1/4” High Pressure Gas Fill & Drain Valve

V1E10430-01

SPACE

VACCO Industries maintains a product line of fill and drain valves designed exclusively to satisfy the needs of the space industry. The High Pressure Gas 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 high pressure gas valve is fully qualified and has extensive flight heritage.

Features

- 4,000 psig operating pressure
- Compatible with GHe and GN_2
- Flight qualified
- Titanium stem, tungsten carbide ball, 304L CRES body
- Metal-to-metal primary seat
- Field serviceable
- Redundant seals against external leakage when closed and capped
- All seal leakage <1.0 x 10^{-6} SCCS GHe at closed position
- Inlet fitting per SAE-AS4395G04 with AN929 fitting cap assembly
- 0.250” diameter outlet tube
- 113 grams (0.25 lb) max

Operating Parameters

Operating Pressure	4,000 psig
Proof Pressure	6,000 psig
Burst Pressure	12,000 psig
Internal Leakage	1.0 x 10^{-6} SCCS GHe @ 4,000 psig
External Leakage	1.0x10^{-5} SCCS GHe @ 4,000 psig
Operating Life Cycles	100 open/close
Media	GHe, GN_2
Flow/Pressure Drop	20 psid @ 51 SCFM GHe
Temperature	
Operating	-7°C to +55°C
Non-operating	-40°C to +60°C
Random Vibration	17.1 G(rms), 2 min/axis

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

VACCO Industries | 10350 Vacco Street | South El Monte, CA 91733
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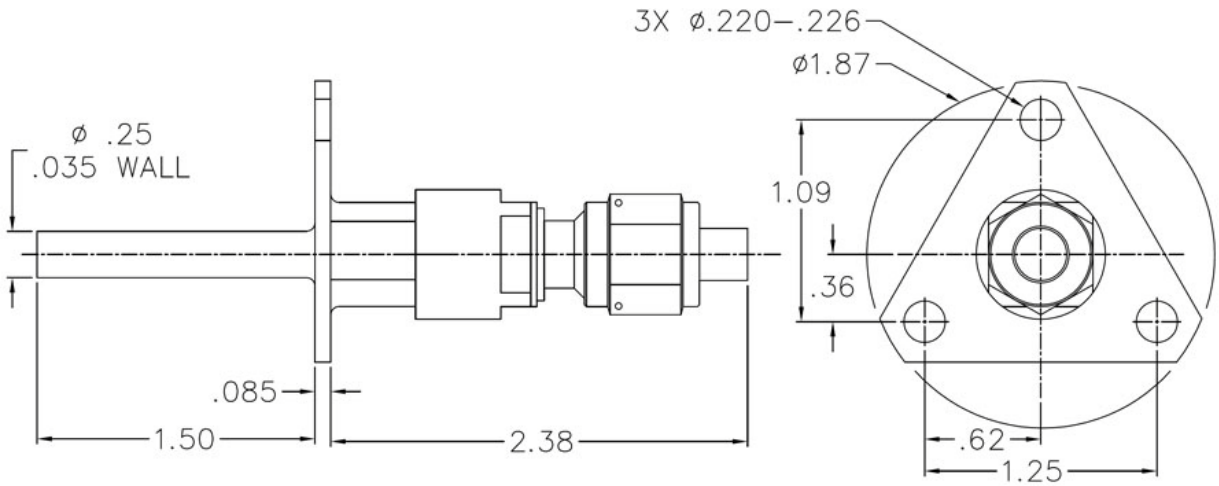

All dimensions in inches.

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1/4” High Pressure Gas Fill & Drain Valve

V1E10811-01

SPACE

VACCO Industries maintains a product line of fill and drain valves designed exclusively to satisfy the needs of the space industry. The 1/4” High Pressure Gas Fill and Drain Valve 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 machined into the titanium 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 high pressure gas valve is fully qualified and has extensive flight heritage.

Features

- 4,495 psia operating pressure
- Compatible with GHe, Xenon
- Flight qualified
- Titanium stem and body, tungsten carbide ball
- Metal-to-metal primary seat
- Field serviceable
- Redundant seals against external leakage when closed and capped
- All seal leakage <1.0 x 10^{-6} SCCS GHe at closed position
- Inlet fitting per SAE-AS4395G02 with AN929 fitting cap assembly
- 0.250” diameter outlet tube
- 113 grams (0.25 lb) max

Operating Parameters

Operating Pressure	4,495 psia
Proof Pressure	6,742 psia
Burst Pressure	11,237 psia
Operating Life Cycles	100 open/close
Internal Leakage	1.0 x 10^{-6} SCCS GHe @ 4,495 psia
External Leakage	2.8 x 10^{-4} SCCS GHe @ 4,495 psia
Media	GHe, Xenon
Flow/Pressure Drop	20 psid @ 40 SCFM GHe
Operating Temperature	-35°C to +55°C
Random Vibration	3 min/axis
Parallel to Mounting Plane	20.7 G(rms)
Perpendicular to Mounting Plane	56.3 G(rms)

