

Thruster Valves



Valcor Engineering Corporation

DESCRIPTION

Valcor's family of Thruster Valves valves are direct acting, coaxial, poppet solenoid shut-off valves that are well-suited for the extreme vibration, temperature, and cycle life requirements found in the most severe satellite and spacecraft operating conditions. The compact size and low weight allow these valves to be used in the tightest space available. Its coaxial design allows for minimal pressure drop and use a poppet with a resilient seal for tight shut-off. These valves do not require system pressure to operate and are available in a normally closed configuration.

APPLICATION

Valcor Thruster Valves are mostly direct acting, poppet solenoid shut-off valves that are well-suited for the extreme vibration, temperature, and high cycle life requirements found in the most severe satellite, spacecraft and missile defense operating conditions. The compact size and low weight allow these valves to be used in the tightest space available. Coaxial designs allow for minimal pressure drop and use a poppet with a resilient seal for tight shut-off. The direct acting valves do not require system pressure to operate and are available in a normally closed configuration. The hot gas thruster valve is a "pilot" operated valve, that uses the hot line pressure to move the main valve element.

FEATURES

- Maximum Operating Pressure: 0-1500 PSIG
- Proof Pressure: 2250 PSIG; Burst Pressure: 3000 PSIG
- Leak Rate: Internal is 0 scc/h. External is 1×10^{-6} scc/s
- Temperature: +10°F to +250°F
- Current: 1.5 amps at 30 VDC at 70°F; 18-30 VDC
- Electrical Connection: 36" 22 AWG pigtails standard
- Wetted Materials: 430, 302, 303, 304L, PTFE
- 1/4" OD line
- Cycles can exceed 1 million
- Fully customizable for your application



Contact us today to see how we can help on your next project.

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Valcor specializes in custom designs. Below are just a few examples of solutions we have created in the past for our customers.

Examples	Operating Fluid	Operating Pressure	Voltage	Current	Flow Rate (ESEO)	Body Material	Response
V27200-1022-W	N ₂ H ₄	400 psi	8 VDC	0.5 amps	.011	316 SS	2.5 ms
V27200-1023-W	MMH, MON	1400 psi	40 VDC	1.5 amps	.060	316 SS	2 ms
V64000-37-W	MMH, MON	265 psi	28 VDC	<2 amps	.10	316 SS	10 ms
V64000-36-W (dual)	GH ₂ , GO ₂ , GN ₂	250 psig	28 VDC	<2 amps	.09	304 SS	15 ms

HOT GAS THRUSTER VALVE

Example	Operating Fluid	Operating Pressure	Voltage	Fluid Temperature	Flow Rate (ESEO)	Body Material	Response
V100000-337-W	GH ₂ , NH ₃ , GN ₂	800 psig	60 VAC	1,500°F	0.23	316 SS	10 ms