

# Clamping of pipes with

# BIG BORE 2G chucks

## BB-EXL2G

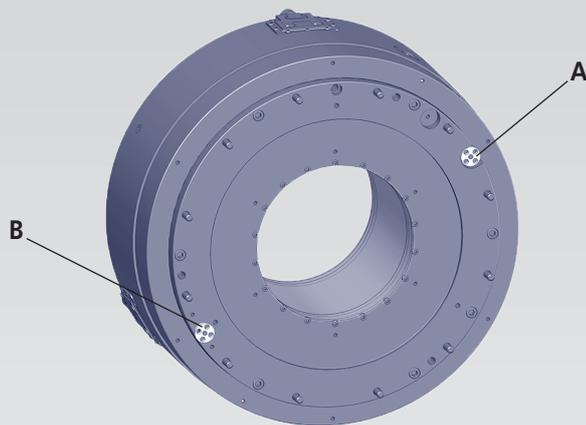
## BB-AZ2G

## BB-FZA2G

## BB-EXL-SC2G

### BIG BORE BB-N-EXL2G

- Self centering
- Extra long jaw stroke
- Jaw jogging

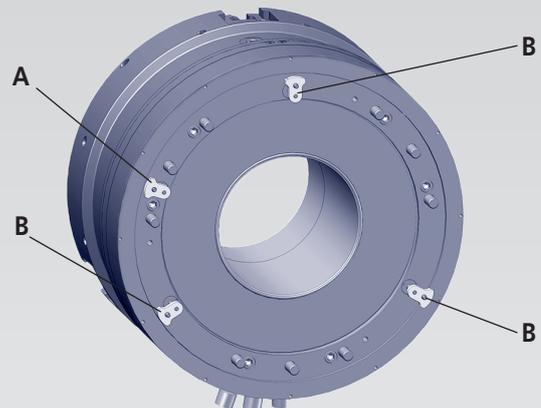


#### Safety features:

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

### BIG BORE BB-AZ2G

- Self centering or compensating
- Extra long jaw stroke

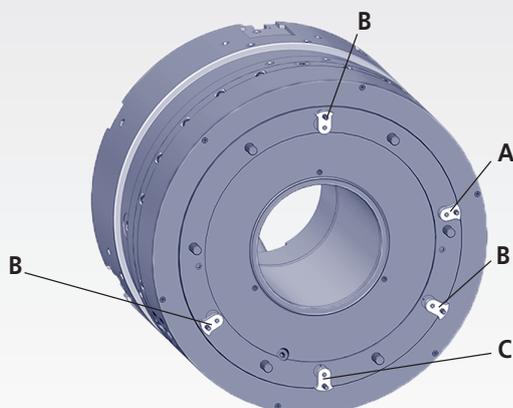


#### Safety features:

- 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)

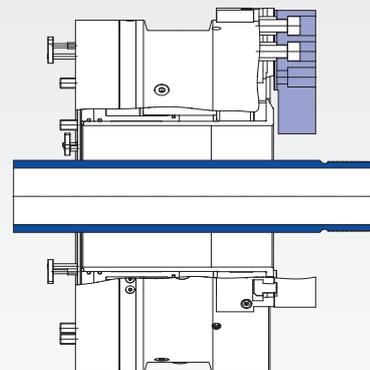


#### Safety features:

- A:** Pressure control for compensating jaws
- B:** Individual stroke control for each compensating 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 allows 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 safe loading and unloading of the pipe.

