

## AIR FILTER PRESSURE REGULATORS

Your Air-Actuated Instrument and Equipment work at their best for a long period when you feed with clean dry air at a constant prescribed pressure. PLACKA FPR- Series Air Filter-cum Pressure Regulator removes completely the moisture and dust particles, and provides the exact pressure constantly at varying air demands. Its compactness and highly accurate performance for a long period with minimum of maintenance make for an optimum compromise between the ideal and the practical, consistent with end-use.

This economically priced unit is extensively used for Process Control Instruments, Air-actuated Control Valves, Cylinders transducers and other equipments.

### SALIENT FEATURES:

- Longer life assured as the materials used are selected for their corrosion resistance and long wear.
- Excellent characteristics throughout the full flow range particularly at low flow zone in which the unit usually serves Instruments.
- Negligible pressure drop due to high porosity ratio of the filter. The filter is reusable and has a high impact strength.
- In addition to solid particles, the unit extracts a high percentage of water thus ensuring trouble-free service even in the most adverse conditions.
- Built-in relief ensures rapid response to circuit-induced pressure changes.
- The dust and liquid contaminants can be fully drained out when the Regulator is mounted both vertically and horizontally as in the case of Control Valves, Transmitters, etc
- Custom made Unit for Control Valves, Transmitters and other field mounted Instruments.
- Regulator adjustment knob is easily lockable by the finger operated locking nut
- Simple, versatile built-in mounting arrangements by bolts and clamps. For panel mounting, tapped holes are provided at the top of the spring case for mounting screws.
- Most economically priced.
- Model FPR-S with SS components instead of brass, for corrosive working conditions of Fertilisers, Refinery and Steel Plants.





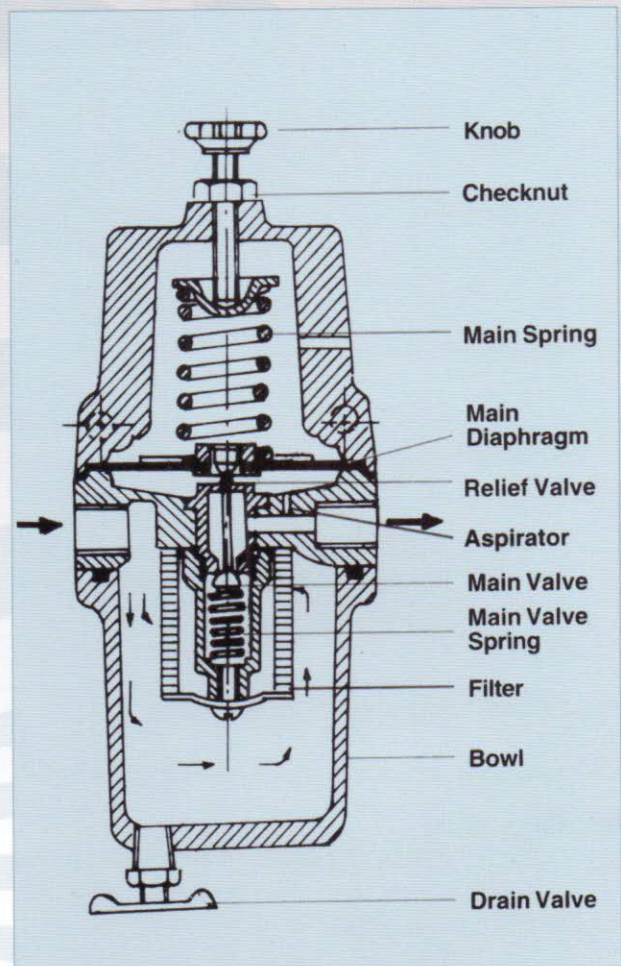
## Cross Sectional Diagram of Placka Air Filter Regulator

### OPERATION

The primary air through the inlet port, passes through the filter element, leaving down the contaminants in the bowl. When the knob is adjusted suitably, the spring acts on the diaphragm which in turn actuates the main valve to allow the pure secondary air at a particular pressure to the outlet. The main valve is supported between the relief valve and the main valve spring, eliminating the need for stem guiding Toggle action between main valve and relief valve completely eliminates the alignment problems and thus, erratic output pressure.

