

INSTRUMENT BALL VALVE
1/4" - 3/4" NPT
1/4" - 3/4" Dual Ferrule Tube
0 – 6000 Psig (413 Bar)

Description

Series IBV Instrument Ball Valves offer reliable 1/4-turn ON/OFF flow control for pressures up to 6,000 Psig (413 bar). These valves feature a Micro-Finished Floating Ball design to provide a positive seal in both directions. Series IBV Instrument Ball Valves also feature a “straight-through” flow path to ensure high flows with minimum pressure drop. The valves are designed to operate with a low operation torque while providing a long service life. All valve configurations can be panel mounted.

Features

- Bi-Directional
- Straight-Through Flow Path
- Micro-Finished Floating Ball
- Large Orifices for High Flow Efficiency
- Handle Orientation Indicates Flow
- NPT, O’ring Face Seal, or Dual Ferrule Tube Connections
- Adjustable Stem Packing for in-line maintenance
- 100% Factory Tested

- **3D CAD MODELS AVAILABLE ONLINE**

Technical Data

Pressure Rating: 6,000 PSI (413 Bar) at 100°F (3:1 SF)¹
 Per NFPA 52 (2013): 4,750 PSI (328 Bar)
 Per ASME B31.3 (2012): 4,400 PSI (303 Bar)
 Temperature Rating: -65° to 200°F (-54° to 93°C)
 Leakage: < 0.1 SCCM @ 2,100 PSIG (145 Bar)
 - 100% Factory Tested for Leakage
 Note: For a leak-free stem seal at pressures higher than 2,100 PSI or after prolonged use, additional tightening of the stem packing may be required.
 Flow Coefficients: per size, see Dimensional Data Table

Materials of Construction

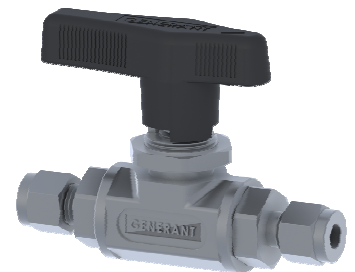
| Component | Material |
|--|---|
| Body | 316 Stainless Steel, ASTM A182 |
| Valve Stem, Valve Ball, Tube Ends, Nuts, Washers, Ferrules | 316 Stainless Steel, ASTM A479 |
| Ball Seat Assembly | 316 Stainless Steel, ASTM A479 and PCTFE ASTM D1430 |
| Seat Spacer, Stem Packing, O’Rings | PTFE, ASTM D1710 |
| Handle with Insert | ABS with Stainless Steel Insert |
| Set Screw | 18-8 Stainless Steel |
| Face Seal O’Rings ² | Standard – FKM |
| | Option “H” - HNBR |

¹ for sustained use at temperatures higher than 100°F, pressure rating may be affected, consult factory.
²other O’Ring materials available, consult factory.

Note: All valves lubricated with perfluorinated polyether (PFPE)



