

*Floating  
Multiport*

**PED**  **CE** **NACE**  **SIL2** Safety Integrity Level 

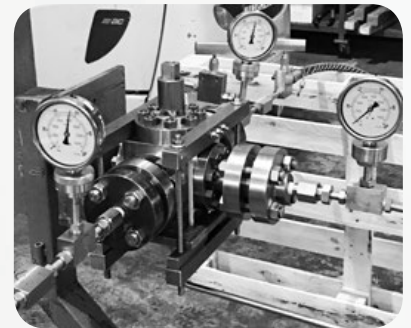
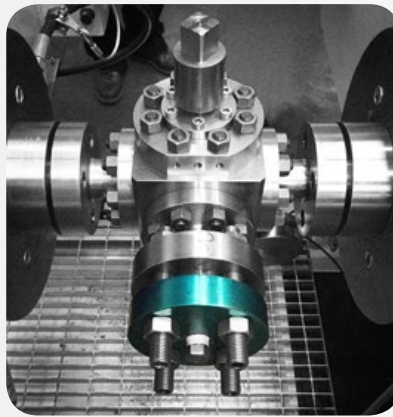


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# Introduction

**Sesto Valves** specializes in custom designed ball valve solutions for the chemical, petrochemical and energy industries. Applications include cryogenics, extreme high temperatures, metal seated applications, as well as specialty double block and bleed emergency shutdown valve solutions. Headquartered in Agrate Brianza (MB) Italy, we are a premium ball valve manufacturer with over 30+ years of engineering experience. Our valves are 100% designed, manufactured, and tested in Italy with complete control of product quality and material traceability. We source only the best materials from local and global partners to ensure quality and competitive pricing.

Our philosophy is to make valves that fit your application, not the other way around. We match materials and trims to maximize performance and reliability, with ready access to special coatings and exotic or super alloys. Our engineers design valves to optimize fit and function, including special face-to-face, multiport or combination valves for cost and space savings. Our quality team inspects every component and runs extensive performance tests for design verification and production phases, and can also include your own customer specified testing. In order to provide a more complete solution, we partner directly with key valve automation industry leaders to provide actuation and automation controls in a comprehensive valve package. Contact Sesto Valves today with your most difficult valve application and we'll give you our best resources and expertise to help you reach your goals.



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## Features and Benefits

- Class 150 to Class 800
- Size Range ½" thru 4" (Class Dependent)
- Custom Sizes by Request
- 3-Way and 4-Way Configurations (T, L, Double L)
- 4-Seat Design, Universal Inlet/Outlet
- Floating Full and Reduced Bore
- Single Body Construction (No Top Flange)
- Fire-Safe Design API 607 Available
- Blowout Proof, Low Torque Guided Stem Design
- Anti-Static Device and Live-Loaded Packing
- Fugitive Emissions ISO 15848
- Wide Range of Soft Seat and Metal Seat Options
- A105N, LF2, LF3, Forged Body Options
- Special Materials Available Upon Request

## Versatility & Reliability

The Sesto design allows for the use of all types and materials of construction and may be installed in any flow configuration and orientation. In addition, the Sesto true multiport solution is engineered with O-ring energized and self-aligning floating seats, ensuring positive shutoff in varying conditions, regardless of flow direction - any inlet can be used as an outlet. We have many different metal seated options for a variety of high temperature, corrosive, or abrasive applications. Our experienced team of engineers can design and build the right valve for your exact requirements. Our precision machined innovative design has been tested to the highest standards and may be used in virtually any application with confidence. The Sesto Floating Multiport Valve is Sil 2 certified, fire tested, FE tested, and built to last. Reliable repeat performance is our responsibility to you. It is truly a Premium Italian Valve.

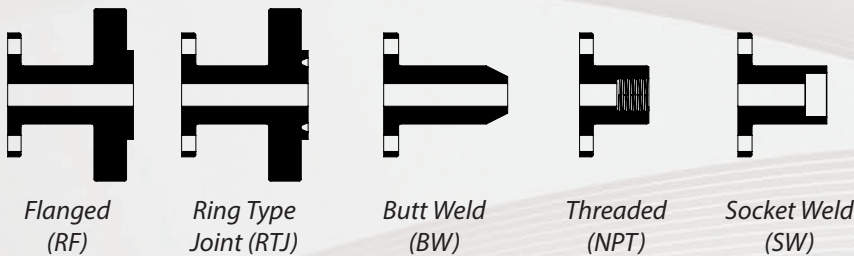
## Certifications and Compliance

- Sesto Valves are designed and manufactured to internationally recognized standards including but not limited to the following:
- Testing:** API 6A, API 598, API 17D, ISO 5208, BS 6755 Part I
  - Marking:** API 6A, MSS-SP-25, PED
  - Certifications:** API607, SIL, NACE, MR0175, PED, Fugitive Emissions

