



- **High flow design**
- **Lightweight construction**
- **Solenoid actuated**
- **Integral charging and gauge**
- **Mil qualified**

Application:

The landing gear blowdown system is used aboard commercial and military aircraft to unlock, lower and relock the main landing gear structure in the down position in the event of failure of the main hydraulic extension system.

Carleton's lightweight landing gear blowdown system (part number B40721-3) has been designed and qualified for use aboard the V-22/MV-22 Osprey.

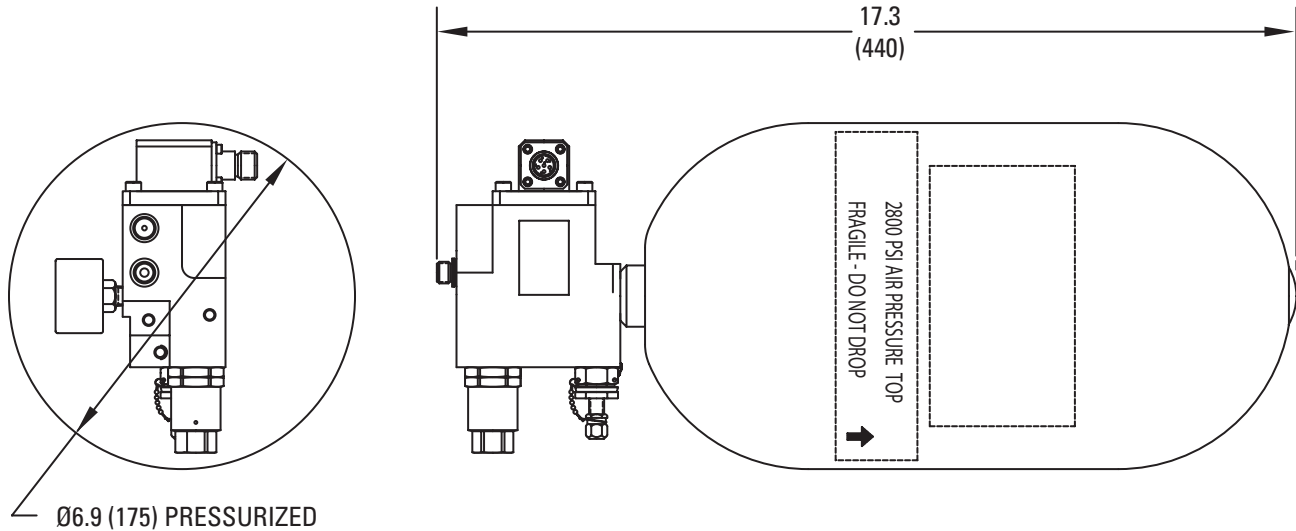
Features:

The system consists of a lightweight composite gas storage vessel and valve manifold. The manifold includes a charging valve with standard schraeder style fill port, pressure gauge, solenoid actuation valve and over-pressure relief valve. The gas storage vessel is constructed using a seamless aluminum liner and fiberglass wrap with pressure embedded resin.

The solenoid valve is actuated with a 28 VDC command and initiates flow through the manifold outlet at 70 SCFM. A relief valve provides overpressure protection by limiting system pressure to 3600 psi. The system has been environmentally qualified to MIL-STD-810 and has successfully passed .50 caliber gunfire testing.

SPECIFICATIONS

Blowdown System Part Number: B40721-3



All dimensions in inch (mm)

Specifications:

Medium	Dry Air, Nitrogen or both	
Fill Pressure	2,800 psig	(194 bar)
Proof Pressure	5,000 psig	(345 bar)
Burst Pressure	8,400 psig	(580 bar)
Flow Rate	0.10lb/min	(39 slpm)
Internal Leakage	< 0.10 scc/min	
External Leakage	< 0.5 scc/min	
Weight (Empty)	11.5 lbs	(4.3 kg)
Internal Volume	300 cubic inches	
Electrical Characteristics		
Voltage	18 to 30 VDC	
Coil Current	0.50a max at 27.5 VDC	
Duty Cycle	Continuous	

Operating Environment:

Temperature	-65 to 160 deg F (-54 to 71 deg C)
Humidity	0 to 95%
Shock	6 g operational 20 g crash
Vibration	3 Grms each axis

Non-Operating Environment:

Temperature	-65 to 160 deg F (-54 to 71 deg C)
Salt Fog	MIL-STD-810, Method 509.2 Procedure I @ 200 ppm
Sand and Dust	MIL-STD-810, Method 510.2 Procedure I @ 1750 ft/min

Product Interfaces:

Fill Valve	MS-28889-2
Electrical	IAW D38999 / 20WA35PA