

Cast Steel Bolted Bonnet Valves

CCPV

Floating Ball Valves Product Overview

Application

Ball valves are designed to open fully or close fully the passage for a fluid in the piping system. They find their application in power engineering, water-supply engineering, paper industry, chemical and petrochemical industries, in cryogenic applications, etc. Some design configurations enable to use the valves for short-time throttling. However, the process of throttling in combination with a service fluid containing mechanical impurities can result in loss of tightness of the valve obturator. Design pressure is from 0 to the specified pressure class (Class, PN) for the relevant body material and sealing elements used.



Working temperature

Ambient temperature ranges from -60 °C to +80 °C.
Temperature of the working medium can range from -196 °C to +400 °C.

Working medium

- gas, water, petroleum

Technical description

The ball valve design meets the requirements of API Spec 6D and EN 14141 as well as those of the related normative documents. The valve construction has been tested in accordance with relevant normative documents and special regulations for fire safety (FIRE SAFE), resistance to wear caused by clean gas and wear in contaminated service, low emission (TA – Luft), seismic resistance, climatic resistance, functional safety (SIL), etc.

Operation

- manual (lever, T-lever)
- gear operator
- electric actuator
- pneumatic, hydraulic, electrohydraulic actuator
- other

Body construction

The valve body is made of forgings and consists of two or three pieces. The body parts are connected:

- in a dismantlable way by means of bolted joints to make a SPLIT BODY (SB)
- in an indivisible way by means of welded joints to make a FULLY WELDED BODY (FW)
- in a dismantlable way by means of threaded joints

The body construction, in combination with non-destructive tests and examinations of the body parts, guarantees constant external tightness of the valve body.

Ball construction and support

The ball is made of a single piece of wrought or cast material. The ball is mounted free (floating ball) and pressure acting on the ball is taken up by the seats.

Seat construction

■ Soft-seated seats

The soft seals are made of PTFE, PEEK, NYLON, etc. The seats are suitable for gases and liquids with very low content of mechanical impurities.

■ Metal-to-metal seats

The seating surfaces of seats are covered with tungsten carbide with a thickness of 0.15–0.20 mm. Then the seats are lapped together with the ball to achieve metallic tightness and marked jointly. Tightness between the seat and the body cap is provided by an O-ring (up to 220°C maximum) or a graphite packing (up to 400°C maximum). This type of seats is suitable for all service fluids containing mechanical impurities.

Stem construction and support

The standard design of the stem support meets the ANTI BLOW OUT requirements (the stem cannot be ejected from the valve body by pressure of the fluid). The stem is both radially and axially supported so that no load is applied to the sealing rings. The stem is sealed with O-rings, a graphite packing or a combination of several seals that are independent of each other.

Specification of additional design features

Antistatic design (ANTISTATIC)

This design provides for electrical continuity (conductive interconnection) between the ball, the stem and the body of the ball valve.

Fire safety (FIRE-SAFE)

Fire safety has been proved for many ball valves according to the following standards: API 607, API 6FA, ISO 10497, BS 6755, and STO 2-4.1-212-2008.

Seismic and vibration resistance

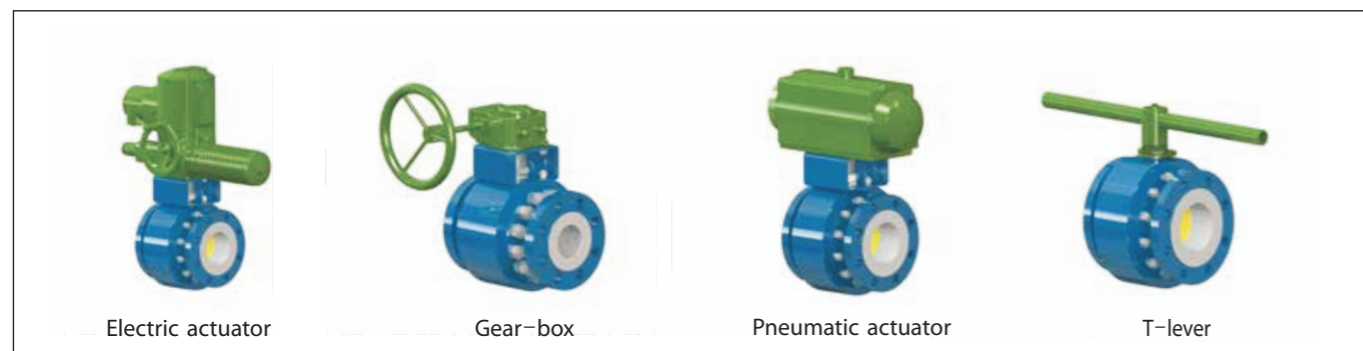
Resistance has been proved by special tests according to GOST 30546.

Design according to TA-Luft

This design guarantees resistance to emission effects.

Service safety

The ball valves have been checked for service safety SIL 3 according to ČSN EN 61508 -1,2 a6 -2011.



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Possible ball valve accessories

- draining (DN ≥ 200 only)
- venting (DN ≥ 200 only)
- stem extension
- locking device
- end position sensors

Testing

The ball valves are subjected to following tests (acc. to ASME, EN or other standards):

- pressure tests
 - functional tests
 - non-destructive tests and examinations
- The scope of testing is specified by requirements of the customer. Inspection certificates according to EN 10204, type 3.1 or type 3.2.

Connection to the piping

- fanged ends (RF, RTJ) according to ASME B16.5, ASME B16.47, EN 1092-1, GOST 12815-80, etc.
- butt-welding ends (BW) according to ASME B16.25 or EN 12627
- fanged ends with counterflanges, bolting material and sealing elements
- butt-welding ends with pup pieces
- combined with one fanged end and one welding end
- threaded ends according to ISO 228-1, ASME B1.20.1

Minimum valve bore

- full bore according to manufacturer's standard
- reduced bore according to manufacturer's standard with bore reduction as required by the customer

Face-to-face and end-to-end dimensions according to:

- API Spec. 6D / ISO 14313
- ASME B16.10
- EN 558-1 (fanged ends)
- EN 12982 (butt-welding ends)
- ČSN 13 3046

Installation

Ball valves may be installed into any piping (horizontal, vertical, inclined), but taking account of instructions applicable to installation of the actuator. Ball valves DN ≥ 200 are equipped with a foundation plate and lifting eyes as a standard.

