FR1400 Series

UHP Single Stage, High Flow, Pressure Reducing Regulator

Precise Control, High Flow Performance

The FR1400 Series ultra high purity, pressure reducing regulator offers high flow capability with an inlet pressure up to 3000 psig and is an excellent choice for cylinder or point of use bulk and specialty gas applications.

The large, tied Hastelloy C-22® diaphragm provides stable control over its full operational range while providing a robust seal for hazardous gas applications.

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:

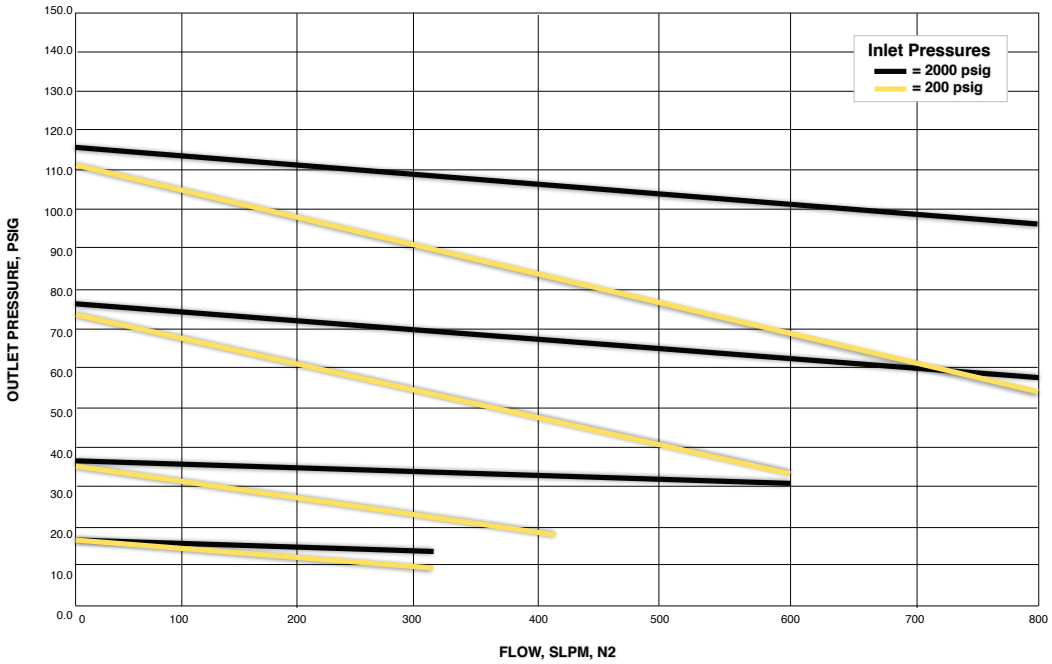
- 316L stainless steel body
- Manufactured for ultra high purity semiconductor gas applications
- Metal-to-metal diaphragm seal
- 10 µ in. Ra surface finish
- Passivated & Electropolished
- Tied diaphragm design
- Hastelloy C-22® diaphragm and poppet standard
- Flows up to 800 slpm (28 scfm)

Parker

ENGINEERING YOUR SUCCESS.

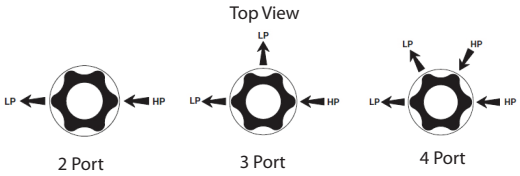
FR1400 Series

Flow Curves

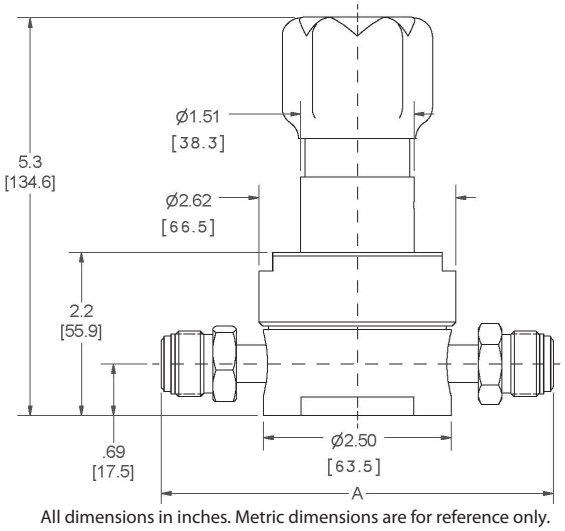


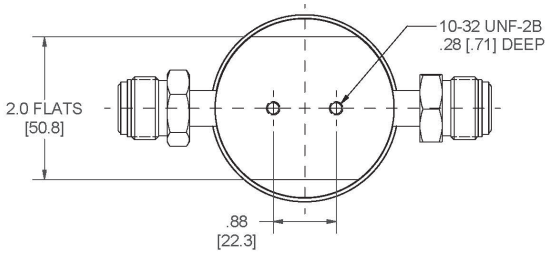
Additional flow curves available upon request

