ROBVALVE

VALVE MANUFACTURER FOR INDUSTRIAL AND WATER APPLICATIONS

BALL VALVES

FLOATING & TRUNNION MOUNTED
RESILIENT & METAL SEATED

Pressure : Class150 ~ Class4500 (PN6 ~ 760) **Size :** ¼" ~ 64" (DN10 ~ 1600) | **Temperature :** -196°C ~ +720°C

Robvalve Presentation

The main goal of the company Robvalve is to offer the highest quality valves for industry and water, at best possible price. Established in Strasbourg, it was a natural choice for the company as it is the center point of Western Europe and also the capital of European Union. Situated in France next to the German boarder, the company took the best of both culture: French creativity with German quality.

Throughout the years Robvalve increased its research & development department and created the Suprax®, a state of the art, Triple Offset Butterfly Valve, thanks to its experts in valve technologies within the engineering team. With big strength in R&D and Lean Manufacturing, Robvalve prove it could achieve its goal : to offer the highest quality valves.

Now fully operational with a brand new factory in Strasbourg, the company can offer a wide range of valves for industry and water markets including ball, butterfly, gate, globe, check valves and strainers technologies. Those products can stand the most difficult applications from cryogenics to very high temperature, from low to super high pressure. Featuring various materials, pressure ranges and connections types which are available depending on the service conditions of the different markets served.

Our independent R&D center and advanced manufacturing technologies strictly implement the relevant international standards. With advanced engineering design approaches, latest manufacturing equipment, testing facilities and the concept of Lean Manufacturing, Robvalve, ensure that each part in every product we supply is manufactured according to the highest standard and performance.

Certifications

An ISO 9001 : 2015 certified company

Products comply with the european directive of the "Pressure Equipment" (PED 2014/68/UE)

Products suitable for driking water systems

Products adapted to fire networks

Products comply with the ATEX directive 94/9/CE (explosion proof)

International certifications :

API 607
API 6FA

Alsace Company

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CODIFICATION

Valve Definition			Inside Parts Material	Connection Type	Working Pressure	Actuation	Size
Valve Type	Ball Type	Body Type					
BAV1 Resilient Seated **BAV2** Metal Seated **BAV3** All welded **BAV4** Eccentric Semi Ball Valve **BAV5** C-Pattern **BAV6** AWWA C507 **BAV7** Top Entry	**1** - Floating **2** - Trunnion	**1** - Monobloc **2** - 2 pieces **3** - 3 pieces	**WB8MPT** Seat (PTFE) Ball (CF8M) Body (WCB)	**Welded or threaded :** **BW** - Butt Welded **SW** - Socket Welded **GT** - Gaz Threded BSP **BT** - NPT Threaded **Flanged :** **FF** - Flat Face **RF** - Raised Face **RJ** - Ring Type Joint **WA** - Wafer **Male & Female Flanged :** **SM** - Small Male Face **SF** - Small Female Face **LM** - Large Male Face **LF** - Large Female Face **Tongue & Groove :** **ST** - Small Tongue Face **SG** - Small Groove Face **LT** - Large Tongue Face **LG** - Large Groove Face	**006** - PN6 **010** - PN10 **016** - PN16 **020** - PN20 **025** - PN25 **040** - PN40 ... **760** - PN760 **C01** - CL150 **C03** - CL300 **C06** - CL600 **C09** - CL900 **C15** - CL1500 **C25** - CL2500 **C45** - CL4500	**0 -** Bareshaft **3 -** Gearbox **4 -** Elec Actuator **5 -** Pneumatical Actuator	**0050** - 2" **0300** - 12" **0008** - DN8 **0150** - DN150

DN - PN

Material Sealing

Sealings	Codification
EPDM	EP
NBR	NB
Silicone	SI
FPM	FP
Hypalon	HY
PTFE	PT
RPTFE	RP
PEEK	PE
Devlon	DE
UHMWPE	HG

PN	CODE	Class	Code
PN6	006		
PN10	010		
PN16	016		
PN25	025	CL150	C01
PN40	040		
PN50	-	CL300	C03
PN64	064		
PN100	100	CL600	C06
PN160	160	CL900	C09
PN250	250	CL1500	C15
PN400	400	CL2500	C25
PN750	750	CL4500	C45

DN	Size	Code
8	1/4"	0008
12	3/8"	0012
15	1/2"	0015
20	3/4"	0020
25	1"	0025
32	1"-1/4	0032
40	1"-1/2	0040
50	2"	0050
65	2"-1/2	0065
80	3"	0080
100	4"	0100
125	5"	0125
150	6"	0150
200	8"	0200
250	10"	0250
300	12"	0300
350	14"	0350
400	16"	0400
500	20"	0500
600	24"	0600
700	28"	0700
800	32"	0800
900	36"	0900
1000	40"	1000
1050	42"	1050
1100	44"	1100
1200	48"	1200
1300	52"	1300
1400	56"	1400
1500	60"	1500
1600	64"	1600

MATERIAL TABLES

Carbon Steel, Low Temperature Carbon Steel and Low Temperature Alloy Steel

Material Group	Forging		Codification	Casting		Codification	Application
	ASTM	EN		ASTM	EN		
Carbon Steel **-29°C Manufacturing Standard**	**A105** A350 **LF1**	**1.0432** -	**A5** **L1**	A216 **WCB** A216 **WCC**	**1.0619** -	**WB** **WC**	Non-corrosive applications including water, oil and gases from -29ºC to +425ºC
Low Temperature Carbon Steel **-46°C**	A350 **LF2** Class 1	**1.0570**	**L2**	A352 **LCB** A352 **LCC**	**1.1156** -	**LB** **LC**	Low temperature applications from LCB, LCC -46ºC to +340ºC LF2 -46ºC to +427ºC
Low Temperature Carbon Steel **-51°C**	A350 **LF6** Class 1 and 2	-	**L6**	-	-	-	Low temperature applications from -51°C to +340°C
Low Temperature Carbon Steel **-59°C**	A350 **LF5** Class 1 and 2 A350 **LF787** Class 2 -	- -	**L5** **L7** **-**	- - - - A352 **LC1**	-	- - - - **A1**	Low temperature applications from -59°C to +340°C
Low Temperature Carbon Steel **-73°C**	A350 **LF9** A350 **LF787** Class 3 -	-	**L9** **L8**	- - - A352 **LC2**	-	- - - **A2**	Low temperature applications from -73°C to +340°C
Low Temperature Alloy Steel **-101°C**	A350 **LF3** Class 1 and 2	**1.5637**	**L3**	A352 **LC3**	**1.5638**	**A3**	Low temperature applications from -101°C to +340°C

Medium and Low Alloy Steel

Material Group	Forging		Codification	Casting		Codification	Application
	ASTM	EN		ASTM	EN		
Low Alloy Steel	A182 **F1**	**1.5421**	**F1**	A217 **WC1**	—	**W1**	For high temperatures non-corrosive applications including water, oil and gases from - 29°C to +470°C
	A182 **F11** Class2	**≈1.7535**	**11**	A217 **WC6**	**1.7354**	**W6**	Non-corrosive applications including water, oil and gases from -30°C to +593°C
	A182 **F22** Class3	**1.7375**	**F2**	A217 **WC9**	**1.7380**	**W9**	For high temperatures Non-corrosive applications including water, steam, oil and gases from -30°C to +593°C
Medium Alloy Steel	A182 **F5**	**1.7362**	**F5**	A217 **C5**	**1.7363**	**C5**	Mild corrosive or erosive applications as well as non-corrosive applications especially high temperature refinery service from -30°C to +650°C
	A182 **F9**	**1.7386**	**F9**	A217 **C12**	**1.7389**	**C1**	Mild corrosive or erosive applications as well as non-corrosive applications especially high temperature erosive refinery service from -30°C to +650°C
	A182 **F91**	**1.4903**	**91**	A217 **C12A**	**1.4903**	**C2**	Mild corrosive or erosive applications as well as non-corrosive applications especially high pressure steam from -30°C to +650°C

Table given as an indication and without obligation on our part.

CODIFICATION

MATERIAL TABLES

Stainless Steel

Type	Casting ASTM	Casting EN	Codification	Forging ASTM	Forging EN	Codification	Application
Generic	Generic **SS**	-	**SS**	Generic **SS**		**SS**	Standard Generic Designation
304	A351 **CF8**	**1.4308**	**C8**	A182 **F304**	**1.4301**	**34**	Corrosive or high temperature non-corrosive services from -268°C to +649°C. Above +425°C specify carbon content of 0,04% or greater
304L	A351 **CF3**	**1.4309**	**C3**	A182 **F304L**	**1.4306**	**4L**	Corrosive or non-corrosive services up to +425°C.
316 **Manufacturing Standard**	A351 **CF8M**	**1.4408**	**8M**	A182 **F316**	**1.4401**	**36**	Corrosive or either extremely low or high temperature non-corrosive services from -268°C to +649°C. Above +425°C specify carbon content of 0,04% or greater
316L	A351 **CF3M**	**1.4404**	**3M**	A182 **F316L**	**1.4404**	**6L**	Acetic acid, calcium carbonate, calcium lactate, potable water, sea water, steam, sulfites Corrosive or high temperature non-corrosive services from -268°C to +649°C. Above +425°C specify carbon content of 0,04% or greater
321	-		-	A182 **F321**	**1.4541**	**32**	Corrosive or high temperature non-corrosive services up to +540°C
310	A351 **CK-20**	**1.4843**	**41**	A182 **F310H**	**1.4841**	**31**	For High Temperature butterfly valves BUV320 : 450°<T<750°

Ferritic-Austenitic Stainless Steel

Type	Casting ASTM	Casting EN	Codification	Forging ASTM	Forging EN	Codification	Application
904L	—	—	—	904L/**UB6**	**1.4539**	**U6**	**Uranius B6**
F51	**A890-CD3MN**	**1.4470**	**DU**	A182 **F51**	**1.4462**	**51**	**Duplex 2205 / Uranius 45N** Low Salt Aggression (Sea Water) Max. temp. 315°
F53	**A890-CE3MN**	**1.4469**	**D2**	A 182 **F53**	**1.4410**	**53**	**Super Duplex F53** High Salt Agression (Sea Water)
F55	**A995-6A**		**DF**	A 182 **F55**	**1.4501**	**55**	**Super Duplex F55** High Salt Agression (Sea Water)

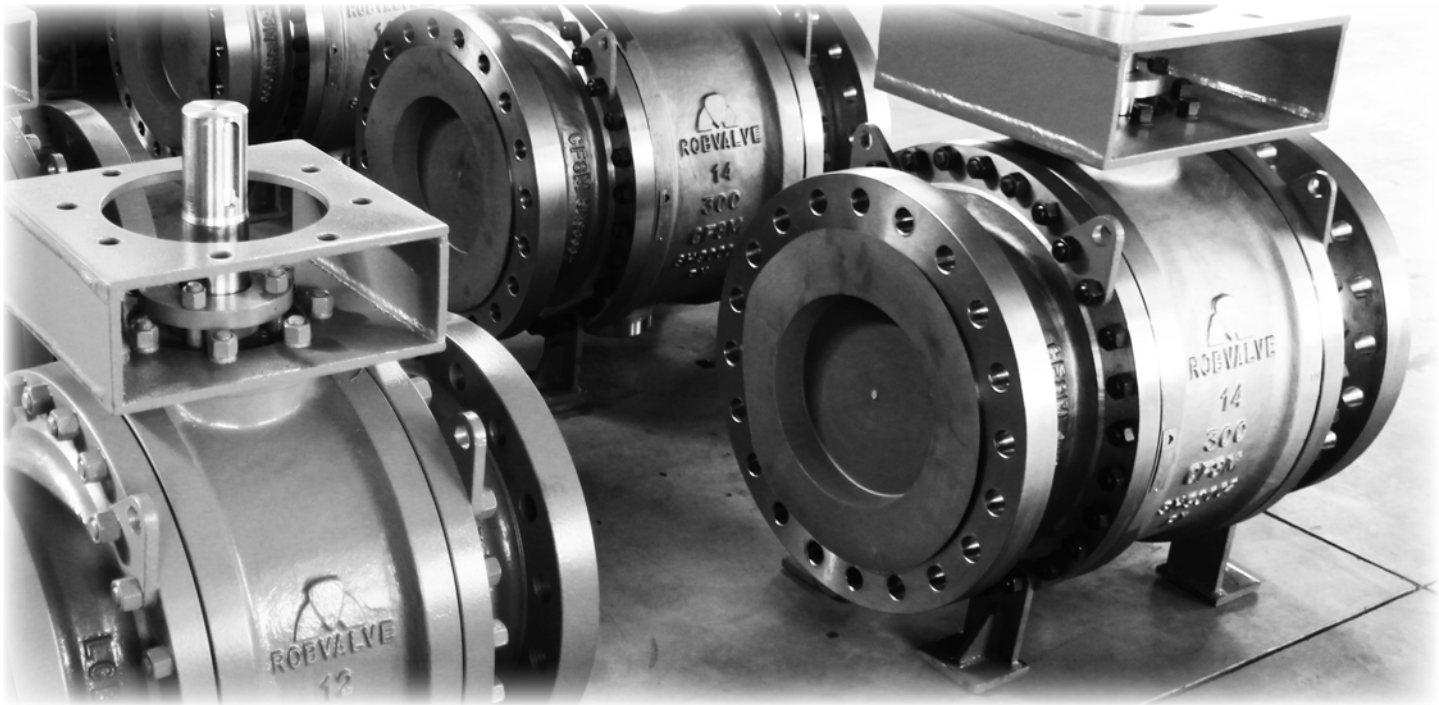
Nickel Alloy

Type	Casting ASTM	Casting EN	Codification	Forging ASTM	Codification	Application
Monel 400	**A494 M35-1**	**2.4360**	**M4**	**N04400**	**N4**	If requested by customer
Monel 500	-	**2.4375**	**M5**	**N05500**	**N5**	
Inconel 600	**A494 CY40**	**2.4816**	**I0**	**N06600**	**N6**	
Inconel 625	**A494 CW-6MC**	**2.4856**	**I5**	**N06625**	**N7**	
Hastelloy C-276	**A494 CW-2M**	**2.4819**	**H2**	**N10276**	**N1**	

Table given as an indication and without obligation on our part.

