

Standard Design Features for All PBV®-USA Floating Ball Valves

Standard design features, product line range, material selection, and centrally located operations facility all combine to make PBV®-USA the first choice for floating ball valves.

The inherent ball valve characteristics of quick quarter-turn operation, bi-directional shut-off capability, ease of automation, and low maintenance are enhanced with many additional features such as Series 300 Stainless Steel gland, heavy bolting meeting NACE MR0175 2002, 125-250 Ra flange finish and port diameters in conformance with API 608.

Body and Trim Material

Body materials are ASME material grades WCB, LCC and CF8M, with Stainless Steel trim; other body or trim materials, including Alloy 20, Monel and Hastelloy®, are available upon request. Seat and seal options include materials designed to stand up to severe environments and repeated cycling.

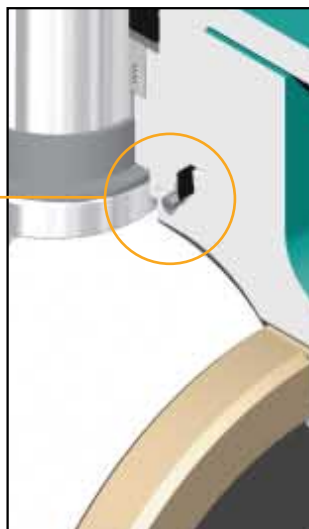
Whether your intended use is in the petrochemical, pharmaceutical or pulp and paper industry, PBV®-USA floating ball valves are designed to provide you with a higher standard in service and value.

PBV®-USA Quality Procedures

Every valve is tested and inspections are performed throughout the production process to insure that product quality meets PBV®-USA standards. Quality holdpoints include receiving inspection to verify part conformance, pressure testing in conformance with API 6D or 598 to assure the integrity of the shell and seals, and final inspection to confirm that all marking, tagging and processing have been performed in accordance with PBV®-USA and leading industry standards.

Encapsulated Body Seals

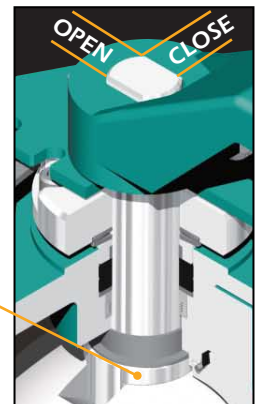
With fully encapsulated body seals, there is no opportunity for seal movement or slippage, thereby improving sealing.



Ball Position Indicator And Blowout Proof Stem Features

The stem is designed with a double flat shape at the top of the stem to indicate ball position.

PBV®-USA's blowout proof stem feature is accomplished by the use of a lower stem collar design.



Bubble-Tight Sealing

Bubble-tight sealing is achieved by the use of two rigid seats firmly secured in the valve body on either side of the ball.

Media flow is cut off on the downstream side by upstream pressure pushing against the ball.

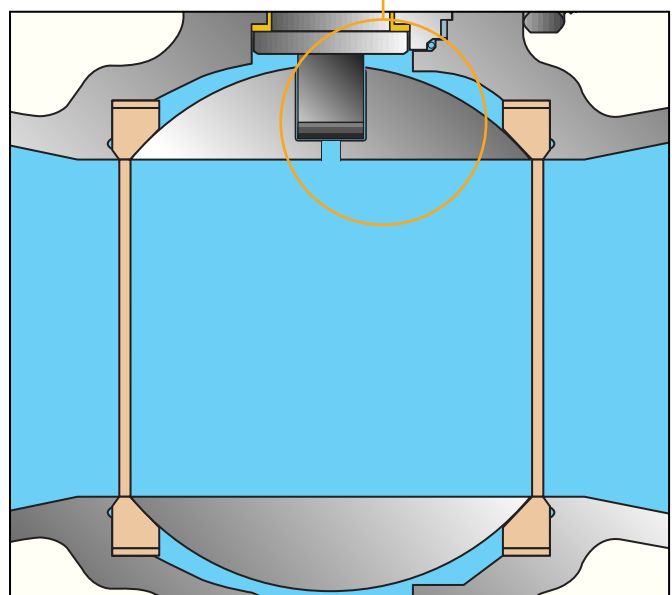


Bi-Directional Sealing

With the bi-directional sealing design, either end can be installed upstream without compromising the integrity of the bubble-tight seal.

Equalized Cavity Pressure

The pressure equalization hole at the top of the ball combined with the seat design are both engineered to maintain the pressure balance in the line and in the body cavity while the valve is in the open position.



PBV®-USA's Series 4400/5400/6400 valves have all been proven to be Firesafe to API 607 or API 6FA. As illustrated, full metal-to-metal contact is attained at all sealing areas after the primary soft seals have been destroyed during a fire.

