Type 700BP
Precision Back Pressure Regulator

The Type-700BP Back Pressure Regulator is a high flow, highly accurate pneumatic relief valve with an adjustable set point. It's primary function is to provide protection against over pressurization in the downstream portion of a pneumatic system. This precision unit is capable of handling flows up to 50 SCFM. A rolling diaphragm provides the sensitivity that causes the Type-700BP to vent to atmosphere in response to the slightest upstream changes.

Features

- **Sensitivity**
  Provides quick response to controlled system pressure variation
- **High Flow Capacity**
  Flows up to 50 SCFM (depending on set point pressure and port size).
- **Compensating Flow Control**
  Venturi type velocitypressure tube adjusts main control valve opening in accordance with velocity pressure variations of flow from controlled system.
- **On-Line Maintenance**
  Unit can be disassembled and serviced without removing from the air line.

Applications

The Type-700BP is used in place of a standard relief valve to provide protection against excessive build-up in supply pressure lines to instruments and other sensitive control devices. The most common application is to control the air pressure in a system supplied by a compressor. Used in conjunction with a diaphragm operated inlet restricting valve and a bleed orifice, the Back Pressure regulator relieves excess compressor pressure while activating the intake restricting valve. When the regulator shuts off, the down-stream air vents through the bleed orifice allowing the restricting valve to open.

Specifications

Flow Capacity	Up to 50 SCFM (1,415 Nl/min) depending on set point pressure and port size
Maximum System Pressure	250 psig (17.25 bar)
Mounting	Pipe or Panel
Ambient Temperature	0°F to 150°F (-18°C to 66°C)
Weight	1.5 lb (.68 Kg)
Materials of Construction	Body; diecast aluminum alloy, baked enamel finish. Trim; acetal, brass, and plated steel. Knob; phenolic plastic.

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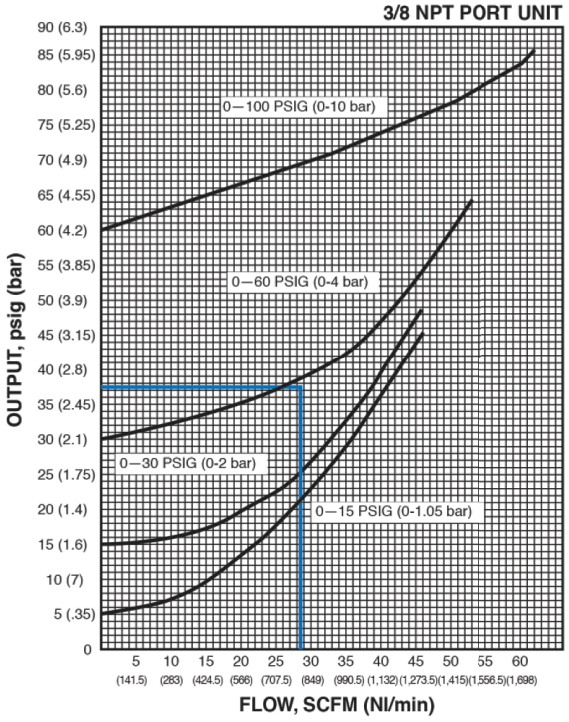
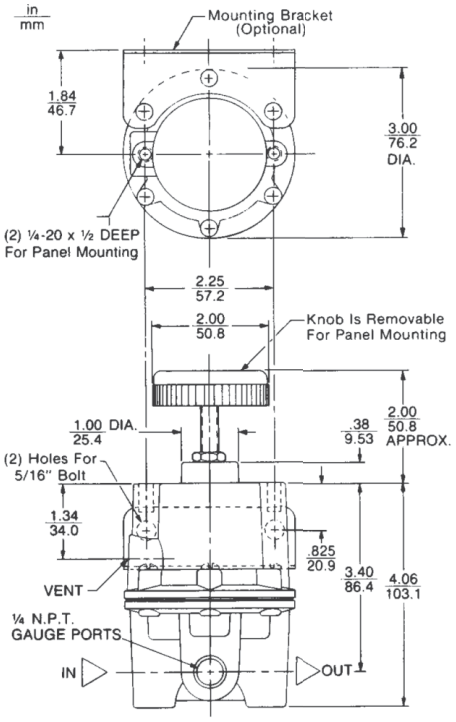
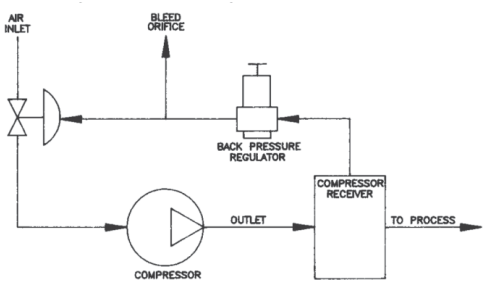
Flow Characteristics



Example: The 0-60 psig range unit set at 30 psig will flow 28 scfm with an 8 psig rise in pressure above the set point. all values assume relief flow is to atmosphere.



Application Example



The Type 700BP is used to control the air pressure in a system supplied by a compressor. When system pressure reaches the Type 700BP set point, the unit starts relieving air pressure. This pressure is routed to an inlet valve causing it to close. Excess pressure vents through the bleed orifice and the valve opens to increase the compressor outlet pressure.

Ordering

Model Number	Port Size NPT	Output Range psi	Output Range BAR
710-BA	1/4"	0-2	0-0.14
710-BC	1/4"	0-15	0-1
710-BD	1/4"	0-30	0-2
710-BE	1/4"	0-60	0-4
710-BF	1/4"	0-150	0-10
710-CA	3/8"	0-2	0-0.14
710-CC	3/8"	0-15	0-0.1
710-CD	3/8"	0-30	0-2
710-CE	3/8"	0-60	0-4
710-CF	3/8"	0-150	0-10
710-DA	1/2"	0-2	0.014
710-DC	1/2"	0-15	0-1
710-DD		0-30	0-2
710-DE	1/2"	0-60	0-4
710-DF	1/2"	0-150	0-10

Options

E - Tapped Exhaust Allows captured exhaust. 1/4" NPT port.

B - Mounting Bracket Zinc-plated steel bracket for side mounting prevents casual adjustment of output pressure

U - 1/4" BSP Porting

X - ATEX 94/9/EC

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