VATAC FLOATING BALL VALVE SERIES

Vatac Series Floating Ball Valves are a prim example of reliability, performance, manufacturing and superior engineering techniques at work. Featuring a uni-body or two-piece bolted design.

GENERAL DESIGN FEATURES

- NACE MR0175-(ISO 15156) (Stainless Steel ball/stem configuratin)
- Blowout proof stem
- Weather Seal (Class600 and higher)
- Actuator mounting pad(4 bolt machined)
- API 6D
- API 607 4th Edition (O-Ring& Graphite)
- Secondary Metal-to-Meatal Sealing
- Full rated bi-directional dead end service
- Antistatic Device
- Lockable handle (optional)
- O-Ring design (standard)
- Graphite or Teflon packed (optional)

SIZE RANGE AND DESIGN AVAILABILITY

SIZE (in.)	CLASS/CONFIGURATION 150	300	600	900	1500
1FP	●	●	●	●	●
1-1/2 FP	●	●	●		
2RP	■	■	●	●	
2FP	●	●	●	●	
2-1/2RP	●	●	●		
3 RP	■	■	●		
3 FP	●	●	●		
4 RP	■	■	●		
4 FP	●	●	●		
6 RP	■	■	●		
6 FP	●	●	●		
8 RP	●	●	●		
8 FP	●	●			
10 RP	●	●			
10 FP	●				
12 RP	●				

■ Unibody ● Split Body

APPLICABLE STANDARDS

API-American Petroleum Institute

Spec.6D Specification for pipeline valves.
Spec.RP6F Recommended practice for fire testing valves.
Std.598 Valve inspection and test.
Std.607 Fire test for soft seated quarter-turn valves.

ASME/ANSI-American National Standard

B16.5 Steel pipe flanges and flanged fittings.
B16.10 Face-to-face and end-to-end dimensions of ferrous valves.
B16.34 Steel valves-Flanged and butt welding ends.

Ec-European Community

CE Marked (P.E.D.97/23/EC, Cat.3)

ISO-International Org.for Standardization

ISO 9001: 2000 Quality systems-Model for quality assurance in design/development, production. installation and servicing.
ISO 15156 Materials for use in H2S containing environments in oil and gas production.

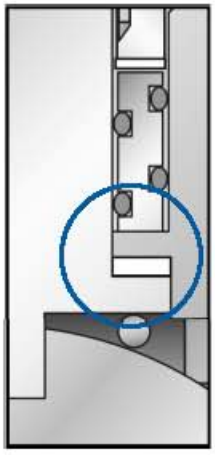
MSS-Manufacturers Standardization Society

SP 6 Std. finishes for contact faces of pipe flanges and connecting- end flanges of valves and fittings.
SP 25 Standard marking system for valves, fittings, flanges and unions.
SP 44 Steel pipeline flanges.
SP 55 Quality standard for steel castings visual method.

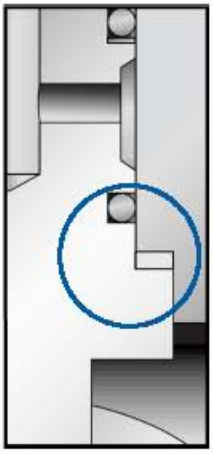
NACE-National Assoc. of Corrosion Engineers

MR 0175 Sulfide stress cracking resistant metallic materials for oilfield equipment. (Superseded by ISO 15156)

VATAC FLOATING BALL VALVES DESIGN FEATURES



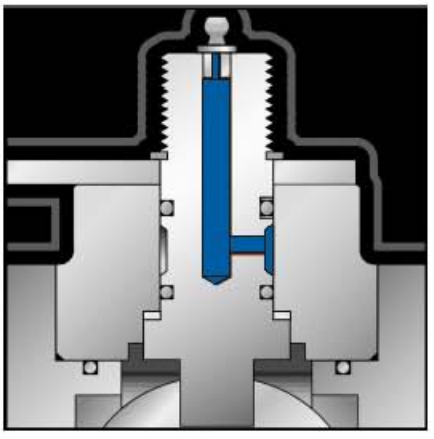
Class 150 &300



Class 600 &higher

BLOWOUT PROOF STEN.

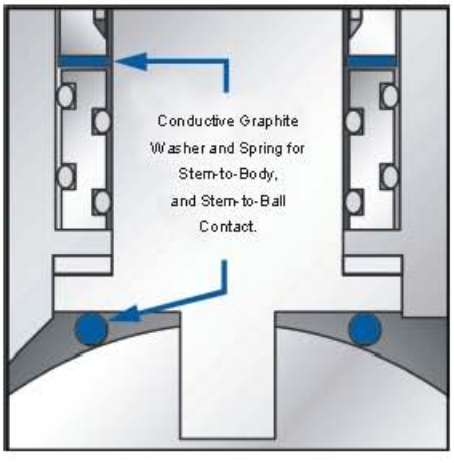
Internally inserted, "backseated" stem assures fire safety and blow-out prevention by retaining stem in the valve at all pressure.



Class 600 &higher

STEM JOURNAL LUBRICATION

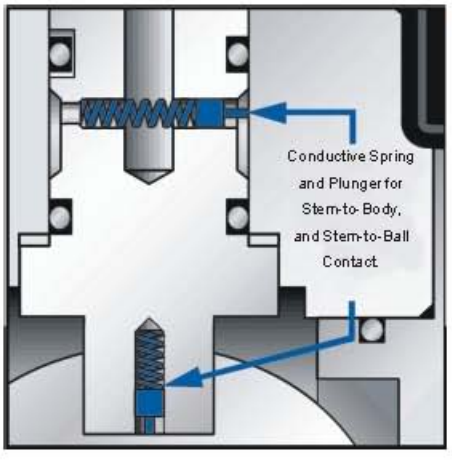
All valves incorporate external stem lubrication.
A ventedweather seal allows safe pressure relief inthe event of excessive grease gun pressure



Class 150 &300
(O-Ring shown, packing alsoavailable.)

