

B42365-1 OXYGEN CYLINDER AND VALVE ASSEMBLY



- **Lightweight 115 ft³ carbon composite cylinder**
- **Form, fit, and function interchangeable with steel**
- **Extended 5 year hydrostatic cycle**
- **Integral on/off hand valve**

Application:

Carleton's oxygen cylinder and valve assemblies are integral components used to store gaseous oxygen in an aircraft's emergency oxygen system. The hand valve assembly allows safe oxygen release into the emergency system, overpressurization protection and a visual indication of cylinder pressure.

Carleton's lightweight composite cylinder and valve assembly (part number B42365-1) has been qualified to Boeing SCD S475W001 and is currently installed as OEM equipment on Boeing 737, 747 and 767 aircraft.

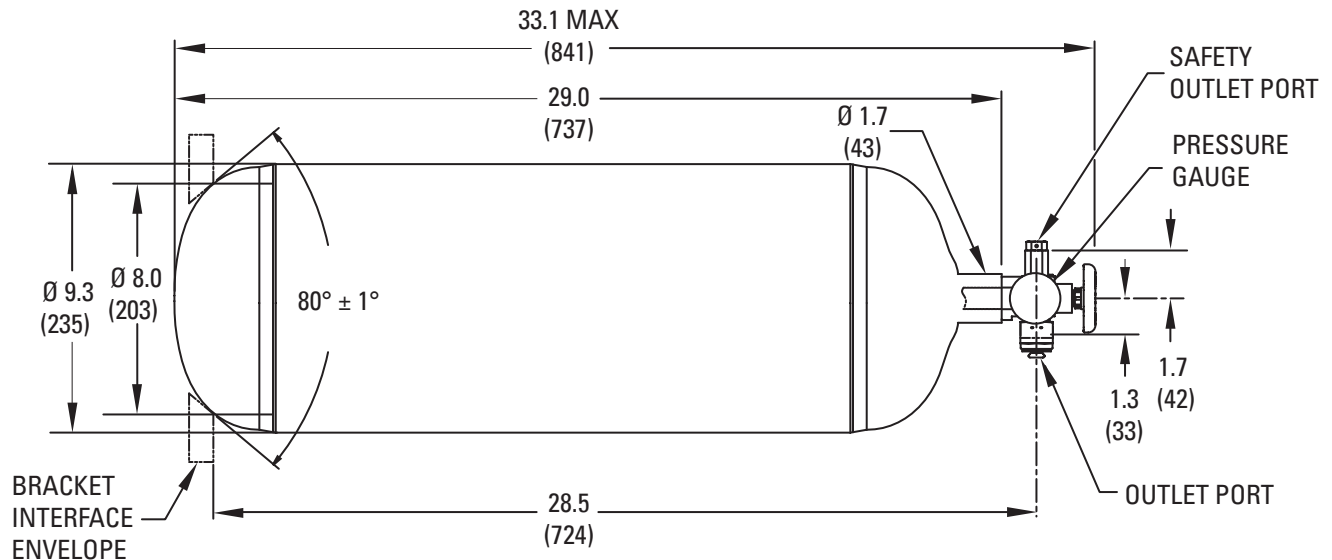
Features:

Carleton's carbon fiber, full composite (CFFC) cylinder uses a lightweight carbon fiber wrap over a spun aluminum liner to offer a 16 lb weight saving over conventional steel tanks. The cylinder is DOT approved, has a 15 year service life and an extended 5 year hydrostatic test cycle, which is a 66% increase over Kevlar cylinders.

The assembly involves a slow opening hand valve designed to minimize gas compression effects and maximize oxygen safety. The assembly also has an overpressurization shear disc that allows oxygen to escape to an overboard discharge line, a filtered charging port for cylinder filling, a filtered outlet port, and an integral pressure gauge.

SPECIFICATIONS

Cylinder Assembly Part Number: B42365-1



All dimensions in inch (mm)

Specifications:

Operating Pressure	0 to 1850 psig @ 70 deg F	(0 to 128 barg @ 21 deg C)
Burst Pressure	6290 psig	(434 barg)
Proof Pressure	3085 psig	(213 barg)
Media	Gaseous Oxygen per MIL-PRF-27210	
Materials		
Hand Valve	Brass and stainless steel Oxygen compatible silicone O rings	
Cylinder	Aluminum alloy, 6061-T6 liner T700 Carbon fiber overwrap	
Internal Volume	115 cubic feet (3.26m ³) Oxygen @ 1850 psig (128 barg), 70 deg F (21 deg C)	
Weight	19.6 lbs (8.9 kg) maximum empty 29.5 lbs (13.4 kg) maximum full	
Cylinder Certification	DOT-E 11194 and DOT-CFFC	

Operating Environment:

Temperature	-65 to 160 deg F	(-54 to 71 deg C)
Shock	6 g operational	20 g crash
Vibration	9.5 Grms each axis	

Product Interfaces:

Outlet Port	CGA-540 .903-14NGO-RH ext thread
Safety Outlet Port	MS33649-05 (AS5202-05)