

# SQB Series

## High Flow High Pressure Regulator

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

### Customer Value Proposition:

The SQB Series regulator is designed specifically for bulk speciality gas systems and incorporates all of the benefits of the SQ Series regulators.

The higher inlet pressure (up to 1250 psig) and up to 300 psig range settings is used with media that condenses easily when large Delta P occurs.

The SQB Series is recommended for bulk gas delivery systems and not intended for cylinder bottle applications.



### Contact Information:

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### Product Features:

- Hastelloy C-22® poppet and diaphragm for superior strength and corrosion resistance.
- Operates at a wide range of flows from 5 liters/min to more than 1000 liters/min.
- High flow capacity with minimal pressure drop, and low supply pressure.
- No springs or threads are exposed to the wetted area.
- Tied-diaphragm for added safety.

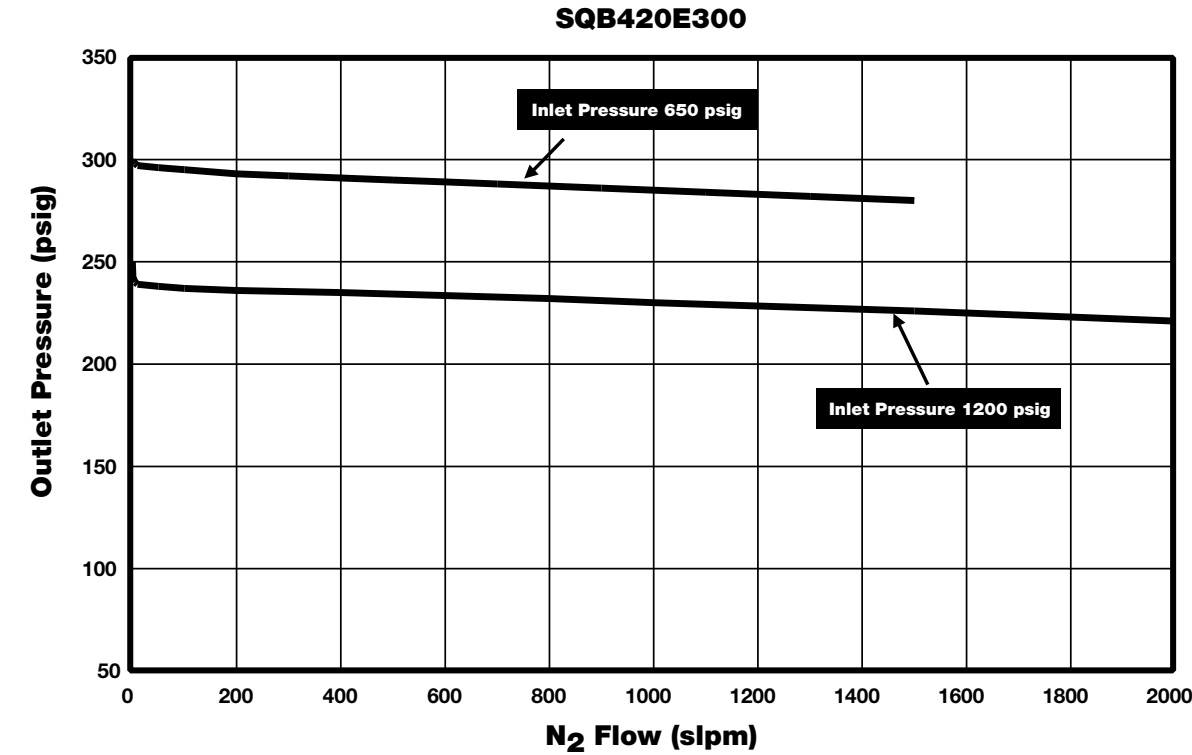


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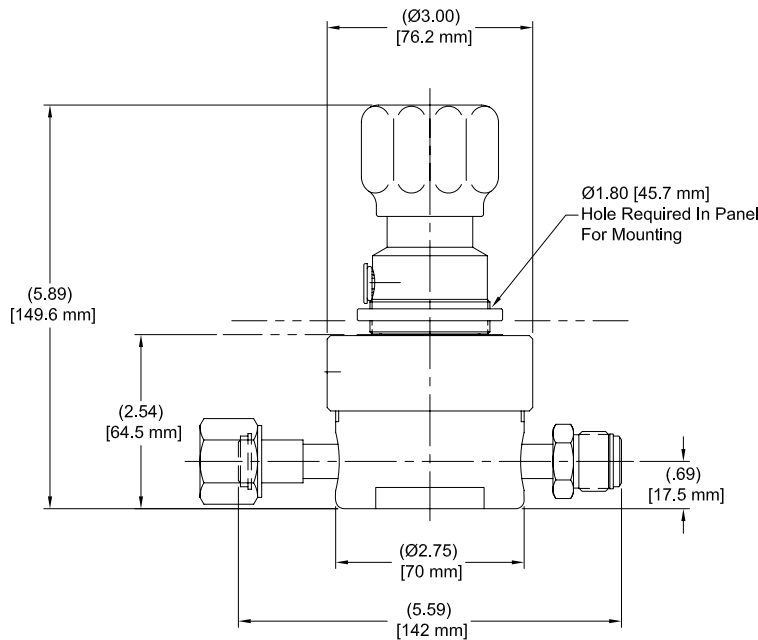
# SQB Series

