

Clamping of pipe with

BIG BORE 2G chucks

BB-N-EXL2G

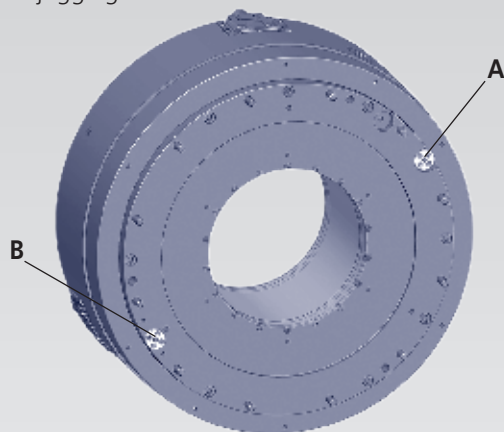
BB-AZ2G

BB-FZA2G

BB-EXL-SC2G

BIG BORE BB-N-EXL2G

- Self centering
- Extra long jaw stroke
- Jaw jogging

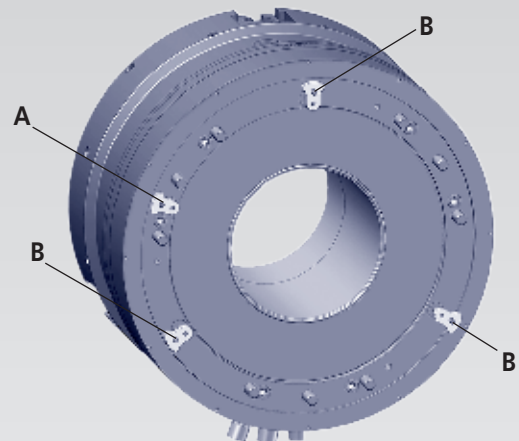


Safety features:

- A:** Pressure control
- B:** Stroke control

BIG BORE BB-AZ2G

- Self centering or compensating
- Extra long jaw stroke

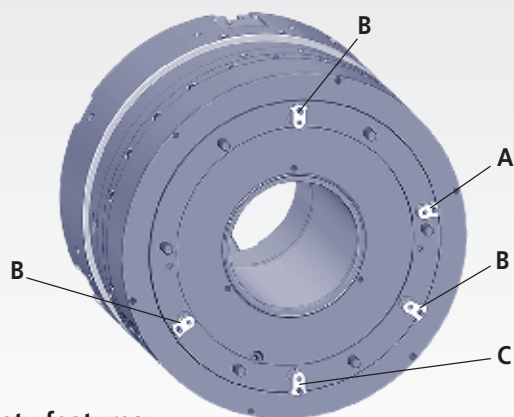


Safety features:

- 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)

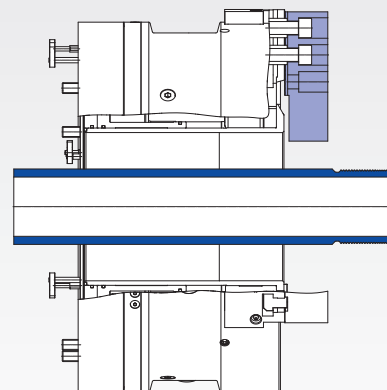


Safety features:

- 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.

