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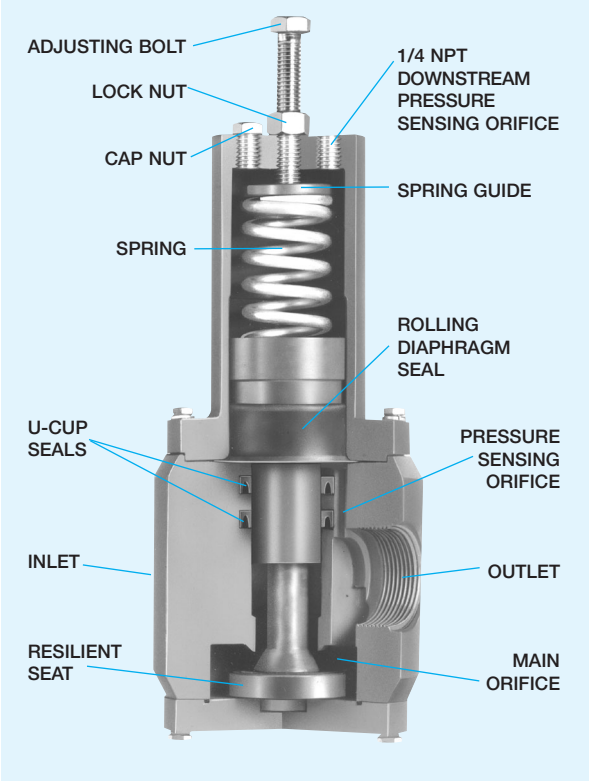
PLAST-O-MATIC

PRODUCT DATA

CATALOG PRD

Series PRD Pressure Differential Regulator

1/4" - 3" Sizes with Pressure Differential to 50 PSI For Corrosive and High Purity Liquids



Features:

- Rugged plastic construction with inlet pressures to 150 PSI.
- Reinforced rolling diaphragm assures sensitive control.
- Wide range of adjustable differential settings from 5 - 50 PSI.
- Long cycle life.
- Wide range of body materials and seals.

Design:

The design follows that of the standard pressure regulator. It is modified by incorporating two threaded 1/4 NPT ports in the top of the spring housing, one for the differential sensing line and the other for exhausting air from the housing. A sealing screw is provided for the exhaust. The control spring is stainless steel and is coated with PVC or PTFE to eliminate contamination and corrosion.

Application:

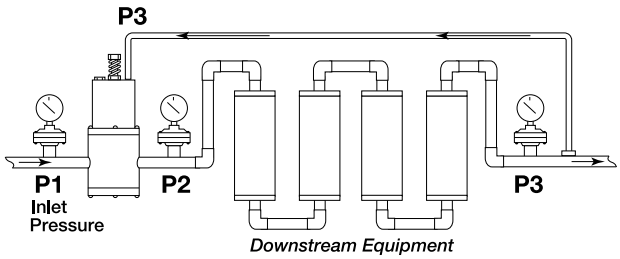
Series PRD differential pressure regulators are used to control the pressure differential (ΔP) across downstream system equipment. A typical application improves optimum filter efficiencies and safety by limiting the pressure differential across a filter or combination of filters as used in the manufacture of ultra-high purity water for the semiconductor industries.

Operation:

Refer to diagram below: The differential pressure setting is P2 minus P3. The differential pressure regulators operate practically the same as the standard regulator. The difference is in the second sensing line which feeds the pressure downstream of the equipment (P3) to the top of the spring housing and aids the spring in keeping the regulator open against the pressure directly at the regulator's outlet (P2). When the downstream pressure P3 begins to drop (as would be the case if the equipment is a filter collecting particles) the regulator begins to close and becomes fully closed when the differential pressure setting is reached. When used with a filter the differential pressure regulator eliminates the possibility of overpressure across the filter membrane.

Installation:

The installation is basically the same as for a standard regulator except the differential pressure regulator has an additional liquid sensing line connected to the top of the spring housing and is connected to the downstream line after the equipment.



TRUE BLUE™

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