

# -FMD02

## Facemill for cast iron *Planfräser für die Gussbearbeitung*

- ▶ New generation of face milling  
*Neue Generation von Planfräsern*
- ▶ Open chipbreaker and big rake angle  
*Spanbrecher mit großer Spanmulde*
- ▶ Wiper for good surface quality  
*Wiperfase für hohe Oberflächenqualität*
- ▶ Reliable screw clamping system  
*Zuverlässiges Schraubenspannsystem*
- ▶ Inserts with 10 cutting edges  
*Doppelseitige Platte mit 10 Schneiden*



your Partner  
your Value

**ZCC-CT**  
ZCC Cutting Tools Europe GmbH



Rake angle  $Kr=67^\circ$   
Anstellwinkel  $Kr=67^\circ$



Wiper / Wiper



10 Cutting edges  
10 Schneidkanten

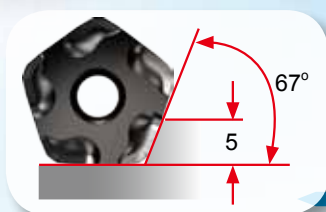


Screw clamping  
Schraubenspannsystem



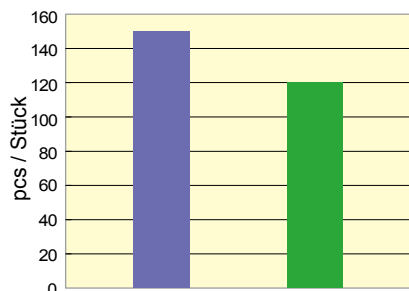
Clamping by wedge for highest accuracy and reliability.

*Klemmkeilspannung für höchste Stabilität und Wiederholgenauigkeit.*



Machining of cast iron,  $a_{p\ max}=5\text{mm}$   
Gussbearbeitung,  $a_{p\ max}=5\text{mm}$   
Steel, Alloy steel,  $a_{p\ max}=7.5\text{mm}$   
Stahl, Legierter Stahl,  $a_{p\ max}=7.5\text{mm}$

Holder/Halter	FMD02-100-B32-PN11-10 <b>ZCC-CT</b>	Competitor A / Wettbewerb A
Insert/WSP	PNEG110512R-CR/YBD152	
Cutting data Schnittdaten	D=100mm $a_p=3\sim 5\text{mm}$ Vc=243m/min $f_z=0.15\text{mm/z}$ 145~155 pcs/Stück	D=100mm $a_p=3\sim 5\text{mm}$ Vc=243m/min $f_z=0.12\text{mm/z}$ 120~133 pcs/Stück



