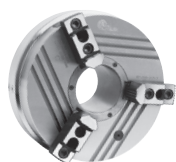


Pneumatic/hydraulic front-end chucks

Control units



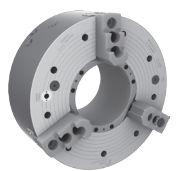
SP® + SP-ES + SP-L

INCH
serration

Front-end pneumatic power chucks
EXTRA LARGE THROUGH HOLE Ø 26 - 115 mm

- 3 jaws, chuck size 125-350
- SP-ES: chuck with rapid and clamping stroke
- SP-L: chuck with long jaw stroke

Page 280



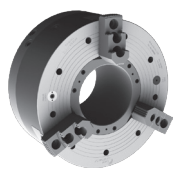
BIG BORE® BB-N

INCH
serration

Front-end pneumatic power chucks
EXTRA LARGE THROUGH HOLE Ø 140 - 410 mm

- standard jaw stroke
- 3 jaws, chuck size 400 - 800

Page 284



BIG BORE® BB-N ES

INCH
serration

Front-end pneumatic power chucks
EXTRA LARGE THROUGH HOLE Ø 140 - 560 mm

- with rapid and clamping stroke
- 3 jaws, chuck size 400 - 1000

Page 288



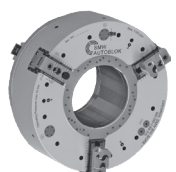
BIG BORE® BB-SC

INCH
serration

Front-end spring clamp power chucks
Air opening
EXTRA LARGE THROUGH HOLE Ø 275 - 565 mm

- with rapid and clamping stroke
- 3 jaws, chuck size 600 - 1020
- **proofline®** chucks = fully sealed – low maintenance

Page 292



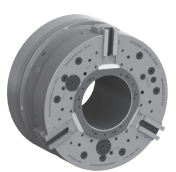
BIG BORE® BB-N-EXL2G

INCH
serration

Front-end pneumatic power chucks
EXTRA LARGE THROUGH HOLE Ø 191 - 390 mm

- Extra large rapid and clamping stroke
- 3 jaws, chuck size 510 - 900
- sealed master jaws

Page 296



BIG BORE® BB-AZ2G

INCH
serration

Front-end pneumatic power chucks
EXTRA LARGE THROUGH HOLE Ø 275 - 560 mm

- Extra large rapid and clamping stroke
- self centering or compensating clamping
- 3 jaws, chuck size 685 - 1000

Page 300



BIG BORE® BB-FZA2G

INCH
serration

Front-end pneumatic sequence chucks
EXTRA LARGE THROUGH HOLE Ø 275 - 390 mm

- Extra large jaw stroke
- 3 integrated centering jaws and 3 compensating jaws
- chuck size 740 - 920

Page 302



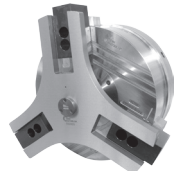
BIG BORE® BB-EXL-SC2G

INCH
serration

Front-end spring clamp power chucks
EXTRA LARGE THROUGH HOLE Ø 191 - 390 mm

- Extra large rapid and clamping stroke
- Clamping with spring
- 3 jaws, chuck size 510 - 900
- **proofline®** chucks = fully sealed – low maintenance

Page 304



CC

INCH
serration

Stationary centering and dampening chuck
Ø 240 - 470 mm

- integrated dampener
- 3 jaws

Page 306



AC-BB

1/2" Design
3/4" Design

Electronic safety control unit
for pneumatic chucks

- basic version

Page 308



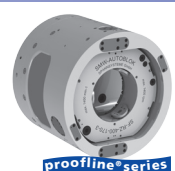
AC-XN

1/2" Design
3/4" Design

Electronic safety control unit
for pneumatic chucks

- all safety features included
- for all common voltages

Page 310

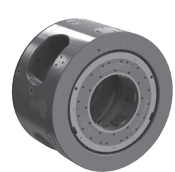


SF-RZ

2 Position hydraulic ring indexing chuck
Ø 400 mm

- 3 self centering jaws
- large evacuation windows for easy chip flow
- fully automatic and controlled indexing
- **proofline®** chucks = fully sealed – low maintenance

Page 312



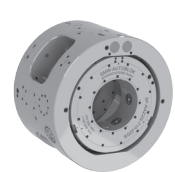
SF-RAZ

Tongue & groove

2 Position hydraulic ring indexing chuck
Ø 750 - 1050 mm

- 6 jaws
(3 self centering and 3 compensating jaws)
- large evacuation windows for easy chip flow
- fully automatic and controlled indexing

Page 314



SF-RAZ2G

Tongue & groove

2 Position hydraulic ring indexing chuck
Ø 710 - 1100 mm

- 6 jaws
(3 self centering and 3 compensating jaws)
- very compact design
- fully automatic and controlled indexing
- hydraulic actuation

Page 316



HYND-S

INCH
serration

Power chucks with built-in hydraulic cylinder
Ø 180 - 400 mm

- hydraulic oil supplied through the machine
- 3 or 4 jaws

Page 318



HYDL-S

Long stroke
INCH serration

Power chucks with built-in hydraulic cylinder
Ø 500 - 800 mm

- hydraulic oil supplied through the machine spindle wall
- 3 jaws

Page 319

SP® + SP-ES + SP-L

INCH
serration

Front-end pneumatic power chucks Ø 26 - 115 mm

- EXTRA large through hole
- 3 jaws, chuck size 125 - 350
- SP-ES: chuck with rapid and clamping stroke
- SP-L: chuck with long jaw stroke



Application/customer benefits

- Universally used in turning machines, rotary tables, handling equipment, welding etc.
- For machines without hydraulic cylinder
- Easy exchange for manual chucks

Technical features

- Power chuck with built-in pneumatic cylinder. Force transmission via wedge hook
- Mounting of the distributor ring on the headstock or with the centering ring on the chuck with anti-rotation bracket
- Open and close only at stopped spindle. Air transmission via distributor ring and SMW-profile seals (monitoring by SMW control cabinet)
- Easy installation with no additional adapters required

Standard equipment

3 jaw chuck
1 set T-nuts with bolts
1 set soft top jaws
2 elbow unions G1/4"
(G1/8" on SP 125)
Spacer ring and centering ring, without
distributor ring bracket/anti-rotation bracket

Ordering example

3 jaw chuck SP 160/Z155

Accessories

Control units
(see general catalog pages 308-311)

The principle invented by SMW: air supply via distributor ring and SMW-profile seal rings

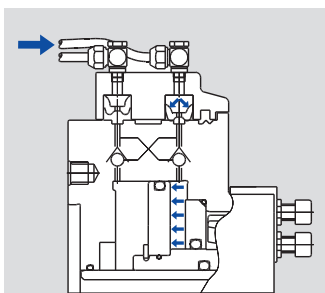


Fig. 1

Open/close movement (only possible at stopped spindle). The profile seals deform radially under the pneumatic pressure, sealing on the chuck body and filling the cylinder chamber. When the clamping pressure is reached, the air feed is stopped, closing the twin non-return valve.

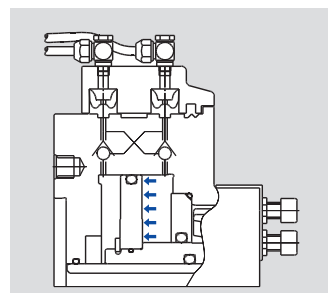


Fig. 2

The SMW-profile seals lift to the expanded position, not touching the chuck body anymore. The clamping pressure is maintained by the twin non-return valve. The chuck can start to rotate.

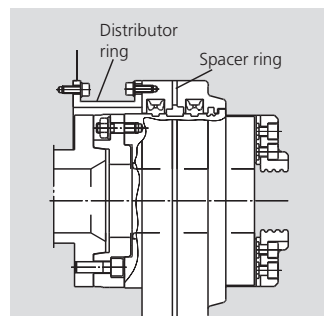


Fig. 3

Distributor ring bracket fixed (stationary) on the headstock to support the distributor ring mounted with the spacer ring. No contact between the static distributor ring and the rotating chuck.

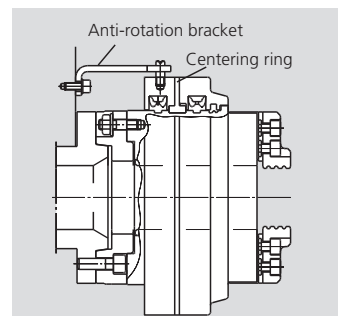


Fig. 4

Distributor ring mounted on the outer diameter of the chuck with the centering ring (teflon part subject to wear). Need of an anti-rotation bracket fixed to the machine headstock.

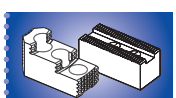
Technical data

SMW-AUTOBLOK Type		SP 125-26	SP 160-38	SP 240-78	SP 280-92	SP 350-115	SP 350-115ES	SP-L 350-90
Id. No.		012044	012045	053170	052778	012588	052850	053193
Stroke per jaw	mm (inch)	3 (0.12")	4.2 (0.17")	4.2 (0.17")	5 (0.20")	5 (0.20")	10+5* (0.39"+0.20")	24 (0.94")
Operating pressure min./max.	bar (psi)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)
Piston area max.	cm²	129	206	290	535	486	486	486
Gripping force at 6 bar (87 psi)	kN (lbf)	20 (4496)	35 (7868)	60 (13489)	95 (21357)	88 (19783)	88 (19783)	31 (6969)
Max. speed (distribution ring with centering ring)	r.p.m.	4000	3500	2800	2200	2200	2200	1000
Max. speed (distribution ring fixed stationary)	r.p.m.	4200	4200	3500	3200	3000	3000	1000
Air consumption/jaw stroke at 6 bar	liter	1.4	3.4	5.2	10.0	9.4	13.5	13.5
Weight (without jaws)	kg (lbs)	11 (24)	23 (51)	40 (88)	62 ()	78 (137)	91 (201)	97 (214)
Moment of inertia	kg·m²	0.028	0.125	0.412	0.823	1.125	1.62	1.62

* 10mm (0.39") extended stroke (must not be used for clamping) + 5mm (0.20") clamping stroke



SMW-AUTOBLOK
283



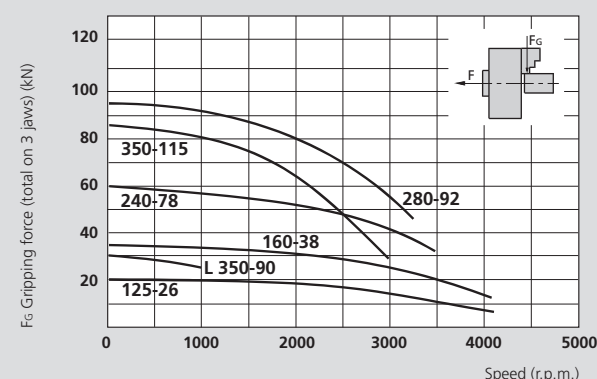
SMW-AUTOBLOK
282

Front-end pneumatic power chucks Ø 26 - 115 mm

- EXTRA large through hole
- 3 jaws, chuck size 125 - 350
- SP-ES: chuck with rapid and clamping stroke
- SP-L: chuck with long jaw stroke

SP®+ SP-ES + SP-L

INCH
serration



Actual gripping force diagram

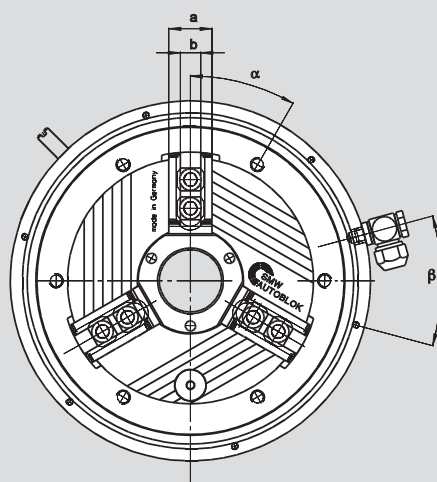
The data in the diagram refer to 3-jaw-chucks, newly maintained according to their service manuals, using SMW-AUTOBLOK K05 grease, operated at 6 bar (87 psi).

The speeds refer to a static bracket. The static and dynamic gripping forces have been measured using MHB hard top jaws placed in a position, not exceeding the outer diameter of the chuck.

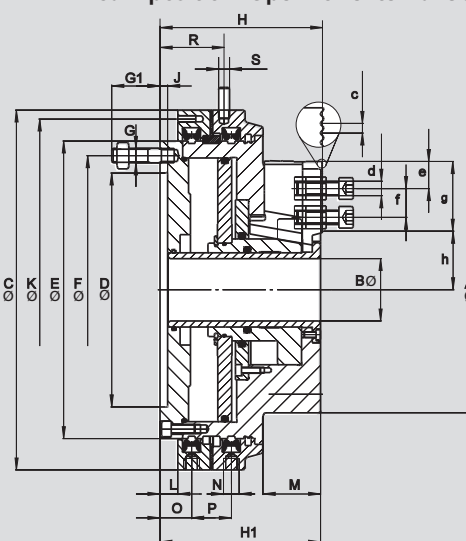
△ Safety advice/danger of damage:

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

* All hoses must be min. Ø 9 mm I.D.



Jaw position: Open for external clamping



Subject to technical changes.

For more detailed information please ask for customer drawing.

SMW-AUTOBLOK Type			SP 125-26	SP 160-38	SP 240-78	SP 280-92	SP 350-115	SP 350-115 ES	SP-L 350-90
Mounting			Z120	Z155	Z195	Z235	Z235	Z235	Z235
	A	mm	136	171	240	284	350	360	360
	B	mm	26	38	78	92	115	115	90
	C	mm	204	255	300	372	372	372/380	372/380
	D H6	mm	120	155	195	235	235	235	235
	E	mm	160	205	248	315	315	315	315
Fixing bolts circle (6 x 60°)	F	mm	137	180	223.8	290.5	290.5	290.5	290.5
Stud screw with nut	G	mm	M8	M12	M12	M12	M12	M12	M12
	G1	mm	30	40	40	39	39	39	39
	H	mm	103	131	135.5	157.5	157.5	191.5	191.5
	H1	mm	101.5	129.5	134	156	156	190	190
	J	mm	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Fixing bolts circle 6 x 60°/M6	K	mm	190	242	285	358	358	358	358
	L	mm	10	14.5	15	21	21	21	21
	M	mm	35	46	48	58	62	92	92
Pneumatic connection	N	inch	G 1/8"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"	G 1/4"
	O	mm	19	26	26.5	33	33	33	33
	P	mm	29	33	33	33	33	33	33
	R	mm	43	52	52	60	60	60	60
Anti-rotation pin	S	mm	8	12	12	12	12	12	12
	a	mm	24	30	36	44	44	44	44
	b	mm	12	14	17	21	21	21	21
Serration	c	inch	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°
Bolt ISO 4762 12.9	d	mm	M8 x 30	M10 x 35	M12 x 35	M16 x 35	M16 x 35	M16 x 35	M16 x 35
min.	e	mm	6	8	9.5	12	12	12	12
T-nuts distance min./max.	f	mm	17/25	21/31	22/41.5	25/51	25/72	25/72	25/72
Serration length	g	mm	40	50	59	75	93	92	95
min./max.	h	mm	25/28	34.9/39	57.7/61.9	70/65	79/84	85/100	85/109
	α	deg.	0°	0°	30°	0°	0°	0°	0°
	β	deg.	30°	30°	30°	45°	45°	45°	45°

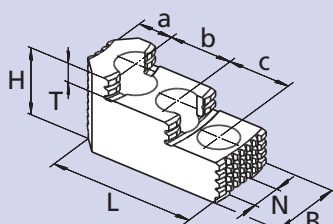
SP®+ SP-ES + SP-L

INCH
serration

■ Top jaws
■ T-nuts

MHB-D

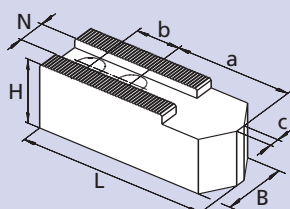
Hard reversible top jaws



Chuck	SP 125-26	SP 160-38	SP 240-78	SP 280-92	SP 350-115 (+ES+L)
Jaw type	MHB-D 130	MHB-D 160	MHB-D 200	MHB-D 251	MHB-D 315
Jaw Id. No. (set)	12081306	12081636	12082036	12083036	12083186
B	30	34	40	45	50
H	34	39	45	56	56
L	58	65	82	105	122
T	8.5	10	10.5	13.5	13.5
N	12	14	17	21	21
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°
a	13	18	19	26	43
b	16	16	23	30	30
c	16	16	23	30	30
kg/set	0.6	0.9	1.7	2.85	4.05

AWB-D

Soft top jaws

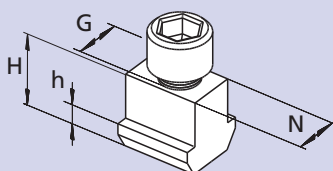


Chuck	SP 125-26	SP 160-38	SP 240-78	SP 280-92	SP 350-115 (+ES+L)
Jaw type	WBSA-D 125	AWB-D 165	AWB-D 200	AWB-D 250	AWB-D 315
Jaw Id. No. (set)	12071300*	035954	081616	081618	081619
B	30	40	40	50	50
H	30	40	40	50	50
L	60	80	90	120	140
N	12	14	17	21	21
Serration	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°	1/16" x 90°
a	29	43	53	70	90
b	16	22	22	28	28
kg/set	0.9	2.0	2.7	5.1	6.3

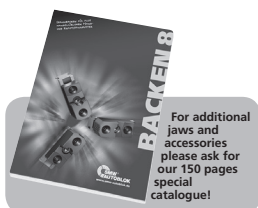
* Jaws are per piece. 3 pcs. must be ordered for 1 set.

NST

T-nuts



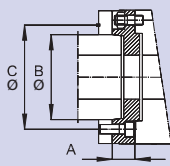
Chuck	SP 125-26	SP 160-38	SP 240-78	SP 280-92	SP 350-115 (+ES+L)
T-nut type	NST 12	NST 14	NST 17-4	NST 21-5	NST 21-5
T-nut Id. No. /pc.	089810	013863	013864	033429	033429
N	12	14	17	21	21
H	21.5	26.5	26.5	30	30
h	7.5	9.5	9.5	11	11
G	M8	M10	M12	M16	M16
Bolt ISO 4762 - 12.9	M8 x 30	M10 x 35	M12 x 35	M16 x 35	M16 x 35
Tighten torque Md max. (Nm)	30	50	70	150	150



Spindle-Adapters for SP chucks

ISO-A DIN 55026

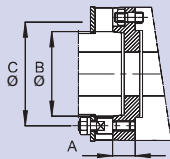
spindle adapters



Chuck	SP 125-26	SP 160-38			SP 240-78			SP 280-92			SP 350-115 (+ES+L)		
Nose dim.	A5	A5	A6		A5	A6	A8	A6	A8	A11	A6	A8	A11
Id. No.	017083	017085	017086		017088	080174	017090	017092	017093	017094	017092	017093	017094
A mm	26.0	25.5	25.5		25.5	32.2	34.0	32.2	38.2	36.0	32.2	38.2	36.0
B mm	82.57	82.57	106.39		82.57	106.39	139.73	106.39	139.73	196.88	106.39	139.73	196.88
C mm	104.8	104.8	133.4		104.8	133.4	171.4	133.4	171.4	235.0	133.4	171.4	235.0

DIN 55027

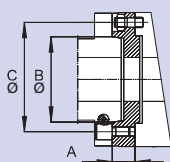
bayonet spindle adapters type C



Chuck	SP 125-26	SP 160-38			SP 240-78			SP 280-92			SP 350-115 (+ES+L)		
Nose dim.	C5	C5	C6		C5	C6	C8	C6	C8	C11	C6	C8	C11
Id. No.	017056	017058	017059		017061	017062	017063	017065	017066	017067	017065	017066	017067
A mm	19.0	25.5	25		25.5	29.0	32.2	29.0	32.2	36.5	29.0	32.2	36.5
B mm	82.57	82.57	106.39		82.57	106.39	139.3	106.39	139.73	196.88	106.39	139.73	196.88
C mm	104.8	104.8	133.4		104.8	133.4	171.4	133.4	171.4	235.0	133.4	171.4	235.0

DIN 55029

camlock spindle adapters type S



Chuck	SP 125-26	SP 160-38			SP 240-78			SP 280-92			SP 350-115 (+ES+L)		
Nose dim.	S5	S5	S6		S5	S6	S8	S6	S8	S11	S6	S8	S11
Id. No.	017117	017119	017120		017122	017123	017124	017126	017127	017128	017126	017127	017128
A mm	22.5	26.0	29.0		26.0	29.0	36.0	32.0	36.0	42.0	32.0	36.0	42.0
B mm	82.57	82.57	106.39		82.57	106.39	139.3	106.39	139.73	196.88	106.39	139.73	196.88
C mm	104.8	104.8	133.4		104.8	133.4	171.4	133.4	171.4	235.0	133.4	171.4	235.0

Important for maintenance and safe operation, to be ordered with the chuck

Grease K05®

Special grease for manual and power chucks



Cartridge 14 Oz. (DIN 1284)
Grease content 500 g
Id. No. 016440

Can 1000 g
Id. No. 011881



- High adhesion
- High resistance against coolant
- High load bearing capacity
- Low friction coefficient
- High gripping force
- Avoids tribocorrosion

Grease gun

Grease gun (DIN 1283) for cartridges 14 Oz. (DIN 1284).

- Also refillable from grease can 1000 g.



Lubrication set Id. No. 083726

Supply range

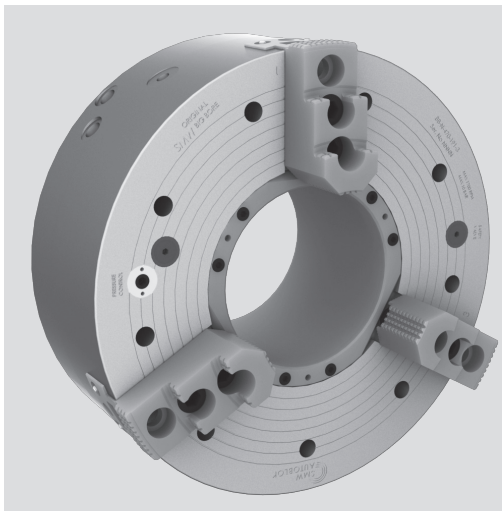
- Grease gun
- 1 Adapter flexible for high pressure grease nipple
- 1 Adapter for cone grease nipple

BIG BORE® BB-N

INCH
serration

Front-end pneumatic power chucks EXTRA LARGE THROUGH HOLE Ø 140 - 410 mm

- chuck size 400 - 800
- standard jaw stroke
- 3 jaws



Application/customer benefits

- End machining of long pipe
- Full spindle bore can be used

Technical features

- Air chuck for external/internal clamping with built-in pneumatic cylinder
- Air feed via distributor ring and SMW-profile seals, at stopped spindle
- Built in non-return valves maintain the air pressure during machining
- Clamping pressure level constantly checked by a safety control system (only for external clamping)
- Jaw stroke control for OD and ID Gripping (not BB-N 400-140)

Standard equipment

- 3 jaw chuck
 - 2 elbow unions G 1/2"
 - 12 mounting bolts (9 for the BB-N 400)
 - 1 lifting eye bolt
 - 1 set T-nuts with bolts
 - 1 set soft top jaws
- without distributor ring bracket

Ordering example

BIG BORE BB-N 470-191/Z310

Accessories

Control unit AC-BB/AC-XN
(see general catalog pages 308-311)

The principle invented by SMW: air supply via distributor ring and SMW-profile seal rings

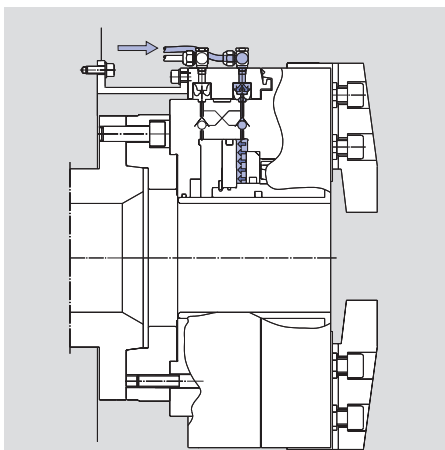


Fig. 1

Open/close movement (only possible at stopped spindle). The profile seals deform radially under the pneumatic pressure, sealing on the chuck body and filling the cylinder chamber. When the clamping pressure is reached, the air feed is stopped, closing the twin non-return valve.

