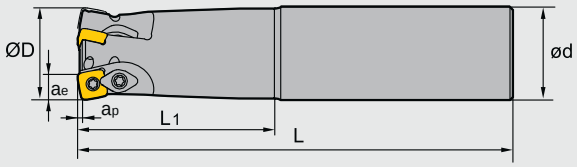
High feed milling cutters · Hochvorschubfräser

XMR01 P M K

S type insert, straight shank
S Typ WSP, Zylinder Schaft

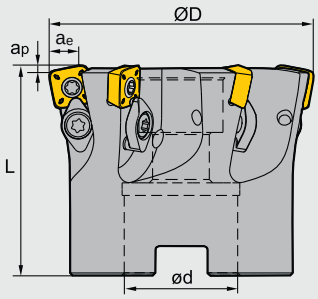


Specification of tools · Werkzeug-Beschreibung
With Internal Cooling · Mit Innenkühlung

Type Typ		Stock Lager	Dimensions (mm) Abmessungen						No. of teeth Zähne	Weight Gewicht (kg)
			Ø D	a_p	a_e	L_1	L	Ø d		
XMR01	-025-G25-SD09-02	●	25	1.4	8.8	60	140	25	2	0.5
	-025-G25-SD09-02C	●	25	1.4	8.8	60	140	25	2	0.5
	-032-G32-SD09-03	●	32	1.4	8.8	70	150	32	3	0.8
	-032-G32-SD09-03C	●	32	1.4	8.8	70	150	32	3	0.8
	-035-G32-SD09-03	○	35	1.4	8.8	70	150	32	3	0.8
	-035-G32-SD09-03C	○	35	1.4	8.8	70	150	32	3	0.8
	-032-G32-SD12-02	●	32	1.8	11.7	70	150	32	2	0.8
	-032-G32-SD12-02C	●	32	1.8	11.7	70	150	32	2	0.8
	-040-G40-SD12-03	●	40	1.8	11.7	70	150	40	3	1.3
	-040-G40-SD12-03C	●	40	1.8	11.7	70	150	40	3	1.3

XMR01 P M K

S



Specification of tools · Werkzeug-Beschreibung
With Internal Cooling · Mit Innenkühlung

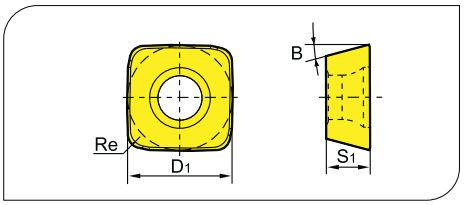
Type Typ		Stock Lager	Dimensions (mm) Abmessungen					No.of teeth Zähne	Coupling Aufnahme	Weight Gewicht (kg)
			Ø D	a_p	a_e	L	ø d			
XMR01	-050-A22-SD09-04	●	50	1.4	8.8	40	22	4	A	0.3
	-050-A22-SD09-04C	●	50	1.4	8.8	40	22	4	A	0.3
	-063-A22-SD09-06	●	63	1.4	8.8	40	22	6	A	0.5
	-063-A22-SD09-06C	●	63	1.4	8.8	40	22	6	A	0.5
	-063-A27-SD09-06	○	63	1.4	8.8	50	27	6	A	0.6
	-063-A27-SD09-06C	○	63	1.4	8.8	50	27	6	A	0.6
	-063-A22-SD12-05	●	63	1.8	11.7	40	22	5	A	0.5
	-063-A22-SD12-05C	●	63	1.8	11.7	40	22	5	A	0.5
	-063-A27-SD12-05	○	63	1.8	11.7	50	27	5	A	0.6
	-063-A27-SD12-05C	○	63	1.8	11.7	50	27	5	A	0.6
	-080-A27-SD12-05	●	80	1.8	11.7	63	27	5	A	0.9
	-080-A27-SD12-05C	●	80	1.8	11.7	63	27	5	A	0.9
	-100-B32-SD12-06	●	100	1.8	11.7	50	32	6	B	1.8
	-100-B32-SD12-06C	●	100	1.8	11.7	50	32	6	B	1.8

● Ex Stock / ab Lager ○ On demand / auf Anfrage

Spare parts · Ersatzteile

Tool Werkzeug	Insert Screw Schraube	Clamp Screw Schraube	Clamp Pratze	Wrench Schlüssel	
XMR01**-SD09**	I60M3.5×08TT	I60M4×8.4	WD-204	WT10IP	WT15IP
XMR01**-SD12**	I60M4×8.4			WT15IP	

