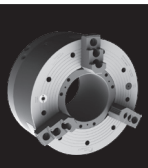
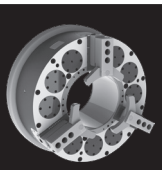
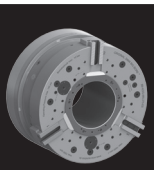
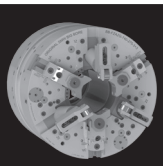
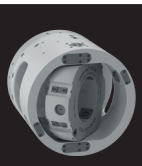
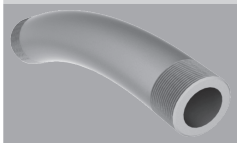
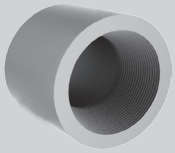
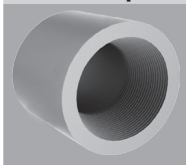
Chuck finder for Oil Country Tubular Goods:

- Straight Pipe
- Bent Pipe
- Couplings

Machining OCTG Product \ Chuck Type	 BB-N/BB-N-ES	 BB-SC	 BB-AZ2G	 BB-FZA2G	 SF-RZ/SF-RAZ
 **Straight Pipe**	Page 12/14	Page 16	Page 18		
 **Bent Pipe with shimming**	~ Page 12/14	Page 16	~ Page 18		
 **Bent Pipe with external centering chuck**			Page 18		
 **Bent Pipe with integrated centering chuck**				Page 22	
 **Threading of Couplings in 1 set up**					Page 28/30
 **Threading of Couplings in 2 set ups**	~ Page 32/34				~ Page 28/30

Ideal ~ Possible

Performance Characteristics

Explanation of the end product properties

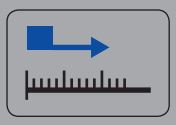
Big Bore

Big Bore is synonymous with **self contained air chucks with large through holes**. Big Bore chucks allow for the full spindle bore of the machine to be utilized.

Quick Clamping Circle

Optimal sized air feeds and valve systems guarantee a **quick clamping cycle**.

ES



ES chucks offer **extended jaw stroke** for greater clearance to ensure safe loading and unloading of pipe.

Spring Clamp

Spring clamp technology ensures the quickest clamping cycles and the highest degree of safety under any conditions.

Low Maintenance

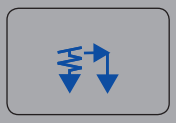
proofline® series
fully sealed – low maintenance

Proofline chucks are **fully sealed**, **low maintenance** allowing for long service intervals, minimizing machine downtime.

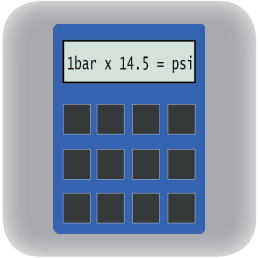
AZ

AZ chucks offer the versatility of clamping either **compensating** or **self centering**.

FZA



FZA chucks **sequence 3 centering jaws** along with **3 compensating jaws** integrated within the same chuck body.



Conversion Table (US)

1 mm	=	0.03937 Inch	1 cm²	=	0.155 square inches
1 bar	=	14.5 psi	1 liter	=	1.05 quarts (qt)
1 kN	=	220.46 lbf	1 kg·m²	=	3417 lb square inches
1 kg	=	2.2046 lbs	1 liter/min	=	0.264 galon/min

