



3/8" LOW PRESSURE CHECK VALVE V1D10856-02

DESCRIPTION

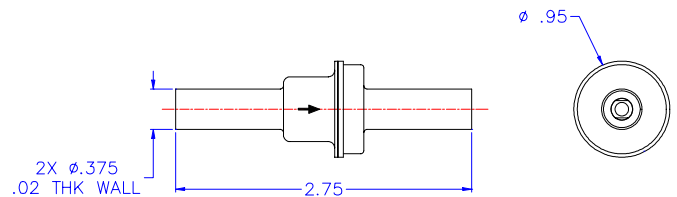
VACCO Industries maintains a product line of stainless and titanium check valves to meet industry's demand for high reliability and tight leakage.

The 3/8" check valve developed for the Mars Ascent program is a titanium welded unit capable of very low external leakage and wide range of temperature extremes (-170° to 45° C). The valve contains an angled-machined seating surface, different from the poppet sealing surface allowing an increase in seat stress. The increase in seat stress improves sealing capability of the valve. This type of design has been in used in other VACCO valves for many years.



FEATURES

- ⊕ Temperature Range: -170° to 45° C
- ⊕ Seat/Seal Configuration Flight Qualified
- ⊕ All Welded External Construction
- ⊕ Operating Pressure: 550 psia
- ⊕ Weight: 20 grams
- ⊕ 10 Years of Successful Flight Heritage
- ⊕ 5,000 Poppet Cycles



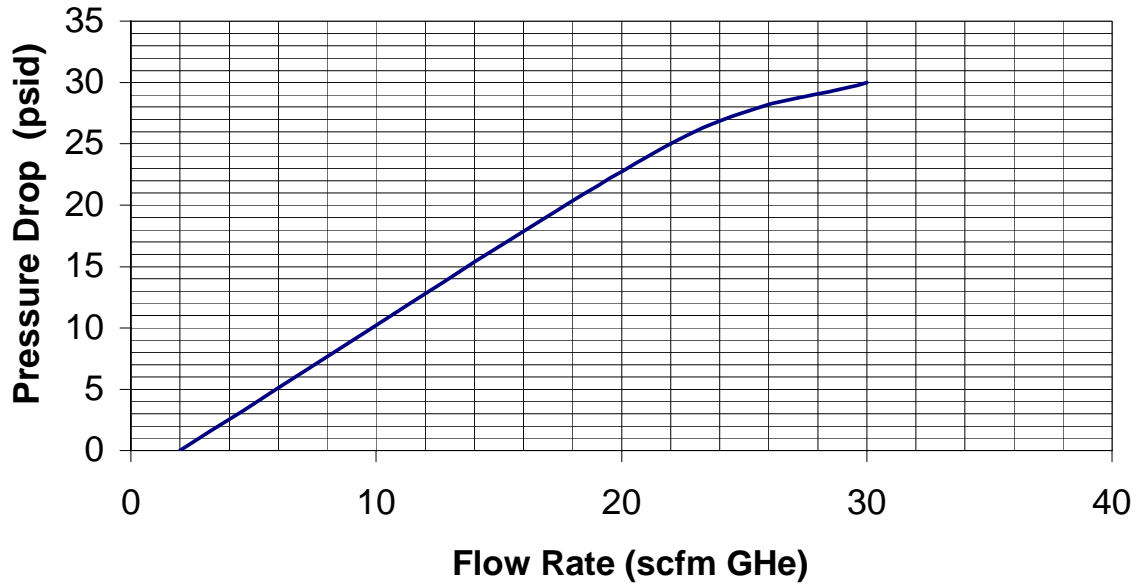
OPERATING PARAMETERS

Operating Pressure Range	550 psia	Reseat Pressure.....	1.0 psid
Proof Pressure.....	825 psia	External Leakage	<1 X 10 ⁻⁶ sccs GHe
Burst Pressure	1,100 psia	Internal Leakage.....	100 scch GHe @ 5 psid 0
Flow7 grams/second GHe	Operating Temperature.....	-170° to +45° C
Pressure Drop.....	10 psid	Non-operating Temperature.....	-40° to +45° C
Cracking Pressure	7.5 psid	Weight.....	20 grams

Performance characteristics are based upon customer requirements, as such, are not representative of component capabilities or limitations