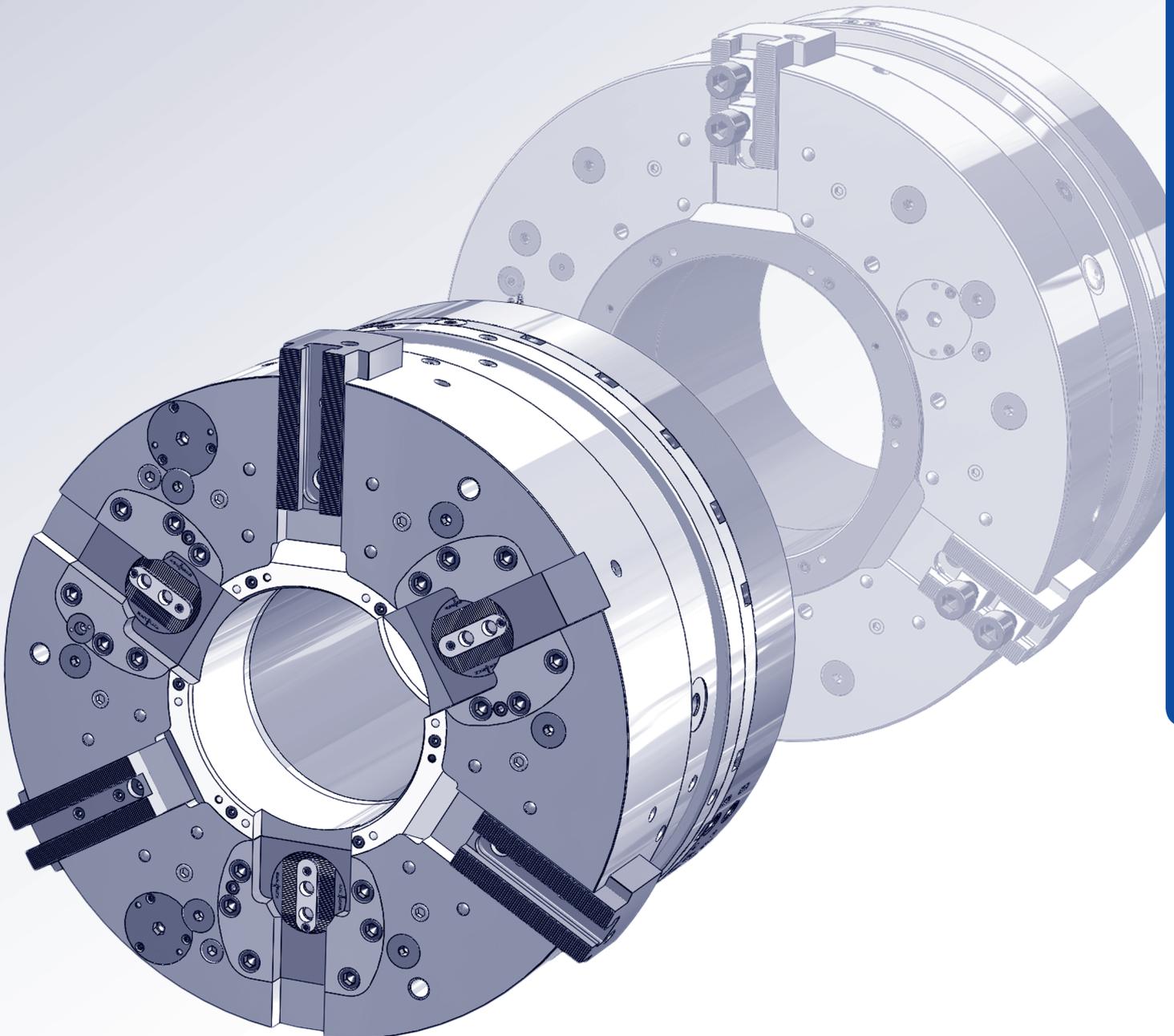
**Individual stroke control for each jaw:** In compensating clamping mode, all 3 jaws of the Big Bore 2G chucks make a different radial movement to compensate for the misalignment of the pipe to be clamped. A single central jaw stroke control cannot detect if the jaw stroke on one of the master jaws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

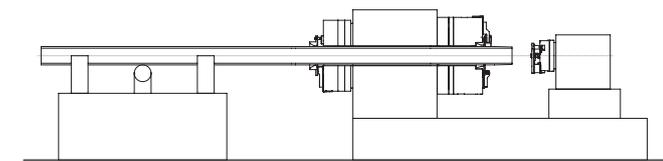
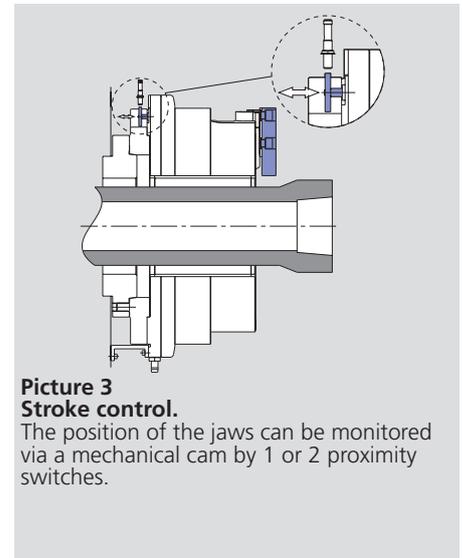
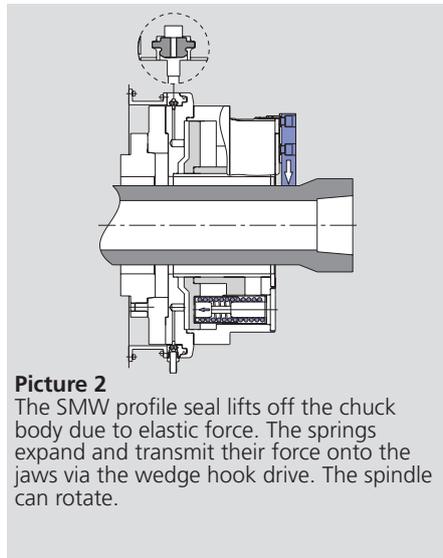
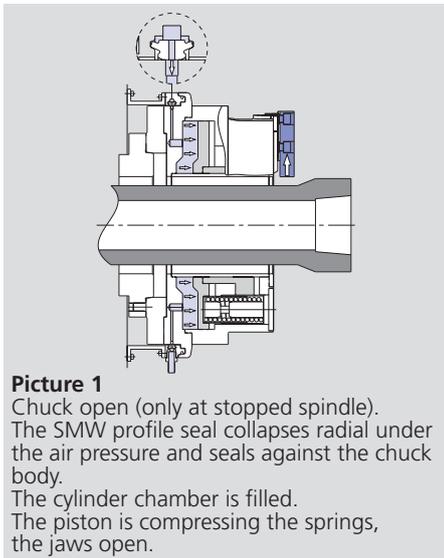
### Ordering example