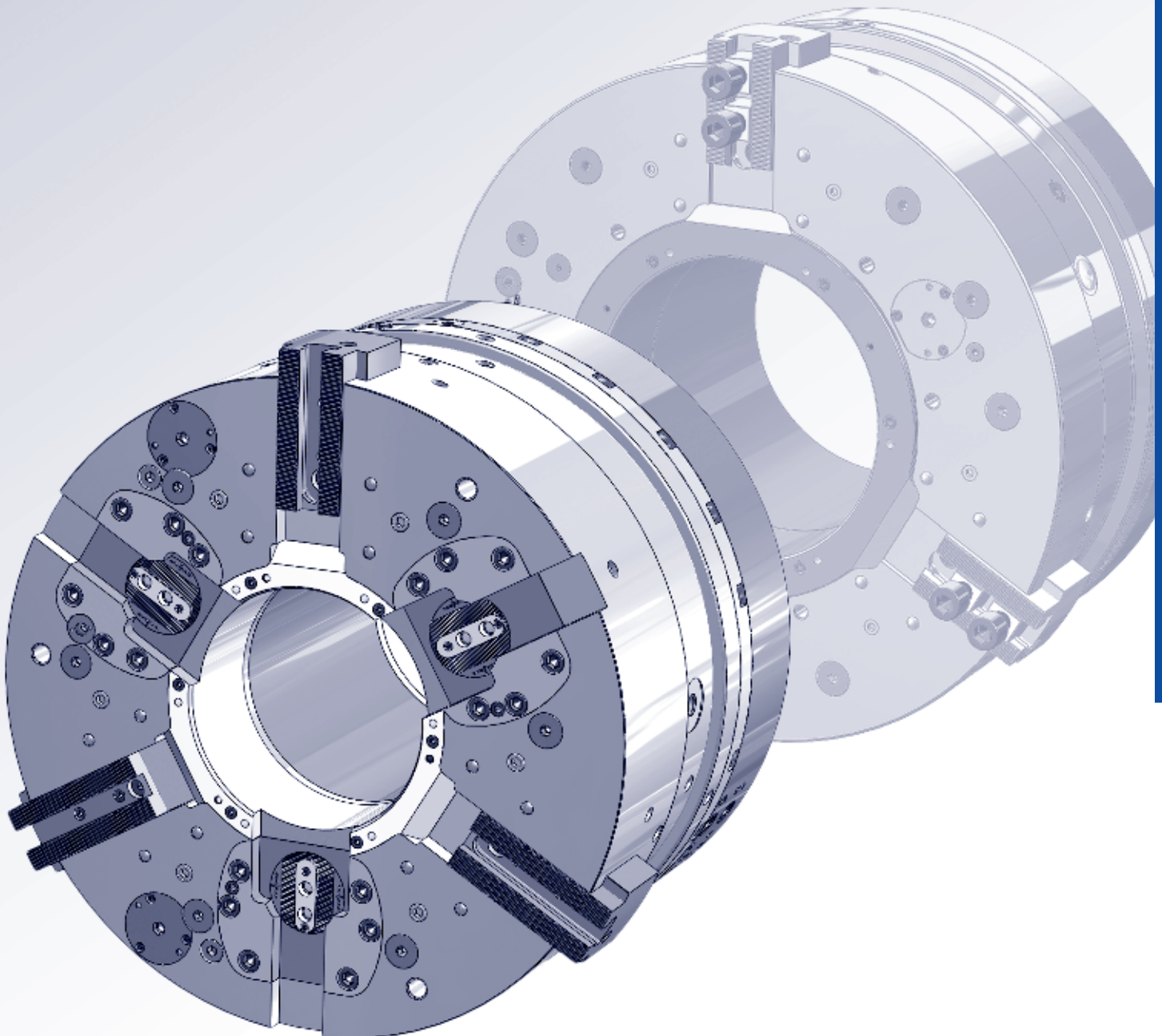
Individual stroke control for each jaw: In compensating clamping mode, all 3 jaws of the Big Bore 2G chucks make a different radial movement to compensate for the misalignment of the pipe to be clamped. A single central jaw stroke control cannot detect if the jaw stroke on one of the master jaws bottoms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

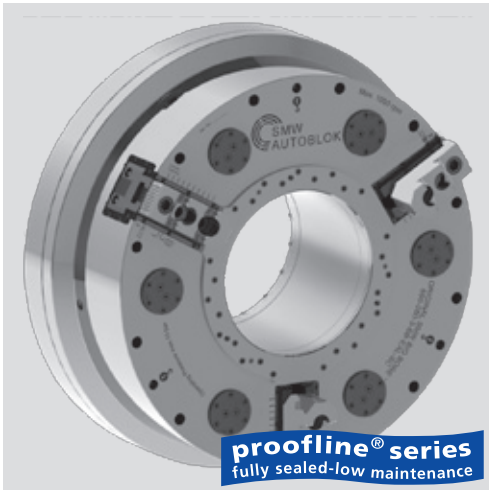


BIG BORE® BB-EXL-SC2G

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

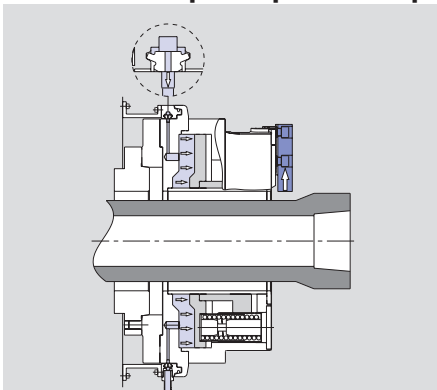


Fig. 1

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.

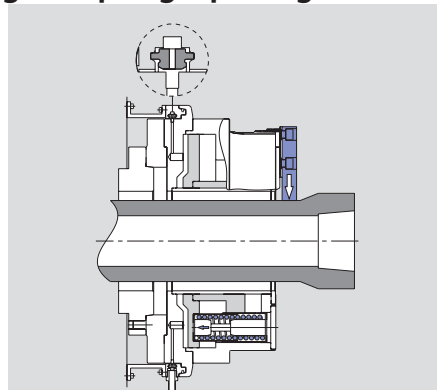


Fig. 2

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.

