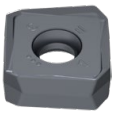
Nieuwe producten voor de verspaner

NEW

MaxiMill 271-12



→ pagina 24+25

Nieuwe systeemgroote voor meer efficiëntie

NEW

MaxiMill 211-11KN / 211-15KN

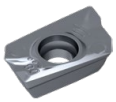


→ pagina 65+71

Update Igelfrezen

NEW

MaxiMill 211-20

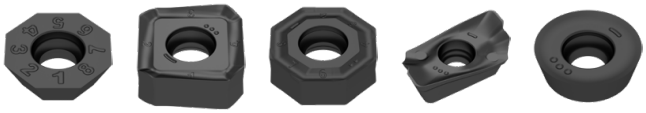


→ pagina 76

Programma uitbreiding wisselplaten

NEW

CTCM245



Nieuwe high-performance soort voor de bewerking van hooggelegeerde stalen



Boren en nabewerken

1 HSS boren

2 VHM boren

3 Wisselplaatboren

4 Ruimen en verzinken

5 Kotteren

Draadsnijbewerkingen

6 Tappen

7 Circulair- en schroefdraadfrezen

8 Draadsnijden

Draaibewerkingen

9 Draaien

10 EcoCut en FreeTurn

11 Steken

12 Miniatuur draaien

Freesbewerkingen

13 HSS frezen

14 VHM frezen

15 Wisselplaat frezen

De catalogus spantechniek

16 Opnames en toebehoren

17 Machineklemmen

18 Materiaalvoorbeelden en artikelnr.-index

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Spaanbreker beschrijving	196+197
Soortenoverzicht	198+199
Soortenbeschrijving	200+201

CERATIZIT \ Performance

Premium-kwaliteitsgereedschappen voor de hoogste performance.

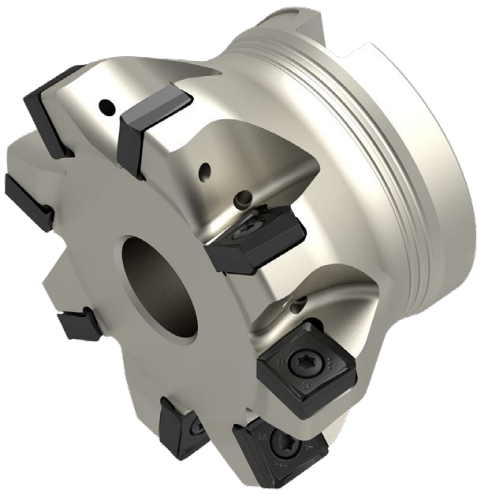
De premium-kwaliteitsgereedschappen uit de **CERATIZIT Performance** productlijn zijn voor speciale toepassingen ontworpen en kenmerken zich door hun buitengewone efficiëntie. Indien u in uw productie de hoogste eisen aan performance stelt en de allerbeste resultaten wilt bereiken, dan bevelen wij u de premium gereedschappen uit deze productlijn aan.

Symboolverklaring


centrale inwendige koeling


zijdelingse inwendige koeling

κ = 43° aanzethoek



ZNF = aantal tanden

● = **hoofdtoepassing**

○ = neventoepassing

Toepassingssymbolen


Vlakfrezen


Schuin induiken


Circulair boorfrezen


Duikfrezen


Sleuffrezen


Hoekfrezen


Sleuffrezen (45°)


Fasefrezen

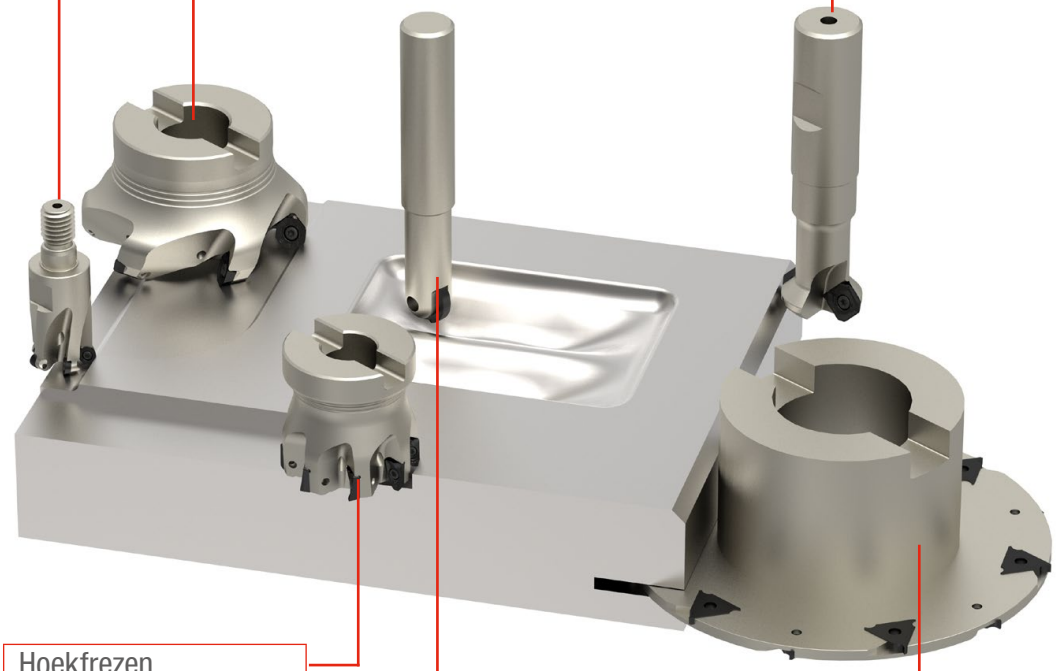

Vrije vorm frezen

Toolfinder – keuzehulp toepasssingen

Vormfrezen
→ systeemkeuze:
8+9

Vlakfrezen
→ systeemkeuze:
4+5

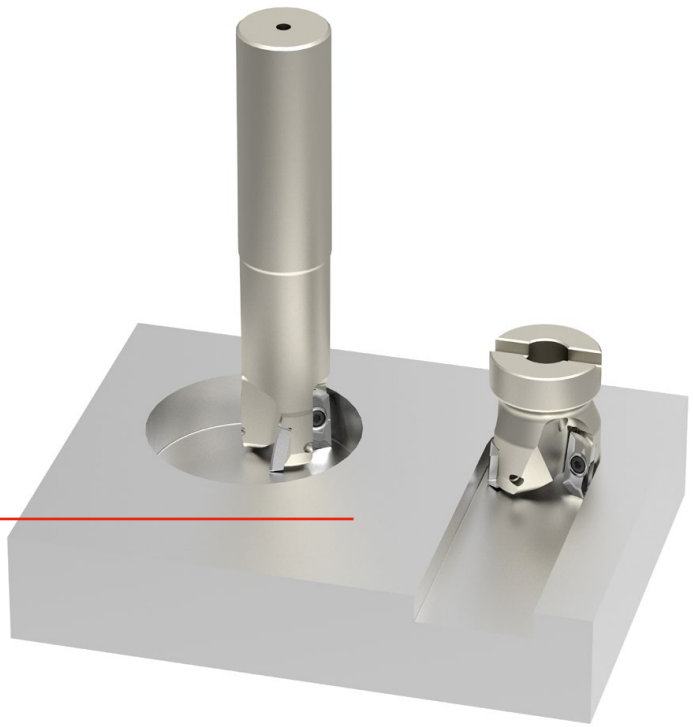
Fase-/hoekfrezen
→ systeemkeuze:
10



Hoekfrezen
→ systeemkeuze:
6+7

Gleuf-/afkortfrezen
→ systeemkeuze:
10

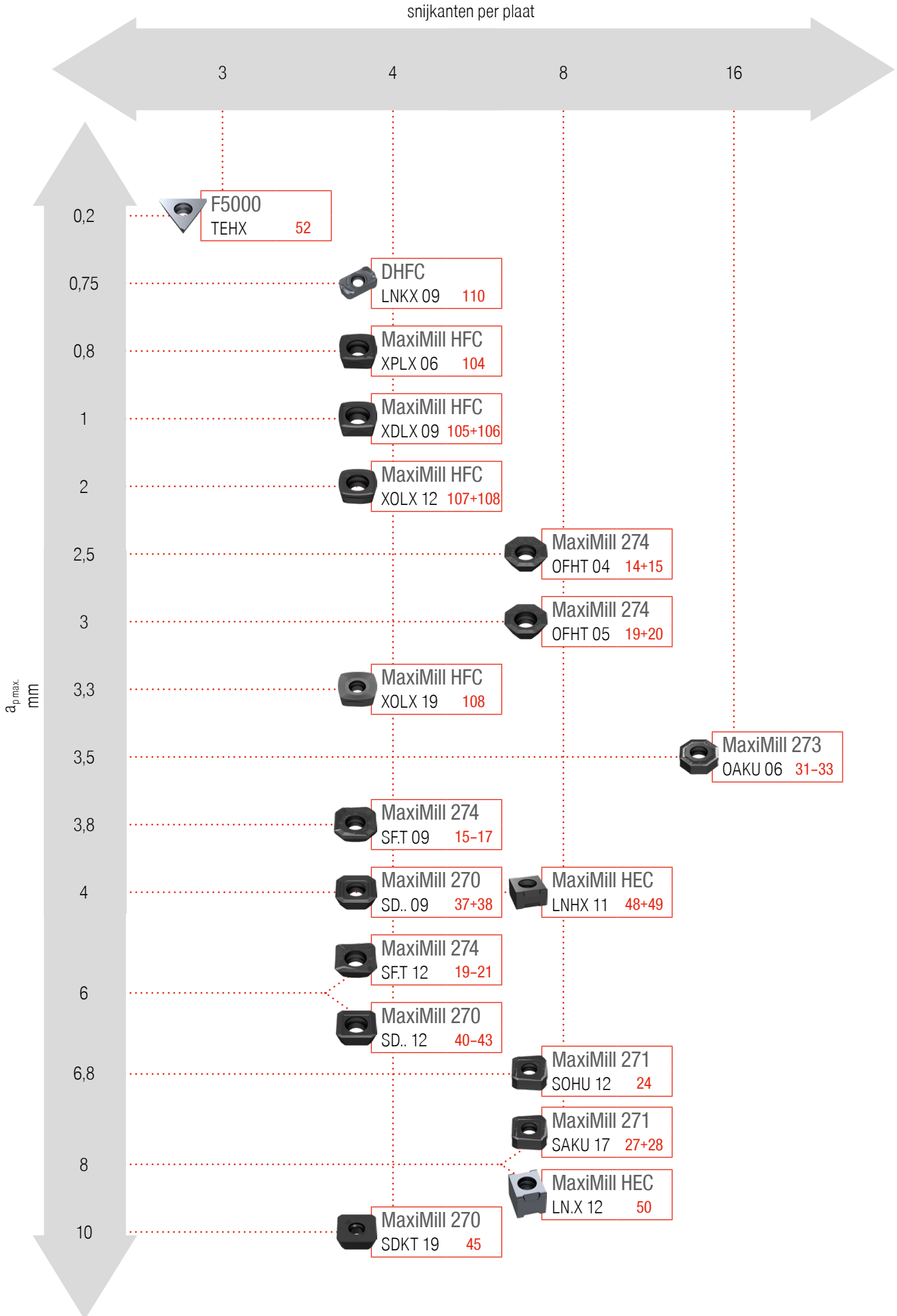
Vormfrezen
→ systeemkeuze:
8+9



HSC-/HPC-frezen
→ systeemkeuze:
6+7

15

Toolfinder – vlakfrezen



Overzicht – vlakfrezen

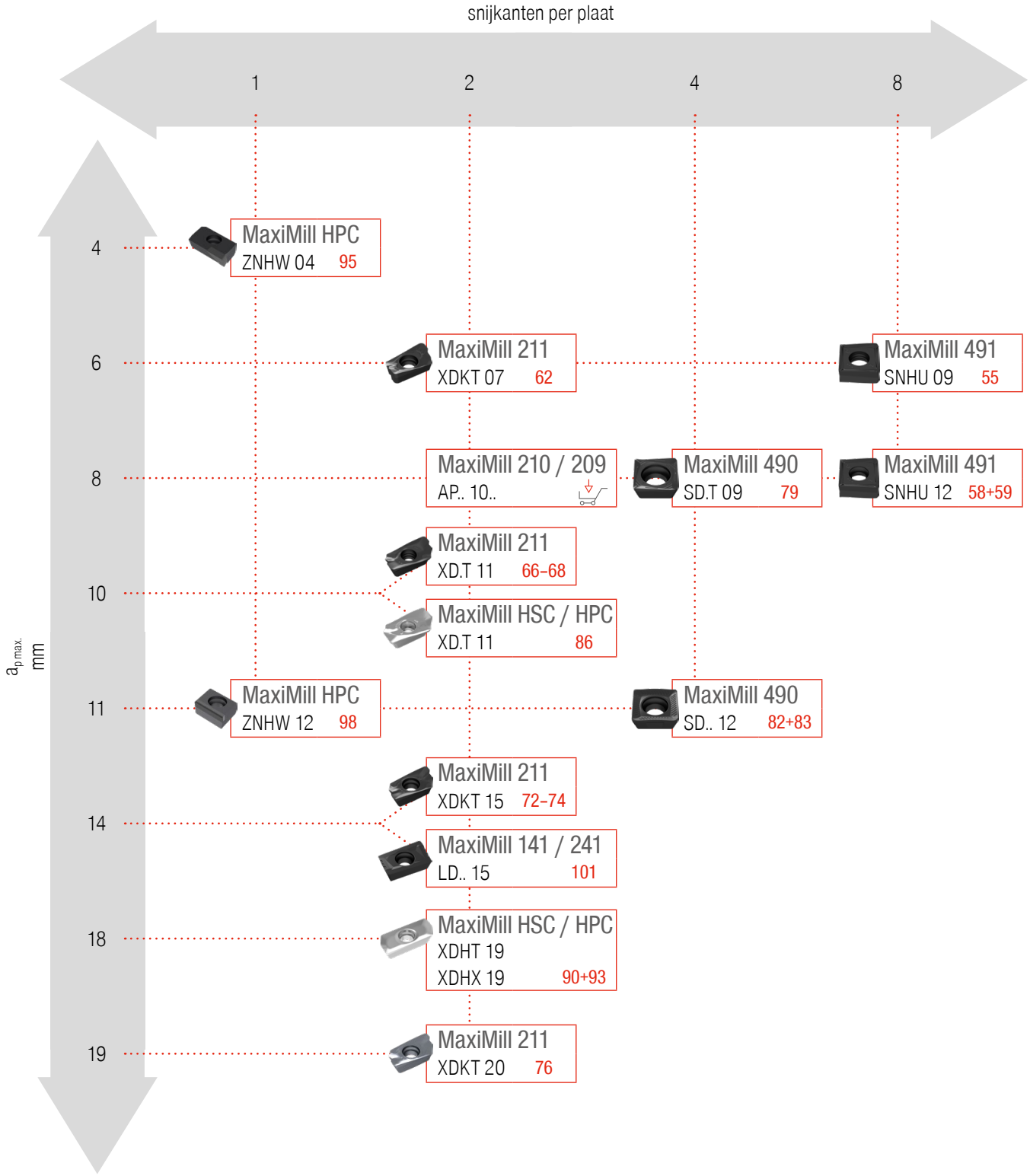
systeem	wisselplaat	snijkanten per plaat	$a_{p\,max.}$ mm	Ø-bereik mm			Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen	Pagina
MaxiMill 274	**OFH.** 04.. / 05.. | **SF.T** 09.. / 12..	8 | 4	2,5–6	Ø 20–32	Ø 20–32	Ø 32–160	●	●	●	●	●			12–21
MaxiMill 271	**SOHU** 1204.. | **SAKU** 1706..	8	6,8 | 8,4		Ø 32–40	Ø 40–250	●	●	●		●			22–28
MaxiMill 273	**OAKU** 0605..	16	3,5		Ø 32–40	Ø 40–250	●	●	●		●			29–33
MaxiMill 270	**SD..** 0903.. / 1204.. / 19..	4	4–10	Ø 16–32	Ø 6–32	Ø 32–315	●	●	●	●	●			34–45
MaxiMill HEC	**LNHX** 1106.. | **LN.X** 1210..	8	4–8			Ø 50–160	●	○	●					46–50
F 5000	**TEHX** 16T3..	3	0,2			Ø 42–100	●	○	●	○		●		51+52
MaxiMill HFC	**X..X** 06.. / 09.. / 12.. / 19..	4	0,8–3,3	Ø 16–42	Ø 16–35	Ø 32–160	●	●	●		●			102–108
DHFC	**LNKX** 09..	4	0,75	Ø 16–42	Ø 16–20		●	●	●		●	●		109+110

Meer diameters op aanvraag verkrijgbaar.

Wisselplaten voor systemen die hier niet meer vermeld staan vindt u in onze online shop op cuttingtools.ceratizit.com

15

Toolfinder – hoekfrezen



Overzicht – hoekfrezen

systeem	wisselplaat	snijkanten per plaat	$a_{p\ max.}$ mm	Ø-bereik mm				Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen	Pagina
MaxiMill 491	**SNHU** 09T3.. / 1204..	8	6–8	Ø 25–32	Ø 25–32	Ø 40–160		●	●	●	●	●			53–59
MaxiMill 211	**XD.T** 0703.. / 11T3.. / 1505.. / 2007..	2	6–19	Ø 16–40	Ø 10–40	Ø 32–160		●	●	●	●	●	○		60–76
MaxiMill 211KN	**XD.T** 11T3.. / 1505.. / 2007..	2	27–75,5		Ø 25–50	Ø 40–50		●	●	●	●	●			65+71
MaxiMill 490	**SD..** 09T3.. / 1205..	4	8–11	Ø 25–40	Ø 25–32	Ø 40–160		●	●	●	●	●			77–83
MaxiMill 490K	**SD..** 09T3..	4	41			Ø 40–63		●	●	●	●	●			78
MaxiMill HSC / HPC	**XD..** 11T3.. / 1904..	2	10–18	Ø 16–40	Ø 16–32	Ø 40–125	Ø 25–50		○	●					84
MaxiMill HPC	**ZNHW** 04T3.. / 1205..	1	4–11	Ø 20–40	Ø 20–40	Ø 40–315	Ø 40–160			●	●		○		94–98
MaxiMill 141 / 241	**LD..** 1504..	2	14	Ø 25–40	Ø 20–32	Ø 40–100		●	●	●	●				99–101
MaxiMill 209 / 210	**AP..** 1003..	2	8	Ø 16,0–31,7	Ø 9,7–32	Ø 40–125		●	●	●	●	●	●		

Meer diameters op aanvraag verkrijgbaar.

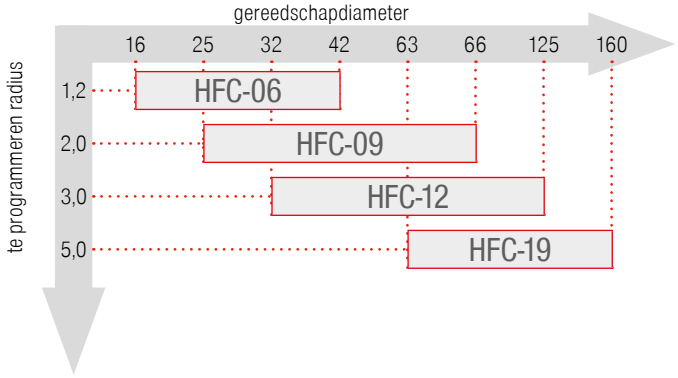
Wisselplaten voor systemen die hier niet meer vermeld staan vindt u in onze online shop op cuttingtools.ceratizit.com

Deze artikelen vindt u in onze online shop op cuttingtools.ceratizit.com

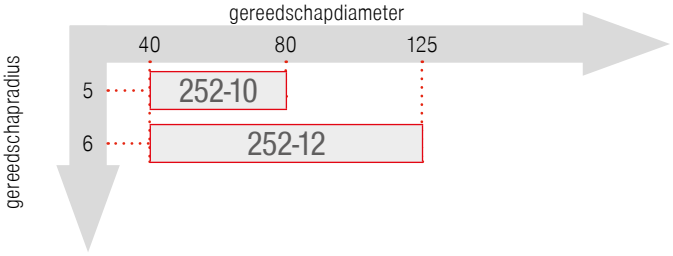
15

Toolfinder – vormfrezen

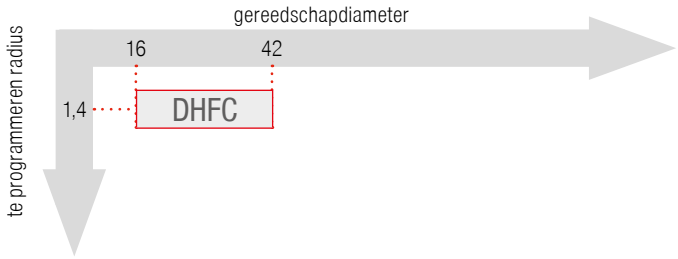
MaxiMill HFC 102–108



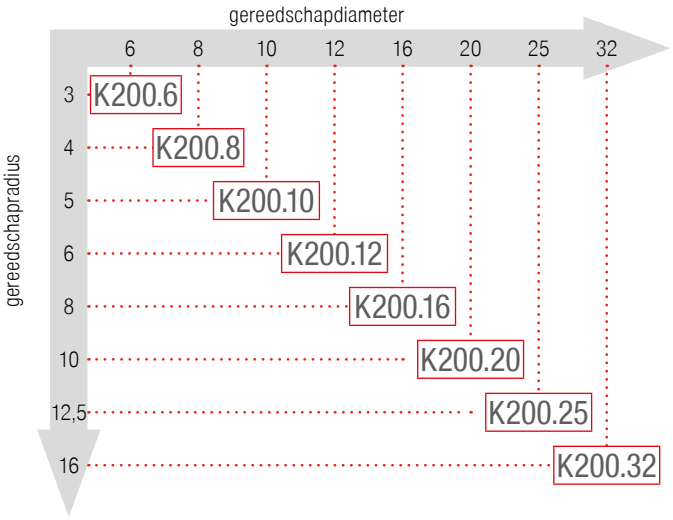
MaxiMill 252 125+126



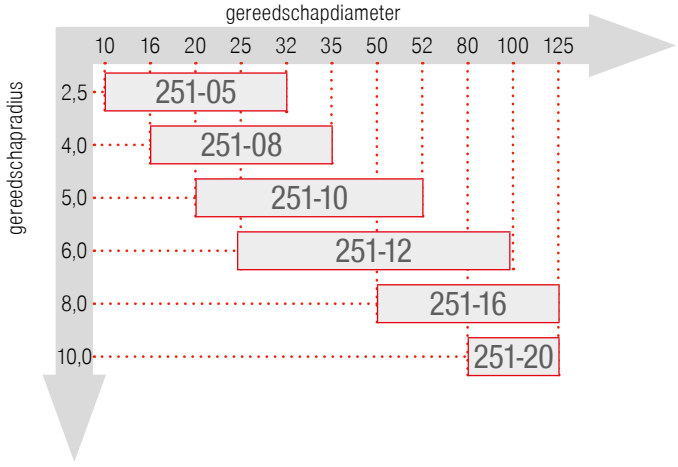
DHFC 109+110



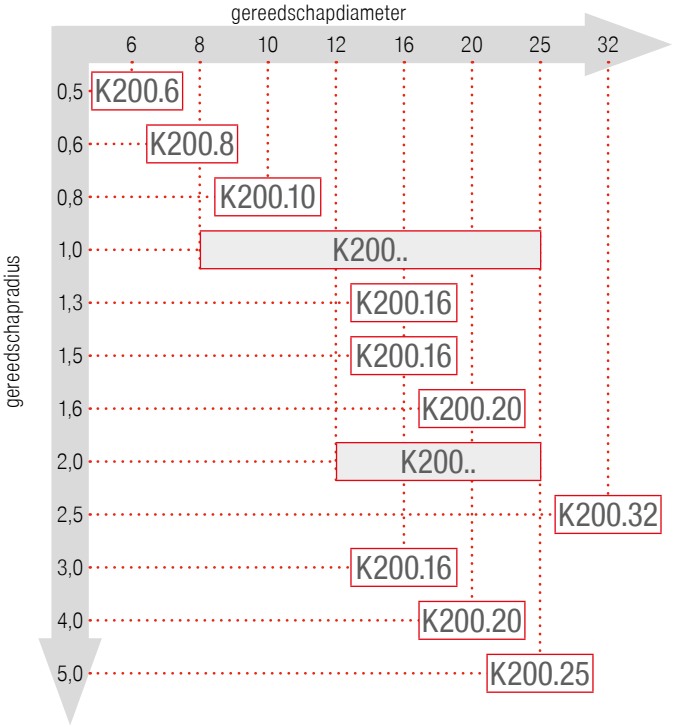
K200. Radius 127–131



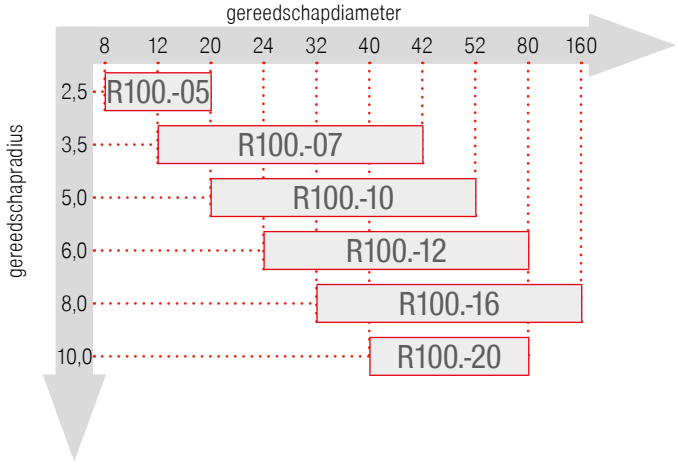
MaxiMill 251 / 251 RS 111–119



K200. Torus 132–135



R100. 120–124



Toepassingsbereik

gereedschapdiameter

Overzicht – vormfrezen

systeem	Wisselplaat	snijkanten per plaat	$a_{p\,max.}$ mm	Ø-bereik mm			Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen	Pagina
MaxiMill HFC	**X.LX** 06.. / 09.. / 12.. / 19..	4	0,8–3,3	Ø 16–42	Ø 16–35	Ø 32–160	●	●	●		●			102–108
DHFC	**LNKX** 09..	4	0,75	Ø 16–42	Ø 16–20		●	●	●		○	○		109+110
MaxiMill 251/ 251 RS	**R..X** 05.. / 08.. / 10.. / 12.. / 16.. / 20..	8	2,5–10	Ø 10–42	Ø 10–32	Ø 40–125	●	●	●	●	●			111–119
R100.	**RD.X** 05.. / 07.. / 10.. / 12.. / 16.. / 20..	8	5	Ø 12–42	Ø 8–20	Ø 42–160	●	●	●	●	○	●		120–124
MaxiMill 252	**RNHU** 10.. / 12..	8	3			Ø 40–125	●	●	○		●			125+126
K200. Radius	**RO.X** .... / **XOHX**	1	0,4–8	Ø 8–32	Ø 6–32		●	●	●	●	●	●		127–131
K200. Torus	**XO.X**	1	0,5–8	Ø 8–32	Ø 8–32		●	●	●	●	●	●		132–135

Meer diameters op aanvraag verkrijgbaar.

Wisselplaten voor systemen die hier niet meer vermeld staan vindt u in onze online shop op cuttingtools.ceratizit.com

15

Overzicht – fasen-/hoekfrezen

systeem	wisselplaat	snijkanten per plaat	$a_{p\ max.}$ mm	Ø-bereik mm		Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen	Pagina
													
MaxiMill 272	**SD..** 0903..	4	4	Ø 6–25		●	●	○	●	●			36–38
													
MaxiMill 242	**LD..** 1504..	2			Ø 50–92	○	●			●			100+101

Meer diameters op aanvraag verkrijgbaar.

Overzicht – schijf-/afkortfrezen

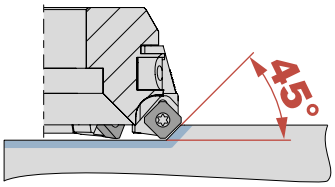
systeem	wisselplaat	snijkanten per plaat	$a_{p\ max.}$ mm	Ø-bereik mm		Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen	Pagina
													
TX	**TX..** R/L	3	64	Ø 80–160	Ø 100–200	●	●	●	●	●			136–138

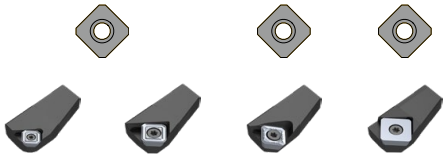
Meer diameters op aanvraag verkrijgbaar.

Overzicht – combifrezen

systeem	snijkanten per plaat	$a_{p\,max}$	Ø-bereik mm	Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen	Pagina
MaxiMill 260	2–16	0,8–33	Ø 80–400	●	●	●	●	●	●		139

Cassette-nr. 041 | 031 | 029 | 032 | 058 | 057

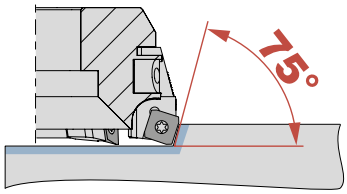




SD.. 0903.. | **SD..** 1204.. **XD..** 1204.. | **SE..** 1204.. | **SD..** 1504.. | **SA..** 1706.. | **OA..** 0605.. **XA..** 0605..

140

Cassette-nr. 018

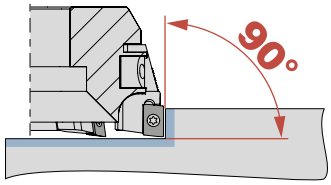


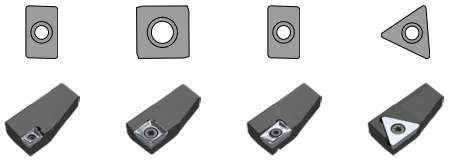


SP.. 1204..

140

Cassette-nr. 042 | 039 | 051 | 025

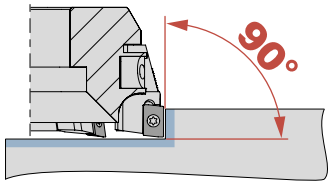




AP.. 1003.. | **SD..** 1205.. | **LD..** 1504.. | **TP..** 2204..

140

Cassette-nr. 055 | 054 | 056

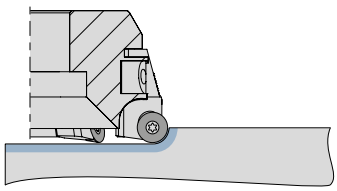


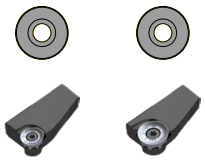


SD.. 09T3 | **XD..** 11T3 | **XD..** 1505

140

Cassette-nr. 052 | 053



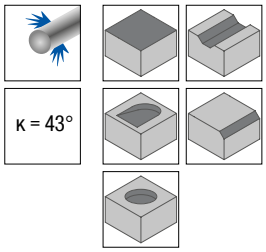


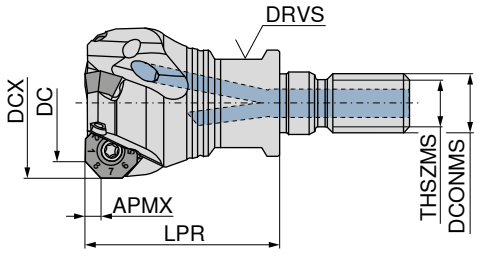
RP.X 1204.. | **RP.X** 1604..

140

15

MaxiMill – Inschroeffrees G 274-04/-09

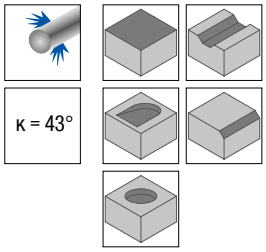


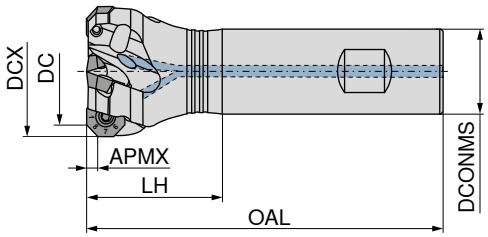




omschrijving	DC mm	DCX mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	aantrekmoment Nm	Wisselplaat	50 742 ... EUR 2B/40	
G274.20.R.03-09	20	25,5	3	3,8	35	M12	12,5	17	1,2	OF.. 0403 / SF.. 0903	276,10	**020**
G274.25.R.04-09	25	30,6	4	3,8	35	M12	12,5	17	1,2	OF.. 0403 / SF.. 0903	314,50	**025**
G274.32.R.05-09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

MaxiMill – Schachtfrees C 274-04/-09

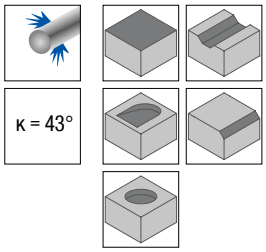


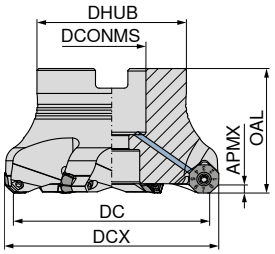


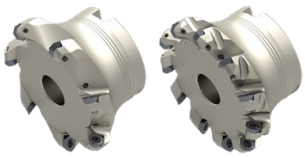


ISO-codering	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	aantrekmoment Nm	Wisselplaat	A 50 743 ... EUR 2B/40		B 50 743 ... EUR 2B/40	
C274.20.R.03-09-A20-25	20	25,5	3	3,8	77	25	20	1,2	OF.. 0403 / SF.. 0903	276,10	**020**		
C274.20.R.03-09-B20-25	20	25,5	3	3,8	77	25	20	1,2	OF.. 0403 / SF.. 0903		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

MaxiMill – Opsteekfrees A 274-04/-09







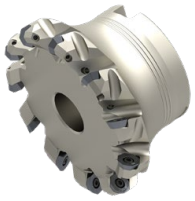
omschrijving	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	aantrekmoment Nm	Wisselplaat	50 744 ... EUR 2B/40		50 744 ... EUR 2B/40	
A274.32.R.05-09	32	37,7	5	3,8	40	38	16	1,2	OF.. 0403 / SF.. 0903			353,00	**032**
A274.40.R.04-09	40	45,7	4	3,8	40	38	16	1,2	OF.. 0403 / SF.. 0903	353,00	**040**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

Onderdelen	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
20 - 32	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**133**	122,50	**191**
32 - 40	4,90	**043**	4,03	**040**	10,51	**125**	13,10	**151**	4,60	**303**	4,29	**133**	122,50	**191**
50 - 125	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**133**	122,50	**191**

Twee typen platen – EEN frees



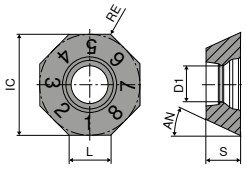




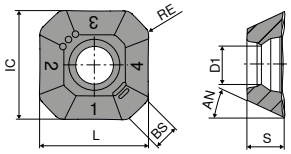


OFHT / OFHW / SFHT / SFKT

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



OF..

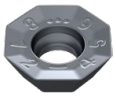
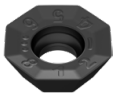


SF.T

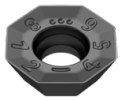
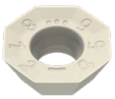
OFHT

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

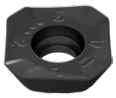
OFHT / OFHW

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

OFHT / OFHW

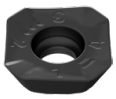
		NEW	NEW					
		-F50 CTCM245	CTCM245	-M50 CTCK215	-F10 CTWN215	-F50 CTC5240	CTC5240	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		OFHT	OFHW	OFHT	OFHT	OFHT	OFHW	OFHT
		51 002 ...	51 105 ...	51 003 ...	50 459 ...	51 002 ...	50 457 ...	51 002 ...
ISO	RE mm	EUR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

SFHT / SFKT

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

15

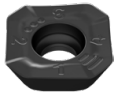
SFHT / SFKT

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

SFHT / SFKT

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

SFKT / SFHT

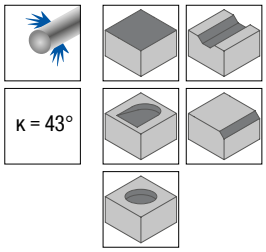
	-R50 CTCK215	-R50 CTPK220	-F10 CTWN215	-F40 CTC5240
	DRAGONSKIN	DRAGONSKIN		DRAGONSKIN
				
	SFKT	SFKT	SFHT	SFHT
	51 065 ...	51 065 ...	50 514 ...	50 514 ...
ISO / RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 17
0903AFFR 1			19,85 505	
0903AFSR 1	12,19 520	12,19 620		20,58 504
P				
M				
K	●	●	○	
N			●	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

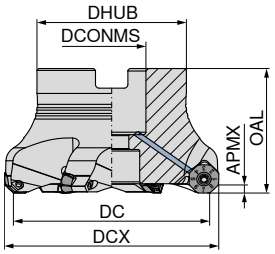
Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 145
Startparameters	→ 146	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

15

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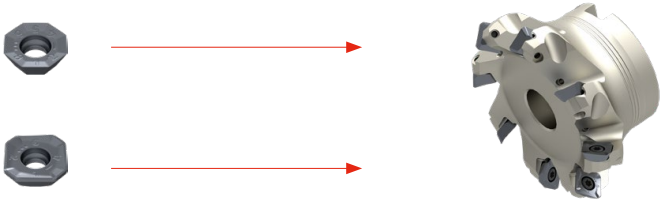


omschrijving	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	aantrekmoment Nm	Wisselplaat	50 772 ... EUR 2B/40		50 772 ... EUR 2B/40	
A274.40.R.03-12	40	48,0	3	6	40	38	16	3,2	OFHT 0504 / SFKT 1204	265,70	**24000**		
A274.40.R.04-12	40	48,0	4	6	40	38	16	3,2	OFHT 0504 / SFKT 1204			348,70	**04000**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

1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

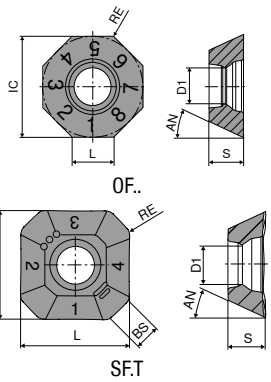
Onderdelen	TORX®-inzetstuk		Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		**80 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
40 - 160	5,42	**054**	12,25	**128**	4,60	**303**	4,84	**340**	135,90	**193**

Twee typen platen – EEN frees



OFHT / SFHT / SFKT

omschrijving	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



OFHT

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

OFHT

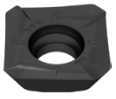
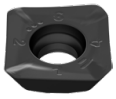
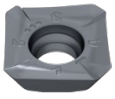
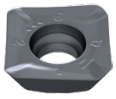
ISO	RE mm	-F50 CTPM225 DRAGONSKIN	-M50 CTPM225 DRAGONSKIN	-F50 CTCM235 DRAGONSKIN	-F50 CTPM240 DRAGONSKIN	-M50 CTPM240 DRAGONSKIN	-F50 CTPM245 DRAGONSKIN
							
		OFHT	OFHT	OFHT	OFHT	OFHT	OFHT
		51 002 ...	**51 003 ...**	**51 002 ...**	**51 002 ...**	**51 003 ...**	**51 002 ...**
		EUR 1B/61	EUR 1B/61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

15

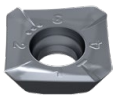
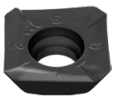
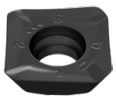
OFHT

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

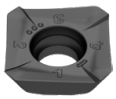
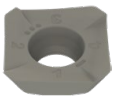
SFHT / SFKT

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

SFHT / SFKT

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

SFHT

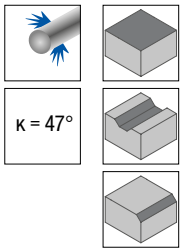
			NEW			
		-F50 CTPM245	-F50 CTCM245	-F10 CTWN215	-F40 CTC5240	
		DRAGONSKIN	DRAGONSKIN		DRAGONSKIN	
						
		SFHT	SFHT	SFHT	SFHT	
		51 012 ...	51 012 ...	51 123 ...	50 514 ...	
ISO	RE mm	EUR 1H/17	EUR 1H/17	EUR 1B/61	EUR 17	
1204AFER	1				22,66 50900	
1204AFFR	1			21,83 37000		
1204AFSR	1	22,21 47500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

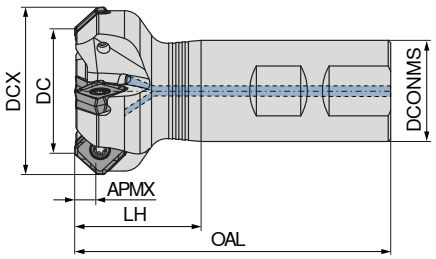
Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 147
Startparameters	→ 148	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

15

MaxiMill – Schachtfrees C 271-12







NEW

B

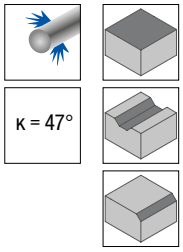
50 786 ...