ANTISTATIC DEVICE

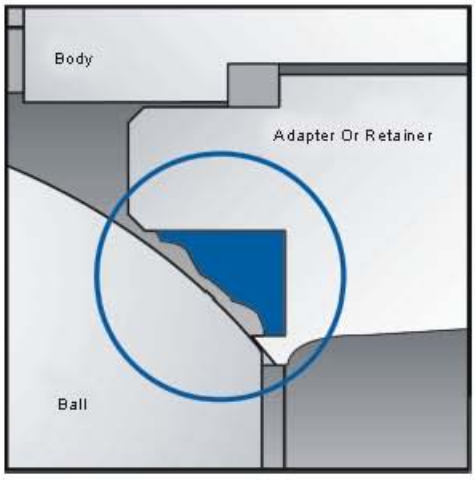
A conductive spring and a graphite washer provide antistatic continuity throughout the valve.



Class 600 &higher

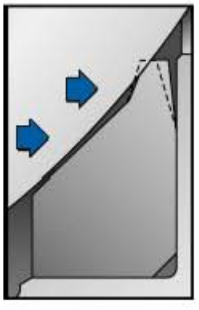
ANTISTATIC DEVICE

1" bore-4" bore, CL.600,900 & 1500 use spring-loaded pins between the ball, stem, and body to provide antistatic continuity throughout the valve.

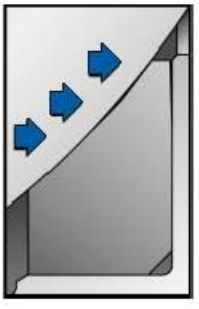


FIRESAFE SEAT SEALING

In the event of fire and seat destruction, ball floats downstream to effectively provide metal-to metal seat sealing.



Low Pressure Sealing

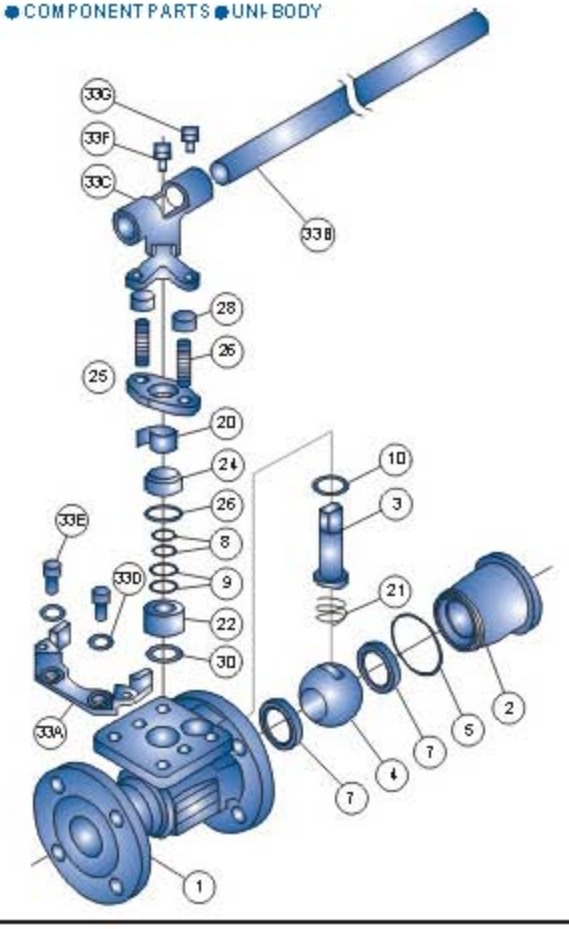


High Pressure Sealing

Positive
Low & High
Pressure Sealing

A specialintegral seat Lip provides positive lowpressure "bubble-tight" sealing between the ball andseat with minimal operating torque. TheVatac seatlip defects slightly at higher pressures to ensurefull seat contactwith the ball. The seat's "memory action" provides"bubble-tight" sealing atboth low and high pressures. This "self compensation for swell" feature results in lowtorque and long life operation.

COMPONENT PARTS UNI-BODY

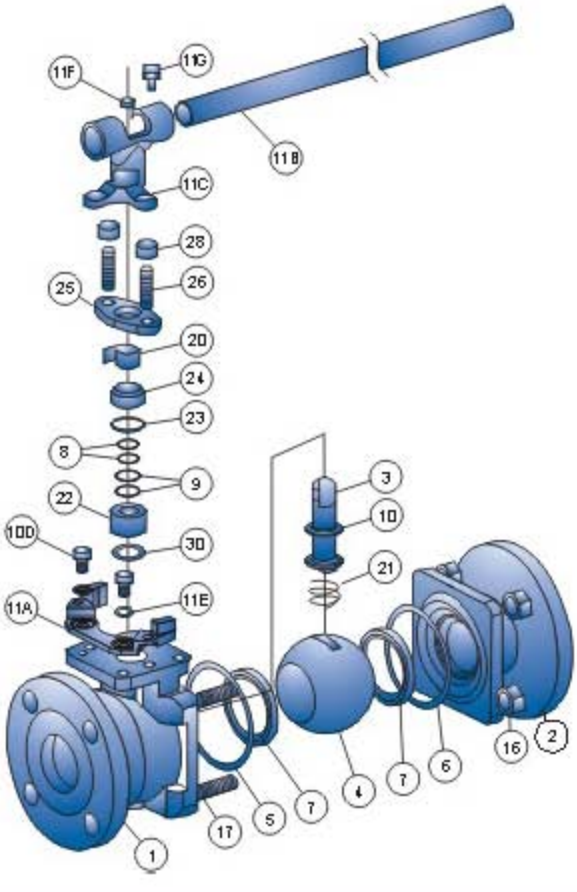


PARTS LIST, UNI-BODY

PART NO	DESCRIPTION	PART NO	DESCRIPTION
1	Body	24	Retainer
2	Seat Retainer	25	Follower
3	Stem	26	Stud, Follower
4	Ball	28	Nut. Follower
5	Body Seal	30	Stem Washer**
7	Seat	33A	Lock Plate
8	Inner Stem O-Rings***	33B	T-Handle Tube
9	Outer Stem O-Rings***	33C	T-Handle Hub
10	Thrust Washer	33D	Lock Washer
20	Liner	33E	Screw . Hex
21	Ground Spring	33F	Screw . Hex
22	Stem Seal: Gland or Packing	33G	Screw . Square
23	Ground Washer*		

*Not required with Graphoil packing in Firesafe valves.
**Required in 2" and larger packed valves only.
***Not used in packed stem valves.

