

NPR4100 Series

Negative Pressure Regulator Stainless Steel



Value Proposition:

The NPR4100 Series regulator offers negative delivery pressures with the use of low pressure gas sources. This regulator is specifically designed to regulate negative pressures down to -26 in. Hg vacuum (100 Torr).

Close tolerances and tight alignment of moving components minimize hysteresis and improve cycle life. Convoluted, Hastelloy C-22® diaphragm provides high corrosion resistance and increases cycle life.



Contact Information:

Parker Hannifin Corporation
Veriflo Division
 250 Canal Blvd
 Richmond, California 94804

phone 510 235 9590
 fax 510 232 7396
 veriflo.sales@parker.com

www.parker.com/veriflo
 Mobile App: m.parker.com/veriflo

Product Features:

- Unique compression member loads the seal to the body without requiring a threaded nozzle or additional seals
- Positive upward and downward stops increase cycle life by preventing over stroking of the diaphragm
- Internally threadless design reduces particle generation
 The low internal volume reduces purge times.
- Selection of seat materials for media compatibility and temperature applications
- Cleaned for O₂ service is standard
- Unique carrier design disperses gas uniformly through the regulator to improve purging

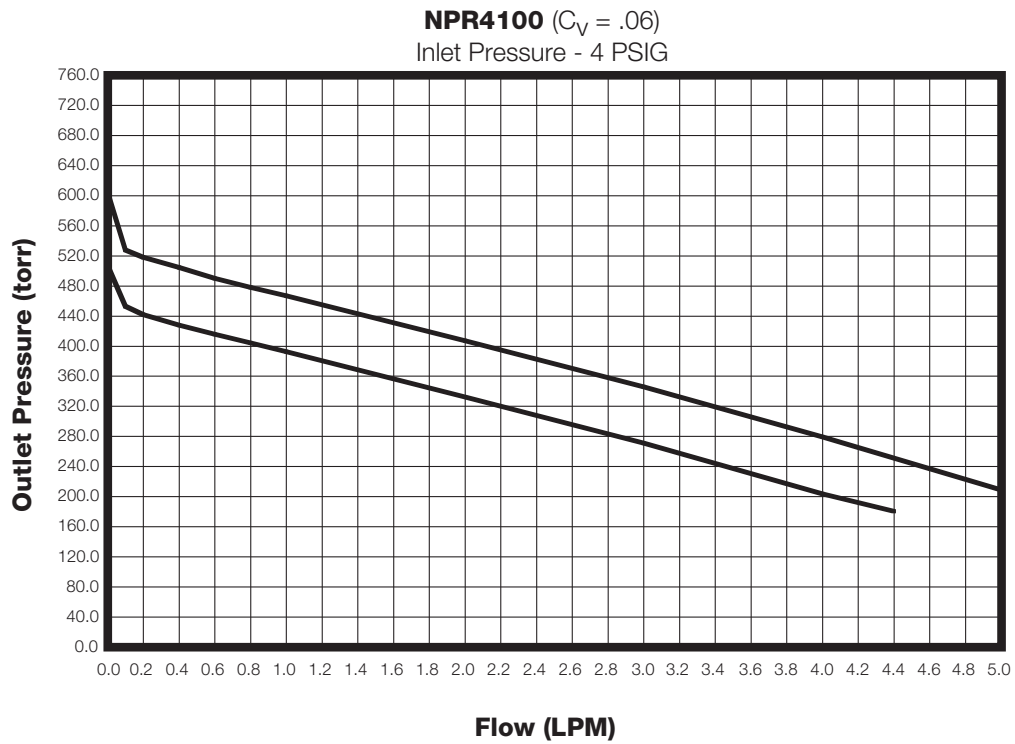


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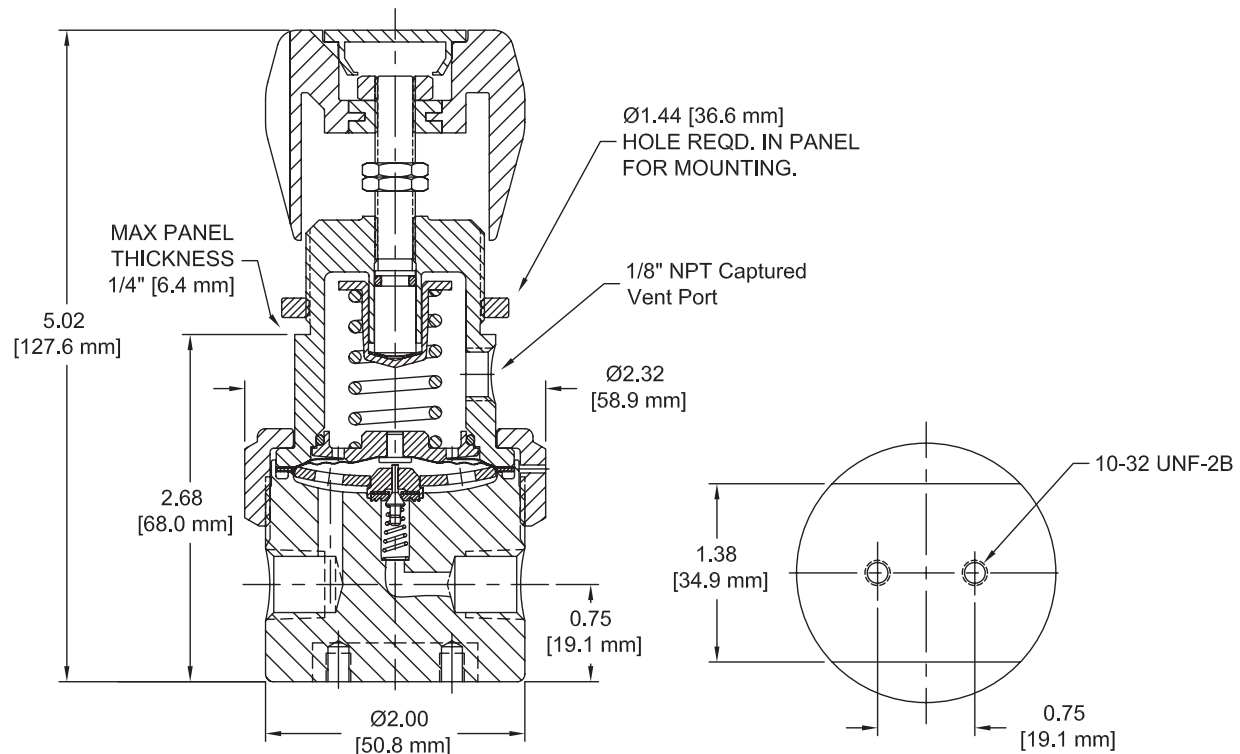