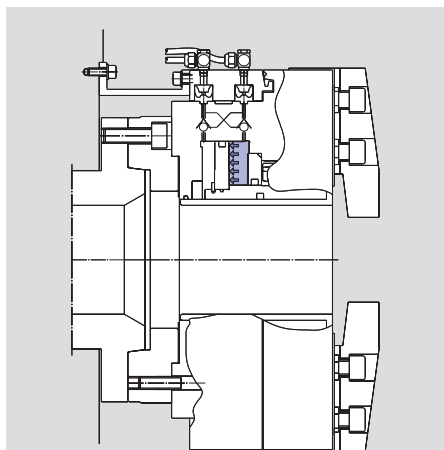


Fig. 2

The SMW-profile seals lift to the expanded position, not touching the chuck body anymore. The clamping pressure is maintained by the twin non-return valve. The chuck can start to rotate.

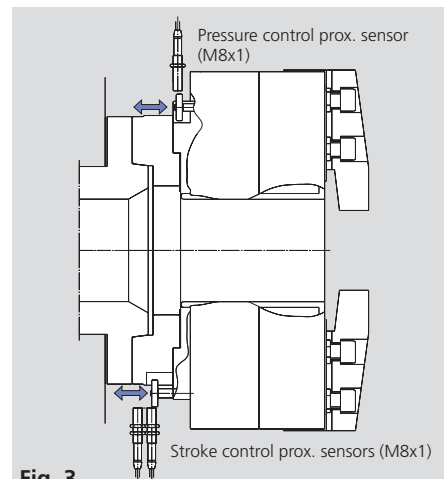
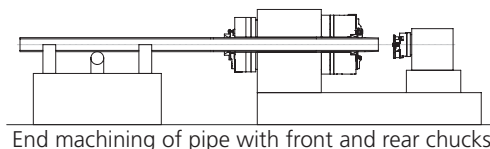


Fig. 3

Pressure control: If the pressure is less than a pre-set safety level, the switch ring moves into the proximity-switch field, sending an alarm signal.
Jaw stroke control: If the part is clamped in a not correct jaw stroke position, the switch ring moves into the proximity-switch field sending an alarm signal.*

* BB-N-400-140 has no stroke control



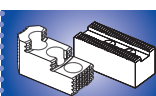
End machining of pipe with front and rear chucks

Technical data

SMW-AUTOBLOK BB-N Type		400-140	470-191	500-205	500-230	600-275	630-310	800-410
Id. No.		052300	053535	053830	053832	053834	053836	053838
Through-hole	mm (inch)	140 (5.51")	191 (7.52")	205 (8.07")	230 (9.06")	275 (10.83")	310 (12.20")	410 (16.14")
Stroke per jaw	mm (inch)	7 (0.28")	7 (0.28")	8.5 (0.33")	8.5 (0.33")	8.5 (0.33")	10 (0.39")	12 (0.47")
Operating pressure min./max.	bar (psi)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)
Piston area	cm²	710	565	1024	940	990	1270	2064
Gripping force at 6 bar	kN (lbf)	160 (35969)	115 (25853)	210 (47210)	190 (42714)	200 (44962)	220 (49458)	330 (74186)
Max. speed	r.p.m.	1700	1700	1300	1300	1300	1000	750
Air consumption/jaw stroke at 6 bar	liter	21	16	36	32	34	52	108
Weight (without top jaws)	kg (lbs)	150 (331)	150 (331)	230 (507)	200 (441)	270 (595)	420 (926)	650 (1433)
Moment of inertia	kg·m²	3.22	5.66	8.53	8	15	28	71.25



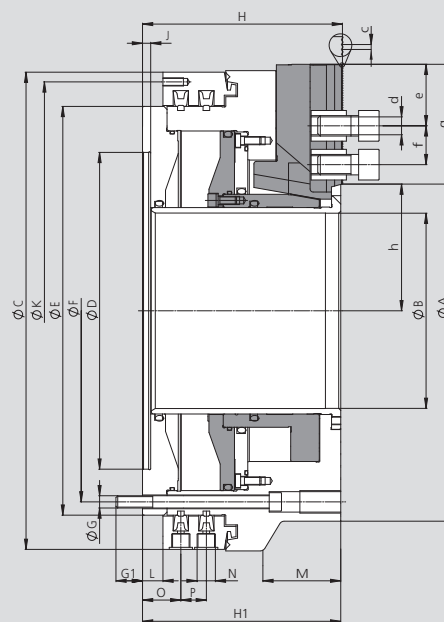
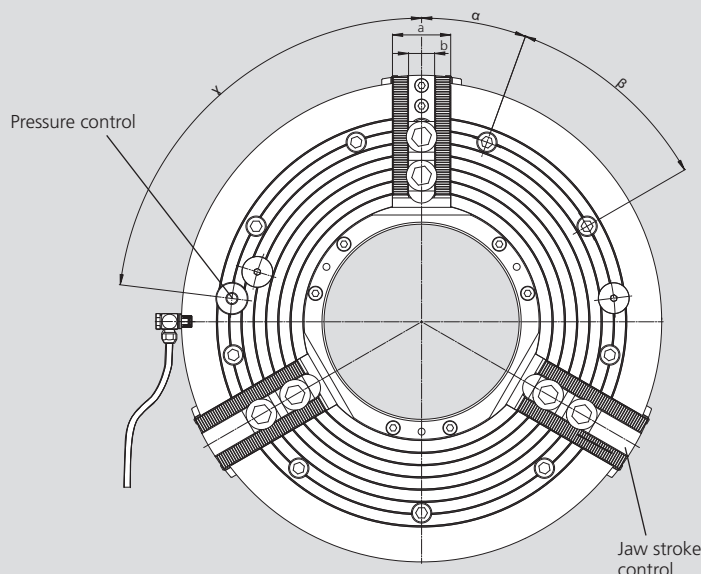
SMW-AUTOBLOK
287



SMW-AUTOBLOK
286

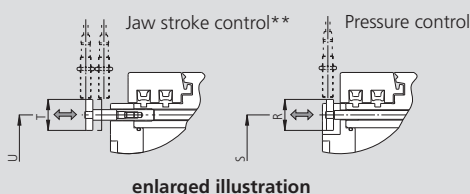
Main dimensions and technical data

Jaw position: Open for external clamping



- * All hoses/piping must be at least 1/2" ID., and min. 3/4" ID from size 630 on!
- ** BBN-400-140 has no stroke control

To determine the exact position of the jaw stroke control and the pressure control please ask for a customer drawing



Subject to technical changes.

For more detailed information please ask for customer drawing.

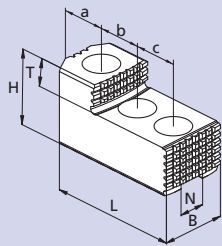
SMW-AUTOBLOK BB-N Type			400-140	470-191	500-205	500-230	600-275	630-310	800-410
Id. No.			052300	053535	053830	053832	053834	053836	053838
Mounting			Z310	Z310	Z415	Z415	Z450	Z510	Z700
	A	mm	422	470	540	570	605	662	800
	B	mm	140	191	205	230	275	310	410
	C	mm	467	467	570	570	605	685	850
	D H6	mm	310	310	415	415	450	510	700
	E	mm	400	400	500	500	535	610	775
Fixing bolts circle	F	mm	374	374	474	474	508	580	745
	G	mm	M12	M12	M12	M12	M12	M16	M16
	G1	mm	26	26	27	27	27	30	30
	H	mm	196	196	225	225	225	263	305
	H1	mm	194	194	223	223	223	261	303
	J	mm	8	8	8	8	8	8	8
Thread circle 6x M8	K	mm	448	448	550	550	585	666	830
	L	mm	20	20	20	20	20	20	25
	M	mm	70	-	98	98	-	115	154
Pneumatic connection	N	inch	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"
	O	mm	37	37	37	37	37	39.5	44.5
	P	mm	26	26	26	26	26	33	33
	R	mm	35	35	35	35	35	42	35
	S	mm	374	374	474	474	508	575	745
	T	mm	35	35	35	35	35	35	35
	U	mm	374	374	474	474	508	580	745
	a	mm	57	57	57	57	57	75	75
	b	mm	25.5	25.5	25.5	25.5	25.5	30	30
Serration	c	inch	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
Bolt ISO 4762 12.9 min.	d	mm	M20	M20	M20	M20	M20	M24	M24
T-nuts distance min./max.	e	mm	13	13	14	14	14	16	16
Serration length min./max.	f	mm	38/85	38/85	38/102	38/102	38/94	47/103	47/130
	g	mm	117.5	117	138	138	130	142	171.5
	h	mm	94.5/101.5	124/131	133.5/142	143.5/152	165/173.5	190.5/200.5	243/255
	α	deg.	20	20	15	15	15	15	15
	β	deg.	9 x 40	9 x 40	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30
(Pressure control)	γ	deg.	83	83	60	60	60	60	60

BIG BORE® BB-N

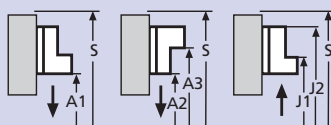
INCH
serration

■ Top jaws
■ T-nuts

GUB Hard reversible top jaws

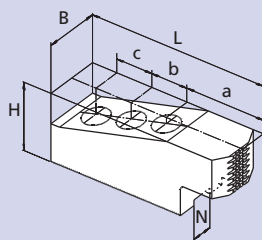


Gripping ranges

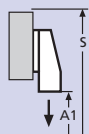


Chuck BB-N	400-140	470-191	500-205	500-230 600-275	630-310	800-410
Jaw type	GUB 500	GUB 500	GUB 500	GUB 500	GUB 630	GUB 800
Id. No./set	12084546	12084546	12084546	12084546	12086446	12088046
B	60	60	60	60	75	75
H	75	75	75	75	85	85
L	140	140	140	140	160	220
T	2x19	2x19	2x19	2x19	30	30
N	25.5	25.5	25.5	25.5	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	46	46	46	46	30	51
b	38	38	38	38	50	62
c	38	38	38	38	50	62
kg/set	6.6	6.6	6.6	6.6	13.5	19.5
A1	65-238	100-273	150-358	175-378	275-485	320-590
A2	110-284	145-320	200-405	225-425	275-485	330-600
A3	294-470	330-505	385-590	410-610	475-685	590-865
J1	175-350	210-385	265-470	285-490	395-610	500-770
J2	355-530	390-565	445-650	465-670	595-810	760-1030
S	585	620	705	725	820	1050

GAB Hard top jaws

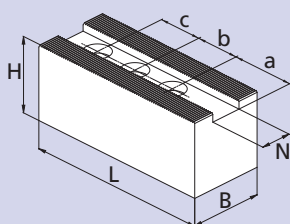


Gripping ranges

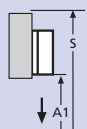


Chuck BB-N	400-140	470-191	500-205	500-230 600-275	630-310	800-410
Jaw type	GAB 500	GAB 500	GAB 500	GAB 500	GAB 630	GAB 800
Id. No./set	12085146	12085146	12085146	12085146	12086546	12089046
B	55	55	55	55	75	75
H	73	73	73	73	82	82
L	195	195	195	195	245	320
N	25.5	25.5	25.5	25.5	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	96	96	96	96	113	165
b	38	38	38	38	50	60
c	38	38	38	38	50	60
kg/set	16.5	16.5	16.5	16.5	31.5	40.5
A1	25-140	60-175	50-260	70-280	105-320	95-272
S	585	620	705	725	820	1010

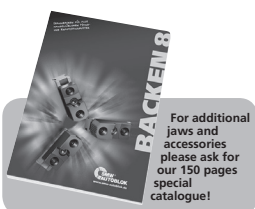
WBSA-D / WBC-D Soft top jaws



Gripping ranges



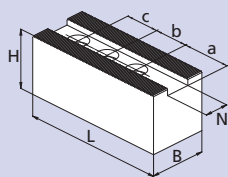
Chuck BB-N	400-140	470-191	500-205	500-230 600-275	630-310	800-410
Jaw type	WBSA-D 500	WBSA-D 500	WBSA-D 500	WBSA-D 500	WBC-D 630	WBC-D 800
Id. No./pc.	12075050	12075050	12075050	12075050	12076440	12078040
B	60	60	60	60	80	80
H	60	60	60	60	80	80
L	170	170	170	170	240	320
N	25.5	25.5	25.5	25.5	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	69	69	69	69	110	165
b	38	38	38	38	50	60
c	38	38	38	38	50	60
kg/piece	3.6	3.6	3.6	3.6	11	15
A1	25-195	60-230	105-315	125-325	110-325	95-272
S	545	580	660	680	815	1010



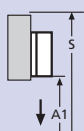
- Top jaws
- T-nuts
- Adapters

INCH
serration

WBCL Soft top jaws long version

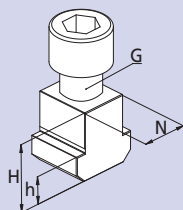


Gripping ranges



Chuck BB-N	400-140	470-191	500-205	500-230 600-275	630-310	800-410
Jaw type	WBC-D 502	WBC-D 502	WBC-D 502	WBC-D 502	WBC-D 800	WBCL-D 800
Id. No./pc.	12075140	12075140	12075140	12075140	12078040	12079040
B	60	60	60	60	80	80
H	60	60	60	60	80	80
L	205	205	205	205	320	390
N	25.5	25.5	25.5	25.5	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	104	104	104	104	165	230
b	38	38	38	38	60	60
c	38	38	38	38	60	60
kg / piece	4.5	4.5	4.5	4.5	15	18
A1	-	0-155	35-245	55-265	25-195	25-235
S	-	575	660	680	845	1020

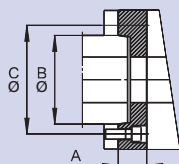
NST T-nuts



Chuck BB-N	400-140	470-191	500-205	500-230 600-275	630-310	800-410
T-nut type	NST	NST	NST	NST	NST	NST
Id. No./pc.	12065020	12065020	12065020	12065020	13063900	13063900
N	25.5	25.5	25.5	25.5	30	30
H	34	34	34	34	44	44
h	15	15	15	15	18	18
G	M20	M20	M20	M20	M24	M24
Bolt ISO 4762 12.9	M20 x 40	M20 x 40	M20 x 40	M20 x 40	M24 x 60	M24 x 60

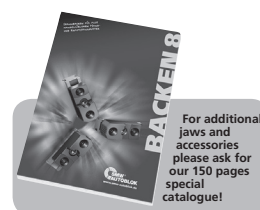
Spindle-Adapters for BIG BORE chucks

ISO-A DIN 55026 Spindle-Adapters



BB-N	400-140/470-191			500-205/500-230			600-275			630-310			800-410	
Spindle nose	A8	A11	A15	A11	A15	A20	A11	A15	A20	A11	A15	A20	A15	A20
Id. No.	24184020	24114020	24124020	24115030	24125020	24175020	24116020	24126020	24176020	24116320	24126320	24176320	24128020	24178020
A mm	40	40	40	40	40	40	40	40	40	50	50	50	50	50
B mm	139.719	196.869	285.775	196.869	285.775	412.775	196.869	285.775	412.775	196.869	285.775	412.775	285.775	412.775
C mm	171.4	235	330.2	235	330.2	463.6	235	330.2	463.6	235	330.2	463.6	330.2	463.6

Bayonet and camlock spindle adapters are available on request

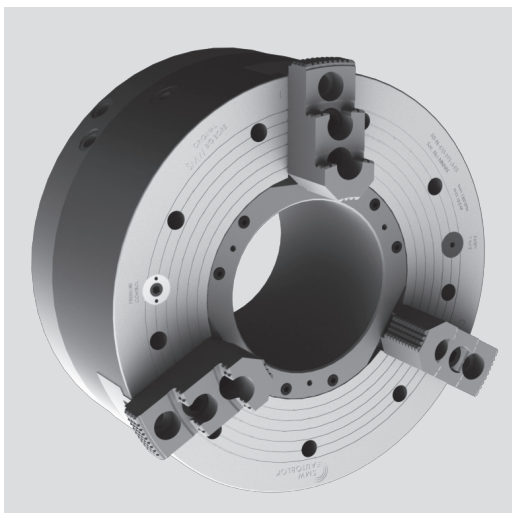


BIG BORE® BB-N-ES

INCH serration

Front-end pneumatic power chucks EXTRA LARGE THROUGH HOLE Ø 140 - 560 mm

- chuck size 400 - 1000
- extended jaw stroke
- 3 jaws



Application/customer benefits

- End machining of long pipe with collars
- Rapid and clamping stroke for short clamping cycles
- Full spindle bore can be used

Technical features

- Air chuck for external clamping with built-in pneumatic cylinder
- Rapid and clamping stroke
- Air feed via distributor ring and SMW-profile seals, at stopped spindle
- Built in non-return valves maintain the air pressure during machining
- Clamping pressure level constantly checked by a safety control system (only for external clamping)
- Clamping stroke control (no clamping in rapid stroke) is monitored

Standard equipment

- 3 jaw chuck
- 2 elbow unions G 1/2" (4 for BB-N 1000)
- 12 mounting bolts (9 for the BB-N-ES 400)
- 1 lifting eye bolt
- 1 set T-nuts with bolts
- 1 set soft top jaws
- without distributor ring bracket

Ordering example

BIG BORE BB-N-ES 400/Z310

Accessories

Control unit AC-BB/AC-XN
(see general catalog pages 308-311)

The principle invented by SMW: air supply via distributor ring and SMW-profile seal rings

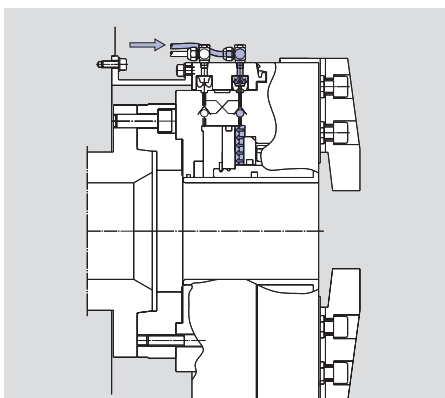


Fig. 1

Open/close movement (only possible at stopped spindle). The profile seals deform radially under the pneumatic pressure, sealing on the chuck body and filling the cylinder chamber. When the clamping pressure is reached, the air feed is stopped, closing the twin non-return valve.

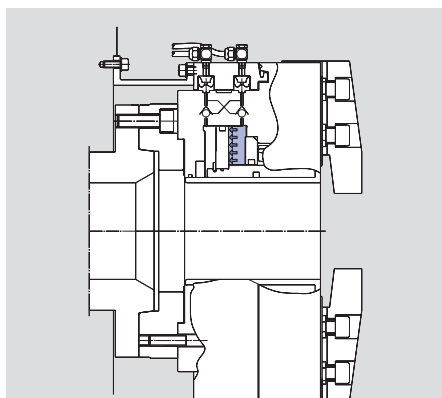


Fig. 2

The SMW-profile seals lift to the expanded position, not touching the chuck body anymore. The clamping pressure is maintained by the twin non-return valve. The chuck can start to rotate.

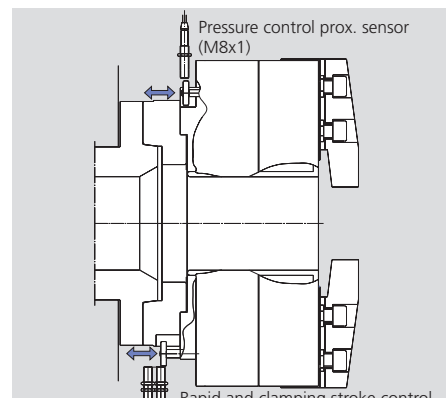
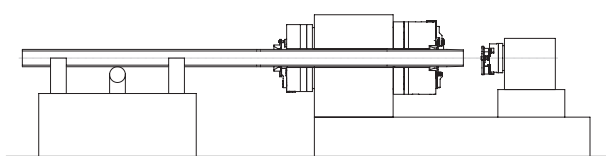
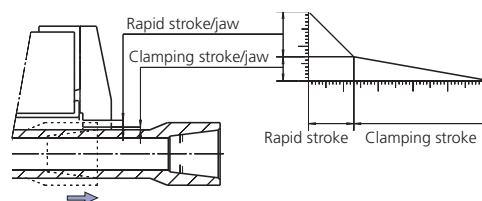


Fig. 3

Safety pressure control: If the pressure is less than a pre-set safety level, the switch ring moves into the proximity-switch field, sending an alarm signal.
Jaw stroke control: If the part is clamped in a not correct jaw stroke position, the switch ring moves into the proximity-switch field sending an alarm signal.



End machining of pipe with front and rear chucks



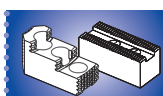
Technical data

SMW-AUTOBLOK BB-N-ES Type		400-140	470-191	500-205	500-230	600-275	630-325	850-375	1000-560
Id. No.		052330	053536	052651	052652	052990	052653	052654	052655
Through-hole	mm (inch)	140 (5.51")	191 (7.52")	205 (8.07")	230 (9.06")	275 (10.83")	325 (12.80")	375 (14.76")	560 (22.05")
Total stroke per jaw	mm (inch)	20 (0.79")	20 (0.79")	25.4 (1")	25.4 (1")	25.4 (1")	25.4 (1")	25.4 (1")	25.4 (1")
Rapid stroke per jaw*	mm (inch)	13 (0.51")	13 (0.51")	16.9 (0.67")	16.9 (0.67")	16.9 (0.67")	17.2 (0.67")	13.4 (0.53")	15 (0.59")
Clamping stroke per jaw	mm (inch)	7 (0.28")	7 (0.28")	8.5 (0.33")	8.5 (0.33")	8.5 (0.33")	8.2 (0.32")	12 (0.47")	10.4 (0.41")
Operating pressure min./max.	bar (psi)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)
Piston area	cm ²	705	565	1004	895	954	1192	1340	1090
Gripping force at 6 bar	kN (lbf)	130 (29225)	115 (25853)	190 (42714)	170 (38218)	185 (41590)	200 (44962)	200 (44962)	170 (38218)
Max. speed	r.p.m.	1300	1300	1100	1300	1100	900	750	450
Air consumption/jaw stroke at 6 bar	liter	29	22	41	37	39	48	79	57
Weight (without top jaws)	kg (lbs)	200 (441)	190 (419)	340 (750)	325 (717)	360 (794)	630 (1389)	970 (2138)	960 (2116)
Moment of inertia	kg·m ²	6.5	9.83	16.4	16.1	19	36	105	160

* must not be used for clamping



SMW-AUTOBLOK
291



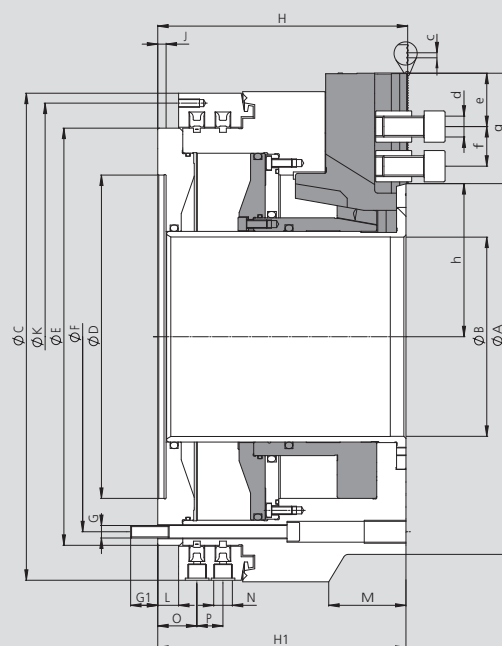
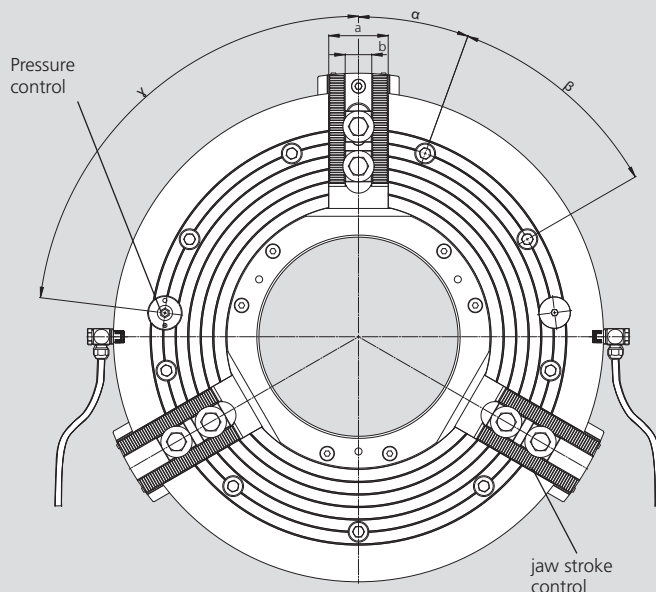
SMW-AUTOBLOK
290

BIG BORE® BB-N-ES

INCH serration

Main dimensions and technical data

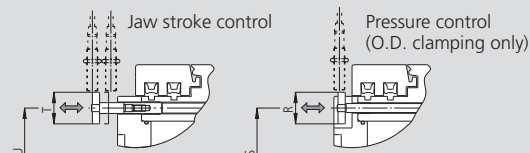
Jaw position: Open for external clamping



* All hoses/piping must be at least 1/2" ID, and min 3/4" ID from chuck size 630 on.