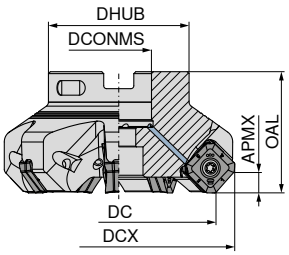
omschrijving	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
C271.32.R.03-12-B-40	32	45	3	6,8	100	40	32	18400	3,2	SOHU 1204.. / XOHU 1204..	335,90	**03203**
C271.40.R.04-12-B32-40	40	53	4	6,8	100	40	32	16800	3,2	SOHU 1204.. / XOHU 1204..	419,80	**04004**

	TORX®-inzetstuk	 Sleutel-D	 Molykote	 Klemschroef	 Moment-sleutel
	80 950 ...	**80 950 ...**	**70 950 ...**	**70 950 ...**	**80 950 ...**
Onderdelen	EUR Y7	EUR Y7	EUR 2A/28	EUR 2A/28	EUR Y7
DC					
32 - 40	5,42 **054**	9,42 **120**	4,60 **303**	3,30 **859**	135,90 **193**

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▲ 8 snijkanten per wisselplaat





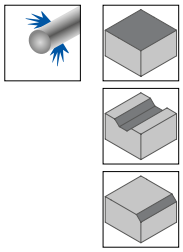


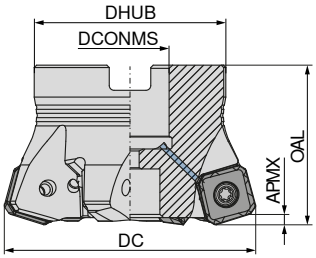
NEW NEW

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

1) zonder inwendige koelmiddeltoevoer

MaxiMill – Opsteekfrees A 271-12 HFC







NEW

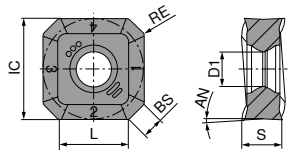
omschrijving	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS H6 mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 788 ... EUR 2B/40	
A271.50.R.04-12-HFC	50	4	2,6	40	43	22	14600	3,2	SOHU 1204..	430,30	**05004**
A271.63.R.06-12-HFC	63	6	2,6	40	48	22	12500	3,2	SOHU 1204..	545,80	**06306**
A271.80.R.07-12-HFC	80	7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

Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		Spansleutel-T 80 397 ... EUR Y7		Sleutel-D 80 950 ... EUR Y7		Powerschroef 70 950 ... EUR 2A/28		Molykote 70 950 ... EUR 2A/28		Klemschroef 70 950 ... EUR 2A/28		Moment-sleutel 80 950 ... EUR Y7	
40 (5078704004)	5,42	**054**	4,03	**040**	9,42	**120**	13,10	**151**	4,60	**303**	3,30	**859**	135,90	**193**
50 - 250	5,42	**054**			9,42	**120**			4,60	**303**	3,30	**859**	135,90	**193**
50 (5078805004)	5,42	**054**	4,37	**050**	9,42	**120**	18,00	**154**	4,60	**303**	3,30	**859**	135,90	**193**

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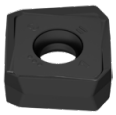
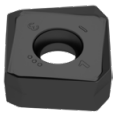
SOHU

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

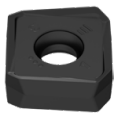
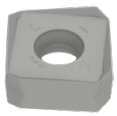


SOHU

SOHU

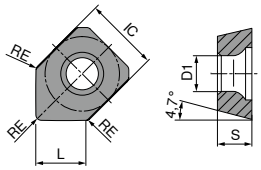
		NEW	NEW	NEW	NEW	NEW	NEW
		-M50 CTCP230	**-M50** CTPP235	**-M50** CTCM235	**-M50** CTPM240	**-F50** CTPM245	**-F50** CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		SOHU	SOHU	SOHU	SOHU	SOHU	SOHU
		51 138 ...	**51 138 ...**	**51 138 ...**	**51 138 ...**	**51 140 ...**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

SOHU

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

XOHU

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



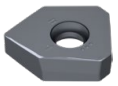
XOHU

XOHU

NEW

-M50
CTPP235

DRAGONSKIN


XOHU

51 141 ...

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

P	●
M	○
K	○
N	
S	
H	
O	

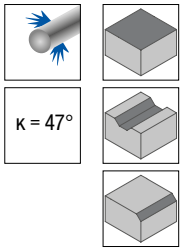
Freesgids

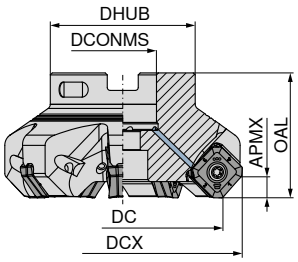
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Soorten beschrijving en overzicht	→ 198–201		

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MaxiMill – Opsteekfrees A 271

▲ 8 snijkanten per wisselplaat







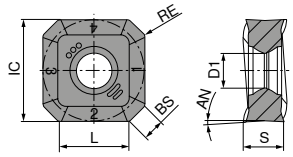
ISO-codering	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	aantrekmoment Nm	Wisselplaat	50 767 ... EUR 2B/40	
A271.50.R.04-17	50	66,1	4	8,4	40	22	43	5	SAKU 1706	409,60	**050**
A271.63.R.06-17	63	79,1	6	8,4	40	22	48	5	SAKU 1706	575,70	**063**
A271.80.R.07-17	80	96,1	7	8,4	50	27	58	5	SAKU 1706	658,70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

1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer
2) met 4 kopse gaten M16, steekcirkel-Ø = 101,6 mm / zonder inwendige koelmiddeltoevoer

	TORX®-inzetstuk		 Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		2A/28		2A/28		Y7	
50 - 250	4,90	**037**	10,25	**114**	4,60	**303**	4,29	**302**	135,90	**193**

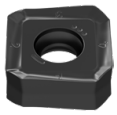
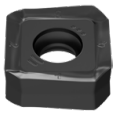
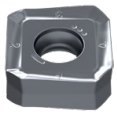
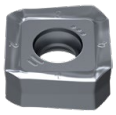
SAKU

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

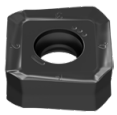
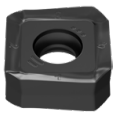
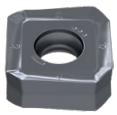


SAKU

SAKU

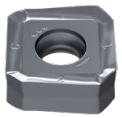
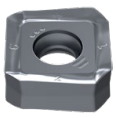
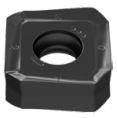
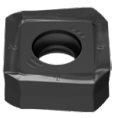
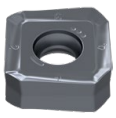
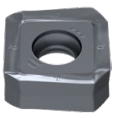
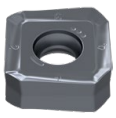
		-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		SAKU	SAKU	SAKU	SAKU
		51 004 ...	**51 005 ...**	**51 004 ...**	**51 005 ...**
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1706ABSR	0,8	30,59 **270**	30,59 **270**	30,59 **070**	30,59 **070**
P		●	●	●	●
M					
K					
N					
S					
H					
O					

SAKU

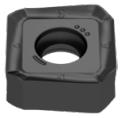
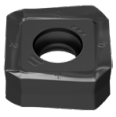
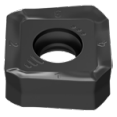
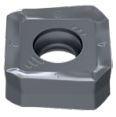
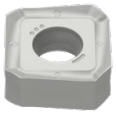
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		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		SAKU	SAKU	SAKU	SAKU
		51 004 ...	**51 005 ...**	**51 004 ...**	**51 005 ...**
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1706ABSR	0,8	30,59 **020**	30,59 **020**	30,59 **120**	30,59 **120**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

15

SAKU

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

SAKU

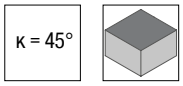
		NEW						
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		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		SAKU	SAKU	SAKU	SAKU	SAKU	SAKU	SAKU
		51 004 ...	51 005 ...	51 058 ...	51 005 ...	51 058 ...	50 306 ...	51 004 ...
ISO	RE mm	EUR 1H/17	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17
1706ABSR	0,8	37,63 92001	30,59 520	30,59 520	30,59 620	30,59 620	37,63 520	37,63 570
Staal		●	○	○	○	○		
RVS		●						
Gietijzer			●	●	●	●		
Non-ferro								
Hittebestendig		●					●	●
Geharde materialen								

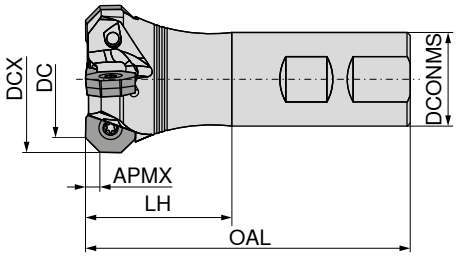
Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Startparameters	→ 149
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

MaxiMill – Schachtfrees C 273

▲ 16 snijkanten per wisselplaat





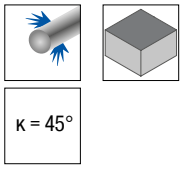


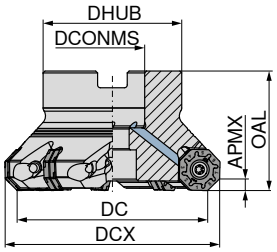
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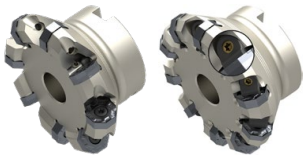
omschrijving	DC mm	DCX mm	ZNF	APMX mm	DCONMS h6 mm	LH mm	OAL mm	aantrekmoment Nm	Wisselplaat	50 762 ... EUR 2B/40	
C273.32.R.03-06-B-40	32	42,1	3	3,5	32	40	101	5	OAKU / XAHT 0605	398,70	**032**
C273.40.R.04-06-B32-50	40	50,1	4	3,5	32	50	111	5	OAKU / XAHT 0605	412,00	**040**

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▲ 16 snijkanten per wisselplaat







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

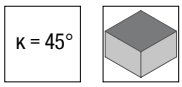
1) uitvoering met spanspie, zonder inwendige koelmiddeltoevoer
2) uitvoering met spanspie, zonder inwendige koelmiddeltoevoer / met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer
3) uitvoering met spanspie, zonder inwendige koelmiddeltoevoer / met 4 kopse gaten M16, steekcirkel-Ø = 101,6 mm / zonder inwendige koelmiddeltoevoer
4) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer
5) zonder inwendige koelmiddeltoevoer

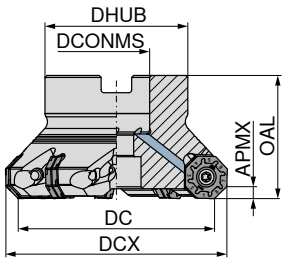
Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		Spansleutel-T 80 397 ... EUR Y7		Spanspie-bout 70 950 ... EUR 2A/28		Spanspie 70 950 ... EUR 2A/28		Sleutel-D 80 950 ... EUR Y7		Powerschroef 70 950 ... EUR 2A/28		Klemschroef 70 950 ... EUR 2A/28		Moment-sleutel 80 950 ... EUR Y7	
40	4,90	**037**	4,03	**040**					10,25	**114**	13,10	**151**	4,29	**302**	135,90	**193**
50	4,90	**037**	4,37	**050**					10,25	**114**	18,00	**154**	4,29	**302**	135,90	**193**
63 - 80	4,90	**037**							10,25	**114**			4,29	**302**	135,90	**193**
80 - 100	4,90	**036**			6,20	**844**	24,73	**845**	9,56	**113**					135,90	**193**
100 - 125	4,90	**037**							10,25	**114**			4,29	**302**	135,90	**193**
125	4,90	**036**			6,20	**844**	24,73	**845**	9,56	**113**					135,90	**193**
160	4,90	**037**							10,25	**114**			4,29	**302**	135,90	**193**
160 - 250	4,90	**036**			6,20	**844**	24,73	**845**	9,56	**113**					135,90	**193**

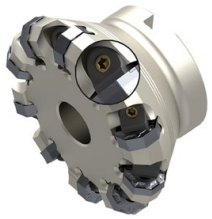
15

MaxiMill – Opsteekfrees A273

- 16 snijkanten per wisselplaat
- axiaal instelbaar







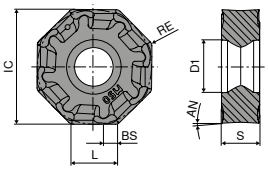
omschrijving	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	aantrekmoment Nm	Wisselplaat	50 777 ... EUR 2B/40	
A273.80.R.10A10-06	80	90,2	10	3,5	50	27	58	5	OAKU / XAHT 0605	1.296,00	**08010**[1]
A273.100.R.14A14-06	100	110,2	14	3,5	50	32	78	5	OAKU / XAHT 0605	1.764,00	**10014**[1]
A273.125.R.17A17-06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

1) uitvoering in hardmetaal
2) uitvoering in hardmetaal / met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm
3) uitvoering in hardmetaal / met 4 kopse gaten M16, steekcirkel-Ø = 101,6 mm

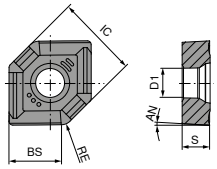
	TORX®-inzetstuk	 Spanspie-bout	 Spanspie	Sleutel-D	 Molykote	 Spie	 Moment-sleutel
	80 950 ...	70 950 ...	70 950 ...	80 950 ...	70 950 ...	70 950 ...	80 950 ...
Onderdelen	EUR Y7	EUR 2A/28	EUR 2A/28	EUR Y7	EUR 2A/28	EUR 2A/28	EUR Y7
DC							
80 - 250	4,90 **036**	6,20 **844**	24,73 **845**	9,56 **113**	4,60 **303**	38,64 **199**	135,90 **193**

OAKU / XAHT

omschrijving	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

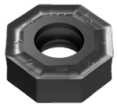
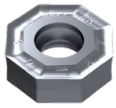


OAKU

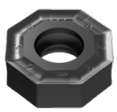
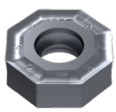


XAHT

OAKU

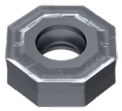
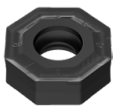
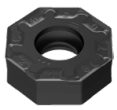
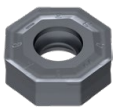
		-F50 CTCP220	-M50 CTCP220	-F50 CTPP225	-M50 CTPP225
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		OAKU	OAKU	OAKU	OAKU
		51 000 ...	51 001 ...	51 000 ...	51 001 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060508SR	0,8	25,79 **258**	25,79 **258**	25,79 **058**	25,79 **058**
P		●	●	●	●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

OAKU

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

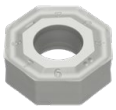
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OAKU

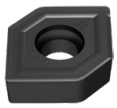
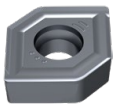
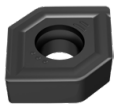
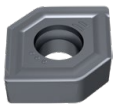
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		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
															
		OAKU		OAKU		OAKU		OAKU		OAKU		OAKU		OAKU	
		51 000 ...		51 001 ...		51 000 ...		51 001 ...		51 000 ...		51 001 ...		51 104 ...	
ISO	RE mm	EUR 1B/61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

OAKU

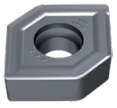
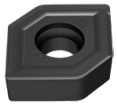
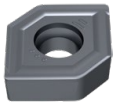
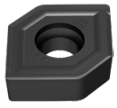
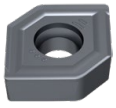
NEW

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

XAHT

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

XAHT

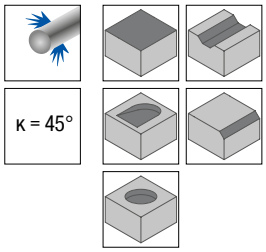
		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-M50 CTCK215	-M50 CTPK220
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XAHT	XAHT	XAHT	XAHT	XAHT
		51 014 ...	51 014 ...	51 014 ...	51 014 ...	51 014 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
060525SR	2,5	31,93 225	31,93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

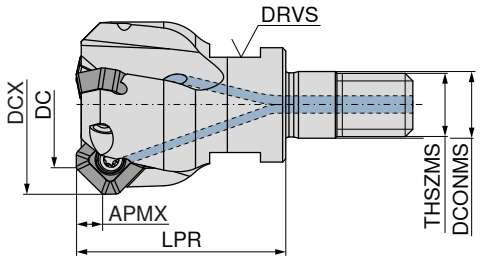
Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Startparameters	→ 150
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

15

MaxiMill – Inschroeffrees 45° G 270-09



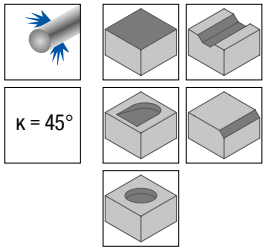


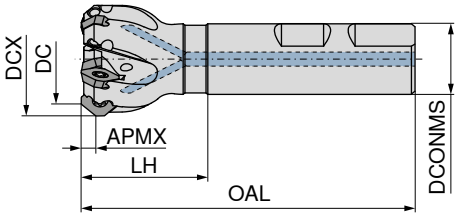


55 202 ...

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

MaxiMill – Schachtfrees 45° C 270-09





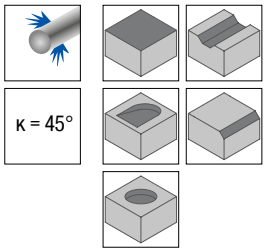


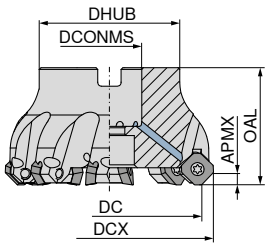


50 666 ...

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

MaxiMill – Opsteekfrees 45° A 270-09







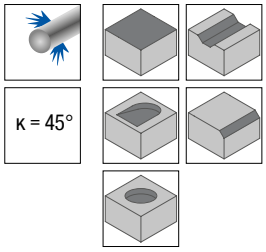
									rechts		rechts		rechts		links	
									50 704 ...		**50 705 ...**		**50 706 ...**		**50 707 ...**	
omschrijving	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	aantrekmoment Nm	**EUR** 2B/40		**EUR** 2B/40		**EUR** 2B/40		**EUR** 2B	
A270.32.R.05-09	32	40,4	5	4	40	34	16	1,8					357,00	**532**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

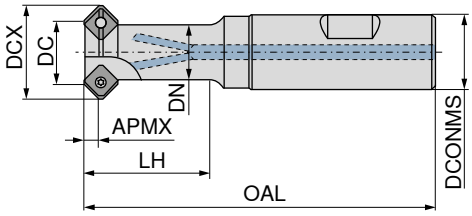
1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

- ▲ 50 704 ... grove vertanding voor inzet op aluminiumlegeringen, non-ferro en kunststoffen
- ▲ 50 705 ... normale vertanding voor een breed inzetspectrum van aluminiumlegeringen, non-ferro tot en met zachtere staalsoorten
- ▲ 50 706 ... fijne vertanding voor maximale verspaningsperformance, inzet voornamelijk op staal en gietijzer
- ▲ 50 707 ... zoals 50 706 ..., echter in **linkssnijdende** uitvoering

MaxiMill – Fasefrees C 272-09

▲ voor- en achterwaarts inzetbaar







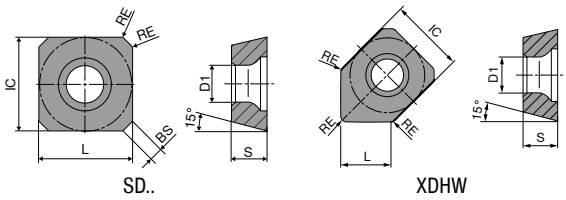
B

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

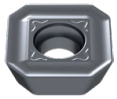
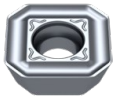
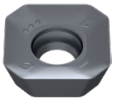
Onderdelen	TORX®-inzetstuk		Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
6 - 12	4,90	**033**	8,03	**110**	4,60	**303**	3,30	**365**	122,50	**191**
16 - 25	4,90	**033**	8,03	**110**	4,60	**303**	2,70	**115**	122,50	**191**

SDHW / SDNT / SDHT / XDHW

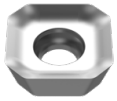
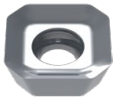
omschrijving	IC mm	D1 mm	L mm	BS mm	S mm
XDHW 0903..	9,52	3,4	5,50	1,68	3,18
SD.. 0903..	9,52	3,4	9,52	1,68	3,18



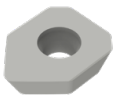
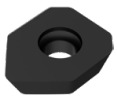
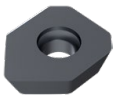
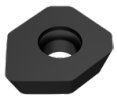
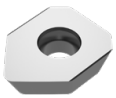
SDHW / SDNT / SDHT

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

SDNT / SDHT

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

XDHW

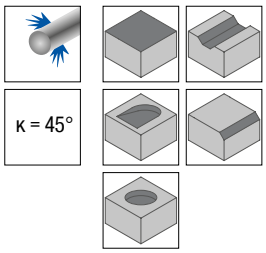
		TCM10	CTCP230 DRAGONSKIN	CTPP235 DRAGONSKIN	CTCK215 DRAGONSKIN	H216T
						
		CERMET				
		XDHW	XDHW	XDHW	XDHW	XDHW
		50 449 ...	51 015 ...	51 015 ...	51 015 ...	50 449 ...
ISO	RE mm	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/18	EUR 1B/61
0903AEEN	1				19,69 **520**	
0903AEFN	1					17,42 **548**
0903AESN	1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

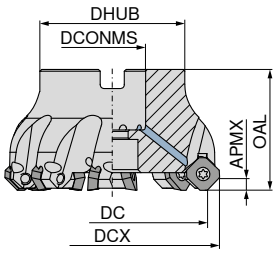
Freesgids

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Soorten beschrijving en overzicht	→ 198–201		

MaxiMill – Opsteekfrees 45° A 270-12

- ▲ 50 705 ... normale vertanding voor een breed inzetspectrum van aluminiumlegeringen, non-ferro tot en met zachtere staalsoorten
- ▲ 50 706 ... fijne vertanding voor maximale verspaningsperformance, inzet voornamelijk op staal en gietijzer







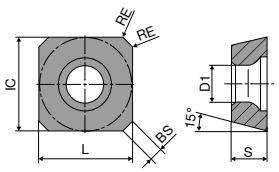
										50 705 ...		50 706 ...	
omschrijving	DC mm	DCX mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	OAL mm	DHUB mm	aantrekmoment Nm	Wisselplaat	EUR 2B/40		EUR 2B/40	
A270.32.R.03-12	32	46	3	6	16	40	32	5	SD../XD.. 1204..	409,00	**032**		
A270.40.R.03-12	40	54	3	6	16	40	38	5	SD../XD.. 1204..	418,40	**040**		
A270.40.R.04-12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

1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

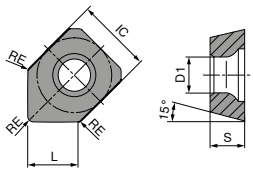
	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
32 - 40	4,90	**037**	4,03	**040**	10,25	**114**	13,10	**151**	4,60	**303**	3,30	**01200**	135,90	**193**
50 - 160	4,90	**037**			10,25	**114**			4,60	**303**	3,30	**01200**	135,90	**193**

SDHT / SDHW / SDMT / XDHW

omschrijving	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..

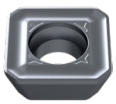


XDHW

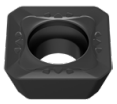
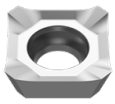
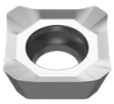
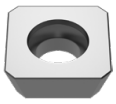
SDHT / SDHW / SDMT

		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	EUR 1B/79	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/61
1204AESN	0,2	18,05 **900**				
1204AESN	1,0		18,81 **899**	15,38 **020**	17,55 **020**	18,05 **020**
P		●	●	●	●	●
M						
K		○	○	○	○	○
N						
S						
H						
O						

SDMT / SDHT / SDHW

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

SDMT / SDHW / SDHT

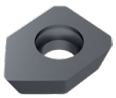
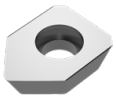
		-31 CTCK215 DRAGONSKIN		-R CTCK215 DRAGONSKIN		-27 H216T		-27P H216T		H216T	
											
		SDMT		SDHW		SDHT		SDHT		SDHW	
		51 059 ...		51 008 ...		50 426 ...		50 426 ...		50 428 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1A/90		EUR 1A/90		EUR 1B/61	
1204AEEN	1,0	14,99	520	18,05	520						
1204AEFN	0,2	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

SDHT

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

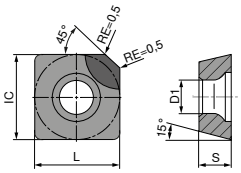
15

XDHW

		TCM10	CTCP230 DRAGONSKIN	CTPP235 DRAGONSKIN	CTCK215 DRAGONSKIN	H216T
						
		CERMET				
		XDHW	XDHW	XDHW	XDHW	XDHW
		50 449 ...	51 015 ...	51 015 ...	51 015 ...	50 449 ...
ISO	RE mm	EUR 1B/79	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
1204AEEN	1				23,77 525	
1204AEFN	1					22,49 600
1204AESN	1	23,77 900	24,93 025	24,93 125		
P		●	●	●		
M				○		
K		○	○	○	●	○
N						●
S						
H						
O						○

SDHW

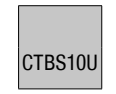
omschrijving	IC mm	D1 mm	L mm	S mm
SDHW 1204..	12,7	5,5	12,7	4,76

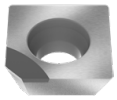
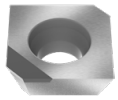


SDHW

SDHW





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

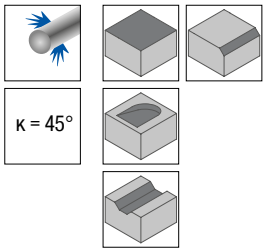
1) $a_{p\,max.}$ = 2,0 mm
2) $a_{p\,max.}$ = 3,5 mm

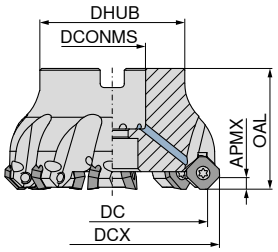
Freesgids

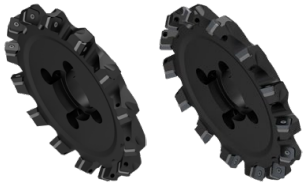
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Soorten beschrijving en overzicht	→ 198–201		

15

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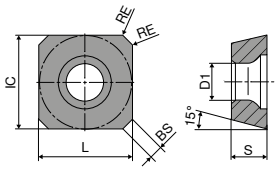
omschrijving	DC mm	DCX mm	ZNF	APMX mm	DCONMS H6 mm	OAL mm	DHUB mm	aantrekmoment Nm	Wisselplaat	links 50 698 ... EUR 2B/40		rechts 50 698 ... EUR 2B/40	
A270.125.R.07-19	125	146,4	7	10	40	63	88	5	SD.. 1907..			810,10	**12507**
A270.160.R.09-19	160	181,4	9	10	40	63	104	5	SD.. 1907..			1.026,00	**16009**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

1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer
2) met 4 kopse gaten M16, steekcirkel-Ø = 101,6 mm / zonder inwendige koelmiddeltoevoer
3) met 4 kopse gaten M16, steekcirkel-Ø = 101,6 mm en met 4 kopse gaten M20, steekcirkel-Ø = 177,8 mm / zonder inwendige koelmiddeltoevoer
4) met 4 kopse gaten M16, steekcirkel-Ø = 101,6 mm en met 4 kopse gaten M20, steekcirkel-Ø = 177,8 mm

Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		Sleutel-D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Klemschroef 70 950 ... EUR 2A/28		HM onderleg-plaat-S 70 950 ... EUR 2A/28		Draadbus 70 950 ... EUR 2A/28		Moment-sleutel 80 950 ... EUR Y7	
125 - 315	4,90	**037**	10,25	**114**	4,60	**303**	4,29	**302**	13,43	**01500**	15,19	**01400**	135,90	**193**

SDKT

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



SD..

SDKT

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

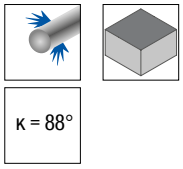
Freesgids

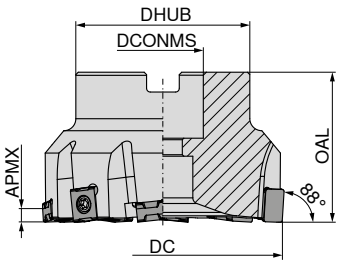
Richtwaarden voor snijgegevens	→ 141–144	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

15

MaxiMill – Opsteekfrees HEC 11

▲ niet instelbaar







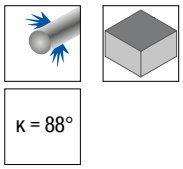
50 725 ...

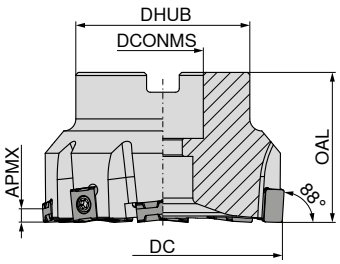
ISO-codering	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
AHEC.50.R.06-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	559,10	**050**
AHEC.63.R.08-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	671,20	**063**
AHEC.80.R.10-11	80	10	6	50	58	27	8000	3,2	LNHX 1106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

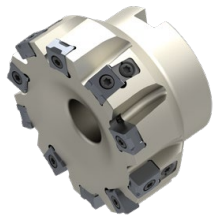
1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

MaxiMill – Opsteekfrees HEC 11

▲ axiaal instelbaar met gelijke tandverdeling







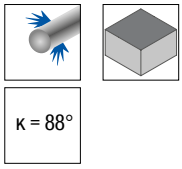
50 733 ...

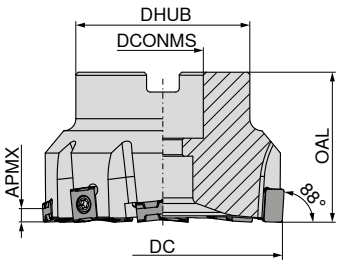
omschrijving	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
AHEC.50.R.06A03-11	50	6	6	40	48	22	12700	3,2	LNHX 1106	847,20	**050**
AHEC.63.R.08A04-11	63	8	6	40	48	22	10100	3,2	LNHX 1106	1.055,00	**063**
AHEC.80.R.10A05-11	80	10	6	50	58	27	8000	3,2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

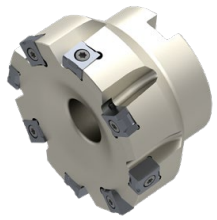
1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

MaxiMill – Opsteekfrees HEC 11

▲ met ongelijke tandverdeling, niet instelbaar







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

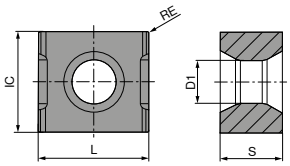
1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		 Molykote 70 950 ... EUR 2A/28		 Koelmiddelring 70 950 ... EUR 2A/28		 Klemschroef 70 950 ... EUR 2A/28		 Spie 70 950 ... EUR 2A/28		 Moment-sleutel 80 950 ... EUR Y7	
50 - 63	4,90	**036**	4,60	**303**	25,94	**852**	3,30	**113**			135,90	**193**
80	4,90	**036**	4,60	**303**	26,50	**853**	3,30	**113**	38,64	**199**	135,90	**193**
100	4,90	**036**	4,60	**303**	29,74	**854**	3,30	**113**			135,90	**193**
125	4,90	**036**	4,60	**303**	39,20	**855**	3,30	**113**			135,90	**193**
160	4,90	**036**	4,60	**303**			3,30	**113**			135,90	**193**

15

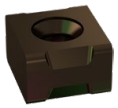
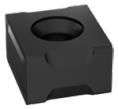
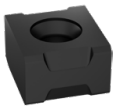
LNHX

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



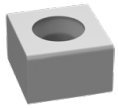
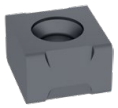
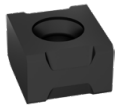
LNHX

LNHX

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

1) -Q = nasnijplaat

LNHX

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

1) -Q = nasnijplaat

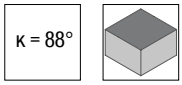
Freesgids

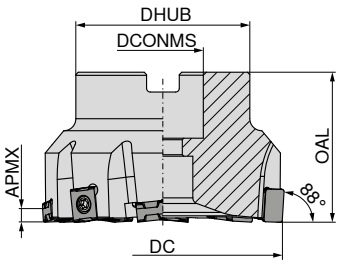
Richtwaarden voor snijgegevens	→ 141–144	Montage advies	→ 152
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

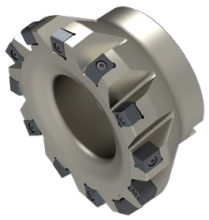
15

MaxiMill – Opsteekfrees HEC 12

▲ niet instelbaar







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

1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer


Sleutel-D

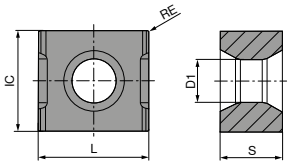

Koelmiddelring


Klemschroef

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

LNHX / LNEX

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



LNHX

LNHX / LNEX


CTCK215
LNHX


CTPK220
LNEX


-R50
CTPK220
LNHX

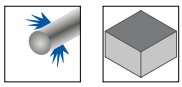
ISO	RE mm	51 135 ... EUR 1B/61		51 133 ... EUR 1B/61		51 134 ... EUR 1B/61	
121008EN	0,8					34,00	**60800**
121008SN	0,8	34,00	**50900**				
121020EN	2,0			31,28	**62000**		
121020SN	2,0	34,00	**52100**				
P							
M							
K		●		●		●	
N							
S							
H							
O							

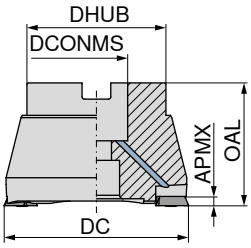
Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Montage advies	→ 152
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

Fijnvlakfrees F 5000 A

- met in µm-bereik instelbare wisselplaten
- vlakloopinstelschroef (56 950 017) met Torx 20-sleutel (80 950 114) instellen







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

1) zonder inwendige koelmiddeltoevoer

	TORX®-inzetstuk		 Sleutel-T		Sleutel-D		 Powerschroef		 Vlakloopinstel-schroef		 Molykote		 Klemschroef		Moment-sleutel	
	80 950 ...		**80 950 ...**		**80 950 ...**		**56 950 ...**		**56 950 ...**		**70 950 ...**		**56 950 ...**		**80 950 ...**	
Onderdelen	EUR		EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		WA		WA		2A/28		WA		Y7	
42	4,90	**036**	4,59	**088**	10,25	**114**	24,84	**121**	3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
52	4,90	**036**	4,59	**088**	9,56	**113**			3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
66	4,90	**036**	4,59	**088**	9,56	**113**			3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
80	4,90	**036**	4,59	**088**	9,56	**113**			3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**
100	4,90	**036**	4,59	**088**	9,56	**113**	24,84	**121**	3,96	**017**	4,60	**303**	3,65	**028**	135,90	**193**

artikel beschrijving

- het aantrekmoment van de wisselplaat-klemschroef 56 950 028 is 3,2 Nm.
- met dit gereedschap worden absoluut gladde oppervlakken Rz ≤ 2,5 µm en hoge vlaknauwkeurigheden bereikt.
- door twee axiaal werkende fijninstelschroeven zijn de gereedschappen in het µm-bereik instelbaar.
- de extra weg naar de slijpmachine kan vervallen, hetgeen de bewerkingstijd verkort en de kosten reduceert.
- ook voor labiele werkstukken en machines met weinig vermogen is dit gereedschap zeer geschikt.

De in elke frees ingedraaide vlakloop instelschroeven moeten bij gebruik absoluut met voorspanning vastgezet worden. Anders bestaat het gevaar, dat de schroeven tijdens de bewerking loskomen. Dit kan tot gevolg hebben dat het werkstuk resp. het gereedschap beschadigd en dit kan ook voor de machinebediener een gevaar kan opleveren. Indien de schroeven voor de fijninstelling niet nodig zijn, dan adviseren wij om de schroeven uit het gereedschap te verwijderen.

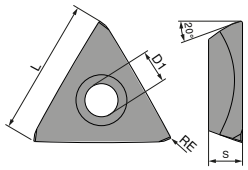
Materiaal	V_c m/min	f_z mm	a_p mm
Staal	150–250*)	0,5–2	0,05–0,2
Gietijzer	150–250*)	0,5–2	0,05–0,2
Geharde materialen ≤ 56 HRC	35–200*)	0,2–1	0,05–0,1

*) afhankelijk van de bewerking en de samenstelling van het te bewerken materiaal.

15

TEHX

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



TEHX





TEHX

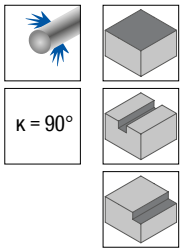
56 327 ...

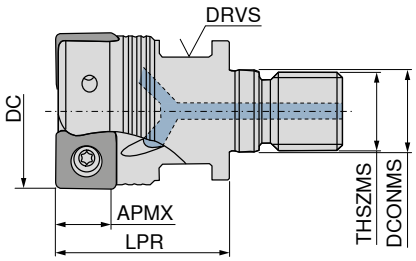
ISO	RE mm	EUR WB	
16T3ZF	0,2	22,24	**151**
P			●
M			●
K			●
N			
S			
H			●
O			

Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Inschroeffrees G 491

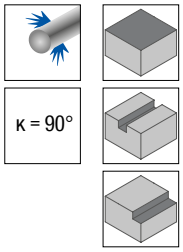


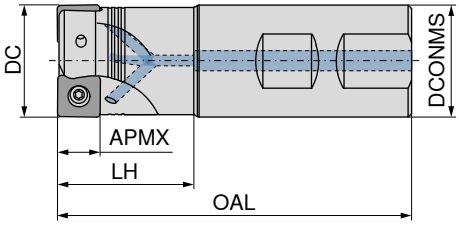




omschrijving	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	aantrekmoment Nm	Wisselplaat	50 773 ... EUR 2B/40	
G491.25.R.03-09	25	3	6	35	M12	12,5	17	2	SNHU 09T3	361,80	125
G491.32.R.03-09	32	3	6	35	M16	17,0	24	2	SNHU 09T3	367,30	132
G491.32.R.04-09	32	4	6	35	M16	17,0	24	2	SNHU 09T3	410,40	232

MaxiMill – Schachtfrees C 491









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

TORX®-inzetstuk


Sleutel-D


Molykote

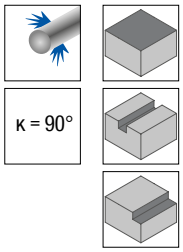

Klemschroef

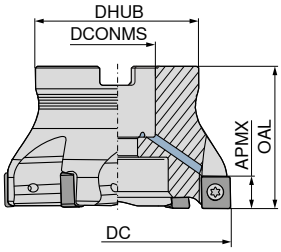

Moment-sleutel

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

15

MaxiMill – Opsteekfrees A 491





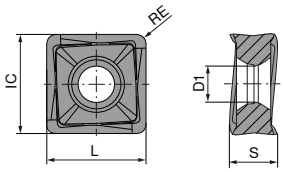


omschrijving	DC mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS $_{H6}$ mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 776 ... EUR 2B/40		50 775 ... EUR 2B/40	
A491.40.R.03-09	40	3	6	40	38	16	16800	2	SNHU 09T3			399,50	**240**
A491.40.R.05-09	40	5	6	40	38	16	16800	2	SNHU 09T3	464,40	**240**		
A491.50.R.04-09	50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

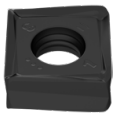
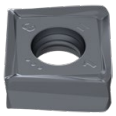
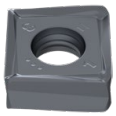
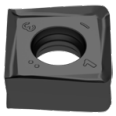
Onderdelen	TORX®-inzetstuk 80 950 ...		 Spansleutel-T 80 397 ...		 Sleutel-D 80 950 ...		 Powerschroef 70 950 ...		 Molykote 70 950 ...		 Klemschroef 70 950 ...		 Moment-sleutel 80 950 ...	
DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
40	5,42	**053**	4,03	**040**	9,18	**119**	13,10	**151**	4,60	**303**	3,24	**710**	135,90	**193**
50 - 125	5,42	**053**			9,18	**119**			4,60	**303**	3,24	**710**	135,90	**193**

SNHU

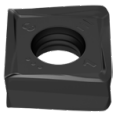
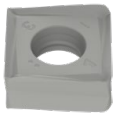
omschrijving	IC mm	L mm	S mm	D1 mm
SNHU 09T3..	9,15	9,15	3,70	3,85



SNHU

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

SNHU

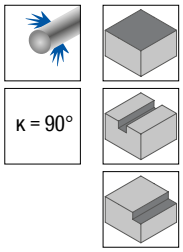
		-R50 CTCK215	NEW -R50 CTPK220	-F10 CTWN215	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN			DRAGONSKIN	DRAGONSKIN
						
		SNHU	SNHU	SNHU	SNHU	SNHU
		51 121 ...	51 121 ...	51 118 ...	51 126 ...	51 126 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17
09T308ER	0,8				28,83 15800	28,83 55800
09T308FR	0,8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

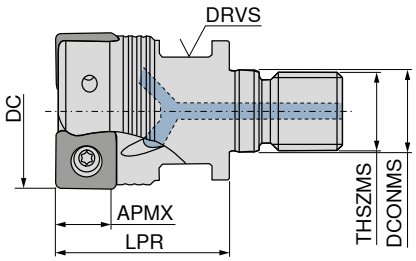
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Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Startparameters	→ 154
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

MaxiMill – Inschroeffrees G 491

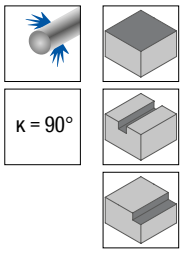


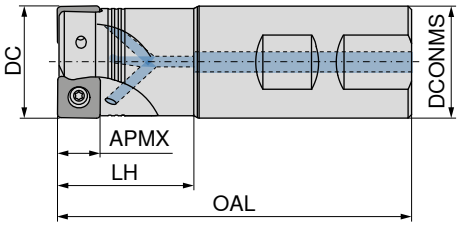




omschrijving	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	aantrekmoment Nm	Wisselplaat	50 773 ... EUR 2B/40	
G491.32.R.02-12	32	2	8	35	M16	17	24	3,2	SNHU 1204	345,70	**032**

MaxiMill – Schachtfrees C 491









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

TORX®-inzetstuk


Sleutel-D

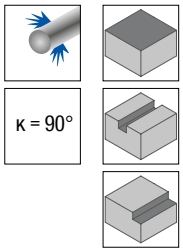

Molykote

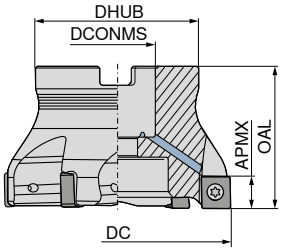

Klemschroef


Moment-sleutel

Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		Sleutel-D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Klemschroef 70 950 ... EUR 2A/28		Moment-sleutel 80 950 ... EUR Y7	
25 - 32	5,42	**053**	9,18	**119**	4,60	**303**	3,24	**710**	135,90	**193**
32	5,42	**054**	12,25	**128**	4,60	**303**	3,30	**859**	135,90	**193**