Metal & Resilient Seats
Advantages

- Ball valve is the valve technology with the smallest fluid resistance
- Stem is able to rotate at 90˚ to realize full open or close position and is easy to operate rapidly
- Floating ball technology uses medium pressure to seal and has good sealing performance
- Stem blow-out proof : sealing force of the valve stem increases with the medium pressure
- Easy to realize automatic control and remote control
- Smooth passage can efficiently prevent the sediment and allow to carry out pigging method



Resilient Seats

Applications

Resilient-seated ball valves have good sealing performances and a variety of choices for the materials depending on the working conditions.

Resilient-seated valves are widely used for pure medium, such as water, LNG, natural gas, oil, nitric acid.

Parameters

Nominal diameter : 1/2" ~ 48" (DN 15 ~ DN 1200)
Pressure class : Class 150 ~ Class 2500 (PN 16 ~ PN 420)
Working temperature : -196℃ ~ 260℃
Structure : floating ball / trunnion mounted
Body type : two-piece / three-piece
Material forming process : casted/ forged
Actuation : handle, gearbox, electric, pneumatic

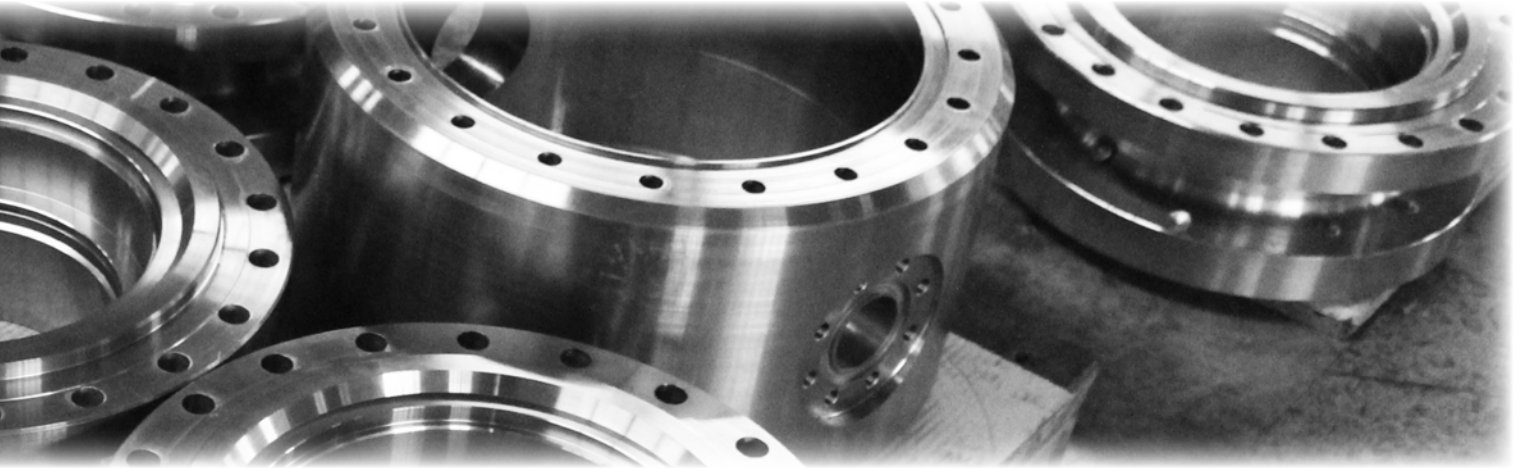
Metal Seats

Applications

Metal seated ball valves are suitable for high temperature, high pressure, abrasive and corrosive working conditions. It is a perfect equipment to shut off some special medium, like solid and gas mixed medium, solid and liquid mixed medium, high-viscosity medium, high temperature steam. It is widely used in petrochemical, paper manufacturing and power plants.

Parameters

Nominal diameter : 1/2" ~ 48" (DN 15 ~ DN 1200)
Pressure class : Class 150 ~ Class 4500 (PN 16~PN 760)
Working temperature : -196℃ ~ 650℃
Structure : floating ball / trunnion mounted
Body type : two-piece / three-piece
Material forming process : casted / forged
Actuation : handle, gearbox, electric, pneumatic

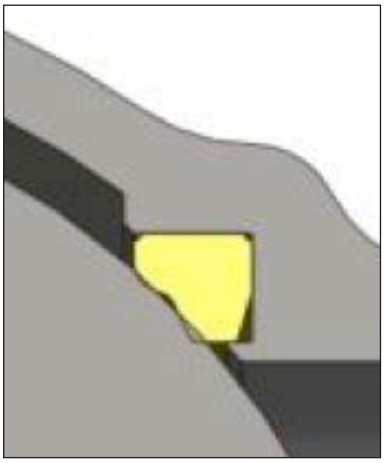


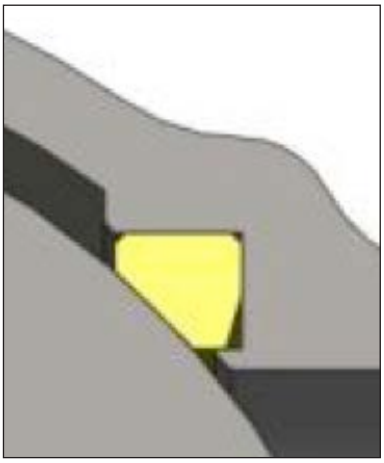
Metal & Resilient Seats

Standards & Specifications

Designing Standards	EN 1983 - Industrial valves — Steel ball valves
	API 6D Specification for Pipeline Valve
	API 608 Metal ball valves. Flanged, Threaded and Welding Ends Fourth Edition
	ASME B16.34 Valves—Flanged, Threaded, and Welding End
	MSS SP-72 Ball Valves with Flanged or Butt-Welding Ends for General Service
	ISO 17292 Metal Ball Valves for Petroleum, Petrochemical and Allied Industries
	ISO 5211 Part-turn Valve Actuator Attachments
	NACE MR0175 Metals for Sulfide Stress Cracking and Stress Corrosion Cracking Resistance in Sour Oilfield Environments
	BS 6364 Valves for Cryogenic service
	EN 1626:2008 Cryogenic vessels — Valves for cryogenic service
End Connection Standards	EN 1092-1:2007+A1:2013 Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, PN designated — Part 1: Steel flanges
	EN 1515-4:2009 Flanges and their joints — Bolting — Part 4: Selection of bolting for equipment subject to the Pressure Equipment Directive 97/23/EC
	ASME B16.5 Pipe Flanges and Flanged Fittings
	B16.47 Large Diameter Steel Flanges
	B16.11 Forged Fittings, Socket-Welding and Threaded
	API 605 Large Diameter Carbon Steel Flanges
	MSS SP-44 Steel Pipe Flanges
	EN 12627 Industrial Valves, Butt Welding Ends Steel Valves
	EN 12760 Valves-Socket welding ends for steel valves
Face to Face Standards	ASME B16.10 Face-to-Face and End-to-End Dimensions of Valves
	ISO 5752 Metal valves for use in flanged pipe systems— —Face-to-face and center-to-face dimensions
	BS 558 Industrial Valves Face To Face & Center To Face Dimensions
Testing and Inspection Standards	API 598 Valve Inspection and Testing
	API 6D Specification for Pipeline Valve
	API 6FA Specification Fire Test For Soft Seats / API 607 for Metal Seats
	BS 12569 Industrial valves - Valves for chemical and petrochemical process industry - Requirements and tests
	MSS SP-55 Quality Standard for Steel Castings for Valves, Flanges , Fittings, and Other Piping Components –Visual Method for Evaluation of Surface Irregularities
	EN 764-5:2002 Pressure Equipment — Part 5: Compliance and Inspection Documentation of Materials
	EN 12266-1:2012 Industrial valves — Testing of metallic valves
	EN 12569:1999 Industrial valves. Valves for chemical and petrochemical process industry. Requirements and tests
Marking of valves	EN 19:2002 Industrial valves — Marking of metallic valves

Design Features
Elastic Sealing

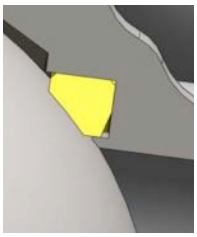




For floating balls, the contact area increases as the medium pressure increases.

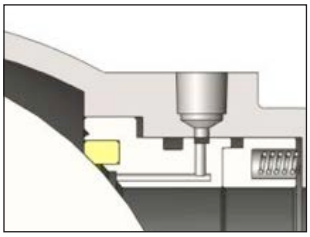
Design Features
Fire safe Protection

Our resilient-seated ball valves floating and trunnion mounted are conform to the API 607, API 6FA standards.

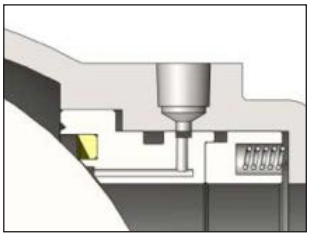


Floating Ball
before Burning

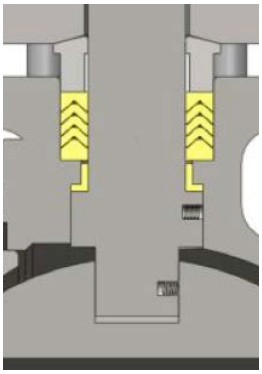
After Burning



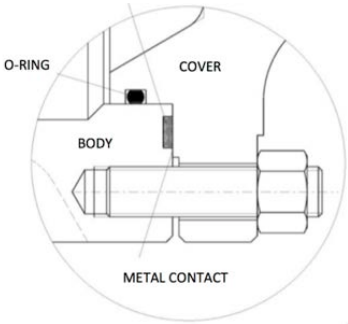
Trunnion mounted before
Burning



After Burning



STAINLESS STEEL+
FLEXIBLE GRAPHITE SPIRAL WOUND GASKET



Design Features

Blow-out Proof Stem

Our trunnion mounted ball valves use T-type stem bottom to lock the stem. Even if the inner cavity is under abnormally high pressure and the packing gland fails at the same time, the stem does not blow-out.

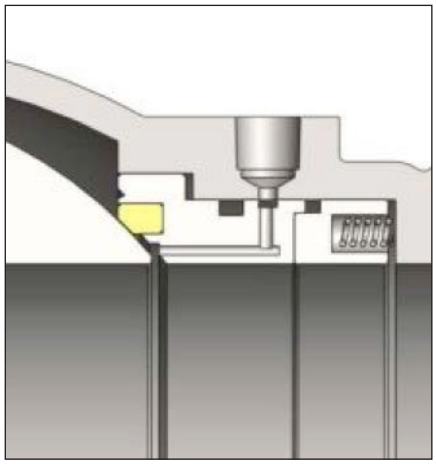
Anti-static Design

Floating ball is equiped with a spring connected to the ball to grant electrical continuity. Trunnion mounted balls release static electricity through the lower stem connected to the ball.

