

**TRUNNION  
MULTIPOINT**

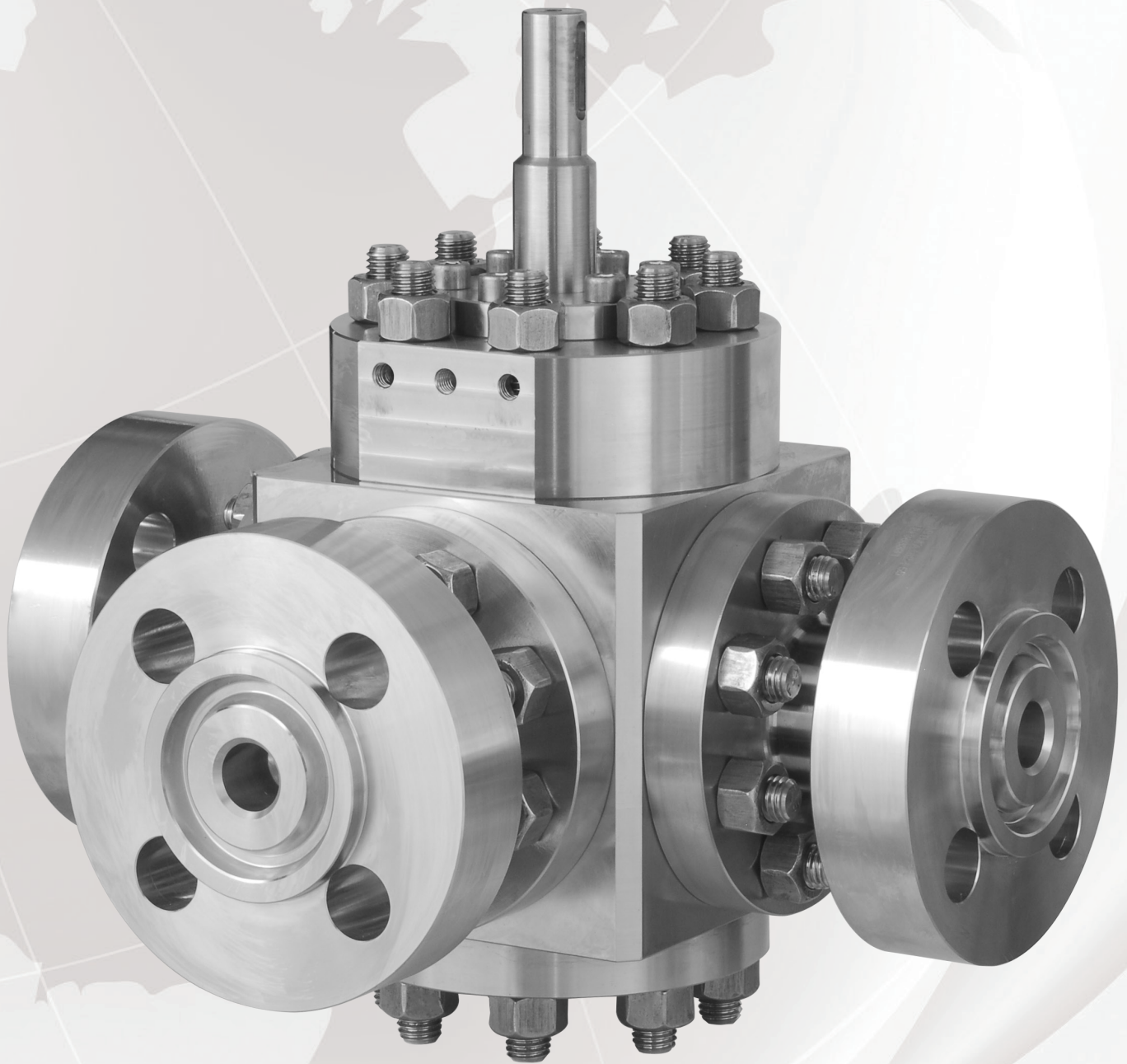
**PED**



**NACE**



**SIL2**  
Safety Integrity Level



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# Introduction



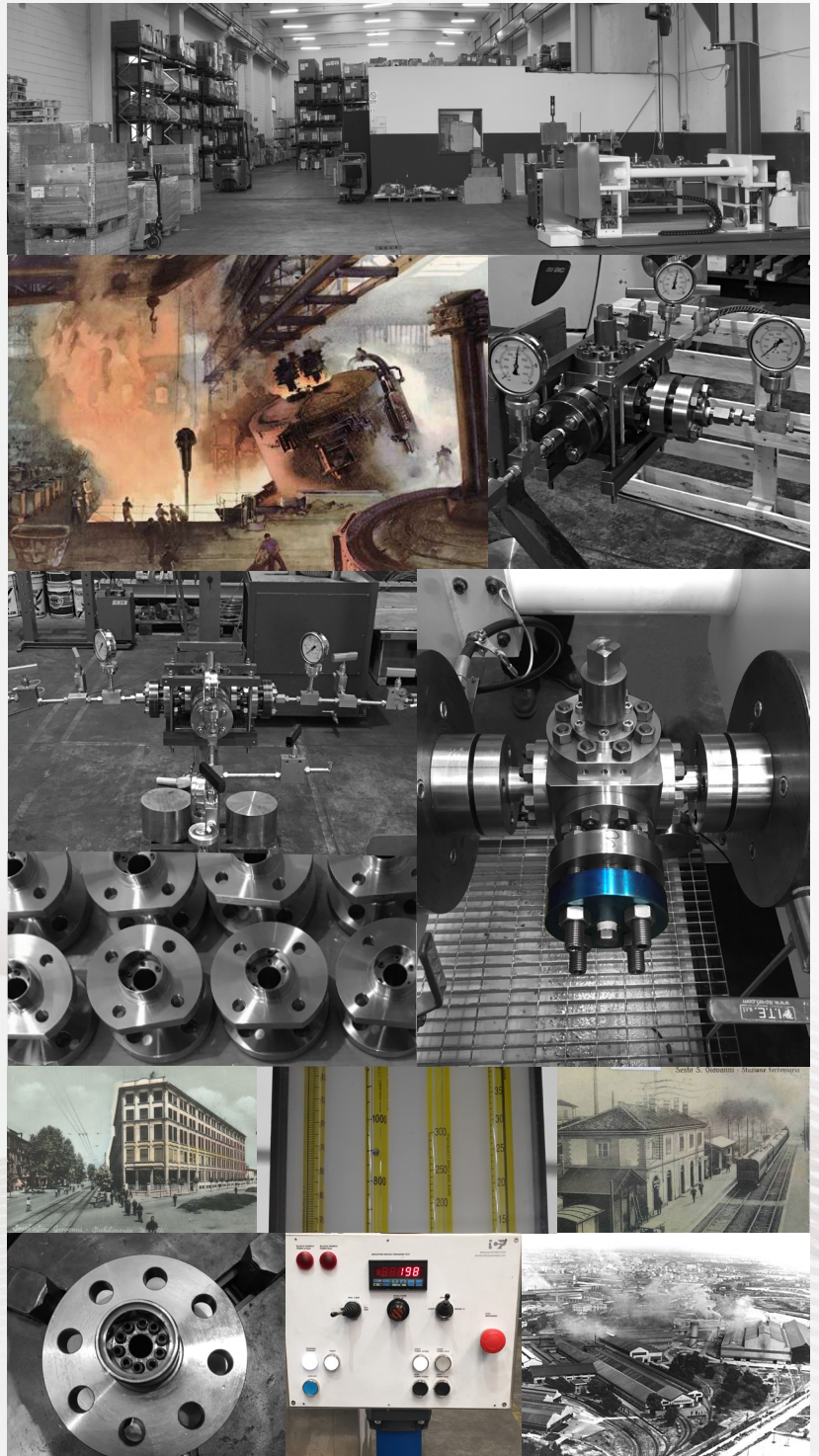
Sesto Valves is a premium high performance ball valve manufacturer headquartered in Sesto San Giovanni, Italy. We source only the best materials from our global partners to ensure quality and competitive pricing.

Our valves are 100% manufactured and tested in Italy so we can control our product quality and provide easy traceability. Sesto Valves offers a full line-up of floating or trunnion mounted ball valves, 3-way multiport ball valves, fully welded ball valves and double-block-and-bleed ball valves suitable for any application ranging from standard duty to critical service, including exotic materials and super alloys.

Our products can be supplied as simple manual shutoff valves or with customized automation and controls for unique requirements. Focused on the chemical, petrochemical and energy industry, Sesto Valves provides solutions for exploration, production and distribution as well as a wide variety of industrial applications.



