# BFR5K Series

## UHP Bulk Gas Regulator
## High Flow, Welded, Stainless Steel

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

## Value Proposition:

The BFR5K Series regulator is a compact, high flow, high performance Bulk Gas regulator designed for semiconductor processing.

The BFR5K provides a stable outlet pressure over a wide variety of conditions with flow rates as high as 5000 slpm.

The unique balanced poppet design allows the regulator to maintain the outlet pressure setting regardless of changes in the upstream pressure.

## 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 Poppet and 321 Stainless Steel Bellows.
- High flow capacity.
- Tied diaphragm to poppet for added safety.
- Balanced poppet design reduces supply pressure effect.
- Capable of operating at a wide range of flows from 100 up to 5,000 slpm.
- Compatibility with semiconductor bulk gases.
- No spring in wetted area.
- Standard full internal electropolish.

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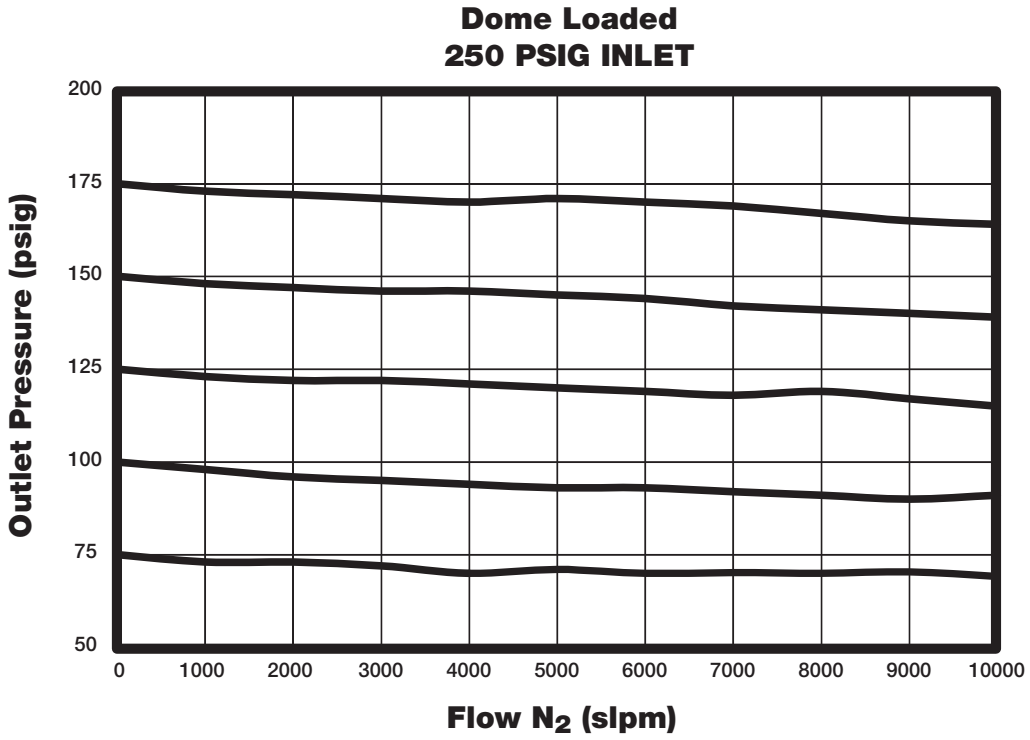
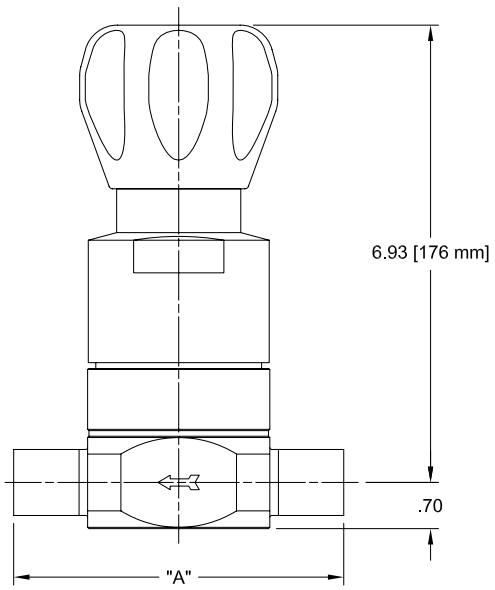
## Flow Curve