Data sheet

Performance Characteristics

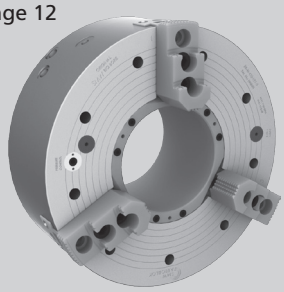
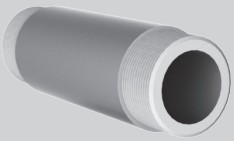
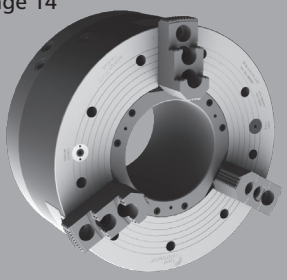
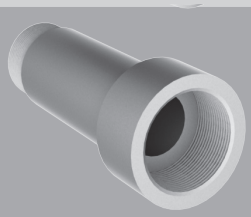
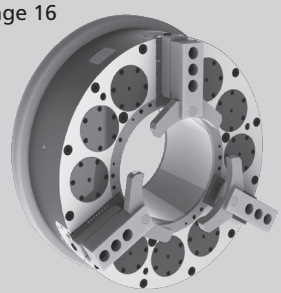
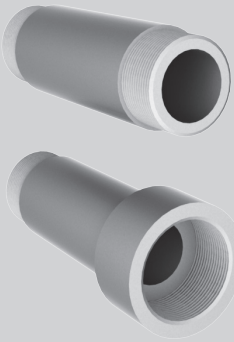
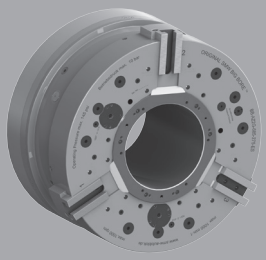
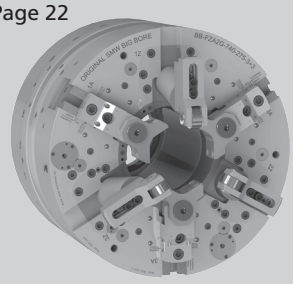
OCTG chuck	Size	Outside Dia. Max	Work piece capacity	Time for a full clamping	Time for a full opening	Max. Grip force (at max. pressure)	Height of chuck without adapter	Weight without jaws and adapter
	in mm	in mm	in mm	Max	Max	in kN	in mm	in kg
BB-N ▪ Big Bore ▪ Quick Clamping Circle	400-140	467	140	-	-	266	196	155
	470-191	470	191	4.5	3.0	191	196	160
	500-205	570	205	6.0	6.0	350	225	230
	500-230	570	230	6.0	6.0	316	225	200
	600-275	605	275	6.0	6.0	333	225	270
	630-310	685	310	6.5	6.5	366	263	420
	800-410	850	410	7.0	5.5	550	305	650
BB-N-ES ▪ Big Bore ▪ Quick Clamping Circle ▪ Extended Stroke	400-140	467	140	on request	on request	216	240	200
	470-191	470	191	4.5	3.0	191	240	195
	500-205	570	205	6.0	4.5	316	280	340
	500-230	570	230	6.0	4.5	283	280	325
	600-275	605	275	6.0	4.5	308	280	350
	630-325	685	325	6.0	4.5	333	307.5	630
	850-375	850	375	7.0	5.5	333	354	970
	1000-560	1000	560	7.5	6.0	283	332	960
BB-SC ▪ Big Bore ▪ Spring Clamp ▪ Low Maintenance	600-275	750	275	3	3	150	320.5	516
	850-395	925	395	3	3	170	375.5	1025
	1020-565	1095	565	4.5	4.5	170	375.5	1256
BB-AZ2G ▪ Big Bore ▪ Self centering or compensating ▪ Extended Stroke	685-275	685	275	on request	on request	266	380.5	800
	740-330	740	330	on request	on request	266	380.5	875
	800-390	800	800	on request	on request	300	380.5	1000
	1000-560	1000	560	on request	on request	300	380.5	1420
BB-FZA2G ▪ Big Bore ▪ Sequence chuck	740-275	740	275	on request	on request	149	516.5	1100
	800-330	800	330	on request	on request	133	516.5	1080
	920-390	920	390	on request	on request	255	546.5	1900
SF-RAZ ▪ Hydraulic indexing chuck ▪ Low Maintenance	750	750	185	2	2	250	456	1018
	840	840	275	2	2	250	501	1286
	950	950	368	2	2	250	560	1650

Clamping times have been measured with the corresponding original SMW-AUTOBLOK air control unit on the SMW-AUTOBLOK test stand. For more details please contact SMW-AUTOBLOK.

