Jamesbury® Flanged Ball Valves
For Increased Operations Uptime and Lower Operating Cost

Metso
North America
Ask anyone which brand of ball valve continues to stand the test of time, and the answer you will hear most often is *Jamesbury* valves. For over half a century, *Jamesbury* valves have consistently been the most preferred brand for ball valves. It’s not hard to see why. After all, we just about invented sealing technology with the introduction of the flexible-lip seat design.

*Jamesbury* technology leadership didn’t stop there. We have gone on to develop the next generation of valve sealing technology that expands seat performance far beyond the boundaries of traditional solutions. The result is a valve that has demonstrated significant life-cycle improvements and extraordinary cost savings.

**The Right Valve For The Right Job.**
- Standard-port design offers high-flow capacity for control of clean or dirty fluids and gases, including steam.
- Many body, trim, and seat options are available to handle a variety of applications and demanding critical services.
- Available in 1/2” through 20” (DN 15-500) standard bore flanged ball valves and 1/2” through 24” (DN 15-600) full bore flanged ball valves, ANSI Class 150 - 300.
- ANSI Class 150 and 300 pressure-rated valves are Fire-Tite® to the requirements of API 607 4th edition.
- A variety of body configurations – from floating ball to trunnion-mounted designs.
- Flexible lip design provides reliable, bidirectional shut-off.
- Also available for special services such as oxygen, hydrogen peroxide, chlorine, steam, and vacuum service.
A Total Solution That Takes Performance To A Whole New Level.

Combine leadership in ball valve technology with the know-how and capabilities of Metso and its channel partners, and you have a formidable resource that you can turn to for a complete solution.

Look to us for:
- A wide range of application-appropriate valves with proven cost-saving features.
- Xtreme® sealing technology that opens up a whole new range of applications for each valve – with performance beyond anything else you’ve ever seen.
- Sophisticated automation capabilities that are proven to exceed user requirements for reliability.
- Network-ready capability throughout the entire product line.
- OEM responsibility for package performance.

### Flanged Ball Valve Specifications

<table>
<thead>
<tr>
<th>Series</th>
<th>Sizes</th>
<th>Port</th>
<th>Pressure Classes</th>
<th>Maximum Temperature</th>
<th>Body/Trim Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>5000</td>
<td>12&quot; - 20&quot; (300 - 500DN)</td>
<td>Std.</td>
<td>300</td>
<td>500° F (260° C)</td>
<td>Carbon Steel 316 SS, Alloy 20, Monel® Hastelloy® C</td>
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<tr>
<td>7000</td>
<td>1/2&quot; - 10&quot; (15 - 250DN)</td>
<td></td>
<td>150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6000</td>
<td>14&quot; - 24&quot; (350 - 600DN)</td>
<td>Full</td>
<td>300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9000</td>
<td>1/2&quot; - 12&quot; (15 - 300DN)</td>
<td></td>
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Monel is a registered trademark of Inco. Hastelloy is a registered trademark of Haynes International, Inc.

Our valve communication and control devices offer you opportunities to supply network-capabilities with high-reliability in hazardous areas.
Common Platform Valves Offering Uncommon Benefits.

One look – both inside and out – and you can see that next generation Jamesbury valves are much more than your average valve. You’ll notice a streamlined common version theme that integrates five valves that make them look totally different than past models. Inside, there are even greater improvements.

**Longest Cycle Life**
Accelerated laboratory life cycle tests show 100 to 1000 times improvement over previous models, depending on the media. Imagine the impact on your uptime and maintenance costs.

**Significant Inventory Reductions**
Now you can reduce your inventory by up to 80%. Modular / interchangeable design means that internal parts, trim parts, accessories and actuation choices are the same for all of these valves. Only one parts kit is needed for a given size of valve.

**Easier Automation**
Modular actuation / linkage choices and precise alignment make automating these common platform valves easy. In fact, technicians should be able to automate these valves 40% faster.

**Code Compliance**
Jamesbury valves are engineered to meet most all of the industry’s important standards. Most important are compliance or approvals from ANSI, ISO, BS, MSS, API, ISA, FM, UL, ULC, CSA, CRN, NACE and PED.
Redefining State-Of-The-Art.

Simplified Modular Design
By applying platform thinking to our 1/4”-2” line of Jamesbury valves, we were able to make all of the internal and trim parts of the valves the same. The only differences are in the bodies, caps and inserts. This makes it easier, and more cost-effective, to change parts, which is especially beneficial when doing repairs. Since the parts are similar, there is no need to have numerous valve repair kits on hand. In most cases, only a single repair kit is needed for all of your Jamesbury valves, reducing your costs. The modular design is also beneficial when it comes to linkages for mounting actuators. With these new valves, users can stock far fewer linkages, thereby reducing inventory, costs and complexity of automation.

