

CRYOGENIC

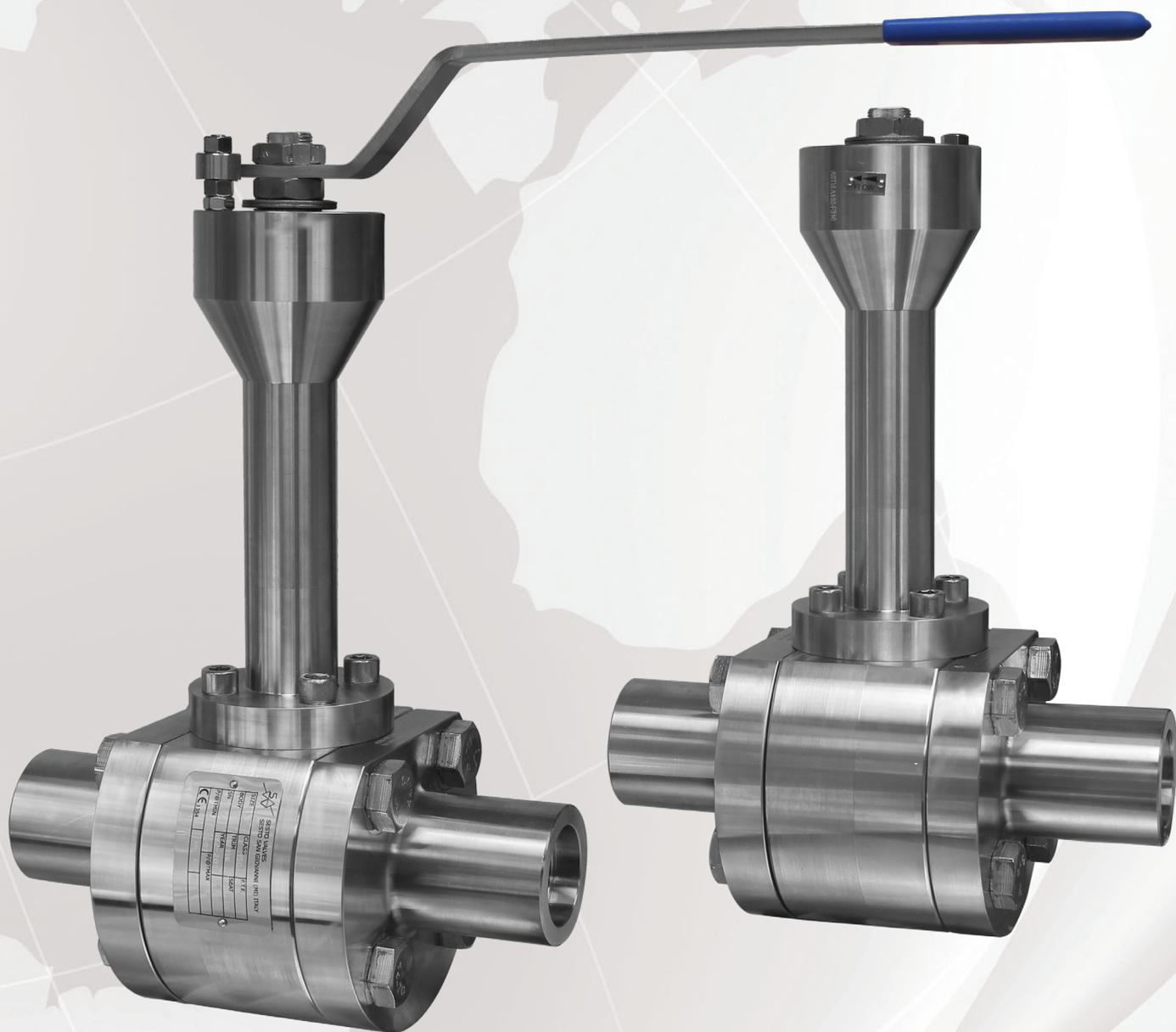
PED



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 ¼" thru 12" (Class Dependent)
 Floating and Trunnion, Full and Reduced Bore
 Body Wall Thickness ASME B16.34, Forged or Cast Versions
 Cryogenic tested to -196°C (-320°F)
 Fire-Safe Design API 607
 Vented Ball Standard
 Blowout Proof, Low Torque Guided Stem Design
 Live-Loaded Packing and Anti-Static Capable
 Fugitive Emissions ISO 15848
 PTFE, TFM, CTFM, PCTFE (KEL-F®) and Metal Seats Available
 Valves are degreased, cleaned and packaged prior to shipping
 Custom Face-to-Face Lengths Available per Customer Requirement
 Manual, Electric, Pneumatic, or Electro-Hydraulic Operators Available

Partial List of Applications

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

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.

Why Sesto?

Sesto "True Cryo" Solution	The Sesto Difference
Forged 316 Body	The forged body eliminates the possibility of any leaks due to casting defects.
1-PC Extended Stem	Our stem is made of one solid piece extended to the valve body. The packing is insulated and there is no leak path in the extension. Our proprietary extension seal design helps maintain flow temperatures giving the end user energy savings.
PCTFE (KEL-F®) Seats lapped to the ball as standard	Our seats are lapped to the ball giving us very tight tolerance and shut-off while lowering our torques dramatically. Our seats do not leak.
Fully Tested Valves to -196°C (-320F)	We test our valves per industry standards and perform tests to Cryogenic Temperatures -196°C (-320°F) and then test again at ambient temperature with water.

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

150# to 2500#
¼" thru 12"

