

Relief Valves



Valcor Engineering Corporation

DESCRIPTION

Relief valves are designed to protect valuable pneumatic and liquid systems from over pressurization, by relieving excess pressure in the system. They open (crack) at a specified pressure, and close (reseat) at a lower system pressure. Adjustable and preset cracking pressures, with customizable crack to reseal pressure ranges are available, along with an extensive range of pressure and flow capacities. Optional outlet configurations include plumbed or vent to atmosphere construction (non-propulsive venting).

APPLICATION

Relief valves are used in launch vehicle and spacecraft propulsion systems. Relief valves are often used downstream of pressure regulators to protect the system from a regulator malfunction.

FEATURES

- Maximum Operating Pressure: Up to 3300 PSI
- Leak Rate: External is 0 cc/min at 3000 PSIG
- High flow rate
- Low weight
- Adjustable pressure set points available
- Ported and manifold mount connections available
- Extensive configurable body and seal material combinations
- 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	Cracking Pressure (PSIG)	Reseat Pressure	Flow Rate	Weight (lb)	Body Material
V3500-84-3-W	GHe	900-1165	665 PSIG MIN	0.43" ESEO	4.25	Nitronic 50
V3500-155-W	MMH/MON, NTO, GN ₂ , GHe	2350-2600	2300 PSIG	0.01" ESEO	< 1	Titanium
V3500-155-1-W	GN ₂ ,MMH, NTO	2350-2600	>2300 PSIG	0.01" ESEO	< 1	CRES 316L
V3500-159-W	GN ₂ ,MMH, NTO	300-350	>350 PSIG	0.01" ESEO	< 1	CRES 316L
V3500-165-W	GN ₂ ,MMH, NTO	2350-2600	>2300 PSIG	0.01" ESEO	< 1	Titanium
V3500-166-W	GN ₂ ,MMH, NTO	350-400	>350 PSIG	0.01" ESEO	< 1	Titanium
V3500-76-W	GHe, GN ₂	7.9 to 13.0	7.6 PSIG MIN	100 SLM of GN ₂	0.66	Aluminum
V3500-123-1-W	MMH/MON, GHe, GN ₂	300-350	300 PSIG MIN	0.03" ESEO	< 1	CRES 316L
V3500-77-1-W	GN ₂ , GHe, Silane/GH ₂	1460-1640	1260 PSIG	0.04" ESEO	.42	Aluminum
V3500-77-2-W	GN ₂ , GHe, Silane/GH ₂	1750-1950	1550 PSIG	0.04" ESEO	.42	Aluminum
V3500-77-3-W	GN ₂ , GHe, Silane/GH ₂	2650-2950	2450 PSIG	0.04" ESEO	.42	Aluminum