



Parker Hannifin Corporation's Veriflo Division presents the FS190. The FS190 is a non-attitude sensitive, excess flow shut-off valve designed to operate with a wide range of inlet pressures.

The capability of operating from 10 to 3500 psig allows it to be used either between a high pressure source at the inlet to the pressure regulator, or in the low pressure delivery line to a process. In both applications, this control valve will automatically shut off the delivery of gas if the flow exceeds a preset limit.

The functional components of the FS190 are incorporated within the body style of a 1-1/4 inch Quantum valve. An actuating knob has been designed to manually operate the valve and clearly indicate the relative operating position - either "Open (Reset)" or "Auto (Shut Off)." A pneumatic actuator may be substituted for the knob, which makes it possible to reset the valve by sending a pressure signal from a remote source.

The FS190 is offered with six different pressure/flow limits: A,B,C,D,E, and F (see flow curve). The nominal differential pressure created at the flow limit is 5 psig for limit values A,B,C, and D. For limit values E and F, the differential pressure is 12 psig. The differential pressure that is created is not affected by mounting orientation (non-attitude sensitive).



Catalog: 4513
LitPN: 25000175
Rev: 0 4/03



materials of construction

Wetted

Body "VeriClean," Veriflo's custom
high purity type 316L Stainless Steel
Compression member 316L Stainless Steel
Seat PCTFE
Diaphragm Elgiloy® or equivalent
Spring Hastelloy C-22®
Poppet 316L Stainless Steel
Orifice 316L Stainless Steel

Non-wetted

Knob Anodized Aluminum (Red)
Stem 416 stainless steel (lubricated)
Cap 316L stainless steel

operating conditions

Supply Pressure 10 psig to 3,500 psig
(.7 barg to 241 barg)
Differential Pressure 5 psig or 12 psig
(.3 barg or .8 barg)
Flow Limit Settings 6 available
Temperature -10 F° to 150 °F
(-23° C to 66° C)

functional performance

Design Leak Rate:
Outboard 2×10^{-9} cc/sec. He
Inboard 2×10^{-10} cc/sec. He

standard configurations

1/4" NPT female, 1/4" face seals or 1/4" tube stubs

internal volume

1.86 cc (including face seal fittings)

surface finishes

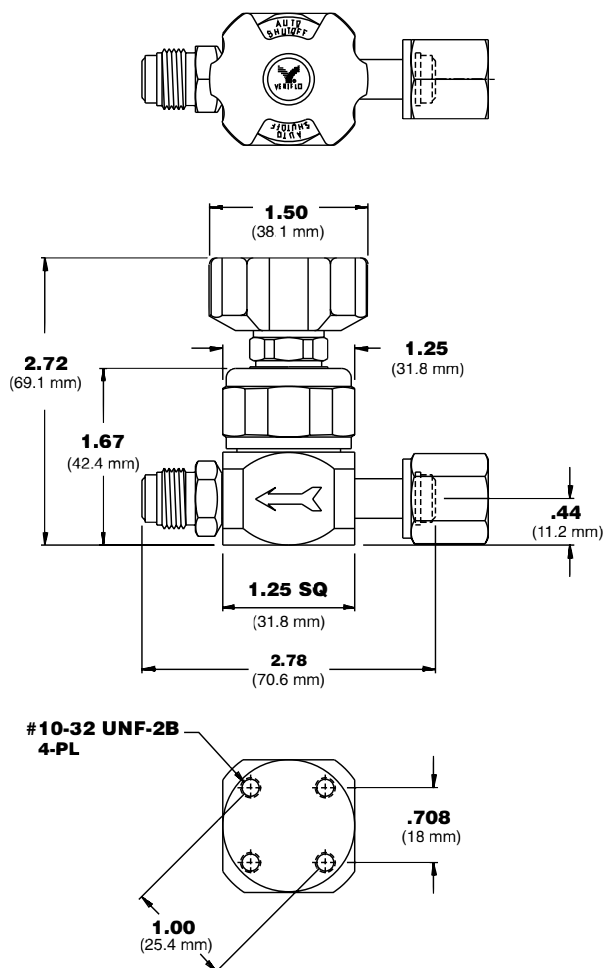
Standard Ra 15-20 micro in
(.38 to .5 micrometer) or less
Optional Ra 10 micro in
(.25 micrometer) or less

approximate weight

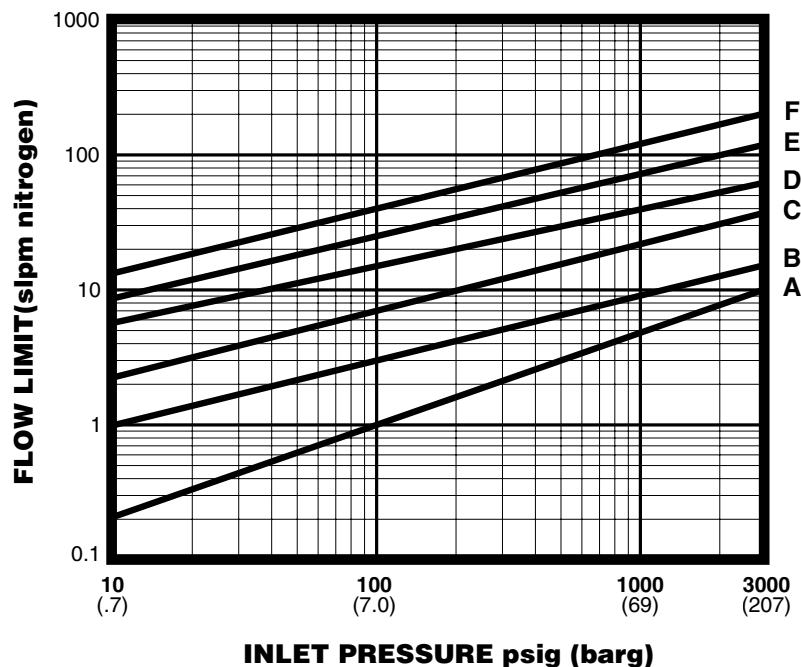
12.5 oz. (.32 kg)

FS190 Series

Dimensional Drawings



Flow Curve



Ordering Information

FS190 S A FSFM AOP

BASIC SERIES

FS190

MATERIAL

S = 316L Stainless Steel

FLOW LIMIT SETTING

Nominal Flow Limit At

1000 psig inlet

A = 4.8 SLPM

B = 9.1 SLPM

C = 21.8 SLPM

D = 39.5 SLPM

E = 72.3 SLPM

F = 120.6 SLPM

30 psig inlet

0.4 SLPM

1.7 SLPM

3.9 SLPM

9.0 SLPM

14.4 SLPM

22.5 SLPM

OPTIONS

AOP = Air Operated

TH = Hastelloy C-22® Trim internals*

3.70 = FLV 120 Dimensional Replacement

3.46 = FLV 110 Dimensional Replacement

CONNECTION (Inlet & Outlet)

P = 1/4" NPTF

FSMM = 1/4" FS Male In Male Out

FSFF = 1/4" FS Female In Female Out

FSFM = 1/4" FS Female In Male Out

FSMF = 1/4" FS Male In Female Out

TS = 1/4" Welded Tube Stubs

Elgiloy® is a registered trademark of Elgiloy Company.

Hastelloy C-22® is a registered trademark of Haynes International, Inc.

* Includes: Hastelloy C-22® Compression member, poppet, spring and orifice.

