

Overview Pipe

Customer's OCTG product:

- Straight pipe
- Bent pipe

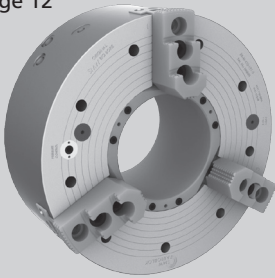
CHUCK

APPLICATION

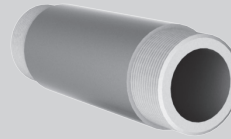
OCTG PRODUCT

CUSTOMER BENEFITS

BB-N
Page 12

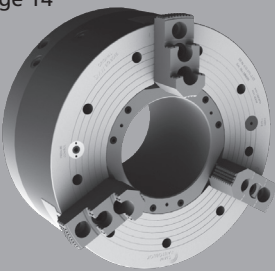


Threading of straight pipe with the original SMW Big Bore Type BB-N.

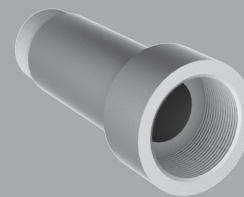


- **Quick jaw movement** more pipe per hour
- Can be used for other work pieces besides piping
- O.D. and I.D. clamping

BB-N-ES
Page 14

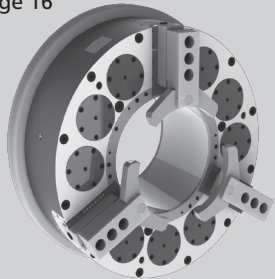


Threading of straight pipe with upset ends with the original SMW Big Bore Type BB-N-ES.

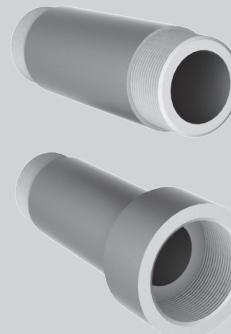


- **Quick jaw movement** more pipe per hour
- Large jaw stroke for easy loading of pipe and less danger of damaging threads when unloading

BB-SC
Page 16

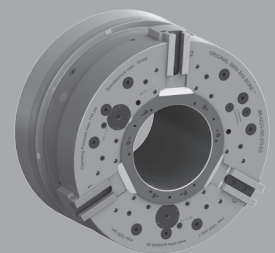


High production **spring clamp** chuck for threading of straight pipe with or without upset ends with the original SMW Big Bore Type BB-SC.

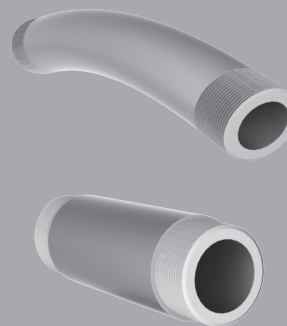


- **Full jaw stroke in 2 seconds** for highest productivity
- Fully sealed/low maintenance for highest availability of the machine
- Safe clamping of pipe even in longer machining processes with spring clamp technology

BB-AZ2G
Page 18

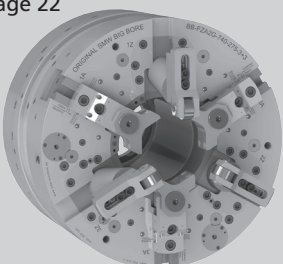


Threading of straight and bent pipe with the original SMW Big Bore Type BB-AZ2G.



- **Self centering or compensating clamping** for universal use
- Quick jaw movement
- External centering device needed when used in compensating mode
- O.D. clamping only

