

BFR5K Series

Bulk Gas Regulator

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

Customer 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:

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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.

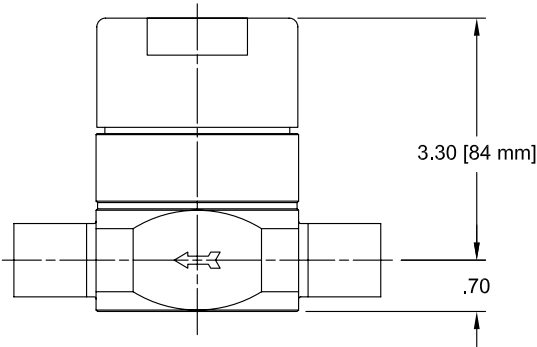
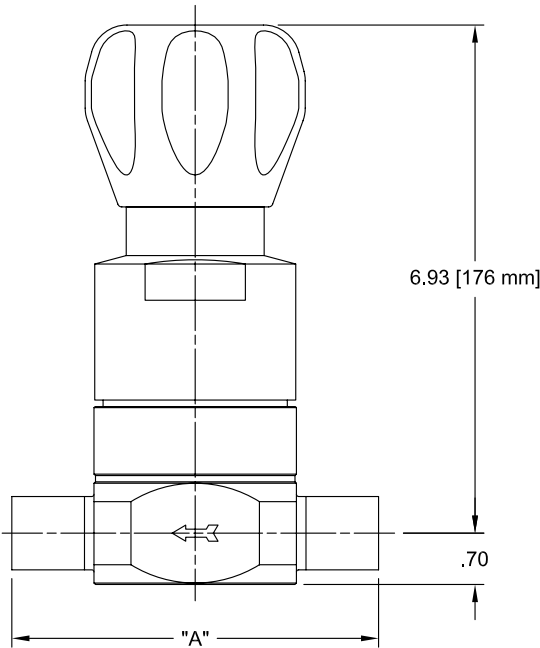


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BFR5K Series

Dimensional Drawing

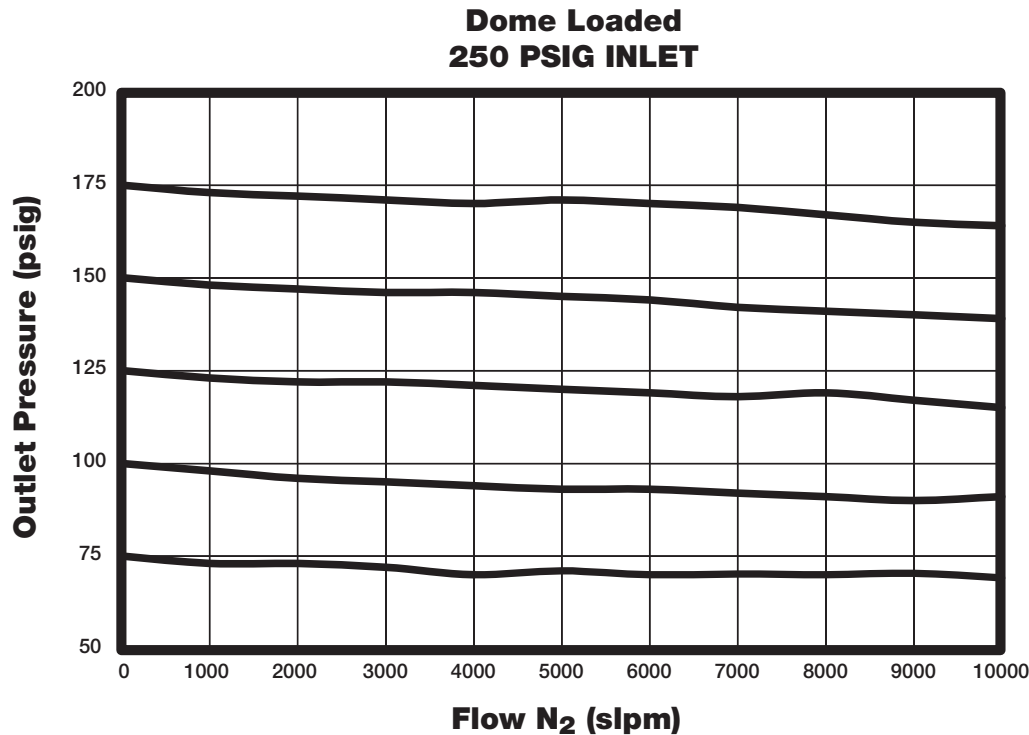
Additional configurations available upon request



END TO END DIMENSION CHART			
Tubing			
	3/4" Tube	1" Tube	1.5" Tube
"A" inches	5.0	5.0	10.5
"A" mm	127.0	127.0	266.7
Fitting			
	3/4" Face Seals	1" Face Seals	
"A" inches	6.0	6.5	
"A" mm	152.4	165.1	

BFR5K Series

Flow Curves



Ordering Information

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

Sample: **BFR5K 100 S K 3P 01 FS16 MMM G**
Finished Order: **BFR5K100SK3P01FS16MMMG**

1

Pressure Setting

- 60 = 0 - 60 psig
- 100 = 0 - 100 psig
- 150 = 0 - 150 psig
- 200 = 0 - 200 psig
- 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*

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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 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, 0-100 psig, 0-150 psig, 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 x 10 ⁻⁹ scc/sec He (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
Inconel® is a registered trademark of Special Metals Corporation

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