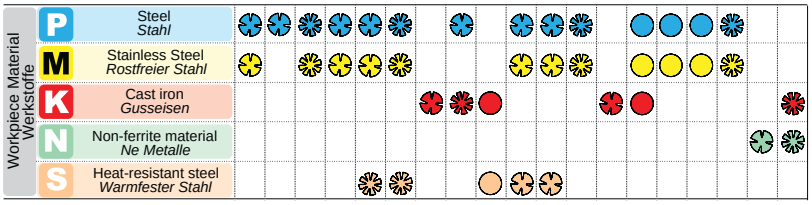
Applicable inserts · Wendeschneidplatten



Ideal Machining Condition
Gute Bearbeitungsbedingungen

Normal Machining Condition
Normale Bearbeitungsbedingungen

Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen



Insert WSP	Type Typ	Dimensions (mm) Abmessungen				CVD Coating CVD Beschicht.							PVD Coating PVD Beschicht.						Cermet Cermet		Carbide uncoat. unbe. Hartmetall		
		B	Re	S_1	D_1	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD101	YD201
	**SDMT09T312-DM**	15°	1.2	3.97	9.525		●				●		○		●		●							
	SDMT120412-DM	15°	2.0	4.76	12.7						●		○		●		●							
New! 	**SDMT09T312-PM**	15°	1.2	3.97	9.525		○			●					●	○								
	SDMT120412-PM	15°	2.0	4.76	12.7		○			●					●	○								

Applicable tool B11-B18
Werkzeug

Tools code key B26-B27
Werkzeug ISO

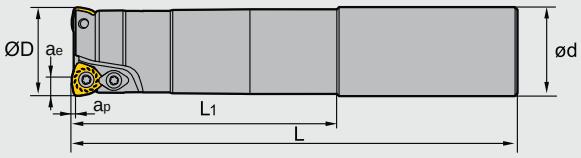
Grade selection guide B19-B23
Sortenauswahl

Technical data B215-B220
Technische Daten

High feed milling cutters · Hochvorschubschaftfräser

XMR01 P M K

W type insert, straight shank
W Typ WSP, Zylinder Schaft



Specification of tools · Werkzeug-Beschreibung

Type Typ		Stock Lager	Dimensions (mm) Abmessungen						No. of teeth Zähne	Weight Gewicht (kg)
			Ø D	a_p	a_e	L_1	L	ø d		
XMR01	-020-G20-WP05-02-M	●	20	1.5	3.8	50	130	20	2	0.2
	-020-G20-WP05-02C-M	●	20	1.5	3.8	50	130	20	2	0.2
	-020-G20-WP05-02-L	●	20	1.5	3.8	100	180	20	2	0.3
	-020-G20-WP05-02C-L	●	20	1.5	3.8	100	180	20	2	0.3
	-020-G20-WP05-02-XL	○	20	1.5	3.8	130	250	20	2	0.8
	-020-G20-WP05-02C-XL	○	20	1.5	3.8	130	250	20	2	0.8
	-025-G25-WP06-02-M	●	25	1.5	4.35	60	140	25	2	0.4
	-025-G25-WP06-02C-M	●	25	1.5	4.35	60	140	25	2	0.4
	-025-G25-WP06-02-L	○	25	1.5	4.35	120	200	25	2	0.6
	-025-G25-WP06-02C-L	○	25	1.5	4.35	120	200	25	2	0.6
	-025-G25-WP06-02-XL	○	25	1.5	4.35	180	300	25	2	1.0
	-025-G25-WP06-02C-XL	○	25	1.5	4.35	180	300	25	2	1.0
	-032-G32-WP06-03-M	●	32	1.5	4.35	70	150	32	3	0.8
	-032-G32-WP06-03C-M	●	32	1.5	4.35	70	150	32	3	0.8
	-032-G32-WP06-03-L	●	32	1.5	4.35	120	200	32	3	1.0
	-032-G32-WP06-03C-L	●	32	1.5	4.35	120	200	32	3	1.0
	-032-G32-WP06-03-XL	○	32	1.5	4.35	180	300	32	3	1.6
	-032-G32-WP06-03C-XL	○	32	1.5	4.35	180	300	32	3	1.6
	-040-G32-WP06-03-M	○	40	1.5	4.35	50	150	32	3	0.9
	-040-G32-WP06-03C-M	○	40	1.5	4.35	50	150	32	3	0.9
	-040-G32-WP06-03-L	○	40	1.5	4.35	50	250	32	3	1.5
	-040-G32-WP06-03C-L	○	40	1.5	4.35	50	250	32	3	1.5
	-040-G32-WP06-03-XL	○	40	1.5	4.35	50	300	32	3	1.8
	-040-G32-WP06-03C-XL	○	40	1.5	4.35	50	300	32	3	1.8
	-040-G32-WP08-02-M	○	40	1.5	5.66	50	150	32	2	0.9
	-040-G32-WP08-02C-M	○	40	1.5	5.66	50	150	32	2	0.9
	-040-G32-WP08-02-L	○	40	1.5	5.66	50	250	32	2	1.5
	-040-G32-WP08-02C-L	○	40	1.5	5.66	50	250	32	2	1.5
	-040-G32-WP08-02-XL	○	40	1.5	5.66	50	300	32	2	1.9
	-040-G32-WP08-02C-XL	○	40	1.5	5.66	50	300	32	2	1.9
	-050-G32-WP09-02-M	○	50	3.0	6.8	50	150	32	2	1.9
	-050-G32-WP09-02C-M	○	50	3.0	6.8	50	150	32	2	1.9
	-050-G32-WP09-02-L	○	50	3.0	6.8	50	250	32	2	2.5
	-050-G32-WP09-02C-L	○	50	3.0	6.8	50	250	32	2	2.5

