

FS190 Series

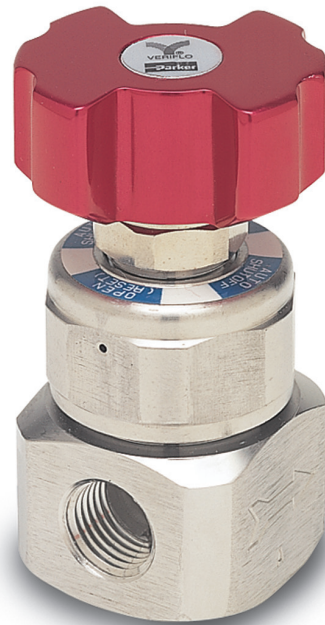
Excess Flow Shut-Off Valve
Stainless Steel



Value Proposition:

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.



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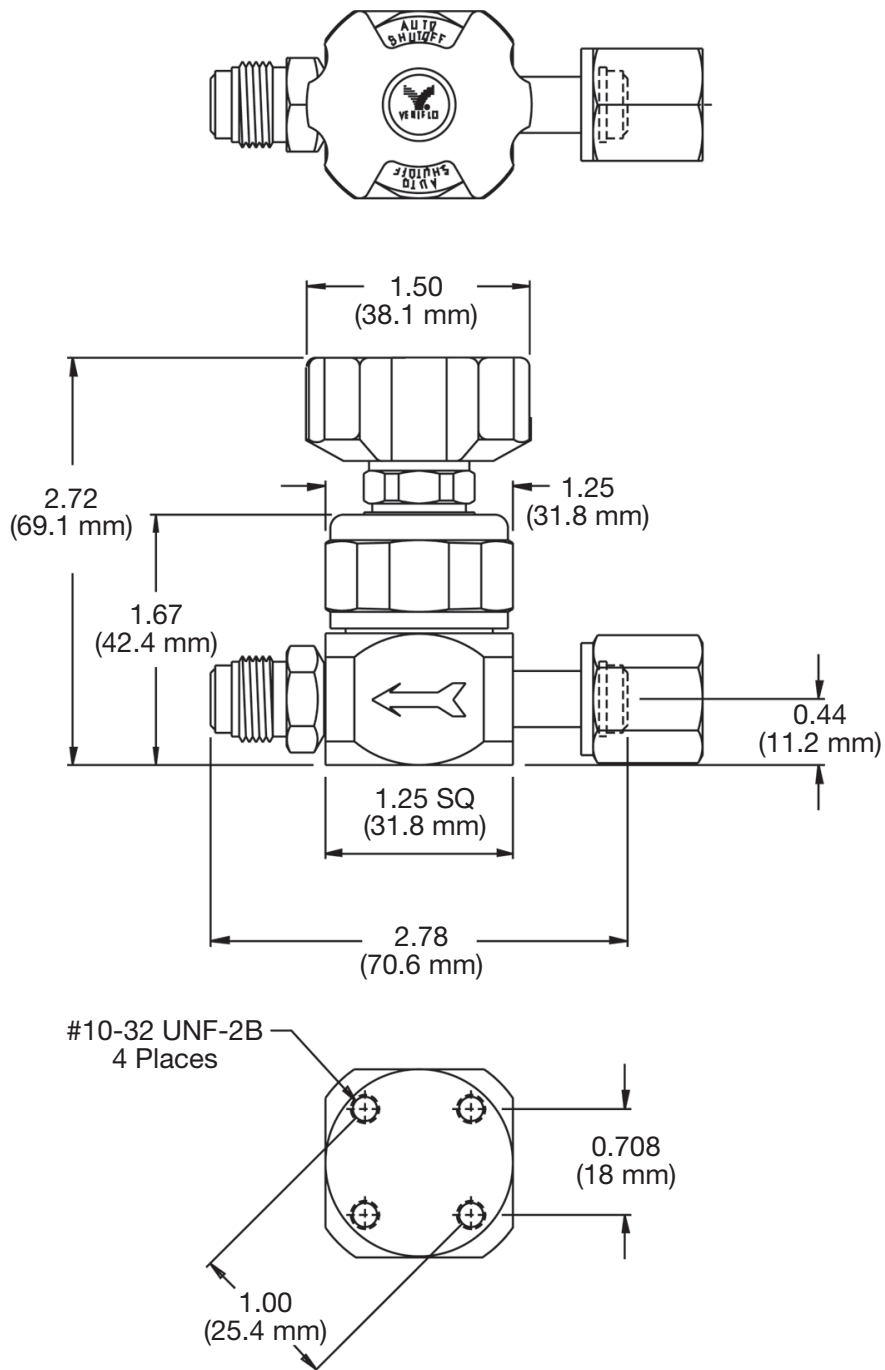
Product Features:

