

- 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 work piece
- Central bore for coolant and/or air
- Chuck body and internal parts case hardened

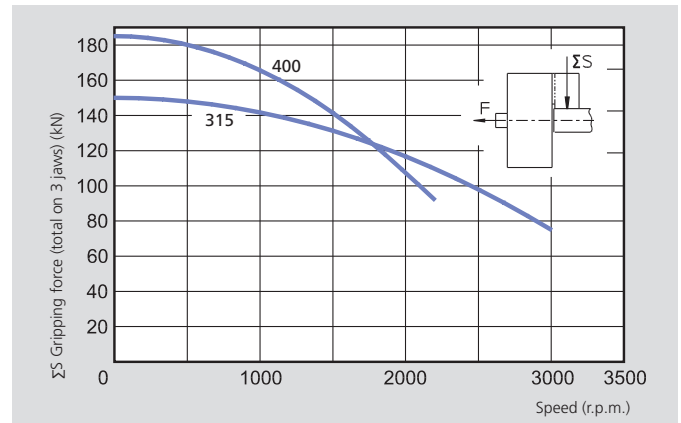
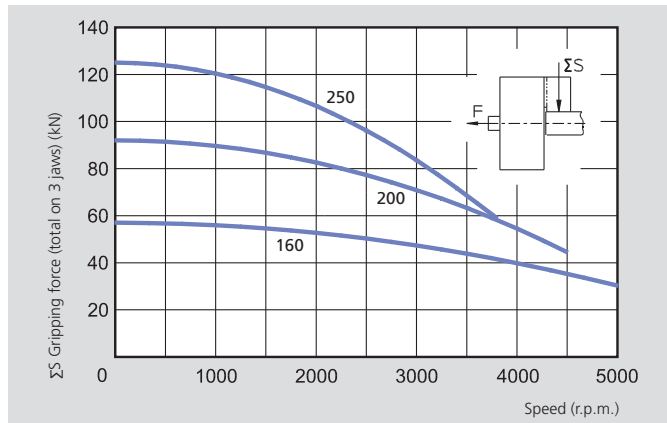
Standard equipment

3 jaw chuck
Mounting bolts
Grease gun

Ordering example

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

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.

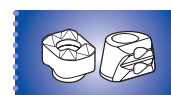
⚠ Safety advice/danger of damage:

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

Technical data

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

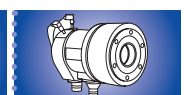
* For internal clamping reduce the draw pull by 30 %



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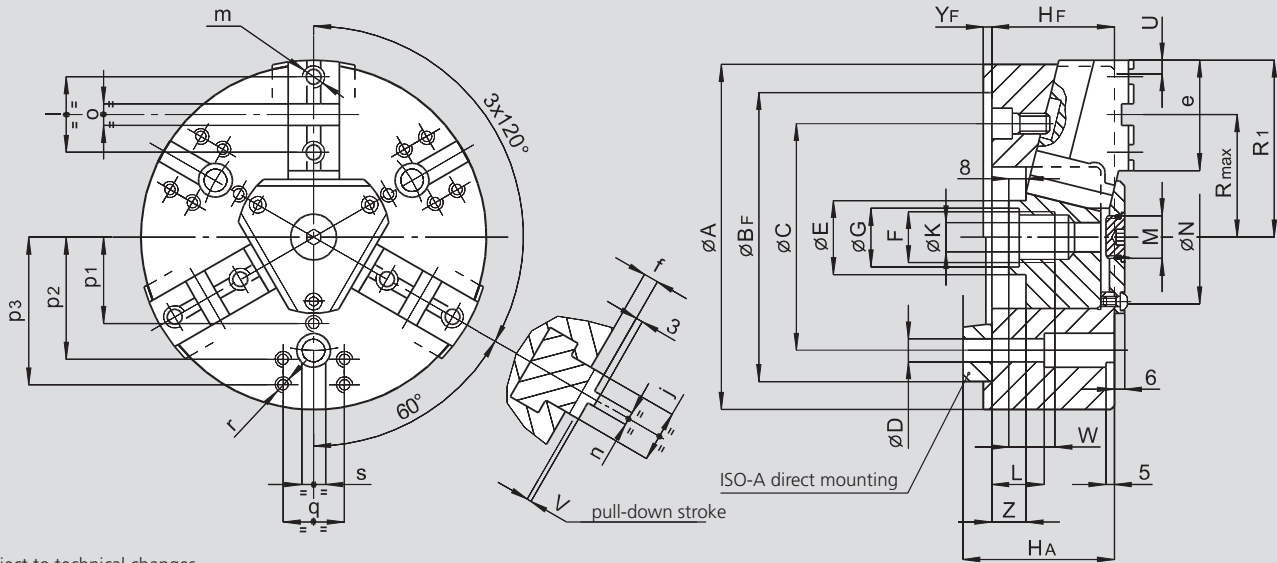
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High precision pull-down chucks \varnothing 160 - 400 mm

RAN

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- tongue & groove master jaws
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Tongue & groove



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

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