## Partial List of Applications

- Lease Automatic Custody Transfer units
- Aerospace Industry
- Gas Production Facilities
- Food & Beverage
- Regasification
- Chemical Injection Skids
- Industrial Chemical Processes
- Cargo and Bunkering Systems
- Petrochemical Plants

## End Connections



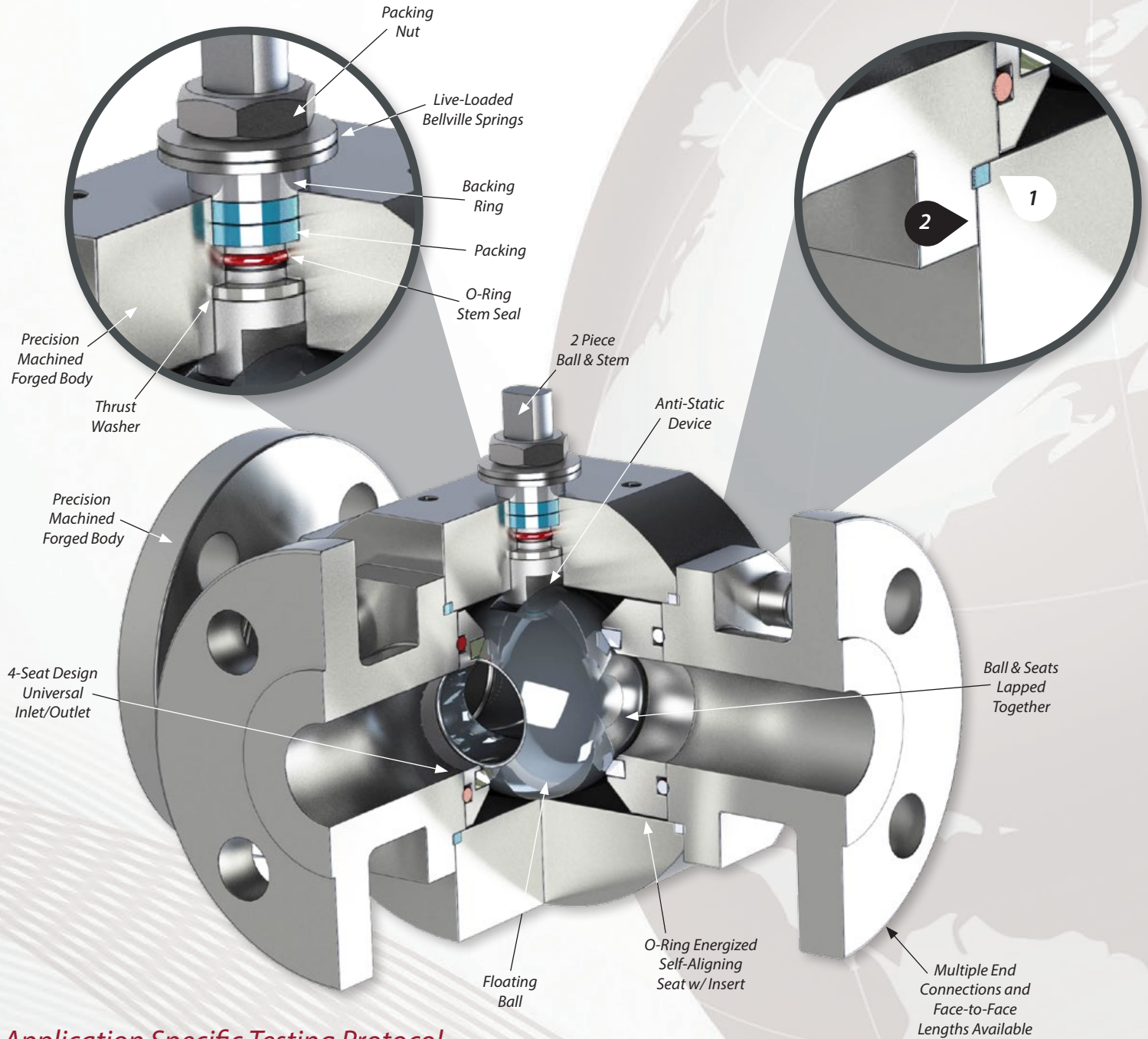
150# to 800#  
½" thru 4"



