

**NT-D**

INCH serration

**NT-M**

METRIC serration

**High precision power chucks Ø 170 - 400 mm**

- centrifugal force compensation
- closed center
- 3 jaws
- **proofline®** chucks = fully sealed – low maintenance

**Application/customer benefits**

- For mid to large batch production/high speed machining and for fragile parts
- Fully sealed, ideal for dry machining of castings and forgings or if high pressure coolant is used

**NT-D:** Master jaws with INCH serration (1/16" x 90°, 3/32" x 90°)**NT-M:** Master jaws with METRIC serration (1.5 mm x 60°)  
(suitable for japanese chuck top jaws)**Technical features**

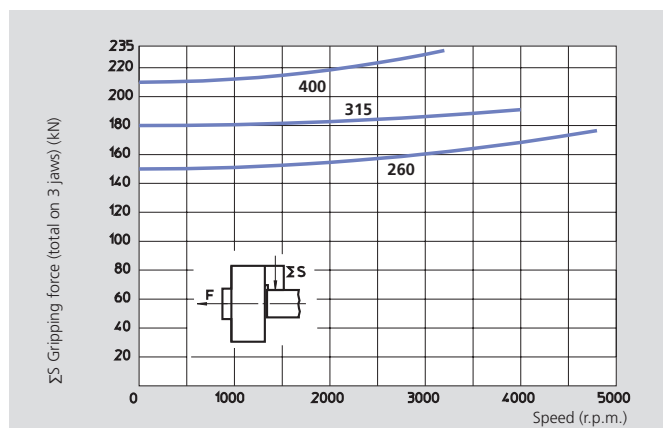
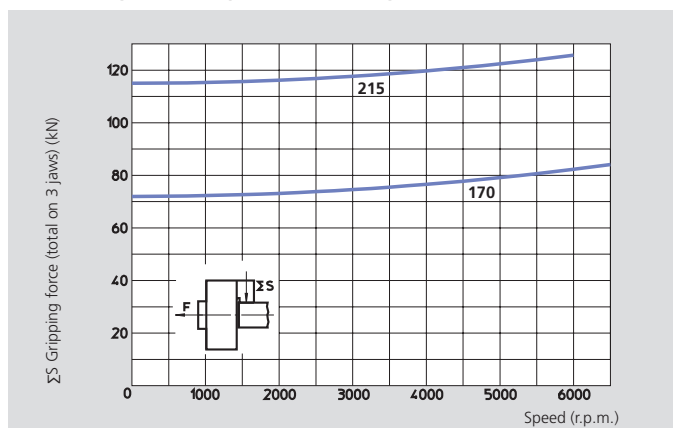
- Centrifugal force compensation
- Constant gripping force with permanent grease lubrication
- Center bore for coolant and/or air
- Chuck body and internal parts case hardened
- **proofline®** chucks = fully sealed – low maintenance

**Standard equipment**

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

**Ordering example**

- 3 jaw chuck NT-D 215/A6
- or
- 3 jaw chuck NT-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.

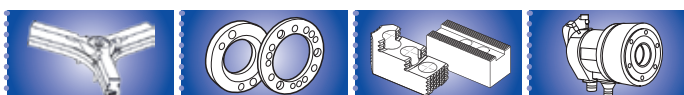
**△ Safety advice/danger of damage:**

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

**Technical data**

SMW-AUTOBLOK Type		NT-D 170 NT-M 170	NT-D 215 NT-M 215	NT-D 260 NT-M 260	NT-D 315 NT-M 315	NT-D 400 NT-M 400
<b>Number of jaws</b>		<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>
<b>Radial jaw stroke</b>	mm	3.6	4.6	5	6.3	7
<b>Axial piston stroke</b>	mm	17	22	24	30	33
<b>Max. draw pull*</b>	kN	30	42	55	65	75
<b>Max. gripping force*</b>	kN	72	112	150	180	210
<b>Max. speed</b>	r.p.m.	6500	6000	4800	4000	3200
<b>Weight (without top jaws)</b>	kg	13	25	40	68	112
<b>Moment of inertia</b>	kg·m <sup>2</sup>	0.048	0.146	0.34	0.84	2.15
<b>Recommended actuating cylinders</b>		<b>SIN-S 100</b>	<b>SIN-S 100/125</b>	<b>SIN-S 125/150</b>	<b>SIN-S 125/150</b>	<b>SIN-S 150/175</b>

