

Overview Pipe

Customer's OCTG product:

- Straight pipe
- Bent pipe

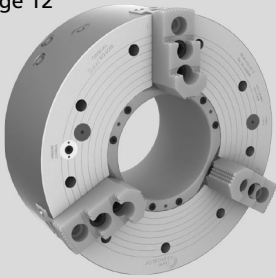
CHUCK

APPLICATION

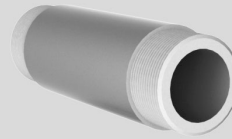
OCTG PRODUCT

CUSTOMER BENEFITS

BB-N
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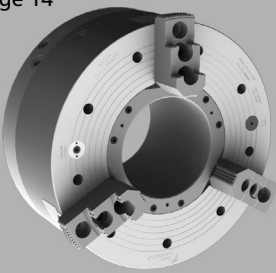


Threading of straight pipe with the original SMW Big Bore Type BB-N.

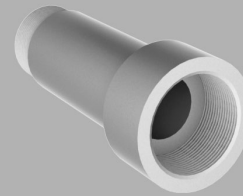


- **Quick jaw movement** more pipe per hour
- Can be used for other work pieces besides piping
- O.D. and I.D. clamping

BB-N-ES
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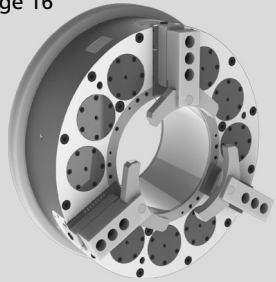


Threading of straight pipe with upset ends with the original SMW Big Bore Type BB-N-ES.

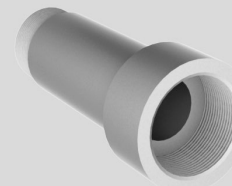
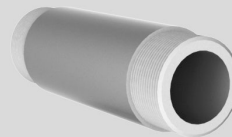


- **Quick jaw movement** more pipe per hour
- Large jaw stroke for easy loading of pipe and less danger of damaging threads when unloading

BB-SC
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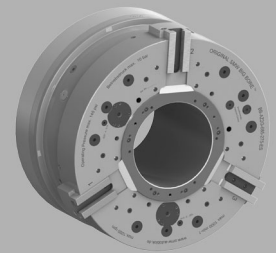


High production **spring clamp** chuck for threading of straight pipe with or without upset ends with the original SMW Big Bore Type BB-SC.

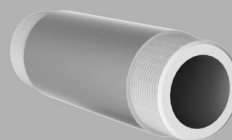
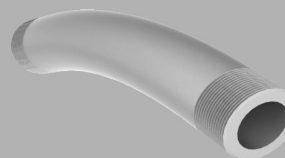


- **Full jaw stroke in 2 seconds** for highest productivity
- Fully sealed/low maintenance for highest availability of the machine
- Safe clamping of pipe even in longer machining processes with spring clamp technology

BB-AZ2G
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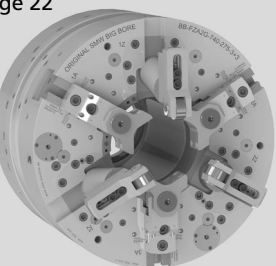


Threading of straight and bent pipe with the original SMW Big Bore Type BB-AZ2G.

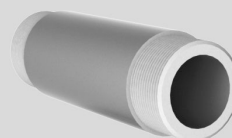
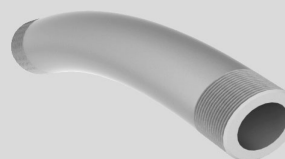


- **Self centering or compensating clamping** for universal use
- Quick jaw movement
- External centering device needed when used in compensating mode
- O.D. clamping only

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

Pipe Clamping

Recommended Combinations

Self centering clamping	Self centering or compensating clamping	3+3-Combination
<p>Combination A</p> <p>Note: This combination can be only used for straight pipe!</p>	<p>Combination B</p> <p>Centering</p>	<p>Combination C</p> <p>Note: No centering necessary!</p>
<p>Combination D</p> <p>Centering</p>	<p>Combination E</p> <p>Note: No centering necessary!</p>	

