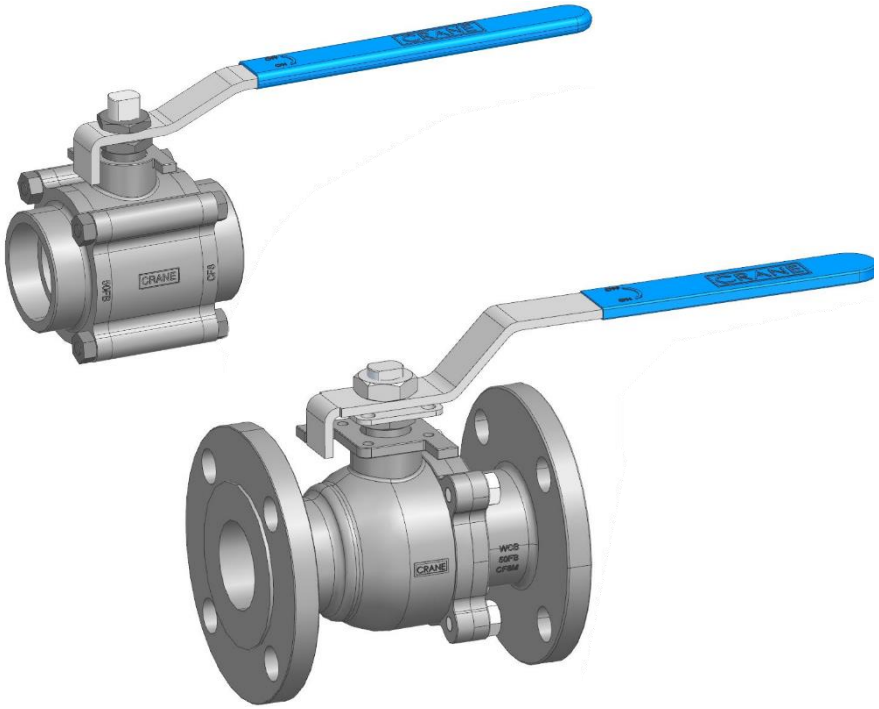
Crane Ball Valves



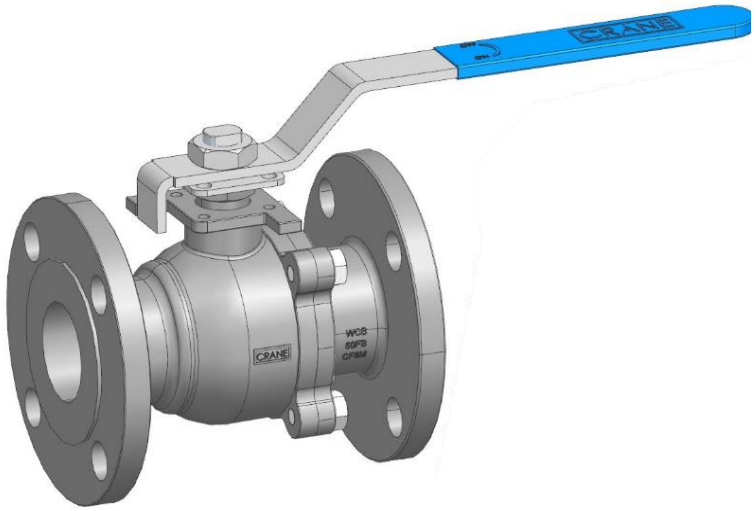
Process Ball Valves with

- Safety Features
- Quality
- Performance

Valves

What is Valve

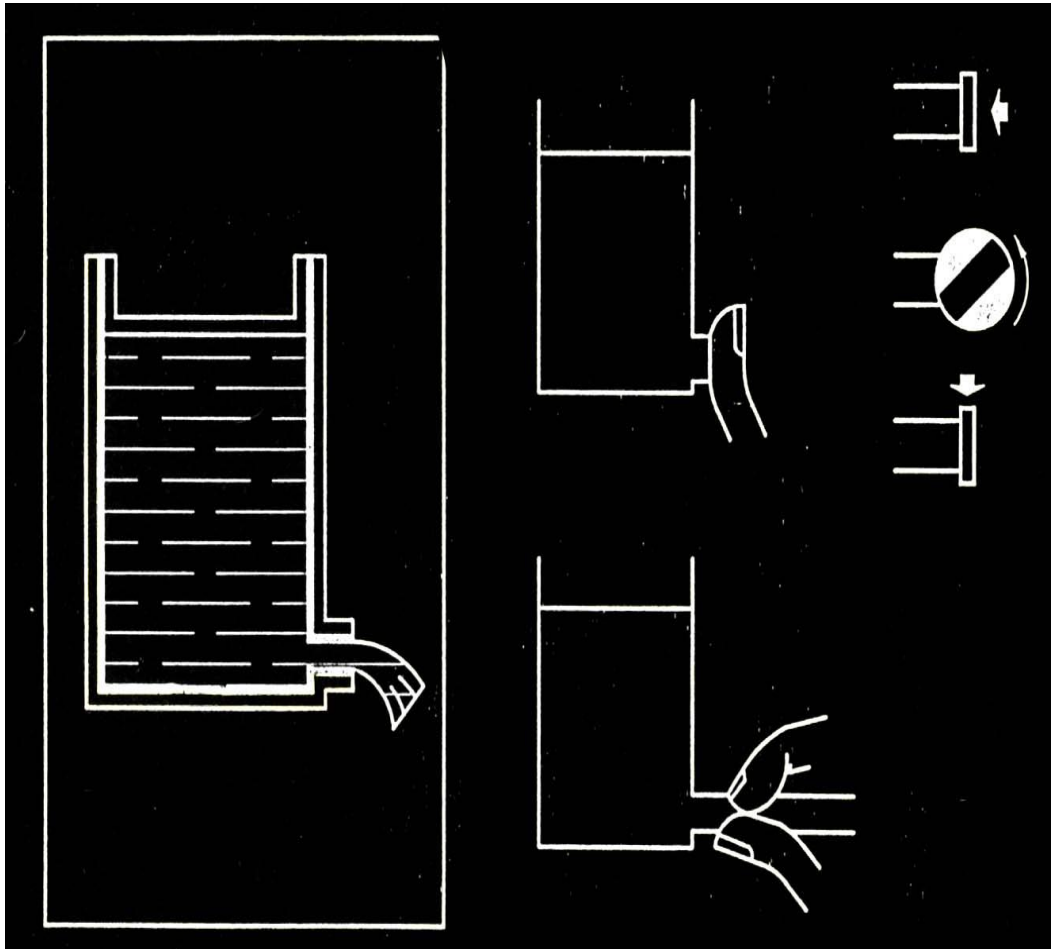
"Valve is a Pressure containing mechanical device used to shut off or otherwise modify the flow of fluid that passes through it"



Valves

Functions of a Valve

- ON / OFF (flow or no flow)
- Controlling / Modulating the flow
- Diverting the flow
- Unidirectional flow



