

Overview Pipe

Customer's OCTG product:

- Straight pipe
- Bent pipe

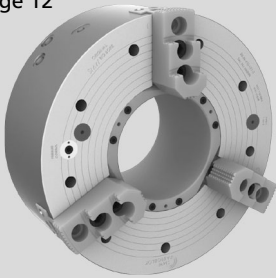
CHUCK

APPLICATION

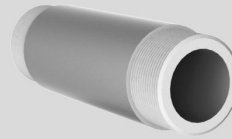
OCTG PRODUCT

CUSTOMER BENEFITS

BB-N
Page 12

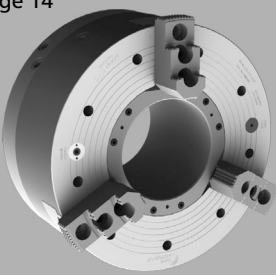


Threading of straight pipe with the original SMW Big Bore Type BB-N.

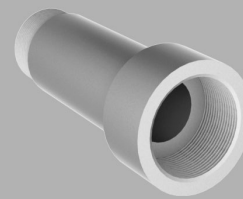


- **Quick jaw movement** more pipe per hour
- Can be used for other work pieces besides piping
- O.D. and I.D. clamping

BB-N-ES
Page 14

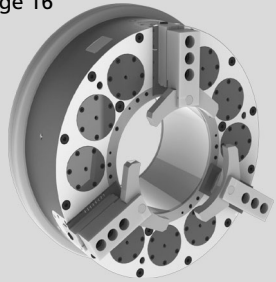


Threading of straight pipe with upset ends with the original SMW Big Bore Type BB-N-ES.

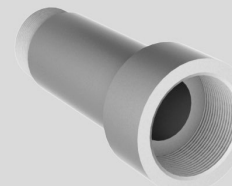
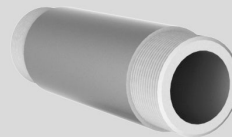


- **Quick jaw movement** more pipe per hour
- Large jaw stroke for easy loading of pipe and less danger of damaging threads when unloading

BB-SC
Page 16

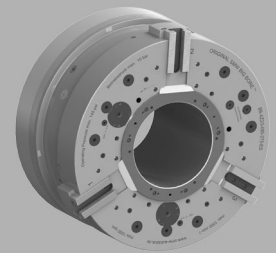


High production **spring clamp** chuck for threading of straight pipe with or without upset ends with the original SMW Big Bore Type BB-SC.

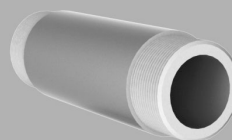
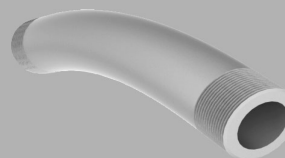


- **Full jaw stroke in 2 seconds** for highest productivity
- Fully sealed/low maintenance for highest availability of the machine
- Safe clamping of pipe even in longer machining processes with spring clamp technology

BB-AZ2G
Page 18

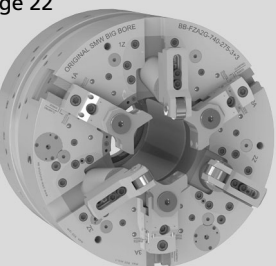


Threading of straight and bent pipe with the original SMW Big Bore Type BB-AZ2G.

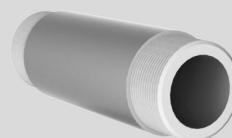
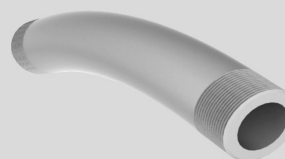


- **Self centering or compensating clamping** for universal use
- Quick jaw movement
- External centering device needed when used in compensating mode
- O.D. clamping only

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

Pipe Clamping

Recommended Combinations

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

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
--	--------------------------------	------------------------------