- Offered with 6 different pressure/flow limits
- Differential pressure that is created is not affected by mounting orientation (non-attitude sensitive)
- Cleaned for O₂ service
- Actuating knob designed to manually operate valve and clearly indicate relative operating position - Open (Reset) or Auto (Shut off)
- Pneumatic actuator available to reset the valve remotely



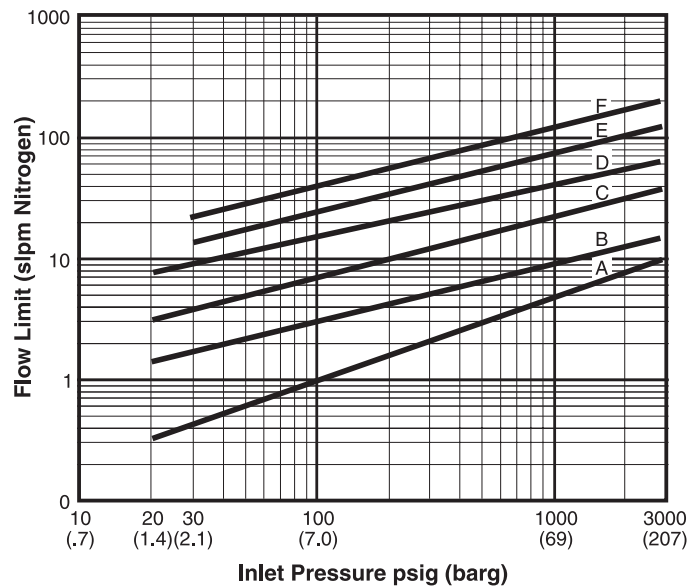
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Dimensional Drawing



FS190 Series

Sizing Chart



Ordering Information

Build an FS190 Series valve 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
 Green *Italic* = Express Service Program (ESP)

For an explanation of Ordering options please reference literature 25000275 at www.parker.com/veriflo

Sample: **FS190** **1** **S** **2** **A** **3** **FSFM** **4** **AOP**
 Finished Order: **FS190SAFSFMAOP**

1 Material
 S = 316L Stainless Steel

2 Flow Limit Setting
 Nominal Flow Limit at:

	1000 psig Inlet	30 psig Inlet
A	= 4.8 SLPM	0.4 SLPM
B	= 9.1 SLPM	1.7 SLPM
C	= 21.8 SLPM	3.9 SLPM
D	= 39.5 SLPM	9.0 SLPM
E	= 72.3 SLPM	14.4 SLPM
F	= 120.6 SLPM	22.5 SLPM

3 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

4 Optional Features
 This section can have multiple options
 AOP = Air Operated
 EX = 10 Ra microinch Finish *Not available with P Connection option*
 TH = Hastelloy C-22® Trim Internals *Includes compression member, poppet, spring and orifice*
 3.46 = FLV 110 Dimensional Replacement *3.46" end-to-end dimensions*
 3.70 = FLV 120 Dimensional Replacement *3.70" end-to-end dimensions*
 5.25 = 5.25" end-to-end dimensions
 5.75 = 5.75" end-to-end dimensions

Additional configurations available upon request

FS190 Series

Specifications

Materials of Construction	
Wetted	
Body	VeriClean™ 316L Stainless Steel
Compression Member Options	316L Stainless Steel (std) or Hastelloy C-22®
Diaphragm	Elgiloy® or equivalent
Poppet Options	316L Stainless Steel (std) or Hastelloy C-22®
Spring	Hastelloy C-22®
Orifice Options	316L Stainless Steel (std) or Hastelloy C-22®
Seat	PCTFE
Non-wetted	
Cap	316L Stainless Steel
Stem	303 Stainless Steel
Knob	Aluminum (Red)
Operating Conditions	
Temperature	-10°F to 150°F (-23°C to 66°C)
Supply Pressure	<i>Based upon Flow Limit Setting</i>
A - D Flow Limits:	10 psig to 3,500 psig (0.7 barg to 241 barg)
E - F Flow Limits:	20 psig to 3,500 psig (1.4 barg to 241 barg)
Differential Pressure	5 psig or 12 psig (0.3 barg or 0.8 barg)
Flow Limit Settings	6 available - <i>see ordering info</i>

Functional Performance	
Design	
Burst Pressure	10,500 psig (724 barg)
Proof Pressure	5,250 psig (362 barg)
Leak Rate	
Internal	Bubble Tight
External (NPT Threaded)	Bubble Tight
External (Welded)	< 2 x 10 ⁻¹⁰ scc/sec He Inboard Test Method
Internal Volume	1.86 cc (<i>including Face Seal Fittings</i>)
Approx. Weight	12.5 oz. (0.32 kg)
Surface Finishes	
Standard	15 - 20 micro inch Ra (0.38 to 0.5 micrometer) or less
Optional (EX)	10 micro inch Ra (0.25 micrometer) or less - <i>not available with 1/4" NPTF Inlet and Outlet connection option (P)</i>

Elgiloy® is a registered trademark of Elgiloy Company
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.

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