

1/2" Low Pressure Fill & Drain Valve

VACCO Industries maintains a product line of fill and drain valves designed exclusively to satisfy the needs of the space industry. The 1/2" Low Pressure Propellant Fill and Drain Valve has high flow capability with a pressure drop of 20 psid at 0.30 pounds per second.

The valve is operated by rotating the actuation nut, which actuates the stainless steel valve stem axially to open and close the valve. A tungsten carbide ball captured to the stem seals against a seat in the 304L CRES body. The valve is operated using standard tools.

A unique feature of VACCO fill and drain valves is the ability to be field serviced. The valves can be disassembled and reassembled easily without removing them entirely out of the system. The low pressure valve, capable of up to 400 psig operating pressure, features an external cap for triple redundant sealing. The valve is flight qualified and has extensive heritage.



SPACE

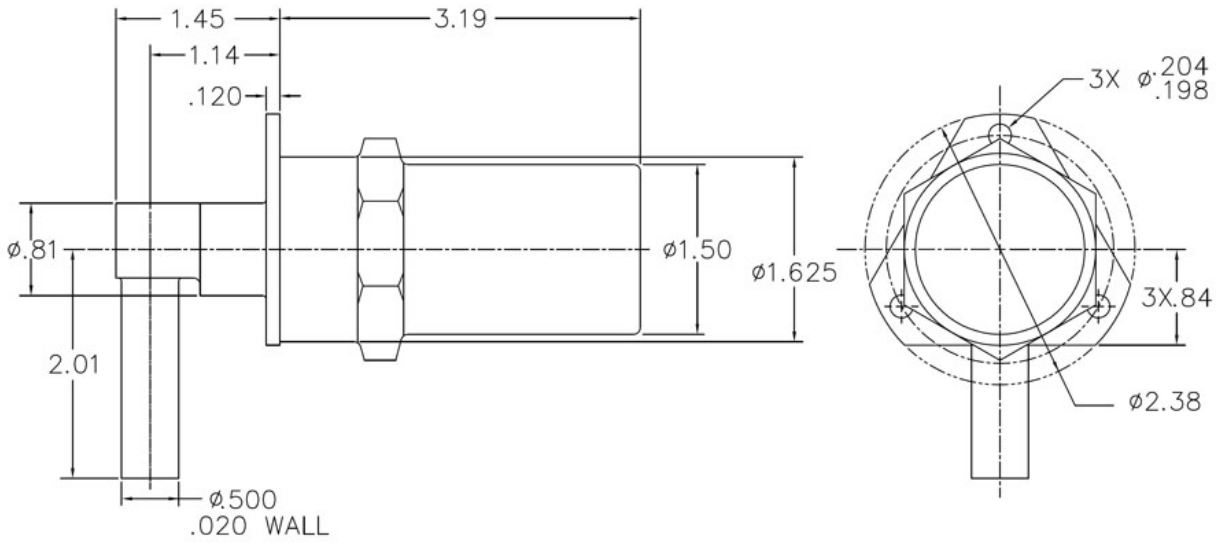
Features

- 400 psig operating pressure
- Compatible with N₂H₄
- Flight qualified
- 15-5PH stainless steel stem, tungsten carbide ball, 304L CRES body
- Metal-to-metal primary seat
- Field serviceable
- High flow, low pressure drop rate
- Triple seal design (capped) against external leakage when closed and capped
- All seal leakage 1.0×10^{-6} SCCS GHe at closed position
- Inlet fitting per SAE-AS1098G8 (KC105) with AS4329 (KC150) fitting cap assembly
- 0.500" diameter outlet tube
- 680 grams (1.50 lb) max

Operating Parameters

Operating Pressure.....	400 psig	Media	N ₂ H ₄
Proof Pressure	1,000 psig	Flow/Pressure Drop	20 psid
Burst Pressure	1,600 psig		@ 0.30 lbs/sec H ₂ O
Operating Life Cycles.....	150 open/close	Operating Temperature.....	+7°C to +32°C
Internal Leakage	1.0 x 10 ⁻⁴ SCCS GHe	Random Vibration	14.1 G(rms), 3 min/axis
	@ 400 psig	Pyro-shock	600 G peak @ 1800 Hz
External Leakage	1.0 x 10 ⁻⁴ SCCS GHe		
	@ 400 psig		

Performance characteristics are based on customer requirements. As such, they are not representative of component capabilities or limitations.