Advantages

- many variants of design configurations
- full and smooth bore resulting in very low pressure loss and piggability
- long-term reliability and maintenance-free service
- possibility of use of different actuators with attachment according to ISO 5211
- stiffness and compactness of construction and ability to transfer external forces

Materials

The selection of materials of individual components depends on service conditions (fluid, pressure, temperature).

For pressure-containing parts within the meaning of definition in API 6D, inspection certificates 3.1 according to EN 10204 are used as a standard or inspection certificates 3.2 according to EN 10204 upon request. For other materials, inspection certificates according to manufacturer's standard or customer's specification are used.

Production range

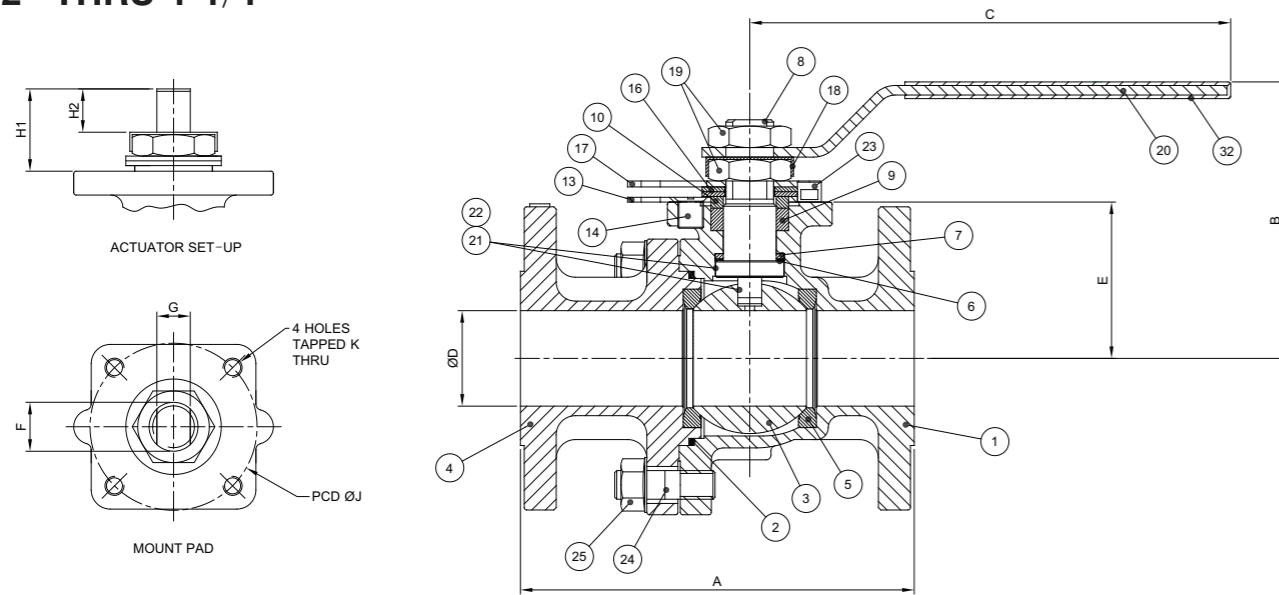
PN / Class	DN / NPS													
	10 3/8"	15 1/2"	20 3/4"	25 1"	32 1 1/4"	40 1 1/2"	50 2"	65 2 1/2"	80 3"	100 4"	125 5"	150 6"	200 8"	250 10"
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63, 100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63, 100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
160	900	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63	400	•	•	•	•	•	•	•	•	•	•	•	•	•
100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
160	900	•	•	•	•	•	•	•	•	•	•	•	•	•
250	1500	•	•	•	•	•	•	•	•	•	•	•	•	•
400	2500	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63	400	•	•	•	•	•	•	•	•	•	•	•	•	•
100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
160	900	•	•	•	•	•	•	•	•	•	•	•	•	•
250	1500	•	•	•	•	•	•	•	•	•	•	•	•	•
400	2500	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63	400	•	•	•	•	•	•	•	•	•	•	•	•	•
100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
160	900	•	•	•	•	•	•	•	•	•	•	•	•	•
250	1500	•	•	•	•	•	•	•	•	•	•	•	•	•
400	2500	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63	400	•	•	•	•	•	•	•	•	•	•	•	•	•
100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63, 100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63, 100	600	•	•	•	•	•	•	•	•	•	•	•	•	•
16, 25	150	•	•	•	•	•	•	•	•	•	•	•	•	•
40	300	•	•	•	•	•	•	•	•	•	•	•	•	•
63, 100	600	•	•	•	•	•	•	•	•	•	•	•	•	•