Stem Packing Seal

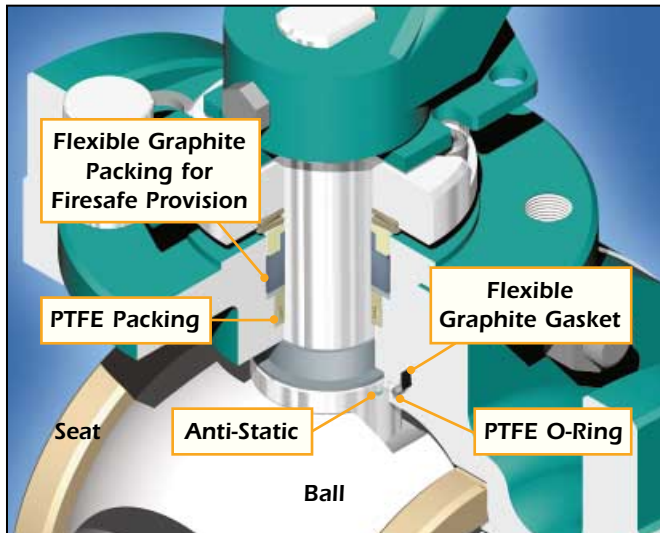


Figure 1. Before Fire

Live Load And Double Packing Stem Seal Features

Belleville spring washers are used to achieve live loading and minimize the need to retighten packing.

Primary PTFE Chevron stem seal and secondary firesafe flexible graphite stem seal are standard for all PBV®-USA ball valves which provide low break torque, excellent emission control and good chemical and thermal resistance.

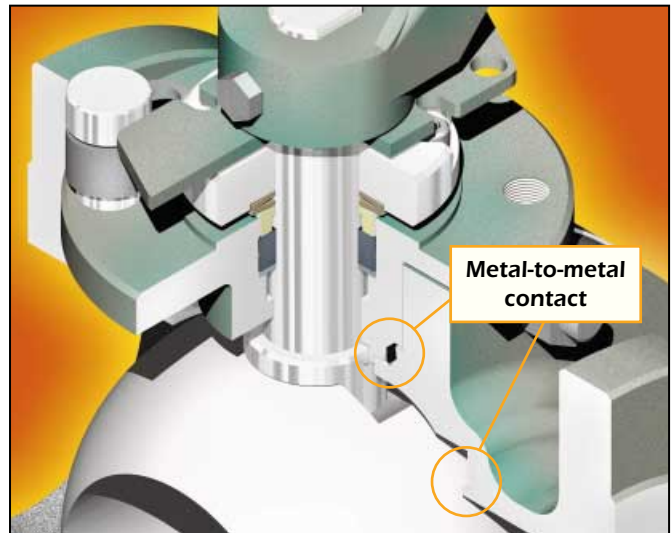


Figure 2. After Fire

Anti-Static Device

Internal parts that are insulated from the valve body by non-conductive seat and seal materials may build up a static electric charge. To ensure electrical continuity between the stem and the ball and body, PBV®-USA includes anti-static devices as an integral part of all floating ball valves.

O-Ring Stem Seal

A fitting is provided on the valve for injection of corrosion inhibiting grease into the stem seal cavity, which prevents water intrusion and subsequent corrosion.

