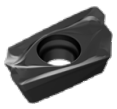
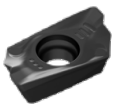
XDKT

		-F50 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN		-R50 CTPM240 DRAGONSKIN		-F40 CTPM245 DRAGONSKIN		-F40 CTCM245 DRAGONSKIN	
											
		XDKT		XDKT		XDKT		XDKT		XDKT	
		51 035 ...		51 038 ...		51 040 ...		51 114 ...		51 114 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
150508ER	0.8							XX,YY	458	XX,YY	90801
150508SR	0.8	XX,YY	408	XX,YY	408	XX,YY	408				
150512ER	1.2									XX,YY	91201
150512SR	1.2			XX,YY	412						
150516ER	1.6									XX,YY	91601
150516SR	1.6			XX,YY	416						
150520ER	2.0									XX,YY	92001 1)
150525ER	2.5									XX,YY	92501 1)
150530SR	3.0			XX,YY	430						
150532ER	3.2							XX,YY	482 2)	XX,YY	93201 2)
150540ER	4.0							XX,YY	490 2)	XX,YY	94001 2)
150540SR	4.0			XX,YY	440						
150560ER	6.0									XX,YY	96001 2)
P			○		○		○		●		●
M			●		●		●		●		●
K											
N											
S											○
H											
O											

1) Insert radius >2.5 mm: Modify cutter body
2) Insert radius >1.6 mm: Modify cutter body

15

XDKT

		-M50 CTCK215 DRAGONSKIN		-R50 CTCK215 DRAGONSKIN		-M50 CTPK220 DRAGONSKIN		-R50 CTPK220 DRAGONSKIN		-F20 CTWN215	
											
		XDKT		XDKT		XDKT		XDKT		XDKT	
		51 038 ...		51 040 ...		51 038 ...		51 040 ...		50 479 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
150508FR	0.8									XX,YY	508
150508SR	0.8	XX,YY	508	XX,YY	508	XX,YY	608	XX,YY	608		
P											
M											
K		●		●		●		●		○	
N										●	
S											
H											
O										○	

XDKT

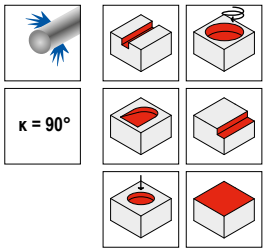
		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN		-R60 CTP6215	
							
		XDKT		XDKT		XDKT	
		50 473 ...		51 114 ...		50 469 ...	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*	
150508ER	0.8	XX,YY	508	XX,YY	558		
150508SR	0.8					XX,YY	300
150532ER	3.2	XX,YY	532 [1]	XX,YY	58201 [1]		
150540ER	4.0	XX,YY	540 [1]	XX,YY	59000 [1]		
P							
M							
K						●	
N							
S		●		●			
H						●	
O							

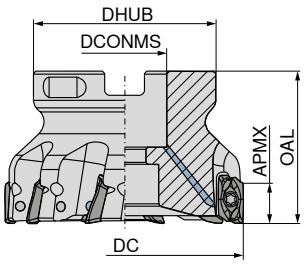
1) Insert radius >2.5 mm: Modify cutter body

Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 157
Starting Parameter	→ 157	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

MaxiMill – 211-20 Shell mill

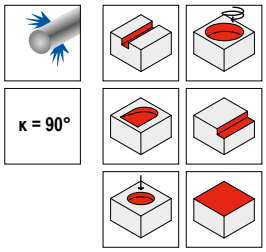


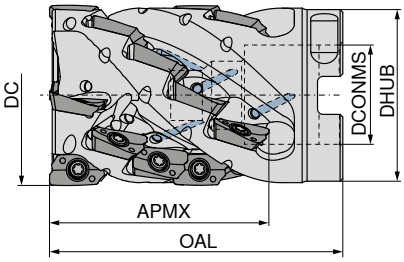


Designation	DC mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 778 ... #CU# *PA*	
A211.63.R.05-20	63	5	19	45	22	48	14400	5	XD.. 2007..	XX,YY	**06305**
A211.80.R.06-20	80	6	19	50	27	58	12400	5	XD.. 2007..	XX,YY	**08006**
A211.100.R.07-20	100	7	19	50	32	78	10900	5	XD.. 2007..	XX,YY	**10007**

MaxiMill – 211-20K 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	50 780 ... #CU# *PA*	
A211.63.R.04K4-20	63	4	68	16	4	92	27	58	5	XD.. 2007..	XX,YY	**06304**
A211.80.R.05K4-20	80	5	68	20	4	92	32	76	5	XD.. 2007..	XX,YY	**08005**


Cylindrical screw

TORX® blade

Key D


Molykote


Clamping screw

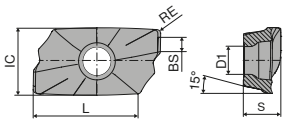

Socket head screw

Torque screw-driver

Spare parts DC	70 950 ... #CU# *PA*		80 950 ... #CU# *PA*		80 950 ... #CU# *PA*		70 950 ... #CU# *PA*		70 950 ... #CU# *PA*		70 950 ... #CU# *PA*		80 950 ... #CU# *PA*	
63			XX,YY	**037**	XX,YY	**106**	XX,YY	**303**	XX,YY	**01200**	XX,YY	**180**	XX,YY	**193**
80			XX,YY	**037**	XX,YY	**106**	XX,YY	**303**	XX,YY	**01200**	XX,YY	**181**	XX,YY	**193**
63	XX,YY	**003**	XX,YY	**037**	XX,YY	**106**	XX,YY	**303**	XX,YY	**01200**	XX,YY	**181**	XX,YY	**193**
80	XX,YY	**004**	XX,YY	**037**	XX,YY	**106**	XX,YY	**303**	XX,YY	**01200**	XX,YY	**234**	XX,YY	**193**
100			XX,YY	**037**	XX,YY	**106**	XX,YY	**303**	XX,YY	**01200**			XX,YY	**193**

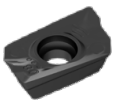
XDKT

Designation	IC mm	D1 mm	L mm	S mm
XDKT 200708..	12.5	5.5	18.8	6.93
XDKT 200716..	12.5	5.5	18.8	6.89
XDKT 200732..	12.5	5.5	18.8	6.82
XDKT 200740..	12.5	5.5	18.8	6.80
XDKT 200760..	12.5	5.5	18.8	6.80



XDKT

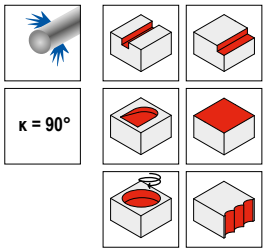
XDKT

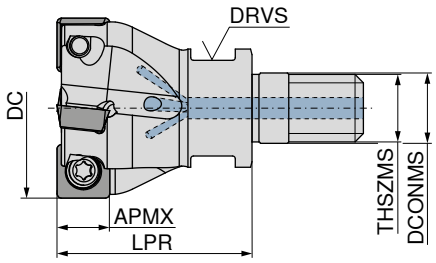
		-M50 CTPP235	-M50 CTCP230	-F40 CTPM245	-F40 CTCM245	-M50 CTPK220	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 145 ...	**51 145 ...**	**51 127 ...**	**51 127 ...**	**51 145 ...**	**51 127 ...**	**51 127 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
200708ER	0.8	XX,YY **10800**	XX,YY **00800**	XX,YY **45800**	XX,YY **90801**	XX,YY **60800**	XX,YY **15800**	XX,YY **55800**
200716ER	1.6	XX,YY **11600**	XX,YY **01600**	XX,YY **46600**	XX,YY **91601**	XX,YY **61600**	XX,YY **16600**	XX,YY **56600**
200732ER	3.2			XX,YY **48200**	XX,YY **93201**		XX,YY **18200**	XX,YY **58200**
200740ER	4.0				XX,YY **94001**		XX,YY **19000**	
200760ER	6.0				XX,YY **96001**		XX,YY **19200**	
P		●	●	●	●			
M		○		●	●			
K		○	○			●		
N								
S					○		●	●
H								
O								

Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 158
Starting Parameter	→ 158	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

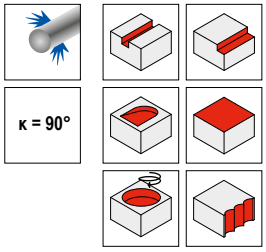
MaxiMill – 490-09 Screw in cutter

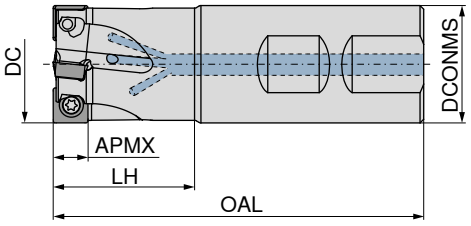




Designation	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	torque moment Nm	Insert	50 726 ... #CU# *PA*	
G490.25.R.03-09	25	3	8	35	M12	12.5	17	3,2	SD.. 09T3..	XX,YY	025
G490.32.R.04-09	32	4	8	35	M16	17.0	24	3,2	SD.. 09T3..	XX,YY	032

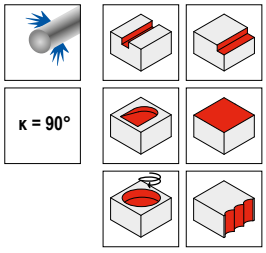
MaxiMill – 490-09 End milling cutter

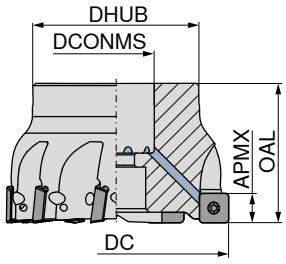




Designation	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	torque moment Nm	Insert	50 727 ... #CU# *PA*		50 727 ... #CU# *PA*	
C490.25.R.03-09-B-32	25	3	8	25	88	32	3,2	SD.. 09T3..			XX,YY	025
C490.25.R.02-09-A-20	25	2	8	20	165	40	3,2	SD.. 09T3..	XX,YY	225		
C490.25.R.02-09-A-40-165	25	2	8	25	165	40	3,2	SD.. 09T3..	XX,YY	125		
C490.32.R.04-09-B-25	32	4	8	25	100	40	3,2	SD.. 09T3..			XX,YY	132
C490.32.R.04-09-B-40	32	4	8	32	100	40	3,2	SD.. 09T3..			XX,YY	032

MaxiMill – 490-09 Shell mill

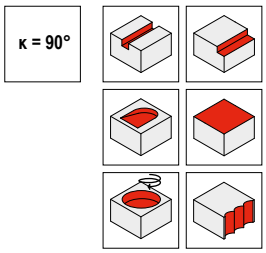


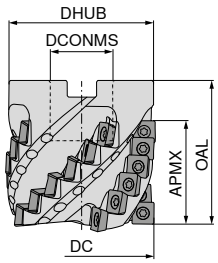


Designation	DC mm	ZNF	APMX mm	DHUB mm	DCONMS H6 mm	OAL mm	torque moment Nm	Insert	50 728 ... #CU# *PA*	
A490.40.R.05-09	40	5	8	38	16	40	3,2	SD.. 09T3..	XX,YY	040
A490.42.R.06-09	42	6	8	38	16	40	3,2	SD.. 09T3..	XX,YY	042
A490.50.R.06-09	50	6	8	43	22	40	3,2	SD.. 09T3..	XX,YY	050
A490.52.R.07-09	52	7	8	43	22	40	3,2	SD.. 09T3..	XX,YY	052
A490.63.R.07-09	63	7	8	48	22	40	3,2	SD.. 09T3..	XX,YY	063
A490.66.R.08-09	66	8	8	48	22	40	3,2	SD.. 09T3..	XX,YY	066
A490.80.R.09-09	80	9	8	58	27	50	3,2	SD.. 09T3..	XX,YY	080
A490.100.R.10-09	100	10	8	78	32	50	3,2	SD.. 09T3..	XX,YY	100

MaxiMill – 490-09K shell end face mill

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

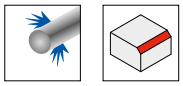


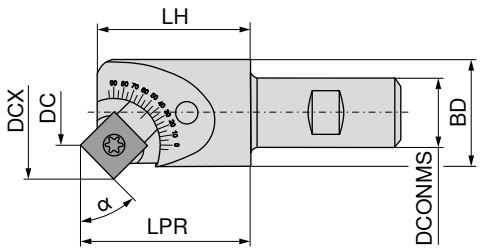


Designation	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS H6 mm	DHUB mm	torque moment Nm	Insert	50 761 ... #CU# *PA*	
A490.40.R.03K6-09	40	3	41	18	6	55	16	38	3,2	SD.. 09T3..	XX,YY	**040**
A490.50.R.04K6-09	50	4	41	24	6	55	22	48	3,2	SD.. 09T3..	XX,YY	**050**
A490.63.R.05K6-09	63	5	41	30	6	60	27	61	3,2	SD..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

	TORX® blade		Clamping key – T		Key D		Power Screw		Molykote		Clamping screw		Torque screw-driver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts DC	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
25 - 32	XX,YY	**036**			XX,YY	**113**			XX,YY	**303**	XX,YY	**110**	XX,YY	**192**
40 - 42	XX,YY	**036**	XX,YY	**040**	XX,YY	**113**	XX,YY	**151**	XX,YY	**303**	XX,YY	**110**	XX,YY	**192**
50 - 100	XX,YY	**036**			XX,YY	**113**			XX,YY	**303**	XX,YY	**110**	XX,YY	**192**

MaxiMill – 490-09 Adjustable single angle milling cutter





NEW

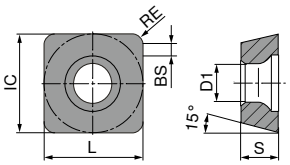
Designation	DC mm	DCX mm	LH mm	BD mm	LPR mm	ZNF	DCONMS mm	torque moment Nm	Insert	50 690 ... #CU# *PA*	
C490.20.R.01	1,6 - 11,1	20,1 - 23,6	32	18.65	32,9 - 34,6	1	16	3,2	SD.. 09T3..	XX,YY	**01600**

	Cylindrical screw		Adjustment wedge		TORX® blade		Key D		Molykote		Clamping screw		Torque screw-driver	
	70 950 ...		**70 950 ...**		**80 950 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts for Article no.	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
50 690 01600	XX,YY	**87500**	XX,YY	**87200**	XX,YY	**036**	XX,YY	**113**	XX,YY	**303**	XX,YY	**110**	XX,YY	**192**

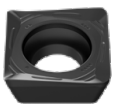
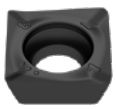
Angle-dependent dimensions can be found on → **Page 159**

SDHT / SDNT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
SD.T 09T3..	9.52	4.4	9.52	2.5	3.97

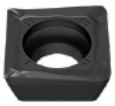
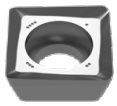


SDHT / SDNT

	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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
09T308ER 0.8			XX,YY 108			XX,YY 458	XX,YY 90801
09T308SR 0.8	XX,YY 900	XX,YY 008		XX,YY 108	XX,YY 408		
P	●	●	●	●	○	●	●
M			○	○	●	●	●
K	○	○	○	○			
N							
S							○
H							
O							

SDNT / SDHT

NEW

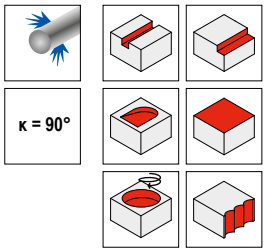
	-31 CTCK215	-F10 CTPX715	-27P H216T	-27 CTC5240	-M31 CTC5240	-F10 CTCS245
	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	SDNT	SDHT	SDHT	SDHT	SDNT	SDHT
	51 029 ...	51 125 ...	50 424 ...	50 496 ...	50 425 ...	51 125 ...
ISO / RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
09T308ER 0.8				XX,YY 508	XX,YY 508	XX,YY 55800
09T308FR 0.8		XX,YY 00802	XX,YY 550			
09T308SR 0.8	XX,YY 508					
P		○				
M		○				
K	●	●	○			
N		●	●			
S		○		●	●	●
H						
O		○	○			

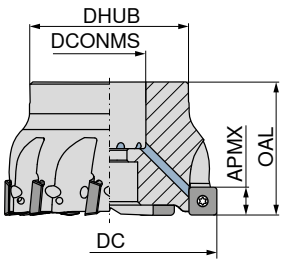
15

Milling guide

Cutting data standard values	→ 141–144	Starting Parameter	→ 159
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

MaxiMill – 490-12 Shell mill

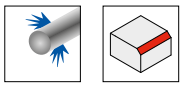


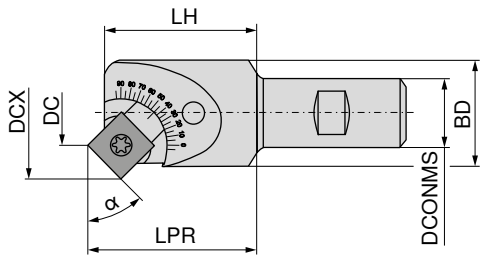


Designation	DC mm	ZNF	APMX mm	DHUB mm	DCONMS mm	OAL mm	torque moment Nm	Insert	50 703 ... #CU# *PA*	
A490.40.R.04-12	40	4	11	38	16	40	5	SD.. 1205..	XX,YY	**54000**
A490.50.R.05-12	50	5	11	43	22	40	5	SD.. 1205..	XX,YY	**550**
A490.63.R.06-12	63	6	11	48	22	40	5	SD.. 1205..	XX,YY	**563**
A490.80.R.07-12	80	7	11	58	27	50	5	SD.. 1205..	XX,YY	**580**
A490.100.R.08-12	100	8	11	75	32	50	5	SD.. 1205..	XX,YY	**600**
A490.125.R.10-12	125	10	11	88	40	63	5	SD.. 1205..	XX,YY	**625**

	TORX® blade	 Clamping key – T	 Key D	 Power Screw	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**80 397 ...**	**80 950 ...**	**70 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts DC	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
40	XX,YY **037**	XX,YY **040**	XX,YY **114**	XX,YY **151**	XX,YY **303**	XX,YY **01200**	XX,YY **193**
50	XX,YY **037**	XX,YY **040**	XX,YY **114**	XX,YY **154**	XX,YY **303**	XX,YY **01200**	XX,YY **193**
63 - 125	XX,YY **037**	XX,YY **040**	XX,YY **114**		XX,YY **303**	XX,YY **01200**	XX,YY **193**

MaxiMill – 490-12 Adjustable single angle milling cutter





NEW

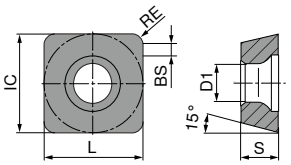
Designation	DC mm	DCX mm	LH mm	BD mm	LPR mm	ZNF	DCONMS mm	torque moment Nm	Insert	50 690 ... #CU# *PA*	
C490.26.R.01	1,1 - 14,1	26,6 - 31,5	37	25	38,2 - 40,6	1	20	5	SD.. 1205..	XX,YY	**02000**

	 Cylindrical screw	 Adjustment wedge	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	70 950 ...	**70 950 ...**	**80 950 ...**	**80 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts for Article no.	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
50 690 02000	XX,YY **87400**	XX,YY **87300**	XX,YY **037**	XX,YY **114**	XX,YY **303**	XX,YY **01200**	XX,YY **193**

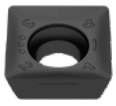
Angle-dependent dimensions can be found on → **Page 160**

SDHW / SDMT / SDHT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
SDH. 120508..	12.7	5.5	12.7	2.2	5.00
SDHT 120512..	12.7	5.5	12.7	1.8	5.00
SDHT 120520..	12.7	5.5	12.7	1.0	5.00
SDHT 120525..	12.7	5.5	12.7	1.5	5.00
SDMT 120508..	12.7	5.5	12.7	3.0	5.00
SDMT 1205ZZ..	12.7	5.5	12.7	0.9	5.00



SDHW / SDMT / SDHT

	TCM10	-29 CTCP230	-29 CTPP235	-29 CTPM240	-33 CTPM240	-F50 CTPM245	-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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
120508ER 0.8						XX,YY 458	XX,YY 90801
120508SR 0.8	XX,YY 901						
120512SR 1.2					XX,YY 412		
120520SR 2.0					XX,YY 421		
1205ZZSN 0.8		XX,YY 020	XX,YY 120	XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
120508ER 0.8				XX,YY 508	XX,YY 55800
120508FR 0.8		XX,YY 00802	XX,YY 555		
120525FR 2.5			XX,YY 559		
1205ZZSN 0.8	XX,YY 521				
P		○			
M		○			
K	●	●	○		
N		●	●		
S		○		●	●
H					
O		○	○		

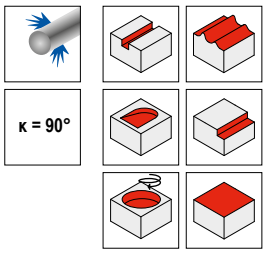
Milling guide

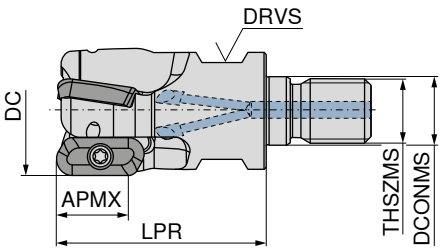
Cutting data standard values	→ 141–144	Starting Parameter	→ 160
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

15

MaxiMill – HSC-11 Screw in cutter

▲ Insert radius >3.2 mm: Modify cutter body

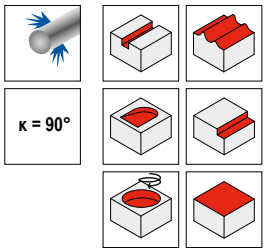


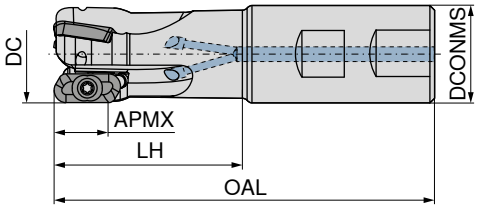


Designation	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	RPMX 1/min.	DRVS mm	torque moment Nm	Insert	55 107 ... #CU# *PA*	
GHSC.16.R.02-11	16	2	10	8.5	27	M8	56000	10	1,8	XDHT 11T3..	XX,YY	**016**
GHSC.20.R.02-11	20	2	10	10.5	33	M10	50100	15	1,8	XDHT 11T3..	XX,YY	**020**
GHSC.25.R.03-11	25	3	10	12.5	35	M12	45000	17	1,8	XDHT 11T3..	XX,YY	**025**
GHSC.32.R.03-11	32	3	10	17.0	35	M16	39800	24	1,8	XDHT 11T3..	XX,YY	**032**
GHSC.40.R.03-11	40	3	10	17.0	35	M16	35500	24	1,8	XDHT 11T3..	XX,YY	**040**

MaxiMill – HSC-11 End milling cutter

▲ Insert radius >3.2 mm: Modify cutter body

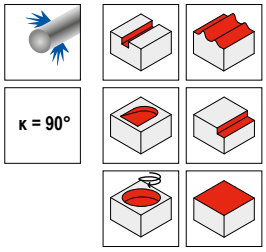


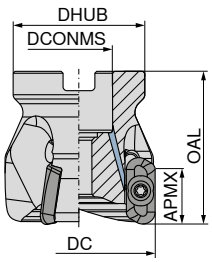


Designation	DC mm	ZNF	APMX mm	DCONMS $_{h6}$ mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	50 675 ... #CU# *PA*		50 675 ... #CU# *PA*	
CHSC.16.R.02-11-B/A-25	16	2	10	16	75	25	56200	1,8	XDHT 11T3..	XX,YY	**016**	XX,YY	**416**
CHSC.16.R.02-11-A-32	16	2	10	16	165	32	18800	1,8	XDHT 11T3..	XX,YY	**116**		
CHSC.20.R.02-11-A-32	20	2	10	20	84	32	50100	1,8	XDHT 11T3..	XX,YY	**020**		
CHSC.20.R.03-11-B-32	20	3	10	20	84	32	50100	1,8	XDHT 11T3..			XX,YY	**420**
CHSC.20.R.02-11-A-40	20	2	10	20	165	40	26700	1,8	XDHT 11T3..	XX,YY	**120**		
CHSC.25.R.03-11-A-40	25	3	10	25	98	40	45000	1,8	XDHT 11T3..	XX,YY	**225**		
CHSC.25.R.04-11-B-40	25	4	10	25	98	40	45000	1,8	XDHT 11T3..			XX,YY	**425**
CHSC.25.R.02-11-A-50	25	2	10	25	165	50	31700	1,8	XDHT 11T3..	XX,YY	**125**		
CHSC.25.R.03-11-A-50	25	3	10	25	165	50	31700	1,8	XDHT 11T3..	XX,YY	**325**		

MaxiMill – HSC-11 Shell mill

▲ Insert radius >3.2 mm: Modify cutter body



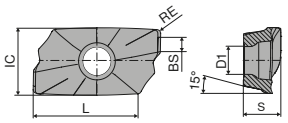


										50 718 ...	
Designation	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	torque moment Nm	Insert	**#CU#** *PA*	
AHSC.40.R.04-11	40	4	10	16	38	50	35500	1,8	XDHT 11T3..	XX,YY	**040**
AHSC.50.R.04-11	50	4	10	22	43	50	31800	1,8	XDHT 11T3..	XX,YY	**050**
AHSC.63.R.05-11	63	5	10	22	43	50	28300	1,8	XDHT 11T3..	XX,YY	**063**
AHSC.80.R.05-11	80	5	10	27	58	50	25100	1,8	XDHT 11T3..	XX,YY	**080**
AHSC.100.R.05-11	100	5	10	32	78	50	22400	1,8	XDHT 11T3..	XX,YY	**100**

	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts **DC**	**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*	
16 - 25	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**128**	XX,YY	**192**
32	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**131**	XX,YY	**192**
40	XX,YY	**043**	XX,YY	**040**	XX,YY	**125**	XX,YY	**151**	XX,YY	**303**	XX,YY	**131**	XX,YY	**192**
50 - 63	XX,YY	**043**	XX,YY	**050**	XX,YY	**125**	XX,YY	**154**	XX,YY	**303**	XX,YY	**131**	XX,YY	**192**
80 - 100	XX,YY	**043**			XX,YY	**125**			XX,YY	**303**	XX,YY	**131**	XX,YY	**192**

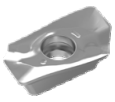
XDKT / XDHT

Designation	IC mm	D1 mm	L mm	BS mm	S mm
XD.T 11T302FR	6.8	2.8	10.6	2	3.80
XD.T 11T304FR	6.8	2.8	10.6	1.8	3.80
XD.T 11T308FR	6.8	2.8	10.6	1.4	3.80
XD.T 11T320FR	6.8	2.8	10.6	1.4	3.80
XD.T 11T325FR	6.8	2.8	10.6	1.4	3.80
XDHT 11T312FR	6.8	2.8	10.6	1.4	3.80
XDHT 11T316FR	6.8	2.8	10.6	1.4	3.80
XDHT 11T332FR	6.8	2.8	10.6	0.8	3.80
XDHT 11T340FR	6.8	2.8	10.6	-	3.80
XDHT 11T350FR	6.8	2.8	10.6	-	3.80



XDKT

XDKT / XDHT

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

ISO	RE mm	#CU# *PA*		#CU# *PA*	
11T302FR	0.2	XX,YY	502	XX,YY	502
11T304FR	0.4	XX,YY	504	XX,YY	504
11T308FR	0.8	XX,YY	508	XX,YY	508
11T312FR	1.2			XX,YY	512
11T316FR	1.6			XX,YY	516
11T320FR	2.0	XX,YY	520 1)	XX,YY	520 1)
11T325FR	2.5	XX,YY	525 1)	XX,YY	525 1)
11T332FR	3.2			XX,YY	532 1)
11T340FR	4.0			XX,YY	540 1)
11T350FR	5.0			XX,YY	550 1)
P					
M					
K			○		○
N			●		●
S					
H					
O			○		○

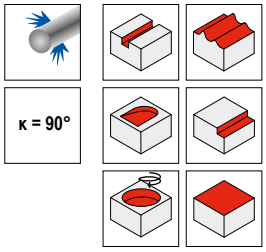
1) Insert radius >1.6 mm: Modify cutter body

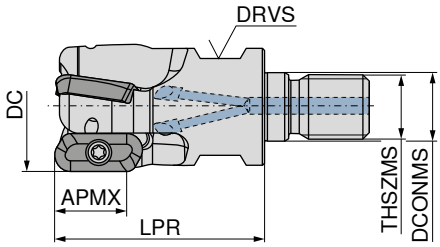
Milling guide

Safety advice	→ 161	Cutting data standard values	→ 162
Machining strategy	→ 163+164	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

MaxiMill – HSC-19 Screw-in cutter

▲ Insert radius >4.0 mm: Modify cutter body

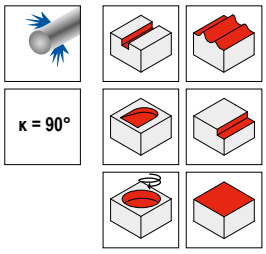


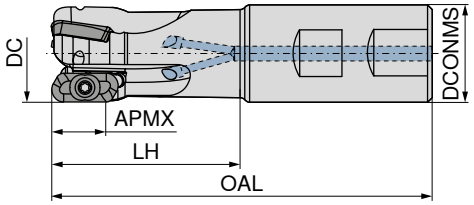


Designation	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	55 108 ... #CU# *PA*	
GHSC.25.R.02-19	25	2	18	12.5	45	M12	17	34400	5	XDHT 1904..	XX,YY	**025**
GHSC.32.R.03-19	32	3	18	17.0	52	M16	24	29100	5	XDHT 1904..	XX,YY	**032**
GHSC.40.R.03-19	40	3	18	17.0	52	M16	24	24900	5	XDHT 1904..	XX,YY	**040**

