

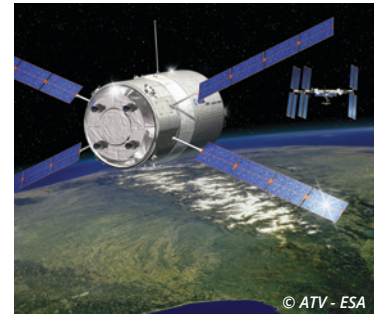
BIPROPELLANT SOLENOID THRUSTER VALVES



The solenoid 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
- PTFE seal and stainless steel construction
- Normally closed valve state



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BIPROPELLANT SOLENOID THRUSTER VALVES

PERFORMANCE CHARACTERISTICS

Characteristic	2.5 lbf (10 N) Thrust Redundant Seat	45 lbf (200 N) Thrust Single Seat	100 lbf (445 N) Thrust Single Seat
Max Operating Pressure, MEOP [psia(bar)]	275 (19)	500 (34.5)	320 (22)
Proof Pressure [psia(bar)]	675 (47)	1300 (90)	450 (31)
Burst Pressure [psia(bar)]	2900 (200)	2175 (150)	1240 (85.5)
Flow Coefficient [GPM water/(psid) ^{0.5}]	0.00043	0.0047	0.009
Operating Voltage Range [Vdc]	12.5 to 50	24 to 31	20 to 32
Open Response Time [msec]	6 max	22 max	30 max
Close Response Time [msec]	6 max	15 max	20 max
Power Consumption [watts]	13 at 12.5 Vdc, 70F 10.5 at 20 Vdc, 70F	42 at 31 Vdc, 70F	23.3 at 32 Vdc, 70F
Leakage per Seat, Internal [scc/hr]	3	3	5
Leakage, External [scc/s]	1E-6	1E-6	1E-6
Cycle Life [cycles]	1,000,000	600,000	5,000
Weight [lbm (gram)]	0.44 (200)	1.2 (545)	0.9 (409)
Inlet Filtration [micron absolute rating]	25	25	25
Operating Temperature Range [°F (°C)]	40 to 250 (4.4 to 121)	32 to 122 (0 to 50)	40 to 200 (4.4 to 93.3)
Representative Model Numbers	-051-178-7 -051E344	-053-247B	-053-200C



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