

BHD-FC**BHM-FC****High precision power chucks Ø 165 - 630 mm**

INCH serration

METRIC serration

- centrifugal force compensation
- LARGE THROUGH HOLE
- 3 jaws

**Application/customer benefits**

- For open center or partial open center clamping
- Large through-hole
- Compensation of centrifugal force for high speed
- Clamping of easily deformed parts with low gripping force, maintained to high speed

BHD-FC: Master jaws with INCH serration (1/16" x 90°, 3/32" x 90°)**BHM-FC:** Master jaws with METRIC serration (1.5 mm x 60°) (Ø 165-400 mm) (suitable for japanese jaws)**Technical features**

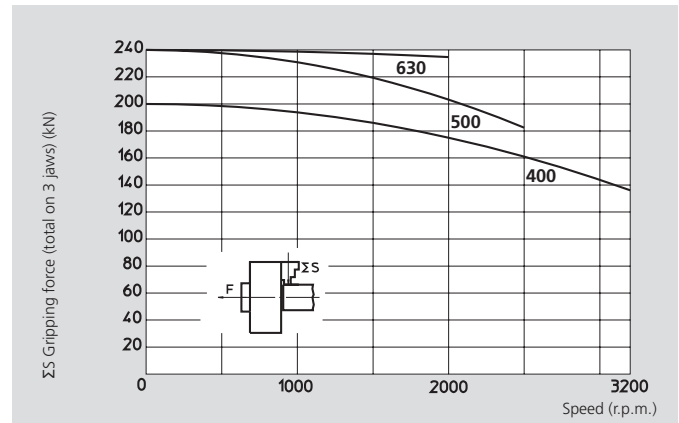
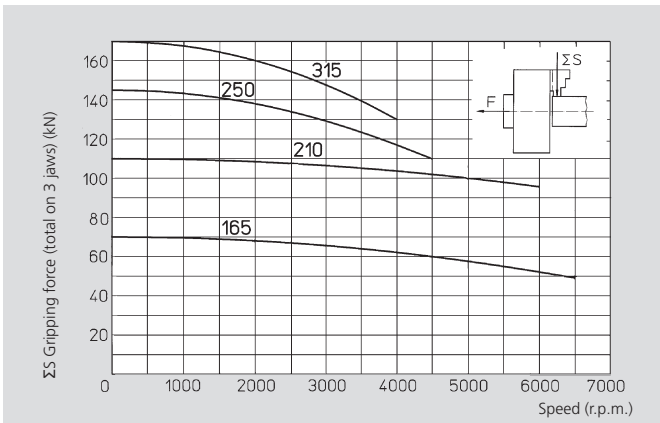
- Gripping force transmission via wedge hook
- Centrifugal force compensation by means of counter balance weights for minimum loss of gripping force at high speed
- Case hardened body (up to Ø 315) to assure greatest precision and long chuck life

Standard equipment

3 jaws chuck
 1 set T-nuts with bolts
 1 set soft top jaws
 Mounting bolts, grease gun

Ordering example

3 jaw chuck BHD-FC 210/A6
 or
 3 jaw chuck BHM-FC 250/Z220

Actual gripping force diagrams

The data in the diagrams refer to 3-jaw-chucks, newly maintained according to their service manuals using SMW-AUTOBLOK K05 grease. The static and dynamic gripping forces have been measured using standard soft top jaws, placed in a position not exceeding the outer diameter of the chuck.

△ Safety advice/danger of damage:

When using taller/heavier jaws and/or clamping on a bigger diameter reduce draw pull/rotating speed accordingly.