BB-N-ES 1000 needs 2 hoses per function open/close (see installation manual).

To determine the exact position of the jaw stroke control and the pressure control please ask for a customer drawing.



enlarged illustration

Subject to technical changes.

For more detailed information please ask for customer drawing.

SMW-AUTOBLOK BB-N-ES Type			400-140	470-191	500-205	500-230	600-275	630-325	850-375	1000-560
Id. No.			052330	053536	052651	052652	052990	052653	052654	052655
Mounting			Z310	Z310	Z415	Z415	Z450	Z510	Z700	Z700
Fixing bolts circle	A	mm	467	470	570	570	605	685	850	1000
	B	mm	140	191	205	230	275	325	375	560
	C	mm	467	467	570	570	605	685	850	925
	D H6	mm	310	310	415	415	450	510	700	700
	E	mm	400	400	500	500	535	610	775	850
	F	mm	374	374	474	474	508	580	745	815
	G	mm	M12	M12	M12	M12	M12	M16	M16	M16
Thread circle 6 x M8	G1	mm	26	26	25	25	25	30	30	30
	H	mm	240	240	282	282	282	307.5	354	332
	H1	mm	238	238	280	280	280	305.5	352	330
	J	mm	8	8	8	8	8	8	8	10
	K	mm	448	448	550	550	585	666	830	910
	L	mm	20	20	20	20	20	20	25	33
	M	mm	-	-	-	-	-	-	-	224
Pneumatic connection	N	inch	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"
	O	mm	37	37	37	37	37	39.5	44.5	52.5
	P	mm	26	26	26	26	26	33	33	33
	R	mm	35	35	35	35	35	42	35	42
	S	mm	374	374	474	474	508	580	745	815
	T	mm	35	35	35	35	35	35	35	35
	U	mm	374	374	474	474	508	580	745	815
Serration	a	mm	57	57	57	57	57	75	75	75
	b	mm	25.5	25.5	25.5	25.5	25.5	30	30	30
	c	inch	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
	d	mm	M20	M20	M20	M20	M20	M24	M24	M24
	e	mm	14	14	14	14	14	16	16	16
	f	mm	38/90	38/85	38/104	38/92	38/79	47/100	47/140	47/125
	g	mm	121	106	140	127.5	116.5	138	182	166
(Pressure control)	h	mm	104/124	127/147	145.6/171	158/182.5	179.1/204.5	204.6/230	242.6/268	334.6/360
	α	deg.	20	20	15	15	15	15	15	15
	β	deg.	9 x 40	9 x 40	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30
	γ	deg.	83	83	60	60	60	60	60	60

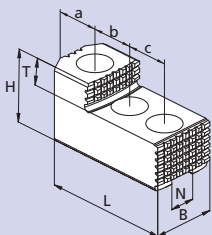
BIG BORE® BB-N-ES

INCH serration

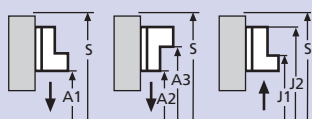
■ Top jaws
■ T-nuts

GUB

Hard reversible top jaws



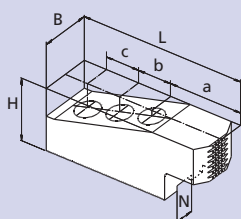
Gripping ranges



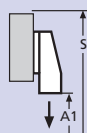
Chuck BB-N-ES	400-140	470-191	500-205	500-230 600-275	630-325	850-375	1000-560
Jaw type	MHB-D 500	GUB 500	GUB 500	GUB 500	GUB 630	GUB 800	GUB 800
Id. No.	12084546	12084546	12084546	12084546	12086446	12088046	12088046
B	60	60	60	60	75	75	75
H	75	75	75	75	85	85	85
L	140	140	140	140	160	220	220
T	2 x 19	2 x 19	2 x 19	2 x 19	30	30	30
N	25.5	25.5	25.5	25.5	30	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	46	46	46	46	30	51	51
b	38	38	38	38	50	62	62
c	38	38	38	38	50	62	62
kg/set	6.6	6.6	6.6	6.6	13.5	19.5	19.5
A1	78-264	113-270	175-388	200-388	295-500	320-610	470-760
A2	125-310	160-315	225-435	250-435	295-500	330-620	480-770
A3	310-495	345-500	410-620	435-620	495-700	590-865	745-1030
J1	-	-	-	-	-	-	-
J2	-	-	-	-	-	-	-
S	635	640	765	765	870	1070	1250

GAB

Hard top jaws



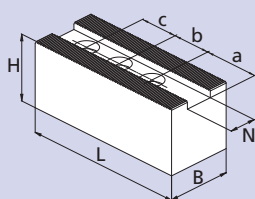
Gripping ranges



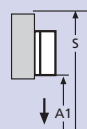
Chuck BB-N-ES	400-140	470-191	500-205	500-230 600-275	630-325	850-375	1000-560
Jaw type	GAB 500	GAB 500	GAB 500	GAB 500	GAB 630	GAB 800	GAB 800
Id. No.	12085146	12085146	12085146	12085146	12086546	12089046	12089046
B	55	55	55	55	75	75	75
H	73	73	73	73	82	82	82
L	195	195	195	195	245	320	320
N	25.5	25.5	25.5	25.5	30	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	96	96	96	96	113	165	165
b	38	38	38	38	50	60	60
c	38	38	38	38	50	60	60
kg/set	16.5	16.5	16.5	16.5	31.5	40.5	40.5
A1	25-160	60-165	75-290	100-290	130-335	95-385	245-535
S	635	640	765	765	870	1060	1210

WBSA-D/WBC-D

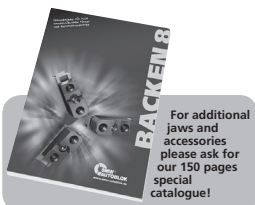
Soft top jaws



Gripping ranges



Chuck BB-N-ES	400-140	470-191	500-205	500-230 600-275	630-325	850-375	1000-560
Jaw type	WBSA-D 500	WBSA-D 500	WBSA-D 500	WBSA-D 500	WBC-D 630	WBC 800	WBC-D 800
Id. No.	12075050	12075050	12075050	12075050	12076440	12078040	12078040
B	60	60	60	60	80	80	80
H	60	60	60	60	80	80	80
L	170	170	170	170	240	320	320
N	25.5	25.5	25.5	25.5	30	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	69	69	69	69	110	165	165
b	38	38	38	38	50	60	60
c	38	38	38	38	50	60	60
kg/piece	3.6	3.6	3.6	3.6	11	15	15
A1	35-220	70-225	130-335	155-335	135-340	95-385	245-535
S	590	595	720	720	865	1060	1210

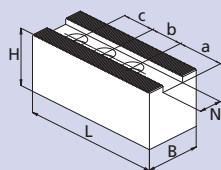


BIG BORE® BB-N-ES

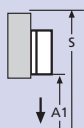
INCH serration

- Top jaws
- T-nuts
- Adapters

WBCL Soft top jaws long version

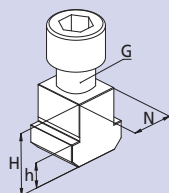


Gripping ranges



Chuck BB-N-ES	400-140	470-191	500-205	500-230 600-275	630-325	850-375	1000-560
Jaw type	WBC-D 502	WBC-D 502	WBC-D 502	WBC-D 502	WBC-D 800	WBCL-D 800	WBCL-D 800
Id. No./pc.	12075140	12075140	12075140	12075140	12078040	12079040	12079040
B	60	60	60	60	80	80	80
H	60	60	60	60	80	80	80
L	205	205	205	205	320	390	390
N	25.5	25.5	25.5	25.5	30	30	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	104	104	104	104	165	230	230
b	38	38	38	38	60	60	60
c	38	38	38	38	60	60	60
kg	4.5	4.5	4.5	4.5	15	18	18
A1	-	0-150	60-275	85-275	25-210	25-255	115-405
S	-	595	720	720	895	1070	1220

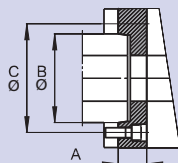
NST T-nuts



Chuck BB-N-ES	400-140	470-191	500-205	500-230 600-275	630-325	850-375	1000-560
T-nut type	NST	NST	NST	NST	NST	NST	NST
Id. No.	12065020	12065020	12065020	12065020	13063900	13063900	13063900
N	25.5	25.5	25.5	25.5	30	30	30
H	34	34	34	34	44	44	44
h	15	15	15	15	18	18	18
G	M 20	M 20	M 20	M 20	M 24	M24	M 24
Bolt ISO 4762 12.9	M20 x 40	M20 x 40	M20 x 40	M20 x 40	M24 x 60	M24 x 60	M24 x 60

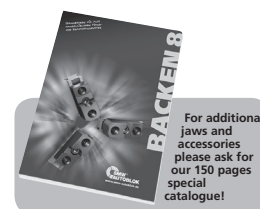
Spindle-Adapters for BIG BORE chucks

ISO-A DIN 55026 Spindle-Adapters



BB-N-ES	400-140/470-191			500-205/500-230			600-275			630-325			850-375		1000-560	
Spindle nose	A8	A11	A15	A11	A15	A20	A11	A15	A20	A11	A15	A20	A15	A20	A15	A20
Id. No.	24184020	24114020	24124020	24115030	24125020	24175020	24116020	24126020	24176020	24116320	24126320	24176320	24128020	24178020	on request	
A mm	40	40	40	40	40	40	40	40	40	50	50	50	50	50		
B mm	139.719	196.869	285.775	196.869	285.775	412.775	196.869	285.775	412.775	196.869	285.775	412.775	285.775	412.775	265.775	412.775
C mm	171.4	235	330.2	235	330.2	463.6	235	330.2	463.6	235	330.2	463.6	330.2	463.6	330.2	463.6

Bayonet and camlock spindle adapters are available on request



BIG BORE® BB-SC

INCH serration

Front-end spring clamp power chucks EXTRA LARGE THROUGH HOLE Ø 275 - 565 mm

- chuck size 600 - 1020
- Clamping with spring packs
- Rapid and clamping stroke

Application/customer benefits

- End machining of long pipe/self centering clamping
- Long jaw stroke to clear upset piping
- Highest productivity/open and clamp time < 3 sec.
- Low maintenance = high availability of the machine
- Step mode for partial opening/clamping for shimming
- Full spindle bore can be used

Technical features

- Self centering clamping with either 9/6/3 spring packs
- Encapsulated spring packs
- Opening via integrated cylinder
- Permanent grease lubricated for constant grip force
- Step mode for opening/clamping for shimming
- Long jaw stroke with rapid and clamping stroke
- Low air consumption
- Stroke control
- **proofline® chucks** = fully sealed – low maintenance

Standard equipment

Chuck with mounting bolts
1 set of soft top jaws
1 set of T-nuts and bolts

Ordering example

Big Bore SC 850-395
Id. No. 053350

Accessories

Air control AC-SC

The reliable principle: Clamping via encapsulated spring packs/opening via air cylinder

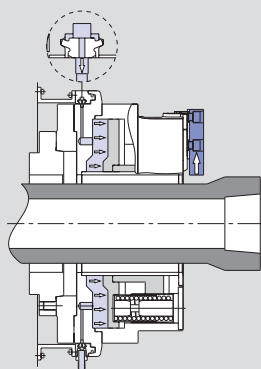


Fig. 1
Chuck open (only at stopped spindle).
The SMW profile seal collapses radial under the air pressure and seals against the chuck body. The cylinder chamber is filled. The piston is compressing the springs, the jaws open.

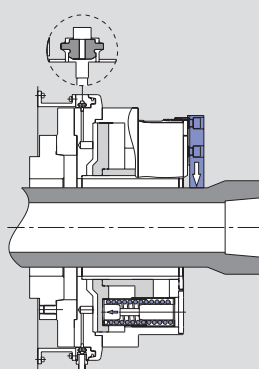


Fig. 2
Chuck clamped.
The SMW profile seal lifts off the chuck body due to elastic force. The springs expand and transmit their force onto the jaws via the wedge hook drive. The spindle can rotate.

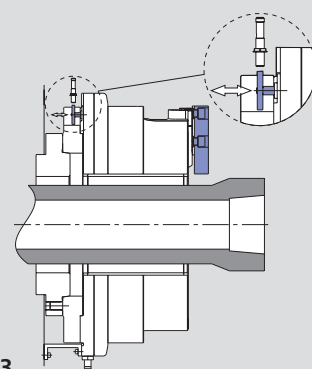
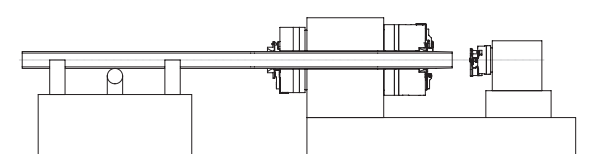
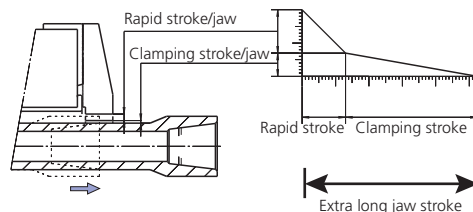


Fig. 3
Stroke control.
The position of the jaws can be monitored via a mechanical cam by 1 or 2 proximity switches.



End machining of tubes with front and rear chucks



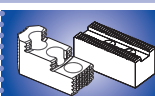
Technical data

SMW-AUTOBLOK Type		BB-SC 600-275			BB-SC 850-395			BB-SC 1020-565		
Id. No.		053540			053350			053570		
Chuck trough hole	mm (inch)	275 (10.83")			395 (15.55")			565 (22.24")		
Total stroke per jaw	mm (inch)	25.4 (1")			27 (1.06")			27 (1.06")		
Rapid stroke per jaw*	mm (inch)	16.9 (0.67")			15 (0.59")			15 (0.59")		
Clamping stroke per jaw	mm (inch)	8.5 (0.33")			12 (0.47")			12 (0.47")		
Operating pressure at 9 springs	bar (psi)	5 (73)			5 (73)			5 (73)		
Max. gripping force at 3/6/9 springs	kN (lbf)	50 (11240)	100 (22480)	150 (33721)	57 (12814)	113 (25403)	170 (38218)	57 (12814)	113 (25403)	170 (38218)
Max. speed	r.p.m.	1000			700			420		
Air consumption to open at 5 bar (73 psi)	liter	60			115			139		
Weight (without jaws)	kg (lbs)	510 (1124)			930 (2050)			1260 (2779)		
Moment of inertia	kg-m ²	34			101			223		

* must not be used for clamping

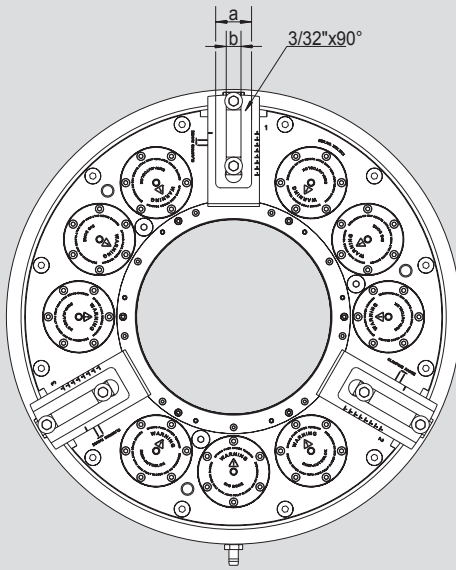


SMW-AUTOBLOK
293

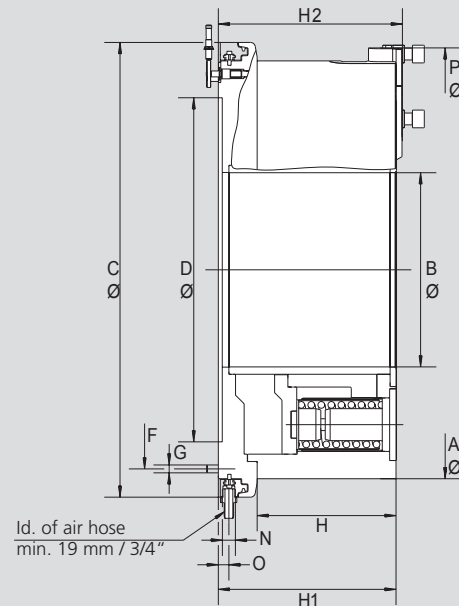
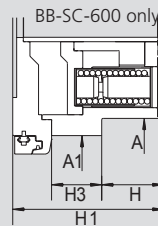


SMW-AUTOBLOK
290

Main dimensions and technical data



Opening pressure with all springs mounted
min. 5 bar (73 psi), max. 8 bar (116 psi)

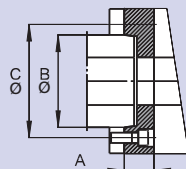


Subject to technical changes.
For more detailed information please ask for customer drawing.

SMW-AUTOBLOK Type			BB-SC 600-275	BB-SC 850-395	BB-SC 1020-565
Mounting			Z520	Z700	Z870
(BB-SC-600-275)	A	mm	605	850	1020
	A1	mm	675	-	-
	B	mm	275	395	565
	C	mm	750	925	1095
	D H6	mm	520	700	870
	F	mm	640	810	980
	G		M12 (12x)	M16 (12x)	M16 (12x)
	H		126.7	282.5	282.5
	H1		307.5	361.5	361.5
	H2		320.5	374.5	374.5
(BB-SC-600-275)	H3		102	-	-
	N		G 3/4"	G 3/4"	G 3/4"
	O		21.5	21.5	21.5
max. swing	P		655.8	902.8	1074
	a		58	73	73
	b		25.5	30	30
Rapid stroke		mm	16.9	15	15
Clamping stroke		mm	8.5	12	12
Total clamping stroke		mm	25.4	27	27

Spindle-Adapters

Spindle-Adapters ISO-A DIN 55026



BB-SC	600-275			850-395		1020-565		
Spindle nose	A11	A15	A20	A15	A20	A15	A20	A28
Id. No.	on request	053590	053591	053362	053358	on request	053595	053596

Clamping of pipe with

BIG BORE 2G chucks

BB-N-EXL2G

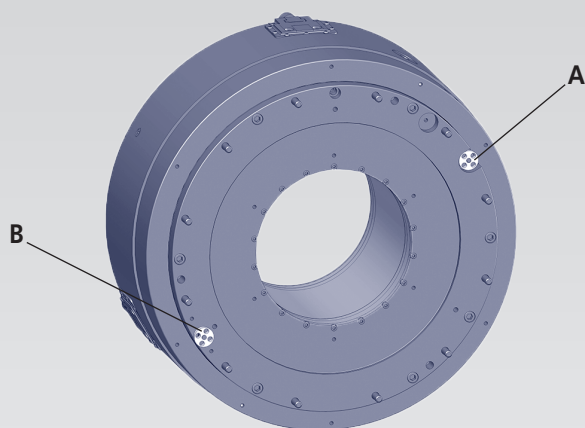
BB-AZ2G

BB-FZA2G

BB-EXL-SC2G

BIG BORE BB-N-EXL2G

- Self centering
- Extra long jaw stroke
- Jaw jogging

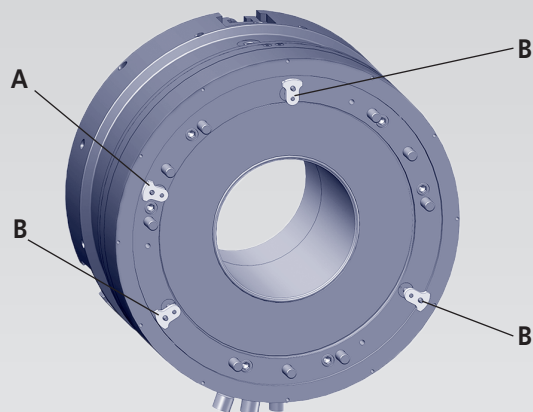


Safety features:

- A:** Pressure control
B: Stroke control

BIG BORE BB-AZ2G

- Self centering or compensating
- Extra long jaw stroke

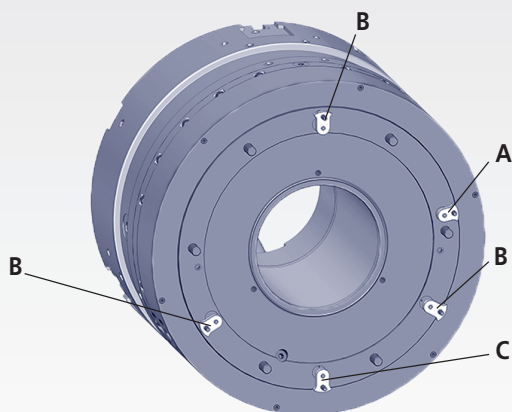


Safety features:

- A:** Pressure control
B: Individual stroke control for each jaw

BIG BORE BB-FZA2G

- 6 jaw sequence chuck
(3 centering jaws - 3 compensating jaws)
- Extra long jaw stroke (radial and axial)

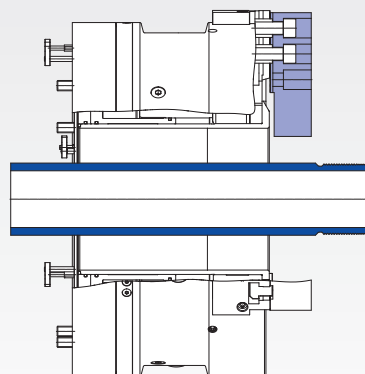


Safety features:

- A:** Pressure control for compensating jaws
B: Individual stroke control for each jaw
C: Stroke control for retracted centering jaws

All 2G chucks

- Extra long jaw stroke
- Extra large clearance between pipe and jaws



Extra long jaw stroke for:

- Safe loading of pipe, no hitting of the jaws
- Safe unloading of the threaded pipe with **no** damage of the finished thread

Clamping glossary

Extra long jaw stroke: The extra long jaw stroke is a long radial movement of the master jaws of the Big Bore 2G chuck. It can be either a fully usable clamping jaw stroke or a combination of rapid stroke and clamping stroke.

An **extra long jaw stroke** allows a safe loading and unloading of the pipe.

