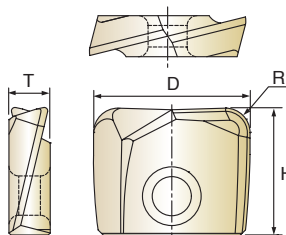


**i-Xmill CORNER RADIUS INSERTS**
**i-Xmill WECHSELPLATTE mit GERADER STIRN UND ECKRADIUS**

- ▶ The optimum geometry of the tool to achieve the better reliability and less vibration and cutting load.
- ▶ Interchangeability with i-Xmill ball holder, but the precise cutting is possible with i-Xmill corner radius holder due to higher stability and strength of tool.
- ▶ The various and wide cutting range makes it possible to machine over the roughing and finishing.
- ▶ Special coating makes high hardness with high thermal stability against oxidation.
- ▶ Three Types of Inserts are available
  - For General Purpose (~HRc50)
  - For Hardened Material (HRc40~HRc65)
  - For Graphite

- ▶ Die optimale Werkzeuggeometrie für große Betriebssicherheit und geringe Vibration und Schneidendruck.
- ▶ Einsetzbar wie i-Xmill Rundplattenhalter, aber eine größere Schnittgenauigkeit ist mit dem Vierkantplattenhalter möglich, wegen der größeren Steifigkeit und Stärke des Werkzeugs.
- ▶ Die große Einsatzbreite des Werkzeugs macht den Einsatz sowohl zum Schruppen als auch zum Schlichten möglich.
- ▶ Eine spezielle Beschichtung verleiht der Schneide große Härte und Hitzebeständigkeit.
- ▶ Drei Typen von Schneideinsätzen lieferbar
  - Für allgemeinen Einsatz (HRc50)
  - Für gehärtete Materialien (HRc40~HRc65)
  - Für Graphit



cutting conditions : p.644

Unit : mm

EDP No.			Corner Radius	Mill Diameter	Height	Thickness
PVD Coated		Diamond Coated				
For General Material	For Hardened Material	For Graphite	R	D	H	T
XMR110A080 03	XMR120C080 03	XMR110D080 03	R0.3	8.0	8	2.4
XMR110A080 05	XMR120C080 05	XMR110D080 05	R0.5			
XMR110A080 10	XMR120C080 10	XMR110D080 10	R1.0			
XMR110A100 05	XMR120C100 05	XMR110D100 05	R0.5	10.0	9.5	2.7
XMR110A100 10	XMR120C100 10	XMR110D100 10	R1.0			
XMR110A100 20	XMR120C100 20	XMR110D100 20	R2.0			
XMR110A120 05	XMR120C120 05	XMR110D120 05	R0.5	12.0	11	3.2
XMR110A120 10	XMR120C120 10	XMR110D120 10	R1.0			
XMR110A120 20	XMR120C120 20	XMR110D120 20	R2.0			
XMR110A130 05	XMR120C130 05	XMR110D130 05	R0.5	13.0	11.2	3.2
XMR110A130 10	XMR120C130 10	XMR110D130 10	R1.0			
XMR110A130 20	XMR120C130 20	XMR110D130 20	R2.0			
XMR110A160 05	XMR120C160 05	XMR110D160 05	R0.5	16.0	13	4.2
XMR110A160 10	XMR120C160 10	XMR110D160 10	R1.0			
XMR110A160 20	XMR120C160 20	XMR110D160 20	R2.0			
XMR110A170 05	XMR120C170 05	XMR110D170 05	R0.5	17.0	13	4.2
XMR110A170 10	XMR120C170 10	XMR110D170 10	R1.0			
XMR110A170 20	XMR120C170 20	XMR110D170 20	R2.0			

- The other corner radius values are available on request.
- The corner radius tolerance is  $\pm 0.015\text{mm}$  and the set-up accuracy is  $\pm 0.02\text{mm}$