COMPONENT PARTS SPLIT BODY

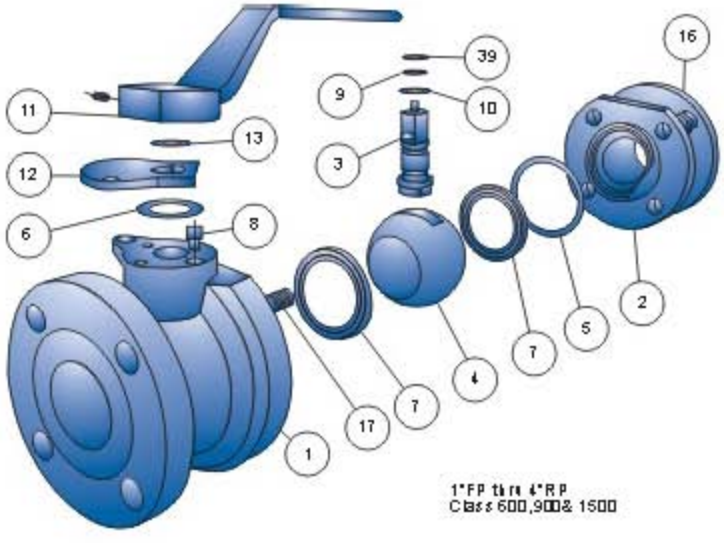


PARTS LIST, SPLIT BODY

PART NO	DESCRIPTION	PART NO	DESCRIPTION
1	Body	11E	Lock Plate Lock Washer
2	Adapter	11F	Handle Hub Screw
3	Stem	11G	Tube Lock Screw
4	Ball	16	Hex Nut
5	Body Gasket	17	Stud
6	Body O-Ring***	20	Follower Liner
7	Seat	21	Ground Spring
8	Inner Stem O-Rings***	22	Stem Seal : Gland or Packing
9	Outer Stem O-Rings***	23	Ground Washer*
10	Thrust Bearing	24	Packing Follower
11A	Lock Plate	25	Packing Retainer
22B	T-Handle Tube	26	Packing Stud
11C	T-Handle Hub	28	Packing Nut
11D	Lock Plate Screw	30	Stem Washer**

*Not required with Graphoil packing in Firesafe valves.
**Required in 2" and larger packed valves only.
***Not used in packed stem valves.

●COMPONENT PARTS ●CLASS 600, 900 &1500

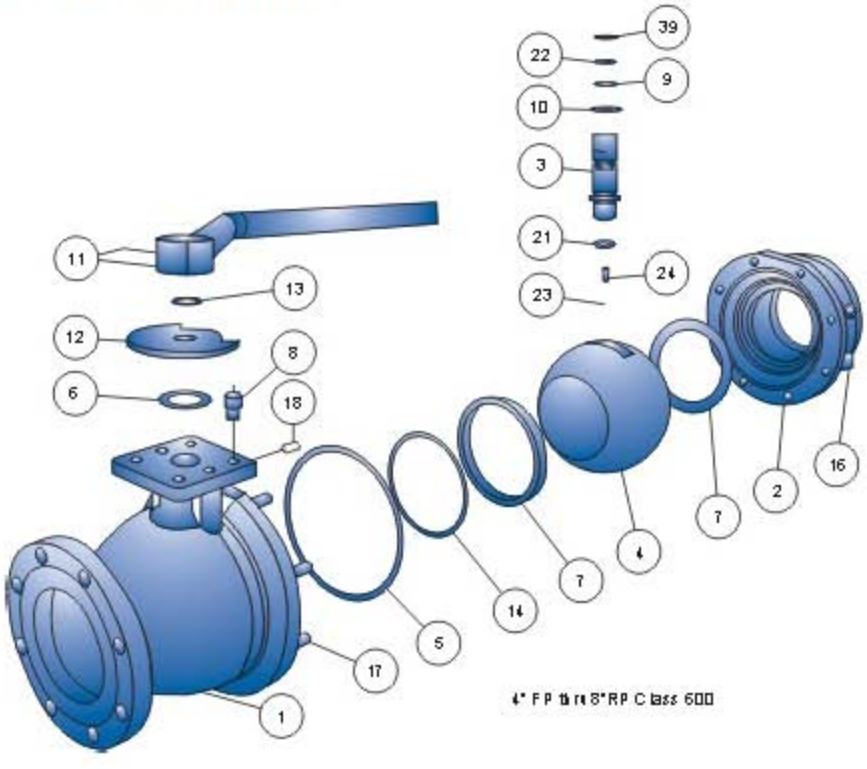


1"FP thru 4"RP
Class 600,900& 1500

PARTS LIST

PART NO	DESCRIPTION
1	Body
2	Adapter
3	Stem
4	Ball
5	Body Seal
6	Stem Bearing
7	Seat
8	Stop Screw
9	Stem Seal
10	Thrust Bearing
11	Handle Assembly
12	Stop Plate
13	Retainer
16	Hex Nut
17	Stud
39	Weather Seal