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Flow Curve

Additional flow curves available upon request



Dimensional Drawing



Safety Guide and Installation and Operating Instructions available at
www.parker.com/veriflo










NPR4100 Series

Ordering Information

Build an NPR4100 Series regulator by replacing the numbered symbols with an option from the corresponding tables below.


Color Explanations: Black = Standard Lead Time Configurations
 Blue = Extended Lead Time Configurations
 Green *Italic* = Express Service Program (ESP)


For an explanation of Ordering options please reference literature 25000275 at www.parker.com/veriflo

Sample: **NPR410**  **0**  **S**  **K**  **4P**  **V3**  **V1**  **4**  **B**  **C**  **C** 


Finished Order: **NPR4100SK4PV3V14BC**

 **1 Pressure Range**
 0 = -26 in Hg - 10 psig


 **2 Body Material**
 S = 316L Stainless Steel
 B = Brass *SST gauges*


 **3 Flow Capacity**
omit = 0.06 Cv *Standard*
 1 = 0.02 Cv
 2 = 0.15 Cv


 **4 Seat Material**
 K = PCTFE
 P = PEEK™
 V = Vespel® *Recommended for Nitrous Oxide (N2O) Service*


 **5 Porting**
 2P = 2 Ports *No X required for gauges, inlet & outlet ports only*
 3P = 3 Ports *One X for gauge port*
 4P = 4 Ports *Two X's for gauge ports*
 4PB = 4 Ports *One X for gauge port*
See Regulator Porting Guide for additional options and port layouts

Note: Ports may be plugged for NPT threaded product.

