

**New!**

## Thermoplastic Pressure Regulators

**Permits Downstream Pressure Settings From 5 to 125 PSI**

**Designed for Higher Flow Capacities with Less System Pressure Loss**



### Materials of Construction and Piping Connections:

The standard connections are female NPT threaded ports. Socket, flanged and spigot connections are also available. Standard body materials are PVC, CPVC Natural Polypropylene and Kynar PVDF. Standard seal materials are FKM and EPDM. For other materials, including PTFE, see catalog PRH. Some Kynar PVDF components are used in the Natural Polypropylene models for strength. Glass-filled polypropylene non-rising stem spring housing (non wetted) used on PP models.

### Superior Features:

- Converts varying inlet pressure up to 150 PSI, to a stabilized, lower pre-set downstream pressure.
- Protects sensitive downstream instruments, tubing and filters against damage from overpressure/pressure surges; permits the entire system to operate safely and effectively.
- Downstream pressure settings adjustable from 5 to 125 PSI.
- Large surface area of its frictionless rolling diaphragm provides exceptional sensitivity.
- Free movement of the diaphragm on a balanced shaft assures smooth, accurate performance and reliable sealing for millions of cycles.
- Double U-cups prevent leakage along the shaft and eliminates the possibility of "creep".
- Optional gauge ports to assist with setting and monitoring pressure.
- For corrosive and ultra-pure liquid applications.
- Sizes: 3/4", 1", 1 1/2" and 2". For other sizes, see Catalogs PRH and PRHM.

### Pressure Regulator Selection:

In the selection of a liquid pressure regulator, flow capacity with minimum system pressure loss are critical criteria, but it should be recognized that all similar-size competitive regulators do not provide similar performance levels. The new Series PRHM regulators provide not only higher set pressures and flow capacities with each model, but these are achieved with less pressure losses than with similar size competitive regulators. These lower pressure drop-offs can be seen from the performance curve charts shown on the next page.



**PLAST-O-MATIC VALVES, INC.**

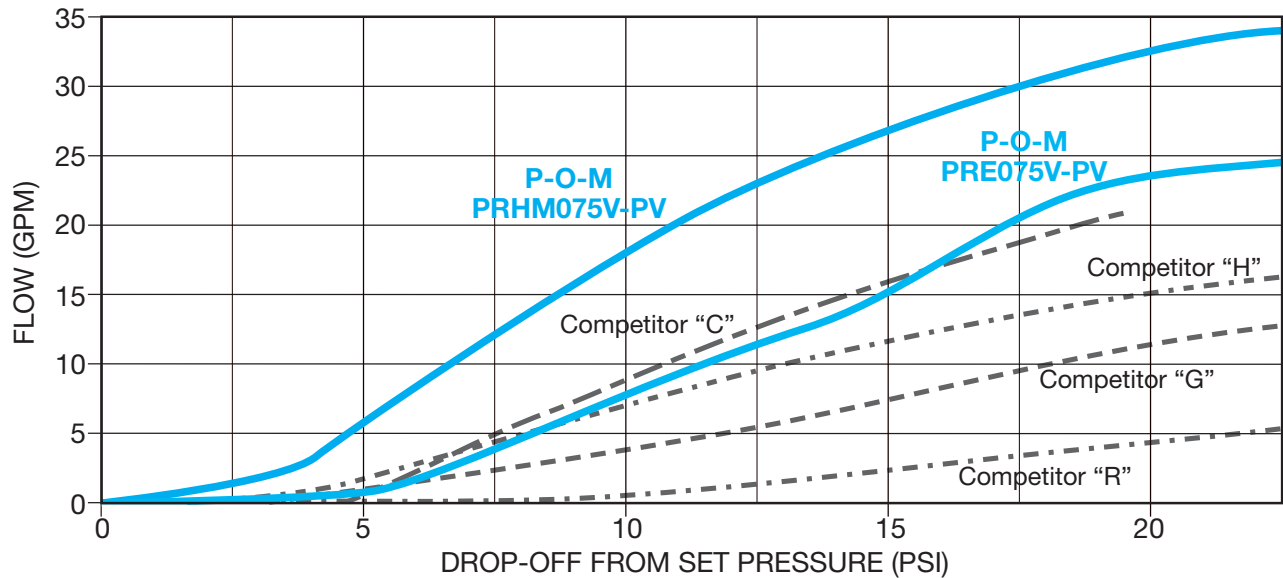
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# SERIES PRHM 3/4" • 1" • PRESSURE REGULATORS