MaxiMill – Opsteekfrees A 491







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

1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

TORX®-inzetstuk


Spansleutel-T


Sleutel-D


Powerschroef


Molykote


Klemschroef

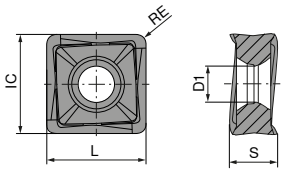

Moment-sleutel

Onderdelen	80 950 ... EUR Y7		80 397 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
DC														
40	5,42	**054**	4,03	**040**	12,25	**128**	13,10	**151**	4,60	**303**	3,30	**859**	135,90	**193**
50 - 160	5,42	**054**			12,25	**128**			4,60	**303**	3,30	**859**	135,90	**193**

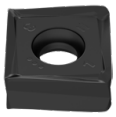
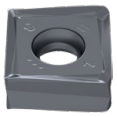
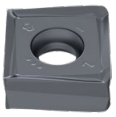
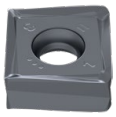
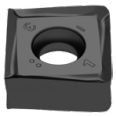
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SNHU

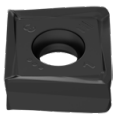
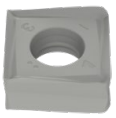
omschrijving	IC mm	L mm	S mm	D1 mm
SNHU 1204..	12,2	12,2	5,00	4,4



SNHU

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

SNHU

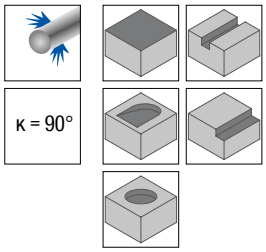
		-R50 CTCK215		-R50 CTPK220		-F10 CTWN215		-F40 CTC5240		-F40 CTCS245	
		DRAGONSKIN		DRAGONSKIN				DRAGONSKIN		DRAGONSKIN	
											
		SNHU		SNHU		SNHU		SNHU		SNHU	
		51 103 ...		51 103 ...		51 101 ...		51 128 ...		51 128 ...	
ISO	RE mm	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 17		EUR 17	
120408ER	0,8	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

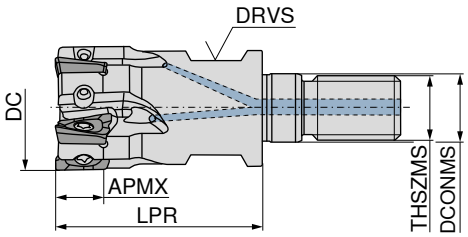
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Soorten beschrijving en overzicht	→ 198–201		

15

MaxiMill – Inschroeffrees G 211-07

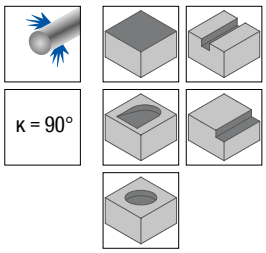


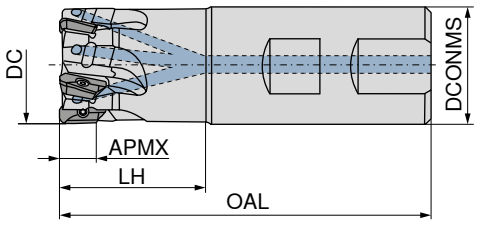




omschrijving	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 751 ... EUR 2B/40	
G211.16.R.04-07	16	4	6	27	8,5	M8	10	50400	1	XD.T 0703	276,00	**016**
G211.20.R.05-07	20	5	6	33	10,5	M10	15	44280	1	XD.T 0703	308,00	**020**
G211.25.R.06-07	25	6	6	35	12,5	M12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

MaxiMill – Schachtfrees C 211-07

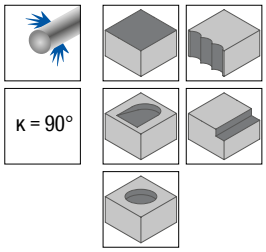


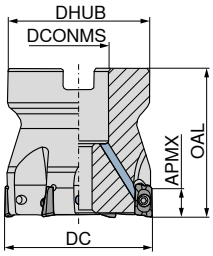


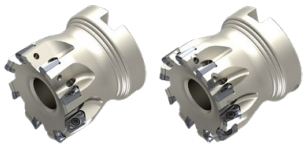


omschrijving	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	A 50 752 ... EUR 2B/40		B 50 752 ... EUR 2B/40	
C211.10.R.01-07-A-20	10	1	6	61,0	20	10	72000	1	XD.T 0703	218,40	**010**		
C211.12.R.02-07-A-20	12	2	6	66,5	20	12	66600	1	XD.T 0703	250,30	**012**		
C211.16.R.04-07-A/B-25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

MaxiMill – Opsteekfrees A 211-07







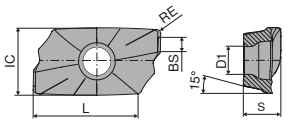
										50 753 ...		**50 754 ...**		
omschrijving	DC mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40		EUR 2B/40		
A211.32.R.06-07	32	6	6	40	16	38	36240	1	XD.T 0703	327,40	**032**			
A211.32.R.08-07	32	8	6	40	16	38	36240	1	XD.T 0703			365,80	**032**	
A211.40.R.08-07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

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Onderdelen DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
10 - 32	5,42	**051**			10,53	**124**			4,60	**303**	3,34	**137**	122,50	**191**
32	5,42	**051**	4,03	**040**	10,53	**124**	13,10	**151**	4,60	**303**	3,34	**137**	122,50	**191**
40 - 50	5,42	**051**			10,53	**124**			4,60	**303**	3,34	**137**	122,50	**191**

15

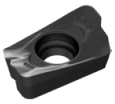
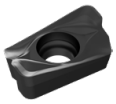
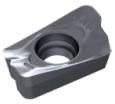
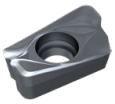
XDKT

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

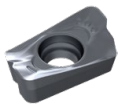
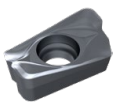
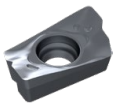
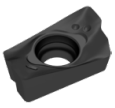
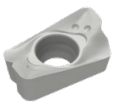


XDKT

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	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61	
070304SR	0,4	12,14	004	12,14	004	12,14	104	12,14	104
070308SR	0,8	12,14	008	12,14	008	12,14	108	12,14	108
P		●		●		●		●	
M						○		○	
K		○		○		○		○	
N									
S									
H									
O									

XDKT

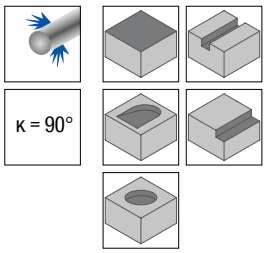
		-F50 CTPM240 DRAGONSKIN		-M50 CTPM240 DRAGONSKIN		-F40 CTPM245 DRAGONSKIN		NEW -F40 CTCM245 DRAGONSKIN		-F20 CTWN215		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN	
		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT		 XDKT	
		51 033 ...		51 036 ...		51 112 ...		51 112 ...		50 507 ...		50 498 ...		51 112 ...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

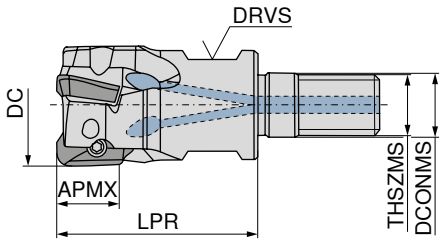
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Startparameters	→ 155	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Inschroeffrees G 211-11

▲ wisselplaatradius > 1,6 mm: body modificeren



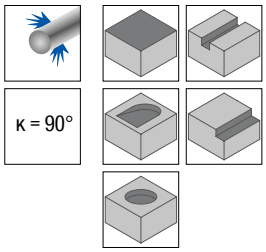


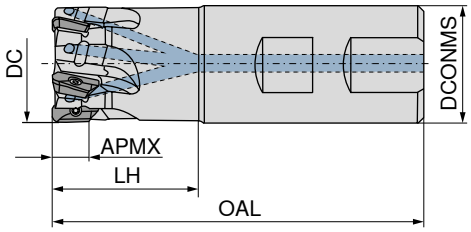


omschrijving	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 736 ... EUR 2B/40	
G211.16.R.02-11	16	2	10	27	8,5	M8	10	42000	1,6	XD.T 11T3	237,40	016
G211.20.R.03-11	20	3	10	33	10,5	M10	15	36900	1,6	XD.T 11T3	269,60	020
G211.25.R.03-11	25	3	10	35	12,5	M12	17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

MaxiMill – Schachtfrees C 211-11

▲ wisselplaatradius > 1,6 mm: body modificeren



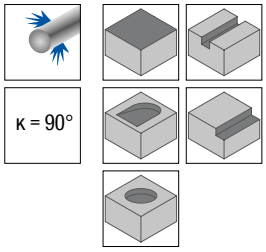


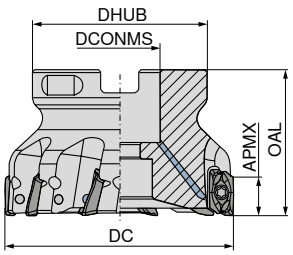


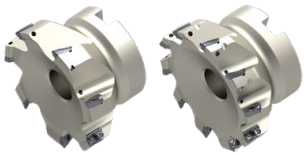
omschrijving	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	A 50 737 ... EUR 2B/40		B 50 737 ... EUR 2B/40	
C211.12.R.01-11-B-20	12	1	10	75	20	16	55000	1,6	XD.T 11T3			211,80	012
C211.16.R.02-11-A/B-25	16	2	10	75	25	16	42000	1,6	XD.T 11T3	237,40	116	237,40	016
C211.16.R.02-11-A15-32-165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

MaxiMill – Opsteekfrees A 211-11

▲ wisselplaatradius > 1,6 mm: body modificeren





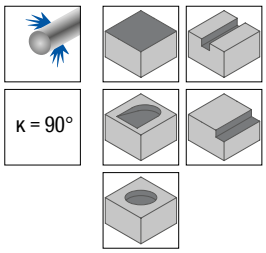


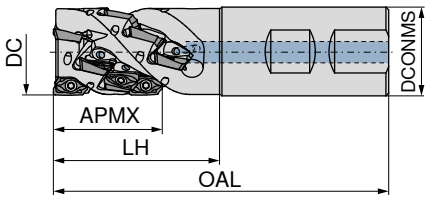
omschrijving	DC mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 738 ... EUR 2B/40		50 739 ... EUR 2B/40	
A211.40.R.04-11	40	4	10	40	16	38	27700	1,6	XD.T 11T3	327,40	**040**		
A211.40.R.06-11	40	6	10	40	16	38	27700	1,6	XD.T 11T3			365,80	**040**
A211.50.R.08-11	50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

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
12	4,90	**043**			10,51	**125**			4,60	**303**	2,70	**116**	122,50	**191**
16 - 32	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**128**	122,50	**191**
40	4,90	**043**	4,03	**040**	10,51	**125**	13,10	**151**	4,60	**303**	4,29	**131**	122,50	**191**
50	4,90	**043**	4,37	**050**	10,51	**125**	18,00	**154**	4,60	**303**	4,29	**131**	122,50	**191**
63 - 125	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**131**	122,50	**191**

MaxiMill – Mantelfrees C 211-11KN

▲ ZEFP = aantal wisselplaten
▲ ZNP = platen per snijkant







NEW

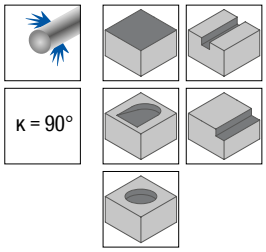
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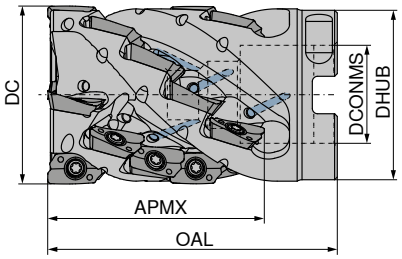
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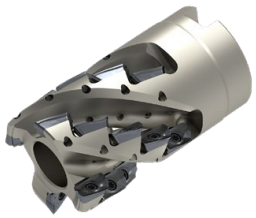
ISO-codering	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	ZEFP	ZNP	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
C211.25.R.02KN3-11-B-40	25	2	28	97	40	25	6	3	1,6	XD.T 11T3	654,40	**02523**
C211.25.R.02KN4-11-B-50	25	2	37	107	50	25	8	4	1,6	XD.T 11T3	692,80	**02524**
C211.25.R.02KN5-11-B-60	25	2	46	117	60	25	10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

MaxiMill – Mantelfrees A 211-11KN

▲ ZEFP = aantal wisselplaten
▲ ZNP = platen per snijkant







NEW

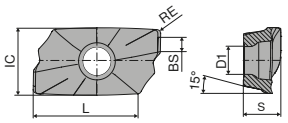
50 794 ...

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

	 Afdicht-schroef		TORX®-inzetstuk		 Sleutel-D		 Molykote		 Klemschroef		 Inbusbout		Moment-sleutel	
	70 950 ...		80 950 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen omschrijving	EUR 2A/28		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
A211.40. KN4			4,90	**043**	10,51	**125**	4,60	**303**	7,44	**20400**	12,08	**20900**	122,50	**191**
A211.40. KN5			4,90	**043**	10,51	**125**	4,60	**303**	7,44	**20400**	12,08	**21000**	122,50	**191**
A211.50. KN5	12,08	**002**	4,90	**043**	10,51	**125**	4,60	**303**	7,44	**20400**	12,08	**20600**	122,50	**191**
A211.50. KN6	12,08	**002**	4,90	**043**	10,51	**125**	4,60	**303**	7,44	**20400**	12,08	**20600**	122,50	**191**
C211.25			4,90	**043**	10,51	**125**	4,60	**303**	7,44	**20700**			122,50	**191**
C211.32			4,90	**043**	10,51	**125**	4,60	**303**	7,44	**20700**			122,50	**191**
C211.40			4,90	**043**	10,51	**125**	4,60	**303**	7,44	**20400**			122,50	**191**

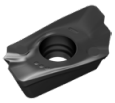
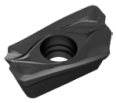
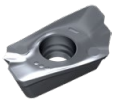
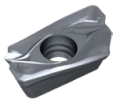
XDKT / XDHT

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

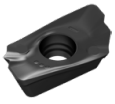
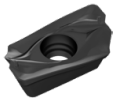
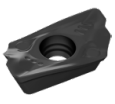
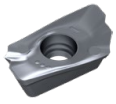
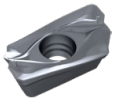
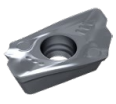


XDKT

XDKT

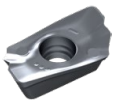
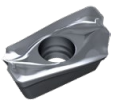
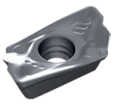
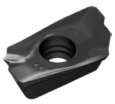
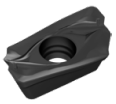
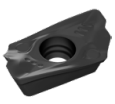
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		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 034 ...	51 037 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
11T308SR	0,8	14,76 258	14,76 258	14,76 058	14,76 058
P		●	●	●	●
M					
K					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

XDKT

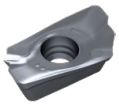
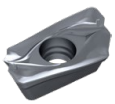
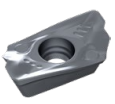
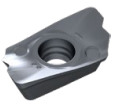
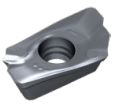
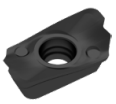
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		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		XDKT	XDKT	XDKT	XDKT	XDKT	XDKT
		51 034 ...	51 037 ...	51 039 ...	51 034 ...	51 037 ...	51 039 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
11T304SR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

1) wisselplaatradius > 1,6 mm: body modificeren

XDKT

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

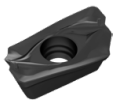
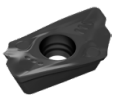
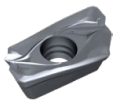
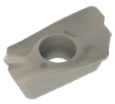
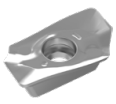
XDKT

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

1) wisselplaatradius > 1,6 mm: body modificeren

15

XDKT / XDHT

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

1) wisselplaatradius > 1,6 mm: body modificeren

XDKT

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

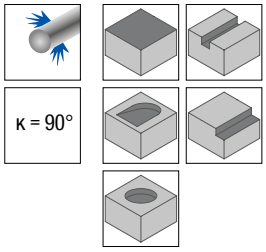
1) wisselplaatradius > 1,6 mm: body modificeren

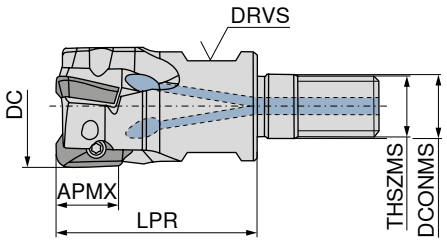
Freesgids

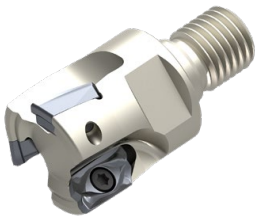
Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 156
Startparameters	→ 156	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Inschroeffrees G 211-15

▲ wisselplaatradius > 2,5 mm: body modificeren



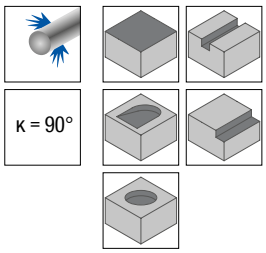


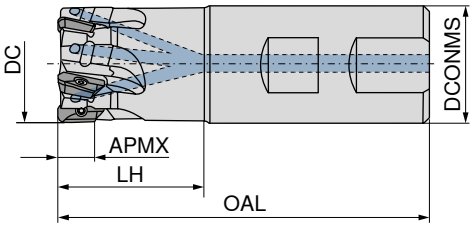


omschrijving	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 746 ... EUR 2B/40	
G211.25.R.02-15	25	2	14	35	12,5	M12	17	26560	3,2	XD.T 1505	272,60	025
G211.32.R.03-15	32	3	14	35	17,0	M16	24	30200	3,2	XD.T 1505	303,50	032
G211.40.R.04-15	40	4	14	40	17,0	M16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

MaxiMill – Schachtfrees C 211-15

▲ wisselplaatradius > 2,5 mm: body modificeren







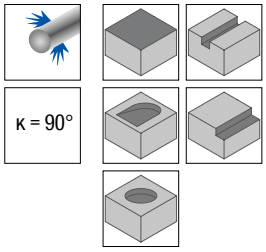


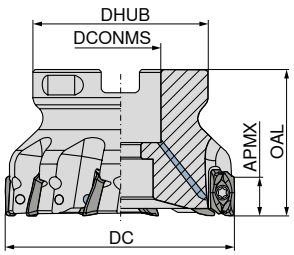
omschrijving	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	A 50 747 ... EUR 2B/40		B 50 747 ... EUR 2B/40	
C211.25.R.02-15-B20-32	25	2	14	83	32	20	26560	3,2	XD.T 1505			272,60	125
C211.25.R.02-15-B/A-32	25	2	14	90	32	25	26560	3,2	XD.T 1505	272,60	225	272,60	025
C211.25.R.02-15-A-50-225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

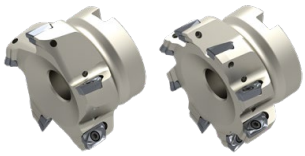
15

MaxiMill – Opsteekfrees A 211-15

▲ wisselplaatradius > 2,5 mm: body modificeren







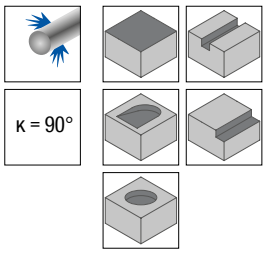
omschrijving	DC mm	ZNF	APMX mm	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 748 ... EUR 2B/40		50 749 ... EUR 2B/40	
A211.40.R.03-15	40	3	14	40	16	38	22160	3,2	XD.T 1505	297,50	**040**		
A211.40.R.04-15	40	4	14	40	16	38	22160	3,2	XD.T 1505			334,80	**040**
A211.50.R.03-15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

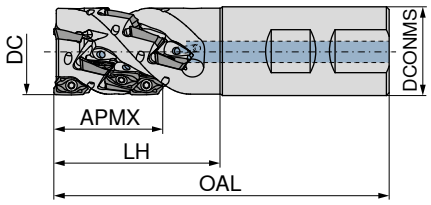
1) zonder inwendige koelmiddeltoevoer

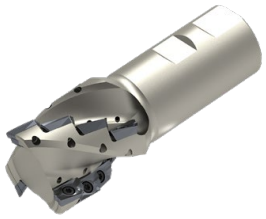
Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		 Spansleutel-T 80 397 ... EUR Y7		 Sleutel-D 80 950 ... EUR Y7		 Powerschroef 70 950 ... EUR 2A/28		 Molykote 70 950 ... EUR 2A/28		 Klemschroef 70 950 ... EUR 2A/28		 Moment-sleutel 80 950 ... EUR Y7	
25 - 32	5,42	**054**			12,25	**128**			4,60	**303**	3,34	**839**	135,90	**193**
40	5,42	**054**	4,03	**040**	12,25	**128**	13,10	**151**	4,60	**303**	3,34	**839**	135,90	**193**
50	5,42	**054**	4,37	**050**	12,25	**128**	18,00	**154**	4,60	**303**	3,34	**839**	135,90	**193**
63 - 160	5,42	**054**			12,25	**128**			4,60	**303**	3,34	**839**	135,90	**193**

MaxiMill – Mantelfrees C 211-15KN

▲ ZEFP = aantal wisselplaten
▲ ZNP = platen per snijkant







NEW

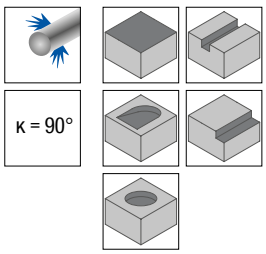
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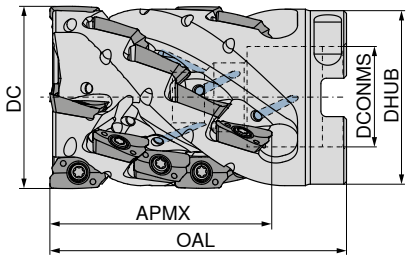
50 783 ...

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

MaxiMill – Mantelfrees A 211-15KN

▲ ZEFP = aantal wisselplaten
▲ ZNP = platen per snijkant







NEW

50 781 ...

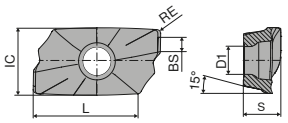
ISO-codering	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
A211.50.R.03KN4-15	50	3	52,6	12	4	87	27	48	3,2	XD.T 1505	931,50	**05034**
A211.50.R.03KN5-15	50	3	65,8	15	5	100	27	48	3,2	XD.T 1505	989,20	**05035**
A211.50.R.04KN5-15	50	4	65,8	20	5	100	27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

	 Afdicht-schroef		TORX®-inzetstuk		 Sleutel-D		 Molykote		 Klemschroef		 Inbusbout		 Moment-sleutel	
	70 950 ...		**80 950 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Onderdelen omschrijving	EUR 2A/28		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
A211.50	12,08	**002**	5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20800**	12,08	**20600**	135,90	**193**
A211.63	12,08	**002**	5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20500**	12,08	**20600**	135,90	**193**
A211.80	27,02	**004**	5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20500**	12,08	**234**	135,90	**193**
C211.40			5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20800**			135,90	**193**
C211.50			5,42	**054**	12,25	**128**	4,60	**303**	9,42	**20800**			135,90	**193**

15

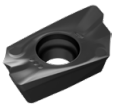
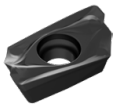
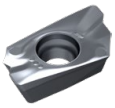
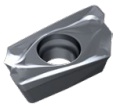
XDKT

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

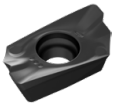
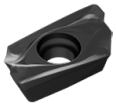
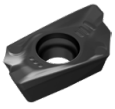
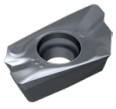
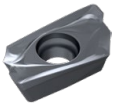
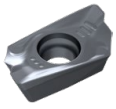


XDKT

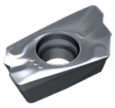
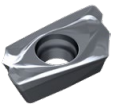
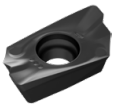
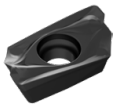
XDKT

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

XDKT

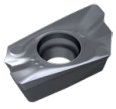
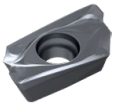
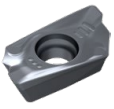
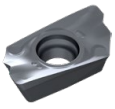
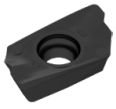
		-F50 CTCP230		-M50 CTCP230		-R50 CTCP230		-F50 CTPP235		-M50 CTPP235		-R50 CTPP235	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	
													
		XDKT		XDKT		XDKT		XDKT		XDKT		XDKT	
		51 035 ...		51 038 ...		51 040 ...		51 035 ...		51 038 ...		51 040 ...	
ISO	RE mm	EUR 1B/61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

XDKT

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

XDKT

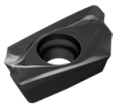
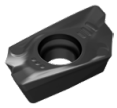
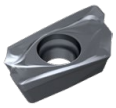
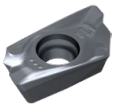
NEW

ISO	RE mm	-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 ...
		EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17
150508ER	0,8				23,70 458	23,70 90801
150508SR	0,8	19,69 408	19,69 408	19,69 408		
150512ER	1,2					23,70 91201
150512SR	1,2		19,69 412			
150516ER	1,6					23,70 91601
150516SR	1,6		19,69 416			
150520ER	2,0					23,70 92001
150525ER	2,5					23,70 92501
150530SR	3,0		19,69 430 1)			
150532ER	3,2				23,70 482 1)	23,70 93201 1)
150540ER	4,0				23,70 490 1)	23,70 94001 1)
150540SR	4,0		19,69 440 1)			
150560ER	6,0					23,70 96001 1)
P		○	○	○	●	●
M		●	●	●	●	●
K						
N						
S						○
H						
O						

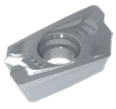
1) wisselplaatradius > 2,5 mm: body modificeren

15

XDKT

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

XDKT

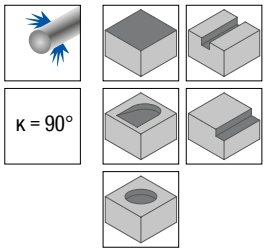
		-F40 CTC5240 DRAGONSKIN		-F40 CTCS245 DRAGONSKIN		-R60 CTP6215	
							
		XDKT		XDKT		XDKT	
		50 473 ...		51 114 ...		50 469 ...	
ISO	RE mm	EUR 17		EUR 17		EUR 1B/61	
150508ER	0,8	23,70	508	23,70	558		
150508SR	0,8					19,69	300
150532ER	3,2	23,70	532 [1)]				
150540ER	4,0	23,70	540 [1)]	23,70	59000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

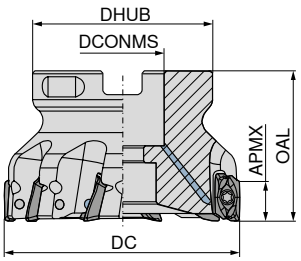
1) wisselplaatradius > 2,5 mm: body modificeren

Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 157
Startparameters	→ 157	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Opsteekfrees A 211-20



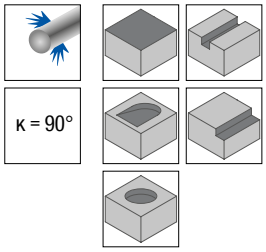


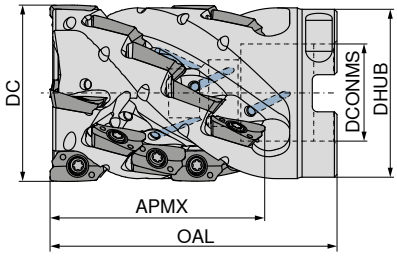


omschrijving	DC mm	ZNF	APMX mm	OAL mm	DCONMS H6 mm	DHUB mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 778 ... EUR 2B/40	
A211.63.R.05-20	63	5	19	45	22	48	14400	5	XD.. 2007..	447,10	**06305**
A211.80.R.06-20	80	6	19	50	27	58	12400	5	XD.. 2007..	478,20	**08006**
A211.100.R.07-20	100	7	19	50	32	78	10900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

MaxiMill – Mantelkopfrees A 211-20K

- ZEFP = aantal wisselplaten
- ZNP = platen per snijkant







NEW

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


Afdicht-schroef

TORX®-inzetstuk

Sleutel-D


Molykote


Klemschroef


Inbusbout

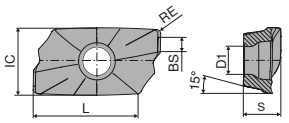
Moment-sleutel

Onderdelen DC	70 950 ... EUR 2A/28		80 950 ... EUR Y7		80 950 ... EUR Y7		70 950 ... EUR 2A/28		70 950 ... EUR 2A		70 950 ... EUR 2A/28		80 950 ... EUR Y7	
63			4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	5,71	**180**	135,90	**193**
80			4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	8,87	**181**	135,90	**193**
63	16,75	**003**	4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	8,87	**181**	135,90	**193**
80	27,02	**004**	4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**	12,08	**234**	135,90	**193**
100			4,90	**037**	7,75	**106**	4,60	**303**	2,60	**280**			135,90	**193**

15

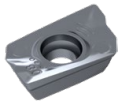
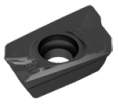
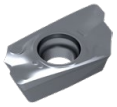
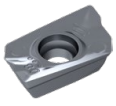
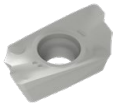
XDKT

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



XDKT

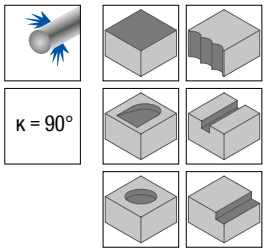
XDKT

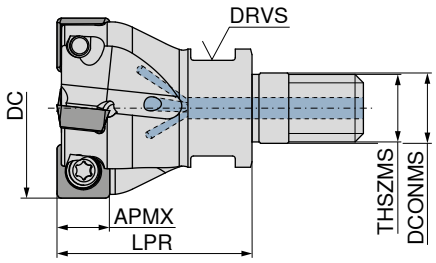
		NEW		NEW			NEW	NEW			
		-M50 CTPP235		-M50 CTCP230		-F40 CTPM245	-F40 CTCM245	-M50 CTPK220	-F40 CTC5240	-F40 CTCS245	
		DRAGONSKIN		DRAGONSKIN		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	
											
		XDKT		XDKT		XDKT	XDKT	XDKT	XDKT	XDKT	
		51 145 ...		51 145 ...		51 127 ...	51 127 ...	51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

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Startparameters	→ 158	Technische informatie	→ 189–194
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MaxiMill – Inschroeffrees G 490-09

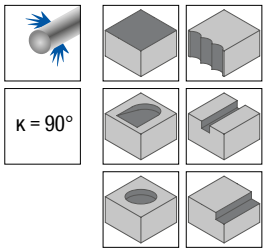


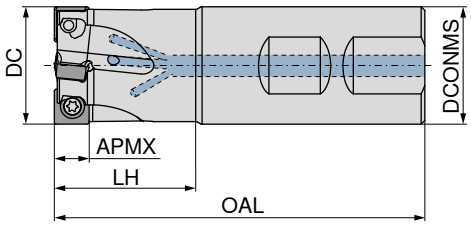




omschrijving	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	aantrekmoment Nm	Wisselplaat	50 726 ... EUR 2B/40	
G490.25.R.03-09	25	3	8	35	M12	12,5	17	3,2	SD.. 09T3..	313,30	025
G490.32.R.04-09	32	4	8	35	M16	17,0	24	3,2	SD.. 09T3..	339,80	032

MaxiMill – Schachtfrees C 490-09

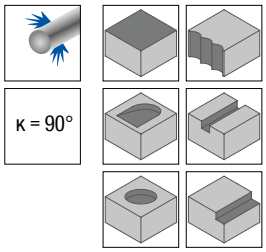


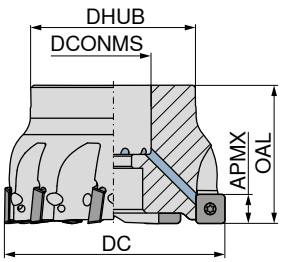


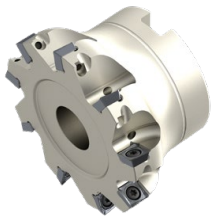


omschrijving	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	aantrekmoment Nm	Wisselplaat	A 50 727 ... EUR 2B/40		B 50 727 ... EUR 2B/40	
C490.25.R.03-09-B-32	25	3	8	25	88	32	3,2	SD.. 09T3..			313,30	025
C490.25.R.02-09-A-20	25	2	8	20	165	40	3,2	SD.. 09T3..	288,90	225		
C490.25.R.02-09-A-40-165	25	2	8	25	165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

MaxiMill – Opsteekfrees A 490-09





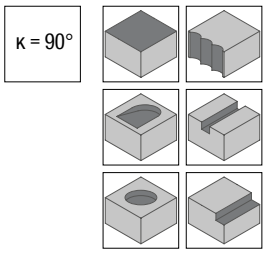


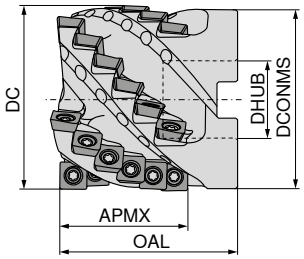
omschrijving	DC mm	ZNF	APMX mm	DHUB mm	DCONMS H6 mm	OAL mm	aantrekmoment Nm	Wisselplaat	50 728 ... EUR 2B/40	
A490.40.R.05-09	40	5	8	38	16	40	3,2	SD.. 09T3..	379,90	040
A490.42.R.06-09	42	6	8	38	16	40	3,2	SD.. 09T3..	406,30	042
A490.50.R.06-09	50	6	8	43	22	40	3,2	SD.. 09T3..	419,70	050
A490.52.R.07-09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

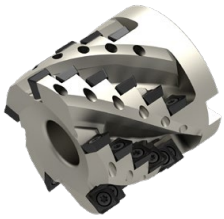
1) zonder inwendige koelmiddeltoevoer

MaxiMill – Mantelkopfrees A 490K

▲ ZEFP = aantal wisselplaten
▲ ZNP = platen per snijkant





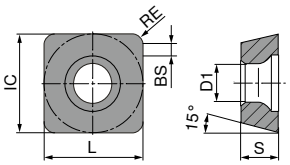


											50 761 ...	
omschrijving	DC mm	ZNF	APMX mm	ZEFP	ZNP	OAL mm	DCONMS $_{H6}$ mm	DHUB mm	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
A490.40.R.03K6-09	40	3	41	18	6	55	16	38	3,2	SD.. 09T3..	1.053,00	**040**
A490.50.R.04K6-09	50	4	41	24	6	55	22	48	3,2	SD.. 09T3..	1.274,00	**050**
A490.63.R.05K6-09	63	5	41	30	6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

	TORX®-inzetstuk		 Spansleutel-T		Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
25 - 32	4,90	**036**			9,56	**113**			4,60	**303**	3,30	**110**	132,50	**192**
40 - 42	4,90	**036**	4,03	**040**	9,56	**113**	13,10	**151**	4,60	**303**	3,30	**110**	132,50	**192**
50 - 160	4,90	**036**			9,56	**113**			4,60	**303**	3,30	**110**	132,50	**192**

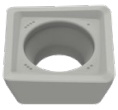
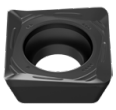
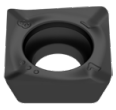
SDHT / SDNT

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

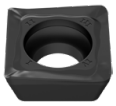
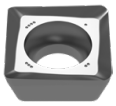


SDHT / SDNT

NEW

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

SDNT / SDHT

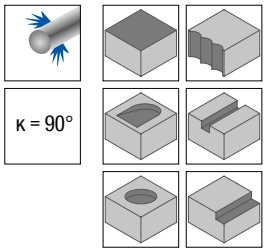
		-31 CTCK215	-27P H216T	-27P AMZ	-27 CTC5240	-M31 CTC5240	-F10 CTCS245
		DRAGONSKIN			DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
							
		SDNT	SDHT	SDHT	SDHT	SDNT	SDHT
		51 029 ...	50 424 ...	50 424 ...	50 496 ...	50 425 ...	51 125 ...
ISO	RE mm	EUR 1B/61	EUR 1A/90	EUR 1A/90	EUR 17	EUR 17	EUR 17
09T308ER	0,8	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

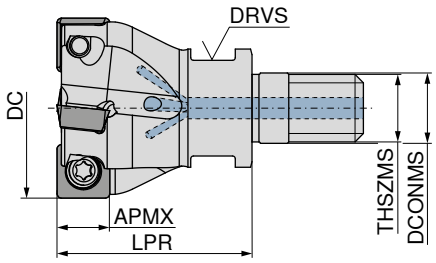
15

Freesgids

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Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

MaxiMill – Inschroeffrees G 490-12



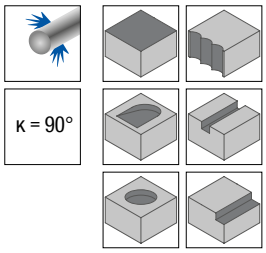


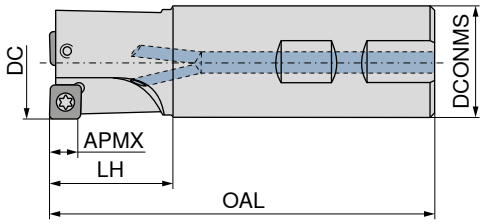


50 726 ...

omschrijving	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
G490.32.R.03-12	32	3	10,7	35	M16	17	24	3,2	SD.. 1205..	327,30	**13200**
G490.40.R.04-12	40	4	10,7	40	M16	17	24	3,2	SD.. 1205..	361,60	**14000**

MaxiMill – Schachtfrees C 490-12







B

50 703 ...

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

TORX®-inzetstuk

80 950 ...


Sleutel-D

80 950 ...


Molykote

70 950 ...


Klemschroef

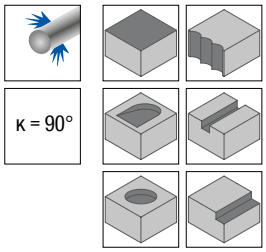
70 950 ...

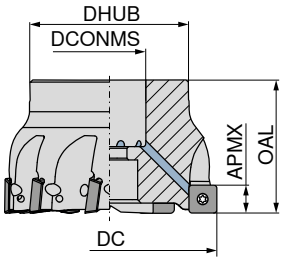

Moment-sleutel

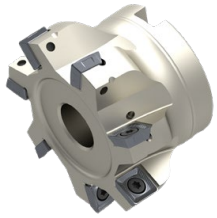
80 950 ...

Onderdelen DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
32	4,90	**037**	10,25	**114**	4,60	**303**	3,30	**01200**	135,90	**193**
32	4,90	**037**					3,30	**01200**	135,90	**193**
40	4,90	**037**	10,25	**114**	4,60	**303**	3,30	**01200**	135,90	**193**
40	4,90	**037**					3,30	**01200**	135,90	**193**

MaxiMill – Opsteekfrees A 490-12







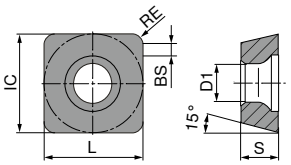
omschrijving	DC mm	ZNF	APMX mm	DHUB mm	DCONMS mm	OAL mm	aantrekmoment Nm	Wisselplaat	50 703 ... EUR 2B/40	
A490.40.R.04-12	40	4	11	38	16	40	5	SD.. 1205..	361,60	**54000**
A490.50.R.05-12	50	5	11	43	22	40	5	SD.. 1205..	401,60	**550**
A490.63.R.06-12	63	6	11	48	22	40	5	SD.. 1205..	441,80	**563**
A490.80.R.07-12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

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
40	4,90	**037**	4,03	**040**	10,25	**114**	13,10	**151**	4,60	**303**	3,30	**01200**	135,90	**193**
50	4,90	**037**	4,03	**040**	10,25	**114**	18,00	**154**	4,60	**303**	3,30	**01200**	135,90	**193**
63 - 125	4,90	**037**	4,03	**040**	10,25	**114**			4,60	**303**	3,30	**01200**	135,90	**193**

15

SDHW / SDMT / SDHT

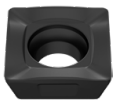
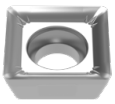
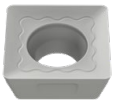
omschrijving	IC mm	D1 mm	L mm	BS mm	S mm
SDH. 120508..	12,7	5,5	12,7	2,2	5,00
SDHT 120512..	12,7	5,5	12,7	1,8	5,00
SDHT 120520..	12,7	5,5	12,7	1,0	5,00
SDHT 120525..	12,7	5,5	12,7	1,5	5,00
SDMT 120508..	12,7	5,5	12,7	3,0	5,00
SDMT 1205ZZ..	12,7	5,5	12,7	0,9	5,00



SDHW / SDMT / SDHT

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

SDMT / SDHT

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

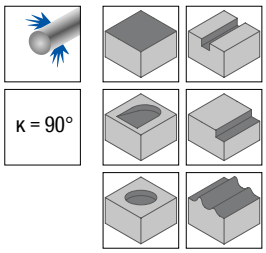
Freesgids

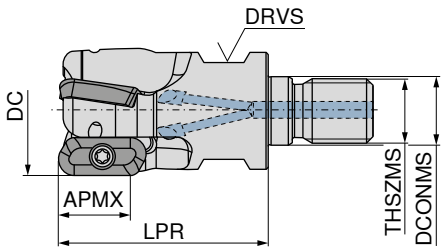
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Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

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MaxiMill – Inschroeffrees 90° G HSC-11

▲ wisselplaatradius > 3,2 mm: body modificeren



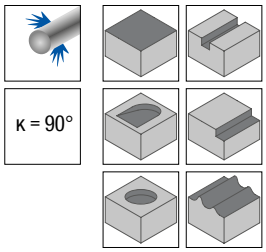


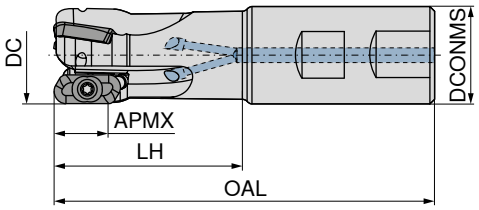


omschrijving	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	RPMX 1/min.	DRVS mm	aantrekmoment Nm	Wisselplaat	55 107 ... EUR 2B/40	
GHSC.16.R.02-11	16	2	10	8,5	27	M8	56000	10	1,8	XDHT 11T3..	275,90	**016**
GHSC.18.R.02-11	18	2	10	8,5	27	M8	53100	10	1,8	XDHT 11T3..	282,50	**018**
GHSC.20.R.02-11	20	2	10	10,5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

MaxiMill – Schachtfrees 90° C HSC-11

▲ wisselplaatradius > 3,2 mm: body modificeren





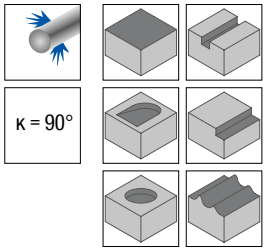


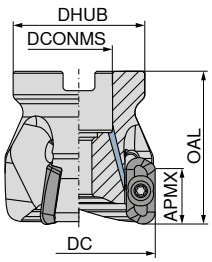


omschrijving	DC mm	ZNF	APMX mm	DCONMS h6 mm	OAL mm	LH mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	A 50 675 ... EUR 2B/40		B 50 675 ... EUR 2B/40	
CHSC.16.R.02-11-B/A-25	16	2	10	16	75	25	56200	1,8	XDHT 11T3..	275,90	**016**	275,90	**416**
CHSC.16.R.02-11-A-32	16	2	10	16	165	32	18800	1,8	XDHT 11T3..	275,90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

MaxiMill – Opsteekfrees 90° A HSC-11

▲ wisselplaatradius > 3,2 mm: body modificeren







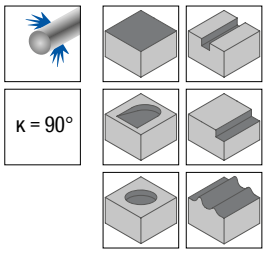
50 718 ...