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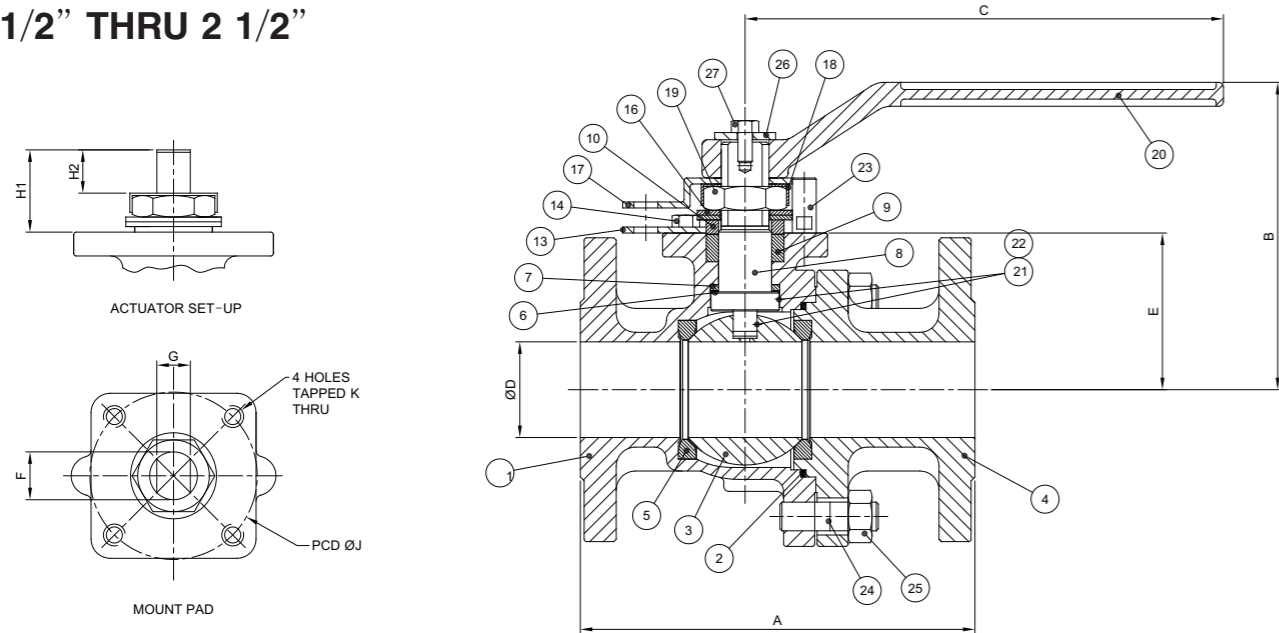
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Floating Ball Valves Product Overview

1/2" THRU 1 1/4"



1 1/2" THRU 2 1/2"

