

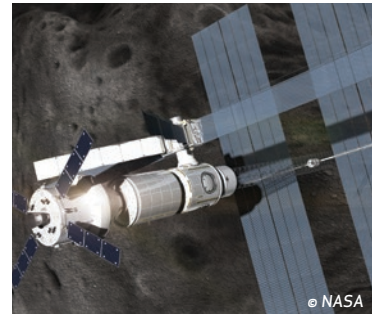
TORQUE MOTOR LATCH VALVE (TMLV)



This TRL 9 high pressure latch valve is a single line, bi-stable, titanium torque motor valve, featuring integral microswitch position indication, inlet filter, and back EMF suppression diodes. This valve is human-rated, and is based on the successful heritage of Moog's torque motor valve family, spanning more than 25 years. The design features an all-welded construction utilizing wetted materials that are compatible with hydrazine.

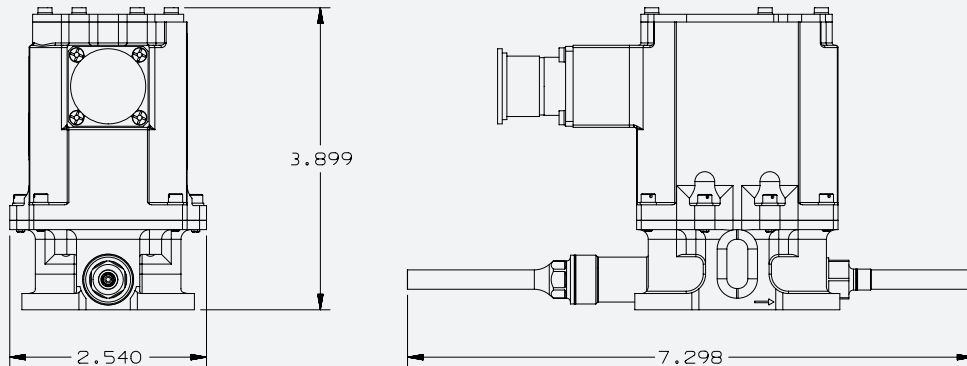
KEY ADVANTAGES

- 4000 psi latching valve
- Leak-tight welded design
- Fast response
- Flight-qualified on Orion crew module



TORQUE MOTOR LATCH VALVE (TMLV)

PRODUCT DIMENSIONS



ASSEMBLY VALVE_EH1V
MODEL : -052E312C

CHARACTERISTICS

Parameter	Performance
Materials of Construction	Titanium alloy
Media Compatibility	Hydrazine, Xenon, Argon, Helium, Nitrogen, DI water, IPA
MEOP / Proof / Burst Pressure	276 / 414 / 689 bar (4000 / 6000 / 10000 psia)
Pressure Drop	<0.69 bar (<10 psid) at 17mg/s (3.75E-5 lbm/s) GHe, 21.7 bar (315 psia) inlet pressure, -40°C (-40°F) gas temperature
Actuation Voltage	120 Vdc, 1 amp max
Response Time	< 50 millisecond open or close
Internal Leakage	< 1 x 10 ⁻³ scc/sec GHe at MEOP
External Leakage	< 1.0 x 10 ⁻⁶ scc/sec GHe at MEOP
Inlet Filtration	10 micron absolute
Cycle Life	> 1,000
Mass	1.13 kg (2.5 lbm) max
Random Vibration	25.9 grms qualification
Thermal	-29 to 68°C (-20 to 155°F) operating -40 to 79°C (-40 to 175°F) qualification
Other	Back EMF diodes integral with design, -51.5 Vdc max, position indication using HEDs
Heritage	Orion Exploration Flight Test 1 Based on 52E252C Space Heritage Torque Motor Valve (200+ delivered).

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