NPR4100 Series

316L SS, Negative Pressure Regulator

Customer 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.

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Product Features:

- Unique compression member loads the seal to the body without requiring a threaded nozzle or additional seals.
- Internally threadless design reduces particle generation. The low internal volume reduces purge times.
- Cleaned for O_2 service is standard.
- Positive upward and downward stops increase cycle life by preventing over stroking of the diaphragm.
- Selection of seat materials for media compatibility and temperature applications.
- Unique carrier design disperses gas uniformly through the regulator to improve purging.

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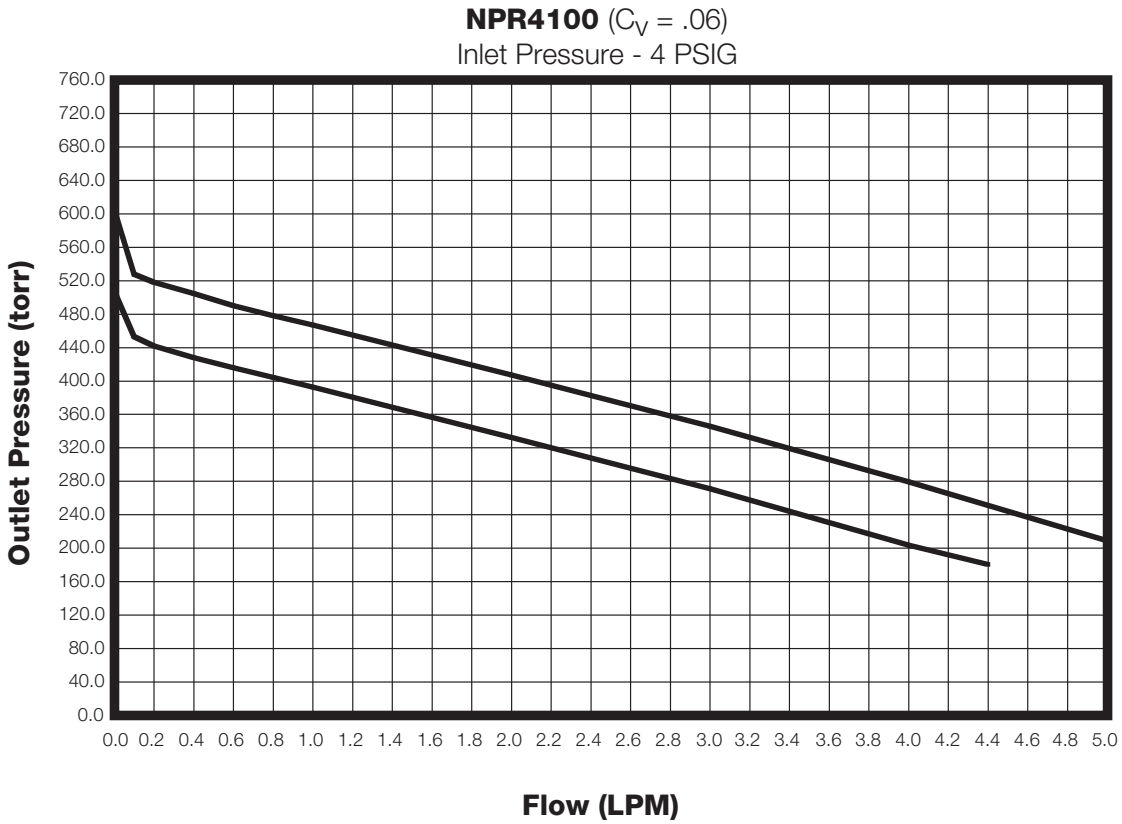
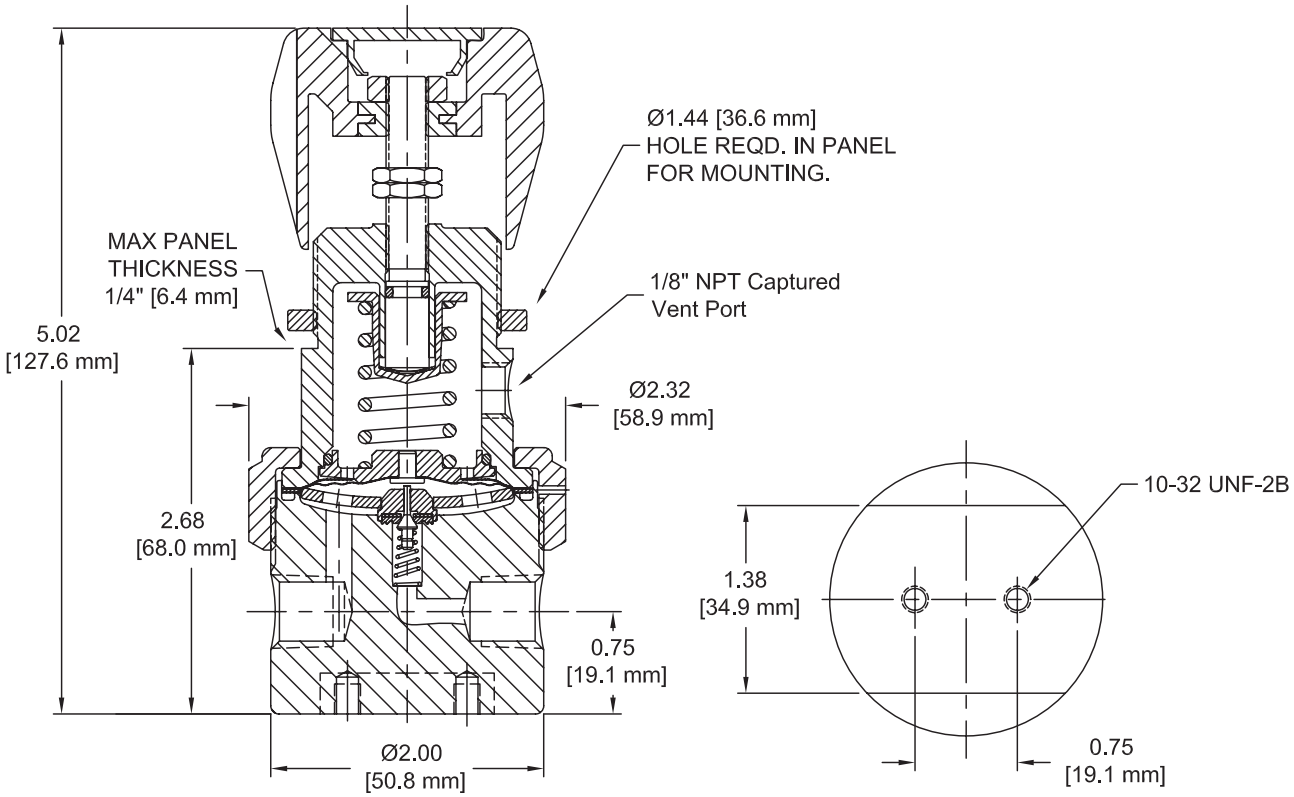
NPR4100 Series

Flow Curves

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.

	1	2	3	4	5	6	7	8	9	10	11
Sample: **NPR410**	**0**	**S**		**K**	**4P**	**V3**	**V1**	**4**	**B**	**C**	

Finished Order: **NPR4100SK4PV3V14BC**

1 Pressure Range

0 = -26 in Hg - 10 psig

2 Body Material

S = 316L Stainless Steel
B = Brass
H = Hastelloy C-22® *SST gauges*
M = Monel® *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 (N20) 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*

Note: Ports may be plugged for NPT threaded product.

See Regulator Porting Guide for additional options and port layouts

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 - Hastelloy® Trim is std with Hastelloy® and Monel® bodies*
V = Outlet Valve *NOVAS44MF or NOVAB44MF 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), Brass, Hastelloy C-22® or Monel® (*Hastelloy® Trim is std with Hastelloy® and Monel® bodies)*
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), Hastelloy® (on Hastelloy® & Monel® bodies)
Non-wetted	
Cap Options	Nickel Plated Brass (std) or Stainless Steel
Nut	Stainless Steel
Knob Options	ABS (std) (ambient temp) or Aluminum

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	*Based upon seat material choice*
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*

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

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