## Why Sesto?

Sesto Multiport Design	The Sesto Difference
Precision Machined Forged Body	The forged body eliminates the possibility of leakage due to poor castings. Precision finish machining keeps tight tolerances to ensure secure assembly for high pressure, critical applications.
4-Seat Design Standard	The 4-Seat design effectively isolates the main body cavity from process pressure, minimizing internal leakage and ensuring proper sealing regardless of flow direction.
Ball/Seat Lapping	Lapping seats to the ball ensures tight tolerances, improving shut-off sealing capability while lowering torque requirements.
Application Specific Testing Protocol	We build upon proven API 598 testing standards and customize our testing protocols to simulate actual service pressure conditions, guaranteeing valve performance before field installation.
Self-Aligning O-Ring Energized Seats	The self-aligning floating seat design allows for flexibility in materials of construction (end closures vs. seats vs. body), and ease of maintenance. This design also ensures positive shutoff between sealing components to improve sealing performance in varying conditions.

## Floating Multiport Design



## Application Specific Testing Protocol

To test the efficacy of multiport ball valve design and performance, Sesto Valves has developed detailed testing protocols that go above and beyond current industry practice. Standard production tests do not always accurately simulate the conditions for the varying scenarios of real world multiport valve applications. Additionally, there currently are no industry standards that govern the construction and testing of multiport valves. As such, portions of other standards need to be appropriately applied to these valves to assure valve integrity and performance in actual conditions. With the API 598 standard as the foundation, Sesto Valves builds upon this to customize multiport testing protocol according to an understanding of specific application requirements. Sesto Valves believes that using proven testing standards and applying them in the context of actual service conditions is the best way to accurately test multiport valves.



**Self-Aligning O-Ring Energized Seats**

Self-Aligning Floating 4-Seat Design isolates pressure from the center cavity and reduces torque.

**Double Body Seal**

(Providing Two Levels of Defense)

**1. Primary Body Seal (RPTFE)**

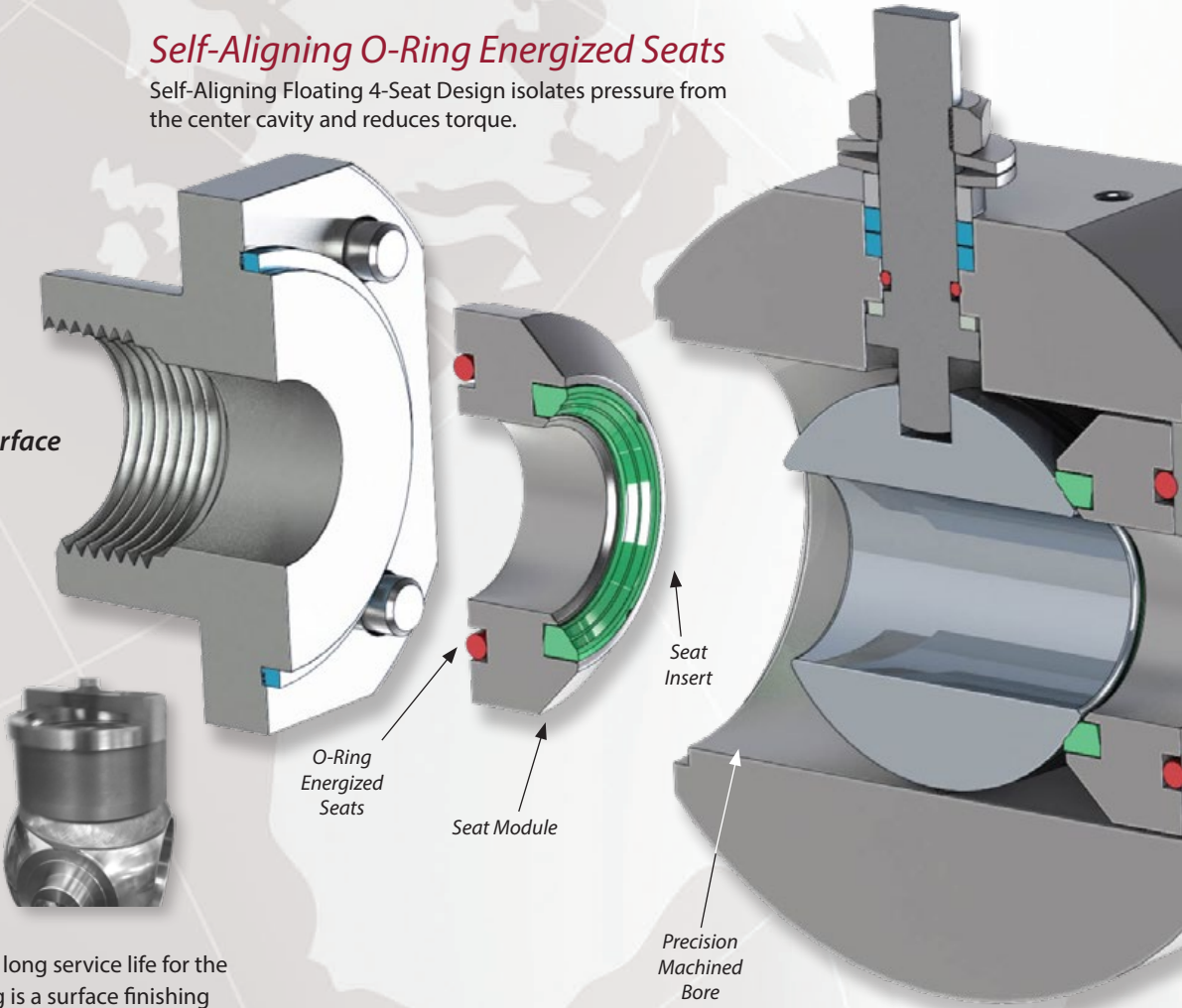
Soft seal for reliable sealing at all pressures