MaxiMill – HSC-19 End milling cutter

▲ Insert radius >4.0 mm: Modify cutter body

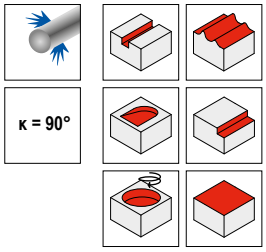


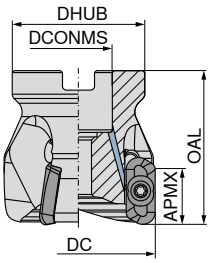


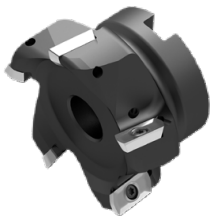
Designation	DC mm	ZNF	APMX mm	DCONMS $_{h5}$ mm	OAL mm	LH mm	RPMX 1/min.	torque moment Nm	Insert	50 679 ... #CU# *PA*		50 679 ... #CU# *PA*	
CHSC.25.R.02-19-A-50	25	2	18	25	121	50	32400	5	XDHT 1904..	XX,YY	**225**		
CHSC.25.R.02-19	25	2	18	25	121	65	32400	5	XDHT 1904..			XX,YY	**025**
CHSC.25.R.02-19-A-63	25	2	18	25	165	63	24700	5	XDHT 1904..	XX,YY	**325**		
CHSC.32.R.02-19-A-63	32	2	18	32	125	63	28900	5	XDHT 1904..	XX,YY	**232**		
CHSC.32.R.03-19-A-63	32	3	18	32	125	63	28900	5	XDHT 1904..	XX,YY	**432**		
CHSC.32.R.03-19	32	3	18	32	125	65	28900	5	XDHT 1904..			XX,YY	**033**
CHSC.32.R.02-19	32	2	18	32	125	65	28900	5	XDHT 1904..			XX,YY	**032**
CHSC.32.R.02-19-A-80	32	2	18	32	165	80	24400	5	XDHT 1904..	XX,YY	**332**		
CHSC.32.R.03-19-A-80	32	3	18	32	165	80	24400	5	XDHT 1904..	XX,YY	**532**		

MaxiMill – HSC-19 Shell mill

▲ Insert radius >4.0 mm: Modify cutter body





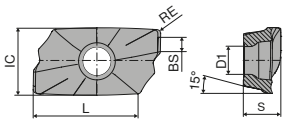


										50 716 ...	
Designation	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	torque moment Nm	Insert	**#CU#** *PA*	
AHSC.40.R.03-19	40	3	18	16	38	50	24900	5	XDHT 1904..	XX,YY	**040**
AHSC.50.R.04-19	50	4	18	22	43	50	21600	5	XDHT 1904..	XX,YY	**050**
AHSC.63.R.04-19	63	4	18	22	48	50	18800	5	XDHT 1904..	XX,YY	**163**
AHSC.63.R.05-19	63	5	18	22	48	50	18800	5	XDHT 1904..	XX,YY	**063**
AHSC.80.R.04-19	80	4	18	27	58	50	16400	5	XDHT 1904..	XX,YY	**180**
AHSC.80.R.05-19	80	5	18	27	58	50	16400	5	XDHT 1904..	XX,YY	**080**
AHSC.100.R.04-19	100	4	18	32	78	50	14500	5	XDHT 1904..	XX,YY	**200**
AHSC.100.R.05-19	100	5	18	32	78	50	14500	5	XDHT 1904..	XX,YY	**100**
AHSC.125.R.05-19	125	5	18	40	88	63	12800	5	XDHT 1904..	XX,YY	**125**
AHSC.125.R.06-19	125	6	18	40	88	63	12800	5	XDHT 1904..	XX,YY	**225**

	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Spare parts **DC**	**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*	
25	XX,YY	**036**			XX,YY	**113**			XX,YY	**303**	XX,YY	**172**	XX,YY	**193**
32	XX,YY	**036**			XX,YY	**113**			XX,YY	**303**	XX,YY	**173**	XX,YY	**193**
40	XX,YY	**036**	XX,YY	**040**	XX,YY	**113**	XX,YY	**151**	XX,YY	**303**	XX,YY	**173**	XX,YY	**193**
50 - 63	XX,YY	**036**	XX,YY	**050**	XX,YY	**113**	XX,YY	**154**	XX,YY	**303**	XX,YY	**174**	XX,YY	**193**
80 - 125	XX,YY	**036**			XX,YY	**113**			XX,YY	**303**	XX,YY	**174**	XX,YY	**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 DRAGONSKIN	-27P H216T
		
	XDHT	XDHT
	51 159 ...	50 487 ...
ISO / RE mm	#CU# *PA*	#CU# *PA*
190402FR 0.2	XX,YY 00202	XX,YY 552
190404FR 0.4	XX,YY 00402	XX,YY 554
190408FR 0.8	XX,YY 00802	XX,YY 556
190412FR 1.2	XX,YY 01202	XX,YY 557
190416FR 1.6	XX,YY 01602	XX,YY 558
190420FR 2.0	XX,YY 02002	XX,YY 560
190425FR 2.5	XX,YY 02502	XX,YY 562
190432FR 3.2	XX,YY 03202	XX,YY 564
190440FR 4.0	XX,YY 04002	XX,YY 566
190450FR 5.0	XX,YY 05002 1)	XX,YY 568 1)
P	○	
M	○	
K	●	○
N	●	●
S	○	
H		
O	○	○

1) Insert radius > 4.0 mm: Modify cutter body

Milling guide

Cutting data standard values	→ 141–144	Safety advice	→ 161
Machining strategy	→ 165–167	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

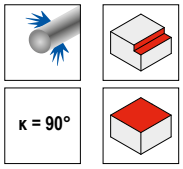
15

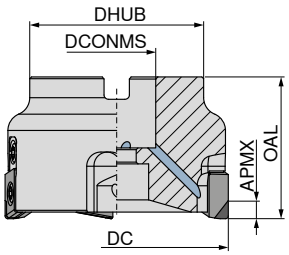
MaxiMill – HPC 12 Shell mill

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

Scope of supply:

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





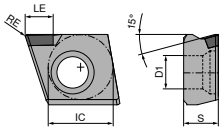
										50 723 ...		50 724 ...	
Designation	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	#CU# *PA*		#CU# *PA*	
AHPC.40.R.04-12	40	4	11	40	34	16	32000	5	ZNHW 1205..	XX,YY	**040**		
AHPC.50.R.04-12	50	4	11	40	49	22	32000	5	ZNHW 1205..	XX,YY	**050**		
AHPC.50.R.05-12	50	5	11	40	49	22	32000	5	ZNHW 1205..			XX,YY	**050**
AHPC.63.R.04-12	63	4	11	40	49	22	29000	5	ZNHW 1205..	XX,YY	**063**		
AHPC.63.R.07-12	63	7	11	40	49	22	29000	5	ZNHW 1205..			XX,YY	**063**
AHPC.80.R.05-12	80	5	11	50	60	27	26000	5	ZNHW 1205..	XX,YY	**080**		
AHPC.80.R.09-12	80	9	11	50	60	27	26000	5	ZNHW 1205..			XX,YY	**080**
AHPC.100.R.06-12	100	6	11	50	70	32	24000	5	ZNHW 1205..	XX,YY	**100**		
AHPC.100.R.12-12	100	12	11	50	70	32	24000	5	ZNHW 1205..			XX,YY	**100**
AHPC.125.R.08-12	125	8	11	63	72	40	22000	5	ZNHW 1205..	XX,YY	**125**		
AHPC.125.R.14-12	125	14	11	63	72	40	22000	5	ZNHW 1205..			XX,YY	**12514**
AHPC.160.R.10-12	160	10	11	63	118	40	18000	5	ZNHW 1205..	XX,YY	**16010** [1)]		
AHPC.160.R.16-12	160	16	11	63	118	40	18000	5	ZNHW 1205..			XX,YY	**16016** [1)]
AHPC.200.R.12-12	200	12	11	63	153	60	16000	5	ZNHW 1205..	XX,YY	**20000** [1)]		
AHPC.250.R.14-12	250	14	11	63	200	60	14000	5	ZNHW 1205..	XX,YY	**25014** [1)]		
AHPC.315.R.18-12	315	18	11	80	265	60	12000	5	ZNHW 1205..	XX,YY	**31518** [1)]		

1) Without Through Coolant

	TORX® blade	 Molykote	 Clamping screw	 Wedge	 Torque screw-driver
	80 950 ...	**70 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
DC					
40 - 315	XX,YY **036**	XX,YY **303**	XX,YY **174**	XX,YY **199**	XX,YY **193**

ZNHW

Designation	LE mm	D1 mm	L mm	S mm	
ZNHW 120504ER-1503	3	4.85	12.7	5.40	
ZNHW 120504FR-0007	7	4.85	12.7	5.40	
ZNHW 120508ER-1503	3	4.85	12.7	5.40	
ZNHW 120508SR-0003	3	4.85	12.7	5.40	
ZNHW 1205EOER-1002	2	4.85	12.7	5.40	
ZNHW 1205POER-1511	11	4.85	12.7	5.40	
ZNHW 1205POFR-1003	3	4.85	12.7	5.40	
ZNHW 1205POSR-1503	3	4.85	12.7	5.40	
ZNHW 1205POSR-1506	6	4.85	12.7	5.40	
ZNHW 1205POSR-3003	3	4.85	12.7	5.40	
ZNHW 1205ZZSR-5003	3	4.85	12.7	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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
120504ER-1503	0.4				XX,YY **906**	
120504FR-0007	0.4				XX,YY **904**	
120508ER-1503	0.8				XX,YY **910**	
120508SR-0003	0.8				XX,YY **908**	
1205EOER-1002		XX,YY **952**				
1205POER-1511			XX,YY **902**			
1205POFR-1003			XX,YY **90600**			
1205POSR-1503			XX,YY **900**			
1205POSR-1506			XX,YY **90800**	XX,YY **90800**		
1205POSR-3003			XX,YY **904**			
1205ZZSR-5003						XX,YY **900** 1)
P						
M						
K		●				
N			●	●	●	●
S						
H		○				
O			○	○	○	○

1) -Q = trailing edge insert

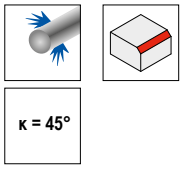
Milling guide

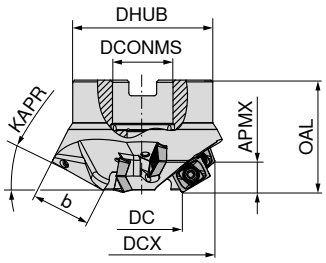
Cutting data standard values	→ 141–144	Machining strategy	→ 168
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

15

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 ...

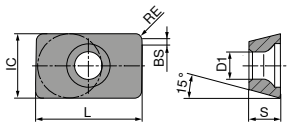
KAPR	DC mm	DCX mm	ZNF	APMX mm	ZEFP	b ±0,3 mm	OAL mm	DCONMS mm	DHUB mm	ZNP	torque moment Nm	Insert	#CU# *PA*	
15°	35	89.60	3	7.0	6	27.6	50	27	62.5	2	3,2	LD.. 15...	XX,YY	**11503**
30°	35	83.60	3	13.6	6	27.6	50	27	62.5	2	3,2	LD.. 15...	XX,YY	**13003**
45°	35	74.60	3	19.3	6	27.6	50	27	62.5	2	3,2	LD.. 15...	XX,YY	**14503**
60°	35	62.70	3	23.6	6	27.6	50	22	49.0	2	3,2	LD.. 15...	XX,YY	**16003**
75°	35	49.48	3	26.7	6	27.6	60	22	49.0	2	3,2	LD.. 15...	XX,YY	**17503** [1]

1) Version with Powerscrew

	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver		 clamping screw	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**		**83 950 ...**	
Spare parts KAPR	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
15 - 60	XX,YY	**036**			XX,YY	**113**			XX,YY	**303**	XX,YY	**304**	XX,YY	**192**	XX,YY	**125**
75	XX,YY	**036**	XX,YY	**050**	XX,YY	**113**	XX,YY	**154**	XX,YY	**303**	XX,YY	**304**	XX,YY	**192**		

LDFT / LDFW / LDMT

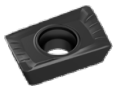
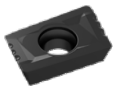
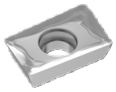
Designation	IC mm	D1 mm	L mm	BS mm	S mm
LD.. 1504PD..	9.52	4.4	15	1.2	4.76
LDFT 150408..	9.52	4.4	15	1.2	4.76
LDFT 1504PD..	9.52	4.4	15	0.8	4.76



L...

LDMT / LDFT / LDFW

NEW

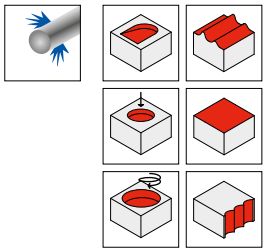
	-29 CTCP230	-29 CTPP235	-33 CTPM240	CTCK215	-F10 CTPX715	-27P H216T
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
						
	LDMT	LDMT	LDFT	LDFW	LDFT	LDFT
	51 080 ...	51 080 ...	51 042 ...	51 043 ...	51 157 ...	50 409 ...
ISO / RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
150408FR 0.8					XX,YY 00802	XX,YY 550
1504PDSR 0.8	XX,YY 020	XX,YY 120		XX,YY 520		
1504PDSR 1.2			XX,YY 420			
P	●	●	○		○	
M		○	●		○	
K	○	○		●	●	○
N					●	●
S					○	
H						
O					○	○

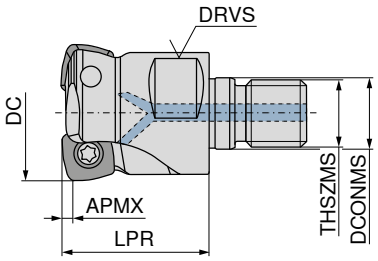
Milling guide

Cutting data standard values	→ 141–144	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

15

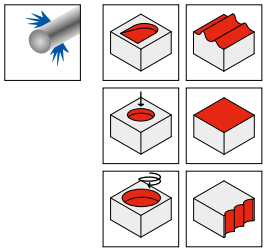
MaxiMill – HFC high-feed screw-in cutter

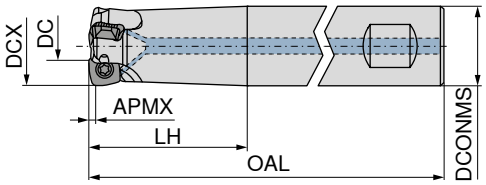




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 682 ... #CU# *PA*	
GHFC.16.R.02-06	16	2	0.8	27	8.5	M8	10	20800	1,2	XPLX 0603..	XX,YY	**616**
GHFC.20.R.03-06	20	3	0.8	33	10.5	M10	15	19800	1,2	XPLX 0603..	XX,YY	**620**
GHFC.25.R.04-06	25	4	0.8	35	12.5	M12	17	18700	1,2	XPLX 0603..	XX,YY	**625**
GHFC.32.R.05-06	32	5	0.8	35	17.0	M16	24	22000	1,2	XPLX 0603..	XX,YY	**632**
GHFC.42.R.07-06	42	7	0.8	35	17.0	M16	24	15000	1,2	XPLX 0603..	XX,YY	**04207**
GHFC.25.R.02-09	25	2	1.0	35	12.5	M12	17	30000	3,2	XDLX 09T3..	XX,YY	**025**
GHFC.25.R.03-09	25	3	1.0	35	12.5	M12	17	30000	3,2	XDLX 09T3..	XX,YY	**125**
GHFC.32.R.03-09	32	3	1.0	35	17.0	M16	24	27000	3,2	XDLX 09T3..	XX,YY	**032**
GHFC.42.R.05-09	42	5	1.0	35	17.0	M16	24	26100	3,2	XDLX 09T3..	XX,YY	**04205**
GHFC.32.R.02-12	32	2	2.0	35	17.0	M16	24	21600	5	XOLX 1204..	XX,YY	**132**
GHFC.35.R.03-12	35	3	2.0	35	17.0	M16	24	21360	5	XOLX 1204..	XX,YY	**035**
GHFC.42.R.04-12	42	4	2.0	35	17.0	M16	24	20800	5	XOLX 1204..	XX,YY	**04204**

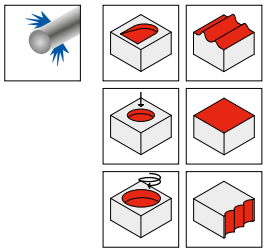
MaxiMill – HFC high-feed end mill

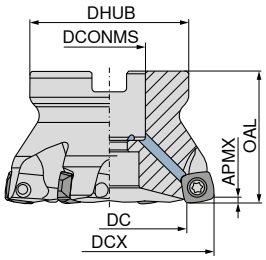




Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 681 ... #CU# *PA*		50 681 ... #CU# *PA*	
CHFC.16.R.02-06-B-40	7.0	16	2	0.8	89	40	16	17300	1,2	XPLX 0603..			XX,YY	**616**
CHFC.16.R.02-06-A-40-200	7.0	16	2	0.8	200	40	16	4600	1,2	XPLX 0603..	XX,YY	**716**		
CHFC.20.R.03-06-B-50	11.0	20	3	0.8	101	50	20	14500	1,2	XPLX 0603..			XX,YY	**620**
CHFC.20.R.03-06-A-50-225	11.0	20	3	0.8	225	50	20	4200	1,2	XPLX 0603..	XX,YY	**720**		
CHFC.25.R.04-06-B-50	16.0	25	4	0.8	107	50	25	15600	1,2	XPLX 0603..			XX,YY	**625**
CHFC.25.R.04-06-A-50-225	16.0	25	4	0.8	225	50	25	4600	1,2	XPLX 0603..	XX,YY	**725**		
CHFC.32.R.05-06-B-25-60	23.0	32	5	0.8	117	60	25	11000	1,2	XPLX 0603..			XX,YY	**632**
CHFC.32.R.05-06-A-25-60-225	23.0	32	5	0.8	225	60	25	3900	1,2	XPLX 0603..	XX,YY	**732**		
CHFC.25.R.02-09-A-50-225	12.3	25	2	1.0	225	50	25	9000	3,2	XDLX 09T3..	XX,YY	**025**		
CHFC.25.R.03-09-A-50-225	12.3	25	3	1.0	225	50	25	9000	3,2	XDLX 09T3..	XX,YY	**125**		
CHFC.32.R.03-09-A-63-250	19.3	32	3	1.0	250	63	32	8100	3,2	XDLX 09T3..	XX,YY	**032**		
CHFC.32.R.02-12-A-63-250	14.8	32	2	2.0	250	63	32	6480	5	XOLX 1204..	XX,YY	**132**		
CHFC.35.R.03-12-A-63-250	17.8	35	3	2.0	250	63	32	6480	5	XOLX 1204..	XX,YY	**035**		

MaxiMill – HFC high-feed face mill





Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	torque moment Nm	Insert	50 683 ... #CU# *PA*	
AHFC.32.R.03-09	19.3	32	3	1.0	40	16	38	27700	3,2	XDLX 09T3..	XX,YY	**032**
AHFC.35.R.04-09	19.3	35	4	1.0	40	16	38	26700	3,2	XDLX 09T3..	XX,YY	**035**
AHFC.40.R.04-09	27.3	40	4	1.0	40	16	38	26400	3,2	XDLX 09T3..	XX,YY	**140**
AHFC.42.R.05-09	29.3	42	5	1.0	40	16	38	26100	3,2	XDLX 09T3..	XX,YY	**142**
AHFC.50.R.05-09	37.3	50	5	1.0	40	22	43	23500	3,2	XDLX 09T3..	XX,YY	**150**
AHFC.52.R.06-09	39.3	52	6	1.0	40	22	43	23000	3,2	XDLX 09T3..	XX,YY	**152**
AHFC.63.R.06-09	50.3	63	6	1.0	40	22	48	20500	3,2	XDLX 09T3..	XX,YY	**163**
AHFC.66.R.07-09	53.3	66	7	1.0	40	22	48	20000	3,2	XDLX 09T3..	XX,YY	**16600**
AHFC.40.R.03-12	22.8	40	3	2.0	40	16	38	21120	5	XOLX 1204..	XX,YY	**040**
AHFC.42.R.04-12	24.8	42	4	2.0	40	16	38	20880	5	XOLX 1204..	XX,YY	**042**
AHFC.50.R.04-12	32.8	50	4	2.0	40	22	43	18800	5	XOLX 1204..	XX,YY	**050**
AHFC.52.R.05-12	34.8	52	5	2.0	40	22	43	18400	5	XOLX 1204..	XX,YY	**052**
AHFC.63.R.05-12	45.8	63	5	2.0	40	22	48	16400	5	XOLX 1204..	XX,YY	**063**
AHFC.66.R.06-12	48.8	66	6	2.0	40	22	48	16000	5	XOLX 1204..	XX,YY	**066**
AHFC.80.R.07-12	62.8	80	7	2.0	50	27	58	14000	5	XOLX 1204..	XX,YY	**080**
AHFC.100.R.08-12	82.8	100	8	2.0	50	32	78	12000	5	XOLX 1204..	XX,YY	**100**
AHFC.63.R.05-19	36.7	63	5	3.3	40	22	48	5500	5	XOLX 1906..	XX,YY	**263**
AHFC.80.R.06-19	53.7	80	6	3.3	50	27	58	4700	5	XOLX 1906..	XX,YY	**280**
AHFC.100.R.08-19	73.7	100	8	3.3	52	32	78	4100	5	XOLX 1906..	XX,YY	**300**
AHFC.125.R.10-19	98.7	125	10	3.3	63	40	88	3600	5	XOLX 1906..	XX,YY	**325**
AHFC.160.R.11-19	133.7	160	11	3.3	63	40	98	3100	5	XOLX 1906..	XX,YY	**360** [1]

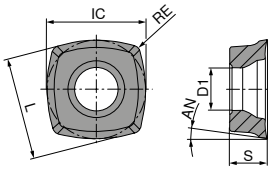
1) With threaded holes M12 on the front face, pitch circle diameter = 66.7 mm / Without Through Coolant

	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts Insert	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
XDLX 09T3..	XX,YY	**036**			XX,YY	**113**			XX,YY	**303**	XX,YY	**110**	XX,YY	**192**
XDLX 09T3.. (Ø32 – Ø42)	XX,YY	**036**	XX,YY	**040**	XX,YY	**113**	XX,YY	**151**	XX,YY	**303**	XX,YY	**110**	XX,YY	**192**
XOLX 1204..	XX,YY	**037**			XX,YY	**114**			XX,YY	**303**	XX,YY	**01200**	XX,YY	**193**
XOLX 1204.. (Ø40 – Ø42)	XX,YY	**037**	XX,YY	**040**	XX,YY	**114**	XX,YY	**151**	XX,YY	**303**	XX,YY	**01200**	XX,YY	**193**
XOLX 1906..	XX,YY	**037**			XX,YY	**114**			XX,YY	**303**	XX,YY	**302**	XX,YY	**193**
XPLX 0603..	XX,YY	**033**			XX,YY	**110**			XX,YY	**303**	XX,YY	**116**	XX,YY	**192**

15

XPLX / XDLX / XOLX / XOHX

Designation	IC mm	D1 mm	L mm	BS mm	S mm	AN °
XPLX 0603..	6.35	2.8	6	1	2.75	11
XDLX 09T3..	9.52	4.4	9	1.9	3.97	15
XO.X 1204..	12.70	5.5	12	1.3	4.76	10
XOLX 1906..	19.14	6.0	19	-	6.35	10



XPLX

		-M50 CTCP220		**-M50** CTPP225		**-M50** CTPP235		**-M50** CTPM225		**-M50** CTPM240		**-F40** CTPM245		**-F40** CTCM245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
															
		XPLX		XPLX		XPLX		XPLX		XPLX		XPLX		XPLX	
		51 019 ...		**51 019 ...**		**51 019 ...**		**51 019 ...**		**51 019 ...**		**51 116 ...**		**51 116 ...**	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
060305ER	0.5											XX,YY	**455**	XX,YY	**90501**
060305SR	0.5	XX,YY	**255**	XX,YY	**055**	XX,YY	**105**	XX,YY	**205**	XX,YY	**405**				
P		●		●		●		●		○		●		●	
M						○		●		●		●		●	
K						○									
N															
S														○	
H															
O															

XPLX

		-M50 CTCK215		**-F40** CTC5240		**-F40** CTCS245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
							
		XPLX		XPLX		XPLX	
		51 019 ...		**50 518 ...**		**51 116 ...**	
ISO	RE mm	#CU# *PA*		#CU# *PA*		#CU# *PA*	
060305ER	0.5			XX,YY	**558**	XX,YY	**55500**
060305SR	0.5	XX,YY	**505**				
P							
M							
K		●					
N							
S				●		●	
H							
O							

XDLX

		-M50 CTCP220	-M50 CTPP225	-M50 CTCP230	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XDLX	XDLX	XDLX	XDLX
		51 016 ...	51 016 ...	51 016 ...	51 016 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
09T308SR	0.8	XX,YY 258	XX,YY 058	XX,YY 008	XX,YY 108
P		●	●	●	●
M					○
K				○	○
N					
S					
H					
O					

XDLX

		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-F40 CTPM245	-M50 CTPM245	-M50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		XDLX	XDLX	XDLX	XDLX	XDLX	XDLX
		51 016 ...	51 016 ...	51 016 ...	51 115 ...	51 016 ...	51 016 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
09T308ER	0.8				XX,YY 458		
09T308SR	0.8	XX,YY 208	XX,YY 308	XX,YY 408		XX,YY 458	XX,YY 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	#CU# *PA*		#CU# *PA*		#CU# *PA*	
09T308ER	0.8			XX,YY	558	XX,YY	558
09T308SR	0.8	XX,YY	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	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
120410SR	1.0	XX,YY	260	XX,YY	060	XX,YY	010	XX,YY	110	XX,YY	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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
120410ER	1.0				XX,YY 460		XX,YY 91001	
120410SR	1.0	XX,YY 210	XX,YY 310	XX,YY 410		XX,YY 460		XX,YY 91001
P		●	●	○	●	●	●	●
M		●	●	●	●	●	●	●
K								
N								
S							○	○
H								
O								

XOLX / XOHX

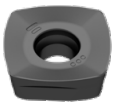
		-M50 CTCK215	-F40 CTC5240	-F50 CTC5240	-F40 CTCS245	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XOLX	XOLX	XOHX	XOLX	XOHX
		51 017 ...	50 504 ...	51 124 ...	51 022 ...	51 124 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
120410ER	1.0		XX,YY 558		XX,YY 560	
120410SR	1.0	XX,YY 510		XX,YY 16000		XX,YY 56000
P						
M						
K		●				
N						
S			●	●	●	●
H						
O						

15

XOLX

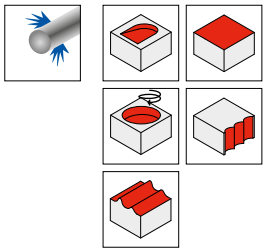
		-M50 CTCP230	-M50 CTPP235	-M50 CTPM240	-F40 CTPM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XOLX	XOLX	XOLX	XOLX
		51 017 ...	51 017 ...	51 017 ...	51 022 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
190615ER	1.5				XX,YY 465
190615SR	1.5	XX,YY 015	XX,YY 115	XX,YY 415	
P		●	●	○	●
M			○	●	●
K		○	○		
N					
S					
H					
O					

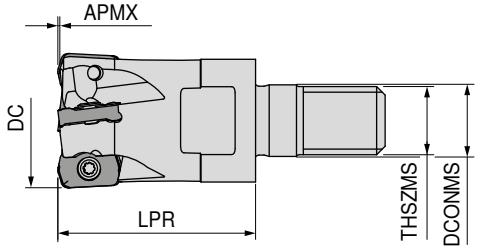
XOLX

		-F40 CTCM245	-M50 CTCK215	-M50 CTPK220	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XOLX	XOLX	XOLX	XOLX	XOLX
		51 022 ...	51 017 ...	51 017 ...	50 504 ...	51 022 ...
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
190615ER	1.5	XX,YY 91501			XX,YY 515	XX,YY 56500
190615SR	1.5		XX,YY 515	XX,YY 61500		
P		●				
M		●				
K			●	●		
N						
S		○			●	●
H						
O						

Milling guide

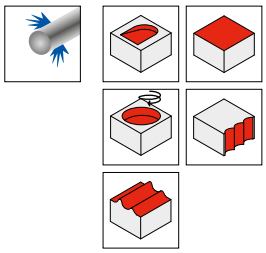
MaxiMill – DHFC high-feed screw-in cutter

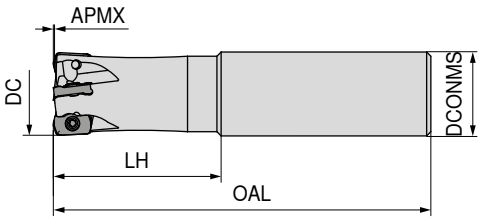




Designation	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	torque moment Nm	Insert	56 411 ... #CU# *PA*	
GDHFC.16.R.02-09	16	2	0.75	29	8.5	M8	0,65	LNKX 0925..	XX,YY	**01602**
GDHFC.16.R.03-09	16	3	0.75	29	8.5	M8	0,65	LNKX 0925..	XX,YY	**01603**
GDHFC.20.R.04-09	20	4	0.75	29	10.5	M10	0,65	LNKX 0925..	XX,YY	**02004**
GDHFC.25.R.05-09	25	5	0.75	33	12.5	M12	0,65	LNKX 0925..	XX,YY	**02505**
GDHFC.32.R.05-09	32	5	0.75	42	17.0	M16	0,65	LNKX 0925..	XX,YY	**03205**
GDHFC.35.R.06-09	35	6	0.75	42	17.0	M16	0,65	LNKX 0925..	XX,YY	**03506**
GDHFC.42.R.06-09	42	6	0.75	42	17.0	M16	0,65	LNKX 0925..	XX,YY	**04206**

MaxiMill – DHFC high-feed end mill





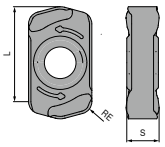
Designation	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	torque moment Nm	Insert	56 417 ... #CU# *PA*	
CDHFC.16.R.05-09-A-32	16	3	0.75	80	32	16	0,65	LNKX 0925..	XX,YY	**01603**
CDHFC.20.R.04-09-A-40	20	4	0.75	90	40	20	0,65	LNKX 0925..	XX,YY	**02004**

Spare parts	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**80 950 ...**	**70 950 ...**	**56 950 ...**	**80 950 ...**
DC	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
16 - 42	XX,YY **051**	XX,YY **117**	XX,YY **303**	XX,YY **15000**	XX,YY **191**

15

LNKX

Designation	L mm	S mm
LNKX 0925..	9	2.50



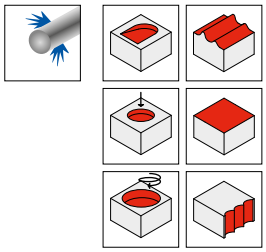
LNKX

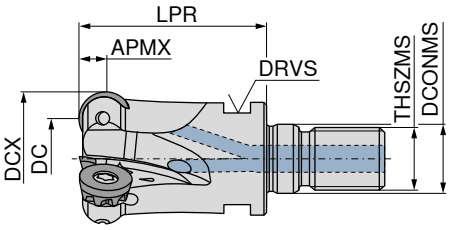
		-R50 CTPP231	-M50 CTPP236	-R50 CTPP236	-M50 CTPM241	-R50 CTPK221
						