Fire Safe Protection

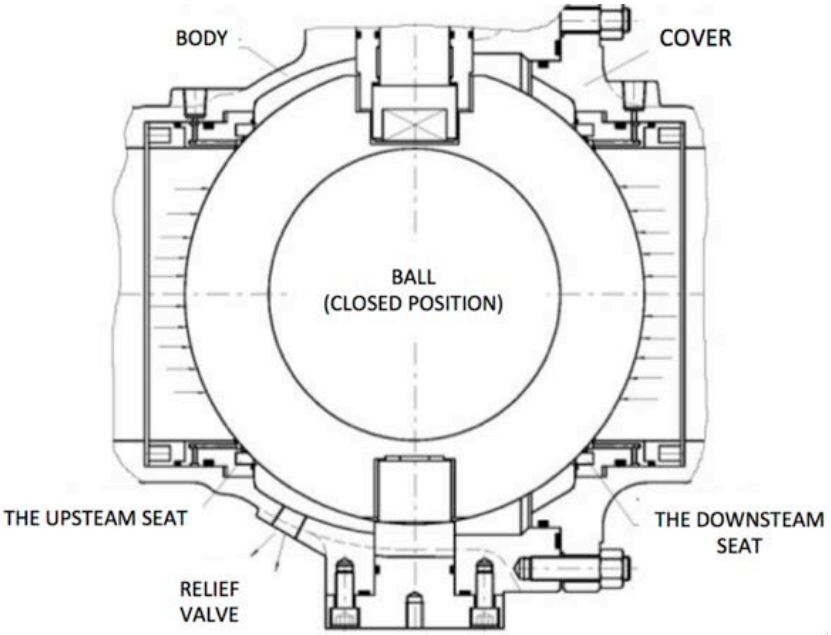
Our resilient-seated ball valves floating and trunnion mounted are conform to the API 607, API 6FA standards.

Self-relief Structure



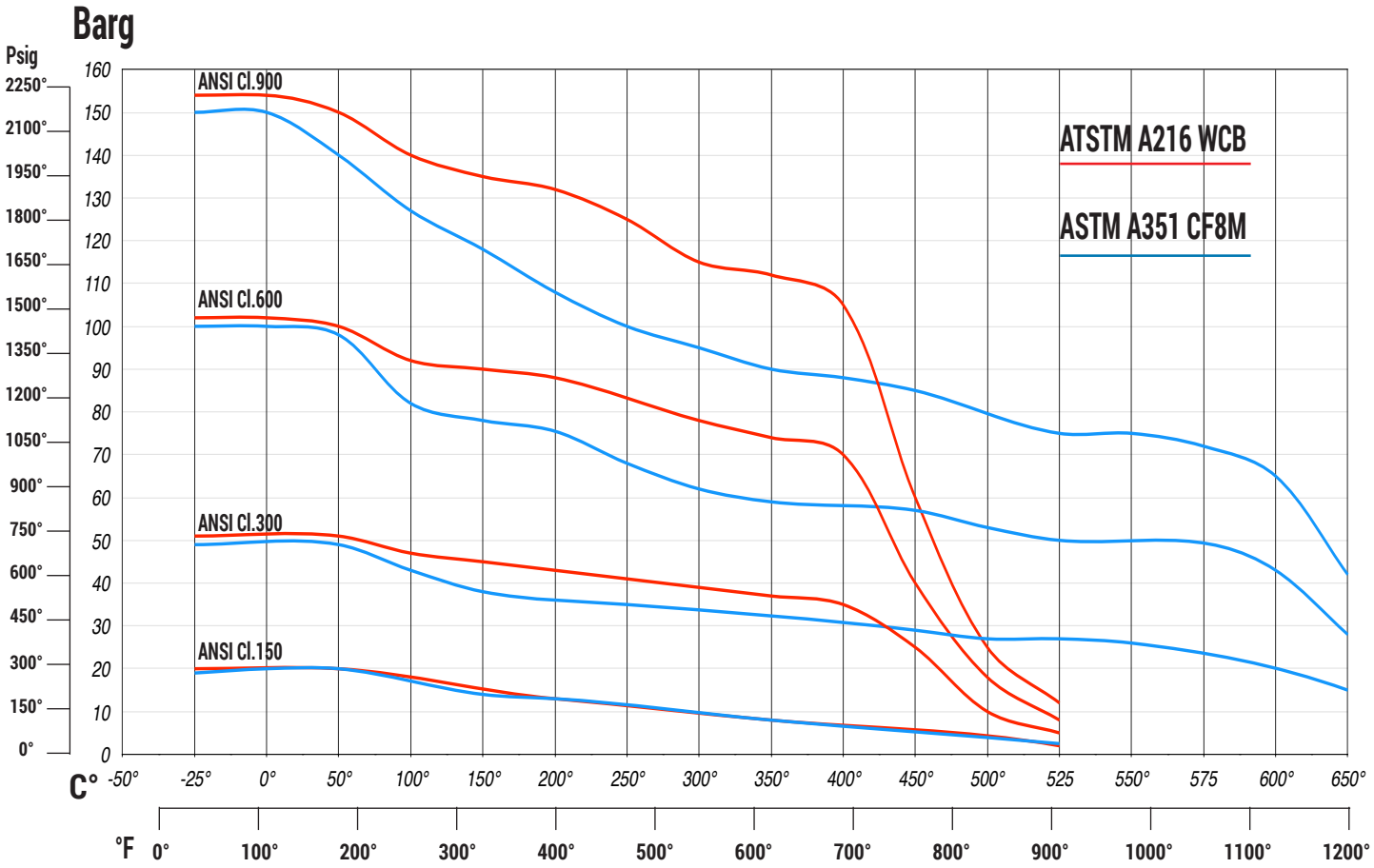
When the medium pressure is unusually high in the cavity, the seat is pushed by the medium and discharge the pressure to the lower side, ensuring the safety of the valve.

Dual-block and Discharge Functions



Trunnion mounted ball valves adopt the front-ball seat sealing structure. Both seat can cut off the medium from each side, realizing the dual-block function. When the ball valve is closed, even if both sides are under pressure, the medium left in the cavity can discharge the relief valve.

Pressure-Temperature Curve



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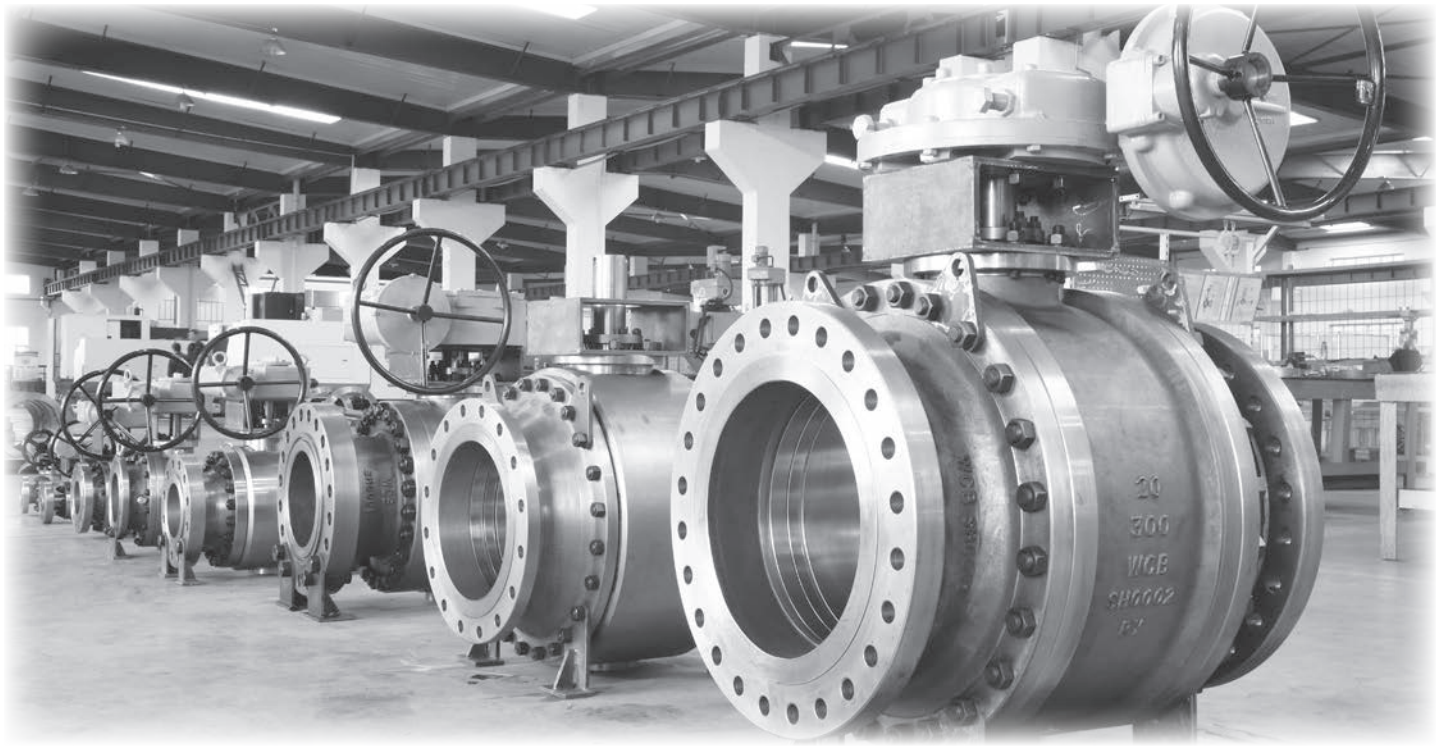


Cv Values

Cv values indicate the water flow through full opened valve per minute under the conditions that differential pressure is 1 pound per square inch (0.07bar), temperature is 60°F (15.6°C). Units are gallons per minute. If more parameters are needed, please contact us.

Caliber (Inch)	Cv Value							
	Class150-Class600		Class900		Class1500		Class2500	
	Full Port	Reduce Bore	Full Port	Reduce Bore	Full Port	Reduce Bore	Full Port	Reduce Bore
½	25	14	24	14	24	14	24	14
¾	56	32	55	31	55	31	55	31
1	98	55	100	55	100	55	100	55
1 ¼	160	86	160	85	160	85	160	85
1 ½	280	125	260	123	260	123	260	123
2	460	218	450	218	450	218	330	160
2 ½	750	340	720	340	720	340	510	240
3	1200	490	1100	490	1050	490	770	350
4	2150	880	2100	880	2100	880	1700	680
6	5500	1980	5500	1980	5100	1840	4200	1500
8	10150	3500	10000	3500	9100	3200	7900	2800
10	17500	5460	17000	5460	15300	4900	13300	4300
12	26000	7900	24000	7980	21500	7100	18400	6100
14	28500	10700	26700	9950	24900	9500	-	-
16	35800	14000	33800	13100	31500	12300	-	-
18	47000	18000	43500	17000	-	-	-	-
20	57750	22000	53600	20600	-	-	-	-
24	75600	31500	70200	29500	-	-	-	-

Resilient Seat

Pressure	Valve Structure		Body Type	
	Floating Ball	Trunnion mounted	Two-piece	Three-piece
Class150	½" ~ 8"	3" ~ 48"	½" ~ 12"	2" ~ 48"
Class300	½" ~ 8"	3" ~ 48"	½" ~ 10"	2" ~ 48"
Class600	½" ~ 4"	2" ~ 36"	½" ~ 8"	1"½ ~ 36"
Class900	½" ~ 3"	2" ~ 24"	½" ~ 8"	1" ~ 24"
Class1500	½" ~ 2"	1½" ~ 20"	½" ~ 6"	1" ~ 20"
Class2500	½" ~ 2"	1½" ~ 12"	½" ~ 5"	1" ~ 12"

