



## HPR50 Series

Inlet 0 to 10,000 psig & Outlet 40 to 10,000 psig

### High Pressure, High Flow, Fluid Pressure Regulator

#### Features

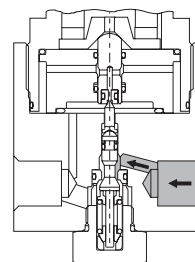
- Balanced Poppet Design
- Metal to Metal Seating
- Captured Self Venting
- 303 or 316 Stainless Steel or Brass Body
- High Pressure 0-10,000 Inlet & Outlet Range
- High Flow Equal to Cv of 0.30
- Internal Damper for Surge Flows
- Ryton 7 Plastic Handle

#### Technical Data

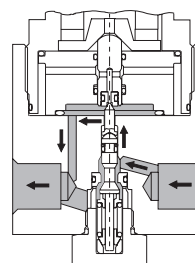
- |                              |  |
|------------------------------|--|
| Body Construction Materials: | • 303 or 316 Stainless Steel or Brass Construction                                     |
| Seat Material:               | • 17-4 PH Cres   |
| Port Sizes:                  | • 1/4" or 1/2" NPT, 1/2" Tube or 1/2" BSPP   |
| Pressure Ratings:            | • Inlet – Cres 0 to 10,000 psig (0 to 690 BAR)<br>Brass 0 to 6,000 psig (0 to 414 BAR) |
|                              | • Outlet – 40 to 10,000 psig (2.7 to 690 BAR)  |
| Temperature Range:           | • -40° F to +225° F (-40° C to +107° C)  |
| Flow Capacity:               | • $C_v = 0.30$   |

NOTE: Proper filtration is recommended to prevent damage to sealing surfaces.

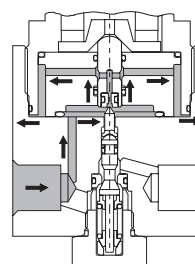
#### How It Works



**CLOSED**  
The balanced poppet is spring loaded against the seat.



**REGULATING**  
As the downstream process demands flow, the pressure acting on the piston decays, allowing the adjusting spring force to push the piston down, at which point increasing pressure overcomes spring force, moving the piston up and allowing the poppet to close.



**VENTING**  
If the downstream pressure should increase beyond regulation set point, or the handle is backed off to decrease the regulated pressure level, the downstream pressure will vent through the piston and the guide to the vent port.

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# HPR50 Series

Inlet 0 to 10,000 psig & Outlet 40 to 10,000 psig

## How to Order

**R/ HPR50 T 1 1 N**

*(Repair Kit)* ———— R/

**BASIC MODEL NUMBER & OUTLET PRESSURE RANGE**

- HPR50 – 150 to 1500 psig (10 to 103 BAR)
- HPR51 – 300 to 3000 psig (20 to 206 BAR)
- HPR52 – 600 to 6000 psig (40 to 414 BAR)
- HPR53 – 1000 to 10,000 psig (69 to 690 BAR)
- HPR54 – 40 to 400 psig (2.7 to 28 BAR)

**BODY MATERIAL**

- B – Brass
- T – 303 Stainless Steel
- U – 316 Stainless Steel

**OPTIONS**

- N – 316 Stainless Steel Panel Nut

**SEAT MATERIALS**

- 0 – Ethylene Propylene
- 1 – Neoprene
- 3 – Viton®
- 4 – Buna N

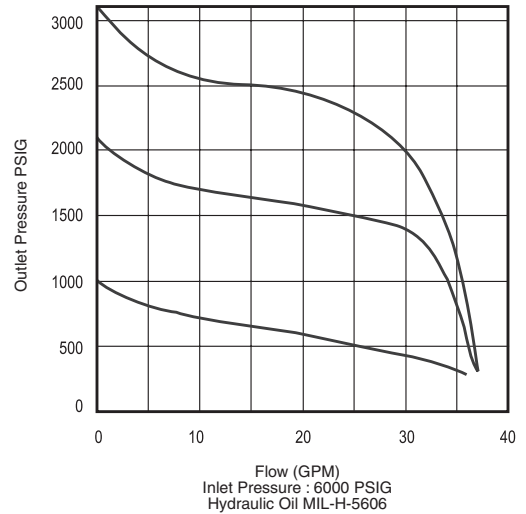
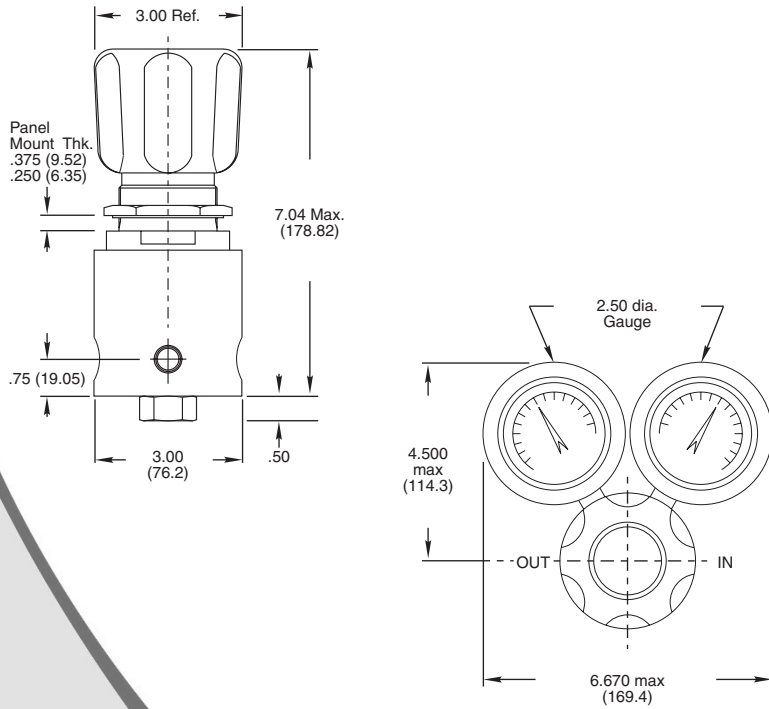
**INLET & OUTLET PORTS**

- 1 – 1/4" NPT
- 2 – 1/2" NPT
- 3 – 1/2" Tube (MS33649-8)
- 4 – 1/2" British Parallel Pipe (Vent Port: 1/4" BSPP) (Gauge Ports: 1/4" BSP)

Please consult your Circle Seal Controls Distributor, Representative or the factory for information on special connections, operating pressures and temperature ranges.

Viton® is a registered trademark of Dupont.

## Dimensions, Gauges & Typical Flow Curves



### For Your Safety

*It is the sole responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation and maintenance of these products. Material compatibility product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury*