

# FINE CONTROLS (UK) LTD



Fine Controls have been supplying process controls & instrumentation equipment since 1994, & now serves an ever expanding customer base, both in the UK & globally.

We offer a full range of valve & instrumentation products & services, with our product range representing leading technologies & brands:

**Flow:** Flow Meters & Transmitters, Flow Switches, Flow Control Valves & Batch Control Systems

**Temperature:** Temperature Probes & Thermowells, Temperature transmitters, Temperature Regulators & Temperature Displays

**Level:** Level Transmitters & Switches

**Pressure:** Pressure Gauges & Transmitters, Precision & High Pressure Regulators & I-P Converters, Volume boosters.

**Precision Pneumatics:** Pressure Regulators, I-P Converters, Volume Boosters, Vacuum Regulators

**Valves:** Solenoid & Pneumatic Valves, Control Valves & Positioners, Actuated Ball, Globe or Diaphragm Valves & Isolation Valves

**Services:** Repair, Calibration, Panel Build, System Design & Commissioning

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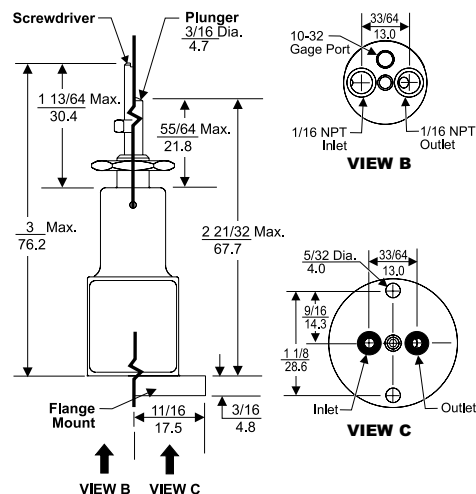
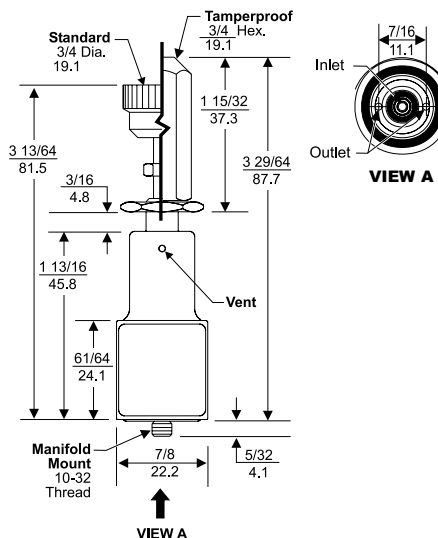
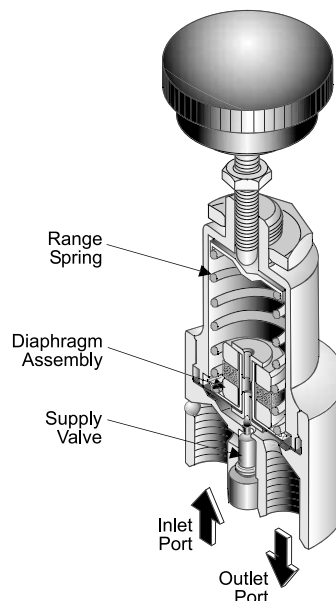


### Features

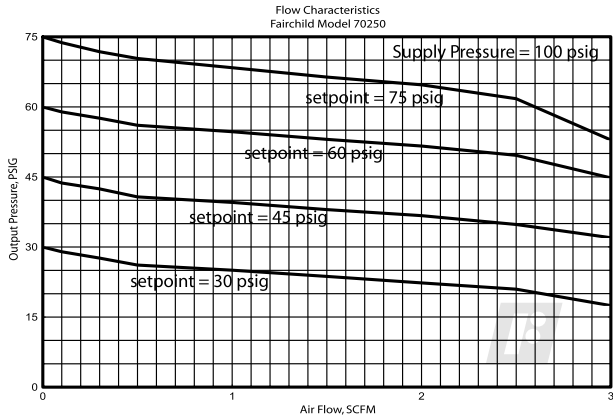
- The Model 70B controls a pressure signal for pneumatic instrumentation. This regulator is ideally suited for applications with limited space.
- Vibration damper provides low noise operation.
- Repeatability within 0.06 psig dead ended allows accurate setpoint control.
- Small size allows installation in restrictive spaces.