All dimensions in inches.

1/4" Low Pressure Fill & Drain Valve

VACCO Industries maintains a product line of fill and drain valves designed exclusively to satisfy the needs of the space industry. The 1/4" Low Pressure Propellant Fill and Drain Valve has a stainless steel body. It is operated by rotating the actuation nut, which actuates the titanium valve stem axially to open and close the valve. A tungsten carbide ball captured to the stem seals against a seat in the 304L CRES body. The valve is operated using standard tools.



A unique feature of VACCO fill and drain valves is the ability to be field serviced. The valves can be disassembled and reassembled easily without removing them entirely out of the system. The low pressure valve, capable of up to 400 psig operating pressure, features an external cap for triple redundant sealing. The valve is flight qualified and has extensive heritage.

Features

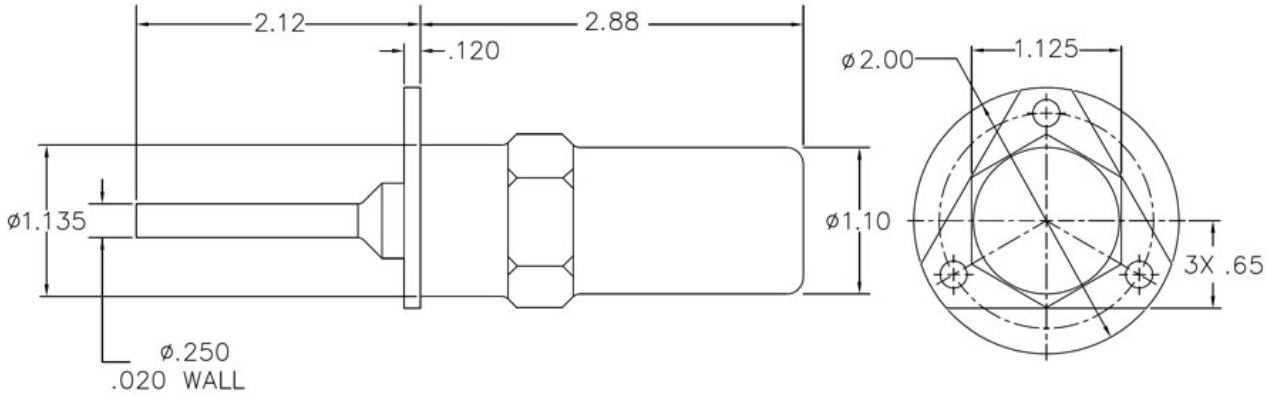
- 400 psig operating pressure
- Compatible with GN₂, N₂H₄
- Flight qualified
- 15-5PH stainless steel stem, tungsten carbide ball, 304L CRES body
- Metal-to-metal primary seat
- Field serviceable
- Triple seal design (capped) against external leakage when closed and capped
- All seal leakage 1.0×10^{-6} SCCS GHe at closed position
- Inlet fitting per SAE-AS1098G4 (KC105) with AS4329 (KC150) fitting cap assembly
- 0.250" diameter outlet tube
- 275 grams (0.60 lb) max

Operating Parameters

Operating Pressure 400 psig
Proof Pressure 1,000 psig
Burst Pressure 1,600 psig
Operating Life Cycles 150 open/close
Internal Leakage 1.0×10^{-6} SCCS GHe @ 400 psig
External Leakage 1.0×10^{-4} SCCS GHe @ 400 psig

Media GN₂, N₂H₄
Flow/Pressure Drop 15 psid @ 20.7 SCFM GN₂
Operating Temperature +7°C to +32°C
Random Vibration 14.1 G(rms), 3 min/axis
Pyro-Shock 600 G peak @ 1800 Hz

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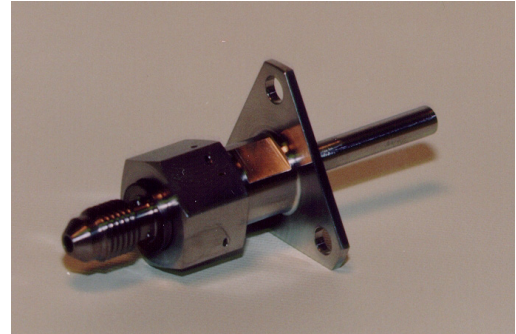


All dimensions in inches.

