Air Filter Regulator

FEATURES

- Stable Output And Repeatability
- Corrosion-Resistant Construction
- Depth Filter
- Self Relieving
- Low Droop At High Flow Levels
- Tight Shutoff

APPLICATIONS

The Type-300 is used extensively to supply air to pneumatic controllers, transmitters, transducers, valve positioners, aircylinders, and a wide range of pneumatic control systems.

SPECIFICATIONS

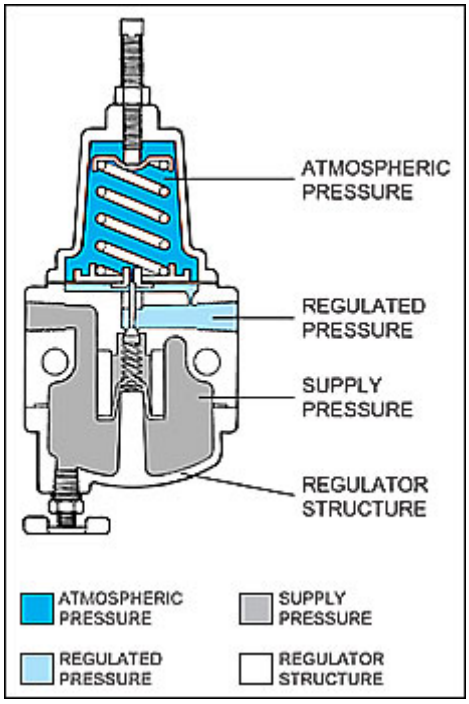
	Type-300 Air Filter Regulator
Port Size	(In, Out and Gauge) 1/4˝N.P.T.
Output Ranges	0-10 psig (0-70 kPa), 0-30 psig (0-200kPa) 0-60 psig (0-400 kPa), 0-120 psig (0-800 kPa)
Maximum Supply Pressure	250 psig (1700 kPa)
Mounting	Pipe or Through Body
Flow Capacity	22 SCFM (33.0 ㎥/hr) at 100 psig (700 kPa) supply with 20 psig (140 kPa) output
Exhaust Capacity	0.1 SCFM (0.17 ㎥/hr) with downstream pressure 5 psig (35 kPa) above set point
Sensitivity	1˝(2.5 ㎝) of water
Air Consumption	less than 5 SCFH (0.17 ㎥/hr)
Effect of Supply Pressure Variation	less than .2 psig (1.4 kPa) for 25 psi (170 kPa) change
Body	Diecast Aluminum Alloy, Irridite and Baked Epoxy Finish
Filter	40 Micron Phenolic Impregnated Cellulose
Diaphragm	Nitrile Elastomer and Nylon Fabric
Valve Seat Plug	Nitrile Elastomer
Additonal Materials	Brass, Zinc Plated Steel, Acetal
Weight	725 g (1.6 lb.)