### Operating Principles

When the setpoint is reached, the upward force of the output pressure that acts on the bottom of the Diaphragm balances with the downward force that acts on the top of the Diaphragm. If the output pressure rises above the setpoint, the force that acts on the bottom of the Diaphragm moves the Diaphragm Assembly upward to close the Supply Valve and open the Relief Valve. Excess output pressure exhausts through the Vents in the unit until it reaches the setpoint. The Vibration Damper dampens the throttling action of the Valve.



**Technical Information**



**Specifications**

**Supply Pressure**

250 psig, [17.0 BAR], (1700 kPa) Maximum  
50 psig, [3.5 BAR], (350 kPa) Minimum

**Flow Capacity**

2.5 SCFM (4.25 m<sup>3</sup>/HR) @ 100 psig, [7.0 BAR], (700 kPa) supply and 30 psig, [2.0 BAR], (200 kPa) setpoint

**Exhaust Capacity**

0.28 SCFM (.48 m<sup>3</sup>/HR) where downstream pressure is 5 psig, [.35 BAR], (35 kPa) above 20 psig, [1.5 BAR], (150 kPa) setpoint

**Supply Pressure Effect**

Less than 0.05 psig, [.0035 BAR], (.35 kPa) for 5 psig [.35 BAR], (35 kPa) change in supply pressure

**Ambient Temperature**

-40° F to + 160° F, (-40° C to + 71° C)

**Materials of Construction**

Body .....Brass  
Diaphragms .....Fluorocarbon  
Trim .....Zinc Plated Steel

**Catalog Information**

Catalog Number 7 0 2  0

**Pressure Range**

psig	[BAR]	(kPa)	
0-5	[0-0.35]	(0-35)	1
0-15	[0-1]	(0-100)	2
0.5-30	[0.035-2]	(3.5-200)	3
1-60	[0.07-4]	(7-400)	4
2-100	[0.15-7]	(15-700)	5

**Options**

- Flange Mounted <sup>1</sup> .....
- Manifold Mounted .....
- Non-Relieving .....
- Plunger Operated <sup>2</sup> .....
- Screwdriver Adjust .....
- Tamperproof .....
- M5 x 0.8 Threaded .....
- In/Out Ports

Table 1. Option Availability

	F	M	N	R	S	T	V
F	-	N	Y	Y	Y	Y	N
M	N	-	Y	Y	Y	Y	N
N	Y	Y	-	Y	Y	Y	Y
R	Y	Y	Y	-	N	N	Y
S	Y	Y	Y	N	-	Y	Y
T	Y	Y	Y	N	Y	-	Y
V	N	N	Y	Y	Y	Y	-

<sup>1</sup> Supplied with Knob as Standard.

<sup>2</sup> Refer to Table 2 for Push Rod Travel and Thrust.

Table 2. Plunger Operated Regulator Parameters

Range	Push Rod Travel (inches)	Push Rod Thrust (pounds) @ Max. Output
0-5 psig [0-0.35 BAR] (0-35 kPa)	.31 ± 10%	1.25 ± 10%
0-15 psig [0-1 BAR] (0-100 kPa)	.34 ± 10%	3.75 ± 10%
0.5-30 psig [0.035-2 BAR] (3.5-200 kPa)	.34 ± 10%	7.50 ± 10%
1-60 psig [0.07-4 BAR] (7-400 kPa)	.34 ± 10%	15.00 ± 10%
2-100 psig [0.15-7 BAR] (15-700 kPa)	.34 ± 10%	25.00 ± 10%