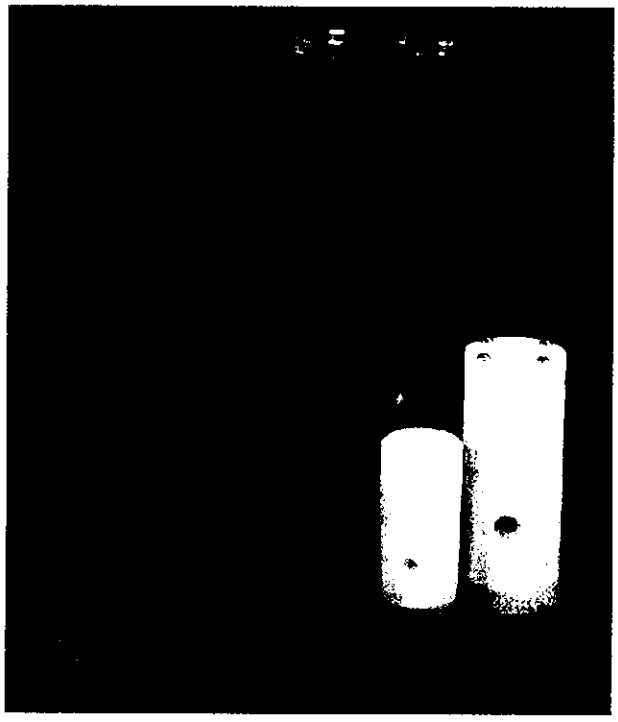
PLAST-O-MATIC PRODUCT DATA

CATALOG PRA

Precise Control of Downstream Pressure With Minimal Drop-Off from Set Pressure, Remote Setting and Easy Adjustment

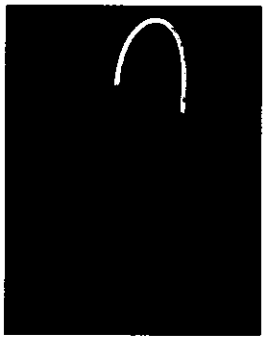


Series PRA, Air-Loaded Pressure Regulator:

- Inlet pressures to 150 PSI.
- Downstream settings from 5 to 125 PSI.
- Outperforms spring-loaded regulators through improved response to pressure changes; pressure is maintained without sacrificing flow.
- Performance rivals control valves, at much lower cost.
- Ideal for applications requiring frequent adjustment or remote control.
- Multi-million cycle design.
- Dual rolling diaphragms provide exceptional sensitivity.
- One piece body and double u-cup design prevent leakage and eliminate "creep".
- Can be used to control any flow related parameter via sensors and E/P controller.
- For critical ultra-pure and corrosive liquid applications.

Materials of Construction and Piping Connections:

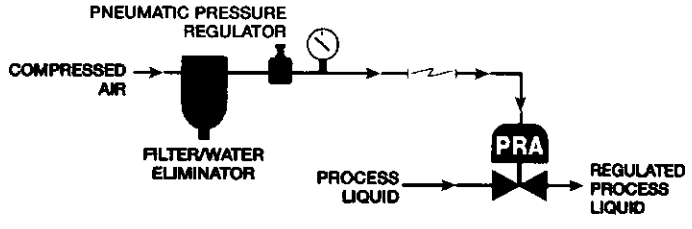
Standard connections are female NPT threaded ports. Socket, flanged and spigot connections are also available. Standard body materials are Grade 1 Type 1 PVC, Natural Polypropylene, and Kynar PVDF. Standard seal materials are Viton and EPDM. Some Kynar PVDF components are used in the Natural Polypropylene models for strength. External fasteners are stainless steel. For materials other than listed, please consult factory.



Controlling Pressure and Other Flow Related Parameters:

When used as a pressure regulator (pressure reducing valve), Series PRA requires no electronics; it simply needs compressed air and a relieving-type air regulator for operation. Plast-O-Matic offers a dynamic relieving-type regulator, Series PRS, which loads the PRA with greater accuracy by reacting to actual downstream pressure.

Controlling Pressure with Series PRA...



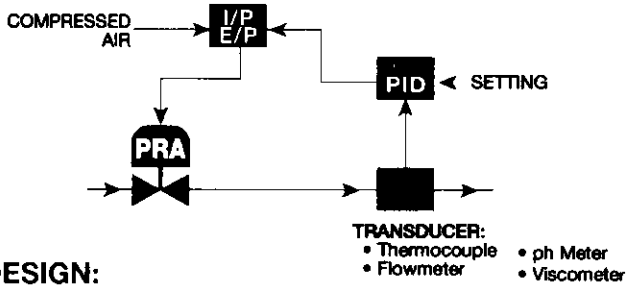
TRUE BLUE™

PLAST-O-MATIC VALVES, INC.
1384 Pompton Avenue, Cedar Grove, New Jersey 07009-1095
(973) 256-3000 • Fax (973) 256-4745 • www.plastomatic.com

SERIES PRA AIR LOADED PRESSURE REGULATOR

To use Series PRA to control other flow related parameters, such as flow rate, pH, viscosity, temperature, etc., a transducer, controller, and E/P or I/P controller is required.

