

SQ Series

UHP High Performance, Point-Of-Use Regulators
Welded, Stainless Steel

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

Value Proposition:

The SQ Series of regulators are high flow, high performance point-of-use regulators designed to be used in process gas cabinets for gas companies, equipment manufacturers and end users.

The SQ Series of regulators provide precise control of the process gas pressure at or near the tool. The results are stable flow and pressure to the mass flow controller.

The SQ60SA provides precise pressure control for point-of-use in the sub-atmospheric range.



Contact Information:

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Product Features:

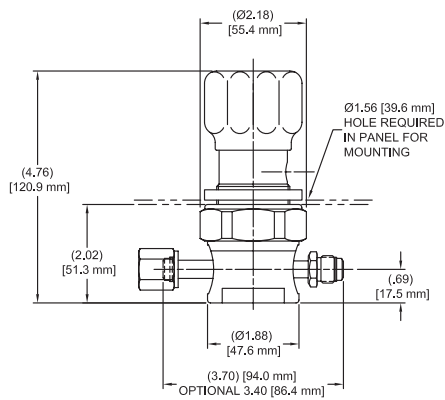
- Standard Hastelloy C-22® poppet and diaphragm
- Metal-to-metal, diaphragm-to-body seal
- Tied-diaphragm for added safety
- Standard full internal electropolish
- Capable of operating at a wide range of flows - see flow range table for details
- Design and materials of construction ensure compatibility with the high flow of corrosive gases
- No springs or threads are exposed to the wetted area
- Sub-atmospheric available (SQ60SA)



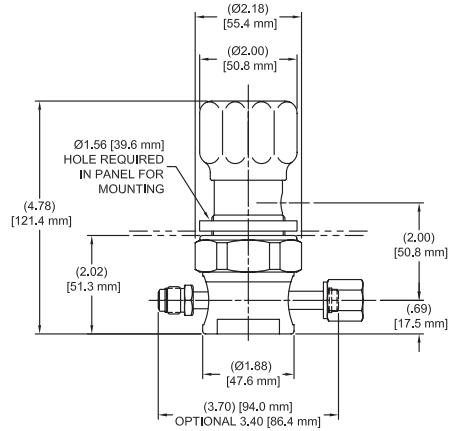
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SQ Series