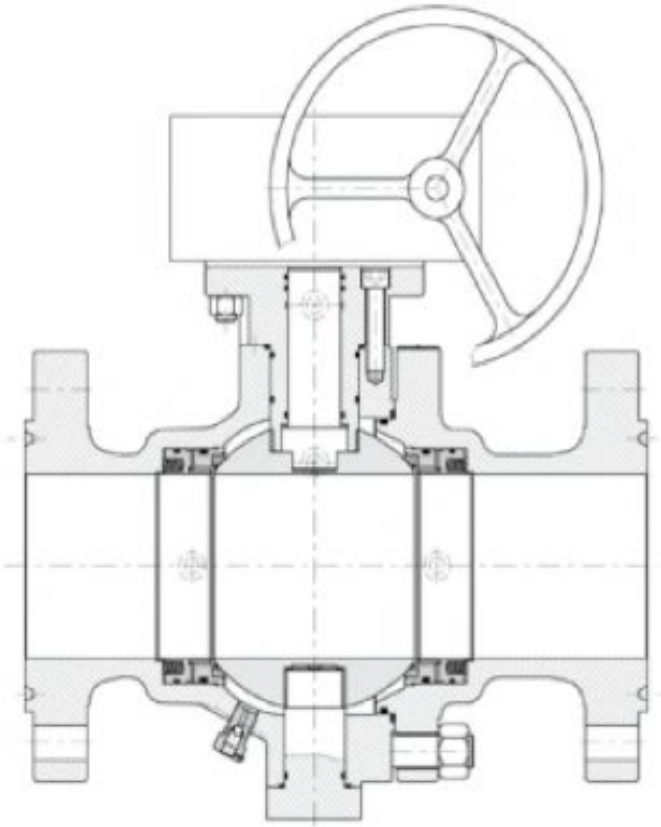
Metal Seat

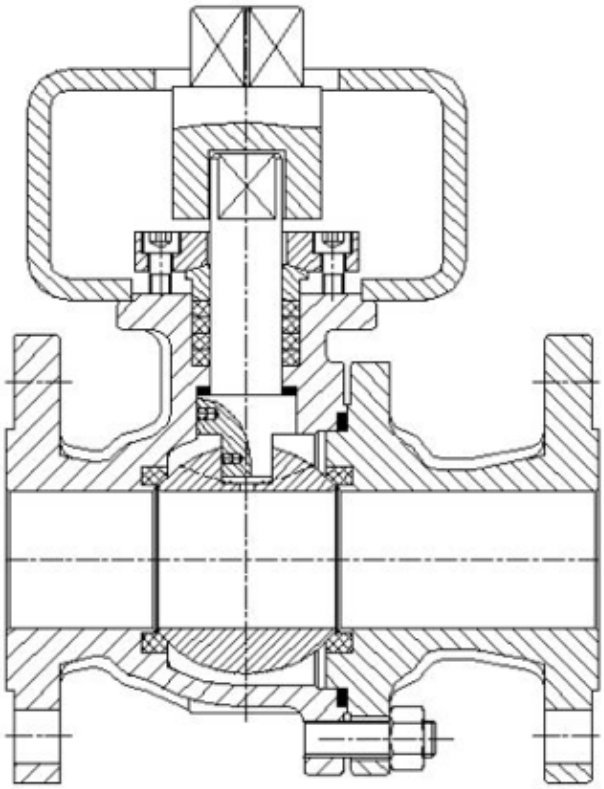
Pressure	Valve Structure		Body Type	
	Floating Ball	Trunnion mounted	Two-piece	Three-piece
Class150	½"~ 4"	2" ~ 36"	½" ~ 12"	2" ~ 48"
Class300	½" ~ 4"	2" ~ 36"	½" ~ 10"	2" ~ 48"
Class600	½" ~ 4"	2" ~ 28"	½" ~ 8"	1"½ ~ 36"
Class900	½" ~ 4"	1"½ ~ 24"	½" ~ 8"	1" ~ 24"
Class1500	½" ~ 3"	1" ~ 20"	½" ~ 6"	1" ~ 20"
Class2500	½" ~ 2"	1" ~ 12"	½" ~ 5"	1" ~ 12"
Class4500	½" ~ 1"½	1" ~ 2"	½" ~ 2"	½" ~ 2"

Note : Cast body and forged body for selection. But to three-piece structure, Class 150~Class 900, the cast body is available when the size ≥12", and for Class900~Class1500, the available size would be ≥6".
The cast body can't be applied when the working pressure is greater than Class 1500.
- *The theoretical manual operation torque value would not exceed 200 N.M*
- *Connection type: flanged, butt-welded, socket-welded, other possibilities could be discussed with us.*
- *If need larger size, please contact us. We can provide customized products upon request.*

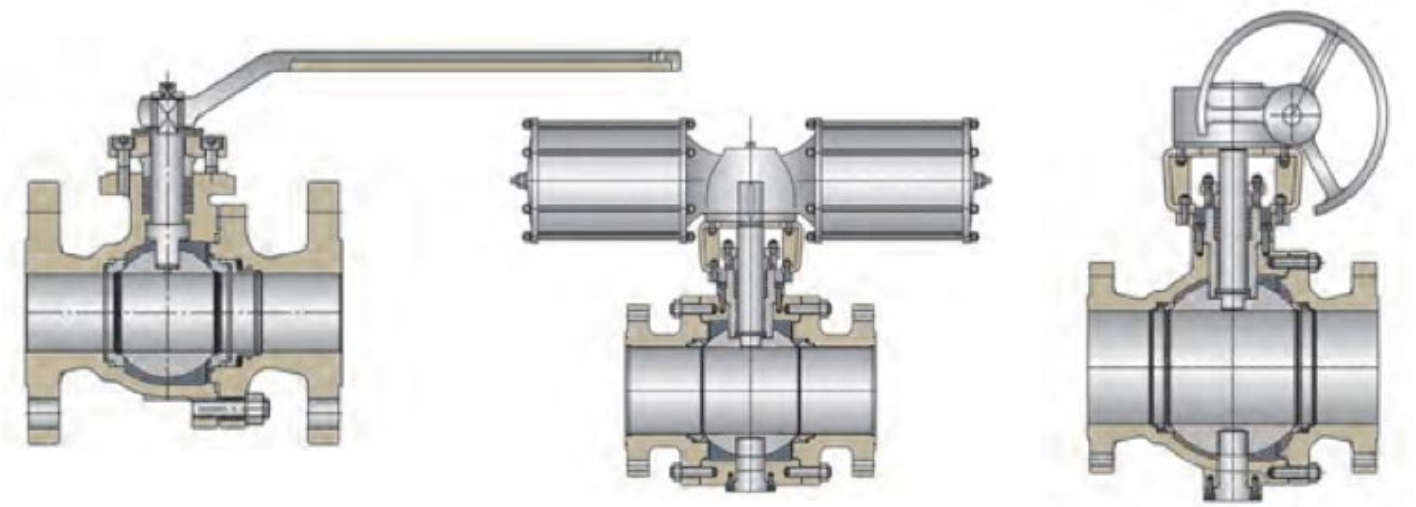
PRODUCT RANGE

Resilient Seat





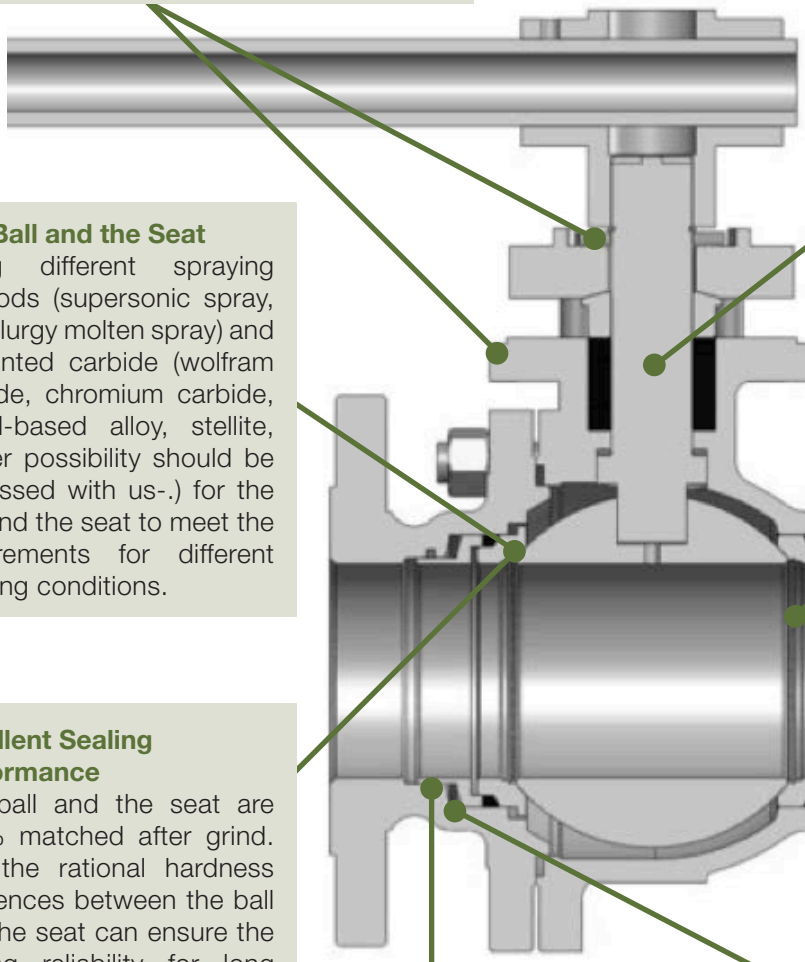
Metal Seat



Design Features of the Metal Seated Floating Ball Valve

Actuator Installation Platform
Using thicken locating plate and block to keep location, efficiently avoid the position to be inaccurate after a long time of service.

Blow-out Proof Stem
Using T-type stem bottom to lock the stem. Even when the inner cavity is under unusually high pressure and the packing gland fails at the same time, the stem wouldn't blow-out.



The Ball and the Seat
Using different spraying methods (supersonic spray, metallurgy molten spray) and cemented carbide (wolfram carbide, chromium carbide, nickel-based alloy, stellite, -Other possibility should be discussed with us-.) for the ball and the seat to meet the requirements for different working conditions.

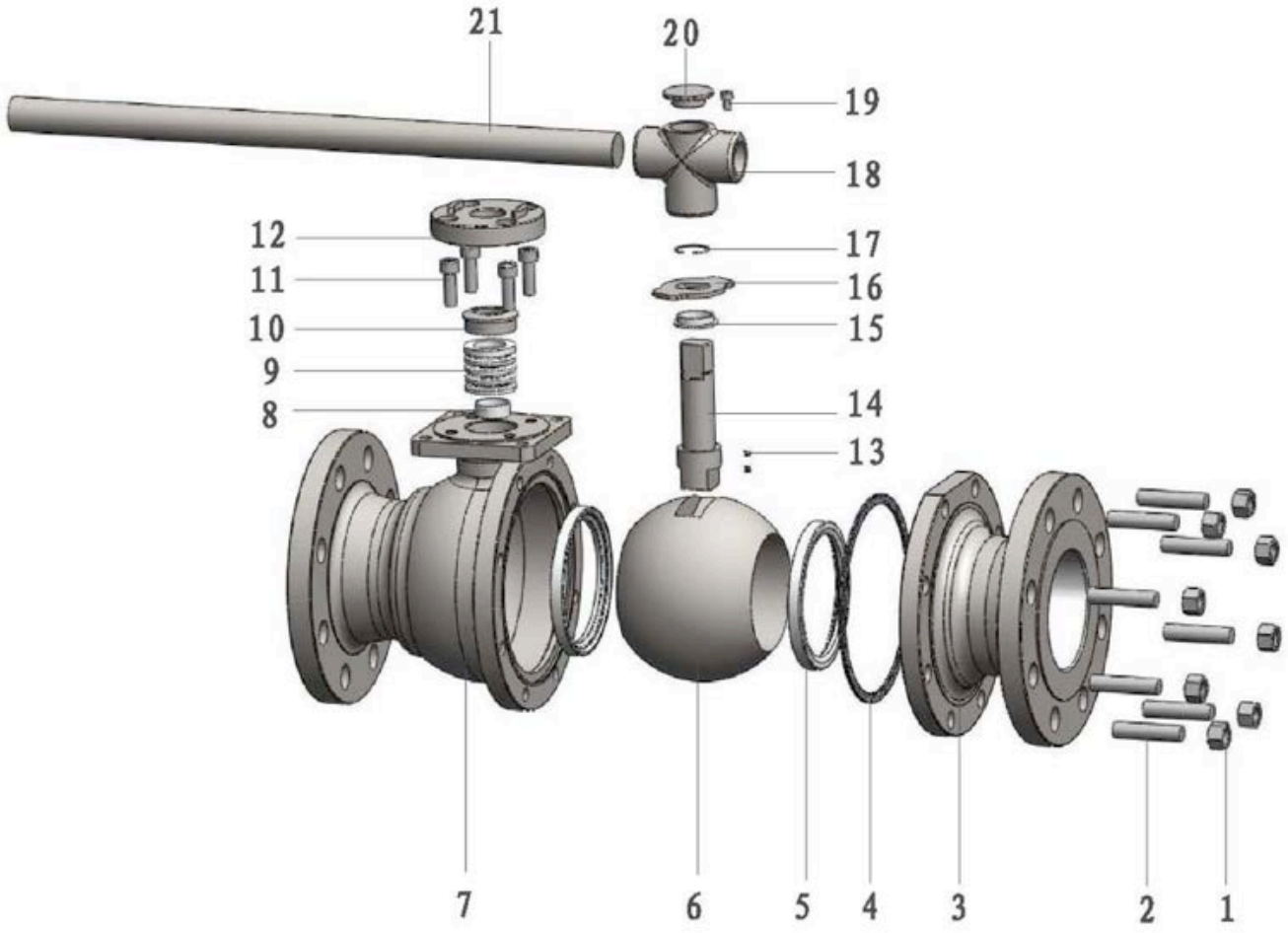
Anti-static Design
In the metal-seated ball valve, the body, seat, ball and other parts are made of metal and close-connected to form the channel of electrostatic leakage. No extra anti-static equipment is needed.

Excellent Sealing Performance
The ball and the seat are 100% matched after grind. And the rational hardness differences between the ball and the seat can ensure the sealing reliability for long time service.

Dust-proof Design
Using graphite ring to protect the spring cavity, the granular medium is unable to enter the spring cavity when passing through, and efficiently extends the service life of the spring.

Anti-locking When Bulge at High Temperature
Using spring loaded structure which can ensure the sealing reliability and also counteract the influence from temperature change. So the valve can work normally under high temperature or large temperature difference.

