FluoroSeal

FLOATING BALL VALVES

UNIBODY & 2 PIECE CAST BODY

Class 150, 300 & 600

PRODUCT OVERVIEW

FluoroSeal® Class 150, 2 piece Floating Ball Valve with Enclosed Gear Operator

FluoroSeal® Class 150, Unibody Floating Ball Valve with Wrench Operator

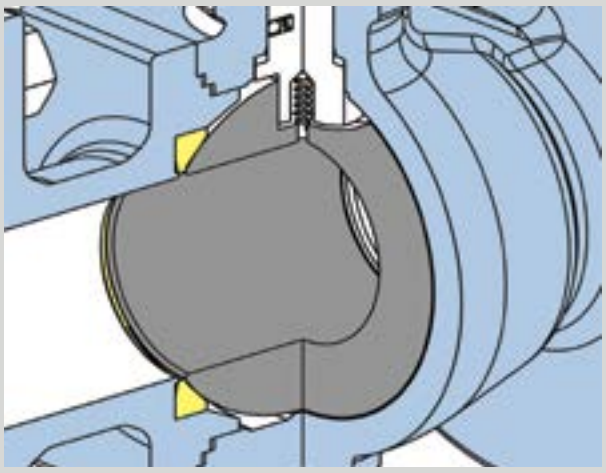
For over 38 years, FluoroSeal Specialty Valves has been manufacturing and customizing a wide range of valves and accessories for many industries including Oil & Gas, Petrochemical, Chemical, Mining, Pulp and Paper, Power Generation, Pharmaceutical, and Marine. FluoroSeal's one and two piece floating ball valves are designed and tested according to API, ANSI, and ASME standards to meet the most stringent industry requirements. These valves provide reliable and long lasting service life in a broad range of difficult and demanding applications.

FluoroSeal one and two piece cast floating ball valves are available in both standard and full port designs. Because of FluoroSeal's metallurgical expertise and in-house foundry capabilities, exotic alloys valves can be supplied with greatly reduced lead times compared to the competition.

DESIGN FEATURES

- **IN-LINE SEALING**

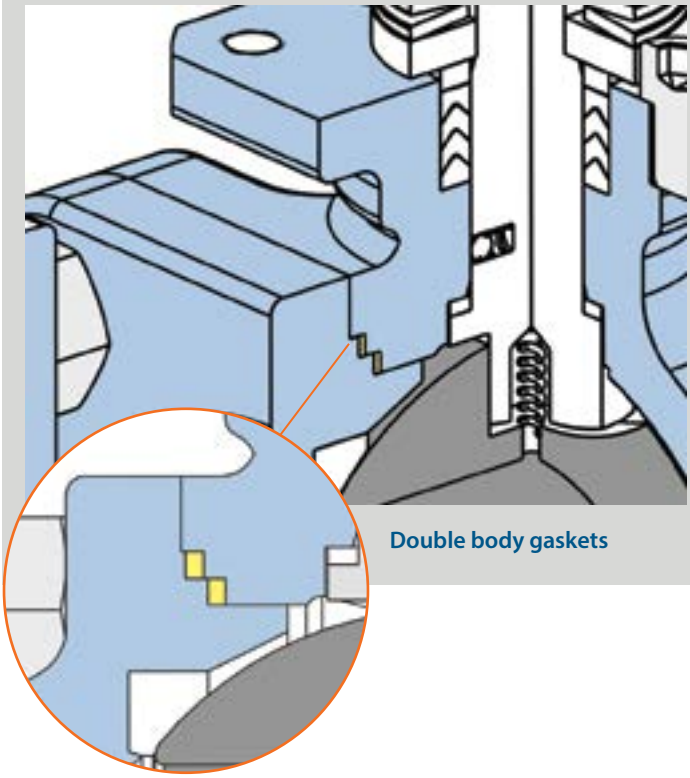
Tight in-line sealing, even under low differential pressure situations is achieved via the pre-loaded resilient PTFE seats. In applications where a pressure drop exists, the force of the differential pressure pushes the floating ball downstream to compress the seat to create a tight, pressure assisted seal. Optional seat materials include RPTFE, Hi-Temp, PEEK, and others. FluoroSeal resilient seats are self-relieving as standard.



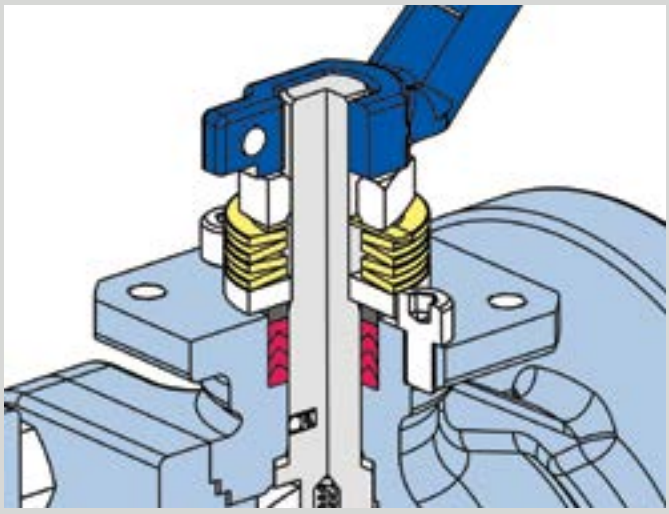
PTFE Seats

- **ATMOSPHERIC SEALING**

FluoroSeal's standard stem seal utilizes a precision machined packing chamber with standard PTFE or optional flexible graphite packing which is loaded by a gland to achieve extremely low emissions. Optional live loading of the stem packing is available to meet the most stringent emissions requirements. Both one and two piece body designs incorporate dual body joint seals to prevent emissions.



Double body gaskets



Live loaded stem packing

- **ISO MOUNTING**

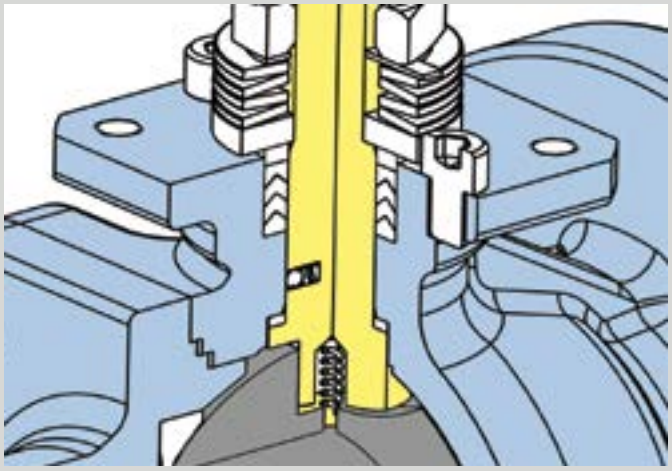
All FluoroSeal one and two piece floating ball valves come standard with mounting pad design in accordance with ISO 5211.

- **BLOW-OUT PROOF STEM**

FluoroSeal's internally installed stem utilizes a machined shoulder to retain the stem in the valve under all pressure conditions.

- **ANTI-STATIC DEVICE**

Electrical continuity between the ball/stem and the stem/body is achieved through the use of spring loaded pins.



Blow-Out Proof Stem

Anti-static Device

OPTIONS

- **FIRESAFE DESIGN**

FluoroSeal's one and two piece fire safe floating ball valves have been qualified to the requirements of API 607. In the event that the valve is subjected to an elevated temperature condition and the resilient seats and seals are damaged, back-up metal seating provides an in-line seal while graphite stem seals and graphite body joint seals provide atmospheric sealing.

- **STEM JOURNAL LUBRICATION**

Ensures smooth operation over long periods of time, even in low cycle frequency applications.

- **LOCKING DEVICE**

Locking devices are available to lock the FluoroSeal floating ball valves in either the fully open or closed positions. Locking devices are available for both wrench and gear operators.

- **VENTED BALL**

Vented balls can be supplied for applications where excess pressure build up in the ball/body cavity is a concern when in the closed position. Process media is vented upstream preventing potential damage to valve internals.

DESIGN AND TESTING STANDARDS

API 6D, API SPEC Q1
Valve Design

ANSI B16.10
Face-to-Face and End-to-End Dimensions of Valves

ANSI B16.34 / API 608 / BS 5351
Valves, Flanged and Butt Weld End

API 607 / ISO 10497 / BS 6755
Specification for Fire Test for Valves

MSS SP-6
Standard Finishes for Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings

ANSI B16.5 / ISO 5211
1/2" – 12" Pipe Flanges and Flanged Fittings

MSS SP-61
Pressure Testing of Valves

ASTM / ANSI / EN
Materials

ISO 15848-1
Fugitive Emissions

API 598
Valve Inspection and Testing

MSS SP-25
Standard Marking System for Valves, Fittings, and Unions

MSS SP-55
Quality Standard for Steel Castings for Valves

QUALITY ASSURANCE

FluoroSeal Valves are designed with the best features presently available on the market. They are inspected throughout the manufacturing process to assure high quality and consistency in every unit.

ISO 9001: 2015

Design and Manufacture of Industrial Valves

ANSI/API 607

Fire Test Certificate

At FluoroSeal, we are inspired and committed to developing innovative flow control solutions for every industry we serve.

For over 40 years, FluoroSeal has been manufacturing and customizing a wide range of valves, parts, and accessories for various industries such as Oil & Gas, Chemical, Petrochemical, Power, Pharmaceutical, and Mining. Our client-oriented culture allows us to understand complex industry needs and meet the highest quality standards - that is why our manufacturing processes are ISO 9001:2015, and PED 2014/68/EU certified with TUV Rheinland of North America.

