

APL-D

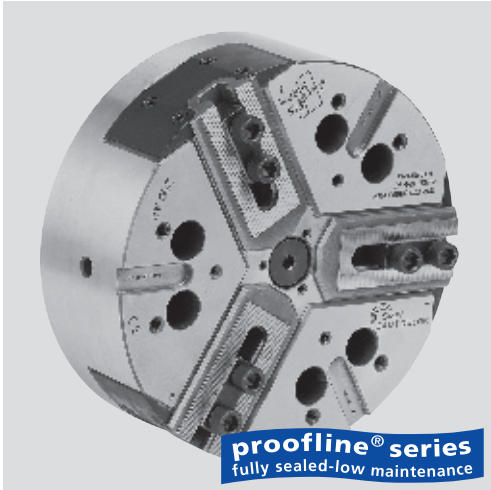
APL-M

INCH serration

METRIC serration

High precision power chucks Ø 215 - 400 mm

- LONG STROKE
- closed center
- 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 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

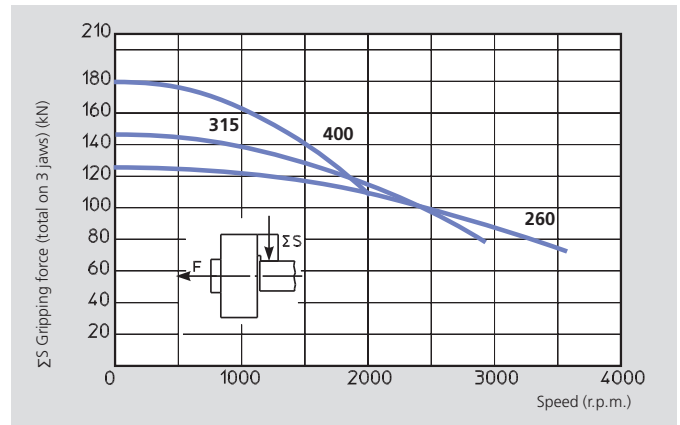
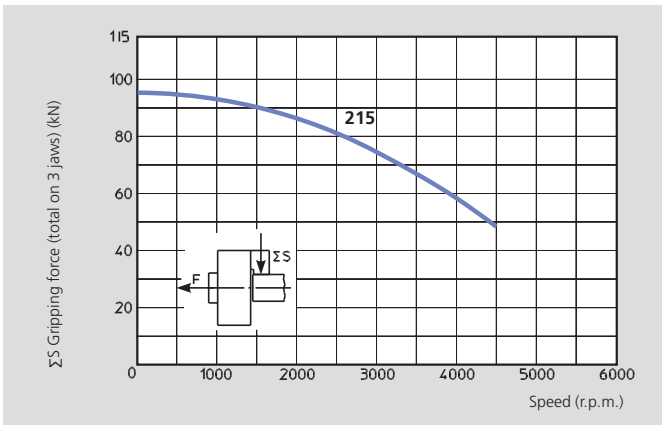
Standard equipment

- 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		SIN-S 100/125	SIN-S 125/150	SIN-S 125/150	SIN-S 150/175

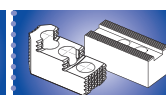
* For internal clamping reduce the draw pull by 30 %



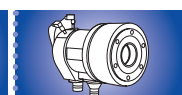
on request:
Tooling Standard
Parts Catalog



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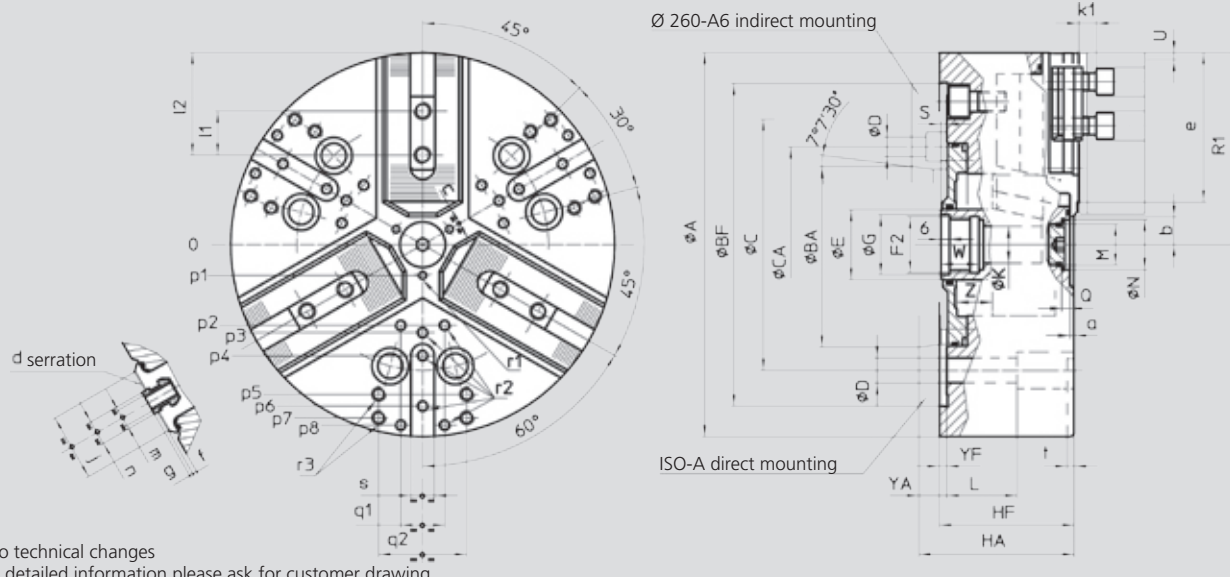
High precision power chucks \varnothing 215 - 400 mm

- LONG STROKE
- closed center
- 3 jaws
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APL-D APL-M

INCH serration

METRIC serration



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

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		235		
	CA	mm	-	-	-	133.4	-	-	-	-	-
	D	mm	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