

- Pull-down effect of inclined master jaws
- Tongue & groove master jaws
- 3 jaws



### Application/customer benefits

- 1st or 2nd operation of parts requesting close squareness and parallelism tolerances
- For chucking parts
- External clamping only

**RAN:** Inclined master jaws with pull-down effect and TONGUE & GROOVE

### Technical features

- Chuck only available with tongue & groove master jaws
- Clamping on raw diameters with carbide inserts, increases the pull-down effect thanks to the penetration into the workpiece
- Central bore for coolant and / or air
- Chuck body and internal parts case hardened

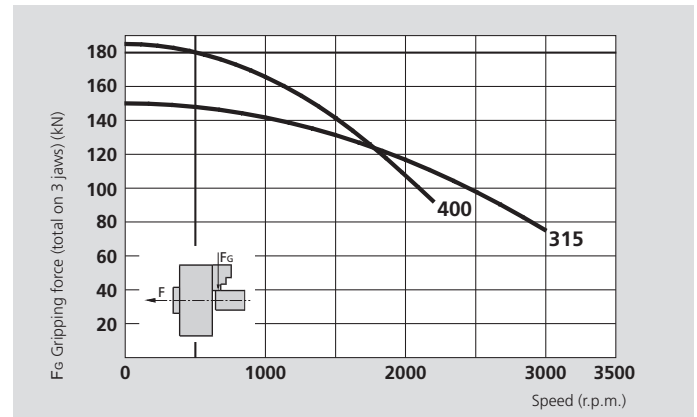
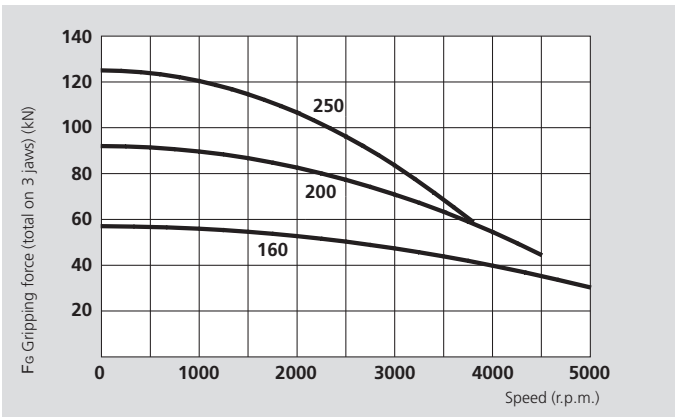
### Standard equipment

3 jaw chuck  
Mounting bolts

### Ordering example

3 jaw chuck RAN 200 / A6  
or  
3 jaw chuck RAN 315 / A8

## Actual gripping force diagrams



The data in the diagram 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.

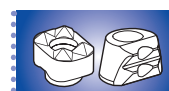
### ⚠ Safety advice / danger of damage:

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

## Technical data

SMW-AUTOBLOK Type		RAN 160	RAN 200	RAN 250	RAN 315	RAN 400
<b>Number of jaws</b>		<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Radial jaw stroke</b>	mm	5	5	6	8	8
<b>Axial jaw stroke (pull-down)</b>	mm	1.25	1.25	1.5	2	2
<b>Axial piston stroke</b>	mm	20	20	25	32	32
<b>Max. draw pull*</b>	kN	25	40	55	65	80
<b>Max. gripping force*</b>	kN	57	92	125	150	185
<b>Max. speed</b>	r.p.m.	5000	4500	3800	3000	2200
<b>Weight (without top jaws)</b>	kg	10	17	31	54	95
<b>Moment of inertia</b>	kg·m <sup>2</sup>	0.034	0.10	0.26	0.65	1.85
<b>Top jaw reference mass</b>	kg	0.58	0.92	1.25	2.15	3.6
<b>Recommended actuating cylinders</b>	Type	SIN-S 85 / 100	SIN-S 100 / 125	SIN-S 125 / 150	SIN-S 125 / 150	SIN-S 150 / 175

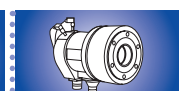
\* For internal clamping reduce the draw pull by 30%.