CITY OF SESTO SAN GIOVANNI



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## Features and Benefits

- Class 150 to Class 2500
- Size Range ½" thru 24" (Class Dependent)
- 3-Way and 4-Way Configurations (T, L, Double L)
- 4-Seat Guided Design, Universal Inlet/Outlet
- Full and Reduced Bore
- Single Body Construction
- Fire-Safe Design API 607
- 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
- Custom End Connections and Face-to-Face Lengths Available

## 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. Our customizable spring configurations and guided seat design gives the option for a carbon steel body and end enclosures with a duplex or stainless seat module. 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 Trunnion 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:

**Fire Testing:** API 607, API 6FA, BS 6755 Part II

**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, ISO 15848

## Partial List of Applications

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

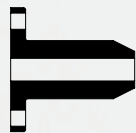
## End Connections



Flanged  
(RF)



Ring Type  
Joint (RTJ)



Butt Weld  
(BW)

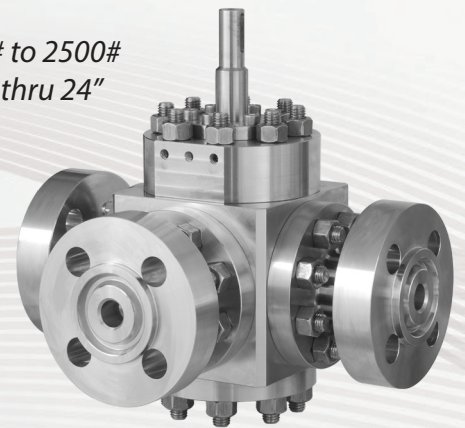


Threaded  
(NPT)



Socket Weld  
(SW)

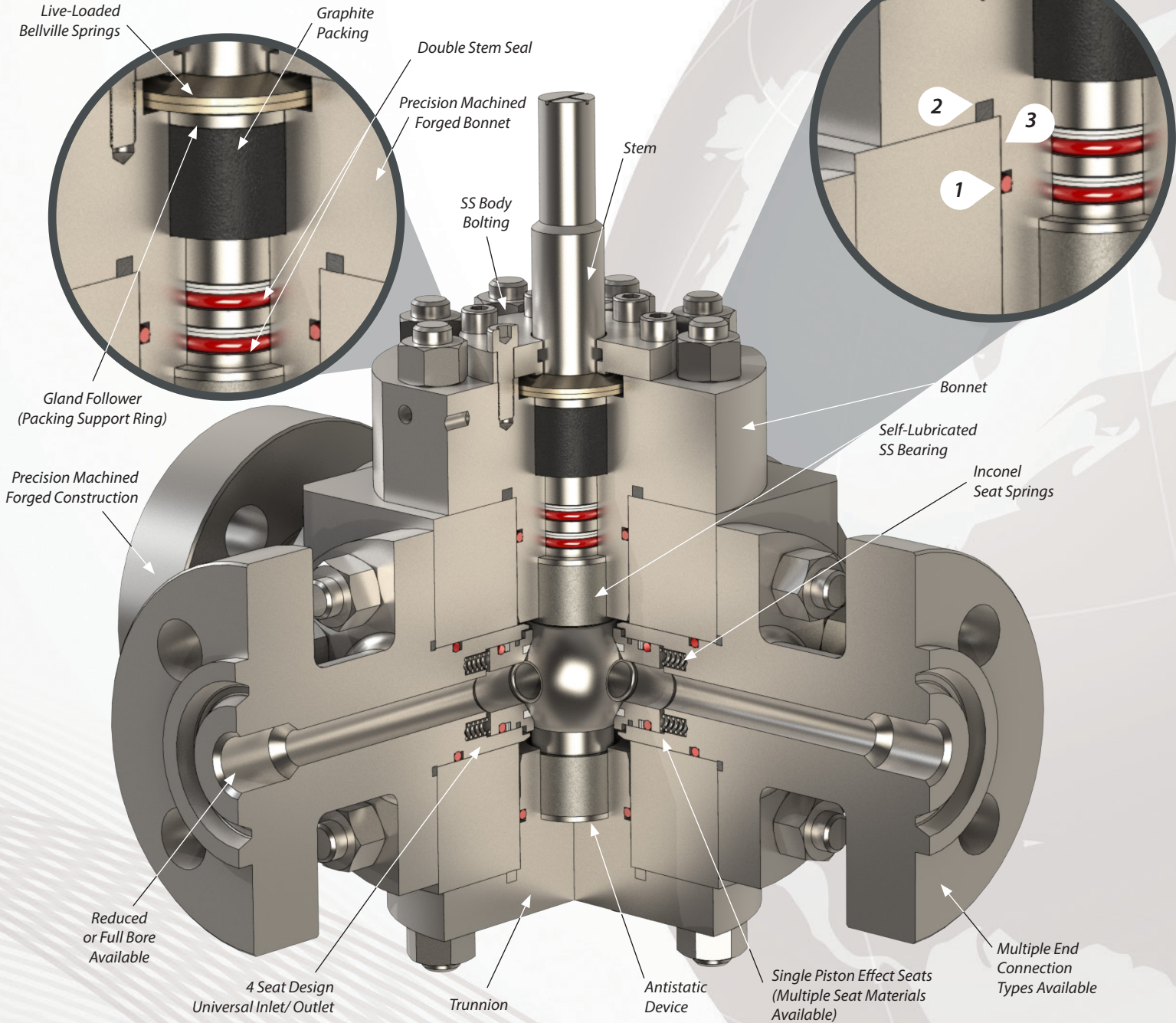
150# to 2500#  
½" thru 24"



