

# BB-D

INCH  
serration

# BB-M

METRIC  
serration

## High precision power chucks Ø 140 - 315 mm

- EXTRA LARGE THROUGH HOLE
- 3 jaws



### Application/customer benefits

- For open center or partial open center clamping
- For machines with very large spindle bore

**BB-D:** Master jaws with INCH serration (1/16" x 90°)

**BB-M:** Master jaws with METRIC serration (1.5 mm x 60°)  
(Suitable for Japanese chucks top jaws)

### Technical features

- Extra large through-hole
- Gripping force transmission via wedge hook
- Case hardened body to assure greatest precision and long chuck life

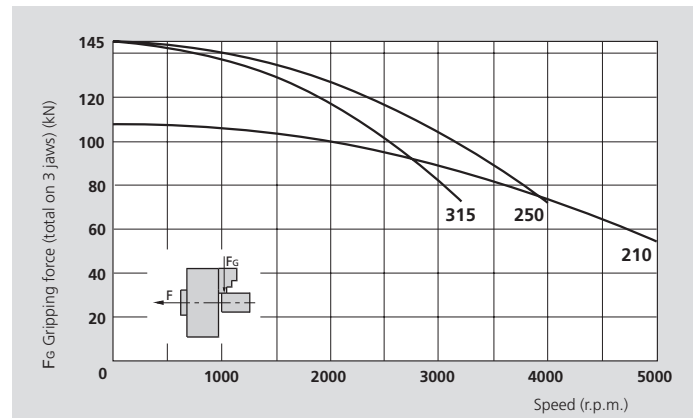
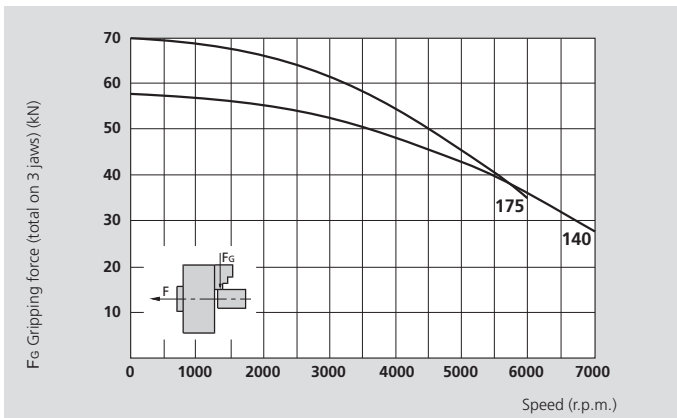
### Standard equipment

- 3 jaw chuck
- 1 set T-nuts with bolts
- 1 set soft top jaws
- Mounting bolts
- Grease gun

### Ordering example

- 3 jaw chuck BB-D 175/A6
- or
- 3 jaw chuck BB-M 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.

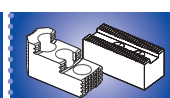
## Technical data

SMW-AUTOBLOK Type		BB-D 140 BB-M 140	BB-D 175 BB-M 175	BB-D 210 BB-M 210	BB-D 250 BB-M 250	BB-D 315 BB-M 315
<b>Number of jaws</b>		3	3	3	3	3
<b>Through-hole</b>	mm	39	56	66	78	122
<b>Radial jaw stroke</b>	mm	3.2	3.2	4	5	5
<b>Axial piston stroke</b>	mm	15	15	19	24	24
<b>Max. draw pull*</b>	kN	22	25	38	50	50
<b>Max. gripping force*</b>	kN	58	70	108	145	145
<b>Max. speed</b>	r.p.m.	7000	6000	5000	4000	3200
<b>Weight (without top jaws)</b>	kg	6	11.5	19.5	30	44
<b>Moment of inertia</b>	kg·m <sup>2</sup>	0.016	0.05	0.12	0.27	0.62
<b>Recommended actuating cylinders</b>		SIN-S 85/100 VNK-T2 70-37	SIN-S 100 VNK-T2 130-52	SIN-S 100/125 VNK-T2 150-67	SIN-S 125/150 VNK-T2 170-77	SIN-S 125/150 VNK-T2 320-127

\* For internal clamping reduce the draw pull by 30 %.