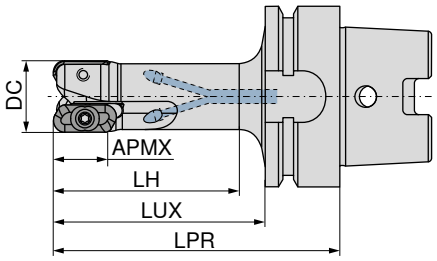
omschrijving	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
AHSC.40.R.04-11	40	4	10	16	38	50	35500	1,8	XDHT 11T3..	464,90	**040**
AHSC.50.R.04-11	50	4	10	22	43	50	31800	1,8	XDHT 11T3..	562,40	**050**
AHSC.63.R.05-11	63	5	10	22	43	50	28300	1,8	XDHT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

MaxiMill – Frees 90° M HSC-11 met HSK 63-A

▲ gebalanceerd G 6,3

▲ wisselplaatradius > 3,2 mm: body modificeren







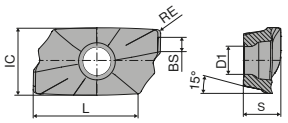
50 722 ...

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

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Onderdelen DC	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
16 - 25	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**128**	132,50	**192**
32	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**131**	132,50	**192**
40	4,90	**043**	4,03	**040**	10,51	**125**	13,10	**151**	4,60	**303**	4,29	**131**	132,50	**192**
50 - 63	4,90	**043**	4,37	**050**	10,51	**125**	18,00	**154**	4,60	**303**	4,29	**131**	132,50	**192**
80 - 100	4,90	**043**			10,51	**125**			4,60	**303**	4,29	**131**	132,50	**192**

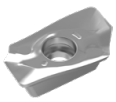
XDKT / XDHT

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



XDKT

XDKT / XDHT

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

1) wisselplaatradius > 1,6 mm: body modificeren

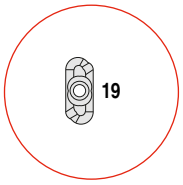
Freesgids

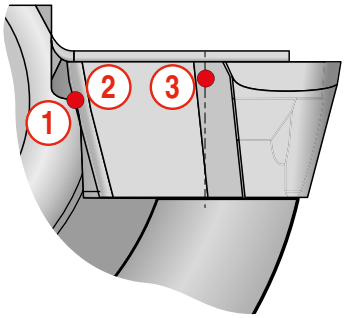
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Bewerkingsstrategie	→ 163+164	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

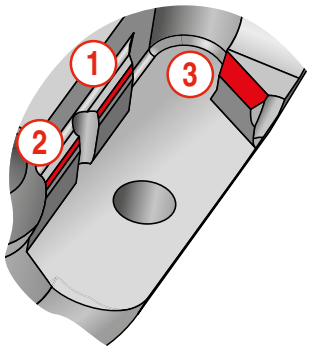
HSC-19

Voor gemiddelde tot hoge toerentallen

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







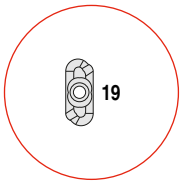
(1) (2) radiale aanlegpunten
- ▲ garanderen 90° hoek en exacte rondloop

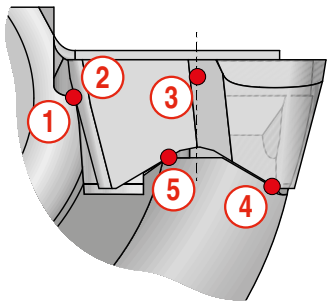
(3) axiaal aanlegpunt
- ▲ garandeert precieze vlakloop

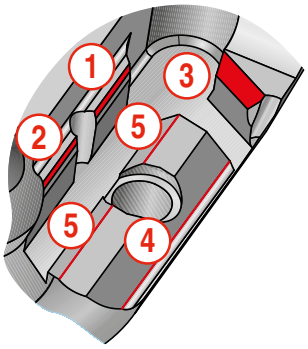
HPC-19

Voor maximale toerentallen

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







Dakvormig met hoek van 140°
- ▲ grotere stabiliteit, veiliger
- ▲ gegarandeerd vormgesloten verbinding tussen wisselplaat en gereedschap

(1) (2) radiale aanlegpunten
- ▲ garanderen 90° hoek en exacte rondloop

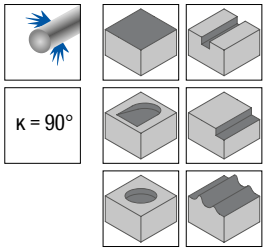
(3) axiaal aanlegpunt
- ▲ garandeert precieze vlakloop

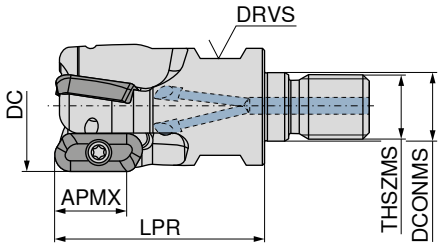
(4) (5) aanlegpunten
- ▲ opname van de verspanings- en centrifugale krachten

15

MaxiMill – Inschroeffrees 90° G HSC-19

▲ wisselplaatradius > 4,0 mm: body modificeren



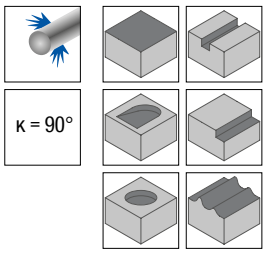


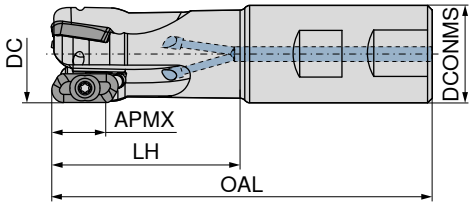


omschrijving	DC mm	ZNF	APMX mm	DCONMS mm	LPR mm	THSZMS	DRVS mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	55 108 ... EUR 2B/40	
GHSC.25.R.02-19	25	2	18	12,5	45	M12	17	34400	5	XDHT 1904..	325,10	**025**
GHSC.32.R.03-19	32	3	18	17,0	52	M16	24	29100	5	XDHT 1904..	421,10	**032**
GHSC.40.R.03-19	40	3	18	17,0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

MaxiMill – Schachtfrees 90° C HSC-19

▲ wisselplaatradius > 4,0 mm: body modificeren





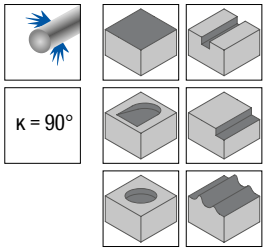


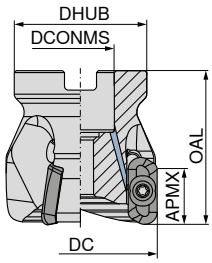


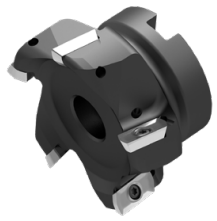
omschrijving	DC mm	ZNF	APMX mm	DCONMS $_{h5}$ mm	OAL mm	LH mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	A 50 679 ... EUR 2B/40		B 50 679 ... EUR 2B/40	
CHSC.25.R.02-19-A-50	25	2	18	25	121	50	32400	5	XDHT 1904..	325,10	**225**		
CHSC.25.R.02-19	25	2	18	25	121	65	32400	5	XDHT 1904..			334,70	**025**
CHSC.25.R.02-19-A-63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

MaxiMill – Opsteekfrees 90° A HSC-19

▲ wisselplaatradius > 4,0 mm: body modificeren







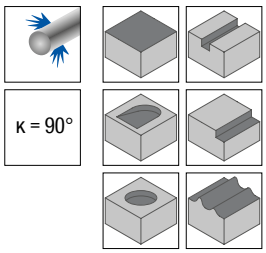
50 716 ...

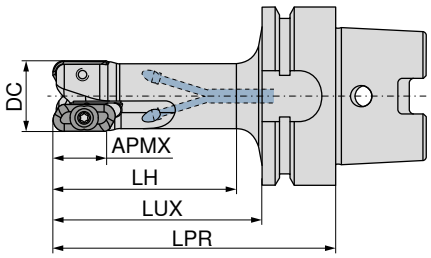
omschrijving	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
AHSC.40.R.03-19	40	3	18	16	38	50	24900	5	XDHT 1904..	435,70	**040**
AHSC.50.R.04-19	50	4	18	22	43	50	21600	5	XDHT 1904..	547,60	**050**
AHSC.63.R.04-19	63	4	18	22	48	50	18800	5	XDHT 1904..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

MaxiMill – Frees 90° M HSC-19 met HSK 63-A

▲ gebalanceerd G 6,3

▲ wisselplaatradius > 4,0 mm: body modificeren







50 720 ...

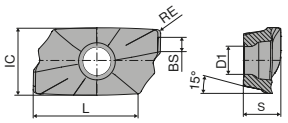
omschrijving	DC mm	ZNF	APMX mm	LPR mm	LH mm	LUX mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
MHSC.25.R.02-19-H63A-50	25	2	18	90	50	64	35000	5	XDHT 1904..	786,10	**525**
MHSC.25.R.02-19-H63A-63	25	2	18	100	63	74	32700	5	XDHT 1904..	786,10	**625**
MHSC.32.R.02-19-H63A-63	32	2	18	100	63	74	29100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

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Onderdelen	**EUR**		**EUR**		**EUR**		**EUR**		**EUR**		**EUR**		**EUR**	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
25	4,90	**036**			9,56	**113**			4,60	**303**	3,00	**172**	135,90	**193**
32	4,90	**036**			9,56	**113**			4,60	**303**	3,57	**173**	135,90	**193**
40	4,90	**036**	4,03	**040**	9,56	**113**	13,10	**151**	4,60	**303**	3,57	**173**	135,90	**193**
50 - 63	4,90	**036**	4,37	**050**	9,56	**113**	18,00	**154**	4,60	**303**	3,57	**174**	135,90	**193**
80 - 125	4,90	**036**			9,56	**113**			4,60	**303**	3,57	**174**	135,90	**193**

15

XDHT

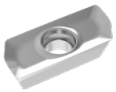
omschrijving	IC mm	D1 mm	L mm	BS mm	S mm
XDHT 190402..	9,52	4,65	19	2	4,76
XDHT 190404..	9,52	4,65	19	2	4,76
XDHT 190408..	9,52	4,65	19	2	4,76
XDHT 190412..	9,52	4,65	19	2	4,76
XDHT 190416..	9,52	4,65	19	2	4,76
XDHT 190420..	9,52	4,65	19	2	4,76
XDHT 190425..	9,52	4,65	19	1,4	4,76
XDHT 190432..	9,52	4,65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



XDKT

XDHT

-27P
H216T


XDHT

50 487 ...

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

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M	
K	○
N	●
S	
H	
O	○

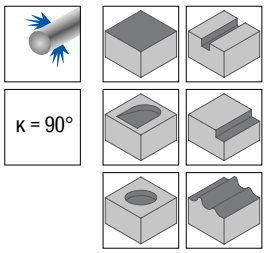
1) wisselplaatradius > 4,0 mm: body modificeren

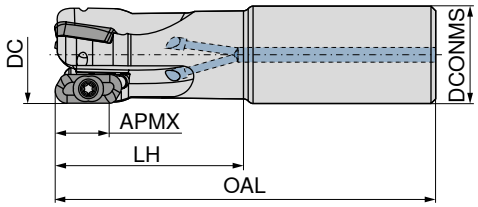
Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Veiligheidsadvies	→ 161
Bewerkingsstrategie	→ 165–167	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Schachtfrees 90° C HPC-19

- schachtuitvoering DIN 1835-A
- wisselplaatradius > 4,0 mm: body modificeren







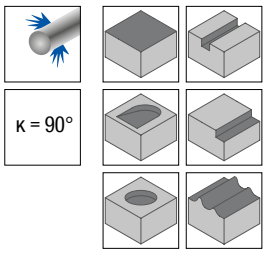
A

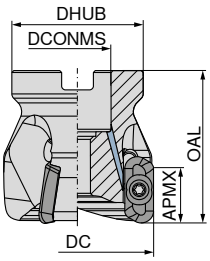
50 680 ...

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

MaxiMill – Opsteekfrees 90° A HPC-19

- wisselplaatradius > 4,0 mm: body modificeren







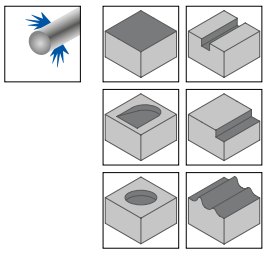
50 717 ...

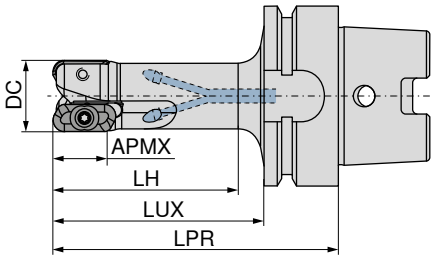
omschrijving	DC mm	ZNF	APMX mm	DCONMS $_{H6}$ mm	DHUB mm	OAL mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	EUR 2B/40	
AHPC.40.R.03-19	40	3	18	16	38	50	35700	5	XDHX 1904..	509,00	**040**
AHPC.50.R.03-19	50	3	18	22	43	50	31900	5	XDHX 1904..	530,20	**050**
AHPC.63.R.03-19	63	3	18	22	48	50	28500	5	XDHX 1904..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

15

MaxiMill – Frees 90° M HPC-19 met HSK 63-A

- gebalanceerd G 6,3
- wisselplaatradius > 4,0 mm: body modificeren





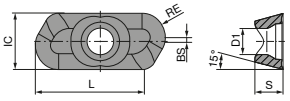


omschrijving	DC mm	ZNF	APMX mm	LPR mm	LH mm	LUX mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 721 ... EUR 2B/40	
MHPC.25.R.02-19-H63A-50	25	2	18	90	50	64	45200	5	XDHX 1904..	1.014,00	**025**
MHPC.25.R.02-19-H63A-63	25	2	18	100	63	74	42300	5	XDHX 1904..	1.014,00	**125**
MHPC.25.R.02-19-H63A-80	25	2	18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

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		Y7		2A/28		2A/28		2A/28		Y7	
22 - 25	4,90	**036**			9,56	**113**			4,60	**303**	3,00	**172**	135,90	**193**
32	4,90	**036**			9,56	**113**			4,60	**303**	3,57	**173**	135,90	**193**
40	4,90	**036**	4,03	**040**	9,56	**113**	13,10	**151**	4,60	**303**	3,57	**173**	135,90	**193**
50 - 63	4,90	**036**	4,37	**050**	9,56	**113**	18,00	**154**	4,60	**303**	3,57	**174**	135,90	**193**

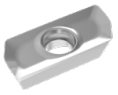
XDHX

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



XDHX

-27P
H216T



XDHX
50 488 ...

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

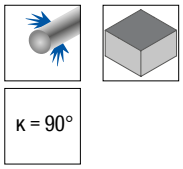
P	
M	
K	○
N	●
S	
H	
O	○

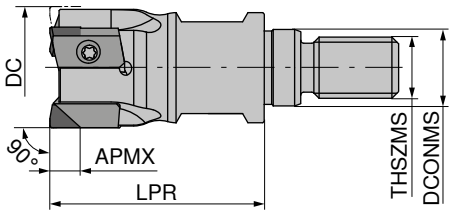
1) wisselplaatradius > 4,0 mm: body modificeren

Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Veiligheidsadvies	→ 161
Bewerkingsstrategie	→ 165–167	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Inschroeffrees G HPC 04

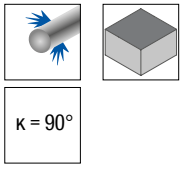


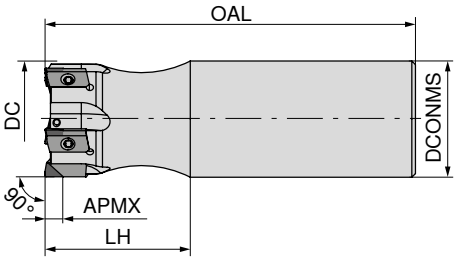




omschrijving	DC mm	ZNF	APMX mm	THSZMS	DCONMS mm	LPR mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 785 ... EUR 2B/40	
GHPC.20.R.03-04	20	3	4	M10	10,5	35	52000	1,6	ZNHW 04T3..	269,60	**20003**
GHPC.25.R.04-04	25	4	4	M12	12,5	35	45000	1,6	ZNHW 04T3..	301,70	**25004**
GHPC.32.R.05-04	32	5	4	M16	17,0	35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

MaxiMill – Schachtfrees C HPC 04







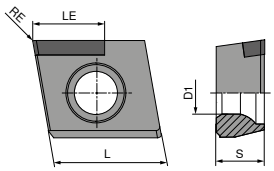


omschrijving	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 680 ... EUR 2B/40	
CHPC.20.R.03-04-A-25	20	3	4	20	77	25	52000	1,6	ZNHW 04T3..	269,60	**02003**
CHPC.25.R.04-04-A-32	25	4	4	25	90	32	45000	1,6	ZNHW 04T3..	301,70	**02504**
CHPC.32.R.05-04-A-40	32	5	4	32	102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

	TORX®-inzetstuk		 Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR	
DC	Y7		Y7		2A/28		2A/28		Y7	
20 - 40	4,90	**043**	10,51	**125**	4,60	**303**	4,29	**131**	122,50	**191**

ZNHW

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



ZNHW





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

P		
M		
K		●
N	●	
S		
H		○
O	○	

Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 168
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

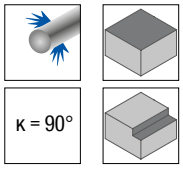
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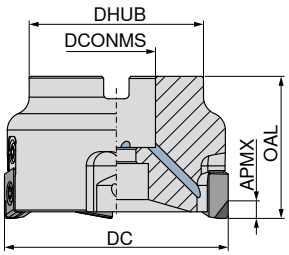
MaxiMill – Opsteekfrees HPC 12

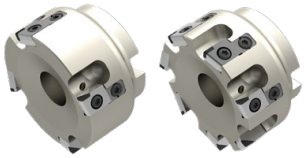
▲ 50 723 ... normale vertanding
▲ 50 724 ... fijne vertanding

leveromvang:

gereedschap, spanspieën en instelsleutel incl. houten kist







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

1) zonder inwendige koelmiddeltoevoer

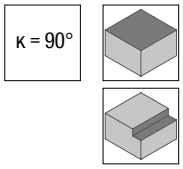
	TORX®-inzetstuk		 Molykote		 Klemschroef		 Spie		 Moment-sleutel	
	80 950 ...		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Onderdelen	EUR		EUR		EUR		EUR		EUR	
DC	Y7		2A/28		2A/28		2A/28		Y7	
40 - 315	4,90	**036**	4,60	**303**	3,57	**174**	38,64	**199**	135,90	**193**

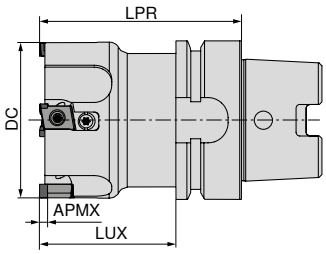
MaxiMill – Monoblok HPC 12

▲ gebalanceerd G 6,3

leveromvang:

gereedschap, spanspieën en instelsleutel incl. houten kist







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

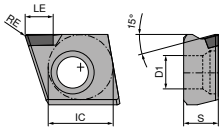
1) zonder inwendige koelmiddeltoevoer

Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Klemschroef 70 950 ... EUR 2A/28		Spie 70 950 ... EUR 2A/28		Moment-sleutel 80 950 ... EUR Y7	
40 - 160	4,90	**036**	4,60	**303**	3,57	**174**	38,64	**199**	135,90	**193**

15

ZNHW

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



ZNHW

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

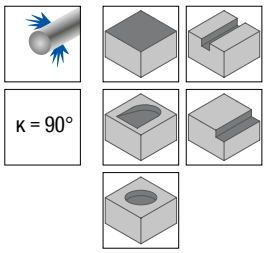
1) -Q = nasnijplaat

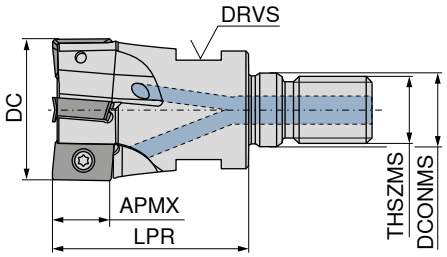
Freesgids

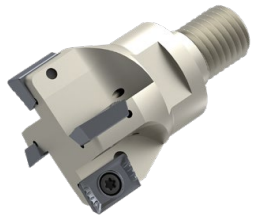
Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 168
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

MaxiMill – Inschroeffrees G 141

▲ wisselplaatradius > 3,2 mm: body modificeren



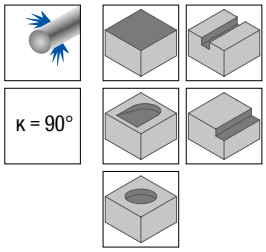


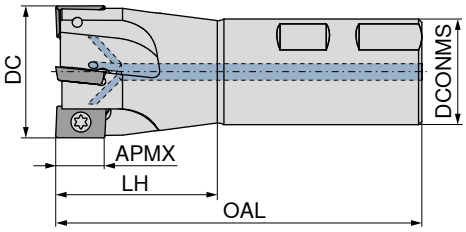


ISO-codering	DC mm	ZNF	APMX mm	LPR mm	THSZMS	DCONMS mm	DRVS mm	aantrekmoment Nm	Wisselplaat	50 770 ... EUR 2B	
G141.25.R.02.IK	25	2	14	35	M12	12,5	17	3,2	LD.. 1504..	171,70	**025**
G141.32.R.03.IK	32	3	14	40	M16	17,0	24	3,2	LD.. 1504..	206,20	**032**
G141.40.R.04.IK	40	4	14	40	M16	17,0	24	3,2	LD.. 1504..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

MaxiMill – Schachtfrees C 141

▲ wisselplaatradius > 3,2 mm: body modificeren







B

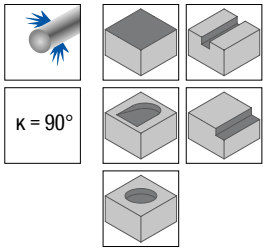
ISO-codering	DC mm	ZNF	APMX mm	DCONMS mm	OAL mm	LH mm	aantrekmoment Nm	Wisselplaat	50 771 ... EUR 2B	
C141.20.R.01	20	1	14	25	95	39	3,2	LD.. 1504..	176,00	**020**
C141.25.R.02	25	2	14	25	100	44	3,2	LD.. 1504..	234,30	**025**
C141.32.R.03	32	3	14	32	108	48	3,2	LD.. 1504..	272,20	**032**

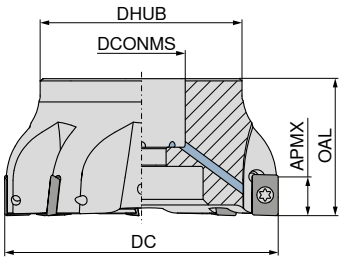
Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		Sleutel-D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Klemschroef 70 950 ... EUR 2A/28		Moment-sleutel 80 950 ... EUR Y7	
20 - 40	4,90	**036**	9,56	**113**	4,60	**303**	3,00	**01100**	132,50	**192**

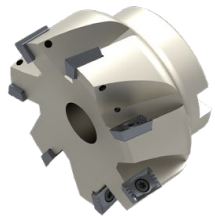
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MaxiMill – Opsteekfrees A 241

▲ wisselplaatradius > 3,2 mm: body modificeren





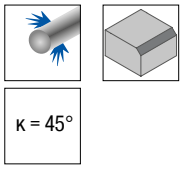


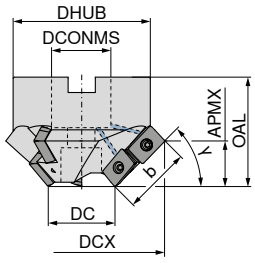
ISO-codering	DC mm	ZNF	APMX mm	DHUB mm	DCONMS mm	OAL mm	aantrekmoment Nm	Wisselplaat	50 769 ... EUR 2B	
A241.40.R.04	40	4	14	33	16	40	3,2	LD.. 1504..	282,90	**040**
A241.50.R.05	50	5	14	43	22	40	3,2	LD.. 1504..	346,70	**050**
A241.52.R.05	52	5	14	43	22	40	3,2	LD.. 1504..	339,20	**052**
A241.63.R.06	63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

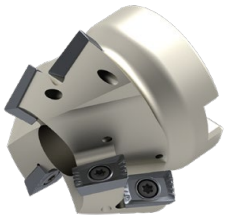
Onderdelen	TORX®-inzetstuk		 Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
DC	EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR Y7	
40	4,90	**036**	9,56	**113**	4,60	**303**	3,30	**110**	132,50	**192**
50 - 100	4,90	**036**	9,56	**113**	4,60	**303**	3,30	**304**	132,50	**192**

MaxiMill – Fasefrees A 242

▲ let op: alleen wisselplaten gebruiken met een neusradius kleiner dan 1,6 mm
▲ ZEFP = aantal wisselplaten
▲ ZNP = platen per snijkant







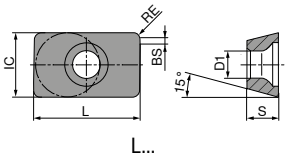
KAPR °	DC mm	DCX ±0,3 mm	ZNF	APMX ±0,3 mm	ZEFP	b ±0,3 mm	OAL mm	DCONMS mm	DHUB mm	ZNP	aantrekmoment Nm	Wisselplaat	50 768 ... EUR 2B	
15	35	92,2	3	7,6	6	29,6	50	27	62,5	2	3,2	LD.. 1504..	387,70	**015**
30	35	86,3	3	14,8	6	29,6	50	27	62,5	2	3,2	LD.. 1504..	387,70	**030**
45	35	76,9	3	20,9	6	29,6	50	27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

1) uitvoering met powerschroef

Onderdelen	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel		 Bevestigings-bout	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...		83 950 ...	
KAPR	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7		EUR Y8	
15 - 45	4,90	**036**			9,56	**113**			4,60	**303**	3,30	**304**	132,50	**192**	3,78	**125**
60 - 75	4,90	**036**	4,37	**050**	9,56	**113**	18,00	**154**	4,60	**303**	3,30	**304**	132,50	**192**		

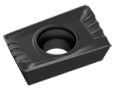
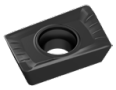
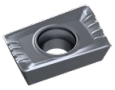
LDFW / LDFT / LDMT

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

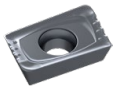
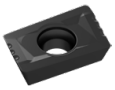


L...

LDFW / LDFT / LDMT

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

LDFT / LDFW

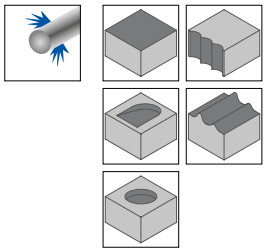
		-33 CTPM240	CTCK215	-27P H216T
		DRAGONSKIN	DRAGONSKIN	
				
		LDFT	LDFW	LDFT
		51 042 ...	51 043 ...	50 409 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1A/90
150408FR	0,8			20,84 550
150416SR	1,6	19,18 41600		
150432SR	3,2	19,18 43200		
1504PDSR	1,2	19,18 420		
1504PDSR	0,8		16,77 520	
P		○		
M		●		
K			●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

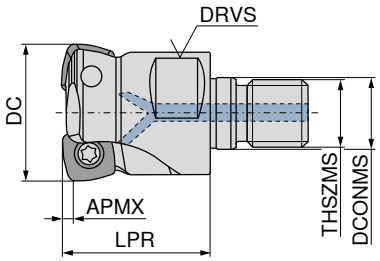
15

Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 170
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

MaxiMill – Inschroeffrees G HFC

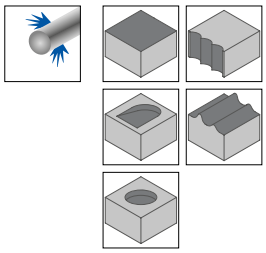


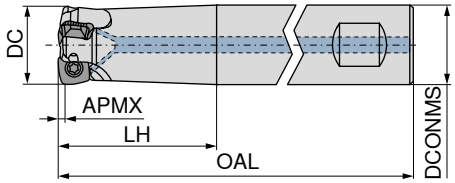




omschrijving	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	DRVS mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	50 682 ... EUR 2B/40	
GHFC.16.R.02-06	16	2	0,8	27	8,5	M8	10	20800	1,2	XPLX 0603..	237,40	616
GHFC.20.R.03-06	20	3	0,8	33	10,5	M10	15	19800	1,2	XPLX 0603..	269,60	620
GHFC.25.R.04-06	25	4	0,8	35	12,5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

MaxiMill – Schachtfrees C HFC

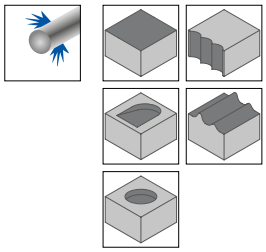


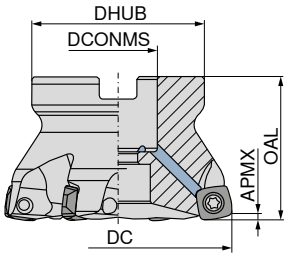


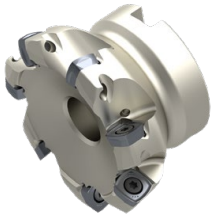


omschrijving	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS h6 mm	RPMX 1/min.	aantrekmoment Nm	Wisselplaat	A 50 681 ... EUR 2B/40		B 50 681 ... EUR 2B/40	
CHFC.16.R.02-06-A-40-200	16	2	0,8	200	40	16	4600	1,2	XPLX 0603..	237,40	716		
CHFC.16.R.02-06-B-40	16	2	0,8	89	40	16	17300	1,2	XPLX 0603..			237,40	616
CHFC.20.R.03-06-B-50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

MaxiMill – Opsteekfrees A HFC







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

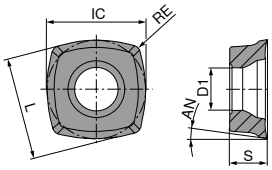
1) met 4 kopse gaten M12, steekcirkel-Ø = 66,7 mm / zonder inwendige koelmiddeltoevoer

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		80 397 ...		80 950 ...		70 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR Y7		EUR Y7		EUR Y7		EUR 2A/28		EUR 2A/28		EUR 2A/28		EUR Y7	
XDLX 09T3..	4,90	**036**			9,56	**113**			4,60	**303**	3,30	**110**	132,50	**192**
XDLX 09T3.. (Ø32 – Ø42)	4,90	**036**	4,03	**040**	9,56	**113**	13,10	**151**	4,60	**303**	3,30	**110**	132,50	**192**
XOLX 1204..	4,90	**037**			10,25	**114**			4,60	**303**	3,30	**01200**	135,90	**193**
XOLX 1204.. (Ø40 – Ø42)	4,90	**037**	4,03	**040**	10,25	**114**	13,10	**151**	4,60	**303**	3,30	**01200**	135,90	**193**
XOLX 1906..	4,90	**037**			10,25	**114**			4,60	**303**	4,29	**302**	135,90	**193**
XPLX 0603..	4,90	**033**			8,03	**110**			4,60	**303**	2,70	**116**	132,50	**192**

15

XPLX / XDLX / XOLX / XOHX

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



XPLX

NEW

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

XPLX

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

XDLX

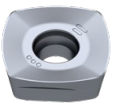
		-M50 CTCP220	-M50 CTPP225	-M50 CTCP230	-M50 CTPP235
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
					
		XDLX	XDLX	XDLX	XDLX
		51 016 ...	51 016 ...	51 016 ...	51 016 ...
ISO	RE mm	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1B/61
09T308SR	0,8	13,36 258	13,36 058	13,36 008	13,36 108
P		●	●	●	●
M					○
K				○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

XDLX

		NEW					
		-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	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17	EUR 1H/17	EUR 1H/17
09T308ER	0,8				16,13 458		
09T308SR	0,8	13,36 208	13,36 308	13,36 408		16,13 458	16,13 90801
P		●	●	○	●	●	●
M		●	●	●	●	●	●
K							
N							
S							○
H							
O							

15

XDLX / XOLX

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

XOLX

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

XOLX

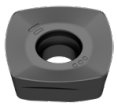
		-M50 CTPM225	-M50 CTCM235	-M50 CTPM240	-F40 CTPM245	-M50 CTPM245	NEW -F40 CTCM245	NEW -M50 CTCM245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
								
		XOLX	XOLX	XOLX	XOLX	XOLX	XOLX	XOLX
		51 017 ...	51 017 ...	51 017 ...	51 022 ...	51 017 ...	51 022 ...	51 017 ...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

XOLX / XOHX

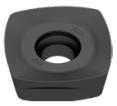
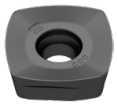
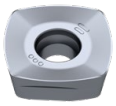
		-M50 CTCK215	-F40 CTC5240	-F50 CTC5240	-F40 CTCS245	-F50 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XOLX	XOLX	XOHX	XOLX	XOHX
		51 017 ...	50 504 ...	51 124 ...	51 022 ...	51 124 ...
ISO	RE mm	EUR 1B/61	EUR 17	EUR 17	EUR 17	EUR 17
120410ER	1,0		18,86 558		18,86 560	
120410SR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

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	EUR 1B/61	EUR 1B/61	EUR 1B/61	EUR 1H/17
190615ER	1,5				28,62 465
190615SR	1,5	23,28 015	23,28 115	23,28 415	
P		●	●	○	●
M			○	●	●
K		○	○		
N					
S					
H					
O					

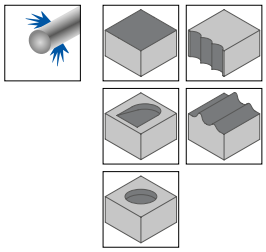
XOLX

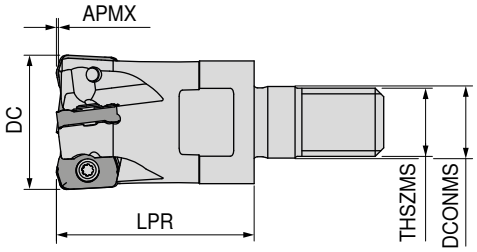
		NEW -F40 CTCM245	-M50 CTCK215	NEW -M50 CTPK220	-F40 CTC5240	-F40 CTCS245
		DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
		XOLX	XOLX	XOLX	XOLX	XOLX
		51 022 ...	51 017 ...	51 017 ...	50 504 ...	51 022 ...
ISO	RE mm	EUR 1H/17	EUR 1B/61	EUR 1B/61	EUR 17	EUR 17
190615ER	1,5	28,62 91501	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

Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 172–175
Startparameters	→ 172–175	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Inschroeffrees G DHFC

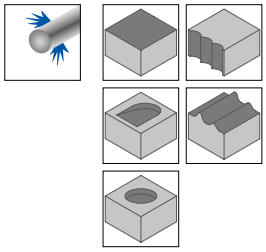


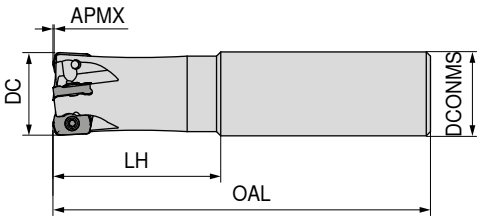




omschrijving	DC mm	ZNF	APMX mm	LPR mm	DCONMS mm	THSZMS	aantrekmoment Nm	Wisselplaat	56 411 ... EUR WA	
GDHFC.16.R.02-09	16	2	0,75	29	8,5	M8	0,65	LNKX 0925..	219,40	01602
GDHFC.16.R.03-09	16	3	0,75	29	8,5	M8	0,65	LNKX 0925..	239,30	01603
GDHFC.20.R.04-09	20	4	0,75	29	10,5	M10	0,65	LNKX 0925..	274,50	02004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

MaxiMill – Schachtfrees C DHFC







A

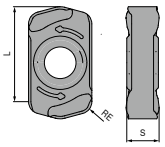
omschrijving	DC mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS $_{h6}$ mm	aantrekmoment Nm	Wisselplaat	56 417 ... EUR WA	
CDHFC.16.R.05-09-A-32	16	3	0,75	80	32	16	0,65	LNKX 0925..	239,30	01603
CDHFC.20.R.04-09-A-40	20	4	0,75	90	40	20	0,65	LNKX 0925..	274,50	02004

Onderdelen DC	TORX®-inzetstuk 80 950 ... EUR Y7		 Sleutel-D 80 950 ... EUR Y7		 Molykote 70 950 ... EUR 2A/28		 Klemschroef 56 950 ... EUR WA		 Moment-sleutel 80 950 ... EUR Y7	
16 - 42	5,42	051	8,19	117	4,60	303	3,42	15000	122,50	191

15

LNKX

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



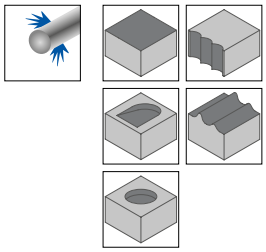
LNKX

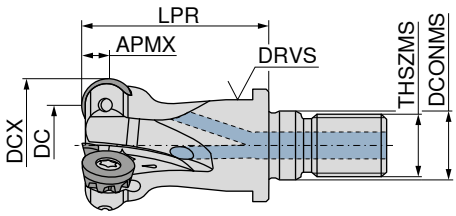
		-R50 CTPP231	-M50 CTPP236	-R50 CTPP236	-M50 CTPM241	-R50 CTPK221
						
		LNKX	LNKX	LNKX	LNKX	LNKX
		56 353 ...	**56 355 ...**	**56 353 ...**	**56 355 ...**	**56 353 ...**
ISO	RE mm	EUR WB	EUR WB	EUR WB	EUR WB	EUR WB
0925ZSR	1	18,56 **12000**	18,56 **02500**	18,56 **02000**	18,56 **42500**	18,56 **27000**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

Freesgids

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Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

MaxiMill – Inschroeffrees G 251



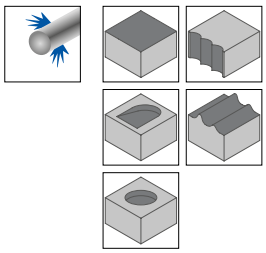


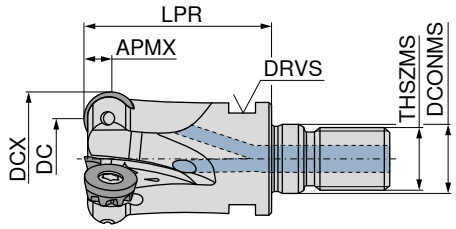


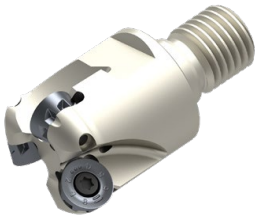
55 112 ...

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

MaxiMill – Inschroeffrees G 251 RS



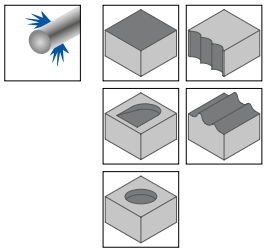


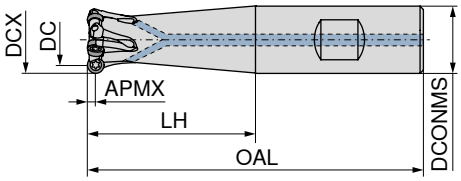


50 684 ...

