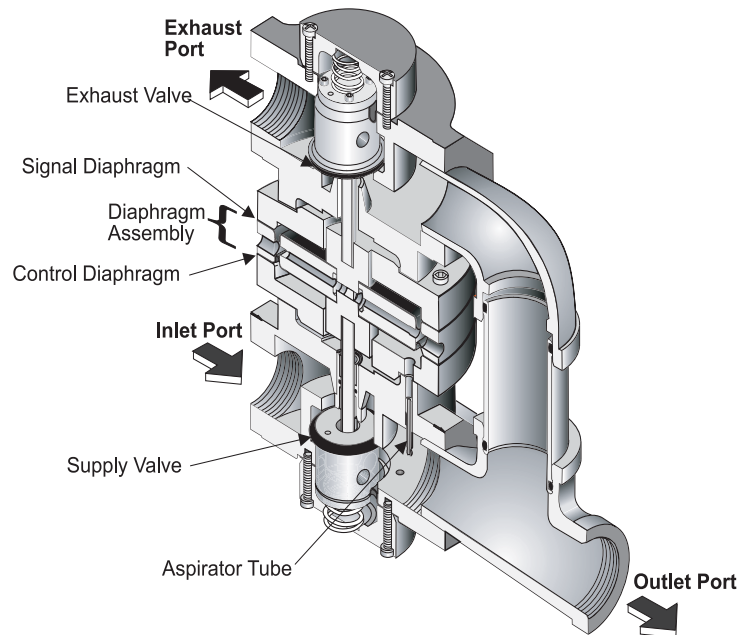


Model 200XLR

Pneumatic Volume Booster



Cross Section

Model 200XLR Booster Detail Drawing shown with Increased Sensitivity Option (L).

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.

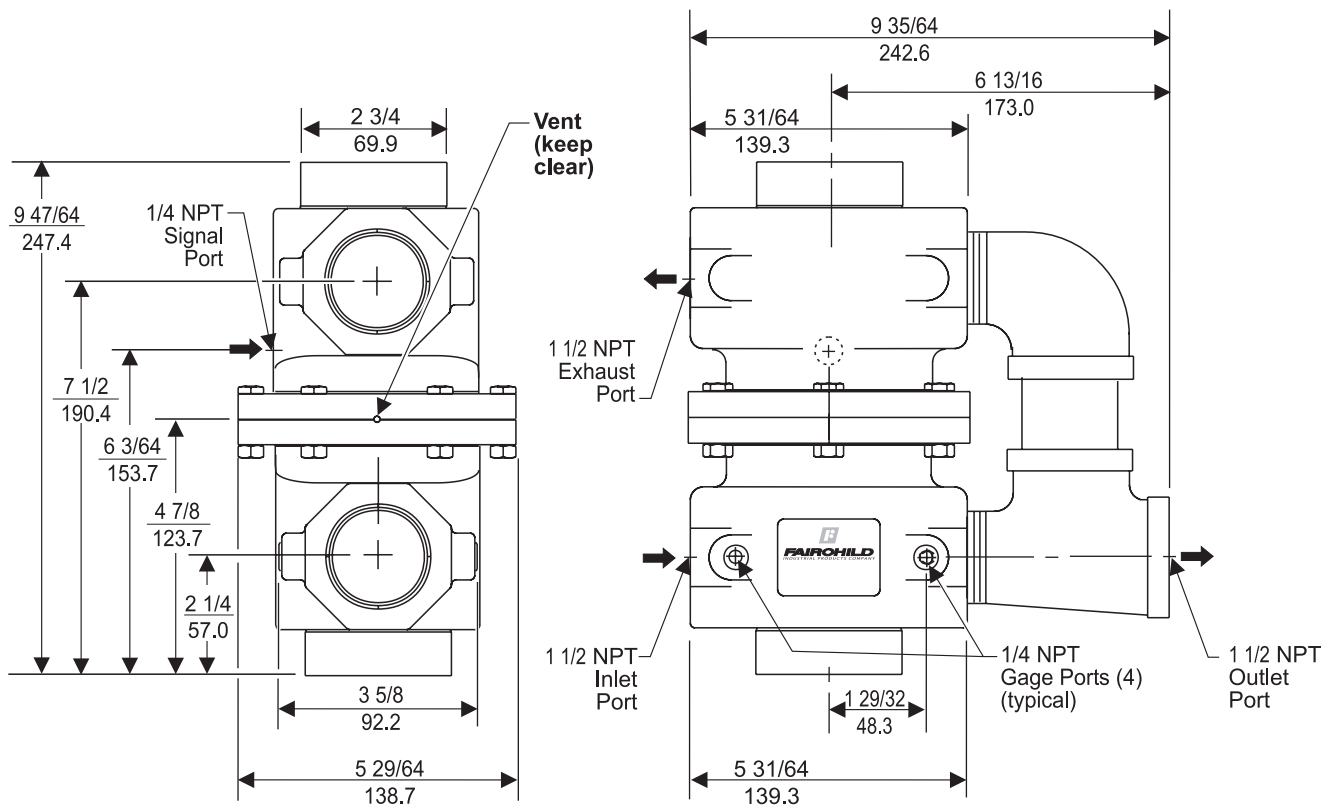
When the output pressure increases above the signal pressure, the Diaphragm Assembly moves upward to close the Supply Valve and open the Exhaust Valve. Excess output pressure exhausts through the Exhaust Port until it reaches the setpoint.