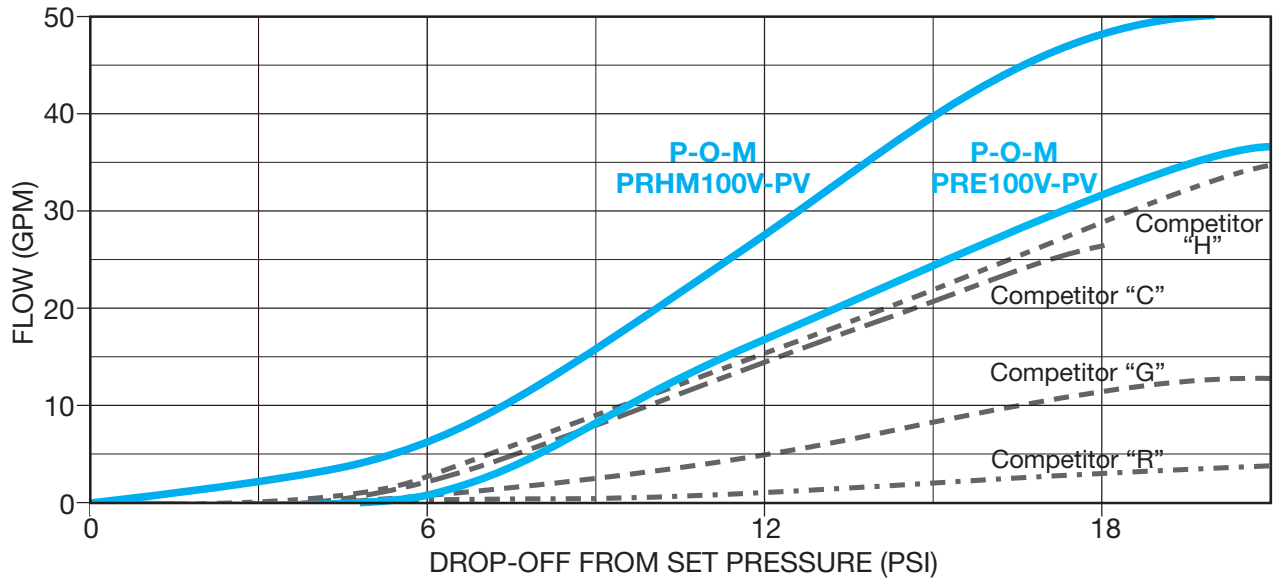
## Typical 3/4" and 1" Pressure Regulators Performance Curves: Flow Capacity vs. Pressure Drop-Off (PSI) Comparison of Representative Plast-O-Matic Models with Competitors

### 3/4" PRESSURE REGULATOR



Test Parameters  
Inlet Pressure: 70 PSI Set Pressure: 35 PSI Media: Tap Water Temperature: 65°F (18.5°C)