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

MaxiMill – Schachtfrees C 251 RS



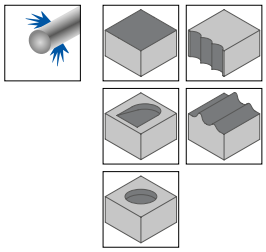


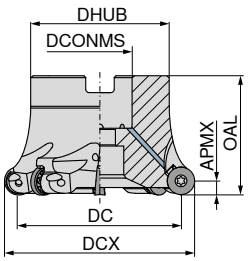


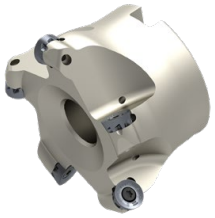
omschrijving	DC mm	DCX mm	ZNF	APMX mm	OAL mm	LH mm	DCONMS mm	RPMX 1/min.	Wisselplaat	A 50 685 ... EUR 2B/40		B 50 685 ... EUR 2B/40	
C251.10.R-02-05-B-12-20-RS	5	10	2	2,5	67	21,5	12	40000	RDHX 0501..			198,60	010
C251.10.R-02-05-A-25-165-RS	5	10	2	2,5	165	25,0	10	12000	RDHX 0501..	191,80	110		
C251.12.R-03-05-B-16-25-RS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

Onderdelen Wisselplaat	TORX®-inzetstuk 80 950 ... EUR Y7		Sleutel-D 80 950 ... EUR Y7		Molykote 70 950 ... EUR 2A/28		Klemschroef 70 950 ... EUR 2A/28		Moment-sleutel 80 950 ... EUR Y7	
RDHX 0501..	4,90	031	8,69	108	4,60	303	2,70	149	122,50	191
RDHX 0802..	4,90	033	8,03	110	4,60	303	2,70	116	122,50	191
RP.X 10T3..	4,90	035	9,41	112	4,60	303	2,70	840	132,50	192
RP.X 1204..	4,90	036	9,56	113	4,60	303	3,30	304	132,50	192

MaxiMill – Opsteekfrees A 251 RS







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

TORX®-inzetstuk


Spansleutel-T


Sleutel-D


Powerschroef


Molykote


Klemschroef

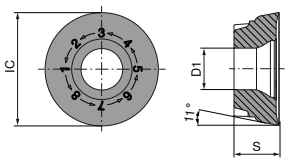

Moment-sleutel

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

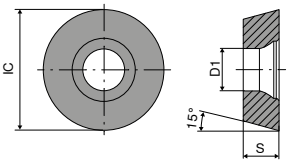
15

RDHX / RPHX / RPNX

omschrijving	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..

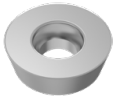


RDHX 0501.. / RDHX0802..

RDHX

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

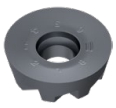
RDHX

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

RPHX / RPNX

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

RPHX / RPNX

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

15

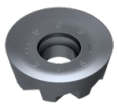
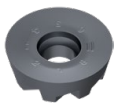
RPNX / RPHX

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

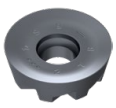
RPHX

ISO	-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 ...	
	EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61		EUR 1B/61	
1204M8EN			14,76	225					14,76	325
1204M8SN	14,76	225			14,76	225	14,76	325		
P	●		●		●		●		●	
M	●		●		●		●		●	
K										
N										
S										
H										
O										

RPHX / RPNX

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

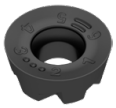
RPHX / RPNX

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

1) wisselplaat met 4-voudige indexering

15

RPNX / RPHX

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

1) wisselplaat met 4-voudige indexering

RPNX / RPHX

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

RPNX / RPHX

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

1) wisselplaat met 4-voudige indexering

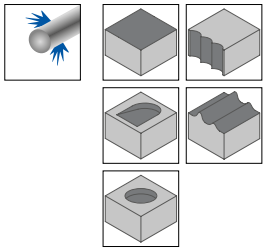
Freesgids

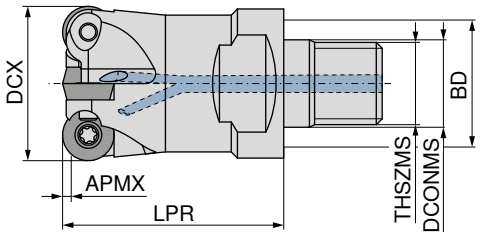
Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 177
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

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Frees met ronde platen R 1000 G

▲ plaathoek 0°





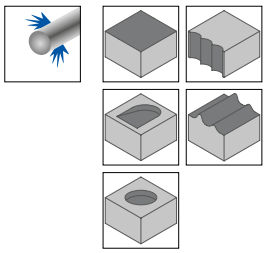


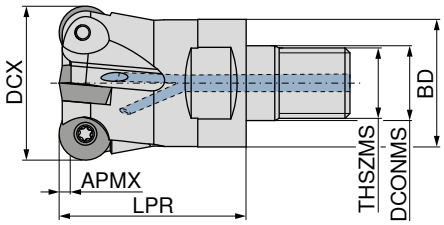
omschrijving	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	BD mm	aantrekmoment Nm	Wisselplaat	56 403 ... EUR WA	
R1000G.15.4.M8-05.IK	15	4	1,3	M8	20,5	8,5	13,8	0,43	RDHX 0501..	171,70	151
R1000G.20.5.M10-05.IK	20	5	1,3	M10	25,5	10,5	18,0	0,43	RDHX 0501..	203,10	201
R1000G.12.2.M8-07.IK	12	2	1,5	M8	28,5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

	TORX®-inzetstuk		 Klemschroef		 Spanring		 Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		56 950 ...		56 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
Onderdelen Wisselplaat	EUR Y7		EUR WA		EUR WA		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
RD.X 0702..	4,90	032					8,03	109	4,60	303	2,72	006	122,50	191
RD.X 07T1..	4,90	032					8,03	109	4,60	303	2,72	004	122,50	191
RD.X 1003..	4,90	036					9,56	113	4,60	303	3,50	010	132,50	192
RD.X 12T3..	4,90	036	2,13	022			9,56	113	4,60	303	3,50	010	132,50	192
RD.X 1604..	4,90	037			1,49	210	10,25	114	4,60	303	3,96	012	132,50	192
RD.X 2006..	4,90	037			1,49	210	10,25	114	4,60	303	3,96	012	132,50	192
RDHX 0501..							8,69	108	4,60	303	2,64	002	122,50	191

Frees met ronde platen R 1007 G

- plaathoek 7°
- voor stalen < 10 % Cr



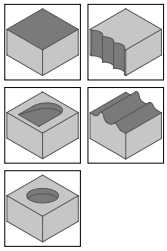


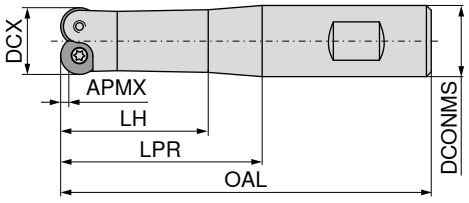


omschrijving	DCX mm	ZNF	APMX mm	THSZMS	LPR mm	DCONMS mm	BD mm	aantrekmoment Nm	Wisselplaat	56 405 ... EUR WA	
R1007G.25.3.M12-10.IK	25	3	2,5	M12	32,5	12,5	21	2,4	RD.X 1003..	126,40	**251**
R1007G.42.6.M16-10.IK	42	6	2,5	M16	42,5	17,0	29	2,4	RD.X 1003..	238,70	**421**
R1007G.35.3.M16-12.IK	35	3	3,0	M16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

Frees met ronde platen R 1000 C

- plaathoek 0°







A

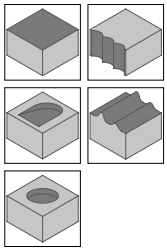
omschrijving	DCX mm	ZNF	APMX mm	OAL mm	LPR mm	LH mm	DCONMS mm	aantrekmoment Nm	Wisselplaat	56 441 ... EUR WA	
R1000C.8.1.30-05	8	1	1,3	75	30	18	10	0,43	RDHX 0501..	124,20	**081**
R1000C.10.2.30-05	10	2	1,3	75	30	23	10	0,43	RDHX 0501..	137,20	**101**
R1000C.12.3.30-05	12	3	1,3	81	30	23	12	0,43	RDHX 0501..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

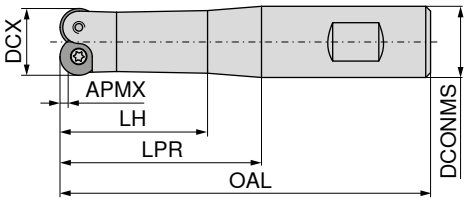
Onderdelen	TORX®-inzetstuk 80 950 ...		 Sleutel-D 80 950 ...		 Molykote 70 950 ...		 Klemschroef 56 950 ...		 Moment-sleutel 80 950 ...	
Wisselplaat	EUR Y7		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
RD.X 07T1..	4,90	**032**	8,03	**109**	4,60	**303**	2,72	**004**	122,50	**191**
RDHX 0501..			8,69	**108**	4,60	**303**	2,64	**002**	122,50	**191**

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Frees met ronde platen R 1002 C

▲ plaathoek 0°







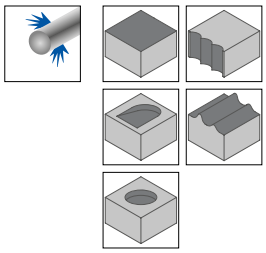


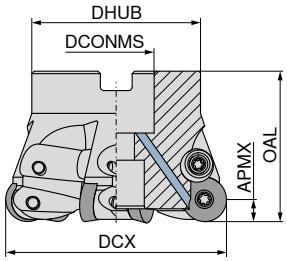
56 443 ...

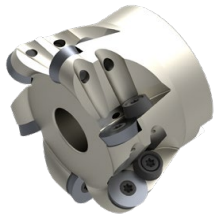
omschrijving	DCX mm	ZNF	APMX mm	OAL mm	LPR mm	LH mm	DCONMS mm	Wisselplaat	EUR WA	
R1002C.12.2.40-07	12	2	1,5	89	40	19,5	16	RD.X 07T1..	100,20	**121**
R1002C.12.2.60-07	12	2	1,5	110	60	19,5	16	RD.X 07T1..	107,40	**122**
R1002C.12.2.80-07	12	2	1,5	129	80	19,5	16	RD.X 07T1..	114,40	**123**
R1002C.15.2.40-07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

Frees met ronde platen R 1000 A

▲ plaathoek 0°







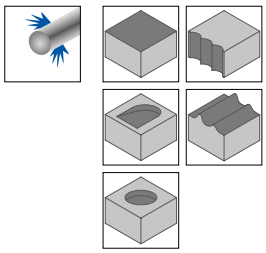
56 407 ...

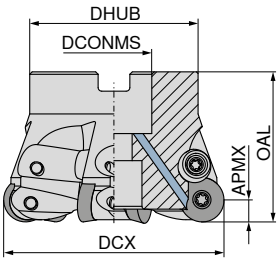
omschrijving	DCX mm	ZNF	APMX mm	OAL mm	DCONMS mm	DHUB mm	aantrekmoment Nm	Wisselplaat	EUR WA	
R1000A.42.6.43-10.IK	42	6	2,8	43,0	16	35	2,4	RD.X 1003..	238,70	**420**
R1000A.42.4.43-12.IK	42	4	3,0	43,0	16	35	2,4	RD.X 12T3..	192,30	**421**
R1000A.42.5.43-12.IK	42	5	3,0	43,0	16	35	2,4	RD.X 12T3..	220,30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

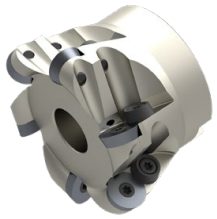
	TORX®-inzetstuk	 Klemschroef	 Spanring	 Sleutel-D	 Molykote	 Klemschroef	 Moment-sleutel
	80 950 ...	**56 950 ...**	**56 950 ...**	**80 950 ...**	**70 950 ...**	**56 950 ...**	**80 950 ...**
Onderdelen Wisselplaat	EUR Y7	EUR WA	EUR WA	EUR Y7	EUR 2A/28	EUR WA	EUR Y7
RD.X 1003..	4,90 **036**			9,56 **113**	4,60 **303**	3,50 **010**	132,50 **192**
RD.X 12T3..	4,90 **036**	2,13 **022**		9,56 **113**	4,60 **303**	3,50 **010**	132,50 **192**
RD.X 1604..	4,90 **037**		1,49 **210**	10,25 **114**	4,60 **303**	3,96 **012**	132,50 **192**

Frees met ronde platen R 1007 A

- plaathoek 7°
- voor stalen < 10 % Cr en freesmachines met geringer aandrijfvermogen







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

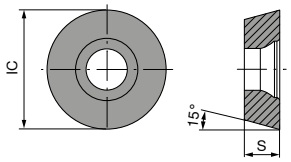
1) zonder inwendige koelmiddeltoevoer

	TORX®-inzetstuk		 Klemschroef		 Spanring		 Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		56 950 ...		56 950 ...		80 950 ...		70 950 ...		56 950 ...		80 950 ...	
Onderdelen Wisselplaat	EUR Y7		EUR WA		EUR WA		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
RD.X 1003..	4,90	**036**					9,56	**113**	4,60	**303**	3,50	**010**	132,50	**192**
RD.X 12T3..	4,90	**036**	2,13	**022**			9,56	**113**	4,60	**303**	3,50	**010**	132,50	**192**
RD.X 1604..	4,90	**037**			1,49	**210**	10,25	**114**	4,60	**303**	3,96	**012**	132,50	**192**
RD.X 2006..	4,90	**037**			1,49	**210**	10,25	**114**	4,60	**303**	3,96	**012**	132,50	**192**

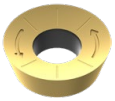
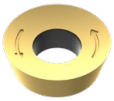
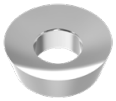
15

RDHX / RDMX / RDEX / RDPX

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



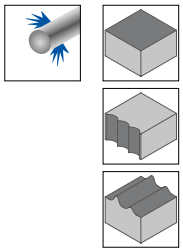
RDHX / RDMX / RDEX / RDPX

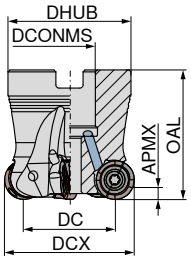
	WTN1205	WAN1240	WAX1240	-HP WAN2225	-F30P WUN4210
					
	RDHX	RDMX	RDEX	RDPX	RDHX
	56 302 ...	56 309 ...	56 314 ...	56 348 ...	56 304 ...
ISO	EUR WB		EUR WB		EUR WB		EUR WB		EUR WB	
0501M0T	12,60	100								
0702M0E									12,14	611
0702M0T	12,94	111			9,01	611				
07T1M0E									12,14	621
07T1M0T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

Freesgids

Richtwaarden voor snijgegevens	→ 178–180	Bewerkingsstrategie	→ 181+182
Technische informatie	→ 189–194	Soortenbeschrijving	→ 195–197
Coderingssysteem	→ 198–201		

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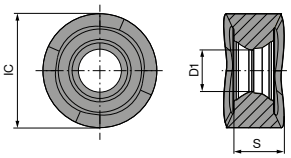
omschrijving	DC mm	DCX mm	ZNF	APMX mm	OAL mm	DHUB mm	DCONMS mm	aantrekmoment Nm	Wisselplaat	50 689 ... EUR 2B/40	
A252.40.R.05-10	30	40	5	2,5	40	38	16	2	RNHU 1004..	421,80	**140**
A252.42.R.05-10	32	42	5	2,5	40	38	16	2	RNHU 1004..	483,70	**142**
A252.50.R.06-10	40	50	6	2,5	40	43	22	2	RNHU 1004..	501,50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

	TORX®-inzetstuk		 Spansleutel-T		 Sleutel-D		 Powerschroef		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		**80 397 ...**		**80 950 ...**		**70 950 ...**		**70 950 ...**		**70 950 ...**		**80 950 ...**	
Onderdelen	**EUR** Y7		**EUR** Y7		**EUR** Y7		**EUR** 2A/28		**EUR** 2A/28		**EUR** 2A/28		**EUR** Y7	
RNHU 1004.. (Ø40 – Ø80)	5,42	**053**			11,91	**127**			4,60	**303**	3,24	**710**	132,50	**192**
RNHU 1205.. (Ø40)	5,42	**054**	4,03	**040**	12,25	**128**	13,10	**151**	4,60	**303**	3,34	**839**	132,50	**192**
RNHU 1205.. (Ø50 – Ø125)	5,42	**054**			12,25	**128**			4,60	**303**	3,34	**839**	132,50	**192**

15

RNHU

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



RNHU

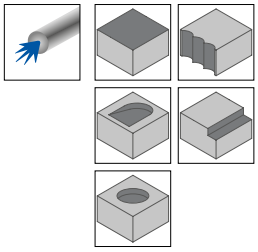
	-M50 CTPP235	-F50 CTPM240	-M31 CTPM245	-M32 CTPM245	-M31 CTC5240	-M31 CTC5240
	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN	DRAGONSKIN
						
	RNHU	RNHU	RNHU	RNHU	RNHU	RNHU
	51 130 ...	**51 129 ...**	**51 106 ...**	**51 107 ...**	**50 520 ...**	**50 521 ...**
ISO	**EUR** 1B/61	**EUR** 1B/61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

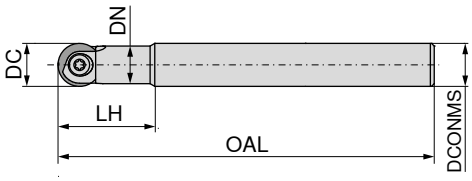
Freesgids

Richtwaarden voor snijgegevens	→ 141–144	Bewerkingsstrategie	→ 183
Technische informatie	→ 189+194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

Kopieerfreesplaathouder K 2000C / K 2001C

▲ met hardmetalen schacht







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

1) zonder inwendige koelmiddeltoevoer

Te gebruiken platen

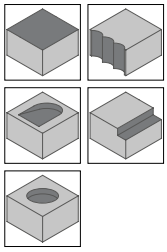
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

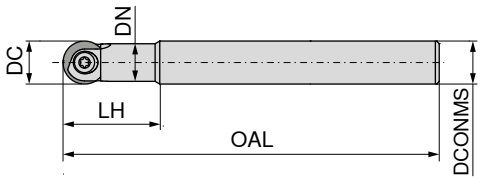
	**XOHX06.. -MR2, XOHX-FM1**

15

Kopieerfreesplaathouder K 2002C

▲ cilindrische uitvoering met stalen schacht







56 102 ...

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

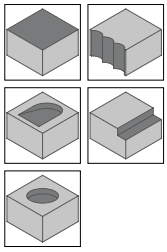
Te gebruiken platen

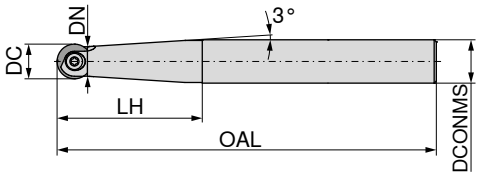
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

	**XOHX-FM1**

Kopieerfreesplaathouder K 2003C

▲ conische uitvoering met stalen schacht







56 104 ...

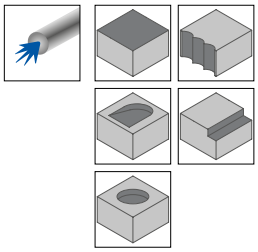
omschrijving	DC mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	aantrekmoment Nm	EUR WA	
K2003C.6.16.90	6	5,3	40	90	10	0,5	108,10	**061**
K2003C.8.50.85	8	7,5	50	85	12	1	128,50	**081**
K2003C.8.50.140	8	7,5	50	140	12	1	128,50	**082**
K2003C.10.35.85	10	9,0	35	85	12	3	128,50	**101**
K2003C.10.35.150	10	9,0	35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

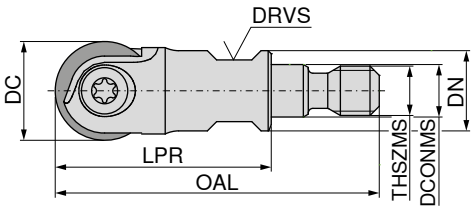
Te gebruiken platen

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

	**XOHX-FM1**

Kopieerfreesplaathouder K 2000G







56 120 ...

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

1) zonder inwendige koelmiddeltoevoer

Te gebruiken platen

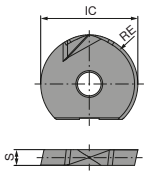
	**ROHX-FM3, ROHX-FM4, ROHX-FM6, ROHX-MR5, ROGX-MR4**

	**XOHX-FM1**

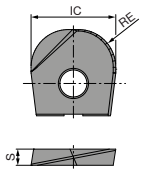
	TORX®-inzetstuk		 Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
	80 950 ...		**80 950 ...**		**70 950 ...**		**56 950 ...**		**80 950 ...**	
Onderdelen DC	EUR Y7		EUR Y7		EUR 2A/28		EUR WA		EUR Y7	
6	4,90	**031**	8,69	**108**	4,60	**303**	6,28	**041**	122,50	**191**
8	4,90	**033**	8,03	**110**	4,60	**303**	6,28	**042**	122,50	**191**
10	4,90	**036**	9,56	**113**	4,60	**303**	6,28	**043**	135,90	**193**
12	4,90	**037**	10,25	**114**	4,60	**303**	8,58	**044**	135,90	**193**
16	4,90	**037**	10,25	**114**	4,60	**303**	8,58	**045**	135,90	**193**
20	4,90	**037**	10,25	**114**	4,60	**303**	8,58	**046**	135,90	**193**
25			12,46	**131**	4,60	**303**	8,58	**047**		
32			12,46	**131**	4,60	**303**	8,70	**048**		

ROHX / XOHX / ROGX

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



RO.X



XOHX

ROHX / XOHX / ROGX

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

1) specifiek voor de bewerking van grafiet!

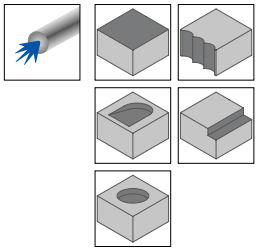
Freesgids

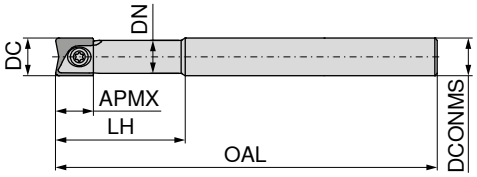
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Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

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Kopieerfreesplaathouder K 2005C / K 2006C

▲ met hardmetalen schacht







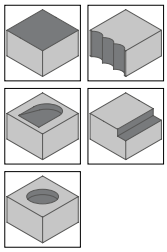
omschrijving	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	aantrekmoment Nm	56 110 ... EUR WA		56 111 ... EUR WA	
K2005C.8.27.82	8	9,5	7,0	27	82	8	1	391,00	**081** [1]		
K2005C.8.27.102	8	9,5	7,0	27	102	8	1	391,00	**082** [1]		
K2005C.8.42.152	8	9,5	7,0	42	152	8	1	434,20	**083** [1]		
K2005C.10.37.82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

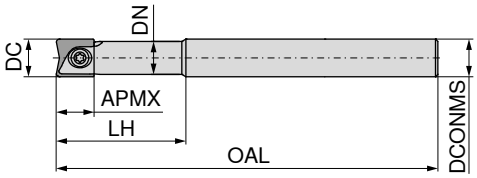
1) zonder inwendige koelmiddeltoevoer

Te gebruiken platen

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

Kopieerfreesplaathouder K 2007C







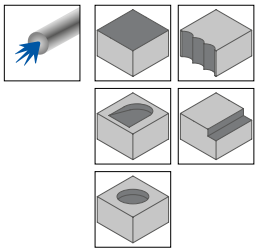
56 112 ...

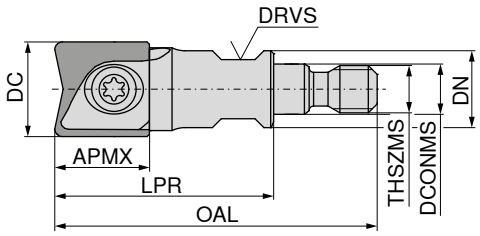
omschrijving	DC mm	APMX mm	DN mm	LH mm	OAL mm	DCONMS $_{h6}$ mm	aantrekmoment Nm	EUR WA	
K2007C.12.34.92	12	14,0	10,5	34	92	12	4	105,30	**121**
K2007C.12.34.132	12	14,0	10,5	34	132	12	4	96,34	**122**
K2007C.12.48.152	12	14,0	10,5	48	152	12	4	100,80	**123**
K2007C.16.38.102	16	16,0	14,0	38	102	16	5	102,10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

Te gebruiken platen

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

Kopieerfreesplaathouder K 2005G







56 130 ...

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

1) zonder inwendige koelmiddeltoevoer

Te gebruiken platen

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

TORX®-inzetstuk

80 950 ...

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


Sleutel-D

80 950 ...

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


Molykote

70 950 ...

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


Klemschroef

56 950 ...

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

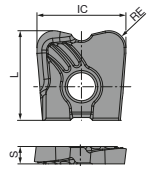

Moment-sleutel

80 950 ...

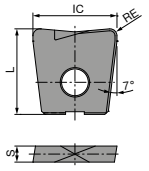
EUR Y7	
122,50	**191**
135,90	**193**
135,90	**193**
135,90	**193**
135,90	**193**

XOHX / XOGX

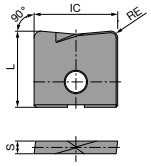
omschrijving	IC mm	S mm	L mm
XO.X10251..	10	2,50	11,5
XO.X12251..	12	2,50	14,0
XO.X16301..	16	3,00	16,0
XO.X16303..	16	3,00	16,0
XO.X20301..	20	3,00	18,0
XO.X20304..	20	3,00	18,0
XOGX12252..	12	2,50	14,0
XOHX06160..	6	1,60	8,0
XOHX08200..	8	2,00	9,5
XOHX08201..	8	2,00	9,5
XOHX10250..	10	2,50	11,5
XOHX12252..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



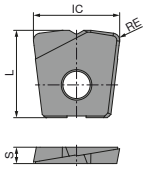
XOGX



XOHX

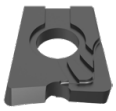
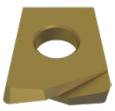


XOHX



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

1) specifiek voor de bewerking van grafiet!

Freesgids

Richtwaarden voor snijgegevens	→ 184+185	aanzetdiepte	→ 186
Technische informatie	→ 189–194	Spaanbreker beschrijving en overzicht	→ 195–197
Soorten beschrijving en overzicht	→ 198–201		

15

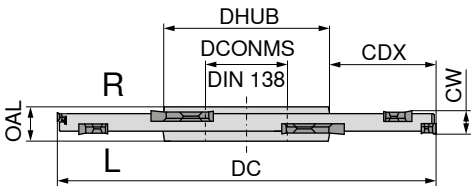
Schijf- afkortfrees TX

- Let op: schijf- afkortfrezen TX zijn kruisvertand en moeten worden voorzien van wisselplaten in rechtse en linkse uitvoering!
- ZEFP = aantal wisselplaten

leveromvang:

schijffrees, 2 reserveschroeven en 1Torx-sleutel







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

1) zonder inwendige koelmiddeltoevoer

	TORX®-inzetstuk		Sleutel-D		Molykote		Klemschroef		Moment-sleutel	
	80 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen	EUR		EUR		EUR		EUR		EUR	
CW	Y7		Y7		2A/28		V5		Y7	
3	4,90	**032**	8,03	**109**	4,60	**303**	4,85	**858**	122,50	**191**
4	4,90	**033**	8,03	**110**	4,60	**303**	2,22	**218**	122,50	**191**
6	4,90	**036**	9,56	**113**	4,60	**303**	2,89	**101**	132,50	**192**
8	4,90	**037**	10,25	**114**	4,60	**303**	2,89	**135**	132,50	**192**
10	4,90	**037**	10,25	**114**	4,60	**303**	2,84	**146**	132,50	**192**

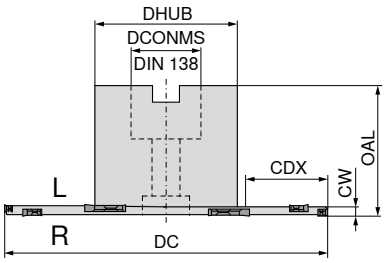
Opsteek schijf- afkortfrees TX

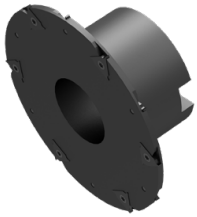
- ▲ Let op: schijf- afkortfrezen TX zijn kruisvertand en moeten worden voorzien van wisselplaten in rechtse en linkse uitvoering!
- ▲ ZEFP = aantal wisselplaten

leveromvang:

schijffrees, 2 reserveschroeven en 1Torx-sleutel







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

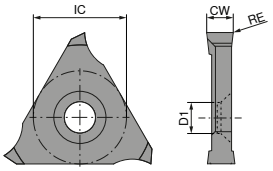
1) zonder inwendige koelmiddeltoevoer

		 Onderleg-ring		TORX®-inzetstuk		 Klemschroef		Sleutel-D		 Molykote		 Klemschroef		 Moment-sleutel	
		70 950 ...		80 950 ...		70 950 ...		80 950 ...		70 950 ...		70 950 ...		80 950 ...	
Onderdelen		EUR V5		EUR Y7		EUR V5		EUR Y7		EUR 2A/28		EUR V5		EUR Y7	
CW	**DCONMS**														
3	27	1,13	**221**	4,90	**032**	1,68	**219**	8,03	**109**	4,60	**303**	4,85	**858**	122,50	**191**
3	40	1,71	**222**	4,90	**032**	7,24	**220**	8,03	**109**	4,60	**303**	4,85	**858**	122,50	**191**
4	27	1,13	**221**	4,90	**033**	1,68	**219**	8,03	**110**	4,60	**303**	2,22	**218**	132,50	**192**
4	40	1,71	**222**	4,90	**033**	7,24	**220**	8,03	**110**	4,60	**303**	2,22	**218**	132,50	**192**

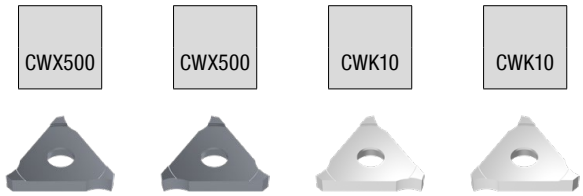
15

TX-L / TX-R

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



TX-L / TX-R



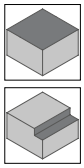
ISO	RE mm	TX-L 50 382 ... EUR V5		TX-R 50 381 ... EUR V5		TX-L 50 382 ... EUR V5		TX-R 50 381 ... EUR V5	
TX 161702	0,2	20,77	**217**	20,77	**217**				
TX 162302	0,2	20,54	**223**	20,54	**223**				
TX 223202	0,2	31,00	**232**	31,00	**232**	27,47	**532**	27,47	**532**
TX 224302	0,2	31,32	**243**	31,32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

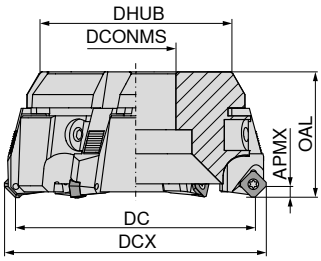
Freesgids

Richtwaarden voor snijgegevens	→ 187	Technische informatie	→ 189–194
Spaanbreker beschrijving en overzicht	→ 195–197	Soorten beschrijving en overzicht	→ 198–201

MaxiMill – Freesbody combifrees 260

▲ freesbody met spanspieën, zonder cassettes







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

1) zonder inwendige koelmiddeltoevoer

Informatie over het instellen van de vlakloop vindt u op → **pagina 188**

Onderdelen DC	Spanspie-bout 70 950 ... EUR 2A/28		Spanspie 70 950 ... EUR 2A/28		Sleutel-T 70 950 ... EUR 2A/28		Molykote 70 950 ... EUR 2A/28		Excenter-sleutel 70 950 ... EUR 2A/28	
80 - 400	3,13	**297**	18,34	**296**	7,44	**317**	4,60	**303**	12,99	**298**

Wisselplaat gerelateerde Ø

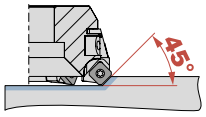
	Wisselplaat	nominale-Ø in mm 80 DC mm	80 DCX mm	100 DC mm	100 DCX mm	120 DC mm	120 DCX mm	160 DC mm	160 DCX mm	200 DC mm	200 DCX mm	250 DC mm	250 DCX mm	315 DC mm	315 DCX mm	400 DC mm	400 DCX mm
	SD.. 0903..	80	88,4	100	108,4	123	131,4	158	166,4	198	206,4	248	256,4	313	321,4	398	406,4
	SD.. 1204..	80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

15

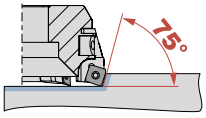
Systeem MaxiMill 260/combinatiefrees

Cassettes voor freeswisselplaten

Vlakfrezen

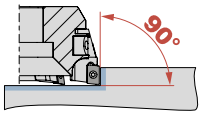


	SD.. 0903..	SD.. 1204.. XD.. 1204..	SE.. 1204..	SD.. 1504..	SA.. 1706..	OA.. 0605..
Cassette-nr.	041	031	029	032	058	057
Artikel-nr. 70 950 ...	329	411	306	412	30800	338



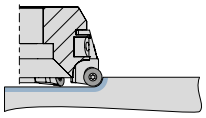
	SP.. 1204..
Cassette-nr.	018
Artikel-nr. 70 950 ...	310

Hoekfrezen



	AP.. 1003..	LD.. 1504..	XD.T 11T3..	XDKT 1505..	SD.. 1205..	SD.. 09T3..	TPKW 2204..
Cassette-nr.	042	051	054	056	039	055	025
Artikel-nr. 70 950 ...	307	300	336	339	311	337	313

Vlak-/kopieerfrezen



	RP.X 1204..	RP.X 16....
Cassette-nr.	052	053
Artikel-nr. 70 950 ...	333	707

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

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

Materiaalvoorbeelden bij de snijgegevenstabellen

	Materiaal ondergroep	Index	Samenstelling / Structuur / Warmtebehandeling		Treksterkte N/mm² - HB / HRc	Werkstof-nummer	Materiaal beschrijving	Werkstof-nummer	Materiaal Beschrijving
P	Ongelegeerd staal	P.1.1	< 0,15 % C	gegloeid	420 N/mm² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	gegloeid	640 N/mm² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		veredeld	840 N/mm² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	gegloeid	910 N/mm² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		veredeld	1010 N/mm² / 300 HB	1.1223	C60R	1.0727	45S20
	Laaggelegeerd staal	P.2.1		gegloeid	610 N/mm² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		veredeld	930 N/mm² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		veredeld	1010 N/mm² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		veredeld	1200 N/mm² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	Hooggelegeerd staal en hooggelegeerd gereedschapstaal	P.3.1		gegloeid	680 N/mm² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		gehard en ontlaten	1100 N/mm² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		gehard en ontlaten	1300 N/mm² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	RVS	P.4.1	ferritisch / martensitisch	gegloeid	680 N/mm² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	martensitisch	veredeld	1010 N/mm² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	RVS	M.1.1	austenitisch / austenitisch-ferritisch	afgeschrikt	610 N/mm² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	austenitisch	veredeld	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	austenitisch / ferritisch (Duplex)		780 N/mm² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grijs gietijzer	K.1.1	perlitisch / ferritisch		350 N/mm² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	perlitisch (martensitisch)		500 N/mm² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Nodulair gietijzer	K.2.1	ferritisch		540 N/mm² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	perlitisch		845 N/mm² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Tempergietijzer	K.3.1	ferritisch		440 N/mm² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	perlitisch		780 N/mm² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium – kneedlegering	N.1.1	niet hardbaar		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	hardbaar	uitgehard	340 N/mm² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Aluminium gietlegering	N.2.1	≤ 12 % Si, niet hardbaar		250 N/mm² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardbaar	uitgehard	300 N/mm² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, niet hardbaar		440 N/mm² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Koper en koperlegeringen (brons /messing)	N.3.1	automatenlegering (1 % Pb)		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, loodvrij koper en elektrolytisch koper		340 N/mm² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesiumlegeringen	N.4.1	Magnesium en magnesium legeringen		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Hittebestendige Legeringen	S.1.1	Fe - basis	gegloeid	680 N/mm² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		uitgehard	950 N/mm² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni- of Co Basis	gegloeid	840 N/mm² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		uitgehard	1180 N/mm² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		gegoten	1080 N/mm² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titaanlegeringen	S.3.1	Zuiver titaan		400 N/mm²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha- + Beta - legeringen	uitgehard	1050 N/mm² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta legeringen		1400 N/mm² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
H	Gehard staal	H.1.1		gehard en ontlaten	46–55 HRC				
		H.1.2		gehard en ontlaten	56–60 HRC				
		H.1.3		gehard en ontlaten	61–65 HRC				
		H.1.4		gehard en ontlaten	66–70 HRC				
	Hard gietijzer	H.2.1		gegoten	400 HB				
	Gehard gietijzer	H.3.1		gehard en ontlaten	55 HRC				
O	Niet-metalen materialen	O.1.1	Kunststoffen, duroplastisch		≤ 150 N/mm²				
		O.1.2	Kunststoffen, thermoplastisch		≤ 100 N/mm²				
		O.2.1	Aramidevezelf versterkt		≤ 1000 N/mm²				
		O.2.2	Glas-/koolstofvezel verstert		≤ 1000 N/mm²				
		O.3.1	Grafiet						

*** Treksterkte**

Richtwaarden voor snijgegevens

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

De snijgegevens zijn zeer sterk afhankelijk van externe omstandigheden, zoals bijvoorbeeld de stabiliteit van het gereedschap, de werkstukopspanning, het materiaal en type machine! De aangegeven waarden zijn mogelijke snijgegevens, die afhankelijk van de toepassing met ca. **20 %** aangepast moeten worden!

Richtwaarden voor snijgegevens

snijmateriaal **hard** (V_c↑) → **taai** (V_c↓)

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

15

De snijgegevens zijn zeer sterk afhankelijk van externe omstandigheden, zoals bijvoorbeeld de stabiliteit van het gereedschap, de werkstukopspanning, het materiaal en type machine! De aangegeven waarden zijn mogelijke snijgegevens, die afhankelijk van de toepassing met ca. **20 %** aangepast moeten worden!

Richtwaarden voor snijgegevens

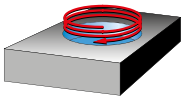
	snijmateriaal **hard** (V_c↑) → **taai** (V_c↓)																	
	DRAGONSKIN		DRAGONSKIN										DRAGONSKIN					
	CTCK215		CTPK220		CTPK221		AMZ		H216T		CTWN215		CTC5240		CTCS245		CTP6215	
Index																		
P.1.1					190	120												
P.1.2					180	100												
P.1.3					150	80										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

De snijgegevens zijn zeer sterk afhankelijk van externe omstandigheden, zoals bijvoorbeeld de stabiliteit van het gereedschap, de werkstukopspanning, het materiaal en type machine! De aangegeven waarden zijn mogelijke snijgegevens, die afhankelijk van de toepassing met ca. 20% aangepast moeten worden!

