

FLOW SWITCHES

- ▶ **FS-150 Series –**
0.5 to 5 GPM
(1.89 to 18.9 LPM)
- ▶ **FS-380P Series –**
0.25 to 2 GPM
(0.95 to 7.57 LPM)
- ▶ **FS-4 Series –**
0.1 to 1.5 GPM
(0.38 to 5.68 LPM)

Features

- Broad range of flow settings
- Small, compact housings
- Right angle and in-line designs
- Variety of configurations
- Primarily plastic construction

Benefits

- Monitor low and higher flow rates
- Space saving designs
- Adaptable to equipment configurations
- Non-clogging
- Easily customized to application or equipment
- Eliminates corrosion concerns

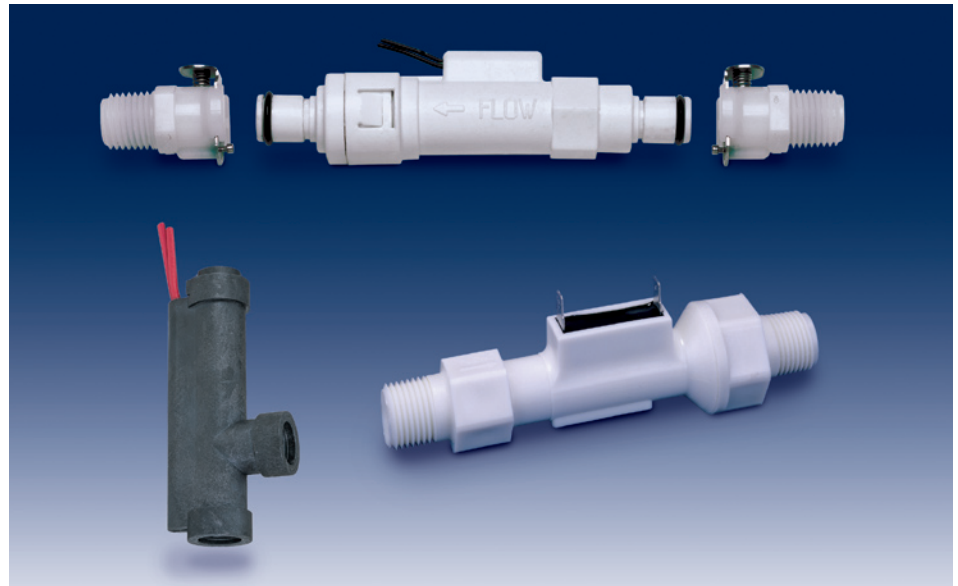
Equipment Used On

- Surgical lasers
- Dental lasers
- Cardiovascular surgical equipment
- Aesthetic laser systems
- Hyper/Hypothermia systems
- X-ray equipment

Flow Monitoring Applications

- Cooling loops
- Thermoregulation

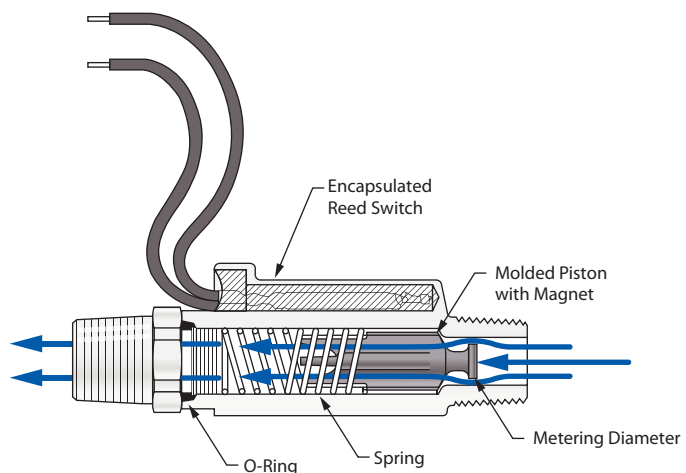
Engineered Plastic Flow Switches



Gems piston type flow switches sense true flow rather than interpret flow rates from temperature or pressure changes. Indirect sensing methods can generate erroneous results in a less-than-perfect system. The three Gems sensors shown here place a piston directly in the flow path for direct reaction to the fluid media. The engineered plastics offered deliver broad media compatibility with excellent temperature and pressure capability. Gems offers both straight-thru or 90° flow path models. Set points on these series range from 0.1 to 5 GPM (see comparisons on back).

Operating Principle

A piston, encapsulating a permanent magnet, is positioned in the flow path within the unit housing. When displaced by the pressure differential from fluid flow, this piston magnetically actuates a hermetically sealed SPST or SPDT reed switch within the unit. The piston metering land diameter precisely sets the actuation point by regulating bypass clearance. A stainless steel spring provides positive piston return as flow decreases. The reed switch, when actuated, can be used to operate remote alarms or indicators. Or, it may be integrated into automatic system controls.