Clamping of pipe with

BIG BORE 2G chucks

BB-N-EXL2G

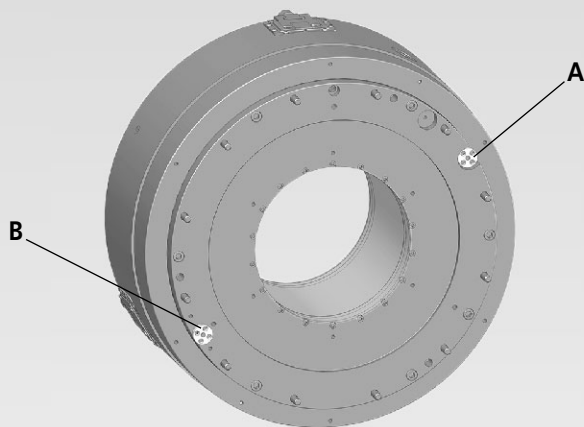
BB-AZ2G

BB-FZA2G

BB-EXL-SC2G

BIG BORE BB-N-EXL2G

- Self centering
- Extra long jaw stroke
- Jaw jogging

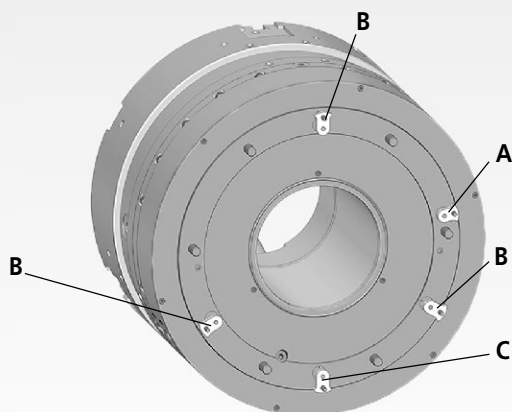


Safety features:

- 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)

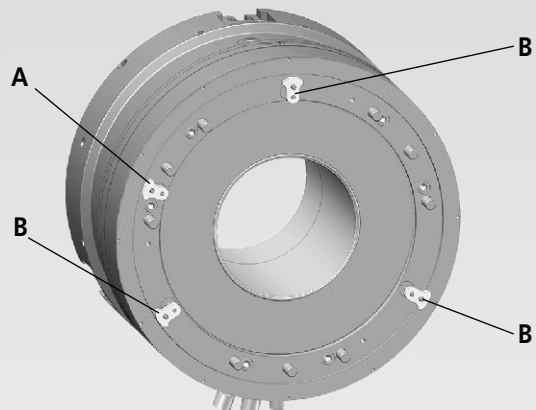


Safety features:

- 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

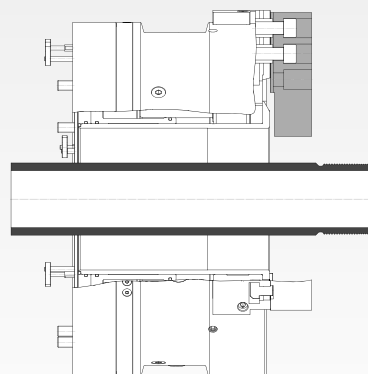


Safety features:

- 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.