For more information, see cross sectional diagram.

General Information

- The Model 200XLR Pneumatic Volume Booster produces a pneumatic signal in a 1:1 ratio. It is ideally suited for systems that require input isolation or increased forward and exhaust flow capacities.
- Control sensitivity to 1" water column variation
- Large supply and Exhaust Valves provide high forward and exhaust flows
- 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.

Outline Dimensions

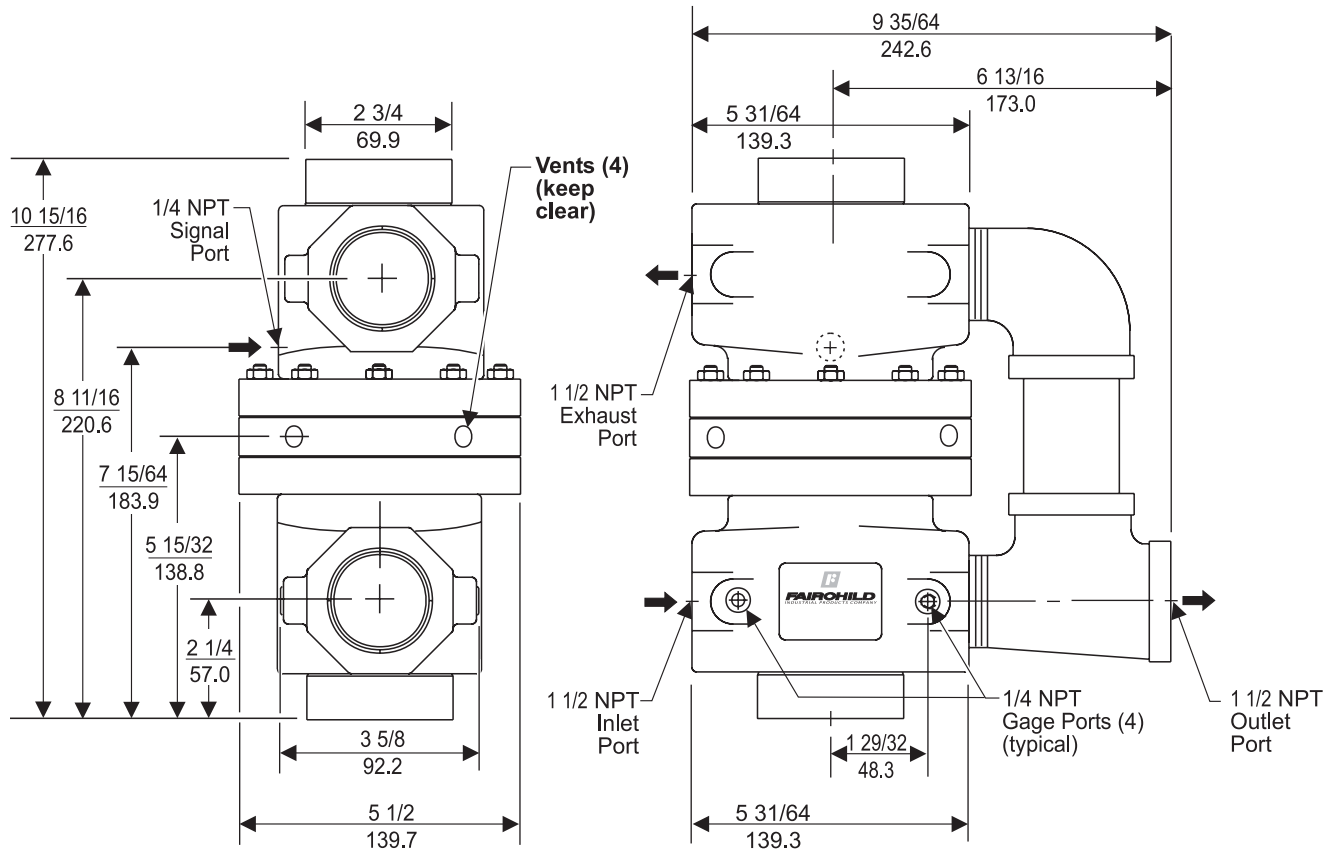


Specifications

Supply Pressure	250 psig, [17.0 BAR], (1700 kPa) Maximum
Signal or Output Pressure	150 psig, [10.0 BAR], (1000 kPa) Maximum
Flow Capacity (SCFM)	1500 (2550 m ³ /hr) @ 100 psig, [7.0 BAR], (700 kPa) supply and 20 psig, [1.5 BAR], (1500 kPa) setpoint
Exhaust Capacity (SCFM)	325 (552.5 m ³ /hr) where downstream pressure is 5 psig, [.35 BAR], (35 kPa) above 20 psig, [1.5 BAR], (150 kPa) setpoint
Ambient Temperature	-40°C to 200°C (-40°C to 93°C)

