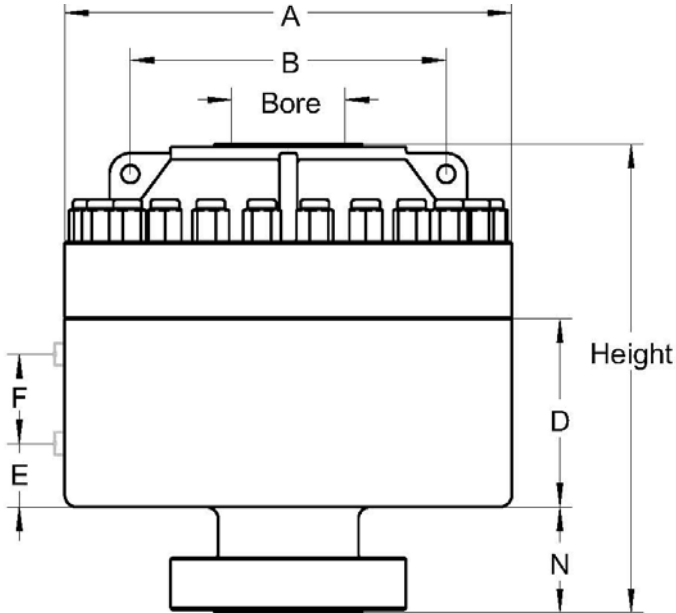
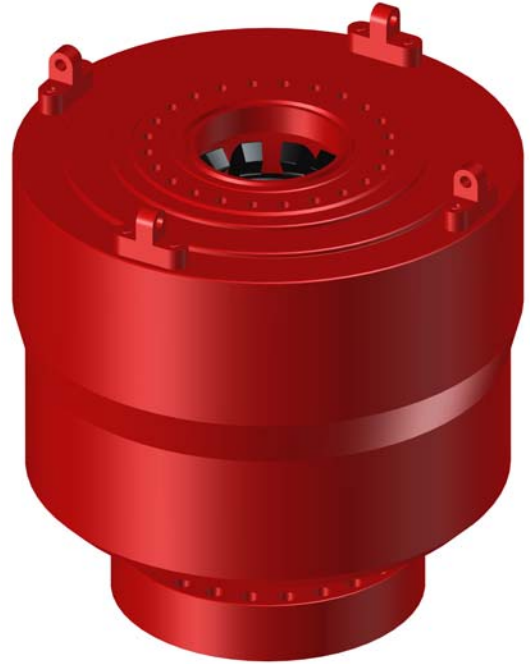
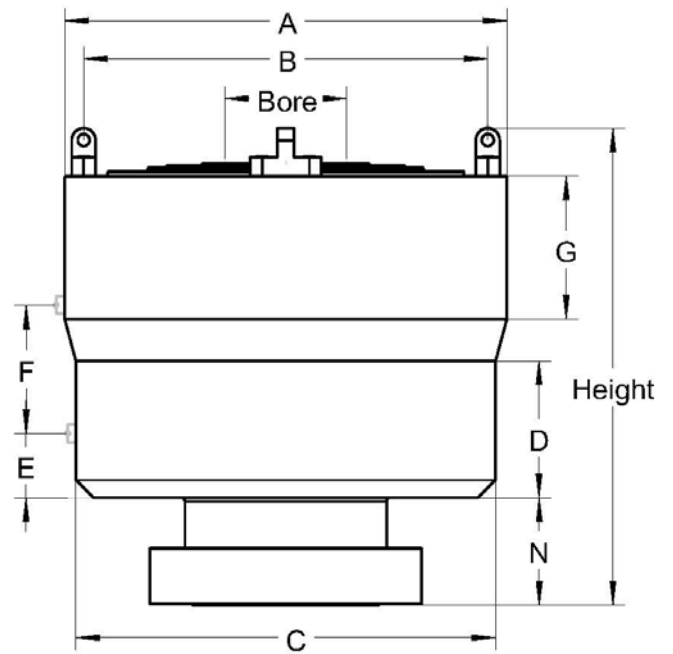