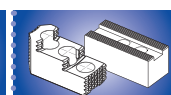
Technical data

SMW-AUTOBLOK Type	BHD-FC 165 BHM-FC 165	BHD-FC 210 BHM-FC 210	BHD-FC 250 BHM-FC 250	BHD-FC 315 BHM-FC 315	BHD-FC 400 BHM-FC 400	BHD-FC 500 -	BHD-FC 630 -
Number of jaws	3	3	3	3	3	3	3
Through-hole	mm 45	mm 52	mm 66	mm 95	mm 118	mm 125	mm 165
Radial jaw stroke	mm 3.2	mm 4	mm 5	mm 5	mm 6.5	mm 9	mm 9
Axial piston stroke	mm 15	mm 19	mm 24	mm 24	mm 31	mm 34	mm 34
Max. draw pull*	kN 25	kN 38	kN 50	kN 60	kN 70	kN 100	kN 100
Max. gripping force*	kN 70	kN 110	kN 145	kN 170	kN 200	kN 240	kN 240
Max. speed	r.p.m. 6500	r.p.m. 6000	r.p.m. 4500	r.p.m. 4000	r.p.m. 3200	r.p.m. 2500	r.p.m. 2000
Weight (without top jaws)	kg 11	kg 21	kg 32	kg 50	kg 95	kg 160	kg 335
Moment of inertia	kg·m ² 0.042	kg·m ² 0.13	kg·m ² 0.29	kg·m ² 0.67	kg·m ² 2	kg·m ² 5.2	kg·m ² 18
Rec. actuating cylinders	SIN-S 100 VNK/VSG 102-46	100/125 130-52	125/150 150-67	125/150 225-95	150/175 320-127	150/175/200 320-127	175/200 450/165

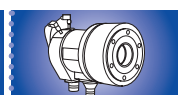
* For internal clamping reduce the draw pull by 30 %



Page 324



Page 326



Page 225

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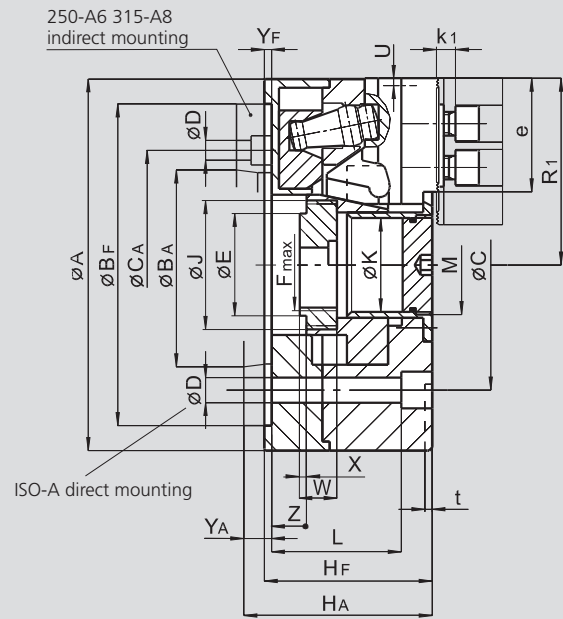
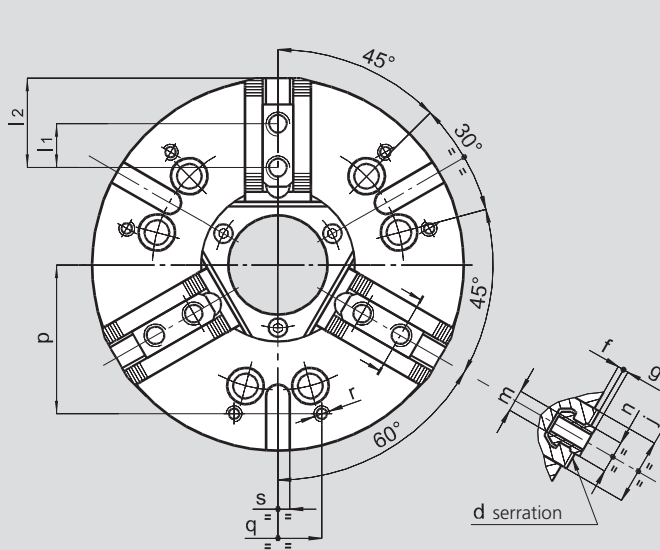
- centrifugal force compensation
- LARGE THROUGH HOLE
- 3 jaws