◎ : Excellent ○ : Good

	Carbon Steels		Alloy Steels		Tool Steels		Cast Iron	Hardened Steels	Stainless Steels	Aluminum	Graphite
	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc35~					
XMR110A	◎	○	◎	○	◎	○	○		○	○	
XMR120C	○	◎	○	◎	○	◎	◎	◎			
XMR110D	○		○		○					○	◎



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- ▶ Drei Typen von Schneideinsätzen lieferbar
  - Für allgemeinen Einsatz (HRc50)
  - Für gehärtete Materialien (HRc40~HRc65)
  - Für Graphit



cutting conditions : p.47

Unit : mm

EDP No.			Corner Radius	Mill Diameter	Height	Thickness
PVD Coated		Diamond Coated				
For General Material	For Hardened Material	For Graphite	R	D	H	T
XMR110A200 05	XMR120C200 05	XMR110D200 05	R0.5	20.0	16	5.2
XMR110A200 10	XMR120C200 10	XMR110D200 10	R1.0			
XMR110A200 20	XMR120C200 20	XMR110D200 20	R2.0			
XMR110A210 05	XMR120C210 05	XMR110D210 05	R0.5	21.0	16	5.2
XMR110A210 10	XMR120C210 10	XMR110D210 10	R1.0			
XMR110A210 20	XMR120C210 20	XMR110D210 20	R2.0			
XMR110A250 05	XMR120C250 05	XMR110D250 05	R0.5	25.0	19.5	6.2
XMR110A250 10	XMR120C250 10	XMR110D250 10	R1.0			
XMR110A250 20	XMR120C250 20	XMR110D250 20	R2.0			
XMR110A260 05	XMR120C260 05	XMR110D260 05	R0.5	26.0	19.5	6.2
XMR110A260 10	XMR120C260 10	XMR110D260 10	R1.0			
XMR110A260 20	XMR120C260 20	XMR110D260 20	R2.0			
XMR110A300 05	XMR120C300 05	XMR110D300 05	R0.5	30.0	23.5	7.2
XMR110A300 10	XMR120C300 10	XMR110D300 10	R1.0			
XMR110A300 20	XMR120C300 20	XMR110D300 20	R2.0			
XMR110A320 05	XMR120C320 05	XMR110D320 05	R0.5	32.0	23.5	7.2
XMR110A320 10	XMR120C320 10	XMR110D320 10	R1.0			
XMR110A320 20	XMR120C320 20	XMR110D320 20	R2.0			

- The other corner radius values are available on request.
- The corner radius tolerance is  $\pm 0.015\text{mm}$  and the set-up accuracy is  $\pm 0.02\text{mm}$

◎ : Excellent ○ : Good

	Carbon Steels		Alloy Steels		Tool Steels		Cast Iron	Hardened Steels	Stainless Steels	Aluminum	Graphite
	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc35~	~HRc35	HRc50~	~HRc28	~HRc8	
XMR110A	◎	○	◎	○	◎	○	○	◎	○	○	
XMR120C	○	◎	○	◎	○	◎	◎	◎			
XMR110D	○		○		○					○	◎



**RECOMMENDED CUTTING CONDITIONS**  
**EMPFOHLENE SCHNEIDKONDITIONEN**

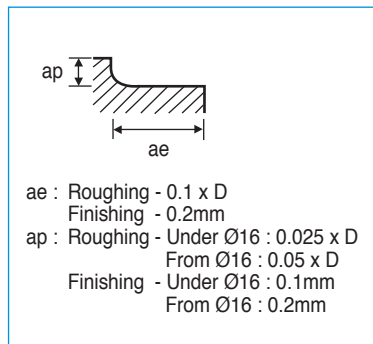
**i-Xmill CORNER RADIUS INSERTS**  
**i-Xmill WECHSELPLATTE MIT GERADER STIRN UND ECKRADIUS**