●COMPONENT PARTS ●CLASS 600



4" FP thru 8"RP Class 600

PARTS LIST

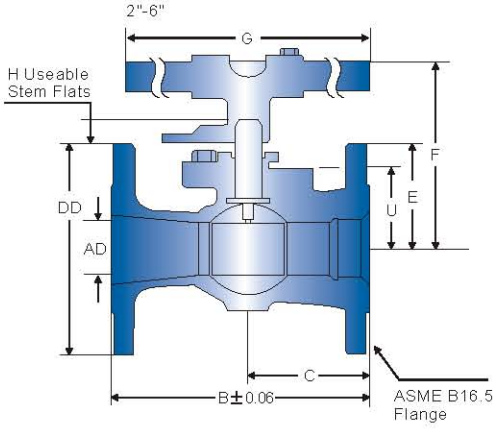
PART NO	DESCRIPTION
1	Body
2	Adapter
3	Stem
4	Ball
5	Body Seal
6	Stem Bearing
7	Seat
8	Stop Screw
9	Stem Seal
10	Thrust Bearing
11	Handle Assembly
12	Stop Plate*
13	Retainer*
14	Adapter Pilot Seal
16	Hex Nut
17	Stud
18	Lube Fitting
21	Ground Spring**
22	Firesafe Stem Packing
23	Ground Plunger*
24	Ground Spring*
39	Weather Seal

*4" Bore Only
**6" Bore Only

UNI-BODY BALL VALVE

- One Piece Uni-body, ReducedBore
- Free Floating Ball, Fire Safe, Blow-out Proof Stem
- Anti-static Device, Cavity RelievingSeats
- NACE MR-01-75, Optional Locking Device
- Designed to ASME B16.34, BS5451 & API6D

Face to Face	ASME B16.10 (ShortPattern)
End Flange	ASME B16.5
Buttweld	ASME B16.25
Class	ASME CL150



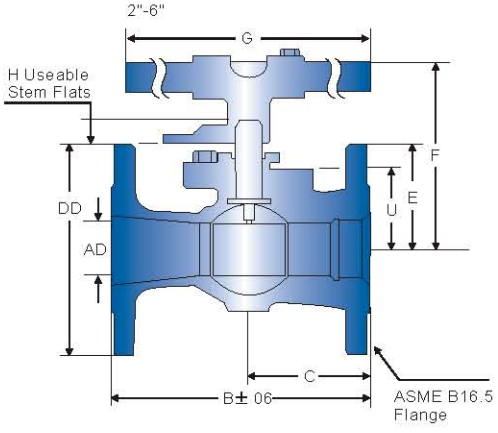
CLASS 150 DIMENSION

SIZE A (in.)	B	C	D	E	F	G	H	U	W.T (lbs.)
									Unit: inch
2	1.50	7.00	3.27	6.00	3.69	5.36	17.00	0.70	2.31	17.6
3	2.42	8.00	3.46	7.50	4.38	6.05	17.00	0.70	3.06	31.5
4	3.00	9.00	4.10	9.00	6.75	8.83	22.00	1.38	4.43	54.2
6	4.50	10.50	5.25	11.00	8.56	10.55	22.00	1.44	6.02	137.0

UNI-BODY BALL VALVE

- One Piece Uni-body, ReducedBore
- Free Floating Ball, Fire Safe, Blow-out Proof Stem
- Anti-static Device, Cavity RelievingSeats
- NACE MR-01-75, Optional Locking Device
- Designed to ASME B16.34, BS5451 &API 6D

Face to Face	ASME B16.10 (ShortPattern)
End Flange	ASME B16.5
Buttweld	ASME B16.25
Class	ASME CL300



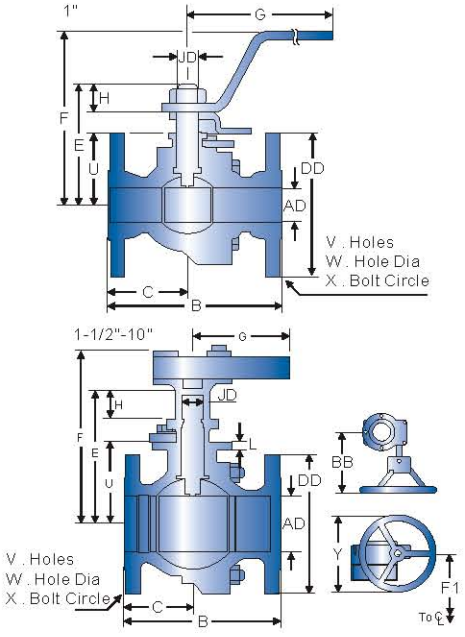
CLASS 300 DIMENSION

SIZE A (in.)	B	C	D	E	F	G	H	U	W.T (lbs.)
									Unit: inch
2	1.50	8.50	3.27	6.50	3.69	5.36	17.00	.70	2.31	26.0
3	2.42	11.12	3.96	8.25	4.38	6.05	17.00	.70	3.06	46.0
4	3.00	12.00	4.10	10.00	6.75	8.83	22.00	1.38	4.43	70.0
6	4.50	15.88	5.25	12.50	8.56	10.55	22.00	1.44	6.02	157.0

SPLIT BODY BALL VALVE

- Two Piece Split Body, Full Portor Reduced Bore
- Free Floating Ball, Fire Safe, Blow-out Proof Stem
- Anti-static Device, Cavity Relieving Seats
- NACE MR-01-75, Optional Locking Device
- Designed to ASME B16.34, BS5451 &API 6D

Face to Face	ASME B16.10 (Long Pattern)
End Flange	ASME B16.5
Buttweld	ASME B16.25
Class	ASME CL150