Spherical Annular BOP



Bolted-Cover Spherical BOP

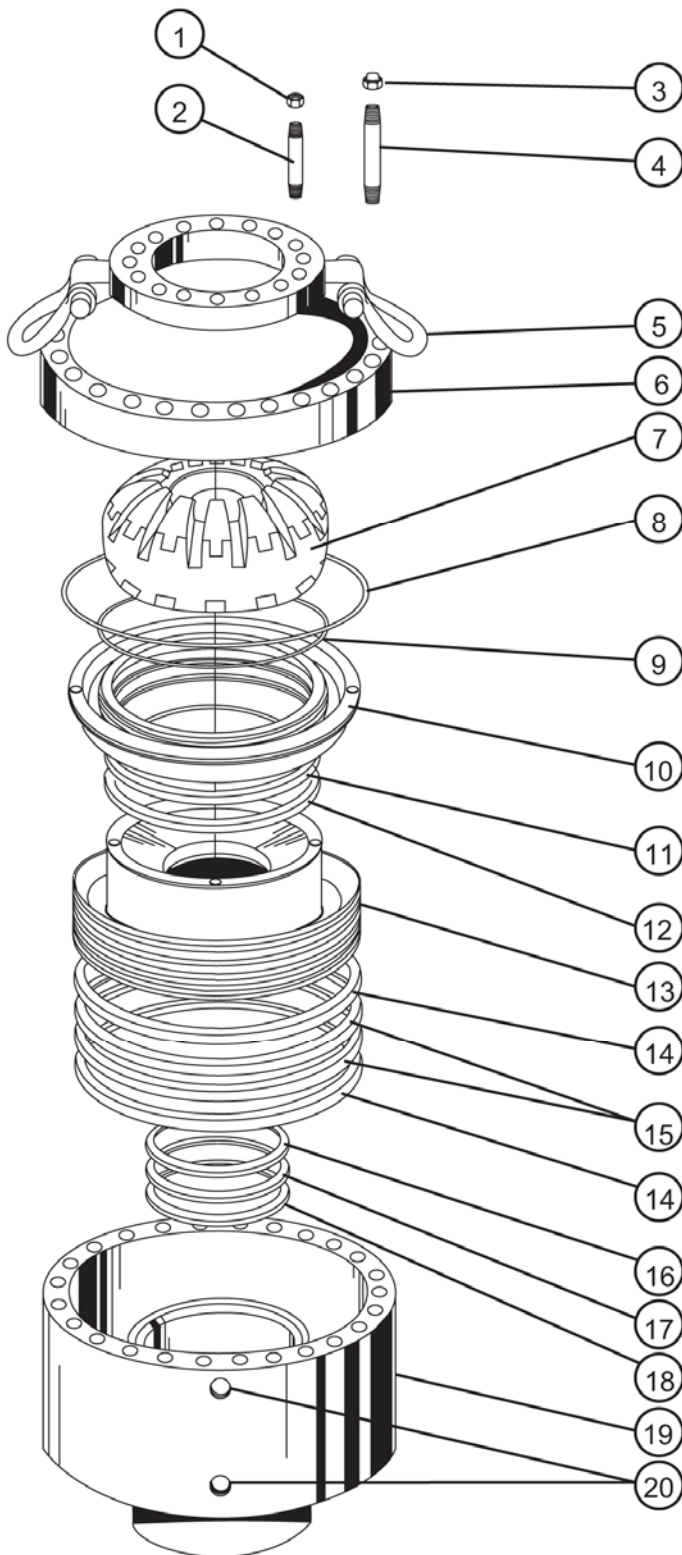


Wedge-Cover Spherical BOP

Spherical Annular BOP Dimensions

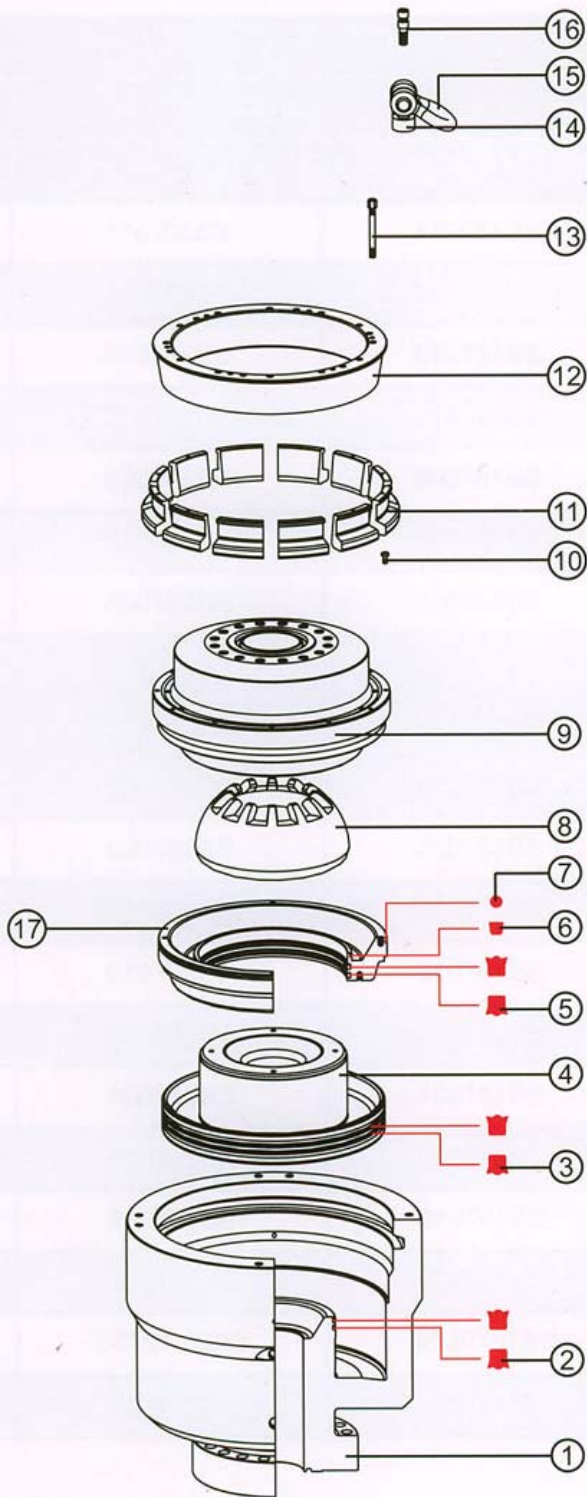
Working Pressure (PSI)		10,000				5,000				
Bore (Inches) Cover Configuration		18-3/4 Wedge	13-5/8 Wedge	11 Wedge	7-1/16 Bolted	21-1/4 Wedge	18-3/4 Wedge	16-3/4 Wedge	13-5/8 Bolted	11 Bolted
A (Inches)		76-1/4	64-1/2	57	43	71	66-1/4	60	50	44-3/4
B (Inches)		70-7/8	59-5/8	53-1/4	28-7/8	66-5/8	62 -1/4	56 -1/4	34 -1/8	29 -1/4
C (Inches)		72	59	53	—	69 -1/2	64- 5/8	56 -3/4	—	—
D (Inches)		38	22 -7/8	21 -1/8	17- 7/8	32- 1/4	28 -7/8	23 -7/16	18 -1/2	17 -1/8
E (Inches)		8-1/2	6 -5/8	6	4 -1/2	5 -1/2	7	4 -3/4	4 -1/2	2 -3/4
F (Inches)		18 -5/8	14 -9/16	12 -7/8	11 -1/8	22 -3/16	18 -7/8	16	12	12 -5/8
G (Inches)		15	15 -1/2	10 -1/2	—	15 -3/8	12 -1/4	7	—	—
N (Inches)	Flanged Bottom	13 -11/16	10 -3/4	9 -1/2	7 -5/16	11 -1/2	11	9 -1/8	7 -13/16	8 -7/16
	Studded Bottom	1	1 -9/16	2	13/16	1 -1/2	2	13/16	1/2	1 -1/16
	Hubbed Bottom	8	6 -1/2	5 -3/4	4-1/16	8	8	6-1/2	5-5/8	4-1/2
Hydraulic Conn.: NPT (Qty.)		2 (4)	2 (4)	2 (2)	1-1/4 (2)	2 (4)	2 (4)	2 (2)	1-1/2 (2)	1-1/4 (2)
Hydraulic Fluid (Gallons)	Close	85.0	40.16	30.58	17.20	61.37	48.16	33.26	23.58	18.67
	Open	66.0	32.64	24.67	13.95	47.76	37.61	25.61	17.41	14.59
Maximum Operating (psi)		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Flanged Bottom	Height (Inches)	72-3/4	58-3/8	53	42-1/4	66	60	51-15/16	44-15/16	41-1/2
	Weight (Lbs.)	57,050	32,475	23,000	10,600	44,500	36,100	22,900	13,650	9,550
Studded Bottom	Height (Inches)	60-3/4	49-3/16	45-1/2	35-3/4	55	51	43-5/8	37-5/8	33-13/16