Respective chuck matrix:

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

Centering options:

<p>Chuck CC Page 20</p>	<p>Turret by customer</p>
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Clamping of pipe with

BIG BORE 2G chucks

BB-N-EXL2G

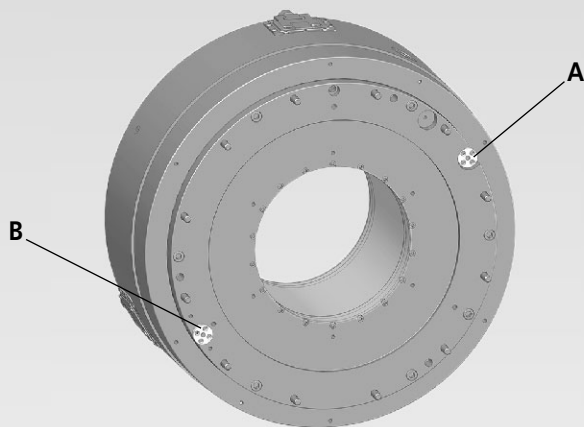
BB-AZ2G

BB-FZA2G

BB-EXL-SC2G

BIG BORE BB-N-EXL2G

- Self centering
- Extra long jaw stroke
- Jaw jogging

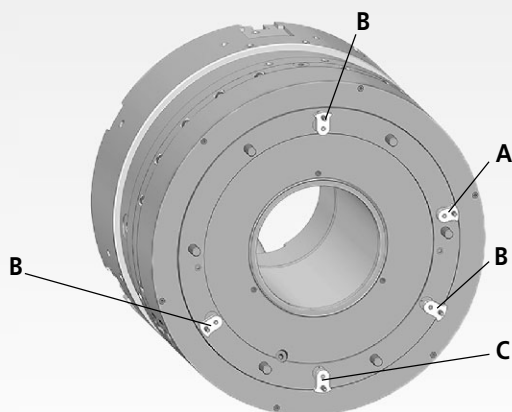


Safety features:

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

BIG BORE BB-FZA2G

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

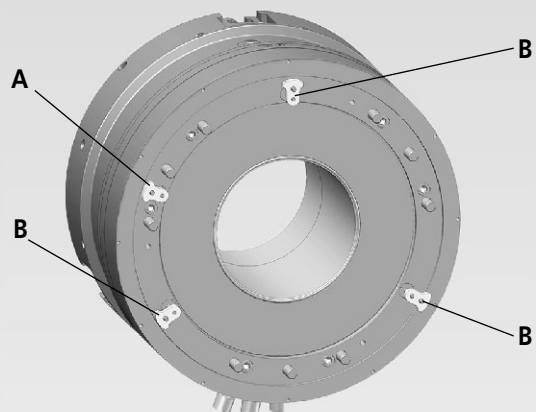


Safety features:

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

BIG BORE BB-AZ2G

- Self centering or compensating
- Extra long jaw stroke

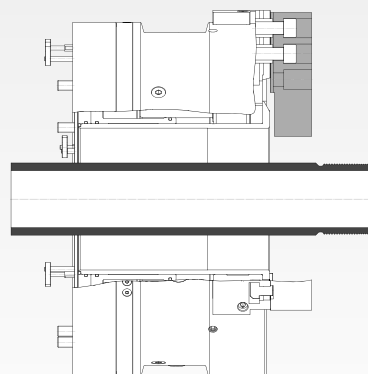


Safety features:

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

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.