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



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# High precision power chucks Ø 170 - 400 mm

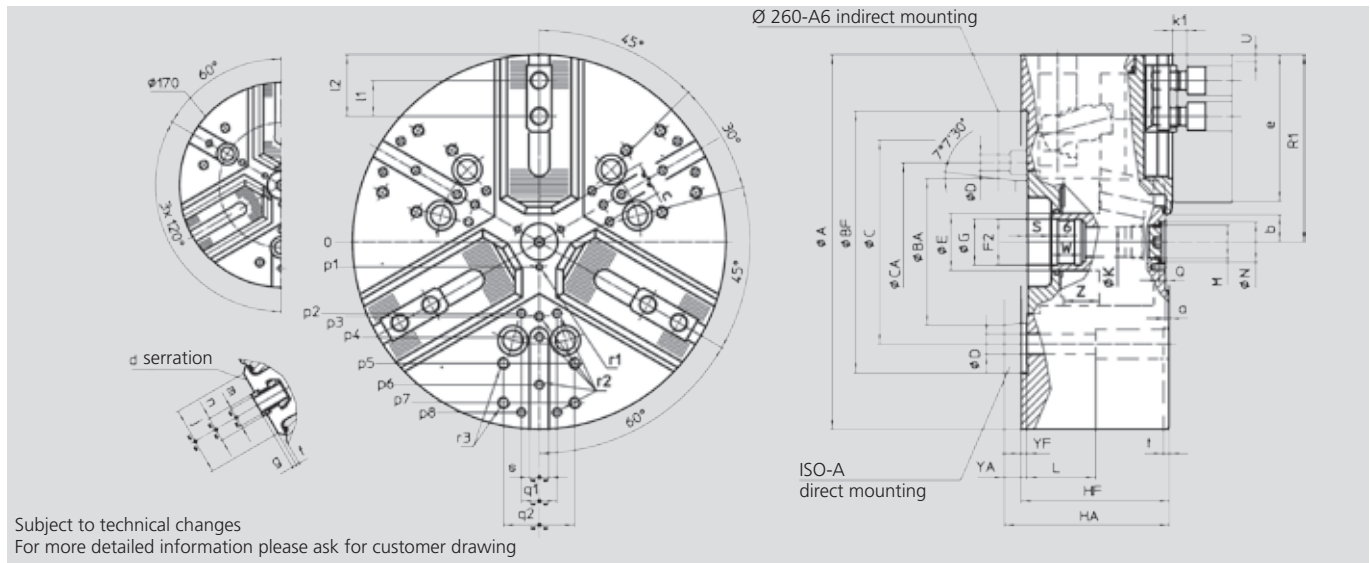
- centrifugal force compensation
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## NT-D