Obturating

Rotating

Sliding

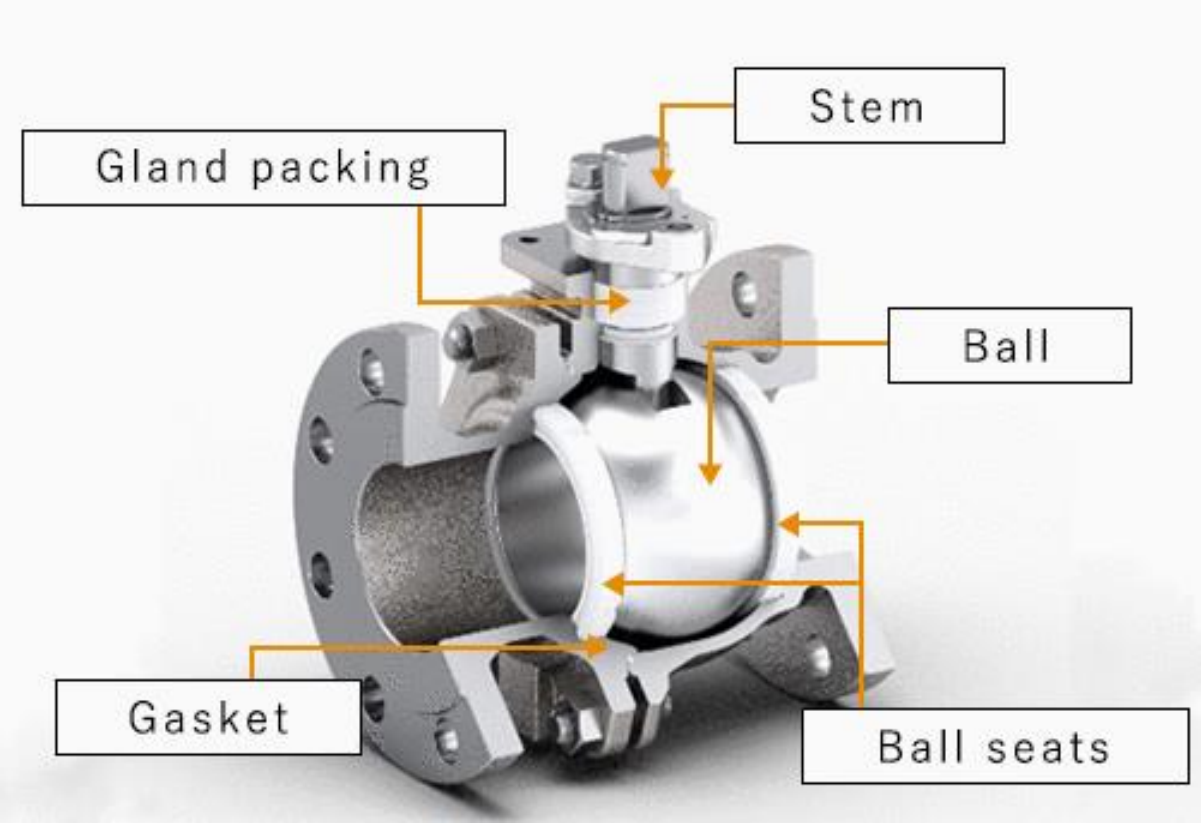
Squeezing

Valves

Types of a Valves

Ball Valves

Ball valves generally have a structure in which the valve "ball", is held between two seat rings referred to as "ball seats". As mentioned above, the "stem" connected with the ball is rotated 90° to turn the valve on or off.

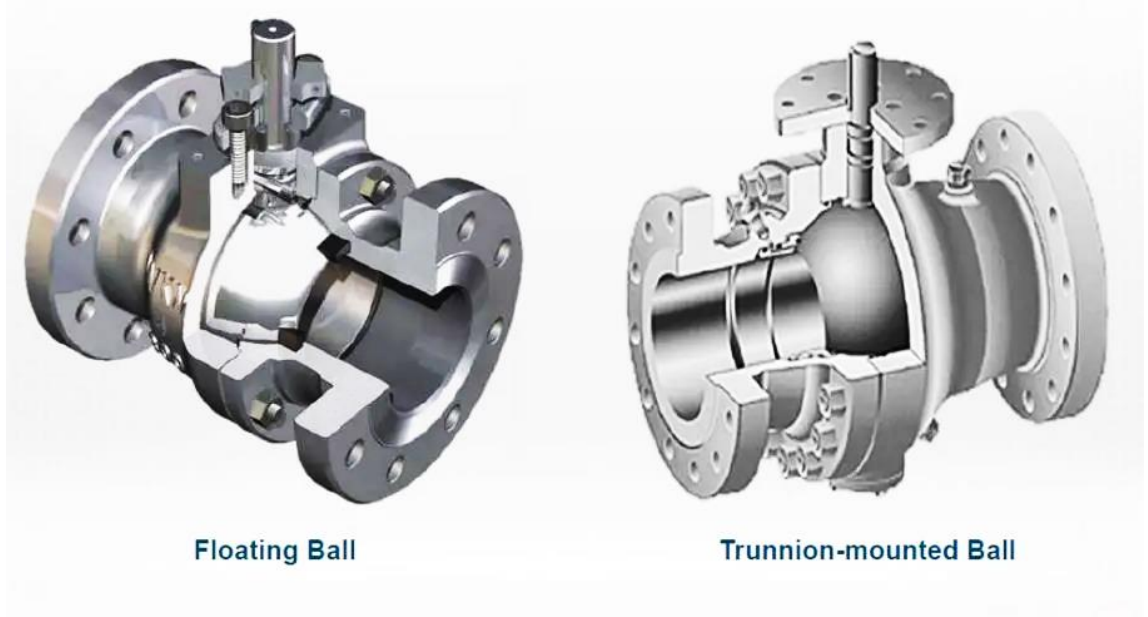


Ball Valves Types – Based on Design

Floating Ball

- The ball is not fixed but is free to move slightly.