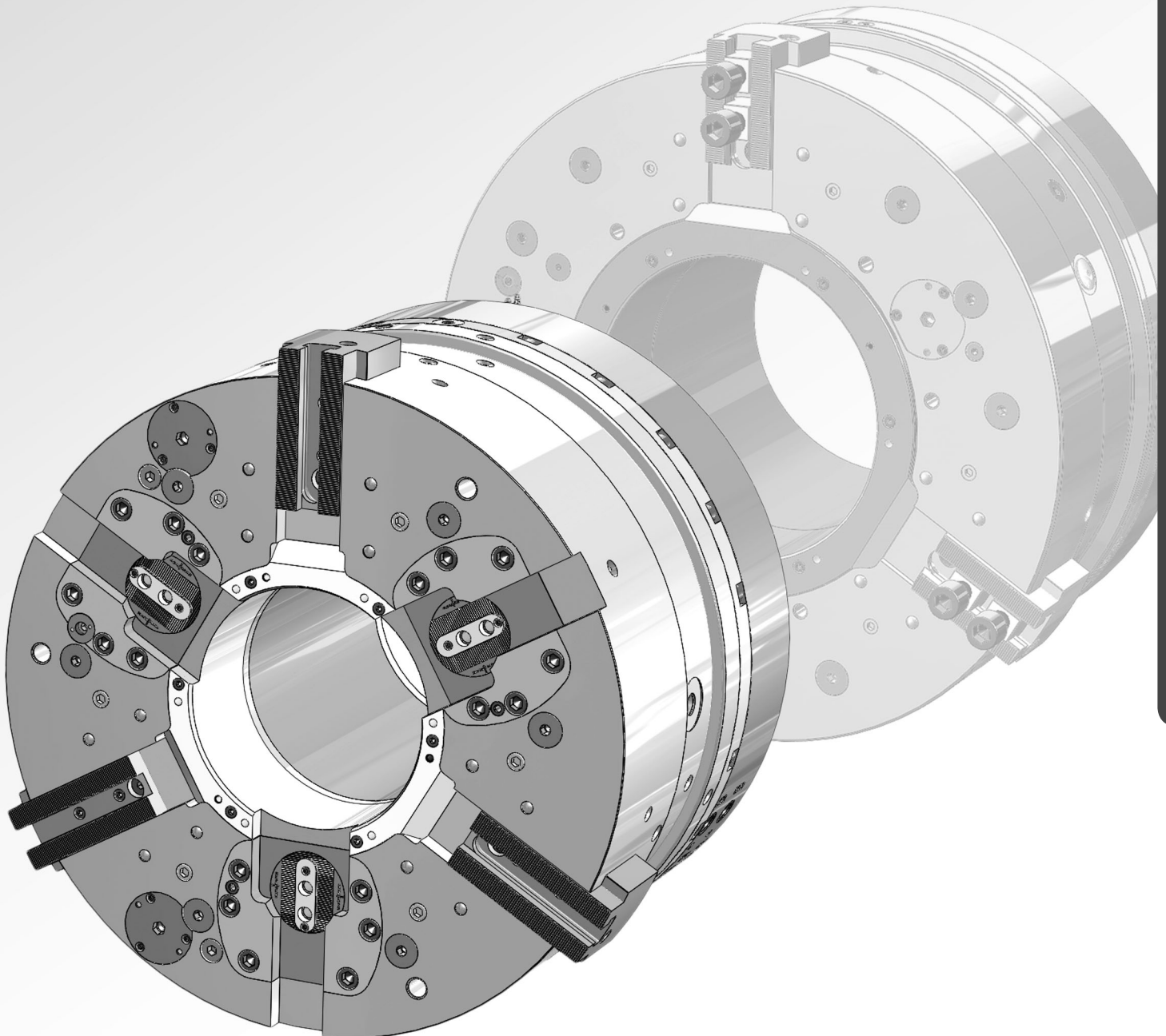
Individual stroke control for each jaw: In compensating clamping mode, all 3 jaws of the Big Bore 2G chucks make a different radial movement to compensate for the misalignment of the pipe to be clamped. A single central jaw stroke control cannot detect if the jaw stroke on one of the master jaws bottoms 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-FZA2G