Resilient Seated Floating Ball Valves Components



NO.	Name	Materials		
		Carbon Series	Stainless Steel Series	
1	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
2	Stud Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
3	Bonnet	ASTM A216 WCB ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
4	Gasket	SS304+Flexible Graphite		SS316+Flexible graphite
5	Seat	Please Refer to the Table Below		
6	Ball	ASTM A182 F304		ASTM A182 F316
7	Body	ASTM A216 WCB ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
8	Neck Bush	PTFE		
9	Packing	PTFE/Flexible Graphite		
10	Packing Bushing	ASTM A182 F304		ASTM A182 F316
11	Screw	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
12	Packing Gland	ASTM A105	ASTM A182 F304	ASTM A182 F316
13	Spring	SS304		SS316
14	Stem	17-4PH		ASTM A182 F316
15	Upper Sealing Washer	SS304+Flexible Graphite		SS316+Flexible Graphite
16	Locating Plate	ASTM 1025	ASTM A182 F304	ASTM A182 F316
17	Elastic Collar	65Mn		
18	Lever Connector	ASTM A216 WCB		
19	Screw	ASTM A193 B7		
20	Cover	ASTM 1025		
21	Lever	ASTM 1025		

Note : The materials above are some common materials. Customers can choose special materials for different parts according to the working conditions. Please contact us for details.

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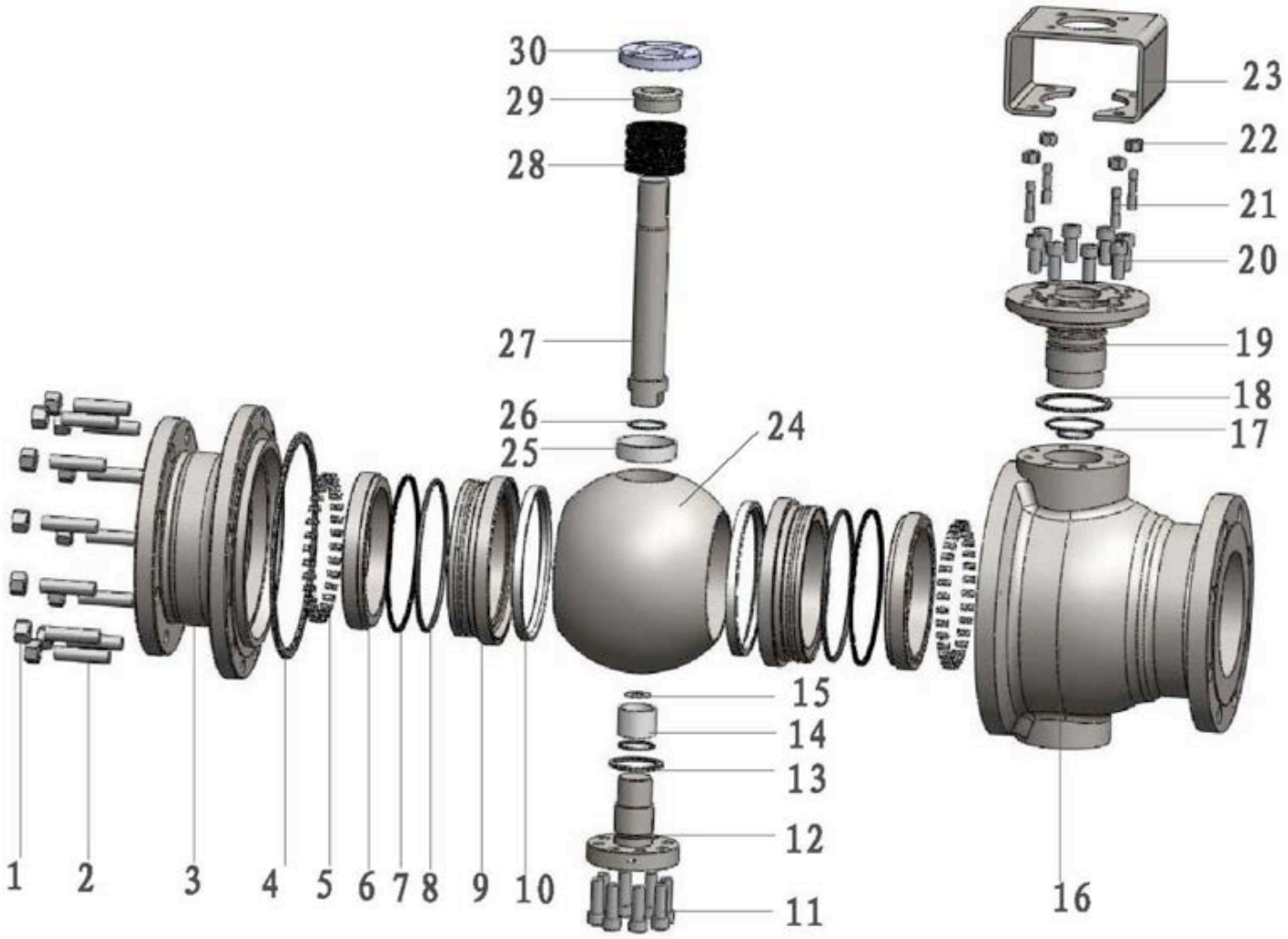
Resilient Seated Trunnion Mounted Ball Valve Components



No.	Parts	Materials		
		Carbon Series	Stainless Steel Series	
1	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
2	Stud Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
3	Bonnet	ASTM A216 WCB/ ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
4	Gasket	S S304+Flexible Graphite		SS316+Flexible Graphite
5	Spring	Inconel X750		
6	Seal Spring Compression Ring	ASTM A182 F304		ASTM A182 F316
7	Collar	Flexible Graphite		
8	O-ring	Viton		
9	Seat Gland	ASTM A182 F304		ASTM A182 F316
10	Seat	PTFE/RPTFE		
11	Screw	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
12	Lower Supporting Stem	ASTM A105	ASTM A182 F304	ASTM A182 F316
13	Gasket	SS304+Flexible Graphite		SS316+Flexible Graphite
14	Stem Bushing	SS304+PTFE		SS316+PTFE
15	Adjustable Pad	ASTM A182 F304		
16	Body	ASTM A216 WCB/ ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
17	O-ring	Viton		
18	Gasket	SS304+Flexible Graphite		SS316+Flexible Graphite
19	Gland	ASTM A105	ASTM A182 F304	ASTM A182 F316
20	Screw	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
21	Stud	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
22	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
23	Stand	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M
24	Ball	ASTM A182 F304		ASTM A182 F316
25	Stem Bushing	SS304+PTFE		SS316+PTFE
26	Upper Sealing Washer	SS304+Flexible Graphite		SS316+Flexible Graphite
27	Stem	17-4PH		ASTM A182 F316
28	Packing	Flexible Graphite		
29	Packing Bushing	ASTM A182 F304		ASTM A182 F316
30	Packing Gland	ASTM A105	ASTM A182 F304	ASTM A182 F316

Note : The materials above are some common materials. Customers can choose special materials for different parts according to the working conditions. Please contact us for details.

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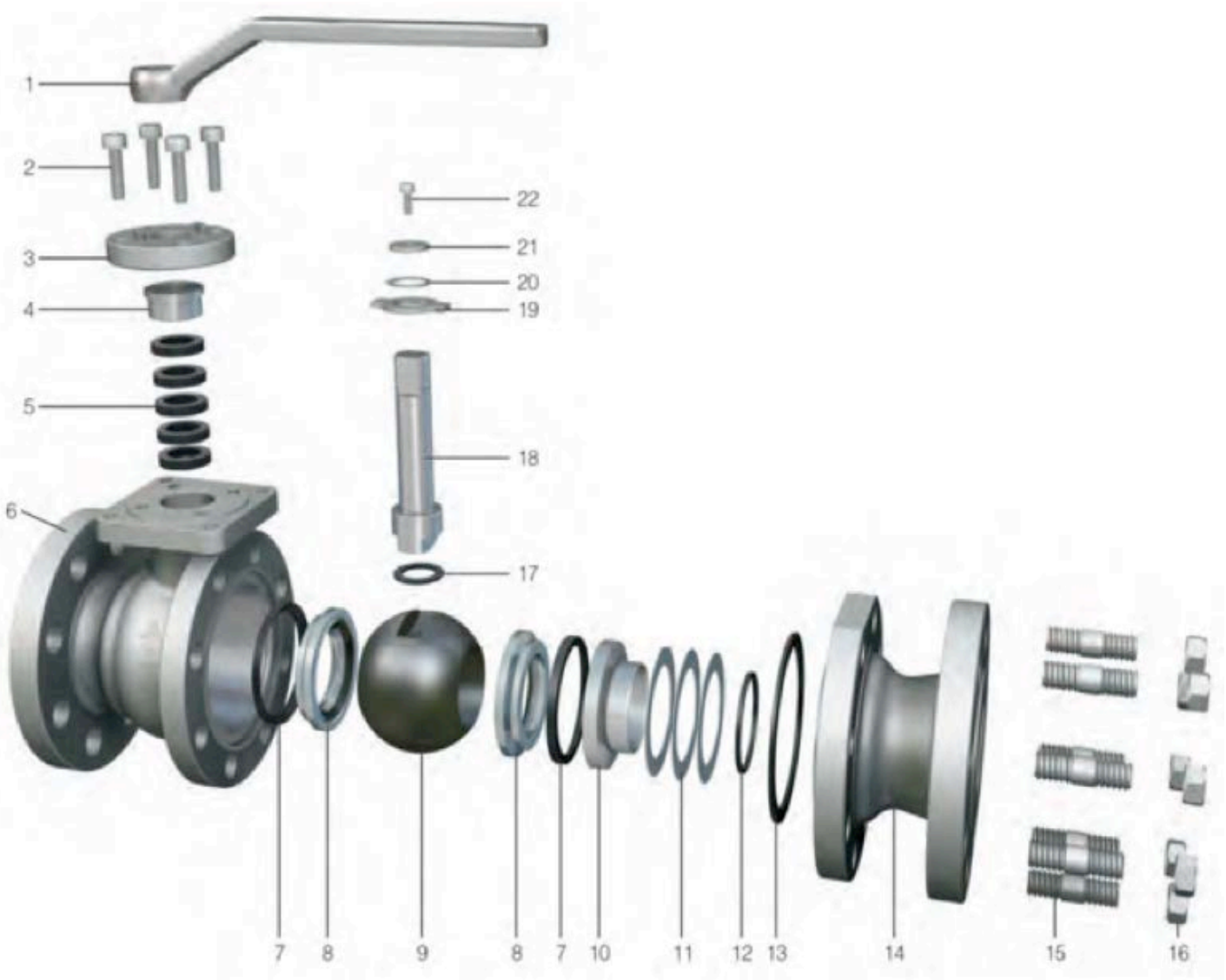
Metal Seated Floating Ball Valve Components



No.	Name	Materials		
		Carbon Steel	Stainless Steel	
1	Handle	ASTM A216 WCB	ASTM A351 CF8	
2	Screw	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
3	Packing Gland	ASTM A105	ASTM A182 F304	ASTM A182 F316
4	Packing Bushing	ASTM A182 F304		ASTM A182 F316
5	Packing	Flexible Graphite		
6	Body	ASTM A216 WCB/ ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
7	Sealing Ring	Flexible Graphite		
8	Seat	ASTM A182 F304+Cemented Carbide		ASTM A182 F316+Cemented Carbide
9	Ball	ASTM A182 F304+Cemented Carbide		ASTM A182 F316+Cemented Carbide
10	Seat Gland	ASTM A182 F304		ASTM A182 F316
11	Plate Spring	Inconel X750		
12	Check Ring	Flexible Graphite		
13	Gasket	SS304+Flexible Graphite		SS316+Flexible Graphite
14	Bonnet	ASTM A216 WCB/ ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
15	Stud Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
16	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
17	Upper Sealing Washer	SS304+Flexible Graphite		SS316+Flexible Graphite
18	Stem	17-4PH		ASTM A182 F316
19	Locating Plate	ASTM 1025	ASTM A182 F304	ASTM A182 F316
20	Elastic Collar	65Mn		
21	Gasket	ASTM 1025		
22	Screw	ASTM A193 B7		

Parts		Optional materials
Sealing Surface	Cemented Carbide	Ultratek, Chromium Carbide, Wolfram Carbide, Stellite

Note : The materials above are some common materials. Customers can choose special materials for different parts according to the working conditions. Please contact us for details.