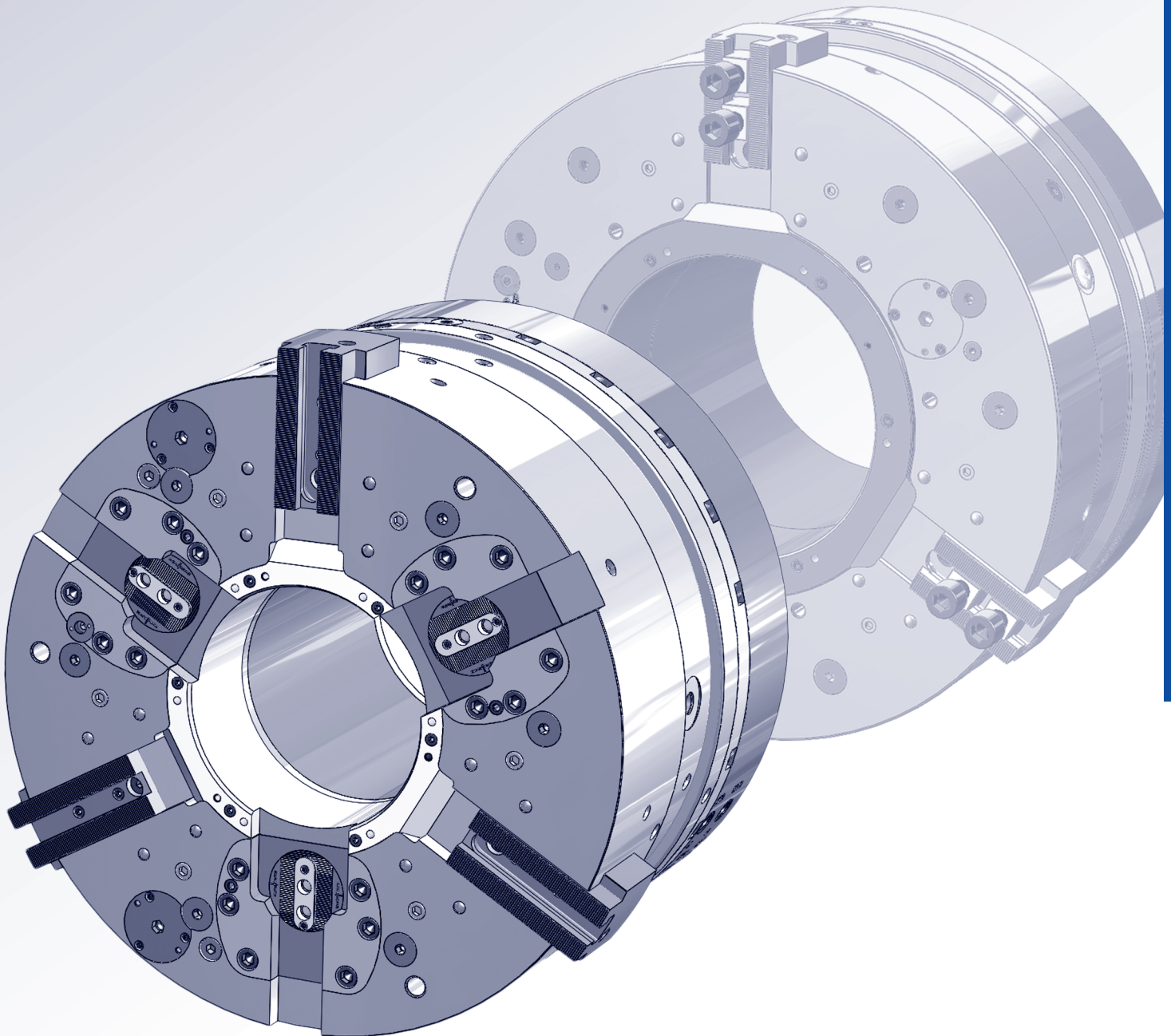
Individual stroke control for each jaw: In compensating clamping mode, all 3 jaws of the Big Bore 2G chucks make a different radial movement to compensate for the misalignment of the pipe to be clamped. A single central jaw stroke control cannot detect if the jaw stroke on one of the master jaws bottoms out and yet cannot hold the pipe in the requested position anymore.

The **individual stroke control for each jaw** ensures that all 3 jaws are within the correct clamping stroke and will clamp the pipe safe and accurate. The signals are picked up by proximity switches, and are monitored by the air control unit.

Stroke control for the retracted jaws: On the 6 jaw sequence chuck Big Bore FZA2G, the centering jaws are used only in static mode to align the pipes machining area to the center line of the machine. The pipe position is maintained when the compensating jaws clamp. The centering jaws are then retracted to allow the threading at the centered area. In order to make sure that the centering jaws are retracted and do not interfere with the threading tool during machining, the retracted position of the centering jaws are monitored by a **stroke control** system via a proximity switch.

Pressure control: During the machining of a pipe, the air pressure to create the gripping force is maintained by a built in safety valve system.

In case there is a drop in clamping pressure, a built in **pressure control** will detect the low pressure and pick up an alarm signal via a proximity switch. All Big Bore 2G chucks have such a pressure control as a standard feature.

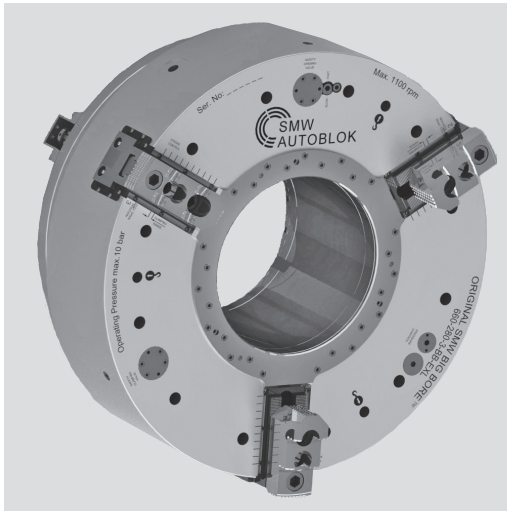


BIG BORE® BB-N-EXL2G

INCH serration

Front-end pneumatic power chucks EXTRA LARGE THROUGH HOLE Ø 191 - 390 mm

- chuck size 510 - 900
- 3 jaws
- extended extra long jaw stroke



Application/customer benefits

- End machining of long pipe with collars
- Rapid and clamping stroke for short clamping cycles
- Full spindle bore can be used

Technical features

- Suitable for jaw jog mode
- Air chuck for external clamping with built-in pneumatic cylinder
- Air feed via distributor ring and SMW-profile seals, at stopped spindle
- Built in non-return valves maintain the air pressure during machining
- Clamping pressure level constantly checked by a safety control system (only for external clamping)
- Clamping stroke control (no clamping in rapid stroke) is monitored
- Extra long jaw stroke (1 1/2" total)

Standard equipment

- 3 jaw chuck
 - 2 elbow unions G 1/2"
 - 12 mounting bolts
 - 3 lifting eye bolt, 1 set T-nuts with bolts
 - 1 set soft top jaws
- without distributor ring bracket

Ordering example

Big Bore BB-N-EXL2G 660/Z450

Accessories

Control unit AC-BB/AC-XN
(see general catalog pages 308-311)

The principle invented by SMW: air supply via distributor ring and SMW-profile seal rings

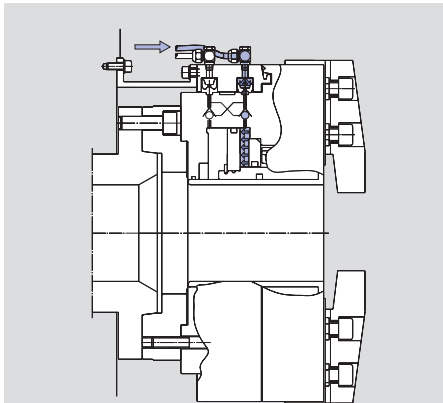


Fig. 1

Open/close movement (only possible at stopped spindle). The profile seals deform radially under the pneumatic pressure, sealing on the chuck body and filling the cylinder chamber. When the clamping pressure is reached, the air feed is stopped, closing the non-return valve.

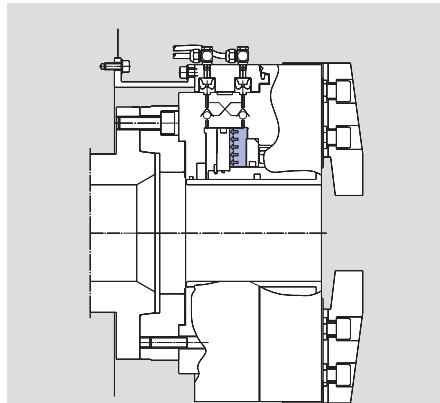


Fig. 2

The SMW-profile seals lift to the expanded position, not touching the chuck body anymore. The clamping pressure is maintained by the twin non-return valve. The chuck can start to rotate.

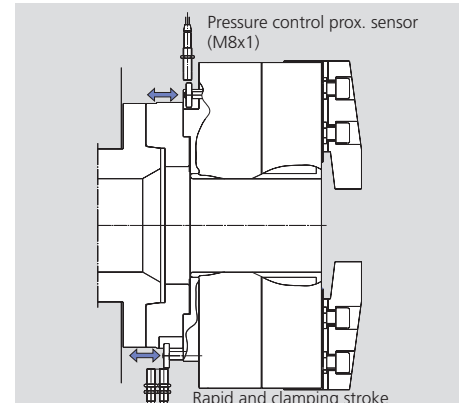
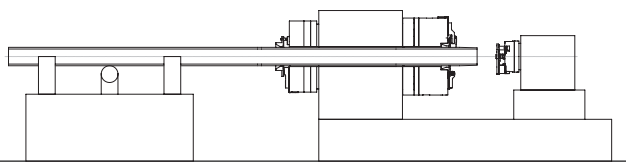
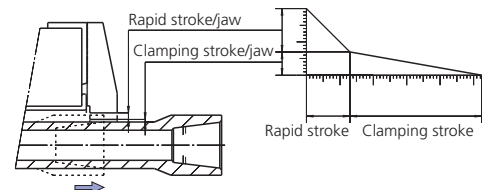


Fig. 3

Safety pressure control: If the pressure is less than a pre-set safety level, the switch ring moves into the proximity-switch field, sending an alarm signal.
Jaw stroke control: If the part is clamped in a not correct jaw stroke position, the switch ring moves into the proximity-switch field sending an alarm signal.



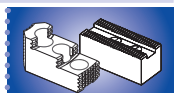
End machining of pipe with front and rear chucks



Technical data

SMW-AUTOBLOK Type		BB-N-EXL2G 510-191	BB-N-EXL2G 660-280	BB-N-EXL2G 900-390
Id. No.		77784553	77784566	77784588
Through-hole	mm (inch)	191 (7.52")	280 (11.02")	390 (15.35")
Total stroke per jaw	mm (inch)	38.5 (1.52")	38.5 (1.52")	38.5 (1.52")
Rapid stroke per jaw*	mm (inch)	30 (1.18")	30 (1.18")	30 (1.18")
Clamping stroke per jaw	mm (inch)	8.5 (0.33")	8.5 (0.33")	8.5 (0.33")
Operating pressure min./max.	bar (psi)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)
Piston area	cm ²	760	1300	1800
Gripping force at 6 bar (87 psi)	kN (lbf)	115 (25853)	195 (43838)	270 (60698)
Max. speed	r.p.m.	1300	1100	750
Air consumption/jaw stroke at 6 bar (87 psi)	liter	37	58	78
Weight (without top jaws)	kg (lbs)	260 (573)	470 (1036)	950 (2094)
Moment of inertia	kg·m ²	10	30.4	112

* must not be used for clamping



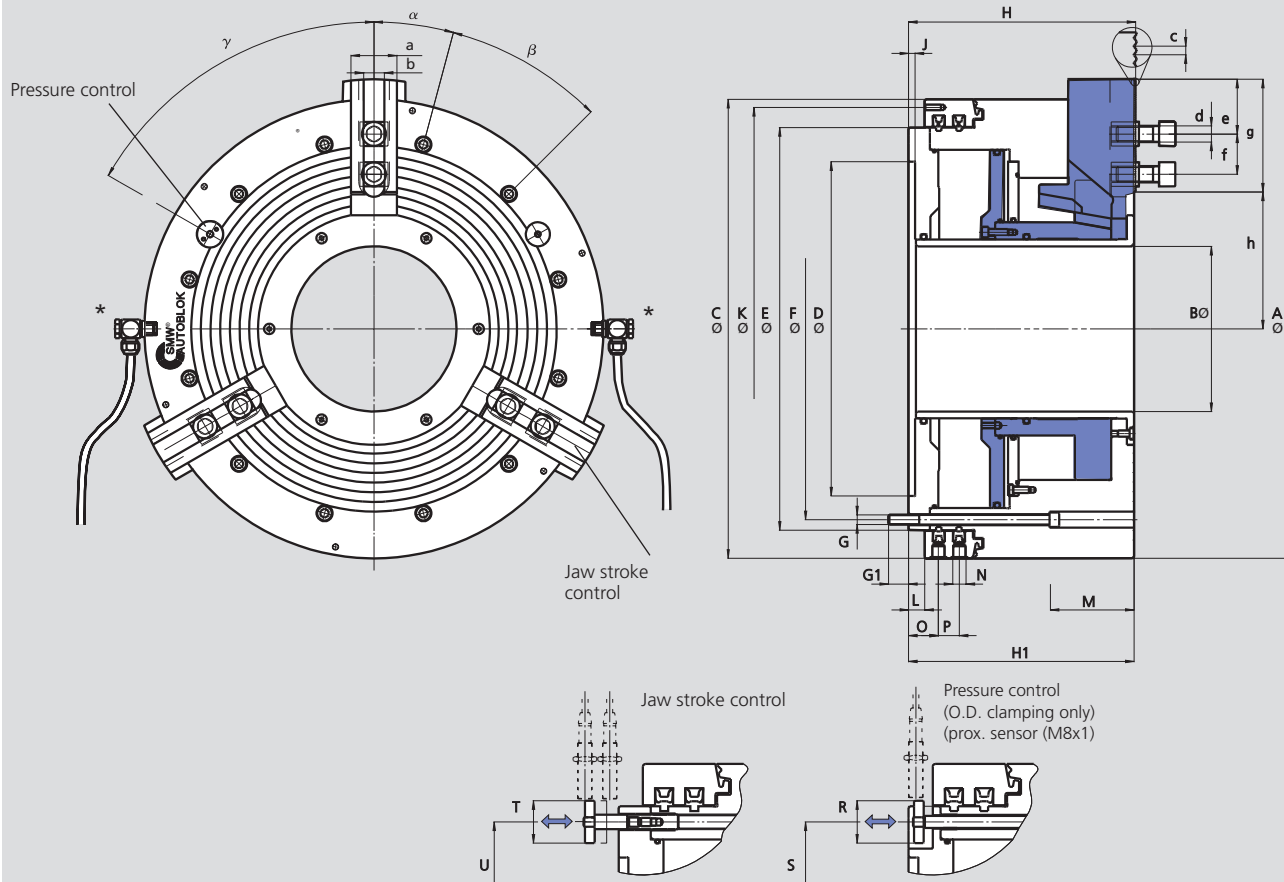
SMW-AUTOBLOK
298

BIG BORE® BB-N-EXL2G

INCH serration

Main dimensions and technical data

Jaw position: Open for external clamping



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

enlarged illustration

SMW-AUTOBLOK Type			BB-N-EXL2G 510-191	BB-N-EXL2G 660-280	BB-N-EXL2G 900-390
Mounting			Z310	Z450	Z700
Fixing bolts circle	A	mm	520	673	900
	B	mm	191	280	390
	C	mm	520	665	852
	D H6	mm	310	450	700
	E	mm	446	585	775
	F	mm	414	558	745
	G	mm	M12	M12	M16
	G1	mm	25	25	29
	H	mm	277	292	323
	H1	mm	270	285	314
Thread circle 6 x M8	J	mm	8	8	8
	K	mm	500	640	830
	L	mm	25	25	33
	M	mm	115	110	143
Pneumatic connection	N	inch	G 1/2"	G 1/2"	G 1/2"
	O	mm	46,5	46	54,5
	P	mm	36	36	33
	R	mm	35	35	35
	S	mm	414	554	745
	T	mm	35	35	35
	U	mm	414	554	745
	a	mm	57	62	75
	b	mm	25,5	25,5	30
	c	inch	3/32" x 90°	3/32" x 90°	3/32" x 90°
Bolt ISO 4762 12.9 min.	d	mm	M20	M20	M24
T-nuts distance min./max.	e	mm	15	15	18
Serration length min./max.	f	mm	30/84	30/107	36/150
	g	mm	110	142	194
	h	mm	151,5/190	199,5/238	262/300,5
	alpha	deg.	20	15	15
	beta	deg.	9x40	12x30	12x30
(Pressure control)	gamma	deg.	83	60	60

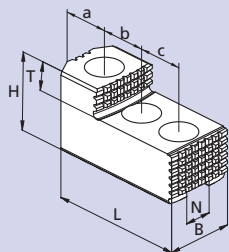
BIG BORE® BB-N-EXL2G

INCH serration

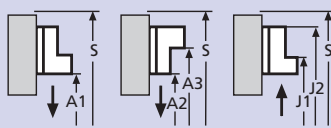
■ Top jaws
■ T-nuts

GUB

Hard reversible top jaws



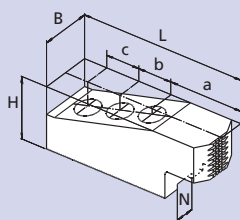
Gripping ranges



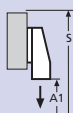
Chuck BB-N-EXL2G	510-191	660-280	900-390
Jaw type	GUB 500	GUB 500	GUB 800
Id. No.	12084546	12084546	12088046
B	60	60	75
H	75	75	85
L	140	140	220
T	2 x 19	2 x 19	30
N	25.5	25.5	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	46	46	51
b	38	38	62
c	38	38	62
kg/set	6.6	6.6	19.5
A1			
A2			
A3			
J1			
J2			
S			

GAB

Hard top jaws



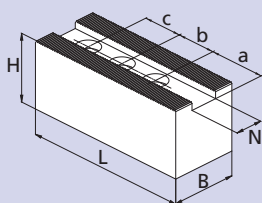
Gripping ranges



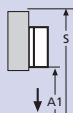
Chuck BB-N-EXL2G	510-191	660-280	900-390
Jaw type	GAB 500*	GAB 660	GAB 800
Id. No.	12085146	12086646	12089046
B	55	55	75
H	73	73	82
L	195	255	320
N	25.5	25.5	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	96	156	165
b	38	38	60
c	38	38	60
kg/set	16.5	26.7	40.5
A1			
S			

WBSA-D / WBC-D

Soft top jaws

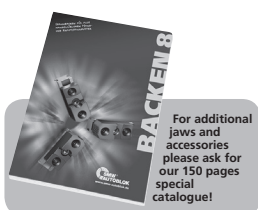


Gripping ranges



Chuck BB-N-EXL2G	510-191	660-280	900-390
Jaw type	WBSA-D 500	WBSA-D 500	WBC 800
Id. No.	12075050	12075050	12078040
B	60	60	80
H	60	60	80
L	170	170	320
N	25.5	25.5	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	69	69	165
b	38	38	60
c	38	38	60
kg/piece	3.6	3.6	15
A1			
S			

* For small clamping dia. please use GAB-660.



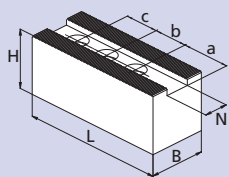
BIG BORE® BB-N-EXL2G

INCH serration

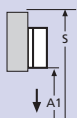
- Top jaws
- T-nuts
- Adapters

WBCL

Soft top jaws long version



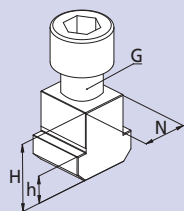
Gripping ranges



Chuck BB-N-EXL2G	510-191	660-280	900-390
Jaw type	WBC-D 502	WBC-D 502	WBCL-D 800
Id. No.	12075140	12075140	12079040
B	60	60	80
H	60	60	80
L	205	205	390
N	25.5	25.5	30
Serration	3/32" x 90°	3/32" x 90°	3/32" x 90°
a	104	104	230
b	38	38	60
c	38	38	60
kg	4.5	4.5	18
A1			
S			

NST

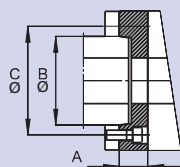
T-nuts



Chuck BB-N-EXL2G	510-191	660-280	900-390
T-nut Typ	NST	NST	NST
Id. No.	12065020	12065020	13063900
N	25.5	25.5	30
H	34	34	44
h	15	15	18
G	M 20	M 20	M24
Bolt ISO 4762 12.9	M20 x 40	M20 x 40	M24 x 60

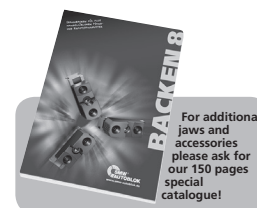
Spindle-Adapters for BIG BORE BB-N-EXL2G chucks

ISO-A DIN 55026
Spindle-Adapters



BB-N-EXL2G	510-191			660-280			900-390	
Spindle nose	A11	A15	A20	A11	A15	A20	A15	A20
Id. No.	24115120	24125120	24175120	24116620	24126620	24176620	24128020	24178020

Bayonet and camlock spindle adapters are available on request



BIG BORE® BB-AZ2G

INCH serration

Front-end pneumatic power chucks EXTRA LARGE THROUGH HOLE Ø 275 - 560 mm

- Chuck size 685 - 1000
- Self centering or compensating clamping
- chuck with extra long rapid and clamping stroke

Application/customer benefits

- End machining of straight or bent pipe
- Tubes can be clamped self centering or with radial jaw compensation at bent pipe, using a retractable centering chuck
- Full spindle bore can be used
- Stroke control for each jaw
- Extra long rapid and clamping stroke (1 1/2" total)
- Pressure control

Technical features

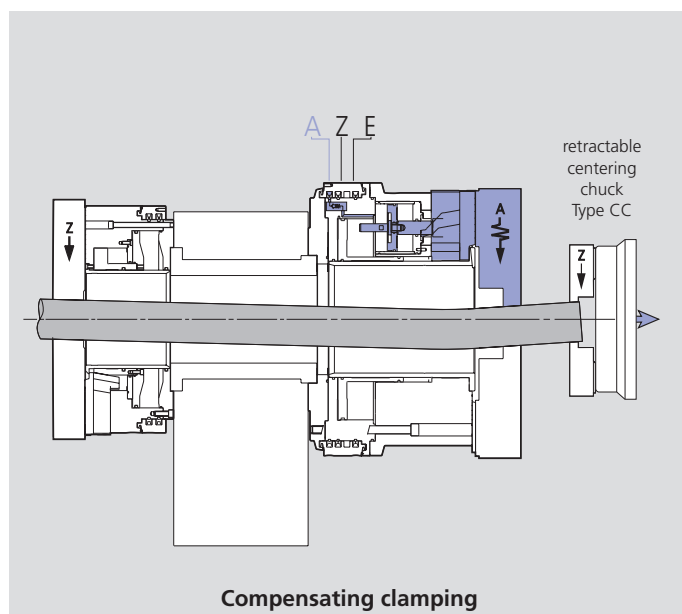
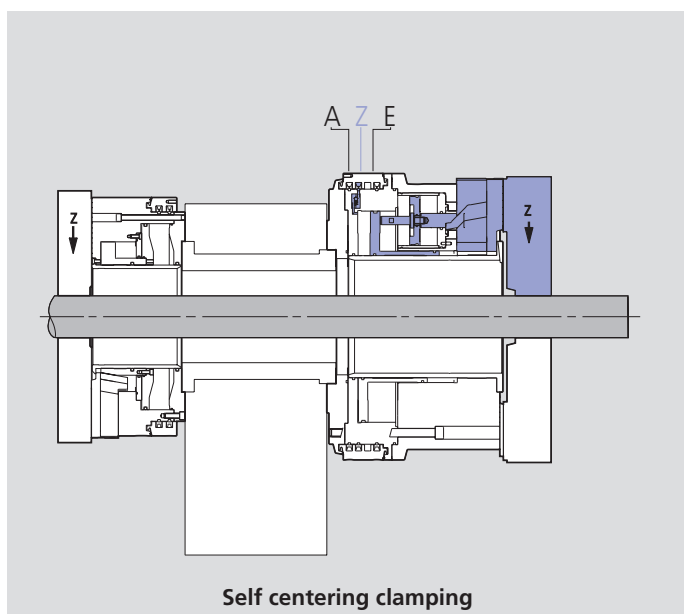
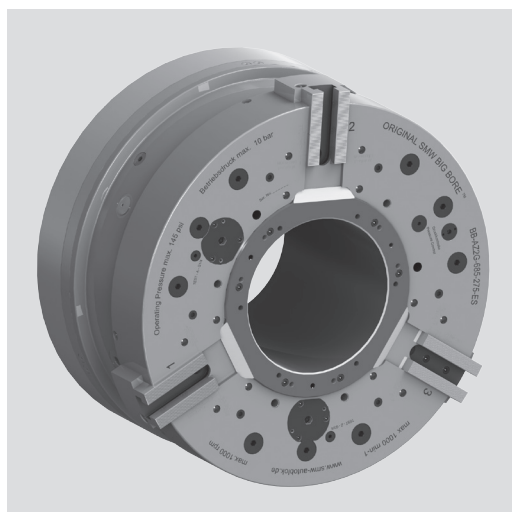
- Air chuck with built-in pneumatic cylinders for self centering or compensating clamping mode
- Air feed for both functions via distributor ring and SMW-AUTOBLOK profile seals at stopped spindle
- Built-in non return valves maintain the air pressure during machining
- Rapid and clamping stroke
- For external clamping only

