High-Flow, Single Stage Tied Diaphragm Pressure Reducing Regulator



# Precise Control, High Flow Performance

The FRN1200 Series pressure reducing regulator offers high-flow capability with an inlet pressure up to 1700 psig and is an excellent choice for general point of use bulk 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
vfo.quotes@support.parker.com
vfo.support@support.parker.com

www.parker.com/veriflo Mobile App: m.parker.com/veriflo

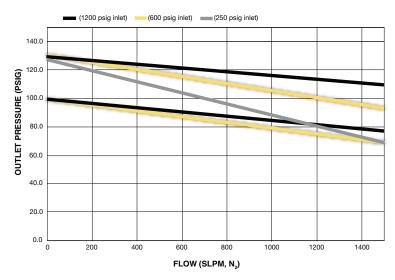
#### **Product Features:**

- 316L stainless steel body
- Metal-to-metal diaphragm seal
- High purity cleaned
- Passivated

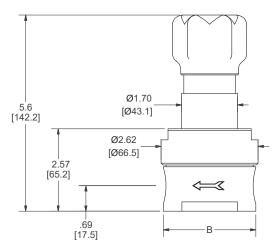
- Hastelloy C-22<sup>®</sup> Tied diaphragm design
- Integrated Filtration
- Flows up to 1200 slpm (42 scfm)
- Reliable leak tight performance

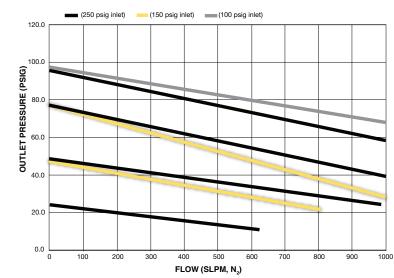


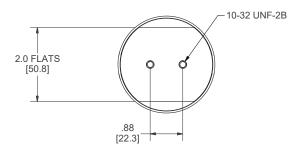
#### Flow Curves



## **Dimensional Drawings**



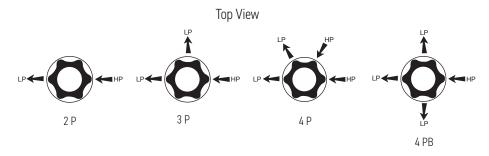




All dimensions in inches. Metric dimensions are for reference only.

Additional flow curves available upon request

### **Porting Configurations**

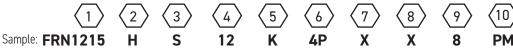


#### Ordering Information

Build an FRN1200 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 and lead time from the factory.



Finished Order: FRN1215HS12K4PXX8PM

#### $\langle 1 \rangle$ Basic Series

FRN1203 = 1 - 30 psig FRN1206 = 5 - 60 psig FRN1210 = 10 - 100 psig FRN1215 = 15 - 150 psig

#### $\langle 2 \rangle$ Source Pressure Range

H = 0 - 1700 psigL = 0 - 300 psig

#### 3 Body Material

S = 316LSS

#### $\overline{4}$ Flow Capacity

12 = 1.2 Cv

#### $\langle 5 \rangle$ Seat Material

K = PCTFE
V = Polyimide

#### 6 Porting\*

2P = 2 Ports 4P = 4 Ports 4PB = 4 Ports

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

#### $\overline{\left\langle 7\right\rangle}$ Outlet Gauge\*

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

\* Only include with "3P", "4P", or "4PB" 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\*

4 = 1/4" NPT Female 6 = 3/8" NPT Female 8 = 1/2" NPT Female 4T = 1/4" A-LOK® 6T = 3/8" A-LOK® 8T = 1/2" A-LOK®

\* 1/4" FNPT Gauge Ports are Standard Any other gauge port configuration may have an extended lead time.

### 0ptional Features This section can have multiple options

Blank = None PM = Panel Mount

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

#### **Specifications**

Wetted Materials of Construction		
Body	316L SS	
Diaphragm	Ni-Cr-Mo alloy (Hastelloy® or equivalent)	
Poppet	316L SS	
Poppet Spring	Inconel®	
Seat Retainer	316L SS	
Filter Screen*	316L SS, 74 µm	
Seat	PCTFE (std), Polyimide	
Finish	Passivated	

\* Filter screen located within inlet port.

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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Functional Performance		
Flow Capacity (Cv)	1.2	
Internal Leakage (seat)	Bubble Tight	
External Leakage	Bubble Tight	
Supply Pressure Effect	6.8 psig / 100 psig	
Proof Pressure	2,550 psig	
Burst Pressure	5100 psig	
Approx. Weight	4.3 lbs (2.0 kg)	
Operating Conditions		
Maximum Inlet Pressure	300 or 1700 psig <sup>2</sup>	
Temperature	-40°F to 150°F (-40°C to 65°C)	
	Surface (std)	
Mounting	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.

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