		LNKX	LNKX	LNKX	LNKX	LNKX
		56 353 ...	**56 355 ...**	**56 353 ...**	**56 355 ...**	**56 353 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0925ZSR	1	XX,YY **12000**	XX,YY **02500**	XX,YY **02000**	XX,YY **42500**	XX,YY **27000**
P		●	●	●	○	○
M		○	○	○	●	
K		○	○	○		●
N						
S					○	
H						
O						

Milling guide

Cutting data standard values	→ 141–144	Machining strategy	→ 175
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

MaxiMill – 251 RS Screw in cutter

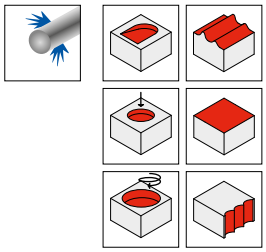


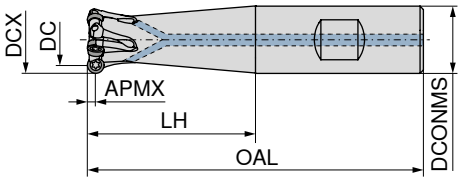


Designation	DC mm	DCX mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	DRVS mm	RPMX 1/min.	torque moment Nm	Insert	50 684 ... #CU# *PA*	
G251.20.R.05-05-RS	15	20	5	2.5	10.5	33	M10	15	31800	0,7	RDHX 0501..	XX,YY	**220**
G251.25.R.06-05-RS	20	25	6	2.5	12.5	35	M12	17	24450	0,7	RDHX 0501..	XX,YY	**225**
G251.32.R.07-05-RS	27	32	7	2.5	17.0	35	M16	24	19850	0,7	RDHX 0501..	XX,YY	**232**
G251.20.R.03-08-RS	12	20	3	4.0	10.5	33	M10	15	25000	1,2	RDHX 0802..	XX,YY	**120**
G251.25.R.04-08-RS	17	25	4	4.0	12.5	35	M12	17	19000	1,2	RDHX 0802..	XX,YY	**125**
G251.32.R.05-08-35-RS	24	32	5	4.0	17.0	35	M16	24	19000	1,2	RDHX 0802..	XX,YY	**132**
G251.20.R.02-10-RS	10	20	2	5.0	10.5	33	M10	15	30000	2	RP.X 10T3..	XX,YY	**020**
G251.25.R.03-10-RS	15	25	3	5.0	12.5	35	M12	17	30000	2	RP.X 10T3..	XX,YY	**025**
G251.32.R.04-10-RS	22	32	4	5.0	17.0	35	M16	24	25000	2	RP.X 10T3..	XX,YY	**032**
G251.25.R.02-12-35-RS	13	25	2	6.0	12.5	35	M12	17	25000	3,2	RP.X 1204..	XX,YY	**525**
G251.32.R.03-12-35-RS	20	32	3	6.0	17.0	35	M16	24	19850	3,2	RP.X 1204..	XX,YY	**532**
G251.35.R.03-12-35-RS	23	35	3	6.0	17.0	35	M16	24	15900	3,2	RP.X 1204..	XX,YY	**535**
G251.42.R.04-12-42-RS	30	42	4	6.0	17.0	42	M16	24	15000	3,2	RP.X 1204..	XX,YY	**542**

	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Spare parts Insert	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
RDHX 0501..	XX,YY **031**	XX,YY **108**	XX,YY **303**	XX,YY **149**	XX,YY **191**
RDHX 0802..	XX,YY **033**	XX,YY **110**	XX,YY **303**	XX,YY **116**	XX,YY **191**
RP.X 10T3..	XX,YY **035**	XX,YY **112**	XX,YY **303**	XX,YY **840**	XX,YY **192**
RP.X 1204..	XX,YY **036**	XX,YY **113**	XX,YY **303**	XX,YY **304**	XX,YY **192**

MaxiMill – 251 RS End milling cutter

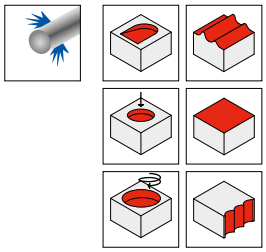


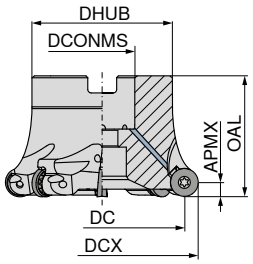


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	Insert	50 685 ... #CU# *PA*		50 685 ... #CU# *PA*	
C251.12.R-03-05-B-16-25-RS	7	12	3	2.5	75	25	16	40000	RDHX 0501..			XX,YY	**012**
C251.12.R-03-05-A-32-165-RS	7	12	3	2.5	165	32	12	16000	RDHX 0501..	XX,YY	**112**		
C251.16.R-04-05-B-32-RS	11	16	4	2.5	81	32	16	40000	RDHX 0501..			XX,YY	**316**
C251.16.R-04-05-A-40-165-RS	11	16	4	2.5	165	40	16	18000	RDHX 0501..	XX,YY	**016**		
C251.20.R-05-05-B-40-RS	15	20	5	2.5	91	40	20	31800	RDHX 0501..			XX,YY	**620**
C251.20.R-05-05-A-50-165-RS	15	20	5	2.5	165	50	20	18000	RDHX 0501..	XX,YY	**120**		
C251.16.R-02-08-B-32-RS	8	16	2	4.0	81	32	16	40000	RDHX 0802..			XX,YY	**116**
C251.16.R-02-08-A-40-165-RS	8	16	2	4.0	165	40	16	18000	RDHX 0802..	XX,YY	**216**		
C251.20.R-03-08-B-40-RS	12	20	3	4.0	91	40	20	31800	RDHX 0802..			XX,YY	**220**
C251.20.R-03-08-A-60-RS	12	20	3	4.0	110	50	20	30000	RDHX 0802..	XX,YY	**020**		
C251.20.R-03-08-A-50-200-RS	12	20	3	4.0	200	50	20	25000	RDHX 0802..	XX,YY	**320**		
C251.25.R-04-08-B-50-RS	17	25	4	4.0	107	50	25	25500	RDHX 0802..			XX,YY	**625**
C251.25.R-04-08-A-60-RS	17	25	4	4.0	116	60	25	19000	RDHX 0802..	XX,YY	**125**		
C251.25.R-04-08-A-60-225-RS	17	25	4	4.0	225	60	25	18000	RDHX 0802..	XX,YY	**225**		
C251.20.R-02-10-A-50-RS	10	20	2	5.0	102	50	20	25000	RP.X 10T3..	XX,YY	**420**		
C251.20.R-02-10-A-50-200-RS	10	20	2	5.0	200	50	20	25000	RP.X 10T3..	XX,YY	**520**		
C251.25.R.03-10-A-60-RS	15	25	3	5.0	116	60	25	25000	RP.X 10T3..	XX,YY	**025**		
C251.25.R-03-10-B-60-RS	15	25	3	5.0	116	60	25	20000	RP.X 10T3..			XX,YY	**325**
C251.25.R-03-10-A-60-225-RS	15	25	3	5.0	225	60	25	18000	RP.X 10T3..	XX,YY	**425**		
C251.32.R.04-10-A-70-RS	22	32	4	5.0	130	70	32	25000	RP.X 10T3..	XX,YY	**032**		
C251.25.R-02-12-B-30-RS	13	25	2	6.0	86	30	25	25000	RP.X 1204..			XX,YY	**525**
C251.32.R-03-12-A-RS	20	32	3	6.0	100	40	32	19000	RP.X 1204..	XX,YY	**232**		
C251.32.R-03-12-B-40-RS	20	32	3	6.0	100	40	32	19000	RP.X 1204..			XX,YY	**132**

Spare parts Insert	TORX® blade 80 950 ... #CU# *PA*		 Key D 80 950 ... #CU# *PA*		 Molykote 70 950 ... #CU# *PA*		 Clamping screw 70 950 ... #CU# *PA*		 Torque screw-driver 80 950 ... #CU# *PA*	
RDHX 0501..	XX,YY	**031**	XX,YY	**108**	XX,YY	**303**	XX,YY	**149**	XX,YY	**191**
RDHX 0802..	XX,YY	**033**	XX,YY	**110**	XX,YY	**303**	XX,YY	**116**	XX,YY	**191**
RP.X 10T3..	XX,YY	**035**	XX,YY	**112**	XX,YY	**303**	XX,YY	**840**	XX,YY	**192**
RP.X 10T3..			XX,YY	**112**	XX,YY	**303**	XX,YY	**840**		
RP.X 1204..	XX,YY	**036**	XX,YY	**113**	XX,YY	**303**	XX,YY	**304**	XX,YY	**192**

MaxiMill – 251 RS Shell mill



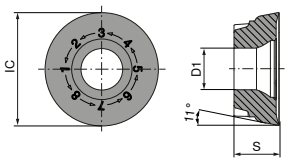


Designation	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	torque moment Nm	Insert	50 686 ... #CU# *PA*	
A251.40.R.03-10-RS	30	40	3	5	40	38	16	15900	2	RP.X 10T3..	XX,YY	**240**
A251.40.R.05-10-RS	30	40	5	5	40	38	16	16000	2	RP.X 10T3..	XX,YY	**140**
A251.42.R.06-10-RS	32	42	6	5	40	38	16	16000	2	RP.X 10T3..	XX,YY	**142**
A251.50.R.04-10-RS	40	50	4	5	40	43	22	12700	2	RP.X 10T3..	XX,YY	**350**
A251.50.R.06-10-RS	40	50	6	5	40	43	22	12500	2	RP.X 10T3..	XX,YY	**150**
A251.52.R.06-10-RS	42	52	6	5	40	43	22	12500	2	RP.X 10T3..	XX,YY	**152**
A251.40.R.04-12-RS	28	40	4	6	40	38	16	15900	3,2	RP.X 1204..	XX,YY	**340**
A251.50.R.04-12-RS	38	50	4	6	40	43	22	12700	3,2	RP.X 1204..	XX,YY	**250**
A251.50.R.05-12-RS	38	50	5	6	40	43	22	12500	3,2	RP.X 1204..	XX,YY	**050**
A251.52.R.05-12-RS	40	52	5	6	40	43	22	12500	3,2	RP.X 1204..	XX,YY	**052**
A251.63.R.06-12-RS	51	63	6	6	40	48	22	10000	3,2	RP.X 1204..	XX,YY	**063**
A251.66.R.07-12-RS	54	66	7	6	40	48	22	9000	3,2	RP.X 1204..	XX,YY	**166**
A251.80.R.05-12-RS	68	80	5	6	50	58	27	7950	3,2	RP.X 1204..	XX,YY	**180**
A251.80.R.07-12-RS	68	80	7	6	50	58	27	8000	3,2	RP.X 1204..	XX,YY	**080**
A251.100.R.06-12-RS	88	100	6	6	50	78	32	6350	3,2	RP.X 1204..	XX,YY	**100**
A251.100.R.10-12-RS	88	100	10	6	50	78	32	6350	3,2	RP.X 1204..	XX,YY	**200**
A251.50.R.04-16-RS	34	50	4	8	40	48	22	12700	5	RP.X 1605..	XX,YY	**450**
A251.52.R.04-16-RS	36	52	4	8	40	48	22	10100	5	RP.X 1605..	XX,YY	**452**
A251.63.R.05-16-RS	47	63	5	8	40	48	22	10100	5	RP.X 1605..	XX,YY	**163**
A251.66.R.05-16-RS	50	66	5	8	40	48	22	7950	5	RP.X 1605..	XX,YY	**466**
A251.80.R.06-16-RS	64	80	6	8	50	58	27	7950	5	RP.X 1605..	XX,YY	**280**
A251.100.R.07-16-RS	84	100	7	8	50	78	32	6350	5	RP.X 1605..	XX,YY	**300**
A251.125.R.08-16-RS	109	125	8	8	63	88	40	5050	5	RP.X 1605..	XX,YY	**225**
A251.80.R.05-20-RS	60	80	5	10	50	58	27	7950	5	RP.X 2006..	XX,YY	**380**
A251.100.R.06-20-RS	80	100	6	10	50	78	32	6350	5	RP.X 2006..	XX,YY	**400**
A251.125.R.06-20-RS	105	125	6	10	63	88	40	5050	5	RP.X 2006..	XX,YY	**125**

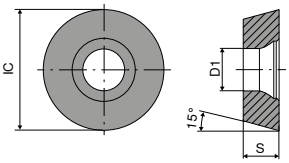
	TORX® blade		 Clamping key – T		 Key D		 Power Screw		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Spare parts Insert	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
RP.X 10T3..	XX,YY	**035**	XX,YY	**040**	XX,YY	**112**	XX,YY	**151**	XX,YY	**303**	XX,YY	**840**	XX,YY	**192**
RP.X 1204..	XX,YY	**036**	XX,YY	**040**	XX,YY	**113**	XX,YY	**151**	XX,YY	**303**	XX,YY	**304**	XX,YY	**192**
RP.X 1605..	XX,YY	**037**	XX,YY	**050**	XX,YY	**114**	XX,YY	**154**	XX,YY	**303**	XX,YY	**01200**	XX,YY	**193**
RP.X 2006..	XX,YY	**037**			XX,YY	**114**			XX,YY	**303**	XX,YY	**302**	XX,YY	**193**

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..

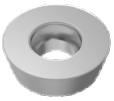


RDHX 0501.. / RDHX0802..

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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0501M0SN	XX,YY 020	XX,YY 120		XX,YY 465	
0802M0SN	XX,YY 025	XX,YY 125	XX,YY 420	XX,YY 470	XX,YY 92001
0802M4SN				XX,YY 471	XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*
0501M0FN	XX,YY 600		
0802M0EN		XX,YY 500	
0802M0FN	XX,YY 602		
0802M0SN			XX,YY 570
0802M4EN		XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
10T3M0SN	XX,YY 900				
10T3M8SN		XX,YY 020	XX,YY 020	XX,YY 020	
1204M0SN	XX,YY 902				
1204M8SN		XX,YY 025	XX,YY 025	XX,YY 025	XX,YY 025
1605M8SN			XX,YY 030	XX,YY 030	XX,YY 030
2006M8SN					XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
10T3M8EN			XX,YY 120	
10T3M8SN	XX,YY 12000	XX,YY 120		
1204M8SN	XX,YY 125	XX,YY 125		
1605M0SN		XX,YY 130		
2006M8EN				XX,YY 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	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
10T3M8SN	XX,YY	12000	XX,YY	12000	XX,YY	120		
1204M8SN	XX,YY	125			XX,YY	125	XX,YY	125
1605M8SN	XX,YY	130			XX,YY	130	XX,YY	130
2006M8SN							XX,YY	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	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
1204M8EN			XX,YY	225					XX,YY	325
1204M8SN	XX,YY	225			XX,YY	225	XX,YY	325		
P	●		●		●		●		●	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

RPHX / RPNX

	-F50 CTPM240 DRAGONSKIN		-F50 CTPM240 DRAGONSKIN		-M30 CTPM240 DRAGONSKIN		-M30 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN	
										
	RPHX		RPNX		RPHX		RPNX		RPHX	
	51 051 ...		51 055 ...		51 049 ...		51 053 ...		51 050 ...	
ISO	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
10T3M8EN					XX,YY	420				
10T3M8SN	XX,YY	420							XX,YY	420
1204M8EN					XX,YY	425				
1204M8SN	XX,YY	425							XX,YY	425
1605M8EN					XX,YY	430				
1605M8SN	XX,YY	430								
2006M8EN							XX,YY	420		
2006M8SN			XX,YY	435						
P	○		○		○		○		○	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

RPHX / RPNX

	CTPM245 DRAGONSKIN		-F50 CTPM245 DRAGONSKIN		-F50 CTPM245 DRAGONSKIN		-M32 CTPM245 DRAGONSKIN		-M50 CTPM245 DRAGONSKIN	
										
	RPHX		RPHX		RPNX		RPHX		RPHX	
	51 052 ...		51 051 ...		51 055 ...		51 108 ...		51 050 ...	
ISO	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
10T3M4SN			XX,YY	470 [1]	XX,YY	470 [1]			XX,YY	470 [1]
10T3M8SN			XX,YY	471	XX,YY	471			XX,YY	471
1204M4EN	XX,YY	475 [1]					XX,YY	475 [1]		
1204M4SN			XX,YY	475 [1]	XX,YY	475 [1]			XX,YY	475 [1]
1204M6SN			XX,YY	476					XX,YY	476
1204M8SN			XX,YY	477	XX,YY	476			XX,YY	477
1605M8SN			XX,YY	480						
2006M4SN			XX,YY	485 [1]						
2006M8SN					XX,YY	485				
P	●		●		●		●		●	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

1) Insert with 4 indexes

15

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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
10T3M4SN	XX,YY 92001 [1]		XX,YY 92001 [1]	XX,YY 92001 [1]
10T3M8SN	XX,YY 92101		XX,YY 92101	
1204M4SN	XX,YY 92501 [1]		XX,YY 92501 [1]	XX,YY 92501 [1]
1204M6SN		XX,YY 92601	XX,YY 92601	XX,YY 92601
1204M8SN	XX,YY 92601			XX,YY 92701
1605M8SN	XX,YY 93001		XX,YY 93001	
2006M8SN	XX,YY 93501	XX,YY 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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
10T3M8FN				XX,YY 02002	XX,YY 600
10T3M8SN	XX,YY 520		XX,YY 620		
1204M8FN				XX,YY 02502	XX,YY 602
1204M8SN	XX,YY 525	XX,YY 525	XX,YY 625		
1605M8FN				XX,YY 03002	XX,YY 604
1605M8SN	XX,YY 530	XX,YY 530	XX,YY 630		
2006M8SN		XX,YY 535	XX,YY 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	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
10T3M4EN			XX,YY	550 [1]						
10T3M4SN					XX,YY	570 [1]				
10T3M8EN			XX,YY	551						
10T3M8SN					XX,YY	571				
1204M4EN			XX,YY	552 [1]						
1204M4SN					XX,YY	575				
1204M6EN			XX,YY	56200	XX,YY	57800				
1204M8EN			XX,YY	582					XX,YY	300
1204M8SN					XX,YY	577				
1605M8EN			XX,YY	555	XX,YY	58100				
2006M8EN	XX,YY	12001								
2006M8SN							XX,YY	585		
P										
M										
K										●
N										
S		●		●		●		●		
H										●
O										

1) Insert with 4 indexes

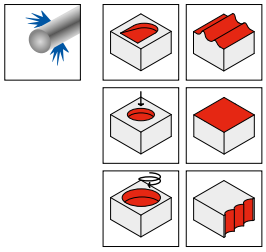
Milling guide

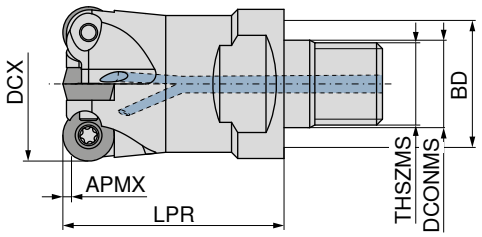
Cutting data standard values	→ 141–144	Machining strategy	→ 176
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

15

R 1000 screw-in button insert milling cutter

▲ Insert angle 0°



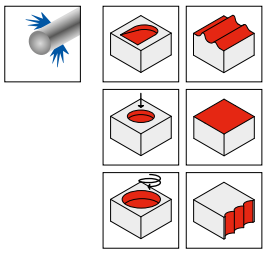


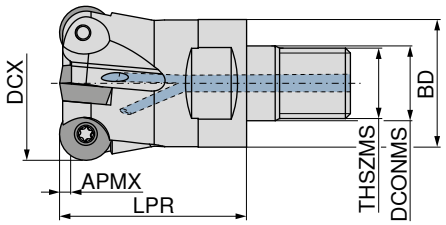
Designation	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	BD mm	torque moment Nm	Insert	56 403 ... #CU# *PA*	
R1000G.15.2.M8-07.IK	15	2	1.5	M8	28.5	8.5	13.8	0,9	RD.X 0702..	XX,YY	**153**
R1000G.16.3.M8-07.IK	16	3	1.5	M8	28.5	8.5	13.8	0,9	RD.X 0702..	XX,YY	**161**
R1000G.20.4.M10-07.IK	20	4	1.5	M10	28.5	10.5	18.0	0,9	RD.X 0702..	XX,YY	**203**
R1000G.25.5.M12-07.IK	25	5	1.5	M12	28.5	12.5	21.0	0,9	RD.X 0702..	XX,YY	**252**
R1000G.30.5.M16-07.IK	30	5	1.5	M16	28.5	17.0	29.0	0,9	RD.X 0702..	XX,YY	**301**
R1000G.35.6.M16-07.IK	35	6	1.5	M16	28.5	17.0	29.0	0,9	RD.X 0702..	XX,YY	**351**
R1000G.42.7.M16-07.IK	42	7	1.5	M16	42.5	17.0	29.0	0,9	RD.X 0702..	XX,YY	**421**
R1000G.20.2.M10-10.IK	20	2	2.8	M10	29.0	10.5	18.0	2,4	RD.X 1003..	XX,YY	**204**
R1000G.25.2.M12-10.IK	25	2	2.8	M12	33.0	12.5	21.0	2,4	RD.X 1003..	XX,YY	**253**
R1000G.25.3.M12-10.IK	25	3	2.8	M12	33.0	12.5	21.0	2,4	RD.X 1003..	XX,YY	**254**
R1000G.30.4.M12-10.IK	30	4	2.3	M12	33.0	12.5	21.0	2,4	RD.X 1003..	XX,YY	**302**
R1000G.30.4.M16-10.IK	30	4	2.8	M16	43.0	17.0	23.0	2,4	RD.X 1003..	XX,YY	**303**
R1000G.35.5.M16-10.IK	35	5	2.8	M16	43.0	17.0	29.0	2,4	RD.X 1003..	XX,YY	**352**
R1000G.42.5.M16-10.IK	42	5	2.8	M16	43.0	17.0	29.0	2,4	RD.X 1003..	XX,YY	**422**
R1000G.42.6.M16-10.IK	42	6	2.8	M16	43.0	17.0	29.0	2,4	RD.X 1003..	XX,YY	**423**
R1000G.24.2.M12-12.IK	24	2	3.0	M12	33.0	12.5	21.0	2,4	RD.X 12T3..	XX,YY	**241**
R1000G.35.3.M16-12.IK	35	3	3.0	M16	43.0	17.0	29.0	2,4	RD.X 12T3..	XX,YY	**353**
R1000G.35.4.M16-12.IK	35	4	3.0	M16	43.0	17.0	29.0	2,4	RD.X 12T3..	XX,YY	**354**
R1000G.42.4.M16-12.IK	42	4	3.0	M16	43.0	17.0	29.0	2,4	RD.X 12T3..	XX,YY	**424**
R1000G.42.5.M16-12.IK	42	5	3.0	M16	43.0	17.0	29.0	2,4	RD.X 12T3..	XX,YY	**425**
R1000G.32.2.M16-16.IK	32	2	4.0	M16	43.5	17.0	29.0	4,3	RD.X 1604..	XX,YY	**321**
R1000G.35.3.M16-16.IK	35	3	4.0	M16	43.5	17.0	29.0	4,3	RD.X 1604..	XX,YY	**355**

	TORX® blade		Clamping Screw		over clamp		Key D		Molykote		Clamping screw		Torque screw-driver	
	80 950 ...		56 950 ...		56 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
Spare parts Insert	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
RD.X 0702..	XX,YY	**032**					XX,YY	**109**	XX,YY	**303**	XX,YY	**006**	XX,YY	**191**
RD.X 1003..	XX,YY	**036**					XX,YY	**113**	XX,YY	**303**	XX,YY	**010**	XX,YY	**192**
RD.X 12T3..	XX,YY	**036**	XX,YY	**022**			XX,YY	**113**	XX,YY	**303**	XX,YY	**010**	XX,YY	**192**
RD.X 1604..	XX,YY	**037**			XX,YY	**210**	XX,YY	**114**	XX,YY	**303**	XX,YY	**012**	XX,YY	**192**

R 1007 screw-in button insert milling cutter

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

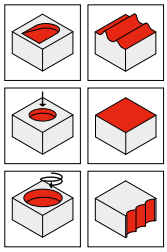


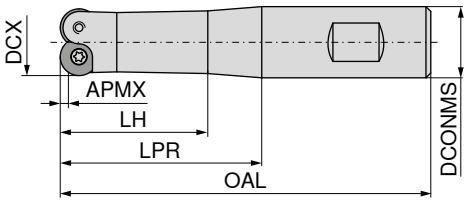


Designation	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	BD mm	torque moment Nm	Insert	56 405 ... #CU# *PA*	
R1007G.25.3.M12-10.IK	25	3	2.5	M12	32.5	12.5	21	2,4	RD.X 1003..	XX,YY	**251**
R1007G.42.6.M16-10.IK	42	6	2.5	M16	42.5	17.0	29	2,4	RD.X 1003..	XX,YY	**421**
R1007G.35.4.M16-12.IK	35	4	3.0	M16	42.5	17.0	29	2,4	RD.X 12T3..	XX,YY	**352**

R 1000 shank button insert milling cutter

▲ Insert angle 0°



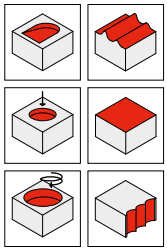


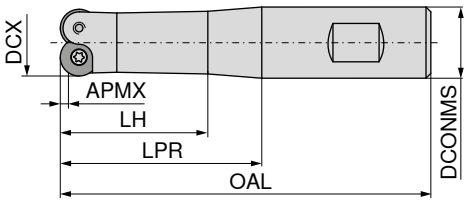
Designation	DCX mm	ZNF	APMX mm	OAL mm	LPR mm	LH mm	DCONMS mm	torque moment Nm	Insert	56 441 ... #CU# *PA*	
R1000C.8.1.30-05	8	1	1.3	75	30	18	10	0,43	RDHX 0501..	XX,YY	**081**
R1000C.10.2.30-05	10	2	1.3	75	30	23	10	0,43	RDHX 0501..	XX,YY	**101**
R1000C.12.3.30-05	12	3	1.3	81	30	23	12	0,43	RDHX 0501..	XX,YY	**121**

	TORX® blade	 Clamping Screw	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**56 950 ...**	**80 950 ...**	**70 950 ...**	**56 950 ...**	**80 950 ...**
Spare parts Insert	**#CU# *PA***	**#CU# *PA***	**#CU# *PA***	**#CU# *PA***	**#CU# *PA***	**#CU# *PA***
RDHX 0501..			XX,YY **108**	XX,YY **303**	XX,YY **002**	XX,YY **191**
RD.X 1003..	XX,YY **036**		XX,YY **113**	XX,YY **303**	XX,YY **010**	XX,YY **192**
RD.X 12T3..	XX,YY **036**	XX,YY **022**	XX,YY **113**	XX,YY **303**	XX,YY **010**	XX,YY **192**

R 1002 shank button insert milling cutter

▲ Insert angle 0°



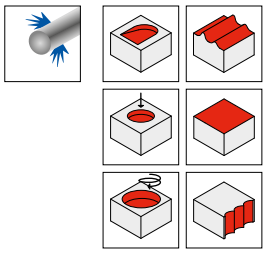


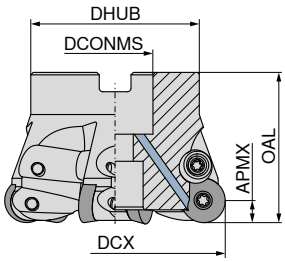
56 443 ...

Designation	DCX mm	ZNF	APMX mm	OAL mm	LPR mm	LH mm	DCONMS mm	Insert	#CU# *PA*	
R1002C.15.2.40-07	15	2	2.6	89	40	23	16	RD.X 0702..	XX,YY	**151**
R1002C.15.2.60-07	15	2	2.6	109	60	23	16	RD.X 0702..	XX,YY	**152**
R1002C.15.2.80-07	15	2	2.6	131	80	22	20	RD.X 0702..	XX,YY	**153**
R1002C.15.2.100-07	15	2	2.6	151	100	22	20	RD.X 0702..	XX,YY	**154**
R1002C.20.2.40-10	20	2	4.0	91	40	23	20	RD.X 1003..	XX,YY	**201**
R1002C.20.2.60-10	20	2	4.0	111	60	23	20	RD.X 1003..	XX,YY	**202**
R1002C.20.2.80-10	20	2	4.0	137	80	23	25	RD.X 1003..	XX,YY	**203**
R1002C.20.2.100-10	20	2	4.0	157	100	23	25	RD.X 1003..	XX,YY	**204**
R1002C.20.2.120-10	20	2	4.0	177	125	23	25	RD.X 1003..	XX,YY	**205**

R 1000 shell button insert milling cutter

▲ Insert angle 0°





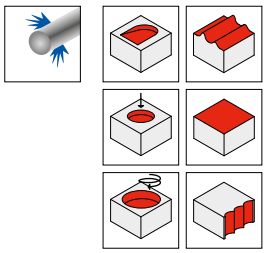
56 407 ...