BHD-FC

BHM-FC

INCH serration

METRIC serration



Subject to technical changes
For more detailed information please ask for customer drawing

SMW-AUTOBLOK Type	BHD-FC 165		BHD-FC 210		BHD-FC 250			BHD-FC 315			BHD-FC 400		BHD-FC 500		BHD-FC 630		
	BHM-FC 165		BHM-FC 210		BHM-FC 250			BHM-FC 315			BHM-FC 400						
Mounting	Z140	A5	Z170	A6	Z220	A6	A8	Z300	A8	A11	Z300	A11	Z380	A15	Z380	A15	
A	mm 168		210		250			315			390		510		630		
Bf/BAH6	mm 140	82.563	mm 170	106.375	mm 220	106.375	139.719	mm 300	139.719	196.869	mm 300	196.869	mm 380	285.775	mm 380	285.775	
C	mm 104.8		133.4		171.4			235			235		330.2		330.2		
CA	mm -		-		-			171.4			-		-		-		
D	mm 11.5		13.5		17			21			21		25		25		
E	mm 58		67		78			111			140		148		198		
F/Fmax	mm M52 x 1.5		M60 x 1.5		M72 x 1.5			M105 x 2			M130 x 2		M135 x 2		M175 x 2		
J	mm M60 x 1.5		M72 x 1.5		M88 x 1.5			M120 x 2			M145 x 2		M160 x 2		M195 x 2		
Hf/HA	mm 90	100	mm 100	112	mm 115	134	129	mm 120	145	136	mm 143	158	mm 160	177	mm 160	177	
K	mm 45		52		66			95			118		125		165		
L	mm 72		74		89			72			115		129		129		
M	mm M47 x 1.5		M54 x 1.5		M68 x 2			M98 x 2			M120 x 2		-		-		
Chuck open	R1	mm 84	105.5		127.5			158			195		255		315		
Jaw stroke	U	mm 3.2	4		5			5			6.5		9		9		
	W	mm 23	24		26			28			33		25		30		
	X	mm 5	4		6			6			17		3		5		
	Yf/YA	mm 5	15	mm 5	17	mm 5	24	19	mm 5	30	21	mm 6	21	mm 3	23	mm 6	23
max./min.	Z	mm 15/0	19/0		24/0			24/0			31/0		37/3		37/3		
BHD-FC ser.	d	inch 1/16" x 90°	1/16" x 90°		1/16" x 90°			1/16" x 90°			3/32" x 90°		3/32" x 90°		3/32" x 90°		
BHM-FC ser.	d	mm 1.5 x 60°	1.5 x 60°		1.5 x 60°			1.5 x 60°			1.5 x 60°		-		-		
	e	mm 49.5	66		77.5			93			116.5		152		192		
	f	mm 5	4		4			4			5		10		10		
	g	mm 2.5	2.5		3.5			3.5			3.5		3.5		3.5		
	j	mm 30	36		45			45			62		62		62		
	k1	mm 10	11		12			12			14		16		16		
BHD-FC	l1	mm 16.5	23		30			30			34		38		38		
BHM-FC	l1	mm 20	25		30			30			34		-		-		
max./min.	l2	mm 41/23	56/33		62/43			78/43			90/49		129/53		167/53		
BHD-FC	m	mm M10	M12		M16			M16			M20		M20		M20		
BHM-FC	m	mm M10	M12		M12			M16			M20		-		-		
BHD-FC	n	h8 mm 14	17		21			21			25.5		25.5		25.5		
BHM-FC	n	h8 mm 12	14		16			21			22		-		-		
	p	mm 65	80		102			125			150		160		200		
	q	mm 36	45		60			100			80		100		100		
	r	mm M8	M8		M10			M10			M12		M12		M12		
	s	H9 mm 16	16		16			20			20		20		20		
	t	mm 4.5	5		5			5			5		5		5		