CLASS 150 DIMENSION

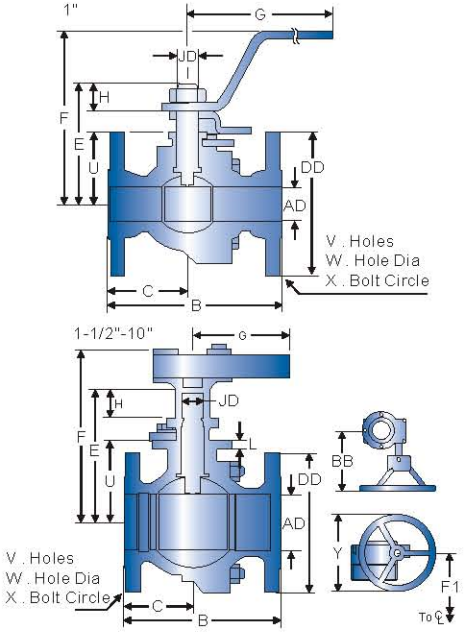
SIZE (in.)	A	B	C	D	E	F	F1	G
								Unit: inch
1X1	1.00	5.00	2.31	4.25	3.50	5.44	-	6.31
1-1/2X1-1/2	1.50	6.50	2.96	5.00	3.69	5.75	7.37	15.50
2X2	2.00	7.00	3.02	6.00	4.51	6.56	8.20	15.50
2-1/2X2	2.00	7.50	2.94	7.00	4.38	6.06	-	8.50
3X3	3.00	8.00	3.50	7.50	6.81	10.25	11.63	20.00
4X4	4.00	9.00	4.00	9.00	8.40	11.00	13.08	20.00
6X6	6.00	15.50	7.75	11.00	10.81	11.12	15.63	20.00
8X6	6.00	11.50	5.13	13.50	10.81	11.12	15.63	20.00
8X8	8.00	18.00	9.00	13.50	14.25	-	18.26	20.00
10X8	8.00	13.00	6.50	16.00	14.25	-	18.26	-
10X10	10.00	21.00	10.50	16.00	17.41	-	22.53	-
12X10	10.00	14.00	7.00	19.00	17.41	-	22.53	-

SIZE (in.)	H	J	L	U	V	W	X	Y	BB	W.T (lbs.)
										Unit: inch
1X1	1.32	0.586	-	1.69	4	0.63	3.13	-	-	17.0
1-1/2X1-1/2	0.64	0.705	0.38	2.31	4	0.63	3.88	6.00	6.50	12.8
2X2	0.64	0.705	0.44	3.14	4	0.75	4.75	6.00	6.50	17.6
2-1/2X2	1.00	0.873/0.871	-	3.06	4	0.75	5.50	-	-	37.5
3X3	1.28	1.087/1.082	0.44	4.43	4	0.75	6.00	6.00	6.50	31.5
4X4	1.28	1.321/1.316	0.62	5.88	8	0.75	7.50	8.00	9.00	54.2
6X6	1.45	1.515/1.510	0.75	8.00	8	0.88	9.50	8.00	9.50	137
8X6	1.45	1.515/1.510	0.75	8.00	8	0.88	9.50	8.00	9.50	210
8X8	2.27	1.997/1.994	0.62	9.64	8	0.88	9.50	12.00	9.50	477
10X8	2.27	1.997/1.994	0.62	9.64	12	1.00	14.25	12.00	9.50	557
10X10	3.06	2.497/2.493	0.62	11.91	12	1.00	14.25	16.00	11.50	685
12X10	3.06	2.497/2.493	0.62	11.91	12	1.00	17.00	16.00	11.50	806

SPLIT BODY BALL VALVE

- Two Piece Split Body, Full Portor Reduced Bore
- Free Floating Ball, Fire Safe, Blow-out Proof Stem
- Anti-static Device, Cavity Relieving Seats
- NACE MR-01-75, Optional Locking Device
- Designed to ASME B16.34, BS5451 &API 6D

Face to Face	ASME B16.10 (Long Pattern)
End Flange	ASME B16.5
Buttweld	ASME B16.25
Class	ASME CL300



CLASS 300 DIMENSION

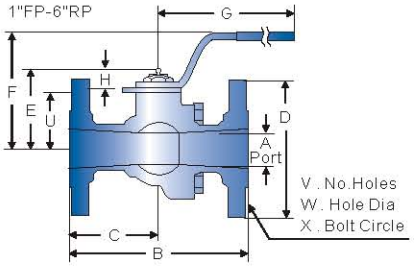
SIZE (in.)	A	B	C	D	E	F	F1	G
								Unit: inch
1X1	1	6.50	3.50	4.88	3.50	5.44	-	6.31
1-1/2X1-1/2	1.50	7.50	3.53	6.13	3.69	5.75	7.37	15.50
2X2	2.00	8.50	4.25	6.50	4.51	6.56	8.20	15.50
2-1/2X2	2.00	9.50	4.69	7.50	4.38	6.06	-	8.50
3X3	3.00	11.13	5.82	8.25	6.81	10.25	11.63	20.00
4X4	4.00	12.00	6.00	10.00	8.40	11.00	13.08	20.00
6X6	6.00	15.88	7.94	12.50	12.75	-	15.63	-
8X6	6.00	16.50	6.63	15.00	12.75	-	15.63	-
8X8	8.00	19.75	9.88	15.00	16.00	-	21.14	-
10X8	8.00	18.00	6.25	17.50	16.00	-	21.14	-

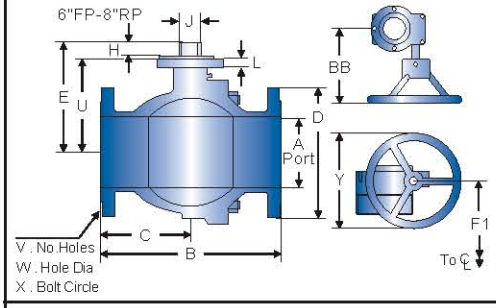
SIZE (in.)	H	J	L	U	V	W	X	Y	BB	W.T (lbs.)
										Unit: inch
1X1	1.32	0.586	-	1.69	4	0.75	3.50	-	-	22.0
1-1/2X1-1/2	0.64	0.705	0.38	2.31	4	0.88	4.50	6.00	6.50	20.0
2X2	0.64	0.705	0.44	3.14	8	0.78	5.00	6.00	6.50	26.0
2-1/2X2	1.00	0.873/0.871	-	3.06	8	0.88	5.88	-	-	43.7
3X3	1.28	1.087/1.062	0.44	4.43	8	0.88	6.63	6.00	6.50	46.0
4X4	1.28	1.321/1.316	0.62	5.88	8	0.88	7.88	8.00	9.00	70.0
6X6	2.27	1.950/1.945	0.62	8.12	12	0.88	10.63	12.00	9.50	157
8X6	2.27	1.950/1.945	0.62	8.12	12	1.00	13.00	12.00	9.50	275
8X8	3.06	2.497/2.492	0.62	10.52	12	1.00	13.00	16.00	11.50	624
10X8	3.06	2.497/2.492	0.62	10.52	16	1.13	15.25	16.00	11.50	724