**2. Backup Metal-to-Metal Interface**

Forms a labyrinth seal with a torturous flow path.

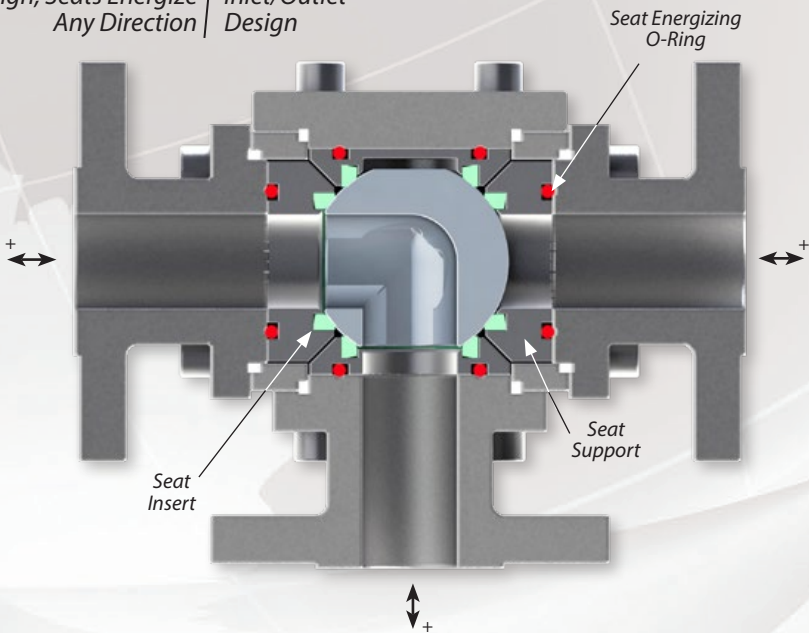
**Ball/Seat Lapping**

Lapped ball and seat sets are utilized when materials and sealing requirements dictate. This precise manufacturing process ensures the lowest operating torque and the tightest possible sealing capability of the ball and seats, while at the same time providing for an exceptionally long service life for the intended application. Lapping is a surface finishing process where extremely fine polishing compounds are used as the lapping agent to achieve remarkably close mating surfaces.



**Sesto Valves Exclusive**

Self Aligning 4-Seat Design, Seats Energize Any Direction | +Universal Inlet/Outlet Design



**4-Seat Design**

Multiport ball valve applications can present unique challenges for reliable valve sealing. With three or more ports, the valve must be able to seal in at least two different positions. To successfully achieve this requires either a designated flow direction or a seat design that allows for sealing from multiple directions, even in trunnion designs with self-relieving seats. This can be difficult - particularly for T-ported balls or floating balls - because any port could potentially be an inlet and the high-pressure source could be on either side of the ball. To realize this design, Sesto Valves has engineered seat solutions with floating, spring-energized and pressure-energized characteristics customized to each application. Valve sealing mechanics and materials are optimized to allow for reliable positive shutoff in varying conditions, regardless of flow direction.



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Rev: Feb. 28, 2019