

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.

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.
- The low internal volume reduces purge times
- 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

Specifications:

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
Leak Rate: External	Bubble Tight
Internal Volume	4.0 cc without fittings
Approximate 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 temperature 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)

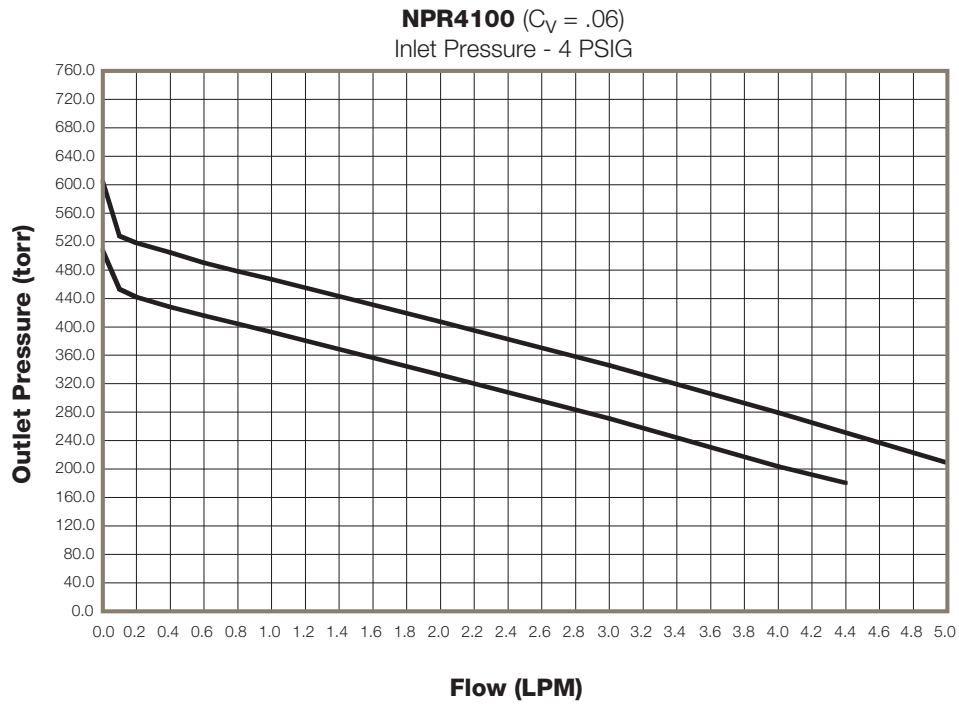
Material of Construction	
Wetted	
Body	316L Stainless Steel (std).
Compression Member	Inconel® 625
Diaphragm	Hastelloy® C-22
Diaphragm Pin	Hastelloy® C-22
Poppet	Hastelloy® C-276
Poppet Spring	Inconel® X750
Seat Options	PCTFE (std.), PEEK™ or Vespel®
Washer Backup Options	316 Stainless Steel (std.) or Hastelloy® C-22
O-Ring Backup Options	FKM (std.) or PTFE
Inlet Screen / Filter	316 Stainless Steel (std). (60µm mesh screen, 10µm Filter)
Non-Wetted	
Cap	Nickel Plated Brass (std.) or Stainless Steel
Nut	316L Stainless Steel
Knob Options	ABS (std - ambient temperature) or Aluminum