Standard equipment

Chuck with mounting bolts
1 set of T-nuts with bolts

Ordering example

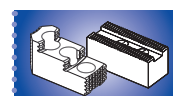
Big Bore BB-AZ2G 685-275- A15



Technical data

SMW-AUTOBLOK Type		BB-AZ2G 685-275	BB-AZ2G 740-330	BB-AZ2G 800-390	BB-AZ2G 1000-560
Through-hole	mm (inch)	275 (10.83")	330 (13")	390 (15.35")	560 (22.05")
Total stroke per jaw	mm (inch)	38.1 (1 1/2")	38.1 (1 1/2")	38.1 (1 1/2")	38.1 (1 1/2")
Rapid stroke per jaw*	mm (inch)	28.7 (1.13")	28.7 (1.13")	28.7 (1.13")	28.7 (1.13")
Clamping stroke per jaw	mm (inch)	9.4 (0.37")	9.4 (0.37")	9.4 (0.37")	9.4 (0.37")
Operating pressure min./max.	bar (psi)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)
Piston area	cm²	1333	1344	1505	1570
Gripping force at 6 bar self centering	kN (lbf)	160 (35969)	160 (35969)	180 (40466)	180 (40466)
Gripping force at 6 bar compensating	kN (lbf)	90 (20233)	90 (20233)	90 (20233)	90 (20233)
Max. speed	r.p.m.	1000	850	750	500
Air consumption/jaw stroke at 6 bar					
Centering	liter	57	57	63	66
Compensating	liter	72	71	76	76
Open	liter	27	27	27	27
Weight (without top jaws)	kg (lbs)	800 (1764)	875 (1929)	1000 (2204)	1420 (3131)
Moment of inertia	kg·m²	51.5	68.4	90.5	221.4
Compensating stroke	mm (inch)	+/- 3.5 (0.14")	+/- 3.5 (0.14")	+/- 3.5 (0.14")	+/- 3.5 (0.14")

* must not be used for clamping

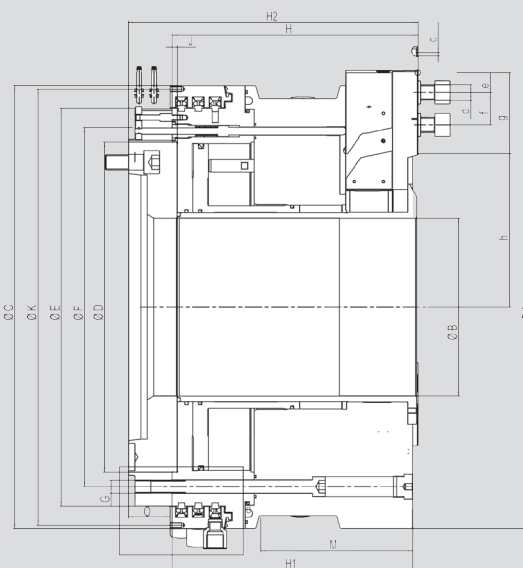
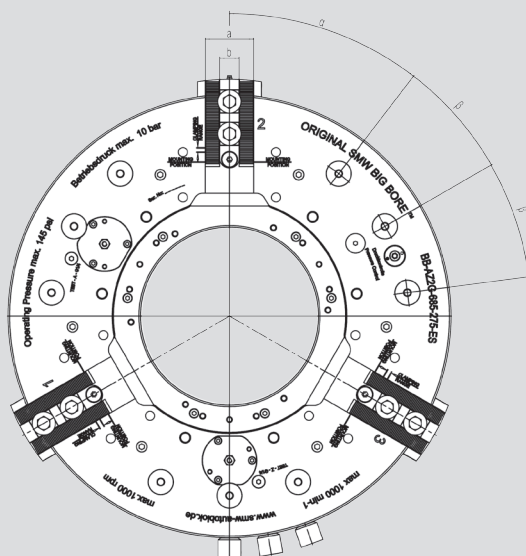


SMW-AUTOBLOK
290

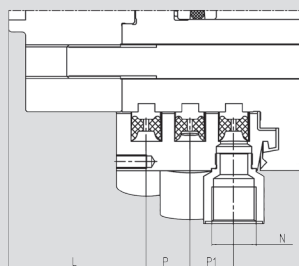
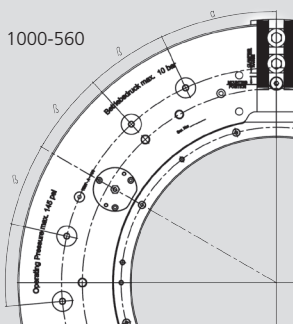
BIG BORE® BB-AZ2G

INCH serration

Main dimensions and technical data



BB-AZ2G 1000-560



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

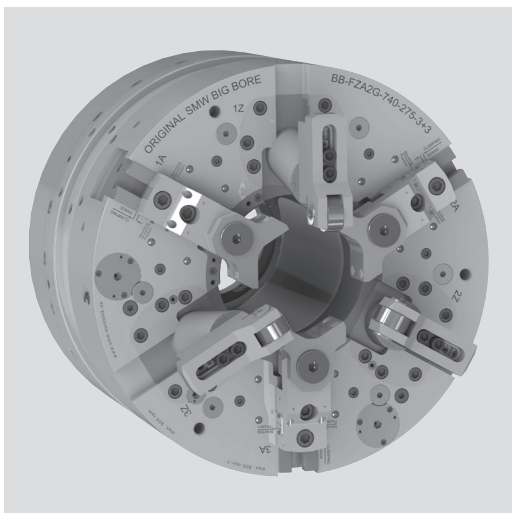
All hoses must be min. 3/4" I.D.

SMW-AUTOBLOK Type			BB-AZ2G 685-275	BB-AZ2G 740-330	BB-AZ2G 800-390	BB-AZ2G 1000-560
Id. No.			054198	054308	054199	054230
Mounting			A20	A20	A20	A28
Chuck diameter	A	mm	685	740	800	1000
Through hole	B	mm	275	330	390	560
	C	mm	685	740	775	970
	D H6	mm	510	510	590	590
	E	mm	615	669	705	705
Fixing bolts circle	F	mm	555	610	640	640
	G	mm	M20	M20	M20	M20
	H	mm	380.5	380.5	380.5	380.5
	H1	mm	372	372	379	375.5
Chuck height	H2	mm	448	448	448	448
	J	mm	8	8	8	8
Thread circle 12 x M8	K	mm	674	729	755	950
	L	mm	82	82	82	82
	M	mm	235	n.a.	n.a.	n.a.
Connection for air hoses	N	inch	G 3/4"	G 3/4"	G 3/4"	G 3/4"
	O	mm	64	64	60.5	64
	P	mm	26	26	26	26
	P1	mm	26	26	26	26
	a	mm	75	75	75	75
	b	mm	30	30	30	30
Serration	c	inch	3/32" x 90°	3/32" x 90°	3/32" x 90°	3/32" x 90°
Bolt ISO 4762 12.9 min.	d	mm	M24	M24	M24	M24
	e	mm	25	25	25	25
T-nuts distance min./max.	f	mm	36/88	36/88	36/88	36/88
Serration length min./max.	g	mm	125	125	125	125
	h	mm	199/237.1	227.8/265.9	258.3/295.4	340.2/378.3
	α	deg.	37.5	37.5	37.5	25.0
	β	deg.	22.5	22.5	22.5	17.5

BIG BORE® BB-FZA2G

Front-end pneumatic 6-jaw sequence chucks EXTRA LARGE THROUGH HOLE Ø 275 - 390 mm

- chuck size 740 - 920
- 3 integrated centering jaws and 3 compensating jaws



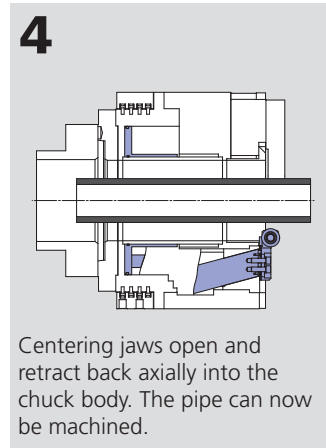
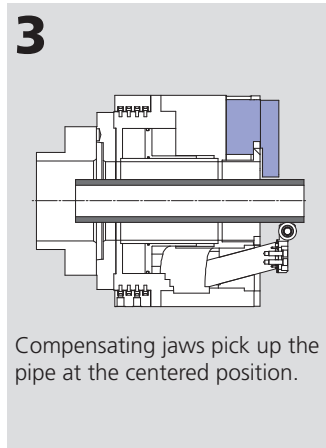
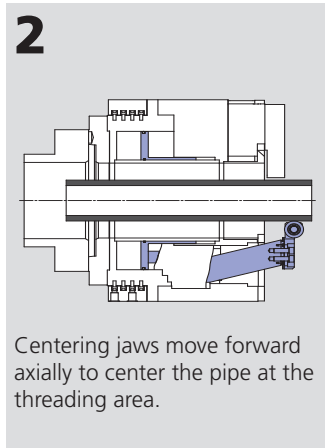
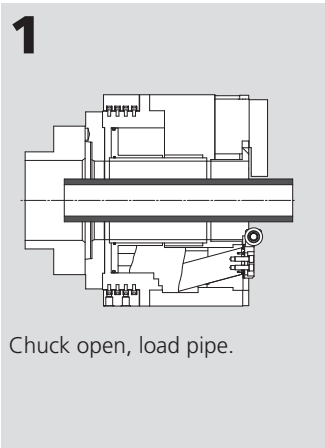
Application/customer benefits

- Extra long axial and radial stroke for centering jaws
- Adjustability of the axial centering position for pipe threading
- Extra long rapid and clamping stroke (1 1/2" total) for compensating jaws
- Stroke control for centering jaws
- Stroke control for each compensating jaw
- Pressure control

Technical features

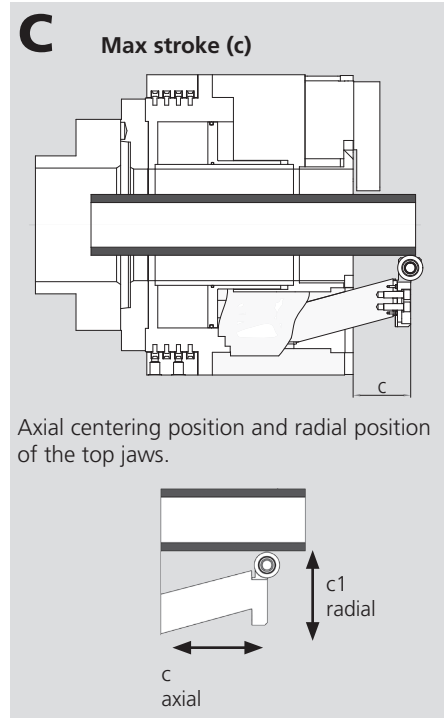
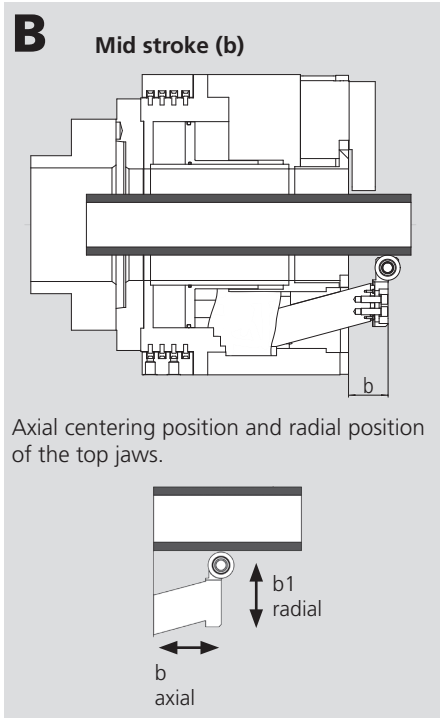
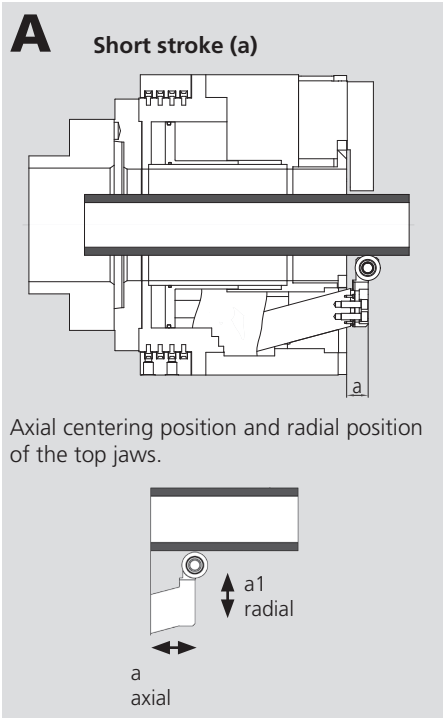
- 3+3 jaw air chuck with 3 integrated centering jaws and 3 compensating jaws
- Integrated centering jaws move axially forward to center the pipe exactly at the area to be threaded
- For external clamping only
- Fully automatic sequence is programmable
- Extra long jaw stroke
- It is possible to adjust the axial centering position through the radial position of the centering jaws

Machining of bent pipe with chuck with integrated centering jaws:



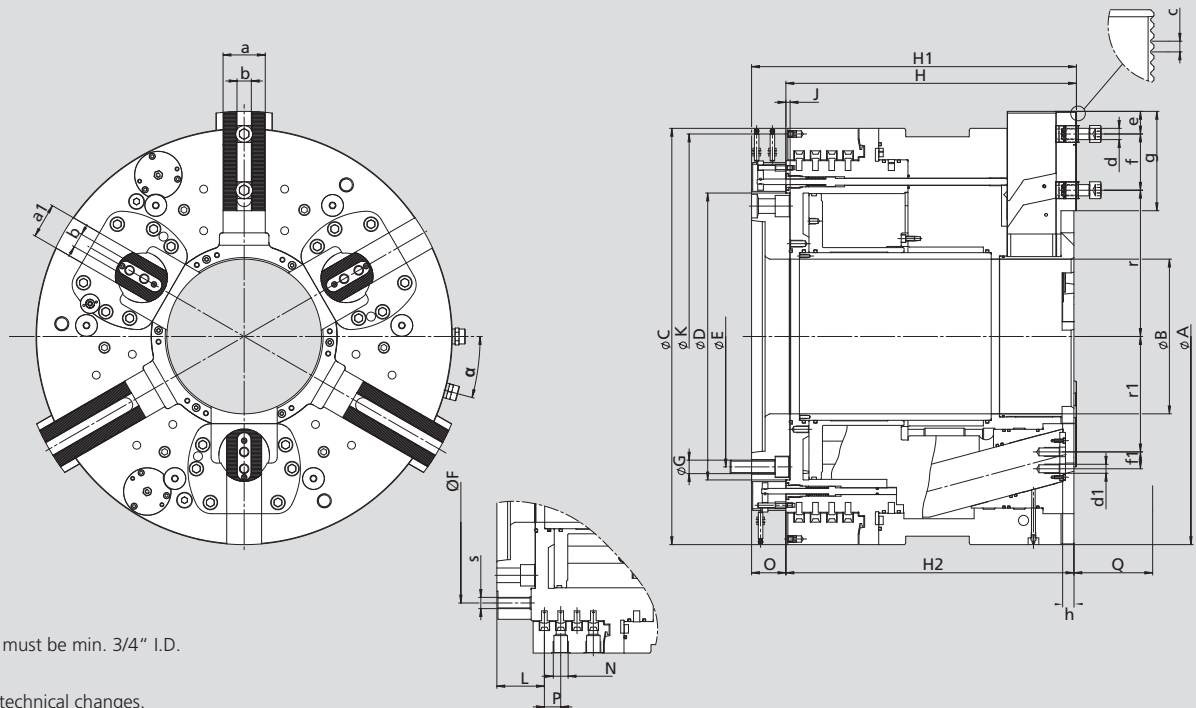
Adjustability of the axial centering position

By changing the radial position of the top jaws, the axial centering position can be changed. The axial centering position is dependent from the radial adjustment of the top jaws.



BIG BORE® BB-FZA2G

Main dimensions and technical data



* all hoses must be min. 3/4" I.D.

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

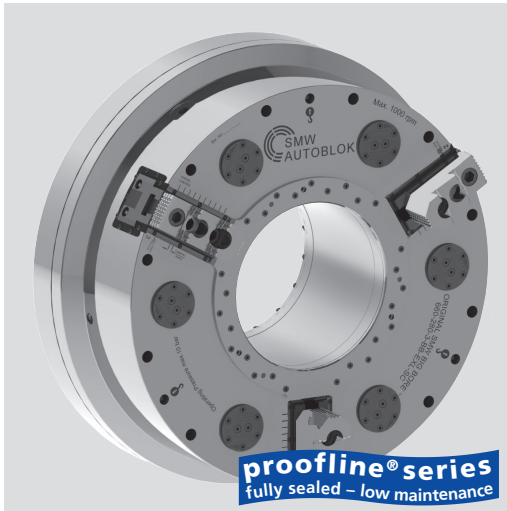
SMW-AUTOBLOK Type			BB-FZA2G 740-275-A20	BB-FZA2G 800-330-A20	BB-FZA2G 920-390-A20
Id. No.			054159	054300	054228
Chuck diameter	A	mm	740	800	920
Through hole	B	mm	275	330	390
	C	mm	740	800	920
	D	mm	510	510	550
	E	mm	463.6	463.6	463,5
	F	mm	562	615	724
	G	mm	M24	M24	M24
	H	mm	516.5	516.5	546.5
Chuck height	H1	mm	577.5	577.5	607.5
	H2	mm	512	512	542
	J	mm	7.5	7.5	7.5
	K	mm	720/6xM8	780/6xM8	890/6xM8
	L	mm	84.5	84.5	86.5
Connection for air hoses	N	inch	G 3/4"	G3/4"	G 3/4"
	O	mm	61	61	61
	P	mm	3x29	3x29	3x31
Centering jaws axial stroke	Q	mm	140	140	160
	a	mm	75	75	75
	a1	mm	62	62	62
	b	mm	25.5 H7	25.5 H7	25.5 H7
	c	inch	3/32" x 90°	3/32" x 90°	3/32" x 90°
Jaw mounting bolts	d	mm	M20	M20	M20
Jaw mounting bolts	d1	mm	M16	M16	M16
min.	e	mm	30	30	30
max.	f	mm	100	100	135
	f1	mm	30	30	30
	g	mm	176.6	176.6	190
Serration to face of chuck	h	mm	19	19	19
	r	mm	260	287.5	321
	r1	mm	205.2	232.7	270.3
	s	mm	M20	M20	M24
	α	deg.	15	15	15
Speed max.		r.p.m.	900	750	600
Gripping force compensating jaws at 6 bar		kN (lbf)	83 (18660)	83 (18660)	137 (30799)
Gripping force centering jaws at 6 bar		kN (lbf)	100 (22481)	114 (25628)	102 (22930)
Jaw stroke compensating jaws total		mm (inch)	38.1 (1 1/2")	38.1 (1 1/2")	38.1 (1 1/2")
rapid stroke		mm (inch)	27.2 (1.07")	27.2 (1.07")	27.2 (1.07")
clamping stroke		mm (inch)	10.9 (0.43")	10.9 (0.43")	10.9 (0.43")
Jaw stroke centering jaws		mm (inch)	37.5 (1.48")	37.5 (1.48")	42.7 (1.68")
Air consumption centering at 6 bar (87psi) max.		liter	92	92	142
Air consumption compensating at 6 bar (87psi) max.		liter	30	30	54
Weight (without top jaws)		kg (lbs)	1140 (2513)	1350 (2976)	1850 (4079)
Operating pressure min./max.		bar (psi)	2/8 (29/116)	2/8 (29/116)	2/8 (29/116)
Moment of inertia		kg·m²	88	121	230

BIG BORE® BB-EXL-SC2G

INCH serration

Front-end spring clamp power chucks EXTRA LARGE THROUGH HOLE Ø 191 - 390 mm

- chuck size 510 - 900
- Clamping with gas spring
- Extra long rapid and clamping stroke



Application/customer benefits

- End machining of long pipe/self centering clamping
- Highest productivity/open and clamp time < 3 sec.
- Low maintenance = high availability of the machine
- Step mode for partial opening/clamping for shimming
- Full spindle bore can be used

Technical features

- Self centering clamping with either 9/6/3 gas spring
- Opening via integrated cylinder
- Permanent grease lubricated for constant grip force
- Long jaw stroke with rapid and clamping stroke
- Low air consumption
- Stroke control
- **proofline® chucks** = fully sealed – low maintenance

Standard equipment

- Chuck with mounting bolts
- 1 set of soft top jaws
- 1 set of T-nuts and bolts

Ordering example

Big Bore BB-EXL-SC2G 900-390
Id. No. 77784388

Accessories

Air control

The reliable principle: Clamping via spring/opening via air cylinder

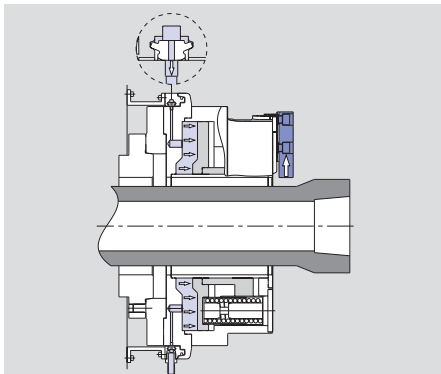


Fig. 1

Chuck open (only at stopped spindle).
The SMW profile seal collapses radial under the air pressure and seals against the chuck body.
The cylinder chamber is filled.
The piston is compressing the springs, the jaws open.

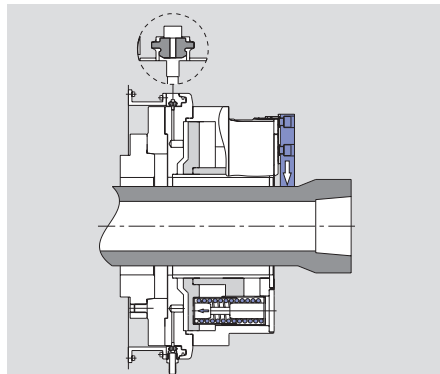


Fig. 2

The SMW profile seal lifts off the chuck body due to elastic force. The springs expand and transmit their force onto the jaws via the wedge hook drive. The spindle can rotate.

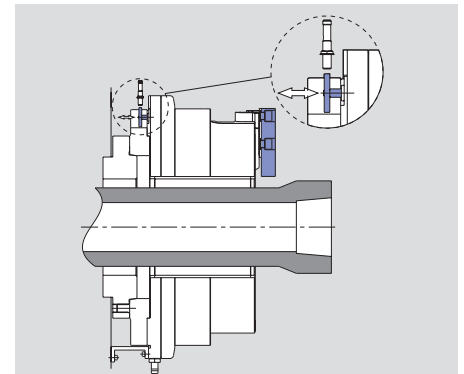
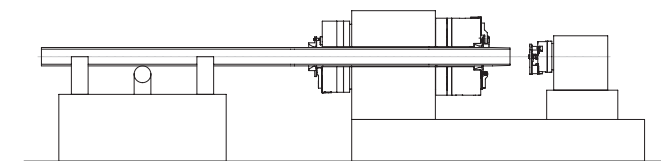
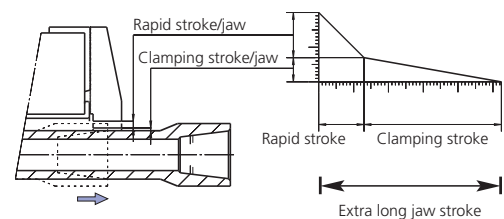


Fig. 3
Stroke control.