### REGULATION CHARACTERISTICS

The secondary pressure at the bottom of the diaphragm balances against the set position of the main spring to keep the main valve at the adjusted position. When the secondary pressure rises above the set point, it pushes the diaphragm away from the relief valve and the excess air finds its way to atmosphere through the bleed hole.

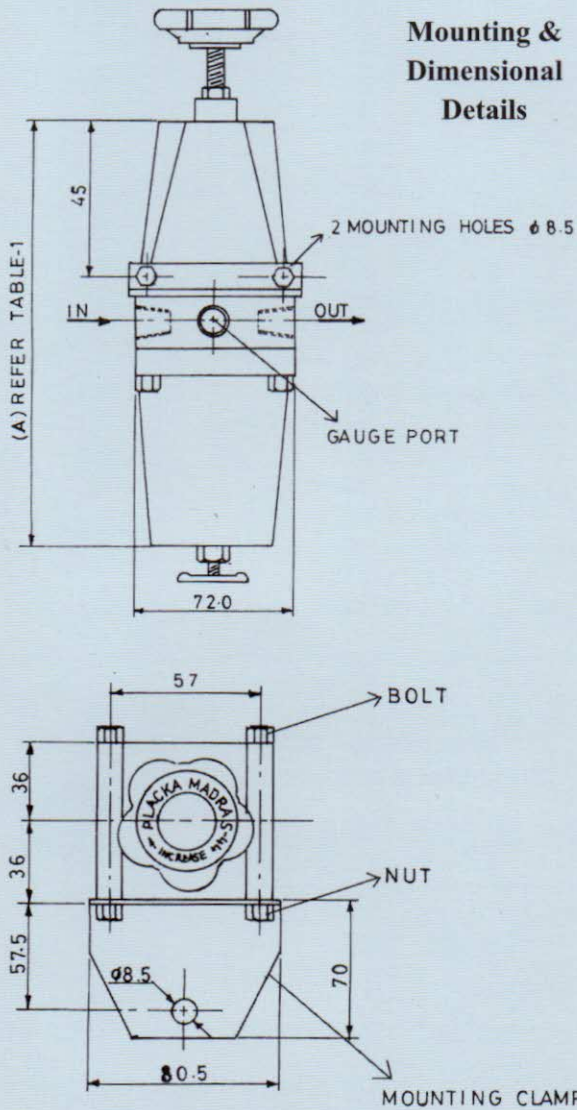


### SPECIFICATIONS

Service	: Air	Filter	: Sintered Bronze / Porus Plastic
Max. Inlet Pressure	: 250 PSI 18 kg/cm <sup>2</sup>		: 15 Microns Standard 5, 25, 40, Microns Optional
Enclosure	: Weather Proof (IP 65)	Main Valve	: Neoprene Moulded on SS stem
Outlet Pressure Ranges	: Refer Table 1	Drain Valve	: Brass - Standard (SS on request)
End Connections	: 1 inlet, 1 outlet and 1 pressure gauge port	Main Valve Spring	: SS
Bowl Capacity	: 130 cc (Approx)	Diaphragm	: Nylon Reinforced Neoprene
Ambient Temperature	: Upto 80°C	Main Spring	: Spring Steel
Adjustment knob with nut	: Unbreakable plastic moulded on C.S. stem (SS on request)	Mounting	: Surface (or) Panel
Body Spring Case and Filter Bowl	: Die Cast Aluminium alloy		