INCH serration

## NT-M

METRIC serration



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

SMW-AUTOBLOK Type			NT-D 170 NT-M 170		NT-D 215 NT-M 215		NT-D 260 NT-M 260			NT-D 315 NT-M 315		NT-D 400 NT-M 400	
Mounting			Z140	A5	Z170	A6	Z220	A6	A8	Z220	A8	Z300	A11
	<b>A</b>	mm	172		216		262			315		390	
	<b>Bf/BA</b> H6	mm	140	82.563	170	106.375	220	106.375	139.719	220	139.719	300	196.869
	<b>C</b>	mm	104.8		133.4		171.4	-	171.4	171.4		235	
	<b>CA</b>	mm	-	-	-	-	-	133.4	-	-	-	-	-
	<b>D</b>	mm	11.5		13.5		17	13.5	17	17		21	
	<b>E</b>	mm	32		42		48			48		75	
	<b>F2</b>	mm	M24 x 2		M32 x 1.5		M38 x 1.5			M38 x 1.5		M60 x 1.5	
	<b>G</b> H8	mm	25		33		39			39		61	
	<b>Hf/HA</b>	mm	92	102	104	116	118	137	132	125	139	149	164
	<b>K</b>	mm	18.5		20		25			25		48	
	<b>L</b>	mm	43		52		58			58		74	
	<b>M</b>	mm	M22 x 1.5		M22 x 1.5		M28 x 1.5			M28 x 1.5		M52 x 1.5	
	<b>N</b> H9	mm	24		24		34			34		60	
	<b>Q</b>	mm	5.5		5.5		5.5			5.5		9	
Chuck open	<b>R1</b>	mm	86.5		108		131			157.5		195	
max./min.	<b>S</b>	mm	20/3		19/-3		22/-2			20/-10		33/0	
Chuck fully closed	<b>T</b>	mm	175		220		-			-		-	
Radial jaw stroke	<b>U</b>	mm	3.6		4.6		5			6.3		7	
	<b>W</b>	mm	22		26		26			26		38	
	<b>Yf/YA</b>	mm	5	15	5	17	5	24	19	5	19	6	21
max./min.	<b>Z</b>	mm	17/0		22/0		24/0			30/0		33/0	
	<b>a</b>	mm	3		3		3			3		3	
min.	<b>b</b>	mm	8.5		12		14			16.5		31	
min.	<b>c</b>	mm	9		13		14			16		38	
serration	<b>NT-D</b>	d	1/16" x 90°		1/16" x 90°		1/16" x 90°			1/16" x 90°		3/32" x 90° (1)	
serration	<b>NT-M</b>	d	1.5 x 60°		1.5 x 60°		1.5 x 60°			1.5 x 60°		1.5 x 60°	
	<b>e</b>	mm	67		82		102			123		144	
	<b>f</b>	mm	3		3		3			3		6	
	<b>g</b>	mm	2.5		2.5		2.5			3.5		3.5	
	<b>j</b>	mm	34		46		48			58		63	
	<b>k1</b>	mm	10		11		12			12		14	
<b>NT-D</b>	<b>l1</b>	mm	16.5		23		30			30		38	
<b>NT-M</b>	<b>l1</b>	mm	20		25		30			30		38	
	<b>l2</b>	mm	43/24		53/33		70/41			84/43		98/54	
<b>NT-D</b>	<b>m</b>	mm	M10		M12		M12			M16		M20	
<b>NT-M</b>	<b>m</b>	mm	M10		M12		M12			M16		M20	
<b>NT-D</b>	<b>n</b>	mm	14		17		17			21		25.5	
<b>NT-M</b>	<b>n</b>	mm	12		14		16			21		22	
	<b>p1</b>	mm	16		16		21			21		37.5	
	<b>p2</b>	mm	-		-		-			60		80	
	<b>p3</b>	mm	38		49		55			62.5		83	
	<b>p4</b>	mm	-		80		70			80		110	
	<b>p5</b>	mm	65		80		102			102		140	
	<b>p6</b>	mm	70		-		102			120		155	
	<b>p7</b>	mm	-		-		-			135		170	
	<b>p8</b>	mm	-		-		-			-		170	
	<b>q1</b>	mm	-		-		-			30		36	
	<b>q2</b>	mm	36		45		60			60		80	
	<b>r1</b>	mm	M5/7		M5/8		M6/10			M6/10		M6/12	
	<b>r2</b>	mm	M6/14		M8/17		M8/17			M8/17		M10/19	
	<b>r3</b>	mm	M8/17		M8/17		M10/19			M10/19		M12/22	
	<b>s</b>	mm	16		16		16			16		20	
	<b>t</b>	mm	5		5		5			5		5	

(1) serration 1/16 x 90° on request