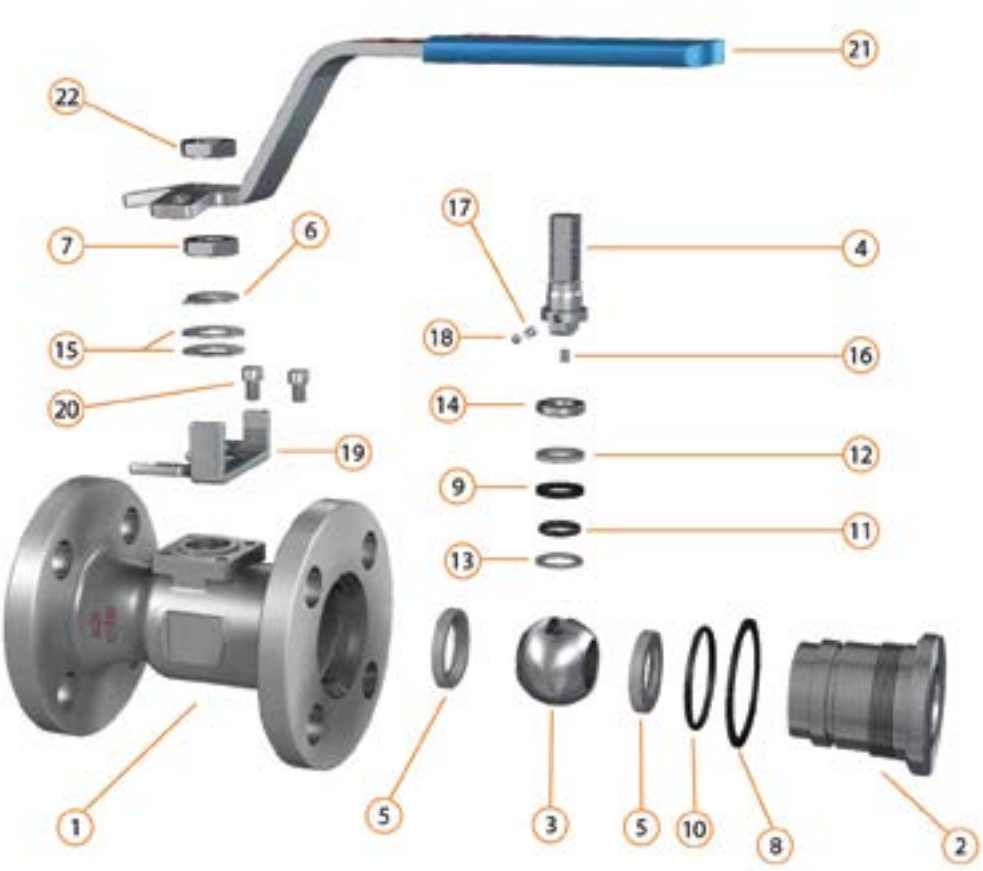
Our wholly owned foundries and manufacturing plants enhance our capability to offer an extensive range of high quality valves at competitive prices in a wide range of exotic alloys on demand. With our large global network of warehouses, stocking distributors, and factory authorized service centers FluoroSeal is capable of delivering valves, repair service, and technical support where and when the end user needs it.

Our product offering is continuously evolving and expanding due to the efforts of our Designers, Engineers, and Metallurgists who apply the latest technologies, production methods, and testing protocols.

STANDARD CONFIGURATION - BG1 WITH WRENCH

UNIBODY FLOATING BALL VALVE, SOFT SEATED

Class 150 & 300: 1/2" to 1 ½"



No.	Description/Part
1	Body
2	End Cap
3	Ball
4	Stem
5	Seat
6	Locking Plate
7	Nut Lock
8	Body Gasket
9	Stem Packing
10	O-ring
11	O-ring
12	Stem Packing
13	Thrust Washer
14	Gland
15	Belleville Spring
16	Antistatic Spring
17	Antistatic Spring

No.	Description/Part
18	Antistatic Ball
19	Position Plate
20	Packing Gland Screw
21	Wrench
22	Lever Nut

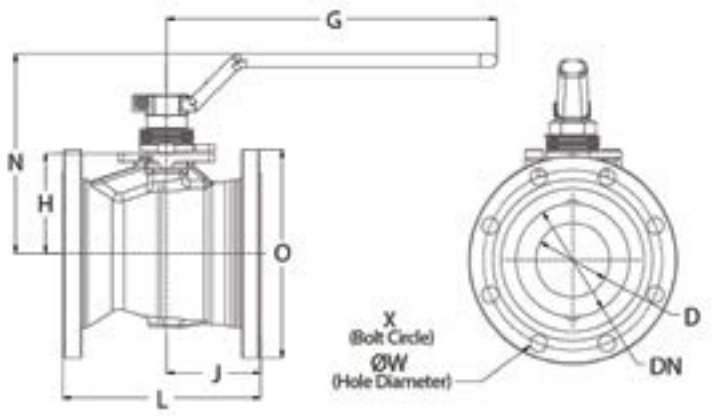
UNIBODY FLOATING BALL VALVE, SOFT SEATED

Class 150: 3" to 8" / Class 300: 3" to 6"

No.	Description/Part
1	Body
2	End Cap
3	Ball
4	Stem
5	Seat
6	Washer
7	Nut Lock
8	Body Gasket
9	Stem Packing
10	O-ring
11	O-ring
12	Thrust Washer
13	Gland
14	Belleville Spring
15	Antistatic Spring
16	Antistatic Spring
17	Antistatic Ball

No.	Description/Part
18	Locking Plate
19	Screw
20	Screw
21	Washer
22	Sleeve
23	Wrench

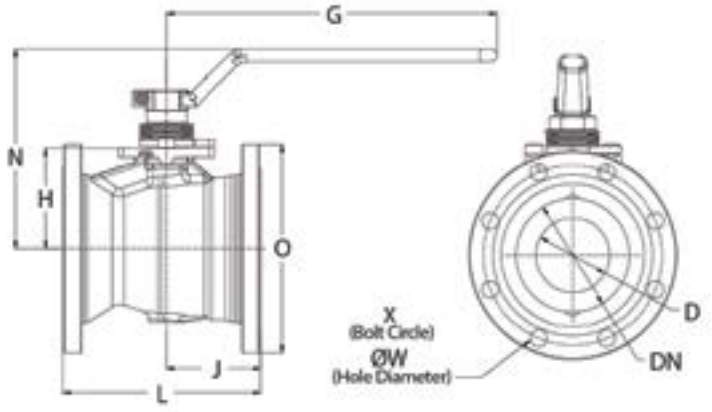
DIMENSIONS & WEIGHTS - BG1 WITH WRENCH



UNIBODY FLOATING BALL VALVE
SOFT SEATED - REDUCED BORE
ANSI CLASS 150

SIZE 1/2" to 8"
Wrench Operated

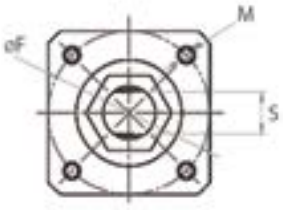
ANSI CLASS 150																							
Size		D		DN		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
½"	15	0.4	11	0.6	15.0	3.5	90	4.3	108	2.1	53.0	0.6	16.0	2.4	60.3	4	0.7	18.7	3.7	93.6	6.3	160	3.3	1.5
¾"	20	0.6	14	0.8	20.8	3.9	100	4.6	117	2.3	59.6	0.6	16.0	2.8	69.9	4	1.1	27.7	4.1	103.5	6.3	160	5.5	2.5
1"	25	0.7	19	1.0	25.4	4.3	110	5.0	127	2.4	61.1	0.6	16.0	3.1	79.4	4	1.3	32.5	4.3	108.5	7.1	180	6.6	3.0
1 ½"	40	1.2	30	1.5	38.0	4.9	125	6.5	165	3.0	76.3	0.6	16.0	3.9	98.4	4	1.9	49.5	4.9	125.0	9.4	240	14.3	6.5
2"	50	1.5	38	2.0	51.0	5.9	150	7.0	178	3.1	80.0	0.7	19.0	4.8	120.7	4	2.2	55.0	5.2	131.0	9.4	240	19.8	9.0
3"	80	2.4	62	3.0	76.0	7.5	190	8.0	203	3.5	88.6	0.7	19.0	6.0	152.4	4	3.8	95.5	6.7	169.5	11.8	300	40.8	18.5
4"	100	3.0	76	4.0	101.5	9.1	230	9.0	229	4.1	104.6	0.7	19.0	7.5	190.5	8	4.6	117.0	8.1	207.0	15.7	400	67.2	30.5
6"	150	3.9	100	6.0	152.5	11.0	280	10.5	267	5.0	127.0	0.9	22.2	9.5	241.3	8	5.3	135.0	8.7	222.0	15.7	400	101.4	46.0
8"	200	5.7	144	8.0	202.5	13.6	345	11.5	292	5.7	146.0	0.9	22.2	11.8	298.5	8	7.4	187.5	11.2	283.5	19.7	500	195.1	88.5

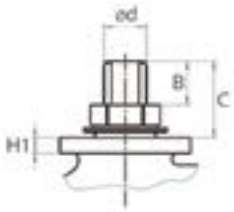


UNIBODY FLOATING BALL VALVE
SOFT SEATED - REDUCED BORE
ANSI CLASS 300

SIZE 1/2" to 6"
Wrench Operated

ANSI CLASS 300																							
Size		D		DN		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
½"	15	0.4	11	0.6	15.0	3.7	95	5.5	139.7	2.1	53.0	0.6	16.0	2.6	66.7	4	0.7	18.7	3.7	93.6	6.3	160	4.4	2.0
¾"	20	0.6	14	0.8	20.8	4.5	115	6.0	152.4	2.3	59.6	0.7	19.0	3.3	82.6	4	1.1	27.7	4.0	100.5	6.3	160	7.7	3.5
1"	25	0.7	19	1.0	25.4	4.9	125	6.5	165.0	2.4	61.1	0.7	19.0	3.5	88.9	4	1.3	32.5	4.3	108.5	7.1	180	9.9	4.5
1 ½"	40	1.2	30	1.5	38.0	6.1	155	7.5	190.5	3.0	76.3	0.9	22.2	4.5	114.3	4	1.9	49.5	4.9	125.0	9.4	240	19.8	9.0
2"	50	1.5	38	2.0	51.0	6.5	165	8.5	216.0	3.1	80.0	0.7	19.0	5.0	127.0	8	2.3	55.0	5.2	131.0	9.4	240	25.4	11.5
3"	80	2.4	62	3.0	76.0	8.3	210	11.1	282.5	3.5	88.6	0.9	22.2	6.6	168.3	8	3.8	95.5	6.7	169.5	11.8	300	56.2	25.5
4"	100	3.0	76	4.0	101.5	10.0	255	12.0	304.8	4.1	104.6	0.9	22.2	7.9	200.0	8	4.6	117.0	8.1	207.0	15.7	400	95.9	43.5
6"	150	3.9	100	6.0	152.5	12.6	320	15.9	403.0	5.0	127.0	0.9	22.2	10.6	270.0	12	5.3	135.0	8.7	222.0	15.7	400	169.8	77.0