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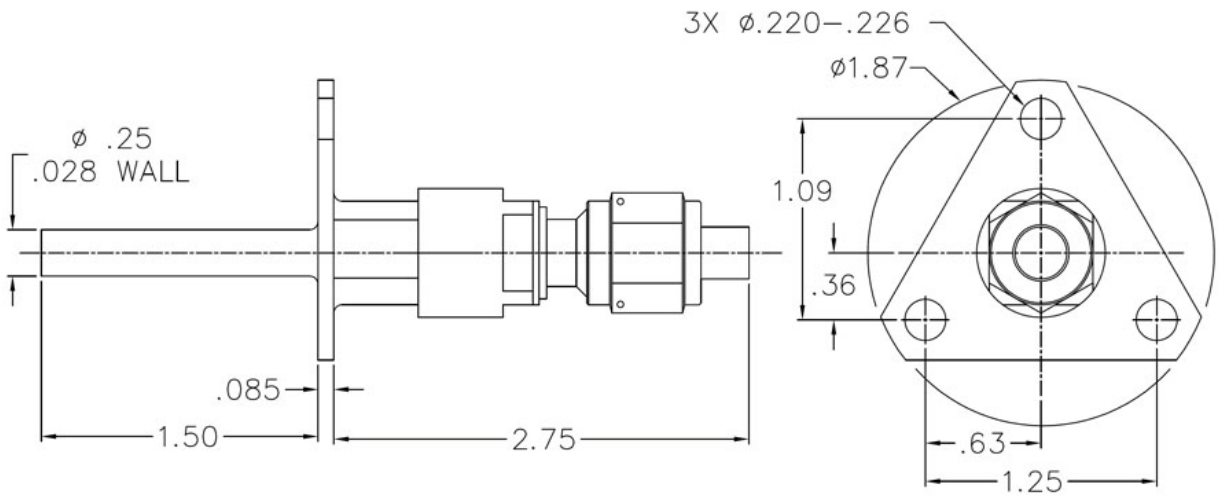

All dimensions in inches.

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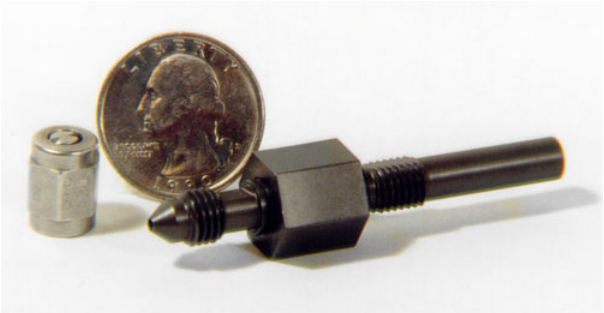
1/8” Miniature Fill & Drain Valve

V1E10845-01

SPACE

VACCO Industries maintains a product line of fill and drain valves designed exclusively to satisfy the needs of the space industry. The 1/8” Miniature Fill and Drain Valve has a titanium body. It is operated by rotating the actuation nut, which actuates the stainless steel valve stem axially to open and close the valve. 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 high pressure miniature valve, capable of up to 10,000 psia operating pressure, features a low weight of 30 grams (0.07 lb). The valve is fully qualified and has extensive heritage.



Features

- 10,000 psia operating pressure
- Compatible with GHe, GN_2, Argon
- Flight qualified
- 17-4PH stainless steel stem, titanium body
- Metal-to-metal primary seat
- Field serviceable
- Redundant seals against external leakage when closed and capped
- All seal leakage <1.0 x 10^{-5} SCCS GHe at closed position
- Inlet fitting per SAE-AS4395E02 with AN929 fitting cap assembly
- 0.125” diameter outlet tube
- 30 grams (0.07lb) max

Operating Parameters

Operating Pressure	10,000 psia
Proof Pressure	15,750 psia
Burst Pressure	26,250 psia
Operating Life Cycles	50 open/close
Media	GHe, GN_2, Argon
Internal Leakage	5.0 x 10^{-5} SCCS GHe @ 10,000 psia
External Leakage	1.0 x 10^{-4} SCCS GHe @ 10,000 psia
Temperature	-34°C to +60°C