- The ball is held in place by the pressure of the fluid acting on the ball, which helps to create a seal against the valve seat.

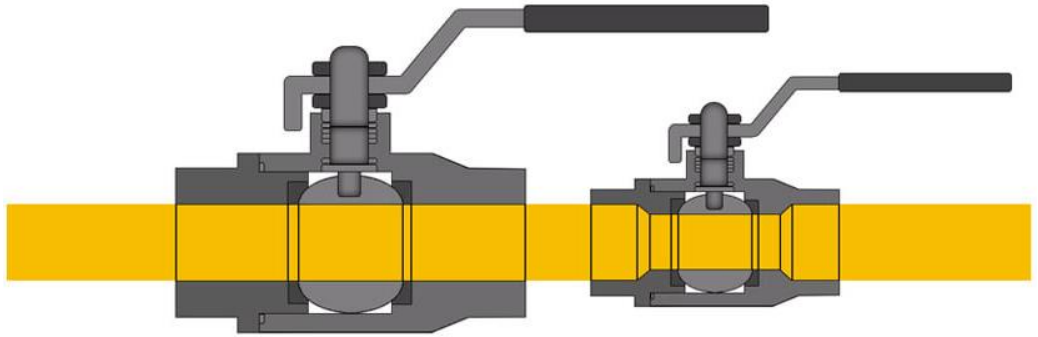


Trunnion Mounted Ball

- The ball is supported by trunnions, essentially pins or shafts mounted on the valve body.

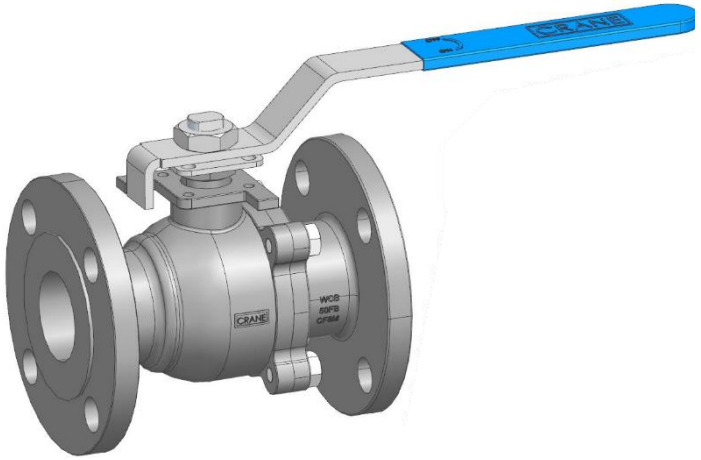
- These trunnions support the ball in place and help to manage the forces acting on the ball during operation.