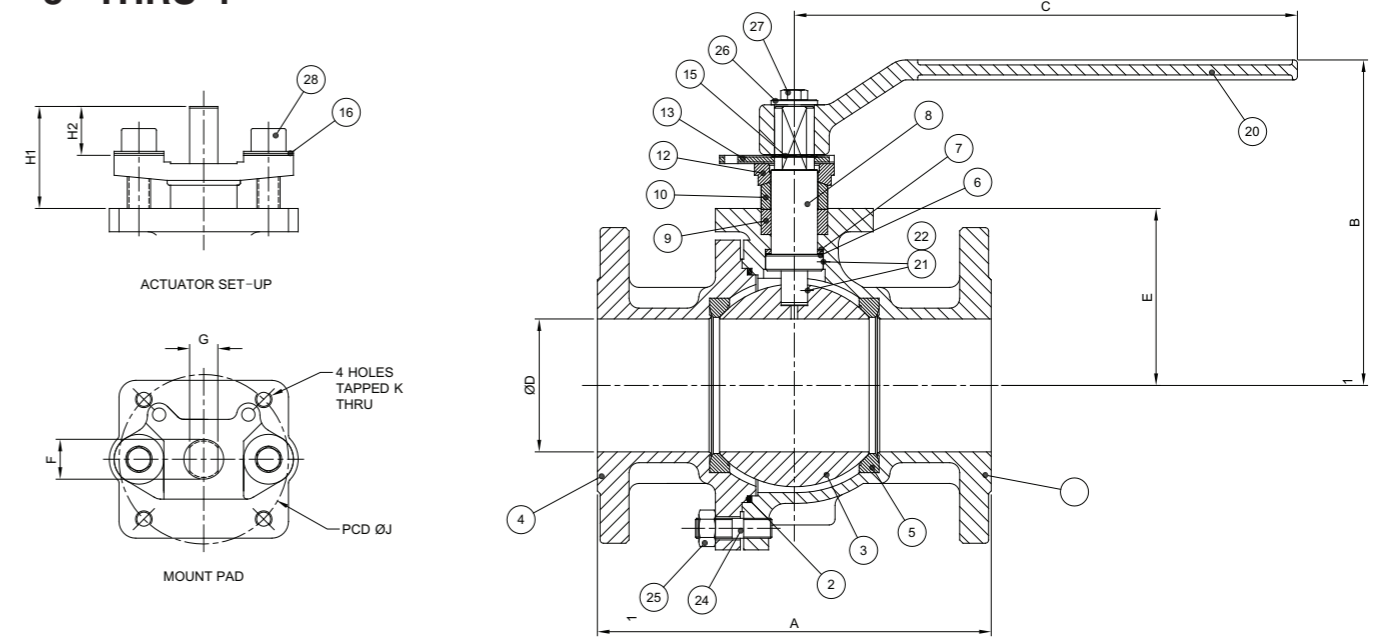


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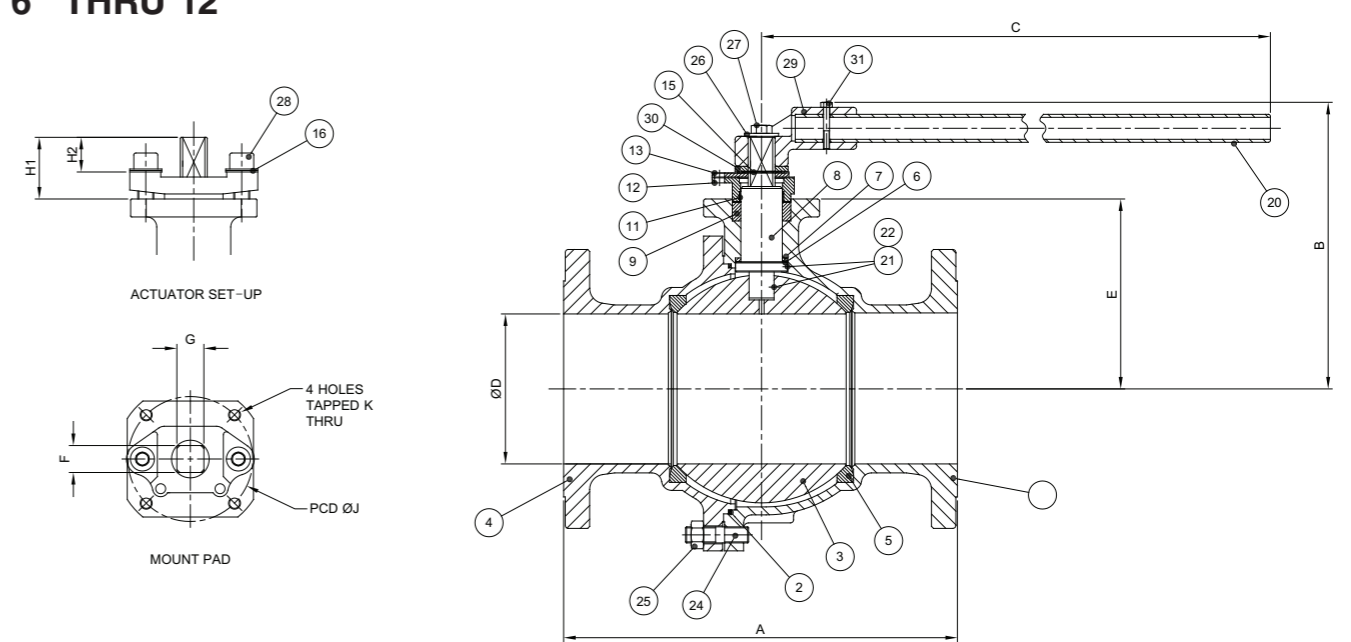
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Floating Ball Valves Product Overview

3" THRU 4"



6" THRU 12"



Cast Steel Bolted Bonnet Valves



Materials of Construction: Floating Ball Valves

Size 1/2" – 12" (Full Port) Fire Safe as Standard	Ball and Stem Materials 316 Stainless Steel Alloy 20 Hastelloy C	Service Applications Chemical Food Processing Oxygen Steam Thermal Fluids Vacuum Water/Oil/Gas	Applicable Standards ASME B16.34 ASME B16.10 ASME B16.5 API 598 API 607
End Connections 150# Flanged 300# Flanged	Seat Materials 15% Glass Filled Tefon 25% Carbon Filled Tefon Tefon PEEK		
Valve Materials 316 Stainless Steel Carbon Steel Alloy 20 Hastelloy C			

Item	Description	Part of Valve Assembly				Material		
		1/2" thru 1 1/4"	1 1/2" thru 2 1/2"	3" thru 4"	6" thru 12"	Stainless Steel	Alloy 20	Carbon Steel
1	Body	Yes	Yes	Yes	Yes	A351-CF8M	Alloy 20	A216-WCB
2	Body Seal	Yes	Yes	Yes	Yes	SS 316/Graphite	SS 316/Graphite	SS 316/Graphite
3	Ball	Yes	Yes	Yes	Yes	A351-CF8M	Alloy 20	A351-CF8M
4	End Cap	Yes	Yes	Yes	Yes	A351-CF8M	Alloy 20	A216-WCB
5	Seat	Yes	Yes	Yes	Yes	RPTFE	RPTFE	RPTFE
6	Thrust Ring	Yes	Yes	Yes	Yes	TFM 4215	TFM 4215	TFM 4215
7	Thrust Seal	Yes	Yes	Yes	Yes	Grafoil	Grafoil	Grafoil
8	Stem	Yes	Yes	Yes	Yes	A276-316	Alloy 20	A276-316
9	Packing	Yes	Yes	Yes	Yes	Grafoil	Grafoil	Grafoil
10	Gland Ring	Yes	Yes	Yes	No	A276-316	Alloy 20	A276-316
11	Bushing	No	No	No	Yes	PTFE	PTFE	PTFE
12	Packing Gland	No	No	Yes	Yes	A351-CF8M	Alloy 20	A216-WCB
13	Locking Plate	Yes	Yes	Yes	Yes	Stainless Steel	Stainless Steel	Stainless Steel or Steel
14	Locking Plate Screw	Yes	Yes	No	No	A193-B8	A193-B8	A193-B7
15	Locking Plate Retainer	No	No	Yes	Yes	Stainless Steel	Stainless Steel	Steel
16	Belleville Washer	Yes	Yes	Yes	Yes	A276-301	A276-301	A276-301
17	Travel Stop	Yes	Yes	No	No	Stainless Steel	Stainless Steel	Stainless Steel
18	Lock Washer	Yes	Yes	No	No	Stainless Steel	Stainless Steel	Stainless Steel
19	Stem Nut	Yes	Yes	No	No	A276-304	A276-304	A276-304
20	Handle	Yes	Yes	Yes	Yes	Steel	Steel	Steel
21	Anti-Static Ball	Yes	Yes	Yes	Yes	A276-316	A276-316	A276-316
22	Spring	Yes	Yes	Yes	Yes	A276-316	A276-316	A276-316
23	Stop Pin	Yes	Yes	No	No	Stainless Steel	Stainless Steel	Stainless Steel
24	Threaded Rod	Yes	Yes	Yes	Yes	A193-B8	A193-B8	A193-B7
25	Body Nut	Yes	Yes	Yes	Yes	A194-8	A194-8	A194-2H
26	Handle Washer	No	Yes	Yes	Yes	Stainless Steel	Stainless Steel	Stainless Steel
27	Handle Screw	No	Yes	Yes	Yes	A193-B8	A193-B8	A193-B7
28	Packing Gland Screw	No	No	Yes	Yes	A193-B8	A193-B8	A193-B7
29	Handle Block	No	No	No	Yes	A216-WCB	A216-WCB	A216-WCB
30	Stem Washer	No	No	No	Yes	Stainless Steel	Stainless Steel	Stainless Steel
31	Handle Block Screw	No	No	No	Yes	A193-B8	A193-B8	A193-B7
32	Handle Sleeve	Yes	No	No	No	Plastic	Plastic	Plastic