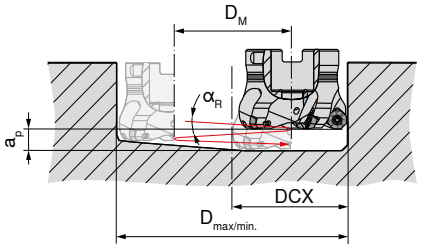
Systeem MaxiMill 274-04/-09

Bewerkingsstrategie

Circulair induiken



$D_{max.}$ in mm = grootste diameter voor een vlakke bodem
$D_{min.}$ in mm = kleinste diameter voor een vlakke bodem
D_M = D_{max} – DCX resp. D_{min} – DCX



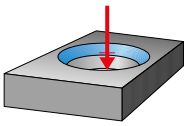
OF..04

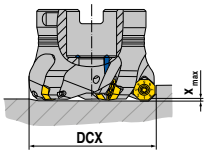
DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
25,6	45	39	2,3
30,7	55	49	1,9
37,7	69	63	1,4
45,7	85	79	1,2
55,7	105	99	0,9
68,7	131	125	0,7
85,7	165	159	0,6
105,7	205	199	0,5
130,7	255	249	0,4

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

Axiaal induiken





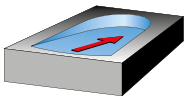
OF..04

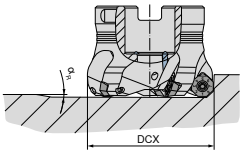
DCX mm	x_{max} mm
25,6	2,5
30,7	2,5
37,7	2,5
45,7	2,5
55,7	2,5
68,7	2,5
85,7	2,5
105,7	2,5
130,7	2,5

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

Schuin induiken





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

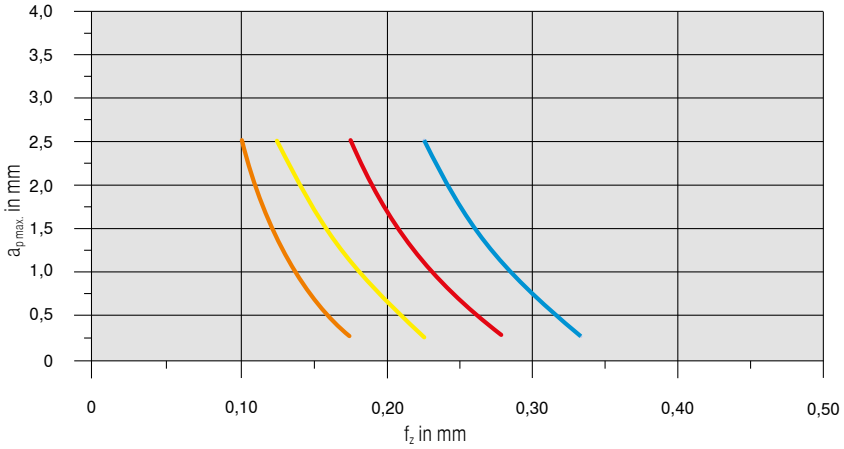
DCX mm	$\alpha_{R\,max}$ °
27,4	20,4
32,5	13,0
39,2	8,0
47,6	5,8
57,6	4,3
70,5	3,2
87,5	2,3
107,5	1,7
132,5	1,3

Systeem MaxiMill 274-04

Startparameters



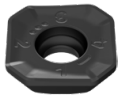
OF.. 04



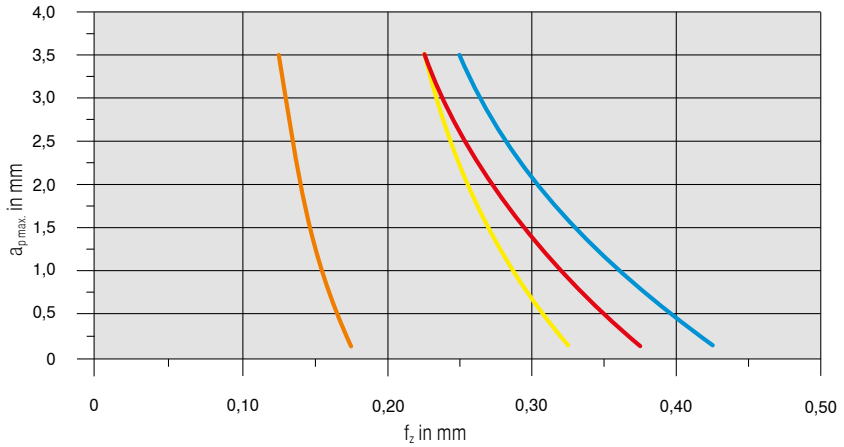
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**OFHT040305SN-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT040305SN-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**OFHT040305SN-M50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**OFHT040305SN-F50**	**CTC5240**	35	emulsie

Systeem MaxiMill 274-09

Startparameters



SF.. 09



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SFKT0903AFSR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SFHT0903AFSR-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**SFKT0903AFSR-R50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**SFHT0903AFSR-F50**	**CTC5240**	35	emulsie

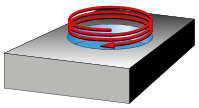
Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

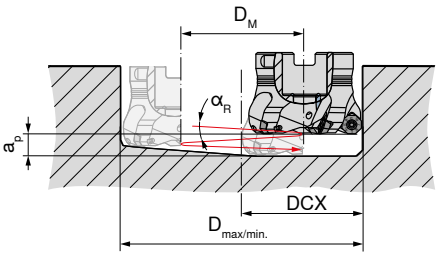
Systeem MaxiMill 274-05/-12

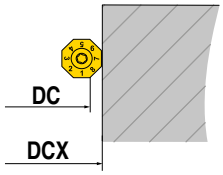
Bewerkingsstrategie

Circulair induiken



$D_{max.}$ in mm = grootste diameter voor een vlakke bodem
$D_{min.}$ in mm = kleinste diameter voor een vlakke bodem
D_M = D_{max} – DCX resp. D_{min} – DCX





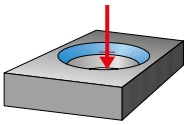
OF..05

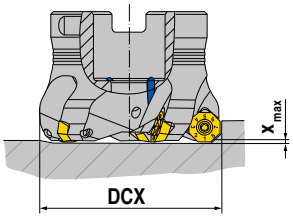
DC mm	DCX mm	D_{max} mm	D_{min} mm	$\alpha_{R\,max}$ °
50	**58**	107	99	1,1
63	**71**	133	125	0,9
80	**88**	167	159	0,7
100	**107,9**	207	199	0,5
125	**132,9**	257	249	0,4

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

Axiaal induiken





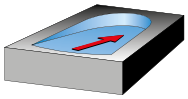
OF..05

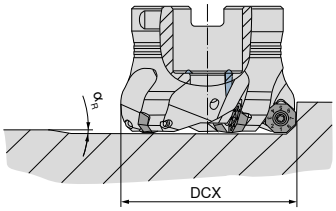
DC mm	DCX mm	X_{max} mm
50	**58**	2,2
63	**71**	1,9
80	**88**	1,8
100	**107,9**	1,1
125	**132,9**	1,4

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

Schuin induiken





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

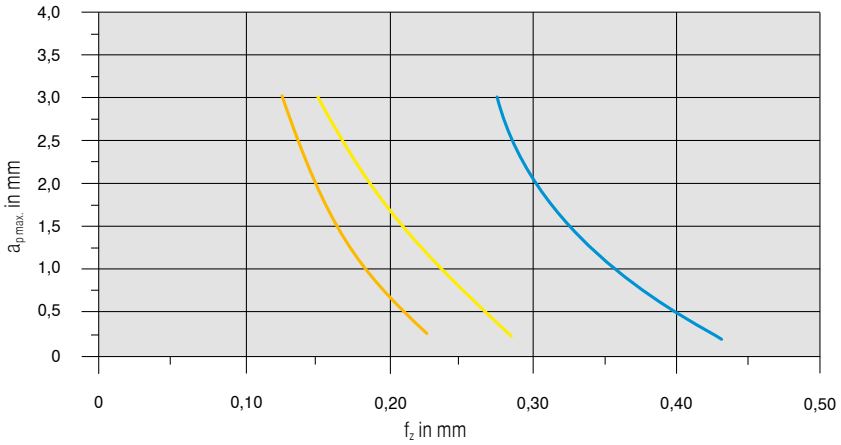
DC mm	DCX mm	$\alpha_{R\,max}$ °
47,0	**61,0**	4,9
59,9	**74,0**	3,4
76,9	**90,9**	2,4
96,9	**110,9**	1,6
121,9	**135,9**	1,3

Systeem MaxiMill 274-05

Startparameters



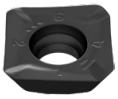
OF.. 05



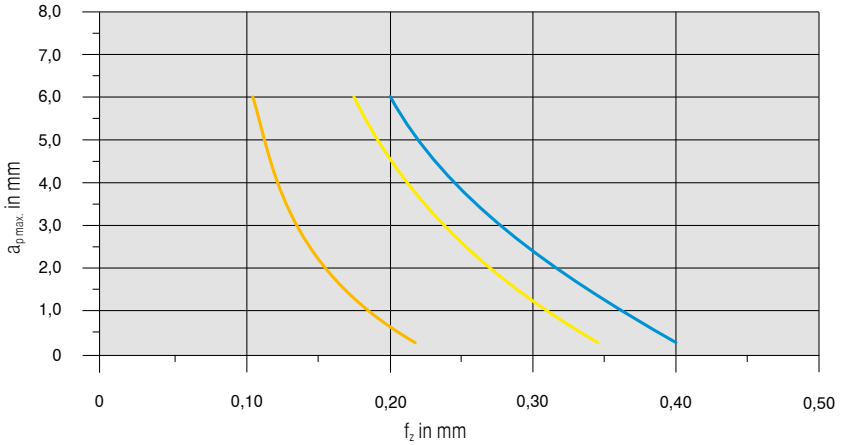
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**OFHT050410SN-M50**	**CTCP230**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**OFHT050410SN-F50**	**CTPM240**	180	Droog
Hittebestendig	**S.2.2**	Inconel 718	**OFHT050410SN-F50**	**CTC5240**	35	emulsie

Systeem MaxiMill 274-12

Startparameters



SF.. 12



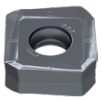
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SFKT1204AFSR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SFKT1204AFSR-M50**	**CTPM240**	180	Droog
Hittebestendig	**S.2.2**	Inconel 718	**SFHT1204AFER-F40**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

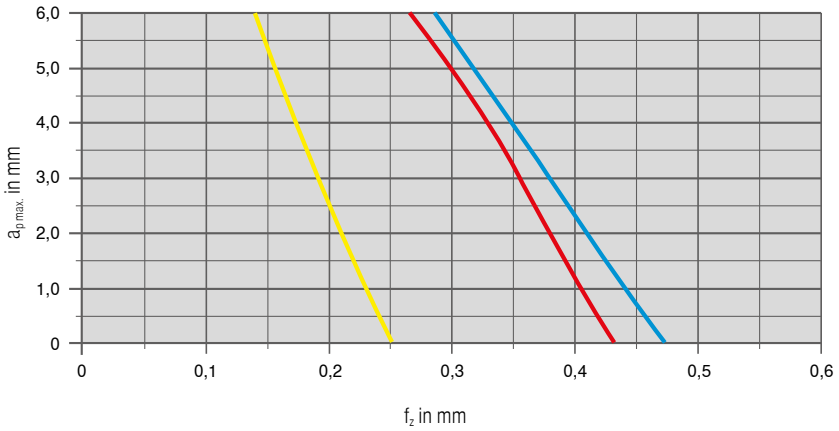
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem MaxiMill 271-12

Startparameters



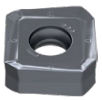
SOHU 12



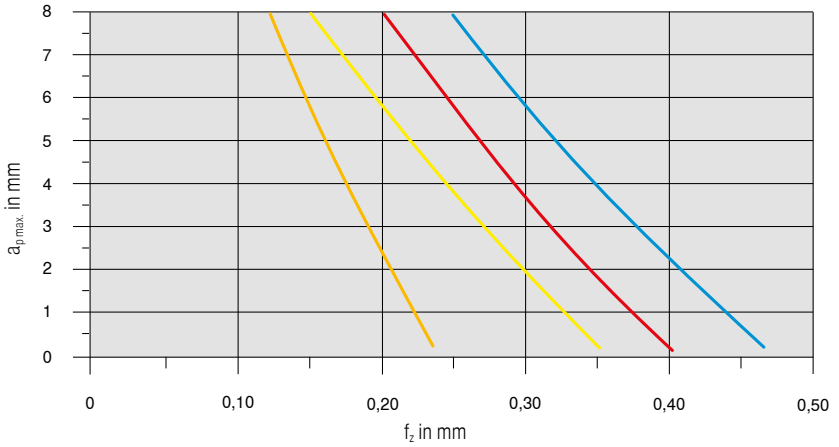
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SOHU 1204ABSR-M50**	**CTPP230**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SOHU 1204ABSR**	**CTPM240**		Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**SOHU 1204ABSR-R50**	**CTCK215**	300	Droog
Hittebestendig	**S.2.2**	Inconel 718	**SOHU 1204ABSR-F50**	**CTC5240**	30	emulsie

Systeem MaxiMill 271-17

Startparameters



SAKU 17



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SAKU 1706ABSR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SAKU 1706ABSR-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**SAKU 1706ABSR-R50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**SAKU 1706ABSR-F50**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

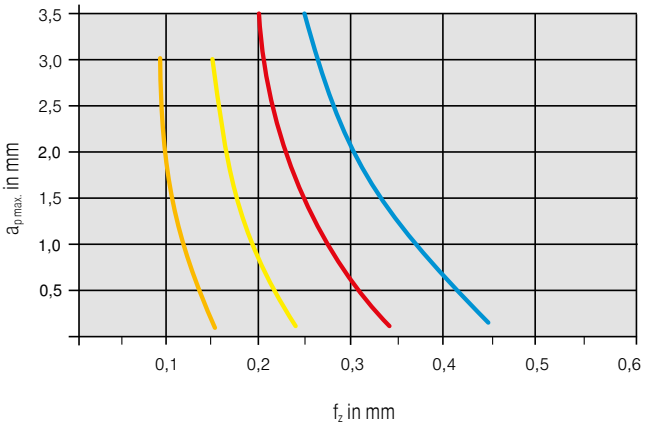
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem MaxiMill 273

Startparameters



OAKU



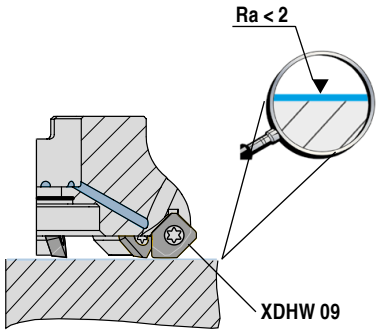
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**OAKU 060508SR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**OAKU 060508SR-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**OAKU 060508SR-R50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**OAKU 060508ER-F40**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem MaxiMill 270

Bewerkingsstrategie

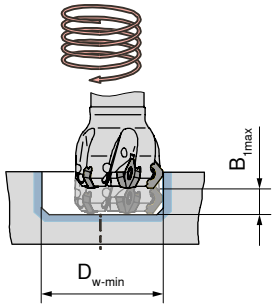


finishfrezen met nasnijplaten

Per freeskop wordt één nasnijplaat gemonteerd, vanaf Ø 125 mm twee.

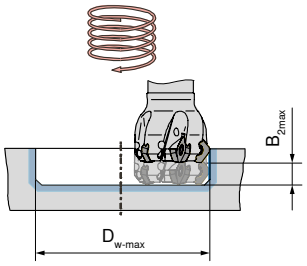
Staal	SDNT	0903AESN-29	CTPP235	+	XDHW	0903AESN CTPP235
	SDNT	0903AESN-29	CTCP230	+	XDHW	0903AESN CTCP230
	SDHT	0903AESN-33	CTCP230	+	XDHW	0903AESN CTCP230
	SDHW	0903AESN	TCM10	+	XDHW	0903AESN TCM10
Gietijzer	SDNT	0903AESN-31	CTCK215	+	XDHW	0903AEEN CTCK215
Non-ferro	SDHT	0903AEFN-ALP	-27P H216T	+	XDHW	0903AEFN -27P H216T

Circulair induiken (zonder startboring)



C 270-09

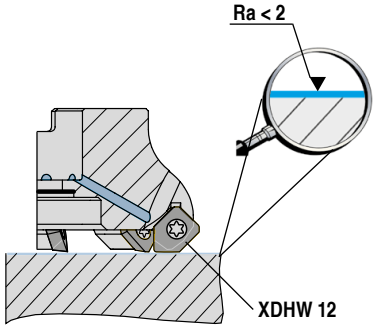
DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm
6	14,4	1,5	19,0	1,5
12	28,5	1,5	31,0	1,5
16	36,5	1,5	39,0	1,5
20	44,5	1,5	47,0	1,5
25	54,5	1,5	57,0	1,5
32	68,5	1,5	71,0	1,5



A 270-09

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

Systeem MaxiMill 270-12

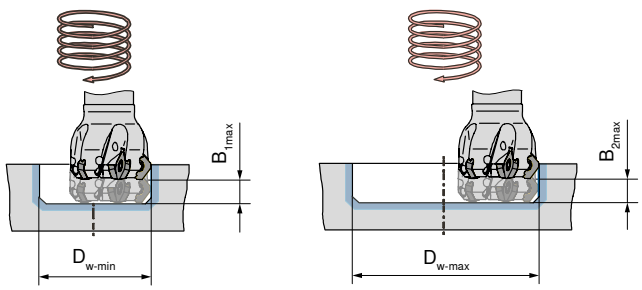


finishfrezen met nasnijplaten

Per freeskop wordt één nasnijplaat gemonteerd, vanaf Ø 125 mm twee.

Staal	SDMT	1204AESN-29R	CTPP235	+	XDHW	1204AESN CTPP235
	SDMT	1204AESN-29R	CTCP230	+	XDHW	1204AESN CTCP230
	SDHW	1204AESN-R	TCM10	+	XDHW	1204AESN TCM10
Gietijzer	SDMT	1204AEEN-31	CTCK215	+	XDHW	1204AEEN CTCK215
	SDHW	1204AESN-R	CTCK215	+	XDHW	1204AEEN CTCK215
Non-ferro	SDHT	1204AEFN-ALP	-27P H216T	+	XDHW	1204AEFN -27P H216T

Circulair induiken (zonder startboring)

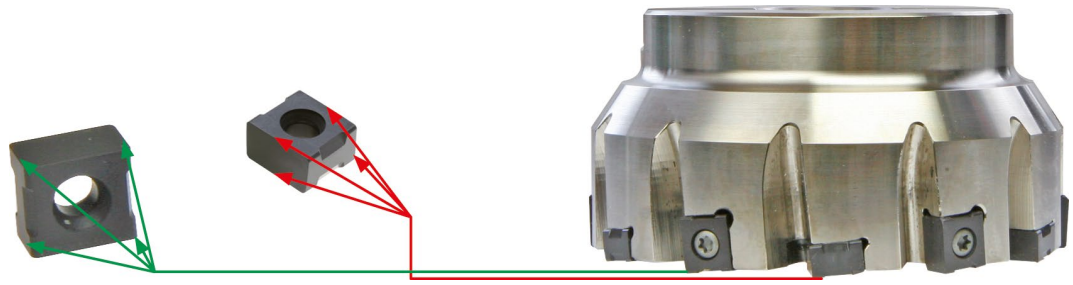


DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm
32	74,5	1,5	78,0	1,5
40	90,5	1,5	94,0	1,5
50	110,5	1,5	114,0	1,5
63	136,5	1,5	140,0	1,5
80	170,5	1,5	174,0	1,5
100	210,5	1,5	214,0	1,5
125	260,5	1,5	264,0	1,5
160	330,5	1,5	334,0	1,5

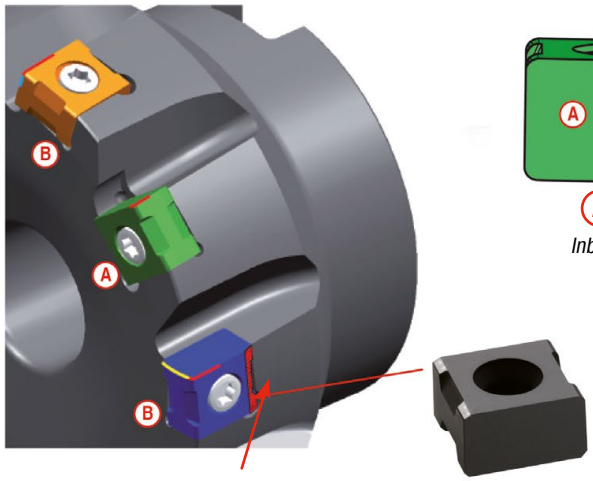
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem MaxiMill HEC 11 / HEC 12

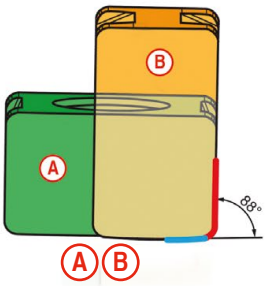
4 Snijkanten per inbouwpositie



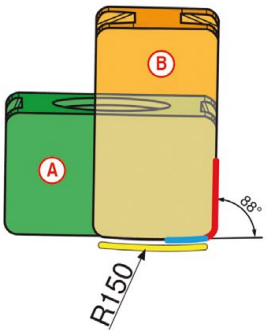
Correcte montage van de standaard- en nasnijwisselplaat



Markering voor de juiste montage



Inbouwpositie



vlaksnijkant standaard plaat — B

hoofdsnijkant plaat — A B

Nasnijplaat — B

Instellen van de gereedschappen met axiaalinstelling

- De instelspie zoals afgebeeld (1) in de frees monteren en de schroef slechts zo vastdraaien, dat de spie niet uitzet. (1)
- Wisselplaat zoals afgebeeld (2) monteren en met 1,0 Nm aantrekken. (2)
- Met behulp van een instelapparaat de hoogste snijkant markeren. (1)
- Door kleine stapsgewijze verdraaiingen van de instelschroef (1) de snijkanten op een vlakloop van minstens 0,005 mm of beter instellen. (1)
- Wisselplaat (2) met 3,2 Nm vastdraaien. (2)



De gemiddelde spaandikte [h_m] – werkwijze

Vlakfrezen

1 De bijpassende gemiddelde spaandikte [h_m] voor het overeenkomstige staal uit de tabel aflezen.

materiaal	Treksterkte N/mm²	h_m mm
voor staal	...–800	0,2
voor staal	800–1000	0,18
voor staal	1000–1200	0,16
voor staal	1200–...	0,14
voor RVS	... –750	0,21
voor RVS	750–900	0,19
voor RVS	900–1150	0,17
voor RVS	1150– ...	0,15

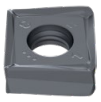
2 De gemiddelde spaandikte [h_m] overnemen en met de bijbehorende snedebreedte [a_e] de gecorrigeerde voedingswaarde uit de tabel halen.

h_m mm	gecorrigeerde voedingswaarde f_z voor 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**

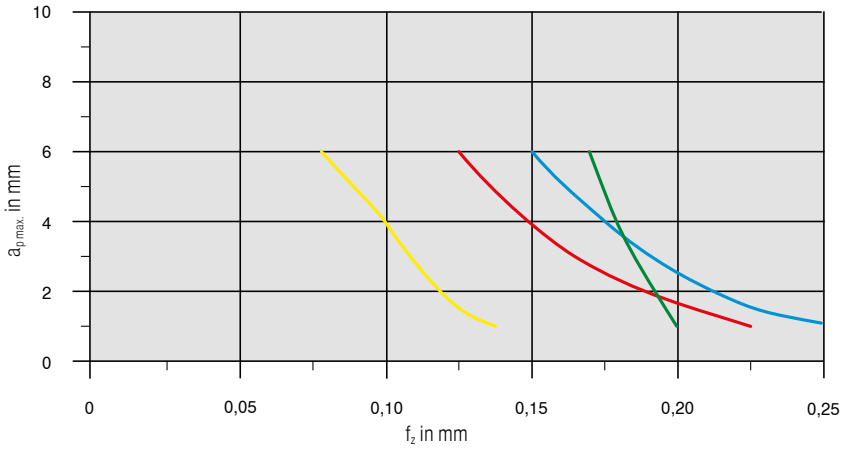
** f_z > 0,4 mm: gevaar voor vrijloopvlakconctact

Systeem MaxiMill 491-09

Startparameters



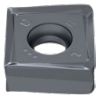
SNHU 09



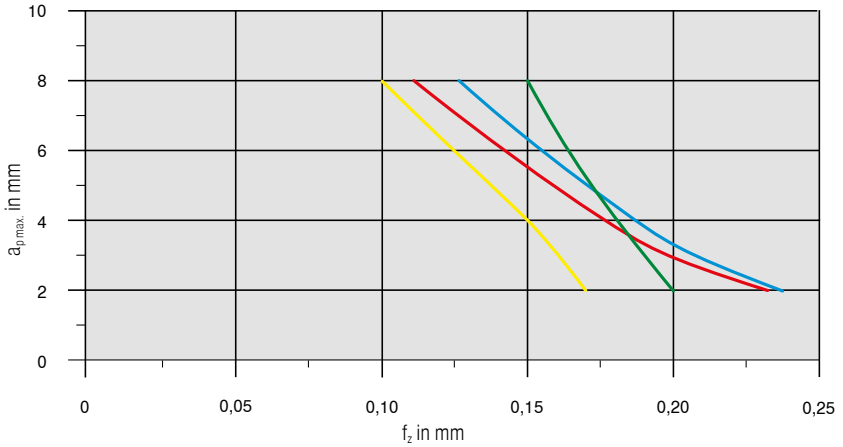
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SNHU09T308SR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SNHU09T308SR-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**SNHU09T308SR-R50**	**CTCK215**	250	Droog
Non-ferro	**N.1.2**	AlMgSi1	**SNHU09T308FR-F10**	**CTWN215**	500	emulsie

Systeem MaxiMill 491-12

Startparameters



SNHU 12



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SNHU120408SR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SNHU120408SR-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**SNHU120408SR-R50**	**CTCK215**	250	Droog
Non-ferro	**N.1.2**	AlMgSi1	**SNHU120408FR-F10**	**CTC5240**	500	emulsie

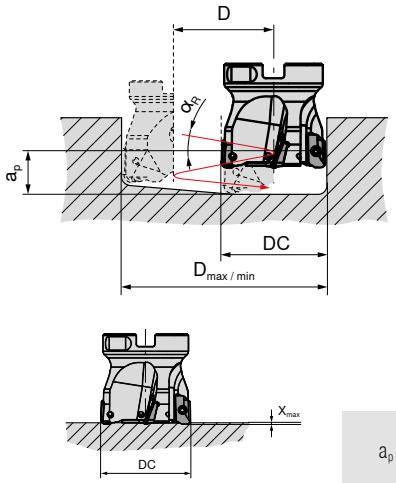
Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

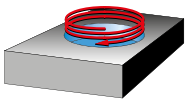
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem MaxiMill 211-07

Bewerkingsstrategie

Circulair induiken



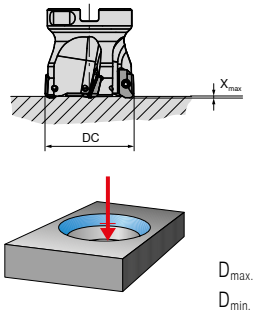


DC mm	D_{max} / RE 0,4 mm	D_{min} mm	$\alpha_{R\,max}$ °
10	19	13	5,5
12	23	17	6,0
16	31	25	3,0
20	39	33	2,0
25	49	43	1,5
32	63	57	1,2
40	79	73	0,8
50	99	93	0,7

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

$a_{p\,max.}$ in mm = $D * \pi * \tan \alpha_R$

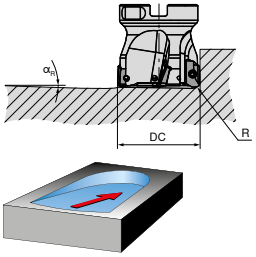
Axiaal induiken



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 = grootste diameter voor een vlakke bodem
$D_{min.}$ in mm = kleinste diameter voor een vlakke bodem

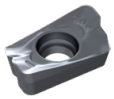
Schuin induiken



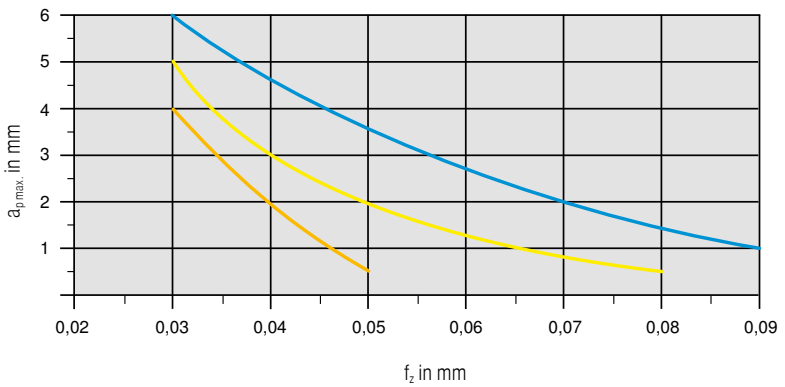
DC mm	α °
10	11,0
12	7,9
16	4,3
20	3,0
25	2,5
32	1,6
40	1,2
50	1,0

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

Startparameters



XDKT 07



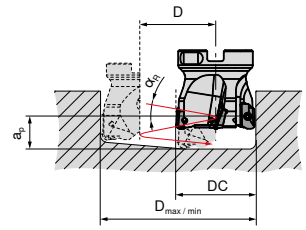
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**XDKT070308SR-M50**	**CTCP230**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XDKT070308SR-F50**	**CTPM240**	180	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XDKT070308ER-F50**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

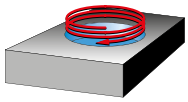
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

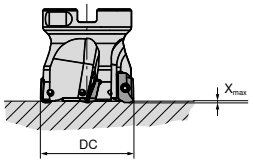
Systeem MaxiMill 211-11

Bewerkingsstrategie

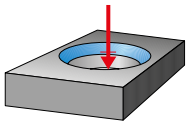


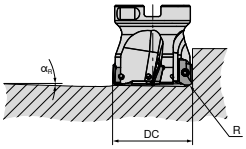
1 Circulair induiken



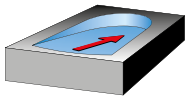


2 Axiaal induiken





3 Schuin induiken



maximaal toerental gerelateerd aan de uitsteeklengte n_{max} in min^{-1}					
DC mm	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		

	1	2	3
DC mm	Circulair induiken RE = 0,8 mm	Axiaal induiken X_{max}	Schuin induiken 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 °

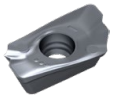
$D_{max.}$ in mm = grootste diameter voor een vlakke bodem

$D_{min.}$ in mm = kleinste diameter voor een vlakke bodem

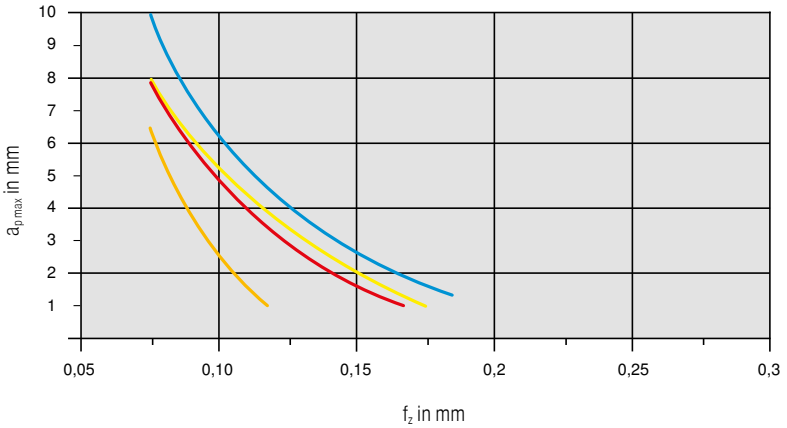
$a_{p\,max.}$ in mm = D x π x tan (α_R) = spoed

l_a in mm = uitsteeklengte

Startparameters



XDKT 11



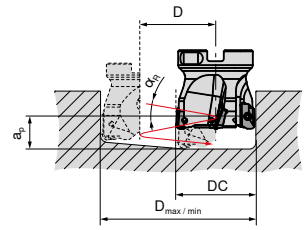
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**XDKT11T308SR-M50**	**CTCP230**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XDKT11T308SR-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**XDKT11T308SR-R50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XDKT11T308ER-F50**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

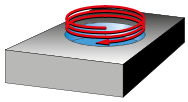
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

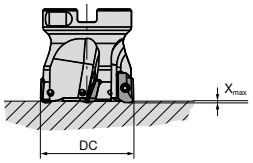
Systeem MaxiMill 211-15

Bewerkingsstrategie

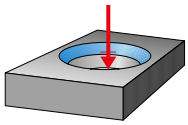


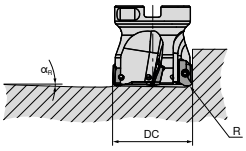
1 Circulair induiken



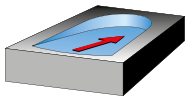


2 Axiaal induiken





3 Schuin induiken



DC mm	maximaal toerental gerelateerd aan de uitsteeklengte 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		

DC mm	Circulair induiken RE = 0,8 mm	1	Axiaal induiken X_{max}	2	Schuin induiken α_R	3
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				

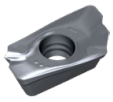
$D_{max.}$ in mm = grootste diameter voor een vlakke bodem

$D_{min.}$ in mm = kleinste diameter voor een vlakke bodem

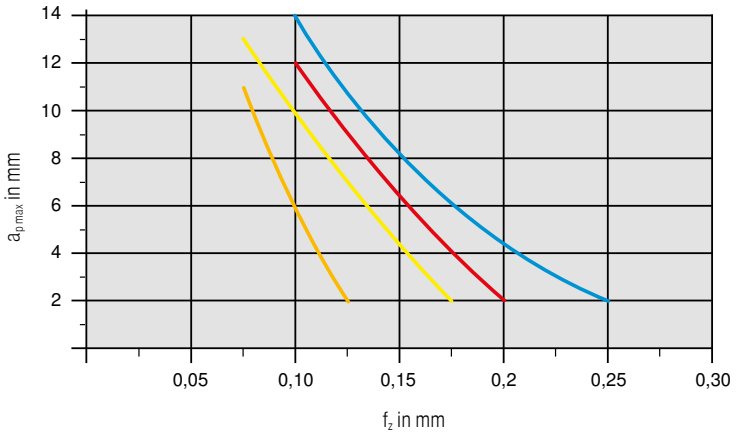
$a_{p\,max.}$ in mm = D x π x tan (α_R) = spoed

l_a in mm = uitsteeklengte

Startparameters



XDKT 15



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**XDKT150508SR-M50**	**CTCP230**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XDKT150508SR-F50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**XDKT150508SR-R50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XDKT150508ER-F40**	**CTC5240**	35	emulsie

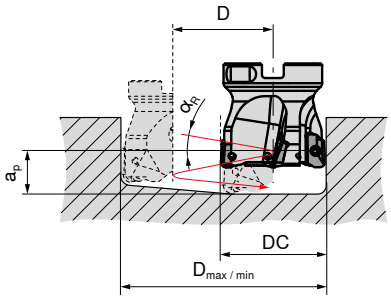
Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

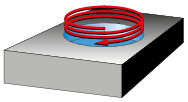
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem MaxiMill 211-20

Bewerkingsstrategie

Circulair induiken

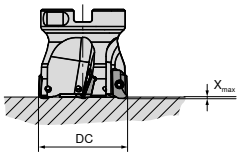


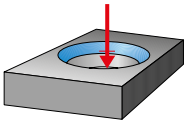


DC mm	D_{max} / RE 0,4 mm	D_{min} mm	$\alpha_{R\,max}$ °
63	124	107	2,2
80	158	143	1,7
100	198	183	1,3

$a_{p\,max.}$ in mm = D * π * tan α_R

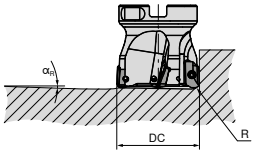
Axiaal induiken

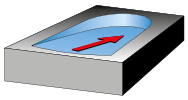




DC mm	X_{max} mm
63	2,0
80	2,0
100	2,0

Schuin induiken



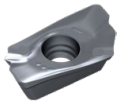


DC mm	α °
63	2,2
80	1,7
100	1,3

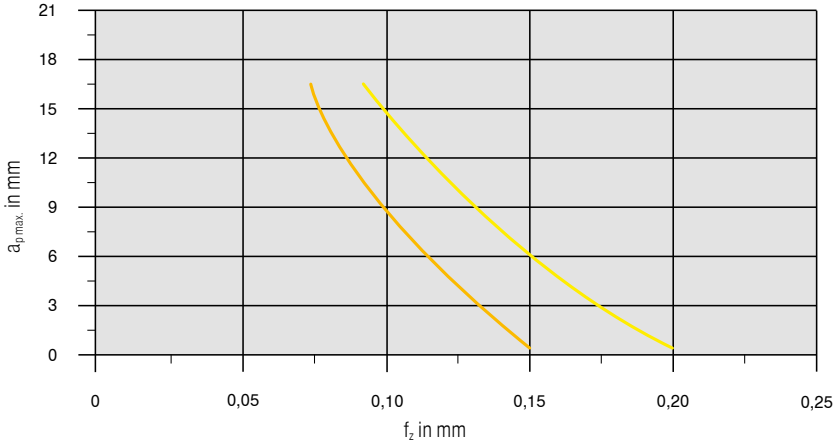
D = D_{max} - DC / D_{min} - DC

$D_{max.}$ in mm = grootste diameter voor een vlakke bodem
$D_{min.}$ in mm = kleinste diameter voor een vlakke bodem

Startparameters



XDKT 20



Materiaal			Wisselplaat		v_c in m/min	Koeling
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XDKT200708ER-F40**	**CTPM240**	180	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XDKT200708ER-F40**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem MaxiMill 490-09

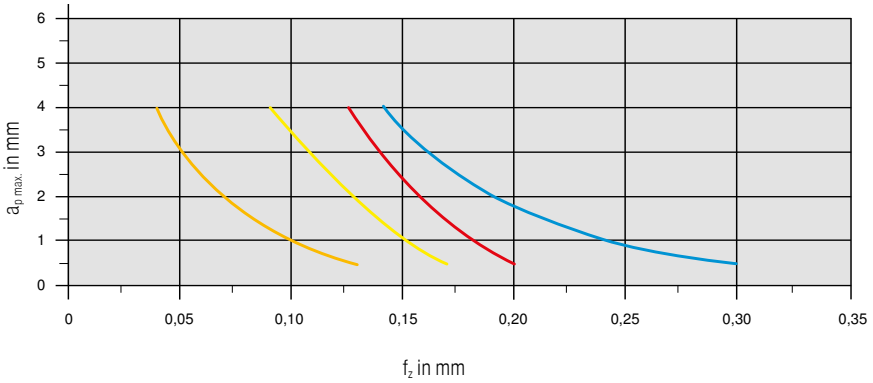
Bewerkingsstrategie

Het systeem MaxiMill 490-09 is niet geschikt voor duikfrezen!

Startparameters



SDNT 09



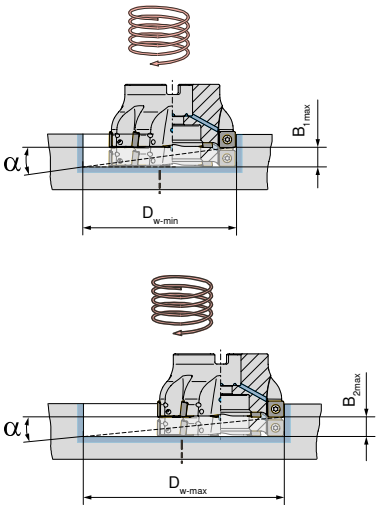
Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SDNT09T308SR-29**	**CTCP230**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SDNT09T308SR-33**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**SDNT09T308SR-31**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**SDNT09T308ER-M31**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

Systeem MaxiMill 490-12

Bewerkingsstrategie

Circulair induiken (zonder startboring)



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

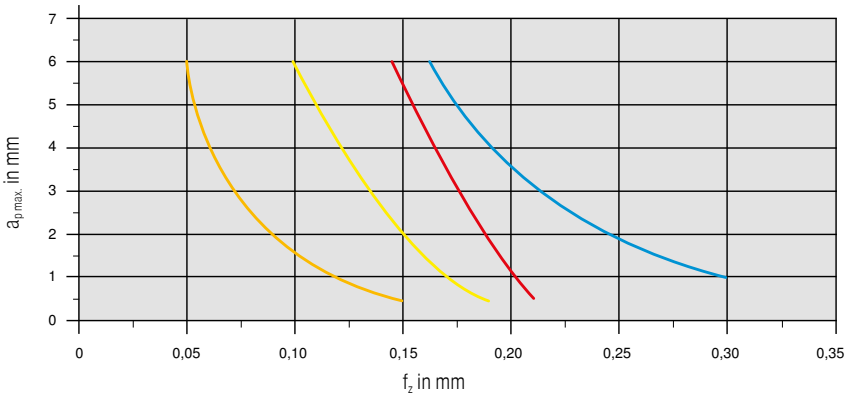
D_w = Diameter van de te produceren boring
DC = Nominale diameter van het freesgereedschap
B = axiale aanzet bij 360° circulaire beweging

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

Startparameters



SDMT 12



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**SDMT1205ZZSN-29**	**CTCP230**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**SDMT120512SR-33**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**SDMT1205ZZSN-31**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**SDMT120508ER-M31**	**CTC5240**	35	emulsie

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

HSC/HPC Bewerking

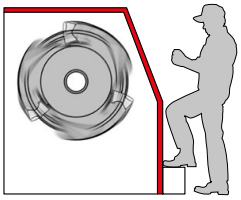
Veiligheidsadvies

Geschiktheid van het gereed voor HSC-bewerking

HSC-gereedschappen van CERATIZIT zijn speciaal voor deze bewerkingsstrategie ontwikkeld en garanderen maximale bedrijfszekerheid.

Neem de veiligheidsvoorschriften van de machinefabrikant in acht

Zorg ervoor dat alle veiligheidsvoorschriften van de machinefabrikant worden opgevolgd (bv.: gesloten bewerkingseenheden)

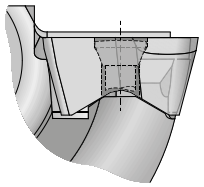


Geschiktheid van gereedschapopnames voor HSC-bewerking

Kies naargelang de freessituatie de optimale combinatie van gereedschap en opname.
Voor sneldraaiende freestoepassingen is het noodzakelijk dat het gereedschap en gereedschapopname samen dynamisch gebalanceerd zijn (overeenkomstig ISO 1940- richtlijnen).

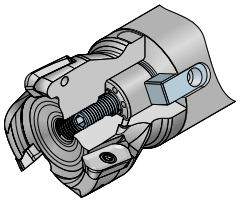
Bevestiging van de wisselplaat met geprofileerde zitting

Wisselplaatklemming: EURO-Patent EP 1083017A1
Zorg dat de plaatzitting schoon is en dat het draadgat voor de klemschroef in onberispelijke toestand is.
Controleer de axiale en radiale aanlegvlakken van de wisselplaat in de plaatzitting.
De klemschroeven voor de vormgesloten wisselplaatbevestiging moeten met een aantrekmoment M aangedraaid worden
(XDHT11 = 1,8 Nm; XDH.19 = 6,0 Nm).



Optimale bevestiging van HSC-frezen (DC = Ø 40–63) op freesopnames met behulp van powerschroef

De powerschroef garandeert een stabiele verbinding tussen het gereedschap en de freesopname en is zeer eenvoudig in gebruik.



Powerschroef

Maximaal toelaatbaar toerental

Let op het op het gereedschap aangegeven maximale toerental. Dit geldt uitsluitend voor het voorliggende gereedschap en moet overeenkomstig de gekozen gereedschapopname, totale uitsteeklengte en de respectievelijke bewerkingssituatie aangepast worden.



Optimaal inzetbereik van het gereedschap (a_e, a_p, f_z, n)

Om productief frezen te garanderen, dient u de aanbevelingen betreffende de freesparameters aan te houden.

