

**NEW**

# IR6000 Series

## Two Stage Regulator Internally Threadless Design



Parker Hannifin Corporation's Veriflo Division introduces the IR6000 Series internally threadless pressure regulator for pressure reducing industrial/analytical applications including cylinder and calibration gases.

The IR6000 is a high pressure regulator that can be ordered with a variety of options to meet a range of system design requirements.

*Note: Please see **Product Features and Benefits** on page two.*



► **materials of construction**

**Wetted**

- Body . . . . . 316L Stainless Steel, Hastelloy C-22®, Brass, Monel®
- Compression Member . . . . . Inconel®
- Diaphragm . . . . . Hastelloy C-22®
- Poppet . . . . . Elgiloy®
- Poppet Spring . . . . . Inconel®
- Carrier . . . . . Stainless Steel\*, Hastelloy C-22®
- Seat . . . . . PCTFE, PEEK™, Vespel®
- Back-up O-ring . . . . . Viton®
- Inlet Screen/Filter . . . . . 316L Stainless Steel, Copper and Phosphor/Bronze (Brass body)

**Non-Wetted**

- Nut . . . . . 316L Stainless Steel
- Cap . . . . . Nickel Plated Brass
- Knob (black) . . . . . ABS Plastic

► **operating conditions**

- Maximum inlet . . . . . 4000 psig (276 barg)
- Outlet . . . . . 1-10 psig (.7 barg), 1-30 psig (2 barg), 1-60 psig (4 barg), 2-100 psig (7 barg), 2-250 psig (17 barg)

- Temperature:
- PCTFE . . . . . -40°F to 150°F (-40°C to 65°C)
  - \*\*PEEK™ . . . . . -40°F to 275°F (-40°C to 135°C)
  - \*\*Vespel® . . . . . -40°F to 500°F (-40°C to 260°C)

► **functional performance**

- Flow capacity:
- Standard . . . . . C<sub>v</sub> .06
  - Optional . . . . . C<sub>v</sub> .02, .15 (ANSI/ISA S 75.02 1998 using water)
- Design Leak Rate:
- Outboard . . . . . 1 x 10<sup>-9</sup> scc/sec He
  - Inboard . . . . . 2 x 10<sup>-9</sup> scc/sec He
  - Across seat . . . . . 4 x 10<sup>-8</sup> scc/sec He
  - Supply Pressure Effect . . . . . 0.01 psig per 100 psig

► **standard configurations**

- 1/4 inch female pipe threads:
- End to end length . . . . . 2.00 ± .02 in. (50. ± .5 mm)

► **internal volume**

8.1 cc

► **approximate weight**

1.5 lbs (.7 kg)

\* Proprietary Carpenter Stainless Steel with corrosion resistance equal or better than 316.

\*\* Temperature ranges available in Stainless Steel body only

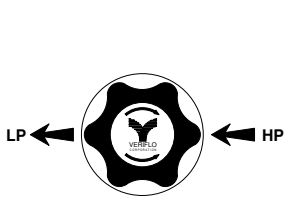


# IR6000 Series

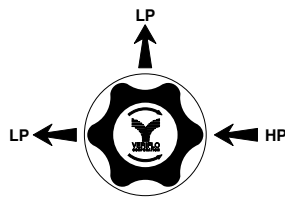
## Product Features and Benefits

- ▶ Unique patented compression member loads the seal to the body without requiring a threaded nozzle or additional seals to atmosphere.
- ▶ Selection of seat materials for media compatibility and temperature applications.
- ▶ Meets NACE standard MR0175.
- ▶ Compression member for low internal volume.
- ▶ Fully swept design.
- ▶ Internally threadless seat design to promote long seat life.
- ▶ No threads in the wetted area minimizes potential particle generation that causes seat damage.
- ▶ Convoluted, Hastelloy C-22<sup>®</sup> diaphragm provides high corrosion resistance and increases cycle life.
- ▶ Positive upward and downward diaphragm stops increases cycle life by preventing over stroking of the diaphragm.
- ▶ Minimized internal volume reduces cycle time to the analyzer.
- ▶ Captured bonnet allows for safety venting.
- ▶ The use of Inconel<sup>®</sup>, Hastelloy<sup>®</sup>, and Elgiloy<sup>®</sup> provide superior corrosion resistance and high repeatability.
- ▶ Close tolerances and tight alignment of moving components minimizes hysteresis.
- ▶ Unique carrier design disperses gas uniformly through the regulator to improve purging.