## Why Sesto?

Sesto Multiport Design	The Sesto Difference
Precision Machined Forged Body	The forged body eliminates the possibility of leakage due to casting defects. 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 the 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.
Guided Seat Design	The guided seat design allows for flexibility in materials of construction (end closures vs. seats vs. body), customizable spring configurations for specific pressure relief set points, and ease of maintenance. This design also ensures better concentricity between sealing components to improve sealing performance.

## Trunnion Multiport Design



## Application Specific Testing Protocol

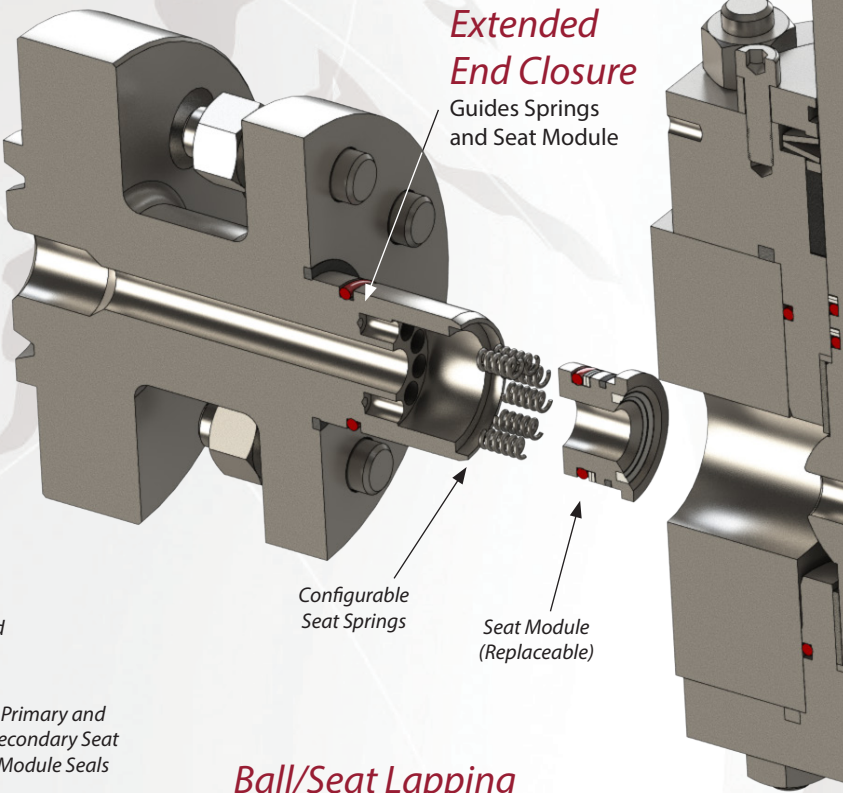
To test the efficacy of multiport ball valve design and performance, Sesto Valves has developed detailed testing protocols that go above and beyond current industry practice. Standard production tests do not always accurately simulate the conditions for the varying scenarios of real world multiport valve 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.