UNIBODY FLOATING BALL VALVE
SOFT SEATED - REDUCED BORE
CLASS 150 & 300

SIZE 1/2" to 2"
Wrench Operated

ANSI CLASS 150 & 300													
Size		øF		øM	S		H1		ød	B		C	
in	mm	in	mm		in	mm	in	mm		in	mm	in	mm
½"	15	1.4	36	M5	0.3	7	0.2	6	M10	0.3	8	0.7	18.0
¾"	20	1.4	36	M5	0.3	7	0.2	6	M10	0.4	10	0.9	22.7
1"	25	1.4	36	M5	0.4	9	0.2	6	M12	0.5	12	1.0	25.5
1 ½"	40	2.0	50	M6	0.6	14	0.3	7	M18	0.7	19	1.4	35.5
2"	50	2.0	50	M6	0.6	14	0.3	7	M18	0.6	15	1.3	34.0

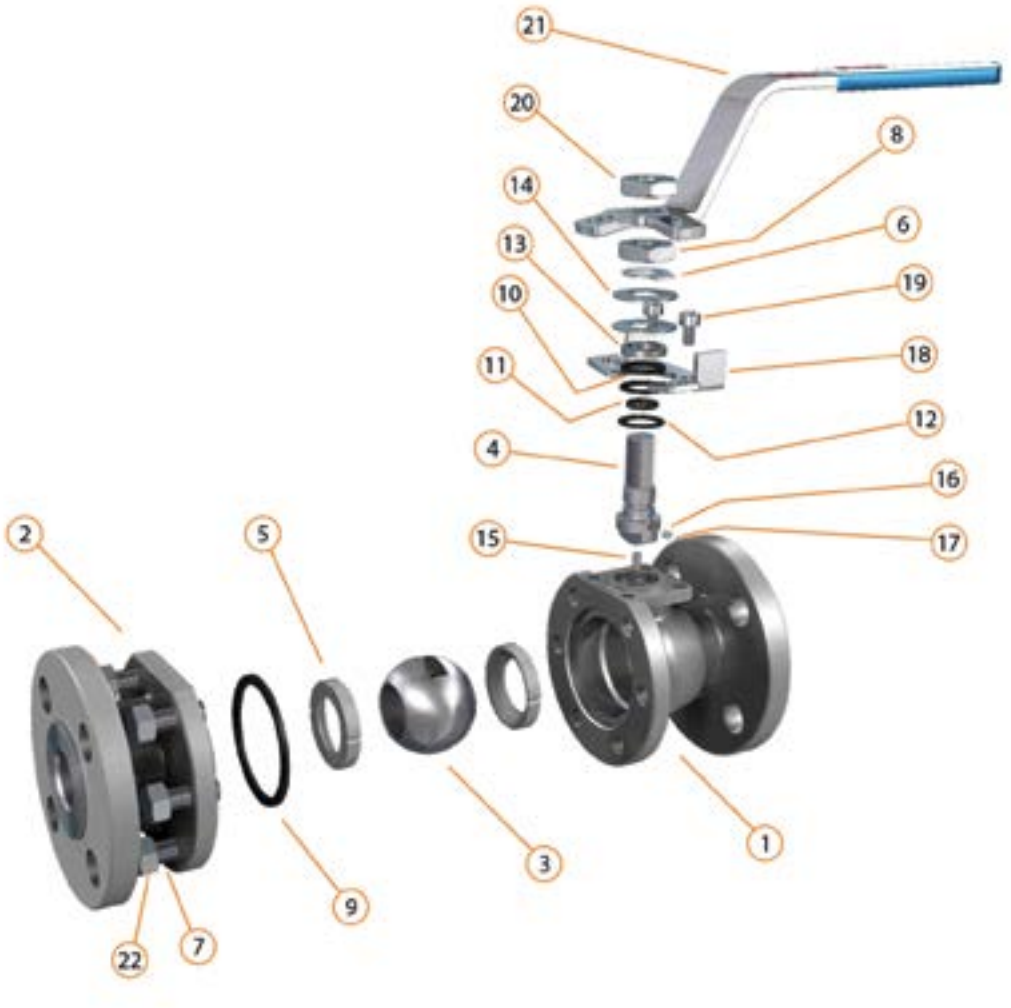
NOTES:

1. The information on this catalog is provided for general informational purposes only.
2. Customization for specific applications is available upon request.
3. For all technical parameters of the product please contact your local FluoroSeal sales office or authorized representative.
4. We reserve the right to make changes without prior notice.

STANDARD CONFIGURATION - BG2 WITH WRENCH

2 PIECE BODY FLOATING BALL VALVE, SOFT SEATED

Class 150 & 300 1/2" to 1 ½"

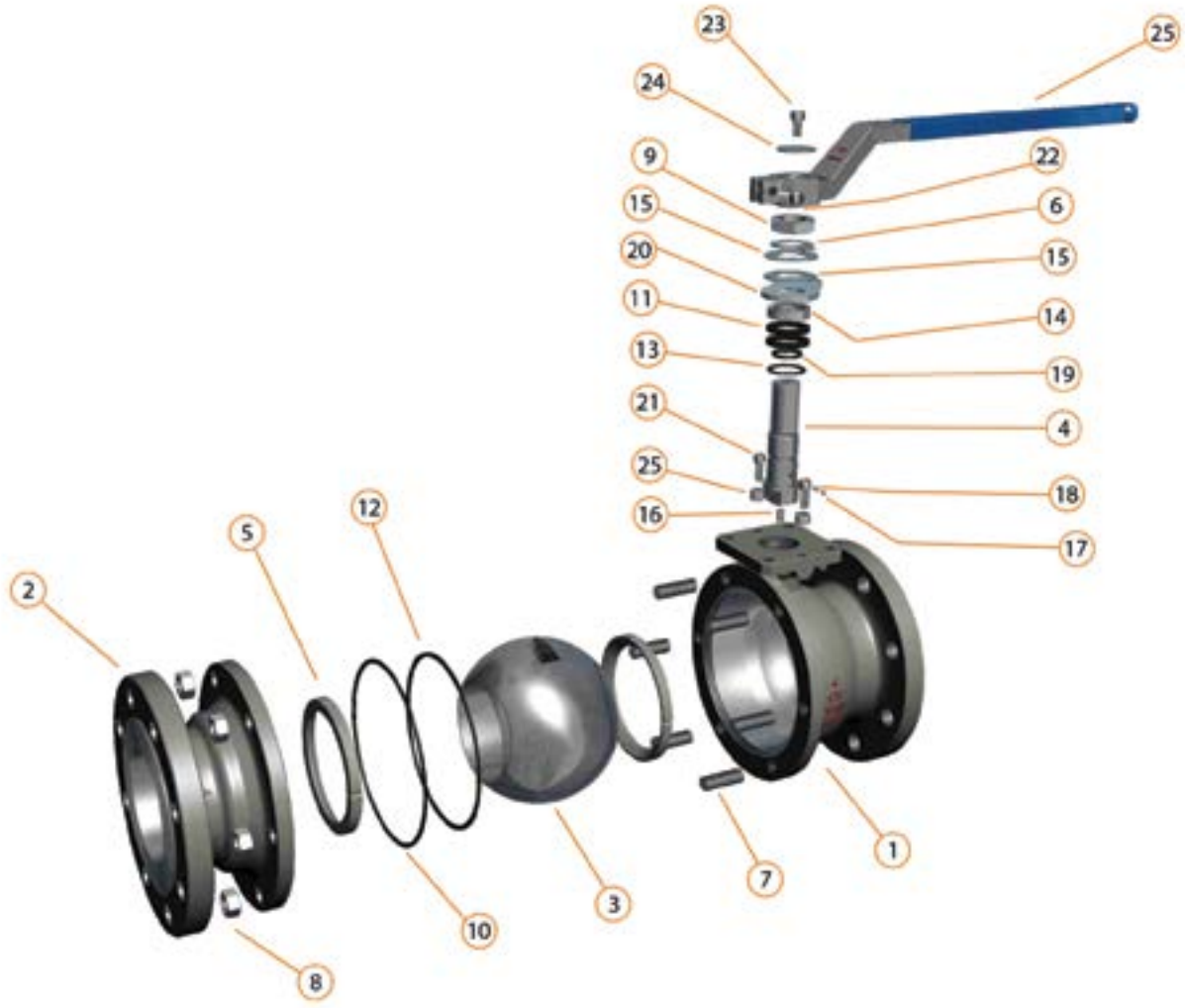


No.	Description/Part
1	Body
2	End Cap
3	Ball
4	Stem
5	Seat
6	Locking Plate
7	Screw
8	Packing Nut
9	Body Gasket
10	O-ring
11	Stem Packing
12	Thrust Washer
13	Gland
14	Belleville Spring
15	Antistatic Spring
16	Antistatic Spring
17	Antistatic Ball