1/4" Low Pressure Fill & Drain Valve

VACCO Industries maintains a product line of fill and drain valves designed exclusively to satisfy the needs of the space industry. The 1/4" Low Pressure Propellant Fill and Drain Valve is operated by rotating the actuation nut, which actuates the titanium valve axially to open and close the valve. A tungsten carbide ball captured to the stem seals against a seat in the 304L CRES body. The valve is operated using standard tools.

A unique feature of the VACCO Fill and Drain Valve is the ability to be field serviced. The valves can be disassembled and reassembled easily without removing them entirely out of the system. The valve is fully qualified and has extensive flight heritage.



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Features

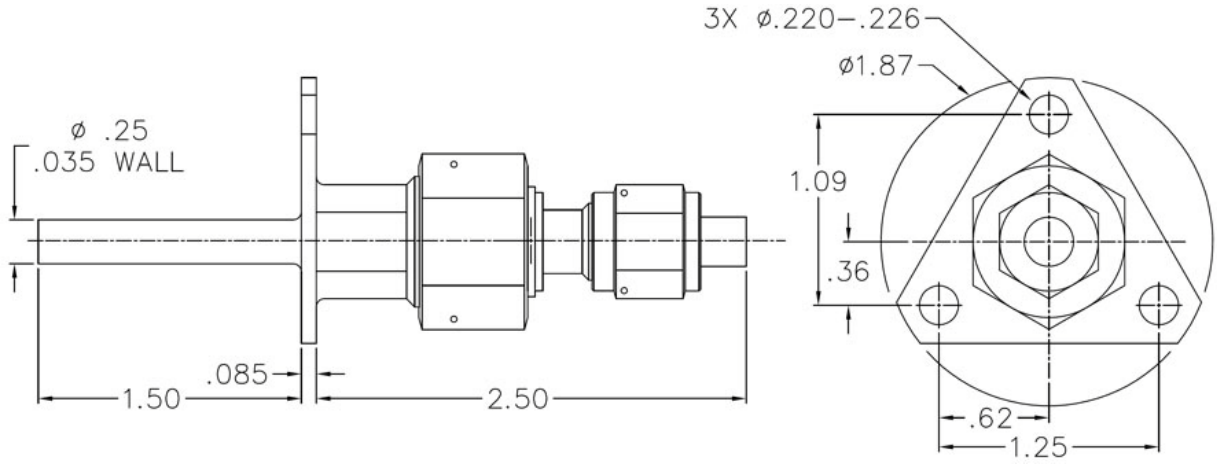
- 250 psig operating pressure
- Compatible with MMH, H₂O, IPA, N₂O₄
- Flight qualified
- Titanium stem, tungsten carbide ball, 304L CRES body
- Metal-to-metal primary seat
- Field serviceable
- 0.250" diameter outlet tube
- Redundant seals against external leakage when closed and capped
- All seal leakage 1.0×10^{-6} SCCS GHe at closed position
- Inlet fitting per SAE-AS4395G04 (V1E10433-01), SAE-AS4395G03 (V1E10433-02) with AN929 fitting cap assembly
- 113 grams (0.25 lb) max

Operating Parameters

Operating Pressure 250 psig
Proof Pressure 375 psig
Burst Pressure 1,000 psig
Operating Life Cycles 100 open/close
Internal Leakage 1.0×10^{-6} SCCS @ 250 psig
External Leakage 1.0×10^{-5} SCCS @ 250 psig

Media MMH, H₂O, IPA, N₂O₄
Flow/Pressure Drop 20 psid @ 0.15 lb/sec H₂O
Temperature
 Operating -7°C to +55°C
 Non-operating -40°C to +60°C
Random Vibration 12.1 G(rms), 1 min/axis

Performance characteristics are based on customer requirements. As such, they are not representative of component capabilities or limitations.



All dimensions in inches.