

# SQ Series

## High Performance Point-Of-Use Regulators

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

### Customer 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.
- Tied-diaphragm for added safety.
- Capable of operating a wide range of flows - see flow range table for details.
- No springs or threads are exposed to the wetted area.
- Metal-to-metal, diaphragm-to-body seal.
- Design and materials of construction ensure compatibility with the high flow of corrosive gases.
- Sub-atmospheric available (SQ60SA)

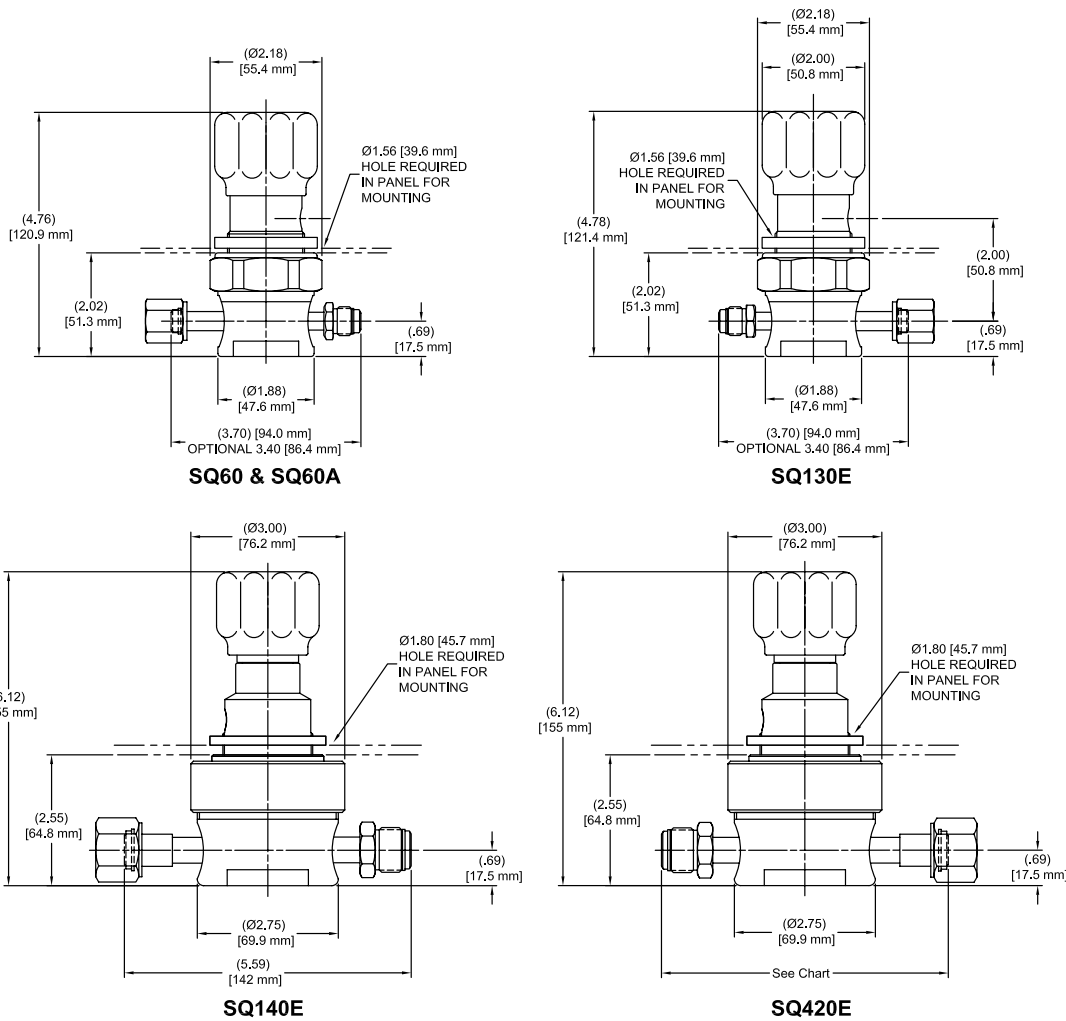


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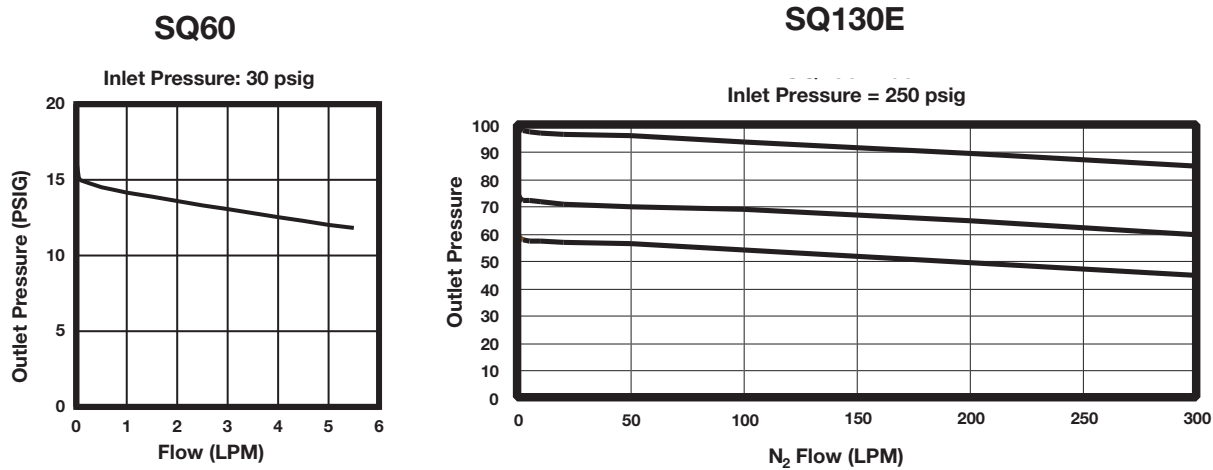
# SQ Series