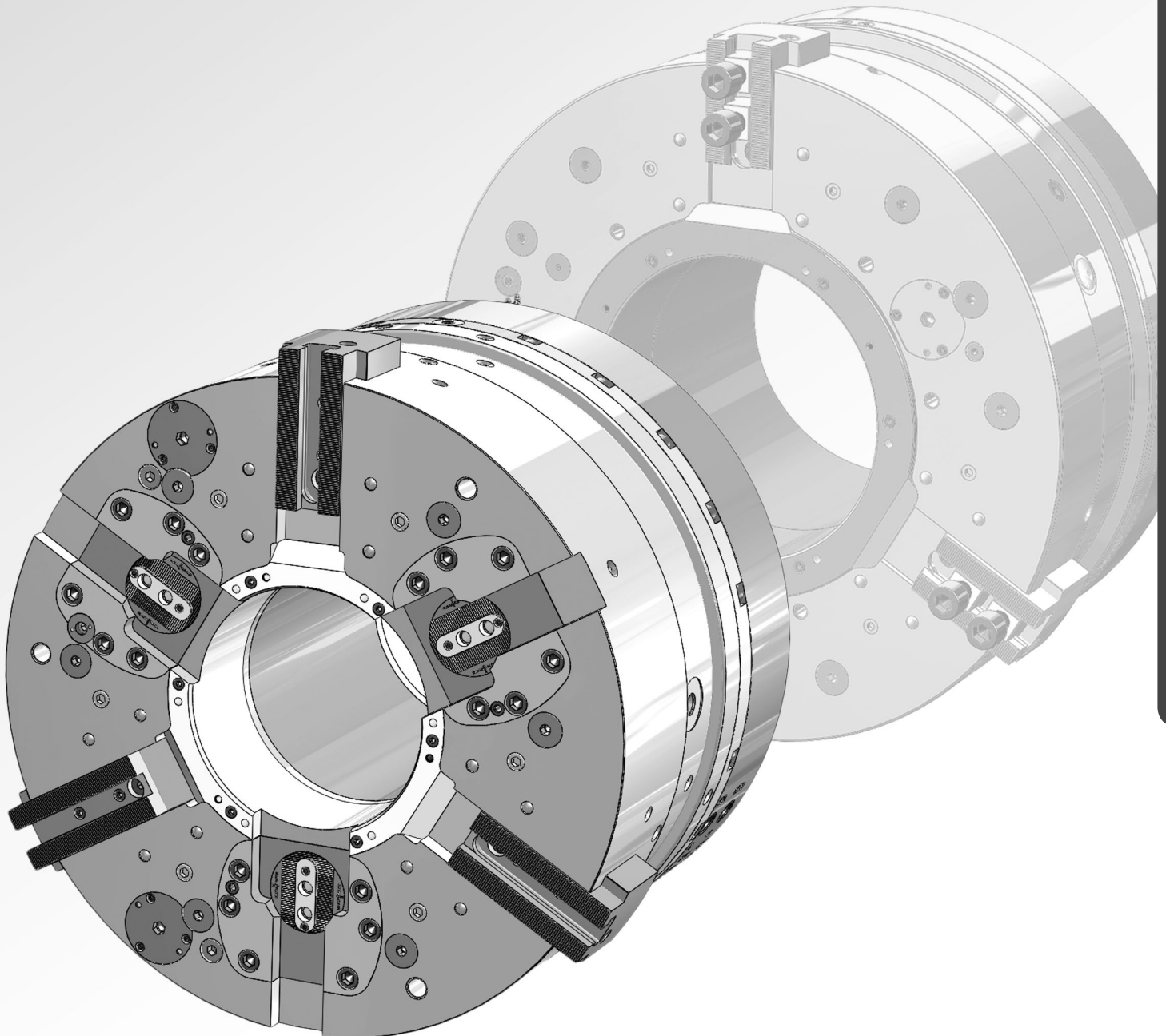
Individual stroke control for each jaw: In compensating clamping mode, all 3 jaws of the Big Bore 2G chucks make a different radial movement to compensate for the misalignment of the pipe to be clamped. A single central jaw stroke control cannot detect if the jaw stroke on one of the master jaws bottoms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



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

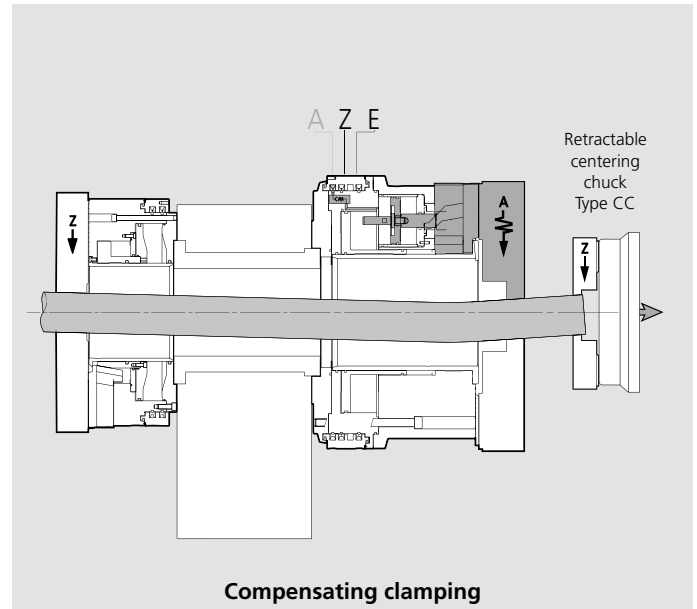
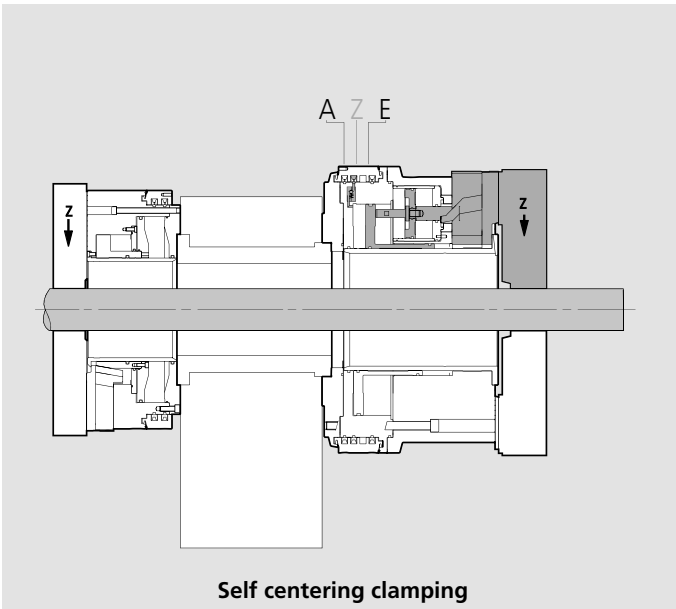
- Air chuck with built-in pneumatic cylinders for self centering or compensating clamping mode
- Air feed for both functions via distributor ring and SMW-AUTOBLOK profile seals at stopped spindle
- Built-in non return valves maintain the air pressure during machining
- Rapid and clamping stroke
- For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