PERFORMANCE CHARACTERISTICS

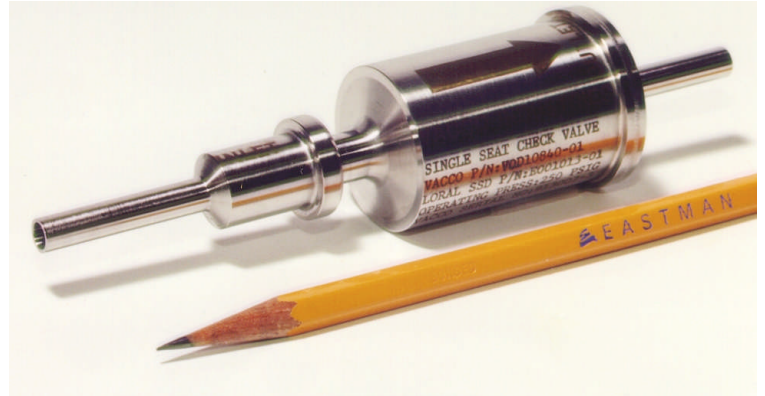
Pressure Drop @ 550 psi



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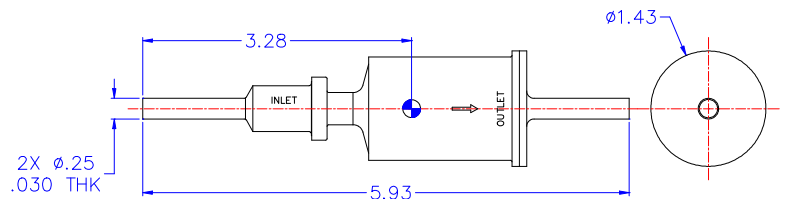
VACCO Aerospace Products maintains a product line of stainless steel and titanium check valves to meet industry's demand for high reliability, and tight leakage.

The 1/4" low pressure check valve is a single poppet valve with stainless steel body and interface. The unit integrates VACCO's etched disc technology with an integral inlet filter. The valve is fully flight qualified and holds extensive heritage.



FEATURES

- ⊕ 250 psi Operating Pressure
- ⊕ Flight Qualified
- ⊕ All Titanium Construction
- ⊕ Stainless Steel Body & Interface
- ⊕ Low Weight – 0.38 lbm (170 grams)
- ⊕ Integral 40μ Etched Disc Filter