## Dimensional Drawings

Additional flow curves available upon request



## Flow Curves



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

# SQ Series

## Ordering Information

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

Sample: **SQ**

1

2

3

4

5

6

7

8

9

60

30

2P

X

X

FS

MF

EV

Finished Order: **SQ60302PXXFSMFEV**

1

Basic Series

60

60SA

130E

140E

420E

2

Pressure Range

- SQ60, SQ60SA, SQ140E, SQ420E only.

30 = 30 psig

50 = 50 psig

100 = 100 psig

3

Body Material

= Vericlean™ 316L Stainless Steel Std.

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

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

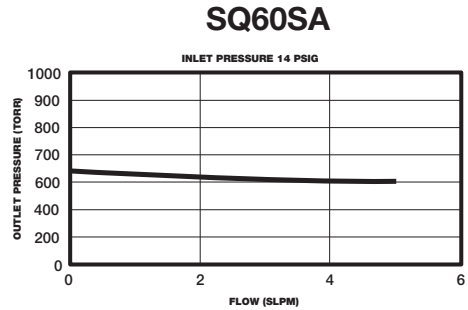
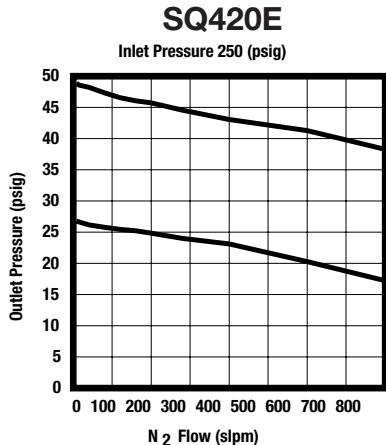
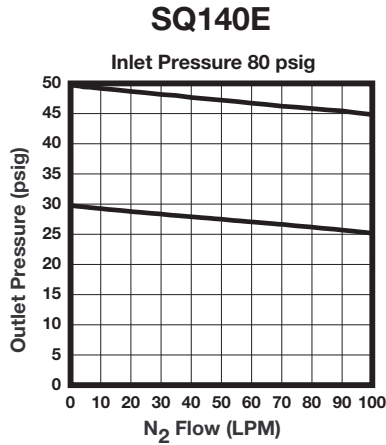
Available on Stainless Steel body only. Includes Hastelloy C-22® diaphragm, compression member and poppet.

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.

END TO END DIMENSIONAL CHART	
(SQ140E & SQ420E Only)	
1/4" FS	4.64" (117.9 mm)
1/2" FS	5.59" (142 mm)
1/2" TS	4.64" (117.9 mm)



# SQ Series

## Specifications

Materials of Construction		Functional Performance	
<b>Wetted</b>		<b>Design</b>	
Body Options	VeriClean™ 316L Stainless Steel (std) or Hastelloy C-22®	Burst Pressure	
Compression Member Options	VeriClean™ 316L Stainless Steel (std) or Hastelloy C-22®	SQ60, SQ60SA, SQ140E, SQ420E	750 psig (52 barg)
Diaphragm	Hastelloy C-22®	SQ130E	3000 psig (207 barg)
Poppet	Hastelloy C-22®	Proof Pressure	
Seat Options	PCTFE (std) or Vespel®	SQ60, SQ60SA, SQ140E, SQ420E	375 psig (26 barg)
<b>Non-wetted</b>		SQ130E	1500 psig (103 barg)
Cap	Nickel Plated Brass	<b>Flow Capacity</b>	
Nut	316L Stainless Steel	SQ60	C <sub>v</sub> 0.054
Knob	ABS	SQ60SA	C <sub>v</sub> 0.15
<b>Operating Conditions</b>		SQ130E	C <sub>v</sub> 0.2
Maximum Inlet Pressure		SQ140E	C <sub>v</sub> 0.25
SQ60, SQ60SA, SQ420E	250 psig (17 barg)	SQ420E	C <sub>v</sub> 1.5
SQ130E	1000 psig (70 barg)	<b>Leak Rate</b>	
SQ140E	250 psig (17 barg) (std) 750 psig (52 barg)	Internal	Inboard Test Method
Outlet Pressure		External	5 x 10 <sup>-8</sup> scc/sec He*
SQ60, SQ130E, SQ140E, SQ420E	0 - 30 psig (2 barg) 0 - 50 psig (3 barg) 0 - 100 psig (7 barg)	<b>Internal Volume</b>	
SQ60SA	-25 in Hg to 15 psig (1 barg)	SQ60, SQ60SA	6.35 cc
Temperature	-40°F to 150°F (-40°C to 66°C)	SQ130E	6.19 cc
		SQ140E	19.02 cc
		SQ420E	22.32 cc
		<b>Approximate Weight</b>	
		SQ60, SQ60SA, SQ130E	1.5 lbs (0.7 kgs)
		SQ140E, SQ420E	4.5 lbs (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

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

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

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