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

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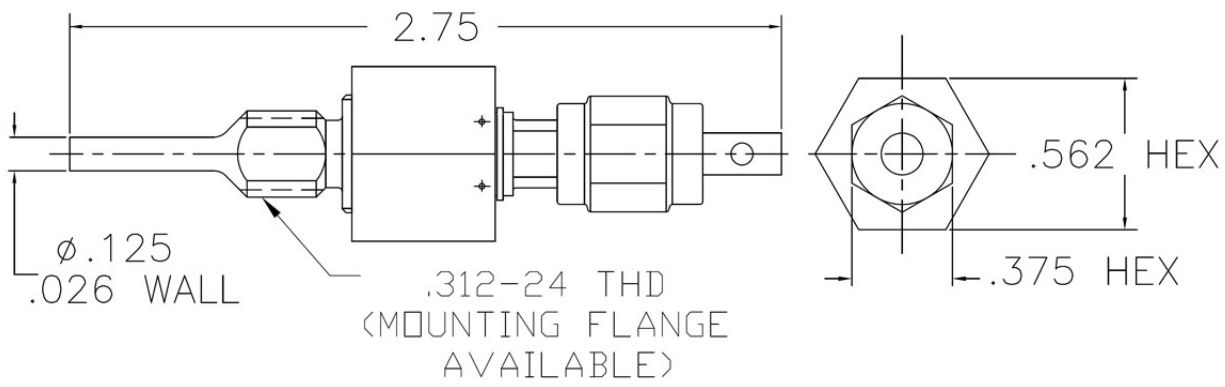

All dimensions in inches.

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3/8” High Pressure Micro Fill & Drain Valve

V1D10855-01

VACCO Industries maintains a product line of fill and drain valves designed exclusively to satisfy the needs of the space industry. The 3/8” High Pressure Micro Fill and Drain Valve has a titanium body and is capable of up to 6,700 psia operating pressure.

This valve features a low weight of less than 10 grams (0.022 lbm). The all-metal construction valve is capable of withstanding temperature extremes as high as 350°C (662°F). It utilizes a ground support tool, which actuates the stainless steel stem axially to open and close the valve.

SPACE

Features

- 6,700 psia operating pressure
- Compatible with GHe, GH_2, GO_2, NTO, MMH
- Flight qualified
- 15-5PH stainless steel stem, titanium body
- Robust all-metal construction, no elastomer used
- Metal-to-metal primary seat
- All seal leakage <1.0 x 10^{-6} SCCS GHe at closed position
- Utilizes ground support operating tool
- 0.375” diameter outlet tube
- Extremely low weight, 10 grams (0.022 lbm) max

Operating Parameters

Operating Pressure Range	6,700 psia
Proof Pressure	10,050 psia
Burst Pressure	13,400 psia
Operating Life Cycles	50 open/close
Internal Leakage	1 x 10^{-6} SCCS GHe @ 6,700 psia
External Leakage	1 x 10^{-6} SCCS GHe @ 6,700 psia
Media	H_2O, GHe, GH_2, GO_2, NTO, MMH
Flow/Pressure Drop	100 psid @ 0.10 GPM of H_2O
Temperature	
Operating	+10°C to +30°C
Non-operating	-170°C to +350°C
Random Vibration	13.2 G(rms), 3 min/axis

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

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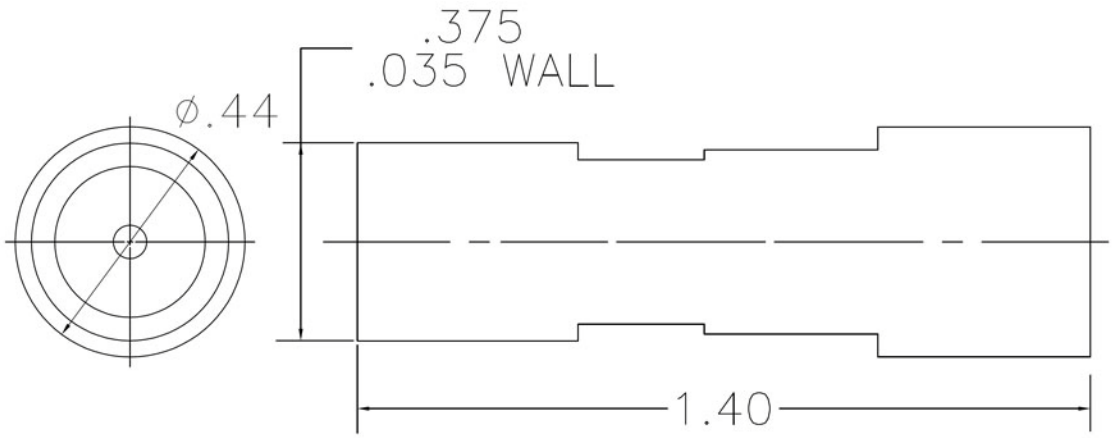

All dimensions in inches.

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