• Comparing of wear / Verschleißvergleich

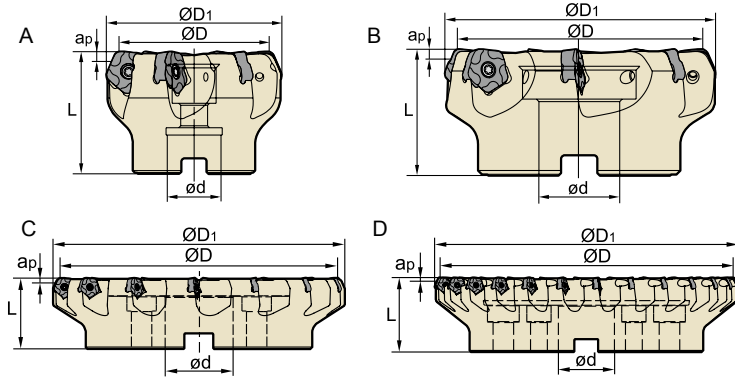


**ZCC-CT** after 80 min/ nach 80 min

Competitor A / Wettbewerb A after 48 min / nach 48 min

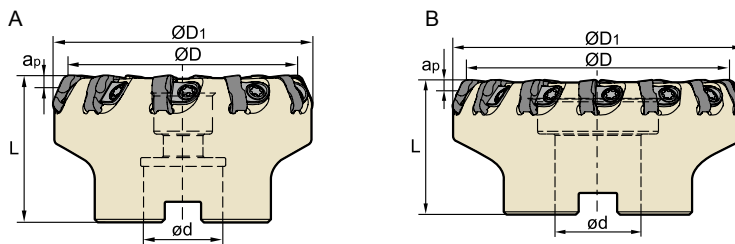


**FMD02** **K**



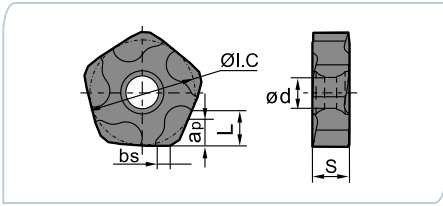
Type Typ	Stock Lager		Dimension Abmessung (mm)					Screw Schraube	Wrench Schlüssel	Tooth Zähne Z	Coupling Aufnahme	Weight Gewicht (kg)
	R	L	ØD	ØD <sub>1</sub>	ød	L	a <sub>pmax</sub>					
<b>FMD02</b>	●	●	50	60.1	22	50	5	I60M4×10	WT15IS	4	A	0.6
	●	○	50	60.1	22	50	5			4	A	0.6
	●	○	63	73.1	22	50	5			5	A	0.8
	●	○	63	73.1	22	50	5			5	A	0.8
	●	○	80	90.1	27	50	5			6	A	1.1
	●	○	80	90.1	27	50	5			6	A	1.1
	●	○	100	110.1	32	50	5			7	B	1.8
	●	○	100	110.1	32	50	5			7	B	1.8
	●	○	125	135.1	40	63	5			8	B	2.9
	●	○	125	135.1	40	63	5			8	B	2.9
	●	○	160	170.1	40	63	5			10	B	5.6
	●	○	200	210.1	60	63	5			12	C	7.9
	●	○	250	260.1	60	63	5			14	C	13.4
	<b>FMD02</b>	●	○	50	60.1	22	50			5	5	A
●		○	50	60.1	22	50	5	5	A	0.6		
●		○	63	73.1	22	50	5	6	A	0.9		
●		○	63	73.1	22	50	5	6	A	0.9		
●		○	80	90.1	27	50	5	8	A	1.2		
●		○	80	90.1	27	50	5	8	A	1.2		
●		○	100	110.1	32	50	5	10	B	1.9		
●		○	100	110.1	32	50	5	10	B	1.9		
●		○	125	135.1	40	63	5	12	B	3.2		
●		○	125	135.1	40	63	5	12	B	3.2		
●		○	160	170.1	40	63	5	14	B	6.4		
●		○	200	210.1	60	63	5	16	C	8.5		
○		○	200	210.1	60	63	5	20	C	8.5		
●		○	250	260.1	60	63	5	18	C	18.0		
●	○	315	325.1	60	80	5	26	D	24.5			

**FMD02** **K**



Type Typ	Stock Lager		Dimension Abmessung (mm)					Shim Unterlage	Screw Schraube	Wrench Schlüssel	Tooth Zähne Z	Coupling Aufnahme	Weight Gewicht (kg)
	R	L	ØD	ØD <sub>1</sub>	ød	L	a <sub>pmax</sub>						
<b>FMD02</b>	●	○	80	90.1	27	50	5	W18N	DM6x20A	WT15IT	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

Applicable inserts  
Wendeschneidplatten

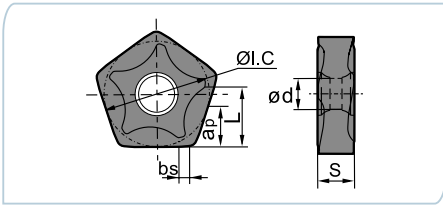


- Ideal Machining Condition / Gute Bearbeitungsbedingungen
- Normal Machining Condition / Normale Bearbeitungsbedingungen
- Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

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

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

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 max	YBC301	YBC302	YBC401	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202		YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD101	YD201
	PNEG110512R-PF	7.5	15.875	5.56	4.64	1.6	7.5		●																		
	PNEG110512L-PF	7.5	15.875	5.56	4.64	1.6	7.5		○																		
	PNEG110512R-PM	7.5	15.875	5.56	4.64	1.6	7.5		●																		
	PNEG110512L-PM	7.5	15.875	5.56	4.64	1.6	7.5		○																		
	PNEG110512R-PR	7.5	15.875	5.56	4.64	1.6	7.5		●																		
	PNEG110512L-PR	7.5	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				
			Vc(m/min)	fz(mm/z)			apmax(mm)
				PF	PM	PR	
<b>P</b> Low-carbon steel / Soft steel / Niedriglegierter Kohlenstoffstahl / Baustahl High-carbon steel / Alloy steel / Hochleg. Kohlenstoffstahl Alloy tool steel / Leg. Werkzeugstahl	≤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
<b>K</b> 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)	



Sales center in Europe  
Vertriebszentrale in Europa:  
**ZCC Cutting Tools Europe GmbH**  
www.zccct-europe.com www.zccct.com  
Heltorfer Straße 12 40472 Düsseldorf  
Tel.: +49(0)211-989240-0  
Fax: +49(0)211-989240-111  
E-mail: Info@zccct-europe.com

Distributor  
Vertretung