SPLIT BODY BALL VALVE

- Two Piece Split Body, Full Portor Reduced Bore
- Free Floating Ball, Fire Safe, Blow-out Proof Stem
- Anti-static Device, Cavity Relieving Seats
- NACE MR-01-75, Optional Locking Device
- Designed to ASME B16.34, BS5451 &API 6D

Face to Face	ASME B16.10 (Long Pattern)
End Flange	ASME B16.5
Buttweld	ASME B16.25
Class	ASME CL600





CLASS 600 DIMENSION

SIZE (in.)	A	B/RF	B/RTJ	C/RF	C/RTJ	D	E	F	G
									Unit: inch
1FP	1	8-1/2	8-1/2	3-3/4	3-3/4	4-7/8	3	4-3/16	5-7/8
1-1/2FP	1-1/2	9-1/2	9-1/2	3-7/8	3-7/8	6-1/8	3-15/16	5-5/8	8-1/2
2RP	1-1/2	11-1/2	11-5/8	4-7/16	4-1/2	6-1/2	3-15/16	5-5/8	8-1/2
2FP	2	11-1/2	11-5/8	4-7/16	4-1/2	6-1/2	4-3/8	6-1/16	8-1/2
2-1/2RP	2	13	13-1/8	4-15/16	5	7-1/2	4-3/8	6-1/16	8-1/2
3RP	2	14	14-1/8	6	6-1/16	8-1/4	4-3/8	6-1/16	8-1/2
3FP	3	14	14-1/8	5-3/4	5-13/16	8-1/4	5-21/32	7-1/4	15
4RP	3	17	17-1/8	7-3/4	7-13/16	10-3/4	5-21/32	7-1/4	15
4FP	4	17	17-1/8	8-1/2	8-9/16	10-3/4	8-19/32	9-1/2	48
6RP	4	22	22-1/8	11	11-1/16	14	8-19/32	9-1/2	48
6FP	6	22	22-1/8	11	11-1/16	14	11-3/4	-	-
8RP	6	26	26-1/8	13	13-1/16	16-1/2	11-3/4	-	-

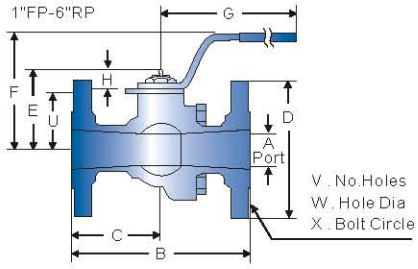
SIZE (in.)	H	J	L	U	V	W	X	W.T (lbs.)	Ring Groove
									Unit: inch
1FP	13/16	0.623/0.621	-	1-11/16	4	3/4	3-1/2	25	R-16
1-1/2FP	1	0.873/0.871	-	2-5/8	4	7/8	4-1/2	30.4	R-20
2RP	1	0.873/0.871	-	2-5/8	8	3/4	5	35	R-23
2FP	1	0.873/0.871	-	3-1/16	8	3/4	5	41.5	R-23
2-1/2RP	1	0.873/0.871	-	3-1/16	8	7/8	5-7/8	52.9	R-26
3RP	1	0.873/0.871	-	3-1/16	8	7/8	6-5/8	61.6	R-31
3FP	1-1/4	1.248/1.246	-	4	8	7/8	6-5/8	89.1	R-31
4RP	1-1/4	1.248/1.246	-	4	8	1	8-1/2	133.8	R-37
4FP	1-11/16	1.791/1.773	1/2	6.5	8	1	8-1/2	167	R-37
6RP	1-11/16	1.791/1.773	1/2	6.5	12	1-1/8	11-1/2	345	R-45
6FP	2-7/8	2.499/2.492	5/8	8-25/32	12	1-1/8	11-1/2	427	R-45
8RP	2-7/8	2.499/2.492	5/8	8-25/32	12	1-1/4	13-3/4	672	R-49

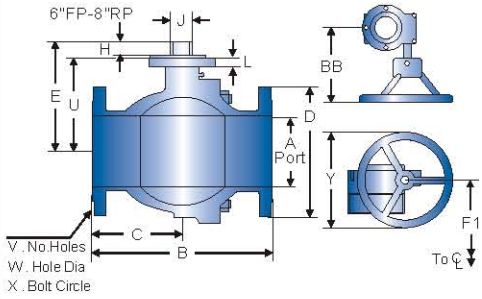
Note: Sizes 1"FP-6"RP is weight w/handle.
Sizes 6"FP-8"RP is weight w/gear operator.

SPLIT BODY BALL VALVE

- Two Piece Split Body, Full Portor Reduced Bore
- Free Floating Ball, Fire Safe, Blow-out Proof Stem
- Anti-static Device, Cavity Relieving Seats
- NACE MR-01-75, Optional Locking Device
- Designed to ASME B16.34, BS5451 &API 6D

Face to Face	ASME B16.10 (Long Pattern)
End Flange	ASME B16.5
Buttweld	ASME B16.25
Class	ASME CL900~CL1500





