

NEW

NPR4000 Series

Negative Pressure Regulator



Parker Hannifin Corporation's Veriflo Division introduces the NPR4000 regulator for applications involving negative delivery pressures with low pressure gas sources.

This new regulator is specifically designed to regulate negative pressures down to -26 inHg vacuum (100 Torr). Typical applications include the delivery of low pressure gases from liquid sources such as WF₆, BCL₃.



features

- ▶ "VeriClean," Veriflo's custom low sulfur high purity 316L VAR Stainless Steel, which enhances electropolishing, welding, and corrosion resistance.
- ▶ Consistently maintains outlet set point.
- ▶ Fluid media: corrosive and non-corrosive gases.
- ▶ Metal-to-metal, diaphragm-to-body seal.



materials of construction

Wetted

Body "VeriClean", Veriflo's high purity type 316L VAR Stainless Steel, Hastelloy C-22®
 Compression Member Inconel®
 Diaphragm Hastelloy C-22®
 Pin Hastelloy C-22®
 Poppet Elgiloy®
 Poppet Spring 316L Stainless Steel, Hastelloy C-22®
 Screen Hastelloy C-22®
 Carrier Stainless Steel*, Hastelloy C-22®
 Seat PCTFE, PEEK™, Vespel®
 Inlet Screen/Filter** 316L Stainless Steel

Non-Wetted

Back-up Plate Aluminum
 Spring Retainer Stainless Steel
 Slip Ring Stainless Steel
 Nut 316L Stainless Steel
 Knob (black) ABS Plastic

operating conditions

Maximum inlet 250 psig (17 barg)
 Outlet . . . 100 torr to 10 psig (-26 in Hg to .7 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_v .06
 Optional C_v .02, .15
 (ANSI/ISA S 75.02 1998)
 Design Leak Rate:
 Outboard 1 x 10⁻⁹ scc/sec He
 Inboard 2 x 10⁻¹⁰ scc/sec He
 Across seat 4 x 10⁻⁸ scc/sec He
 Supply Pressure Effect0.6 psig
 (.04 barg) per 100 psig (6.80 barg)

standard configurations

1/4" female pipe threads:
 End to end length . . . 2.0 ± .02 in. (50.0 ± .5 mm)
 Any configuration of 1/4" FS male and/or female fittings:
 Gland to gland length 3.70 ± .02 in. (94.0 ± .5 mm)

internal volume

4.0 cc

surface finishes

Standard Ra . . . 10 micro inch (.25 micro meter)

approximate weight

1.5 lbs. (.7 kg)

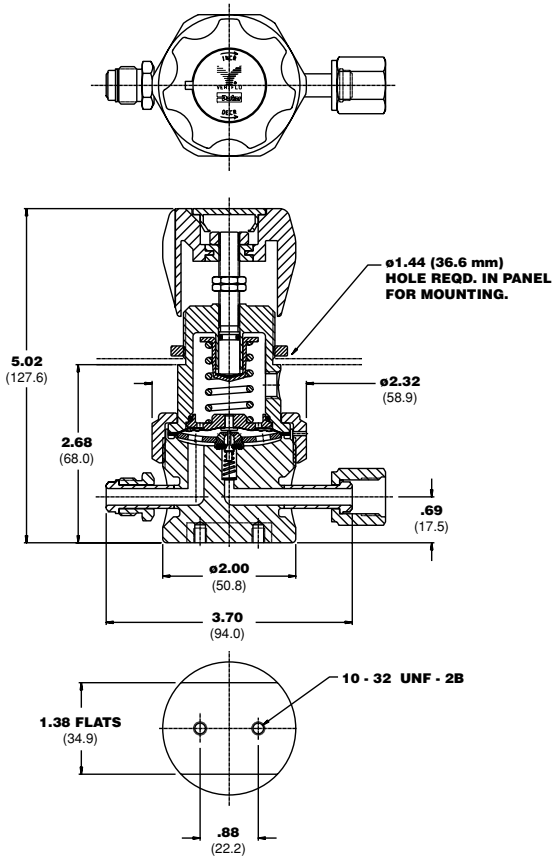
* Proprietary Carpenter Stainless Steel with corrosion resistance equal or better than 316.

