

BOP Introduction



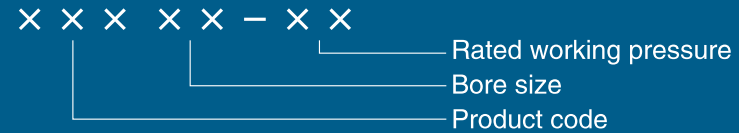
Rongsheng's BOP products fall into two large product series: Drilling BOP and remedial well treatment as well as Operation BOP, covering 200 models and specifications. The products is applicable in a variety of operation conditions including low temperature, high temperature and high content of sulphur, and they can fully satisfy the well control requirements in drilling operation, underbalanced drilling, formation testing and down-hole operation.

The bore sizes of Rongsheng BOP products range from 65 mm (2 9/16") to 762 mm (30"); the pressure grades range from 3.5 MPa (507 psi) to 138MPa (20000 psi); the bodies are made by casting or by forging with locking mechanism by manual or hydraulic operations. Users have several options in manners of connection, which may be shear rams or variable bore rams.

The company has developed special-purpose products in 20 models, covering continuous slurry circulation BOP, coiled tubing BOP, bearing mill casing BOP, cable BOP and double bore ram BOP.

The rubber sealing parts used in Rongsheng's BOPs are all designed and manufactured independently by Rongsheng, and Rongsheng have all equipments for check and measure and core technology necessary for production of rubber sealing parts on BOPs, which have the features of good resistance to low temperature, high temperature and hydrogen sulfide.

Description to product codes



Product code

RS-D	Annular BOP using the Spherical packing element
RS-A	Annular BOP using the Conical packing element
RS-C	Casting structure Ram BOP
RS-CS	Casting structure with shear function Ram BOP
RS-F	Forging structure Ram BOP
RS-FS	Forging structure with shear function Ram BOP

Bore size

Rated working pressure

180 mm	7 1/16"	3.5 MPa	507 psi
230 mm	9"	6.9 MPa	1,000 psi
280 mm	11"	10.5 MPa	1,524 psi
350 mm	13 5/8"	13.8 MPa	2,000 psi
430 mm	16 3/4"	20.7 MPa	3,000 psi
480 mm	18 3/4"	34.5 MPa	5,000 psi
530 mm	20 3/4"	69 MPa	10,000 psi
540 mm	21 1/4"	103.5 MPa	15,000 psi
680 mm	26 3/4"	138 MPa	20,000 psi
750 mm	29 1/2"		
760 mm	30"		

Anticorrosion wearresisting technology

- Nickel phosphor plating technology
- Electroplating brush-plating technology
- Surface anti-corrosion alloy welding technology
- Surface anti-corrosion lubrication coating technology



Corrosion-resistant overlays

Anti-corrosion coating → Abrasion resisting coating

Anti-corrosion coating → Abrasion resisting coating

RS-D Annular BOP (With spherical rubber)

Working Pressure MPa (psi)	Bore Size mm (in)							
	180 (7 1/16)	230 (9)	280 (11)	350 (13 5/8)	430 (16 3/4)	480 (18 3/4)	530 (20 3/4)	540 (21 1/4)
13.8 (2,000)								
20.7 (3,000)								
34.5 (5,000)								
69 (10,000)								
103.5 (15,000)								



RS-D 7 1/16"-3,000psi



RS-D 9"-5,000psi



RS-D 13 5/8"-5,000psi



RS-D 18 3/4"-5,000psi



RS-D 21 1/4"-5,000psi

Model	RS-D 7 1/16"-3,000psi	RS-D 7 1/16"-5,000psi	RS-D 9"-3,000psi	RS-D 9"-5,000psi	RS-D 11"-2,000psi	RS-D 11"-3,000psi	RS-D 11"-5,000psi	RS-D 13 5/8"-3,000psi	RS-D 13 5/8"-5,000psi	RS-D 18 3/4"-5,000psi	RS-D 20 3/4"-3,000psi	RS-D 21 1/4"-5,000psi
Part Number (P/N)	RS11827	RS11168	RS11143	F9303	RS11878	RS11150	RS11135	RS11186	F35	RS11845	RS111100	RS11801
Bore Size	179.4 mm 7 1/16"	179.4 mm 7 1/16"	228.6 mm 9"	228.6 mm 9"	279.4 mm 11"	279.4 mm 11"	279.4 mm 11"	346.1 mm 13 5/8"	346.1 mm 13 5/8"	476.3 mm 18 3/4"	527 mm 20 3/4"	539.7 mm 21 1/4"
Rated Working Pressure	20.7 MPa 3,000 psi	34.5 MPa 5,000 psi	20.7 MPa 3,000 psi	34.5 MPa 5,000 psi	13.8 MPa 2,000 psi	20.7 MPa 3,000 psi	34.5 MPa 5,000 psi	20.7 MPa 3,000 psi	34.5 MPa 5,000 psi	34.5 MPa 5,000 psi	20.7 MPa 3,000 psi	34.5 MPa 5,000 psi
Operating Chamber Rated Working Pressure	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi
Recommended Hydraulic Control Working Pressure for Closed Pipe String	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi	≤ 10.5 MPa ≤ 1,524 psi
Volume to Open Chamber	15 L 3.92 gal	15 L 3.92 gal	22.8 L 6.02 gal	33 L 8.72 gal	33 L 8.72 gal	33 L 8.72 gal	56 L 14.79 gal	72 L 19.02 gal	72 L 19.02 gal	172 L 45.44 gal	110 L 29.06 gal	171 L 45.17 gal
Volume to Close Chamber	21 L 5.55 gal	21 L 5.55 gal	34 L 8.98 gal	42 L 11.10 gal	46 L 12.15 gal	46 L 12.15 gal	72 L 19.02 gal	98 L 25.89 gal	98 L 25.89 gal	220 L 58.12 gal	173 L 45.70 gal	227 L 59.97 gal
Overall Dimension (O.D)	745 mm 29.33"	745 mm 29.33"	908 mm 35.75"	1016 mm 40.00"	1013 mm 39.88"	1013 mm 39.88"	1146 mm 45.12"	1271 mm 50.04"	1271 mm 50.04"	1780 mm 70.08"	1375 mm 54.13"	1938 mm 76.30"
Overall Dimension (Height)	842 mm 33.15"	842 mm 33.15"	838 mm 32.99"	924 mm 36.38"	855 mm 33.66"	873 mm 34.37"	1110 mm 43.70"	1176 mm 46.30"	1176 mm 46.30"	1710 mm 67.32"	1293 mm 50.91"	1742 mm 68.58"
Approx Weight	1433 kg 3159 lb	1520 kg 3351 lb	2440 kg 5379 lb	3050 kg 6724 lb	3512 kg 7743 lb	3400 kg 7496 lb	4716 kg 10397 lb	5700 kg 12566 lb	6415 kg 14143 lb	16320 kg 35979 lb	6994 kg 15419 lb	20220 kg 44577 lb