CLASS 900/1500 DIMENSION

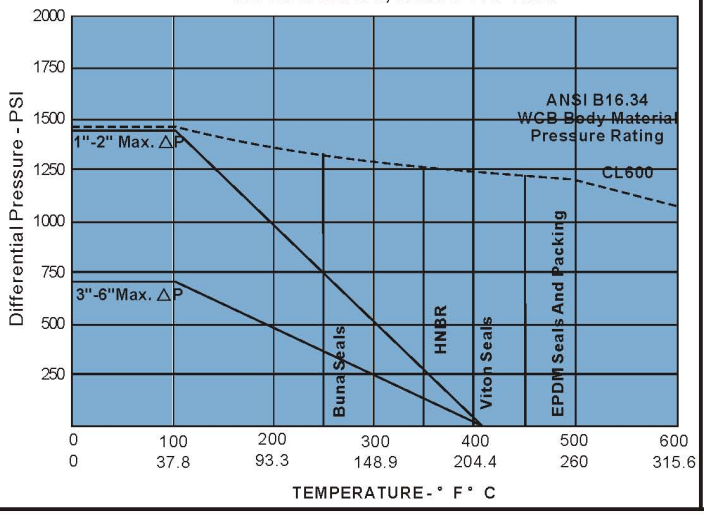
SIZE (in.)	A	B/RF	B/RTJ	C/RF	C/RTJ	D	E	F	G
									Unit: inch
1FP	1	10	10	4-3/4	4-3/4	5-7/8	3-1/16	4-1/2	5-7/8
2RP	1-1/2*	14-1/2*	14-5/8*	7-1/4*	7-5/16*	8-1/2*	3-15/16*	5-5/8*	8-1/2*
2FP	2*	14-1/2*	14-5/8*	7-1/4*	7-5/16*	8-1/2*	4-3/8*	6-1/16*	8-1/2*

SIZE (in.)	H	J	L	U	V	W	X	W.T (lbs.)	Ring Groove
									Unit: inch
1FP	1-1/8	.623/.621	-	2	4	1	4	28	R-16
2RP	1-1/16*	.873/.871*	-	2-5/8*	8*	1*	6-1/2*	42.9*	R-24*
2FP	1-1/16*	.873/.871*	-	3-1/16*	8*	1*	6-1/2*	51.2*	R-24*

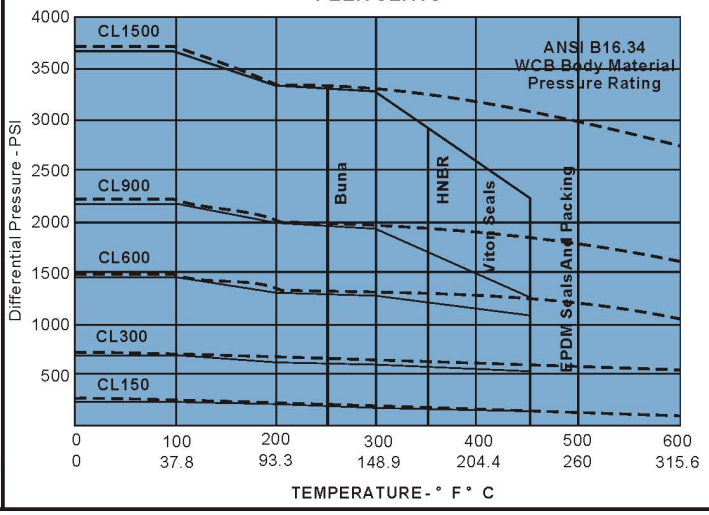
Note: Weight is w/handle
* Class 900 only

ENGINEERING DATA PRESSURE TEMPERATURE (SIZES LISTED ON TEFLON CHART INDICATE BORE SIZE)

TEFLON SEATS, CLASS 600 ONLY



PEEK SEATS



LOW TEMPERATURE LIMITS

BODY MATERIAL	° F	° C	SEAT MATERIAL	° F	° C	SEAT MATERIAL	° F	° C	SEAT MATERIAL	° F	° C
WCC	-20°	-28.9	Devlon V	-50°	-45.6	TFE Packing	-50°	-45.6	Viton	+10°	-12.2
LCC	-50°	-45.6	Teflon	-50°	-45.6	Low Temp Buna N	-50°	-45.6	HNBR	-40°	-40
WCB	-20°	-28.9	PEEK	-50°	-45.6	Viton	-20°	-28.9	EPDM	-50°	-45.6
CF8M	-50°	-45.6				Elast-0-Lion 985	-50°	-45.6			

FLOW COEFFICIENT (CV)

Class	1FP	1-1/2FP	2RP	2FP	2-1/2RP	3RP	3FP	4RP	4FP	6RP	6FP	8RP	8FP	10RP	10FP	12RP
150	98	265	125	470	220	430	1240	600	2470	1010	5249	2500	10.750	5000	17.775	8400
300	98	265	125	420	220	430	1050	600	2000	1010	5100	2400	10.300	4825	-	-
600	93	308	140	365	220	185	1000	570	1800	900	4600	2235	-	-	-	-
900/1500	90	-	135*	350*	-	-	-	-	-	-	-	-	-	-	-	-

*Class 900 only

METHOD OF CALCULATING FLOW

The Flow Coeffcient "Cv" of a valve is the flow rete of water (gallons/minute) through a fully opened valve, with a pressure drop of 1psi across the valve. To find the flow of liquid through valve from the Cv. use the following formulas:

Liquid Flow

QL= flow rate of liquid (gal./min.)
△P= differential pressure across the valve (psi)
G= specific gravity of liquid (for water, G=1)

$$QL = Cv\sqrt{\frac{\Delta P}{G}}$$

Gas Flow

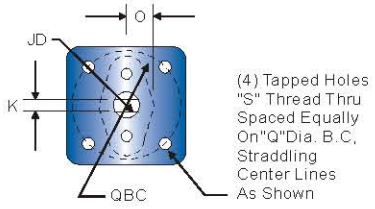
Qg = flow rate of gas (CFH at STP)
P_2 = outlet pressure (psia)
g = Specific gravity of gas (for air, g=1.000)

$$Qg = 61Cv\sqrt{\frac{P_2\Delta P}{g}}$$

For non-critical flow

$$\left\{\frac{\Delta P}{P_2} < 1.0\right\}$$

UNI-BODY BALL VALVE

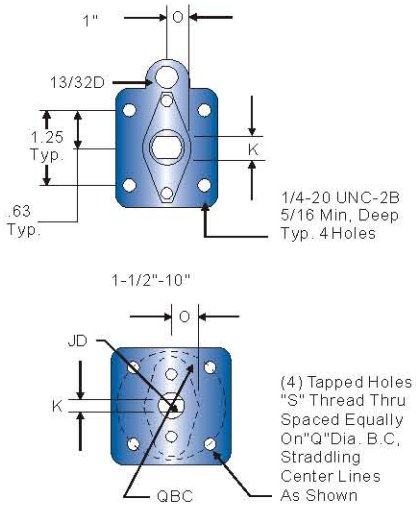


TOPWORKS (IN.) & STEM TORQUE (IN.-LBS) UNIBODY BALL VALVES, CLASS 150&300

Unit: inch

SIZE (in.)	Class	J	K	O	Q	S
2	150/300	0.705	0.376/0.373	0.81	3.25	3/8-16 UNC
3	150/300	0.705	0.376/0.373	0.81	3.25	3/8-16 UNC
4	150/300	1.06	0.674/0.670	1.36	4.13	3/8-16 UNC
6	150/300	1.32	0.865/0.861	1.36	4.41	1/2-13 UNC