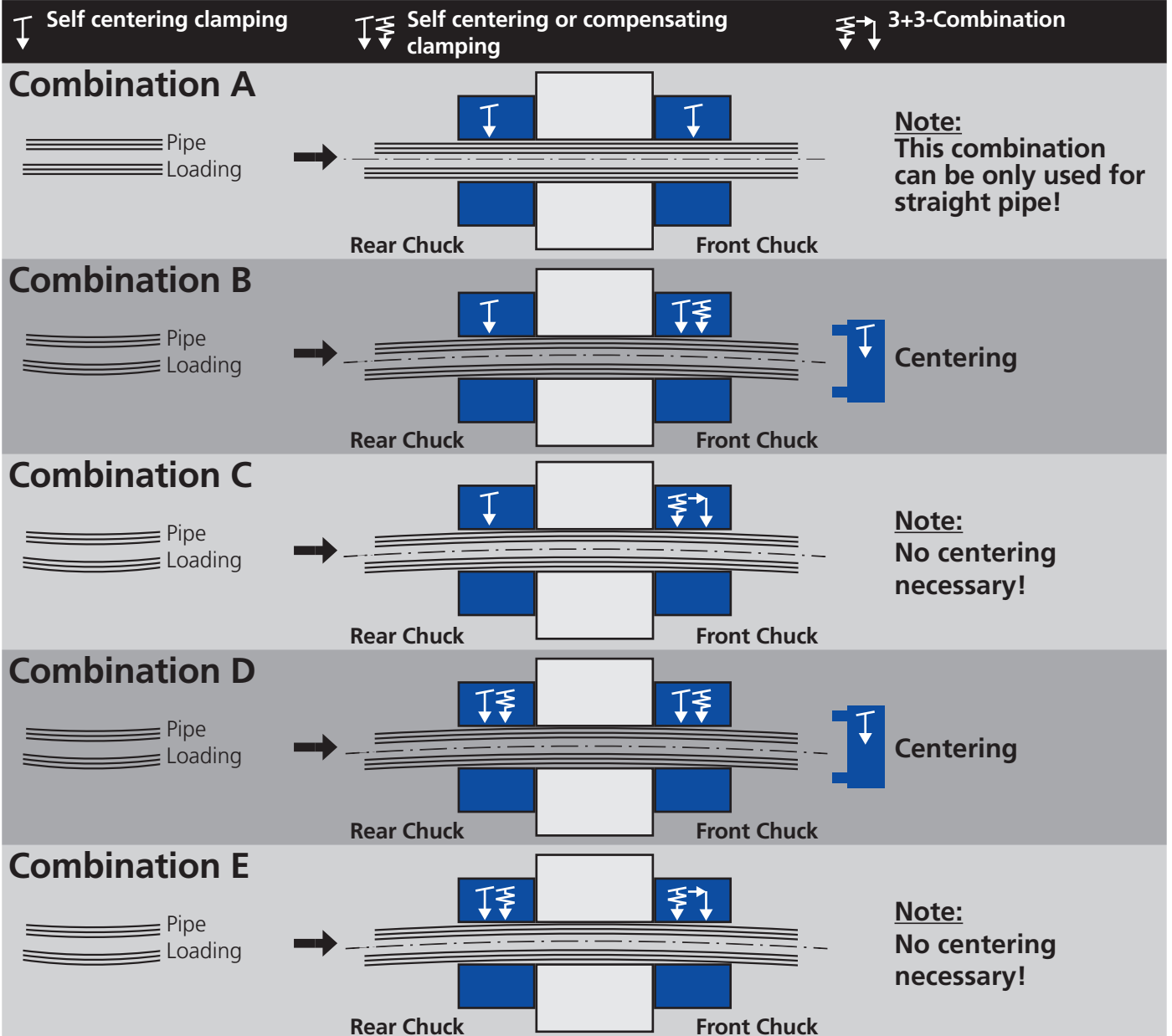
BB-FZA2G
Page 22



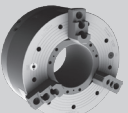
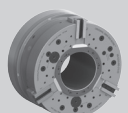
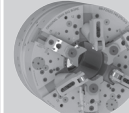
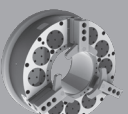
Threading of straight and bent pipe with integrated centering jaws with the original SMW Big Bore Type BB-FZA2G.



- **Integrated centering jaws for the pipe** = no external centering device needed
- Quick jaw movement
- Fully automatic programmable cycle



Respective chuck matrix:

Self centering clamping	Self centering or compensating clamping	3 jaw + 3 jaw combination
 BB-N/ BB-N-ES Page 12/14	 BB-AZ2G Page 18	 BB-FZA2G Page 22
 BB-SC Page 16		

Centering options:

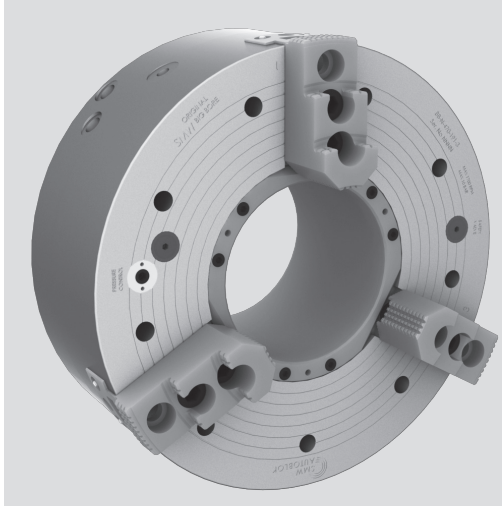
 Chuck CC Page 20	Turret by customer
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BIG BORE® BB-N

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 298-300)

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

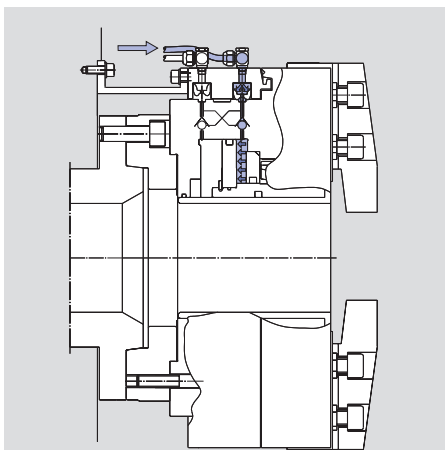


Fig. 1

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.