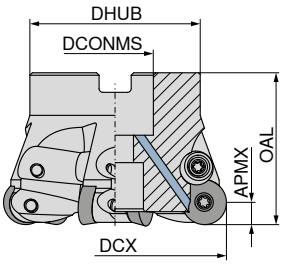
Designation	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	torque moment Nm	Insert	#CU# *PA*	
R1000A.42.6.43-10.IK	42	6	2.8	43.0	16	35	2,4	RD.X 1003..	XX,YY	**420**
R1000A.42.4.43-12.IK	42	4	3.0	43.0	16	35	2,4	RD.X 12T3..	XX,YY	**421**
R1000A.42.5.43-12.IK	42	5	3.0	43.0	16	35	2,4	RD.X 12T3..	XX,YY	**422**
R1000A.52.5.53-12.IK	52	5	3.5	53.0	22	40	2,4	RD.X 12T3..	XX,YY	**521**
R1000A.52.4.53,5-16.IK	52	4	4.7	53.5	22	40	4,3	RD.X 1604..	XX,YY	**522**
R1000A.66.5.53,5-16.IK	66	5	5.1	53.5	27	48	4,3	RD.X 1604..	XX,YY	**661**
R1000A.80.6.53,5-16.IK	80	6	5.8	53.5	27	60	4,3	RD.X 1604..	XX,YY	**801**

	TORX® blade		Clamping Screw		over clamp		Key D		Molykote		Clamping screw		Torque screw-driver	
	80 950 ...		**56 950 ...**		**56 950 ...**		**80 950 ...**		**70 950 ...**		**56 950 ...**		**80 950 ...**	
Spare parts	#CU#		#CU#		#CU#		#CU#		#CU#		#CU#		#CU#	
Insert	*PA*		*PA*		*PA*		*PA*		*PA*		*PA*		*PA*	
RD.X 1003..	XX,YY	**036**					XX,YY	**113**	XX,YY	**303**	XX,YY	**010**	XX,YY	**192**
RD.X 12T3..	XX,YY	**036**	XX,YY	**022**			XX,YY	**113**	XX,YY	**303**	XX,YY	**010**	XX,YY	**192**
RD.X 1604..	XX,YY	**037**			XX,YY	**210**	XX,YY	**114**	XX,YY	**303**	XX,YY	**012**	XX,YY	**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 ... #CU# *PA*	
R1007A.42.6.42,5-10.IK	42	6	3.5	42.5	16	35	2,4	RD.X 1003..	XX,YY	**421**
R1007A.52.7.52,5-10.IK	52	7	3.5	52.5	22	40	2,4	RD.X 1003..	XX,YY	**521**
R1007A.52.5.52,5-12.IK	52	5	3.5	52.5	22	40	2,4	RD.X 12T3..	XX,YY	**522**
R1007A.66.6.52,5-12.IK	66	6	3.5	52.5	27	48	2,4	RD.X 12T3..	XX,YY	**661**
R1007A.80.7.54,5-12.IK	80	7	3.5	54.5	27	60	2,4	RD.X 12T3..	XX,YY	**801**
R1007A.52.5.53-16.IK	52	5	4.1	53.0	22	40	4,3	RD.X 1604..	XX,YY	**523**
R1007A.66.5.53-16.IK	66	5	4.6	53.0	27	48	4,3	RD.X 1604..	XX,YY	**662**
R1007A.66.6.53-16.IK	66	6	5.1	53.0	27	48	4,3	RD.X 1604..	XX,YY	**663**
R1007A.80.6.53-16.IK	80	6	5.1	53.0	27	60	4,3	RD.X 1604..	XX,YY	**802**
R1007A.100.7.53-16	100	7	5.1	53.0	32	70	4,3	RD.X 1604..	XX,YY	**910** 1)
R1007A.125.8.53-16	125	8	5.2	53.0	40	90	4,3	RD.X 1604..	XX,YY	**925** 1)
R1007A.160.9.53-16	160	9	5.1	53.0	40	120	4,3	RD.X 1604..	XX,YY	**960** 1)

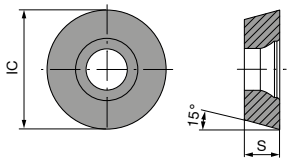
1) Without Through Coolant

	TORX® blade	 Clamping Screw	 over clamp	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	**56 950 ...**	**56 950 ...**	**80 950 ...**	**70 950 ...**	**56 950 ...**	**80 950 ...**
Spare parts Insert	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
RD.X 1003..	XX,YY **036**			XX,YY **113**	XX,YY **303**	XX,YY **010**	XX,YY **192**
RD.X 12T3..	XX,YY **036**	XX,YY **022**		XX,YY **113**	XX,YY **303**	XX,YY **010**	XX,YY **192**
RD.X 1604..	XX,YY **037**		XX,YY **210**	XX,YY **114**	XX,YY **303**	XX,YY **012**	XX,YY **192**

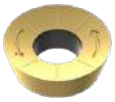
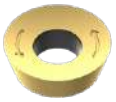
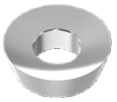
15

RDHX / RDMX / RDEX / RDPX

Designation	IC mm	S mm
RDHX 0501..	5	1.50
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

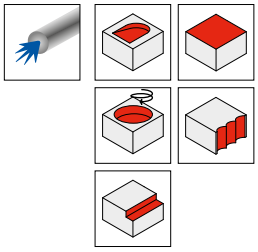
	WTN1205		WAN1240		WAX1240		-HP WAN2225		-F30P WUN4210	
										
	RDHX		RDMX		RDEX		RDPX		RDHX	
	56 302 ...		56 309 ...		56 314 ...		56 348 ...		56 304 ...	
ISO	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
0501M0T	XX,YY	100								
0702M0E									XX,YY	611
0702M0T	XX,YY	111			XX,YY	611				
1003M0S							XX,YY	231		
1003M0T	XX,YY	131	XX,YY	731	XX,YY	631			XX,YY	631
12T3M0S							XX,YY	241		
12T3M0T	XX,YY	141	XX,YY	741	XX,YY	641			XX,YY	641
1604M0S							XX,YY	251		
1604M0T	XX,YY	151	XX,YY	751	XX,YY	651			XX,YY	651
P	●		●		●					
M	●		○		○		●			
K	●		○		○					○
N										●
S							●			
H	●									
O										○

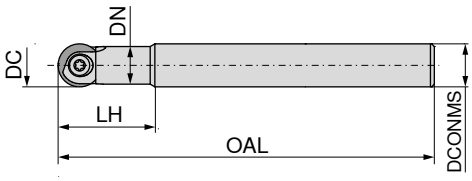
Milling guide

Cutting data standard values	→ 177–179	Machining strategy	→ 180+181
Technical Information	→ 187–192	Grade description	→ 193–195
Designation System	→ 196–202		

K 2000 / K 2001 shank copy milling cutter

▲ with carbide shank





ISO designation	DC mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	56 100 ... #CU# *PA*		56 101 ... #CU# *PA*	
K2000C.6.16.100	6	5.3	16	100	8	0,5	XX,YY	**060** [1]		
K2000C.6.20.100	6	5.8	20	100	6	0,5	XX,YY	**061** [1]		
K2000C.6.70.150	6	5.8	70	150	6	0,5	XX,YY	**062** [1]		
K2000C.6.100.200	6	5.8	100	200	6	0,5	XX,YY	**063** [1]		
K2000C.8.25.80	8	7.0	25	80	8	1	XX,YY	**081** [1]		
K2000C.8.25.100	8	7.0	25	100	8	1	XX,YY	**082** [1]		
K2000C.8.40.150	8	7.0	40	150	8	1	XX,YY	**083** [1]		
K2000C.10.35.80	10	8.8	35	80	10	3	XX,YY	**101** [1]		
K2000C.10.35.120	10	8.8	35	120	10	3	XX,YY	**102** [1]		
K2000C.10.50.150	10	8.8	50	150	10	3	XX,YY	**103** [1]		
K2000C.12.35.80	12	10.5	35	80	12	4	XX,YY	**121** [1]		
K2001C.12.35.80	12	10.5	35	80	12	4			XX,YY	**121**
K2000C.12.35.120	12	10.5	35	120	12	4	XX,YY	**122** [1]		
K2001C.12.35.120	12	10.5	35	120	12	4			XX,YY	**122**
K2000C.12.50.160	12	10.5	50	160	12	4	XX,YY	**123** [1]		
K2001C.12.50.160	12	10.5	50	160	12	4			XX,YY	**123**
K2001C.16.40.100	16	14.0	40	100	16	5			XX,YY	**161**
K2001C.16.40.140	16	14.0	40	140	16	5			XX,YY	**162**
K2001C.16.55.175	16	14.0	55	175	16	5			XX,YY	**163**
K2001C.20.50.100	20	18.0	50	100	20	5			XX,YY	**201**
K2001C.20.50.140	20	18.0	50	140	20	5			XX,YY	**202**
K2001C.20.75.190	20	18.0	75	190	20	5			XX,YY	**203**
K2001C.25.60.160	25	22.4	60	160	25	8			XX,YY	**252**
K2001C.25.90.210	25	22.4	90	210	25	8			XX,YY	**253**

1) Without Through Coolant

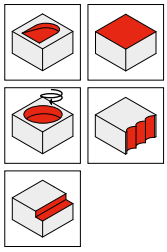
Applicable inserts

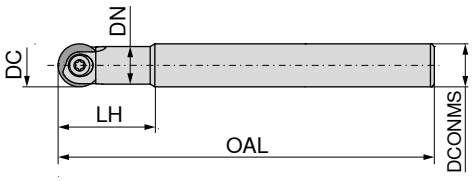
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

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

K 2002 shank copy milling cutter

▲ cylindrical steel shank version





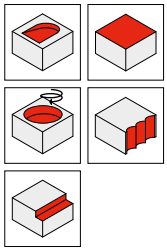
Designation	DC mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	56 102 ... #CU# *PA*	
K2002C.12.32.90	12	10.5	32	90	12	4	XX,YY	**121**
K2002C.12.32.130	12	10.5	32	130	12	4	XX,YY	**122**
K2002C.12.46.150	12	10.5	46	150	12	4	XX,YY	**123**
K2002C.16.36.100	16	14.0	36	100	16	5	XX,YY	**161**
K2002C.16.36.140	16	14.0	36	140	16	5	XX,YY	**162**
K2002C.16.53.160	16	14.0	53	160	16	5	XX,YY	**163**
K2002C.20.45.160	20	18.0	45	160	20	5	XX,YY	**202**
K2002C.20.61.175	20	18.0	61	175	20	5	XX,YY	**203**
K2002C.25.45.160	25	22.4	45	160	25	8	XX,YY	**252**
K2002C.25.70.190	25	22.4	70	190	25	8	XX,YY	**253**
K2002C.32.56.175	32	28.6	56	175	32	8	XX,YY	**322**
K2002C.32.80.210	32	28.6	80	210	32	8	XX,YY	**323**

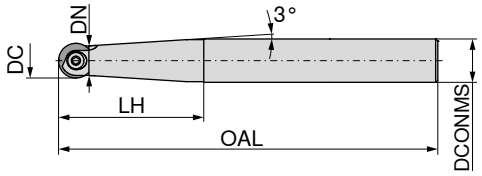
Applicable inserts

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

K 2003 shank copy milling cutter

▲ tapered execution





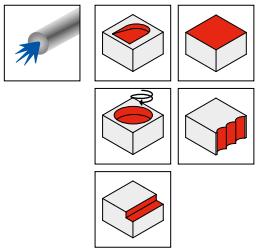
Designation	DC mm	DN mm	LH mm	OAL mm	DCONMS h6 mm	torque moment Nm	56 104 ... #CU# *PA*	
K2003C.6.16.90	6	5.3	40	90	10	0,5	XX,YY	**061**
K2003C.8.50.85	8	7.5	50	85	12	1	XX,YY	**081**
K2003C.8.50.140	8	7.5	50	140	12	1	XX,YY	**082**
K2003C.10.35.85	10	9.0	35	85	12	3	XX,YY	**101**
K2003C.10.35.150	10	9.0	35	150	12	3	XX,YY	**102**
K2003C.12.60.110	12	10.5	60	110	16	4	XX,YY	**121**
K2003C.12.60.160	12	10.5	60	160	16	4	XX,YY	**122**
K2003C.16.67.120	16	14.0	67	120	20	5	XX,YY	**161**
K2003C.16.67.175	16	14.0	67	175	20	5	XX,YY	**162**
K2003C.20.80.190	20	18.0	80	190	25	5	XX,YY	**201**
K2003C.25.100.210	25	22.4	100	210	32	8	XX,YY	**251**
K2003C.32.123.240	32	28.6	123	240	40	8	XX,YY	**321**

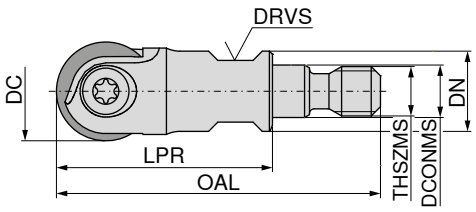
Applicable inserts

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

	**XOHX-FM1**

K 2000 screw-in copy milling cutter





56 120 ...

Designation	DC mm	LPR mm	DN mm	OAL mm	DCONMS mm	THSZMS	DRVS mm	torque moment Nm	#CU# *PA*	
K2000G.8.25.M6	8	25	10	39.5	6.5	M6	8	1	XX,YY	**081** 1)
K2000G.10.25.M6	10	25	10	39.5	6.5	M6	8	3	XX,YY	**101** 1)
K2000G.12.25.M6	12	25	10	39.5	6.5	M6	8	4	XX,YY	**121** 1)
K2000G.12.26.M8	12	26	13	43.5	8.5	M8	10	4	XX,YY	**122**
K2000G.16.26.M8	16	26	13	43.5	8.5	M8	10	5	XX,YY	**161**
K2000G.20.30.M10	20	30	18	49.5	10.5	M10	15	5	XX,YY	**201**
K2000G.25.40.M12	25	40	21	62.0	12.5	M12	17	8	XX,YY	**251**
K2000G.32.45.M16	32	45	30	69.0	17.0	M16	26	8	XX,YY	**321**

1) Without Through Coolant

Applicable inserts

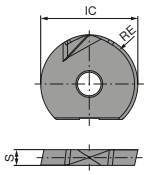
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

	**XOHX-FM1**

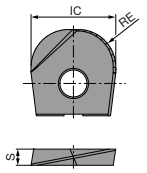
	TORX® blade		 Key D		 Molykote		 Clamping screw		 Torque screw-driver	
	80 950 ...		**80 950 ...**		**70 950 ...**		**56 950 ...**		**80 950 ...**	
Spare parts DC	**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*		**#CU#** *PA*	
6	XX,YY	**031**	XX,YY	**108**	XX,YY	**303**	XX,YY	**041**	XX,YY	**191**
8	XX,YY	**033**	XX,YY	**110**	XX,YY	**303**	XX,YY	**042**	XX,YY	**191**
10	XX,YY	**036**	XX,YY	**113**	XX,YY	**303**	XX,YY	**043**	XX,YY	**193**
12	XX,YY	**037**	XX,YY	**114**	XX,YY	**303**	XX,YY	**044**	XX,YY	**193**
16	XX,YY	**037**	XX,YY	**114**	XX,YY	**303**	XX,YY	**045**	XX,YY	**193**
20	XX,YY	**037**	XX,YY	**114**	XX,YY	**303**	XX,YY	**046**	XX,YY	**193**
25			XX,YY	**131**	XX,YY	**303**	XX,YY	**047**		
32			XX,YY	**131**	XX,YY	**303**	XX,YY	**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	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
0616 R3			XX,YY 30200	XX,YY 90200			XX,YY 602 1)
0820 R4	XX,YY 71300		XX,YY 31300	XX,YY 71300	XX,YY 11300		XX,YY 613 1)
1025 R5	XX,YY 72400		XX,YY 32400	XX,YY 72400	XX,YY 12400		XX,YY 624 1)
102540		XX,YY 92400					
1225 R6			XX,YY 33500	XX,YY 73500	XX,YY 13500	XX,YY 53500	XX,YY 635 1)
122550		XX,YY 93500					
1630 R8			XX,YY 34600	XX,YY 74600	XX,YY 14600	XX,YY 54600	XX,YY 646 1)
163070		XX,YY 94700					
2030 R10			XX,YY 35700	XX,YY 75700	XX,YY 15700	XX,YY 55700	
203090		XX,YY 95900					
2540 R12,5			XX,YY 36800	XX,YY 76800	XX,YY 16800	XX,YY 56800	
3250 R16			XX,YY 37900	XX,YY 77900	XX,YY 17900	XX,YY 57900	
P	●	●	●	●	●	●	
M	○	○	○	○	●	●	
K	○	●	●	●	●	●	
N	○	○	○	○		○	○
S	○	○	○	○		○	
H	○	●	●	●	○	○	
O	○	○	○	○			●

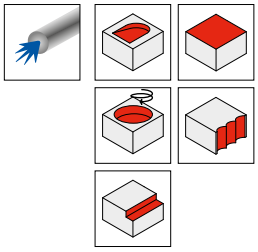
1) Specifically for machining graphite !

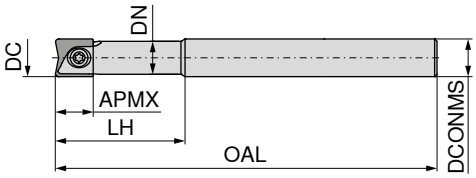
Milling guide

Cutting data standard values	→ 182+183	Depth of Cut	→ 184
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

K 2005 / K 2006 shank copy milling cutter

▲ with carbide shank





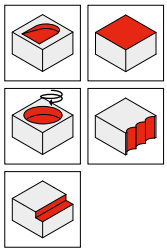
Designation	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	56 110 ... #CU# *PA*		56 111 ... #CU# *PA*	
K2005C.8.27.82	8	9.5	7.0	27	82	8	1	XX,YY	**081** [1]		
K2005C.8.27.102	8	9.5	7.0	27	102	8	1	XX,YY	**082** [1]		
K2005C.8.42.152	8	9.5	7.0	42	152	8	1	XX,YY	**083** [1]		
K2005C.10.37.82	10	11.5	8.8	37	82	10	3	XX,YY	**101** [1]		
K2005C.10.37.122	10	11.5	8.8	37	122	10	3	XX,YY	**102** [1]		
K2005C.10.52.152	10	11.5	8.8	52	152	10	3	XX,YY	**103** [1]		
K2005C/K2006C.12.37.82	12	14.0	10.5	37	82	12	4	XX,YY	**121** [1]	XX,YY	**121**
K2005C/K2006C.12.37.122	12	14.0	10.5	37	122	12	4	XX,YY	**122** [1]	XX,YY	**122**
K2005C/K2006C.12.52.162	12	14.0	10.5	52	162	12	4	XX,YY	**123** [1]	XX,YY	**123**
K2006C.16.42.102	16	16.0	14.0	42	102	16	5			XX,YY	**161**
K2006C.16.42.142	16	16.0	14.0	42	142	16	5			XX,YY	**162**
K2006C.16.57.177	16	16.0	14.0	57	177	16	5			XX,YY	**163**
K2006C.20.52.102	20	18.0	18.0	52	102	20	5			XX,YY	**201**
K2006C.20.52.142	20	18.0	18.0	52	142	20	5			XX,YY	**202**
K2006C.20.77.192	20	18.0	18.0	77	192	20	5			XX,YY	**203**
K2006C.25.62.162	25	23.5	22.4	62	162	25	8			XX,YY	**252**
K2006C.25.92.212	25	23.5	22.4	92	212	25	8			XX,YY	**253**

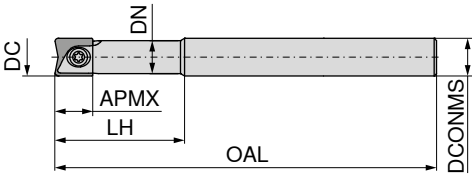
1) Without Through Coolant

Applicable inserts

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

K 2007 shank copy milling cutter





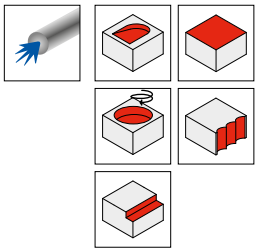
Designation	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	torque moment Nm	56 112 ... #CU# *PA*	
K2007C.12.34.132	12	14.0	10.5	34	132	12	4	XX,YY	**122**
K2007C.12.34.92	12	14.0	10.5	34	92	12	4	XX,YY	**121**
K2007C.12.48.152	12	14.0	10.5	48	152	12	4	XX,YY	**123**
K2007C.16.38.102	16	16.0	14.0	38	102	16	5	XX,YY	**161**
K2007C.16.38.142	16	16.0	14.0	38	142	16	5	XX,YY	**162**
K2007C.16.55.162	16	16.0	14.0	55	162	16	5	XX,YY	**163**
K2007C.20.47.162	20	18.0	18.0	47	162	20	5	XX,YY	**202**
K2007C.20.63.177	20	18.0	18.0	63	177	20	5	XX,YY	**203**
K2007C.25.47.162	25	23.5	22.4	47	162	25	8	XX,YY	**252**
K2007C.25.72.192	25	23.5	22.4	72	192	25	8	XX,YY	**253**
K2007C.32.58.177	32	28.0	28.6	58	177	32	8	XX,YY	**322**
K2007C.32.82.212	32	28.0	28.6	82	212	32	8	XX,YY	**323**

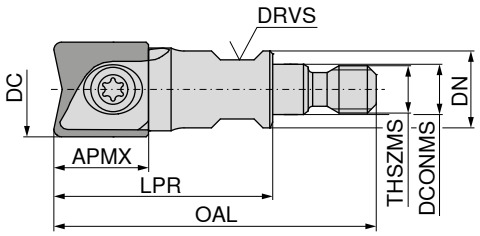
Applicable inserts

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

15

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	#CU# *PA*	
K2005G.8.25.M6	8	9.5	10	25	39.5	6.5	M6	8	1	XX,YY	**081** 1)
K2005G.10.25.M6	10	11.5	10	25	39.5	6.5	M6	8	3	XX,YY	**101** 1)
K2005G.12.25.M6	12	14.0	10	25	39.5	6.5	M6	8	4	XX,YY	**121** 1)
K2005G.12.28.M8	12	14.0	13	28	45.5	8.5	M8	8	4	XX,YY	**122**
K2005G.16.28.M8	16	16.0	13	28	45.5	8.5	M8	10	5	XX,YY	**161**
K2005G.20.32.M10	20	18.0	18	32	51.5	10.5	M10	15	5	XX,YY	**201**
K2005G.25.42.M12	25	23.5	21	42	64.0	12.5	M12	17	8	XX,YY	**251**
K2005G.32.47.M16	32	28.0	30	47	71.0	17.0	M16	26	8	XX,YY	**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 ...

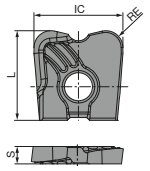

Clamping screw
56 950 ...

Torque screw-driver
80 950 ...

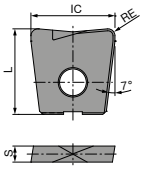
Spare parts DC	#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*		#CU# *PA*	
8	XX,YY	**033**	XX,YY	**110**	XX,YY	**303**	XX,YY	**042**	XX,YY	**191**
10	XX,YY	**036**	XX,YY	**113**	XX,YY	**303**	XX,YY	**043**	XX,YY	**193**
12	XX,YY	**037**	XX,YY	**114**	XX,YY	**303**	XX,YY	**044**	XX,YY	**193**
16	XX,YY	**037**	XX,YY	**114**	XX,YY	**303**	XX,YY	**045**	XX,YY	**193**
20	XX,YY	**037**	XX,YY	**114**	XX,YY	**303**	XX,YY	**046**	XX,YY	**193**
25			XX,YY	**131**	XX,YY	**303**	XX,YY	**047**		
32			XX,YY	**131**	XX,YY	**303**	XX,YY	**048**		

XOHX / XOGX

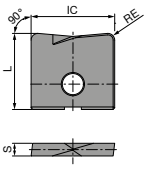
Designation	IC mm	S mm	L mm
XO.X10251..	10	2.50	11.5
XO.X12251..	12	2.50	14.0
XO.X16301..	16	3.00	16.0
XO.X16303..	16	3.00	16.0
XO.X20301..	20	3.00	18.0
XO.X20304..	20	3.00	18.0
XOGX12252..	12	2.50	14.0
XOHX06160..	6	1.60	8.0
XOHX08200..	8	2.00	9.5
XOHX08201..	8	2.00	9.5
XOHX10250..	10	2.50	11.5
XOHX12252..	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



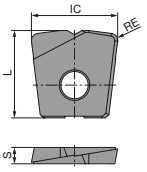
XOGX



XOHX

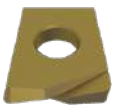
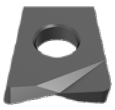


XOHX



XOHX

XOHX / XOGX

	-MR2 CTPP211	-MR6 CTPP211	-FM2 CTPP216	-FM5 CTPP216	-MF4 CTPP216	-MR3 CTPK231	-MR2 CTCN211
							
	XOHX	XOHX	XOHX	XOHX	XOGX	XOHX	XOHX
	56 167 ...	56 163 ...	56 165 ...	56 159 ...	56 161 ...	56 171 ...	56 168 ...
ISO / RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
061605 / 0.5	XX,YY 71000						XX,YY 610 1)
082006 / 0.6		XX,YY 71000	XX,YY 71000	XX,YY 71000			
082010 / 1.0	XX,YY 71200		XX,YY 71200				XX,YY 612 1)
102508 / 0.8		XX,YY 72100	XX,YY 72100	XX,YY 72100		XX,YY 32100	
102510 / 1.0	XX,YY 72200		XX,YY 72200		XX,YY 92200		XX,YY 622 1)
122510 / 1.0	XX,YY 73200	XX,YY 73200	XX,YY 73200	XX,YY 73200	XX,YY 93200	XX,YY 53200	XX,YY 632 1)
122520 / 2.0	XX,YY 73500		XX,YY 73500		XX,YY 93500		
163010 / 1.0	XX,YY 74200		XX,YY 74200		XX,YY 94200		XX,YY 642 1)
163013 / 1.3		XX,YY 74300	XX,YY 74300	XX,YY 74300			
163015 / 1.5						XX,YY 54400	
163030 / 3.0	XX,YY 74700		XX,YY 74500		XX,YY 94700		
203010 / 1.0	XX,YY 75200		XX,YY 75200		XX,YY 95200		
203016 / 1.6		XX,YY 75400	XX,YY 75400	XX,YY 75400			
203020 / 2.0						XX,YY 55500	
203040 / 4.0	XX,YY 75800		XX,YY 75800		XX,YY 95800		
254010 / 1.0	XX,YY 76200		XX,YY 76200				
254020 / 2.0		XX,YY 76500	XX,YY 76500	XX,YY 76500			
254050 / 5.0	XX,YY 76900		XX,YY 76900				
325025 / 2.5		XX,YY 77600		XX,YY 77600			
P	●	●	●	●	●	●	
M	○	○	○	○	○	●	
K	○	○	●	●	●	●	
N	○	○	○	○	○	○	○
S	○	○	○	○	○	○	
H	○	○	●	●	●	○	
O	○	○	○	○	○		●

1) Specifically for machining graphite !

Milling guide

Cutting data standard values	→ 182+183	Depth of Cut	→ 184
Technical Information	→ 187–192	Chip groove description and overview	→ 193–195
Grade description and overview	→ 196–202		

15

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

▲ The following components are required to complete the tool:

Spanner

Grooving insert

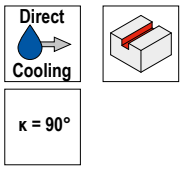
Saw cutters

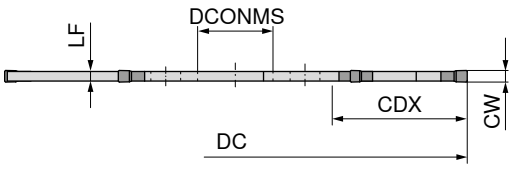
Multipurpose milling cutter adapter

MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.80.R.6.13.DC-SX2	80	2	23	13	1.65	6	SX E2 ..	AD.SLOT.13...	XX,YY	**08002**
ASLOT.80.R.6.13.DC-SX3	80	3	23	13	2.50	6	SX E3 ..	AD.SLOT.13...	XX,YY	**08003**
ASLOT.80.R.4.13.DC-SX4	80	4	23	13	3.50	4	SX E4 ..	AD.SLOT.13...	XX,YY	**08004**
ASLOT.80.R.4.13.DC-SX5	80	5	23	13	4.50	4	SX E5 ..	AD.SLOT.13...	XX,YY	**08005**

Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 383 08002	XX,YY	**00100**	XX,YY	**836**
50 383 08003	XX,YY	**00100**	XX,YY	**836**
50 383 08004	XX,YY	**00100**	XX,YY	**837**
50 383 08005	XX,YY	**00100**	XX,YY	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 132**

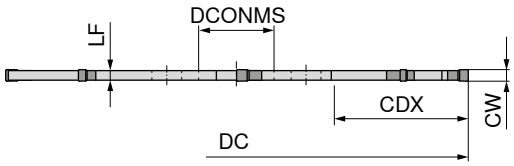
MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.100.R.8.22.DC-SX2	100	2	29	22	1.65	8	SX E2 ..	AD.SLOT.22...	XX,YY	**10002**
ASLOT.100.R.8.22.DC-SX3	100	3	29	22	2.50	8	SX E3 ..	AD.SLOT.22...	XX,YY	**10003**
ASLOT.100.R.6.22.DC-SX4	100	4	29	22	3.50	6	SX E4 ..	AD.SLOT.22...	XX,YY	**10004**
ASLOT.100.R.6.22.DC-SX5	100	5	29	22	4.50	6	SX E5 ..	AD.SLOT.22...	XX,YY	**10005**
ASLOT.100.R.4.22.DC-SX6	100	6	29	22	5.40	4	SX E6 ..	AD.SLOT.22...	XX,YY	**10006**

Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 384 10002	XX,YY	**00100**	XX,YY	**836**
50 384 10003	XX,YY	**00100**	XX,YY	**836**
50 384 10004	XX,YY	**00100**	XX,YY	**837**
50 384 10005	XX,YY	**00100**	XX,YY	**837**
50 384 10006	XX,YY	**00100**	XX,YY	**837**

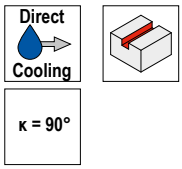
Suitable multipurpose milling cutter adapters can be found on → **Page 132**

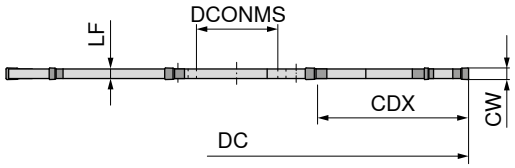
15

MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.125.R.10.22.DC-SX2	125	2	42	22	1.65	10	SX E2 ..	AD.SLOT.22...	XX,YY	**12502**
ASLOT.125.R.10.22.DC-SX3	125	3	42	22	2.50	10	SX E3 ..	AD.SLOT.22...	XX,YY	**12503**


Clamping screw

Ejector SX

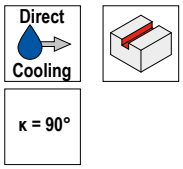
Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 385 12502	XX,YY	**00100**	XX,YY	**836**
50 385 12503	XX,YY	**00100**	XX,YY	**836**

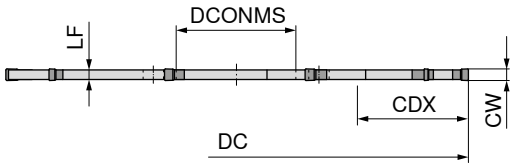
Suitable multipurpose milling cutter adapters can be found on → **Page 132**

MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling cutters **without** assembly key, **without** clamping screws





NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 386 ... #CU# *PA*	
ASLOT.125.R.10.32.DC-SX2	125	2	30	32	1.65	10	SX E2 ..	AD.SLOT.32...	XX,YY	**12502**
ASLOT.125.R.10.32.DC-SX3	125	3	30	32	2.50	10	SX E3 ..	AD.SLOT.32...	XX,YY	**12503**
ASLOT.125.R.8.32.DC-SX4	125	4	30	32	3.50	8	SX E4 ..	AD.SLOT.32...	XX,YY	**12504**
ASLOT.125.R.8.32.DC-SX5	125	5	30	32	4.50	8	SX E5 ..	AD.SLOT.32...	XX,YY	**12505**
ASLOT.125.R.8.32.DC-SX6	125	6	30	32	5.40	8	SX E6 ..	AD.SLOT.32...	XX,YY	**12506**


Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 386 12502	XX,YY	**00200**	XX,YY	**836**
50 386 12503	XX,YY	**00200**	XX,YY	**836**
50 386 12504	XX,YY	**00200**	XX,YY	**837**
50 386 12505	XX,YY	**00200**	XX,YY	**837**
50 386 12506	XX,YY	**00200**	XX,YY	**837**

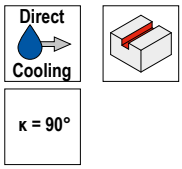
Suitable multipurpose milling cutter adapters can be found on → **Page 132**

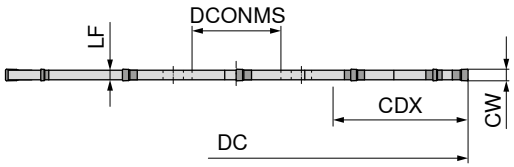
15

MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling cutters **without** assembly key, **without** clamping screws





NEW

Designation	DC mm	CW mm	CDX mm	DCONMS $_{H6}$ mm	LF mm	ZEFP	Insert	Adapter	50 387 ... #CU# *PA*	
ASLOT.160.R.12.32.DC-SX2	160	2	48	32	1.65	12	SX E2 ..	AD.SLOT.32...	XX,YY	**16002**
ASLOT.160.R.12.32.DC-SX3	160	3	48	32	2.50	12	SX E3 ..	AD.SLOT.32...	XX,YY	**16003**


Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 387 16002	XX,YY	**00200**	XX,YY	**836**
50 387 16003	XX,YY	**00200**	XX,YY	**836**

Suitable multipurpose milling cutter adapters can be found on → **Page 132**

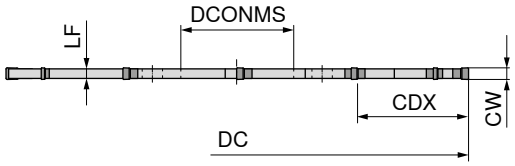
MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.160.R.12.40.DC-SX2	160	2	39	40	1.65	12	SX E2 ..	AD.SLOT.40...SK	XX,YY	**16002**
ASLOT.160.R.12.40.DC-SX3	160	3	39	40	2.50	12	SX E3 ..	AD.SLOT.40...SK	XX,YY	**16003**
ASLOT.160.R.10.40.DC-SX4	160	4	39	40	3.50	10	SX E4 ..	AD.SLOT.40...SK	XX,YY	**16004**
ASLOT.160.R.10.40.DC-SX5	160	5	39	40	4.50	10	SX E5 ..	AD.SLOT.40...SK	XX,YY	**16005**
ASLOT.160.R.10.40.DC-SX6	160	6	39	40	5.40	10	SX E6 ..	AD.SLOT.40...SK	XX,YY	**16006**

Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 388 16002	XX,YY	**00300**	XX,YY	**836**
50 388 16003	XX,YY	**00300**	XX,YY	**836**
50 388 16004	XX,YY	**00300**	XX,YY	**837**
50 388 16005	XX,YY	**00300**	XX,YY	**837**
50 388 16006	XX,YY	**00300**	XX,YY	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 132**

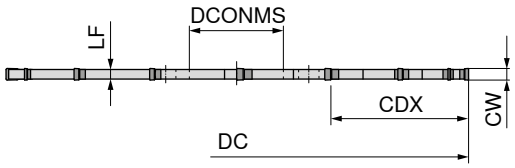
MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.200.R.16.40.DC-SX2	200	2	59	40	1.65	16	SX E2 ..	AD.SLOT.40...SK	XX,YY	**20002**
ASLOT.200.R.16.40.DC-SX3	200	3	59	40	2.50	16	SX E3 ..	AD.SLOT.40...SK	XX,YY	**20003**
ASLOT.200.R.14.40.DC-SX4	200	4	59	40	3.50	14	SX E4 ..	AD.SLOT.40...SK	XX,YY	**20004**
ASLOT.200.R.14.40.DC-SX5	200	5	59	40	4.50	14	SX E5 ..	AD.SLOT.40...SK	XX,YY	**20005**
ASLOT.200.R.14.40.DC-SX6	200	6	59	40	5.40	14	SX E6 ..	AD.SLOT.40...SK	XX,YY	**20006**


Clamping screw

Ejector SX

Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 389 20002	XX,YY	**00300**	XX,YY	**836**
50 389 20003	XX,YY	**00300**	XX,YY	**836**
50 389 20004	XX,YY	**00300**	XX,YY	**837**
50 389 20005	XX,YY	**00300**	XX,YY	**837**
50 389 20006	XX,YY	**00300**	XX,YY	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 132**

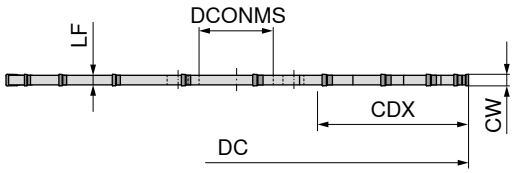
MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.250.R.20.40.DC-SX3	250	3	84	40	2.5	20	SX E3 ..	AD.SLOT.40...ZK	XX,YY	**25003**
ASLOT.250.R.18.40.DC-SX4	250	4	84	40	3.5	18	SX E4 ..	AD.SLOT.40...ZK	XX,YY	**25004**
ASLOT.250.R.18.40.DC-SX5	250	5	84	40	4.5	18	SX E5 ..	AD.SLOT.40...ZK	XX,YY	**25005**
ASLOT.250.R.18.40.DC-SX6	250	6	84	40	5.4	18	SX E6 ..	AD.SLOT.40...ZK	XX,YY	**25006**[1)]

1) Not ex-stock

Clamping screw

Ejector SX

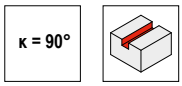
Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 380 25003	XX,YY	**00400**	XX,YY	**836**
50 380 25004	XX,YY	**00400**	XX,YY	**837**
50 380 25005	XX,YY	**00400**	XX,YY	**837**
50 380 25006	XX,YY	**00400**	XX,YY	**837**

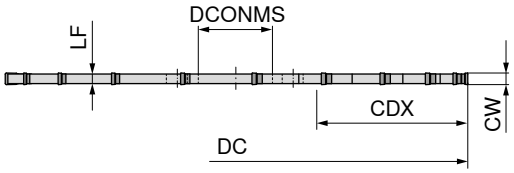
Suitable multipurpose milling cutter adapters can be found on → **Page 132**

MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.250.R.20.40-SX3	250	3	84	40	2.5	20	SX E3 ..	AD.SLOT.40...ZK	XX,YY	**25003**
ASLOT.250.R.18.40-SX4	250	4	84	40	3.5	18	SX E4 ..	AD.SLOT.40...ZK	XX,YY	**25004**
ASLOT.250.R.18.40-SX5	250	5	84	40	4.5	18	SX E5 ..	AD.SLOT.40...ZK	XX,YY	**25005**
ASLOT.250.R.18.40-SX6	250	6	84	40	5.4	18	SX E6 ..	AD.SLOT.40...ZK	XX,YY	**25006** [1]

1) Not ex-stock


Clamping screw

Ejector SX

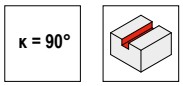
Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 390 25003	XX,YY	**00400**	XX,YY	**836**
50 390 25004	XX,YY	**00400**	XX,YY	**837**
50 390 25005	XX,YY	**00400**	XX,YY	**837**
50 390 25006	XX,YY	**00400**	XX,YY	**837**

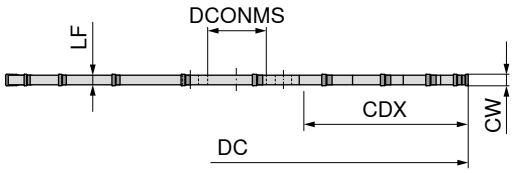
Suitable multipurpose milling cutter adapters can be found on → **Page 132**

MaxiMill – Slot-SX side and face milling cutter

Scope of supply:

Side and face milling 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 ... #CU# *PA*	
ASLOT.315.R.22.40-SX4	315	4	115	40	3.5	22	SX E4 ..	AD.SLOT.40...ZK	XX,YY	**31504**
ASLOT.315.R.22.40-SX5	315	5	115	40	4.5	22	SX E5 ..	AD.SLOT.40...ZK	XX,YY	**31505**
ASLOT.315.R.22.40-SX6	315	6	115	40	5.4	22	SX E6 ..	AD.SLOT.40...ZK	XX,YY	**31506** [1]

1) Not ex-stock


Clamping screw

Ejector SX

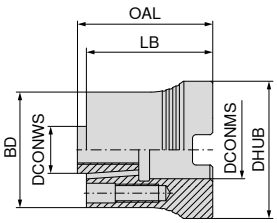
Spare parts for Article no.	50 950 ... #CU# *PA*		70 950 ... #CU# *PA*	
50 391 31504	XX,YY	**00400**	XX,YY	**837**
50 391 31505	XX,YY	**00400**	XX,YY	**837**
50 391 31506	XX,YY	**00400**	XX,YY	**837**

Suitable multipurpose milling cutter adapters can be found on → **Page 132**

MaxiMill – Slot-SX multipurpose milling cutter adapter

Scope of supply:

Multipurpose milling cutter adapter including screws



NEW

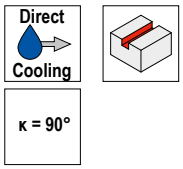
Designation	DCONMS mm	DCONWS $_{h6}$ mm	DHUB mm	LB mm	OAL mm	BD mm	50 395 ... #CU# *PA*	
AD.SLOT.13.32.A16	16	13	38	35	37.5	32	XX,YY	**01300**
AD.SLOT.22.40.A22	22	22	48	35	37.5	40	XX,YY	**02200**
AD.SLOT.32.63.A27	27	32	58	45	47.5	63	XX,YY	**03200**
AD.SLOT.40.80.A32.SK	32	40	78	55	57.5	80	XX,YY	**04000**
AD.SLOT.40.80.A32.ZK	32	40	78	55	57.5	80	XX,YY	**04100**

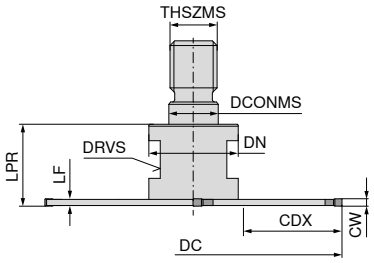
Spare parts for Article no.	 Clamping screw 50 950 ... #CU# *PA*		 Clamping screw 50 950 ... #CU# *PA*		 Clamping screw 50 950 ... #CU# *PA*		 Power Screw 70 950 ... #CU# *PA*	
50 395 01300	XX,YY	**00100**					XX,YY	**151**
50 395 02200	XX,YY	**00100**						
50 395 03200	XX,YY	**00200**						
50 395 04000					XX,YY	**00300**		
50 395 04100			XX,YY	**00400**				

MaxiMill – Slot-SX screw-in multipurpose milling cutter

Scope of supply:

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





NEW

50 392 ...

Designation	DC mm	CW mm	CDX mm	DCONMS mm	THSZMS	LF mm	DN mm	LPR mm	DRVS mm	ZEFP	Insert	#CU# *PA*	
GSLOT.63.R.4.M10.DC-SX2	63	2	21	10.5	M10	1.65	19	18	15	4	SX E2 ..	XX,YY	**06302**
GSLOT.63.R.4.M10.DC-SX3	63	3	21	10.5	M10	2.50	19	18	15	4	SX E3 ..	XX,YY	**06303**

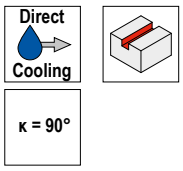
70 950 ...

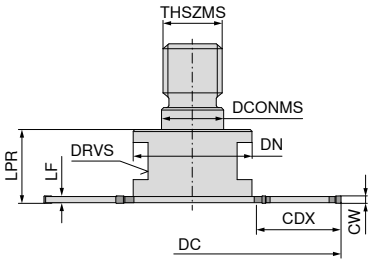
Spare parts for Article no.	#CU# *PA*	
50 392 06302	XX,YY	**836**
50 392 06303	XX,YY	**836**

MaxiMill – Slot-SX screw-in multipurpose milling cutter

Scope of supply:

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





NEW

50 393 ...

Designation	DC mm	CW mm	CDX mm	DCONMS mm	THSZMS	LF mm	DN mm	LPR mm	DRVS mm	ZEFP	Insert	#CU# *PA*	
GSLOT.80.R.6.M16.DC-SX2	80	2	23	17	M16	1.65	32	20	24	6	SX E2 ..	XX,YY	**08002**
GSLOT.80.R.6.M16.DC-SX3	80	3	23	17	M16	2.50	32	20	24	6	SX E3 ..	XX,YY	**08003**
GSLOT.80.R.4.M16.DC-SX4	80	4	23	17	M16	3.50	32	20	24	4	SX E4 ..	XX,YY	**08004**

70 950 ...

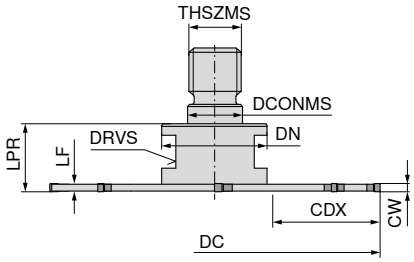
Spare parts for Article no.	#CU# *PA*	
50 393 08002	XX,YY	**836**
50 393 08003	XX,YY	**836**
50 393 08004	XX,YY	**837**

MaxiMill – Slot-SX screw-in multipurpose milling cutter

Scope of supply:

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

κ = 90°



NEW

50 394 ...

Designation	DC mm	CW mm	CDX mm	DCONMS mm	THSZMS	LF mm	DN mm	LPR mm	DRVS mm	ZEFP	Insert	#CU# *PA*	
GSLOT.100.R.8.M16.DC-SX2	100	2	33	17	M16	1.65	32	20	24	8	SX E2 ..	XX,YY	**10002**
GSLOT.100.R.8.M16.DC-SX3	100	3	33	17	M16	2.50	32	20	24	8	SX E3 ..	XX,YY	**10003**
GSLOT.100.R.6.M16.DC-SX4	100	4	33	17	M16	3.50	32	20	24	6	SX E4 ..	XX,YY	**10004**

Ejector SX

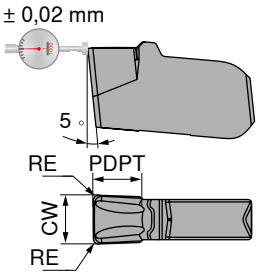
70 950 ...

Spare parts for Article no.	#CU# *PA*	
50 394 10002	XX,YY	**836**
50 394 10003	XX,YY	**836**
50 394 10004	XX,YY	**837**

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

Insert SX

F	M	R



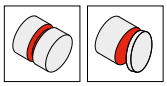
-F2
CTP1340

DRAGONSKIN

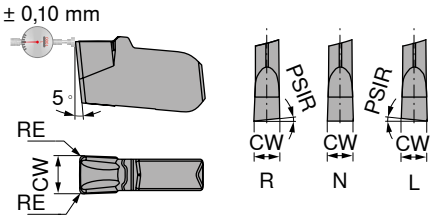
Designation	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 346 ... #CU# *PA*	
SX E2.00 N 0.20	2	0.2	1.5	-SX2	XX,YY	**622**
SX E3.00 N 0.30	3	0.3	2.0	-SX3	XX,YY	**623**
SX E4.00 N 0.40	4	0.4	2.5	-SX4	XX,YY	**624**

P	●
M	●
K	○
N	○
S	●
H	
O	

Insert SX



F	M	R



-M1
CTCP335

DRAGONSKIN

-M1
CTP1340

DRAGONSKIN

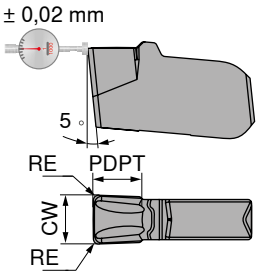
Designation	IH	CW +/-0,05 mm	RE +/-0,05 mm	for tool holder	70 342 ... #CU# *PA*		70 342 ... #CU# *PA*	
SX E2.00 N 0.20	N	2	0.2	-SX2	XX,YY	**52200**	XX,YY	**622**
SX E3.00 N 0.20	N	3	0.2	-SX3	XX,YY	**523**	XX,YY	**623**
SX E4.00 N 0.30	N	4	0.3	-SX4	XX,YY	**524**	XX,YY	**624**
SX E5.00 N 0.30	N	5	0.3	-SX5	XX,YY	**52500**	XX,YY	**625**
SX E6.00 N 0.40	N	6	0.4	-SX6	XX,YY	**52600**	XX,YY	**626**

P	●	●
M	○	●
K	●	○
N		○
S		●
H		
O		

15

Insert SX

F	M	R
	●	



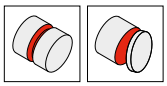
-27P
H216T

70 349 ...

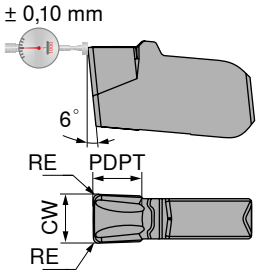
Designation	CW +/-0,02 mm	RE +/-0,05 mm	PDPT mm	for tool holder	#CU# *PA*	
SX E2.00 N 0.20	2	0.2	2.0	-SX2	XX,YY	**122**
SX E3.00 N 0.30	3	0.3	2.5	-SX3	XX,YY	**123**
SX E4.00 N 0.40	4	0.4	3.0	-SX4	XX,YY	**124**

P	
M	
K	○
N	●
S	
H	
O	○

Insert SX



F	M	R
	●	



NEW

-M7
CTP1340

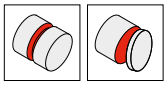
DRAGONSKIN

70 347 ...

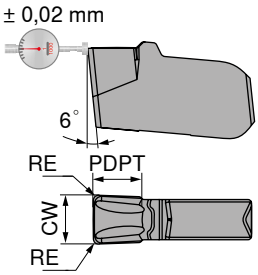
Designation	CW +/-0,05 mm	RE +/-0,05 mm	PDPT mm	for tool holder	#CU# *PA*	
SX E2.00 N 0.20	2	0.2	1.5	-SX2	XX,YY	**62200**
SX E3.00 N 0.20	3	0.2	2.0	-SX3	XX,YY	**62300**
SX E4.00 N 0.30	4	0.3	2.5	-SX4	XX,YY	**62400**
SX E5.00 N 0.30	5	0.3	2.7	-SX5	XX,YY	**62500**
SX E6.00 N 0.40	6	0.4	3.0	-SX6	XX,YY	**62600**

P	●
M	●
K	○
N	○
S	●
H	
O	

Insert SX



F	M	R



NEW

-M8
CTP1340

DRAGONSKIN

Designation	CW +/-0,05 mm	RE +/-0,05 mm	PDPT mm	for tool holder	70 348 ... #CU# *PA*	
SX E2.00 N 0.20	2	0.2	1.5	-SX2	XX,YY	**62200**
SX E3.00 N 0.20	3	0.2	2.0	-SX3	XX,YY	**62300**
SX E4.00 N 0.30	4	0.3	2.5	-SX4	XX,YY	**62400**
SX E5.00 N 0.30	5	0.3	2.7	-SX5	XX,YY	**62500**
SX E6.00 N 0.40	6	0.4	3.0	-SX6	XX,YY	**62600**

P	●
M	●
K	○
N	○
S	●
H	
O	

Milling guide

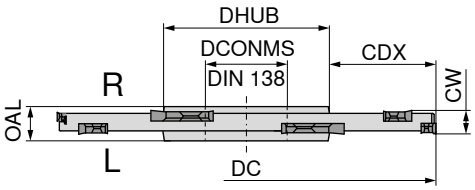
Cutting data standard values	→ 185	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

15

TX side and face milling cutter

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

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



Designation	DC mm	CW mm	ZNF	CDX mm	DCONMS mm	DHUB mm	OAL mm	ZEFP	Insert	torque moment Nm	50 730 ... #CU# *PA*	
TX.STF.80X27.03.Z4	80	3	4	18.0	27	40	8	8	TX. 161702	0,7	XX,YY	**083**
TX.STF.100X32.03.Z5	100	3	5	25.0	32	46	8	10	TX. 161702	0,7	XX,YY	**103**
TX.STF.125X40.03.Z6	125	3	6	32.0	40	54	10	12	TX. 161702	0,7	XX,YY	**123**
TX.STF.160X40.03.Z8	160	3	8	50.0	40	54	10	16	TX. 161702	0,7	XX,YY	**163** 1)
TX.STF.80X27.04.Z4	80	4	4	18.0	27	40	8	8	TX. 162302	1,3	XX,YY	**084**
TX.STF.100X32.04.Z5	100	4	5	25.0	32	46	8	10	TX. 162302	1,3	XX,YY	**104**
TX.STF.125X40.04.Z6	125	4	6	32.0	40	54	10	12	TX. 162302	1,3	XX,YY	**124**
TX.STF.160X40.04.Z8	160	4	8	50.0	40	54	10	16	TX. 162302	1,3	XX,YY	**164** 1)
TX.STF.80X27.06.Z4	80	6	4	21.0	27	36	10	8	TX. 223202	2	XX,YY	**086**
TX.STF.80X22.06.Z4	80	6	4	22.0	22	33	10	8	TX. 223202	2	XX,YY	**080**
TX.STF.100X32.06.Z5	100	6	5	25.5	32	47	10	10	TX. 223202	2	XX,YY	**106**
TX.STF.125X40.06.Z6	125	6	6	32.5	40	58	10	12	TX. 223202	2	XX,YY	**136**
TX.STF.160X40.06.Z8	160	6	8	50.0	40	58	10	16	TX. 223202	2	XX,YY	**166** 1)
TX.STF.80X27.08.Z4	80	8	4	21.0	27	36	12	8	TX. 224302	2,8	XX,YY	**088**
TX.STF.100X32.08.Z5	100	8	5	25.5	32	47	12	10	TX. 224302	2,8	XX,YY	**108**
TX.STF.125X40.08.Z6	125	8	6	32.5	40	58	12	12	TX. 224302	2,8	XX,YY	**138**
TX.STF.160X40.08.Z8	160	8	8	50.0	40	58	12	16	TX. 224302	2,8	XX,YY	**168** 1)
TX.STF.80X27.10.Z4	80	10	4	21.0	27	36	12	8	TX. 225402	3	XX,YY	**090**
TX.STF.100X32.10.Z5	100	10	5	25.5	32	47	12	10	TX. 225402	3	XX,YY	**110**
TX.STF.125X40.10.Z6	125	10	6	32.5	40	58	14	12	TX. 225402	3	XX,YY	**140**
TX.STF.160X40.10.Z8	160	10	8	50.0	40	58	14	16	TX. 225402	3	XX,YY	**170** 1)

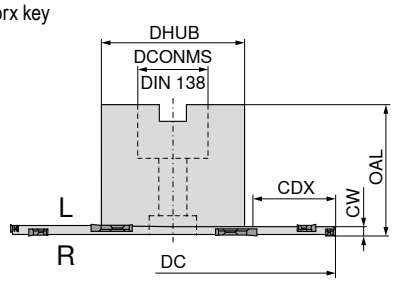
1) Without Through Coolant

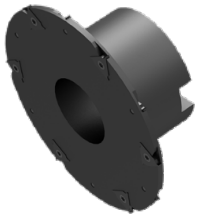
	TORX® blade	 Key D	 Molykote	 Clamping screw	 Torque screw-driver
	80 950 ...	80 950 ...	70 950 ...	70 950 ...	80 950 ...
Spare parts CW	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
3	XX,YY **032**	XX,YY **109**	XX,YY **303**	XX,YY **858**	XX,YY **191**
4	XX,YY **033**	XX,YY **110**	XX,YY **303**	XX,YY **218**	XX,YY **191**
6	XX,YY **036**	XX,YY **113**	XX,YY **303**	XX,YY **101**	XX,YY **192**
8	XX,YY **037**	XX,YY **114**	XX,YY **303**	XX,YY **135**	XX,YY **192**
10	XX,YY **037**	XX,YY **114**	XX,YY **303**	XX,YY **146**	XX,YY **192**

TX shell / side and face milling cutter

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

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





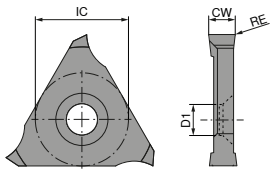
Designation	DC mm	CW mm	ZNF	CDX mm	DCONMS mm	DHUB mm	OAL mm	ZEFP	torque moment Nm	Insert	50 734 ... #CU# *PA*	
TX.ASF.100.R.03.Z5	100	3	5	25.0	27	48	50	10	0,7	TX. 161702	XX,YY	**300**
TX.ASF.125.R.03.Z6	125	3	6	37.5	27	48	50	12	0,7	TX. 161702	XX,YY	**225**
TX.ASF.160.R.03.Z8	160	3	8	44.0	40	70	50	16	0,7	TX. 161702	XX,YY	**260** 1)
TX.ASF.100.R.04.Z5	100	4	5	25.0	27	48	50	10	3,2	TX. 162302	XX,YY	**100**
TX.ASF.125.R.04.Z6	125	4	6	37.5	27	48	50	12	3,2	TX. 162302	XX,YY	**025**
TX.ASF.125.R.04.Z6	125	4	6	26.5	40	70	50	12	3,2	TX. 162302	XX,YY	**125**
TX.ASF.160.R.04.Z8	160	4	8	55.0	27	48	50	16	3,2	TX. 162302	XX,YY	**060** 1)
TX.ASF.160.R.04.Z8	160	4	8	44.0	40	70	50	16	3,2	TX. 162302	XX,YY	**160** 1)
TX.ASF.180.R.04.Z9	180	4	9	54.0	40	70	50	18	3,2	TX. 162302	XX,YY	**180** 1)
TX.ASF.200.R.04.Z10	200	4	10	64.0	40	70	50	20	3,2	TX. 162302	XX,YY	**200** 1)

1) Without Through Coolant

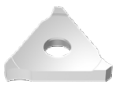
Spare parts CW	DCONMS	 Washer 70 950 ... #CU# *PA*		TORX® blade 80 950 ... #CU# *PA*		 Clamping Screw 70 950 ... #CU# *PA*		Key D 80 950 ... #CU# *PA*		 Molykote 70 950 ... #CU# *PA*		 Clamping screw 70 950 ... #CU# *PA*		 Torque screw-driver 80 950 ... #CU# *PA*	
3	27	XX,YY	**221**	XX,YY	**032**	XX,YY	**219**	XX,YY	**109**	XX,YY	**303**	XX,YY	**858**	XX,YY	**191**
3	40	XX,YY	**222**	XX,YY	**032**	XX,YY	**220**	XX,YY	**109**	XX,YY	**303**	XX,YY	**858**	XX,YY	**191**
4	27	XX,YY	**221**	XX,YY	**033**	XX,YY	**219**	XX,YY	**110**	XX,YY	**303**	XX,YY	**218**	XX,YY	**192**
4	40	XX,YY	**222**	XX,YY	**033**	XX,YY	**220**	XX,YY	**110**	XX,YY	**303**	XX,YY	**218**	XX,YY	**192**

TX_L / TX_R

Designation	IC mm	D1 mm	CW mm
TX . 1617..	10	3.95	1.7
TX . 1623..	10	3.95	2.3
TX . 2232..	13	5.50	3.2
TX . 2243..	13	5.50	4.3
TX . 2254..	13	5.50	5.4



TX_L / TX_R

		CWX500	CWX500	CWK10	CWK10
					
		TX-L	TX-R	TX-L	TX-R
		50 382 ...	**50 381 ...**	**50 382 ...**	**50 381 ...**
ISO	RE mm	#CU# *PA*	#CU# *PA*	#CU# *PA*	#CU# *PA*
TX 161702	0.15	XX,YY **217**	XX,YY **217**		
TX 162302	0.15	XX,YY **223**	XX,YY **223**		
TX 223202	0.15	XX,YY **232**	XX,YY **232**		
TX 223202	0.20			XX,YY **532**	XX,YY **532**
TX 224302	0.15	XX,YY **243**	XX,YY **243**		
TX 224302	0.20			XX,YY **543**	XX,YY **543**
TX 225402	0.15	XX,YY **254**	XX,YY **254**		
TX 225402	0.20			XX,YY **554**	XX,YY **554**
P		●	●		
M		●	●		
K		●	●		
N		●	●	●	●
S		○	○		
H					
O		○	○	○	○

Milling guide

Cutting data standard values	→ 186	Technical Information	→ 187–192
Chip groove description and overview	→ 193–195	Grade description and overview	→ 196–202

Material examples for cutting data tables

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

* Tensile strength

Cutting data standard values

Index	CTEP210 CERMET DRAGONSKIN		TCM10 CERMET DRAGONSKIN		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																
N.2.2																
N.2.3																
N.3.1																
N.3.2																
N.3.3																
N.4.1																
S.1.1																
S.1.2																
S.2.1																
S.2.2																
S.2.3																
S.3.1																
S.3.2																
S.3.3																
H.1.1																
H.1.2																
H.1.3																
H.1.4																
H.2.1																
H.3.1																
O.1.1																
O.1.2																
O.2.1																
O.2.2																
O.3.1																

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

Cutting data standard values

Index	CTPM225		CTCM235		CTPM240		CTPM241		CTPM245		CTCM245		CTN3105		CTL3215	
													CERAMIC		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																		

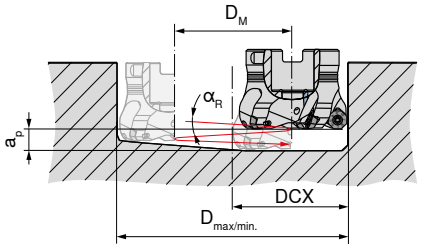
The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. **±20%** according to the usage conditions.