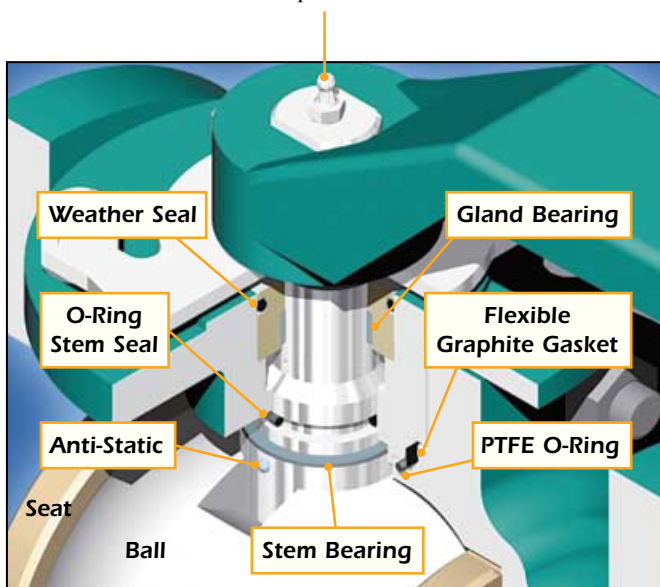


Figure 3. Before Fire

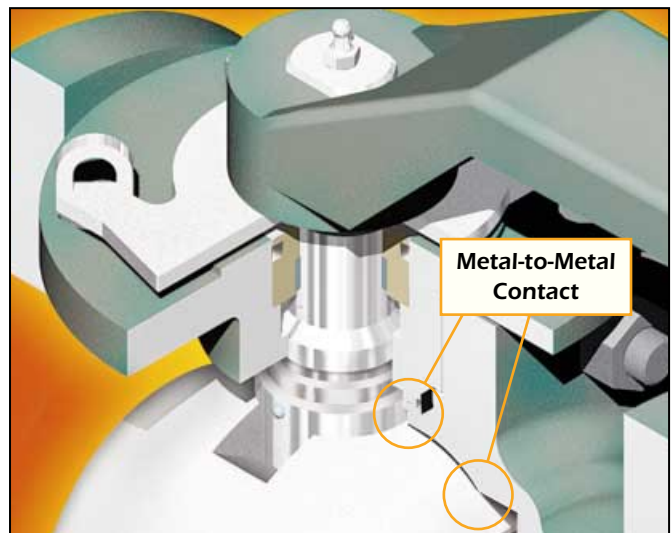
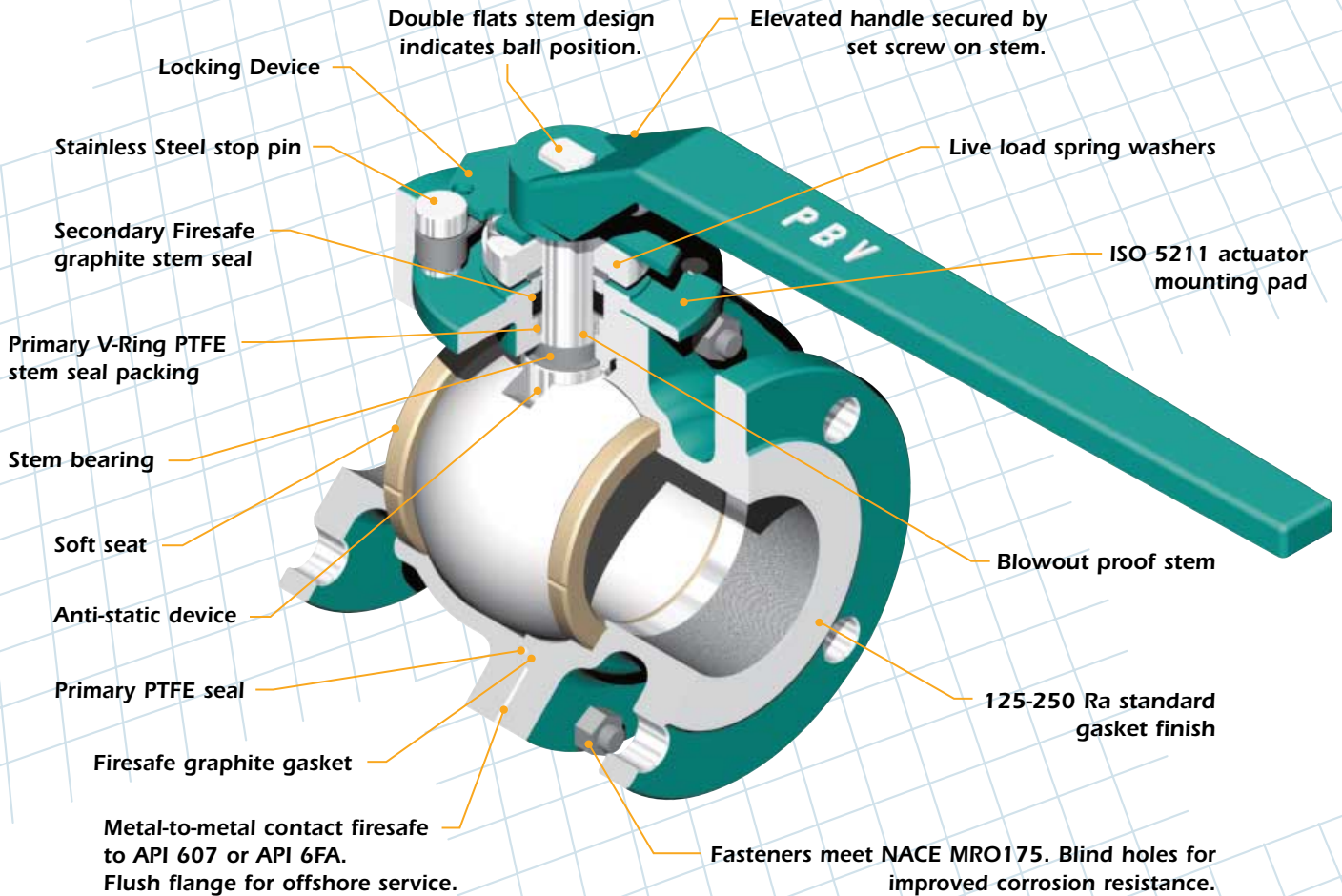


Figure 4. After Fire

Series 6400 Full Port, 2 pc Body Stem Packing Ball Valves

Standard Features

This is an illustrated cross section of a typical PBV®-USA full port, 2 pc body, floating ball valve exhibiting standard design features. The actual design of a particular valve may be slightly different from this illustration depending on its size and pressure class.



PBV® Flanged Floating Ball Valves installed in a typical manifold application.