BALL VALVES WITH BARRIER™ SEATS

Barrier seat valves were developed by Metso specifically to handle difficult services in which the media can induce scaling and cause solids to build-up within the valve. They are available in 4" – 12" (DN 100 – 300) Series 7000 standard port and 3" – 10" (DN 80 – 250) Series 9000 full port ball valves.

These valves overcome recurring problems experienced with other types of valves in a variety of difficult services including:

1. Green and white liquor in pulp mill recovery systems.
2. Oxygen lines in steel mill BOP systems where lime flux is injected into the furnace with oxygen.
3. Potash fertilizer slurries.

The effectiveness of the Barrier seat valve results from the combination of two important design features. First, the flexible-lip seat design, which unlike customary jam seats, is self compensating for pressure and temperature changes, and for wear, and second, the patented barrier design, which prevents scale deposits and solids from building up in the valve.

FEATURES

- 316 stainless steel outer seat casing and Viton® barrier element prevent build up of solids and scale deposits.
- Filled PTFE seat configuration provides effective shutoff in difficult services.
- Exclusive seat design allows for continued ease of operation through many cycles.
- Rugged construction maximizes time between required maintenance.
- Valves can be easily automated with a complete line of JAMESBURY® brand actuators and accessories to provide single source responsibility.

Design Principle

The standard Barrier seat consists of a filled PTFE (M) seat mechanically trapped in an outer casing of 316 stainless steel, with a Viton barrier element, as shown in Figure 1. The seat is secured in a fixed position with a tack weld so it cannot move within the valve body. With the seat fixed in position, the combination of a seal ring and the seat shape result in two sealing zones on the back surface of the seat. These features prevent solids build up which can cause leakage and increase the valve operating torque.

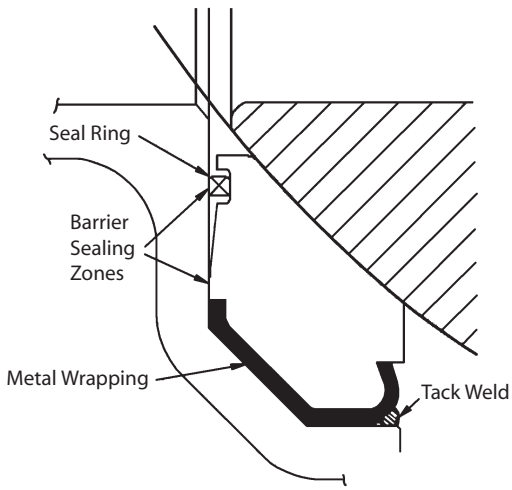


Figure 1

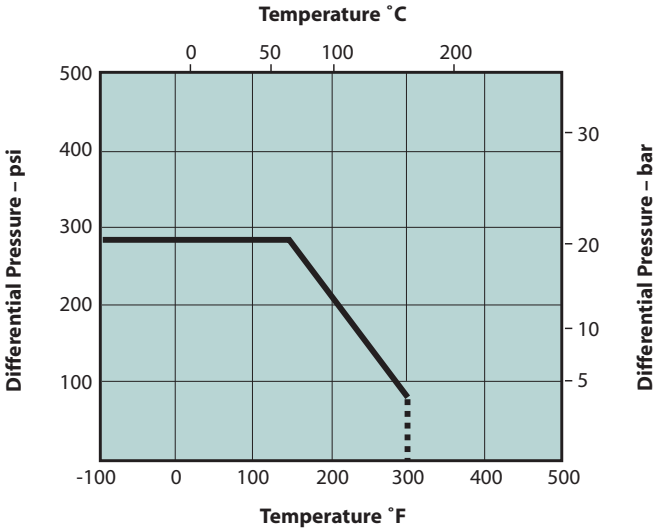
jamesbury

B151-5 • 8/2009

metso
Expect results

SPECIFICATIONS

Pressure/temperature ratings of valves with Barrier seats are shown in the chart below.



Viton® is a registered trademark of E.I.DuPont Co.

ACTUATOR SIZING

The Barrier seat design, along with the "difficult service" conditions generally associated with their application requires doubling the operation torques of corresponding standard Filled PTFE(M) or XTREME(X) seated valves. Standard torques can be found in the individual valve bulletins.

HOW TO ORDER

The seat/seal code for Barrier seats with Viton O-rings, PTFE stem seals and PTFE or PTFE/316SS body seals is "MBT", i.e., 4" 7150-11-36HB**MBT2**. Please refer to the individual valve bulletins listed below for complete valve information.

Product	**Bulletin**
Series 7000 Standard bore ball valves	B107-1
Series 9000 Full bore ball valves	B107-2

Subject to change without prior notice.

Metso Automation Inc.

Europe, Levytie 6, P.O. Box 310, 00811 Helsinki, Finland.
Tel. +358 20 483 150. Fax +358 20 483 151

North America, 44 Bowditch Drive, P.O. Box 8044, Shrewsbury, MA 01545, USA.
Tel. +1 508 852 0200. Fax +1 508 852 8172

Europe, 6-8 rue du Maine, 68271 Wittenheim Cedex, France.
Tel. +33 (0)3 89 50 64 00. Fax +33 (0)3 89 50 64 40

South America, Av. Independência, 2500- Iporanga, 18087-101, Sorocaba-São Paulo
Brazil. Tel. +55 15 2102 9700. Fax +55 15 2102 9748/49

Asia Pacific, 238A Thomson Road, #25-09 Novena Square Tower A, 307684 Singapore.
Tel. +65 6511 1011. Fax +65 6250 0830

China, 19/F, the Exchange Beijing, No. 118, Jianguo Lu Yi, Chaoyang Dist, 100022 Beijing, China.
Tel. +86-10-6566-6600. Fax +86-10-6566-2575

Middle East, Roundabout 8, Unit AB-07, P.O. Box 17175, Jebel Ali Freezone, Dubai,
United Arab Emirates. Tel. +971 4 883 6974. Fax +971 4 883 6836

www.metso.com/automation

metso