

APL-D

INCH
SERRATION

APL-M

METRIC
SERRATION

High precision power chuck Ø 215 - 400 mm

- Closed center
- Long stroke
- 3 jaws
- proofline® chucks = fully sealed - low maintenance

Application/customer benefits

- For mid to large batch production
- Fully sealed, ideal for dry machining of castings and forgings or if high pressure coolant is used
- Large clamping range

APL-D: Master jaws with INCH SERRATION (1/16" x 90°, 3/32" x 90°)

APL-M: Master jaws with METRIC SERRATION (1.5 mm x 60°)

(suitable for japanese chuck top jaws)

Technical features

- EXTRA long jaw stroke
- Constant gripping force with permanent grease lubrication
- Central bore for coolant and / or air
- Chuck body and internal parts case hardened
- **proofline® chucks** = fully sealed - low maintenance

Standard equipment

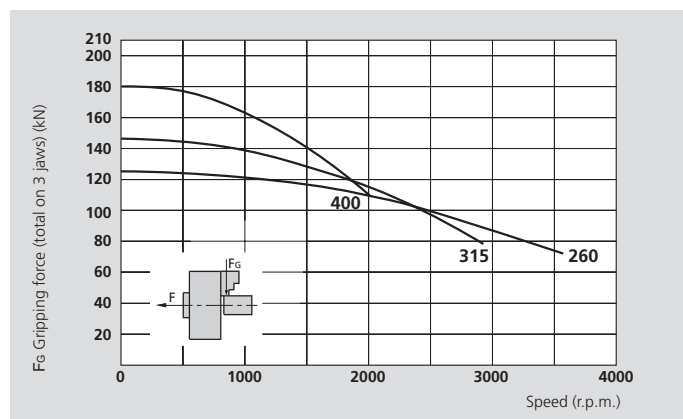
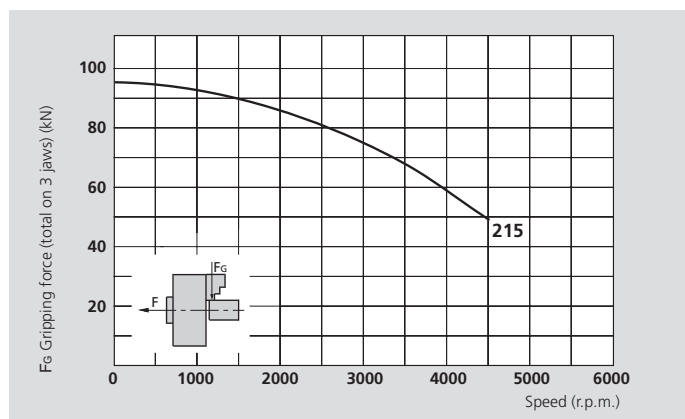
3-jaw chuck
1 set T-nuts and bolts
1 set soft top jaws
Mounting bolts

Ordering example

3-jaw chuck APL-D 215 / A6
or
3-jaw chuck APL-M 260 / 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.

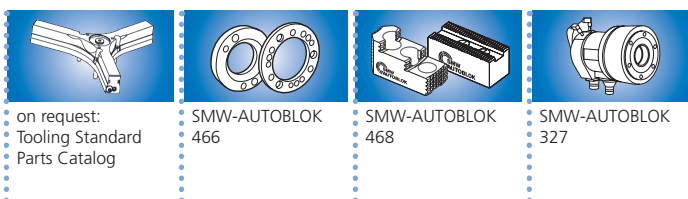
⚠ Safety advice / danger of damage:

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

Technical data

SMW-AUTOBLOK Type		APL-D 215 APL-M 215	APL-D 260 APL-M 260	APL-D 315 APL-M 315	APL-D 400 APL-M 400
Radial jaw stroke	mm	8.5	9.7	12.1	13.3
Axial piston stroke	mm	21	24	30	33
Max. draw pull*	kN	53	68	80	100
Max. gripping force*	kN	95	125	145	180
Max. speed	r.p.m.	4500	3600	2800	2000
Weight (without top jaws)	kg	19.5	32.5	56	90
Moment of inertia	kg·m ²	0.113	0.28	0.69	1.7
Recommended actuating cylinders					
	Type	SIN-S 100 / 125	SIN-S 125 / 150	SIN-S 125 / 150	SIN-S 150 / 175
Id. No. APL-D (Center mounting)		77184021	77184026	77184031	77184040
Id. No. APL-M (Center mounting)		77184121	77184126	77184131	77184140