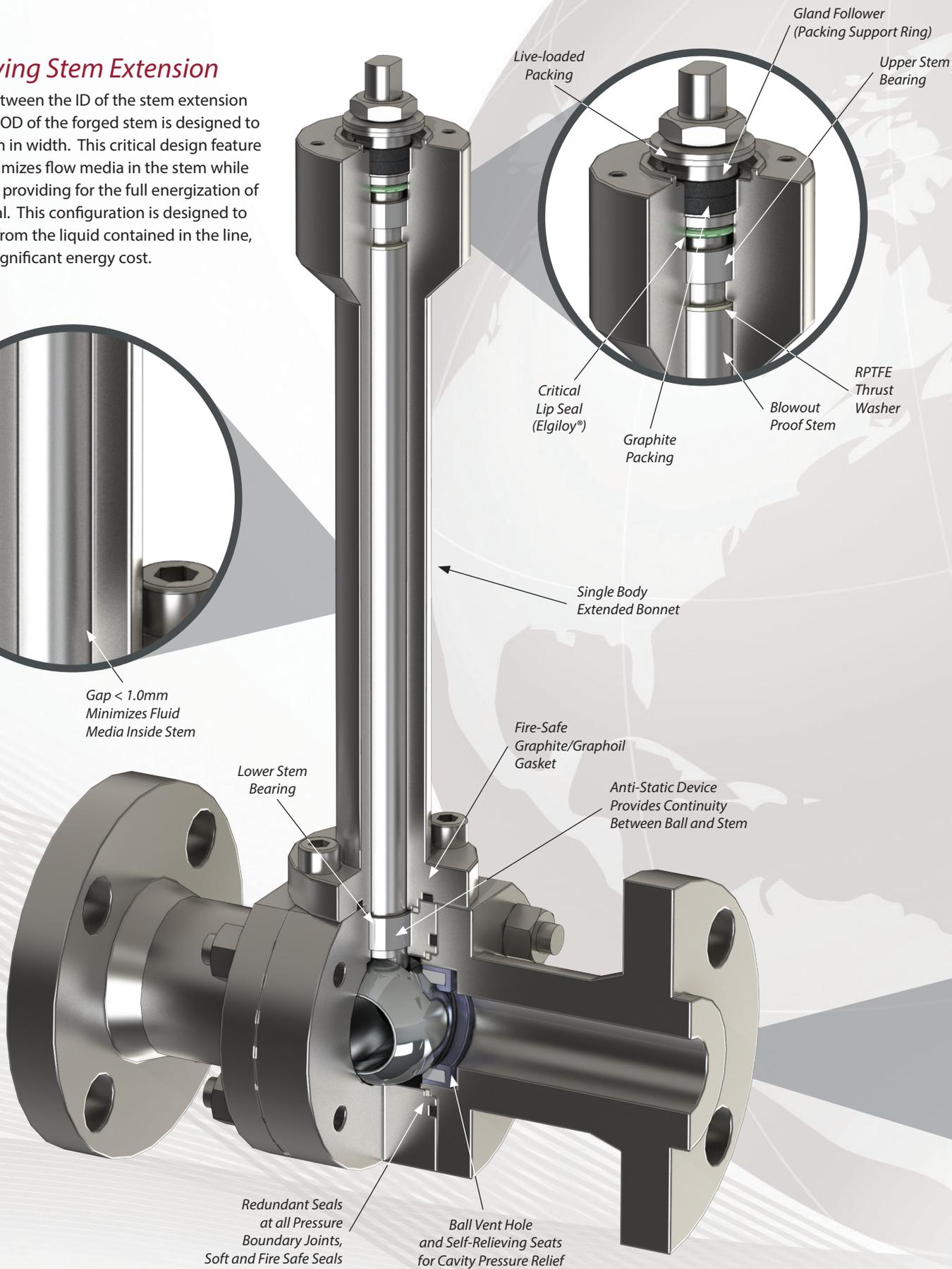


Energy Saving Stem Extension

The clearance between the ID of the stem extension housing and the OD of the forged stem is designed to be less than 1mm in width. This critical design feature significantly minimizes flow media in the stem while at the same time providing for the full energization of the critical lip seal. This configuration is designed to keep heat away from the liquid contained in the line, thereby saving significant energy cost.



Gap < 1.0mm
Minimizes Fluid
Media Inside Stem



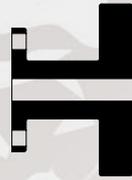
Live Loaded Lip Seal (Stem Packing)

Sesto cryogenic ball valves utilize the safest and most reliable stem packing technology available; don't be fooled by adjustable packing systems. Referred to as the Live-Loaded-Lip-Seal, whereby the packing and bearing "system" (see diagram) is live loaded and locked into place by high strength Belleville washers, and then critically backed up by the most technologically advanced high pressure spring energized lip seal (Elgiloy®). The lip seal is the heart of the technology, providing the safest and most reliable packing system on the market today.