1/4” - 2” Valves: Integrated Linkage Designs for Automation (Figure 1)
- Linkage is all stainless steel for corrosion resistance and appearance.
- Coupling is high strength 17-4 stainless steel for wear resistance and precise open & close position.
- Coupling self aligns at point 1 with a bearing between the coupling O.D. and the bracket I.D.
- Coupling self aligns at point 2 on the stem diameter and coupling drive I.D.

Live-Loaded Stem Seal (Figure 2)
The platform valves are equipped with a live-loaded stem seal. Thanks to its innovative design, users benefit from several time- and money-saving advantages.
- Corrosion-resistant stainless steel washers store energy so stem seal accommodates more cycles without requiring users to make many adjustments.
- When adjustments are necessary, our compression plate design permits them to be made with relative ease.
- The stem bearings are designed to manage thrust loads efficiently, eliminating metal contact and eventual failure.

Improved Sealing (Figure 3)
Our new patented stem seal design is beyond anything the competition can offer. It is engineered with three sealing zones – a particularly important feature on smaller valves where there is not a lot of room for innovation. We shaped the stem seal to allow the fitting of a compression plate on our smaller valves. This new patented stem seal design is utilized in the Jamesbury 1/4” - 2” platform products lines:
- Three zones of contact that, by the very nature of their unique design, promotes super tight sealing.
- A stem that is fully guided so leak paths do not form during operation – adding to the valve’s performance and dependability.
- Fugitive emission standards that have been tested to ISO/CD 15484, thereby meeting important Class A requirements.
- No stem seal adjustments needed after thermal and pressure cycles, reducing operator intervention and, as a result, costs.
By applying platform thinking to the key components of our Jamesbury valve assemblies – focusing on the all-important areas of ball, seat and sealing technologies – we were able to engineer and deliver next generation ball valve performance. Solutions that offer you vastly improved stem sealing and cycle life. In fact, depending on the application, the cycle life of these new valves can be as much as 100 times greater than that of competitive valves.

Our next-generation Jamesbury common platform valves include the following products:
• 4000 Series Ball Valves
• 7000 Series Ball Valves (1/2" – 2")
• 9000 Series Ball Valves (1/2" – 1-1/2")
• ELIMINATOR™ Ball Valves
• "A" Style Ball Valves

When we undertook the task of engineering the next-generation of Jamesbury valves, we explored all options. We realized that the most important areas to improve upon would be those that would make a practical difference and save you money. So we focused on:
• Improved sealing in both the stem and seat.
• Modular design for interchangeable components and lower costs.
• Simpler automation, across the board.
• Ability to meet ANSI and other critical industry standards.
Going To Extremes To Meet Your Performance And Cost Requirements.

We have pushed the envelope with our Xtreme seat technology. Xtreme seats truly expand the performance boundaries of standard flanged ball valves to provide a new range of applicability. Xtreme seats offer a variety of advantages over PTFE, standard-filled PTFE, and even PEEK seats:

**Expanded Temperature and Pressure Ranges**
Better recovery helps the seat material maintain contact with the valve ball for better sealing.

**Lower Torque**
A lower coefficient of friction and reduced stiffness translate into lower torque requirements — this may allow you to reduce actuators by one or more sizes.

**Longer-Lasting**
Life-cycle improvements have been documented up to 100%.

**Excellent Chemical Resistance**
Chemical compatibility is superior to filled PTFE, Delrin, and PEEK.

**Inventory Reduction**
Expanded performance range cuts the need for multiple valves and spare part types.

**Cost Reduction Opportunities.**
Jamesbury valves with Xtreme sealing technology offer numerous opportunities for long-term cost reductions:

- A single seat material is easier to specify, reducing valve and spare part acquisition costs and inventory.
- Longer cycle life minimizes shutdowns, repairs and increases process uptime.
- Lower torque reduces size requirements and, ultimately, actuator costs.
- Eliminates leaking valves, reduces maintenance costs and increases product quality — even in critical chlorine, phosgene, hydrazine, and cyanide applications.

**Seat Memory Affects Sealing Performance.**
- Seat performance is optimized because the seat returns to its original shape after loading. This maintains a tight seal between the seat and ball.
- Maximum seat recovery allows for highest pressures and cycle life.

**EXPERIENCE THE COSTS SAVINGS OF XTREME**
Application: 2” ANSI Class 300 flanged end ball valve for 350lb. steam or 500° F (260° C) heat transfer fluid

- Jamesbury Series 9000 valves using PEEK Seating Material:
  - Model: 2” 93001122HBLGG1
  - List Price: $1074
  - LK 1902 $409
  - VPVL600 SR6 $1930
  - Total: $3413

- Jamesbury Series 9000 valves with Xtreme Seats:
  - Model: 2” 9300312236XTZ1
  - List Price: $756
  - LK 1593 $158
  - VPVL400S6 $747
  - Total: $1661

**SAVINGS: 51%**
Cost savings due to the use of smaller actuators. Xtreme has less torque than PEEK.