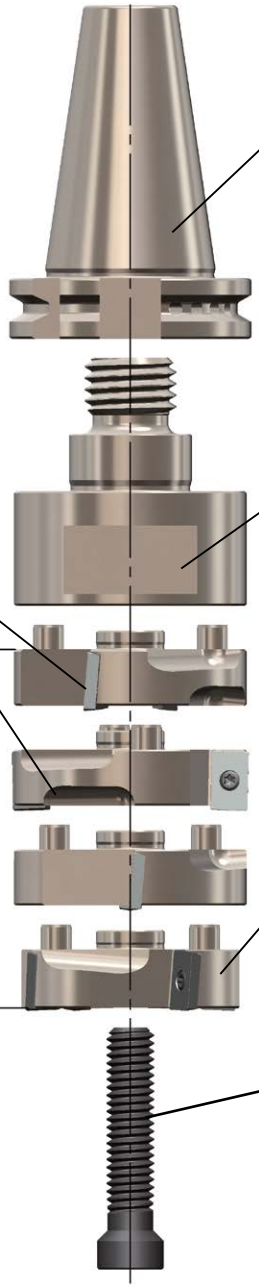
Schaft-Schruppfräser-System

Modular-roughing-milling system, Système modulaire d'ébauche, Sistema modulare di fresatura



Grundkörper GK.. (Page VII-2)
Basic Body, Mandrin de base, Attacchi base

Adapter AD.. (Page VII-3+4)
Adapter, Adaptateur, Giunti di prolungamento

Fräsringe koppelbar (Page VII-5+6+10)
Coupling milling rings
Fraises modulaires assemblables
Frese ad anello assemblabili

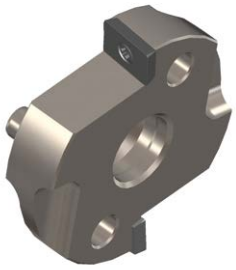
Fräsring Einzel- oder Endring (Page VII-6+7+10)
Milling ring single or end ring
Fraises modulables de bout
Fresa ad anello singola o finale

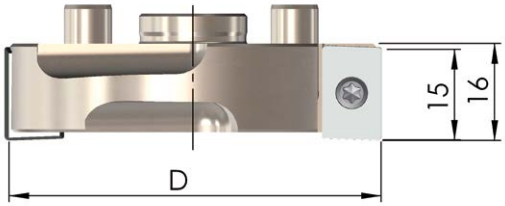
S = Vollnuten 1 x D
= Ecke 1,5-2,0 x D
S = Full slot milling 1 x D
= Angle 1,5-2,0 x D
S = Rainurage dans le plein 1 x D
= Dressage 1,5-2,0 x D
S = Scanalatura in pieno 1 x D
= Spallamento retto 1,5-2,0 x D

Koppelschraube KS.. (Page VII-12+13)
Connecting Screw, Vis d'assemblage,
Vite di collegamento

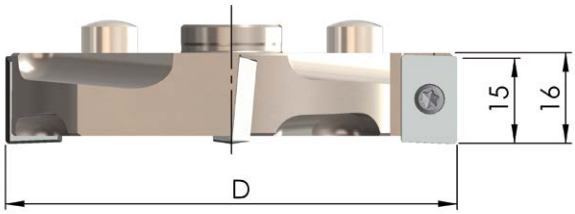
B06 Fräsringe *Milling rings, Fraises modulables, Fresa ad anelli*

FR ..-15-2 und FR 80-15-4 Koppelbar, *Connectable, Assemblables, Assemblabili*





Bestell-Nr. *Order-No.* *Référence* *Codice*	D	Z	für Adapter *for adapter* *pour adaptateurs* *per giunto di prolungamento*
FR 40-15-2	40	2	AD 38-..
FR 50-15-2	50	2	AD 48-..
FR 63-15-2	63	2	AD 61-..



