Model 80D Multi-Stage Pressure Regulator

Features
- Force balance and 2 stage pilot control to minimize droop.
- Excellent frequency response to eliminate output pressure excursions.
- Compact size for installation where space is limited.
- Sapphire Orifice provides precise control of pilot control air flow.
- Low air consumption for efficient operation.
- Available in 1/8", 1/4" and 3/8" NPT port sizes.

Operating Principles
The Model 80D is a precision two-stage device that incorporates a force balance design with pilot control. This compact, high quality unit combines the flow capacity of a process regulator with the precision of an instrument regulator.

FIGURE 1 1/8" NPT Regulator

FIGURE 2 1/4" & 3/8" NPT Regulator
Model 80D Multi-Stage Pressure Regulator

Technical Information

Model 80D Regulator Kits & Accessories
Mounting Bracket Kit ......................... 11969 (sold separately)

Specifications
Flow Capacity
14 SCFM (23.8 m³/HR) (100 psig, [7.0 BAR], (700 kPa)
supply: 20 psig, [1.5 BAR], (150 kPa) setpoint

Exhaust Capacity
2.5 SCFM (4.26 m³/HR) where downstream pressure is
5 psig, [0.35 BAR], (35 kPa) above 20 psig setpoint

Pressure Change under Flow Conditions
Less than 0.1 psig, [0.007 BAR], (0.7 kPa) from dead end
service to 10 SCFM (17 m³/HR)
(set pressure 10 psig, [0.7 BAR], (700 kPa) supply pressure
100 psig, [7.0 BAR], (700 kPa)

Air Consumption
Less than .1 SCFM (17 m³/HR)

Sensitivity
Less than 0.1” (.254 cm) Water Column

Maximum Supply Pressure
150 psig, [10.0 BAR], (1000 kPa) for 20 psig,
[1.5 BAR], (150 kPa) range
250 psig, [17.0 BAR], (1700 kPa) for 60 - 100 psig,
[4.0 - 7.0 BAR], (400 - 700 kPa) range

Effect of Supply Pressure Variation
Less than .2 psig, [0.014 BAR], (1.4 kPa) for 100 psig,
[7.0 BAR], (700 kPa) change in supply pressure

Ambient Temperature Limits
-40°F to +200°F, (-40°C to +93.3°C)

Materials of Construction
Trim ........................................ Zinc Plated Steel
Body ........................................ Aluminum
Diaphragms .................................. Nitrile and Uacon
Orifice ...................................... Sapphire

Catalog Information

Catalog Number 805

Pressure Range
<table>
<thead>
<tr>
<th>psig</th>
<th>[BAR]</th>
<th>(kPa)</th>
</tr>
</thead>
</table>
| 0-20 | [0-1.5] | (0-150) |...
| 1-60 | [0.07-4] | (7-400) |...
| 1-100 | [0.07-7] | (7-700) |...

Pipe Size
1/8” NPT1 ........................................ 1
1/4” NPT2 ........................................ 2
3/8” NPT2 ........................................ 3

1 FIGURE 1 on Pg. 40 Shows 1/8” port body style
2 FIGURE 2 on Pg. 40 shows 1/4 and 3/8” port body style

Options
Tapped Exhaust ................................. E
Bonnet Mounting .............................. P
Adjustment Screw ............................ S
Tamper Proof .................................. T
BSPT (Tapered) ............................... U

Service Information

A service kit is available for the Model 80D. Refer to the Fairchild Model 80D Pressure Regulator Installation, Operation and Maintenance Instructions, IS-1000080D.