

FILL & DRAIN OR VENT VALVE

MANUALLY OPERATED, ISOLATION VALVE FOR CRITICAL OR LONG-TERM STORAGE

COMPONENT FEATURES

- Aerospace qualified in launch and flight applications
- Configured specifically to the requirements of each system
- Configurations for vacuum up to 10,000 psig [690 bar]
- Compliant metal coating provides hermetic sealing when closed
- Electron-beam welded construction
- Swivel probe couplings provide threaded interface to the valve
- Different threaded connections prevent mixing of incompatible media

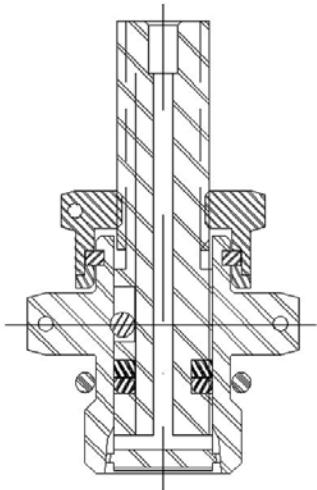
TYPICAL SPECIFICATIONS

- 1.0 Valve Type: 2-Way, Manually Operated
2.0 Media: Air or Nitrogen, Compressed Gaseous Media
3.0 Pressure
 3.1 Operating: 5,000 psig [345 bar]
 3.2 Proof: 7,500 psig [518 bar]
 3.3 Burst: 10,000 psig [690 bar] (min)
4.0 Torque to Close: 35 in-lbs [4 N-m] above running torque
5.0 Leakage: Zero (in closed position)
6.0 Temperature
 6.1 Ambient: -65°F to +300°F [-54°C to 149°C]
 6.2 Media: -190°F to +160°F [-123°C to 71°C]
7.0 Mounting Port: See Below



FILL / VENT VALVE

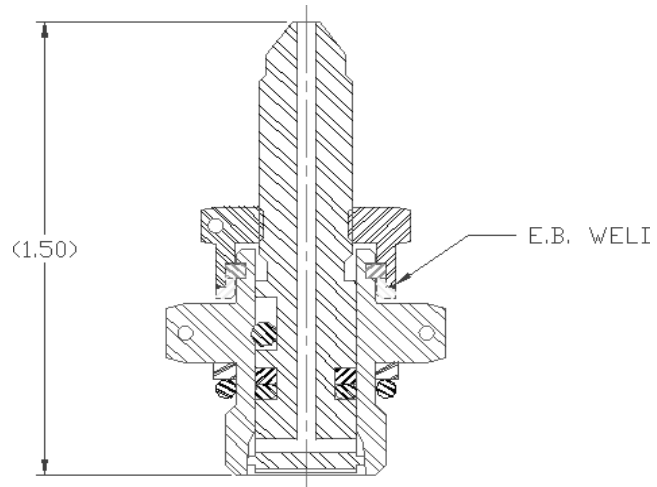
Fig. 1



PORT PER AND10050-5
(MODIFIED)

SBC p/n: 20025678

Fig. 2



PORT PER MS16142-5
(MODIFIED)

SBC p/n: 20028075

SOUTH BEND CONTROLS

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BULLETIN AV-503

TECH DATA

FILL, DRAIN OR VENT VALVE TECHNOLOGY

What is it? This is simple 2-way, manual type valve for use in gas and liquid transfer applications. The valves work well with consumables such as argon, nitrogen, helium, oxygen, and many aviation fuels.

How does it work? Cold-gas storage systems must remain leak-tight for extended periods of time. This valve is capable of gas-tight, hermetic sealing with absolutely zero internal and external leakage (when closed). Precise match-tapered metal to metal seats with a compliant metal coating provide the primary seal. The valve is opened and closed by rotating the upper captive hex nut. Elements of the valve are assembled through electron beam welding to insure uniformity and structural integrity.

How is it used? The valve is used for filling, venting or draining on-board pressurized storage reservoirs at pressures of up to 10,000 psig [690 bar]. Standard wetted materials are stainless steel with in internal FKM or EPDM o-ring. This valve can also be supplied with various threaded connections and an integral Schrader style valve core is available for low pressure sealing redundancy.

Individualized threaded interfaces prevent the mixing of incompatible media. Each type of fill valve will couple only with a corresponding mating swivel probe coupling. During fill & vent operations, coupled sealing is through a tapered face (Fig. 1) or an internal probe (Fig. 2) as shown on the front page.

Related products: see tech data bulletins AV-502 for Relief Valves, AV-501 for Pressure Regulators and AV-505 for Pneumatic Solenoid Valves.



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