

SINGLE LINE ISOLATION LATCH VALVES



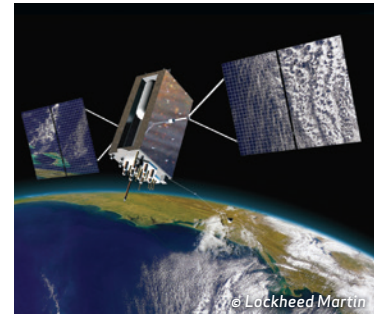
Moog latch valves have been in production for more than four decades. The valves were originally developed for Galileo, LEASAT, INSAT, and Minuteman. The valves can be used for controlling propellants and pressurization gasses. The latch valves are bi-stable, and will stay in the last (open/closed) commanded position.

KEY FEATURES

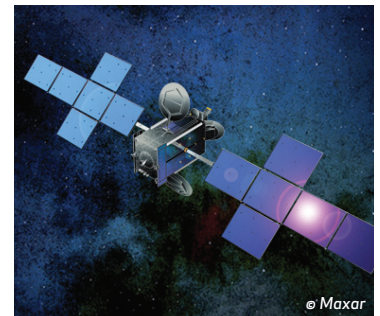
- All welded design to prevent external leakage
- PTFE Seal and stainless steel or titanium construction
- Direct microswitch position indication
- Transition tubes available for stainless to titanium and titanium to stainless steel
- Inlet filter available for most configurations



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SINGLE LINE ISOLATION LATCH VALVES

PERFORMANCE CHARACTERISTICS

Characteristic



Valve	1/4 inch line, Torque Motor, Stainless Steel	3/8 inch line, Torque Motor, Stainless Steel	3/8 inch line, Torque Motor, Titanium	1/2 to 3/4 inch line, Linear Force Motor, Stainless Steel
Max Operating Pressure, MEOP [psia(bar)]	420 (28.9)	260 (17.9)	350 (24.1)	400 (27.5)
Proof Pressure [psia(bar)]	1155 (79.6)	600 (41.4)	500 (34.4)	900 (75.8)
Burst Pressure [psia(bar)]	2500 (172)	1600 (110)	2500 (172)	2000 (138)
Back Pressure Relief (BPR) [psid]	50-350	25 to 250 annular, 40 to 200 simple	25 to 200 annular, 250 to 550 simple	50 to 90
Max Delta P [H ₂ O]	4 psid at 0.01 lbm/s	3.5 psid at 0.175 lbm/s annular, 6 psid at 0.11 lbm/s simple	5 psid at 0.19 lbm/s annular, 19 psid at 0.1 lbm/s simple	11.2 psid at 0.71 lbm/s
Operating Voltage Range [Vdc]	22 to 34	18 to 51.5	24 to 34	24 to 32
Max Response Time [msec]	50	50	50	50
Power Consumption [watts]	20 at 28 Vdc, 70F	26 at 28 Vdc, 70F	14 at 34 Vdc, 70F	62 at 32 Vdc, 70F
Leakage, Internal [scc/hr GHe]	1	5	5	5
Leakage, External [scc/s GHe]	1E-6	1E-6	1E-6	1E-6
Cycle Life [cycles]	50,000	5,000	20,000	3,000
Mass [lbm (kg)]	0.72 (0.32)	1.54 (0.690)	1.76 (0.730)	4.3 (2.0)
Inlet Filtration [micron absolute rating]	40	None	40	40
Operating Temperature Range [°F (°C)]	-29 to 160 (-34 to 71)	14 to 150 (-10 to 66)	-29 to 160 (-34 to 71)	0 to 140 (-18 to 60)
Representative Model Numbers	51-181, 51-401	52-265, 52-220	52E252, 52-316	53-189, 53-334



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