• All BOPs are designed and manufactured in accordance with API Spec 16A.

• Temperature Rating is $-20 / 250$ or as required by contract.

• The resistance to stress corrosion by Hydrogen Sulphide at BOP positions in contact with fluid in the well meets relevant requirements specified in NACE MR 0175.

RS-A Annular BOP (With tapered rubber)

Working Pressure MPa (psi)	Bore Size mm (in)							
	180 (7 1/16)	230 (9)	280 (11)	350 (13 5/8)	430 (16 3/4)	480 (18 3/4)	530 (20 3/4)	540 (21 1/4)
13.8 (2,000)								
20.7 (3,000)								
34.5 (5,000)								
69 (10,000)								
103.5 (15,000)								



Model	RS-A 7 1/16"-10,000psi	RS-A 11"-10,000psi	RS-A 11"-15,000psi	RS-A 13 5/8"-5,000psi	RS-A 13 5/8"-10,000psi	RS-A 16 3/4"-3,000psi	RS-A 16 3/4"-5,000psi	RS-A 18 3/4"-10,000psi	RS-A 21 1/4"-2,000psi
Part Number (P/N)	RS11185	RS11831	RS11887	RS11807	RS11189	RS18012	RS11177	RS11899	FHZ5414
Bore Size	179.4 mm 7 1/16"	279.4 mm 11"	279.4 mm 11"	346.1 mm 13 5/8"	346.1 mm 13 5/8"	425.5 mm 16 3/4"	425.5 mm 16 3/4"	476.3 mm 18 3/4"	539.7 mm 21 1/4"
Rated Working Pressure	69 MPa 10,000 psi	69 MPa 10,000 psi	103.5 MPa 10,000 psi	34.5 MPa 5,000 psi	69 MPa 10,000 psi	20.7 MPa 3,000 psi	34.5 MPa 5,000 psi	69 MPa 10,000 psi	13.8 MPa 2,000 psi
Operating Chamber Rated Working Pressure	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi	13.8 MPa 2,000 psi
Recommended Hydraulic Control Working Pressure for Closed Pipe String	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi	≤10.5 MPa ≤1,524 psi
Volume to Open Chamber	27 L 7.13 gal	66 L 17.44 gal	120 L 31.70 gal	54 L 14.27 gal	117 L 30.91 gal	84 L 22.2 gal	78 L 20.61 gal	220 L 58.12 gal	84.9 L 22.43 gal
Volume to Close Chamber	36 L 9.51 gal	67 L 17.70 gal	121 L 31.96 gal	68 L 17.96 gal	116 L 30.64 gal	118 L 31.2 gal	112 L 29.59 gal	220 L 58.12 gal	136.5 L 36.06 gal
Overall Dimension (O.D)	1490 mm 58.66"	1687 mm 66.42"	1650 mm 64.96"	1510 mm 59.45"	1780 mm 70.08"	1598 mm 62.91"	1728 mm 68.03"	2160 mm 85.04"	1512 mm 59.23"
Overall Dimension (Height)	1250 mm 49.21"	1653 mm 65.08"	1959 mm 77.13"	1434 mm 56.46"	1787 mm 70.35"	1553mm 61.14"	1630 mm 64.17"	2231 mm 87.83"	1437 mm 56.57"
Approx Weight	6239 kg 13755 lb	12290 kg 27095 lb	17640 kg 38889 lb	6917 kg 15249 lb	15190 kg 33488 lb	7098kg 15648lb	10030 kg 22112 lb	27016 kg 59560 lb	7660 kg 16887 lb

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- Temperature Rating is T-20 / 250 or as required by contract.
- The resistance to stress corrosion by Hydrogen Sulphide at BOP positions in contact with fluid in the well meets relevant requirements as specified in NACE MR 0175.