

XMR01

High feed milling
Hochvorschubfräsen

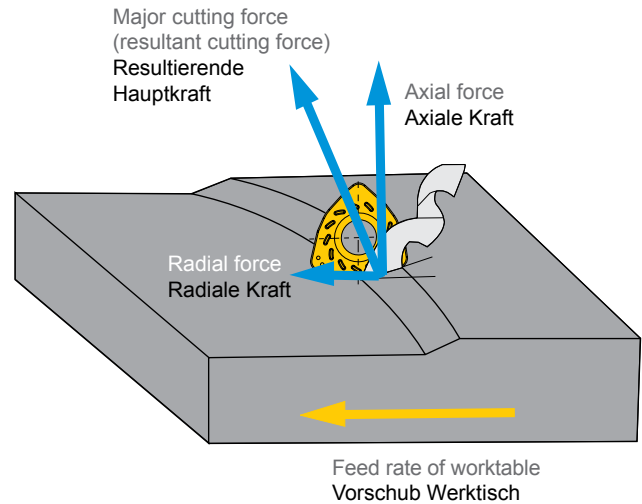
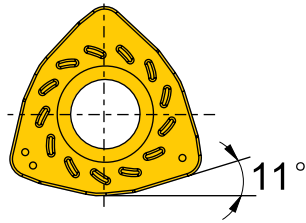


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XMR01

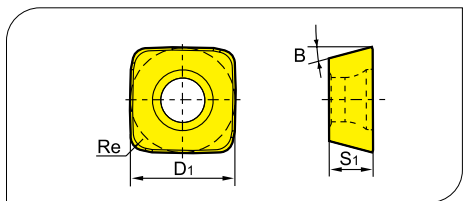
series high feed milling tools Hochvorschubfräser



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 Hochvorschubfräasers ist 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.

Applicable inserts · Wendeschneidplatten



- Ideal Machining Condition / Gute Bearbeitungsbedingungen
- Normal Machining Condition / Normale Bearbeitungsbedingungen
- Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

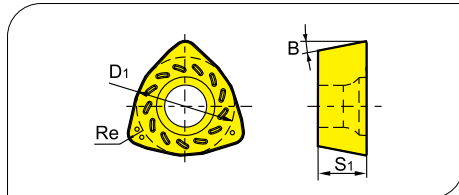
Workpiece Material / Werkstoffe	P	M	K	N	S	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD101	YD201
Steel / Stahl	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Stainless Steel / Rostfreier Stahl	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Cast iron / Gusseisen	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Non-ferite material / Ne Metalle	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Heat-resistant steel / Warmfester Stahl	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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	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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	SDMT09T312-PM	15°	1.2	3.97	9.525	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SDMT120412-PM	15°	2.0	4.76	12.7	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

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

■ Applicable inserts · Wendeschneidplatten

- Ideal Machining Condition / Gute Bearbeitungsbedingungen
- Normal Machining Condition / Normale Bearbeitungsbedingungen
- Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen



Workpiece Material / Werkstoffe	P	M	K	N	S
Steel / Stahl	●	●	●	●	●
Stainless Steel / Rostfreier Stahl	●	●	●	●	●
Cast iron / Gusseisen	●	●	●	●	●
Non-ferrous material / Ne Metalle	●	●	●	●	●
Heat-resistant steel / Warmfester Stahl	●	●	●	●	●

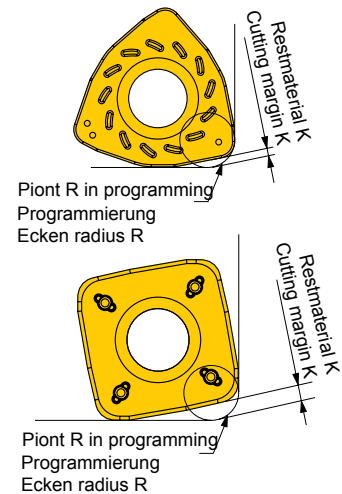
Insert WSP	Type Typ	Dimensions (mm) / Abmessungen				CVD Coating / CVD Beschicht.				PVD Coating / PVD Beschicht.				Cermet / Cermet	Carbide uncoat. / unbe. Hartmetall											
		B	Re	S1	D1	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252		YBG102	YBG202	YBG205	YBG212	YBG152	YBG252	YNG151	YNG151C	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	●											○									
	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	●										●										