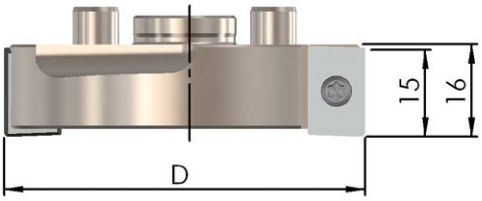
Bestell-Nr. *Order-No.* *Référence* *Codice*	D	Z	für Adapter *for adapter* *pour adaptateurs* *per giunto di prolungamento*
FR 80-15-4	80	4	AD 78-..

- Fräsringe der Type FR..-15-2 und FR80-15-4 können in beliebiger Anzahl (bis zur Stabilitätsgrenze) miteinander gekoppelt werden.
- *Milling rings type FR..-15-2 and FR80-15-4 can be connected as required (up to stability limit).*
- *Fraises modulables de type FR..-15-2, FR 80-15-4 peuvent être assemblées selon les besoins, tout en tenant compte de la limite de stabilité.*
- *Frese ad anello tipo FR ..-15-2 e FR 80-15-4 sono assemblabili entro i loro diametri (fino raggiungimento del limite di stabilità).*

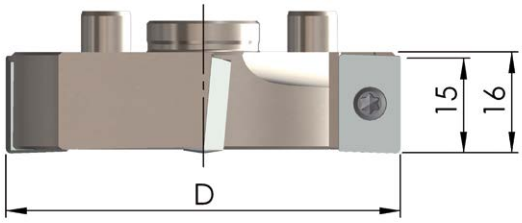
B06 Fräsringe *Milling rings, Fraises modulables, Fresa ad anelli*

FR..-15-.. HO Koppelbar und Endringe

Connectable and end rings, Assemblable et module de bout, Assemblabili ed anelli finali



Bestell-Nr. *Order-No.* *Référence* *Codice*	**D**	**Z**	**für Adapter** *for adapter* *pour adaptateurs* *per giunto di prolungamento*
FR 50-15-2 HO	50	2	AD 48-..
FR 63-15-2 HO	63	2	AD 61-..

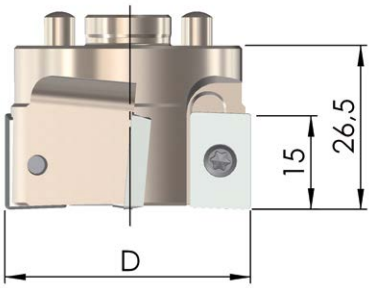


Bestell-Nr. *Order-No.* *Référence* *Codice*	**D**	**Z**	**für Adapter** *for adapter* *pour adaptateurs* *per giunto di prolungamento*
FR 50-15-4 HO	50	4	AD 48-..
FR 63-15-4 HO	63	4	AD 61-..

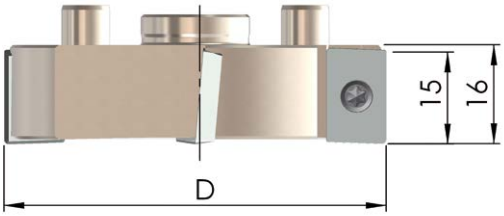
- Fräsringe der Type FR..-15-4 HO bilden von der Adapterseite gesehen den Endring. Der vorhergehende Fräsring ist immer ein FR..-15-2 HO. Anschließend können, sofern Schnitttiefe nicht ausreicht, Fräsringe der Type FR..-15-2 in beliebiger Anzahl (bis zur Stabilitätsgrenze) folgen.
- *Milling rings type FR..-15-4 HO form the end of the milling cutter. The next following milling ring is always FR..-15-2 HO. Milling rings type* FR..-15-2 *can then be added as required (up to the stability limit).*
- *Fraises du type FR..-15-4 HO sont en tête d`outil. La fraise modulaire suivante doit impérativement être du type FR..-15-2 HO. Au cas où la hauteur d`usinage n`est pas suffisante, on peut rajouter le nombre nécessaire de fraises du type FR..-15-2, tout en tenant compte de la limite de stabilité*
- *Frese ad anello del tipo FR..-15-4 HO formano visto dal lato del giunto di prolungamento l`anello finale. La fresa ad anello precedente è sempre del tipo FR..-15-2 HO. Successivamente se la profondità di taglio non è sufficiente possono seguire frese ad anello del tipo FR..-15-2 in quantità facoltativa (fino a raggiungere il limite di stabilità.)*

B06 Fräsringe *Milling rings, Fraises modulables, Fresa ad anelli*

FR..-15-4 Einzelringe *Single milling rings, Fraises non assemblables, Anelli singoli*



Bestell-Nr. *Order-No.* *Référence* *Codice*	D	Z	für Adapter *for adapter* *pour adaptateurs* *per giunto di prolungamento*
FR 40-15-4	40	4	AD 38-..