15

Het niet handhaven van deze veiligheidsvoorschriften ontslaat CERATIZIT Deutschland GmbH automatisch van haar aansprakelijkheid

Systeem MaxiMill HSC-11

Richtwaarden voor snijgegevens

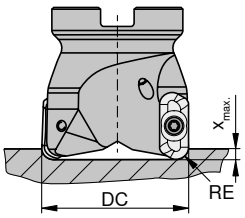
werkstukmateriaal		behandeling / legering		VDI 3323 groep	Hardheid HB	H216T (CWK26) v_c in m/min	H216T (CWK26) v_c in m/min
N	Aluminium kneedlegeringen	niet hardbaar		21	60		200–3000
		hardbaar		22	100		200–2000
	Aluminium gietlegering	niet hardbaar	< 12 % Si	23	80		200–2000
		hardbaar	< 12 % Si	24	90		200–1800
		niet hardbaar	> 12 % Si	25	130		200–1000
	Koper en koperlegeringen (brons, messing)		automatenlegering (1 % Pb)	26			200–600
			messing, gietbrons	27	90	250–1000	250–1000
			Brons	28	100		150–400
			loodvrij koper en electrolytisch koper	29	100		300–800
O	Non-ferro materialen		Duroplasten	29		80–1000	80–1000
			Vezelversterkte kunststoffen	29		70–500	70–500
			Hard rubber	30		80–300	80–300

= normale koeling = minimaalsmering = droogverspaning

Systeem MaxiMill HSC-11

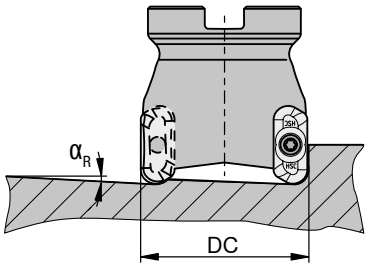
Bewerkingsstrategie

Axiaal induiken



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

Lineair induiken



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

Voor- en nafreesstrategie

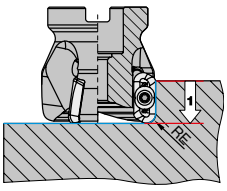
met maximaal spaanvolume

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

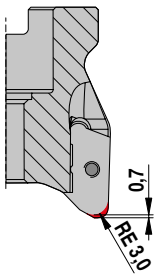
met optimale wandkwaliteit

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

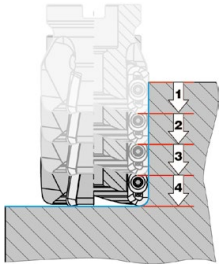
Hoekfrezen

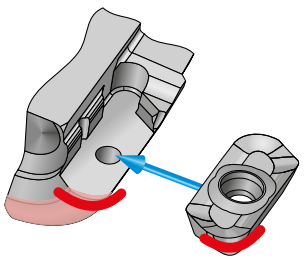


kops profiel nadraaien

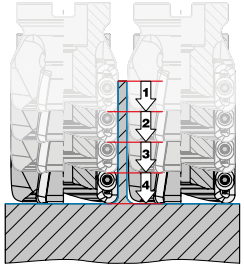


pocketfrezen





pocketfrezen met dunne tussenwanden

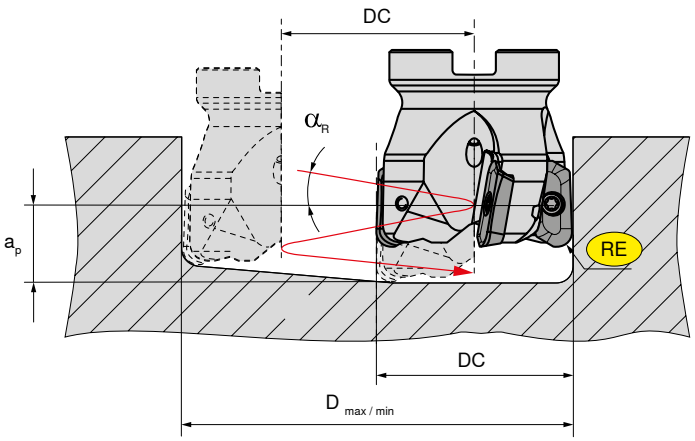


voor wisselplaten met een hoekradius groter dan 3,2 mm moet de body volgens bovenstaande schets gemodificeerd worden.

Systeem MaxiMill HSC-11

Bewerkingsstrategie

Circulair induiken



RE = wisselplaatradius
α_R in mm = maximale induikhoek (gerelateerd aan gereedschapsmidden)
$a_{p\,max.}$ in mm = spoed → D x π x tan (α_R)
D in mm = → D_{max} – DC resp. D_{min} – DC

voor vlakke bodem

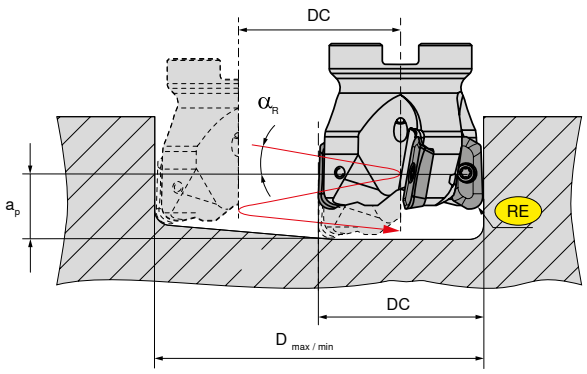
$D_{max.}$ in mm = grootste gatdiameter
$D_{min.}$ in mm = kleinste gatdiameter
$DN_{max.}$ in mm = grootste gatdiameter voor een niet-vlakke bodem

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

Systeem MaxiMill HSC/HPC-19

Bewerkingsstrategie

Circulair induiken



RE = wisselplaatradius
α_R in mm = maximale induikhoek (gerelateerd aan gereedschapsmidden)
$a_{p\,max.}$ in mm = spoed → D x π x tan (α_R)
D in mm = → D_{max} – DC resp. D_{min} – DC

voor vlakke bodem

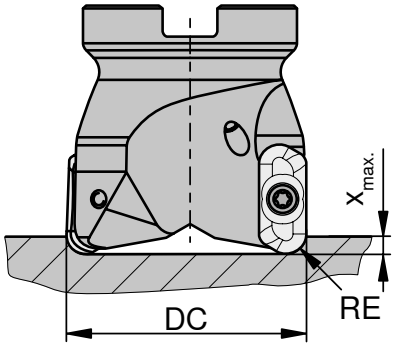
$D_{max.}$ in mm = grootste gatdiameter
$D_{min.}$ in mm = kleinste gatdiameter
$DN_{max.}$ in mm = grootste gatdiameter voor een niet-vlakke bodem

	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

Systeem MaxiMill HSC/HPC-19

Bewerkingsstrategie

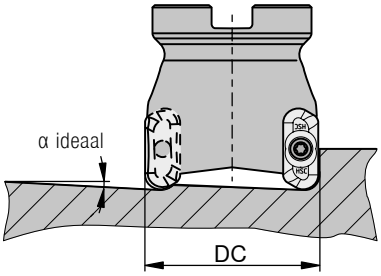
Axiaal induiken



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

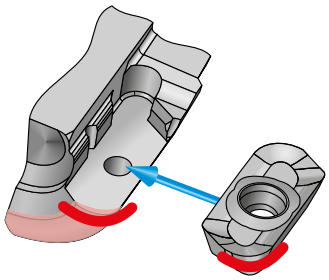
Lineair induiken

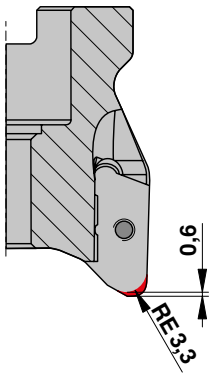


DC mm	α ideaal HSC 19	α ideaal HPC 19
25	11°	11°
32	7°	7°
40	5°	5°
50	4°	4°
63	3°	3°
80	2°	
100	2°	

Nabewerking van freesbody

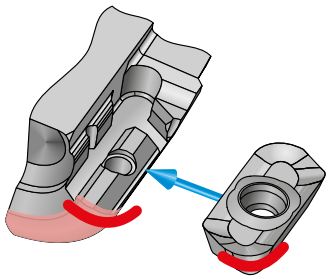
HSC 19





kops profiel nadraaien

HPC 19

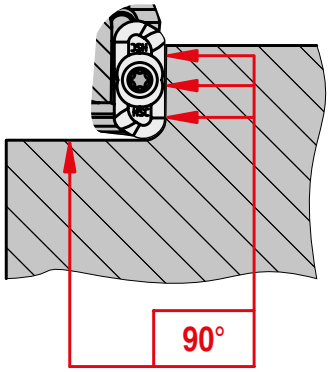


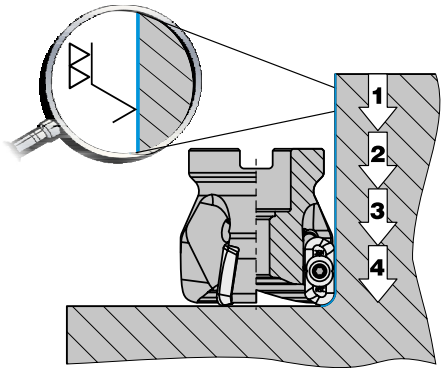
voor wisselplaten met een hoekradius groter dan 4,0 mm moet de body volgens bovenstaande schets gemodificeerd worden.

Systeem MaxiMill HSC/HPC-19

Bewerkingsstrategie

uitstekende kwaliteit van zijwand na voorfrezen.
extra finisbewerkingen kunnen vervallen.





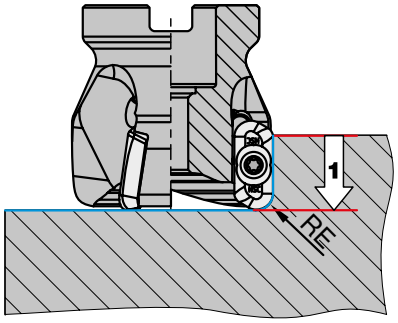
met maximaal spaanvolume

Wisselplaat	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

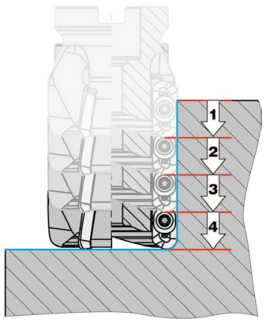
met optimale wandkwaliteit

Wisselplaat	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

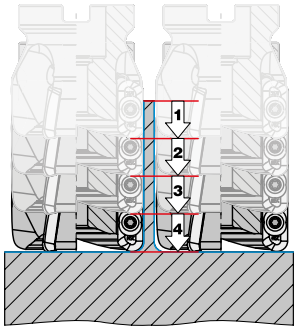
Hoekfrezen



pocketfrezen



pocketfrezen met
dunne tussenwanden



15

Deze informatie is van toepassing op wisselplaten type XDHT 19 en XDHX 19.

Systeem MaxiMill HPC-04/12

Bewerkingsstrategie

Waarop moet men letten?

- machinestabiliteit
- stabiele werkstukopspanning en gereedschapopname
- inzet van koelmiddel niet per se noodzakelijk, echter de afvoer van spanen wordt vereenvoudigd – bovendien verbetert de oppervlaktekwaliteit
- temperatuurschommelingen en kritische temperatuur van 600 °C in de gaten houden, afhankelijk van materiaal met koeling werken
- vermijden van vibraties
- balanceerklasse aanhouden
- oppassen voor chemische reacties van diamant met carbidevormende elementen (Fe, Ti, Ta, Co, Ni)

Wanneer is inzet bijzonder zinvol?

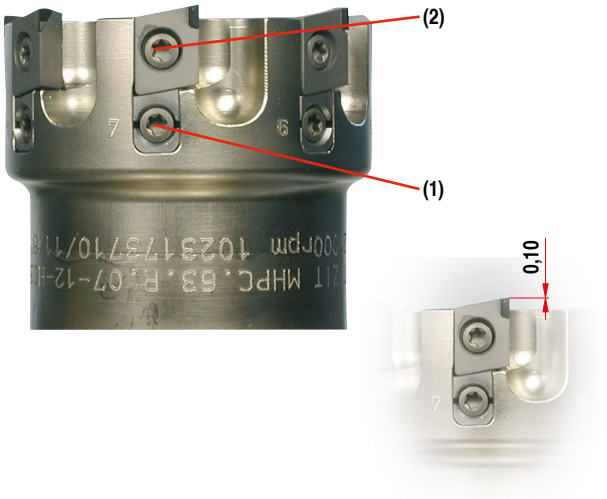
- onderdelen uit non-ferro, kunststoffen, vezelversterkte materialen, grafiet ...
- indien de eenvoudige instelmogelijkheid kosten voor voorinstelling kan besparen
- massaproduktie
- hoge eisen aan oppervlaktekwaliteit van de werkstukken
- noodzakelijkheid van hoge standtijden ter vermindering van omslachtige gereedschapwissels en dure machine stilstandtijden
- reeds aanwezige gereedschapservice ter plaatse (voorinstelling, etc.).

Controle van de balanceerklasse

De balanceerklasse van de gereedschappen moet na het samenbouwen, het plaatsen van de wisselplaten en het instellen van de vlakloop gecontroleerd worden. Het is vooral noodzakelijk om een opsteekfrees na de samenbouw met een opname te balanceren.

Instelprocedure met nasnijplaten

De nasnijplaten worden tijdens de hieronder beschreven instelprocedure van de standaardplaten op een rondloop van 0,02 mm ingesteld. De wisselplaten met nasnijfase worden dan 0,02–0,03 mm boven de hoogste snijkant ingesteld.



De instelprocedure

1 Monteren van de instelspie aan het gereedschap (levertoestand). Draai de

2 Monteren van de PKD-platen en vastdraaien van de spanschroeven (2) met

3 Markeren van de „hoogste snijkant“ met behulp van een voorinstelapparaat.

4 Verstellen van deze PKD-wisselplaat met 0,02 mm door het linksom draaien van de instelschroef(1).

Voorspanning moet bereikt zijn. Gebruik hiervoor de meegeleverde TORX-haakse schroevendraaier!

5 Instellen van de overige freesplaten op dit niveau met een afwijking van maximaal 0,005 mm. Maximale verstelweg= 0,10 mm.

6 Aantrekken van alle WSP-klemschroeven (2) met 5,0 Nm.

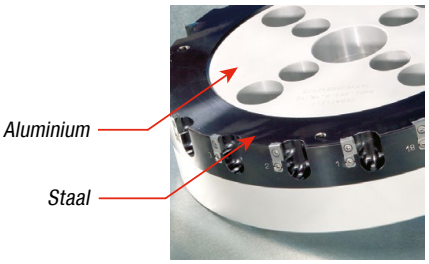
7 Controle van de vlakloop van alle wisselplaten: Eis = 0,005 mm.

Volmaakte precisie – MaxiMill HPC-12

Het instelbare high-performancegereedschap voor het finishen van aluminium delen

Freesbody van staal

- voor de hoogste stabiliteit
- maximale slijtvastheid
- bi-metaaluitvoering vanaf diameter 160 mm;
  eenvoudige handling en spindelontlastend bij grote gereedschappen



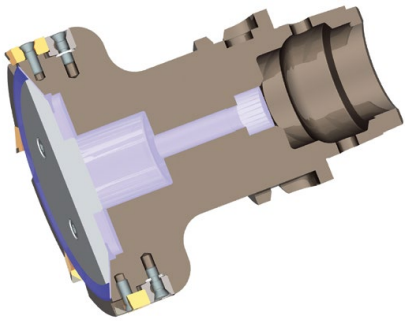
afbeelding toont bi-metaaluitvoering

Uitvoering als opsteek- of monoblokvariant

- monoblokvariant met HSK63 aansluiting
- monoblokgereedschap gebalanceerd G 2,5 bij n = 20.000 min^{-1} (ISO1940)

Speciaal voor HSC-toepassingen ontwikkelde inwendige koelmiddeltoevoer

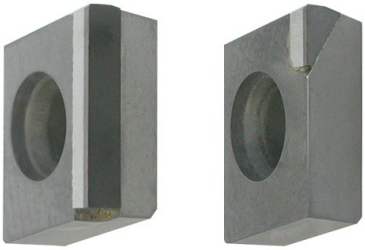
- verbeterde spaanafvoer
- hoge oppervlaktekwaliteit
- optimale inzetomstandigheden
- geschikt voor minimaalsmering



Tijd is geld – het MaxiMill HPC-12 systeem is eenvoudig en bovendien snel instelbaar!

Hoogpositieve spaanhoek met +25°

- geringe snijkrachten
- verhoogde vlakheid van oppervlakken
- geminimaliseerde werkstukvervorming



Tangentiaal platenconcept

- een stabiele onderbouw voor het PKD-segment en de hoogste proceszekerheid

Aangepaste PKD-snijkant

- hoge slagvastheid bij freesbewerking!
- maximale kantenstabiliteit
- verminderde braamvorming aan het werkstuk
- de bewerking van Al-Si legeringen met
  meer dan 12 % siliciumaandeel is probleemloos mogelijk

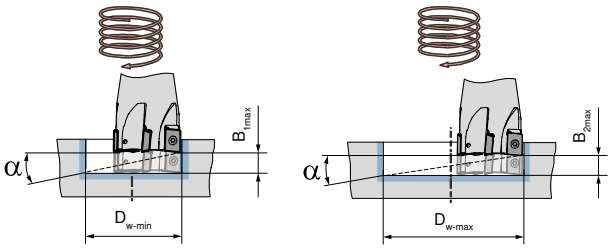
Keuze aan wisselplaten

- standaard wisselplaat
- wisselplaat met hoekradius
- wisselplaat met nafase

Systeem MaxiMill 141 / 241

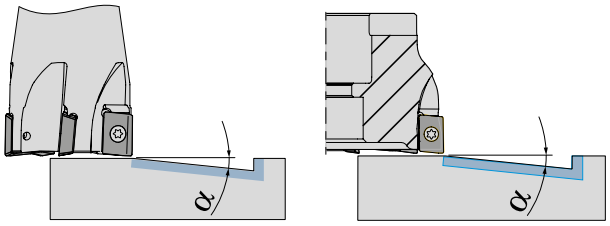
Bewerkingsstrategie

Circulair induiken (zonder startboring)



D_w = diameter van de te maken boring
DC = nominale diameter van het freesgereedschap
B = axiale voeding over 360° circulaire verplaatsing

Schuin induiken



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

C 141

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

A 241

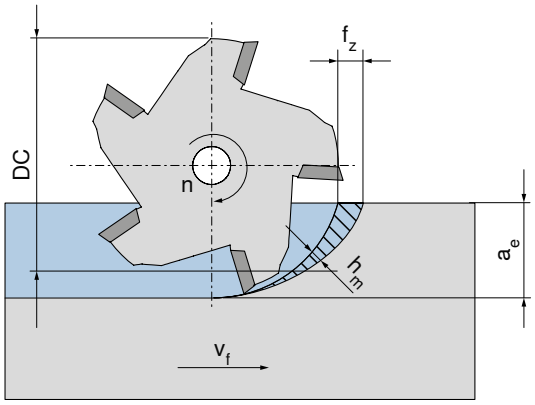
DC mm	$D_{w\text{-}min}$ mm	$B_{1\,max}$ mm	$D_{w\text{-}max}$ mm	$B_{2\,max}$ mm	α °
40	64,0	1,9	78,0	3,1	1,5
50	84,0	1,8	98,0	2,6	1,0
63	110,0	1,2	124,0	1,6	0,5
80	144,0	1,4	158,0	1,7	0,4
100	184,0	1,3	198,0	1,6	0,3
125	234,0	1,2	248,0	1,3	0,2

De gemiddelde spaandikte [h_m] – werkwijze

Hoekfrezen

1 De bijpassende gemiddelde spaandikte [h_m] voor het overeenkomstige staal uit de tabel aflezen.

materiaal	Treksterkte N/mm²	h_m mm
voor staal	...–800	0,16
voor staal	800–1000	0,14
voor staal	1000–1200	0,12
voor staal	1200–...	0,10
voor RVS	...–750	0,15
voor RVS	750–900	0,13
voor RVS	900–1150	0,11
voor RVS	1150–...	0,09 *

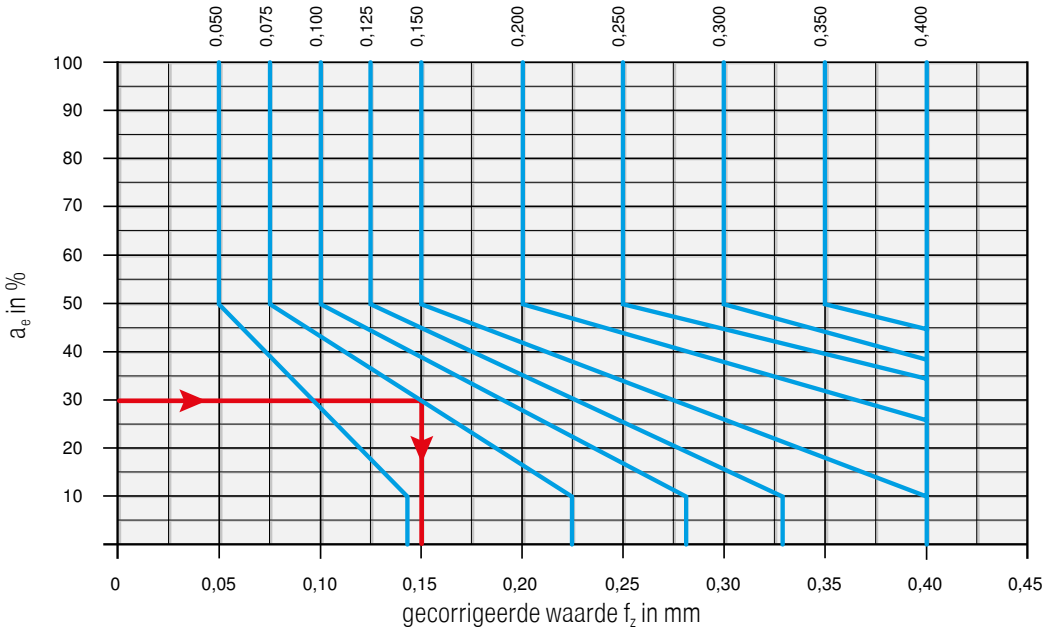


2 De gemiddelde spaandikte [h_m] overnemen en met de bijbehorende snedebreedte [a_e] de gecorrigeerde voedingswaarde uit de tabel halen.

h_m mm	gecorrigeerde voedingswaarde f_z voor 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: gevaar, omdat het gereedschap niet meer snijdend werkt

Startwaarde f_z[mm] in mm uit het startparameterdiagram



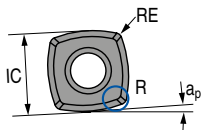
Voorbeeld:
startwaarde (f_z) = 0,075 mm
a_e = 30 %
gecorrigeerde waarde (f_z) = 0,15 mm

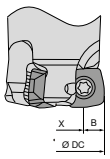
15

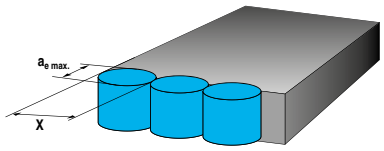
Systeem MaxiMill HFC-06

Bewerkingsstrategie

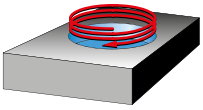
geprogrammeerde radius R = 1,2 mm

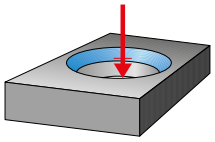


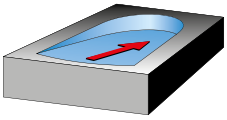




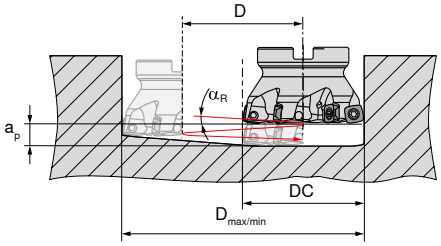
Snedediepte en restmateriaal			Snedebreedte bij parallelle vlakken			Aangrijpbreedte bij duikfrezen				
IC in mm	RE in mm	$a_{p\ max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\ max.}$ in mm	f_z in mm			X
							startwaarde	min.	max.	
6,35	0,5	0,8	16–32	DC–(2 x B)	4,3	5,3	0,10	0,08	0,15	<0,7 x DC







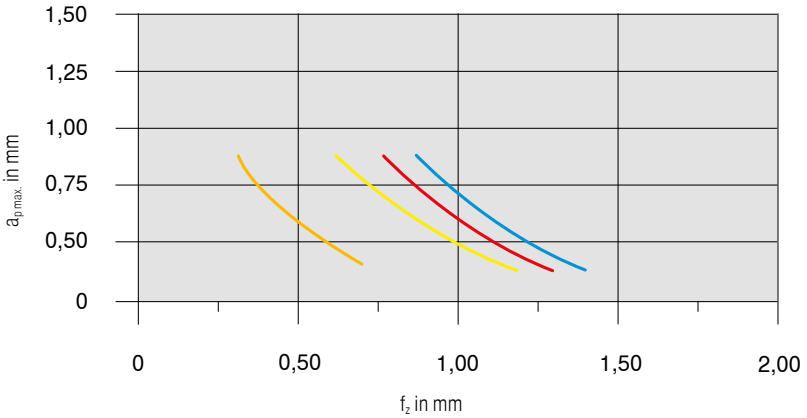
DC	circulair boorfrezen (circulair induiken in vol materiaal)			axiaal induiken	schuin
	$D_{min.}$	$D_{max.}$	$\alpha_{R\ max.}$	$X_{max.}$	$\alpha_{R\ max.}$
mm	mm	mm	°	mm	°
16	31	22	4,5°	0,5	5,9°
20	39	30	2,3°		3,2°
25	49	40	1,3°		2°
32	63	54	0,9°		1,3°



Startparameters



XPLX 06



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**XPLX 060305SR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XPLX 060305ER-M40**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**XPLX 060305ER-M50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XPLX 060305SR-F40**	**CTC5240**	35	emulsie

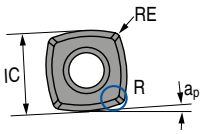
Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

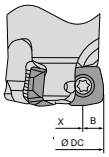
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

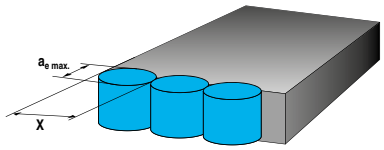
Systeem MaxiMill HFC-09

Bewerkingsstrategie

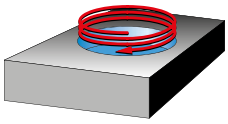
geprogrammeerde radius R = 2 mm

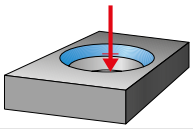


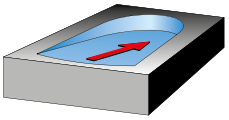




Snededіepte en restmateriaal			Snedebreedte bij parallelle vlakken			Aangrijpbreedte bij duikfrezen				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							startwaarde	min.	max.	
9	0,8	1	25–66	DC–(2 x B)	5,9	7,5	0,10	0,08	0,15	<0,7 x DC

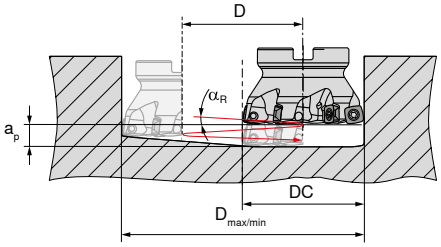






	circulair		
	boorfrezen (circulair induiken in vol materiaal)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
25	48	35	3,1°
32	62	49	1,7°
35	68	55	1,4°
40	78	65	1,0°
42	82	69	0,9°
50	98	85	0,8°
52	102	89	0,7°
63	124	111	0,7°
66	130	117	0,6°

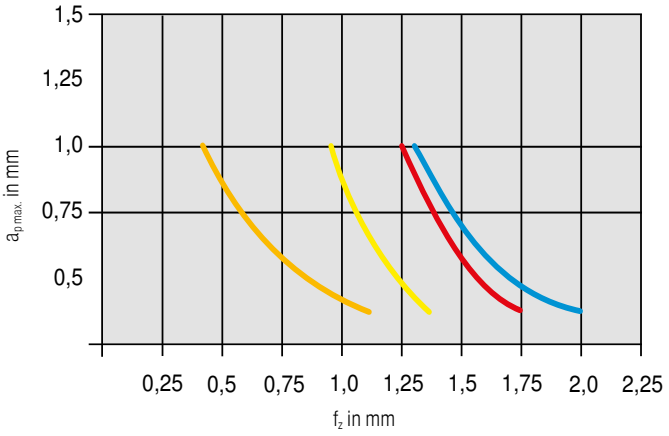
	axiaal	schuin
	induiken	
DC mm	$X_{max.}$ mm	$\alpha_{R\,max.}$ °
25	0,75	3,6°
32		2,0°
35		1,6°
40		1,2°
42		1,1°
50		0,9°
52		0,8°
63		0,8°
66		0,7°



Startparameters



XDLX 09



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**XDLX09T308SR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XDLX09T308SR-M50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**XDLX09T308SR-M50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XDLX09T308ER-F40**	**CTC5240**	35	emulsie

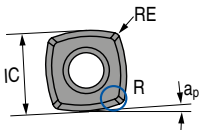
Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

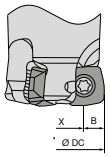
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

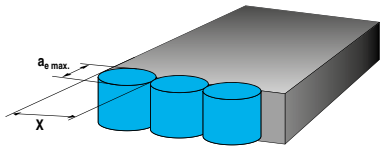
Systeem MaxiMill HFC-12

Bewerkingsstrategie

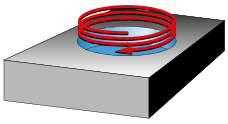
geprogrammeerde radius R = 3 mm

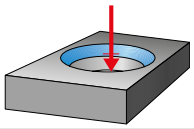


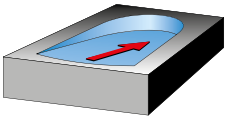




Snedediepte en restmateriaal			Snedebreedte bij parallelle vlakken			Aangrijpbreedte bij duikfrezen				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							startwaarde	min.	max.	
12	1,0	2	32–100	DC–(2 x B)	8,3	10	0,15	0,10	0,20	<0,7 x DC

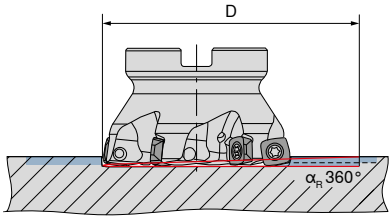






	circulair		
	boorfrezen (circulair induiken in vol materiaal)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
32	62	44	6,1°
35	68	50	3,7°
40	78	60	2,5°
42	82	64	2,3°
50	98	80	1,3°
52	102	84	1,3°
63	124	106	0,9°
66	130	112	0,9°
80	158	140	1,1°
100	198	180	0,6°

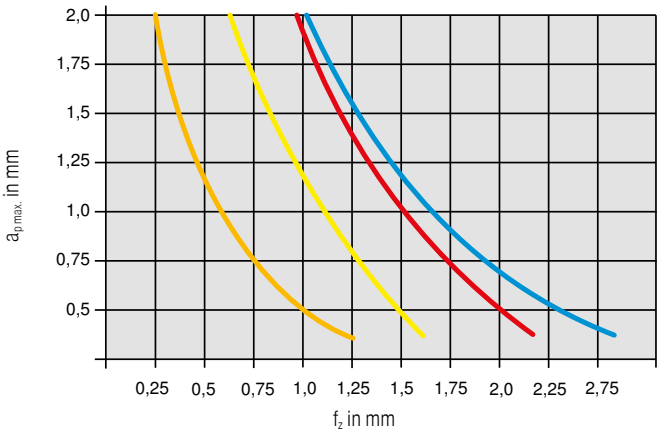
	axiaal	schuin
	induiken	
DC mm	$X_{max.}$ mm	$\alpha_{R\,max.}$ °
32	1,15	7,2°
35		4,4°
40		2,9°
42		2,7°
50 + 52		1,5°
63 + 66		1,1°
80		1,3°
100		0,7°



Startparameters



XOLX 12



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**XOLX120410SR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XOLX120410ER-M50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**XOLX120410ER-M50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XOLX120410ER-F40**	**CTC5240**	35	emulsie

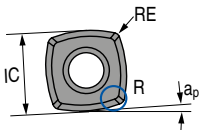
Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

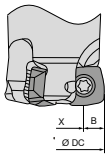
Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

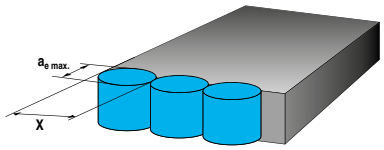
Systeem MaxiMill HFC-19

Bewerkingsstrategie

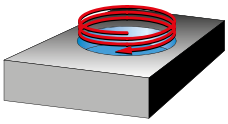
geprogrammeerde radius R = 5 mm

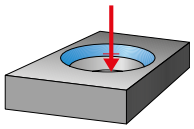


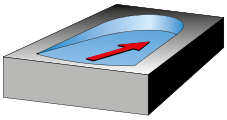




Snedediepte en restmateriaal			Snedebreedte bij parallelle vlakken			Aangrijpbreedte bij duikfrezen				
IC in mm	RE in mm	$a_{p\,max.}$ in mm	DC in mm	X in mm	B in mm	$a_{e\,max.}$ in mm	f_z in mm			X
							startwaarde	min.	max.	
19,14	1,5	3,3	63–160	DC–(2 x B)	13,1	12	0,2	0,10	0,25	<0,65 x DC

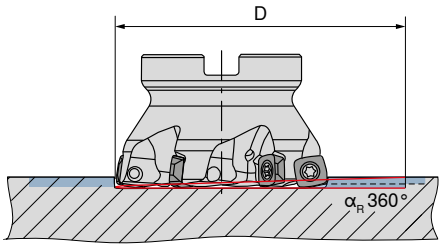






	circulair		
	boorfrezen (circulair induiken in vol materiaal)		
DC mm	$D_{min.}$ mm	$D_{max.}$ mm	$\alpha_{R\,max.}$ °
63	97	123	2,5
80	131	157	1,4
100	171	197	1,0
125	221	247	0,7
160	291	317	0,5

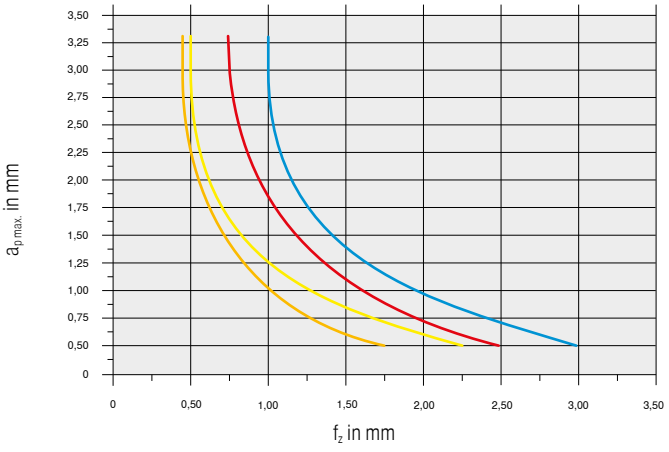
	axiaal	schuin	
		induiken	
DC mm	$X_{max.}$ mm	$\alpha_{R\,max.}$ °	$a_{p\,max}$ mm
63		2,9	
80		1,8	
100	1,7	1,3	3,3
125		1,0	
160		0,7	



Startparameters



XOLX 19



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**XOLX190615SR-M50**	**CTPP235**	200	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**XOLX190615SR-M50**	**CTPM240**	180	Droog
Gietijzer	**K.1.1**	EN-GJL-250 (GG25)	**XOLX190615SR-M50**	**CTCK215**	250	Droog
Hittebestendig	**S.2.2**	Inconel 718	**XOLX190615ER-F40**	**CTC5240**	35	emulsie

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Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Systeem DHFC

Richtwaarden voor snijgegevens

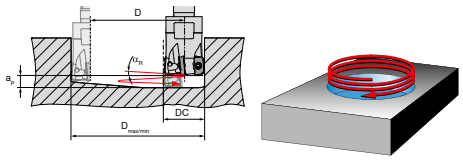
voor standaard wisselplaten

	F			M			R		
Materiaal	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
Staal	130–300	0,25–1,0	0,70	130–300	0,25–1,0	0,75			
RVS				90–210	0,25–1,0	0,60			
Gietijzer				120–270	0,2–1,1	0,70	120–270	0,2–1,2	0,75
Non-ferro									
Hittebestendig				40–80	0,15–0,75	0,60			
Geharde materialen									
Niet-metalen materialen									

Bewerkingsstrategie

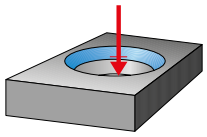
geprogrammeerde radius R = 1,4 mm

Circulair frezen



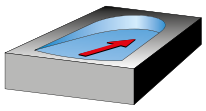
DC mm	D_{min} mm	D_{max} mm
16	23	31
20	31	39
25	41	49
32	55	63
35	61	69
42	75	83

Axiaal induiken in vol materiaal



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

Schuin induiken



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

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

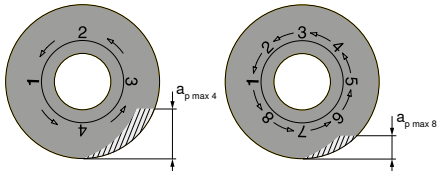
Systeem MaxiMill 251 / 251 RS

Technologie

aanbevolen snedediepte

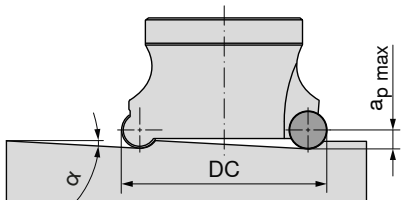
Ø mm	4-voudig $a_{p\,max.}$ mm	4-voudig $a_{p\,max}$ theoretisch mm	8-voudig $a_{p\,max.}$ mm
5	1,0	2,0	0,7
8	1,5	3,5	1,1
10	2,5	4,5	1,4
12	3,0	5,5	1,7
16	4,0	7,5	2,3
20	4,0	9,5	2,9

snedediepte voor het 4-/8-voudig gebruik van de wisselplaat



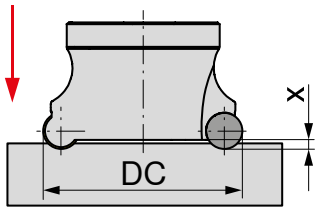
Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

Lineair induiken



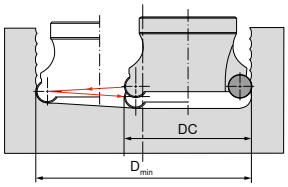
Ø DC mm	05 α °	08 α °	10 α °	12 α °	16 α °	20 α °
10	3,4					
12	16,0					
16	8,0	5,0				
20	5,5	20,0	1,3			
25	4,0	13,0	2,0	6,0		
32	3,0	8,0	3,0	4,0		
40			3,3	2,8		
42			3,1			
50			2,4	2,6	4,0	
52			2,2	2,3		
63				1,9	2,8	
66				1,6		
80				1,3	2,0	3,2
100				1,0	1,5	2,3
125						1,7

Axiaal induiken

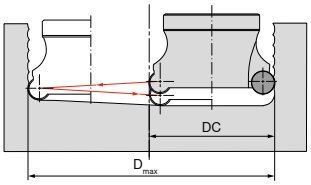


Ø DC mm	05 $X_{max.}$ mm	08 $X_{max.}$ mm	10 $X_{max.}$ mm	12 $X_{max.}$ mm	16 $X_{max.}$ mm	20 $X_{max.}$ mm
10	0,5					
12	1,3					
16	1,3	0,5				
20	1,3	2,7	0,2			
25	1,3	2,7	0,4	1,0		
32	1,3	2,7	0,8	1,1		
40			1,5	1,2		
42			1,5	1,5		
50			1,5	1,5	2,0	
52			1,5	1,5	2,0	
63				1,5	2,0	
66				1,5	2,0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

Circulairfrezen in vol materiaal



$D_{min.}$ = kleinste gatdiameter afhankelijk van gereedschapdiameter



$D_{max.}$ = grootste gatdiameter afhankelijk van gereedschapsdiameter

maximaal mogelijke gatdiameter = 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

Systeem R100.

Richtwaarden voor snijgegevens

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

De snijgegevens zijn zeer sterk afhankelijk van externe omstandigheden, zoals bijvoorbeeld de stabiliteit van het gereedschap, de werkstukopspanning, het materiaal en type machine! De aangegeven waarden zijn mogelijke snijgegevens, die afhankelijk van de toepassing met ca. **20 %** aangepast moeten worden!