The PRA is also a Control Valve...



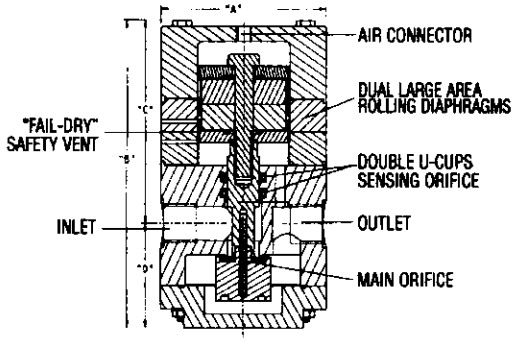
DESIGN:

Plast-O-Matic Series PRA Pressure Regulators are designed to handle corrosive and ultra-pure liquids with inlet pressures up to 150 PSI at 75°F. Standard downstream set pressure range is 5 to 125 PSI. The normally-open regulators incorporate a poppet seat at the valve orifice to prevent sticking and affecting the sensing of the downstream line pressure. Also, one piece body construction and dual U-cup shaft seals help to eliminate internal leakage that could cause the downstream pressure to creep beyond the set pressure. Two, large-surface, rolling diaphragm seals isolate the air chamber from downstream pressure sensing liquid. This unique design, in conjunction with a pressure balanced shaft, assures smooth performance and stable control. ***CAUTION:*** Avoid quick closing valves downstream of a regulator to eliminate "water hammer" shock that can cause breakage.

DIMENSIONS:

SERIES PRA - PRESSURE REGULATOR

PIPE SIZE	A		B		C		D	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.
1/4"	2.0	51	4.062	103	2.625	67	1.437	40
1/2"	2.5	64	6.187	157	4.187	106	2.000	51
3/4"	4.5	114	8.312	211	5.500	140	2.812	71
1"	4.5	114	8.375	213	5.500	140	2.875	73
1 1/2"	5.0	127	9.562	244	6.812	157	3.37	86
2"	7.0	178	12.750	324	7.375	187	5.375	136
3"	8.0	203	15.062	378	8.625	220	6.437	168



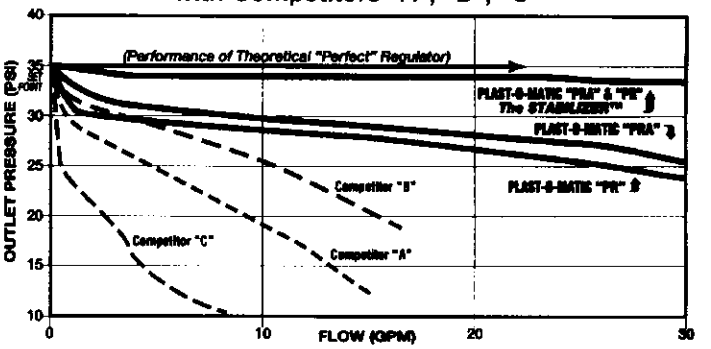
NOTE:
Refer to Catalog PR/PRE/PRH for information on Plast-O-Matic Spring-Loaded Pressure Regulator Models.

OPERATION:

Series PRA pressure regulators prevent downstream pressure from exceeding the desired set pressure. Regulator will remain closed as long as set pressure is maintained. As equipment or valves downstream of the regulator begin to open and demand flow, the downstream pressure begins to fall and the regulator begins to open. As valves or equipment downstream open further, the pressure regulator continues to open until its maximum opening is reached. As the process is reversed, downstream pressure begins to increase and the regulator starts closing. When the downstream pressure again reaches set pressure the regulator closes bubble-tight. ***IMPORTANT:*** It should be noted from the preceding explanation that a pressure regulator does not maintain a specific downstream pressure, but only prevents the downstream pressure from exceeding a set point.

REGULATOR PERFORMANCE CURVES

Flow Capacity (gpm) vs. Pressure Drop-Off (psi)
Comparison of Representative Plast-O-Matic Models with Competitors "A", "B", "C"



Drop-off is the difference between the pressure regulator set pressure and the downstream pressure. Performance curves chart at right identifies the high flow capacities and the low pressure drop-off of Plast-O-Matic regulators which result in their greater sensitivity, finer adjustability and superior accuracy as compared to competitive models.

SERIES PRA MODEL NUMBERS MAXIMUM FLOW RATES

Valve Size	EPDM Seals Model No.	Viton Seals Model No.	Flow Rates GPM*
1/4	PRA025EP	PRA025V	5
1/2	PRA050EP	PRA050V	10
3/4	PRA075EP	PRA075V	35
1	PRA100EP	PRA100V	50
1 1/2	PRA150EP	PRA150V	70
2	PRA200EP	PRA200V	100
3	PRA300EP	PRA300V	200

*Maximum Recommended
Add material suffix to complete the part number.
Add -PV for PVC,-PP for Polypropylene, and
- PF for Kynar PVDF.

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