Ball Valves Types – Based on Bore and Ends



Full Bore Reduced Bore

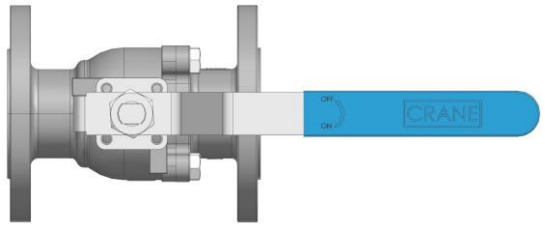
3-Piece
Socket Weld/Screwed end



2-Piece
Flanged end

Crane Ball Valve - Product Overview

Body Configuration	Type	End Connection	Pressure Class	1/2" 15	3/4" 20	1" 25	1 1/2" 40	2" 50	2 1/2" 65	3" 80	4" 100	6" 150
2 Piece, Full Bore	Non-Fire Safe	Flanged	Cl. 150			●	●	●	●	●	●	●
3 Piece, Full Bore	Non-Fire Safe	Flanged	Cl. 150	●	●							
2 Piece, Full Bore	Non-Fire Safe	Flanged	Cl. 300	●	●	●	●	●	●	●	●	●
3 Piece, Full Bore	Non-Fire Safe	Screwed / Socket-weld	Cl. 600	●	●	●	●	●				
2 Piece, Reduced Bore	Non-Fire Safe	Flanged	Cl. 150			●	●	●	●	●	●	●
3 Piece, Reduced Bore	Non-Fire Safe	Flanged	Cl. 150	●	●							
3 Piece, Reduced Bore	Non-Fire Safe	Screwed / Socket-weld	Cl. 600	●	●	●	●	●				
2 Piece, Full Bore	Fire Safe	Flanged	Cl. 150			●	●	●	●	●	●	●
3 Piece, Full Bore	Fire Safe	Flanged	Cl. 150	●	●							
2 Piece, Full Bore	Fire Safe	Flanged	Cl. 300	●	●	●	●	●	●	●	●	●



Materials of Construction

- Standard: A216 Gr. WCB; A351 Gr. CF8M
- Options upon request: CF8, CF3M

Size Range

- 1/2" up to 6" / DN15 up to DN150

Pressure Ratings

- Flanged Ends : ASME Cl. 150, Cl. 300,
- Screwed/Socket Welds : ASME Cl. 600

Body Configurations

- Flanged End ASME B16.5
- Socket Weld / Screwed Ends
- Floating Ball Design

General Standards

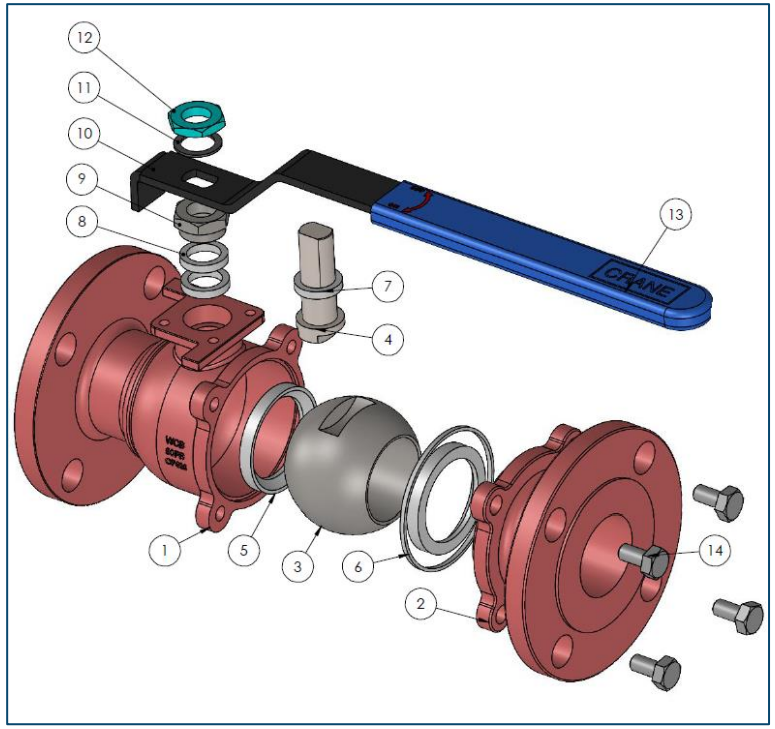
- API 608, EN 17292 and ASME B16.34 compliant
- Quality certification as per ISO 9001
- ISO 5211 actuator mounting
- Leakage as per ANSI / FCI 70-2 Class VI (tested to API- 598)
- Fire Tested as per : API 607, EN-ISO 10497, API 6FA