Systeem R 1000, 1002, 1007

Richtwaarden voor snijgegevens

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

Systeem R 1000, 1002, 1007

Richtwaarden voor snijgegevens

		f_z / a_p mm	WTN1205	WAN2225	WAN1240	WAX1240	WUN4210
Non-ferro							
	07T1	f_z					**0,1–0,3**
		a_p					**0,1–0,7**
	0702	f_z					**0,1–0,3**
		a_p					**0,1–1,0**
	1003	f_z					**0,1–0,3**
		a_p					**0,1–1,5**
	12T3	f_z					**0,1–0,4**
		a_p					**0,1–2,0**
	1604	f_z					**0,2–0,5**
		a_p					**0,2–4,0**
	2006	f_z					**0,25–0,6**
		a_p					**0,2–5,0**
Hittebestendig							
	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**			
Geharde materialen							
	0501	f_z	**0,1–0,15**				
		a_p	**0,1–0,2**				
	07T1	f_z	**0,1–0,15**				
		a_p	**0,1–0,2**				
	0702	f_z	**01–0,2**				
		a_p	**0,1–0,3**				
	1003	f_z	**0,1–0,2**				
		a_p	**0,1–0,5**				
	12T3	f_z	**0,1–0,25**				
		a_p	**0,1–0,7**				
	1604	f_z	**0,15–0,3**				
		a_p	**0,2–1,0**				
	2006	f_z	**0,2–0,4**				
		a_p	**0,2–1,0**				
Niet-metalen materialen							
	07T1	f_z					0,1–0,3
		a_p					0,1–0,7
	0702	f_z					0,1–0,3
		a_p					0,1–1,0
	1003	f_z					0,1–0,3
		a_p					0,1–1,5
	12T3	f_z					0,1–0,4
		a_p					0,1–2,0
	1604	f_z					0,2–0,5
		a_p					0,2–4,0
	2006	f_z					0,25–0,6
		a_p					0,2–5,0

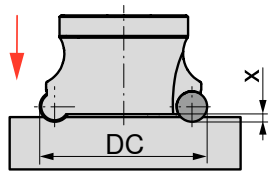
WTN 1205

tot 48 HRC:
a_p-bereik, zoals in de tabel aangegeven
tot 55 HRC:
maximale waarde a_p x 0,7
tot 65 HRC:
maximale waarde a_p x 0,5

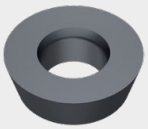
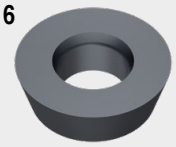
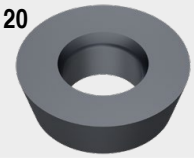
Systeem R 1000, 1002, 1007

Bewerkingsstrategie

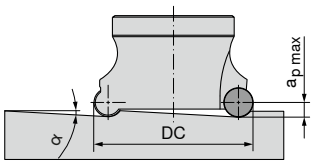
Axiaal induiken

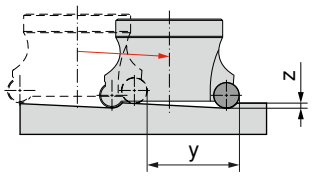


f_z volgens de tabel tot 30 % reduceren
→ V_c pagina 178–180

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

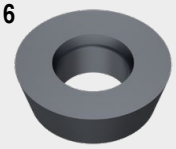
Lineair induiken





y = minimale verplaatsing
z = maximaal toelaatbare induikdiepte
a_p / f_z volgens de tabel

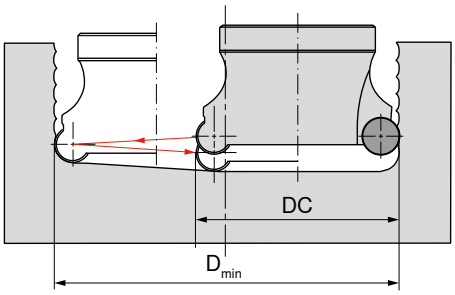
→ V_c pagina 178–180

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

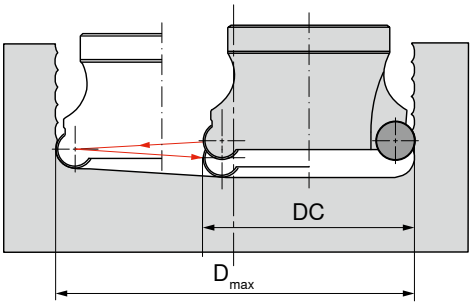
Systeem R 1000, 1002, 1007

Bewerkingsstrategie

Circulair induiken



D_{min} = kleinste gatdiameter afhankelijk van gereedschapdiameter



D_{max} = grootste gatdiameter afhankelijk van gereedschapdiameter

a_p / f_z overeenkomstig de inzettabel
→ V_c pagina 178–180

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

Systeem MaxiMill 252

Bewerkingsstrategie

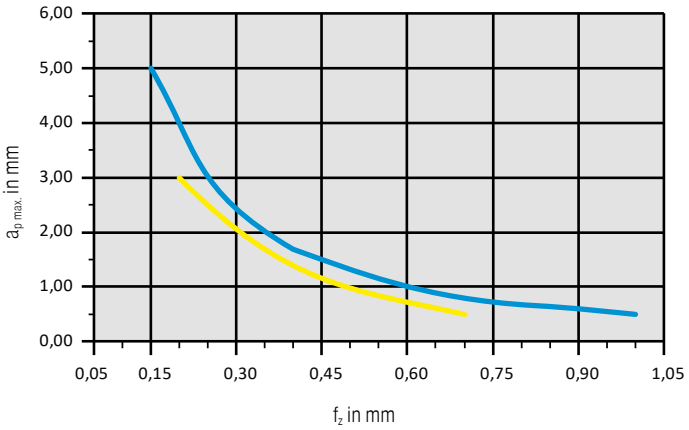
aanbevolen snedediepte

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

Startparameters



RNHU 10

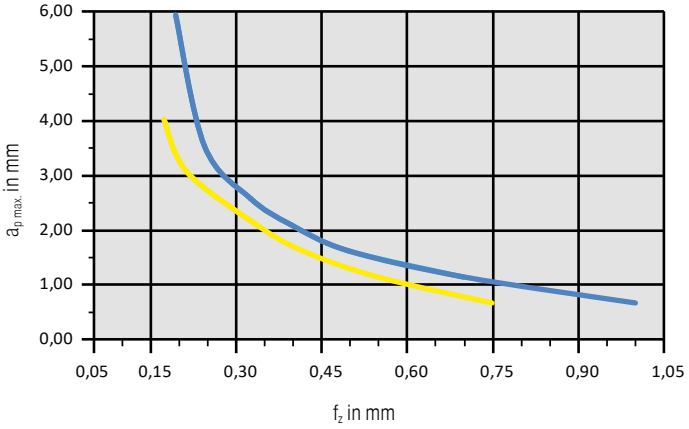


Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**RNHU1005M4SR-M50**	**CTPP235**	180	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**RNHU1005M4ER-F50**	**CTPM240**	180	Droog

Startparameters



RNHU 12



Materiaal			Wisselplaat		v_c in m/min	Koeling
Staal	**P.4.1**	40CrMnMoS 8-6	**RNHU1205M4SR-M50**	**CTPP235**	180	Droog
RVS	**M.1.1**	X6CrNiMoTi 1712 2	**RNHU1205M4ER-F50**	**CTPM240**	180	Droog

Gedetailleerde snijgegevens voor de afzonderlijke snijmaterialen vindt u op → pagina 142–144

Vanaf een v_c > 400 m/min moet het gereedschap gebalanceerd worden!

Richtwaarden voor snijgegevens voor kopieerfrees K200.

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

Richtwaarden voor snijgegevens voor kopieerfrees K200.

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

Maximale axiale aanzetdiepte ap_p voor kopieerfrees K200.



Kogelplaten									
Wisselplaten 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					

*bij gebruik van de volledige breedte bedraagt a_p maximaal 25 % van Ø DC!



Torusplaten									
Wisselplaten 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								

Toepassingsbereiken van de geometrieën

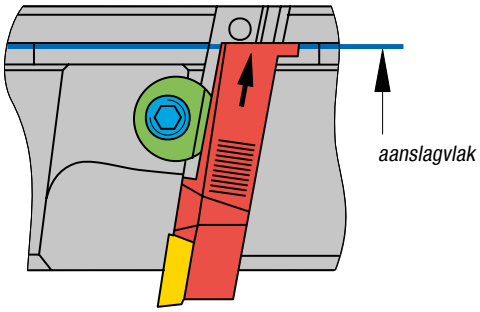
Wisselplaat	F	M	R	hoofdtoepassing
XOHX-FM1	●	●		staal, gietstaal, hittebestendige stalen, geharde stalen tot 63 HRC
XOHX-FM2	●	●		staal, gietstaal, hittebestendige stalen, geharde stalen tot 60 HRC
ROHX-FM3	●	●		staal, gietstaal, hittebestendige stalen
ROHX-FM4	●	●		staal, gietstaal, hittebestendige stalen, geharde stalen tot 60 HRC
XOHX-FM5	●	●		staal, gietstaal, hittebestendige stalen, geharde stalen tot 60 HRC
ROHX-FM6	●	●	●	non-ferro materialen, kunststoffen en grafiet
XOHX-MR2		●	●	langspanige metalen
XOHX-MR3		●	●	staal, gietstaal, hittebestendige stalen
ROGX-MR4		●	●	staal, gietstaal, hittebestendige stalen
XOGX-MF4	●	●		staal, gietstaal, hittebestendige stalen
ROHX-MR5		●	●	langspanige metalen
XOHX-MR6		●	●	langspanige metalen

Richtwaarden voor snijgegevens voor afkortfrezen TX

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

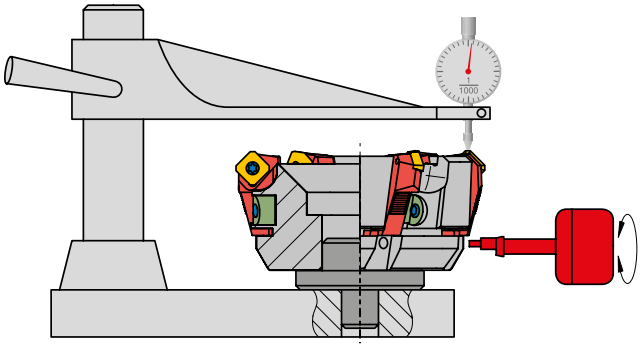
Systeem MaxiMill 260

Vlakloopinstelling voor ruwfrezen



De cassettes simpelweg bij het inbouwen tegen de geslepen aanslagvlakken van de radiale groef drukken. De vlakloop bedraagt 0,03 mm gemeten op de kalibreerplaat.

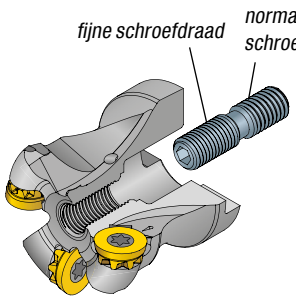
Instelling van de vlakloop met een excentersleutel en meetklok resp. op een optisch voorinstelapparaat



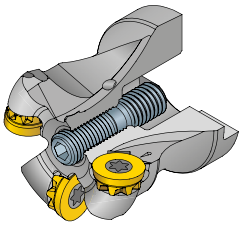
Exacte vlakloopinstelling tot 0,002 mm

- Maak het freesgereedschap schoon.
- Opspannen van de freesbody op een daartoe geschikt instelapparaat.
- Spanspie losmaken, cassettes tegen de aanslagvlakken drukken en de spanspie licht aandraaien.
- Excentersleutel in de boring steken en door verdraaien de cassette in de juiste positie brengen.
- Excentersleutel in contact met de cassette houden zodat deze de juiste positie behoudt en de spanspie vastzetten (aantrekmoment 10Nm).
- Het gereedschap is nu klaar voor gebruik.

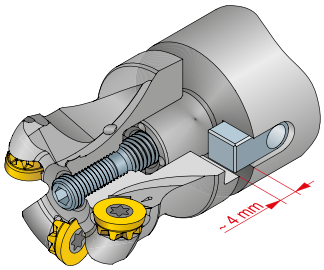
Eenvoudig en veilig gespannen – met de CERATIZIT powerschroef



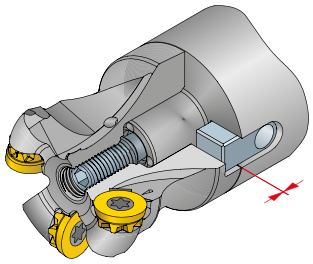
Het deel van de spanschroef met fijne schroefdraad wordt in de frees geschroefd.



De spanschroef wordt licht tegen de aanslag gedraaid (levertoestand).

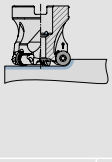
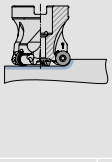
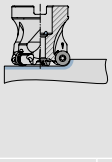


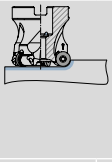
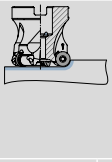
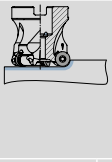
Om een optimale verbinding te garanderen, moet voor het spannen een spleet van ca. 4 mm aanwezig zijn. In combinatie met genormeerde standaard opnames wordt dit automatisch gewaarborgd. Indien nodig kan dmv de spanschroef met 0,5 mm/omw. nagesteld worden.



De spanschroef indraaien en aantrekken.

Aantrekmomenten voor spanschroeven voor het bevestigen van de frees op de opsteekdoorn

	 10				 12				 16			
frees-Ø mm	Inbusbout DIN 912	M_d Nm	Power-schroef Artikel-nr.	M_d Nm	Inbusbout DIN 912	M_d Nm	Power-schroef Artikel-nr.	M_d Nm	Inbusbout DIN 912	M_d Nm	Power-schroef Artikel-nr.	M_d Nm
40			70 950 151	10			70 950 151	10				
42			70 950 151	10			70 950 151	10				
50	M10x25	80			M10x25	80					70 950 154	15
52					M10x25	80					70 950 154	15
63					M10x25	80			M10x25	80		
66					M10x25	80			M10x25	80		

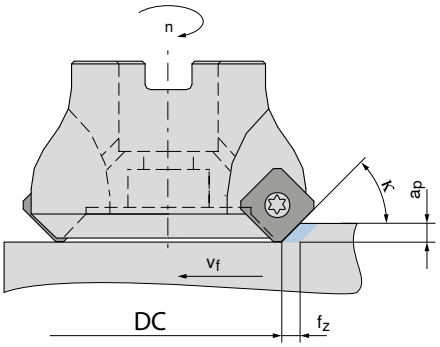
	 12				 16				 20			
frees-Ø mm	Inbusbout DIN 912	M_d Nm	Power-schroef Artikel-nr.	M_d Nm	Inbusbout DIN 912	M_d Nm	Power-schroef Artikel-nr.	M_d Nm	Inbusbout DIN 912	M_d Nm	Power-schroef Artikel-nr.	M_d Nm
80	M12x30	140			M12x30	140			M12x30	140		
100	M16x35	180			M16x35	180			M16x35	180		
125					M16x35	180			M16x35	180		

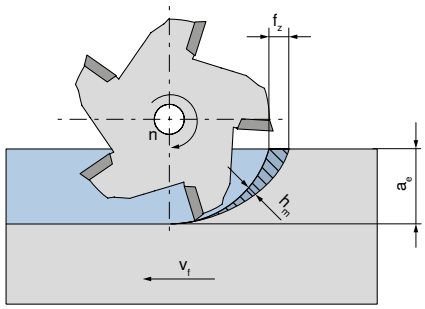
15

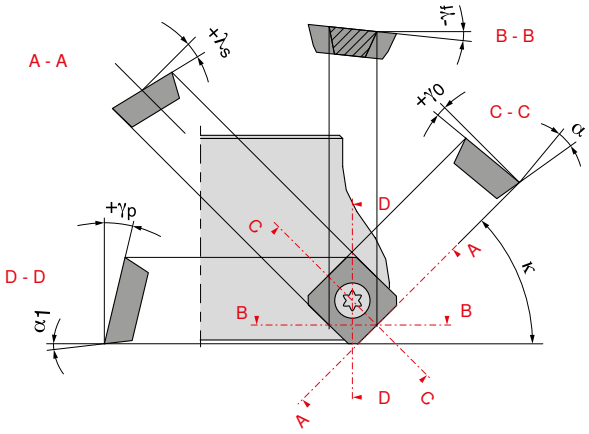
Afkortingen & afmetingen

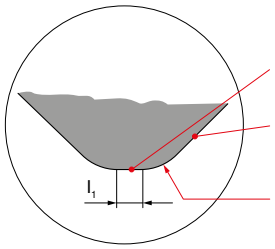
a_e	aangrijpbreedte	mm
a_p	snedediepte	mm
DC	freesdiameter	mm
D_w	werkstuk diameter	mm
f_z	voeding per tand	mm
h_m	gemiddelde spaandikte	mm
k	aantal tanden	
k_c	specifieke snijkracht	N/mm²
$k_{c1.1}$	specifieke snijkracht voor 1 mm² spaandoorsnede	N/mm²
BS	lengte van nasnijfase	mm
m_c	toename specifieke snijkracht	
n	spindel toerental	1/min
Q	Spaanvolume per tijdseenheid	cm³/min
v_c	snijsnelheid	m/min
v_f	voedingssnelheid	mm/min.
ZNF	effectief aantal tanden	

γ_0	orthogonale spaanhoek (effectieve spaanhoek)	graden
γ_f	radiale spaanhoek	graden
γ_p	axiale spaanhoek	graden
κ	aanzethoek	graden
λ_s	hellingshoek	graden
α	vrijloophoek	graden
α_1	vrijloophoek van nasnijfase	graden









nasnijfase

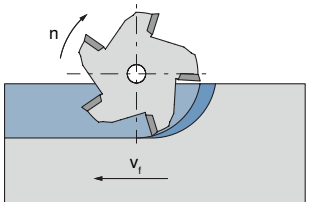
hoofdsnijkant

hoekradius of fase

Aangrijpsituaties

Gunstig

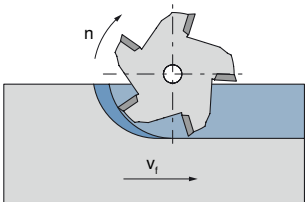
meelopend frezen



De voedingsrichting van het werkstuk is in het snijgebied gelijk aan de de draairichting van de frees.
De spaandikte is bij aanvang maximaal en neemt naar het einde toe tot nul af.

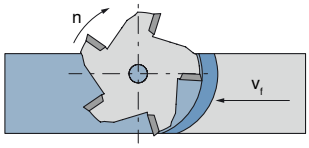
Ongunstig

tegenlopend frezen

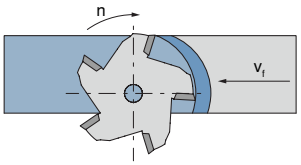


De voedingsrichting van het werkstuk is in het snijgebied tegengesteld aan de draairichting van de frees.
De spaandikte is aan het begin nul en wordt steeds groter tot aan het einde van de snede.

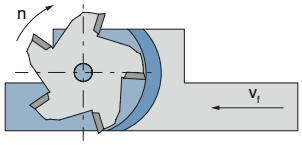
freesplaatsing



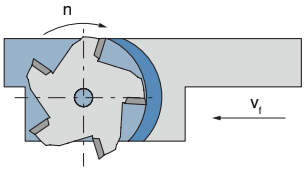
Indien mogelijk moet de frees het werkstuk tangentiaal verlaten.



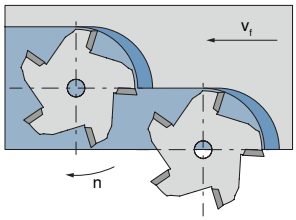
positie van het werkstuk



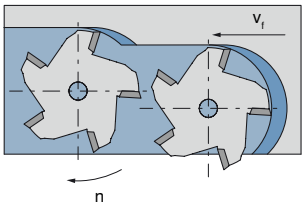
Indien mogelijk moet het werkstuk zo opgespannen worden dat de frees over de gehele bewerkingslengte tangentiaal het werkstuk kan verlaten.



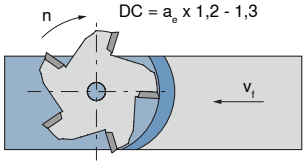
overlapping



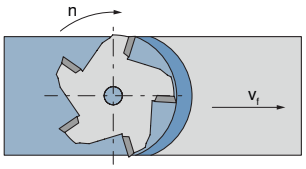
Meelopend frezen, of zoals in het voorbeeld links weergegeven, zorgt ervoor dat de frees tangentiaal het werkstuk verlaat.



freesgrootte



Bij vlakfrezen moet de diameter van het freesgereedschap 20–30 % groter zijn dan het werkstuk.



15

ISO-coderingssysteem voor freeswisselplaten

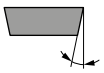
X	D	K	T	11	T3	08	S	R	-	F50
1	2	3	4	5	6	7	8	9		10

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 plaatvorm

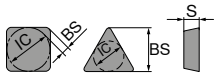
A	85°	
B	82°	
K	55°	
H	120°	
L	90°	
O	135°	
P	108°	
C	80°	
D	55°	
E	75°	
M	86°	
V	35°	
R		
S	90°	
T	60°	
W	80°	
X Z	speciale uitvoering	

2 vrijloophoek

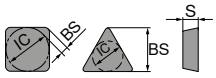


	α
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	speciale uitvoering

3 toleranties

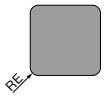


	IC ±mm	BS ±mm	S ±mm	IC = 6,35 / 9,52	IC = 12,7	IC = 15,8 / 19,05
A	0,025	0,005	0,025	●	●	●
C	0,025	0,013	0,025	●	●	●
E	0,025	0,025	0,025	●	●	●
F	0,013	0,005	0,025	●	●	●
G	0,025	0,025	0,13	●	●	●
H	0,013	0,013	0,025	●	●	●
J	0,05	0,005	0,025	●		
	0,08	0,005	0,025		●	
	0,10	0,005	0,025			●
K	0,05	0,013	0,025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

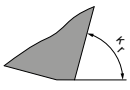
7 fase / neusradius



radius

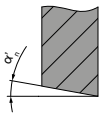
	RE in mm
M0*	
02	0,2
04	0,4
08	0,8
12	1,2

* alleen bij plaatvorm "R"



1e teken

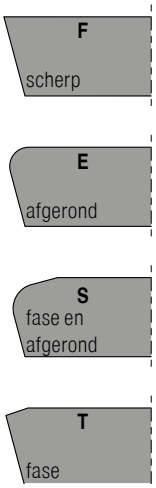
	K_r
A	45°
D	60°
E	75°
F	85°
P	90°
Z	overige



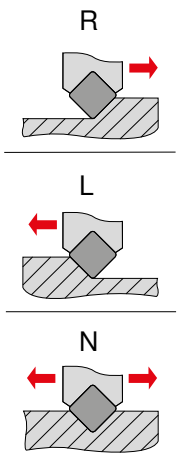
2e teken

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

8 snijkant



9 snijrichting



4

kenmerk

A	
F	
G	
M	
N	
Q	
R	
T	
U	
W	
X	speciale uitvoering

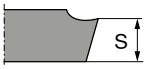
5

snijkantlengte

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

plaatdikte



	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

spaanbreker

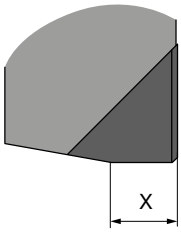
spaanbreker aanduiding
F.. = fijn
M.. = middel
R.. = ruw

extra kenmerken:
R = overgangsradius hoofd- / nevensnijkant
Q = Masterfinish

11

aanduiding van de fabrikant

lengte van de nasnijfase

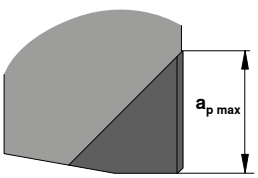


00 = 0,0 mm
10 = 1,0 mm
12 = 1,2 mm
15 = 1,5 mm
30 = 3,0 mm
50 = 5,0 mm

12

aanduiding van de fabrikant

$a_{p\,max}$



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

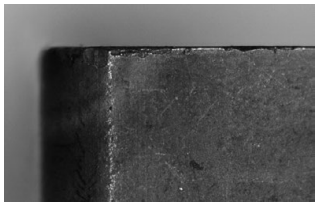
13

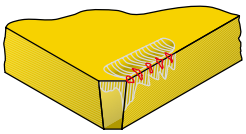
aanduiding van de fabrikant

F = fijn
M = middel
R = ruw

15

Snijkant belastingen bij frezen

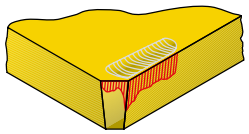




snijkant uitbrokkelingen

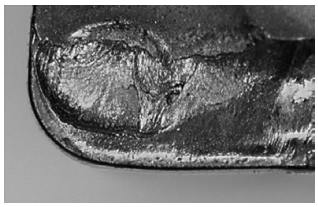
snijsnelheid ↑
voeding per tand ↓
taaiheid van het snijmateriaal ↑
fase van de snijkant ↑

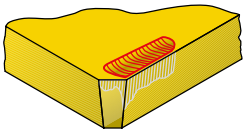




vrijloopvlakslijtage

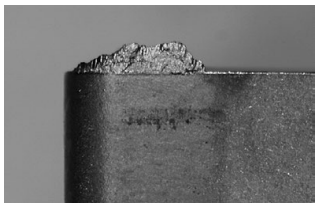
snijsnelheid ↓
voeding per tand ↑
slijtvastheid van het snijmateriaal ↑

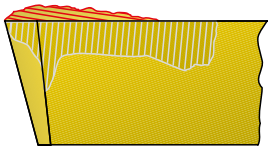




kolkslijtage

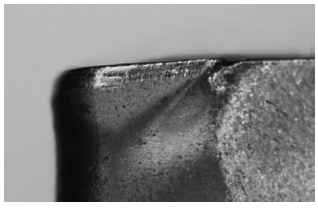
snijsnelheid ↓
voeding per tand ↓
slijtvastheid van het snijmateriaal ↑

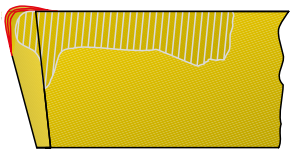




Snijkantsopbouw

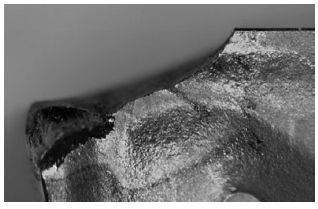
snijsnelheid ↑
voeding per tand ↑
slijtvastheid ↑

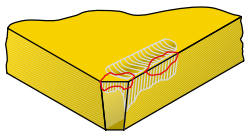




snijkant deformatie

snijsnelheid ↓
voeding per tand ↓
slijtvastheid van het snijmateriaal ↑

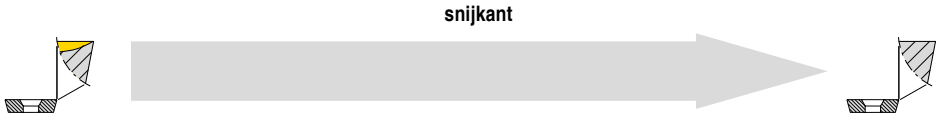




snijkant breuk

snijsnelheid ↓
taaiheid van het snijmateriaal ↑

Spaanbrekeroverzicht



toenemende wighoek				scherp		middel		stabiel	
				●		● ●		● ● ●	
				10	20	30	40	50	60
	fijn	F		**-F10 -27 -27P**	**-F20**		**-F40**	**-F50**	**-ER -FN -33P -33**
	middel	M				**-M31 -M30 -M32**		**-M50 -31**	**-EN -29**
	grof	R				**-R30**		**-R50**	**-SN -R60 -SR**

Spaanbrekercodering

verspaanbaarheid				snijkant		
				scherp	middel	stabiel
				10–20	30–40	50–60
	licht	F		●	● ●	● ● ●
	medium	M		●	● ●	● ● ●
	moeilijk	R		●	● ●	● ● ●

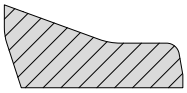
Voorbeeld: spaanbreker -M50



Spaanbreker beschrijving

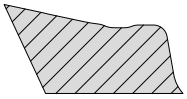
-27P

- zeer positieve geometrie
- scherpe snijkanten
- geringe neiging tot verkleven
- eerste keus voor non-ferro



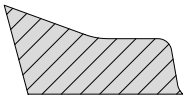
-F10

- hoogpositieve geometrie
- scherpe snijkant
- geringe neiging tot verkleven
- eerste keus voor non-ferro



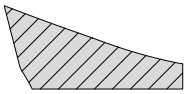
-27

- zeer positieve geometrie
- scherpe snijkanten
- eerste keus voor non-ferro



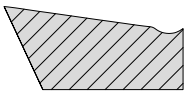
-F20

- zeer positieve geometrie
- licht afgeronde snijkant
- eerste keus voor de niet ijzerhoudende metalen



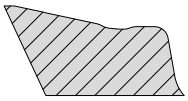
-F40

- positieve geometrie
- afgeronde snijkant
- finish- en ruwbewerking
- voor labiele opspanningen
- voor hittebestendige materialen, titaan- en superlegeringen



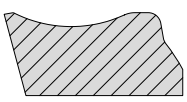
-F50

- positieve geometrie met kleine positieve beschermfase
- afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- voor labiele opspanningen
- lichte ruwbewerking
- eerste keus voor RVS



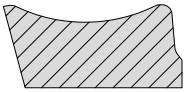
-33P

- positieve geometrie met kleine neutrale beschermfase
- geringe neiging tot verkleven
- afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- voor labiele opspanningen
- lichte ruwbewerking
- eerste keus voor RVS



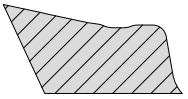
-33

- positieve geometrie met kleine neutrale beschermfase
- afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- voor labiele opspanningen
- lichte ruwbewerking
- eerste keus voor RVS



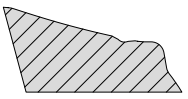
-M30

- positieve geometrie
- afgeronde snijkant
- medium ruwbewerking
- eerste keus voor martensitisch RVS



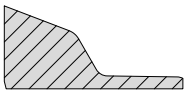
-M31

- positieve geometrie
- afgeronde snijkant
- finish- en ruwbewerking
- voor labiele opspanningen
- voor hittebestendige materialen, titaan- en superlegeringen



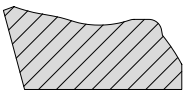
-M32

- positieve geometrie
- afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- medium ruwbewerking
- eerste keus voor martensitisch RVS



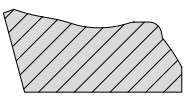
-M50

- positieve geometrie met licht negatieve beschermfase
- afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- lichte tot medium ruwbewerking
- eerste keus voor algemene stalen



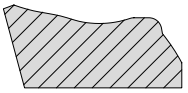
-31

- positieve geometrie met neutrale beschermfase
- afgeronde snijkant
- zware ruwbewerking
- sterk onderbroken snede
- eerste keus voor gietijzer



-29

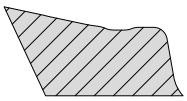
- positieve geometrie met licht negatieve beschermfase
- afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- lichte tot medium ruwbewerking
- eerste keus voor algemene stalen



Spaanbreker beschrijving

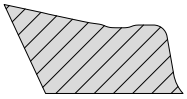
-29R

- positieve geometrie met licht negatieve beschermfase
- sterk afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- lichte tot medium ruwbewerking
- eerste keus voor algemene stalen



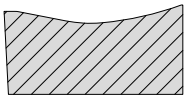
-R30

- positieve geometrie met licht negatieve beschermfase
- sterk afgeronde snijkant
- geringe snijkracht en goede stabiliteit
- lichte tot medium ruwbewerking
- eerste keus voor algemene stalen



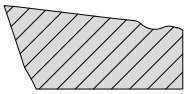
-R50

- licht positieve geometrie
- afgeronde snijkant
- medium ruwbewerking
- sterk onderbroken snedes
- eerste keus voor gietijzer



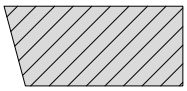
-R60

- positieve geometrie met negatieve stabiele beschermfase
- sterk afgeronde snijkant
- voor stabiele bewerkingssituaties
- eerste keus voor sterk onderbroken snedes
- zware ruwbewerking
- eerste keus voor gietijzer



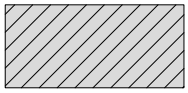
-FN

- neutrale en zeer stabiele geometrie
- sterk afgeronde snijkant
- voor stabiele bewerkingssituaties
- eerste keus voor de hardbewerking tot ca. 50 HRC



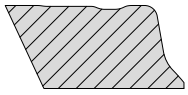
-ER

- neutrale geometrie
- afgeronde snijkant
- universell einsetzbar
- hoge oppervlaktekwaliteit door nasnijfase
- eerste keus voor de bewerking van gietijzer en non-ferro



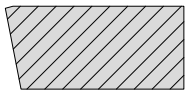
-EN

- neutrale geometrie
- afgeronde snijkant
- hoge oppervlaktekwaliteit door nasnij fase (radiale beschermfase aan WSP)
- eerste keus voor de bewerking van gietijzer en non-ferro



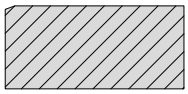
-SN

- neutrale geometrie
- afgeronde snijkant
- hoge oppervlaktekwaliteit door nasnij fase (radiale beschermfase aan WSP)
- geringere snijkrachten
- eerste keus voor goede vlakheid



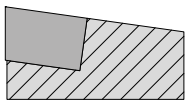
-SR

- neutrale geometrie met negatieve beschermfase
- afgeronde snijkant
- robuuste wisselplaat
- voor slechte bewerkingsomstandigheden
- eerste keus voor de bewerking van gietijzer en staal



-FR

- neutrale geometrie
- licht afgeronde en stabiele snijkant
- afgestemd op keramiek en CBN snijmateriaal
- voor stabiele bewerkingssituraties
- eerste keus voor de bewerking van gietijzer



Soortenoverzicht

Soort	normaanduiding	ISO-toepassingsgebied	Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen
		01 05 10 15 20 25 30 35 40 45 50	P	M	K	N	S	H	O
CTEP210	HE-P10		●		●				
	HE-K05								
TCM10 (CWC10)	HT-P15		●		○				
	HT-K10								
WTN1205	HC-P10		●	○	●			●	
	HC-M15								
	HC-K05								
	HC-H10								
CTPP211	HC-P10		●	○	○	○	○	○	○
	HC-K10								
	HC-M15								
	HC-N10								
	HC-S15								
	HC-H10								
	HC-O10								
CTPP216	HC-P15		●	○	●	○	○	●	○
	HC-M20								
	HC-K15								
	HC-N15								
	HC-S20								
	HC-H15								
	HC-O15								
CTCP220	HC-P20		●		●				
	HC-K20								
CTPP225	HC-P25		●		●				
	HC-K25								
CTCP230	HC-P30		●		●				
	HC-K25								
CTPP231	HC-P30		●		○				
	HC-K25								
CTPP235	HC-P35		●	○	○				
	HC-M30								
	HC-K30								
CTPP236	HC-P35		●	○	○				
	HC-M35								
	HC-K30								
WAN1240	HC-P40		●	○	○				
	HC-M35								
	HC-K30								
WAX1240	HC-P30		●	○	○				
	HC-M25								
	HC-K25								
CTPM225	HC-P25		●	●					
	HC-M25								
WAN2225	HC-M25			●			●		
	HC-S30								
CTCM235	HC-P40		●	●					
	HC-M35								
CTPM240	HC-P40		○	●					
	HC-M40								
CWK10	HC-N10					●			○
	HC-O10								

● **hoofdtoepassing**
○ neventoepassing

slijtvaster v_c+ ⟷ v_c− taaier

Soortenoverzicht

Soort	normaanduiding	ISO-toepassingsgebied	Staal	RVS	Gietijzer	Non-ferro	Hittebestendig	Geharde materialen	Niet-metalen materialen
		01 05 10 15 20 25 30 35 40 45 50	P	M	K	N	S	H	O
CTPM241	HC-P40								
	HC-M40		●	●			○		
	HC-S40								
CTPM245	HC-P45								
	HC-M50		●	●					
CTCM245	HC-P45								
	HC-M50		●	●			○		
	HC-S35								
CTN3105	CN-K05				●				
CTL3215	BC-K10				●			○	
	BC-H10								
CTCK215	HC-K15				●				
CTPK220	HC-K20				●				
CTPK221	HC-P15								
	HC-K10		○		●				
CTPK226	HC-P15								
	HC-M20								
	HC-K15		●	●	●			○	
	HC-H15								
CTPK231	HC-P30								
	HC-M35								
	HC-K30								
	HC-N30		●	●	●	○	○	○	
	HC-S35								
	HC-H30								
CTD4205	DP-N05								
	DP-005					●			○
AMZ	HC-K10								
	HC-N10				○	●			○
	HC-O10								
WUN4210	HT-K10								
	HT-N15				○	●			
CTCN211	HC-N10								
	HC-O10					○			●
CTWN215	HC-K15								
	HC-N10				○	●			○
	HC-O10								
H216T	HW-K15								
	HW-N15				○	●			○
	HW-O15								
CTC5240	HC-S35						●		
CTCS245	HC-S45						●		
CTP6215	HC-K15								
	HC-H15				●			●	
CWX500	HC-P15								
	HC-M15								
	HC-K15								
	HC-N15		●	●	○	●	○		○
	HC-S15								
	HC-O15								

● **hoofdtoepassing**
○ neventoepassing

slijtvaster v_c+ ◯ ⟷ ◌ v_c− taaier

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Soortenbeschrijving

AMZ
- hardmetaal, TiAlN gecoat
- ISO | K10 | **N10** | O10
- de gecoate hardmetaalsoort voor de verspaning van aluminium

CTC5240
- hardmetaal, TiN-TiB_2-gecoat
- ISO | **S35**
- de speciale soort voor de verspaning van titaan en titaanlegeringen

CTCK215
- hardmetaal, TiCN-Al_2O_3-gecoat
- ISO | **K15**
- de eerste keus voor de bewerking van gietijzer bij hoge snijsnelheden

CTCN211
- hardmetaal, gecoat
- ISO | N10 | **O10**
- diamant gecoate hardmetaalsoort speciaal voor de verspaning van grafiet en non-ferro

CTCM235
- hardmetaal, TiCN-Al_2O_3-gecoat
- ISO | **P40** | **M35**
- het taaie alternatief bij de bewerking van algemene stalen
- goed geschikt voor martensitische stalen

CTCM245
- hardmetaal, TiCN-Al_2O_3 gecoat
- ISO | **P5** | **M45** | S35
- speciale soort voor de bewerking van hooggelegeerde staalsoorten

CTCP220
- hardmetaal, TiCN-Al_2O_3-gecoat
- ISO | **P20 l K20**
- de slijtvaste soort voor de droogbewerking van staal

CTCP225
- hardmetaal, TiAlTaN-gecoat
- ISO | **P25** | **K25**
- de slijtvaste soort voor de natbewerking van staal

CTCP230
- hardmetaal, TiCN-Al_2O_3-gecoat
- ISO | **P30** | K25
- de eerste keus voor de droogbewerking van staal bij hoge snijsnelheden

CTD4205
- hardmetaal, ongecoat
- ISO | **N05** | O05
- polykristallijne diamantsoort voor de bewerking van non-ferro

CTEP210
- Cermet, TiCN-Al_2O_3-gecoat
- ISO | **P10** | **K05**
- de gecoate Cermet-soort met taaiheidsreserve voor de finishbewerking met hoge snijsnelheden

CTP6215
- hardmetaal, TiAlN-gecoat
- ISO | **K15** | **H15**
- de gecoate hardmetaalsoort voor de hardbewerking

CTPK220
- hardmetaal, TiAlTaN-gecoat
- ISO | **K20**
- optimaal voor de bewerking van gietijzer met een hoge treksterkte in het taaiere toepassingsbereik

CTPK221
- hardmetaal, TiAlN gecoat
- ISO | P15 | **K10**
- de gecoate standaardsoort voor het fijnverspanen van gietijzer en non-ferro bij medium snijsnelheid

CTPK226
- hardmetaal, gecoat
- ISO | **P15** | **M20** | **K15** | H15
- zeer slijtvaste submicrograin hardmetaalsoort voor de verspaning van gietijzer en geharde stalen tot 62 HRC

CTPK231
- hardmetaal, gecoat
- ISO | **P30** | **M35** | **K30** | N30 | S35 | H30
- taaie hardmetaalsoort voor de medium- en zwaarverspaning van staal en gietijzer
- goed geschikt voor droogbewerking

CTPM225
- hardmetaal, TiAlTaN gecoat
- ISO | **P25** | **M25**
- de slijtvaste keuze voor de bewerking van austenitisch RVS

CTPM240
- hardmetaal, TiAlTaN-gecoat
- ISO | P40 | **M40**
- de eerste keus voor de bewerking van austenitisch RVS

CTPM241
- hardmetaal, AlTiN gecoat
- ISO | **P40** | **M40** | S40
- de taaie hardmetaalsoort voor de verspaning van RVS en hittebestendige stalen

CTPM245
- hardmetaal, TiAlTaN gecoat
- ISO | **M45** | **P50**
- de eerste keus voor de bewerking van martensitische stalen

Soortenbeschrijving

CTPP211
- hardmetaal, gecoat
- ISO | **P10** | M15 | K10 | N10 | S15 | H10 | O10
- verslijtvaste hardmetaalsoort voor de medium- en zwaarverspaning van staal en RVS
- goed geschikt voor droogbewerking

CTPP216
- hardmetaal, TiAlN gecoat
- ISO | **P10** | M20 | **K15** | N15 | S20 | **H15** | O15
- zeer slijtvaste hardmetaalsoort met een hoge snijkantstabiliteit voor het finishen van materialen met hoge treksterkte, ongelegeerde gereedschapstalen, gietijzer en gehard staal tot 54 HRC

CTPP231
- hardmetaal, gecoat
- ISO | **P30** | K25
- zeer taaie speciale soort voor de medium- en zwaarverspaning van staal bij gemiddelde snijsnelheden bij extreem hoge voeding per tand

CTPP235
- hardmetaal, TiAlTaN-gecoat
- ISO | **P35** | M30 | K30
- de slijtvaste soort voor de natbewerking van staal

CTPP236
- hardmetaal, TiAlN-TiN-gecoat
- ISO | **P35** | M35 | K30
- de taaie speciaalsoort voor de medium- en zwaarverspaning van staal in het hoge snijsnelheidsbereik
- deze soort vindt ook toepassing in de verspaning van gietijzer en RVS

CTWN215
- hardmetaal, ongecoat
- ISO | K15 | **N10** | O10
- ongecoate hardmetaalsoort voor de bewerking van non-ferro

H216T
- hardmetaal, ongecoat
- ISO | K15 | **N15** | O15
- de ongecoate hardmetaalsoort voor de bewerking van aluminium en andere non-ferro materialen
- ook zeer goed geschikt voor HSC-bewerking

TCM10
- Cermet, ongecoat
- ISO | **P15** | **M10** | K10
- de ongecoate Cermet-soort voor het finishen van RVS en gehard staal
- bijzonder slijtvast door hoge hittebestendigheid

WAN1240
- hardmetaal, gecoat
- ISO | **P40** | M35 | K30
- gecoate, taaie speciaalsoort voor de bewerking van staal bij medium tot hoge snijsnelheden
- als neventoepassing ook geschikt voor de bewerking van gietijzer

WAN2225
- hardmetaal, gecoat
- ISO | **M25** | **S25**
- fijnkorrelige soort met hoge taaiheid en temperatuurbestendigheid
- voor ruw- en finishbewerkingen van roest- en zuurbestendige stalen, zowel nat- als droogbewerking

WAX1240
- hardmetaal, gecoat
- ISO | **P40** | M25 | K30
- speciale soort voor de medium- en zwaarverspaning van staal bij medium snijsnelheden en extreem hoge voeding per tand

WTN1205
- hardmetaal, gecoat
- ISO | **P10** | M15 | **K05** | **H10**
- geocate speciaalsoort voor de bewerking van staal, gehard staal en gietijzer alsmede grafiet en kunststoffen

WUN4210
- hardmetaal, gecoat
- ISO | K15 | **N10** | O10
- ongecoate standaardsoort voor de medium verspaning van non-ferro en grafiet

CTCS245
- hardmetaal, CVD TiN-TiB2 gecoat
- ISO | **S45**
- de speciale soort voor de bewerking van nikkelbasis legeringen

Soortenbeschrijving

C T C | P | 2 | 2 0 (Voorbeeld)

Hoofdtoepassing – materiaal

1|P	Staal
2|M	Roestvrij staal
3|K	Gietijzer
4|N	Non-ferro materialen
5|S	Superlegeringen / titaan
6|H	Harde materialen
7|X	Universele toepassing

Toepassing

1	Draaien
2	Frezen
3	Steken
4	boren
5	Schroefdraadsnijden
6	Andere
7	Meerdere bewerkingen

Hardheidgradatie

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