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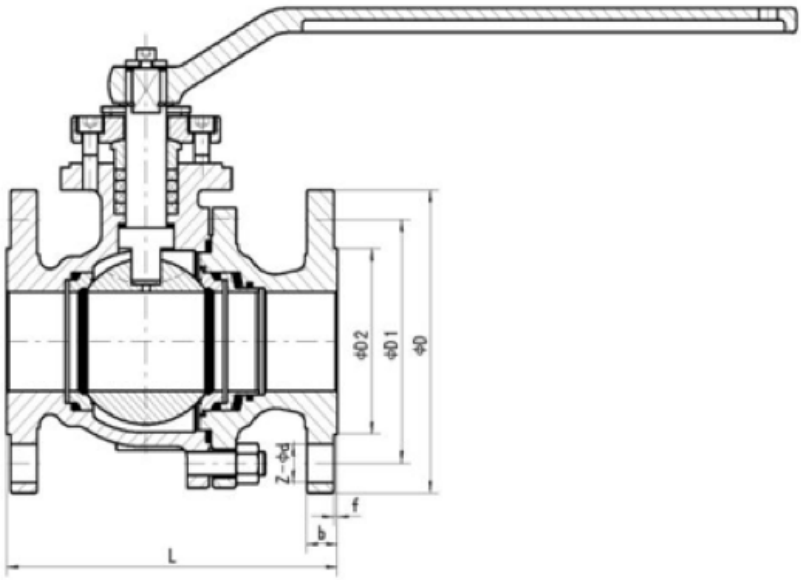
Metal Seated Trunnion Mounted Ball Valve Components

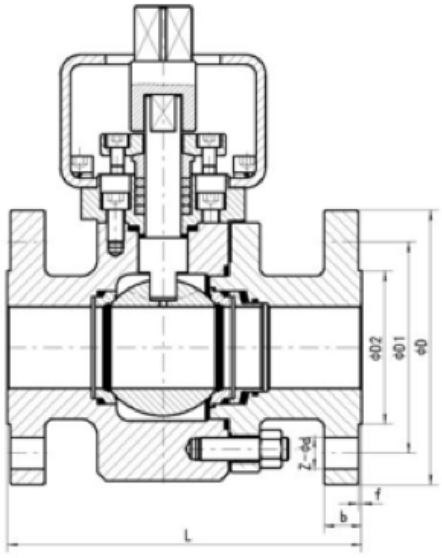
DIMENSIONS

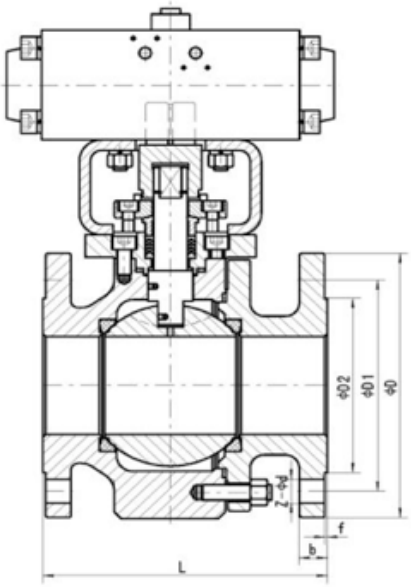
No.	Name	Materials		
		Carbon Steel	Stainless Steel	
1	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
2	Stud Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
3	Bonnet	ASTM A216 WCB/ ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
4	Gasket	SS304+Flexible Graphite		SS316+Flexible Graphite
5	Graphite Annulus	Flexible Graphite		
6	Check Ring	Flexible Graphite		
7	Spring	Inconel X750		
8	Seat Gland	ASTM A182 F304		ASTM A182 F316
9	Sealing Ring	Flexible Graphite		
10	Seat	ASTM A182 F304 + Cemented Carbide		ASTM A182 F316 + Cemented Carbide
11	Seat Check Ring	Flexible Graphite		
12	Anchor Frame	35		
13	Lifting Ring	35		
14	Ball	ASTM A182 F304 + Cemented Carbide		ASTM A182 F316 + Cemented Carbide
15	Upper Sealing Washer	SS304+Flexible Graphite		SS316+Flexible Graphite
16	Stem	17-4PH		ASTM A182 F316
17	Screw	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
18	Lower Supporting Stem	ASTM A105 + Ultratek	ASTM A182 F304 + Ultratek	ASTM A182 F316 + Ultratek
19	Gasket	SS304+Flexible Graphite		SS316+Flexible Graphite
20	Adjustable Pad	ASTM A182 F304		
21	Body	ASTM A216 WCB/ ASTM A105	ASTM A351 CF8/ ASTM A182 F304	ASTM A351 CF8M/ ASTM A182 F316
22	Sealing Washer	SS304+Flexible Graphite		SS316+Flexible Graphite
23	Gland	ASTM A105 + Ultratek	ASTM A182 F304 + Ultratek	ASTM A182 F316 + Ultratek
24	Screw	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
25	Stud	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
26	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
27	Packing	Flexible Graphite		
28	Packing Bushing	ASTM A182 F304		ASTM A182 F316
29	Packing Gland	ASTM A105	ASTM A182 F304	ASTM A182 F316
30	Stud Bolt	ASTM A193 B7	ASTM A193 B8	ASTM A193 B8M
31	Nut	ASTM A194 2H	ASTM A194 8	ASTM A194 8M
32	Stand	ASTM A216 WCB	ASTM A351 CF8	ASTM A351 CF8M

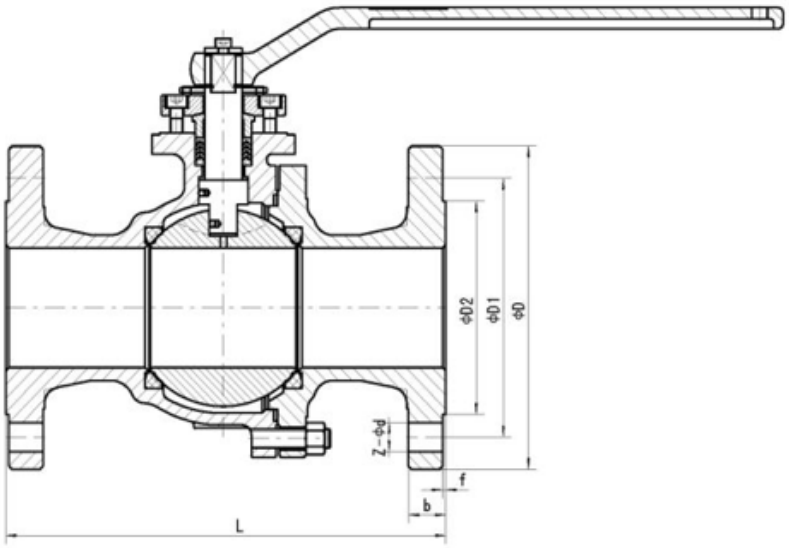
Parts		Optional Materials
Sealing Surface	Cemented Carbide	Ultratek, Chromium Carbide, Wolfram Carbide, Stellite

Metal and Resilient Seated with Floating Ball, Full Bore









Metal and Resilient Seated with Floating Ball, Full Bore

Class150 - Class300

Pressure	Caliber		Dimensions (mm)							
	DN	inch	L		D	D1	D2	Z-d	b	f
			RF	RJ						
Class150 PN20	15	½	108	119	90	60.5	35	4-15	11.5	2
	20	¾	117	130	100	70	43	4-15	11.5	2
	25	1	127	140	110	79.5	51	4-15	11.5	2
	32	1 ¼	140	153	115	89	64	4-15	13	2
	40	1 ½	165	178	125	98.5	73	4-15	14.5	2
	50	2	178	191	150	120.5	92	4-19	16	2
	65	2 ½	190	203	180	139.5	105	4-19	17.5	2
	80	3	203	216	190	152.5	127	4-19	19.5	2
	100	4	229	242	230	190.5	157	8-19	24	2
	125	5	356	369	255	216	186	8-22	24	2
	150	6	394	407	280	241.5	216	8-22	25.5	2
	200*	8	457	470	345	298.5	270	8-22	29	2
Class300 PN50	15	½	140	151	95	66.5	35	4-15	14.5	2
	20	¾	152	165	115	82.5	43	4-19	16	2
	25	1	165	178	125	89	51	4-19	17.5	2
	32	1 ¼	178	191	135	98.5	64	4-19	19.5	2
	40	1 ½	190	203	155	114.5	73	4-22	21	2
	50	2	216	232	165	127	92	8-19	22.5	2
	65	2 ½	241	257	190	149	105	8-22	25.5	2
	80	3	283	299	210	168.5	127	8-22	29	2
	100	4	305	321	255	200	157	8-22	32	2
	125*	5	381	397	280	235	186	8-22	35	2
	150*	6	403	419	320	269.9	216	12-22	37	2
	200*	8	502	518	380	330	270	12-25	41.5	2

*Size available with resilient seats only

DIMENSIONS

Metal and Resilient Seated with Floating Ball, Full Bore

Class600 - Class 900 - Class 1500 - Class2500

Pressure	Caliber		Dimensions (mm)							
	DN	inch	L		D	D1	D2	Z-d	b	f
			RF	RJ						
Class600 PN100	15	½	165	164	95	66.5	35	4-15	14.5	6.5
	20	¾	190	190	115	82.5	43	4-19	16	6.5
	25	1	216	216	125	89	51	4-19	17.5	6.5
	32	1 ¼	229	229	135	98.5	64	4-19	21	6.5
	40	1 ½	241	241	155	114.5	73	4-22	22.5	6.5
	50	2	292	295	165	127	92	8-19	25.5	6.5
	65	2 ½	330	333	190	149	105	8-22	29	6.5
	80	3	356	359	210	168	127	8-22	32	6.5
	100	4	432	435	275	216	157	8-25	38.5	6.5
Class900 PN160	15	½	216	216	120	82.5	35	4-23	22.5	6.5
	20	¾	229	229	130	88.9	43	4-23	25.5	6.5
	25	1	254	254	150	101.6	51	4-26	29	6.5
	32	1 ¼	279	279	160	111.1	64	4-26	29	6.5
	40	1 ½	305	305	180	123.8	73	4-29	32	6.5
	50	2	368	371	215	165.1	92	8-26	38.5	6.5
	80	3	381	384	240	190.5	127	8-26	38.5	6.5
Class1500 PN250	15	½	216	216	120	82.5	35	4-23	22.5	6.5
	20	¾	229	229	130	88.9	43	4-23	25.5	6.5
	25	1	254	254	150	101.6	51	4-26	29	6.5
	32	1 ¼	279	279	160	111.1	64	4-26	29	6.5
	40	1 ½	305	305	180	123.8	73	4-29	32	6.5
	50	2	368	371	215	165.1	92	8-26	38.5	6.5
	80*	3	470	473	265	203.5	127	8-32	48	6.5
Class2500 PN400	15	½	264	264	135	88.9	35	4-23	30	6.5
	20	¾	273	273	140	95.3	43	4-23	32	6.5
	25	1	308	308	160	108	51	4-26	35	6.5
	32	1 ¼	349	352	185	130	64	4-29	38	6.5
	40	1 ½	384	387	205	146	73	4-32	44.5	6.5
	50	2	451	454	235	171.4	92	8-29	51	6.5
	80*	3	578	584	305	228.6	127	8-35	67	6.5

*Size available with resilient seats only

Metal and Resilient Seated with Floating Ball, Full Bore

PN16 - PN25 - PN40

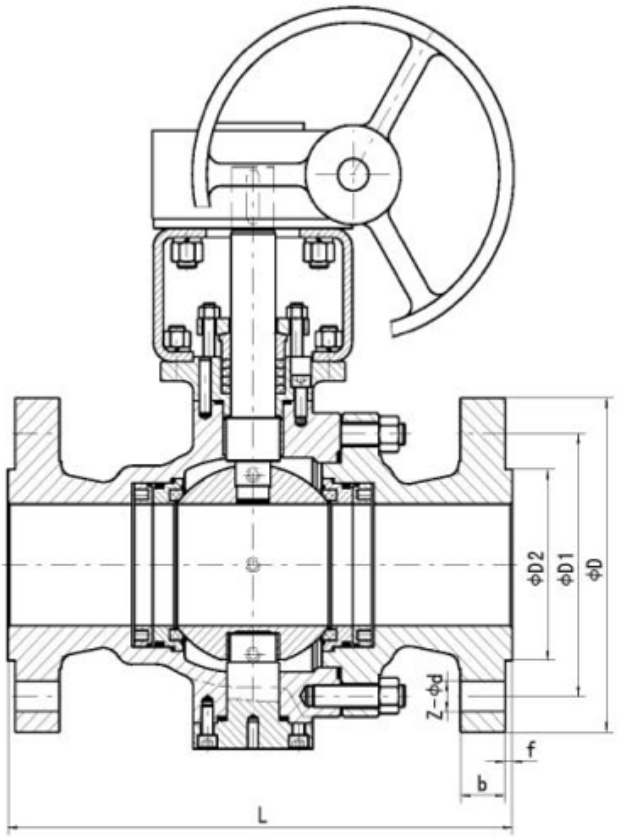
Pressure	Caliber (DN)	Dimensions (mm)						
		L	D	D1	D2	Z-d	b	f
PN16	15	130	95	65	45	4-14	14	2
	20	140	105	75	55	4-14	14	2
	25	150	115	85	65	4-14	14	2
	32	165	135	100	78	4-18	16	2
	40	180	145	110	85	4-18	16	3
	50	200	160	125	100	4-18	16	3
	65	220	180	145	120	4-18	18	3
	80	250	195	160	135	8-18	20	3
	100	280	215	180	155	8-18	20	3
	125	320	245	210	185	8-18	22	3
	150	360	280	240	210	8-23	24	3
PN25	15	130	95	65	45	4-14	16	2
	20	140	105	75	55	4-14	16	2
	25	150	115	85	65	4-14	16	2
	32	165	135	100	78	4-18	18	2
	40	180	145	110	85	4-18	18	3
	50	200	160	125	100	4-18	20	3
	65	220	180	145	120	4-18	22	3
	80	250	195	160	135	8-18	22	3
	100	320	230	190	160	8-23	24	3
	125	400	270	220	188	8-25	28	3
	150	400	300	250	218	8-25	30	3
PN40	15	130	95	65	45	4-14	16	2
	20	140	105	75	55	4-14	16	2
	25	150	115	85	65	4-14	16	2
	32	180	135	100	78	4-18	18	2
	40	200	145	110	85	4-18	18	3
	50	220	160	125	100	4-18	20	3
	65	250	180	145	120	8-18	22	3
	80	280	195	160	135	8-18	22	3
	100	320	230	190	160	8-23	24	3
	125	400	270	220	188	8-25	28	3
	150	400	300	250	218	8-25	30	3

