

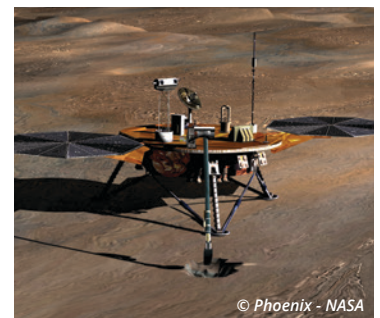
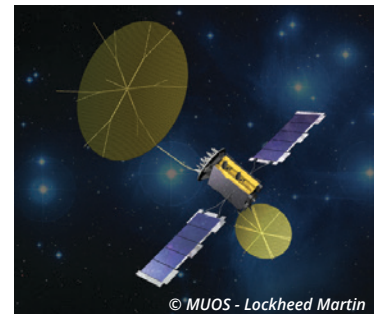
## MONOPROPELLANT SOLENOID THRUSTER VALVES



The Moog solenoid thruster valves are available in a single seat or series redundant seat. The valve has a normally closed configuration.

### KEY ADVANTAGES

- Minimum dribble volume
- All welded design to prevent external leakage
- AFE411 seal and stainless steel construction
- Normally closed valve state



# MONOPROPELLANT SOLENOID THRUSTER VALVES

## PERFORMANCE CHARACTERISTICS

Characteristic	0.2 lbf (1 N) and 1.0 lbf (5N) Thrust Redundant Seat	5 lbf (22 N) Thrust Redundant Seat	9 lbf (40 N) Thrust Single Seat	160 lbf (711 N) Thrust Single Seat
Max Operating Pressure, MEOP [psia(bar)]	385 (26.5)	400 (27.6)	500 (34.5)	276 (19)
Proof Pressure [psia(bar)]	1500 (103.4)	1650 (114)	1500 (103)	450 (31)
Burst Pressure [psia(bar)]	2500 (172)	2650 (183)	2911 (200)	715 (49.3)
Flow Coefficient [GPM water/(psid) <sup>0.5</sup> ]	0.00008	0.0007	0.0013	0.019
Operating Voltage Range [Vdc]	24 to 37	24 to 35.5	22 to 32	98 to 136
Maximum Open Response Time [msec]	10	15	15	30
Maximum Close Response Time [msec]	10	15	15	20
Power Consumption [watts]	3.8 at 28 Vdc, 70F	20.5 at 35.5, 68F	26.5 at 32 Vdc, 70F	122 at 136 Vdc, 70F
Leakage per Seat, Internal [scc/hr]	0.4	0.4	0.4	3.6
Leakage, External [scc/s]	1E-6	1E-6	1E-6	1E-3
Cycle Life [cycles]	300,000	1,000,000	100,000	100,000
Weight [lbm (gram)] excluding leadwires	0.44 (200)	0.7 (318)	0.5 (230)	2.5 (1134)
Inlet Filtration [micron absolute rating]	25	25	25	25
Operating Temperature Range[°F (°C)]	40 to 250 (4.4 to 121)	40 to 176 (4.4 to 80)	40 to 300 (4.4 to 149)	40 to 300 (4.4 to 149)
Representative Model Numbers	-051E444 -051E476 (single seat)	-051E448	51-288	53-291B



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