

# BB-D

INCH  
SERRATION

# BB-M

METRIC  
SERRATION

## High precision power chuck 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

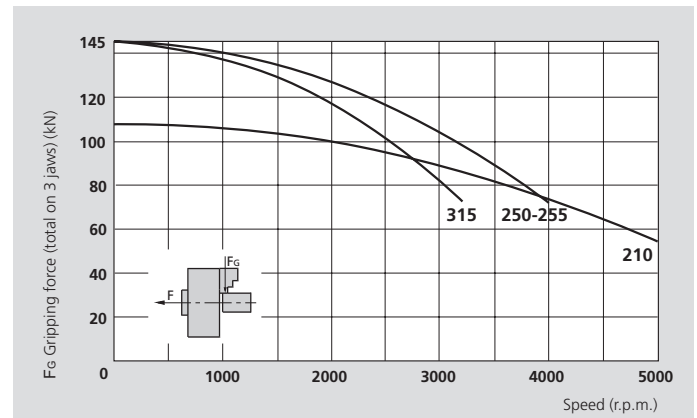
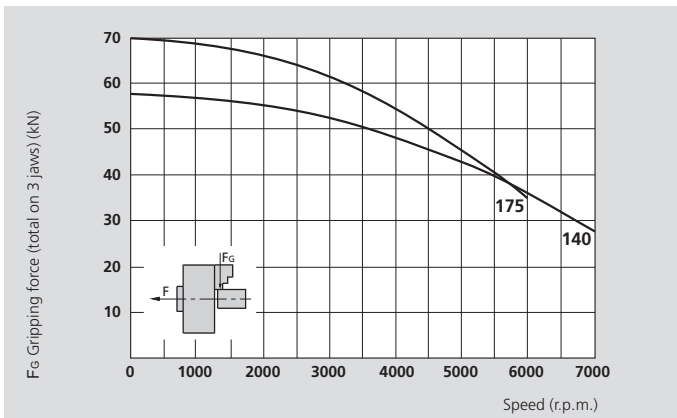
### Standard equipment

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

### 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 K67 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.

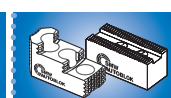
## Technical data

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 255 BB-M 255	BB-D 315 BB-M 315
<b>Number of jaws</b>		3	3	3	3	3	3
<b>Through-hole</b>	mm	39	56	66	78	82	122
<b>Radial jaw stroke</b>	mm	3.2	3.2	4	5	5	5
<b>Axial piston stroke</b>	mm	15	15	19	24	24	24
<b>Max. draw pull*</b>	kN	22	25	38	50	50	50
<b>Max. gripping force*</b>	kN	58	70	108	145	145	145
<b>Max. speed</b>	r.p.m.	7000	6000	5000	4000	4000	3200
<b>Weight (without top jaws)</b>	kg	6	11.5	19.5	30	33	44
<b>Moment of inertia</b>	kg·m <sup>2</sup>	0.016	0.05	0.12	0.27	0.32	0.62
<b>Recommended actuating cylinders without hole</b>		SIN-S 85 / 100	SIN-S 100	SIN-S 100 / 125	SIN-S 125 / 150	SIN-S 125 / 150	SIN-S 125 / 150
<b>Recommended actuating cylinders with hole</b>		VNK-T2 70-37	VNK-T2 130-52	VNK-T2 150-67	VNK-T2 170-77	VNK-T2 176-82	VNK-T2 320-127
<b>Id. No. BB-D 3 jaws (Center mounting)</b>		77150714	77150917	77150921	77150725	77150726	77150731
<b>Id. No. BB-M 3 jaws (Center mounting)</b>		77150814	77151117	77151121	77151025	77151026	77150831