	Weight (Lbs.)	54,950	31,175	22,375	10,275	42,500	34,750	22,000	13,100	9,275
Hubbed Bottom	Height (Inches)	67-1/16	54-1/8	49-1/4	39	63-1/2	57	49-5/16	42-3/4	37-9/16
	Weight (Lbs.)	50,075	31,575	22,550	10,400	43,200	35,400	22,525	13,250	9,300
Working Pressure (PSI)		5,000			3,000				2,000	
Bore (Inches) Cover Configuration		9 Bolted	7-1/16 Bolted	20-3/4 Bolted	13-5/8 Bolted	11 Bolted	9 Bolted	7-1/16 Bolted	21-1/4 Bolted	
A (Inches)		40	29	54 1/8	46 3/8	39 7/8	35 1/2	29	49	
B (Inches)		25	19 -3/4	39 1/4	31 1/2	26 1/2	24	19 1/4	39 1/4	
C (Inches)		—	—	—	—	—	—	—	—	
D (Inches)		14 -13/16	11 -3/4	21 3/16	16 1/8	13 7/16	13 5/8	11 5/8	20 9/16	
E (Inches)		2 -13/16	2 -3/4	3 3/4	3 3/4	2 1/16	1 7/8	2 5/8	3 1/8	
F (Inches)		10 -1/4	7 -3/4	14 7/32	10 7/8	10 1/8	10 1/4	7 3/4	15 13/16	
G (Inches)		—	—	—	—	—	—	—	—	
N (Inches)	Flanged Bottom	7 -7/16	9	9	6 7/16	5 15/16	5 13/16	5	7 3/8	
	Studded Bottom	7/16	—	—	1/4	3/8	3/8	1	13/16	
	Hubbed Bottom	3-7/8	—	—	3 1/2	3 3/4	—	—	5 1/2	
Maximum Operating (psi)		1-1/4 (2)	1 (2)	1 1/2 (2)	1 1/2 (2)	1 (2)	1 (2)	1 (2)		
Hydraulic Fluid (Gallons)	Close	11.05	43.4	43.4	23.50	11.00	7.23	4.92	32.59	
	Open	8.72	26.9	26.9	14.67	6.78	5.03	3.43	16.92	
Maximum Operating (psi)		1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	
Flanged Bottom	Height (Inches)	36-1/2	2	48 7/16	40 11/16	32 7/8	32 1/2	29 1/8	46 1/8	
	Weight (Lbs.)	6,800	100,000	14,600	9,500	5,825	4,775	2,900	10,850	
Studded Bottom	Height (Inches)	29-1/2	48 7/16	—	34 1/2	27 1/16	27 1/16	25 3/8	—	
	Weight (Lbs.)	6,500	14,600	—	8,850	5,675	4,675	2,850	10,150	
Hubbed Bottom	Height (Inches)	32-15/16	—	—	37 3/4	30 11/16	—	—	44 1/4	
	Weight (Lbs.)	6,625	—	—	9,325	5,683	—	—	10,200	