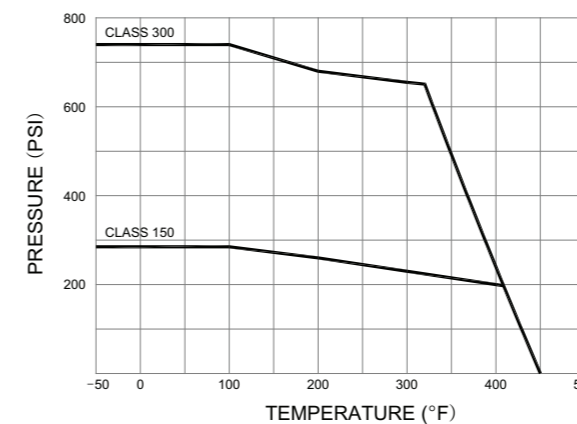


Cast Steel Bolted Bonnet Valves

Floating Ball Valves • ANSI Class 150~300

SIZE	ANS Class	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G	H1 (in.)	H2 (in.)	J (in.)	K (in.)	ISO 5211	Weight (lbs)	TORQUE (in-lbs)	CV
1/2"	150#	4.25	3.57	5.65	0.59	1.67	M10	0.297	0.69	0.39	1.654	M5	F04	4.6	84	23
	300#	5.50	3.67	5.65	0.59	1.75	M10	0.297	0.69	0.37	1.654	M5	F04	7.1	84	23
3/4"	150#	4.61	3.70	5.65	0.79	1.79	M10	0.297	0.73	0.39	1.654	M5	F04	5.3	96	53
	300#	5.98	3.76	5.65	0.79	1.85	M10	0.297	0.69	0.37	1.654	M5	F04	9.5	96	53
1"	150#	5.00	4.07	5.65	0.98	2.05	M14	0.342	1.16	0.72	1.969	M6	F05	5.7	120	94
	300#	6.50	4.23	5.65	0.98	2.15	M14	0.342	1.06	0.63	1.969	M6	F05	10.6	120	94
1 1/4"	150#	5.51	4.41	5.65	1.26	2.34	M14	0.342	1.06	0.63	1.969	M6	F05	11.5	178	118
	300#	7.00	4.41	5.65	1.26	2.34	M14	0.342	1.06	0.63	1.969	M6	F05	13.9	178	118
1 1/2"	150#	6.50	5.04	7.87	1.57	2.58	M20	0.551	1.46	0.69	2.756	M8	F07	15.0	216	213
	300#	7.48	5.04	7.87	1.57	2.58	M20	0.551	1.46	0.69	2.756	M8	F07	15.9	216	213
2"	150#	7.01	5.35	7.87	1.97	2.87	M20	0.551	1.50	0.69	2.756	M8	F07	19.8	300	378
	300#	8.50	5.35	7.87	1.97	2.87	M20	0.551	1.50	0.69	2.756	M8	F07	27.6	300	378
2 1/2"	150#	7.48	6.22	11.81	2.56	3.74	M20	0.551	1.50	0.69	2.756	M8	F07	32.0	531	660
	300#	9.49	6.22	11.81	2.56	3.74	M20	0.551	1.50	0.69	2.756	M8	F07	40.4	531	660
3"	150#	7.99	7.72	13.78	3.15	4.19	0.984	0.669	2.42	1.14	4.016	M10	F10	43.0	781	951
	300#	11.14	7.95	13.78	3.15	4.45	0.984	0.669	2.42	1.14	4.016	M10	F10	70.6	781	951
4"	150#	9.02	8.35	15.75	3.94	4.80	0.984	0.669	2.42	1.14	4.016	M10	F10	72.8	1444	1691
	300#	12.01	8.58	15.75	3.94	5.06	0.984	0.669	2.42	1.14	4.016	M10	F10	101	1444	1691
6"	150#	15.51	11.30	32.87	5.91	7.48	1.063	1.063	2.43	1.34	4.921	M12	F12	137	3356	3806
	300#	15.87	11.30	32.87	5.91	7.48	1.063	1.063	2.44	1.34	4.921	M12	F12	194	3356	3806
8"	150#	17.99	14.88	41.14	7.87	9.90	1.260	1.260	3.11	1.59	4.921	M12	F12	243	12744	7812
	300#	19.76	14.88	41.14	7.87	9.90	1.260	1.260	3.11	1.59	4.921	M12	F12	359	12744	7812
10"	150#	20.98	16.26	41.34	9.84	10.87	1.417	1.417	3.37	1.83	5.512	M16	F14	366	15930	13371
	300#	22.36	16.26	41.34	9.84	10.87	1.417	1.417	3.37	1.83	5.512	M16	F14	525	15930	13371
12"	150#	24.02	20.53	59.06	11.81	13.33	1.811	1.811	4.98	2.66	6.496	M20	F16	523	21240	19255
	300#	25.51	20.53	59.06	11.81	13.33	1.811	1.811	4.98	2.66	6.496	M20	F16	783	21240	19255

Pressure/Temperature Rating for 15% Glass Filled Tefon



Features

- ANSI Class 150 & 300
- Spring Loaded Stem Packing
- Bottom Entry Stem to Prevent Blow-Out
- ISO 5211 Mounting Pad
- Lockable Handle as Standard
- Fire Safe as Standard

Cast Steel Bolted Bonnet Valves



Floating Ball Valves HOW TO ORDER



Electric Actuator

- 120/230 VAC
- 12/24 VDC
- NEMA 4/7
- Positioners 4–20 mA
- Reversing
- Telemetry
- Battery Back-up
- Spring Return