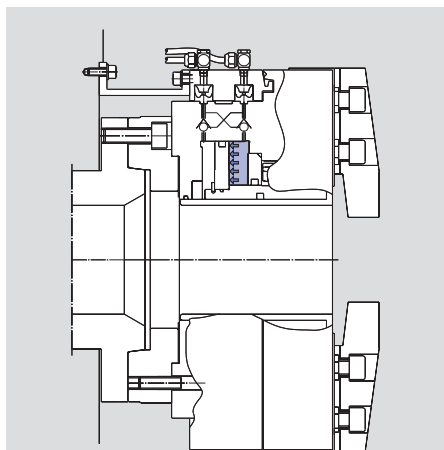


Fig. 2

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.

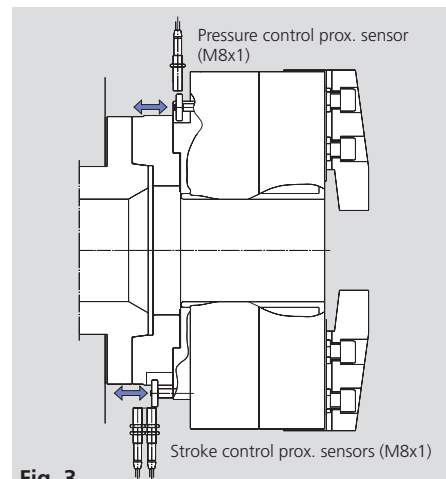
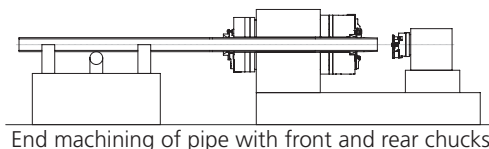


Fig. 3

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



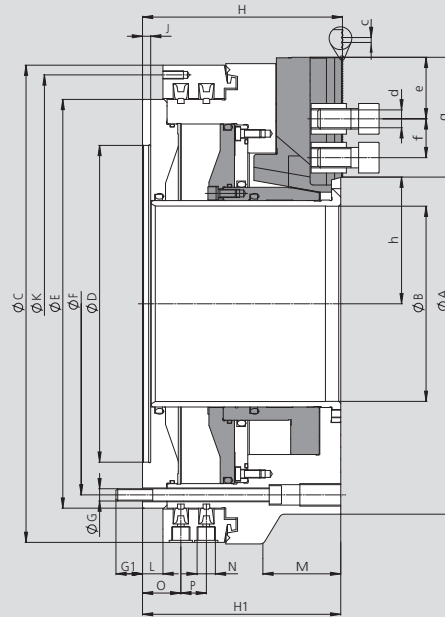
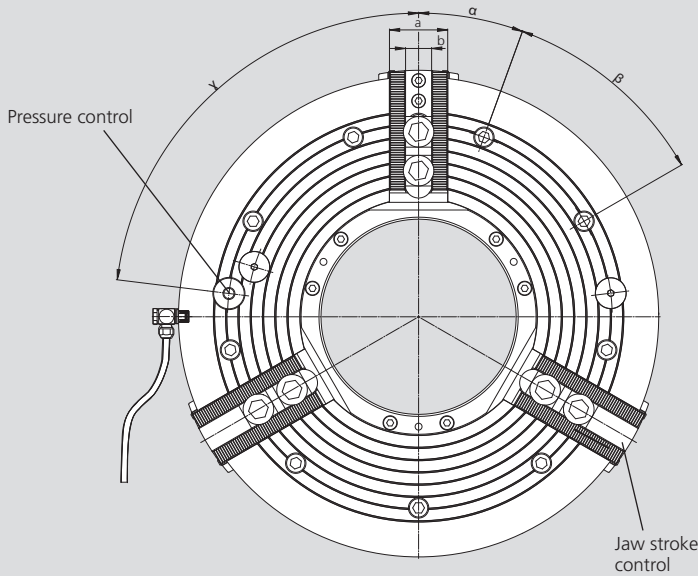
End machining of pipe with front and rear chucks

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	cm ²	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·m ²	3.22	5.66	8.53	8	15	28	71.25

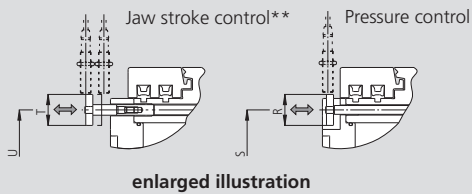
Main dimensions and technical data

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
Fixing bolts circle	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
	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
Thread circle 6x M8	H1	mm	194	194	223	223	223	261	303
	J	mm	8	8	8	8	8	8	8
	K	mm	448	448	550	550	585	666	830
Pneumatic connection	L	mm	20	20	20	20	20	20	25
	M	mm	70	-	98	98	-	115	154
	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
Serration	b	mm	25.5	25.5	25.5	25.5	25.5	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°
	d	mm	M20	M20	M20	M20	M20	M24	M24
Bolt ISO 4762 12.9 min.	e	mm	13	13	14	14	14	16	16
T-nuts distance min./max.	f	mm	38/85	38/85	38/102	38/102	38/94	47/103	47/130
Serration length min./max.	g	mm	117.5	117	138	138	130	142	171.5
(Pressure control)	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
	γ	deg.	83	83	60	60	60	60	60