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



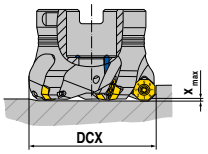
OF..04

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

SF..09

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

Axial ramping



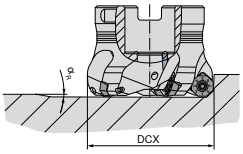
OF..04

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

SF..09

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

Angled ramping



OF..04

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

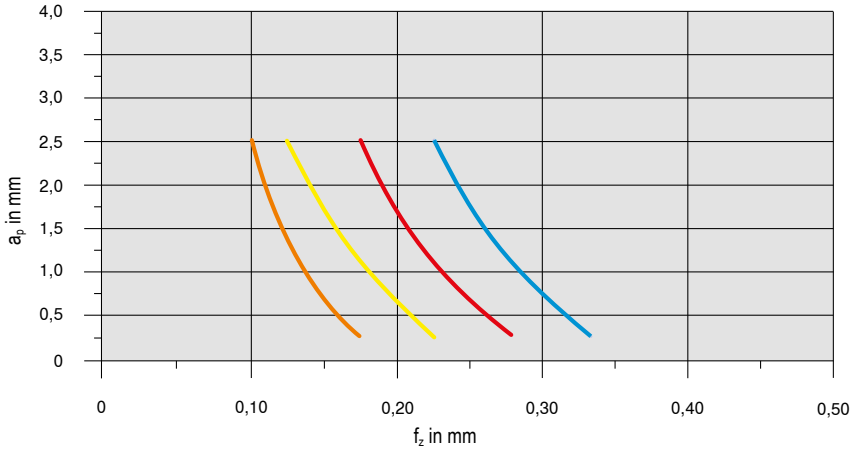
SF..09

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

System MaxiMill 274-04

Starting Parameter

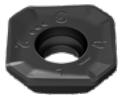
OF.. 04



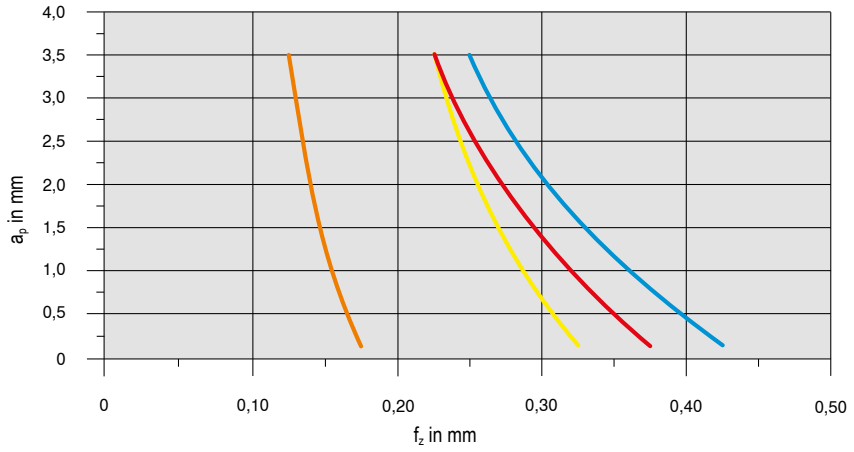
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**OFHT040305SN-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT040305SN-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**OFHT040305SN-M50**	**CTCK215**	250	Dry
Heat-resistant	**S.2.2**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

System MaxiMill 274-09

Starting Parameter



SF.. 09



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

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

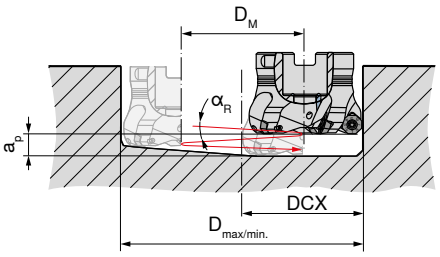
From v_c > 400 m/min, the tool must be balanced!

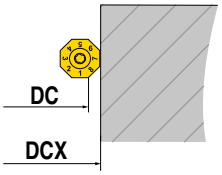
System MaxiMill 274-05/-12

Machining strategy

Helical 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





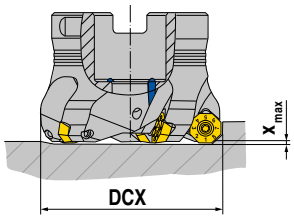
OF..05

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

SF..12

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

Axial ramping



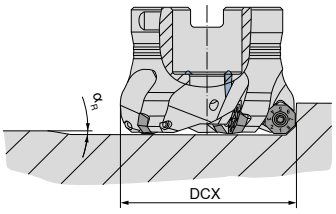
OF..05

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

SF..12

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

Angled ramping



OF..05

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

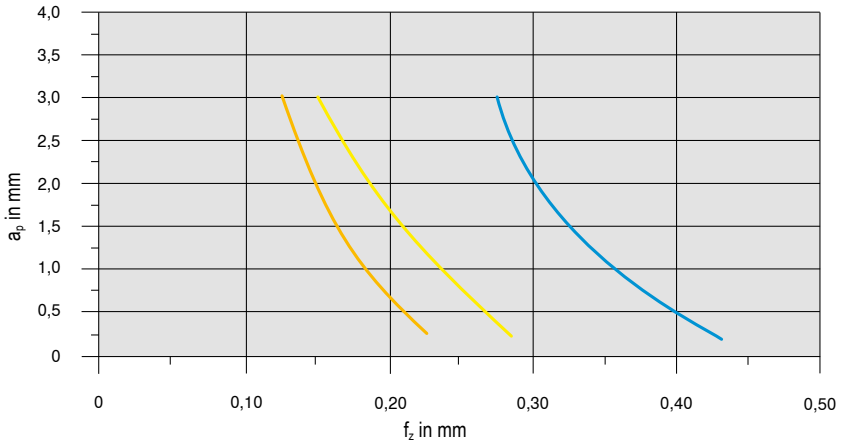
SF..12

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

System MaxiMill 274-05

Starting Parameter

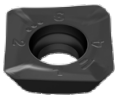
OF.. 05



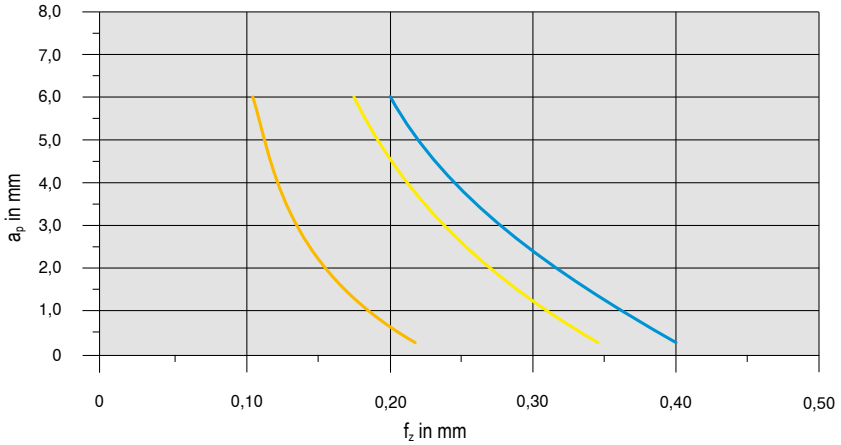
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**OFHT050410SN-M50**	**CTCP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT050410SN-F50**	**CTPM240**	180	Dry
Heat-resistant	**S.2.2**	Inconel 718	**OFHT050410SN-F50**	**CTC5240**	35	Emulsion

System MaxiMill 274-12

Starting Parameter



SF.. 12



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

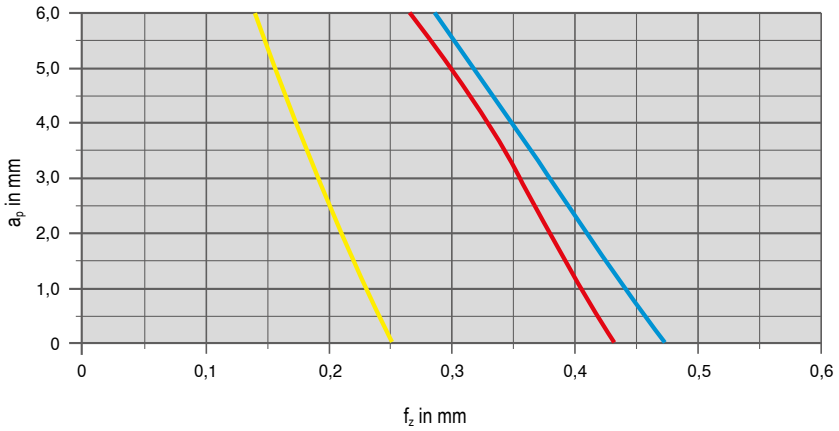
Detailed information on cutting speed for each grade can be found on → page 142–144

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

MaxiMill 271-12 system

Starting Parameter

SOHU 12

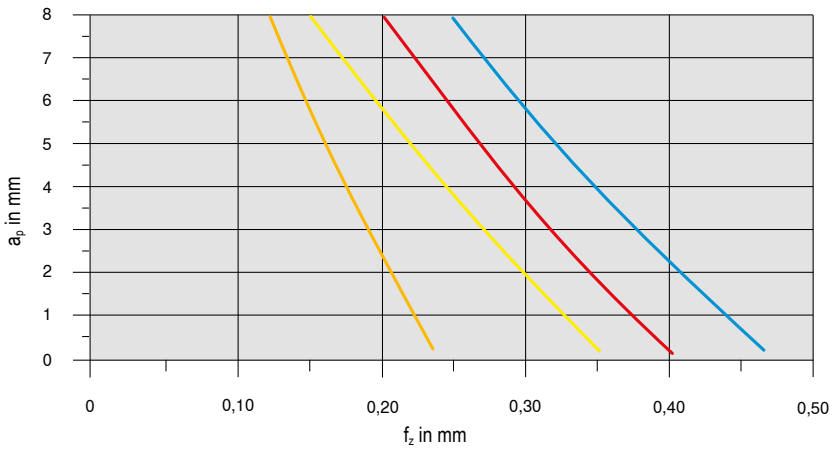


Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SOHU 1204ABSR-M50**	**CTPP230**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SOHU 1204ABSR-M50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SOHU 1204ABSR-R50**	**CTCK215**	300	Dry
Heat-resistant	**S.2.2**	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.4.1**	40CrMnMoS 8-6	**SAKU 1706ABSR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SAKU 1706ABSR-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SAKU 1706ABSR-R50**	**CTCK215**	250	Dry
Heat-resistant	**S.2.2**	Inconel 718	**SAKU 1706ABSR-F50**	**CTC5240**	35	Emulsion

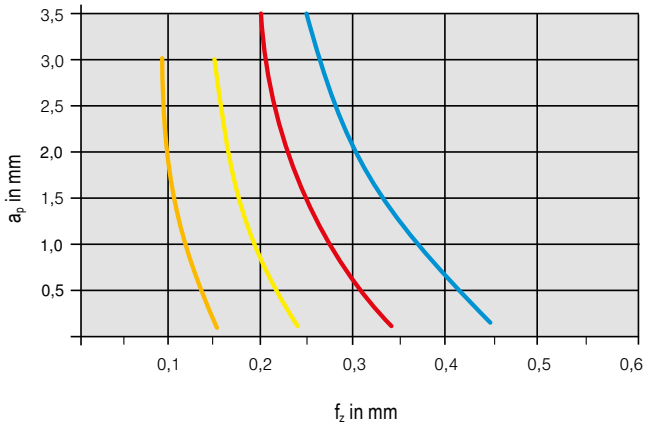
Detailed information on cutting speed for each grade can be found on → page 142–144

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

MaxiMill 273 system

Starting Parameter

OAKU



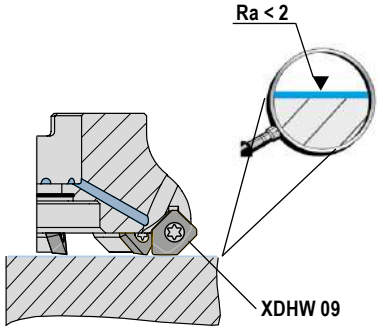
Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**OAKU 060508SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**OAKU 060508SR-F50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**OAKU 060508SR-R50**	**CTCK215**	250	Dry
Heat-resistant	**S.2.2**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

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

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

MaxiMill 270 system

Machining strategy

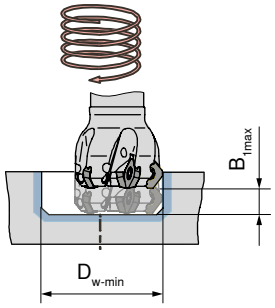


Finish milling with trailing edge inserts

Two wiper inserts are mounted in each 125mm head

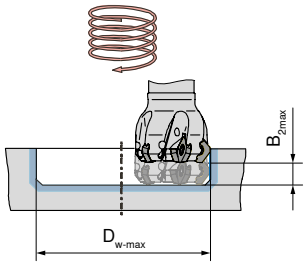
Steel	SDNT	0903AESN-29	CTPP235	+	XDHW	0903AESN	CTPP235
	SDNT	0903AESN-29	CTCP230	+	XDHW	0903AESN	CTCP230
	SDHT	0903AESN-33	CTCP230	+	XDHW	0903AESN	CTCP230
	SDHW	0903AESN	TCM10	+	XDHW	0903AESN	TCM10
Cast iron	SDNT	0903AESN-31	CTCK215	+	XDHW	0903AESEN	CTCK215
Non-ferrous metals	SDHT	0903AEFN-ALP	-27P H216T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

Helical plunging (without pilot hole)



C 270-09

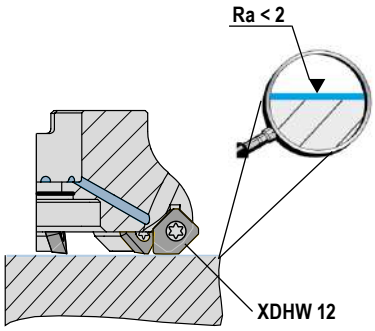
DC mm	D_{w-min} mm	$B_{1\,max}$ mm	D_{w-max} mm	$B_{2\,max}$ mm
6	14,4	1,5	19,0	1,5
12	28,5	1,5	31,0	1,5
16	36,5	1,5	39,0	1,5
20	44,5	1,5	47,0	1,5
25	54,5	1,5	57,0	1,5
32	68,5	1,5	71,0	1,5



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

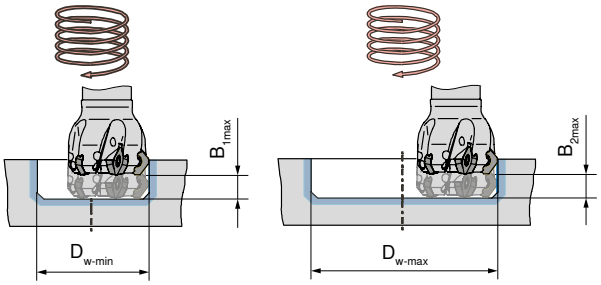


Finish milling with trailing edge inserts

Two wiper 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)



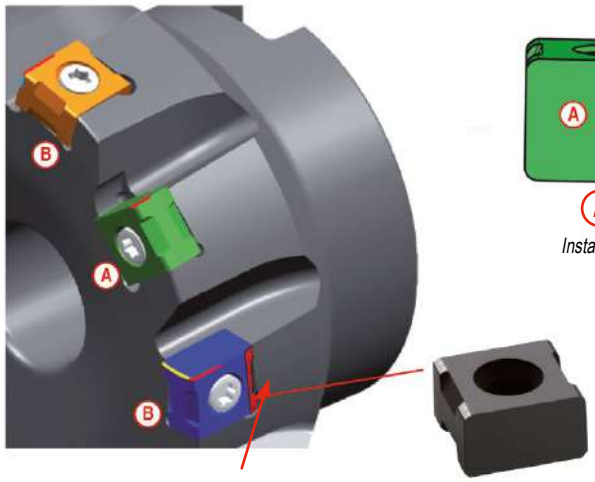
DC mm	D_{w-min} mm	$B_{1\,max}$ mm	D_{w-max} mm	$B_{2\,max}$ mm
32	74,5	1,5	78,0	1,5
40	90,5	1,5	94,0	1,5
50	110,5	1,5	114,0	1,5
63	136,5	1,5	140,0	1,5
80	170,5	1,5	174,0	1,5
100	210,5	1,5	214,0	1,5
125	260,5	1,5	264,0	1,5
160	330,5	1,5	334,0	1,5

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

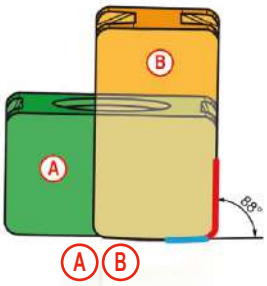
MaxiMill HEC 11 / HEC 12 system

4 cutting edges per installation position

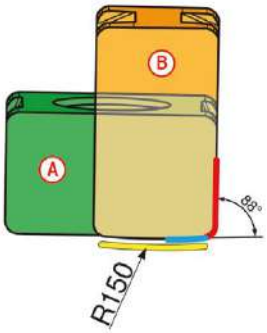
Correct assembly of standard and trailing edge inserts



Marking for the correct assembly



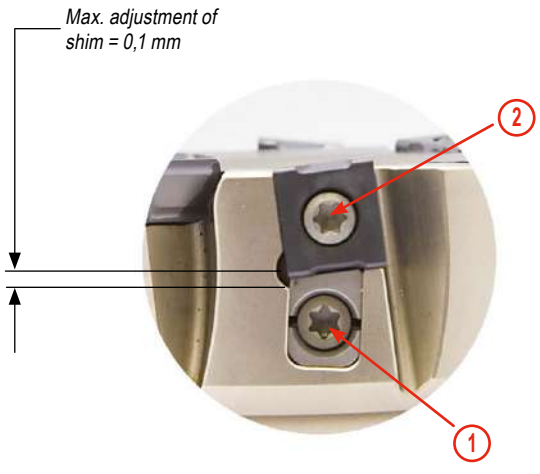
Installation position



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**

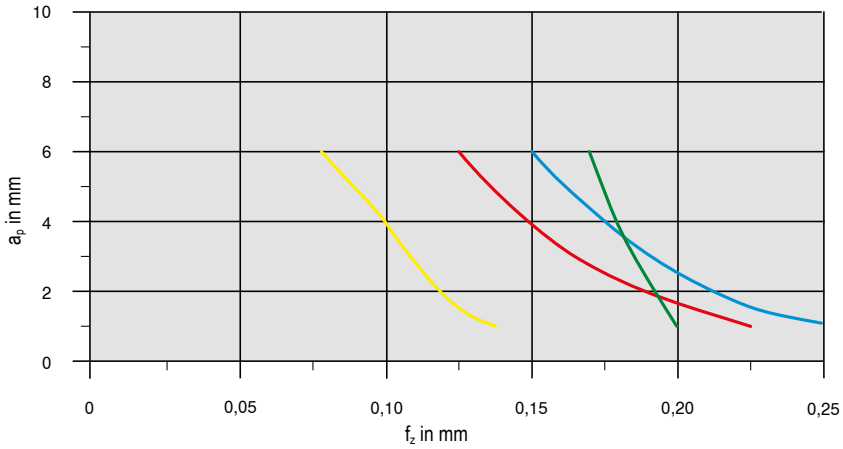
** f_z > 0,4 mm: Danger of an open space contact

15

MaxiMill 491-09 system

Starting Parameter

SNHU 09

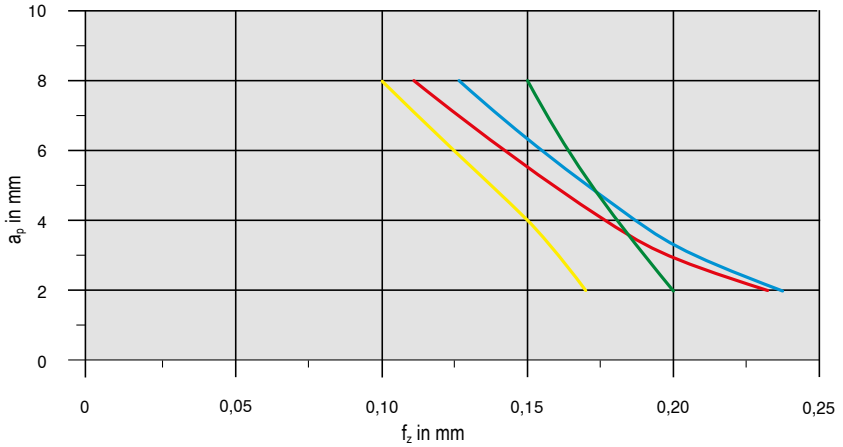


Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	40CrMnMoS 8-6	**SNHU09T308SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**SNHU09T308SR-F50**	**CTPM240**	180	Emulsion
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**SNHU09T308SR-R50**	**CTCK215**	250	Dry
Non-ferrous metals	**N.1.2**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

MaxiMill 491-12 system

Starting Parameter

SNHU 12



Material			Inserts		v_c in m/min	Cooling
Steel	**P.4.1**	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

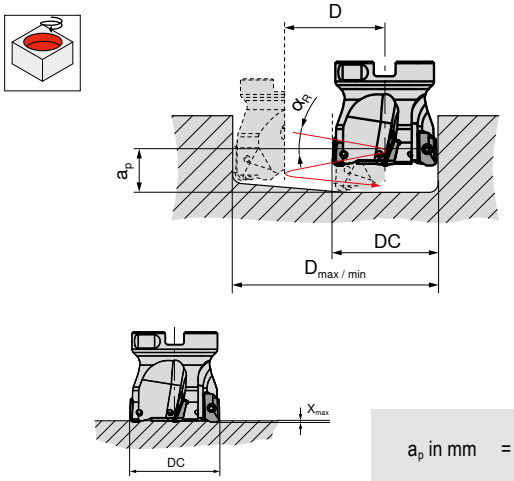
Detailed information on cutting speed for each grade can be found on → page 142–144

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

System MaxiMill 211-07

Machining strategy

Helical plunging

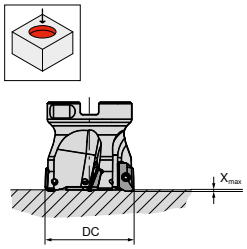


a_p in mm = D * π * tan α_R

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

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

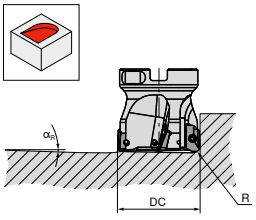
Axial ramping



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

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

Angled ramping

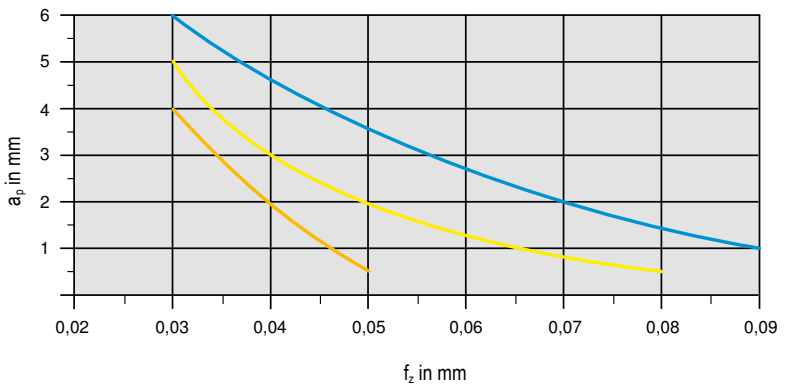


DC mm	α °
10	11,0
12	7,9
16	4,3
20	3,0
25	2,5
32	1,6
40	1,2
50	1,0

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

Starting Parameter

XDKT 07



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

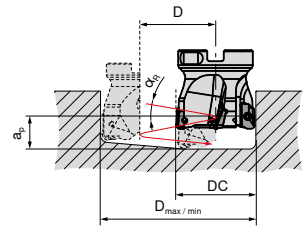
15

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

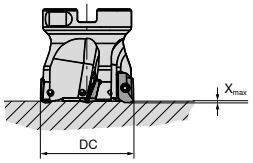
From v_c > 400 m/min, the tool must be balanced!

System MaxiMill 211-11

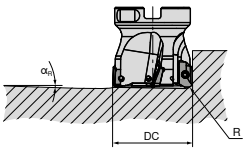
Machining strategy



1 Helical 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 ° $D_{max.}$ 107 mm $D_{min.}$ 101 mm	1,6 mm	1,1 °

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

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

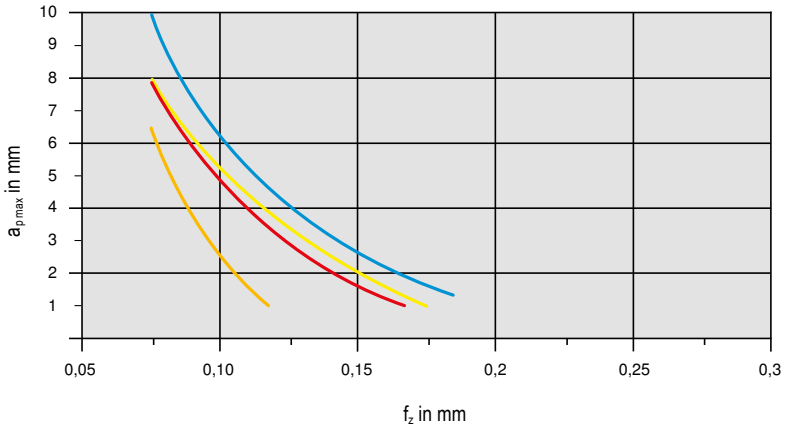
a_p in mm = D x π x tan (α_R) = Pitch

l_a in mm = Overhang length

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

Starting Parameter

XDKT 11



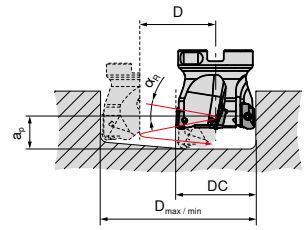
Material			Inserts		v_c in m/min	Cooling
Steel	P.4.1	40CrMnMoS 8-6	XDKT11T308SR-M50	CTCP230	200	Dry
Stainless steel	M.1.1	X6CrNiMoTi 1712 2	XDKT11T308SR-F50	CTPM240	180	Dry
Cast iron	K.1.1	EN-GJL-250 (GG25)	XDKT11T308SR-R50	CTCK215	250	Dry
Heat-resistant	S.2.2	Inconel 718	XDKT11T308ER-F50	CTC5240	35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

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

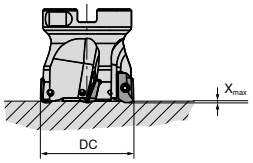
From v_c > 400 m/min, the tool must be balanced!

System MaxiMill 211-15

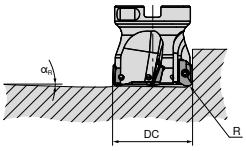
Machining strategy



1 Helical 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		
100	α_R	0,8 °	1,6 mm	1,1 °
	$D_{max.}$	107 mm		
	$D_{min.}$	101 mm		

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

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

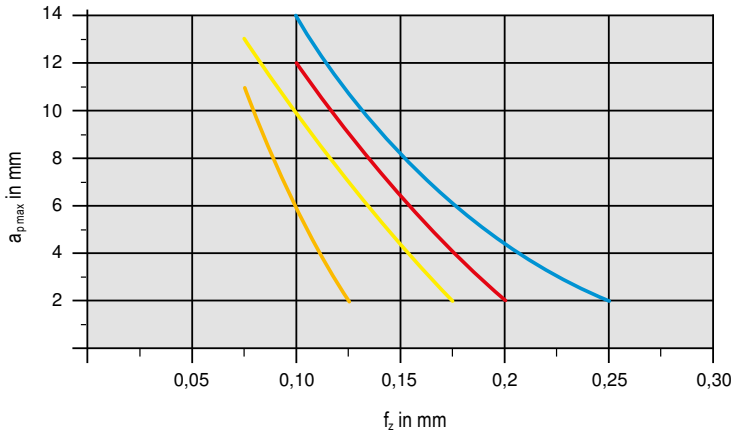
a_p in mm = D x π x tan (α_R) = Pitch

l_a in mm = Overhang length

DC mm	Maximum speed related to projection length n_{max} in min^{-1} l_a = 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		

Starting Parameter

XDKT 15



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

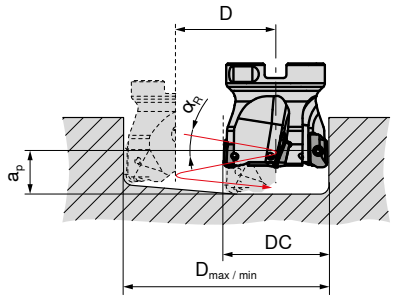
Detailed information on cutting speed for each grade can be found on → page 142–144

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

System MaxiMill 211-20

Machining strategy

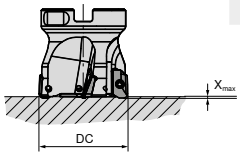
Helical plunging



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

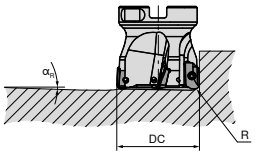
a_p in mm $= D * \pi * \tan \alpha_R$

Axial ramping



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

Angled ramping



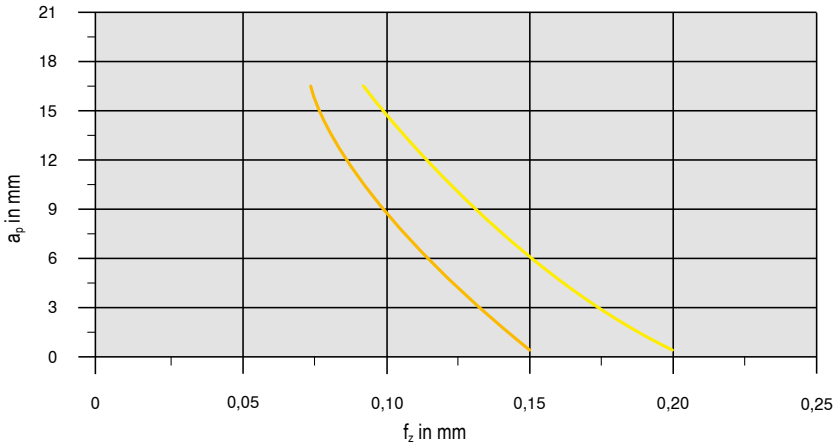
DC mm	α °
63	2,2
80	1,7
100	1,3

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

$D_{max.}$ 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 142–144

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

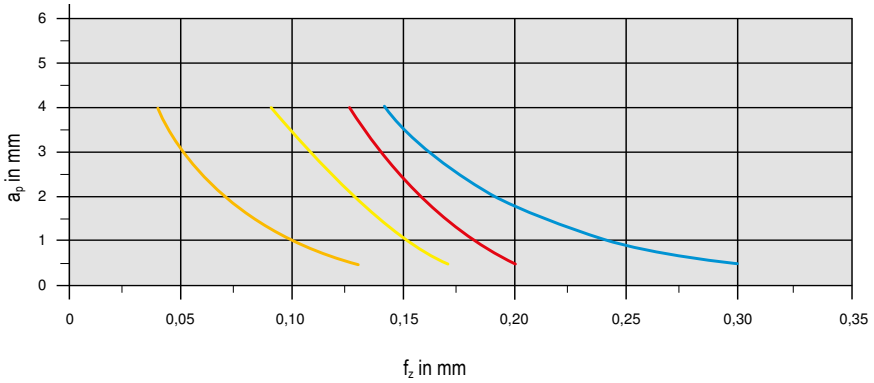
System MaxiMill 490-09

Machining strategy

System MaxiMill 490-09 is not suitable for plunging!