SMW-AUTOBLOK 444



SMW-AUTOBLOK 438



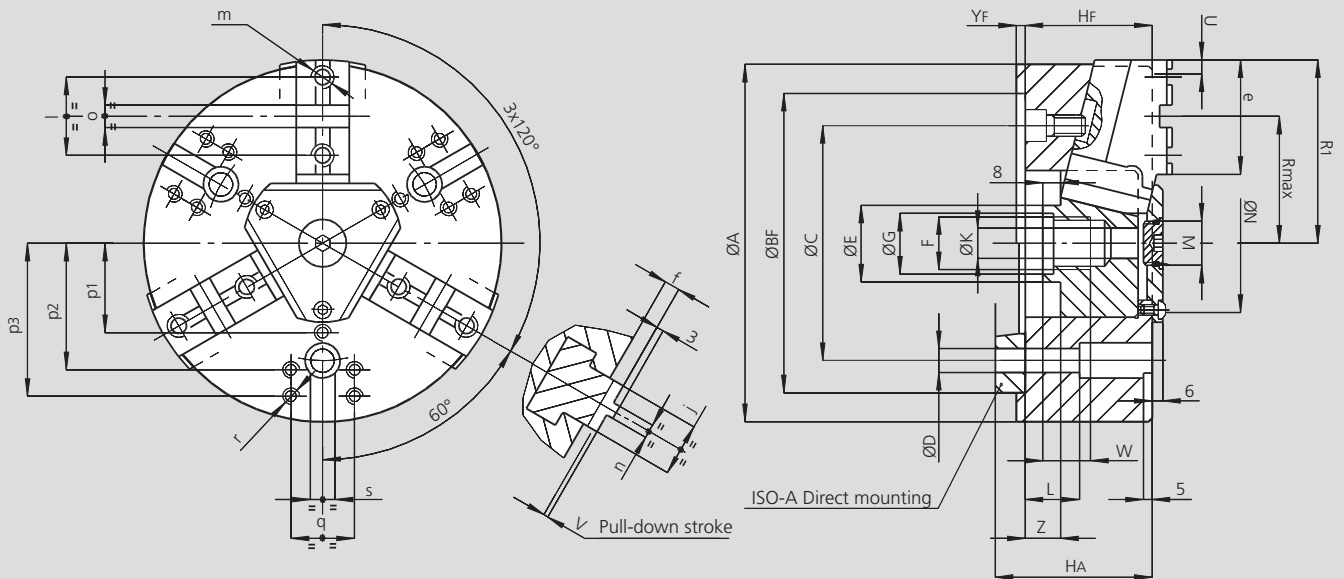
SMW-AUTOBLOK 297

# High precision pull-down chucks $\varnothing$ 160 - 400 mm

# RAN

- Pull-down effect of inclined master jaws
- Tongue & groove master jaws
- 3 jaws

TONGUE & GROOVE



Subject to technical changes.  
For more detailed information please ask our customer service.

SMW-AUTOBLOK Type			RAN 160		RAN 200		RAN 250		RAN 315		RAN 400	
Mounting			Z140	A5	Z170	A6	Z220	A8	Z220	A8	Z300	A11
	<b>A</b>	mm	165		203		250		305		390	
	<b>BF H6</b>	mm	140		170		220		220		300	
Fixing holes circle	<b>C</b>	mm	104.8		133.4		171.4		171.4		235	
Fixing holes diameter	<b>D</b>	mm	11.5		13.5		17		17		21	
	<b>E</b>	mm	32		41		47		47		66	
	<b>F</b>	mm	M24 x 2		M32 x 1.5		M38 x 1.5		M38 x 1.5		M56 x 2	
	<b>G</b>	mm	25		33		39		39		57	
	<b>HF/HA</b>	mm	66	81	72	89	87	106	95	114	104	125
Central through-hole	<b>K</b>	mm	16		18		25		25		36	
	<b>L</b>	mm	13		22		18		18		54	
	<b>M</b>	mm	M20 x 1		M24 x 1		M28 x 1.5		M28 x 1.5		M52 x 1.5	
	<b>N</b>	mm	75		90		105		112		145	
Chuck open	<b>R1</b>	mm	85		104		128		155		198	
	<b>Rmax</b>	mm	56		72		88		105		133	
Radial clamp. stroke	<b>U</b>	mm	5		5		6		8		8	
Pull-down clamp. stroke	<b>V</b>	mm	1.25		1.25		1.5		2		2	
	<b>W</b>	mm	20		25		25		25		35	
	<b>YF</b>	mm	5		5		5		5		6	
Axial wedge stroke	<b>Z</b>	mm	20		20		25		32		32	
	<b>e</b>	mm	57		65		84		103		130	
Chuck open	<b>f</b>	mm	8.25		8.25		8.5		9		11	
	<b>j</b>	mm	24		30		36		36		45	
	<b>l</b>	mm	38		44.4		54		63.5		76.2	
	<b>m</b>	mm	M10		M12		M16		M16		M20	
	<b>n h8</b>	mm	7.94		7.94		12.7		12.7		12.7	
	<b>o H7</b>	mm	12.68		12.68		19.03		19.03		19.03	
	<b>p1</b>	mm	-		-		60		65		85	
	<b>p2</b>	mm	65		72		100		90		120	
	<b>p3</b>	mm	-		87		-		120		150	
	<b>q</b>	mm	36		36		60		60		80	
	<b>r</b>	mm	M8		M8		M10		M10		M12	
	<b>s</b>	mm	16		14		16		20		20	