

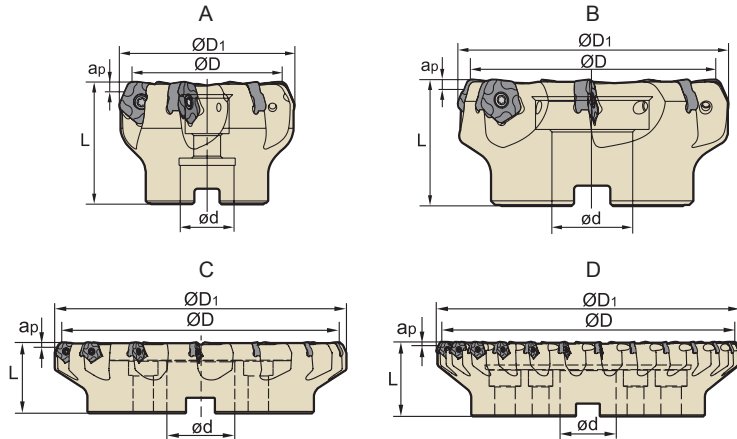
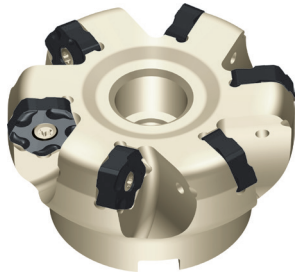
Milling · Fräsen

Indexable Milling Tools · Wendepplattenfräser

Face milling / Planfräser **Kr:67°**



FMD02 **K**



Type Typ	Stock Lager		Dimension Abmessung (mm)						Tooth Zähne Z	Coupling Aufnahme	Weight Gewicht (kg)
	R	L	ØD	ØD ₁	ød	L	a _{pmax}				
FMD02	-050-A22-PN11-04	●	●	50	60.1	22	50	5	4	A	0.6
	-050-A22-PN11-04C	●	○	50	60.1	22	50	5	4	A	0.6
	-063-A22-PN11-05	●	○	63	73.1	22	50	5	5	A	0.8
	-063-A22-PN11-05C	●	○	63	73.1	22	50	5	5	A	0.8
	-080-A27-PN11-06	●	○	80	90.1	27	50	5	6	A	1.1
	-080-A27-PN11-06C	●	○	80	90.1	27	50	5	6	A	1.1
	-100-B32-PN11-07	●	○	100	110.1	32	50	5	7	B	1.8
	-100-B32-PN11-07C	●	○	100	110.1	32	50	5	7	B	1.8
	-125-B40-PN11-08	●	○	125	135.1	40	63	5	8	B	2.9
	-125-B40-PN11-08C	●	○	125	135.1	40	63	5	8	B	2.9
	-160-B40-PN11-10	●	○	160	170.1	40	63	5	10	B	5.6
	-200-C60-PN11-12	●	○	200	210.1	60	63	5	12	C	7.9
-250-C60-PN11-14	●	○	250	260.1	60	63	5	14	C	13.4	
FMD02	-050-A22-PN11-05	●	○	50	60.1	22	50	5	5	A	0.6
	-050-A22-PN11-05C	●	○	50	60.1	22	50	5	5	A	0.6
	-063-A22-PN11-06	●	○	63	73.1	22	50	5	6	A	0.9
	-063-A22-PN11-06C	●	○	63	73.1	22	50	5	6	A	0.9
	-080-A27-PN11-08	●	○	80	90.1	27	50	5	8	A	1.2
	-080-A27-PN11-08C	●	○	80	90.1	27	50	5	8	A	1.2
	-100-B32-PN11-10	●	○	100	110.1	32	50	5	10	B	1.9
	-100-B32-PN11-10C	●	○	100	110.1	32	50	5	10	B	1.9
	-125-B40-PN11-12	●	○	125	135.1	40	63	5	12	B	3.2
	-125-B40-PN11-12C	●	○	125	135.1	40	63	5	12	B	3.2
	-160-B40-PN11-14	●	○	160	170.1	40	63	5	14	B	6.4
	-200-C60-PN11-16	●	○	200	210.1	60	63	5	16	C	8.5
	-200-C60-PN11-20	○	○	200	210.1	60	63	5	20	C	8.5
-250-C60-PN11-18	●	○	250	260.1	60	63	5	18	C	18.0	
-315-D60-PN11-26	●	○	315	325.1	60	80	5	26	D	24.5	