Starting Parameter

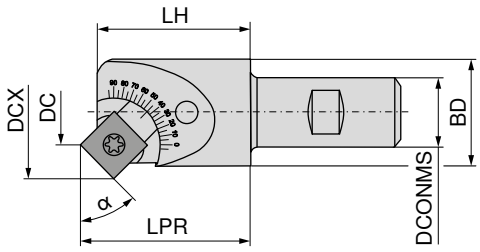
SDNT 09



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

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

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**

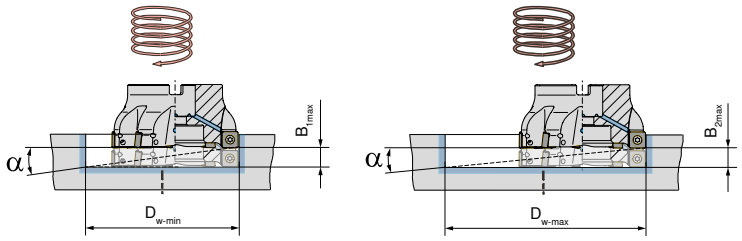
* Tangential cutting point at deepest engagement point

** Smallest diameter in centre

System MaxiMill 490-12

Machining strategy

Helical plunging (without pilot hole)



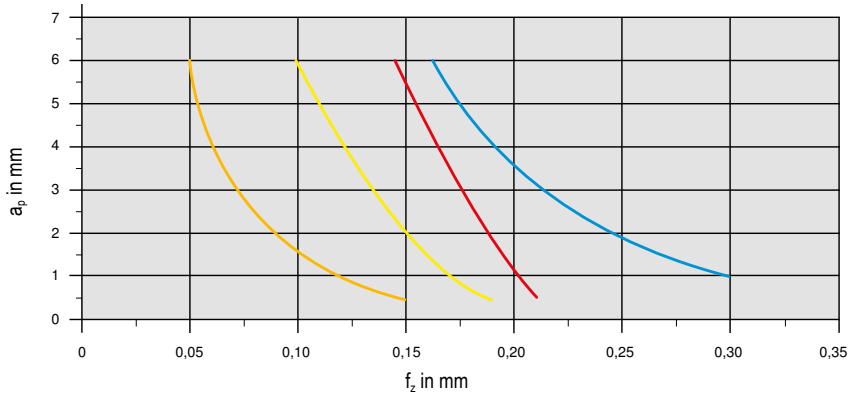
$$B = (D_W - DC) \times \pi \times \tan \alpha$$

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

Starting Parameter

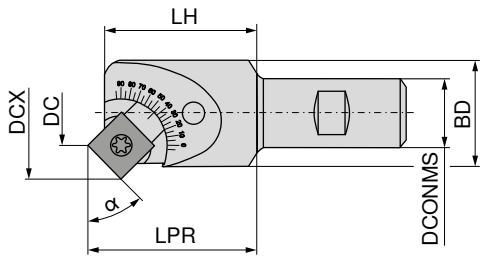
SDMT 12



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

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

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

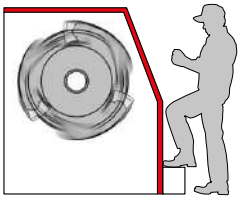
Safety advice

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).

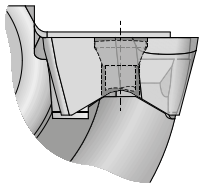


Suitability of the adapters for HSC machining

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).

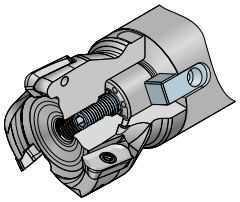
Mounting the indexable insert with centrifugal force protection

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		260–100	260–100

= full lubricant

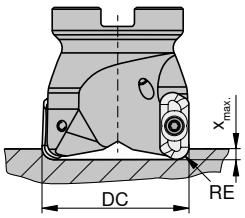
= Minimum quantity lubrication

= dry machining

System MaxiMill HSC-11

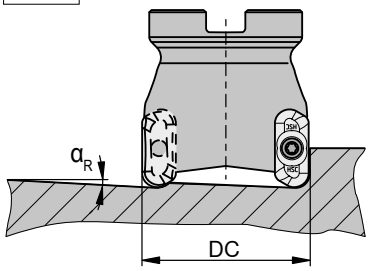
Machining strategy

Axial ramping



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

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

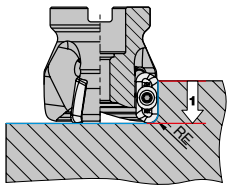
With maximum chip volume

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

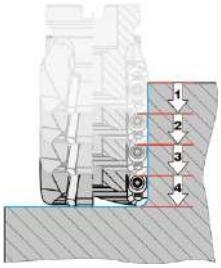
With maximum side wall quality

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

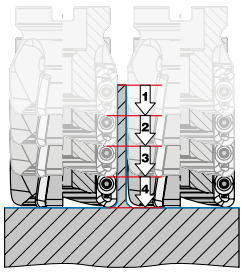
Shoulder milling



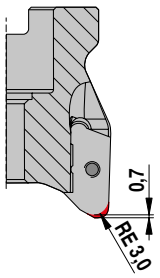
Pocket milling

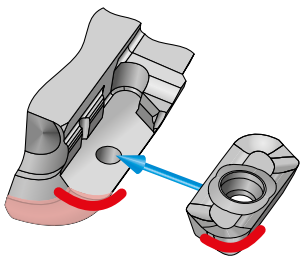


Pocket milling with thin walled components



Modification to front profile





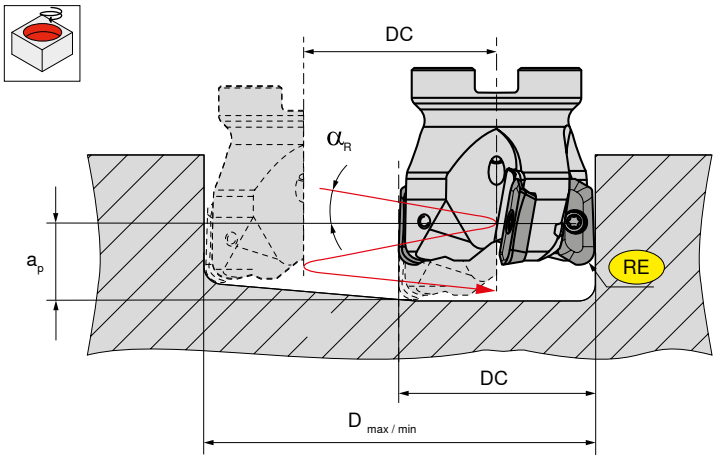
For inserts with a corner radius larger than 3.2 mm the basic body of the tool must be modified according to the drawing above.

15

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

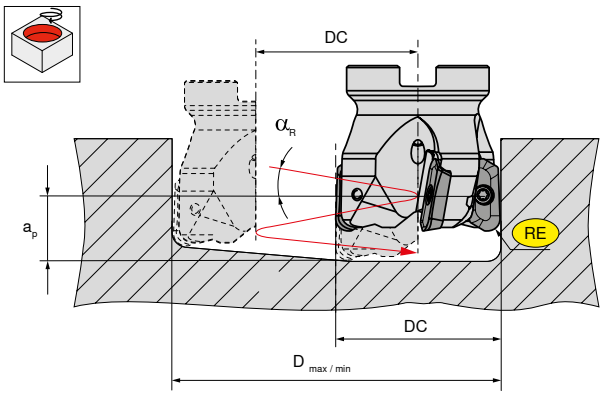
$D_{max.}$ in mm = largest drilling diameter
$D_{min.}$ in mm = smallest drilling diameter
$DN_{max.}$ in mm = Maximum hole diameter for non flat bottom

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

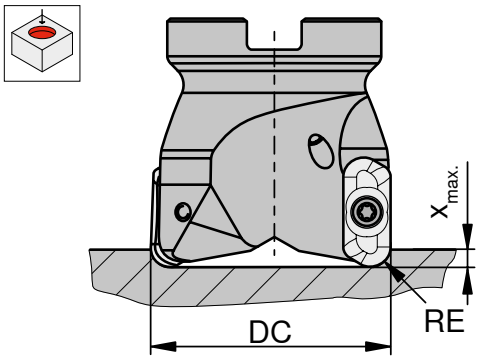
$D_{max.}$ in mm = largest drilling diameter
$D_{min.}$ in mm = smallest drilling diameter
$DN_{max.}$ in mm = Maximum hole diameter for non flat bottom

	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

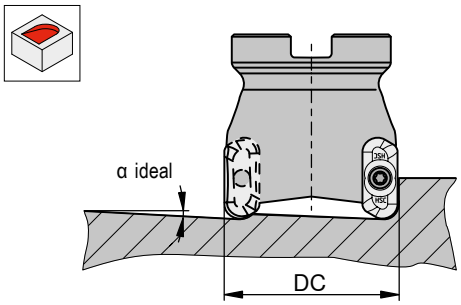
Axial ramping



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

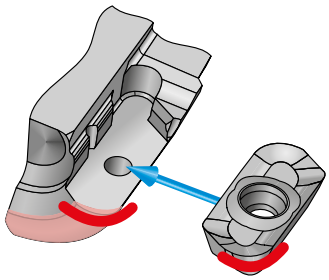
Angled ramping

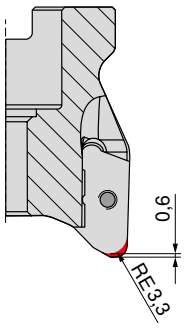


DC mm	α ideal HSC 19	α ideal HPC 19
25	11°	11°
32	7°	7°
40	5°	5°
50	4°	4°
63	3°	3°
80	2°	
100	2°	

Modification to basic body

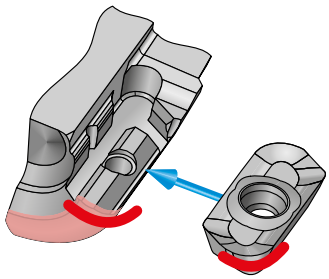
HSC 19





Modification to front profile

HPC 19

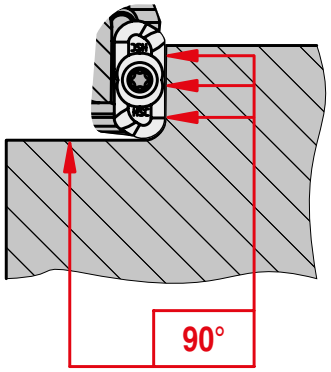


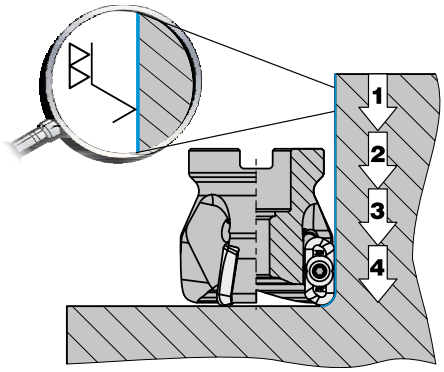
For inserts with a corner radius larger than 4.0 mm the basic body of the tool must be modified according to the drawing above.

System MaxiMill HSC/HPC-19

Machining strategy

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





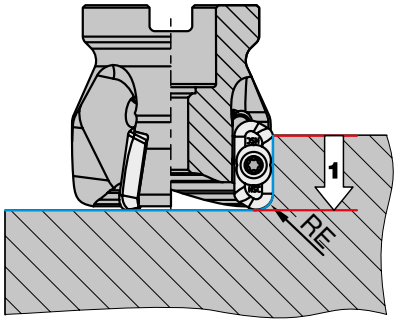
With maximum chip volume

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

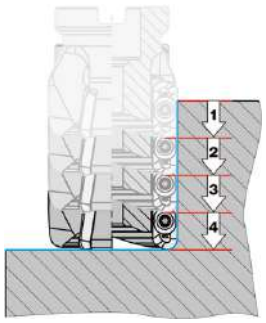
With maximum side wall quality

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

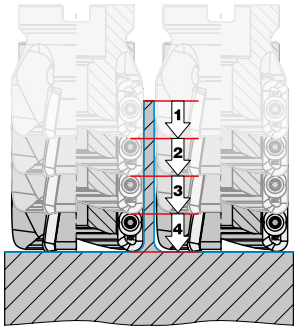
Shoulder milling



Pocket milling



Pocket milling with
thin walled components



15

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

System MaxiMill HPC-04/12

Machining strategy

What do you have to take into account?

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

Excellent suitability

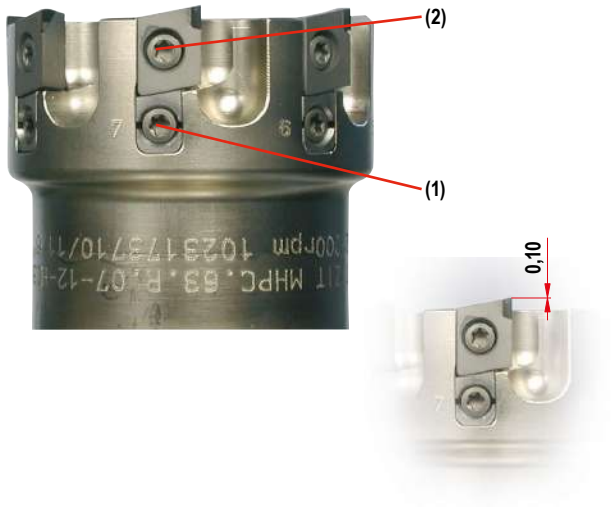
- ▲ for components made of light metals and non-ferrous metals, plastic, fibre composite materials, graphite ...
- ▲ when the simplest setting method saves cost for tool presetting.
- ▲ for high-volume production.
- ▲ for high surface quality of the work pieces.
- ▲ when long tool life is necessary to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

Quality class check

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

Setting 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 wiper edge are then set to 0.02–0.03 mm above the highest cutting edge.



The adjustment procedure

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

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

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

4 Adjust the PCD insert by 0.02 mm turning the clamping screw (1) clockwise.

Pre-loading must be reached. Use the angled TORX screwdrivers

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

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

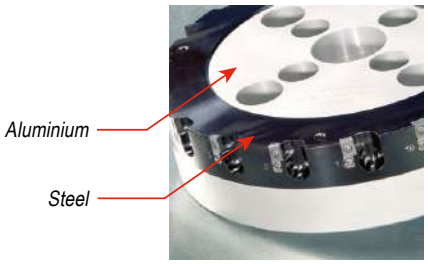
7 Check axial run-out of all inserts: Target = 0.005 mm.

Perfect precision – MaxiMill HPC-12

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

Tool body made of steel

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



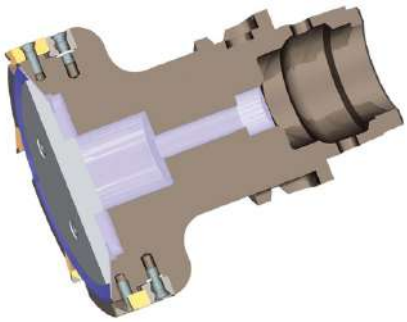
Picture shows bimetallic version

Available as shell milling cutters and monobloc type

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

Particularly for HSC applications with internal coolant supply

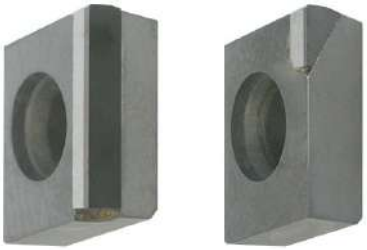
- Improved chip evacuation
- High surface quality
- Optimum application conditions
- Suitability for minimum quantity lubrication



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

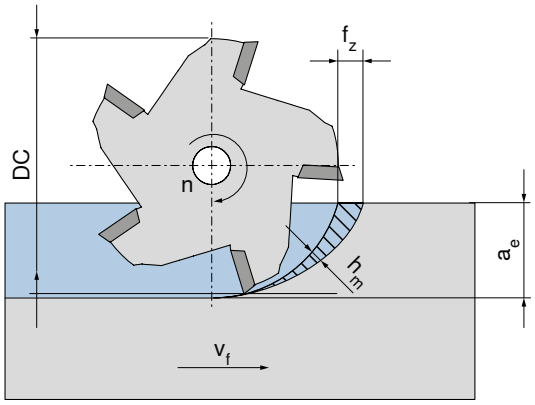
- Standard insert
- Insert with corner radius
- Insert with trailing edge

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 *

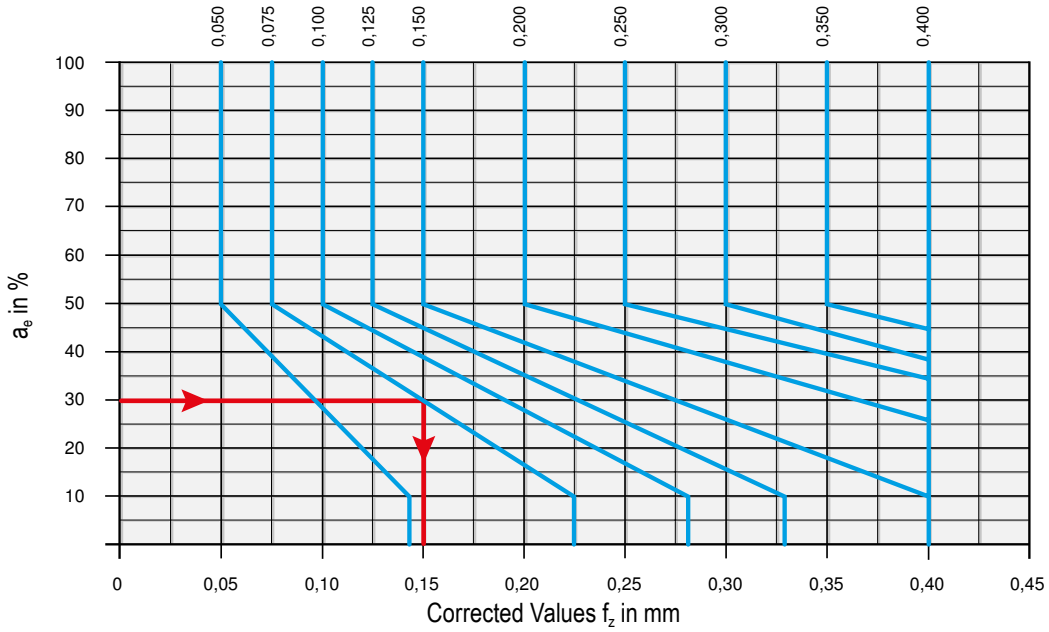


2 Select the corrected feed rate value from the table based on the appropriate chip thickness [h_m] and depth of cut [a_e].

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

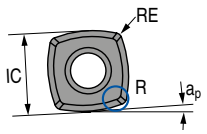


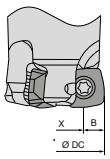
Example:
Start value (f_z) = 0.075 mm
a_e = 30 %
corrected value (f_z) = 0.15 mm

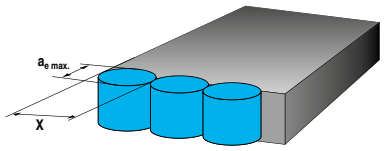
System MaxiMill HFC-06

Machining strategy

Programmed radius R = 1.2 mm



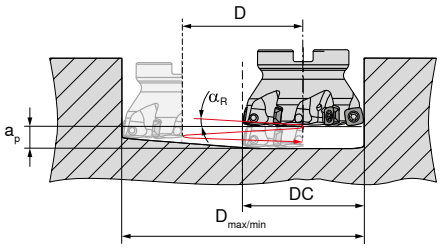




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\ max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\ max.}$ in mm	f_z in mm			X
							initial	min.	max.	
6,35	0,5	0,8	16–32	DC–(2 x B)	4,3	5,3	0,10	0,08	0,15	<0,7 x DC

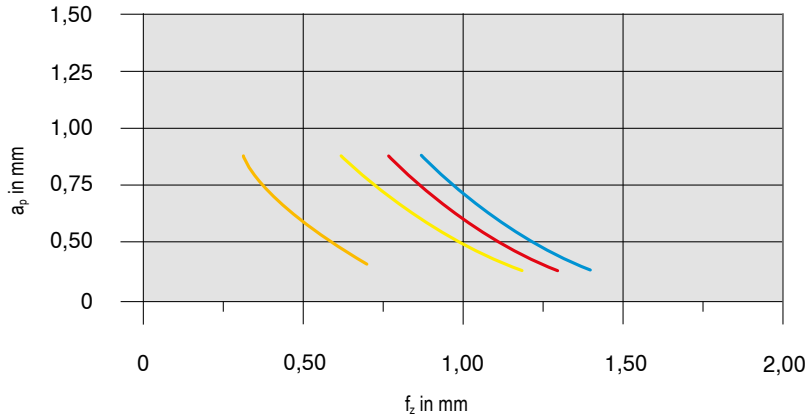
	circular		
	Helical plunging (helical plunging into solid material)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\ max.}$ °
16	22	31	4,5°
20	30	39	2,3°
25	40	49	1,3°
32	54	63	0,9°

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



Starting Parameter

XPLX 06



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

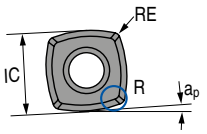
Detailed information on cutting speed for each grade can be found on → page 142–144

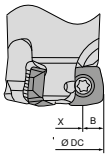
From v_c > 400 m/min, the tool must be balanced!

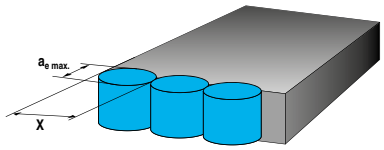
System MaxiMill HFC-09

Machining strategy

Programmed radius R = 2 mm



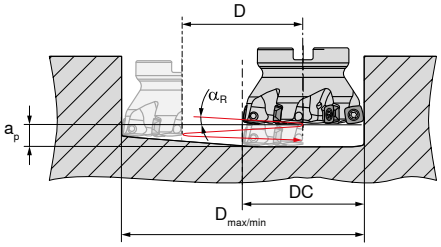




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
9	0,8	1	25–66	DC–(2 x B)	5,9	7,5	0,10	0,08	0,15	<0,7 x DC

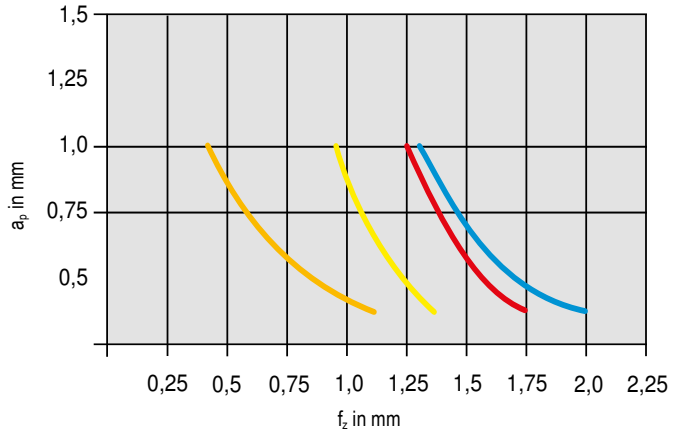
	circular		
	Helical plunging (helical plunging into solid material)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
25	35	48	3,1°
32	49	62	1,7°
35	55	68	1,4°
40	65	78	1,0°
42	69	82	0,9°
50	85	98	0,8°
52	89	102	0,7°
63	111	124	0,7°
66	117	130	0,6°

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



Starting Parameter

XDLX 09



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

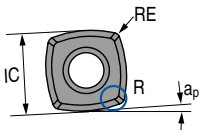
Detailed information on cutting speed for each grade can be found on → page 142–144

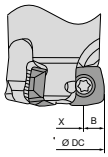
From v_c > 400 m/min, the tool must be balanced!

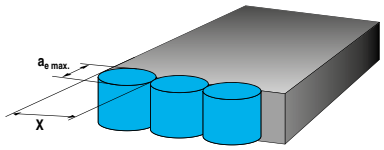
System MaxiMill HFC-12

Machining strategy

Programmed radius R = 3 mm



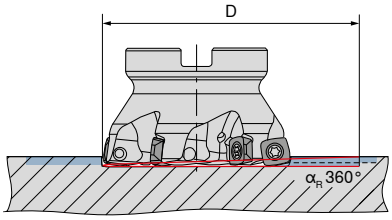




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
12	1,0	2	32–100	DC–(2 x B)	8,3	10	0,15	0,10	0,20	<0,7 x DC

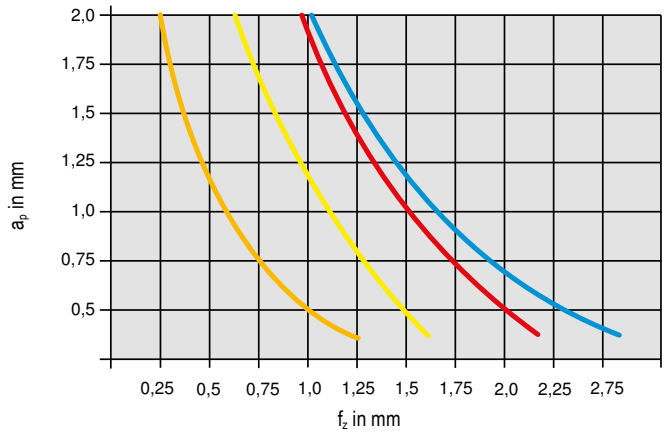
	circular		
	Helical plunging (helical plunging into solid material)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
32	44	62	6,1°
35	50	68	3,7°
40	60	78	2,5°
42	64	82	2,3°
50	80	98	1,3°
52	84	102	1,3°
63	106	124	0,9°
66	112	130	0,9°
80	140	158	1,1°
100	180	198	0,6°

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



Starting Parameter

XOLX 12



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

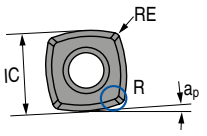
Detailed information on cutting speed for each grade can be found on → page 142–144

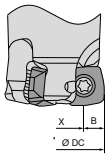
From v_c > 400 m/min, the tool must be balanced!

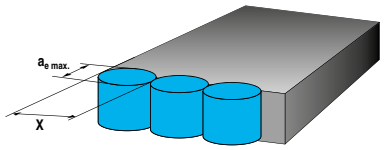
System MaxiMill HFC-19

Machining strategy

Programmed radius R = 5 mm



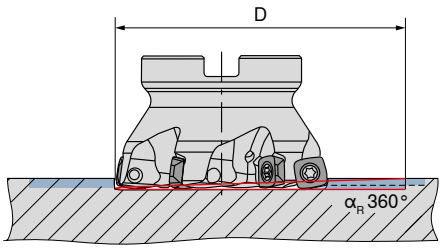




Cutting depth and remaining material			Cutting width for flat surfaces			Cutting depth when plunging				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							initial	min.	max.	
19,14	1,5	3,3	63–160	DC–(2 x B)	13,1	12	0,2	0,10	0,25	<0,65 x DC

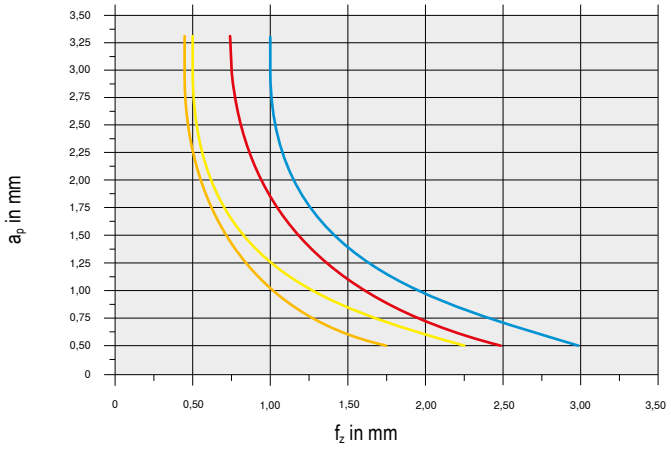
	circular		
	Helical plunging (helical plunging into solid material)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
63	97	123	2,5
80	131	157	1,4
100	171	197	1,0
125	221	247	0,7
160	291	317	0,5

	axial	Angled	
		Plunging	
DC mm	$X_{max.}$ mm	$\alpha_{R\,max.}$ °	$a_{p\,max}$ 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.4.1**	40CrMnMoS 8-6	**XOLX190615SR-M50**	**CTPP235**	200	Dry
Stainless steel	**M.1.1**	X6CrNiMoTi 1712 2	**XOLX190615SR-M50**	**CTPM240**	180	Dry
Cast iron	**K.1.1**	EN-GJL-250 (GG25)	**XOLX190615SR-M50**	**CTCK215**	250	Dry
Heat-resistant	**S.2.2**	Inconel 718	**XOLX190615ER-F40**	**CTC5240**	35	Emulsion

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

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

System DHFC

Cutting data standard values

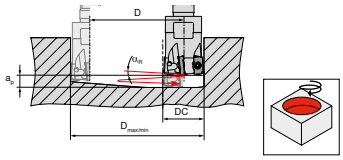
for standard inserts

	F			M			R		
Material	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm	v_c m/min	f_z mm	a_p mm
Steel	130–300	0,25–1,0	0,7	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 142–144

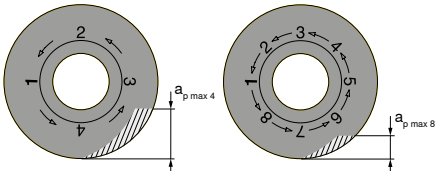
MaxiMill 251/251 RS system

Technical data

Recommended cutting depth

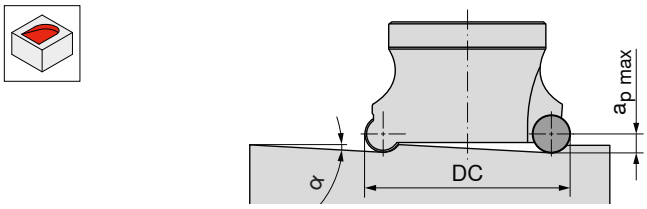
Ø mm	4-position $a_{p\,max.}$ mm	4-position $a_{p\,max}$ theoretical mm	8-face $a_{p\,max.}$ mm
5	1,0	2,0	0,7
8	1,5	3,5	1,1
10	2,5	4,5	1,4
12	3,0	5,5	1,7
16	4,0	7,5	2,3
20	4,0	9,5	2,9

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



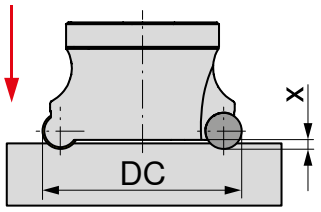
Detailed information on cutting speed for each grade can be found on → page 142–144

Angled ramping



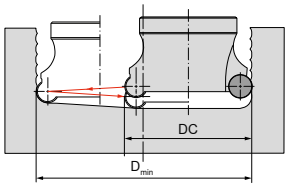
Ø DC mm	05 α °	08 α °	10 α °	12 α °	16 α °	20 α °
10	3,4					
12	16,0					
16	8,0	5,0				
20	5,5	20,0	1,3			
25	4,0	13,0	2,0	6,0		
32	3,0	8,0	3,0	4,0		
40			3,3	2,8		
42			3,1			
50			2,4	2,6	4,0	
52			2,2	2,3		
63				1,9	2,8	
66				1,6		
80				1,3	2,0	3,2
100				1,0	1,5	2,3
125						1,7

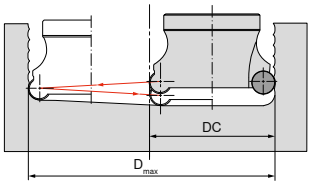
Axial ramping



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.