## Flow Curves

Additional flow curves available upon request



## Dimensional Drawing



END TO END DIMENSIONAL CHART	
1/2" FS	5.60" (142 mm)
3/4" FS	6.34" (161 mm)
1.0" FS	8.25" (210 mm)
3/8" TS	4.64" (118 mm)
1/2" TS	4.75" (121 mm)
3/4" TS	4.75" (121 mm)
1.0" TS	5.60" (142 mm)

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

# SQB Series

## Ordering Information

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

1

2

3

4

5

6

7

8

9

Sample: **SQB 420E 100 4P 01 20 FS8 MMMF PM**

Finished Order: **SQB420E1004P0120FS8MMMFPM**

1

**Basic Series**

200E

420E

2

**Pressure Setting**

100 = 5 - 100 psig

200 = 5 - 200 psig

300 = 5 - 300 psig

3

**Body Material**

= 316L Stainless Steel

H = Hastelloy C-22®

4

**Porting**

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

3P = 3 Ports *One X for gauge port*

4P = 4 Ports *Two X's for gauge ports*

*See Regulator Porting Guide for additional options and port layouts*

5

**Outlet Gauge**

01 = 0 - 100 psig

2 = 0 - 200 psig

4 = 0 - 400 psig

X = No Gauge

6

**Inlet Gauge**

10 = 0 - 1000 psig

20 = 0 - 2000 psig

X = No Gauge

*Additional ranges available upon request*

7

**Port Style**

FS8 = 1/2" Face Seal

FS12 = 3/4" Face Seal

FS16 = 1" Face Seal

TS6 = 3/8" Tube Stub

TS8 = 1/2" Tube Stub

TS12 = 3/4" Tube Stub

TS16 = 1" Tube Stub

8

**Port Configuration**

M = Male

F = Female

I = Internal Face Seal

*1/4" FS-M Gauge Ports are Standard*

9

**Optional Features**

*This section can have multiple options*

PM = Panel Mount

TH = Hastelloy C-22® Trim

*Available on Stainless Steel body only. Includes Hastelloy C-22® diaphragm, compression member and poppet*

VESP = Vespel® Seat *Recommended for Nitrous Oxide (N2O) service*

EV = 5 Ra Surface Finish

# SQB Series

## Specifications

Materials of Construction	
<b>Wetted</b>	
Body Options	VeriClean™ 316L Stainless Steel (std) or Hastelloy C-22®
Compression Member Options	VeriClean™ 316L Stainless Steel (std) or Hastelloy C-22®
Diaphragm	Hastelloy C-22®
Poppet	Hastelloy C-22®
Seat Options	PCTFE (std) or Vespel®
<b>Non-wetted</b>	
Cap	Nickel Plated Brass
Nut	316L Stainless Steel
Knob	ABS (Blue)
Operating Conditions	
Maximum Inlet	1250 psig (86 barg)
Outlet Options	5-100 psig (.3-7 barg)
	5-200 psig (.3-14 barg)
	5-300 psig (.3-21 barg)
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	
<b>Design</b>	
Burst Pressure	3750 psig (259 barg)
Proof Pressure	1875 psig (129 barg)
<b>Flow Capacity</b>	C <sub>v</sub> 0.65 - <i>SQB200 Only</i>
	C <sub>v</sub> 1.0 - <i>SQB420 Only</i>
<b>Surface Finish</b>	
Standard Ra	10 micro inch
Optional Ra	5 micro inch
<b>Leak Rate</b>	
Design Internal	5 x 10 <sup>-8</sup> scc/sec He
Production Internal Leak Test:	Outboard sniffer probe at 50-70 psig, 20%-25% Helium
External	2 x 10 <sup>-10</sup> scc/sec He (Inboard Test Method)
<b>Internal Volume</b>	22.32cc
<b>Approx. Weight</b>	4 lbs. 10 oz. (2.1 kgs)

Vespel® is a registered trademark of DuPont Performance Elastomers L.L.C.  
Hastelloy C-22® is a registered trademark of Haynes International, Inc.  
VeriClean™ is a trademark of Parker Hannifin Corporation

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