

QR4000 & NPR4000 Series

UHP Single Stage, Pressure Regulator
Internally Threadless, Welded, Stainless Steel

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Value Proposition:

The QR4000 is a high purity, high pressure non-tied diaphragm regulator. It utilizes a metal-to-metal diaphragm seal which provides enhanced leak integrity.

The NPR4000 regulator is for applications involving negative delivery pressures with low pressure gas sources. Typical applications include the delivery of low pressure gases from liquid sources such as WF6, BCL3.



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:

- “VeriClean”, Veriflo’s custom low sulfur high purity 316L Stainless Steel™ enhances electropolishing, welding and corrosion resistance
- Unique compression member loads the seal to the body without requiring a threaded nozzle or additional seals to atmosphere
- Threadless internal nozzle assembly
- Metal-to-metal diaphragm to body seal assures high leak integrity
- Minimal particle generation and entrapment
- Positive upward and downward diaphragm stops
- Standard full internal electropolish

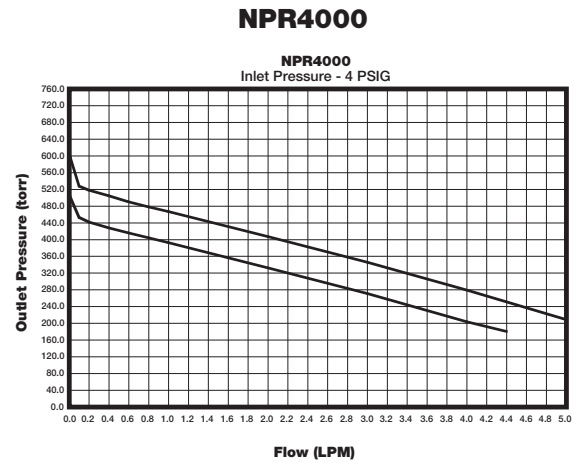
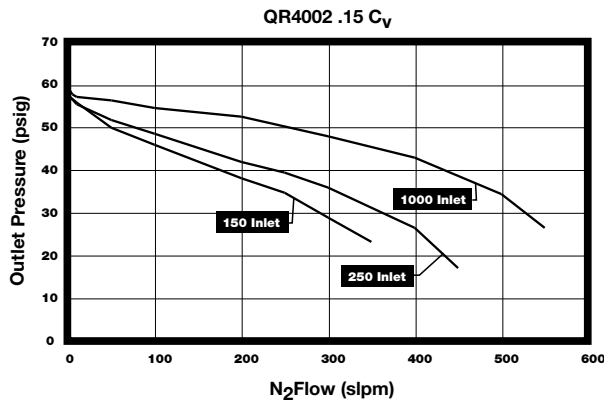
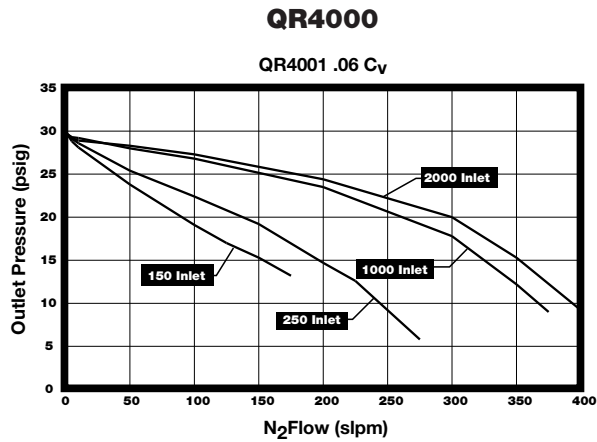


ENGINEERING YOUR SUCCESS.

QR4000 & NPR4000 Series

Flow Curves

Additional flow curves available upon request



Basic Model	Max Inlet PSIG		
	0.06 C _v	0.02 C _v	0.15 C _v
QR4000	400	400	400
QR4001	4000	4000	1250
QR4002	4000	4000	1250
QR4003	4000	4000	4000*
QR4004	4000	4000	1250
QR4005	4000	4000	1250
QR4015	4000	4000	4000*
NPR4000	250	250	250

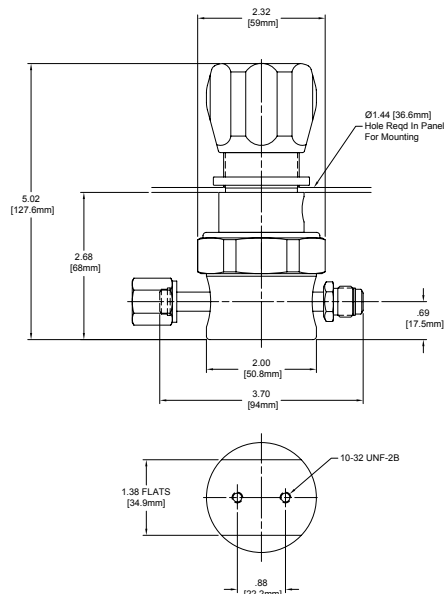
* 4000 PSIG max inlet pressure for PCTFE seats only (HP option).
1250 PSIG max inlet pressure for PEEK and Vespel seats.

When setting the delivery pressure, ensure that the maximum outlet pressure of the regulator is not exceeded for any operating condition including increases in delivery pressure due to flow shutoff and supply pressure effect. Supply pressure effect will result in a significant rise in outlet pressure as the inlet pressure decreases.

The stop settings will be adjusted to accommodate typical inlet and outlet pressure ranges. Please contact the factory if specific stop settings are required.

Refer to the Safety Guide 25000194 and the Pressure Regulators Installation and Operation Guide 25000169 for more information.

Dimensional Drawing



Connection Type	End to End Dimension
1/4" Face Seal	3.70 ± .02 in. (94 ± .5 mm)
1/2" Face Seal	4.82 ± .02 in. (122.4 ± .5 mm)
All Tube Stubs	3.70 ± .02 in. (94 ± .5 mm)

Safety Guide and Installation and Operating Instructions available at

www.parker.com/veriflo

QR4000 & NPR4000 Series

Ordering Information

Build a QR4000 or NPR4000 Series regulator by replacing the numbered symbols with an option from the corresponding tables below.

Contact factory for most up to date lead time information.

Blue = Configurations that have selections in blue may have an extended lead time and a minimum order quantity.

1
2
3
4
5
6
7
8
9
10
11

Sample: **QR40 03 S K 4P 01 40 FS MMMM M**

Finished Order: **QR4003SK4P0140FSMMMM**

1 Basic Series
 QR40
 NPR40

2 Pressure Ranges

QR40 Range	3P Outlet Gauge
00 = 1 - 10 psig	
01 = 1 - 30 psig	V1, 01
02 = 1 - 60 psig	V1, 01
03 = 2 - 100 psig	V1, 01
15 = 5 - 150 psig	2
04 = 3 - 250 psig	
05 = 20 - 500 psig	
NPR40 Range	
00 = -26" Hg - 10 psig	
01 = -26" Hg - 30 psig	
02 = -26" Hg - 60 psig	

3 Body Material
 S = 316L Stainless Steel

4 Flow Capacity
 = 0.06 C_V Standard
 1 = 0.02 C_V
 2 = 0.15 C_V

5 Seat Material
 K = PCTFE
 P = PEEK™
 V = Vespel® Recommended for Nitrous Oxide (N₂O) service

6 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*
 5P = 5 Ports *Two X's for gauge ports*
See Regulator Porting Guide for additional options and port layouts

7 Outlet Gauge
 V3 = -30 in Hg 0 - 30 psig
 V1 = -30 in Hg 0 - 100 psig
 OL = 0 - 60 psig
 01 = 0 - 100 psig
 2 = 0 - 200 psig
 4 = 0 - 400 psig
 6 = 0 - 600 psig
 X = No Gauge
Additional ranges available upon request

8 Inlet Gauge
 V3 = -30 in Hg 0 - 30 psig
 V1 = -30 in Hg 0 - 100 psig
 01 = 0 - 100 psig
 4 = 0 - 400 psig
 10 = 0 - 1000 psig
 20 = 0 - 2000 psig
 30 = 0 - 3000 psig
 40 = 0 - 4000 psig
 X = No Gauge
Additional ranges available upon request

9 Port Style
 FS = 1/4" Face Seal
 FS8 = 1/2" Face Seal
 TS = 1/4" Tube Stub
 TS6 = 3/8" Tube Stub
 TS8 = 1/2" Tube Stub

10 Port Configuration
 M = Male
 F = Female
 I = 1/4" Internal Face Seal
*1/4" FS-M Gauge Ports are Standard
 Any other Gauge Port Configuration may have an extended lead time.*

11 Optional Features
 This section can have multiple options
 HP = 4000 psig Max Inlet Pressure
For .15 C_V QR4003 and QR4015 with PCTFE seats only
 M = Metal Knob (Black) *Required for temperatures above 150° F*

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

QR4000 & NPR4000 Series

Specifications

Materials of Construction	
Wetted	
Body	316L Stainless Steel
Compression Member	Inconel 625®
Diaphragm	Hastelloy C-22®
Pin	Hastelloy C-22® - <i>NPR4000 Only</i>
Poppet	Hastelloy C-276®
Poppet Spring	Inconel X750®
Screen	Hastelloy C-22®
Seat Options	PCTFE (std), PEEK™ or Vespel®
Carrier	316L Stainless Steel
Washer Back-up	316 Stainless Steel
Non-wetted	
Cap	Nickel Plated Brass
Nut	316L Stainless Steel
Knob Options	Aluminum (Black)
QR4000	ABS (Black)
NPR4000	ABS (White)

For additional information on materials of construction, functional performance and operating conditions, please contact factory.

Vespel® is a registered trademark of DuPont Performance Elastomers L.L.C.
 Hastelloy C-22® is a registered trademark of Haynes International, Inc.
 VeriClean™ is a trademark of Parker Hannifin Corporation
 Inconel® is a registered trademark of Special Metals Corporation
 PEEK™ is a trademark of Victrex plc.

Functional Performance	
Flow Capacity	
Cv Options	C _v 0.06 (std), C _v 0.02, C _v 0.15
Leak Rate	
Internal	< 4 x 10 ⁻⁸ scc/sec He
External	< 2 x 10 ⁻¹⁰ scc/sec He
Supply Pressure Effect	
<i>Based upon C_v Option</i>	
QR4000	
0.02 C _v	0.23 psig/100 psig (0.16 barg/7 barg)
0.06 C _v	0.6 psig/100 psig (0.04 barg/7 barg)
0.15 C _v	1.5 psig/100 psig (0.1 barg/7 barg)
Internal Volume	
4.0 cc without fittings	
Approx. Weight	
1.5 lbs. (0.7 kg)	
Operating Conditions	
Maximum Inlet	Refer to Range Table for specific information
Outlet Options	
QR4000	1-10 psig (0.07 barg), 1-30 psig (2 barg), 1-60 psig (4 barg), 2-100 psig (7 barg), 3-250 psig (17 barg), 5-150 psig, (10 barg), 20-500 psig (35 barg)
NPR4000	100 torr - 10 psig (-26 in Hg - 0.7 barg) 100 torr - 30 psig (-26 in Hg - 2 barg) 100 torr - 60 psig (-26 in Hg - 4 barg)
Temperature	
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)

OFFER OF SALE:

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the detailed "Offer of Sale" elsewhere in this document or available at www.parker.com/veriflo



FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE. THIS DOCUMENT IS FOR REFERENCE ONLY. PLEASE CONSULT FACTORY FOR LATEST PRODUCT DRAWINGS AND SPECIFICATIONS

This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.

The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing are subject to change by Parker Hannifin Corp 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.

© 2009 Parker Hannifin Corporation



Use mobile device to scan this QR Code.

LitPN: 25000117

Rev: F

Date of Issue 09/2016



ENGINEERING YOUR SUCCESS.