** Available in 1/4" NPT body only

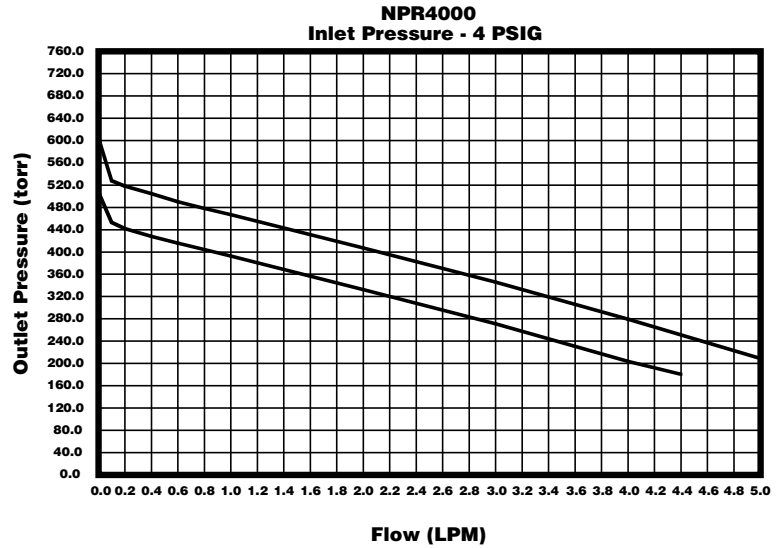
*** Temperature ranges available in Stainless Steel body only

NPR4000 Series

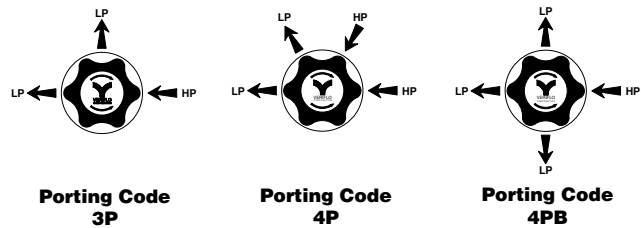
Cross Sectional Drawing



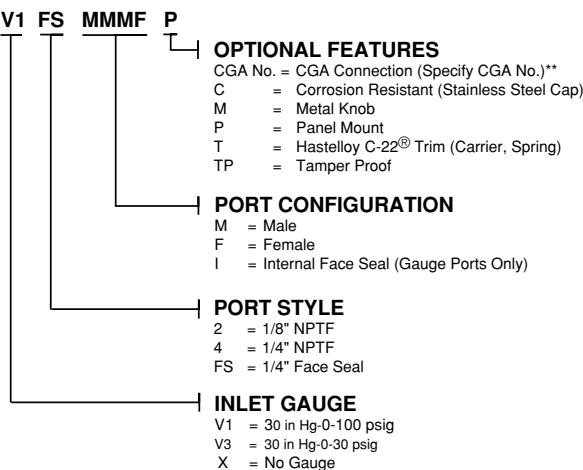
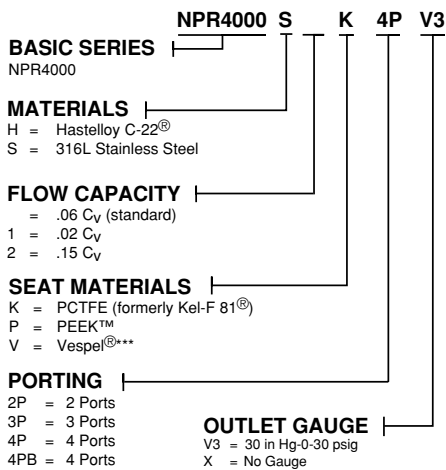
Flow Curve



Porting Configurations



Ordering Information



** Do not exceed the rated pressure of the CGA connection
 ***Recommended for Nitrous Oxide (N₂O) Service

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 Powerful Solutions.**

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