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



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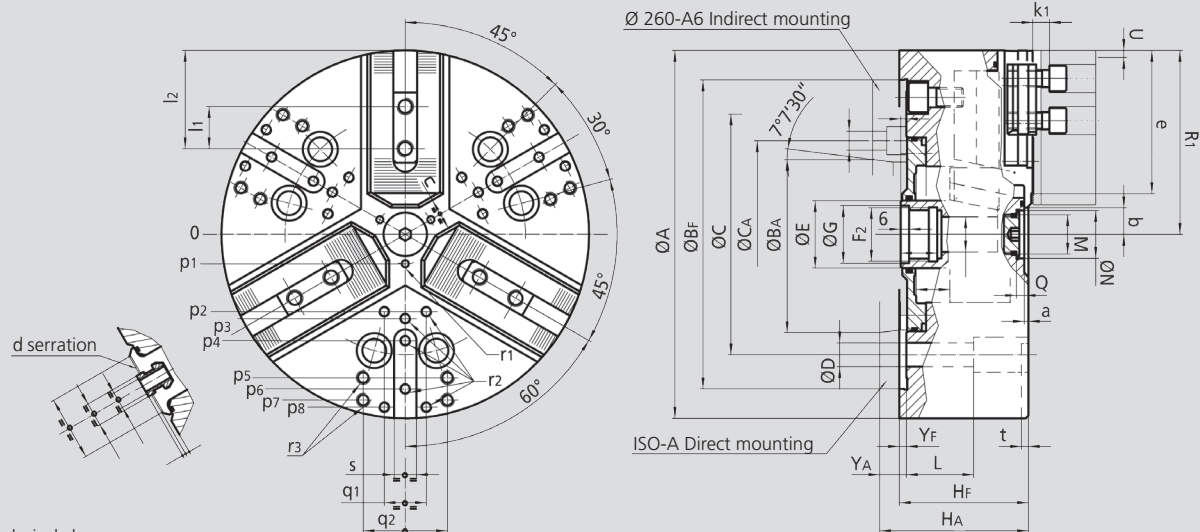
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- Long stroke
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Subject to technical changes.

For more detailed information please ask our customer service.

SMW-AUTOBLOK Type			APL-D 215 APL-M 215		APL-D 260 APL-M 260			APL-D 315 APL-M 315		APL-D 400 APL-M 400	
Mounting			Z170	A6	Z220	A6	A8	Z220	A8	Z300	A11
	A	mm	216		262			315		390	
	BF/BA H6	mm	170	106.375	220	106.375	139.719	220	139.719	300	196.869
	C	mm	133.4		171.4	171.4		171.4	235		
	CA	mm	-	-	-	133.4	-	-	-	-	-
	D	mm	13.5		17	13.5	17	17	21		
	E	mm	42		48			48	75		
	F2	mm	M32 x 1.5		M38 x 1.5			M38 x 1.5	M60 x 1.5		
	G H8	mm	33		39			39	61		
	HF/HA	mm	81	93	92	111	106	101	115	112	127
	K	mm	20		25			25	48		
	L	mm	32		38			38	54		
	M	mm	M22 x 1.5		M28 x 1.5			M28 x 1.5	M52 x 1.5		
	N H9	mm	24		34			34	60		
	Q	mm	5.5		5.5			5.5	9		
Chuck open	R1	mm	112.5		136			163.5	202		
Max. / min.	S	mm	25 / 4		28 / 4			34 / 4	37 / 4		
Radial jaw stroke	U	mm	8.5		9.7			12.1	13.3		
	W	mm	26		26			26	38		
	YF/YA	mm	5	17	5	24	19	5	19	6	21
Max. / min.	Z	mm	21 / 0		24 / 0			30 / 0	33 / 0		
	a	mm	3		3			3	3		
Min.	b	mm	8.5		9			11	24.5		
Min.	c	mm	6.2		6			6	28		
APL-D	d	inch	1/16" x 90°		1/16" x 90°			1/16" x 90°	3/32" x 90° ⁽¹⁾		
APL-M	d	mm	1.5 x 60°		1.5 x 60°			1.5 x 60°	1.5 x 60°		
	e	mm	82.5		102			123.5	145.5		
	f	mm	3		3			3	6		
	g	mm	2.5		2.5			3.5	3.5		
	j	mm	46		48			58	63		
	k1	mm	11		12			12	14		
APL-D	l1	mm	23		30			30	38		
APL-M	l1	mm	25		30			30	38		
Max. / min.	l2	mm	53 / 33		73 / 41			88 / 43	102 / 54		
APL-D	m	mm	M12		M12			M16	M20		
APL-M	m	mm	M12		M12			M16	M20		
APL-D	n h8	mm	17		17			21	25.5		
APL-M	n h8	mm	14		16			21	22		
	p1	mm	16		21			21	37.5		
	p2	mm	-		-			60	80		
	p3	mm	49		55			62.5	83		
	p4	mm	80		70			80	110		
	p5	mm	80		102			102	140		
	p6	mm	-		102			120	155		
	p7	mm	-		-			135	170		
	p8	mm	-		-			-	170		
	q1	mm	-		-			30	36		
	q2	mm	45		60			60	80		
	r1	mm	M5 / 8		M6 / 10			M6 / 10	M6 / 12		
	r2	mm	M8 / 17		M8 / 17			M8 / 17	M10 / 19		
	r3	mm	M8 / 17		M10 / 19			M10 / 19	M12 / 22		
	s	mm	16		16			16	20		
	t	mm	5		5			5	5		

⁽¹⁾ Serration 1/16 x 90° on request.