IBV-8T

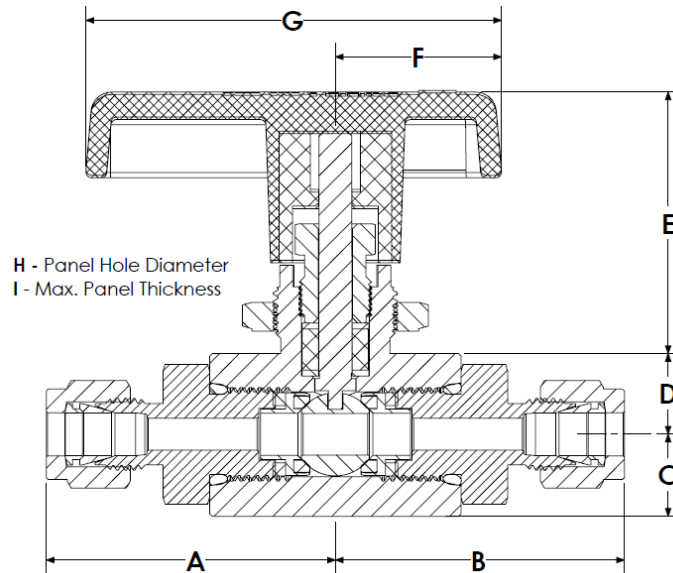


IBV-4T

IBV

SERIES

INSTRUMENT BALL VALVE



Dimensional Data

| MODEL CODE | PORT CONFIGURATION (INLET AND OULET) | FLOW COEFF. (Cv) | VALVE ORIFICE (in) | Dimensions in inches (mm) | | | | | | | |
|------------|--------------------------------------|------------------|--------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| | | | | A, B | C | D | E | F | G | H | I |
| IBV-4T | 1/4" Bi-Lok | 1.05 | 0.187 | 1.50 (38.1) | 0.49 (12.4) | 0.48 (12.2) | 1.56 (39.6) | 1.00 (25.4) | 2.50 (63.5) | 0.77 (19.6) | 0.20 (5.1) |
| IBV-4F | 1/4" NPT Female | 2.35 | 0.250 | 1.50 (38.1) | | | | | | | |
| IBV-6T | 3/8" Bi-Lok | 2.35 | 0.250 | 1.80 (45.7) | | | | | | | |
| IBV-6FS | 3/8" Face Seal | 2.35 | 0.250 | 1.50 (38.1) | 0.72 (18.3) | 0.71 (18.0) | 1.73 (43.9) | 1.25 (31.8) | 3.50 (88.9) | 0.90 (22.9) | 0.35 (8.9) |
| IBV-6F | 3/8" NPT Female | 6.40 | 0.406 | 2.25 (57.1) | | | | | | | |
| IBV-8T | 1/2" Bi-Lok | 6.40 | 0.406 | 2.65 (67.3) | | | | | | | |
| IBV-8F | 1/2" NPT Female | 6.40 | 0.406 | 2.45 (62.2) | 0.72 (18.3) | 0.71 (18.0) | 1.73 (43.9) | 1.25 (31.8) | 3.50 (88.9) | 0.90 (22.9) | 0.35 (8.9) |
| IBV-8FS | 1/2" Face Seal | 5.60 | 0.375 | 2.25 (57.1) | | | | | | | |
| IBV-12T | 3/4" Bi-Lok | 6.40 | 0.406 | 2.65 (67.3) | | | | | | | |
| IBV-12F | 3/4" NPT Female | 6.40 | 0.406 | 2.65 (67.3) | | | | | | | |

Notes: Dimensions shown with Bi-Lok nuts finger-tight. Dimensions are in inches (millimeters), for reference only and subject to change. Restrictions in inlet or outlet piping may reduce flow. NPT Threads per ASME B1.20.1. Face Seal Connections per SAE J1453.

How to Order

IBV - 8T

SERIES

IBV - Instrument Ball Valve

PORT CONFIGURATION

- 4T - 1/4" Bi-Lok
- 4F - 1/4" NPT Female
- 6T - 3/8" Bi-Lok
- 6FS - 3/8" Face Seal*
- 6F - 3/8" NPT Female
- 8T - 1/2" Bi-Lok
- 8F - 1/2" NPT Female
- 8FS - 1/2" Face Seal*
- 12T - 3/4" Bi-Lok
- 12F - 3/4" NPT Female

* - Face Seal Connections come standard with FKM O-Rings.

Natural Gas Service

HNBR O-Rings are recommended for Face Seal Connections in Natural Gas Service. Specify "-H" suffix to indicate HNBR Face Seal O-Rings.

PROPER COMPONENT SELECTION – When specifying a component, the total system design must be considered to ensure safe and trouble-free performance. Intended component function, materials compatibility, pressure ratings, installation, environment and maintenance are the responsibility of the system designer.

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1865 Route 23 South PO Box 768 Butler, New Jersey 07405 973.838.6500 Fax 973.838.4888