

# AP-RC

Quick jaw change  
TONGUE & GROOVE

# AP-RD

Quick jaw change  
SERRATION

## Quick jaw change 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 flexible production
- Quick jaw change = short set up time
- Fully sealed, ideal for dry machining of castings and forgings or if high pressure coolant is used
- Ideal for vertical, pick up and horizontal machines

**AP-RC:** Quick jaw change with TONGUE & GROOVE master jaws

**AP-RD:** Quick jaw change with SERRATED master jaws (2.5 mm x 60°) (radially adjustable)

### Technical features

- High accuracy patented quick jaw change
- 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**

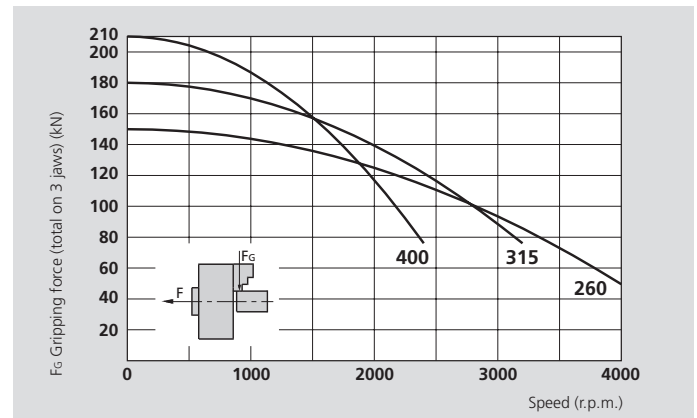
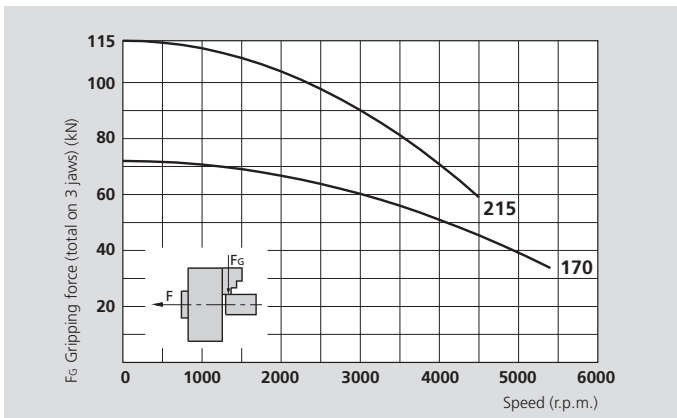
### Standard equipment

- 3 jaw chuck
- 1 set soft top jaws (no AP-RC)
- 1 quick jaw change T wrench
- Mounting bolts

### Ordering example

- 3 jaw chuck AP-RC 215 / A6
- or
- 3 jaw chuck AP-RD 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.

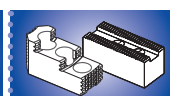
## Technical data

SMW-AUTOBLOK Type		AP-RC 170 AP-RD 170	AP-RC 215 AP-RD 215	AP-RC 260 AP-RD 260	AP-RC 315 AP-RD 315	AP-RC 400 AP-RD 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.	5400	4600	4000	3200	2400
<b>Weight (without top jaws)</b>	kg	10	19.5	32.5	56	90
<b>Moment of inertia</b>	kg·m <sup>2</sup>	0.037	0.113	0.28	0.69	1.7
<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%.



