Model 50BP Miniature Precision Back Pressure Regulator

Features

• Compact size
• Lightweight unit
• High accuracy for precision control
• Polymer construction for corrosive resistance
• Non-rising adjustment knob
• Manifold mount capability
• Push to connect fittings in all ports
• Separate control chamber isolates the Diaphragm from the main flow to eliminate hunting and buzzing

Operating Principles

Downstream pressure is transmitted through the Aspirator Tube to the bottom of the Diaphragm Assembly. As long as the pressure acting on the bottom of the Diaphragm Assembly produces a force less than the spring force acting on the top of the Diaphragm Assembly, the Relief Valve remains closed. When system pressure increases, the force on the bottom of the Diaphragm Assembly increases beyond the set point. When system pressure increases beyond the set point, the assembly moves upward, lifting the Relief Valve from its seat and vents the downstream air.

If downstream pressure decreases below the set point, the assembly moves downward closing the Relief Valve.

Specifications

Flow Capacity
10 SCFM (17.0 m³/HR) @ 120 psig, [8 BAR], (800 kPa) system pressure

Maximum System Pressure
150 psig, [10 BAR], (1000 kPa)

Sensitivity
5" (12.7cm) Water Column

Ambient Temperature
0°F to +160°F, (-17.8°C to 71.1°C)

Materials of Construction
Body and Housing.................................Glass Filled Acetal
Valve .................................................Stainless Steel
Diaphragm ............................................Polymer Reinforced Nitrile

Catalog Information

Catalog Number   5 0 B 1
Pressure Range

<table>
<thead>
<tr>
<th>psig</th>
<th>[BAR]</th>
<th>(kPa)</th>
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<tbody>
<tr>
<td>0-10</td>
<td>0-0.7</td>
<td>(0-70)</td>
</tr>
<tr>
<td>5-30</td>
<td>0.03-2</td>
<td>(3-200)</td>
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<td>1-60</td>
<td>0.07-4</td>
<td>(7-400)</td>
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<tr>
<td>2-100</td>
<td>0.15-7</td>
<td>(15-700)</td>
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Port Tubing Size
1/4" / 6 mm

Port Type
Inch ...........................................E
Metric .........................................M

Elastomer
Nitrile .........................................N

Adjustment Type
Knob .............................................K

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