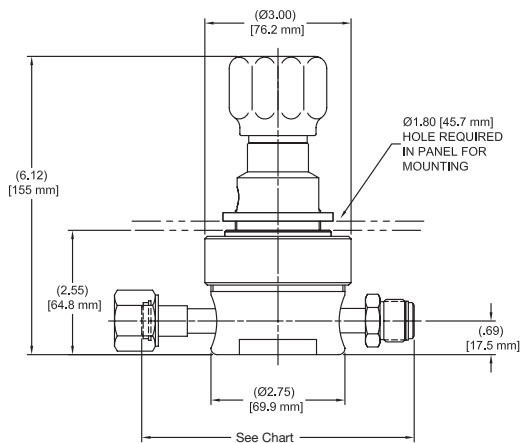
Dimensional Drawings



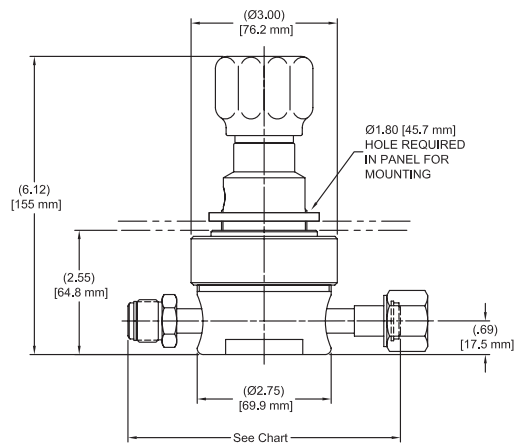
SQ60 & SQ60SA



SQ130E



SQ140E



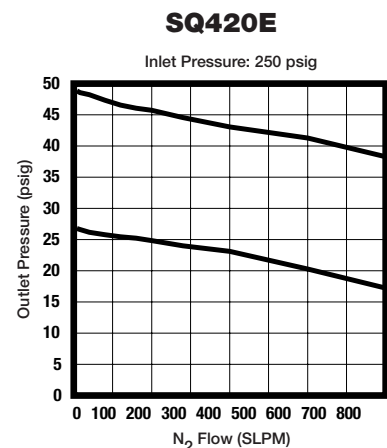
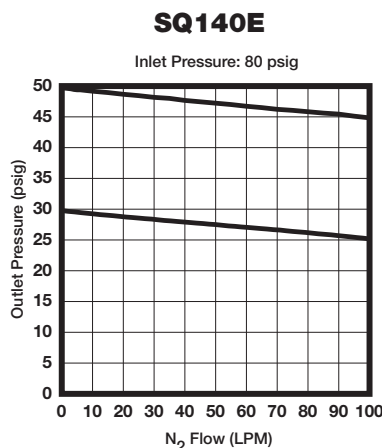
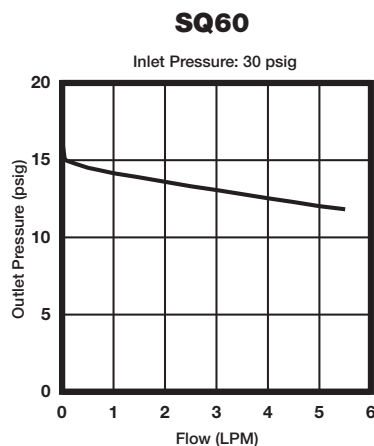
SQ420E

Flow Curves

Additional flow curves available upon request

DIMENSION TABLE (SQ140E & SQ420E Only)

| Connection Type | End to End Dimension |
|-----------------|----------------------|
| 1/4" Face Seal | 4.64" (117.9 mm) |
| 1/2" Face Seal | 5.59" (142 mm) |
| 1/2" Tube Stub | 4.64" (117.9 mm) |



Safety Guide and Installation and Operating Instructions available at

www.parker.com/veriflo

SQ Series

Ordering Information

Build a SQ 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

Sample: **SQ** **60** **30** **2P** **FS** **MF** **EV**

Finished Order: **SQ60302PFSMFV**

1 Basic Series
60
60SA
130E
140E
420E

2 Pressure Range
- Omitted for SQ60SA.
30 = 30 psig
50 = 50 psig
100 = 100 psig

3 Body Material
= Vericlean™ 316L Stainless Steel

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

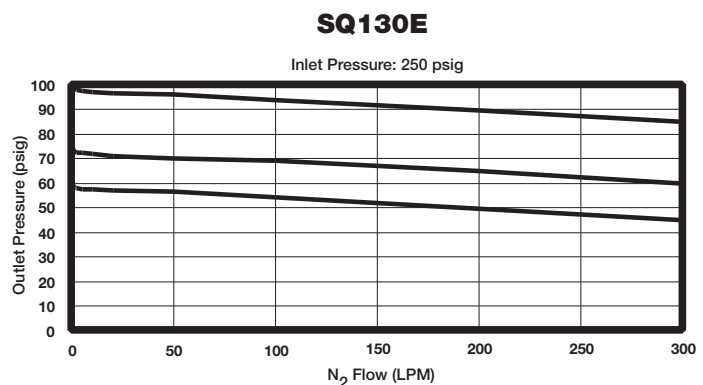
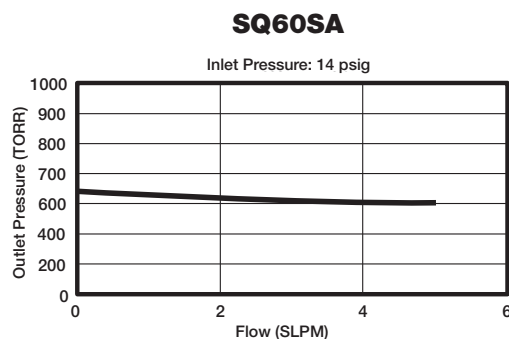
5 Outlet Gauge
VX = -30 in Hg 0 - 150 psig
V1 = -30 in Hg 0 - 100 psig
V2 = -30 in Hg 0 - 200 psig
V3 = -30 in Hg 0 - 30 psig
OL = 0 - 60 psig
L = -30 in Hg 0 - 60 psig
X = No Gauge
Additional ranges available upon request