**Triple Body Seal**

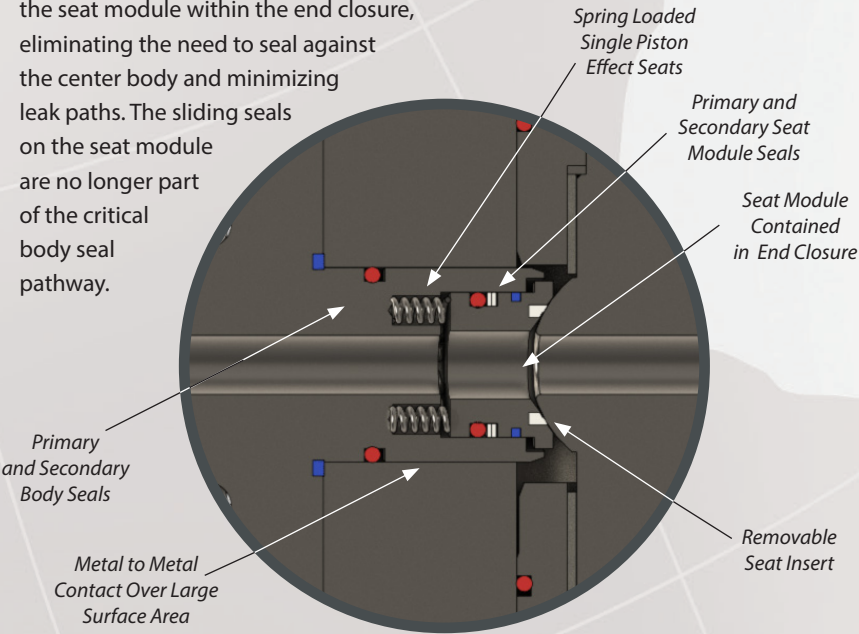
(Providing Three Levels of Defense)

- 1. Primary Body Seal (RPTFE)**  
Soft seal for reliable sealing at all pressures
- 2. Secondary Body Seal (Graphite)**  
Provides a fire safe secondary seal.
- 3. Backup Metal-to-Metal Interface**  
Forms a labyrinth seal with a torturous flow path.



**Guided Seat Design**

Sesto Valves Guided Seat Design surrounds the seat module within the end closure, eliminating the need to seal against the center body and minimizing leak paths. The sliding seals on the seat module are no longer part of the critical body seal pathway.



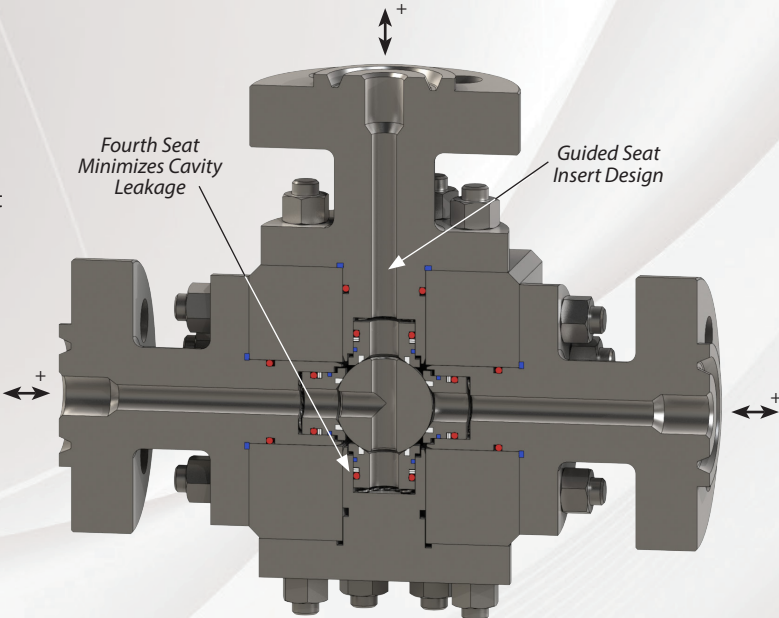
**Ball/Seat Lapping**

All Sesto Multiport Ball Valves utilize lapped ball and seat sets. 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 extremely long service life for the intended application. Lapping is a surface polishing process where compounded powders are used as the lapping agent to achieve a matched fit.



**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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