■ Recommended Cutting data · Schnittdaten

Workpiece material / Werkstückstoff	Hardness HB / Härte	Grade / Sorte	Cutting speed / Schnittgeschw. (m/min)	Ø25		Ø30/32/35		Ø40		Ø50/63		Ø80/100	
				Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth
P carbon steel / Soft steel / legierter Kohlenstoffstahl / Baustahl	≤HB180	YBC302	170(120-220)	0.6~1.0	0.8~1.2	0.8~1.2	1.0~1.4	0.8~1.2	1.0~1.4	1.1~1.5	1.1~1.5	1.0~1.5	1.0~1.5
	HB180-280	YBM351	150(100-200)										
	Alloy steel / Leg. Stahl / Alloy tool steel / Leg. Werkzeugstahl	HB280-350 / ≤HB350	YBC302 / YBM351 / YBG202										
hardened steel / gehärteter Stahl	≤HRC35	YBC302 / YBM351 / YBG202	120(80-160)	0.4~0.8	0.6~1.0	0.6~1.0	0.8~1.2	0.6~1.0	0.8~1.2	0.9~1.3	0.9~1.3	0.8~1.3	0.8~1.3
M Stainless steel / Rostfreier Stahl	≤HB270	YBM351 / YBG205 / YBG202	120(80-160) / 120(80-190)	0.6~1.0	0.6~1.0	0.8~1.2	0.8~1.2	0.8~1.2	0.8~1.2	1.1~1.5	0.9~1.3	1.0~1.5	0.8~1.3
	cast Iron / Gusseisen	Tensile strength / ≤350MPa	YBG202 / YBG302 / YBD252	150(100-200)	0.6~1.0	1.0~1.4	0.8~1.2	1.2~1.6	0.8~1.2	1.2~1.6	1.1~1.5	1.3~1.7	1.0~1.5
K Nodular Cast iron / Kugelgrafitguss / Temperguss	Tensile strength / ≤800MPa	YBG202 / YBG302 / YBD252	120(80-160)	0.4~0.8	0.8~1.2	0.6~1.0	1.0~1.4	0.6~1.0	1.0~1.4	0.9~1.3	1.1~1.5	0.8~1.3	1.0~1.5

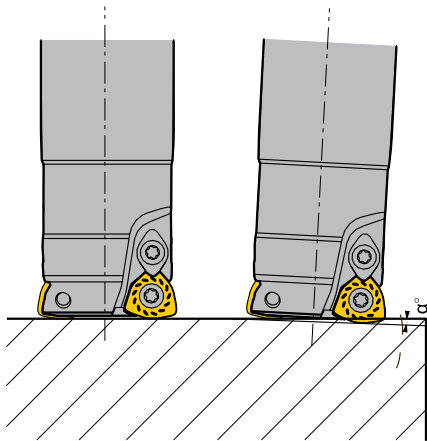
Approximate R in machining program Ungefährer Programmerradius

Insert · WSP	approx./ca. R(mm)	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

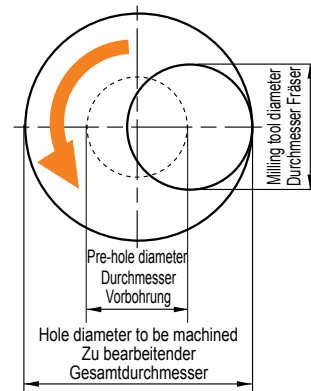


Different machining styles Different machining styles

■ 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 (achsal) unter 0,2 mm einstellen.
- "Vorsicht" – Beim Bohren können lange Späne entstehen.
- Die Schnitttiefe pro Rotation kann die maximale Schnitttiefe a_p nicht erreichen.
- Die S-Typ Wendeschneidplatten können auch für andere Bearbeitungsoperationen eingesetzt werden.

