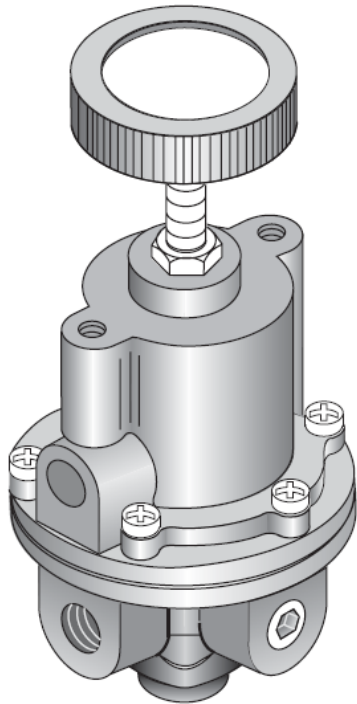


# Equilbar Model 10 Pneumatic Precision Regulator

## INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

### GENERAL INFORMATION:

The Model 10 is a general-purpose manually-adjustable pressure reducing regulator. It is designed to control the pressure of air and dry inert gasses. The target pressure of the Model 10 is set by adjusting the hand knob which compresses an internal spring. The Model 10 allows supply pressure to flow into the system until the system pressure equals the target pressure applied by the spring. The Model 10 will attempt to accurately maintain the target pressure by modulating the flow rate allowed into the system. The Model 10 is a relieving pressure regulator. If the system pressure rises above the target pressure the Model 10 will relieve the excess pressure out of its vent (exhaust) port. The Model 10 will also exhaust if the hand knob is used to adjust the target pressure to a value lower than the current system pressure. The Model 10 is useful for general applications where a pressure reducing regulator is required. The Model 10 is often used to provide the low flow pilot set point pressure to a larger pilot operated regulator.



### SPECIFICATIONS:

FUNCTIONAL SPECIFICATIONS			
Supply Pressure	psig	[BAR]	(kPa)
Maximum	500	35	3500
Flow Capacity (Nominal)	40 SCFM (68m <sup>3</sup> /HR) @ 100 psig [7 BAR] (700 kPa) Supply * 20 psig [1.5 BAR] (150 kPa) Set.		
Exhaust Capacity	5 1/2 SCFM (9.4m <sup>3</sup> /HR) @ downstream pressure 5 psig [.35 BAR] (35 kPa) above 20 psig [1.5 BAR] (150 kPa) Set Pressure]		
Sensitivity	Less than 0.125" (0.32 cm) Water Column		
Ambient Temperature Limits	-40°F to +200°F (-40°C to +93.2°C)		
PERFORMANCE SPECIFICATIONS			
Supply Pressure Effect	Less than 0.1 psig [0.007 BAR] (0.7 kPa) for 100 psig [7 BAR] (700 kPa) Change		
Materials of Construction	Body and Housing: Aluminum Trim: Stainless Steel, Brass, zinc Plated Steel Diaphragms: Buna N on Dacron		

### ORDERING INFORMATION

PART NUMBER	PRESSURE RANGE		
	psig	BAR	kPa
10212D-Z22435	0-2	0-0.15	0-15
10222D-Z22435	0-10	0-0.70	0-70
10202D-Z22435	0-20	0-1.5	0-150
10232D-Z22435	0.5-30	0.03-2	3-200
10242D-Z22435	1-60	0.1-4	10-400
10262D-Z22435	2-150	0.1-10	15-1000
10272D-Z22435	3-200	0.2-14	20-1400
10282D-Z22435	5-300	0.3-21	35-2100
10292D-Z22435	5-400	0.3-28	35-2100

# Equilbar Model 10 Pneumatic Precision Regulator

## INSTALLATION

Clean all pipelines to remove dirt and scale before installation.

Apply a minimum amount of pipe compound to the male threads of the fitting only. Start with the third thread back and work away from the end of the fitting to avoid the possibility of contaminating the regulator. Install the regulator in the air line.

You can mount the Model 10 regulator in any position without affecting its operation. To panel mount the unit, use the two 1/4"-20 holes in the bonnet. You can wall mount the regulator using Mounting Bracket 14523 shown in **Figure 3**.

The inlet and outlet connections are labeled on the underside of the regulator with the arrows pointing in the direction of the flow. Tighten connections securely. Avoid undersized fittings that will limit the flow through the regulator and cause a pressure drop downstream. For more information, see **Figure 2**. "Outline Dimensions".

## NOTE

Oil free air must be applied to the regulator. Use a filter to remove dirt and entrained liquid in the air line ahead of the regulator. If an air line lubricator is used, it **MUST** be located downstream of the regulator, to avoid interference with regulator performance.