INCH SERRATION

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



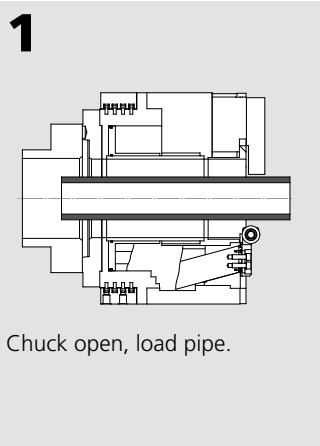
Application/customer benefits

- 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

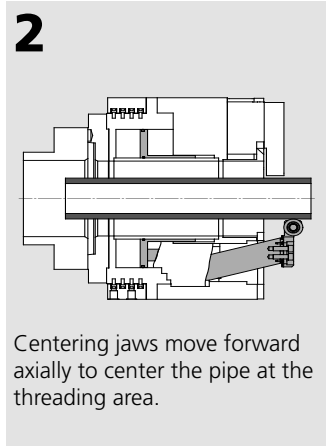
Technical features

- 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

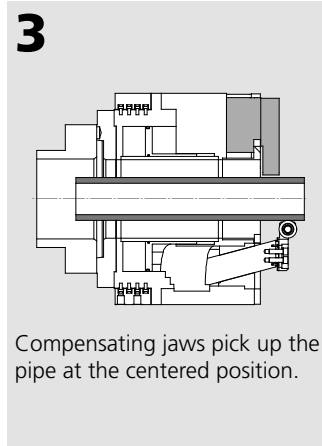
Machining of bent pipe with chuck with integrated centering jaws:



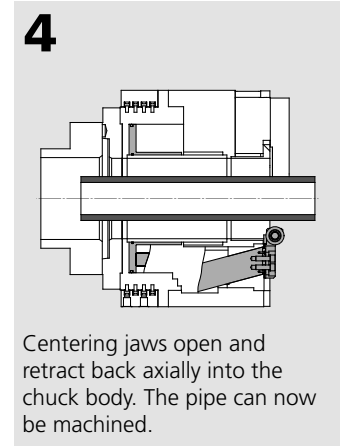
Chuck open, load pipe.



Centering jaws move forward axially to center the pipe at the threading area.



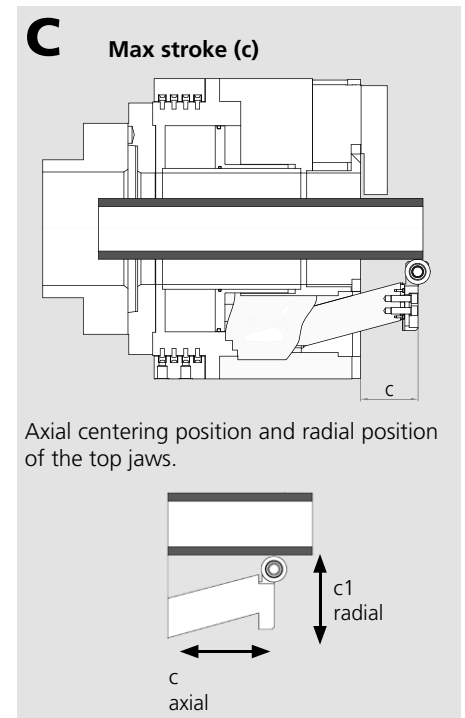
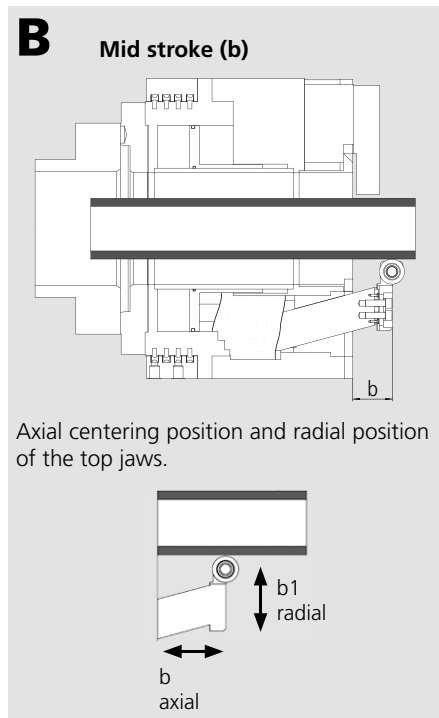
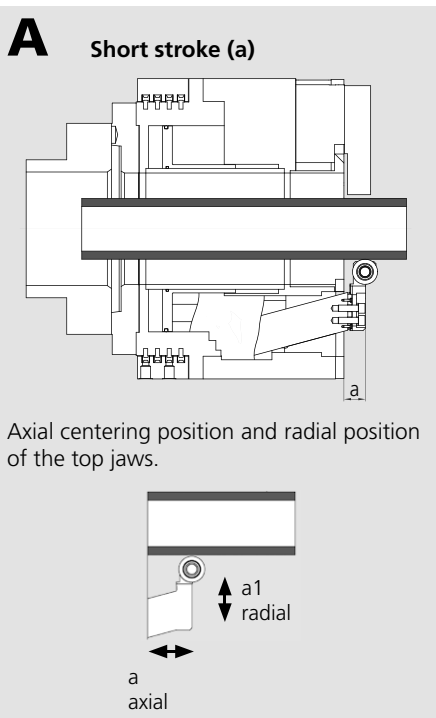
Compensating jaws pick up the pipe at the centered position.