6 Inlet Gauge
V1 = -30 in Hg 0 - 100 psig
2 = 0 - 200 psig
4 = 0 - 400 psig
10 = 0 - 1000 psig
X = No Gauge
Additional ranges available upon request

7 Port Style
FS = 1/4" Face Seal
FS8 = 1/2" Face Seal
TS = 1/4" Tube Stub
TS6 = 3/8" Tube Stub
TS8 = 1/2" 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
DO = Dome Loaded - *SQ130E only.*
EV = 5 Ra micro inch surface finish
PM = Panel Mount
TH = Hastelloy C-22® Trim
Available on Stainless Steel body only. Includes Hastelloy C-22® diaphragm, compressor member and poppet.
VESP = Vespel® Seat *Recommended for Nitrous Oxide (N2O) service*
3.4 = 3.4" Optional End-to-End Dimension - *SQ60, SQ60SA & SQ130E only.*
750 = Max Inlet Pressure - *SQ140E only.*



SQ Series

Specifications

| Materials of Construction | |
|------------------------------|---|
| Wetted | |
| Body | VeriClean™ 316L Stainless Steel |
| 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® |
| Non-wetted | |
| Cap | Nickel Plated Brass |
| Nut | 316L Stainless Steel |
| Knob | ABS |
| Operating Conditions | |
| Maximum Inlet | |
| SQ60, SQ60SA, SQ420E | 250 psig (17 barg) |
| SQ130E | 1000 psig (70 barg) |
| SQ140E | 250 psig (17 barg) (std) or 750 psig (52 barg) |
| Outlet Options | |
| SQ60, SQ130E, SQ140E, SQ420E | 0 - 30 psig (2 barg) 0 - 50 psig (3 barg) 0 - 100 psig (7 barg) |
| SQ60SA | -25 in Hg to 15 psig (1 barg) |
| Temperature | -40°F to 150°F (-40°C to 66°C) |

| Functional Performance | |
|------------------------------|------------------------------------|
| Design | |
| Burst Pressure | |
| SQ60, SQ60SA, SQ140E, SQ420E | 750 psig (52 barg) |
| SQ130E | 3,000 psig (207 barg) |
| Proof Pressure | |
| SQ60, SQ60SA, SQ140E, SQ420E | 375 psig (26 barg) |
| SQ130E | 1,500 psig (103 barg) |
| Flow Capacity | |
| SQ60 | C _v 0.054 |
| SQ60SA | C _v 0.15 |
| SQ130E | C _v 0.2 |
| SQ140E | C _v 0.25 |
| SQ420E | C _v 1.5 |
| Leak Rate | |
| Inboard Test Method | |
| Internal | < 5 x 10 ⁻⁸ scc/sec He* |
| External | < 2 x 10 ⁻¹⁰ scc/sec He |
| Internal Volume | |
| SQ60, SQ60SA | 6.35 cc |
| SQ130E | 6.19 cc |
| SQ140E | 19.02 cc |
| SQ420E | 22.32 cc |
| Approx. Weight | |
| SQ60, SQ60SA, SQ130E | 1.5 lbs. (0.7 kgs) |
| SQ140E, SQ420E | 4.5 lbs. (2.1 kgs) |

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

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.

* SQ420E: Design Internal Leak Rate shown.
Production Leak Test is Outboard sniffer probe at 50-70 psig, 20%-25% Helium.

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