Pneumatic Actuator

- Double Acting
- Spring Return
- Solenoid Valves
- Limit Switches
- Positioners 3–15 PSI
- Positioners 4–20 mA
- Intelligent Positioner
- Declutchable Manual Override



Manual Valves

- Oval Handle
- Spring Return
- Stem Extensions
- Fusible Link
- Lock Device
- Gear Operators

HOW TO ORDER

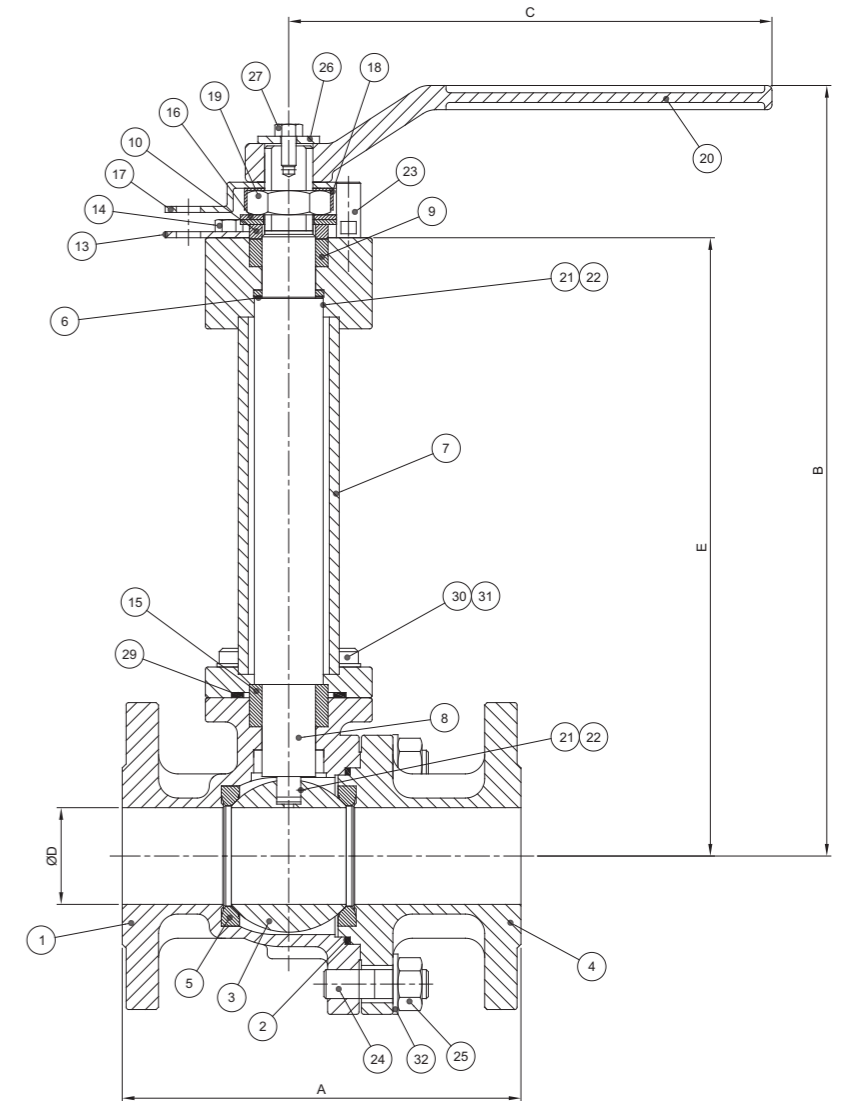
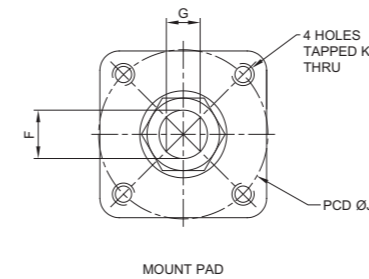
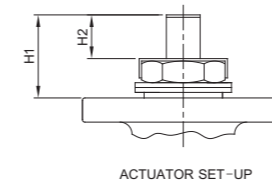
Flanged Ball Valve	Carbon Steel	SS316	PEEK	Graphoil	150	100	Lever Handle
Series	Body & End Material	Ball & Stem Material	Seat Material	Seal Material	End Style	Size	Options
Flanged Ball Valve	Carbon Steel	Alloy 20	25% Carbon PTFE	Graphoil	150 – Class150Lb	15 – 1/2"	Gear Operated
	Alloy 20	SS316	15% Glass PTFE	PTFE	300 – Class300Lb	20 – 3/4"	Lever Handle
	ASTM A351 CF8	Hastelloy C	Teflon (PTFE)		600 – Class600Lb	25 – 1"	Air-operated
	ASTM A351 CF8M	SS304	PEEK			32 – 1 1/4"	
	Hastelloy C	ASTM A105	DEVLON			40 – 1 1/2"	
			Nylon			50 – 2"	
			Metal to Metal			65 – 2 1/2"	
						80 – 3"	
						100 – 4"	
						150 – 6"	
						200 – 8"	
						250 – 10"	
						300 – 12"	



Cast Steel Bolted Bonnet Valves

Cryogenic Floating Ball Valves Product Overview

1 1/2" THRU 2 1/2"