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



SMW-AUTOBLOK  
466



SMW-AUTOBLOK  
468



SMW-AUTOBLOK  
327

# High precision power chuck Ø 140 - 315 mm

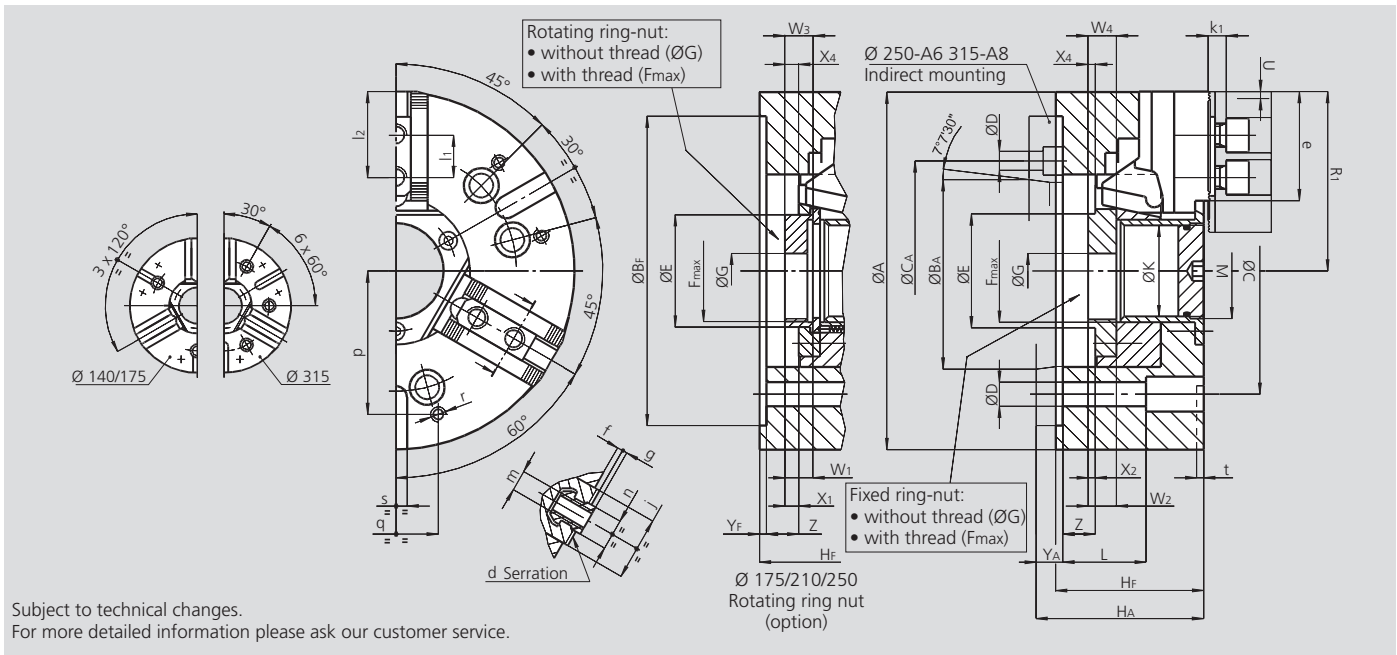
## BB-D

## BB-M

- EXTRA large through-hole
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INCH  
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Subject to technical changes.  
For more detailed information please ask our customer service.

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 255 BB-M 255			BB-D 315 BB-M 315		
Mounting			Z130	A5	Z160	A6	Z170	A6	Z220	A6	A8	Z220	A6	A8	Z300	A8	A11
	<b>A</b>	mm	140		175		210		254			255			315		
	<b>BF/BA H6</b>	mm	130	82.563	160	106.375	170	106.375	220	106.375	139.719	220	106.375	139.719	300	139.719	196.869
	<b>C</b>	mm	104.8		133.4		133.4		171.4	-	171.4	171.4	-	171.4	235	-	235
	<b>CA</b>	mm	-	-	-	-	-	-	-	133.4	-	-	133.4	-	-	171.4	-
	<b>D</b>	mm	11.5		13.5		13.5		13.5			17		17		17	
	<b>E</b>	mm	53		71		78		92			95			143		
	<b>Fmax</b>	mm	M45 x 1.5		M62 x 1.5		M72 x 1.5		M85 x 2			M90 x 2			M135 x 2		
	<b>G</b>	mm	16		20		20		25			20			70		
	<b>Hf/HA</b>	mm	67	77	82	94	92	104	105	124	119	105	124	119	118	143	134
	<b>K</b>	mm	39		56		66		78			82			122		
	<b>L</b>	mm	46		54		66		79			79			72		
	<b>M</b>	mm	M42 x 1.5		M58 x 1.5		M68 x 2		M80 x 2			M84 x 2			M125 x 2		
Chuck open	<b>R1</b>	mm	70		89		106		128			130.5			157.5		
Jaw stroke	<b>U</b>	mm	3.2		3.2		4		5			5			5		
	(1) <b>W1/W2</b>	mm	- / 14		18 / 16		20 / 18		20 / 20			20 / 20			- / 23		
	(2) <b>W3/W4</b>	mm	- / 14		28 / 35		30 / 35		33 / 38			33 / 38			- / 23		
<b>BB-D</b>	<b>X1/X2</b>	mm	- / 6		11 / 5		12 / 5		11 / 6			9 / 4			- / 5		
<b>BB-M</b>	<b>X1/X2 (X4)</b>	mm	- / 6 (6)		11 / 5 (22)		12 / 5 (22)		11 / 11 (23)			9 / 4 (23)			- / 5 (5)		
	<b>YF/YA</b>	mm	5	15	5	17	5	17	5	24	19	5	24	19	5	30	21
Max. / min.	<b>Z</b>	mm	15 / 0		15 / 0		19 / 0		24 / 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°			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°			1.5 x 60°		
	<b>e</b>	mm	39		49.5		59		73			72.5			77.5		
	<b>f</b>	mm	2		3		3		4			4			4		
	<b>g</b>	mm	2.5		2.5		2.5		3.5			3.5			3.5		
	<b>j</b>	mm	30		33		38		45			45			45		
	<b>k1</b>	mm	10		10		11		12			12			12		
<b>BB-D</b>	<b>l1</b>	mm	16		16.5		23		30			30			30		
<b>BB-M</b>	<b>l1</b>	mm	16		20		25		30			30			30		
Max. / min.	<b>l2</b>	mm	32 / 23		41 / 24		49 / 33		57 / 43			57 / 43			62 / 43		
<b>BB-D</b>	<b>m</b>	mm	M8		M10		M12		M16			M16			M16		
<b>BB-D</b>	<b>n h8</b>	mm	12		14		17		21			21			21		
<b>BB-M</b>	<b>m</b>	mm	M8		M10		M12		M12			M12			M16		
<b>BB-M</b>	<b>n h8</b>	mm	12		12		14		16			16			21		
	<b>p</b>	mm	52		65		80		102			102			100		
	<b>q</b>	mm	30		36		45		60			60			60		
	<b>r</b>	mm	M6		M8		M8		M10			M10			M10		
	<b>s H12</b>	mm	12		16		16		16			16			20		
	<b>t</b>	mm	5		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