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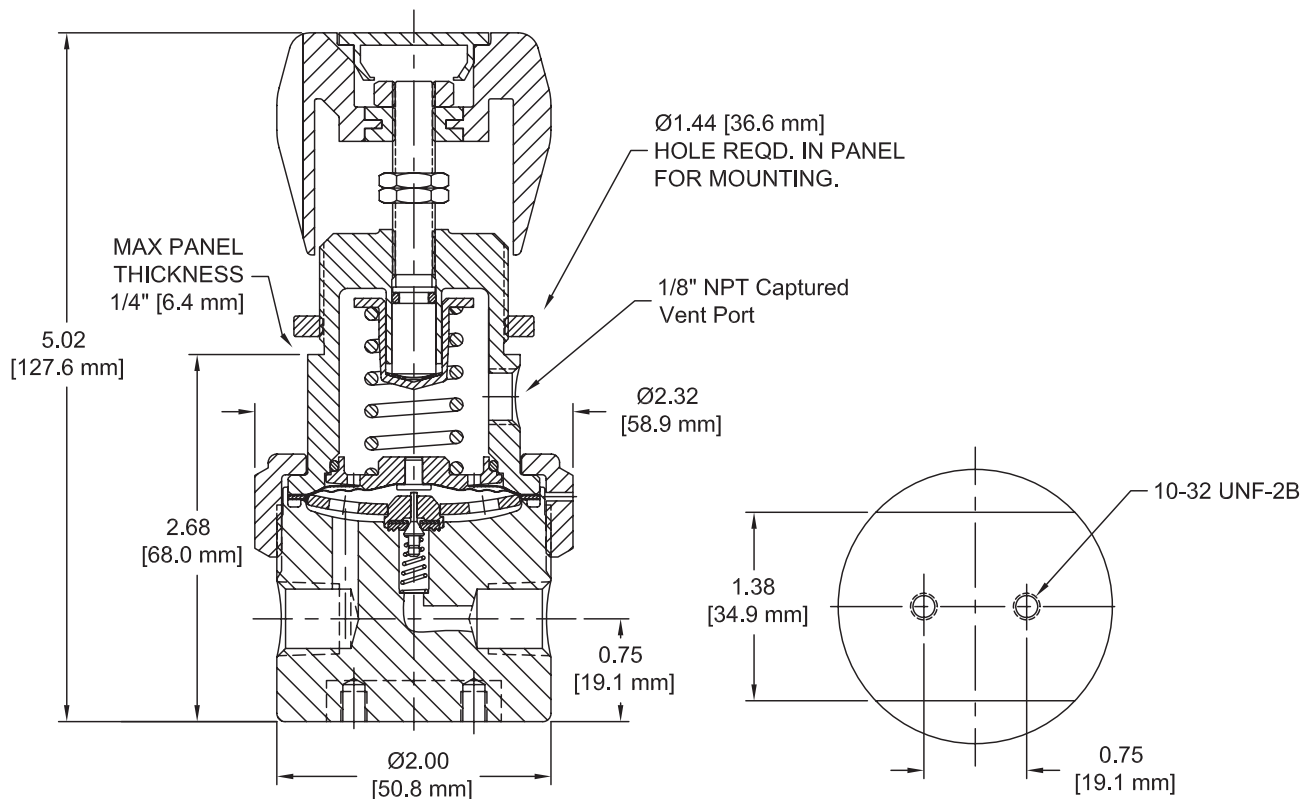


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Flow Curve:



Dimensional Drawing:



NPR4100 Series

Ordering Information:

Building a Part Number: *Example: NPR4100SK4PV3V14BC*

Example Part Number:	NPR140	0	S		K	4P	V3	V1	4	B	C
Ordering Parameters/Options:	Series	Pressure Range	Body Material	Flow Capacity	Seat Material	Porting	Outlet Gauge	Inlet Gauge	Port Style	Port Mounting	Optional Features
Table Reference: (see below)	A	B	C	D	E	F	G	H	I	J	K

A - Series	
NPR140	NPR140 Series Regulator

B - Pressure Range	
0	-26 in. Hg, 0-10 psig

C - Body Material	
S	316L Stainless Steel

D - Flow Capacity	
omit	0.06 Cv (std.)
1	0.02 Cv
2	0.15 Cv

E - Seat Material	
K	PCTFE
P	PEEK™
V	Vespel® (Recommended for Nitrous Oxide (N ₂ O) service)

F - 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 ports)

G - Outlet Gauge	
V3	-30 in. Hg, 0-30 psig
X	No Gauge (Gauges may be provided by local Parker Distributor)

H - Inlet Gauge (Gauges may be provided by local Parker Distributor)	
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
I - Port Style	
4	1/4" NPT Female (All Gauges are 1/4" NPT Female)

J - Port Mounting	
B	0.75 port height with 0.75 mounting hole pattern

K - Optional Features (This section may have multiple options)	
C	Corrosion Resistant External (Stainless Steel Cap)
G	Tamper Proof (Not available with M option)
L	PTFE Backup O-ring (PCTFE and PEEK™ Seats Only)
M	Metal Knob
C3	Cleaned for Oxygen Service (Oxygen Cleaning Requirements in accordance with Parker Specification ESS003)

Note:

Panel Mount Option: Order Panel Mount Nut Ring (PN: IR4-Panel-Nut-B-NP) as separate line item
Vent Muffler Option: Vent Muffler (PN: Muffler-2F-Bronze) as separate line item.

Parker Instrumentation Products Division reserves the right to plug NPT ports

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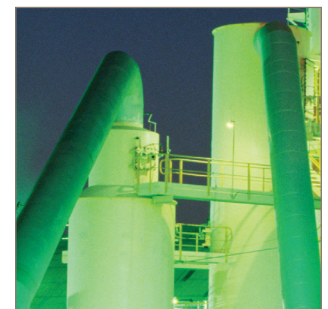
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NPR4100 SERIES: Negative Pressure Regulator



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