

# FR1200 Series

UHP High-Flow, Single Stage Tied  
Diaphragm Pressure Reducing Regulator



## Precise Control, High Flow Performance

The FR1200 Series ultra high purity, pressure reducing regulator offers high-flow capability with an inlet pressure up to 1700 psig and is an excellent choice for point of use bulk and specialty gas applications.

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



## Contact Information: Product Features:

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

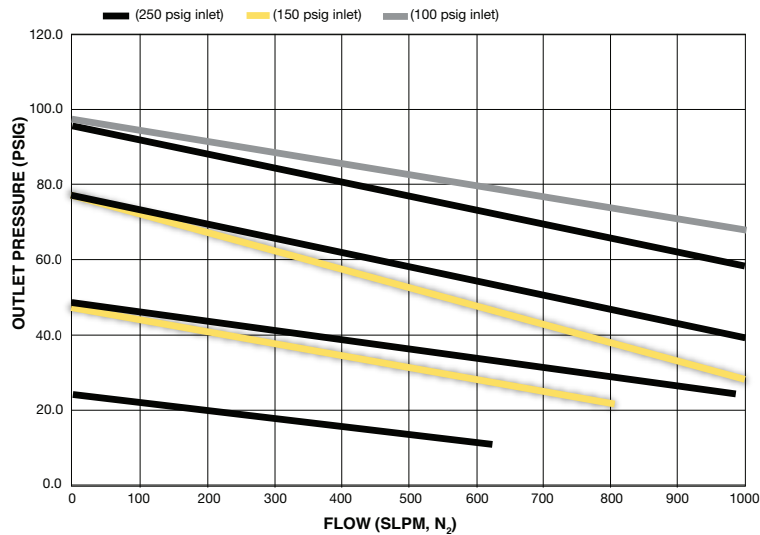
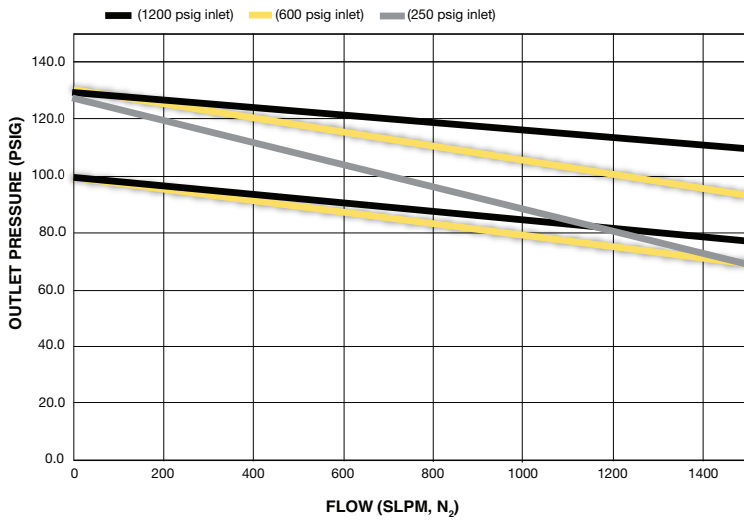
- 316L stainless steel body
- Manufactured for ultra high purity semiconductor gas applications
- Metal-to-metal diaphragm seal
- 10  $\mu$ m. Ra surface finish
- Passivated & Electropolished
- Tied diaphragm design
- Hastelloy C-22<sup>®</sup> diaphragm
- Flows up to 1200 slpm (42 scfm)



ENGINEERING YOUR SUCCESS.

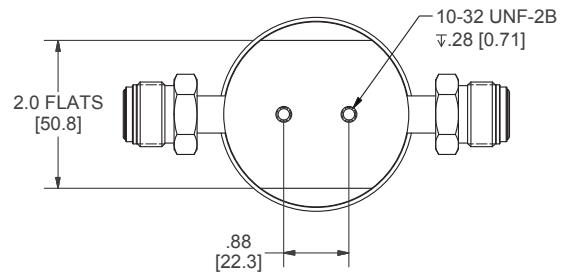
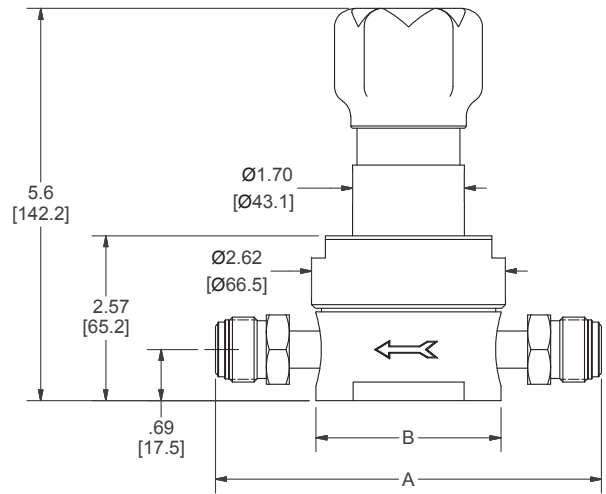
# FR1200 Series