Bestell-Nr. *Order-No.* *Référence* *Codice*	D	Z	für Adapter *for adapter* *pour adaptateurs* *per giunto di prolungamento*
FR 50-15-4	50	4	AD 48-..
FR 63-15-4	63	4	AD 61-..

Die Fräsringe sind für den Einsatz als Einzelringe direkt am Adapter vorgesehen.

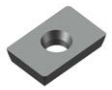
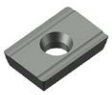
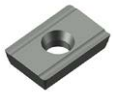
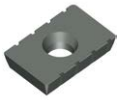
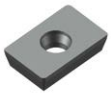
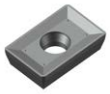
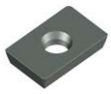
The milling rings are to be used singly, directly on the adapter.

Ce type de fraises modulables se monte directement sur l'adaptateur et n'est pas assemblable avec d'autres fraises modulables.

Le frese ad anello sono adatte per l´impiego da anello singolo direttamente sul giunto di prolungamento.

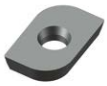
Fräswendeplatten und Schnittdaten

Milling inserts and parameters, Plaquettes de fraisage et paramètres, Inserti e parametri di taglio

			HT50 (code 22)	TA50 (code 2)	Ti20 (code 1)	KT28 (code 23)	K15M (code 8)		
	**JMB06-41R08-** 15,6x10,0x3,18 R0,8 H M	Order-No.	**B06DS -22-A**						
		f_z [mm]	0,20 (0,10-0,30)						
	**JMB06-41AR08-** 15,6x10,0x3,18 R0,8 S	Order-No.		**B06CR -02-A**					
		f_z [mm]		0,20 (0,10-0,30)					
	**JMB06-41AR08-** 15,6x10,0x3,18 R0,8 U	Order-No.					**B06BJ -08-A**		
		f_z [mm]					0,20 (0,10-0,40)		
	**JMB06-44R08-** 15,6x10,0x3,18 R0,8 H	Order-No.		**B06ET -02-A**					
		f_z [mm]		0,20 (0,10-0,30)					
	**JMB06-46R08-** 15,7x10,0x3,97 R0,8 H	Order-No.	**B06FX -22-A**		**B06GY -01-A**				
			Achtung: Nenn-ø 0,2mm größer u. Konturfehler von ca. 1°! *Attention: 0,2 mm major nominal-Ø and contour error of ca. 1°!* *N.B.: diamétre nominal = +0,2 mm et erreur de perpendicularité +~1°!* *Attenzione: Il ø nominale aumenta di 0,2 mm con un errore angolare di c.a. 1°!*						
		f_z [mm]	0,20 (0,10-0,30)		0,20 (0,10-0,30)				
	**JMB06-47R08-** 15,8x10,1x3,97 R0,8 M	Order-No.	**B06HZ -22-A**		**B06JA -01-A**				
			Achtung: Nenn-ø 0,2mm größer u. Konturfehler von ca. 1°! *Attention: 0,2 mm major nominal-Ø and contour error of ca. 1°!* *N.B.: diamétre nominal = +0,2 mm et erreur de perpendicularité +~1°!* *Attenzione: Il ø nominale aumenta di 0,2 mm con un errore angolare di c.a. 1°!*						
		f_z [mm]	0,20 (0,10-0,30)		0,20 (0,10-0,30)				
	JMB06-48R08- 15,7x10,0x3,97 R0,8 H	Order-No.		**B06BZ -02-A**	**B06KC -01-A**				
			Achtung: Nenn-ø 0,2mm größer u. Konturfehler von ca. 1°! *Attention: 0,2 mm major nominal-Ø and contour error of ca. 1°!* *N.B.: diamétre nominal = +0,2 mm et erreur de perpendicularité +~1°!* *Attenzione: Il ø nominale aumenta di 0,2 mm con un errore angolare di c.a. 1°!*						
		f_z [mm]		0,20 (0,10-0,30)	0,20 (0,10-0,30)				
	**JMB06-42R08-** 15,6x10,0x3,18 R0,8 H M	Order-No.	**B06FA -22-B**		**B06HC -01-B**	**B06GB -23-B**			
		f_z [mm]	0,20 (0,10-0,30)		0,20 (0,10-0,30)	0,20 (0,10-0,30)			
	JMB06-42AR08- 15,6x10,0x3,18 R0,8 S	Order-No.	**B06CZ -22-B**		**B06EZ -01-B**				
		f_z [mm]	0,20 (0,10-0,30)		0,20 (0,10-0,30)				
	JMB06-42AR08- 15,6x10,0x3,18 R0,8 U	Order-No.					**B06DW -08-B**		
		f_z [mm]					0,20 (0,10-0,40)		
			10	10	10	10	10		

