

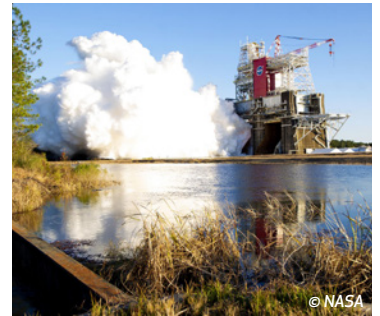
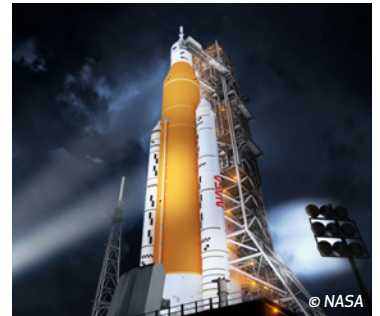
CONTINUOUS VENT VALVE (CVV)



Moog model 54-164 is a cryogenic gas control valve (CVV) that provides propellant tank ullage venting for the NASA SLS Exploration Upper Stage. The pilot-operated valve vents hydrogen gas through vent thrusters during on-orbit and in-transit operations to support propellant settling. The CVV also releases ullage gas overboard to help maintain stable bulk liquid propellant saturation temperature.

KEY FEATURES

- Cryogenic hydrogen capable
- 40 psig MEOP
- 500 psig actuation pressure
- $CdA = 0.2 \text{ in}^2$
- Microswitch position indication

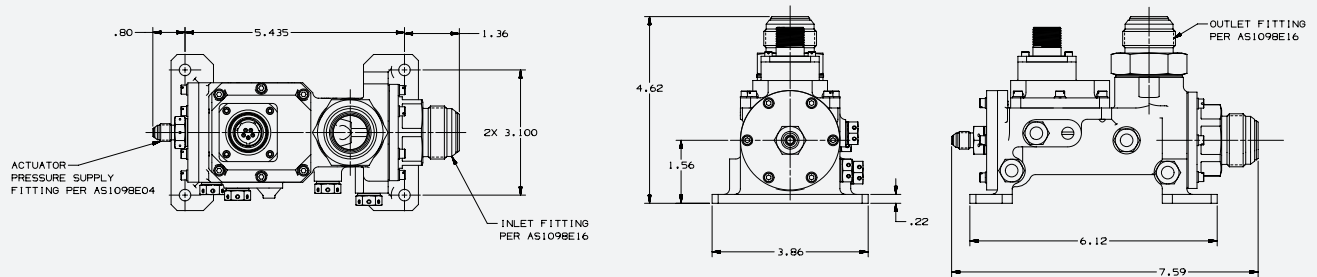


CONTINUOUS VENT VALVE (CVV)

PERFORMANCE CHARACTERISTICS

Characteristics	Performance / Interfaces
Materials of Construction	Aluminum, stainless steel, PTFE, and PEEK
Compatibility	LH2, GH2, LN2, GN2, GHe, Di-Water, IPA
Propellant MEOP	40 psig (proof 1.5, burst 2.5)
Actuation MEOP	500 psig (proof 1.5, burst 2.5)
Orifice Flow Capacity, CdA	0.2 in ² min.
External Leakage	20 SCIM (helium)
Internal Leakage	35 SCIM (helium)
Response Time	1.5 seconds max. (open or close)
Minimum Cycle Life	500 Cycles min.
Operating Temperature	-423°F to 170°F
Mass	4.5 lbs
Electrical Interface	NC4H10-5PN per MSFC-SPEC-40M38294
Propellant Interface	SAE AS1098-16
Actuation Interface	SAE AS1098-4
Filtration	10 micron nominal, 25 micron absolute filter
Random Vibration	14 Grms - In-Plane Axes 39 Grms - Normal Axis

DIMENSIONS



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