**XMR110A, XMR120C, XMR110D SERIES**

WORK MATERIAL		NON-ALLOYED STEELS ALLOY STEELS CAST IRON				ALLOY STEELS HEAT RESISTANT STEELS			
HARDNESS	HB	~280				280~380			
	HRc	~30				30~40			
STRENGTH	N/mm <sup>2</sup>	~1000				1000~1250			
i-Xmill TYPE		XMR110A				XMR110A			
CUTTING CONDITION Roughing~Finishing		RPM [rev/min]	Feed(Vf) [mm/min]	Vc [m/min]	fz [mm/t]	RPM [rev/min]	Feed(Vf) [mm/min]	Vc [m/min]	fz [mm/t]
8.0		6370~11940	2550~3580	160~300	0.20~0.15	4770~11140	1910~3340	120~280	0.20~0.15
10.0		5090~9550	2040~2860	160~300	0.20~0.15	3820~8910	1530~2670	120~280	0.20~0.15
12.0, 13.0		4240~7960	1700~2390	160~300	0.20~0.15	3180~7430	1270~2230	120~280	0.20~0.15
16.0, 17.0		3180~5970	1590~2390	160~300	0.25~0.20	2390~5570	1190~2230	120~280	0.25~0.20
20.0, 21.0		2550~4770	1270~1910	160~300	0.25~0.20	1910~4460	950~1780	120~280	0.25~0.20
25.0, 26.0		2040~3820	1020~1530	160~300	0.25~0.20	1530~3570	760~1430	120~280	0.25~0.20
30.0, 32.0		1700~3180	850~1270	160~300	0.25~0.20	1270~2970	640~1190	120~280	0.25~0.20

WORK MATERIAL		DIE TOOL STEELS PRE-HARDENED				HARDENED STEELS			
HARDNESS	HB	380~480				480~740			
	HRc	40~50				50~65			
STRENGTH	N/mm <sup>2</sup>	1250~1500				1500~			
i-Xmill TYPE		XMR110A, XMR120C				XMR120C			
CUTTING CONDITION Roughing~Finishing		RPM [rev/min]	Feed(Vf) [mm/min]	Vc [m/min]	fz [mm/t]	RPM [rev/min]	Feed(Vf) [mm/min]	Vc [m/min]	fz [mm/t]
8.0		3980~11140	990~1340	100~280	0.12~0.06	3180~8750	640~880	80~220	0.10~0.05
10.0		3180~8910	800~1070	100~280	0.13~0.06	2550~7000	510~700	80~220	0.10~0.05
12.0, 13.0		2650~7430	660~890	100~280	0.12~0.06	2120~5840	420~580	80~220	0.10~0.05
16.0, 17.0		1990~5570	600~840	100~280	0.15~0.08	1590~4380	420~530	80~220	0.15~0.06
20.0, 21.0		1590~4460	480~670	100~280	0.15~0.08	1270~3500	380~420	80~220	0.15~0.06
25.0, 26.0		1270~3570	380~530	100~280	0.15~0.07	1020~2800	310~340	80~220	0.15~0.06
30.0, 32.0		1060~2970	320~450	100~280	0.15~0.08	850~2330	250~280	80~220	0.15~0.06

WORK MATERIAL		GRAPHITE			
HARDNESS	HB				
	HRc				
STRENGTH	N/mm <sup>2</sup>				
i-Xmill TYPE		XMR110D			
CUTTING CONDITION Roughing~Finishing		RPM [rev/min]	Feed(Vf) [mm/min]	Vc [m/min]	fz [mm/t]
8.0		11940~15920	4770~6370	300~400	0.20~0.20
10.0		9550~12730	3820~5090	300~400	0.20~0.20
12.0, 13.0		7960~10610	3180~4240	300~400	0.20~0.20
16.0, 17.0		5970~7960	2390~3180	300~400	0.20~0.20
20.0, 21.0		4770~6370	2390~3180	300~400	0.25~0.25
25.0, 26.0		3820~5090	1910~2550	300~400	0.25~0.25
30.0, 32.0		3180~4240	1590~2120	300~400	0.25~0.25



► Recommend to reduce the feed rate to 70 ~ 85% when you use long tools.

RPM = rev./min.  
FEED = mm/min.  
Vc = m/min.  
fz = mm/t