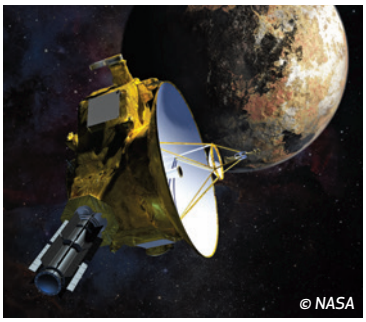
HELIUM REGULATOR

PNEUMATIC PRESSURE REGULATOR

Moog model 50-1425 pressure regulator is a series-redundant unit designed to provide stable tank pressure for propellant in a spacecraft propulsion system. Both regulator stages are temperature compensated and have inlet and outlet filters. The upstream regulator features a flow limiter. The design can be provided as a single-stage unit.

KEY FEATURES

- Nominal 250 psia regulated outlet
- Inlet pressures from 400 – 2500 psia
- Primary operation: upstream regulates with downstream open
- Each stage meets specified flow and pressure requirements
- Temperature-compensated
- Inlet and outlet filters
- First stage flow limiter
- In development; qualification in fall 2021



HELIUM REGULATOR

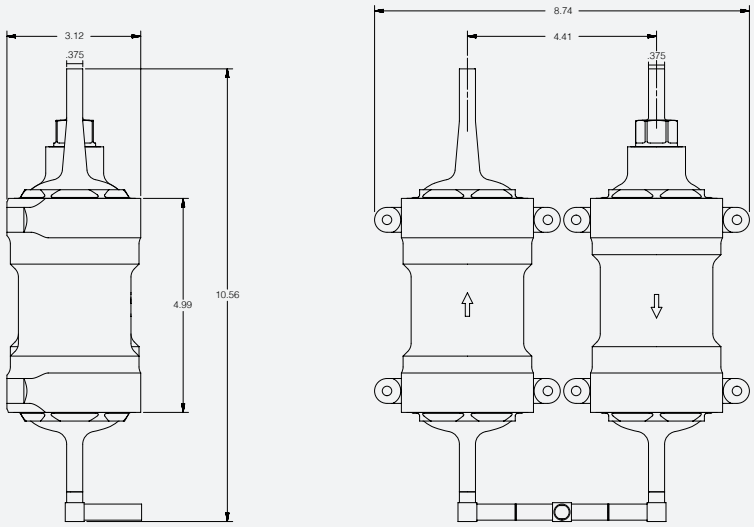
PERFORMANCE CHARACTERISTICS

Characteristics	Performance / Interfaces
Unit Weight	13.0 lbm max.
Dimensions	10.5 inch x 8.8 inch x 3.1 inch
Flow Rate (Operating)	1.2 - 24.5 SCFM (helium)
Maximum Flow Rate	50 SCFM (helium)
Surge Protection Flow Rate	< 4.0 SCFM (@ min. 20,000 psi/sec)
Internal Leakage	< 0.007 scc/sec (@ lock-up)
External Leakage	$< 1x10^{-6}$ scc/sec
Temperature (Operating)	-40°F to 160°F
Cycle Life	1500 Cycles
MEOP (Inlet)	2500 psia
Regulated Pressure (Outlet)	250 psia (nominal)
Lock-up	260 psia (single stage)
Wetted Materials	Titanium, stainless steel, inconel

VARIANTS AVAILABLE

1. Single stage unit
2. No flow limiter
3. Regulation set point can be adjusted

DIMENSIONS



MOOG
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