15

System R 1000, 1002, 1007

Cutting data standard values

		f_z / a_p mm	WTN1205	WAN2225	WAN1240	WAX1240	WUN4210
Steel							
	0501	f_z	**0,1–0,3**				
		a_p	**0,1–0,3**				
	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							
	0501	f_z	0,1–0,15				
		a_p	0,1–0,15				
	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							
	**0501**	f_z	**0,1–0,2**				
		a_p	**0,1–0,3**				
	**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							
	**0501**	f_z	**0,1–0,15**				
		a_p	**0,1–0,2**				
	**0702**	f_z	**01–0,2**				
		a_p	**0,1–0,3**				
	**1003**	f_z	**0,1–0,2**				
		a_p	**0,1–0,5**				
	**12T3**	f_z	**0,1–0,25**				
		a_p	**0,1–0,7**				
	**1604**	f_z	**0,15–0,3**				
		a_p	**0,2–1,0**				
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

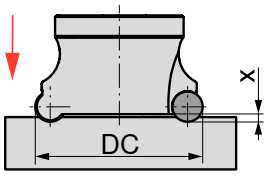
Up to 48 HRC: a_p-range as indicated in the table
Up to 55 HRC: maximum value a_p x 0,7
Up to 65 HRC: maximum value a_p x 0,5

15

System R 1000, 1002, 1007

Machining strategy

Axial ramping

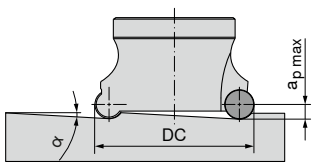


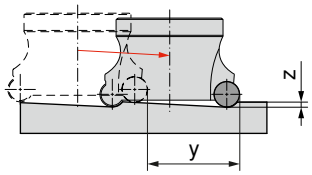
reduce f_z according to table by 30 %

→ vc Page 177–179

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

Angled ramping





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

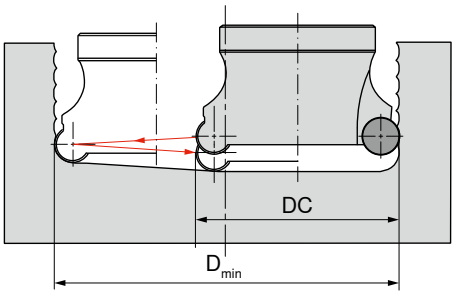
→ vc Page 177–179

	05			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	α°	y mm	z mm
8	26,5	2	< 1,0												
10															
12	14,0	4	< 1,0												
14	9,5	6	< 1,0												
15	8,1	7	< 1,0	26,5	2	< 1,2									
16	7,1	8	< 1,0	14,0	4	< 1,2									
18	5,7	10	< 1,0	11,3	6	< 1,2									
20	4,7	12	< 1,0	8,5	8	< 1,2									
22															
24															
25				5,3	13	< 1,2	19,7	7	< 2,5						
30				3,8	18	< 1,2	11,7	12	< 2,5						
32															
35				3,0	23	< 1,2	8,4	17	< 2,5	13,0	13	< 3,0	38,7	5	< 4,0
40															
42				2,3	30	< 1,2	5,9	24	< 2,5	8,5	20	< 3,0			
50															
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

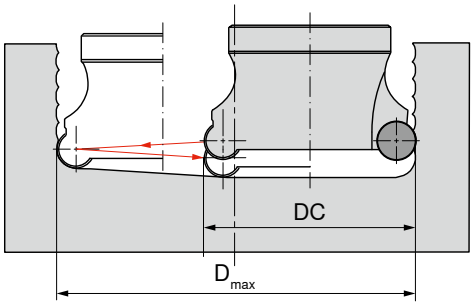
System R 1000, 1002, 1007

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
→ vc Page 177–179

	05			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	α°	y mm	z mm
8	10	16													
10	12	20													
12	16	24	14	24											
14	20	28	16	28											
15	22	30	17	30											
16	24	30	20	32											
18	28	36	24	36	20	36									
20	32	40	28	40	22	40									
22							24	44							
24							26	48							
25			38	50	32	50									
30			48	60	42	60									
32									34	64					
35			58	80	72	70	48	70	40	70			38,7	5	< 4,0
40											42	80			
42			72	84	66	84	62	84							
50											62	100			
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

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

$$v_f = f_z \times z \times n$$

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

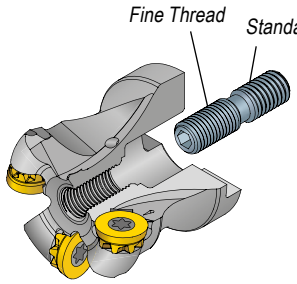
v_f in mm/min

$$v_f = f_z \times z \times n$$

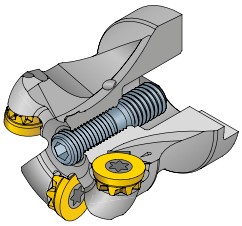
DC = Ø of the disc cutters

ZNF = Number of teeth of the cutter

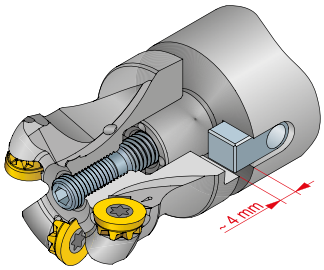
Easy and safe clamping – with the CERATIZIT power screw



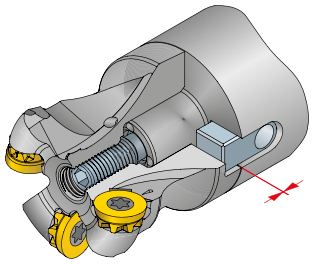
The fine-pitch part of the power screw is threaded into the milling cutter.



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 readjust by means of the power screw with 0.5 mm/rev.



Turn clamping screw to tighten

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

	10				12				16			
Cutter Ø mm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm
40			70 950 151	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		

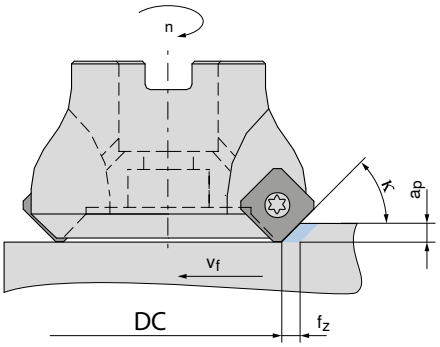
	12				16				20			
Cutter Ø mm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm	ISK-Screw DIN 912	M_d Nm	Suits-screw Article no.	M_d Nm
80	M12x30	140			M12x30	140			M12x30	140		
100	M16x35	180			M16x35	180			M16x35	180		
125					M16x35	180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

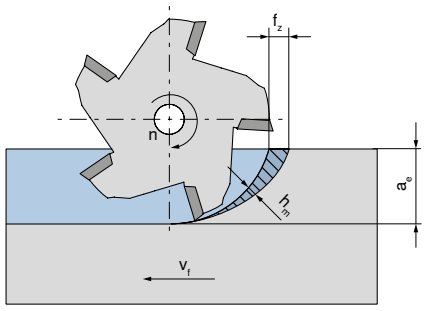
15

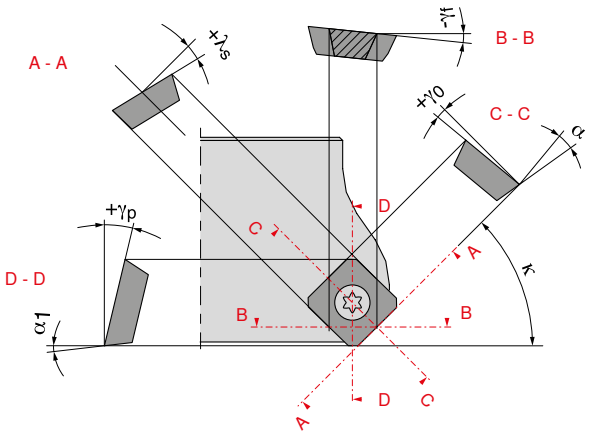
Abbreviations & dimensions

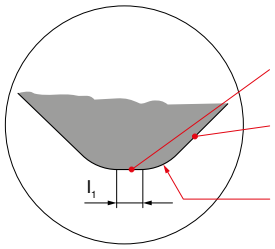
a_e	cutting width	mm
a_p	Cutting depth	mm
DC	Tool diameter	mm
D_w	Workpiece diameter	mm
f_z	Feed per tooth	mm
h_m	Average Chip Thickness	mm
k	Number of teeth	
k_c	Specific cutting force	N/mm²
$k_{c1.1}$	Specific cutting force for 1 mm ² chip area	N/mm²
BS	Length of trailing edge land	mm
m_c	Increase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

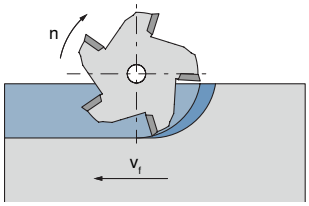
Main cutting edge

Corner radius

Engagement conditions

Recommended

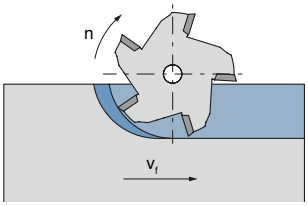
Climb milling



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.

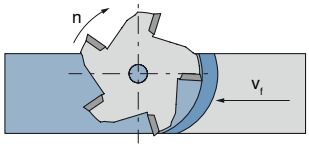
Unsuitable

Conventional milling

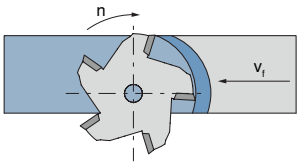


The feed direction of the workpiece is opposite to the direction of rotation of the milling cutter in the cutting zone. Chip thickness is zero at the beginning and increases until it reaches its maximum at the end of the cut.

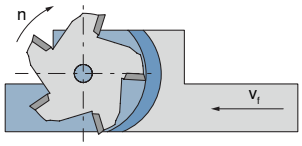
Cutter positioning



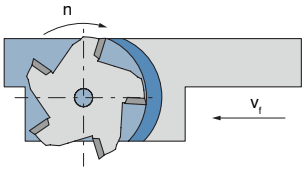
If possible the cutter should exit tangentially of the workpiece.



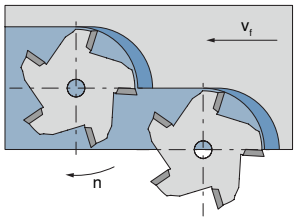
Workpiece situation



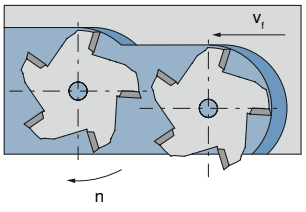
The workpiece should be clamped in such a way as to allow the cutter to emerge tangentially of the workpiece along the whole machining length.



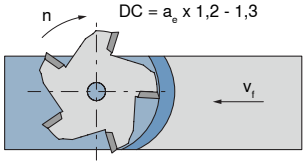
Overlapping



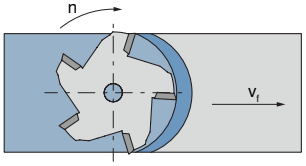
Either employ climb milling or ensure that the cutter comes out of the workpiece tangentially, as in the illustration on the left.



Cutter size



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



15

ISO designation indexable milling inserts

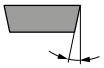
X	D	K	T	11	T3	08	S	R	-	F50
1	2	3	4	5	6	7	8	9		10

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

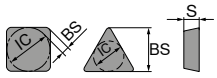
A	85°	
B	82°	
K	55°	
H	120°	
L	90°	
O	135°	
P	108°	
C	80°	
D	55°	
E	75°	
M	86°	
V	35°	
R		
S	90°	
T	60°	
W	80°	
X	Special version	
Z		

2 Clearance angle

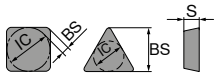


	α
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special version

3 Tolerances

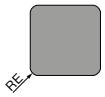


	IC ±mm	BS ±mm	S ±mm	IC = 6,35 / 9,52	IC = 12,7	IC = 15,8 / 19,05
A	0,025	0,005	0,025	●	●	●
C	0,025	0,013	0,025	●	●	●
E	0,025	0,025	0,025	●	●	●
F	0,013	0,005	0,025	●	●	●
G	0,025	0,025	0,13	●	●	●
H	0,013	0,013	0,025	●	●	●
J	0,05	0,005	0,025	●		
	0,08	0,005	0,025		●	
	0,10	0,005	0,025			●
K	0,05	0,013	0,025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

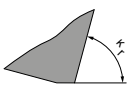
7 Trailing edge land / corner radius



Radius

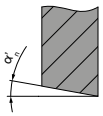
	RE in mm
M0*	
02	0,2
04	0,4
08	0,8
12	1,2

* Only with insert type "R"



1. Designation

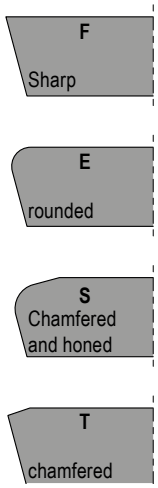
	K_r
A	45°
D	60°
E	75°
F	85°
P	90°
Z	Alternative



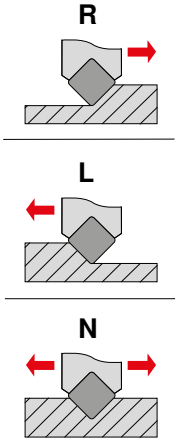
2. Designation

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

8 Cutting edge



9 Direction of cut



4

Characteristics

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

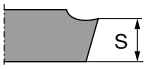
5

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

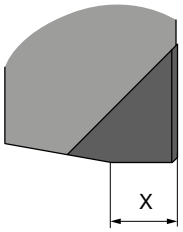
Chip breaker designation
F.. = fine
M.. = medium
R.. roughing

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

11

Manufacturer specification

Length of the finishing cutting edge

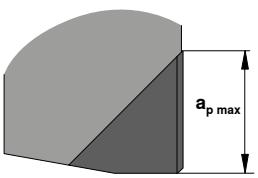


00 = 0,0 mm
10 = 1,0 mm
12 = 1,2 mm
15 = 1,5 mm
30 = 3,0 mm
50 = 5,0 mm

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

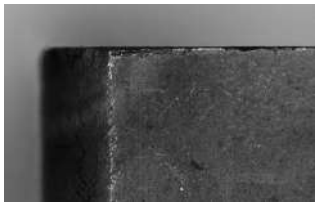
13

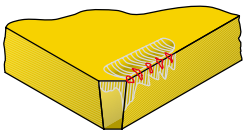
Manufacturer specification

F = Fine
M = Medium
R = Rough

15

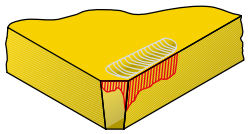
Cutting demands when milling





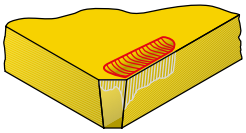
Edge chipping

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



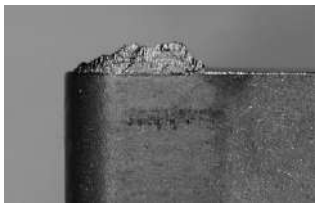
Wear on clearance face

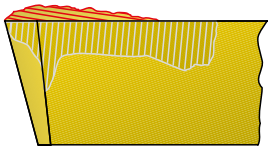
Cutting speed ↓
Feed per tooth ↑
Abrasion resistant grade ↑



Cratering

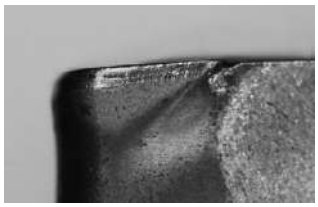
Cutting speed ↓
Feed per tooth ↓
Abrasion resistant grade ↑

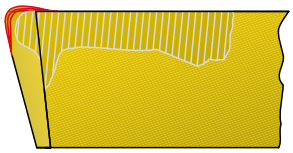




Built-up edge

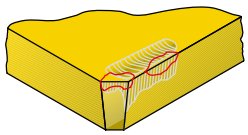
Cutting speed ↑
Feed per tooth ↑
Wear resistance ↑





Cutting-edge deformation

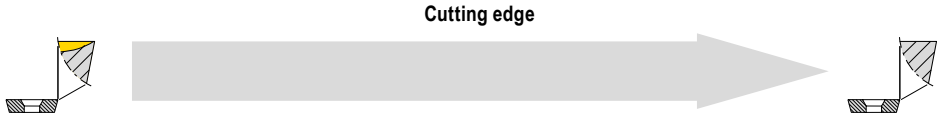
Cutting speed ↓
Feed per tooth ↓
Abrasion resistant grade ↑



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

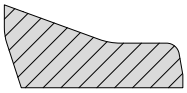
			Cutting edge		
			Sharp	medium	stable
			10–20	30–40	50–60
Application type	light	F	●	● ●	● ● ●
	universal	M	●	● ●	● ● ●
	difficult	R	●	● ●	● ● ●

Example: **Chip breaker -M50**

Chip groove description

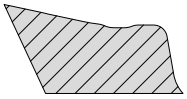
-27P

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



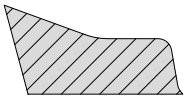
-F10

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



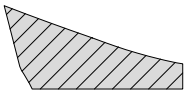
-27

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



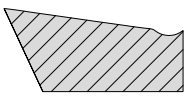
-F20

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



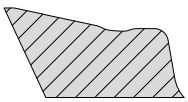
-F40

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



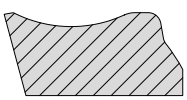
-F50

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



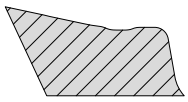
-33P

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



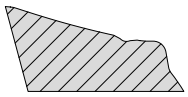
-M30

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



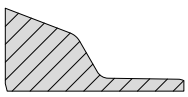
-M31

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



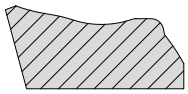
-M32

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



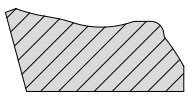
-M50

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



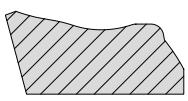
-31

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



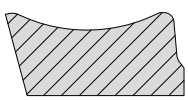
-29

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



-33

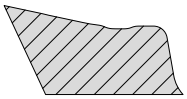
- Positive geometry with small neutral protective chamfer
- Rounded cutting edge
- Low cutting force and good stability
- For unstable clamping situations
- Light rough machining
- First choice for stainless steels



Chip groove description

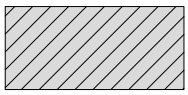
-29R

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



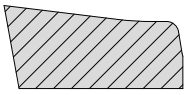
-ER

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



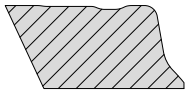
-R30

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



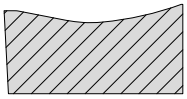
-EN

- 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



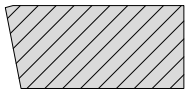
-R50

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



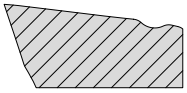
-SN

- 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



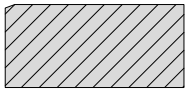
-R60

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



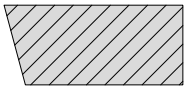
-SR

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



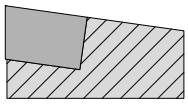
-FN

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



-FR

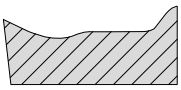
- Neutral Geometry
- Slightly rounded and stable cutting edge
- Associated with Ceramic and CBN cutting materials.
- For stable machining situations
- First choice for machining cast irons



Spanleitstufenbeschreibung für System MaxiMill Slot-SX

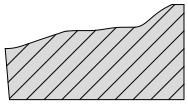
-27P

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



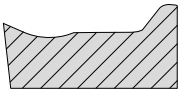
-M8

- 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



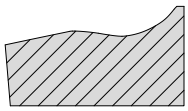
-F2

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



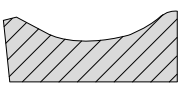
-M7

- 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	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	01 05 10 15 20 25 30 35 40 45 50	●		●				
	HE-K05								
TCM10	HT-P15		●		○				
	HT-K10								
WTN1205	HC-P10		●	○	●			●	
	HC-M15								
	HC-K05								
	HC-H10								
CTPP211	HC-P10		●	○	○	○	○	○	○
	HC-K10								
	HC-M15								
	HC-N10								
	HC-S15								
	HC-H10								
	HC-O10								
CTPP216	HC-P15		●	○	●	○	○	●	○
	HC-M20								
	HC-K15								
	HC-N15								
	HC-S20								
	HC-H15								
	HC-O15								
CTCP220	HC-P20		●		●				
	HC-K20								
CTPP225	HC-P25		●		●				
	HC-K25								
CTCP230	HC-P30		●		●				
	HC-K25								
CTPP231	HC-P30		●		○				
	HC-K25								
CTPP235	HC-P35		●	○	○				
	HC-M30								
	HC-K30								
CTPP236	HC-P35		●	○	○				
	HC-M35								
	HC-K30								
WAN1240	HC-P40		●	○	○				
	HC-M35								
	HC-K30								
WAX1240	HC-P30		●	○	○				
	HC-M25								
	HC-K25								
CTPM225	HC-P25		●	●					
	HC-M25								
WAN2225	HC-M25			●			●		
	HC-S30								
CTCM235	HC-P40		●	●					
	HC-M35								
CTPM240	HC-P40		○	●					
	HC-M40								
CWK10	HC-N10					●			○
	HC-O10								

● **Main Application**
○ Extended application

wear-resistant v_c+ ⟷ v_c– tough

Grades Overview

Grade designation	Standard designation	ISO application range	Steel P	Stainless steel M	Cast iron K	Non-ferrous metals N	Heat-resistant S	Tempered steel H	Non-metal materials O
CTPM241	HC-P40	05 15 25 35 45 / 01 10 20 30 40 50	●	●			○		
	HC-M40								
	HC-S40								
CTPM245	HC-P45		●	●					
	HC-M50								
CTCM245	HC-P45		●	●			○		
	HC-M50								
	HC-S35								
CTN3105	CN-K05				●				
CTL3215	BC-K10				●			○	
	BC-H10								
CTCK215	HC-K15				●				
CTPK220	HC-K20				●				
CTPK221	HC-P15		○		●				
	HC-K10								
CTPK226	HC-P15		●	●	●			○	
	HC-M20								
	HC-K15								
	HC-H15								
CTPK231	HC-P30		●	●	●	○	○	○	
	HC-M35								
	HC-K30								
	HC-N30								
	HC-S35								
	HC-H30								
CTD4205	DP-N05					●			○
	DP-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								

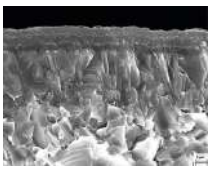
● **Main Application**
○ Extended application

wear-resistant v_c+ ⟷ v_c− tough

15

Grade description

CTEP210



P10 | **K05**

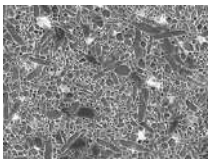
Specification:
Composition: Cermet Co/Ni 12.2%; mixed carbide 71.4%; others; WC balance | Fine grain size | Hardness: HV_{30} 1620 | Layer system: CVD TiCN-Al_3O_3
Application:
Coated Cermet grade with reserves of toughness for finish machining at high cutting speeds

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

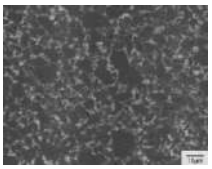
CTN3105



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

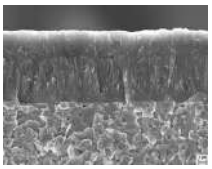
CTL3215



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

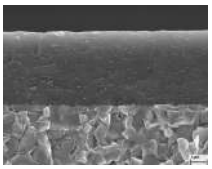
CTCP220



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

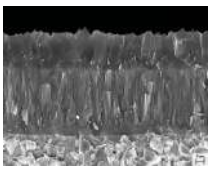
CTPP225



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

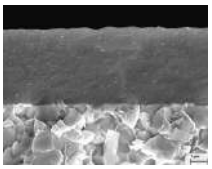
CTCP230



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

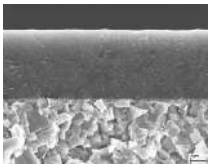


HC-P35 | HC-M30

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

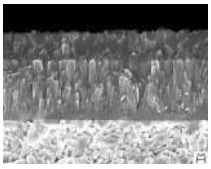
CTPM225



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

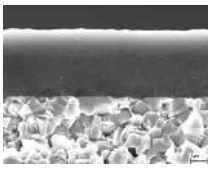
CTCM235



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

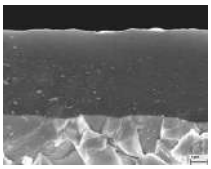
CTPM240



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

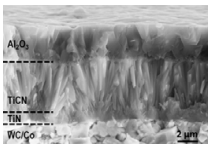
CTPM245



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

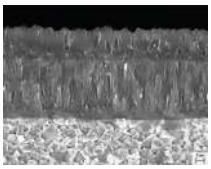
CTCM245



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

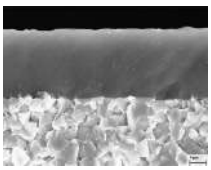
CTCK215



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

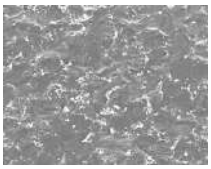
CTPK220



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

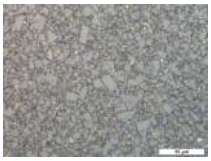


DP-N05

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

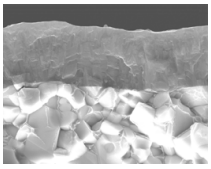
CTWN215 (H216T)



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

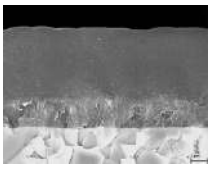
CTPX715



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

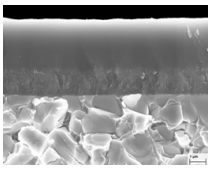
CTC5240



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

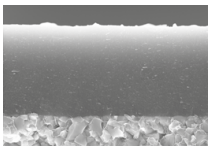
CTCS245



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.

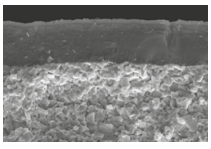
CTP6215



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/mm^2
Material example:
Tool steel 1.2379, 1.2312

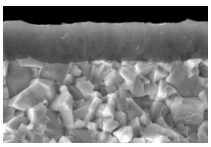
CTPK231



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

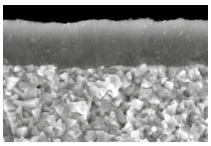
CTPP216



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

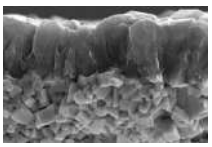


P10 | M20 | **K15** | H15

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

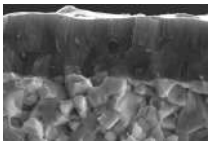
CTCN211



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

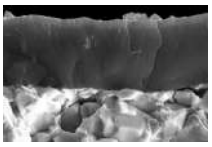
WAN1240



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**

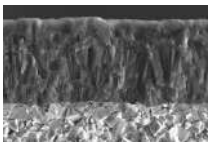
Specification:
Composition: Co 11.3%; WC balance | Medium grain size 2µm | Hardness: HV_{30} 1307 | Layer system: PVD TiAlN / TiN
Application:
Dry and wet machining, fine grain grade with high toughness and temperature resistance. For rough and finish machining of rust and acid-resistant steels

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

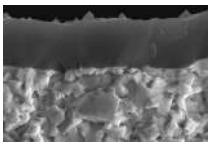
WAX1240



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

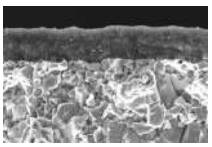
WTN1205



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

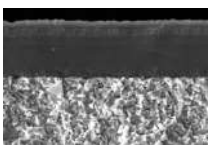
CTPP231



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

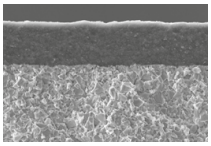


P10 | M15 | K10 | N10 | S15 | H10 | O10

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

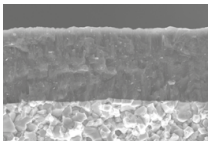
CTPP236



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

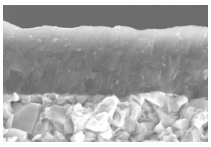
CTPK221



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

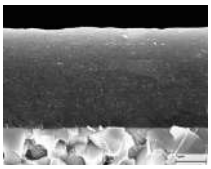
CTPM241



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

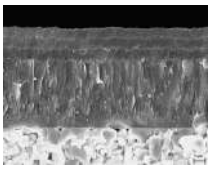


ISO | **P30** | **K30** | N30 | **S30** | O30

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

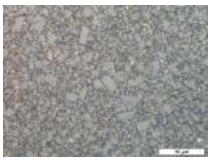


ISO | **P35** | M30 | **K35**

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.

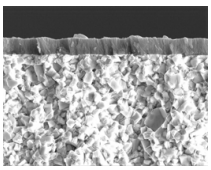
CWK10



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**

Spezifikation:
Zusammensetzung: Co 10,0%; Andere 0,7 %, WC Rest | Korngröße: 1 µm | Härte: HV_{30} 1660

Einsatzempfehlung:
Die universale Hartmetallsorte für nahezu alle Materialien

Grade description