



### Features

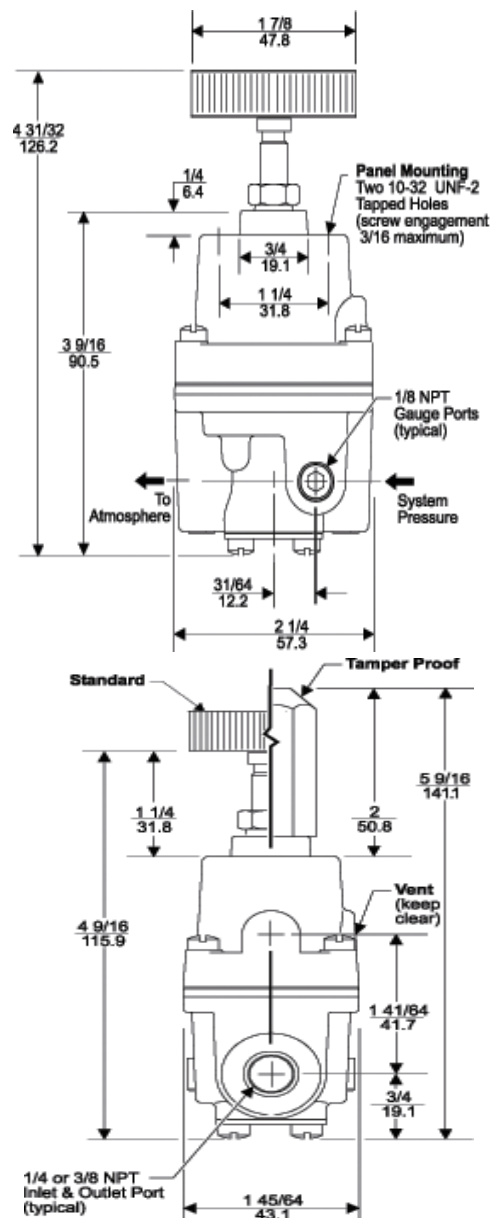
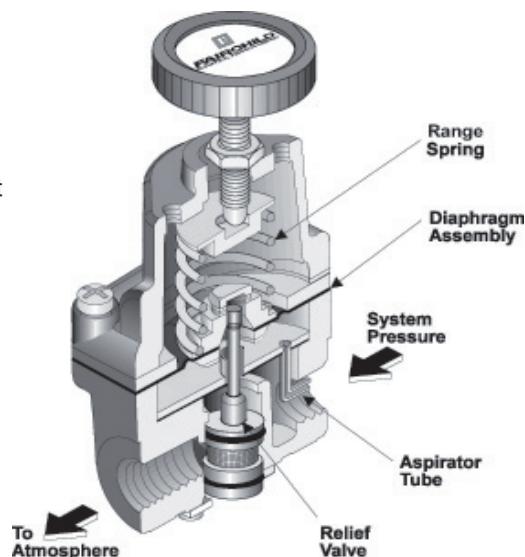
- The Model 30BP is a high capacity back pressure regulator that relieves excess system pressure to maintain a setpoint.
- Combination of high capacity and compact size make the Model 30BP an excellent choice for a wide range of precision applications including: Precise Control of Paper Machinery Felt Guides, Supply of a Precise Repeatable Signal to a Pneumatic Clutch, or Control of Cylinder Pressure.
- The Model 30BP is sensitive to 1/4" Water Column variation which permits use in precision processes.
- Flow of up to 40 SCFM allows use in applications with high flow requirements.
- A Separate Control Chamber and Aspirator Tube isolates the diaphragm from the main flow eliminating hunting and buzzing.

### Operating Principles

The Model 30BP Regulator uses the force balance principle to open the Relief Valve and vent system pressure when the set point is exceeded.