## Flow Curves



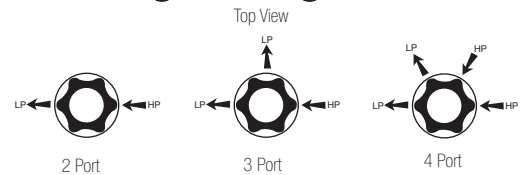
Additional flow curves available upon request

## Dimensional Drawings



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

## Porting Configurations



### DIMENSION TABLE

Body Style	Connection Type	End to End Dimension (A)	Body Diameter (B)
Single Melt*	1/4" Face Seal (male & female)	4.30 ± .02 in. [109 ± .5 mm]	Ø2.50 in. [63.5 mm]
	1/4" Face Seal (female)	3.70 ± .02 in. [94 ± .5 mm]	Ø2.38 in. [60.5 mm]
Double Melt	1/4" Face Seal (male)	4.00 ± .02 in. [102 ± .5 mm]	Ø2.38 in. [60.5 mm]
	1/4" Tube Stub	3.46 ± .02 in. [88 ± .5 mm]	Ø2.38 in. [60.5 mm]
Single/Double Melt	3/8" Face Seal	5.22 ± .02 in. [133 ± .5 mm]	Ø2.50 in. [63.5 mm]
	3/8" Tube Stub	4.00 ± .02 in. [102 ± .5 mm]	Ø2.50 in. [63.5 mm]
	1/2" Face Seal	5.22 ± .02 in. [133 ± .5 mm]	Ø2.50 in. [63.5 mm]
	1/2" Tube Stub	4.34 ± .02 in. [110 ± .5 mm]	Ø2.50 in. [63.5 mm]
Double Melt	3/4" Face Seal	6.26 ± .02 in. [159 ± .5 mm]	Ø2.50 in. [63.5 mm]
	3/4" Tube Stub	5.00 ± .02 in. [127 ± .5 mm]	Ø2.50 in. [63.5 mm]

\* 1/4" tube stub not offered

Safety Guide and Installation and Operating Instructions available at  
[www.parker.com/veriflo](http://www.parker.com/veriflo)

# FR1200 Series

## Ordering Information

Build an FR1200 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 will require a price quote from factory.

Sample: **FR1215 H S 12 K 4P X X FS6 FF TH**  
Finished Order: **FR1215HS12K4PXXFS6FFTH**

### 1 Basic Series

FR1203 = 1 - 30 psig  
FR1206 = 5 - 60 psig  
FR1210 = 10 - 100 psig  
FR1215 = 15 - 150 psig

### 2 Source Pressure Range

H = 0 - 1700 psig  
L = 0 - 300 psig

*\* For low inlet pressure applications below 300 psig, specify "L" model for improved droop performance.*

### 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

12 = 1.2 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*

### 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

TS = 1/4" Tube Stub  
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  
FS12 = 3/4" Face Seal  
TS12 = 3/4" 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  
Any other gauge port configuration may have an extended lead time.*

### 11 Optional Features

This section can have multiple options

Blank = None  
PM = Panel Mount  
TH = Ni-Cr-Mo alloy poppet & seat retainer  
(Hastelloy® or equivalent)

# FR1200 Series

## Specifications

Wetted Materials of Construction	
Body	316L SS (std), 316L SS Double melt
Diaphragm	Ni-Cr-Mo alloy (Hastelloy® or equivalent)
Poppet	316L SS (std) Ni-Cr-Mo alloy (Hastelloy® or equivalent)
Poppet Spring	Inconel®
Seat Retainer	316L SS (std), Ni-Cr-Mo alloy (Hastelloy® or equivalent)
Seat	PCTFE (std), Polyimide
Finish	Passivated & Electropolished

For additional information on materials of construction, functional performance and operating conditions, please refer to Veriflo report RI.EN.RP018.

All specifications subject to change without notice.

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Inconel® is a registered trademark of Special Metals Corporation

Functional Performance	
Flow Capacity (Cv)	1.2
Internal Leakage (seat)	$\leq 4 \times 10^{-8}$ scc/sec He
External Leakage (Inboard)	$\leq 2 \times 10^{-10}$ scc/sec He
Supply Pressure Effect	6.8 psig / 100 psig
Internal Volume	
1/4" Face Seal	1.02 in <sup>3</sup> (16.7 cm <sup>3</sup> ) <sup>1</sup>
1/2" Face Seal	1.41 in <sup>3</sup> (23.1 cm <sup>3</sup> ) <sup>1</sup>
3/4" Face Seal	2.42 in <sup>3</sup> (39.7 cm <sup>3</sup> ) <sup>1</sup>
Proof Pressure	2,550 psig
Burst Pressure	5100 psig
Operating Conditions	
Maximum Inlet Pressure	300 or 1700 psig <sup>2</sup>
Temperature	-40°F to 150°F (-40°C to 65°C)
Mounting	Surface (std)
	Panel (1.75 in. [44.4 mm] hole required)

1. Internal volume includes end connections.
2. Pressure rating based on nominal temperature conditions. Refer to Veriflo report RI.EN.RP018 for specific information regarding regulator performance at temperature.

#### 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](http://www.parker.com/veriflo)



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