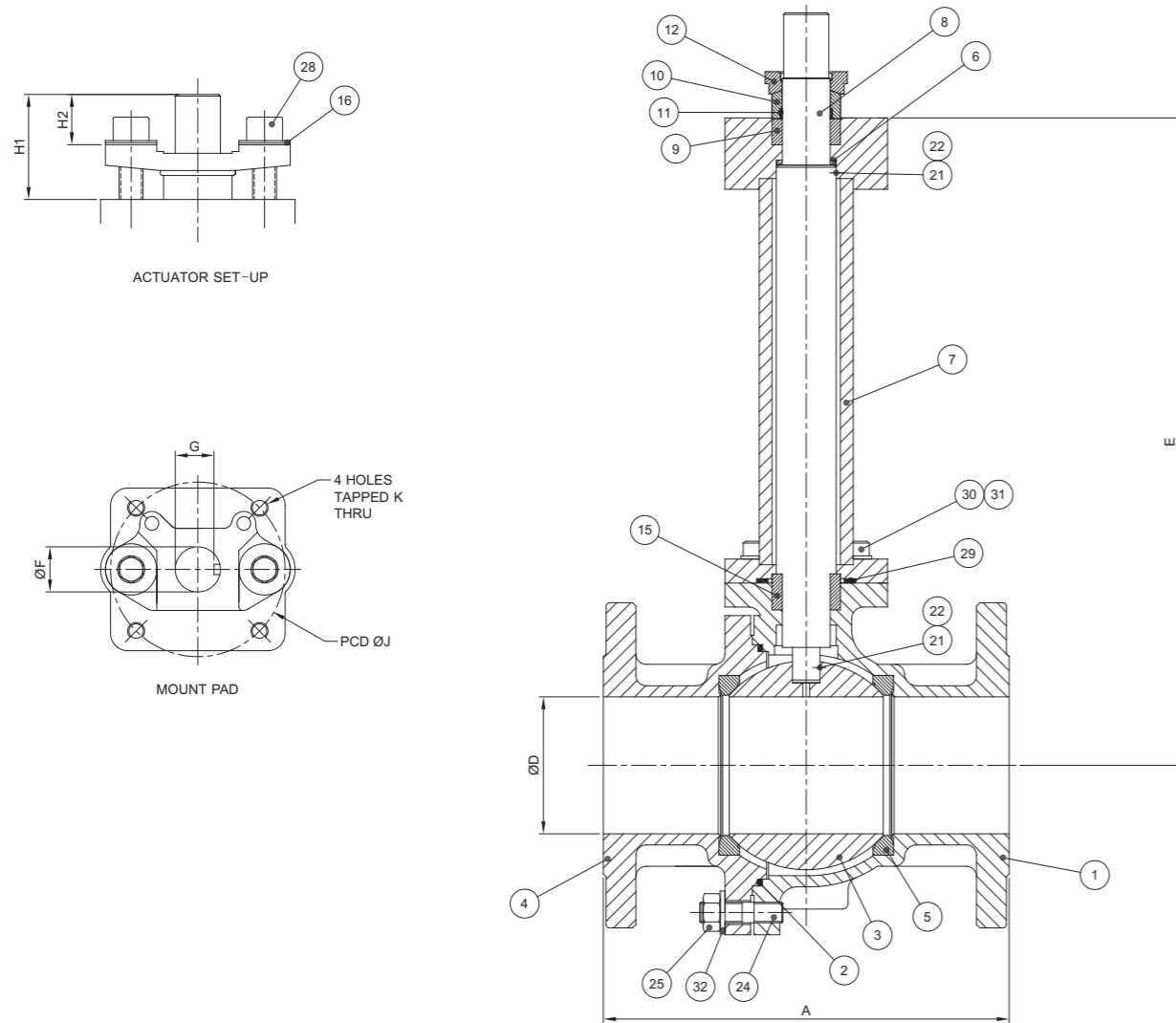


Cast Steel Bolted Bonnet Valves

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Materials of Construction: Cryogenic Floating Ball Valves

3" THRU 12"



Size	Ball and Stem Materials	Service Applications	Applicable Standards
1 1/2" - 12" (Full Port) Fire Safe as Standard	316 Stainless Steel	Aerospace Cryogenic Service Food Processing Liquid O2 Liquid N2 LNG Petro-Chemical	ASME B16.34 ASME B16.10 ASME B16.5 BS 6364 ISO 21011
End Connections	Seat Materials		
150# Flanged 300# Flanged	25% Carbon Filled Teflon Teflon		
Valve Materials			
316 Stainless Steel			

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Cast Steel Bolted Bonnet Valves

Materials of Construction: Cryogenic Floating Ball Valves

Item	Description	Valve Size			Material
		1 1/2" thru 2 1/2"	3" thru 4"	6" thru 12"	
1	Body	Yes	Yes	Yes	A351-CF8M
2	Body Seal	Yes	Yes	Yes	SS 316/Graphite
3	Ball	Yes	Yes	Yes	A351-CF8M
4	End Cap	Yes	Yes	Yes	A351-CF8M
5	Seat	Yes	Yes	Yes	CTFE
6	Thrust Ring	Yes	Yes	Yes	TFM 4215
7	Cryogenic Bonnet	Yes	Yes	Yes	A276-316
8	Stem	Yes	Yes	Yes	A276-316
9	Packing	Yes	Yes	Yes	Grafoil
10	Gland Ring	Yes	Yes	No	A276-316
11	Upper Bushing	No	No	Yes	PTFE
12	Packing Gland	No	Yes	Yes	A351-CF8M
13	Locking Plate	Yes	No	No	Stainless Steel
14	Locking Plate Screw	Yes	No	No	A193-B8
15	Lower Bushing	Yes	Yes	Yes	PTFE
16	Belleville Washer	Yes	Yes	Yes	A276-301
17	Travel Stop	Yes	No	No	Stainless Steel
18	Lock Washer	Yes	No	No	Stainless Steel
19	Stem Nut	Yes	No	No	A276-304
20	Handle	Yes	No	No	Steel
21	Anti-Static Ball	Yes	Yes	Yes	A276-316
22	Spring	Yes	Yes	Yes	A276-316
23	Stop Pin	Yes	No	No	Stainless Steel
24	Body Stud	Yes	Yes	Yes	A193-B8
25	Body Nut	Yes	Yes	Yes	A194-8
26	Handle Washer	Yes	No	No	Stainless Steel
27	Handle Screw	Yes	No	No	A193-B8
28	Packing Gland Screw	No	Yes	Yes	A193-B8
29	Gasket	Yes	Yes	Yes	SS 316/Graphite
30	Bonnet Bolt	Yes	Yes	Yes	A193-B8
31	Bonnet Bolt Washer	Yes	Yes	Yes	Stainless Steel
32	Body Bolt Washer	Yes	Yes	Yes	Stainless Steel