Spare parts · Ersatzteile

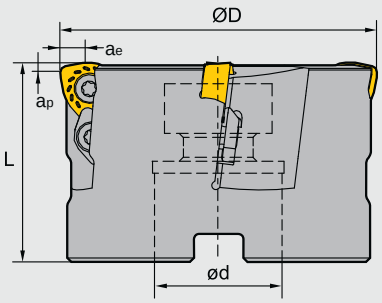
Tool Werkzeug	Clamp/Insert Screw Schraube	Clamp Pratze	Wrench Schlüssel	
				
XMR01**-WP05**	I60M3.5×08TT	--	WT10P	--
XMR01**-WP06**	I60M4×8.4		WT15P	
XMR01**-WP08**	I60M5×13	WD-208	--	WT20IT
XMR01**-WP09**				

● Ex Stock / ab Lager ○ On demand / auf Anfrage

High feed milling cutters · Hochvorschubfräser

XMR01 P M K

W type insert, Arbor mounting
W Typ WSP, Aufsteckfräser



Specification of tools · Werkzeug-Beschreibung

Type Typ		Stock Lager	Dimensions (mm) Abmessungen					No. of teeth Zähne	Inserts WSP	Weight Gewicht (kg)
			Ø D	a_p	a_e	L	ø d			
XMR01	-050-A22-WP06-04	●	50	1.5	4.35	50	22	4	A	0.4
	-050-A22-WP06-04C	●	50	1.5	4.35	50	22	4	A	0.4
	-050-A22-WP08-03	○	50	1.5	5.66	50	22	3	A	0.4
	-050-A22-WP08-03C	○	50	1.5	5.66	50	22	3	A	0.4
	-063-A22-WP08-04	●	63	1.5	5.66	50	22	4	A	0.7
	-063-A22-WP08-04C	●	63	1.5	5.66	50	22	4	A	0.7
	-063-A27-WP08-04	●	63	1.5	5.66	50	27	4	A	0.7
	-063-A27-WP08-04C	●	63	1.5	5.66	50	27	4	A	0.7
	-080-A27-WP08-05	●	80	1.5	5.66	63	27	5	A	1.5
	-080-A27-WP08-05C	●	80	1.5	5.66	63	27	5	A	1.5
	-100-B32-WP08-06	○	100	1.5	5.66	63	32	6	B	2.2
	-100-B32-WP08-06C	○	100	1.5	5.66	63	32	6	B	2.2
	-125-B40-WP08-07	●	125	1.5	5.66	63	40	7	B	3.5
	-125-B40-WP08-07C	●	125	1.5	5.66	63	40	7	B	3.5
	-160-B40-WP08-08	○	160	1.5	5.66	63	40	8	B	6.0
	-160-B40-WP08-08C	○	160	1.5	5.66	63	40	8	B	6.0
	-063-A22-WP09-03	○	63	3.0	6.8	50	22	3	A	0.7
	-063-A22-WP09-03C	○	63	3.0	6.8	50	22	3	A	0.7
	-080-A27-WP09-04	○	80	3.0	6.8	63	27	4	A	1.4
	-080-A27-WP09-04C	○	80	3.0	6.8	63	27	4	A	1.4
	-100-B32-WP09-05	○	100	3.0	6.8	63	32	5	B	2.1
	-100-B32-WP09-05C	○	100	3.0	6.8	63	32	5	B	2.1
	-125-B40-WP09-06	○	125	3.0	6.8	63	40	6	B	3.7
	-125-B40-WP09-06C	○	125	3.0	6.8	63	40	6	B	3.7
	-160-B40-WP09-07	○	160	3.0	6.8	63	40	7	B	6.3
	-160-B40-WP09-07C	○	160	3.0	6.8	63	40	7	B	6.3