SMW-AUTOBLOK  
438



SMW-AUTOBLOK  
152



SMW-AUTOBLOK  
297

# Quick jaw change high precision power chucks

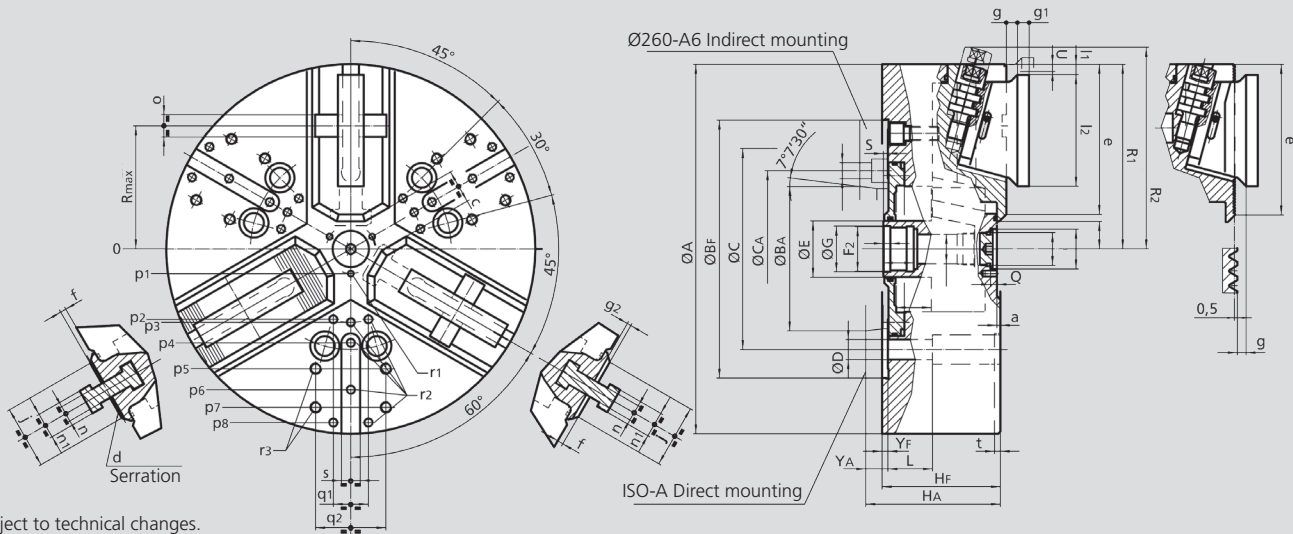
- Ø 170 - 400 mm
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## AP-RC

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## AP-RD

Quick jaw change  
SERRATION



Subject to technical changes.  
For more detailed information please ask our customer service.

3

SMW-AUTOBLOK Type			AP-RC 170 AP-RD 170		AP-RC 215 AP-RD 215		AP-RC 260 AP-RD 260			AP-RC 315 AP-RD 315		AP-RC 400 AP-RD 400	
Mounting			Z140	A5	Z170	A6	Z220	A6	A8	Z220	A8	Z300	A11
	<b>A</b>	mm	172		216		262			315		390	
	<b>BF/BAH6</b>	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 H8</b>	mm	25		33		39			39		61	
	<b>HF/HA</b>	mm	68	78	81	93	92	111	106	101	115	112	127
	<b>K</b>	mm	18.5		20		25			25		48	
	<b>L</b>	mm	23		32		38			38		54	
	<b>M</b>	mm	M10 x 1		M22 x 1.5		M28 x 1.5			M28 x 1.5		M52 x 1.5	
	<b>N H9</b>	mm	15		24		34			34		60	
	<b>Q</b>	mm	4.5		5.5		5.5			5.5		9	
Max.	<b>R</b>	mm	56		72		88			105		133.5	
Chuck open	<b>R1</b>	mm	86.5		108		131			157.5		195	
	<b>R2 *</b>	mm	99		122.5		145.5			172		217.5	
Max. / min.	<b>S</b>	mm	21 / 4		26 / 4		28 / 4			34 / 4		37 / 4	
Radial jaw stroke	<b>U</b>	mm	3.6		4.6		5			6.3		7	
	<b>W</b>	mm	22		26		26			26		38	
Max. / min.	<b>YF/YA</b>	mm	5	15	5	17	5	24	19	5	19	6	21
	<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 AP-RD	<b>d</b>	mm	2.5 x 60°		2.5 x 60°		2.5 x 60°			2.5 x 60°		2.5 x 60°	
	<b>e</b>	mm	68		85		106			128.5		150	
	<b>f</b>	mm	5		5		5			5		7	
	<b>g</b>	mm	7.5		7.5		8.5			9.5		11.5	
	<b>g1</b>	mm	8		8		9			10		12	
	<b>g2</b>	mm	3.5		3.5		3.5			3.5		5.5	
	<b>j</b>	mm	30		38		44			54		63	
	<b>l1</b>	mm	2.5		2.5		9			9		8.5	
	<b>l2</b>	mm	52		66		78			95		118	
	<b>n h8</b>	mm	10		10		12			14		18	
	<b>n1</b>	mm	16		16		19			22		28	
	<b>o H7</b>	mm	12.68		12.68		19.03			19.03		19.03	
	<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	

\* Quick jaw change position.