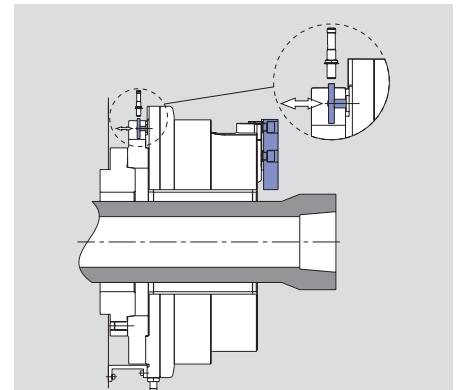
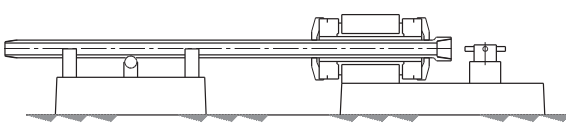
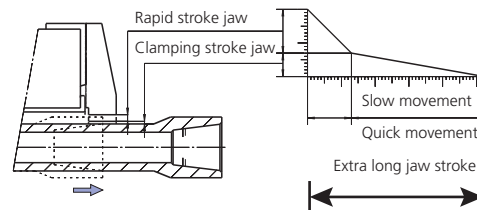


Fig. 3

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



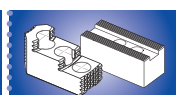
Technical data

SMW-AUTOBLOK Type		BB-EXL-SC2G 510-191			BB-EXL-SC2G 660-280			BB-EXL-SC2G 900-390		
Id. No.		77784353			77784366			77784388		
Chuck trough hole	mm	191			280			390		
Total stroke per jaw	mm	38.5			38.5			38.5		
Rapid stroke per jaw*	mm	30			30			30		
Clamping stroke per jaw	mm	8.5			8.5			8.5		
Opening pressure with all springs	bar	5			5			5		
Max. gripping force at 3/6/9 springs	kN	57	114	-	82	164	-	82	164	245
Max. speed	r.p.m	1100			1000			680		
Air consumption to open at 6 bar (73 psi)	l	37			92			125		
Weight (without top jaws)	kg	318			500			950		
Moment of inertia	kg-m ²	14			36			117		

*must not be used for clamping



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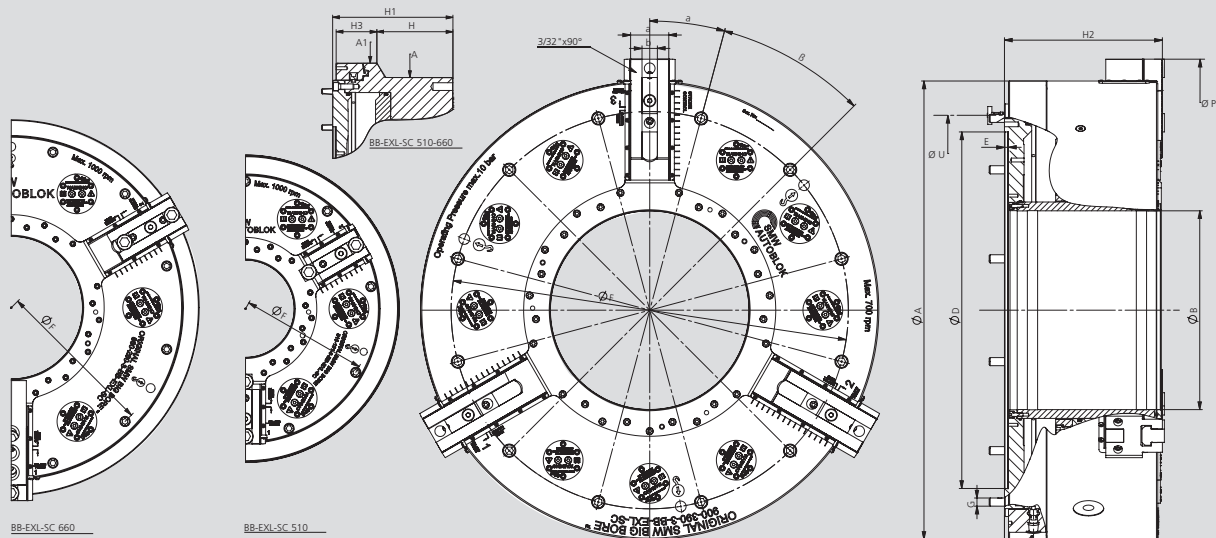


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BIG BORE® BB-EXL-SC2G

INCH serration

Main dimensions and technical data



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

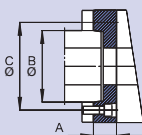
I.D. of air hose
min. 13 mm / 1/2"
(3/4" from size 660)

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
	DH6	mm	310	450	700
	E	mm	8	8	8
	F	mm	502	632	780
	G		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
	max. swing	P	mm	604	760
a		mm	57	62	75
b		mm	25.5	25.5	30
α°			20	15	15
β°			9x40°	12x30°	12x30°
Rapid stroke	U	mm	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

Mounting
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