Spare parts · Ersatzteile

Tool Werkzeug	Clamp / Insert Screw Pratze / WSP Schraube	Clamp Pratze	Wrench Schlüssel	
				
XMR01**-WP06**	I60M4×8.4	--	WT15S	--
XMR01**-WP08**	I60M5×13	WD-208	--	WT20IT
XMR01**-WP09**	I60M5×13	WD-208	--	

Applicable tool B11-B18
Werkzeug

Tools code key B26-B27
Werkzeug ISO

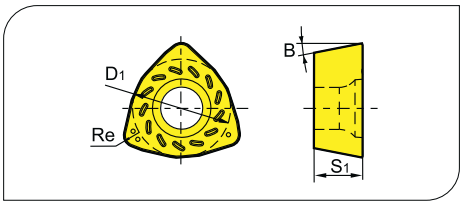
Grade selection guide B19-B23
Sortenauswahl

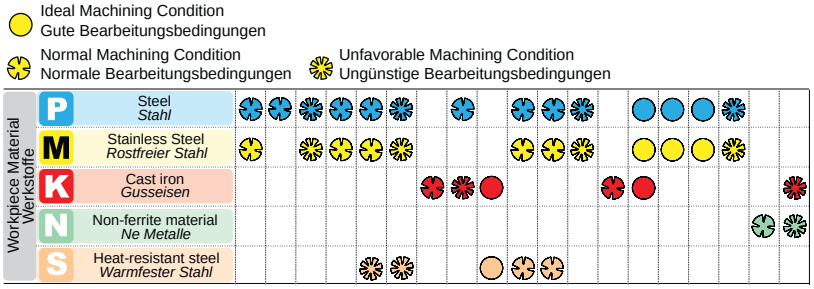
Technical data B215-B220
Technische Daten

B

Milling Tools
Fräser

Applicable inserts · Wendeschneidplatten



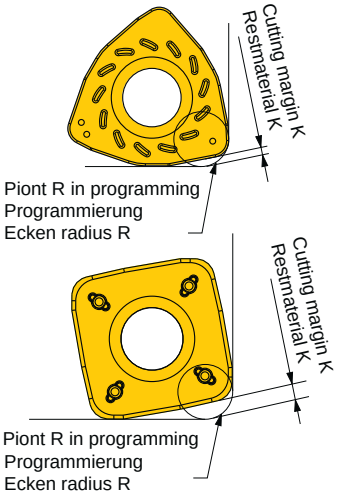


Insert WSP	Type Typ	Dimensions (mm) Abmessungen				CVD Coating CVD Beschicht.								PVD Coating PVD Beschicht.						Cermet Cermet		Carbide uncoat. unbe. Hartmetall		
		B	Re	S1	D1	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG212	YBG152	YBG252	YNG151	YNG151C	YC30S	YD101	YD201
	**WPGT050315ZSR**	11°	1.5	3.5	7.94		●				●						○							
	WPGT060415ZSR	11°	1.5	4.2	9.525		●				●					●	○							
	WPGT080615ZSR	11°	1.5	6.35	12.85		●				●					●	○							
	WPGT090725ZSR	11°	2.5	7	15		●				●						○							
New! 	**WPGT050315ZSR-PM**	11°	1.5	3.5	7.94		●				○					●								
	WPGT060415ZSR-PM	11°	1.5	4.2	9.525		●				○					●								
	WPGT080615ZSR-PM	11°	1.5	6.35	12.85		●				○					●								
	WPGT090725ZSR-PM	11°	2.5	7	15		●				○					●								

