

# 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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**FAIRCHILD**



**bürkert**



**SIEMENS**



**alcon**  
SOLENOID VALVES

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**MIDLAND-ACS**  
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**Honeywell**



**Bourdon**  
Baumer Group



**SOLDO**  
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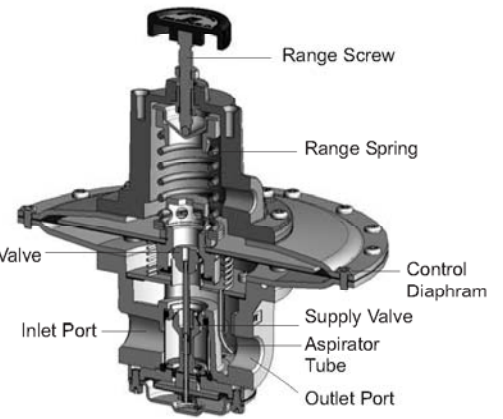
Model  
M4100



The Model 4100A Pneumatic Precision Regulator is a no bleed design regulator that precisely controls a set pressure.

### Features

- Sensitivity of 0.05" WC for Precision Control in low pressure applications.
- Large Relief Valve provides high exhaust flows.
- Soft Valve seat minimizes air consumption.
- An Aspirator Tube compensates upstream pressure build up under flow conditions.

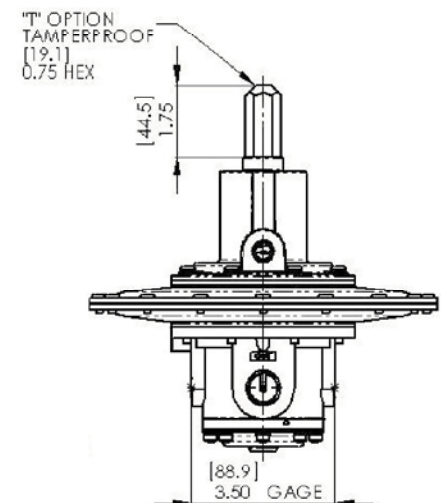
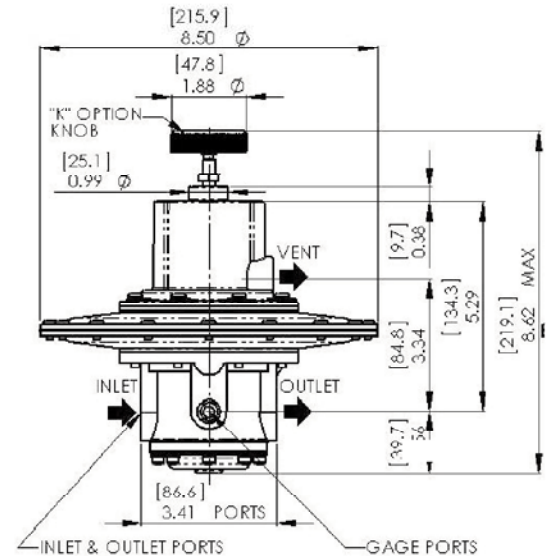


### Operating Principles

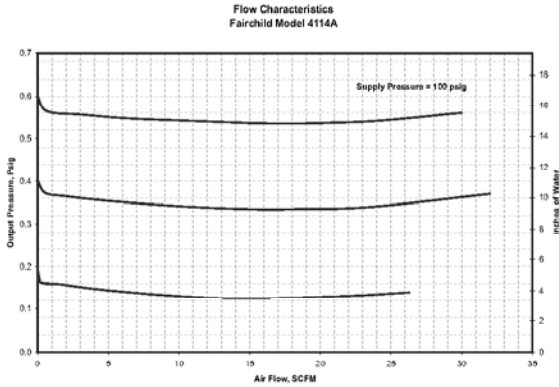
When you adjust the Range Screw to a specific setpoint, the Range Spring exerts a downward force against the top of the Control Diaphragm. This downward force opens the Supply Valve. Output pressure flows through the Outlet Port and the Aspirator Tube to the Control Chamber where it creates an upward force on the bottom of the Control Diaphragm.

When the setpoint is reached, the force of the Range Spring that acts on the top of the Control Diaphragm balances with the force of output pressure that acts on the bottom of the Control Diaphragm and closes the Supply Valve.

When the output pressure increases above the setpoint, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve, and output pressure exhausts through the Vent on the side of the unit until it reaches the setpoint.



**Technical Information**



**Specifications**

**Supply Pressure (Psig)**

20 psi to 150 psi max.

**Output Ranges**

0-0.7 psi [0-0.48 BAR]; up to 0-5.0 psi [0-0.35 BAR]

**Consumption**

None Detected

**Sensitivity**

Low as 0.05" Water Column

**Supply Pressure Effect**

None Detected

**Ambient Temperature**

-40°F to +200°F, (-40°C to +93°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  
Trim ..... Zinc Plated Steel, Brass  
Diaphragms and seals ..... Nitrile on Dacron

**Catalog Information**

**Catalog Number**

41 [ ] [ ] A [ ] [ ] [ ] [ ]

**Pressure Range**

psig	[BAR]	(kPa)
0-0.7	[0-0.048]	(0-4.8) . .
0-1.4	[0-0.096]	(0-9.7) . .
0-3	[0-0.21]	(0-21) . .
0-5	[0-0.35]	(0-35) . .

1  
2  
3  
4

**Port Size**

3/8" NPT. .... 3  
1/2" NPT. .... 4  
3/4" NPT. .... 6

**Port Thread**

NPT. .... N  
BSPT ..... U  
BSPPT<sup>1</sup> ..... H

**Elastomer**

Nitrile. .... N  
Fluorocarbon. .... J

**Actuator**

Knob. .... K  
Tamper Proof. .... T

**Vent**

Straight. .... S  
Threaded. .... E

<sup>1</sup> BSPPT Threads in Inlet & Outlet Ports Only. Others BSPT.

**Installation**

For installations instructions, refer to the *Fairchild Model 4000A Pneumatic Precision Regulator Instruction, Operation and Maintenance Instructions, IS-1004100.*