■ Spare Parts · Ersatzteile

ØD	Screw / Schraube	Wrench / Schlüssel	
Ø50 - Ø315	 I60M4×10	 WT15IS	

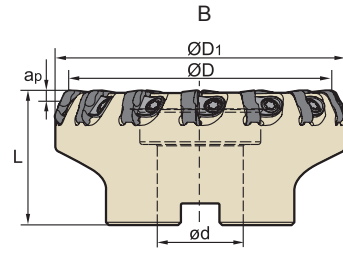
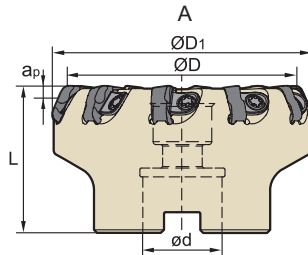
● Ex Stock / ab Lager ○ On demand / auf Anfrage

Face Milling Tools · Planfräser

Kr:67°







FMD02 **K**



Type Typ	Stock Lager	Dimension Abmessung (mm)						Tooth Zähne Z	Coupling Aufnahme	Weight Gewicht (kg)
		R	L	ØD	ØD1	ød	L			
FMD02	• ○	○	80	90.1	27	50	5	10	A	1.3
	• ○	○	80	90.1	27	50	5	10	A	1.3
	• ○	○	100	110.1	32	50	5	14	B	1.6
	• ○	○	100	110.1	32	50	5	14	B	1.6
	• ○	○	125	135.1	40	63	5	18	B	3.2
	• ○	○	125	135.1	40	63	5	18	B	3.2
	○ ○	○	160	170.1	40	63	5	22	B	5.8
	○ ○	○	200	210.1	60	63	5	28	C	8.5

■ Spare Parts · Ersatzteile

ØD	Shim / Unterlage	Screw / Schraube	Wrench / Schlüssel
Ø80 - Ø160	 W18N	 DM6x20A	 WT15IT



Applicable tool
Werkzeug **B11-B18**

Tools code key
Werkzeug ISO **B26-B27**

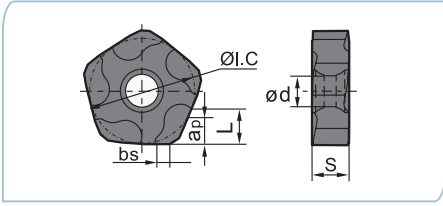
Grade selection guide
Sortenauswahl **B19-B23**

Technical data
Technische Daten **B215-B220**

Milling - Fräsen

Indexable Milling Tools - Wendeschneidfräser

Applicable inserts Wendeschneidplatten

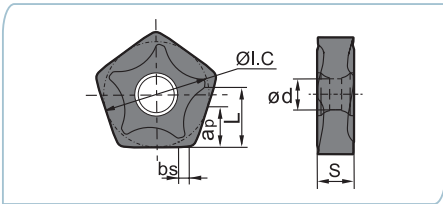


- Ideal Machining Condition
Gute Bearbeitungsbedingungen
- ⊗ Normal Machining Condition
Normale Bearbeitungsbedingungen
- ⊗ Unfavorable Machining Condition
Ungünstige Bearbeitungsbedingungen

Workpiece Material Werkstoff	P Steel Stahl	M Stainless Steel Rostfreier Stahl	K Cast iron Gusseisen	N Non-ferrous material Nichte Metalle	S Heat-resistant steel Wärmefester Stahl
P	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
M	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
K	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
N	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
S	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●