● Ex Stock / ab Lager ○ On demand / auf Anfrage

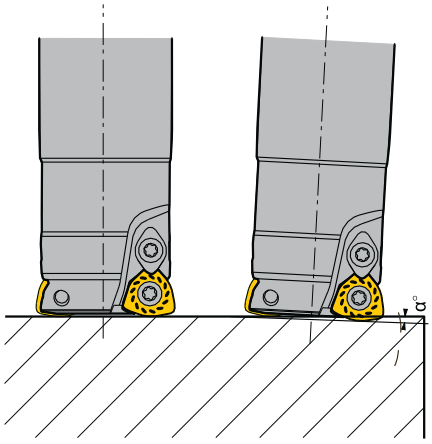
Approximate R in machining program
Ungefährer Programmierradius

Insert WSP	approx. ca. R(mm)	Cutting margin Cutting margin K(mm)
WPGT050315ZSR	2	0.5
WPGT060415ZSR	2.5	0.7
WPGT080615ZSR	2.0	0.7
WPGT090725ZSR	4.0	1.2
SDMT09T312-DM	2.5	0.87
SDMT120412-DM	4.0	0.93

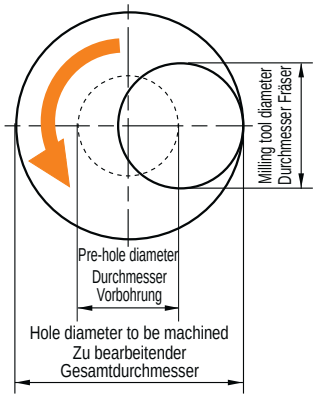


Different machining styles
Different machining styles

■ Ramp machining
Tauchfräsen



■ Helical interpolation milling
Zirkularfräsen



- Reduce the feed rate in ramp and helical machining operations.
- Set the axial feed rate below 0.2mm/rev in drilling operation.
- Be careful ! Long chippings may fly out in drilling operation.
- The cutting depth of each rotation can't exceed the maximum cutting depth (a_p)
- The S type insert not only is applied in the machining operations mentioned above, but also able to be used for plunge milling.

- Beim Tauch- und Zirkularfräsen den Vorschub reduzieren.
- Vorschub bei Bohroperationen (achsial) unter 0,2 mm einstellen.
- "Vorsicht“ – Beim Bohren können lange Späne entstehen.
- Die Schnitttiefe pro Rotation kann die maximale Schnitttiefe ap nicht erreichen.
- Die S-Type Wendeschneidplatten können auch für andere Bearbeitungsoperationen eingesetzt werden.

XMR01-Serie
XMR01-Serie

XMR01 series tools (install SD**inserts) possess perfect edge strength and excellent economical efficiency, have more advantages in face milling.
XMR01 series tools (install WP**inserts) possess good capability of chip removal, have more advantages in cavity milling.

Werkzeuge mit Schneidplatten (SD**) besitzen ausgezeichnete Schneidkantenstabilität. Sie haben besondere Vorteile beim Planfräsen mit hoher Wirtschaftlichkeit.

Werkzeuge mit Schneidplatten (WP..) haben besondere Vorteile bei der Spanabfuhr und werden Löschen beim Auskoffern eingesetzt.

Recommended Cutting data · Schnittdaten

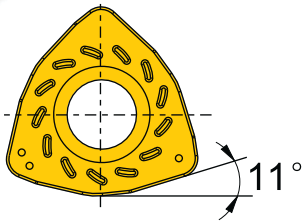
Workpiece material Werkstückstoff		Hardness HB Härte	Grade Sorte	Cutting speed Schnitt-geschw. (m/min)	Ø25		Ø30/32/35	
					Axial cutting depth Axial cutting depth	Feed rate per tooth Feed rate per tooth	Axial cutting depth Axial cutting depth	Feed rate per tooth Feed rate per tooth
P	carbon steel Soft steel legierter Kohlenstoffstahl Baustahl	≤HB180 HB180-280	YBG202	170(120-220)	0.6~1.0	0.8~1.2	0.8~1.2	1.0~1.4
			YBM351	150(100-200)				
	Alloy steel Leg. Stahl Alloy tool steel Leg. Werkzeugstahl	HB280-350 ≤HB350	YBG202	150(100-200)	0.4~0.8	0.8~1.2	0.6~1.0	1.0~1.4
			YBM351	130(80-180)				
	hardened steel gehärteter Stahl	≤HRC35	YBG202	150(100-200)	0.4~0.8	0.6~1.0	0.6~1.0	0.8~1.2
			YBM351	120(80-160)				
M	Stainless steel Rostfreier Stahl	≤HB270	YBG202	150(100-200)	0.6~1.0	0.6~1.0	0.8~1.2	0.8~1.2
			YBM351	120(80-160)				
K	cast Iron Gusseisen	Tensile strength Tensile strength ≤350MPa	YBG202	170(120-220)	0.6~1.0	1.0~1.4	0.8~1.2	1.2~1.6
			YBM351	150(100-200)				
	Nodular Cast iron Kugelgrafitguss Temperguss	Tensile strength Tensile strength ≤800MPa	YBG202	150(100-200)	0.4~0.8	0.8~1.2	0.6~1.0	1.0~1.4
			YBM351	120(80-160)				

