

HIGH PRESSURE RELIEF VALVE

BUBBLE-TIGHT PROTECTION FOR COLD-GAS PNEUMATIC SYSTEMS

COMPONENT FEATURES

- Aerospace qualified in launch and flight applications
- Bubble tight sealing up to cracking pressure
- Versions with cracking pressures up to 3,500 psig [242 bar] *
- Constructed of aluminum, stainless steel & FKM elastomer
- Configured specifically to the requirements of each system
- Porting, manifold, and mounting flexibility
- Specialized custom configurations also available

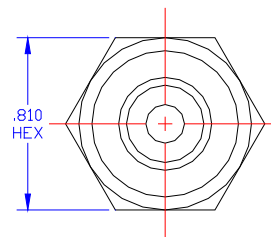
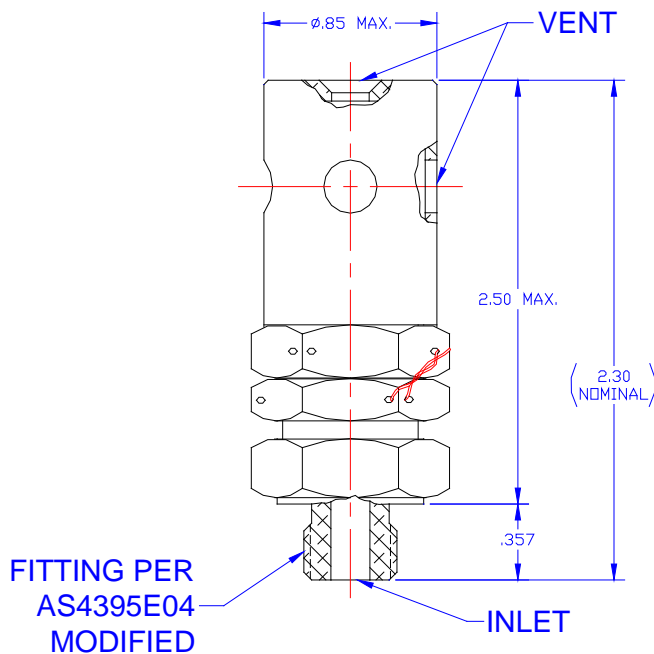
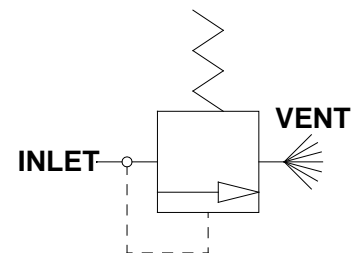
SPECIFICATIONS

1.0 Valve Type:	Relief Valve
2.0 Media:	Compressed Gas (Air or Nitrogen typically)
3.0 Pressure	
3.1 Cracking:	540 psia +/- 15 psia [37.2 bar +/- 1 bar] *
3.2 Reseat:	475 psia [32.8 bar] (min)
3.3 Proof:	1,200 psia [82.7 bar]
3.4 Burst:	2,400 psia [165.5 bar]
4.0 Temperature	
4.1 Ambient:	-65°F to +300°F [-54°C to 149°C]
4.2 Media:	-190°F to +160°F [-123°C to 71°C]
5.0 Flow:	0.068" [1.7 mm] Sharp Edge Orifice (Cv of 0.08) at 655 psia [45 bar]
6.0 Leakage	
6.1 External	Bubble-Tight
6.2 Internal	Bubble-Tight @ 540 psia [37.2 bar]
7.0 Weight:	0.15 lbm [60 grams]



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ENGINEERING FOR
OTHER PRESSURE
RELIEF SETTINGS.**

FLOW SCHEMATIC



FRONT VIEW

BOTTOM VIEW

SOUTH BEND CONTROLS

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BULLETIN AV-502

HIGH PRESSURE RELIEF VALVE

What is it? This is a poppet-style relief valve for use in the protection of guidance and control systems. Outlet pressures for this model are factory calibrated between 150 and 1,075 psig [11 to 75 bar]. Other models are available with cracking pressure settings up to 3,500 psig [242 bar]. This family of valves works well with both liquids and gases such as nitrogen, oxygen, helium, and many fuels.

How does it work? A spring-loaded poppet is preloaded against a positive stop with an elastomer seal. Cracking pressure can be calibrated to any point within a pressure range and is achieved through selection of spring constant and compressive preload. The elastomer seal provides minimal leakage with high cycle life and aids in resealing once the pressure drops below the reset pressure threshold.

How is it used? The valve is used to relieve pressurized storage reservoirs on aircraft & spacecraft to prevent overpressure damage to critical systems. This valve provides overpressure protection where system anomalies such as over temperature or component failure are a concern.

Related products: see tech data bulletins AV-503 for Fill/Vent Valves, AV-501 for Pressure Regulators and AV-505 for Pneumatic Solenoid Valves.



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