### 1" PRESSURE REGULATOR

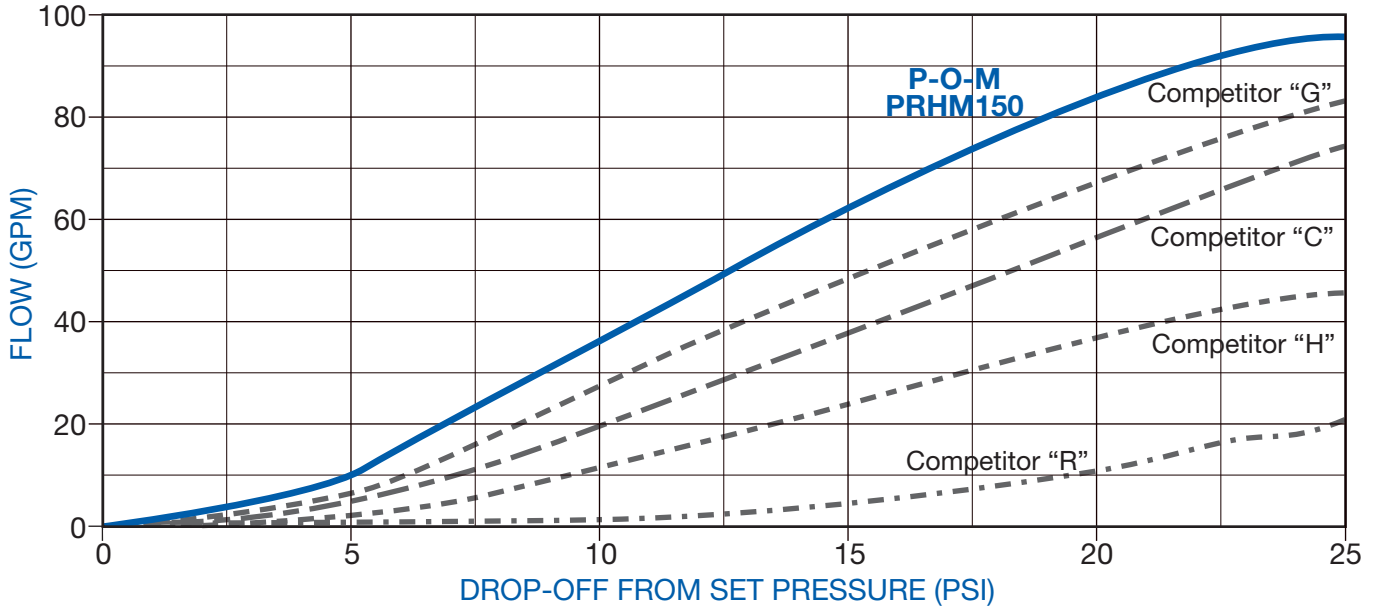


Test Parameters  
Inlet Pressure: 70 PSI Set Pressure: 35 PSI Media: Tap Water Temperature: 65°F (18.5°C)

The drop-off is the difference between the pressure regulator set pressure and the downstream pressure.  
NOTE: All data for these curves was collected from actual flow tests at Plast-O-Matic Valves, Inc., Cedar Grove, NJ. or manufacturer's published performance data. The measuring equipment used was the same for all regulators tested, and the relative results between different models are considered to be an accurate portrayal of the data.

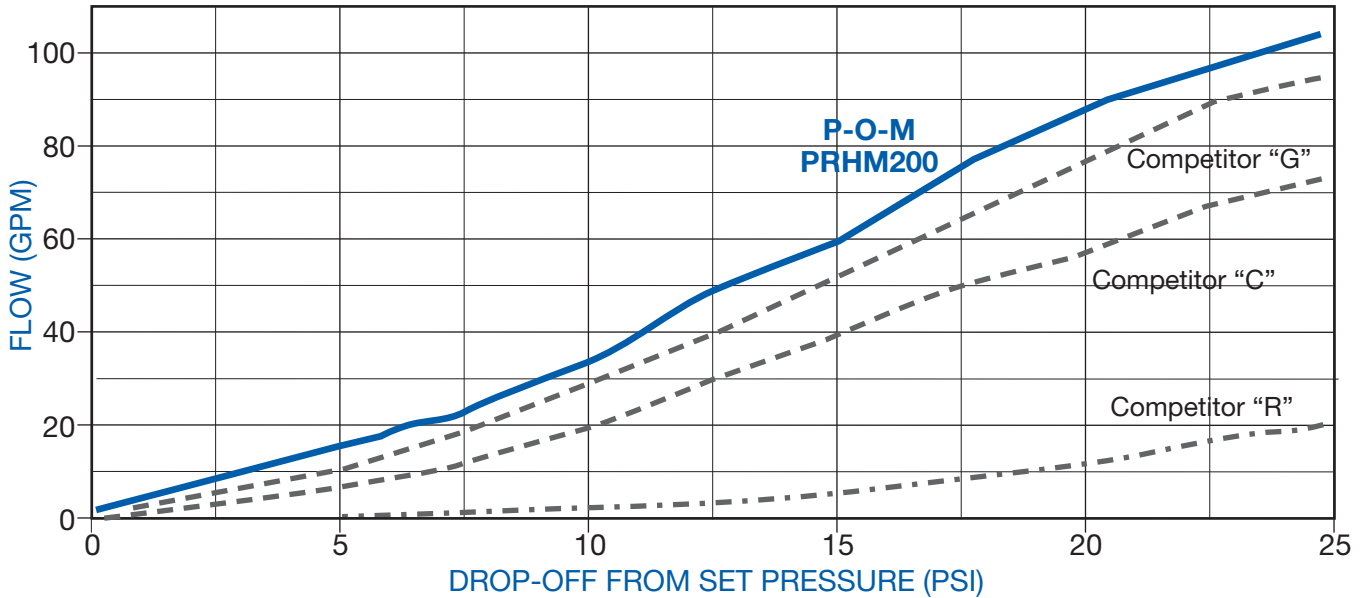
# SERIES PRHM • 1 1/2" • 2" PRESSURE REGULATORS

## 1 1/2" PRESSURE REGULATOR



Test Parameters  
Inlet Pressure: 50 PSI Set Pressure: 35 PSI Media: Tap Water Temperature: 65°F (18.5°C)

## 2" PRESSURE REGULATOR



Test Parameters  
Inlet Pressure: 50 PSI Set Pressure: 35 PSI Media: Tap Water Temperature: 65°F (18.5°C)

The drop-off is the difference between the pressure regulator set pressure and the downstream pressure.  
NOTE: All data for these curves was collected from actual flow tests at Plast-O-Matic Valves, Inc., Cedar Grove, NJ, or manufacturer's published performance data. The measuring equipment used was the same for all regulators tested, and the relative results between different models are considered to be an accurate portrayal of the data.