Temperature Range

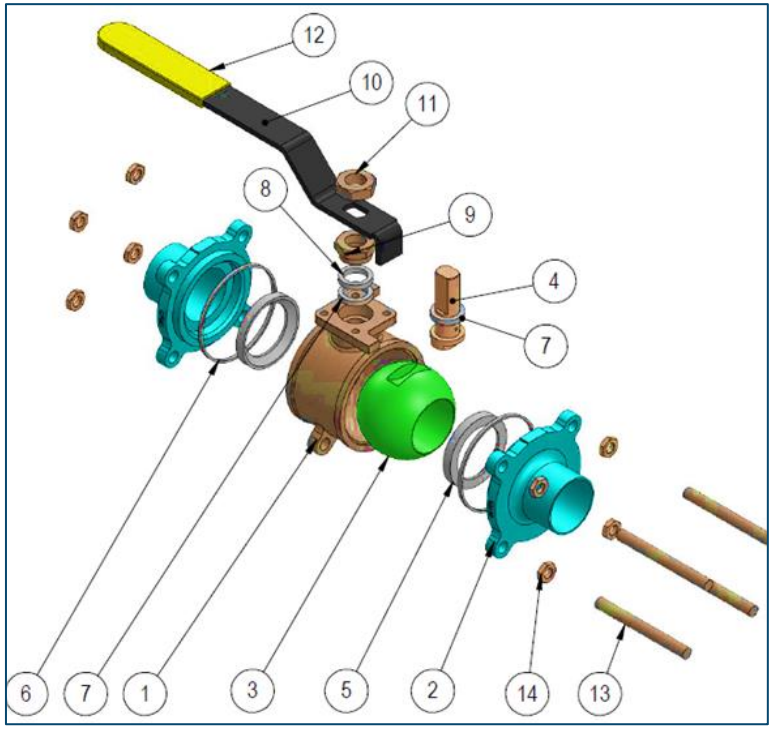
- -29°C up to +230°C, depending on valve type and material selection

Crane Ball Valve – Part List

PART NO.	PART	QTY
1	BODY	1
2	TAIL PIECE	1
3	BALL	1
4	STEM	1
5	SEAT	2
6	BODY SEAL	1
7	STEM SEAL	1
8	GLAND PACKING	2
9	GLAND NUT	1
10	LEVER	1
11	WASHER	1
12	LEVER NUT	1
13	LEVER GRIP	1
14	BOLT	4



2-Piece Flanged end



PART NO.	PART	QTY
1	BODY	1
2	TAIL PIECE	1
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5	SEAT	2
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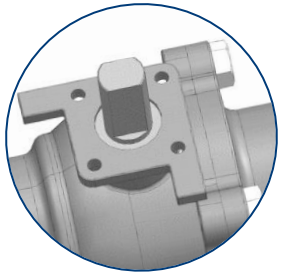
7	STEM SEAL	1
8	GLAND PACKING	2
9	GLAND NUT	1
10	LEVER	1
11	WASHER	1
12	LEVER NUT	1
13	LEVER GRIP	1
14	BOLT	4

3-Piece Socket Weld/Screwed end

Crane Ball Valve – Features

1. ISO Mounting Pad

ISO 5211 mounting pad allows precise mounting of actuator, mounting bolts are independent and exact alignment prevents side load and out-of-line wear for flanged end valves

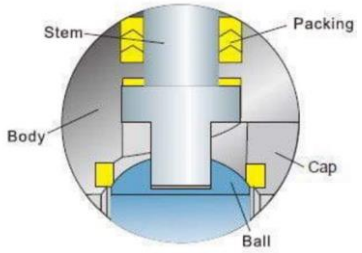


2. Solid Ball with Mirror-finish

Solid Ball provides straight through flow and real full-port performance characteristics. The solid construction of the balls also guarantees higher structural strength and provides safety in the service involving thermal expansion

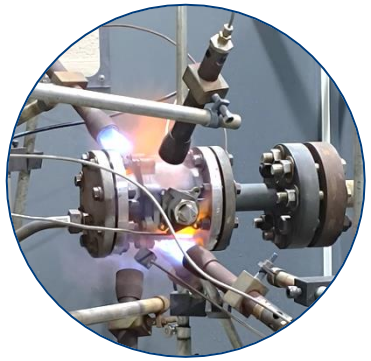
3. Blow-out proof stem

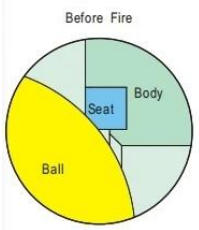
Stem has larger diameter at stem collar inside body that prevents it from blowing out in case of pressure build up

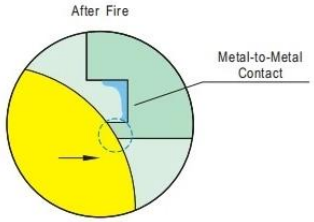


5. Fire Safe Design

Secondary metal sealing on body minimizes the leakage, in case of a fire in the pipeline

