

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. Convuluted, 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)
Vespe®	-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 Vespe®
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

Hastelloy® C-22 and Hastelloy® C-276 are registered trademarks of Haynes International, Inc. Vespe® is a registered trademark of DuPont Performance Elastomers L.L.C. Inconel® and Monel® are registered trademarks of Special Metals Corporation. PEEK™ is a trademark of Victrex plc.

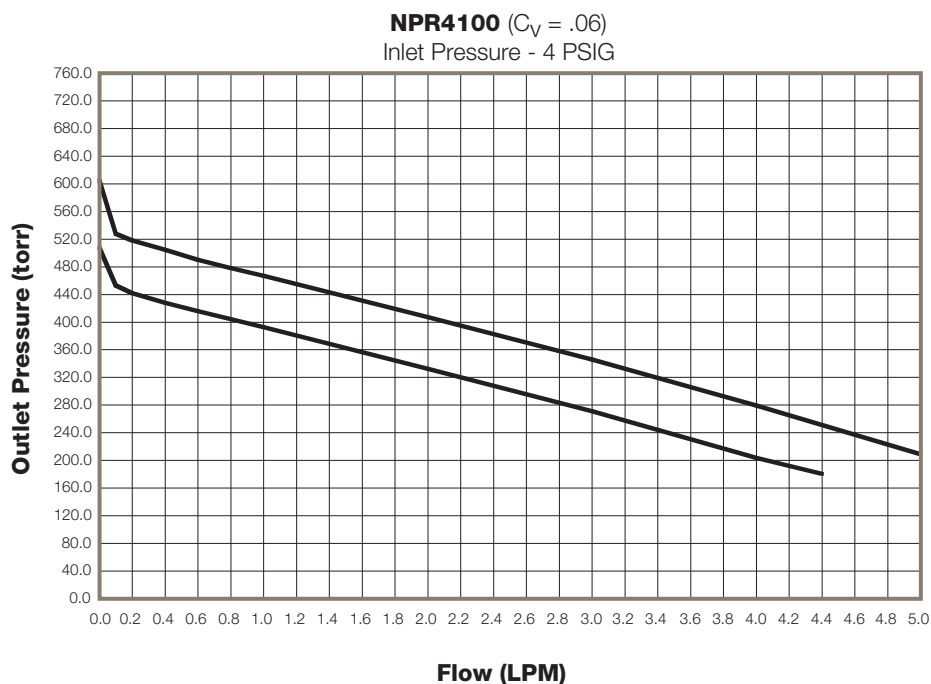


INSTRUMENTATION PRODUCTS DIVISION

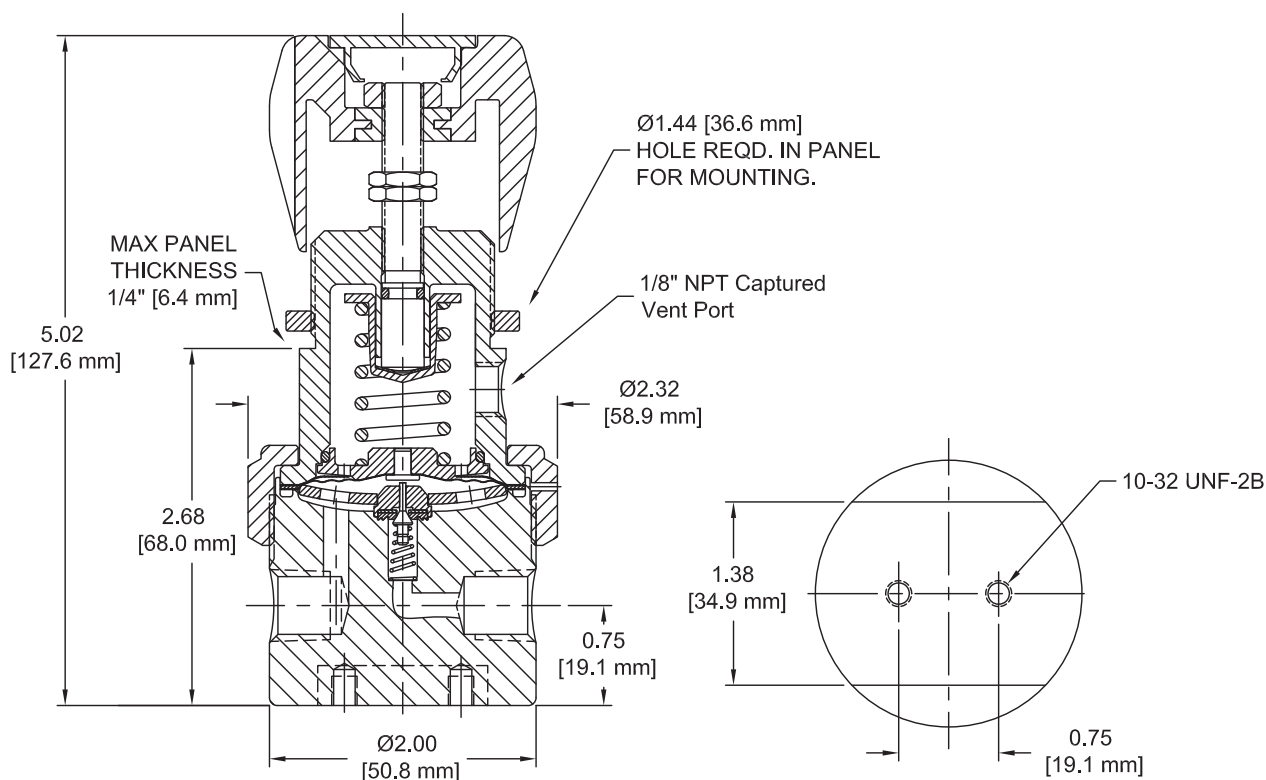
ENGINEERING YOUR SUCCESS.

NPR4100 Series

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	Vespe® (Recommended for Nitrous Oxide (N2O) 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, White (Available with G Option)
C3	Cleaned for Oxygen Service (Oxygen Cleaning Requirements in accordance with Parker Specification ES8003)

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.
 Vent Muffler is standard for the Self Relieving (S), Corrosion Resistant (C) option combination.

Parker Instrumentation Products Division reserves the right to plug NPT ports

Parker Worldwide

AE – UAE, Dubai
Tel: +971 4 8875600
parker.me@parker.com

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129
falecom@parker.com

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener Neustadt
Tel: +43 (0)2622 23501 970
parker.easturope@parker.com

AU – Australia, Dandenong
Tel: +61 (0)3 9768 5555
customer.service.au@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LX – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BR – Brazil, Sao Jose dos Campos
Tel: +55 12 4009 3504
falecom@parker.com

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CA – Canada, Grimsby, Ontario
Tel: +1 905-945-2274
ipd_canada@parker.com

CH – Switzerland, Etoy
Tel: +41 (0) 21 821 02 30
parker.switzerland@parker.com

CL – Chile, Santiago
Tel: +56 (0) 2 2303 9640
falecom@parker.com

CN – China, Shanghai
Tel: +86 21 2899 5000
INGtechnical.china@parker.com

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 33 00 01
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budapest
Tel: +36 1 220 4155
parker.hungary@parker.com

ID – Indonesia, Tangerang
Tel: +62 (0)21 7588 1906
parker.id@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IN – India, Mumbai
Tel: +91 22 6513 7081-85

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

JP – Japan, Tokyo
Tel: +81 3 6408 3900
infophj@parker.com

KR – South Korea, Seoul
Tel: +82 2 559 0400
parkerkr@parker.com

KZ – Kazakhstan, Almaty
Tel: +7 7272 505 800
parker.easturope@parker.com

LV – Latvia, Riga
Tel: +371 6 745 2601
parker.latvia@parker.com

MX – Mexico, Toluca
Tel: +52 722 275 4200
contacto@parker.com

MY – Malaysia, Selangor
Tel: +603 784 90 800
parkermy@parker.com

NL – The Netherlands, Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Stavanger
Tel: +47 (0)51 826 300
parker.norway@parker.com

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SG – Singapore,
Tel: +65 6887 6300
parkersg@parker.com

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TH – Thailand, Bangkok
Tel: +66 2 186 7000
phthailand@parker.com

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

TW – Taiwan, Taipei
Tel: +886 2 2298 8987
enquiry.taiwan@parker.com

UA – Ukraine, Kiev
Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317878
parker.uk@parker.com

USA – IPD, Huntsville
Tel: +1 256 881 2040
ipdcct@parker.com

USA – Autoclave Engineers, Erie
Tel: +1 814 860 5700
ipdaect@parker.com

VN – Vietnam, Hochi Minh City
Tel: +84 (0)8337 546 51
parker_viet@parker.com

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

WARNING

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Proposition 65 Warning: This product contains chemicals known to the state of California to cause cancer or birth defects or other reproductive harm.

Offer of Sale

The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

©2017 Parker Hannifin Corporation | Instrumentation Products Division

Literature #: **25000153**

Nov 2017



Instrumentation Products Division
1005 A Cleaner Way
Huntsville, AL 35805 • USA
Tel: 256 881 2040
Fax: 256 881 5072

ipd.sales@parker.com
www.parker.com/ipdus
Mobile Application: m.parker.com/ipd

NPR4100 SERIES: Negative Pressure Regulator



ENGINEERING YOUR SUCCESS.