



- **Redundant relief feature**
- **High flow rate**
- **Accessible test ports**
- **Oxygen safe brass construction**

### **Application:**

Carleton's Series/Parallel Relief Valve is an integral part of an aircraft gaseous emergency passenger oxygen system. The valve is located between the high pressure oxygen source and the centralized flow control unit, with the outlet port connected to the overboard discharge line. The valve prevents excessive pressure build up in the oxygen system in the event of an uncontrolled pressure rise.

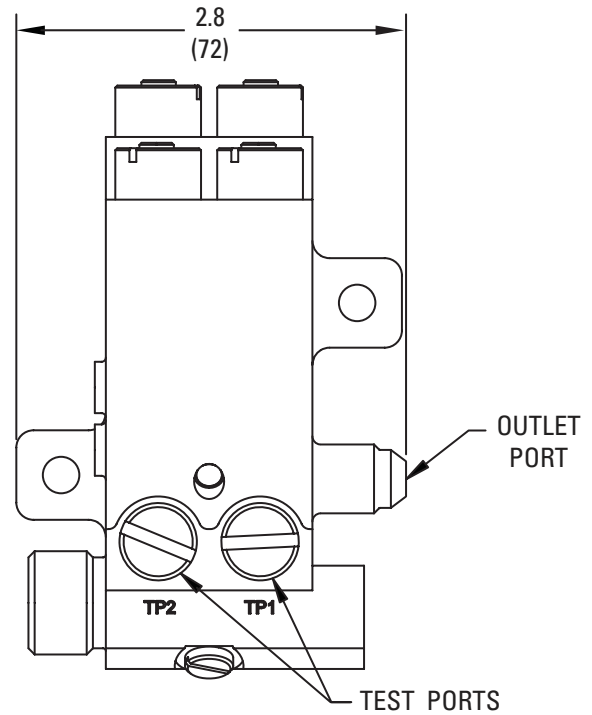
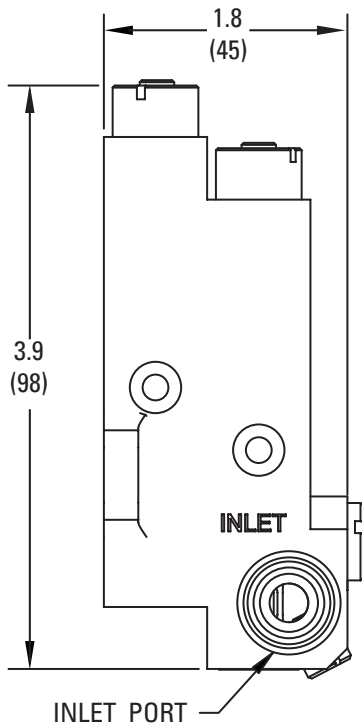
Carleton's Series/Parallel Relief Valve (part number B43577-1) has been qualified for use and is original equipment (OEM) on large commercial aircraft.

### **Features:**

The design of the Series/Parallel Relief Valve provides two parallel pressure relief stages, each of which has two redundant series stages. In the event of an over pressurization, a maximum flow of 2,500 slpm at 233 psi can be relieved through one of the two parallel stages. Four independent poppets with O-ring seals provide the relief function; each poppet assembly can be independently tested for leakage, flow, and crack/reseat pressure.

# SPECIFICATIONS

## Relief Valve Part Number: B43577-1



All dimensions in inch (mm)

### Specifications:

<b>Weight</b>	2.55 lbs	(1.16 Kg)
<b>Inlet Pressure</b>	115 to 145 psig	(7.9 to 10 barg)
<b>Relief Pressure</b>	165 to 175 psig	(10.7 to 12.1 barg)
<b>Reseat pressure</b>	145 psig min	(10 barg min)
<b>Flow Rate</b>	2,500 slpm @ 233 psig	
<b>Proof Pressure</b>	Inlet: 263 psig	Outlet: 1,088 psig
<b>Burst Pressure</b>	Inlet: 350 psig	Outlet: 1,450 psig
<b>Media</b>	Gaseous Oxygen per MIL-PRF-27210	

### Operating Environment:

<b>Operating Temperature</b>	5 to 158 deg F	(-15 to 70 deg C)
<b>Storage Temperature</b>	-67 to 185 deg F	(-55 to 85 deg C)
<b>Shock</b>	9 g sustained	20 g crash
<b>Vibration</b>	5.83 Grms each axis	
<b>Humidity</b>	0 to 100% relative humidity	
<b>Altitude</b>	41,000 ft max	(12,497 m)

### Product Interfaces:

<b>Inlet Port</b>	MS 33514G-8
<b>Outlet Port</b>	MS 33656-5 (AS4395-05)