

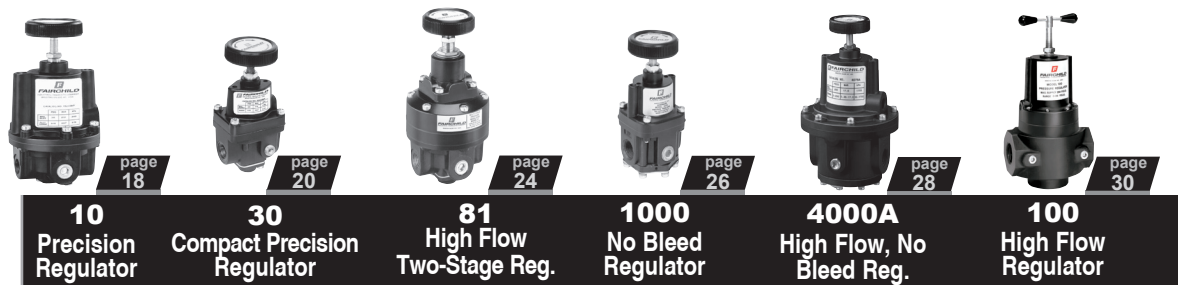
# Pneumatic Pressure Regulators

A pressure regulator reduces an unregulated high input pressure to a regulated lower output pressure. Its primary function is to maintain the regulated output pressure under flowing and non-flowing conditions.

Fairchild manufactures a complete line of precision pneumatic regulators including positive pressure, back pressure and vacuum models. Quality engineering and manufacturing excellence assures that our pressure regulators meet all the requirements of a precision device.

Our large selection of pressure ranges and flow capacities lets you select the models that meet your needs for instrument or general industrial control applications.

## Precision Regulators



	<b>10</b> Precision Regulator	<b>30</b> Compact Precision Regulator	<b>81</b> High Flow Two-Stage Reg.	<b>1000</b> No Bleed Regulator	<b>4000A</b> High Flow, No Bleed Reg.	<b>100</b> High Flow Regulator
<b>Flow Capacity:</b> SCFM (m <sup>3</sup> /HR) Supply =100 psig	40 (68)	40 (68)	50 (85)	50 (85)	150 (255)	1500 (2550)
<b>Exhaust Capacity:</b> SCFM (m <sup>3</sup> /HR) Downstream pressure 5 psig above 20 psig set point	5.5 (9.4)	2.0 (3.4)	5.5 (9.4)	8 (13.6)	40 (65)	44 (75)
<b>Sensitivity:</b> Inch/WC (cm)	0.125 (0.32)	0.25 (0.63)	<0.1 (<0.254)	0.5 (1.27)	0.5 (1.27)	0.5 (1.27)
<b>Supply Pressure Var:</b> PSIG (kPa) For Supply Change:	<0.1 (<0.7) 100 psig	<0.2 (1.4) 100 psig	<0.2 (<1.4) 100 psig	<0.1 (<0.7) 100 psig	<0.1 (<0.7) 100 psig	<0.5 (<3.5) 100 psig
<b>Supply Pressure Max:</b> PSIG (kPa)	500 (3500)	250 (1700)	2 & 5 psig range 100 (700) All other ranges 150 (1000)	250 (1700)	250 (1700)	250 (1700)
<b>Dimensions (Approx):</b> Inches (mm)	Dia. 3 H 6 1/2 (Dia. 76 H 165)	2 1/2 x 1 3/4 x 5 1/4 (57 x 44 x 133)	Dia. 3 H 6 1/4 (Dia. 76 H 159)	2 1/8 x 2 1/8 x 5 (54 x 54 x 127)	Dia. 4 1/2 H 7 7/8 (Dia. 114 H 202)	Dia. 5 1/2 H 11 1/4 (Dia. 133 H 286)
<b>Range PSIG (kPa)</b>	0-2 (0-15), 0-10 (0-70), 0-20 (0-150), 0.5-30 (3-200), 1-60 (10-400), 2-150 (15-1000), 3-200 (20-1500), 5-300 (35-2100), 5-400 (35-2800)	0-2 (0-15), 0-10 (0-70), 0.5-30 (3-200), 1-60 (10-400), 2-100 (15-700)	0-2 (0-14), 0-5 (0-35), 0-20 (0-150), 0.5-60 (3.5-400), 0.5-100 (3.5-700)	0.5-10 (3.5-70), 0.5-30(3.5-200), 1-60 (7-400), 2-150 (15-1000)	0.5-10 (3.5-70), 0.5-30 (3.5-200), 1-60 (7-400), 2-150 (15-1000), 5-250 (35-1700)	0-10 (0-70), 0.5-30 (3-200), 1-60 (10-400), 2-100 (15-700), 2-150 (15-1000)
<b>Pipe Size</b>	1/4", 3/8", 1/2"	1/4", 3/8"	1/4"	1/4", 3/8"	3/8", 1/2", 3/4"	1", 1 1/2"