Overview Pipe

Customer´s OCTG product:

- **Straight pipe**
- **Bent pipe**

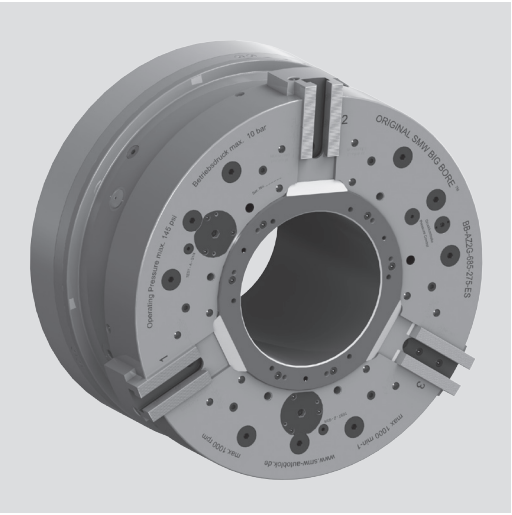
CHUCK	APPLICATION	OCTG PRODUCT	CUSTOMER BENEFITS
BB-N Page 12 	Threading of straight pipe with the original SMW Big Bore Type BB-N.		▪ **Quick jaw movement** more pipe per hour ▪ Can be used for other work pieces besides piping ▪ O.D. and I.D. clamping
BB-N-ES Page 14 	Threading of straight pipe with 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 availabitlity 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 programable cycle

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



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

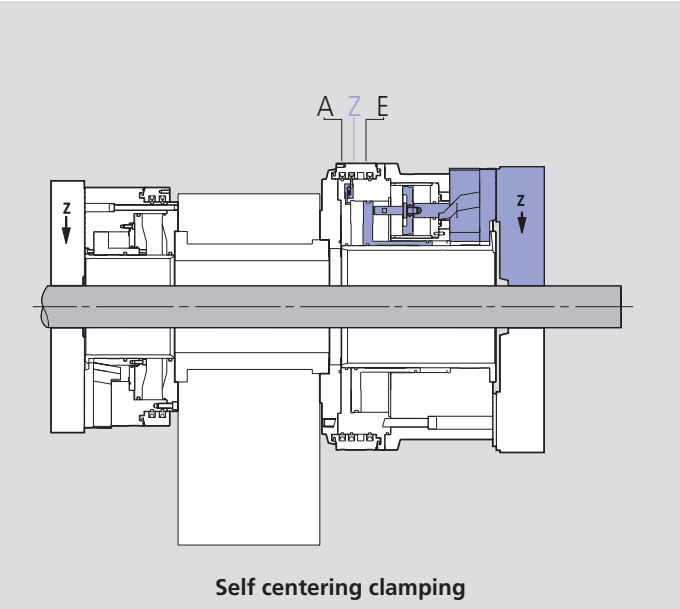
- Air chuck with built-in pneumatic cylinders for self centering or compensating clamping mode
- Air feed for both functions via distributor ring and SMW-AUTOBLOK profile seals at stopped spindle
- Built-in non return valves maintain the air pressure during machining
- Rapid and clamping stroke
- For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

Standard equipment

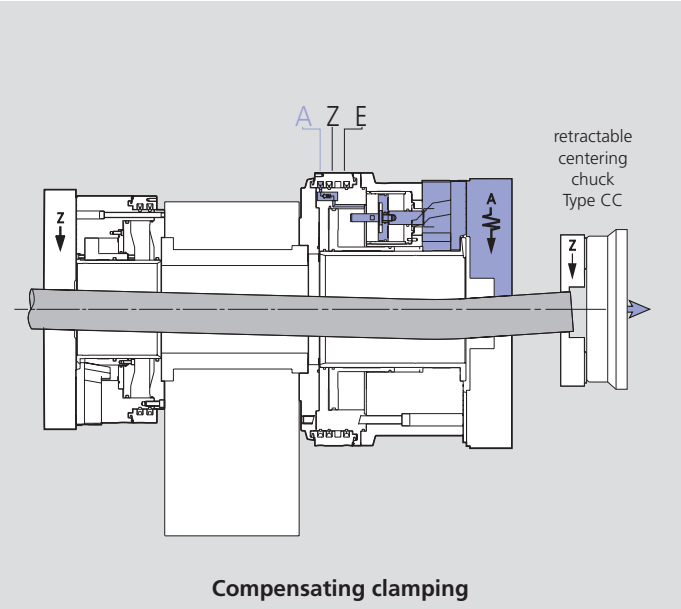
Chuck with mounting bolts
1 set of T-nuts with bolts