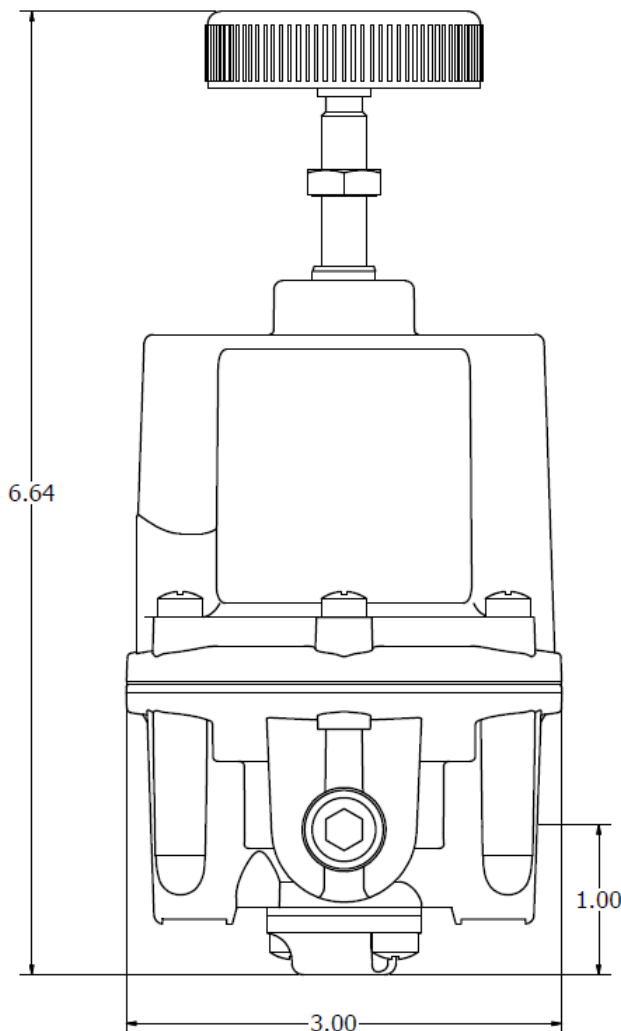


Fig. 2 Outline Dimensions

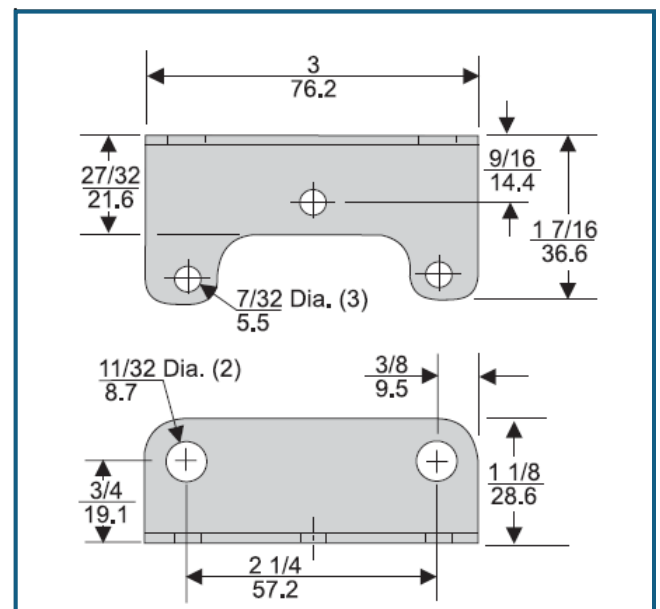
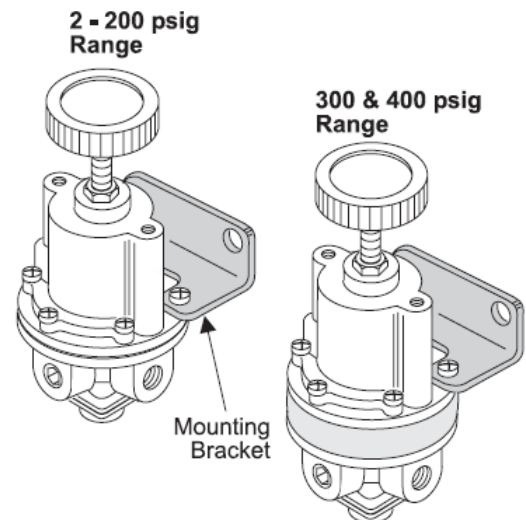


Fig. 3 Mounting Bracket 14523 (sold separately)

# Equilbar Model 10 Pneumatic Precision Regulator

## MAINTENANCE:

To clean the Model 10, use the following procedure:

1. Before disassembly, shut off the valve that is supplying air to the regulator. This is to prevent air from escaping. **It is not necessary to remove the regulator from the air line.**
2. Remove the two Screws (22) from bottom of the unit.
3. Pull out the Inner Valve Assembly (19). Wash the Seat on the Inner Valve Assembly carefully.
4. Wipe off any particles that may be attached to rubber
5. Seat Ring (17) in Body.
6. Replace the assembly carefully.
7. Keep the vent hole in the Bonnet clear for proper regulator operation. Lubricate the adjusting screw with Molycote "G".  
For more information, see **Figure 4**, "Exploded Drawing".

**Avoid such solvents as acetone, carbon tetrachloride and trichlorethylene.**

**If the standard maintenance procedure does not correct the problem install service kit.**

## TROUBLESHOOTING:

PROBLEM	SOLUTION
Leakage	Body Screw tightness. Diaphragm.
High Bleed	Relief Pintle and Relief Seat for damage or contamination.
Valve Chatter	Seal Ring lubrication.

## HAZARDOUS LOCATION INSTALLATIONS:

INFORMATION REQUIRED	DESCRIPTION DETAIL
Hazardous Locations	Group II, Category 2, Gas and Dusts: Zones 1, 2 and 21,22, respectively Gas Groups IIA and IIB
Ambient Temperature Range	Use must be evaluated for the relevant flammable gas temperature code
Cleaning	Clean with damp cloth
Grounding	Units must be grounded to earth ground
Codes of Practice	PD CLC/TR 50404:2003 BS 5958

Fig. 4 Exploded Drawing