Bolted-Cover Spherical Annular BOP Structure View

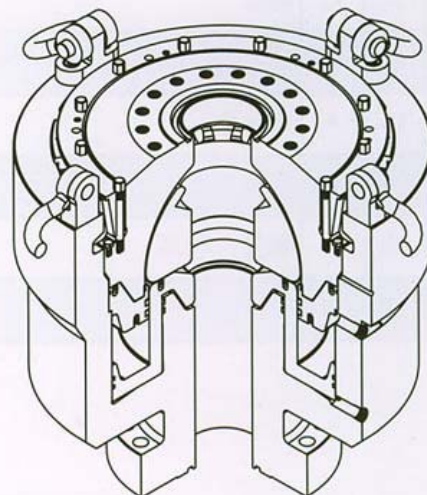


Item No.	Description
1	Nut for Upper Flange
2	Stud for Upper Flange
3	Nut for Upper Housing
4	Stud for Upper Housing
5	Anchor Shackle
6	Upper Housing, Studded
7	Sealing Element
8	Seal, Adapter OD
9	Seal, Adapter Top
10	Adapter Ring*
11	Seal, Adapter ID Upper
12	Seal, Adapter ID Lower
13	Piston
14	Wear Band
15	Seal, Piston OD Upper and Lower
16	Seal, Piston ID Upper
17	Seal, Piston ID Lower
18	Wear Band
19	Lower Housing, Flanged
20	Pipe Plug

Wedge-Cover Spherical Annular BOP Part Description



Item No.	Description
1	Nut for Upper Flange
2	Stud for Upper Flange
3	Nut for Upper Housing
4	Stud for Upper Housing
5	Anchor Shackle
6	Upper Housing, Studded
7	Sealing Element
8	Seal, Adapter OD
9	Seal, Adapter Top
10	Adapter Ring*
11	Seal, Adapter ID Upper
12	Seal, Adapter ID Lower
13	Piston
14	Wear Band
15	Seal, Piston OD Upper and Lower
16	Seal, Piston ID Upper
17	Seal, Piston ID Lower



Bolted-Cover Spherical Annular BOP Specification

Working Pressure	Bore Size
10000psi (70MPa)	7 1/16in
5000psi (35MPa)	13 5/8in
	11in
	9in
	7 1/16in
3000psi (21MPa)	20 3/4in
	13 5/8in
	11in
	9in
2000psi (14MPa)	7 1/16in
	21 1/4in

Wedge-Cover Spherical Annular BOP Specification

Working Pressure	Bore Size
10000psi (70MPa)	18 3/4in
	13 5/8in
	11in
5000psi (35MPa)	21 1/4in
	18 3/4in
	16 3/4in
	11in