Fräswendeplatten und Schnittdaten

Milling inserts and parameters, Plaquettes de fraisage et paramètres, Inserti e parametri di taglio

			HT50 (code 22)	TA50 (code 2)	Ti20 (code 1)	KT28 (code 23)	K15M (code 8)		
 15,6x10,0x3,18 R.. H M	JMB06-42R10-	Order-No.		B06JD -02-B	B06KE -01-B				
	JMB06-42R15-	Order-No.		B06ML -02-B					
	JMB06-42R20-	Order-No.		B06OT -02-B	B06PW -01-B				
	JMB06-42R25-	Order-No.		B06SP -02-B					
	JMB06-42R30-	Order-No.		B06RS -02-B	B06MT -01-B				
	JMB06-42R35-	Order-No.		B06TR -02-B					
	JMB06-42R40-	Order-No.		B06UB -02-B	B06SG -01-B				
	JMB06-42R50-	Order-No.		B06WU -02-B	B06XW -01-B				
	JMB06-42R60-	Order-No.		B06YZ -02-B					
	JMB06-42R80-	Order-No.		B06ZA -02-B					
	JMB06-42R100-	Order-No.		B06KW -02-B	B06LZ -01-B				
		f_z [mm]		0,20 (0,10-0,30)	0,20 (0,10-0,30)				
				10	10				

Nachträgliches Freidrehen des Trägerkörpers ab R 3,0 notwendig!
Starting by R 3,0 a subsequent finish turning of the tool body is required.
A partir d'un rayon R 3.0, le corps de fraise doit être adapté au rayon recherché!
A partire dal raggio R 3,0 occorre modificare il corpo fresa!

v_c [m/min]	**Stahl** *Steel Acier Acciaio*	**Rostfrei** *Stainless Acier inoxydable Inossidabile*	**Guss** *Cast iron Fonte Ghisa*	**NE-Metalle** *Non-ferrous metals Non ferreux Metalli non ferrosi*	**Hochwarmfest** *Highly heat-resistant Superalliages Resistente al calore*	**Gehärtet** *Tempered Aciers traités Temprato*
HT50	220 (160 - 300)	200 (100 - 300)	260 (200 - 300)			
TA50	220 (160 - 300)	200 (100 - 300)	260 (200 - 300)			
Ti20	250 (220 - 280)	220 (180 - 300)	240 (180 - 350)			
KT28			260 (180 - 350)			80 (40 - 120)
K15M				400 (300 - 600)		

Ersatzteile *Spare parts, Pièces de rechange, Parti di ricambio*

SS 4,0-1 (M = 3,2 - 3,3 Nm)	**T 15**	**Fett** *Grease, Graisse, Grasso*

Jongen Werkzeugtechnik GmbH | Siemensring 11 | 47877 Willich | Germany
Tel.: +49 (0) 21 54 92 85-0 | Fax: +49 (0) 21 54 9285 9 2000
Email: info@jongen.de | www.jongen.de