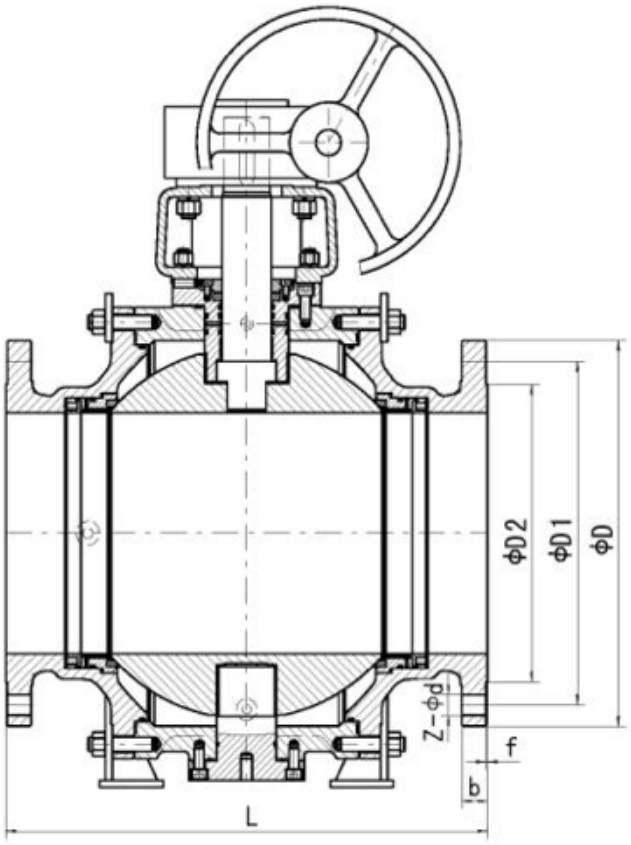
Metal and Resilient Seated with Floating Ball, Full Bore

PN63 - PN100

Pressure	Caliber (DN)	Dimensions (mm)						
		L	D	D1	D2	Z-d	b	f
PN63	15	140	105	75	55	4-14	18	2
	20	152	125	90	68	4-18	20	2
	25	165	135	100	78	4-18	22	2
	32	178	150	110	82	4-23	24	2
	40	190	165	125	95	4-23	24	3
	50	216	175	135	105	4-23	26	3
	65	241	200	160	130	8-23	28	3
	80	283	210	170	140	8-23	30	3
	100	305	250	200	168	8-25	32	3
PN100	15	165	105	75	55	4-14	20	2
	20	190	125	90	68	4-18	22	2
	25	216	135	100	78	4-18	24	2
	32	229	150	110	82	4-23	24	2
	40	241	165	125	95	4-23	26	3
	50	292	195	145	112	4-25	28	3
	65	330	220	170	138	8-25	32	3
	80	356	230	180	148	8-25	34	3
	100	432	265	210	172	8-30	38	3

Metal and Resilient Seated Trunnion Mounted, Full Bore





Metal and Resilient Seated Trunnion Mounted, Full Bore

Class150 - Class300

Pressure	Caliber		Dimensions (mm)							
	DN	inch	L		D	D1	D2	Z-d	b	f
			RF	BW						
Class150 PN20	100	4	229	305	230	190.5	157	8-19	24	2
	125	5	356	381	255	216.0	186	8-22	24	2
	150	6	394	457	280	241.5	216	8-22	25.5	2
	200	8	457	521	345	298.5	270	8-22	29	2
	250	10	533	559	405	362.0	324	12-25	31	2
	300	12	610	635	485	432.0	381	12-25	32	2
	350	14	686	762	535	476.0	413	12-29	35	2
	400	16	762	838	595	540.0	470	16-29	37	2
	450	18	864	914	635	578.0	533	16-32	40	2
	500	20	914	991	700	635.0	584	20-32	43	2
	600	24	1067	1143	815	749.5	692	20-35	48	2
	650	26	1143	1245	786	744.5	711	36-22	40	2
	700	28	1245	1346	837	795.5	762	40-22	43	2
	750	30	1295	1397	887	846.0	813	44-22	43	2
	800	32	1372	1524	941	900.0	864	48-22	44	2
	900	36	1524	1727	1057	1009.5	972	44-26	51	2
Class300 PN50	80	3	283	283	210	168.5	127	8-22	29	2
	100	4	305	305	255	200.0	157	8-22	32	2
	125	5	381	381	280	235.0	186	8-22	35	2
	150	6	403	457	320	270.0	216	12-22	37	2
	200	8	502	521	380	330.0	270	12-25	41.5	2
	250	10	568	559	445	387.5	324	16-29	48	2
	300	12	648	635	520	451.0	381	16-32	51	2
	350	14	762	762	585	514.5	413	20-32	54	2
	400	16	838	838	650	571.5	470	20-35	58	2
	450	18	914	914	710	628.5	533	24-35	61	2
	500	20	991	991	775	686.0	584	24-35	64	2
	600	24	1143	1143	915	813.0	692	24-41	70	2
	650	26	1245	1245	867	803.5	737	32-35.5	87	2
	700	28	1346	1346	921	857.0	787	36-35.5	87	2
	750	30	1397	1397	991	921.0	845	36-39	92	2
	800	32	1524	1524	1054	978.0	902	32-42	102	2
	900	36	1727	1727	1172	1089.0	1010	32-45	102	2

Metal and Resilient Seated Trunnion Mounted, Full Bore

Class600 - Class900

Pressure	Caliber		Dimensions (mm)									
	DN	inch	L			D	D1	D2	Z-d	b	f
			RF	RJ	BW						
Class600 PN100	50	2	292	295	292	165	127	92	8-19	26	6.5
	65	2 ½	330	333	330	190	149	105	8-22	29	6.5
	80	3	356	359	356	210	168	127	8-22	32	6.5
	100	4	432	435	432	275	216	157	8-25	38	6.5
	125	5	508	511	508	330	266.5	186	8-29	45	6.5
	150	6	559	562	559	355	292	216	12-29	48	6.5
	200	8	660	664	660	420	349	270	12-32	56	6.5
	250	10	787	791	787	510	432	324	16-35	64	6.5
	300	12	838	841	838	560	489	381	20-35	67	6.5
	350	14	889	892	889	605	527	413	20-38	70	6.5
	400	16	991	994	991	685	603	470	20-41	77	6.5
	450	18	1092	1095	1092	745	654	533	20-44	83	6.5
	500	20	1194	1200	1194	815	724	584	24-44	89	6.5
	600	24	1397	1407	1397	940	838	692	24-52	102	6.5
	700	28	1549	1562	1549	952	863.5	784	28-48	116	6.5
Class900 PN160	50	2	368	371	368	215	165.1	92	8-26	38.5	6.5
	65	2 ½	419	422	419	245	190.5	105	8-29	41.5	6.5
	80	3	381	384	381	240	190.5	127	8-26	38.5	6.5
	100	4	457	460	457	290	234.9	157	8-32	44.5	6.5
	125	5	559	562	559	350	279.4	186	8-35	51	6.5
	150	6	610	613	610	380	317.5	216	12-32	56	6.5
	200	8	737	740	737	470	393.7	270	12-39	63.5	6.5
	250	10	838	841	838	545	469.9	324	16-39	70	6.5
	300	12	965	968	965	610	533.4	381	20-39	79.5	6.5
	350	14	1029	1038	1029	640	558.8	413	20-42	86	6.5
	400	16	1130	1140	1130	705	615.9	470	20-45	89	6.5
	450	18	1219	1232	1219	785	686	533.5	20-51	102	6.5
	500	20	1321	1334	1321	855	749.5	584.5	20-55	108	6.5
	600	24	1549	1568	1549	1040	901.5	692.5	20-68	140	6.5

Metal and Resilient Seated Trunnion Mounted, Full Bore

Class1500 - Class2500

Pressure	Caliber		Dimensions (mm)								
	DN	inch	L			D	D1	D2	Z-d	b	f
			RF	RJ	BW						
Class1500 PN250	25	1	254	254	254	150	101.6	51	4-26	28.5	6.5
	40	1 ½	305	305	305	180	123.8	73	4-29	32	6.5
	50	2	368	371	368	215	165.1	92	8-26	38.5	6.5
	65	2 ½	419	422	419	245	190.5	105	8-29	41.5	6.5
	80	3	470	473	470	265	203.2	127	8-32	48	6.5
	100	4	546	549	546	310	241.3	157	8-35	54	6.5
	125	5	673	676	673	375	292.1	186	8-42	73.5	6.5
	150	6	705	711	705	394	317.5	216	12-39	83	6.5
	200	8	832	841	832	483	393.7	270	12-45	92	6.5
	250	10	991	1000	991	585	482.6	324	12-51	108	6.5
	300	12	1130	1146	1130	675	571.5	381	16-54	124	6.5
	350	14	1257	1276	1257	750	635	413	16-60	133.5	6.5
	400	16	1384	1407	1384	825	705	470	16-68	146.5	6.5
	450	18	1537	1559	1537	915	774.5	533.5	16-74	162	6.5
	500	20	1664	1686	1664	985	832	584.5	16-80	178	6.5
Class2500 PN400	25	1	308	308	308	160	108	51	4-26	35	6.5
	40	1 ½	384	387	384	205	146	73	4-32	44.5	6.5
	50	2	451	454	451	235	171.4	92	8-29	51	6.5
	65	2 ½	508	514	508	265	196.8	105	8-32	57.5	6.5
	80	3	578	584	578	305	228.6	127	8-35	67	6.5
	100	4	673	683	673	355	273	157	8-42	76.5	6.5
	125	5	794	807	794	420	323.8	186	8-48	92.5	6.5
	150	6	914	927	914	485	368.3	216	8-54	108	6.5
	200	8	1022	1038	1022	550	438.1	270	12-54	127	6.5
	250	10	1270	1292	1270	675	539.7	324	12-67	165.5	6.5
	300	12	1422	1445	1422	760	619	381	12-74	184.5	6.5

Metal and Resilient Seated Trunnion Mounted, Full Bore

PN16 - PN25 - PN40

Pressure	Dimensions (mm)								
	Caliber	L		D	D1	D2	Z-d	b	f
	DN	RF	BW						
PN 16	100	229	305	220	180	156	8-18	22	2
	150	394	457	280	240	210	8-23	24	3
	200	457	521	335	295	265	12-23	26	3
	250	533	559	405	355	320	12-25	30	3
	300	610	635	460	410	375	12-25	30	4
	350	686	762	520	470	435	16-25	34	4
	400	762	838	580	525	485	16-30	36	4
	450	864	914	640	585	545	20-30	40	4
	500	914	991	705	650	608	20-34	44	4
	600	1067	1143	840	770	718	20-41	48	5
	700	1245	1346	910	840	788	24-41	50	5
	800	1372	1524	1020	950	898	24-41	52	5
	900	1524	1727	1120	1050	998	28-41	54	5
PN 25	100	229	305	235	190	156	8-22	24	2
	150	394	457	300	250	218	8-25	30	3
	200	457	521	360	310	278	12-25	34	3
	250	533	559	425	370	332	12-30	36	3
	300	610	635	485	430	390	16-30	40	4
	350	686	762	550	490	448	16-34	44	4
	400	762	838	610	550	505	16-34	48	4
	450	864	914	660	600	555	20-34	50	4
	500	914	991	730	660	610	20-41	52	4
	600	1067	1143	840	770	718	20-41	56	5
	700	1245	1346	955	875	815	24-48	60	5
	800	1372	1524	1070	990	930	24-48	64	5
	900	1524	1727	1180	1090	1025	28-54	66	5
PN 40	100	305	305	235	190	156	8-22	24	2
	150	403	457	300	250	218	8-25	30	3
	200	502	521	375	320	282	12-30	38	3
	250	568	559	445	385	345	12-34	42	3
	300	648	635	510	450	408	16-34	46	4
	350	762	762	570	510	465	16-34	52	4
	400	838	838	655	585	535	16-41	58	4
	450	914	914	680	610	560	20-41	60	4
	500	991	991	755	670	612	20-48	62	4
	600	1143	1143	890	795	730	20-54	62	5