# AP-R

Quick jaw change

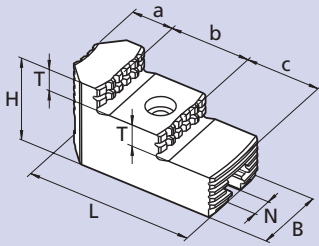
# NT-R

Quick jaw change

## Quick change soft and hard top jaws

- Only for AP-RD, AP-RC, NT-RD, NT-RC
- Soft and hard jaws for chucks with serration (2.5 mm x 60°)
- Soft jaws for chucks with tongue & groove
- Torque wrench for quick jaw change

### MHB-D



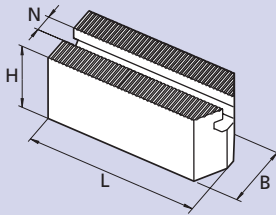
### Hard top jaws with 2.5 x 60° serration for AP-RD and NT-RD chucks

First operation jaws, if high concentricity is required jaws have to be ground on chuck.

Chuck Ø	Id. No.*	Serration mm	B mm	H mm	L mm	N mm	T mm	a mm	b mm	c mm	Weight kg / each
170	18081736	2.5 x 60°	30	45	65	10	10	23	24	18	0.36
215	18082136	2.5 x 60°	35	46	82	10	10.5	24	36	22	0.57
260	18082636	2.5 x 60°	45	56	100	12	14.5	27	39	34	1.04
315	18083136	2.5 x 60°	45	57	105	14	14	27	42	36	1.09
400	18084036	2.5 x 60°	55	73	140	18	18.5	42	49	49	2.27

\* the number refers to a set of 3 jaws

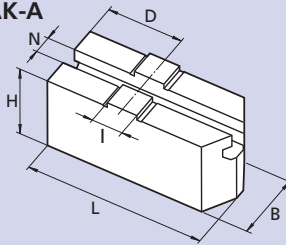
### WBSA-D



### Soft top jaws with 2.5 x 60° serration for AP-RD and NT-RD chucks

Chuck Ø	Id. No.	Serration mm	B mm	H mm	L mm	N mm	Weight kg / each
170	18071730	2.5 x 60°	30	40	70	10	0.48
215	18072130	2.5 x 60°	35	45	90	10	0.87
260	18072630	2.5 x 60°	45	60	100	12	1.70
315	18073130	2.5 x 60°	45	60	120	14	2.05
400	18074030	2.5 x 60°	55	75	140	18	3.87

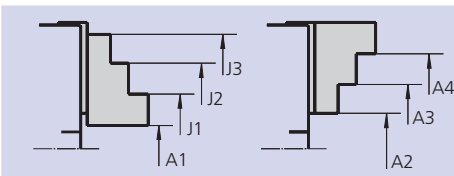
### WAK-A



### Soft top jaws with tongue & groove "C" for AP-RC and NT-RC chucks

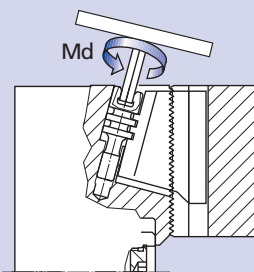
Chuck Ø	Id. No.	B mm	H mm	L mm	N mm	D mm	I mm	Weight kg / each
170	18041730	30	37	80	10	30	12.70	0.52
215	18042130	35	44	100	10	35	12.70	0.97
260	18042630	45	57	120	12	42	19.03	2.02
315	18043130	45	57	140	14	50	19.03	2.30
400	18044030	55	70	165	18	60	19.03	4.20

## Gripping ranges using standard hard top jaws on AP-RD and NT-RD chucks



Chuck Ø	Id. No.	A1 mm	A2 mm	A3 mm	A4 mm	J1 mm	J2 mm	J3 mm
170	18081736	15-75	-	55-115	105-155	65-120	110-170	145-205
215	18082136	20-95	-	65-145	140-200	75-150	140-215	185-260
260	18082636	20-105	-	95-175	170-245	80-160	150-235	220-305
315	18083136	35-130	-	105-205	190-290	110-195	190-280	265-350
400	18084036	45-170	-	145-275	245-370	135-255	230-350	325-450

## Spare quick jaw change T-wrenches



- Normal T-wrenches
- Torque wrenches for correct tightening of the quick jaw change bolt (option)

Chuck Ø	Hexagon mm	Correct torque Md Nm	"T" wrench Id. No.
170	6	23	51500812
215	8	45	51500816
260	10	70	51500820
315	12	110	51500822
400	14	200	51500824