

APL-D

Long jaw stroke
INCH serration

APL-M

Long jaw stroke
METRIC serration

High precision power chucks Ø 215 - 400 mm

- proffline® chucks = fully sealed – low maintenance
- closed center
- 3 jaws long stroke



Application/customer's benefit

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

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

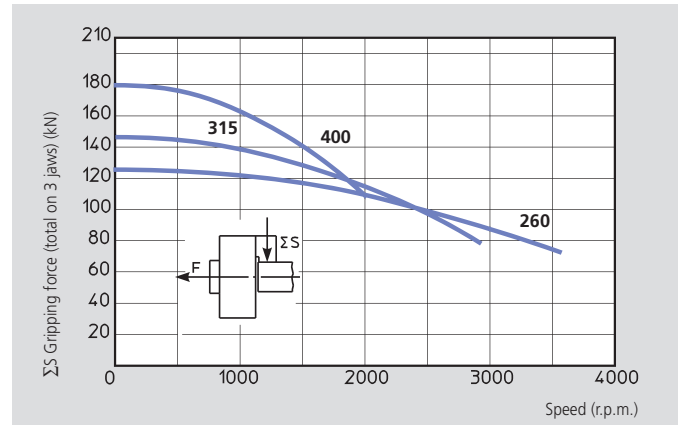
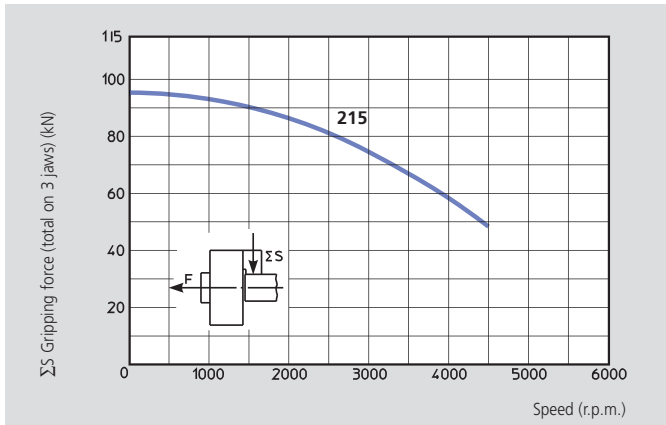
Standard equipment

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

Ordering example

3 jaw chuck APL-D 210/A6
or
3 jaw chuck APL-M 250/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:

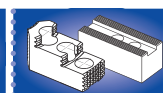
When using taller/heavier jaws and/or clamping on a bigger diameter reduce draw pull/rotating speed accordingly.

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 wedge 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
Mass (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



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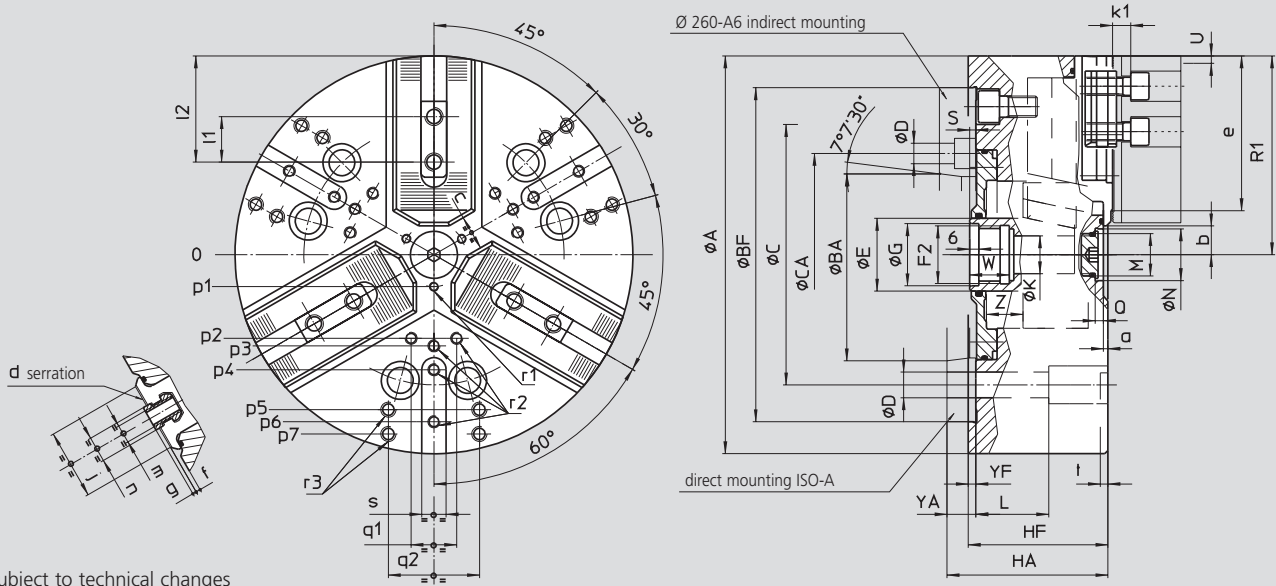
High precision power chucks \varnothing 215 - 400 mm
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Subject to technical changes

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		
	Z170	A6	Z220	A6	A8	Z220	A8	Z300	A11	
Mounting										
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	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		131		163.5		202		
max./min.	S mm	26/4		28/4		34/4		37/4		
Radial jaw stroke	U mm	8.5		5		13.1		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		
min.	a mm	3		3		3		3		
min.	b mm	17		14		16.5		38		
min.	c mm	6.2		14		16		28		
APL-D	d mm	1/16" x 90°		1/16" x 90°		1/16" x 90°		1/32" x 90°		
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	55/33		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	17		17		21		25.5		
APL-M	n h8	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		
	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		