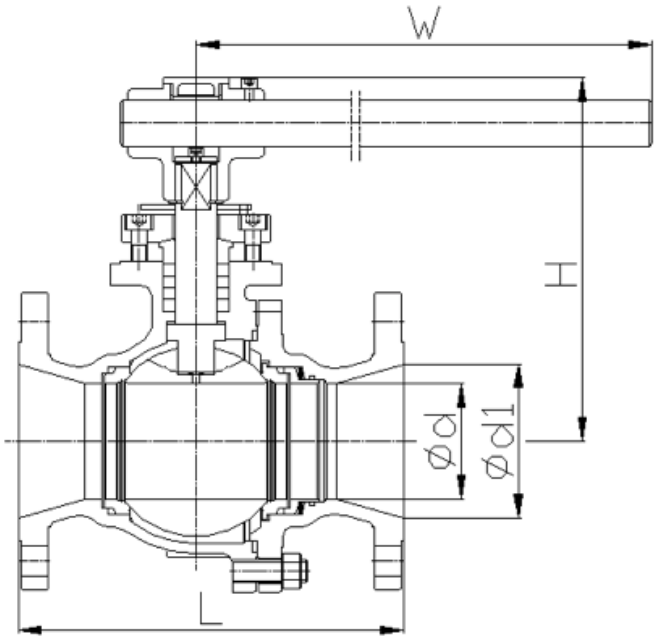
Metal and Resilient Seated Trunnion Mounted, Full Bore

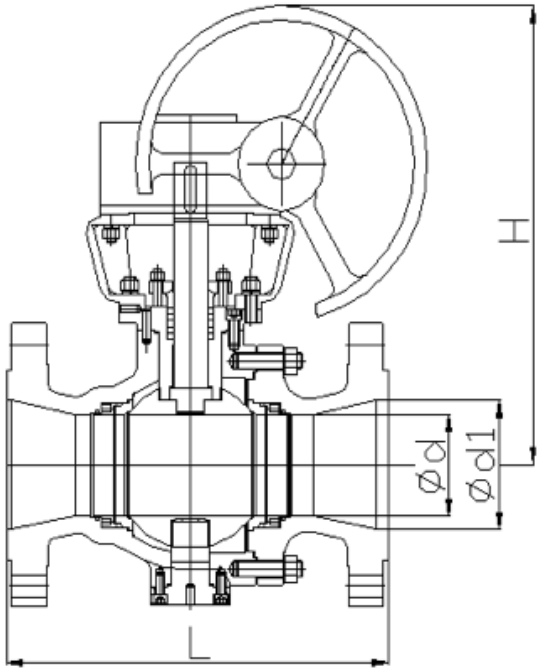
PN63 - PN100 - PN160

Pressure	Dimensions (mm)									
	Caliber	L		D	D1	D2	Z-d	b	f
	DN	RF	BW						
PN 63	100	305	305	250	200	168	8-25	32	3
	125	381	381	295	240	202	8-30	36	3
	150	403	457	340	280	240	8-34	38	3
	200	502	521	405	345	300	12-34	44	3
	250	568	559	470	400	352	12-41	48	3
	300	648	635	530	460	412	16-41	54	4
	350	762	762	595	525	475	16-41	60	4
	400	838	838	670	585	525	16-48	66	4
PN 100	50	292	292	195	145	112	4-25	28	3
	65	330	330	220	170	138	8-25	32	3
	80	356	356	230	180	148	8-25	34	3
	100	432	432	265	210	172	8-30	38	3
	125	508	508	310	250	210	8-34	42	3
	150	559	559	350	290	250	12-34	46	3
	200	660	660	430	360	312	12-41	54	3
	250	787	787	500	430	382	12-41	60	3
	300	838	838	585	500	442	16-48	70	4
	350	889	889	655	560	498	16-54	76	4
	400	991	991	715	620	558	16-54	80	4
PN 160	50	368	368	215	165	132	8-25	36	3
	65	419	419	245	190	152	8-30	44	3
	80	381	381	260	205	168	8-30	46	3
	100	457	457	300	240	200	8-34	48	3
	125	559	559	355	285	238	8-41	60	3
	150	610	610	390	318	270	12-41	66	3
	200	737	737	480	400	345	12-48	78	3
	250	838	838	580	485	425	12-54	88	3
	300	965	965	665	570	510	16-54	110	4

Metal and Resilient Seated Ball Valves, Reduced Bore

Reduced bore ball valves also have the floating ball type and trunnion mounted type, with the same characteristics that the full bore type.





Reduced Bore Ball Floating Ball Valve Dimensions (mm)

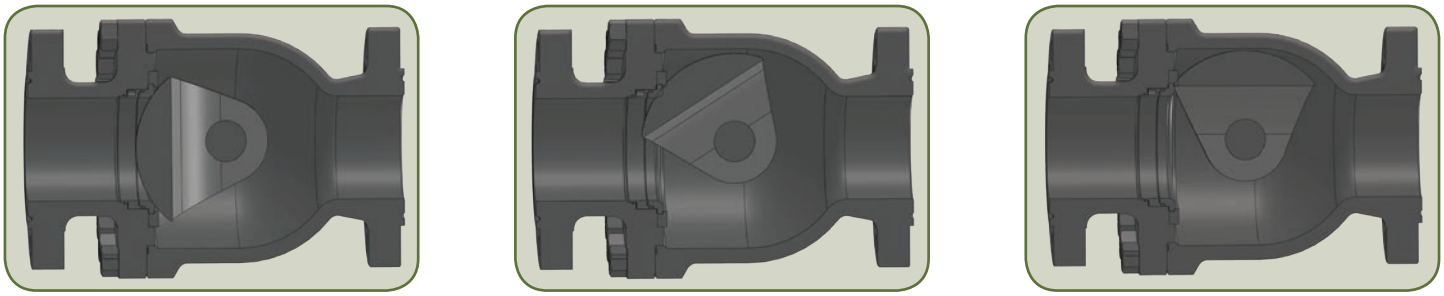
Caliber (inch)	Class150					Class300					Class600				
	L	d	d1	H	W	L	d	d1	H	W	L	d	d1	H	W
½	108	10	14	80	140	140	10	14	80	140	165	10	14	80	140
¾	117	14	19	85	140	152	14	19	85	140	190	14	19	85	140
1	127	20	25	90	140	165	20	25	90	140	216	20	25	90	140
1¼	140	25	32	99	150	178	25	32	99	150	229	25	32	114	150
1½	165	32	38	105	180	190	32	38	105	180	241	32	38	120	200
2	178	38	51	126	200	216	38	51	126	200	292	38	51	125	250
2½	190	51	64	140	250	241	51	64	140	250	330	51	64	156	300
3	203	64	76	165	300	283	64	76	165	300	356	64	76	172	350
4	229	76	102	178	350	305	76	102	178	350	432	76	102	220	500
5	356	102	127	230	500	381	102	127	230	500	508	102	127	250	650
6	394	127	152	280	800	403	127	152	280	800	-	-	-	-	-
8	457	152	203	310	800	502	152	203	310	800	-	-	-	-	-
10	533	203	254	350	1000	568	203	254	350	1000	-	-	-	-	-

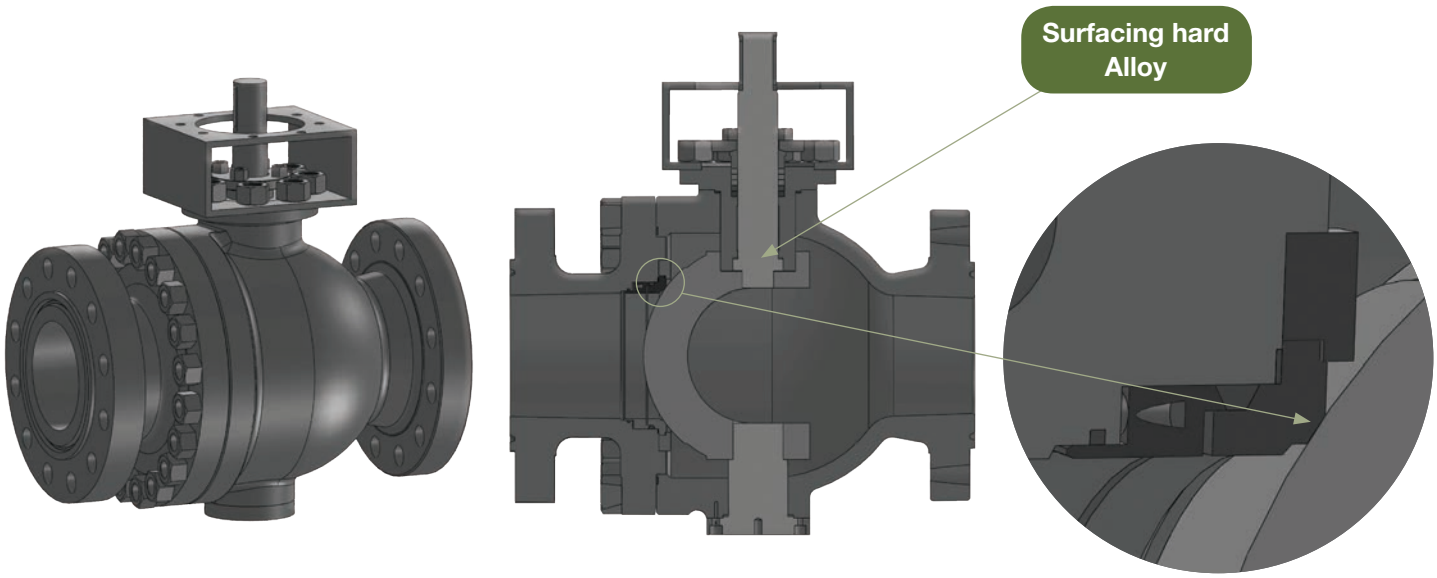
Reduced Bore Ball Trunnion Mounted Ball Valve Dimensions (mm)

Caliber (inch)	Class150				Class300				Class600				
	L	d	d1	H	L	d	d1	H	L		d	d1	H
									RF	RJ			
5	356	102	127	330	381	102	127	340	508	511	102	127	358
6	394	102	152	330	403	102	152	340	559	562	102	152	358
8	457	152	203	392	502	152	203	402	660	664	152	203	445
10	533	203	254	492	568	203	254	498	787	791	203	254	498
12	610	254	305	548	648	254	305	655	838	841	254	305	653
14	686	305	337	688	762	305	337	658	889	892	305	337	665
16	762	305	387	688	838	305	387	658	991	994	305	387	665
18	864	337	438	722	914	337	438	686	1092	1095	337	438	738
20	914	387	489	750	991	387	489	880	1194	1200	387	489	920
24	1067	489	591	952	1143	489	591	1110	1397	1407	489	591	1200
26	1143	538	633	1050	1245	538	633	1250	-	-	-	-	-
28	1245	591	684	1154	1346	591	684	1400	-	-	-	-	-
30	1295	633	735	1300	1397	633	735	1500	-	-	-	-	-
32	1372	684	779	1550	1524	684	779	1600	-	-	-	-	-
36	1524	779	874	1740	1727	779	874	1800	-	-	-	-	-

Caliber (inch)	Class900					Class1500					Class2500				
	L		d	d1	H	L		d	d1	H	L		d	d1	H
	RF	RJ				RF	RJ				RF	RJ			
2½	419	422	50	64	250	419	422	50	64	320	508	514	42	52	320
3	381	384	64	76	300	470	473	64	76	340	578	584	52	62	350
4	457	460	76	102	345	546	549	76	102	385	673	683	62	87	400
5	559	562	102	127	415	673	676	102	127	415	794	807	87	100	425
6	610	613	102	152	415	705	711	102	144	480	914	927	87	131	500
8	737	740	152	203	477	832	841	144	192	580	1022	1038	131	179	590
10	838	841	203	254	520	991	1000	192	239	584	1270	1292	179	223	610
12	965	968	254	305	628	1130	1146	239	287	650	1422	1445	223	265	660
14	1029	1038	305	322	680	-	-	-	-	-	-	-	-	-	-
16	1130	1140	305	373	680	-	-	-	-	-	-	-	-	-	-

C-PATTERN BALL VALVE





Product Design Advantages & Features

- Single seat, no dead space, full bore design. Sealing is reliable, convenient operation, high flow, low cost
- Quarter turn, low torque operation, 98% of travel is in idle stroke, no friction, no wear
- Self-cleaning function, it has shearing action and can clean up the debris adhering to the sealing surface when closed
- With spring loaded movable seat, the sealing performance is still reliable under high temperature
- Spring chamber anti-slag design can prevent the spring failure effectively
- With upper and lower supporting design for the fixed ball, the stem just need to bear open-close torque
- It can meet the requirements of frequent switching due to the abrasion treatment on the contact portion between the support and C-ball
- Hardness, wear resistance, corosion resistance, high bond strength characteristics and meet the slashing conditions

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