Outline Dimensions

Shown with Increased Sensitivity Option (L)



Specifications

Sensitivity

1" (2.54 cm) Water Column

Supply Pressure Effect

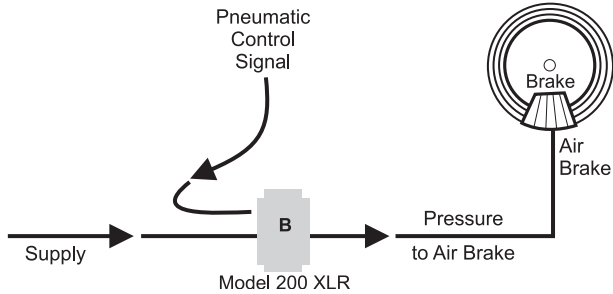
Less than 0.5 psig, [.03 BAR], (3.4 kPa) for 100 psig, [7.0 BAR], (700 kPa) change in supply pressure

Materials of Construction

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

Typical Application

In this application, the Model 200XLR is used to operate an Air Brake. Due to the high supply and exhaust capacity of the unit, it is well suited for this type of application.



Installation

For installation instructions, see the *Fairchild Model 200XLR Pneumatic Volume Booster Installation, Operation and Maintenance Instructions, IS-20200XLR*.

Catalog Information

Catalog Number **2001** **12** **XLR**

Pipe Size
 1 1/2" NPT 12

Options

Fluorocarbon (Viton) Elastomers J
 Increased Sensitivity L
 (for more precision control at low setpoints)