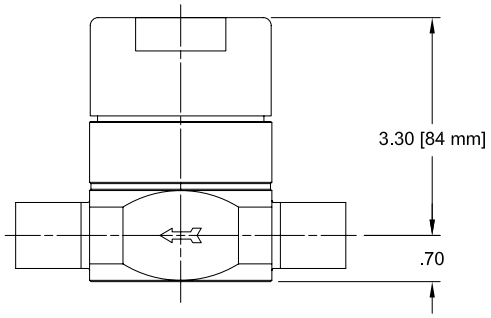
Additional flow curves available upon request




## Dimensional Drawing




| DIMENSION TABLE | | |
|---|---|---|
| *Connection Type* | End to End Dimension | |
| | "A" inches | "A" mm |
| 3/4" Face Seal | 6.0 | 152.4 |
| 1" Face Seal | 6.5 | 165.1 |
| 3/4" Tube Stub | 5.0 | 127.0 |
| 1" Tube Stub | 5.0 | 127.0 |
| 1-1/2" Tube Stub | 10.5 | 266.7 |




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

# BFR5K Series

## Ordering Information

**Build a BFR5K Series regulator by replacing the numbered symbols with an option from the corresponding tables below.**

**Color Explanations:** Black = Standard Lead Time Configurations
Blue = Extended Lead Time Configurations

*For an explanation of Ordering options please reference literature 25000275 at www.parker.com/veriflo*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Sample: **BFR5K** | **100** | **S** | **K** | **3P** | **01** | **FS16** | **MMM** | **G** |

Finished Order: **BFR5K100SK3P01FS16MMMG**

### 1 Pressure Setting

| Range | | Outlet Gauge |
|---|---|---|
| 60 | = 0 - 60 psig | |
| 100 | = 0 - 100 psig | |
| 150 | = 0 - 150 psig | 2 |
| 200 | = 0 - 200 psig | 2 |
| DL | = 0 - 200 psig (Dome Loaded) | |

### 2 Body Material

S = 316L Stainless Steel

### 3 Seat Material

K = PCTFE

### 4 Porting

2P = 2 Ports *No X required for gauges, inlet & outlet ports only*
3P = 3 Ports *One X for gauge port*

### 5 Outlet Gauge

OL = 0 - 60 psig
01 = 0 - 100 psig
2 = 0 - 200 psig
4 = 0 - 400 psig
X = No Gauge
*Additional ranges available upon request*

### 6 Port Style

TS12 = 3/4” Tube Stub
TS16 = 1” Tube Stub
TS24 = 1.5” Tube Stub
FS12 = 3/4” Face Seal
FS16 = 1” Face Seal

### 7 Port Configuration

M = Male
F = Female
*1/4” FS-M Gauge Ports are Standard*

### 8 Optional Features

G = Tamper Proof
E = Ethylene Propylene O-ring
EV = 5 Micro In Surface Finish

# BFR5K Series

## Specifications

| Materials of Construction | |
|---|---|
| ***Wetted*** | |
| Body | VeriClean™ 316L Stainless Steel |
| Poppet and Trim | VeriClean™ 316L Stainless Steel |
| Seat | PCTFE |
| O-ring Options | Fluorocarbon (std) or<br>Ethylene Propylene |
| Bellows | |
| Inner | Inconel® 718 |
| Outer | 321 Stainless Steel |
| ***Non-wetted*** | |
| Cap | Nickel Plated Brass |
| **Operating Conditions** | |
| Maximum Inlet | 500 psig |
| Outlet Options | |
| Manual | 0-60 psig<br>0-100 psig<br>0-150 psig<br>0-200 psig |
| Dome Loaded | 0-200 psig |
| Temperature | -40°F to 150°F (-40°C to 66°C) |

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

| Functional Performance | |
|---|---|
| ***Flow Capacity*** | $C_V$ 4.5 |
| ***Leak Rate*** | |
| Internal | Bubble Tight |
| External | $< 1 \times 10^{-9}$ scc/sec He<br>Inboard Test Method |
| ***Internal Volume*** | 71 cc without connections |
| ***Approx. Weight*** | |
| Dome Loaded | 5.7 lbs. (2.6 kg) |
| Manual | 7.7 lbs. (3.5 kg) |

VeriClean™ is a trademark of Parker Hannifin Corporation
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Use mobile device to scan this QR Code.

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