The position of the jaws can be monitored via a mechanical cam by 1 or 2 proximity switches.



End machining of tubes with front and rear chucks



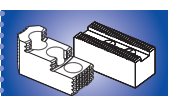
Technical data

SMW-AUTOBLOK Type		BB-EXL-SC2G 510-191			BB-EXL-SC2G 660-280			BB-EXL-SC2G 900-390		
Id. No.		77784353			77784366			77784388		
Chuck trough hole	mm (inch)	191 (7.52")			280 (11.02")			390 (15.35")		
Total stroke per jaw	mm (inch)	38.5 (1.52")			38.5 (1.52")			38.5 (1.52")		
Rapid stroke per jaw*	mm (inch)	30 (1.18")			30 (1.18")			30 (1.18")		
Clamping stroke per jaw	mm (inch)	8.5 (0.33")			8.5 (0.33")			8.5 (0.33")		
Opening pressure with all springs	bar (psi)	5 (73)			5 (73)			5 (73)		
Max. gripping force at 3/6/9 springs	kN (lbf)	57 (12814)	114 (25628)	-	82 (18434)	164 (36869)	-	82 (18434)	164 (36869)	245 (55078)
Max. speed	r.p.m.	1100			1000			680		
Air consumption to open at 5 bar (73 psi)	liter	37			92			125		
Weight (without top jaws)	kg (lbs)	318 (701)			500 (1102)			950 (2094)		
Moment of inertia	kg·m²	14			36			117		

* must not be used for clamping



SMW-AUTOBLOK
305



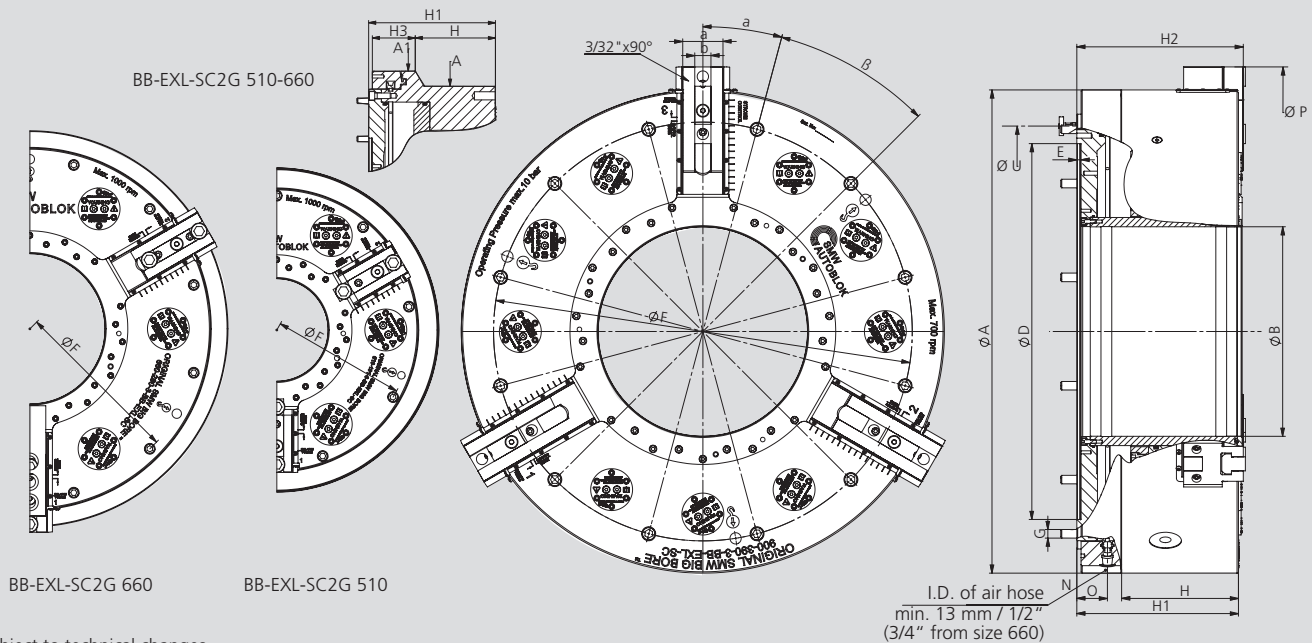
SMW-AUTOBLOK
298

BIG BORE® BB-EXL-SC2G

INCH serration

Main dimensions and technical data

Opening pressure with all springs mounted
min. 5 bar, max. 8 bar

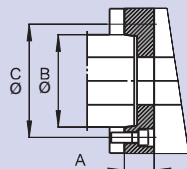


Subject to technical changes.
For more detailed information please ask for customer drawing.

SMW-AUTOBLOK Type			BB-EXL-SC2G 510-191	BB-EXL-SC2G 660-280	BB-EXL-SC2G 900-390
Mounting			Z310	Z450	Z700
Through hole	A	mm	532	673	900
	A1	mm	610	738	-
	B	mm	191	280	390
	D H6	mm	310	450	700
	E	mm	8	8	8
	F	mm	502	632	780
	G	mm	M12 (9x)	M12 (12x)	M16 (12x)
	H	mm	170	152	215
	H1	mm	272	272	301
	H2	mm	279	279	310
	N	inch	G 1/2"	G 1/2"	G 1/2"
	O	mm	47	47	57
	P	mm	604	760	986
	a	mm	57	62	75
max. swing	b	mm	25.5	25.5	30
	alpha	mm	20	15	15
	beta	deg.	9x40°	12x30°	12x30°
	U	deg.	414	554	765
Rapid stroke		mm	30	30	30
Clamping stroke		mm	8.5	8.5	8.5
Total clamping stroke		mm	38.5	38.5	38.5

Spindle-Adapters

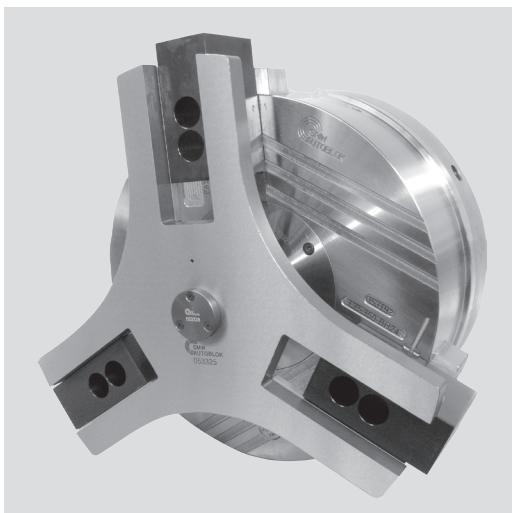
Spindle-Adapters
ISO-A DIN 55026



SMW-AUTOBLOK Type	BB-EXL-SC2G 510-191			BB-EXL-SC2G 660-280			BB-EXL-SC2G 900-390	
Spindle nose	A11	A15	A20	A11	A15	A20	A15	A20
Id. No.	24115130	24125130	24175130	24116630	24126630	24176630	24128830	24178830

**Stationary centering and dampening chuck,
pneumatic Ø 240 - 470 mm**

■ with integrated dampener

**Application/customer benefits**

- Axial positioning and centering of tubes when a BB-AZ2G chuck on the main spindle is used in compensating clamping mode
- Integrated hydraulic dampener with fixed and position for controlled deceleration and positioning of tubes
- Suitable for O.D. and I.D. centering

Technical features

- Stationary pneumatic clamping unit with integrated dampener/endstop
- Operating pressure 2-10 bar (29-145 psi)
- Monitoring of endposition of the axial stop via prox. switch (prox. switch not included with the chuck)

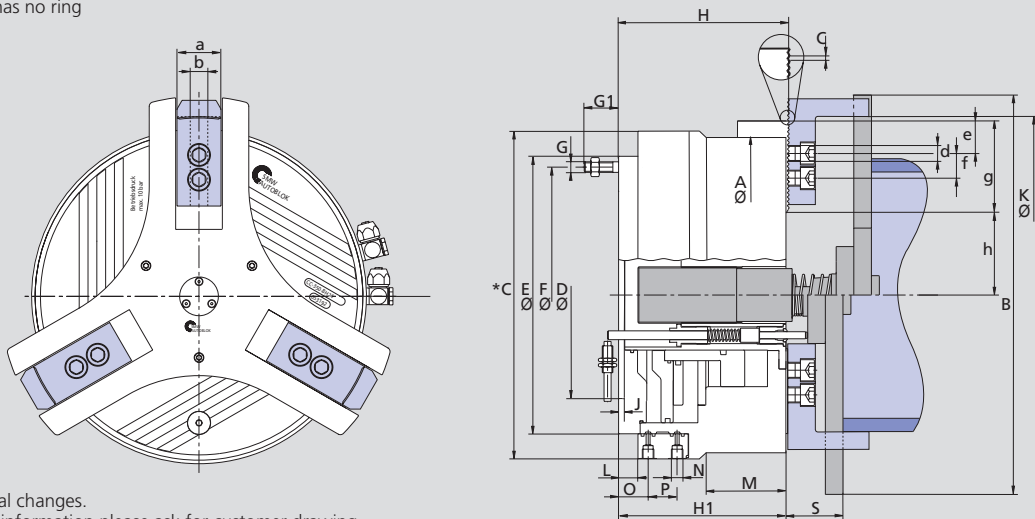
Standard equipment

3-jaw centering chuck
1 set of soft top jaws

Ordering example

Stationary centering chuck CC-350

* Chuck CC-240 has no ring



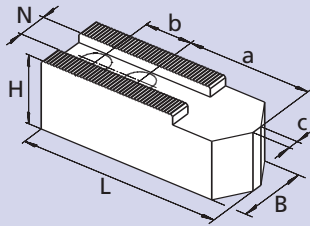
Subject to technical changes.
For more detailed information please ask for customer drawing.

SMW-AUTOBLOK Type			CC 240 Z	CC 350 Z	CC 470 Z
Id. No.			053290	053192	054470
	A	mm	240	360	470
	B	mm	306	446	550
	C	mm	250	372	n.a.
	D H6	mm	195	235	310
	E	mm		315	400
	F	mm	223.8	290.5	374
	G/G1	mm	M12/39	M12/39	M12/26
	H	mm	135.5	191.5	239.5
	H1	mm	134	190	238
	J	mm	6.5	6.5	8
Clamping Ø max.	K	mm	245	365	507
	L	mm	—	21	20
	M	mm	49	92	n.a.
Pneumatic connection	N	inch	G 1/4"	G 1/4"	G 1/2"
min./max.	S	mm	45/95	47/97	50.5/152.5
	a	mm	40	44	60
	o	mm	74	33	37
	p	mm	—	33	26
	b f7	mm	17	21	25.5
Serration	c	inch	1/16" x 90°	1/16" x 90°	3/32" x 90°
Bolts ISO 4762 12.9	d	mm	M12 x 30	M16 x 35	M20 x 45
min.	e	mm	9.5	12	15
T-nut distance min./max.	f	mm	22/41.5	25/72	35/68
Length of serration	g	mm	59	95	99
min./max.	h	mm	53/66	85/109	128/153
Stroke/jaw		mm (inch)	12.7 (0.5")	24 (0.94")	25 (0.98")
Pressure min./max.		bar (psi)	2/10 (29/145)	2/10 (29/145)	2/10 (29/145)
Piston area		cm ²	290	486	652
Air consumption/jaw stroke at 6 bar		liter	5.5	13.5	21
Weight (without top jaws)		kg (lbs)	53 (11915)	115 (25853)	260 (58450)

- Top jaws
- T-nuts

AWB-D

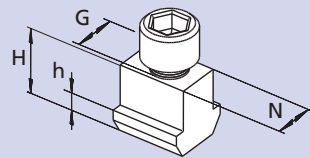
Soft top jaws



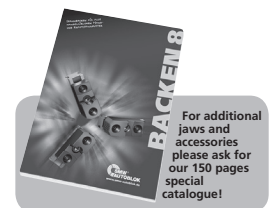
Chuck Type	CC 240 Z	CC 350 Z	CC 470 Z
Jaw type	MWB-D 240	MWB-D 250	MWB-D 470
Jaw Id. No. (set)	233462	013491	081603
B	40	50	60
H	80	80	120
L	90	120	155
N	17	21	25.5
Serration	1/16" x 90°	1/16" x 90°	3/32" x 90°
a	20	62	94
b	22	28	35
kg/set	4.2	10.5	21.5

NST

T-nuts



Chuck Type	CC 240 Z	CC 350 Z	CC 470 Z
T-nut type	NST 17-4	NST 21-5	NST 21-5
T-nut Id. No./piece	013864	033429	014812
N	17	21	25.5
H	26.5	30	29
h	9.5	11	11
G	M12	M16	M20
Bolt ISO 4762 12.9	M12 x 30	M16 x 35	M20 x 40



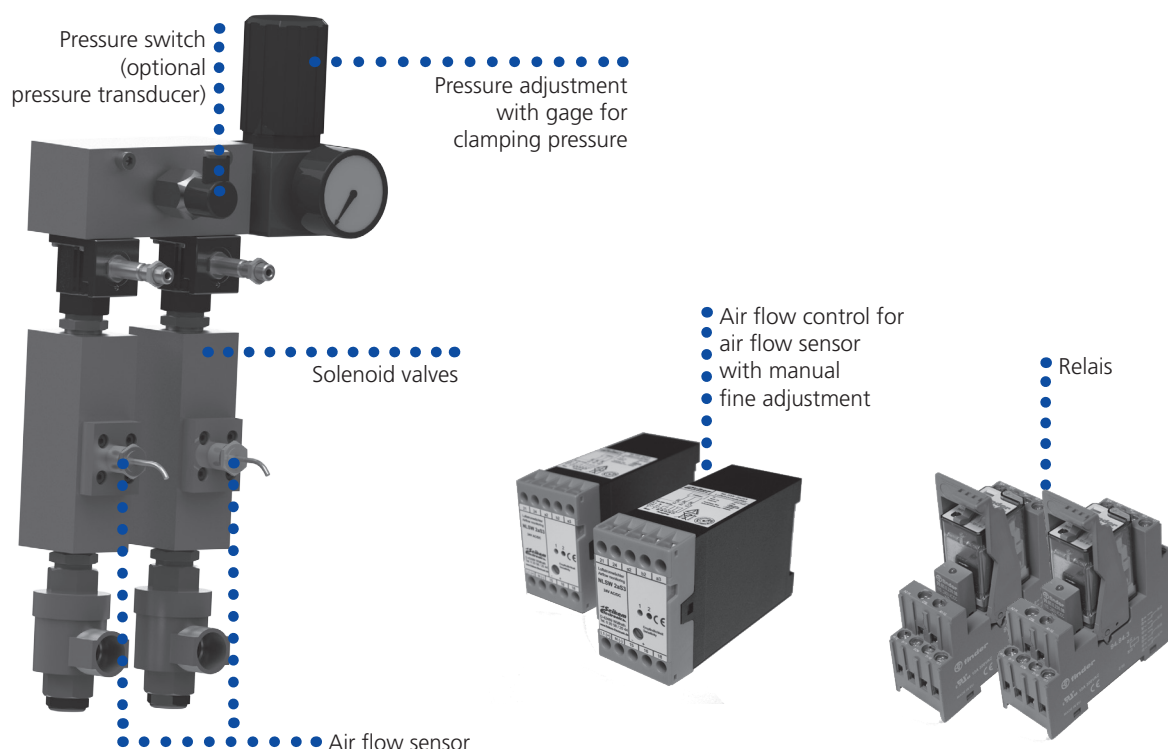
AC-BB

Control unit for
SP and Big Bore chucks

- Electronic safety control unit
- for SP and Big Bore chucks
- without pressure control
- without stroke control

Electropneumatic control unit for SP and Big Bore® chucks

- 1/2" or 3/4" design for SP and Big Bore chucks
- Actuation via foot pedal or push button (not included in the supply range)
- Clamping control via air flow sensors
- Quick chuck actuation via diaphragm valves with quick exhaust
- Airflow control with LED for ready and air flow. Adjustable air flow sensor sensitivity



SMW-AUTOBLOK Type	Voltage	Size	Id. No.
AC-BB	24 V	1/2"	202342
AC-BB	110 V	1/2"	202343
AC-BB	220 V	1/2"	202344
AC-BB	24 V	3/4"	202837
AC-BB	110 V	3/4"	202838
AC-BB	220 V	3/4"	202839

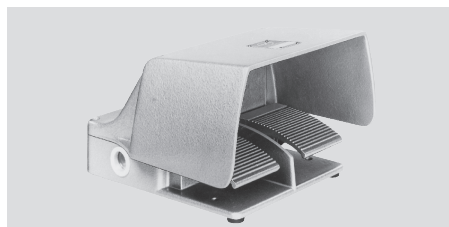
Standard equipment:

as shown, without hoses and fittings

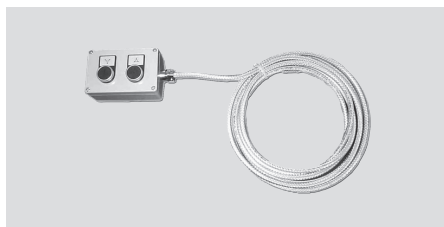
Approx. dimensions (w x h x d)
222 x 465 x 128 mm

Accessories:

Foot pedal F2 with 4 m cable
Id. No. 013324



Push button with 5 m cable
Id. No. 192942

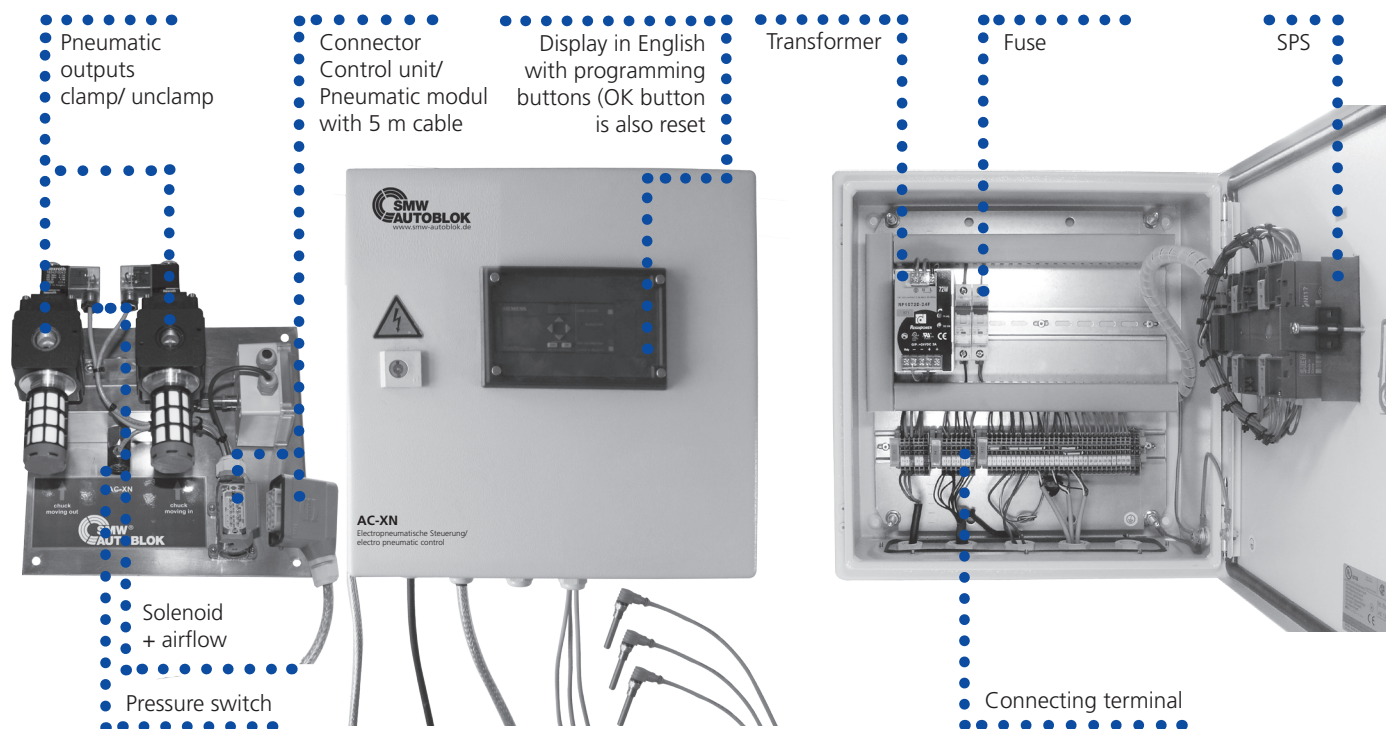


Air service unit
Id. No. 1/2" 192074,
Id. No. 3/4" 199790



Universal, electronic micro-processor compact control unit for Big Bore chucks in 1/2" / 3/4" design

- All safety systems integrated
- Easy installation - no other devices needed
- Can be connected to all common voltages
- LCD display in English
- Quick chuck actuation by 1/2" / 3/4" pneumatic parts
- To be actuated by an external signal

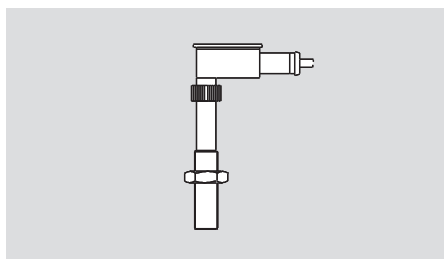


Accessories:

Foot pedal F2
with 4 m cabel
Id. No. 013324

**Proximity switch for pressure
and stroke control signals
M8x1**
Id. No. 203500

Air service unit 1/2"
Id. No. 192074
Air service unit 3/4"
Id. No. 199790



Order review:

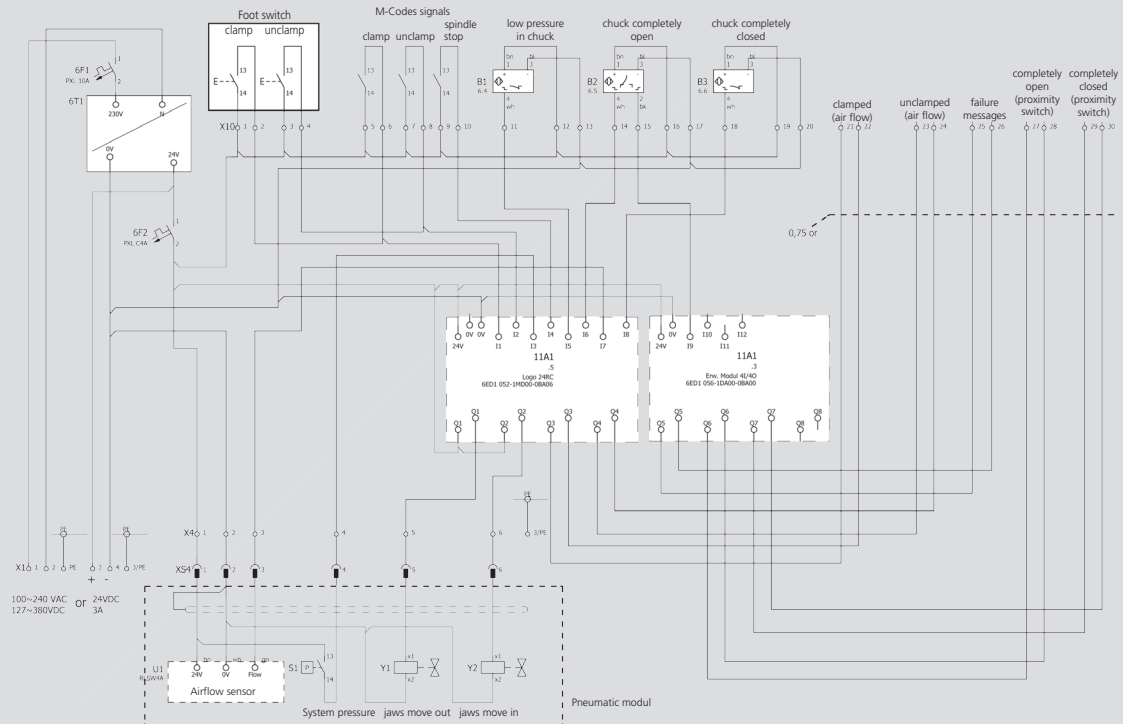
Control unit AC-XN complete 1/2"	Id. No. 203491
Control unit AC-XN complete 3/4"	Id. No. 203490