# SERIES PRHM PVC PRESSURE REGULATORS

## Design:

Plast-O-Matic Series PRHM Pressure Regulators are designed to handle corrosive and ultra-pure liquids with inlet pressures up to 150 PSI at 75°F. Standard down-stream 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 set pressure to creep beyond a safe limit. A unique, large-surface, rolling diaphragm seal isolates the spring 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 valve downstream of a regulator to eliminate "water hammer" shock that can cause breakage.

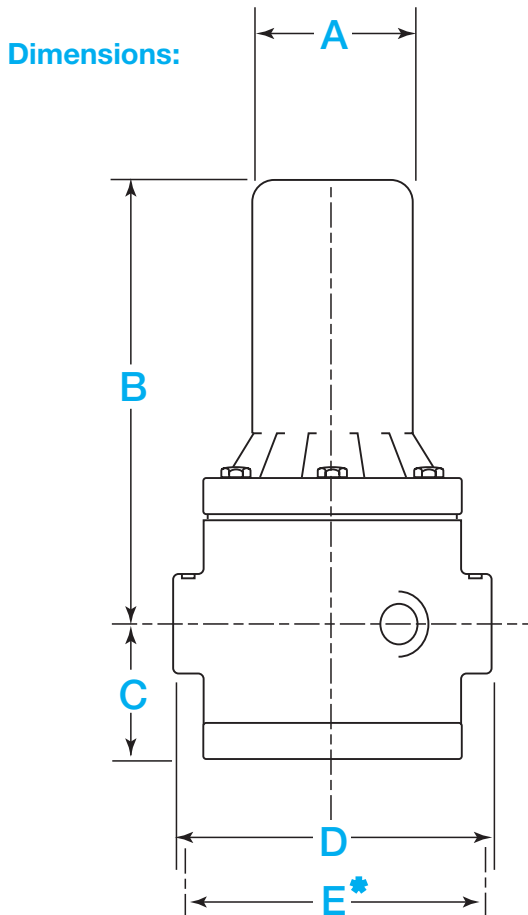
## Typical Performance Curves of Flow vs. Drop Off From Set Pressure:

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.

## Operation:

Series PRHM 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 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 the 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.



Dim.		SIZE NPT or BSP			
		3/4"	1"	1 1/2"	2"
A	Inch	27/8	27/8	27/8	27/8
	mm	73	73	73	73
B	Inch	7 <sup>13</sup> / <sub>16</sub>	7 <sup>13</sup> / <sub>16</sub>	8 <sup>15</sup> / <sub>16</sub>	8 <sup>15</sup> / <sub>16</sub>
	mm	190	190	227	227
C	Inch	27/8	27/8	3	3
	mm	73	73	77	77
D	Inch	5 1/2	5 1/2	6 <sup>1</sup> / <sub>16</sub>	6 <sup>9</sup> / <sub>16</sub>
	mm	140	140	154	167
E	Inch	47/8 **	5 **	NOT APPLICABLE	
	mm	124 **	127 **		

\*\* Subject to change, consult factory.

• Thread engagement is recessed.

"E" dimension is thread end-to-end

## Series PRHM Model Number & Maximum Flow

Valve Size	Model Numbers		Flow Rates	
	EDPM Seals	FKM Seals	GPM*	LPM
3/4"	PRHM075EP-PV	PRHM075V-PV	35	132
1"	PRHM100EP-PV	PRHM100V-PV	50	189
1 1/2"	PRHM150EP-PV	PRHM150V-PV	70	265
2"	PRHM200EP-PV	PRHM200V-PV	100	379

\*Maximum Recommended

Parts numbers shown are for PVC body material. For CPVC, change -PV to -CP. For Natural Polypro, change -PV to -PP. FOR KYNAR PVDF, CHANGE -PV TO -PF.

**NOTE:** Refer to Catalog PRH and PRHM for information on other sizes and materials.

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