Centering jaws open and retract back axially into the chuck body. The pipe can now be machined.

Adjustability of the axial centering position

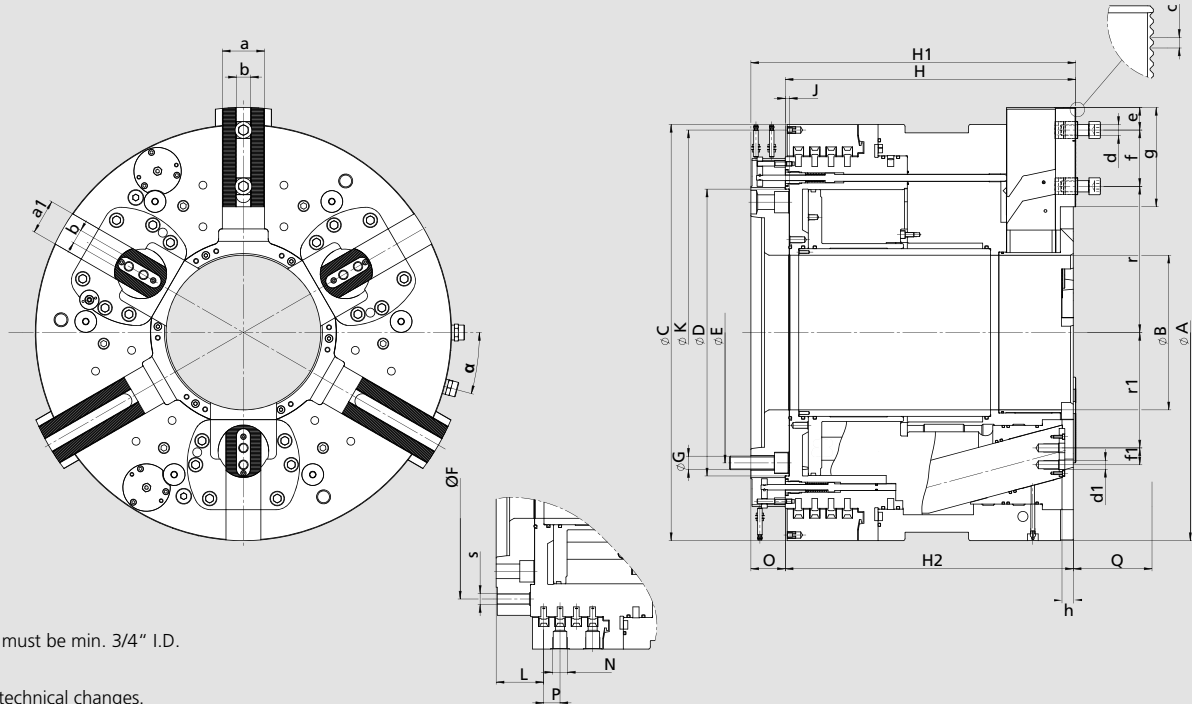
By changing the radial position of the top jaws, the axial centering position can be changed. The axial centering position is dependent from the radial adjustment of the top jaws.



BIG BORE® BB-FZA2G

INCH SERRATION

Main dimensions and technical data



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

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

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 max.		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·m ²	88	121	230