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

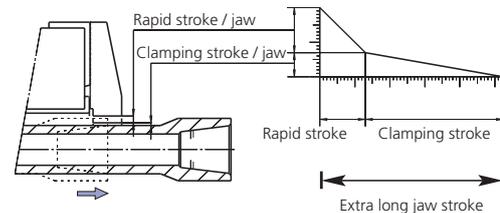
### Accessories

Air control

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



End machining of tubes with front and rear chucks



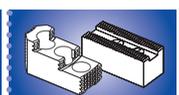
### Technical data

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		

\* May not be used for clamping.



SMW-AUTOBLOK  
347



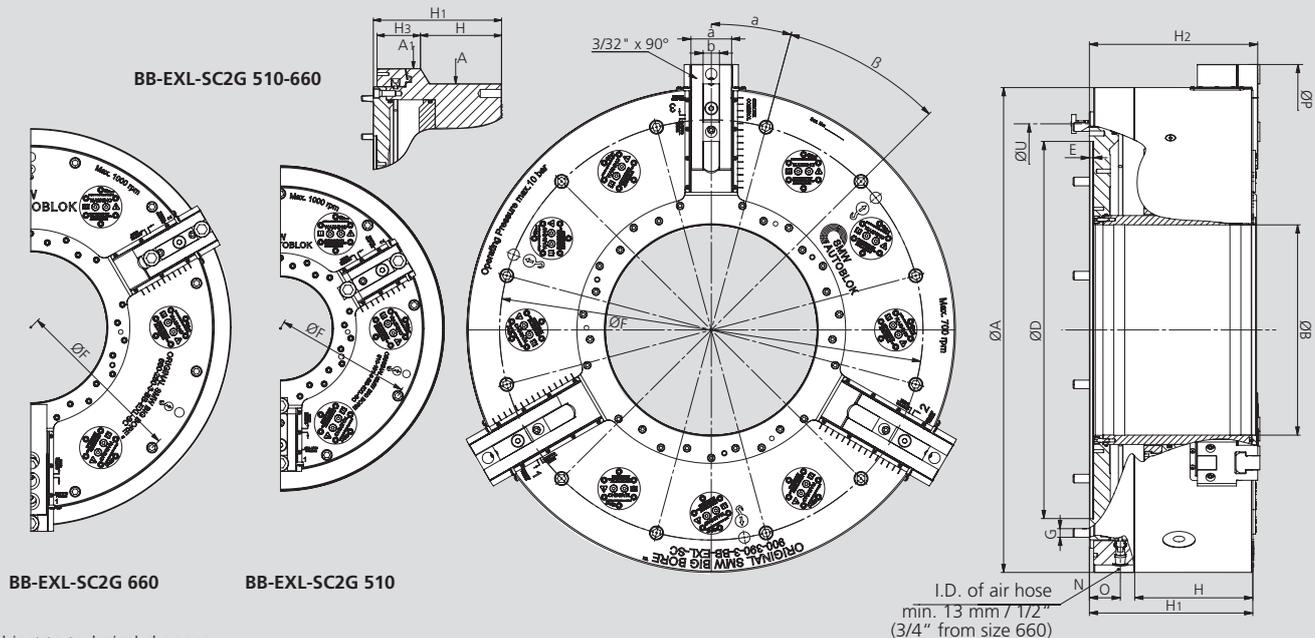
SMW-AUTOBLOK  
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# BIG BORE® BB-EXL-SC2G

INCH SERRATION

## Main dimensions and technical data

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

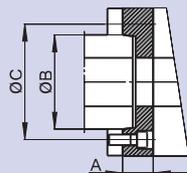


Subject to technical changes.  
For more detailed information please ask our customer service.

SMW-AUTOBLOK Type			BB-EXL-SC2G 510-191	BB-EXL-SC2G 660-280	BB-EXL-SC2G 900-390
<b>Mounting</b>			<b>Z310</b>	<b>Z450</b>	<b>Z700</b>
Through hole	<b>A</b>	mm	532	673	900
	<b>A1</b>	mm	610	738	-
	<b>B</b>	mm	191	280	390
	<b>D H6</b>	mm	310	450	700
	<b>E</b>	mm	8	8	8
	<b>F</b>	mm	502	632	780
	<b>G</b>	mm	M12 (9x)	M12 (12x)	M16 (12x)
	<b>H</b>	mm	170	152	215
	<b>H1</b>	mm	272	272	301
	<b>H2</b>	mm	279	279	310
	<b>N</b>	inch	G 1/2"	G 1/2"	G 1/2"
	<b>O</b>	mm	47	47	57
	Max. swing	<b>P</b>	mm	604	760
<b>a</b>		mm	57	62	75
<b>b</b>		mm	25.5	25.5	30
<b>α</b>		deg.	20	15	15
<b>β</b>		deg.	9 x 40°	12 x 30°	12 x 30°
	<b>U</b>	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

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