



Parker Hannifin Corporation's Veriflo Division presents the SQHP. This high purity regulator is a continuation of Veriflo's process-proven SQ line of regulators. A high pressure version of the high-purity SQ60 point-of-use regulator, the SQHP was designed for state-of-the-art semiconductor applications.



features

Standard Hastelloy C-22® Poppet and Diaphragm.

- ▶ "VeriClean", Veriflo's low sulfur high purity 316L VAR Stainless Steel™, which enhances electropolishing, surface resistance, and corrosion resistance.
- ▶ Provides precise pressure control of outlet pressure with an inlet pressure as high as 3,500 psig.
- ▶ No high pressure seals to atmosphere.
- ▶ Unique patented compression member loads the seal to the body without requiring a threaded nozzle or additional seals to atmosphere.
- ▶ Tied diaphragm for added safety.
- ▶ Metal-to-metal diaphragm-to-body seal assures high leak integrity.
- ▶ 100% Helium leak tested.

materials of construction

Wetted

Body "VeriClean", Veriflo's high purity
type 316L VAR Stainless Steel™, Hastelloy C-22®
Seat PCTFE, optional Vespel®
Diaphragm Hastelloy C-22®
Poppet Hastelloy C-22®
Compression Member "VeriClean", Veriflo's
high purity type 316L VAR Stainless Steel™,
optional Hastelloy C-22®

Non-Wetted

Nut 316L Stainless Steel
Cap Nickel Plated Brass
Knob (Red) ABS Plastic

operating conditions

Maximum inlet pressure . . . 3500 psig (240 barg)
Outlet pressure 0 to 30 psig (2 barg)
0 to 60 psig (4 barg), 0 to 100 psig (7 barg)
Temperature -40°F to 150°F (-40°C to 66°C)

surface finishes

Standard Ra 10 micro inch
(.25 micro meter) or less
Optional Ra EV=5 micro inch
(.13 micro meter) or less

functional performance

Design proof pressure 5,250 psig (362 barg)
Design burst pressure 10,500 psig (724 barg)
Flow capacity C_v .06
. (SEMI Flow Coefficient Test #F-32-0998)

Design Leak Rate:

Outboard 2 x 10⁻⁹ scc/sec He
Inboard 2 x 10⁻¹⁰ scc/sec He
Across seat 5 x 10⁻⁸ scc/sec He
Supply pressure effect. . . . <0.1 psig per 100 psig
(<.02 barg per 6.7 barg)

internal volume

6.35 cc

standard connections

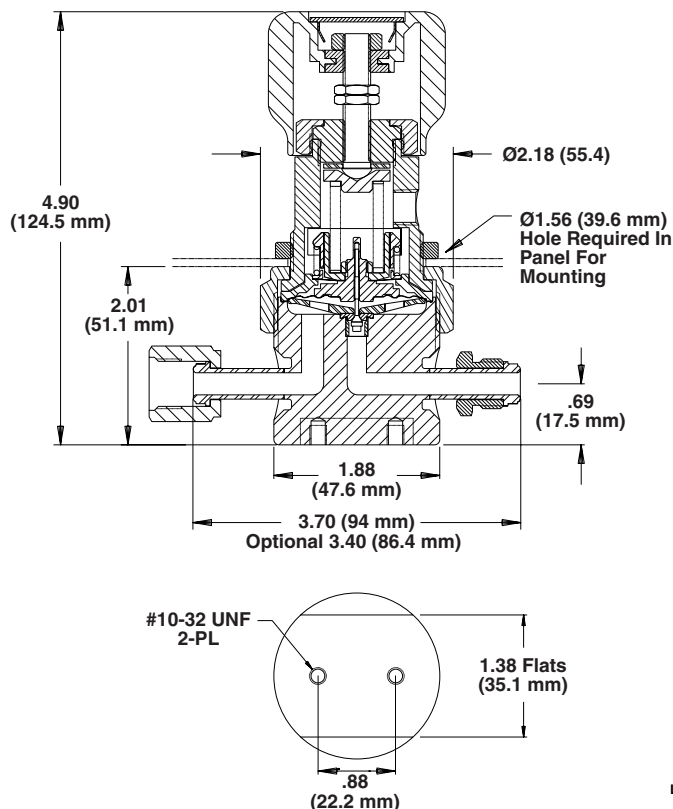
Any combination of FS male and/or female fittings.
1/4" Gland to gland length 3.70 ± .02 in.
(94.0 ± .05 mm)
1/4" inch tube stubs inlet and outlet.
End to end length 3.70 ± .02 in.
(94.0 ± .05 mm)

approximate weight

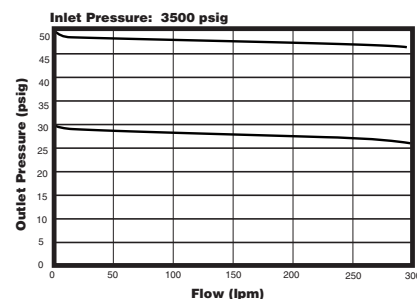
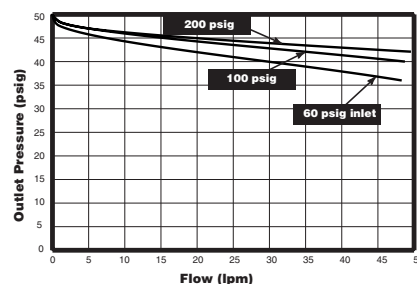
1.5 lbs (7kgs)

Dimensional Drawing

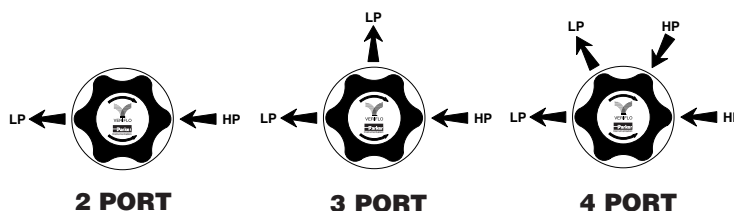
All dimensions are reference and nominal.



Flow Curves



Porting Configurations



Ordering Information

BASIC SERIES

SQHP

PRESSURE SETTING

30 = 30 psig
50 = 50 psig
100 = 100 psig

MATERIAL

= 316L VAR Stainless Steel (Standard)
H = Hastelloy C-22®

PORTING

2P = 2 Ports
3P = 3 Ports
4P = 4 Ports

OUTLET GAUGE

V3 = -30 in. Hg- 0 - 30 psig
L = -30 in. Hg- 0 - 60 psig
V1 = -30 in. Hg- 0 - 100 psig
X = No Gauge

OPTIONAL FEATURES

PM = Panel Mount
SS = Stainless Steel Internals**
TH = Hastelloy C-22® Trim (Compression Member)
VESP = Vespel® Seat*
3.4 = 3.4" Optional End-To-End Dimension

PORT CONFIGURATION

M = Male
F = Female
I = Internal Female Face Seal (1/4" Only)

PORT STYLE

FS = 1/4" Face Seal
TS = 1/4" Tube Stub
TS6 = 3/8" Tube Stub

INLET GAUGE

10 = 0 - 1000 psig
30 = 0 - 3000 psig
40 = 0 - 4000 psig
X = No Gauge

* Recommended for Nitrous Oxide (N₂O) Service

** Recommended for Carbon Monoxide (CO) or Nickel Carbonyl Ni(CO)₄ Service

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Vespel® is a registered trademark of DuPont Company.