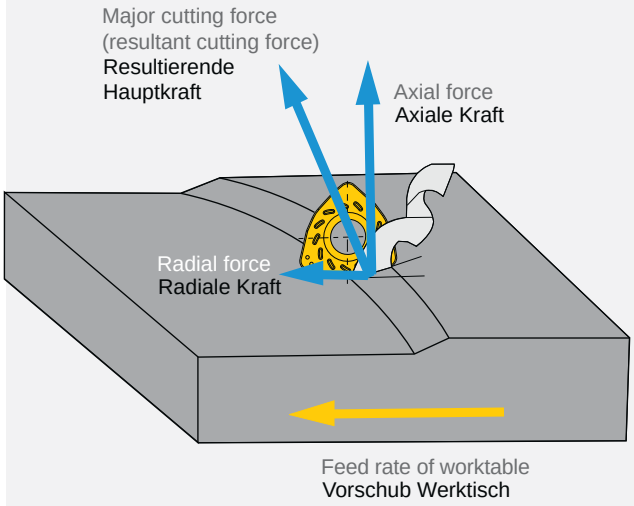
Recommended Cutting data · Schnittdaten

Workpiece material Werkstückstoff		Hardness HB Härte	Grade Sorte	Cutting speed Schnitt-geschw. (m/min)	Ø40		Ø50/63		Ø80/100	
					Axial cutting depth Axial cutting depth	Feed rate per tooth Feed rate per tooth	Axial cutting depth Axial cutting depth	Feed rate per tooth Feed rate per tooth	Axial cutting depth Axial cutting depth	Feed rate per tooth Feed rate per tooth
P	carbon steel Soft steel legierter Kohlenstoffstahl Baustahl	≤HB180 HB180-280	YBG202	170(120-220)	0.8~1.2	1.0~1.4	1.1~1.5	1.1~1.5	1.0~1.5	1.0~1.5
			YBM351	150(100-200)						
	Alloy steel Leg. Stahl Alloy tool steel Leg. Werkzeugstahl	HB280-350 ≤HB350	YBG202	150(100-200)	0.6~1.0	1.0~1.4	0.9~1.3	1.1~1.5	0.8~1.3	1.0~1.5
			YBM351	130(80-180)						
	hardened steel gehärteter Stahl	≤HRC35	YBG202	150(100-200)	0.6~1.0	0.8~1.2	0.9~1.3	0.9~1.3	0.8~1.3	0.8~1.3
			YBM351	120(80-160)						
M	Stainless steel Rostfreier Stahl	≤HB270	YBG202	150(100-200)	0.8~1.2	0.8~1.2	1.1~1.5	0.9~1.3	1.0~1.5	0.8~1.3
			YBM351	120(80-160)						
K	cast Iron Gusseisen	Tensile strength Tensile strength ≤350MPa	YBG202	170(120-220)	0.8~1.2	1.2~1.6	1.1~1.5	1.3~1.7	1.0~1.5	1.2~1.7
			YBM351	150(100-200)						
	Nodular Cast iron Kugelgrafitguss Temperguss	Tensile strength Tensile strength ≤800MPa	YBG202	150(100-200)	0.6~1.0	1.0~1.4	0.9~1.3	1.1~1.5	0.8~1.3	1.0~1.5
			YBM351	120(80-160)						

● Ex Stock / ab Lager ○ On demand / auf Anfrage

XMR01 series high feed milling tools
Hochvorschubfräser





The feature of high feed tool is to resolve the major cutting force into the axial direction, greatly reduce the radial cutting force, thus improve tool's capability of shock resistance. In addition, this structure can effectively reduce the vibration in long overhang milling application.

Merkmale dieses Hochvorschubfräsers ist die Ablenkung der Hauptkraft in axiale Richtung. Dadurch wird die radiale Kraft deutlich verringert, was eine Reduzierung der Vibration ermöglicht und somit lange Standzeiten auch bei größeren Auskraglängen zur Folge hat.