SMW-AUTOBLOK  
368



SMW-AUTOBLOK  
370



SMW-AUTOBLOK  
249

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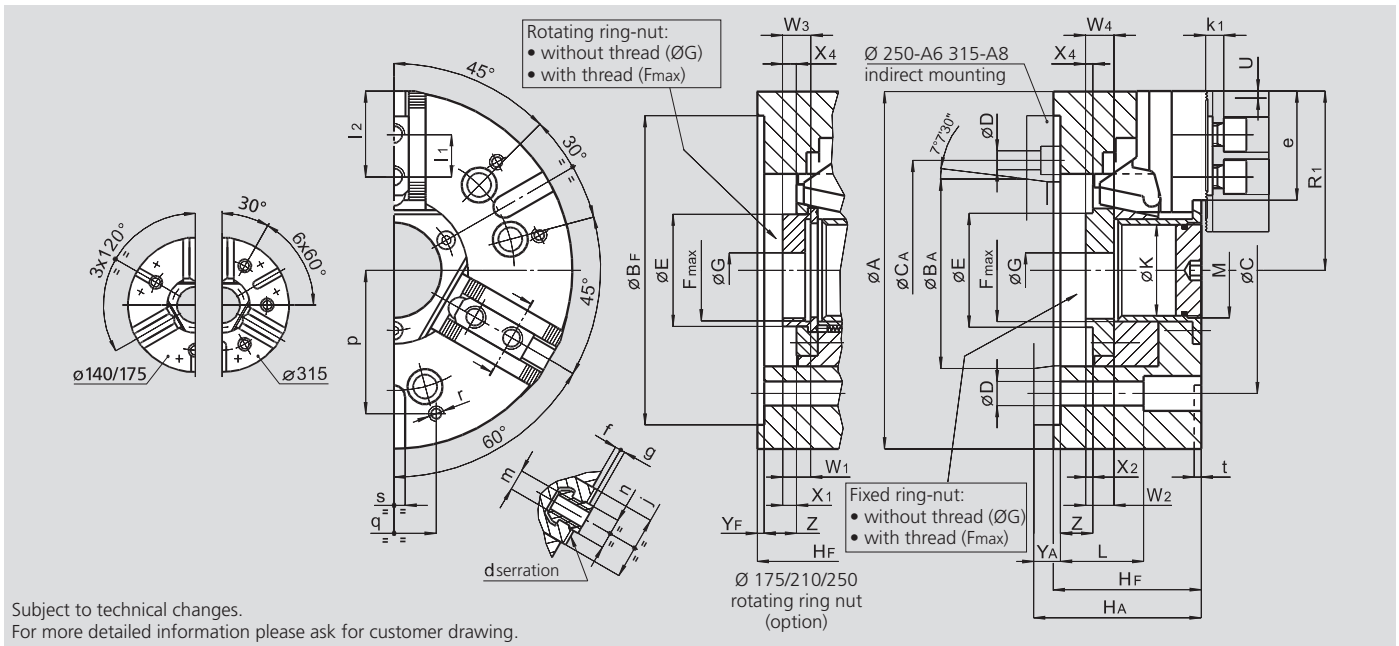
## BB-D