PRINCIPLES OF OPERATION

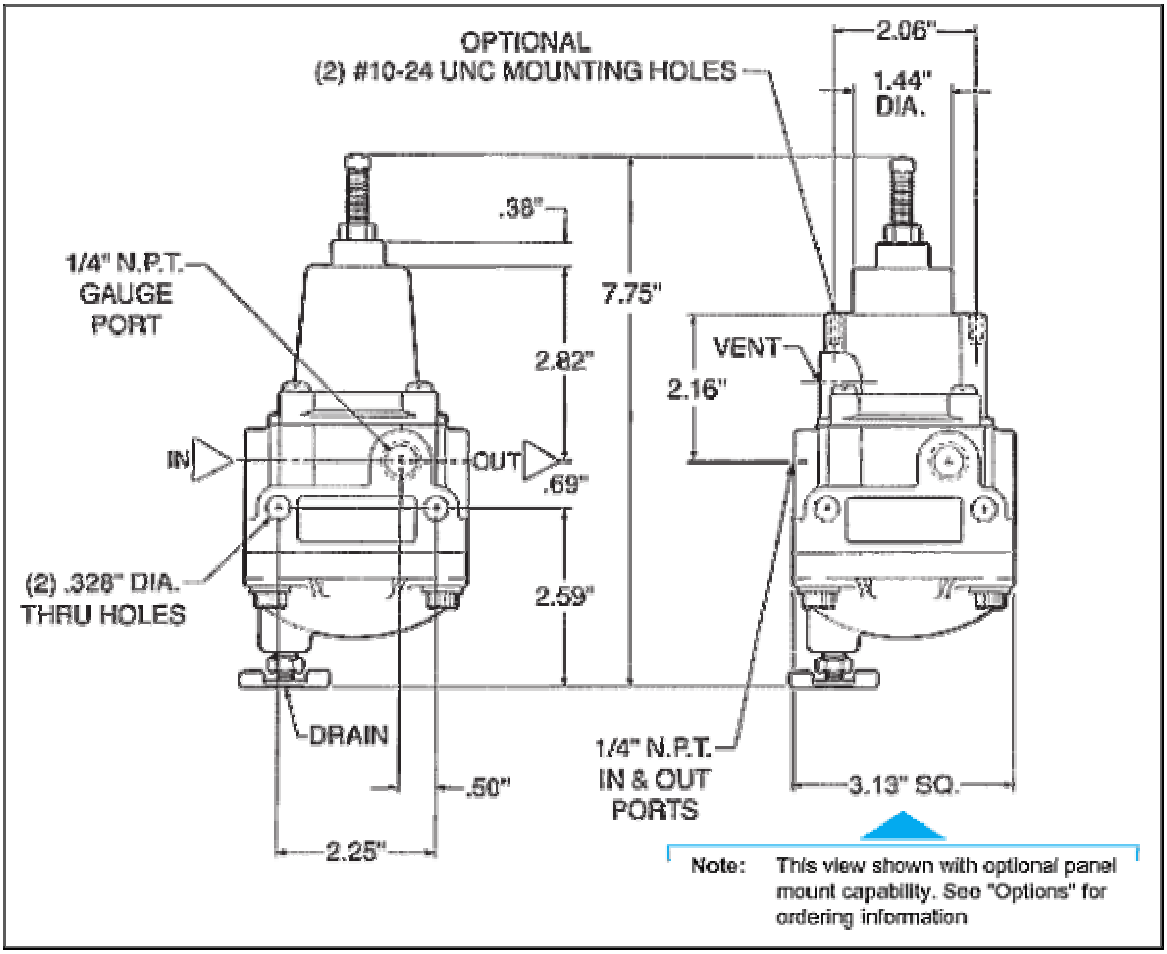
Turning the adjusting screw changes the force exerted by the range spring on the diaphragm assembly. In equilibrium of set pressure, the force exerted by the range spring is balanced by the force from the output pressure acting underneath the diaphragm assembly.

An unbalanced state between the output pressure and the set pressure causes a corresponding reaction in the diaphragm and supply valve assemblies. If the output pressure rises above the set pressure, an upward force is exerted on the diaphragm assembly causing the relief seat to lift and open. Excess pressure is vented to atmosphere until equilibrium is reached. If the output pressure drops below the set pressure the unbalanced force of the range spring causes a downward force on the diaphragm assembly. The supply valve then opens until the pressure builds up once more to the equilibrium condition.

Under forward flow conditions, the range spring force is balanced by the diaphragm pressure force, with the supply valve open just enough to maintain the required equilibrium pressure. When high flow occurs, a specially designed aspirator helps maintain downstream pressure and compensates for droop.



DIMENSIONS


OPTIONAL
(2) #10-24 UNC MOUNTING HOLES
2.06"
1.44"
DIA.
.38"
1/4" N.P.T.
GAUGE
PORT
7.75"
2.82"
VENT
2.16"
IN
OUT
.69"
(2) .328" DIA.
THRU HOLES
2.59"
DRAIN
1/4" N.P.T.
IN & OUT
PORTS
.50"
3.13" SQ.
2.25"
Note: This view shown with optional panel mount capability. See "Options" for ordering information