

AP[®]-D

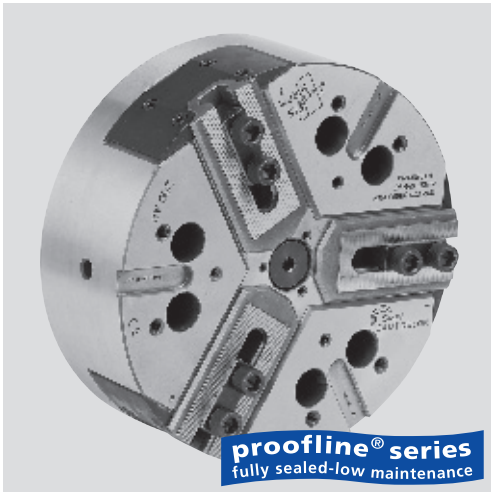
INCH serration

AP[®]-M

METRIC serration

High precision power chucks Ø 170 - 400 mm

- 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

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

AP-M: Master jaws with METRIC serration (1.5 mm x 60°) (suitable for japanese chuck jaws)

Technical features

- 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

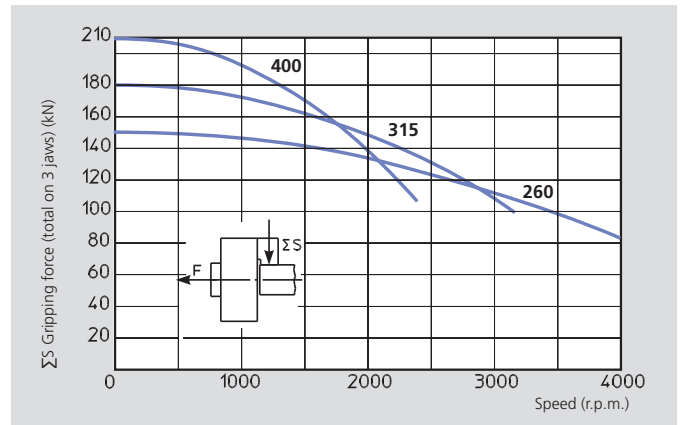
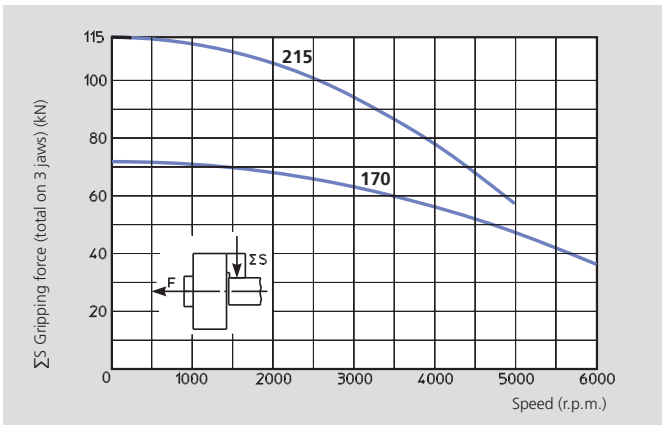
Standard equipment

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

Ordering example

- 3 jaw chuck AP-D 215/A6
- or
- 3 jaw chuck AP-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		AP-D 170 AP-M 170	AP-D 215 AP-M 215	AP-D 260 AP-M 260	AP-D 315 AP-M 315	AP-D 400 AP-M 400
Number of jaws		3	3	3	3	3
Radial jaw stroke	mm	3.6	4.6	5	6.3	7
Axial piston stroke	mm	17	22	24	30	33
Max. draw pull*	kN	30	42	55	65	75
Max. gripping force*	kN	72	112	150	180	210
Max. speed	r.p.m.	6000	5000	4000	3200	2400
Weight (without top jaws)	kg	10	19.5	32.5	56	90
Moment of inertia	kg·m ²	0.037	0.113	0.28	0.69	1.7
Recommended actuating cylinders		SIN-S 100	SIN-S 100/125	SIN-S 125/150	SIN-S 125/150	SIN-S 150/175

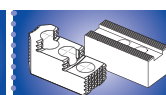
* For internal clamping reduce the draw pull by 30 %



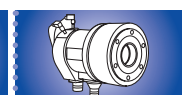
on request:
Tooling Standard
Parts Catalog



Page 324



Page 326



Page 225

High precision power chucks Ø 170 - 400 mm

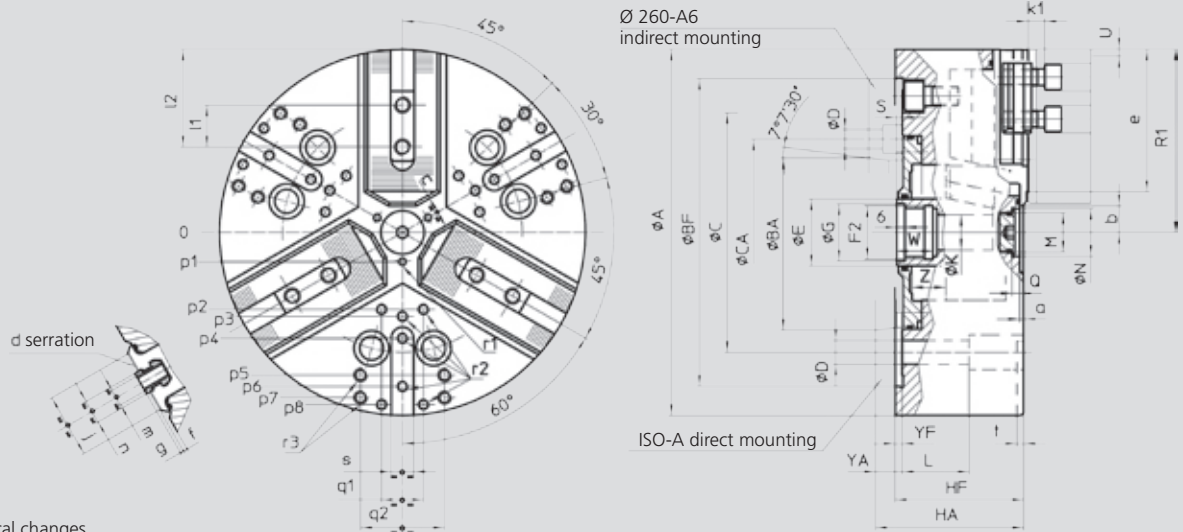
- closed center
- 3 jaws
- proofline® chucks = fully sealed – low maintenance

AP®-D

INCH serration

AP®-M

METRIC serration



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

SMW-AUTOBLOK Type			AP-D 170 AP-M 170		AP-D 215 AP-M 215		AP-D 260 AP-M 260			AP-D 315 AP-M 315		AP-D 400 AP-M 400	
Mounting			Z140	A5	Z170	A6	Z220	A6	A8	Z220	A8	Z300	A11
	A	mm	172		216		262			315		390	
	Bf/BA H6	mm	140	82.563	170	106.375	220	106.375	139.719	220	139.719	300	196.869
	C	mm	104.8		133.4		171.4			171.4		235	
	CA	mm	-	-	-	-	-	133.4	-	-	-	-	-
	D	mm	11.5		13.5		17			17		21	
	E	mm	32		42		48			48		75	
	F2	mm	M24 x 2		M32 x 1.5		M38 x 1.5			M38 x 1.5		M60 x 1.5	
	G H8	mm	25		33		39			39		61	
	Hf/HA	mm	68	78	81	93	92	111	106	101	115	112	127
	K	mm	18.5		20		25			25		48	
	L	mm	23		32		38			38		54	
	M	mm	M22 x 1.5		M22 x 1.5		M28 x 1.5			M28 x 1.5		M52 x 1.5	
	N H9	mm	24		24		34			34		60	
	Q	mm	5.5		5.5		5.5			5.5		9	
Chuck open	R1	mm	86.5		108		131			157.5		195	
max./min.	S	mm	21/4		26/4		28/4			34/4		37/4	
Jaw stroke	U	mm	3.6		4.6		5			6.3		7	
	W	mm	22		26		26			26		38	
	Yf/YA	mm	5	15	5	17	5	24	19	5	19	6	21
max./min.	Z	mm	17/0		22/0		24/0			30/0		33/0	
	a	mm	3		3		3			3		3	
min.	b	mm	8.5		12		14			16.5		31	
min.	c	mm	9		13		14			16		38	
AP-D	d	inch	1/16" x 90°		1/16" x 90°		1/16" x 90°			1/16" x 90°		3/32" x 90° ⁽¹⁾	
AP-M	d	mm	1.5 x 60°		1.5 x 60°		1.5 x 60°			1.5 x 60°		1.5 x 60°	
	e	mm	67		82		102			123		144	
	f	mm	3		3		3			3		6	
	g	mm	2.5		2.5		2.5			3.5		3.5	
	j	mm	34		46		48			58		63	
	k1	mm	10		11		12			12		14	
AP-D	l1	mm	16.5		23		30			30		38	
AP-M	l1	mm	20		25		30			30		38	
max./min.	l2	mm	43/24		53/33		70/41			84/43		98/54	
AP-D	m	mm	M10		M12		M12			M16		M20	
AP-M	m	mm	M10		M12		M12			M16		M20	
AP-D	n h8	mm	14		17		17			21		25.5	
AP-M	n h8	mm	12		14		16			21		22	
	p1	mm	16		16		21			21		37.5	
	p2	mm	-		-		-			60		80	
	p3	mm	38		49		55			62.5		83	
	p4	mm	-		80		70			80		110	
	p5	mm	65		80		102			102		140	
	p6	mm	70		-		102			120		155	
	p7	mm	-		-		-			135		170	
	p8	mm	-		-		-			-		170	
	q1	mm	-		-		-			30		36	
	q2	mm	36		45		60			60		80	
	r1	mm	M5/7		M5/8		M6/10			M6/10		M6/12	
	r2	mm	M6/14		M8/17		M8/17			M8/17		M10/19	
	r3	mm	M8/17		M8/17		M10/19			M10/19		M12/22	
	s	mm	16		16		16			16		20	
	t	mm	5		5		5			5		5	

(1) serration 1/16 x 90° on request