Cast Steel Bolted Bonnet Valves



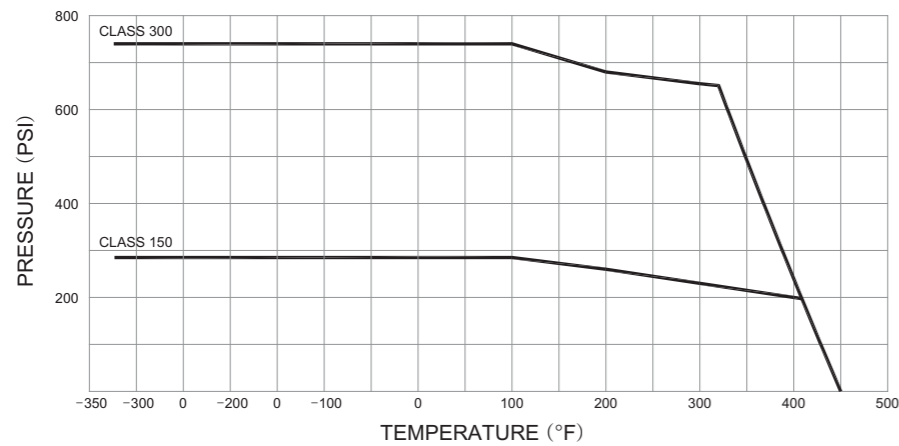
Cryogenic Floating Ball Valves • ANSI Class 150~300

SIZE	ANS Class	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H1 (in.)	H2 (in.)	J (in.)	K (in.)	ISO 5211	TORQUE (in-lbs)	CV
1 1/2"	150#	6.50	16.85	7.87	1.57	14.39	M20	0.551	1.46	0.69	2.756	M8	F07	216	213
	300#	7.48	16.85	7.87	1.57	14.39	M20	0.551	1.46	0.69	2.756	M8	F07	216	213
2"	150#	7.01	17.16	7.87	1.97	14.68	M20	0.551	1.50	0.69	2.756	M8	F07	300	378
	300#	8.50	17.16	7.87	1.97	14.68	M20	0.551	1.50	0.69	2.756	M8	F07	300	378
2 1/2"	150#	7.48	18.03	11.81	2.56	15.55	M20	0.551	1.50	0.69	2.756	M8	F07	531	660
	300#	9.49	18.03	11.81	2.56	15.55	M20	0.551	1.50	0.69	2.756	M8	F07	531	660
3"	150#	7.99			3.15	4.19	1.102	0.945	2.99	1.77	4.016	M10	F10	781	951
	300#	11.14			3.15	4.45	1.102	0.945	2.99	1.77	4.016	M10	F10	781	951
4"	150#	9.02			3.94	4.80	1.102	0.945	2.99	1.77	4.016	M10	F10	1444	1691
	300#	12.01			3.94	5.06	1.102	0.945	2.99	1.77	4.016	M10	F10	1444	1691
6"	150#	15.51			5.91	23.23	1.417	1.220	2.99	1.97	4.921	M12	F12	3356	3806
	300#	15.87			5.91	23.23	1.417	1.220	2.99	1.97	4.921	M12	F12	3356	3806
8"	150#	17.99			7.87	25.65	1.811	1.594	3.43	1.97	4.921	M12	F12	12744	7812
10"	150#	20.98			9.84	26.62	1.969	1.752	4.09	2.56	5.512	M16	F14	15930	13371
12"	150#	24.02			11.81	29.08	2.362	2.087	5.47	3.15	6.496	M20	F16	21240	19255

Notes

- Torque values are based upon ambient temperature operation
- Dimensions must be clarified before installation.

Pressure/Temperature Rating for 25% Carbon Filled Teflon



Features

- ANSI Class 150 & 300
- Spring Loaded Stem Packing
- Stem Blow-out Prevention
- Anti-Static
- ISO 5211 Mounting Pad
- Locking Handle as Standard on sizes up to 2 1/2"
- Bare Stem as Standard on sizes 3" and above
- Fire Safe as Standard
- Vented Ball



Cast Steel Bolted Bonnet Valves

Cryogenic Floating Ball Valves HOW TO ORDER



Electric Actuator

- 120/230 VAC
- 12/24 VDC
- NEMA 4/7
- Positioners 4-20 mA
- Reversing
- Telemetry
- Battery Back-up
- Spring Return

Pneumatic Actuator

- Double Acting
- Spring Return
- Solenoid Valves
- Limit Switches
- Positioners 3-15 PSI
- Positioners 4-20 mA
- Intelligent Positioner
- Declutchable Manual Override

Manual Valves

- Lever Handle
- Locking Device
- Gear Operators

HOW TO ORDER

Flanged Ball Valve	CF8	304 SS	PTFE	Graphoil	150	100	Lever Handle
Series	Body & End Material	Ball & Stem Material	Seat Material	Seal Material	End Style	Size	Options
Flanged Ball Valve	Carbon Steel Alloy 20 ASTM A351 CF8 ASTM A351 CF8M Hastelloy C	304 SS 316 SS	PTFE PEEK DEVLON Nylon Metal to Metal	Graphoil	150 - Class150Lb 300 - Class300Lb	40 - 1 1/2" 50 - 2" 65 - 2 1/2" 80 - 3" 100 - 4" 150 - 6" 200 - 8" 250 - 10" 300 - 12"	Gear Operated Lever Handle Air-operated