Standard equipment:

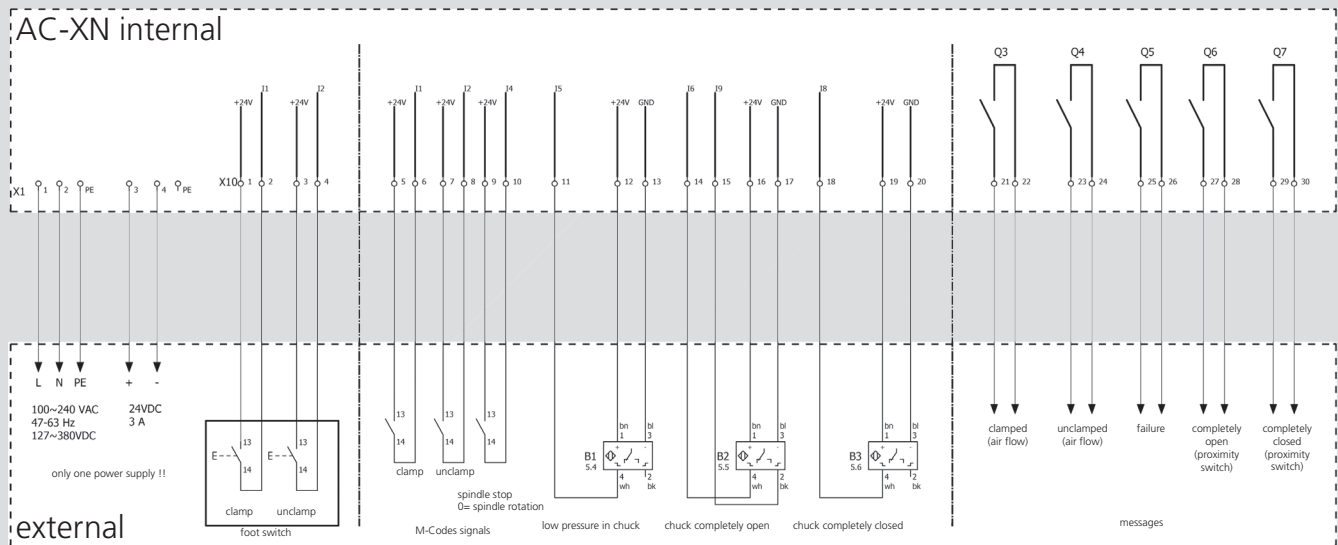
Control unit
WxHxD = 380 x 380 x 220 mm
Pneumatic module 1/2" or 3/4"
WxHxD = 300 x 300 x 130 mm
3 pcs. Proximity switch M8x1
(Id. No. 203500) included

- Pneumatic diagram
- Electric diagram

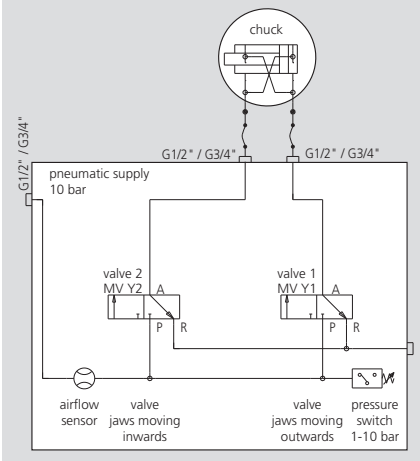
Electric connection AC-XN



Electric diagram AC-XN



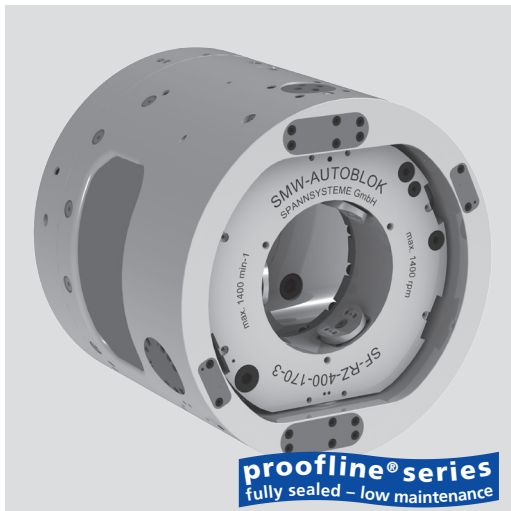
Pneumatic diagram AC-XN



SF-RZ

2 Position hydraulic ring indexing chuck

- 3 self centering jaws
- large evacuation windows for easy chip flow
- fully automatic and controlled indexing



Application/customer benefits

- Machining of couplings up to 5 1/2" in one set up
- Indexing 180°
- 3 self centering jaws external clamping
- Compact design and light weight
- Standard mounting for easy retrofit on existing machines

Technical features

- Hydraulic operated, automatic ring indexing chuck
- All functions controlled by proximity switches
- Extremely accurate and rigid indexing mechanism
- Optional: pendulum clamping inserts, central coolant supply

Standard equipment

Chuck with mounting bolts

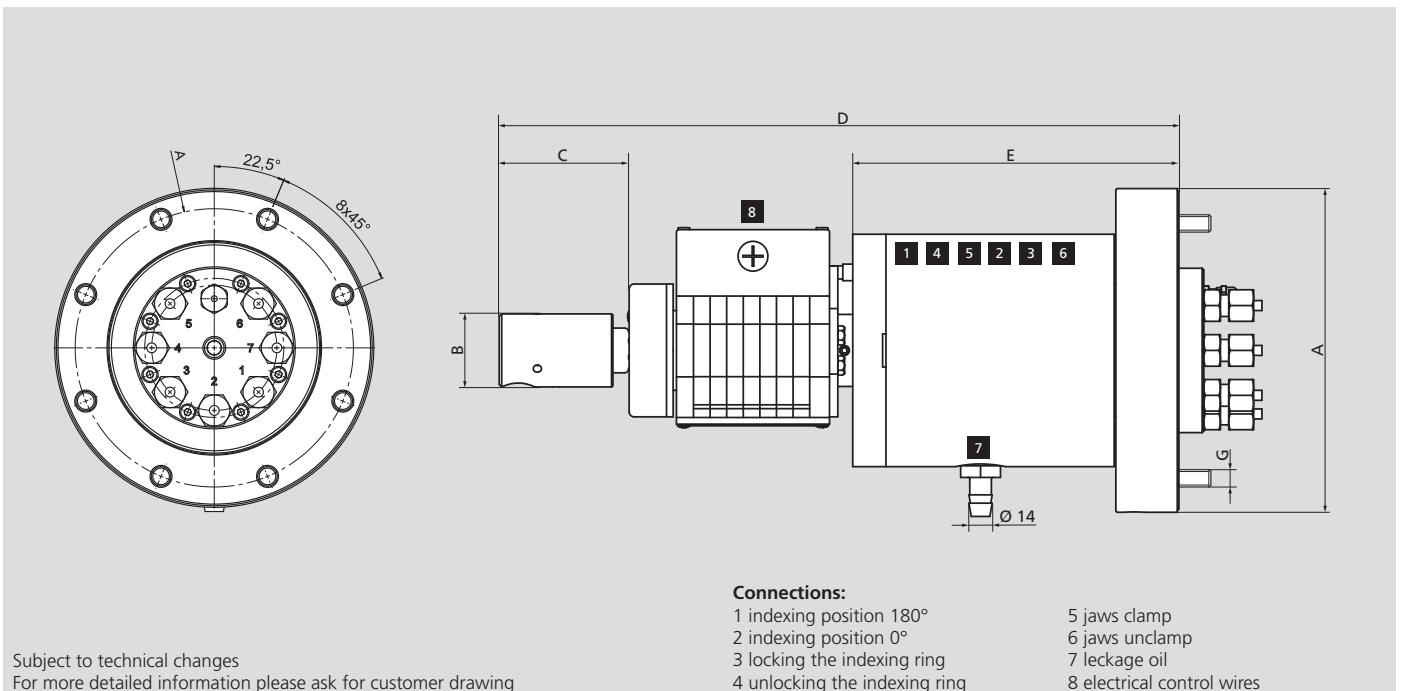
Ordering example

SF-RZ 400

Accessories

7-way oil distributor
Connection kit for coolant supply

MDV 65 7-way oil distributor



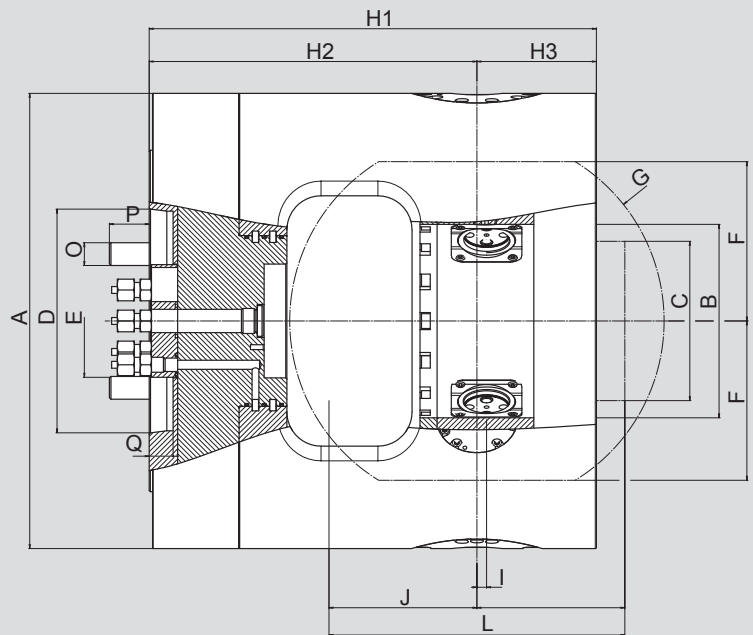
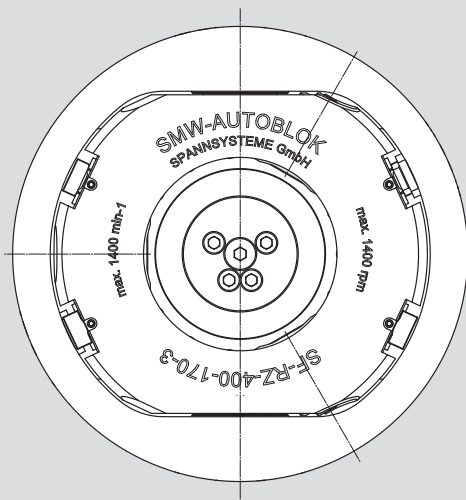
Connections:

- | | |
|-------------------------------|----------------------------|
| 1 indexing position 180° | 5 jaws clamp |
| 2 indexing position 0° | 6 jaws unclamp |
| 3 locking the indexing ring | 7 leakage oil |
| 4 unlocking the indexing ring | 8 electrical control wires |

SMW-AUTOBLOK Type			MDV 65
Id. No.			045920
	A	mm	195
	B	mm	44
	C	mm	78.3
	D	mm	331.2
	E	mm	196.5
	F	mm	170
	G	mm	8xM12
Max. speed		r.p.m.	1400
Weight		kg	28

For exact position of the connecting ports, please ask for a customer drawing.
All ports (1-6) are G 3/8".

Main dimensions and technical data

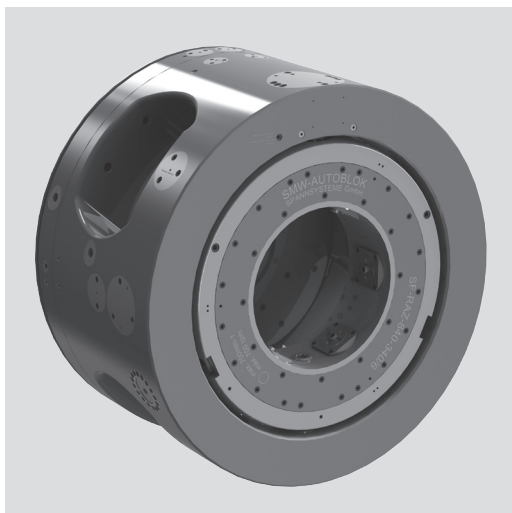


Subject to technical changes.
For more detailed information please ask for customer drawing.

SMW-AUTOBLOK Type			SF-RZ 400
Id. No.			054394
Chuck O.D.	A	mm	400
Indexing ring I.D.	B	mm	170
Max. workpiece O.D.	C	mm	140
Spindle mounting	D		A11
Connection flange O.D.	E	mm	99
Height indexing ring	F	mm	140
Swing indexing ring	G	mm	329
	H1	mm	393
	H2	mm	288
Indexing axis	H3	mm	105
Jaw axis to indexing axis	I	mm	8.5
	K	mm	130
Max. length of workpiece	L	mm	260
Clamping stroke	M	mm	5.7
Mounting bolts	O	mm	M20
	P	mm	35
	Q	mm	21
Max. speed		r.p.m.	1400
Max. pressure		bar	50
Max. clamping force		kN	120
Weight		kg	225
Moment of inertia		kg·m ²	6

2 Position hydraulic ring indexing chuck

- 3 self centering and 3 compensating jaws
- large evacuation windows for easy chip flow
- fully automatic and controlled indexing
- hydraulic actuation



Application/customer benefits

- Machining of couplings in one set up
- Indexing 180° in 2 seconds
- 6 jaw clamping for perfect roundness of the coupling = ideal for premium threads
- High-Low clamping (roughing-finishing)

Technical features

- Hydraulic, automatic ring indexing chuck
- All functions controlled by proximity switches
- Extremely accurate and rigid indexing mechanism
- For external clamping only
- Automatic central lubrication

Standard equipment

Chuck with mounting bolts

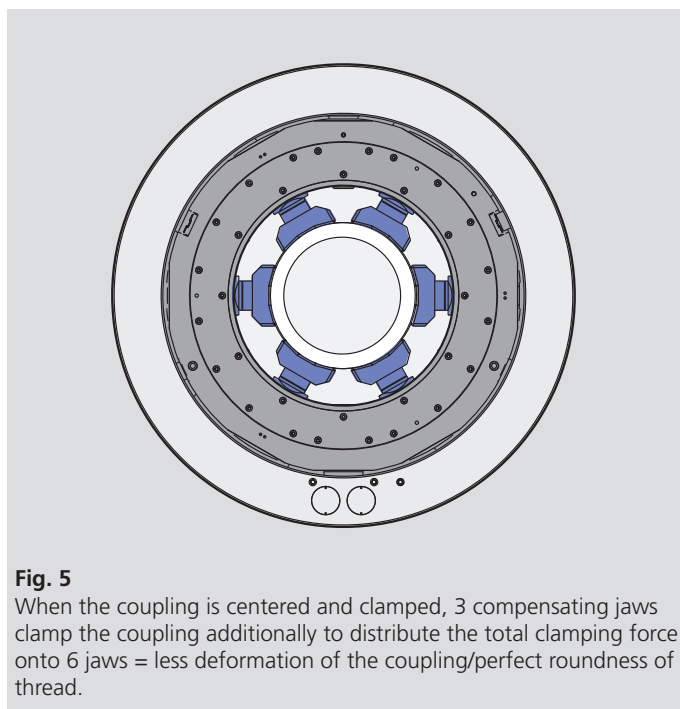
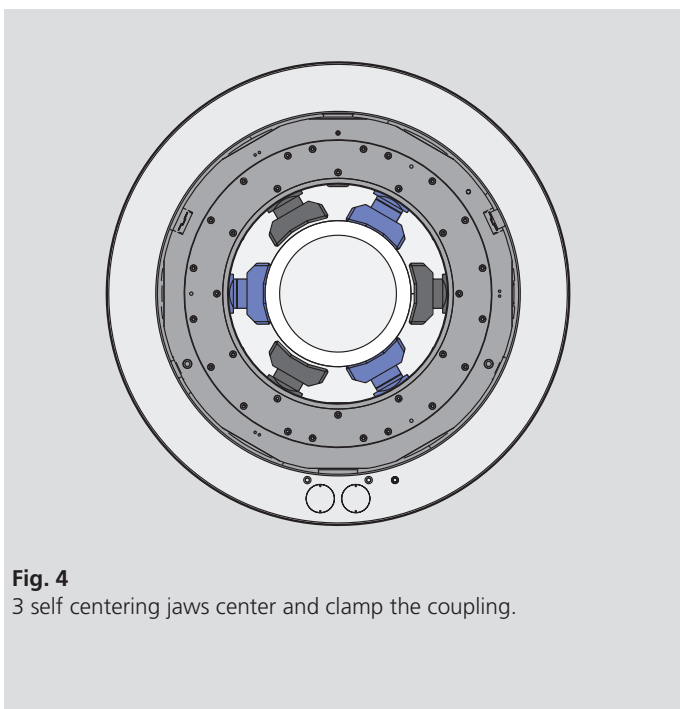
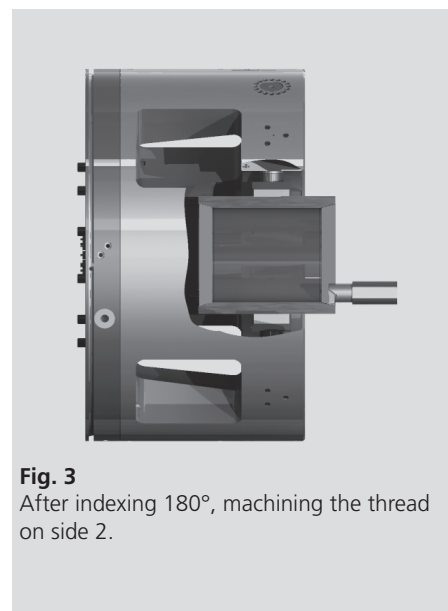
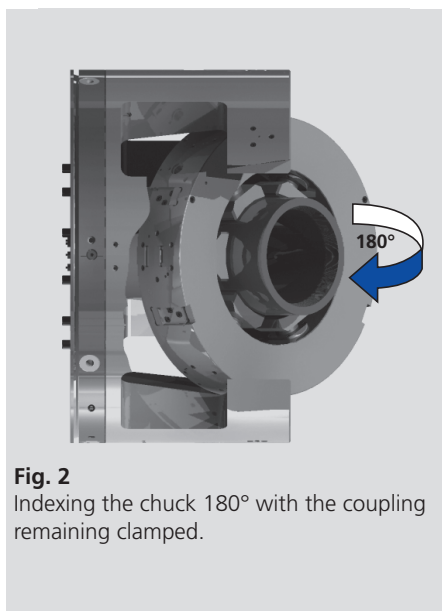
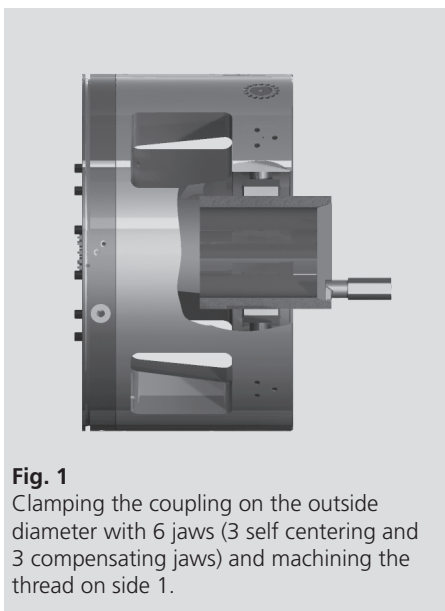
Ordering example

SF-RAZ 950-3+3 A 20

Accessories

Hydraulic manifold including electric manifold, hose kit

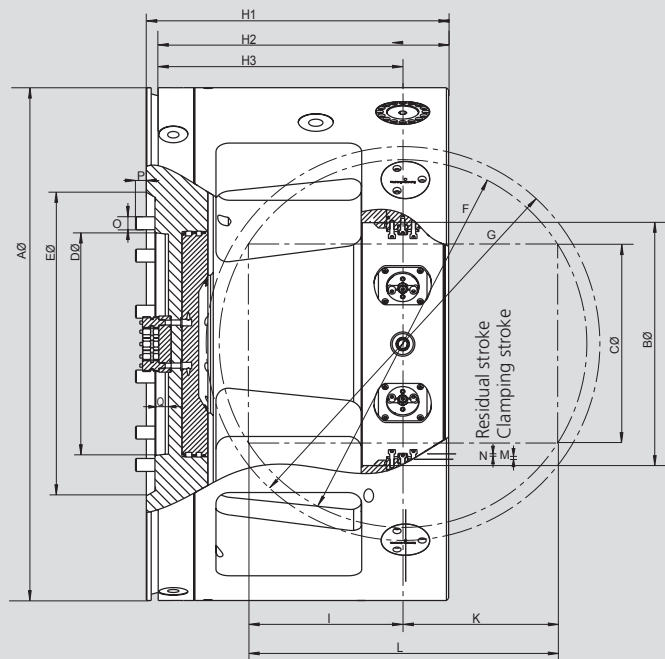
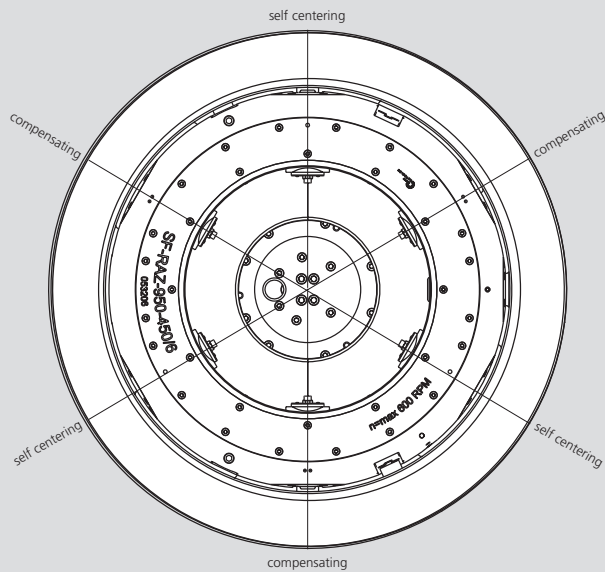
Machining of a coupling in 1 set up:



Main dimensions and technical data

Tongue & groove

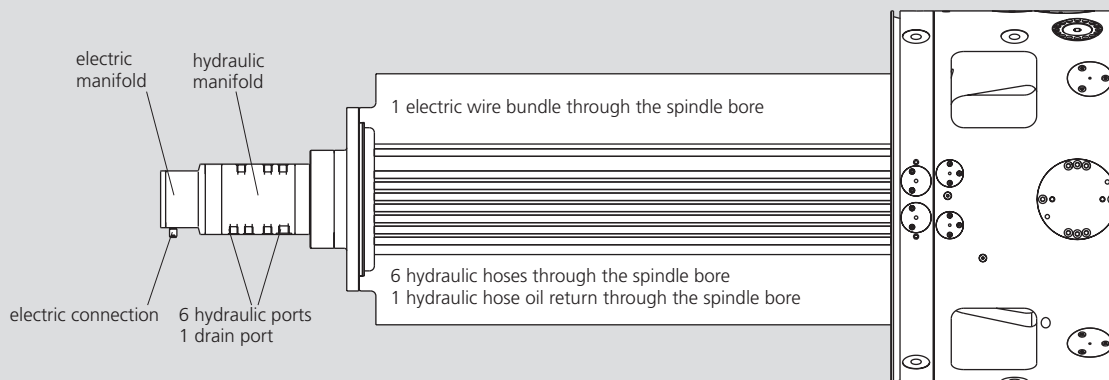
Data sheet shows no jaw dimensions and radial covers for switches and adjustments.
Data sheet shows only general dimensions!