No.	Description/Part
18	Position Plate
19	Travel Stop Screw
20	Wrench Nut
21	Wrench
22	Body Nut

2 PIECE BODY FLOATING BALL VALVE, SOFT SEATED

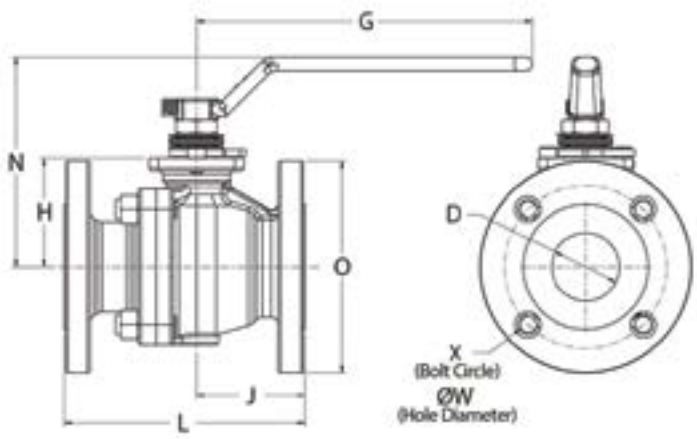
Full Bore - Class 150 & 300: 2" to 6" / Class 600 2" to 4" / Reduced Bore - Class 150 & 300: 2" to 8" / Class 600: 2" to 4"



No.	Description/Part
1	Body
2	End Cap
3	Ball
4	Stem
5	Seat
6	Washer
7	Bolt
8	Nut
9	Packing Nut
10	Body Gasket
11	Stem Packing
12	Washer
13	Thrust Washer
14	Gland
15	Belleville Spring
16	Antistatic Spring
17	Antistatic Spring

No.	Description/Part
18	Antistatic Ball
19	O-ring
20	Locking Plate
21	Travel Stop Screw
22	Screw
23	Screw
24	Washer
25	Wrench

DIMENSIONS & WEIGHTS - BG2 WITH WRENCH

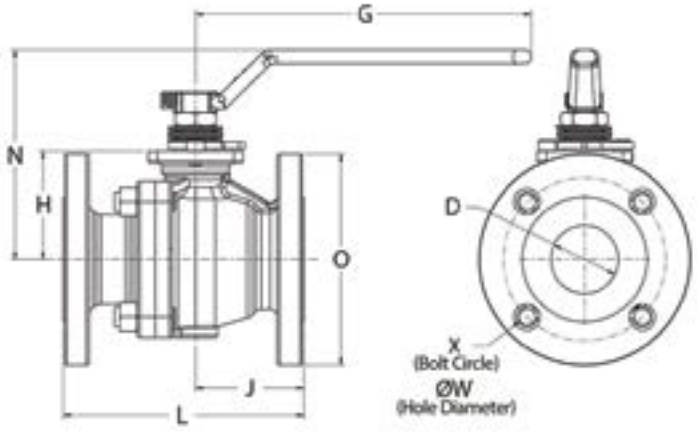


2 PIECE FLOATING BALL VALVE
SOFT SEATED - FULL BORE
ANSI CLASS 150 & 300

SIZE 1/2" to 6"
Wrench Operated

ANSI CLASS 150																					
Size		D		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
½"	15	0.6	14	3.5	90	4.3	108	1.9	47.0	0.6	16	2.4	60.3	4	1.4	36.0	4.3	109.0	6.3	160	4.0	1.8
¾"	20	0.7	19	3.9	100	4.6	117	2.1	53.0	0.6	16	2.8	69.9	4	1.6	41.5	4.5	115.0	7.1	180	4.4	2.0
1"	25	1.0	25	4.3	110	5.0	127	2.2	55.5	0.6	16	3.1	79.4	4	1.7	43.0	4.7	120.0	7.1	180	7.9	3.6
1 ½"	40	1.5	38	4.9	125	6.5	165	3.0	75.0	0.6	16	3.9	98.4	4	2.3	57.5	5.1	130.0	9.4	240	15.9	7.2
2"	50	2.0	50	6.0	150	7.0	178	3.1	80.0	0.7	19	4.8	120.7	4	3.5	89.0	5.7	146.0	9.4	240	24.5	11.1
3"	80	3.0	76	7.5	190	8.0	203	3.7	95.0	0.7	19	6.0	152.4	4	4.6	117.0	7.9	200.0	15.7	400	48.5	22.0
4"	100	3.9	100	9.0	230	9.0	229	4.1	104.0	0.7	19	7.5	190.5	8	5.3	135.0	8.9	225.0	15.7	400	110.2	50.0
6"	150	5.9	151	11.0	280	15.5	394	6.9	175.0	0.9	22.2	9.5	241.3	8	7.7	195.0	11.5	291.0	23.6	600	238.1	108.0

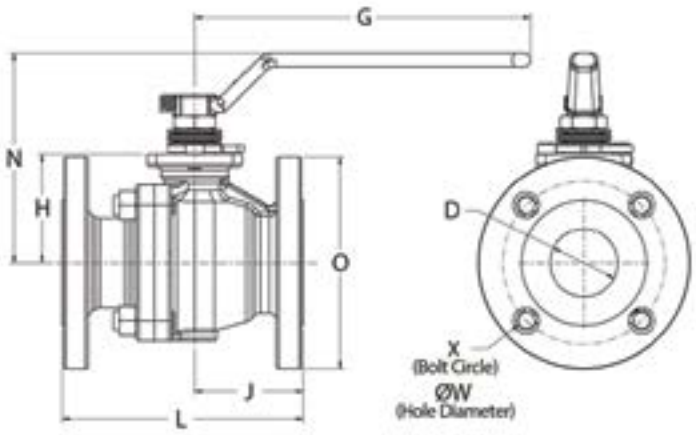
ANSI CLASS 300																					
Size		D		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
½"	15	0.6	14	3.7	95	5.5	140	2.0	52	0.6	16.0	2.6	66.7	4	1.4	36.0	4.3	109	6.3	160	5.1	2.3
¾"	20	0.7	19	4.5	115	6.0	152	2.1	53	0.7	19.0	3.2	82.5	4	1.6	41.5	4.5	115	7.1	180	7.9	3.6
1"	25	1.0	25	4.9	125	6.5	165	2.4	60	0.7	19.0	3.5	88.9	4	1.7	43.0	4.7	120	7.1	180	11.2	5.1
1 ½"	40	1.5	38	6.1	155	7.5	190	3.0	75	0.9	22.2	4.5	114.3	4	2.3	57.5	5.1	130	9.4	240	22.0	10.0
2"	50	2.0	50	6.5	165	8.5	216	3.1	80	0.7	19.0	5.0	127.0	8	3.5	89.0	5.7	146	9.4	240	30.9	14.0
3"	80	3.0	76	8.3	210	11.1	283	3.7	95	0.9	22.2	6.6	168.3	8	4.6	117.0	7.9	200	15.7	400	67.5	30.6
4"	100	3.9	100	10.0	255	12.0	305	4.1	104	0.9	22.2	7.9	200.0	8	5.3	135.0	8.9	225	15.7	400	116.8	53.0
6"	150	5.9	151	12.6	320	15.9	403	6.9	175	0.9	22.2	10.6	269.9	12	7.7	195.0	11.5	291	31.5	800	255.7	116.0



2 PIECE FLOATING BALL VALVE
SOFT SEATED - FULL BORE
ANSI CLASS 600

SIZE 2" to 4"
Wrench Operated

ANSI CLASS 600																					
Size		D		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
2"	50	2.0	50	6.0	150	11.5	292	4.5	113.5	0.7	19.0	5.0	127.0	8	3.0	77	5.9	151	13.4	340	47.8	21.7
3"	80	3.0	76	8.3	210	14.0	356	6.0	153.0	0.9	22.2	6.6	168.3	8	4.2	106	8.0	204	14.4	367	108.5	49.2
4"	100	3.9	100	10.8	275	17.0	432	7.0	178.0	1.0	25.4	8.5	215.9	8	5.9	150	8.0	204	24.0	610	213.6	96.9

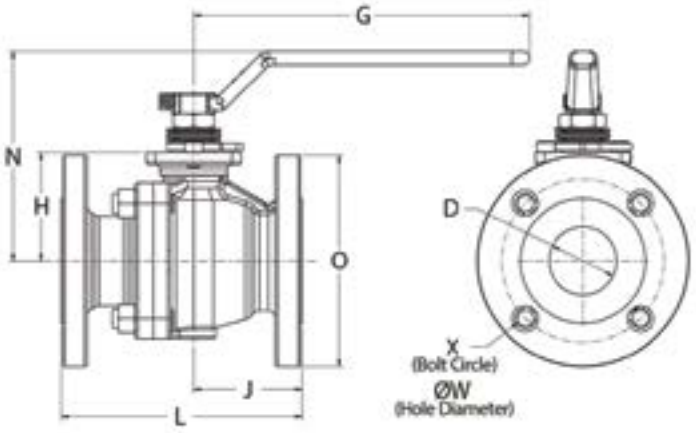


2 PIECE FLOATING BALL VALVE SOFT SEATED- REDUCED BORE ANSI CLASS 150 & 300

SIZE 2" to 8"
Wrench Operated

ANSI CLASS 150																							
Size		D		DN		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
2"	50	1.5	38	2.0	50	5.9	150	7.0	178	3.1	80	0.7	19.0	4.8	120.7	4	2.2	55.0	4.4	112.5	9.4	240	19.8	9.0
3"	80	2.0	50	3.0	76	7.5	190	8.0	203	3.5	90	0.7	19.0	6.0	152.4	4	3.1	80.0	5.7	146.0	9.4	240	35.3	16.0
4"	100	3.0	76	3.9	100	9.1	230	9.0	229	3.9	100	0.7	19.0	7.5	190.5	8	4.5	115.0	7.9	200.0	15.7	400	65.0	29.5
6"	150	3.9	100	5.9	151	11.0	280	15.5	394	5.9	150	0.9	22.2	9.5	241.3	8	5.3	135.0	8.7	221.0	15.7	400	105.8	48.0
8"	200	5.9	151	8.0	202	13.6	345	18.0	457	7.9	200	0.9	22.2	11.8	298.5	8	7.7	195.0	11.3	286.0	23.6	600	271.2	123.0