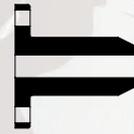
End Connections



Flanged
(RF)



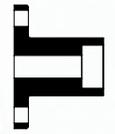
Ring Type
Joint (RTJ)



Butt Weld
(BW)



Threaded
(NPT)



Socket Weld
(SW)

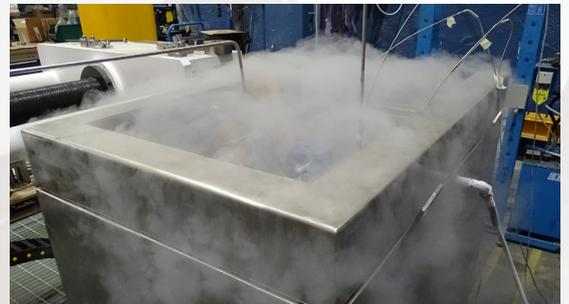
Ball/Seat Lapping

All Sesto cryogenic 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 grinding/polishing process where loose abrasive powders are used as the lapping agent to achieve extremely tight tolerances.



Cryogenic Testing

Sesto Valves designs and manufactures true cryogenic service ball valves in full compliance with British Standard BS 6364 "Specification for Valves for Cryogenic Service" which includes proof of design testing at severe low temperatures of -196°C (-321°F). Detailed quality inspections are performed before and after cryo testing, and valves are re-assembled and tested again at ambient temperatures for verification.



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.



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Rev: 05.24.2017