 **6 Outlet Gauge**
 V3 = -30 in Hg 0 - 30 psig
 X = No Gauge

 **7 Inlet Gauge**
 V3 = -30 in Hg 0 - 30 psig
 V1 = -30 in Hg 0 - 100 psig
 2 = 0 - 200 psig
 4 = 0 - 400 psig
 X = No Gauge

 **8 Port Style**
 2 = 1/8" NPT Female
 4 = 1/4" NPT Female
 6 = 3/8" NPT Female
 4T = 1/4" A-LOK®
 6T = 3/8" A-LOK®
 8T = 1/2" A-LOK®
All Gauge ports are 1/4" NPT Female

 **9 Port Mounting**
 B = 0.75 port height w/0.75 mounting hole pattern

 **10 Optional Features**
 This section can have multiple options

- B = True Ported Body *no plugs*
- C = Corrosion Resistant External *Stainless Steel Cap*
- D = Dome Loaded *Not available with G or M options*
- G = Tamper Proof *Not available with D or M options*
- L = PTFE Backup O-Ring *PCTFE and PEEK™ Seats Only*
- M = Metal Knob (White) *Not available with D or G options*
- N = Nickel Plate *Brass bodies only*
- R = Relief Valve *4PB Only*
- T = Hastelloy® Trim *Includes carrier and back-up washer. Option is for Stainless Steel body only.*
- V = Outlet Valve *NV17SS44MF or NV17SB44MF for Brass Body*

Note: Panel Mount Option:
 Order Panel Nut Ring p/n: 41900363 as a separate line item.
 Vent Muffler Option:
 Order Vent Muffler p/n: 46600581 as a separate line item.

 **11 CGA#**
 320, 330, 350, 510, 580, or 590
 Do not exceed the rated pressure of the CGA connection.

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Specifications

Materials of Construction	
Wetted	
Body Options	316L Stainless Steel (std) or Brass
Compression Member	Inconel 625®
Diaphragm	Hastelloy C-22®
Diaphragm Pin	Hastelloy C-22®
Poppet	Hastelloy C-276®
Poppet Spring	Inconel X750®
Seat Options	PCTFE (std), PEEK™ or Vespel®
Carrier Options	316L Stainless Steel (std) or Hastelloy C-22®
Washer Back-up Options	316 Stainless Steel (std) or Hastelloy C-276®
O-ring Back-up Options	FKM (std) or PTFE
Inlet Screen / Filter	316 Stainless Steel (std) (60µm mesh screen, 10µm Filter) Copper and Phosphor Bronze (on Brass bodies)
Non-wetted	
Cap Options	Nickel Plated Brass (std) or Stainless Steel
Nut	Stainless Steel
Knob Options	ABS (std) (ambient temp) or Aluminum

For additional information on materials of construction, functional performance and operating conditions, see Regulator Technical Bulletin.

Functional Performance	
Design	
Burst Pressure	750 psig (52 barg)
Proof Pressure	375 psig (26 barg)
Flow Capacity	
C _v Options	C _v 0.06 (std), C _v 0.02, C _v 0.15
Leak Rate	
Internal	Bubble Tight
External	Bubble Tight
Internal Volume	4.0 cc without fittings
Approx. Weight	1.5 lbs. (0.7 kg)
Operating Conditions	
Maximum Inlet	250 psig (17 barg)
Outlet Options	100 torr to 10 psig (-26 in Hg to .7 barg)
Temperature	Metal Knob required for temperatures above 150°F
PCTFE	-40°F to 150°F (-40°C to 66°C)
PEEK™ *	-40°F to 275°F (-40°C to 135°C)
Vespel® *	-40°F to 500°F (-40°C to 260°C)

* Not available for Brass Bodies

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LitPN: 25000153

Rev: J

Date of Issue 04/2013



Hanley Controls Clonmel Ltd
Gortnafeur, Clonmel, Co. Tipperary
Tel: +353 (0)52 6122722
e-mail: info@hcc.ie
web: www.hcc.ie

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