Standard equipment

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

Ordering example

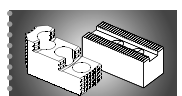
Big Bore BB-AZ2G 685-275- A15



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	cm ²	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-m ²	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")

* Could not be used for clamping

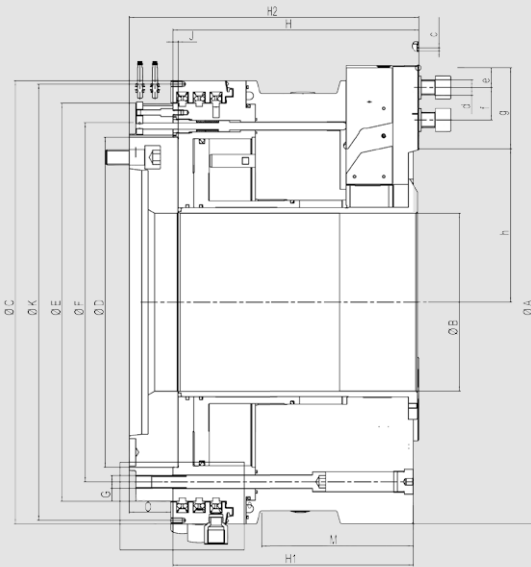
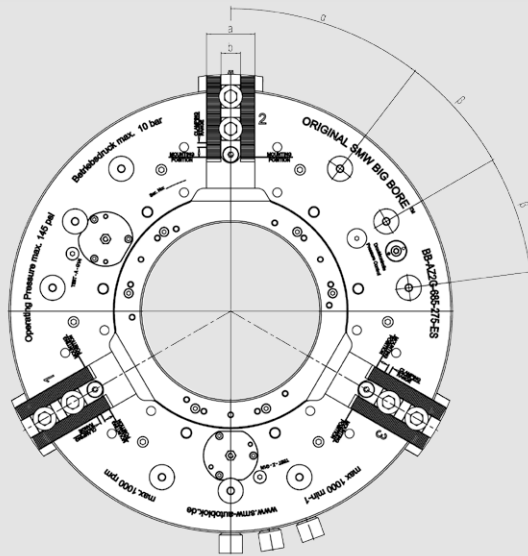


SMW-AUTOBLOK
290

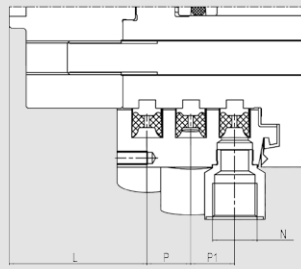
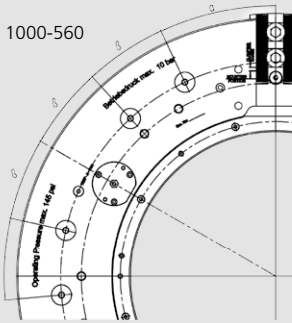
BIG BORE® BB-AZ2G

INCH SERRATION

Main dimensions and technical data



BB-AZ2G 1000-560



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

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	d	mm	M24	M24	M24	M24
Min.	e	mm	25	25	25	25
T-nuts distance min./max.	f	mm	36/88	36/88	36/88	36/88
Serration length	g	mm	125	125	125	125
Min./max.	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