Insert WSP	Type Typ	Dimension Abmessung (mm)						CVD Coating CVD Beschicht.					PVD Coating PVD Beschicht.					Cermet Cermet	Carbide uncoat. unb. Hartmetall								
		L	ØI.C	S	ød	bs	ap	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202		YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD101	YD201
	PNEG110512R-CF	5.4	15.875	5.56	4.64	1.6	5																				
	PNEG110512L-CF	5.4	15.875	5.56	4.64	1.6	5																				
	PNEG110512R-CM	5.4	15.875	5.56	4.64	1.6	5																				
	PNEG110512L-CM	5.4	15.875	5.56	4.64	1.6	5																				
	PNEG110512R-CR	5.4	15.875	5.56	4.64	1.6	5																				
	PNEG110512L-CR	5.4	15.875	5.56	4.64	1.6	5																				

Applicable inserts Wendeschneidplatten



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

Workpiece Material Werkstoff	P Steel Stahl	M Stainless Steel Rostfreier Stahl	K Cast iron Gusseisen	N Non-ferrous material Nichte Metalle	S Heat-resistant steel Wärmefester Stahl
P	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
M	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
K	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
N	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●
S	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●	●●●●●●●●●●

Insert WSP	Type Typ	Dimension Abmessung (mm)						CVD Coating CVD Beschicht.					PVD Coating PVD Beschicht.					Cermet Cermet	Carbide uncoat. unb. Hartmetall								
		L	ØI.C	S	ød	bs	ap	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202		YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD101	YD201
	PNEG110512R-PF	5.4	15.875	5.56	4.64	1.6	7.5	●																			
	PNEG110512L-PF	5.4	15.875	5.56	4.64	1.6	7.5		○																		
	PNEG110512R-PM	5.4	15.875	5.56	4.64	1.6	7.5	●																			
	PNEG110512L-PM	5.4	15.875	5.56	4.64	1.6	7.5		○																		
	PNEG110512R-PR	5.4	15.875	5.56	4.64	1.6	7.5	●																			
	PNEG110512L-PR	5.4	15.875	5.56	4.64	1.6	7.5		○																		

Cutting Data / Schnittdaten

Workpiece material Werkstück Material	Hardness HB Härte	Grade Sorte	Cutting data / Schnittdaten				
			V _c (m/min)	f _z (mm/z)			a _{pmax} (mm)
				PF	PM	PR	
P Low-carbon steel Soft steel Niedriglegierter Kohlenstoffstahl Baustahl	≤180	YBM253 YBC302	270 (220-350)	0.15 (0.1-0.2)	0.2 (0.1-0.3)	0.3 (0.2-0.4)	7.5
	180-280	YBM253 YBC302	260 (200-320)	0.15 (0.1-0.2)	0.2 (0.1-0.3)	0.3 (0.2-0.4)	7.5
	280-350	YBM253 YBC302	240 (180-300)	0.15 (0.1-0.2)	0.2 (0.1-0.3)	0.3 (0.2-0.4)	7.5
K Cast iron Gusseisen	180-250	YBD152	270 (150-300)	CF	CM	CR	5
				0.15 (0.1-0.2)	0.2 (0.1-0.3)	0.3 (0.2-0.4)	

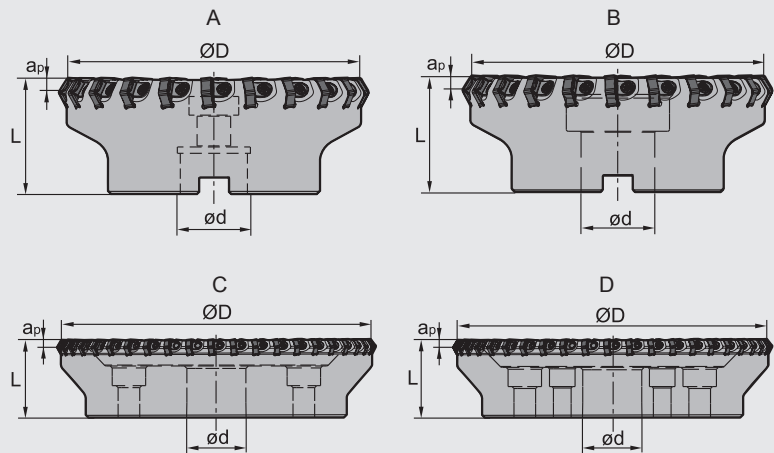
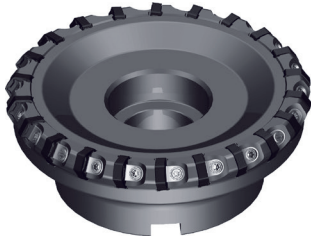
● Ex Stock / ab Lager ○ On demand / auf Anfrage