Ordering example

Big Bore BB-AZ2G 685-275- A15



Self centering clamping



Compensating clamping

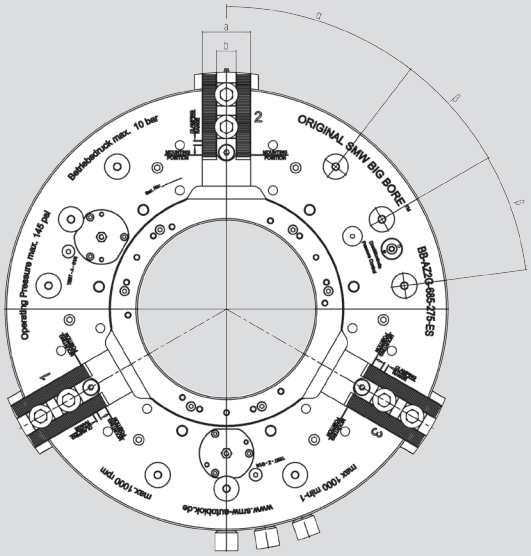
Technical data

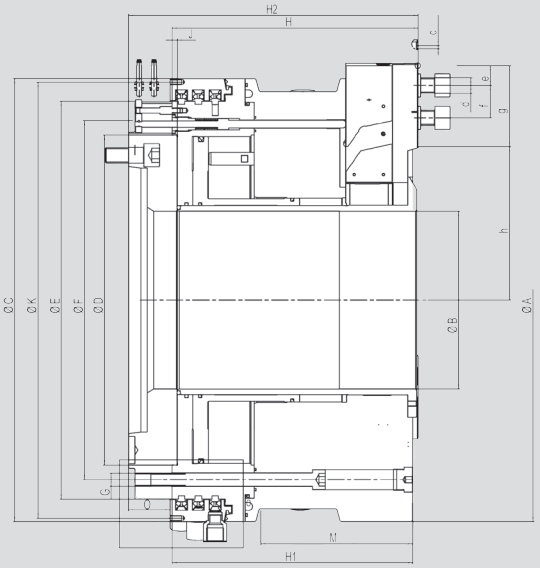
SMW-AUTOBLOK Type		BB-AZ2G 685-275	BB-AZ2G 740-330	BB-AZ2G 800-390	BB-AZ2G 1000-560
Through-hole	mm (inch)	275 (10.83")	330 (13")	390 (15.35")	560 (22.05")
Total stroke per jaw	mm (inch)	38.1 (1 1/2")	38.1 (1 1/2")	38.1 (1 1/2")	38.1 (1 1/2")
Rapid stroke per jaw*	mm (inch)	28.7 (1.13")	28.7 (1.13")	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	$kg \cdot m^2$	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")

* must not be used for clamping

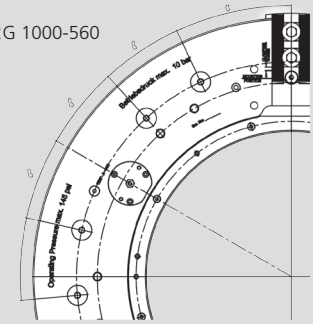
BIG BORE®
BB-AZ2G

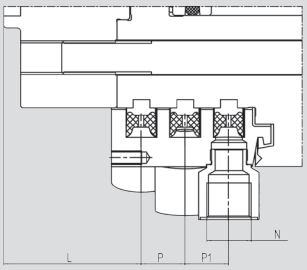
INCH serration





BB-AZ2G 1000-560





Subject to technical changes.
For more detailed information please ask for customer drawing.

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