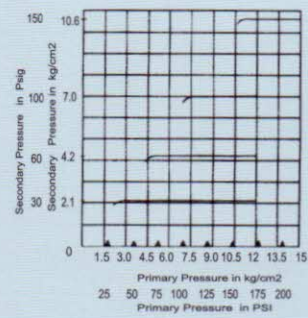
### Mounting & Dimensional Details



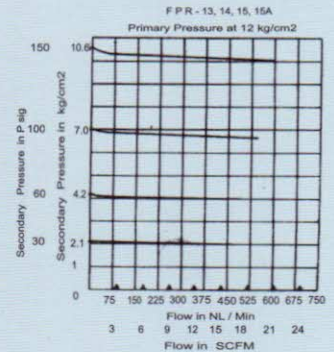
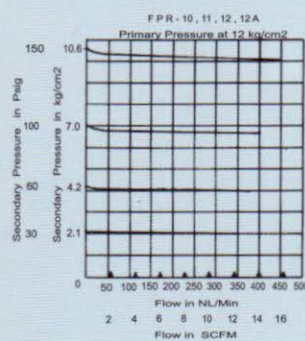
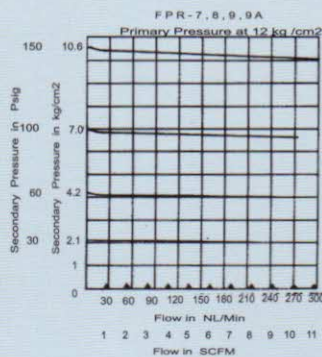
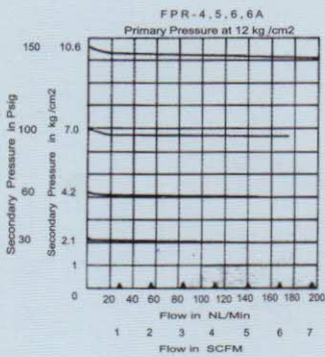
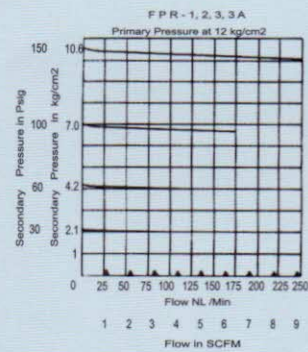
## FLOW CHARACTERISTICS

When the air flow from the Regulator is increased, the secondary pressure falls below the set point. This 'pressure drop' in supply will force your equipment to function erratically. But PLACKA Air Set reduces the pressure drop successfully by an aspirator. The aspirator connects the outlet port and the chamber under the diaphragm. When flow increases, the aspirator creates a lower pressure below the diaphragm, which in turn forces the main valve to open further and thus more air flows in, to compensate for the pressure drop.

### Regulation Characteristics



### Flow Characteristics





## SELECT MODEL NUMBERS:

END CONNECTION	OUTLET PRESSURE RANGE				DIMENSION (A) mm
	0-2.1 kg/cm <sup>2</sup> 0-30 PSI	0-4.2 kg/cm <sup>2</sup> 0-60 PSI	0-7 kg/cm <sup>2</sup> 0-100 PSI	0-10.6 kg/cm <sup>2</sup> 0-150 PSI	
1/4"	FPR-1	FPR-2	FPR-3	FPR-3A	157.0
3/8"	FPR-4	FPR-5	FPR-6	FPR-6A	172.0
1/2"	FPR-7	FPR-8	FPR-9	FPR-9A	172.0
3/4"	FPR-10	FPR-11	FPR-12	FPR-12A	180.0
1"	FPR-13	FPR-14	FPR-15	FPR-15A	190.0

**Table I**

For 1/2" end connection size & 0-7 kg/cm<sup>2</sup> output pressure Model No. is FPR-9.  
 Special Version:- Model No. FPR Regulator with suffix 'S' has the exposed parts (Pressure adjustment Screw with Checknut & Drain Valve) in SS to serve better in the corrosive atmosphere of Fertilizer and other Chemical Industries.

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