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

SMW-AUTOBLOK Type			SF-RAZ 750	SF-RAZ 840	SF-RAZ 950	SF-RAZ 1050
Id. No.			053090	053097	053206	053900
Chuck O.D.	A	mm	750	840	950	1050
Indexing ring I.D.	B	mm	250	340	450	550
Max. workpiece O.D.	C	mm	185	275	368	468
Spindle mounting	D		A15	A15	A20	A20
Recess for spindle O.D.	E	mm	435	435	562	562
Max. swing workpiece	F	mm	480	570	680	780
Swing indexing ring	G	mm	526	618	728	828
	H1	mm	456	501	560	610
	H2	mm	440	485	544	594
	H3	mm	355	400	459	509
	I	mm	221.5	250	286	312
	K	mm	221.5	250	286	312
Max. length of workpiece	L	mm	443	500	572	624
Clamping at rec. clamping stroke	M	mm	5.5	5.5	5.5	5.5
Recom. residual stroke	N	mm	4.5	4.5	4.5	4.5
Total jaw stroke	S	mm	10	10	10	10
Mounting bolts	O	mm	M24	M24	M24	M24
	P	mm	37	37	36	36
Max. speed		r.p.m.	800	700	600	530
Max. pressure		bar (psi)	70 (1015)	70 (1015)	70 (1015)	70 (1015)
Max. grip force		kN (lbf)	250 (56202)	250 (56202)	250 (56202)	250 (56202)
Weight		kg (lbs)	1018 (2244)	1200 (2646)	1650 (3638)	2155 (4751)

Installation of SF-RAZ with hydraulic manifold, electric manifold and hose kit: (All these accessories must be ordered separately)

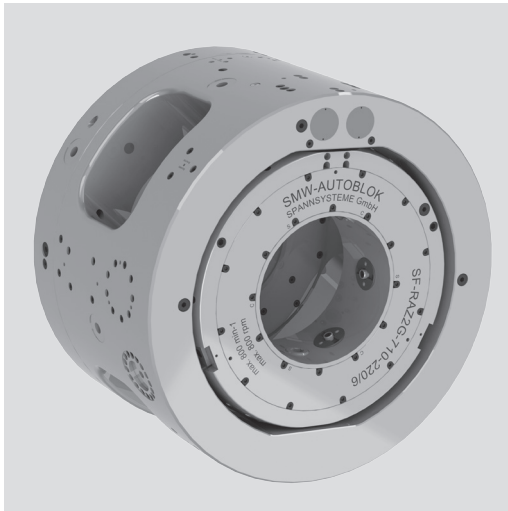


SF-RAZ2G

Tongue & groove

2 Position hydraulic ring indexing chuck

- 3 self centering and 3 compensating jaws
- very compact design
- fully automatic and controlled indexing
- hydraulic actuation



Application/customer benefits

- Machining of couplings in one set up
- Indexing 180° in 2 seconds
- 6 jaw clamping for perfect roundness of the coupling = ideal for premium threads
- High-Low clamping (roughing-finishing)

Technical features

- Better chuck to workpiece dia. Ratio
- Less chuck weight on the spindle
- Extremely accurate and rigid indexing mechanism with locking system free of clearance
- All functions controlled by proximity switches
- For external clamping only
- Automatic central lubrication

Standard equipment

Chuck with mounting bolts

Ordering example

SF-RAZ2G 710

Accessories

Hydraulic manifold including electric manifold, hose kit

Machining of a coupling in 1 set up:

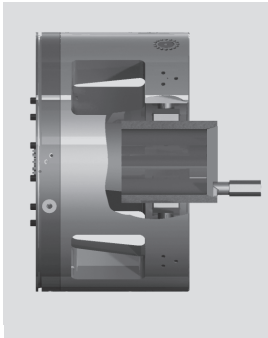


Fig. 1
Clamping the coupling on the outside diameter with 6 jaws (3 self centering and 3 compensating jaws) and machining the thread on side 1.

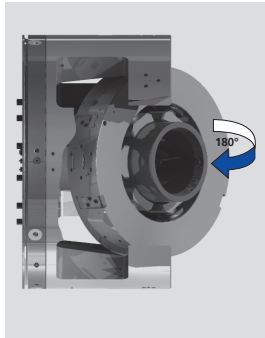


Fig. 2
Indexing the chuck 180° with the coupling remaining clamped.

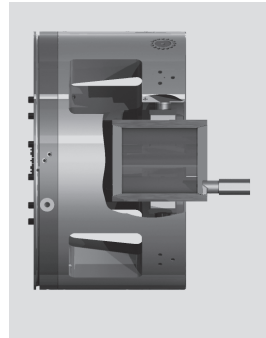


Fig. 3
After indexing 180°, machining the thread on side 2.

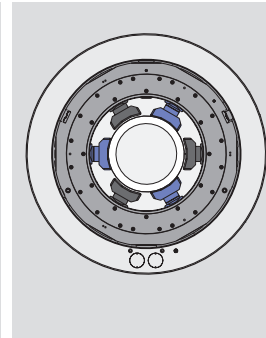


Fig. 4
3 self centering jaws center and clamp the coupling.

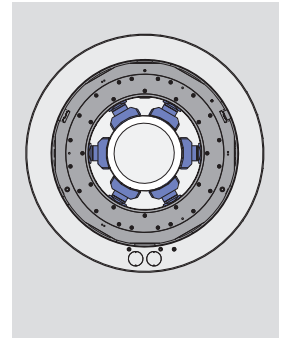


Fig. 5
When the coupling is centered and clamped, 3 compensating jaws clamp the coupling additionally to distribute the total clamping force onto 6 jaws = less deformation of the coupling/perfect roundness of thread.

Technical data

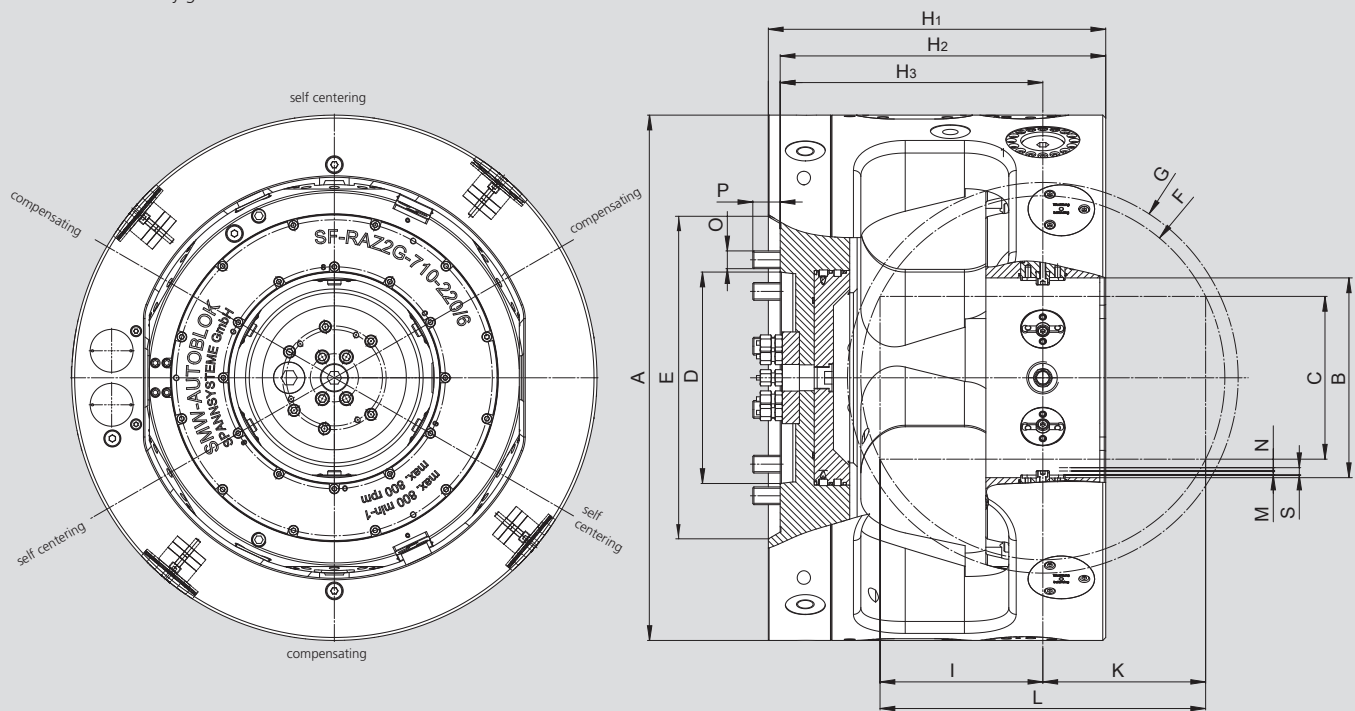
SMW-AUTOBLOK Type		SF-RAZ2G 710-220	SF-RAZ2G 780-290	SF-RAZ2G 880-390	SF-RAZ2G 1100-570
Id. No.		054720	on request*	on request*	on request*
Number of jaws		3+3	3+3	3+3	3+3
Chuck O.D.	mm	710	780	880	1.100
Stroke per jaw	mm	10	10	10	10
Pressure max.	bar	70	70	70	70
Clamping force at 50 bar	kN	175	175	175	175
Clamping diameter max.	mm	220	290	390	570
Speed max.	r.p.m	800	(*)	(*)	(*)
Weight	kg	800	~ 1.015	~ 1.380	~ 2.155
Coupling size / label size	inch	7 1/2"	9 5/8"	13 3/8"	20
Wall thickness (calc.)	mm	14.75	20	25	31

* Detailed dimensions on request.

Main dimensions and technical data

Tongue & groove

Data sheet shows no jaw dimensions and radial covers for switches and adjustments.
Data sheet shows only general dimensions!

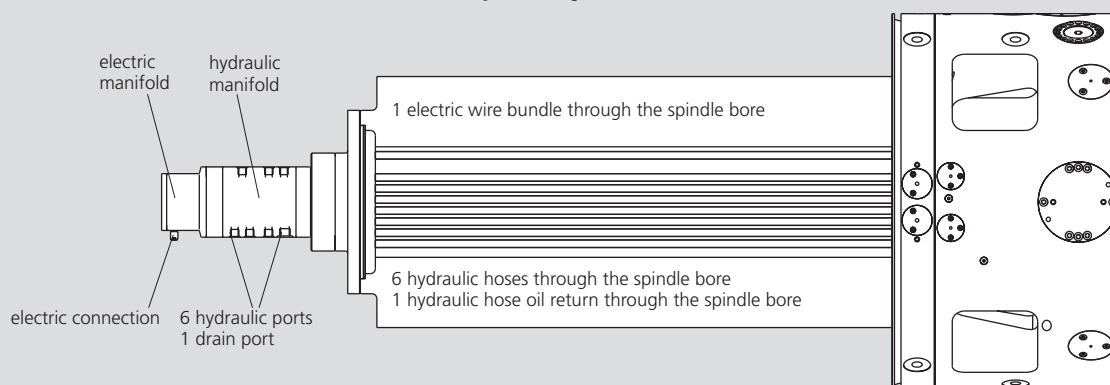


Subject to technical changes.
For more detailed information please ask for customer drawing.

SMW-AUTOBLOK Type			SF-RAZ2G 710-220	SF-RAZ2G 780-290	SF-RAZ2G 880-390	SF-RAZ2G 1100-570
Id. No.			054720	055170	on request*	on request*
Chuck O.D.	A	mm	710	780	880	1100
Indexing ring I.D.	B	mm	270	340		
Max. workpiece O.D.	C	mm	220	290	390	570
Spindle mounting	D		A15	A15		
Recess for spindle O.D.	E	mm	435	435		
Max. swing workpiece	F	mm	492	550		
Swing indexing ring	G	mm	528	598		
	H1	mm	456	491		
	H2	mm	440	475		
	H3	mm	355	390		
	I	mm	220	233.7		
	K	mm	220	233.7		
Max. length of workpiece	L	mm	440	467.4		
Clamping at rec. clamping stroke	M	mm	5.5	5.5		
Recom. residual stroke	N	mm	4.5	4.5		
Total jaw stroke	S	mm	10	10		
Mounting bolts	O	mm	M24	M24		
	P	mm	37	37		

* Detailed dimensions on request.

Installation of SF-RAZ2G with hydraulic manifold, electric manifold and hose kit: (All these accessories must be ordered separately)



HYND-S

INCH
serration

Hydraulic front end chuck Ø 180 - 400 mm

- oil feed through spindle wall
- 3 and 4 jaws

Application/customer benefits

- Machining of bars/shafts
- Complete spindle bore can be used
- For machines with rotary tables and special machines

HYND-S: Master jaws with INCH serration (1/16" x 90°)

Technical features

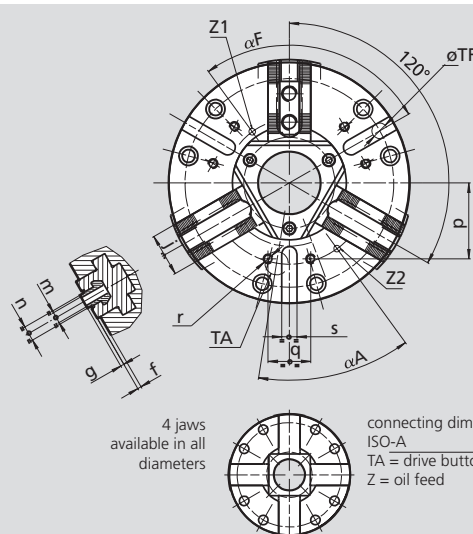
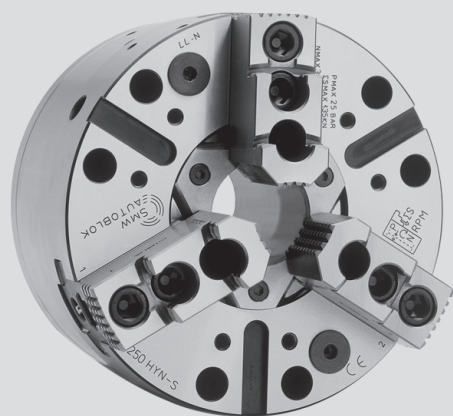
- Power chuck with big through hole, wedge hook design
- Built in cylinder with safety valves
- Chuck body case hardened
- Special mounting dimensions on request

Standard equipment

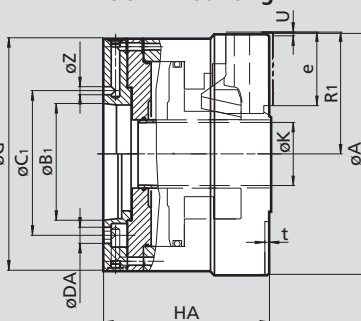
3 or 4 jaw chuck
1 set T-nuts with bolts
1 set of top jaws
Mounting bolts
Grease gun

Ordering example

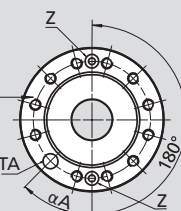
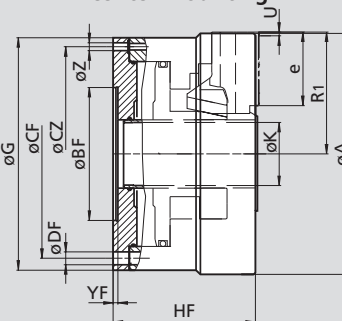
3 jaw chuck HYND-S 210-53-3 A06
or
4 jaw chuck HYND-S 250-66-4 Z140



ISO-A mounting

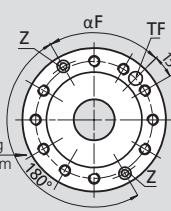


center mounting



180-226

connecting dim.
center mounting
TF = drive bottom
Z = oil feed



250-400

connecting dim.
center mounting
TF = drive bottom
Z = oil feed

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

Technical data

SMW-AUTOBLOK Type		HYND-S 180	HYND-S 210	HYND-S 226	HYND-S 250	HYND-S 315	HYND-S 400
Max. pressure	bar (psi)	20 (290)	25 (363)	22 (319)	25 (363)	22 (319)	25 (363)
Max. gripping force	kN (lbf)	72 (16186)	115 (25853)	115 (25853)	135 (30349)	160 (35969)	210 (47210)
Max. speed	r.p.m.	5000	4200	4200	3600	3100	2500
Moment of inertia	kg·m²	0.09	0.18	0.22	0.40	0.85	1.9
Weight (without top jaws) (ISO-A)	kg (lbs)	20 (44)	31 (68)	34 (75)	48 (106)	70 (154)	145 (320)

Dimensions

Type	A	G	K	R1 open	U stroke	Z	e	f	g	j	m	n	p	q	r	s	t
	mm	mm	mm	mm	mm (inch)	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
HYND-S 180	180	180	53	90.5	3.5 (0.14")	7	49.5	5	2.5	30	M10	14	-	-	-	-	-
HYND-S 210	212	212	53	108	3.5 (0.14")	7	66	4	2.5	36	M12	17	80	28	M8	16	5
HYND-S 226	226	226	65	116	3.5 (0.14")	7	66	4	2.5	36	M12	17	90	36	M8	16	5
HYND-S 250	254	245	66	128.5	4.0 (0.16")	8.5	77.5	4	3.5	45	M16	21	80	45	M10	16	5
HYND-S 315	315	305	102	160.5	4.5 (0.18")	8.5	93	4	3.5	45	M16	21	100	60	M10	20	5
HYND-S 400	400	335	130	202	5.5 (0.22")	10	116	5	3.5	62	M16	21	135	80	M12	20	5

Dimensions of chucks with center mounting

Type	BF H6	CF	CZ	DF	HF	YF	TF	αF	Mass
	mm	mm	mm	mm	mm	mm	mm	deg.	kg (lbs)
HYND-S 180	140	163	165	9	119	6	8	45°	17 (38)
HYND-S 210	110	190	190	11	126	5	12	75°	27 (60)
HYND-S 226	140	206	206	11	129	5	12	30°	30 (66)
HYND-S 250	140	220	226	13.5	150	5	16	96°	42 (93)
HYND-S 315	140	262	280	17	160	5	16	96°	60 (132)
HYND-S 400	200	280	235	17	190	5	20	65°	133 (293)

Dimensions of chucks with ISO-A mounting

Type	BA J4	CA	DA	HA	αA
	mm	mm	mm	mm	deg.
HYND-S 180 A5	82.563	104.8	11.5	137	45°
HYND-S 180 A6	106.375	133.4	13.5	140	45°
HYND-S 210 A5	82.563	104.8	11.5	146	45°
HYND-S 210 A6	106.375	133.4	13.5	146	45°
HYND-S 226 A6	106.375	133.4	13.5	149	45°
HYND-S 250 A6	106.375	133.4	13.5	175	45°
HYND-S 250 A8	139.719	171.4	17	175	45°
HYND-S 315 A8	139.719	171.4	17	185	45°
HYND-S 315 A11	196.869	235	21	185	45°
HYND-S 400 A8	139.719	171.4	17	220	45°
HYND-S 400 A11	196.869	235	21	220	45°

- oil feed through spindle wall
- 3 jaws

LONG STROKE
INCH serration

Application/customer benefits

- Machining of bars/shafts
- For special applications / special machines / rotary tables
- Complete spindle bore can be used

HYDL-S: long stroke INCH serration 3/32"x 90°

Technical features

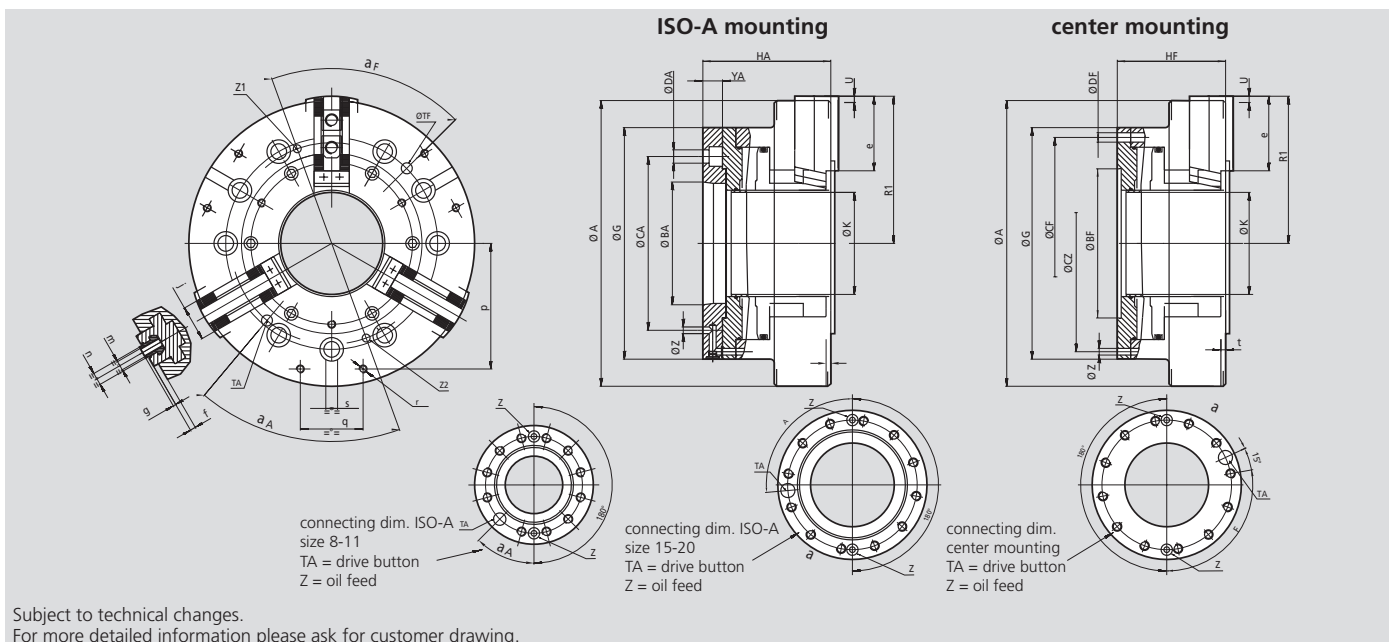
- Power chuck with big through hole, wedge hook design
- Built in cylinder with safety valves
- Chuck body case hardened
- Special mounting dimensions on request

Standard equipment

3 jaw chuck
1 set T-nuts with bolts
1 set of top jaws
Mounting bolts
Grease gun

Ordering example

3 jaw chuck HYDL-S 500 A11



Technical data

SMW-AUTOBLOK Type		HYDL-S 500	HYDL-S 630	HYDL-S 800
Radial jaw stroke	mm (inch)	11 (0.43")	13.5 (0.53")	13.5 (0.53")
Max. pressure	bar (psi)	30 (435)	25 (363)	25 (363)
Max. gripping force	kN (lbf)	150 (33721)	250 (56202)	250 (56202)
Max. speed	r.p.m.	1600	1300	1000
Moment of inertia	kg·m ²	5.1	16	48
Weight (without top jaws)	kg (lbs)	160 (353)	310 (683)	580 (1279)

Dimensions type HYDL-S

Type	A	G	K	R1 open	U stroke	e	f	g	j	m	n	Z
	mm	mm	mm	mm	mm (inch)	mm	mm	mm	mm	mm	mm	mm
HYDL-S 500	500	400	180	256	11.0(0.43")	116	9	3.5	62	M20	25.5	10
HYDL-S 630	630	540	250	323	13.5(0.53")	140	9	3.5	62	M20	25.5	10
HYDL-S 800	800	540	250	405	13.5(0.53")	165	9	3.5	75	M20	25.5	12

Dimensions of chucks with center mounting

All types Size	B _F H ₆	C _F	C _Z	D _F	H _F	Y _F	T _F	α _F
	mm	mm	mm	mm	mm	mm	mm	deg.
Ø 500	300	350	330.2	17	185	6	20	65°
Ø 630	380	463.6	463.6	27	210	6	24	65°
Ø 800	380	463.6	463.6	27	220	6	24	65°

Dimensions of chucks with ISO-A mounting

All types Size	BA J ₄	CA	DA	HA	α _A	ZA
	mm	mm	mm	mm	deg.	mm
Ø 500 A11	196.869	235	21	220	45°	10
Ø 500 A15	285.775	330.2	25	225	85°	12
Ø 630 A15	285.775	330.2	25	250	85°	12
Ø 630 A20	412.775	463.6	27	230	85°	12
Ø 800 A20	412.775	463.6	27	240	85°	12

