Features

• Control sensitivity of 1/8" water column allows use in precision processes.

• Pressure balanced supply valve prevents supply pressure changes from affecting the setpoint.

• Optional check valve permits Backflow of downstream pressure when supply is opened to atmosphere.

• Separate control chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing.

• An aspirator tube compensates downstream pressure droop under flow conditions.

• Canadian Registration Number (CRN) certification for all territories and provinces.

• NO Yellow Metals available for harsh media.

Operating Principles

The Model 10 Series regulator uses mechanical feedback force balance principals to control the movement of the Valve Assembly that controls the output pressure. When the regulator is adjusted for a specific set point, the downward force of the Range Spring moves the Diaphragm Assembly downward. The Supply Valve opens and allows air to pass to the Outlet Port. As the set point is reached, the downward force exerted by the Range Spring is balanced by the force of the downstream pressure that acts on the Diaphragm Assembly. The resultant force moves the Supply Valve upward to reduce the flow of air to the Outlet Port.

Outlet pressure is maintained as a result of balance between forces acting on the top and bottom of the Diaphragm Assembly.

Options

Low Bleed (B)  Option that reduces the bleed rate below that of a standard unit and can be used when bleed or consumption is an issue. A reduction in sensitivity will result from the lower bleed rate.

Low Flow (L)   Option that increases the bleed rate above that of a standard unit to improve response in low flow applications.

Check Valve (C)  Internal check valve that permits rapid Backflow of downstream pressure through the supply line when supply pressure is removed.

Non-Relieving (N)  Option that includes no relief function or continuous bleed. Units with this feature must operate with a continuous downstream flow to regulate properly and prevent the output from equalizing with supply line pressure.

Relieving, No Bleed (D)  Option to provide relief function without continuous bleed. A reduction in sensitivity will result from the no bleed feature.
Technical Information

Model 10 Pneumatic Precision Regulator

Catalog Number 102

Pressure Range

<table>
<thead>
<tr>
<th>psig</th>
<th>(BAR)</th>
<th>(kPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>(0-0.15)</td>
<td>(0-15)</td>
</tr>
<tr>
<td>0-10</td>
<td>(0-0.70)</td>
<td>(0-70)</td>
</tr>
<tr>
<td>0-20</td>
<td>(0-1.5)</td>
<td>(0-150)</td>
</tr>
<tr>
<td>0.5-30</td>
<td>(0.03-2)</td>
<td>(3-200)</td>
</tr>
<tr>
<td>1-60</td>
<td>(0.1-4)</td>
<td>(10-400)</td>
</tr>
<tr>
<td>2-150</td>
<td>(0.1-10)</td>
<td>(15-1000)</td>
</tr>
<tr>
<td>3-200</td>
<td>(0.2-14)</td>
<td>(20-1400)</td>
</tr>
<tr>
<td>5-300</td>
<td>(0.3-21)</td>
<td>(35-2100)</td>
</tr>
<tr>
<td>5-400</td>
<td>(0.3-28)</td>
<td>(35-2800)</td>
</tr>
<tr>
<td>5-500&quot;</td>
<td>(0.3-35)</td>
<td>(35-3500)</td>
</tr>
</tbody>
</table>

Pipe Size

1/4" NPT ..................  2
3/8" NPT ..................  3
1/2" NPT ..................  4

Options

Mounting Bracket: 09921 (Zinc Plated Steel)
14523 (316 Stainless Steel)

Silicone Elastomers 1 A - Y Y N Y Y Y Y Y Y Y N
Low Bleed B Y - Y N Y Y Y Y N Y Y Y Y Y Y
Check Valve 2 C Y Y - Y Y Y Y N Y Y Y Y Y N
No Bleed 3 D N N Y - Y Y Y N Y Y Y Y Y Y
Tapped Exhaust E Y Y Y Y - Y Y Y Y N Y Y Y Y Y N
BSPP (Parallel) 3 H Y Y Y Y Y - Y Y Y Y N Y Y Y Y Y N
Fluorocarbon Elastomers J N Y N Y Y - Y Y Y Y Y Y Y Y
Low Flow L Y N Y N Y Y - N Y Y Y Y Y Y
Non-Relieving N Y N Y N Y Y Y N - Y Y Y Y Y Y
Panel Mount 4 P Y Y Y Y Y Y Y - N Y N Y Y Y Y
Plunger Operated 5 R Y Y Y Y N Y Y Y Y N - N N Y N Y
Screwdriver Adjust S Y Y Y Y Y Y Y Y N - N Y Y Y Y
Tamper Proof T Y Y Y Y Y Y Y Y Y N - Y Y Y Y
BSPT (Tapered) U Y Y Y Y N Y Y Y Y Y Y - Y Y
No Yellow Metals 6 Y Y N Y N N Y Y Y Y Y Y Y - Y Y

Option Compatibility Chart: "Y" in Box = Compatible options

Table 1 - Plunger Operated Regulator Parameters

<table>
<thead>
<tr>
<th>Range</th>
<th>Push Rod Travel (inches)</th>
<th>Push Rod Thrust (pounds)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2 psig</td>
<td>.560 ± 10%</td>
<td>6.28 ± 10%</td>
</tr>
<tr>
<td>0-10 psig</td>
<td>.668 ± 10%</td>
<td>31.4 ± 10%</td>
</tr>
<tr>
<td>0-20 psig</td>
<td>.668 ± 10%</td>
<td>62.8 ± 10%</td>
</tr>
<tr>
<td>0.5-30 psig</td>
<td>.673 ± 10%</td>
<td>94.2 ± 10%</td>
</tr>
<tr>
<td>1-60 psig</td>
<td>.698 ± 10%</td>
<td>188.4 ± 10%</td>
</tr>
<tr>
<td>2-150 psig</td>
<td>.589 ± 10%</td>
<td>188.4 ± 10%</td>
</tr>
<tr>
<td>5-300 psig</td>
<td>.589 ± 10%</td>
<td>471.0 ± 10%</td>
</tr>
<tr>
<td>3-200 psig</td>
<td>.418 ± 10%</td>
<td>628.0 ± 10%</td>
</tr>
<tr>
<td>5-400 psig</td>
<td>.418 ± 10%</td>
<td>628.0 ± 10%</td>
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Specifications

Supply Pressure
500 psig, [35.0 BAR], (3500 kPa) Maximum

Flow Capacity
40 SCFM (68 m³/HR) @ 100 psig, [7.0 BAR], (700 kPa) supply and 20 psig, [1.5 BAR], (150 kPa) setpoint

Exhaust Capacity
5.5 SCFM (9.35 m³/HR) where downstream pressure is 5 psig, [0.035 BAR], (35 kPa) above 20 psig, [1.5 BAR], (150 kPa) change in supply pressure

Supply Pressure Effect
Less than 0.1 psig, [0.007 BAR], (7 kPa) for 100 psig, [7.0 BAR], (700 kPa) change in supply pressure

Sensitivity
1/8 in Water Column [0.31 mBAR (0.031 kPa)]

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

Hazardous Locations
Acceptable for use in Zones 1 and 2 for gas atmosphere; Groups IIA and IIB and Zones 21 and 22 for dust atmospheres

Materials of Construction
Body and Housing: Aluminum
Diaphragms: Buna N on Dacron (Std. unit only)
Trim: Brass, Zinc Plated Steel

Options

Mounting Bracket Kit: 09921 (Zinc Plated Steel)
14523 (316 Stainless Steel)

Technical Information

Fairchild Model 10262

Catalog Information

Catalog Number 102

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