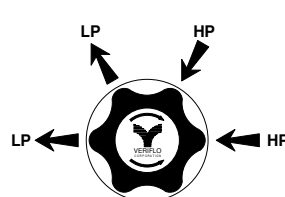
## Porting Configurations



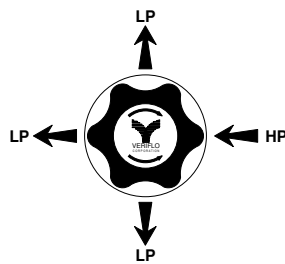
**Porting Code 2P**



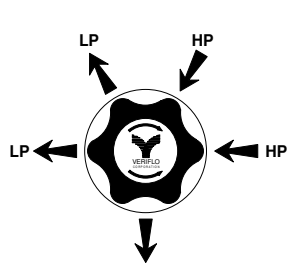
**Porting Code 3P**



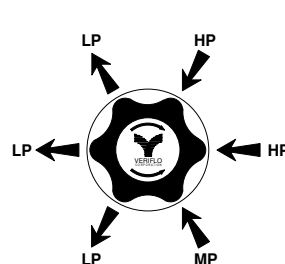
**Porting Code 4P**



**Porting Code 4PB**



**Porting Code 5P**

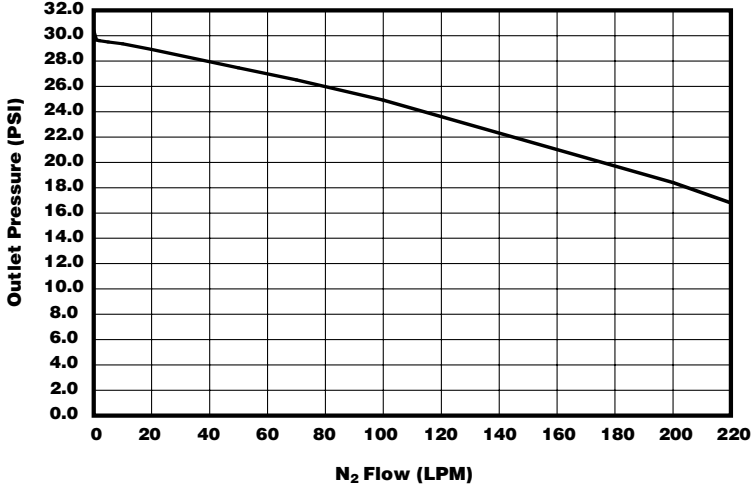


**Porting Code 6P**

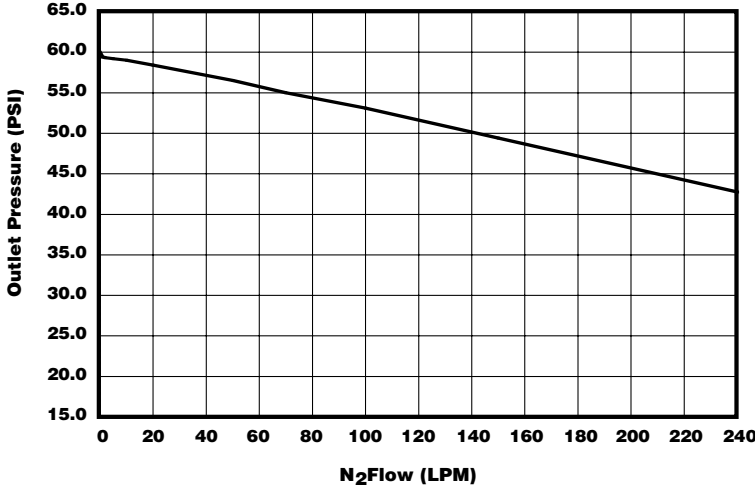
# IR6000 Series

## Flow Curves

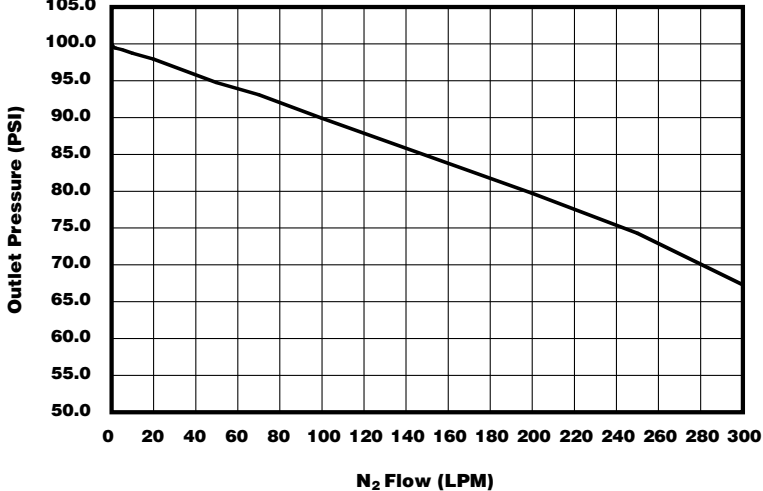
IR6001 .06 C<sub>v</sub>  
Inlet Pressure - 1500 PSIG