ANSI CLASS 300																							
Size		D		DN		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
2"	50	1.5	38	2.0	50	6.5	165	8.5	216	3.7	95	0.7	19.0	5.0	127.0	8	2.2	55.5	4.4	112.5	9.4	240	24.3	11.0
3"	80	2.0	50	3.0	76	8.3	210	11.1	283	4.3	110	0.9	22.2	6.6	168.3	8	3.1	80.0	5.7	146.0	9.4	240	66.1	30.0
4"	100	3.0	76	3.9	100	10.0	255	12.0	305	4.9	125	0.9	22.2	7.9	200.0	8	4.5	115.0	7.9	200.0	15.7	400	86.0	39.0
6"	150	3.9	100	5.9	151	12.6	320	15.9	403	6.3	160	0.9	22.2	10.6	269.9	12	5.3	135.0	8.7	221.0	15.7	400	159.8	72.5
8"	200	5.6	151	8.0	202	15.0	380	19.8	502	8.9	225	1.0	25.4	13.0	330.2	12	7.7	195.0	11.3	286.0	31.5	800	326.3	148.0

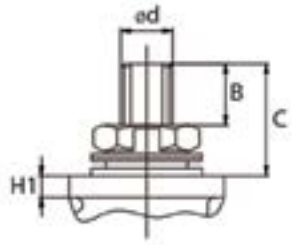


2 PIECE FLOATING BALL VALVE SOFT SEATED - REDUCED BORE ANSI CLASS 600

SIZE 2" to 4"
Wrench Operated

ANSI CLASS 600																							
Size		D		DN		O		L		J		W		X		V	H		N		G		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
2"	50	1.5	38	2.0	50	6.5	165	11.5	292	4.6	117.5	0.7	19.0	5.0	127.0	8	2.6	67	5.6	141	13.4	340	42.3	19.2
3"	80	2.0	50	3.0	76	8.3	210	14.0	356	6.2	158.5	0.9	22.2	6.6	168.3	8	3.0	77	5.9	151	13.4	340	69.0	31.3
4"	100	3.0	76	3.9	100	10.8	275	17.0	432	8.0	203.0	1.0	25.4	8.5	215.9	8	4.2	106	8.0	204	14.4	367	167.6	76.0

TOP WORKS - DIMENSIONS BG2 WITH WRENCH



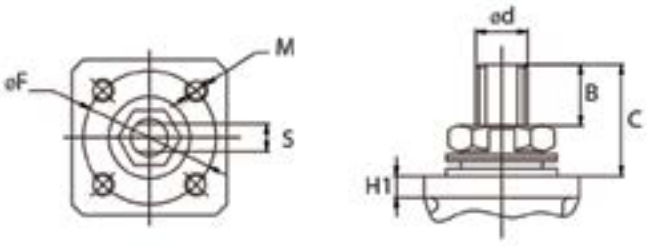
2 PIECE FLOATING BALL VALVE
SOFT SEATED - FULL BORE
CLASS 150, 300 & 600

SIZE 1/2" to 6"
Wrench Operated

ANSI CLASS 150													
Size		øF		M	S		H1		ød	B		C	
in	mm	in	mm		in	mm	in	mm		in	mm	in	mm
½"	15	1.4	36	M5	0.3	7	0.2	5.0	M10	0.3	8.5	0.7	18.5
¾"	20	1.4	36	M5	0.4	9	0.2	5.0	M12	0.5	11.5	1.0	25.0
1"	25	1.7	42	M5	0.4	11	0.2	6.0	M14	0.7	17.0	1.1	27.5
1 ½"	40	2.0	50	M6	0.6	14	0.3	7.5	M18	0.9	23.0	1.3	33.0
2"	50	2.8	70	M8	0.5	13	0.4	10.0	M18	0.6	14.0	1.4	36.0
3"	80	4.0	102	M10	0.8	20	0.5	12.0	M27	0.9	23.0	2.1	52.5
4"	100	4.0	102	M10	0.8	20	0.5	12.0	M27	0.9	23.0	2.1	52.5
6"	150	4.9	125	M12	0.9	24	0.6	16.0	M36	1.0	26.5	2.5	62.5

ANSI CLASS 300													
Size		øF		M	S		H1		ød	B		C	
in	mm	in	mm		in	mm	in	mm		in	mm	in	mm
½"	15	1.4	36	M5	0.3	7	0.2	5.0	M10	0.3	8.5	0.7	18.5
¾"	20	1.4	36	M5	0.3	8	0.2	5.0	M12	0.5	11.5	1.0	25.0
1"	25	1.7	42	M5	0.4	11	0.2	6.0	M14	0.7	17.0	1.1	27.5
1 ½"	40	2.0	50	M6	0.6	14	0.3	7.5	M18	0.9	23.0	1.3	33.0
2"	50	2.8	70	M8	0.5	13	0.4	10.0	M18	0.6	14.0	1.4	36.0
3"	80	4.0	102	M10	0.8	20	0.5	12.0	M27	0.9	23.0	2.1	52.5
4"	100	4.0	102	M10	0.8	20	0.5	12.0	M30	0.9	23.0	2.2	55.0
6"	150	4.9	125	M12	1.1	28	0.6	16.0	M40	1.1	28.0	2.5	64.0

ANSI CLASS 600													
Size		øF		M	S		H1		ød	B		C	
in	mm	in	mm		in	mm	in	mm		in	mm	in	mm
2"	50	2.8	70	M8	0.5	12	0.3	8.5	M22	0.5	12.0	1.5	37
3"	80	4.0	102	M10	0.8	20	0.5	12.0	M30	1.0	24.5	2.5	63
4"	100	4.0	102	M10	1.1	28	0.5	11.5	M40	0.8	21.5	2.5	64



2 PIECE FLOATING BALL VALVE
SOFT SEATED (CAST STEEL BODY)
REDUCED BORE - CLASS 150, 300 & 600

SIZE 2" to 8"
Wrench Operated

ANSI CLASS 150													
Size		øF		M	S		H1		ød	B		C	
in	mm	in	mm		in	mm	in	mm		in	mm	in	mm
2"	50	2.0	50	M6	0.5	13	0.3	8.0	M18	0.5	13.5	1.3	33.0
3"	80	2.8	70	M8	0.5	13	0.4	9.0	M18	0.7	17.0	1.5	37.0
4"	100	4.0	102	M10	0.8	20	0.5	12.0	M27	1.0	25.0	2.0	52.0
6"	150	4.0	102	M10	0.8	20	0.5	12.0	M27	1.0	26.0	2.1	53.0
8"	200	4.9	125	M12	0.9	24	0.6	16.0	M36	1.4	35.0	2.4	62.0

ANSI CLASS 300													
Size		øF		M	S		H1		ød	B		C	
in	mm	in	mm		in	mm	in	mm		in	mm	in	mm
2"	50	2.0	50	M6	0.5	13	0.3	8.0	M18	0.5	13.5	1.3	33.0
3"	80	2.8	70	M8	0.5	13	0.4	9.0	M18	0.7	17.0	1.5	37.0
4"	100	4.0	102	M10	0.8	20	0.5	12.0	M27	1.0	25.0	2.0	52.0
6"	150	4.0	102	M10	0.8	20	0.5	12.0	M30	1.0	25.5	2.2	55.0
8"	200	4.9	125	M12	1.1	28	0.6	16.0	M40	1.0	26.0	2.4	62.0

ANSI CLASS 600													
Size		øF		M	S		H1		ød	B		C	
in	mm	in	mm		in	mm	in	mm		in	mm	in	mm
2"	50	2.8	70	M8	0.5	12	0.3	8.4	M22	0.4	11.0	1.4	35.0
3"	80	2.8	70	M8	0.5	12	0.4	10.0	M22	0.5	12.0	1.5	37.0
4"	100	4.0	102	M10	0.8	20	0.6	15.0	M30	1.0	24.5	2.4	61.5

NOTES:

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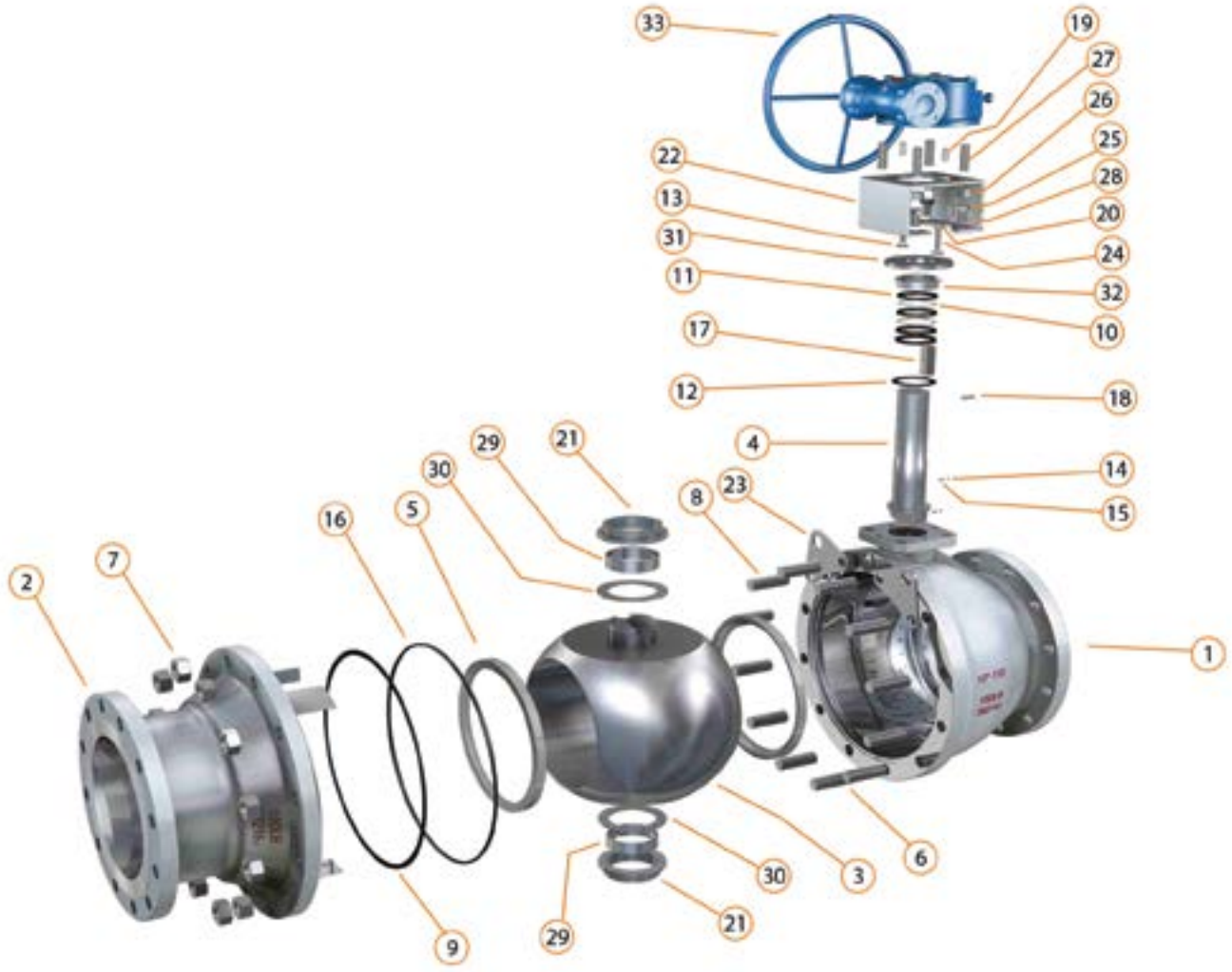
STANDARD CONFIGURATION - BG2 WITH GEAR

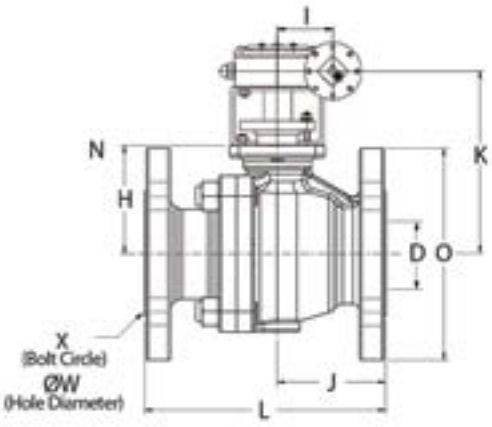
2 PIECE BODY FLOATING BALL VALVE, SOFT SEATED

Full Bore - Class 150: 6" to 12" / Class 300 6" to 12" / Reduced Bore - Class 150 & 300: 8" to 10"



No.	Description/Part
1	Body
2	End Cap
3	Ball
4	Stem
5	Seat
6	Bolt
7	Nut
8	Bolt
9	Body Gasket
10	Stem Packing
11	Stem Packing
12	Thrust Washer
13	Belleville Spring
14	Antistatic Spring
15	Antistatic Spring
16	Antistatic Ball
17	O-ring

No.	Description/Part
18	Key
19	Pin
20	Pin
21	Pin
22	Trunnion
23	Yoke
24	Lifting eye
25	Bolt
26	Nut
27	Bolt
28	Nut
29	Screw
30	Bearing
31	Washer
32	Retainer Plate
33	Packing Gland
34	Gear



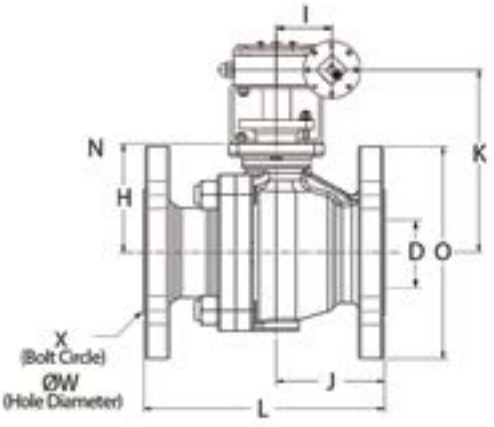
2 PIECE FLOATING BALL VALVE
SOFT SEATED - FULL BORE
CLASS 150 & 300

SIZE 6" to 12"

Enclosed Gear Operated

ANSI CLASS 150																					
Size		D		O		L		J		W		X		V	H		K		I		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
6"	150	5.9	151	11.0	280	15.5	394	6.9	175.0	0.9	22.2	9.5	241.3	8	7.7	195.0	12.5	318.0	3.1	78	291.0	132.0
8"	200	8.0	202	13.6	345	18.0	457	7.9	200.0	0.9	22.9	11.8	298.5	8	9.3	237.0	15.3	389.5	4.7	120	429.9	195.0
10"	250	10.0	254	15.9	405	21.0	533	8.9	226.0	1.0	25.4	14.3	362.0	12	11.1	282.0	17.2	437.0	4.7	120	687.8	312.0
12"	300	12.0	305	19.1	485	24.0	610	12.0	304.0	1.0	25.4	17.0	431.8	12	11.7	296.0	19.4	493.0	4.9	125	762.8	346.0

ANSI CLASS 300																					
Size		D		O		L		J		W		X		V	H		K		I		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
6"	150	5.9	151	12.6	320	15.9	403	6.9	175	0.9	22.2	10.6	269.9	12	7.7	195.0	12.5	318	3.1	78	319.7	145.0
8"	200	8.0	202	15.0	380	19.8	502	7.9	200	1.0	25.4	13.0	330.2	12	9.3	237.0	14.9	379	5.0	126	517.0	234.5
10"	250	10.0	254	17.5	445	22.4	568	10.3	261	1.1	28.6	15.3	387.4	16	11.1	282.0	17.4	441	5.0	126	1,086.9	493.0
12"	300	12.0	305	19.1	485	24.0	610	12.0	304	1.0	25.4	17.0	431.8	12	11.7	296.0	19.4	493	4.9	125	762.8	346.0



2 PIECE FLOATING BALL VALVE
SOFT SEATED - REDUCED BORE
CLASS 150 & 300

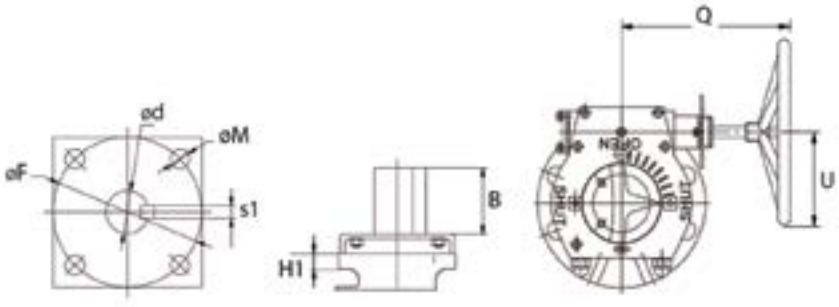
SIZE 8" to 10"

Enclosed Gear Operated

ANSI CLASS 150																							
Size		D		DN		O		L		J		W		X		V	H		K		I		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
8"	200	5.9	151	8.0	202	13.6	345	18.0	457	7.9	200	0.9	22.2	11.8	298.5	8	7.7	195	12.5	318.0	3.1	78	321.9	146
10"	250	8.0	202	10.0	254	15.9	405	21.0	533	8.9	226	1.0	25.4	14.3	362.0	12	9.3	237	15.3	389.5	4.7	120	480.6	218

ANSI CLASS 300																							
Size		D		DN		O		L		J		W		X		V	H		K		I		Weight	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	Holes	in	mm	in	mm	in	mm	lb	kg
8"	200	5.9	151	8.0	202	15.0	380	19.8	502	7.9	200	1.0	25.4	13.0	330.2	12	7.7	195	12.5	318	3.1	78	379.2	172
10"	250	8.0	202	10.0	254	17.5	445	22.4	568	10.3	261	1.1	28.6	15.3	387.4	16	9.3	237	14.9	379	5.0	126	705.5	320

TOP WORKS - DIMENSIONS BG2 WITH GEAR

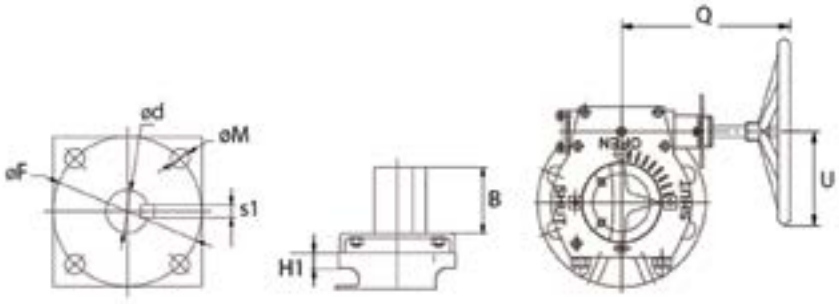


2 PIECE FLOATING BALL VALVE SOFT SEATED - FULL BORE CLASS 150 & 300

SIZE 6" to 12"
Enclosed Gear Operated

ANSI CLASS 150																	
Size		øF		ød		øM	S1		H1		B		Q		U		
in	mm	in	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	
6"	150	4.9	125	1.3	34	M12	0.4	10	0.6	16.0	2.0	50.0	8.8	223.5	11.8	300	
8"	200	5.5	140	1.8	45	M16	0.5	12	0.6	16.0	2.5	64.0	10.5	267.0	15.7	400	
10"	250	5.5	140	2.2	55	M16	0.7	18	0.9	22.0	2.5	63.0	12.4	316.0	23.6	600	
12"	300	10.0	254	3.1	78	M16	0.9	22	1.0	25.0	3.8	97.5	20.2	513.0	23.6	600	

ANSI CLASS 300																	
Size		øF		ød		øM	S1		H1		B		Q		U		
in	mm	in	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	
6"	150	4.9	125	1.5	38	M12	0.4	10	0.6	16.0	2.0	50.0	8.8	223.5	11.8	300	
8"	200	5.5	140	1.8	45	M16	0.5	12	0.6	16.0	2.5	64.0	15.9	404.0	27.6	700	
10"	250	5.5	140	2.2	55	M16	0.7	18	0.9	22.0	2.5	63.0	15.8	402.0	23.6	600	
12"	300	10.0	254	3.1	78	M16	0.9	22	1.0	25.0	3.8	97.5	20.2	513.0	23.6	600	



2 PIECE FLOATING BALL VALVE SOFT SEATED - REDUCED BORE CLASS 150 & 300

SIZE 8" to 10"
Enclosed Gear Operated

ANSI CLASS 150																	
Size		øF		ød		øM	S1		H1		B		Q		U		
in	mm	in	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	
8"	200	4.9	125	1.3	34	M12	0.4	10	0.6	16	2.0	50	8.8	223.5	11.8	300	
10"	250	5.5	140	1.8	45	M16	0.5	12	0.6	16	2.5	64	10.5	267.0	15.7	400	

ANSI CLASS 300																	
Size		øF		ød		øM	S1		H1		B		Q		U		
in	mm	in	mm	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	
8"	200	4.9	125	1.5	38	M12	0.4	10	0.6	16	2.0	50	8.8	223.5	11.8	300	
10"	250	5.5	140	1.8	45	M16	0.5	12	0.6	16	2.5	64	15.9	404.0	27.6	700	

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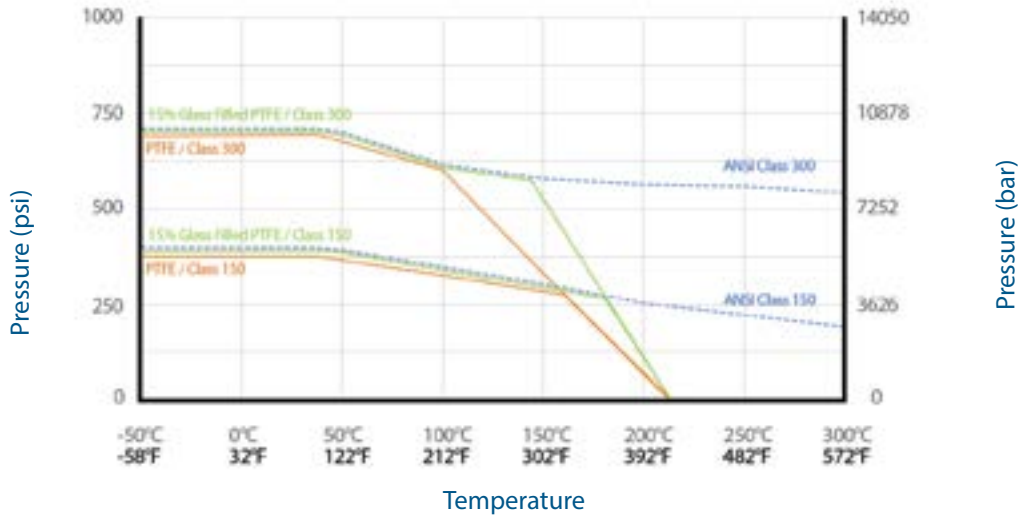
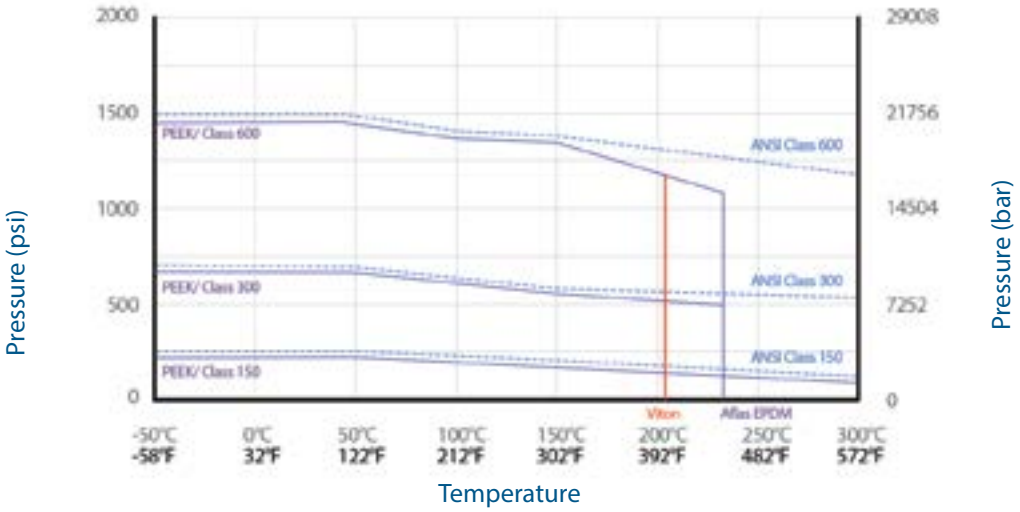
PRESSURE-TEMPERATURE CHART

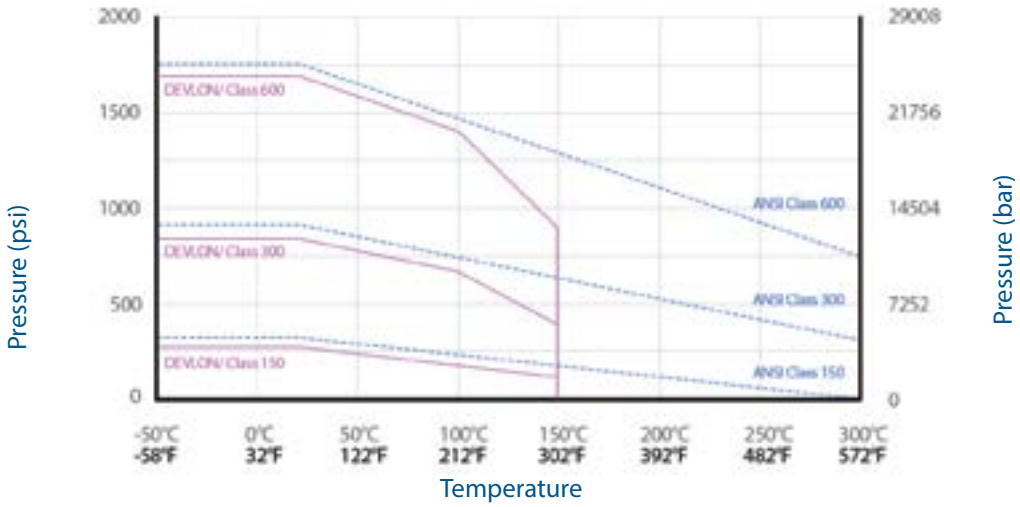
PTFE & RPTFE SEATED



PEEK SEATED



DEVLON SEATED



TECHNICAL DATA

VALVE OPERATING TORQUES - FULL PORT

		PTFE SEATS					
Size		Class 150		Class 300		Class 600	
in	DN	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
½"	15	8	0.90	12	1.35	-	-
¾"	20	12	1.35	16	1.80	-	-
1"	25	15	1.69	20	2.25	-	-
1 ½"	40	30	3.38	40	4.51	-	-
2"	50	50	5.64	72	8.13	138	15.59
3"	80	91	10.28	180	20.33	293	33.10
4"	100	230	25.98	345	38.97	690	77.95
6"	150	420	47.45	735	83.04	-	-
8"	200	1,100	124.28	3,050	344.60	-	-
10"	250	2,600	293.76	3,650	412.39	-	-
12"	300	4,000	451.93	-	-	-	-

VALVE OPERATING TORQUES - REDUCED PORT

		PTFE SEATS					
Size		Class 150		Class 300		Class 600	
in	DN	in-lbs	Nm	in-lbs	Nm	in-lbs	Nm
½"	15	3	0.33	7	0.79	-	-
¾"	20	8	0.90	12	1.35	-	-
1"	25	12	1.35	16	1.80	-	-
1 ½"	40	15	1.69	20	2.25	-	-
2"	50	30	3.38	40	4.51	112	12.65
3"	80	50	5.64	72	8.13	138	15.59
4"	100	91	10.28	180	20.33	293	33.10
6"	150	230	25.98	345	38.97	-	-
8"	200	420	47.45	735	83.04	-	-
10"	250	1,100	124.28	3,050	344.60	-	-

FLOW COEFFICIENT - REDUCED PORT

UNIBODY											
Size		Ball Bore	Cv max	Cv for Various Openings							
in	DN	D	90°	80°	70°	60°	50°	40°	30°	20°	10°
½"	15	11	7.8	5.1	3.3	2.2	1.4	0.8	0.5	0.2	0.05
¾"	20	14	14.9	9.7	6.3	4.1	2.6	1.6	0.9	0.4	0.1
1"	25	19	28.3	18.5	12.1	7.8	4.9	3.0	1.7	0.8	0.2
1 ½"	40	30	73.2	47.8	31.2	20.1	12.6	7.7	4.3	2.1	0.6
2"	50	38	119.9	78.3	51.1	32.9	20.7	12.5	7.1	3.4	0.9
3"	80	62	332.7	217.2	141.9	91.4	57.5	34.8	19.6	9.4	2.6
4"	100	76	507.1	331.1	216.3	139.3	87.7	53.1	29.9	14.4	3.9
6"	150	100	895.3	584.6	381.8	245.9	154.8	93.7	52.8	25.4	7.0
8"	200	144	1,908.4	1,246.0	813.8	524.1	330.0	199.8	112.5	54.0	14.8