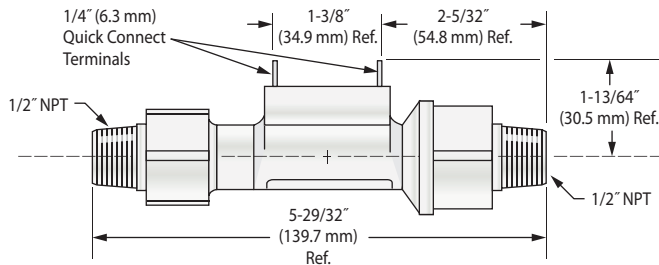


Comparison Chart

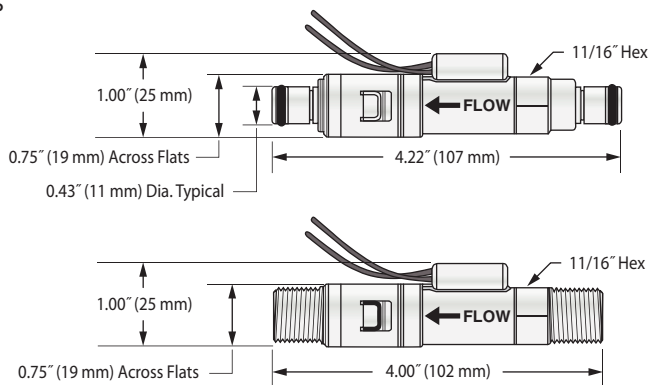
	FS-150	FS-380P	FS-4	
Fixed Set Pts. GPM (LPM)	0.5, 1.0, 2.0, 3.0, 4.0, 5.0 (1.9, 3.8, 7.6, 11.4, 15.1, 18.9)	0.25, 0.50, 1.00, 1.50, 2.00 (0.95, 1.89, 3.79, 5.69, 7.57)	0.1, 0.25, 0.5, 0.75, 1.0, 1.5 (0.38, 0.95, 1.89, 2.84, 3.79, 5.69)	
Primary Construction Material	Polypropylene	Polypropylene	Ryton®	
Port Size	1/2" MNPT	3/8" MNPT and 1/4" Quick Disconnect QDC Adapters: 1/4" MNPT, 1/4" BSPT, 3/8" MNPT, 3/8" BSPT, 1/4" and 3/8" O.D. Polytube, 1/4" Barb, 5/16" Barb, 3/8" Barb, 1/4" and 3/8" O.D. JG® with and without check valve	9/16"-18 UNF-2B Adapters: 1/8" FNPT, 1/4" FNPT, 1/2" Barb	
Operating Temperature	0°F to 212°F (-18°C to +100°C)		0°F to 225°F (-18°C to 107°C)	
Max. Pressure @ 70°F (21°C)	200 PSIG (14 bar)	125 PSI (9 bar)	250 PSIG (17 bar)	
Switch Rating Set Pt. Accy.	SPST 20 VA ±15%	SPST 10 VA ±20%	SPST 20 VA ±15% max.	SPDT 240 VAC max. ±15% max.

Dimensions

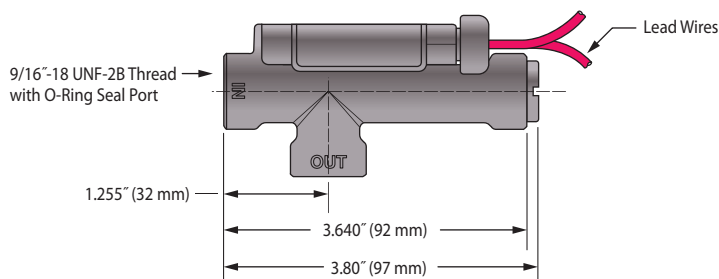
FS-150



FS-380P



FS-4



FS-150 Series

This slim, inline switch reduces pressure drop to a minimum. It incorporates a unique, dual-diameter, internal bore and piston configuration to minimize flow constriction. Liquids are able to smoothly pass around the piston and flow through the switch body with little pressure loss to the line down stream. 150 micron filtration is recommended.

FS-380P Series

This is rugged flow switch whose inline design is less susceptible to clogging than most other flow sensors — just 100 micron filtration is recommended. Fixed set points and a simplified, straight-thru design make it a very dependable switch. Our 1/4" quick disconnect version features a host of snap-on mating fittings sold separately to fit most piping requirements.

FS-4 Series

This series makes flow protection economical for a broad range of applications, including medical sterilizers and dispensing equipment. A 90° flow path aids fluid system routing in many compact applications. Ryton® plastic housing provides superior temperature and pressure capability. 50 micron filtration is recommended.

Our Medical Equipment Specialists are ready to discuss your sensor requirements, so don't hesitate to give us a call.



50 YEARS OF INNOVATION

GemsSensors.com

800.378.1600