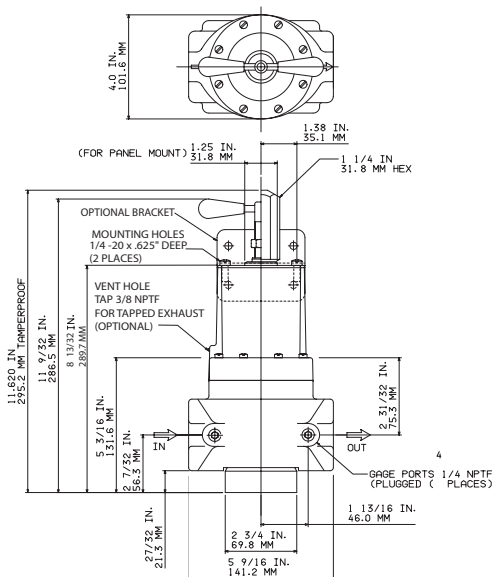
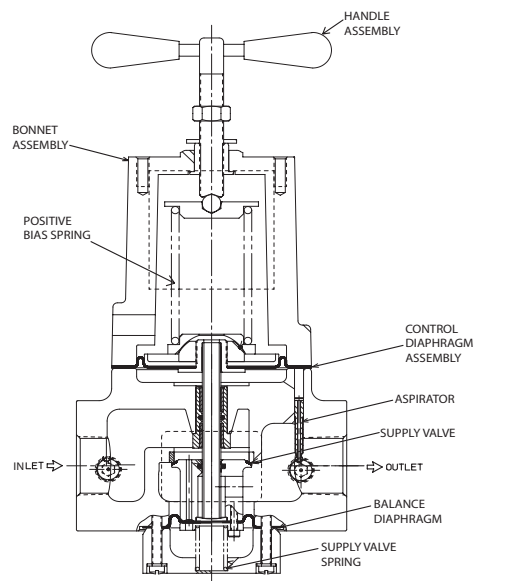
## Features

- Sensitivity of 1" (1.27 cm) of water column responds to minute changes in downstream pressure.
- Venturi-type aspirator tube to aid stability and minimize downstream pressure drop under flowing conditions.
- Balanced supply valve to minimize effect of supply pressure variation.
- Control Chamber isolates the control diaphragm to eliminate hunting and buzzing.
- Operates equally well on shop air or clean, dry instrument air.
- May be serviced and maintained without removal from line.
- Mounting Bracket available
- Canadian Registration Number (CRN) certification for all territories and provinces.

## Operating Principles

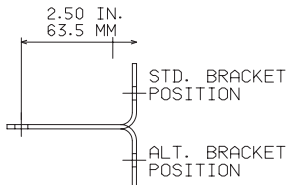
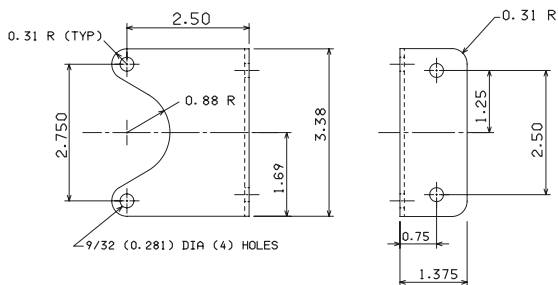
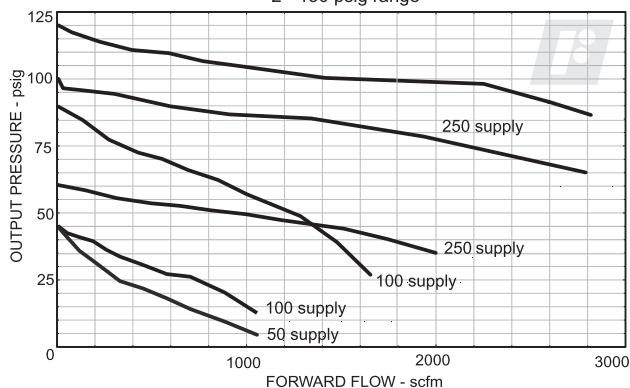
The Model 100 High Flow Pressure Regulator is designed for use in control systems requiring unusually high flow capacities. Like many of the Fairchild regulators, the compensating action of the inner valve assembly of the Model 100 allows complete stabilization of downstream pressure.

This high quality unit, which operates as efficiently on shop air as on dry instrument air, offers unusual versatility and economy. The Model 100 is capable of providing precise control of set point and good sensitivity under high flow conditions, and is the ideal choice for many demanding applications, including main header regulator control, large nip roll loading, and clutch brake operation.



**Technical Information**

Model 100612  
Fairchild Industrial Product Company  
2 - 150 psig range



Mounting Bracket: 10308

**Model 100 Regulator Kits & Accessories**

Mounting Bracket Kit ..... 10308 (sold separately)

**Specifications**

**Maximum Supply Pressure**  
250 psig, [17.0 BAR], (1700 kPa)

**Flow Capacity**  
In excess of 1500 SCFM (2550 m<sup>3</sup>/HR) (100 psig, [7.0 BAR], (700 kPa) supply, 1 1/2" NPT Conn. 40 psig, [2.8 BAR], (280 kPa) setpoint

**Exhaust Capacity**  
44 SCFM (75 m<sup>3</sup>/HR) for downstream pressure 5 psig, [.35 BAR], (35 kPa) above 20 psig set pressure

**Supply Pressure Effect**  
Less than 0.1 psig, [.007 BAR], (.7 kPa) per 100 psig, [7.0 BAR], (700 kPa) change

**Sensitivity**  
1" (1.27 cm) Water Column

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

**Catalog Information**

Catalog Number **1 0 0**      

**Pressure Range**

psig	[BAR]	(kPa)	
0-10	[0-0.7]	(0-70)	2
0.5-30	[0.035-2]	(3.5-200)	3
1-60	[0.07-4]	(7-400)	4
2-100	[0.14-7]	(14-700)	5
2-150	[0.14-10]	(14-1000)	6

**Pipe Size**

1" NPT	08
1 1/2" NPT	12

**Options**

Tapped Exhaust	E
Non-Relieving	N
Tamper Proof	T

**Service Information**

A Service Kit is available for the Model 100. Refer to the *Fairchild Model 100 High Flow Pressure Regulator Installation, Operation and Maintenance Instructions, IS-10000100.*

**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	Aluminum
Trim	Zinc Plated Steel, Brass
Diaphragms	Buna N