## BB-M

- EXTRA LARGE THROUGH HOLE
- 3 jaws

INCH  
serration

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

SMW-AUTOBLOK Type			BB-D 140 BB-M 140		BB-D 175 BB-M 175		BB-D 210 BB-M 210		BB-D 250 BB-M 250			BB-D 315 BB-M 315		
Mounting			Z130	A5	Z160	A6	Z170	A6	Z220	A6	A8	Z300	A8	A11
	<b>A</b>	mm	140		175		210		254			315		
	<b>BF/BA H6</b>	mm	130	82.563	160	106.375	170	106.375	220	106.375	139.719	300	139.719	196.869
	<b>C</b>	mm	104.8		133.4		133.4		171.4	-	171.4	235	-	235
	<b>CA</b>	mm	-	-	-	-	-	-	-	133.4	-	-	171.4	-
	<b>D</b>	mm	11.5		13.5		13.5		13.5			17		
	<b>E</b>	mm	53		71		78		92			143		
	<b>Fmax</b>	mm	M45 x 1.5		M62 x 1.5		M72 x 1.5		M85 x 2			M135 x 2		
	<b>G</b>	mm	16		20		20		25			70		
	<b>HF/HA</b>	mm	67	77	82	94	92	104	105	124	119	118	143	134
	<b>K</b>	mm	39		56		66		78			122		
	<b>L</b>	mm	46		54		66		79			72		
	<b>M</b>	mm	M42 x 1.5		M58 x 1.5		M68 x 2		M80 x 2			M125 x 2		
Chuck open	<b>R1</b>	mm	70		89		106		128			157.5		
Jaw stroke	<b>U</b>	mm	3.2		3.2		4		5			5		
	(1) <b>W1/W2</b>	mm	-/14		18/16		20/18		20/20			-/23		
	(2) <b>W3/W4</b>	mm	-/14		28/35		30/35		33/38			-/23		
<b>BB-D</b>	<b>X1/X2</b>	mm	-/6		11/5		12/5		11/6			-/5		
<b>BB-M</b>	<b>X1/X2 (X4)</b>	mm	-/6 (6)		11/5 (22)		12/5 (22)		11/11 (23)			-/5 (5)		
	<b>YF/YA</b>	mm	5	15	5	17	5	17	5	24	19	5	30	21
max./min.	<b>Z</b>	mm	15/0		15/0		19/0		24/0			24/0		
<b>BB-D</b> serration	<b>d</b>	inch	1/16" x 90°		1/16" x 90°		1/16" x 90°		1/16" x 90°			1/16" x 90°		
<b>BB-M</b> serration	<b>d</b>	mm	1.5 x 60°		1.5 x 60°		1.5 x 60°		1.5 x 60°			1.5 x 60°		
	<b>e</b>	mm	39		49.5		59		73			77.5		
	<b>f</b>	mm	2		3		3		4			4		
	<b>g</b>	mm	2.5		2.5		2.5		3.5			3.5		
	<b>j</b>	mm	30		33		38		45			45		
	<b>k1</b>	mm	10		10		11		12			12		
<b>BB-D</b>	<b>l1</b>	mm	16		16.5		23		30			30		
<b>BB-M</b>	<b>l1</b>	mm	16		20		25		30			30		
max./min.	<b>l2</b>	mm	32/23		41/24		49/33		57/43			62/43		
<b>BB-D</b>	<b>m</b>	mm	M8		M10		M12		M16			M16		
<b>BB-D</b>	<b>n h8</b>	mm	12		14		17		21			21		
<b>BB-M</b>	<b>m</b>	mm	M8		M10		M12		M12			M16		
<b>BB-M</b>	<b>n h8</b>	mm	12		12		14		16			21		
	<b>p</b>	mm	52		65		80		102			100		
	<b>q</b>	mm	30		36		45		60			60		
	<b>r</b>	mm	M6		M8		M8		M10			M10		
	<b>s H12</b>	mm	12		16		16		16			20		
	<b>t</b>	mm	5		5		5		5			5		

(1) Rotating ring-nut with thread  
Fixed ring-nut with thread

W<sub>1</sub>=BBD-BBM  
W<sub>2</sub>=BBD-BBM

(2) Blank rotating ring-nut without thread  
Fixed ring-nut blank without thread

W<sub>3</sub> = BBD-BBM  
W<sub>4</sub> = BBD-BBM