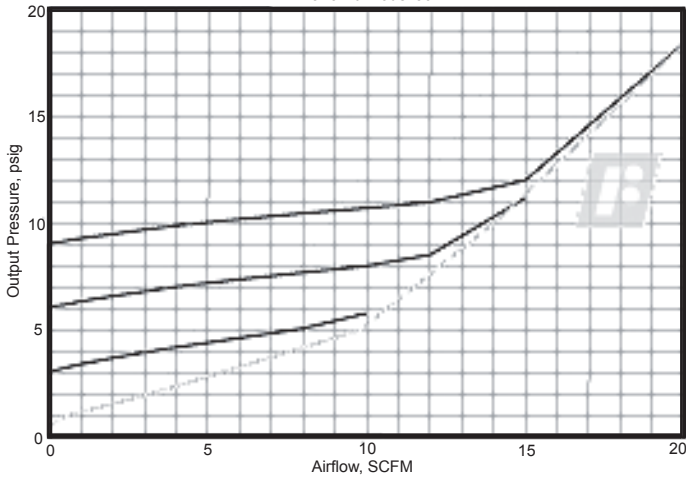
Downstream pressure is transmitted through the Aspirator Tube to the bottom of the Diaphragm Assembly. When you adjust the range screw for a specific set point, the Range Spring compresses and exerts a force on the top of the Diaphragm Assembly. As long as the pressure acting on the bottom of the Diaphragm 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 until it reaches 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.



**Technical Information**

Flow Characteristics  
Fairchild Model 30222BP



**Specifications**

**Set Point Range**

2-100 psig, [0.15-7.0 BAR], (15-700 kPa)

**System Pressure (Maximum)**

150 psig, [10.0 BAR], (1000 kPa)

**Flow Capacity (SCFM)**

40 (68 m<sup>3</sup>/HR) @ 100 psig, [7.0 BAR], (700 kPa)

**Sensitivity**

1/4" (.63 cm) Water Column

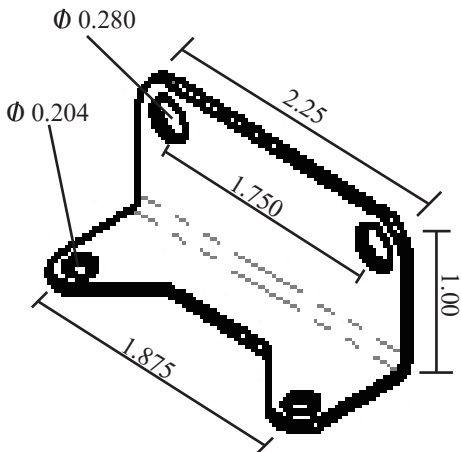
**Ambient Temperature**

-40°F to +200°F, (-40°C to 93.3°C)

**Materials of Construction**

Body and Housing ..... Aluminum  
Diaphragms ..... Nitrile on Dacron  
Trim ..... Brass

**Model 30 Mounting Bracket  
P/N 21667-1**



**Catalog Number**

3 0 2   BP

**Pressure Range**

psig	[BAR]	(kPa)
0-2	[0-0.15]	(0-15)
0-10	[0-0.7]	(0-70)
.5-30	[0.03-2]	(3-200)
1-60	[0.1-4]	(10-400)
2-100	[0.15-7]	(15-700)

- 1
- 2
- 3
- 4
- 5

**Pipe Size**

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

**Options**

- Silicone Elastomers ..... A
- Fluorocarbon (Viton) Elastomers ..... J
- BSPP (Parallel)<sup>2</sup> ..... H
- Mounting Bracket ..... M
- Screwdriver Adjustment ..... S
- Tamper Proof ..... T
- BSPT (Tapered) ..... U

<sup>2</sup> BSPP Threads in Inlet & Outlet Ports Only. Others BSPT.

**Installation**

For installation instructions, refer to the *Fairchild Model 30BP Midget Precision Back Pressure Regulator Installation, Operation and Maintenance Manual, IS-100030BP*.

