



HORIZON
POLYMER

Lined Ball Valves

Designed to perform & save costs



Horizon fully lined high performance ball valves are engineered for reliable isolation and control of extremely corrosive, hazardous and high purity process liquids and gases. Designed using industry's pertinent specifications as a minimum requirement, Horizon valves incorporate the highest standards of fundamental engineering principles, quality and safety that are essential in assuring reliable performance. Designed in accordance with ANSI B16.10, 150 lb. face to face dimensions, Horizon valves are routinely used as direct replacements for massive, high torque and difficult to maintain plug, gate and ball valves. The low torque feature, which has been tested to be as much as 66% less than lined plug valves results in easier manual operation, reduced piping stress and considerably lower automation cost.

Design & Testing Standards

Horizon 150 lb. flanged lined ball valves are designed in accordance with ANSI B 16.10, ANSI B 16.5 and ANSI B 16.34 specifications. Bidirectional pressure testing and stem seal testing to assure absolute tight shutoff is conducted in accordance with API 598 specifications. The lining integrity of each valve is tested with 25,000 volts to assure quality conformance and uniform thickness.

Helium Leak Test

Horizon valves have been repeatedly tested for Helium Leak Test on the valve body bonnet/cover joints and stuffing box. Test pressure 3.5 bar using detector probe technique in compliance with ASME Sec V Article 10.

Materials of Construction

The standard material of construction of the Horizon valve body is ASTM A 395 60-40 -18 (Ductile Iron)

As an option, the following materials are also available

GGG 40 (Ductile Iron)

ASTM A216 WCB (Carbon Steel)

All Grades of Stainless Steel

Flow Rates

SIZE		Cum/hr.	US Gallons/min
mm	Inches		
25	1"	5.4	24
40	1.5"	9.0	40
50	2"	42.0	185
80	3"	43.8	193
100	4"	133.5	588
150	6"	238.5	1050

Horizon valves are designed to offer long-term maintenance-free protection against fugitive emissions which is assured through a deep stuffing box consisting of virgin PTFE chevron style rings. The axial pressure applied by the gland follower, assisted by the internal system pressure, radially expands the chevron rings to form an absolute tight stem seal. Vacuum service applications require that the packing rings be installed in the inverted direction.

Special Features of Lined Ball Valves

- Horizon PFA lined ball valves are robust and created to handle corrosive fluids from -60° C to +200°C.
- The body, adapter, ball and stem of the valves are lined as individual components. The body materials are generally cast ductile iron / cast steel and are also available in CF8/CF8M.
- The liner, generally PFA, is locked by dovetail holes which are provided at the time of machining the casting and the lining of the valve components is done on a special purpose injection moulding machine which has a unique built in system with control points to ensure that the lining process is controlled. This is important because every component to be lined has to undergo a heating and cooling cycle at the time of lining/moulding.
- Our lined valves are suitable to operate at full vacuum.
- We do not process/use re-ground or re-processed polymer
- The body design minimizes the dead space between the ball, stem and housing.
- The free floating ball valve principle makes it possible for the ball to seal against the downstream seat ring ensuring a positive sealing force even when the line pressure is low.
- Anti blow-out stem is provided.
- Valves with lockable handle arrangement can be provided upon special request.
- Anti-static device provides protection against a damaging electrostatic discharge.
- The PFA line ball can be easily replaced with a ceramic ball whereby the life of the valve can be increased if the valve is required to handle other than clear liquid or to work at the bottom of the tank.
- Extremely low torque ensuring bubble tight-off facilitates manual quarter turn operation. On the other hand, it is a huge saving in cost when selecting actuators for the valves because of low torque valves.
- Horizon valves are equipped with an ISO mounting flange simplifying the mounting of any standard actuator
- Safety design features proved protection for the operators and environment.
- The short pattern face to face dimensions allow direct replacement of a fully lined or sleeve plug valve with Horizon lined ball valve without altering the existing pipe work.

Horizon is the only company in India that has qualified its valves to the European norms under "PED Directive" whereby all valves supplied to European Community will bear the "CE" marking.