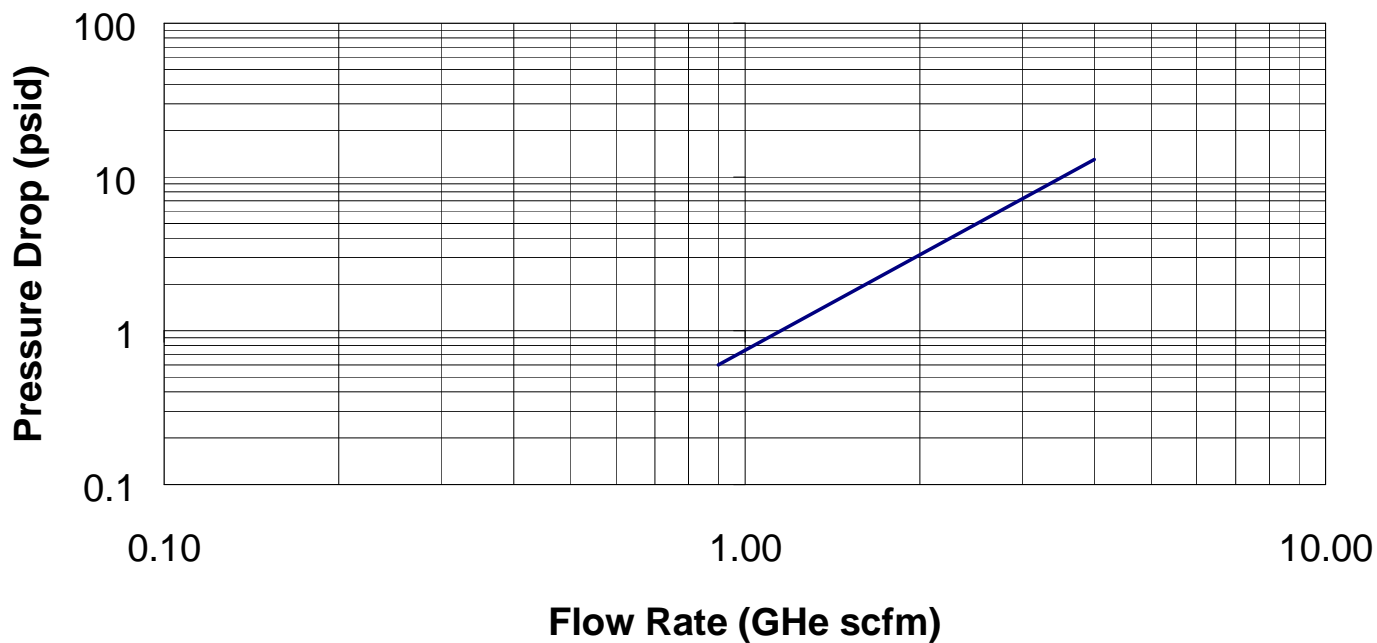


OPERATING PARAMETERS

Operating Pressure Range.....	50-250 psig	External Leakage.....	<1 X 10 ⁻⁶ sccs GHe
Proof Pressure.....	375 psig	Operating Temperature	+19° to +120° F
Burst Pressure.....	1,000 psig	Inlet Filter Rating.....	40 microns absolute
Flow	1.87 scfm GHe	Weight.....	0.38 lbm (170) grams)
Pressure Drop	4 psid max. @ rated flow	Thermal Cycle.....	12 cycles @+19° to +149° F
Cracking Pressure.....	6.0±1.0 psid	Random Vibration:	
Reseat Pressure.....	0.9±0.7 psid	Acceptance Level.....	12.1 G(rms)@ 1 min/axis
Internal Leakage.....	8.3 X 10 ⁻⁶ sccs GHe	Qualification Level.....	17.1 G(rms)@ 2 min/axis

PERFORMANCE CHARACTERISTICS

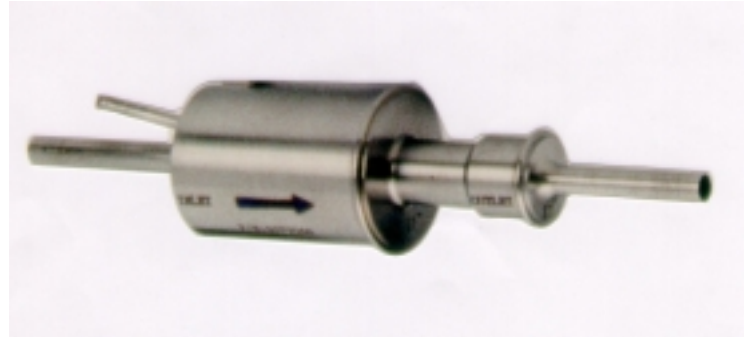
Pressure Drop @ 250 psig



DESCRIPTION

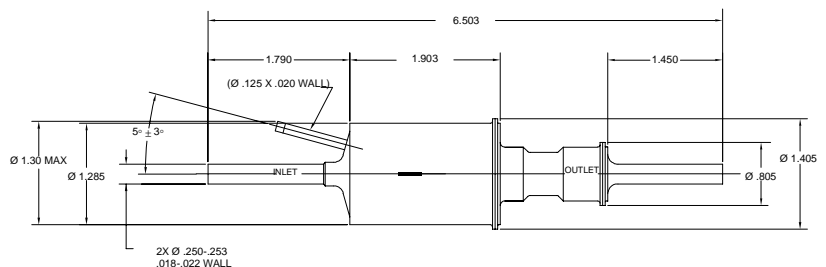
VACCO Industries maintains a product line of stainless steel and titanium check valves to meet industry's demand for high reliability and tight leakage.

The 1/4" low pressure check valve features a series redundant poppet design. Weight is kept to a minimum with an all titanium body and piston. The unit is fully flight qualified and has extensive heritage.



FEATURES

- ⊕ 260 psi Operating Pressure
- ⊕ Flight Qualified
- ⊕ All Titanium Body & Interface
- ⊕ Titanium Pistons
- ⊕ Low Weight – 136 Grams (0.30 LB)
- ⊕ Chatter Resistant “Snap Action”
- ⊕ Mechanically Independent series Redundant Poppets.



OPERATING PARAMETERS

Operating Pressure..... 260 psig
 Proof Pressure..... 600 psig
 Burst Pressure 1,600 psig
 Flow Rate..... 2.6 scfm of GHe @ 250 psig
 Pressure Drop..... 4.4 psid max. @ rated flow
 Leakage:
 Internal @ 2 psid..... <10 scch GHe
 External..... <1 x 10⁻⁶ sccs GHe

Temperature..... +10⁰ to +170⁰F
 Cracking Temperature 5.0 ± 0.7 psid
 Reseat Pressure..... 0.4 to 5.7 psid
 Random Vibration:
 Acceptance Level 14.4 G(rms) @ 1 min/axis
 Qualification Level 17.3 G(rms) @ 2 min/axis
 Thermal Cycle 3 cycles @ -29.2⁰ to +170⁰F

PERFORMANCE CHARACTERISTICS

Flow vs Pressure Drop @ 245 psi