SPLIT BODY BALL VALVE CL150/300

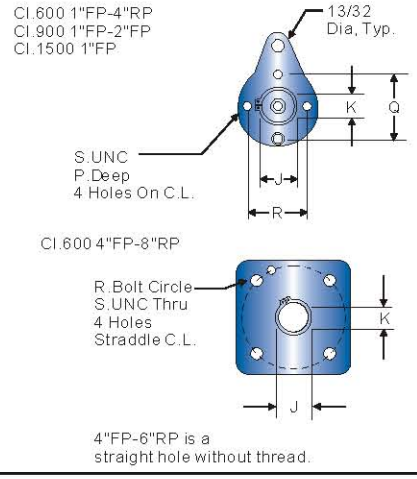


SPLIT BODY BALL VALVE CL150/300

Unit: inch

SIZE (in.)	Class	J	K	O	Q	S
1X1	150/300	0.586	0.371/0.369	0.56	-	1/4-20 UNC
1-1/2X1-1/2	150/300	0.705	0.376/0.373	0.76	3.25	3/8-16 UNC
2X2	150/300	0.705	0.376/0.373	0.76	3.25	3/8-16 UNC
2-1/2X2	150/300	0.873/0.871	0.560/0.556	-	1.75	1/4-20 UNC
3X3	150/300	1.067/1.062	0.674/0.670	1.36	4.13	3/8-16 UNC
4X4	150/300	1.321/1.316	0.865/0.861	1.36	4.41	1/2-13 UNC
6X6	150	1.515/1.510	1.065/1.061	1.36	5.13	5/8-11 UNC
6x6	300	1.950/1.945	1.249/1.245	1.58	5.13	5/8-11 UNC
8X6	150	1.575/1.570	1.065/1.061	1.36	5.13	5/8-11 UNC
8x6	300	1.950/1.945	1.249/1.245	1.58	5.13	5/8-11 UNC
8X8	150	1.997/1.992	1.247/1.243	1.58	5.13	5/8-11 UNC
8x8	300	2.497/2.492	1.747/1.743	2.10	6.75	3/4-10 UNC
10X8	150	1.997/1.992	1.247/1.243	1.58	5.13	5/8-11 UNC
10x8	300	2.497/2.492	1.747/1.743	2.10	6.75	3/4-10 UNC
10X10	150	2.497/2.492	1.747/1.743	2.10	6.75	3/4-10 UNC
12X10	150	2.497/2.492	1.747/1.743	2.10	6.75	3/4-10 UNC

SPLIT BODY BALL VALVE CL 600~1500



SPLIT BODY BALL VALVE CL 600~1500

Unit: inch

SIZE (in.)	Class	J	K	P	Q	R	S
1FP	600	0.623/0.621	0.372/0.370	5/16	1-1/4	1-1/4	1/4-20 UNC
1FP	900	0.623/0.621	0.372/0.370	5/16	1-1/4	1-1/4	1/4-20 UNC
1FP	1500	0.623/0.621	0.372/0.370	5/16	1-1/4	1-1/4	1/4-20 UNC
1-1/2 FP	600	0.873/0.871	0.560/0.566	3/8	1-3/4	1-3/4	1/4-20 UNC
2RP	600/900	0.873/0.871	0.560/0.566	3/8	1-3/4	1-3/4	1/4-20 UNC
2-1/2RP	600	0.873/0.871	0.560/0.566	3/8	1-3/4	1-3/4	1/4-20 UNC
2FP	600/900	0.873/0.871	0.560/0.566	3/8	1-3/4	1-3/4	1/4-20 UNC
3RP	600	0.873/0.871	0.560/0.566	3/8	1-3/4	1-3/4	1/4-20 UNC
3FP	600	1.248/1.246	0.622/0.618	5/8	3-1/8	2-1/4	5/16-18 UNC
4RP	600	1.248/1.246	0.622/0.618	5/8	3-1/8	2-1/4	5/16-18 UNC
4FP	600	1.791/1.773	1.247/1.243	thru	-	4-1/4	7/16
6RP	600	1.791/1.773	1.247/1.243	thru	-	4-1/4	7/16
6FP	600	2.499/2.492	1.749/1.745	thru	-	6-3/4	3/4-10 UNC
8RP	600	2.499/2.492	1.749/1.745	thru	-	6-3/4	3/4-10 UNC

DESIGN TORQUES FOR ACTUATOR SIZING (IN.-LBS.)*

Class/ Work. Press. (psi)	Valve Size (in.) 1FP	1-1/2 FP	2RP	2FP	2-1/2 RP	3RP	3FP	4RP	4FP	6RP	6FP	8RP	8FP	10RP	10FP	12RP
150/285	180	280	240	440	600	520	600	600	1440	1440	5500	5500	12.000	12.000	23.000	23.000
300/740	180	280	240	500	960	590	1000	1000	2500	2500	12.000	12.000	27.000	27.000	-	-
600/1480	600	900	900	1200	1200	1200	2700	2700	5280	5280	27.000	27.000	-	-	-	-
900/2220	780	-	1320	1800	-	-	-	-	-	-	-		-	-	-	-
1500/3705	1200	-	-	-	-	-	-	-	-	-	-		-	-	-	-

*There is no safety factor in the above torques. Vatac recommends at least a 25% safety factor be added.