IR6002 .06 C<sub>v</sub>  
Inlet Pressure - 1500 PSIG

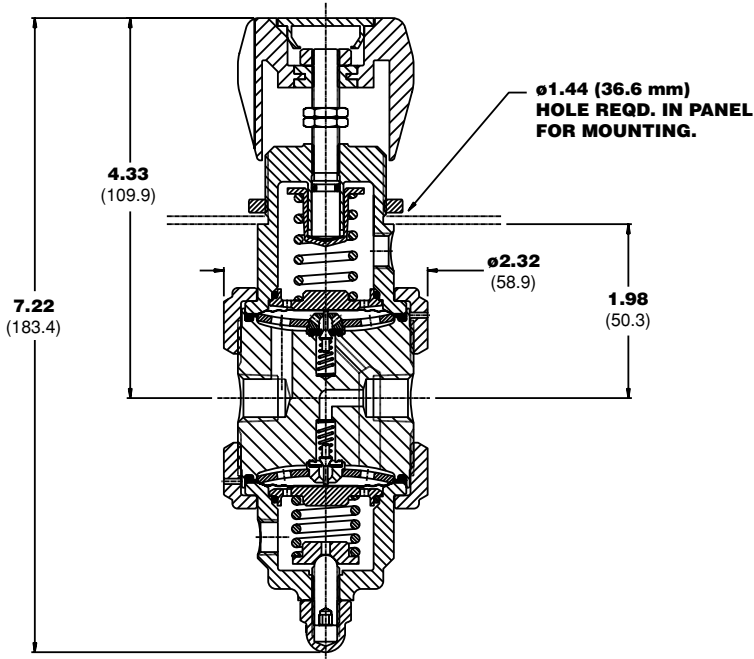


IR6003 .06 C<sub>v</sub>  
Inlet Pressure - 1500 PSIG

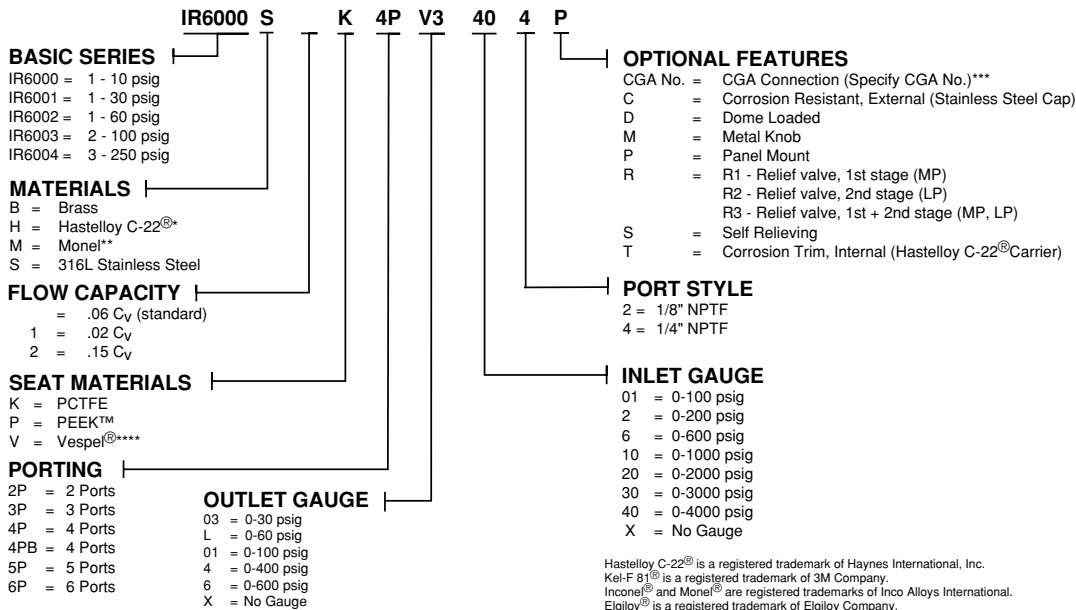


# IR6000 Series

## Dimensional Drawing



## Ordering Information



\* Hastelloy C-22<sup>®</sup> material includes: Hastelloy C-22<sup>®</sup> body, Hastelloy C-22<sup>®</sup> Carrier  
 \*\* Monel<sup>®</sup> material includes: Monel<sup>®</sup> body, Hastelloy C-22<sup>®</sup> Carrier  
 \*\*\* Do not exceed the rated pressure of the CGA connection  
 \*\*\*\* Recommended for Nitrous Oxide (N<sub>2</sub>O) Service

Hastelloy C-22<sup>®</sup> is a registered trademark of Haynes International, Inc.  
 Kel-F 81<sup>®</sup> is a registered trademark of 3M Company.  
 Inconel<sup>®</sup> and Monel<sup>®</sup> are registered trademarks of Inco Alloys International.  
 Egitloy<sup>®</sup> is a registered trademark of Egitloy Company.  
 Vespel<sup>®</sup> is a registered trademark of DuPont Company.  
 Vitor<sup>®</sup> is a registered trademark of DuPont Dow Elastomers.  
 PEEK<sup>™</sup> is a trademark of Victrex plc.

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