2-PIECE BODY											
Size		Ball Bore	Cv max	Cv for Various Openings							
in	DN	D	90°	80°	70°	60°	50°	40°	30°	20°	10°
¾"	20	14	14.9	9.7	6.3	4.1	2.6	1.6	0.9	0.4	0.1
1"	25	19	28.3	18.5	12.1	7.8	4.9	3.0	1.7	0.8	0.2
1 ½"	40	30	73.2	47.8	31.2	20.1	12.6	7.7	4.3	2.1	0.6
2"	50	38	119.9	78.3	51.1	32.9	20.7	12.5	7.1	3.4	0.9
3"	80	62	332.7	217.2	141.9	91.4	57.5	34.8	19.6	9.4	2.6
4"	100	76	507.1	331.1	216.3	139.3	87.7	53.1	29.9	14.4	3.9
6"	150	100	895.3	584.6	381.8	245.9	154.8	93.7	52.8	25.4	7.0
8"	200	144	1,908.4	1,246.0	813.8	524.1	330.0	199.8	112.5	54.0	14.8
10"	250	187	3,276.9	2,139.5	1,397.4	900.0	566.6	343.0	193.2	92.8	25.5

FLOW COEFFICIENT - FULL PORT

2-PIECE BODY											
Size		Ball Bore	Cv max	Cv for Various Openings							
in	DN	D	90°	80°	70°	60°	50°	40°	30°	20°	10°
½"	15	14	16.0	8.7	4.5	2.1	0.8	0.2	0.0	0.0	0.0
¾"	20	19	32.5	20.2	11.9	6.6	3.4	1.5	0.4	0.0	0.0
1"	25	24	55.8	33.6	15.4	10.2	4.9	1.9	0.3	0.1	0.1
1 ½"	40	38	160.4	103.8	63.8	37.3	20.4	9.9	3.7	0.5	0.1
2"	50	50	300.8	193.4	118.2	68.6	37.1	17.7	6.4	0.7	0.3
3"	80	76	782.6	516.8	325.0	194.6	109.6	56.0	23.3	5.0	0.7
4"	100	100	1,465.3	987.7	634.7	389.4	226.0	120.6	54.8	16.1	1.3
6"	150	151	3,720.3	2,531.8	1,643.6	1,019.5	599.6	326.2	153.5	50.1	3.3
8"	200	202	7,223.5	4,959.5	3,249.6	2,036.2	1,540.6	670.8	325.2	115.2	10.5
10"	250	254	12,172.7	8,409.0	5,545.6	3,499.3	2,100.7	1,175.7	581.5	216.5	26.2
12"	300	305	18,462.4	12,849.6	8,540.9	5,435.3	3,295.5	1,869.5	946.0	371.9	59.5

BG1 - FLOATING BALL VALVES

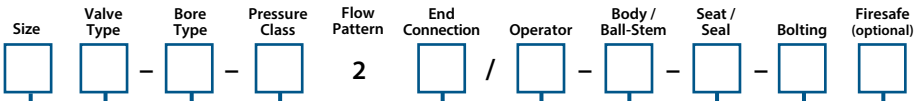
Item	Description	Stainless Steel	WCB
1	Body	ASTM A351 CF8M	ASTM A216 WCB
2	End Cap	ASTM A182 F316	ASTM A105
3	Ball	ASTM A182 F316	ASTM A182 F316
4	Stem	ASTM A182 F316	ASTM A182 F316
5	Seat	TFM1700 / 1600	TFM1700 / 1600
6	Locking Plate	ASTM A515 70	ASTM A515 70
7	Nut Lock	ASTM A240 304	ASTM A240 304
8	Body Gasket	PTFE	PTFE
9	Stem Packing	Chevron	Chevron
10	O-ring	Viton	Viton
11	O-ring	Viton	Viton
12	Stem Packing	Chevron	Chevron
13	Thrust Washer	Filled PTFE	Filled PTFE
14	Gland	ASTM A276 316	ASTM A276 316
15	Belleville Spring	ASTM A240 304	ASTM A240 304
16	Antistatic Spring	ASTM A313 316	ASTM A313 316
17	Antistatic Spring	ASTM A313 316	ASTM A313 316
18	Antistatic Ball	ASTM A276 304	ASTM A276 304
19	Position Plate *	ASTM A515 70	ASTM A515 70
20	Packing Gland Screw	ASTM A193 B7	ASTM A193 B7
21	Wrench	ASTM A29 1035	ASTM A29 1035
22	Lever Nut	304 Stainless Steel	304 Stainless Steel

BG2 - FLOATING BALL VALVES

Item	Description	Stainless Steel	WCB
1	Body	ASTM A351 CF8M	ASTM A216 WCB
2	End Cap	ASTM A351 CF8M	ASTM A216 WCB
3	Ball	ASTM A182 F316	ASTM A182 F316
4	Stem	ASTM A182 F316	ASTM A182 F316
5	Seat	TFM1700 / 1600	TFM1700 / 1600
6	Locking Plate	ASTM A515 70	ASTM A515 70
7	Screw	ASTM A193 B8	ASTM A193 B7
8	Packing Nut	ASTM A194 8	ASTM A194 8
9	Body Gasket	PTFE	PTFE
10	O-ring	Viton	Viton
11	Stem Packing	PTFE	PTFE
12	Thrust Washer	PTFE	PTFE
13	Gland	ASTM A276 316	ASTM A276 316
14	Belleville Spring	ASTM A240 304	ASTM A240 304
15	Antistatic Spring	ASTM A313 316	ASTM A313 316
16	Antistatic Spring	ASTM A313 316	ASTM A313 316
17	Antistatic Ball	ASTM A276 304	ASTM A276 304
18	Position Plate *	ASTM A515 70	ASTM A515 70
19	Travel Stop Screw	304 Stainless Steel	304 Stainless Steel
20	Wrench Nut	304 Stainless Steel	304 Stainless Steel
21	Wrench	ASTM A29 1035	ASTM A29 1035
22	Body Nut	ASTM A194 8	ASTM A194 2H

* Item only available for valve sizes ½" to 1 ½"

ORDERING INSTRUCTIONS



Size

1/2" to 12"

Valve Type

BG1	Unibody Floating Ball Valve
BG2	2-piece Floating Ball Valve

Bore Type

F	Full Bore
R	Reduced Bore

Pressure Class

15= ASME Class 150
60 = ASME Class 600
30 = ASME Class 300

End Connection

FR	Flange Raised Face	RJ	Ring Type Joint
FF	Flat Faced Flanged	X	Special

Operator

B	Bare Stem	EG	Enclosed Gear
W	Wrench	EL	Gear + Locking Device
WL	Wrench + Locking Device	A	Actuator
WX	Wrench + Stem Extension		

Body / Ball-Stem

1	WCB / 316	5	CN7M / A20
2	CF8M / 316	6	LF2 / 316
3	CF8 / 304	X	Special
4	LCC / 316		

Seat / Seal

PP	PTFE / PTFE	KP	PEEK / PTFE
PV	PTFE / Viton	KV	PEEK / Viton
RP	RPTFE / PTFE	X	Special
RV	RPTFE / Viton		

Bolting (Bolts - Studs/Nuts)*

1	B7 / 2H	3	B8 / 8
2	B7M / 2HM	4	B8M / 8M
X	Special		

*According to ASTM A193 and ASTM A194

Firesafe (Optional)

1	Firesafe

MODEL SELECTION EXAMPLE

Example: 4"BG2-F-152FR/W-1-PV-10

Description: FluoroSeal 4" 2 piece Floating Ball Valve, Full Bore, Class 150, Two-way Flow Pattern, Flanged Raised Face, Wrench Operated, Body in ASTM A216 Gr. WCB, Ball-Stem in 316 Stainless Steel, PTFE Seat, Viton Seal, ASTM A193 B7 bolts, ASTM A194 2H studs and nuts, and No Firesafe.

NOTES:

1. For all technical parameters of the product please refer to this catalog, additional information can be obtained from your local FluoroSeal sales office or authorized representative.
2. Customization for specific applications is available upon request.

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All products sent out will be carefully examined, counted and packed. The cost of any special packing or special handling caused by Buyer's requirements or requests shall be added to the amount of the order. No claim for shortages will be allowed unless made in writing within ten (10) days of receipt of a shipment. Claims for products damaged or lost in transit should be made to the carrier, as FluoroSeal Inc.'s responsibility ceases, and title passes, on delivery to the carrier.

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Where the products, engineering design or fabrication is for nuclear plant applications, Buyer agrees (a) to take all necessary steps to add FluoroSeal Inc. as an insured supplier under the American Nuclear Insurers (ANI) pool and under the Mutual Atomic Energy Reinsurance Pool (MAERP) for property damage and liability insurance and if necessary steps could have been taken, but are not taken, Buyer shall hold FluoroSeal Inc. harmless against all such losses which could have been thus covered; (b) Buyer agrees to hold FluoroSeal Inc. harmless with respect to any personal injury or death, property damage or any other loss in a nuclear incident which is caused directly or indirectly by defective design, material, or workmanship, furnished by FluoroSeal Inc. and which is covered by insurance maintained by Buyer (or which could be so covered but with respect to which Buyer has elected to self-insure), and further agrees to waive subrogation by its carriers of such insurance against FluoroSeal Inc.; (c) as to nuclear hazards for which Buyer cannot obtain insurance coverage, the liability of FluoroSeal Inc. for any personal injury or death, property damage or any other loss directly caused by defective design, material, or workmanship furnished by FluoroSeal Inc. shall not exceed the value of the material furnished by FluoroSeal Inc. at the time of the loss occurrence.

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