Porting Configurations



Dimensional Drawings





DIMENSION TABLE	
Connection Type	End to End Dimension (A)
1/4" Face Seal	4.30 ± .02 in. (109 ± .5 mm)
3/8" Face Seal	5.22 ± .02 in. (133 ± .5 mm)
3/8" Tube Stub	4.00 ± .02 in. (102 ± .5 mm)
1/2" Face Seal	5.22 ± .02 in. (133 ± .5 mm)
1/2" Tube Stub	4.34 ± .02 in. (110 ± .5 mm)

All dimensions in inches. Metric dimensions are for reference only.

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

FR1400 Series

Ordering Information

Build an FR1400 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:	FR1415	H	S	5	K	4P	X	X	FS6	FF	TH
Finished	FR1415HS5K4PXXFSFFTH										

1 Basic Series Configuration

FR1403 = 1 - 30 psig
FR1406 = 5 - 60 psig
FR1410 = 10 - 100 psig
FR1415 = 15 - 150 psig

2 Source Pressure Range

H = 300 - 3000 psig
L = 0- 300 psig

3 Body Material

S = 316L SS
D = 316L SS (Double melt) *

* Captured bonnet with 1/8" FNPT vent port standard with 316L SS double melt body.

4 Flow Capacity

5 = 0.5 Cv

5 Seat Material

K = PCTFE
V = Polyimide

6 Porting*

2P = 2 Ports
3P = 3 Ports
4P = 4 Ports

* Refer to the Regulator Porting Guide, 25000156, for additional porting configurations.

7 Outlet Gauge*

X = No Gauge
03 = 0 - 30 psig
OL = 0 - 60 psig
01 = 0 - 100 psig
2 = 0 - 200 psig
4 = 0-400 psig

* Only include with "3P" or "4P" body configurations.

8 Inlet Gauge*

X = No Gauge
01 = 0 - 100 psig
4 = 0 - 400 psig
10 = 0 - 1000 psig
20 = 0 - 2000 psig
30 = 0 - 3000 psig
40 = 0 - 4000 psig

* Only include with "4P" body configuration.

9 Port Style

FS = 1/4" Face Seal
FS6 = 3/8" Face Seal *
TS6 = 3/8" Tube Stub
FS8 = 1/2" Face Seal
TS8 = 1/2" Tube Stub

* Provided with 1/2" face seal nuts.

10 Port Configuration

M = Male
F = Female
I = Internal Face Seal (gauge ports only)

* 1/4" FS-M Gauge Ports are Standard
** Extended lead times for configurations with non-matching end connections.

11 Optional Features

This section can have multiple options

Blank = None
PM = Panel Mount
TH = Hastelloy® Trim (Seat Retainer)

Blue = Configurations that have selections in blue may have an extended lead time. Contact Parker Veriflo for further details.

FR1400 Series

Specifications

Wetted Materials of Construction	
Body	316L SS (std), 316L SS Double melt - VeriClean®
Diaphragm	Hastelloy C-22®
Poppet	Hastelloy C-22®
Poppet Spring	Inconel®
Seat Retainer	316L SS, Hastelloy C-22®
Seat	PCTFE (std), Polyimide
Finish	Passivated & Electropolished

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

All specifications subject to change without notice.

Functional Performance	
Flow Capacity (Cv)	0.5
Internal Leakage (seat)	≤ 4 x 10^{-8} scc/sec He
External Leakage (Inboard)	≤ 2 x 10^{-10} scc/sec He
Supply Pressure Effect	1.6 psig / 100 psig
Internal Volume	
1/4" Face Seal	.20 in^3 (3.3 cm^3)[1]
1/2" Face Seal	1.07 in^3 (17.5 cm^3)[1]
Proof Pressure	4,500 psig
Burst Pressure	9,000 psig
Operating Conditions	
Maximum Inlet Pressure	300 or 3000 psig[2]
Temperature	-40°F to 160°F[2] (-40°C to 71°C)
Mounting	Surface (std.), panel

1. Internal volume includes end connections.
2. Pressure rating based on nominal temperature conditions. Contact Parker Veriflo for specific information regarding regulator performance at temperature.

© 2016 Parker Hannifin Corporation Part Number: 25000320 Description: Rev - Date: 6/11/2016

ENGINEERING YOUR SUCCESS.