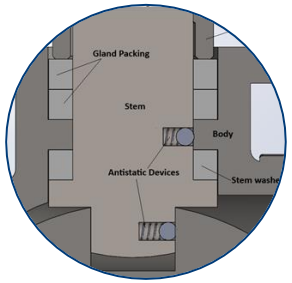






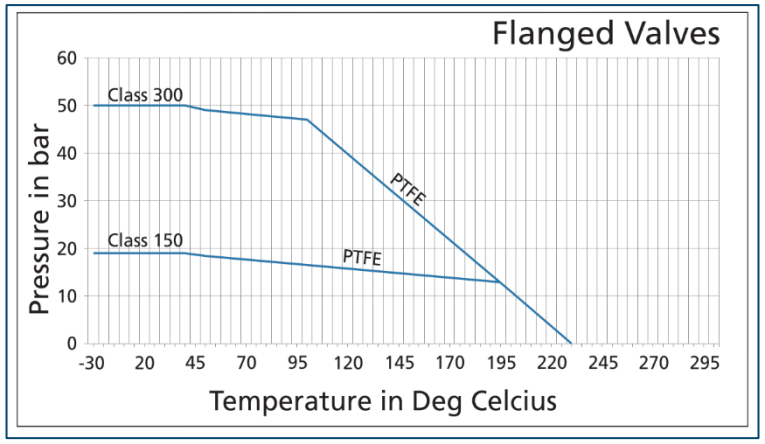
4. Antistatic Design

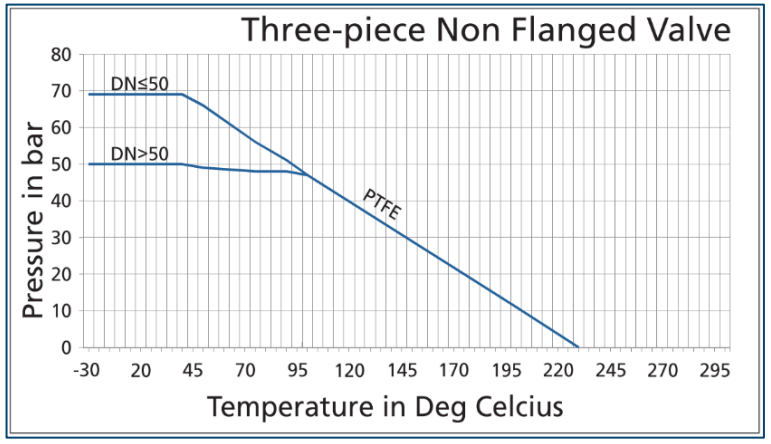
Critical safety feature that helps prevent the buildup of static electricity during valve operation



Crane Ball Valve - Technical Specifications

Pressure Temperature Charts – PTFE Seat Material





Ordering Information

BV	2	025	F	F1	W6	PT	L
BV	Type	Size	Bore	Ends	Body/Trim	Seats & Seals	Operator
Ball Valve	2 - Two-piece	015	F - Full Bore	F1 - Flanged # 150	W4 - WCB/304	PT - PTFE (Non-Fire Safe)	L - Lever
	3 - Three-piece	020	R - Reduced Bore	F3 - Flanged # 300	W6 - WCB/316	GF - GFT (Non-Fire Safe)	G - Gear
		025		SW - Socket Weld #600	M6 - CF8M/316	PE - Peek * (Non-Fire Safe)	0S - SS304 Lever
		040		SN - Screwed NPT #600	C4 - CF8/304	FP – PTFE Seat & Grafoil Seals (Fire Safe)	XX - Actuator Model / Type
		050		SB - Screwed BSP #600	M3 - CF3M/316L	FG – GFT Seat & Grafoil Seals (Fire Safe)	
		065		ST - Screwed BSPT #600		FE – Peek Seat & Grafoil Seals (Fire Safe) *	
		080		BW - Butt Weld OD Tubing *			
		100		TC - ASME BPE TC End *			
		125					
		150					
		200 *					

* Consult Factory
# Fire Safe is available in Full Bore Flanged ends only

CRANE

THINK **BIG** ▪ BE **BOLD** ▪ ACT **FAST**