Face Milling Tools · Planfräser

Kr:55°






FMD02 K



Specification of tools · Werkzeug Beschreibung

Type Typ	Stock Lager	Dimension (mm) Abmessung						No. of teeth Zähne	Coupling Aufnahme	Weight Gewicht (kg)
		R	L	ØD	ød	L	apmax			
FMD02		○	○	80	27	50	6	10	A	1.1
		○	○	100	32	63	6	14	B	2.6
		○	○	125	40	70	6	18	B	3.7
		○	○	160	40	63	6	22	B	5.6
		○	○	200	60	63	6	28	C	6.3
		○	○	250	60	63	6	36	C	10.3
		○	○	315	60	63	6	44	D	21.7

Spare Parts · Ersatzteile

Diameter Durchmesser Ø D	Wedge Keil	Wedge screw Keilschraube	Wrench Schlüssel
Ø80-Ø315	 W18N	 DM6×20A	 WT15IT

Applicable tool B11-B18
Werkzeug

Tools code key B26-B27
Werkzeug ISO

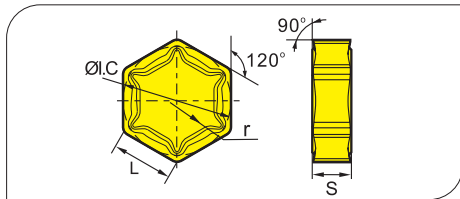
Grade selection guide B19-B23
Sortenauswahl

Technical data B215-B220
Technische Daten

Milling · Fräsen

Indexable Milling · Fräswendeplatten

Applicable inserts · Wendeschneidplatten



Workpiece Material Werkstoffe	Ideal Machining Condition Gute Bearbeitungsbedingungen			Normal Machining Condition Normale Bearbeitungsbedingungen			Unfavorable Machining Condition Ungünstige Bearbeitungsbedingungen			
	●	●	●	●	●	●	●	●	●	
P Steel Stahl	●	●	●	●	●	●	●	●	●	●
M Stainless Steel Rostfreier Stahl	●	●	●	●	●	●	●	●	●	●
K Cast iron Gusseisen						●	●	●	●	●
N Non-ferrous material Nichte Metalle									●	●
S Heat-resistant steel Wärmeester Stahl						●	●	●	●	●

Insert shape Plattenform	Type Typ	Dimension (mm) Abmessung				CVD Coating CVD Beschicht.						PVD Coating PVD Beschicht.				Cermet Cermet	Carbide uncoat. unbe. Hartmetall								
		L	I.C	S	r	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202		YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD101	YD201
	HNEX090512-DF	9.16	15.875	5.56	1.2							○													
	HNEX090512-DM	9.16	15.875	5.56	1.2							○													
	HNEX090512-DR	9.16	15.875	5.56	1.2						●	●													

Chipbreaker Selection FMD02 · Spanbrecher Auswahl FMD02

Application Anwendung	Finishing Schlichten	Semi-Finishing Mittlere Bearbeitung	Roughing Schruppen
K	-DF	-DM	-DR

Recommended cutting data · Empfohlene Schnittdaten

Workpiece material Werkstückstoff	Hardness HB Härte	Grade Sorte	Cutting data Schnittdaten			
			V (m/min)	f (mm/z)		
				-DF	-DM	-DR
K Cast iron Gusseisen	180-250	YBD152	180 (110-250)	0.15(0.1-0.2)	0.2 (0.1-0.3)	0.3(0.2-0.5)
		YBD252	130 (110-200)	0.2(0.1-0.2)	0.25 (0.1-0.3)	0.3(0.2-0.5)

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