XMR01-Serie XMR01-Serie

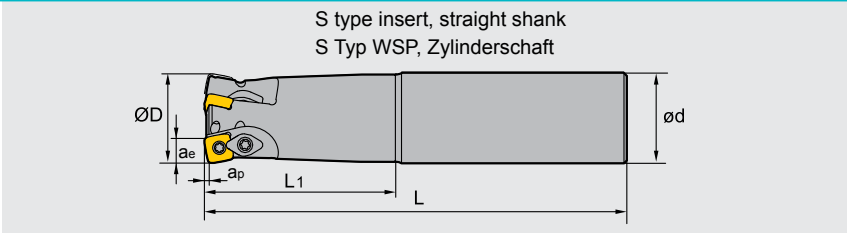
XMR01 series tools (install SD**inserts) possess perfect edge strength and excellent economical efficiency, have more advantages in face milling.

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.

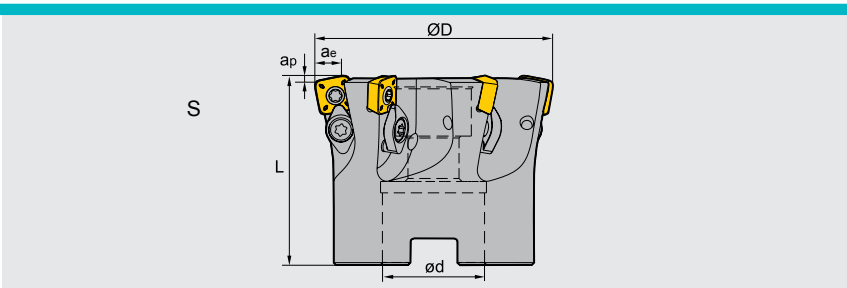
Werkzeuge mit Schneidplatten (WP..) haben besondere Vorteile bei der Spanabfuhr und werden Löschen beim Auskoffern eingesetzt.

High feed milling cutters · Hochvorschubfräser



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	ap	ae	L1	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	



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	ap	ae	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

Spare parts · Ersatzteile

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



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

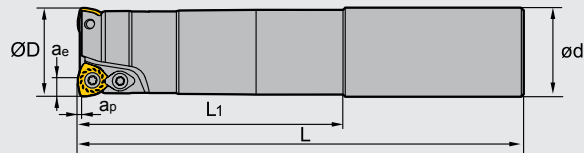
High feed milling cutters · Hochvorschubschafffräser



XMR01 P M K







W type insert, straight shank
W Typ WSP, Zylinderschaft



Specification of tools · Werkzeug Beschreibung

Type Typ	Stock Lager	Dimensions (mm) Abmessungen							No. of teeth Zähne	Weight Gewicht (kg)
		Ø D	ap	ae	L1	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**			--	WT20IT



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

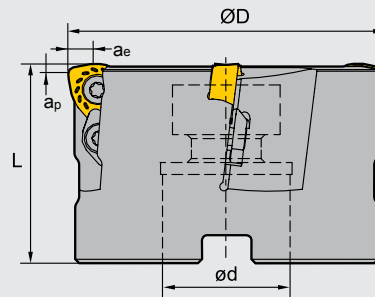
High feed milling cutters · Hochvorschubfräser



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	ap	ae	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	--	WT20IT



Tool / Werkzeug		XMR01-063-A22-SD12-05	XMR01-040-G32-WP08-02-L
Insert / WSP		SDMT120412-DM	WPGT080615ZSR
Grade / Sorte		YBM351	YBM351
Workpiece Werkstück			
Material/Material		NAK80	S55C
Hardness Härte		HRC 40	HB 250
Cuttingdata Schnittdaten	V (m/min)	120-150	130
	f(mm/z)	0.7	1.2
	ap(mm)	1.0	1.0
	ae(mm)	40	—

XMR01

ZCC-CT

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