

Model 200 Pneumatic Volume Booster



C
Model 200

The Model 200 Pneumatic Volume Booster reproduces a pneumatic signal in a 1:1 ratio. It is ideally suited for systems that require input isolation or increased forward flow capacity.

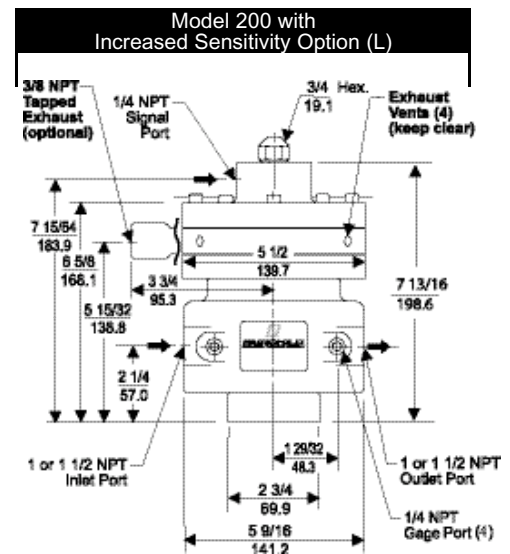
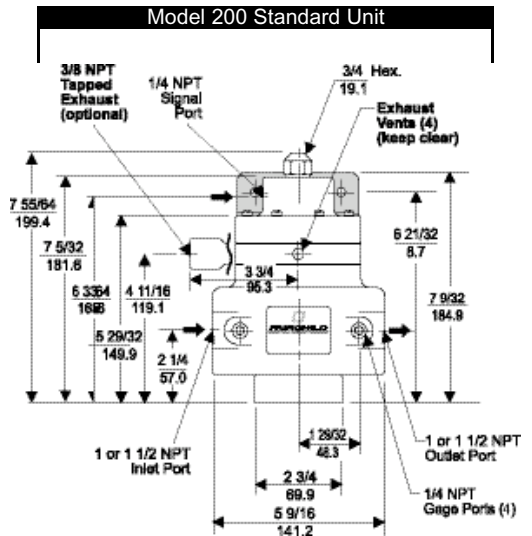
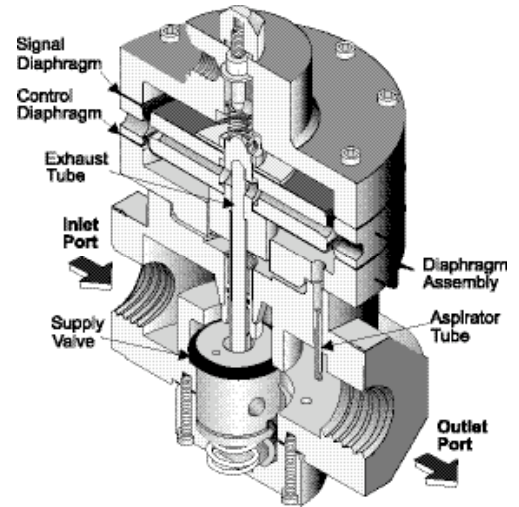
Features

- Control sensitivity to 1" water column variation.
- Large Supply and Exhaust Valves provide high forward and exhaust flows.
- A balanced Supply Valve minimizes the effect of supply pressure variation.
- An Aspirator Tube minimizes downstream pressure droop under flow conditions.
- A separate Control Chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing.
- Optional Increased Sensitivity configuration with larger Control Diaphragm for more precision control at low setpoints.
- Unit construction lets you service the Model 200 without removing it from the line.
- Mounting Bracket is available

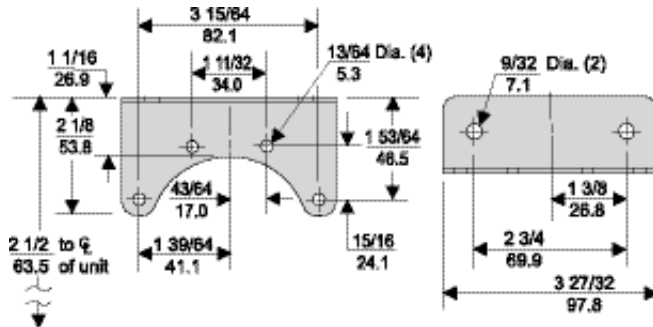
Operating Principles

When signal pressure on the top of the Signal Diaphragm creates a downward force on the Diaphragm Assembly, the Supply Valve opens. Output pressure flows through the Outlet Port and the Aspirator Tube to the Control Chamber to create an upward force on the bottom of the Control Diaphragm. When the setpoint is reached, the downward force of the signal pressure that acts on the top of the Signal Diaphragm balances with the upward force of the output pressure that acts on the bottom of the Control Diaphragm.

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



Technical Information



Mounting Bracket: 10311

Model 200 Booster Kits & Accessories

Mounting Bracket Kit.....10311 (sold separately)

Specifications

Maximum Supply Pressure

250 psig, [17.0 BAR], (1700 kPa)

Flow Capacity

1800 SCFM (3058 m³/HR) @ 150 psig, [10.0 BAR], (1000 kPa) supply, 20 psig, [1.5 BAR], (150 kPa) set point

Exhaust Capacity

65 SCFM (110.5 m³/HR) where downstream pressure is 5 psig, [.35 BAR], (35 kPa) above 20 psig, [1.5 BAR], (150 kPa) setpoint

Maximum Signal or Output Pressure

150 psig, [10 BAR], (1000 kPa)

Supply Pressure Effect

Less than 0.5 psig, [.035 BAR], (3.5 kPa) for 100 psig, [7.0 BAR], (700 kPa) change in supply pressure

Sensitivity

1" (2.54 cm) Water Column

Ambient Temperature

-40°F to +200°F, (-40°C to 93.3°C)

Materials of Construction

Body and Housing Aluminum
 Trim Aluminum, Stainless Steel,
 Zinc Plated Steel, Brass
 Diaphragms Nitrile on Dacron

Catalog Information

| | | | |
|--|---------|--------------------------|--------------------------|
| Catalog Number | 2 0 0 1 | <input type="checkbox"/> | <input type="checkbox"/> |
| Pipe Size | | <input type="checkbox"/> | <input type="checkbox"/> |
| 1" NPT | | 08 | |
| 1 1/2" NPT | | 12 | |
| Options | | | <input type="checkbox"/> |
| Tapped Exhaust | | | E |
| Increased Sensitivity | | | L |
| <i>(for more precision control at low setpoints)</i> | | | |
| Non-Relieving | | | N |
| Viton Elastomers | | | J |
| BSPB (Parallel) ¹ | | | H |

¹ BSPB Threads in Inlet and Outlet Ports Only. Others BSPT.

Service Kit

For installation instructions, refer to the *Fairchild Model 200 Pneumatic Volume Booster Installation, Operation and Maintenance Instructions*, IS-20000200.

