

# F-451

**1" & 1-1/2" Pipe Size**  
**Rod Guided Float**  
**Shield option**



## Features:

- Polysulfone meter body resists high temperatures and pressures.
- 316SS or Hastelloy rod guided float.
- Direct reading permanent scale.
- Union connections for easy installation and maintenance.
- Custom calibrations, materials, and Private labeling available.
- Very low pressure drop.
- Optional polycarbonate splash shield

## Materials of Construction:

- Meter Body:** .....Polysulfone
- Adapters:**
- Standard Series - 1" pipe .....Polysulfone, F/NPT or elbow M/NPT
  - Standard Series - 1.5" pipe ..PVC, F/NPT
  - Solarmeter® Series .....Brass, 1" M/NPT or Sweat
- Guide Rod Holder:** .....Polysulfone
- O-ring seals:** .....Viton® (optional EP)
- Union Nuts (non wetted):** .....Fiber reinforced Nylon
- Float:**
- Standard Series .....316SS or PTFE (varies per model)
  - K- Series .....Hastelloy or PTFE (varies per model)
- Guide Rod:**
- Standard Series .....316SS
  - K- Series .....Hastelloy
- Optional Shield:** .....Polycarbonate

## Specifications:

- Max. working pressure:** .....150 PSI (10.3 bar) @ 70° F (21° C)
- Max. fluid temperature:**
- Standard units - 1" pipe.....212° F (100° C) @ 0 PSI
  - Standard units - 1-1/2" pipe .120° F (49° C) @ 0 PSI
  - Solarmeter® units .....240° F (115° C) @ 0 PSI
- Full scale accuracy:** .....+/- 3%
- Calibration fluid:** .....water, specific gravity 1.0
- Scale length:** .....6" (150mm)
- Environment:**.....Not for direct sunlight exposure.
- Maximum pressure drop:** .....1 PSI
- Approximate shipping wt:** ...3 lb. (1.36 kg)

## Dimensions:

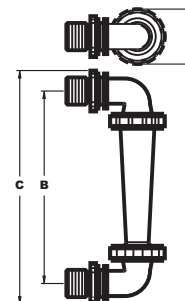
### VERTICAL INLINE MODELS

A	B
14-1/2"	3-5/16"

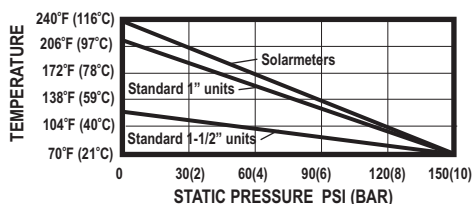


### PANEL MOUNT ELBOW MODELS

A	B	C
3-5/16"	15"	17"



Maximum Temperature vs. Pressure



### Installation Requirements:

#### 1. Misalignment will damage the meter!

Flowmeter must be installed in an exact vertical plane to ensure accuracy. Be certain of proper plumbing alignments. Misalignment may cause the o-ring seals to leak. The meterbody material can be damaged by UV rays. **Do not install in direct sunlight.**

#### 2. Pipe dope and glue will damage the meter!

Use only Teflon<sup>®</sup> tape on the threaded adapters. The meter body and plastic fittings cannot tolerate PVC Glue and/or pipe dope. Even fumes can cause severe damage. If you are installing your flowmeter to a glued pipe configuration, install the flowmeter *after* all glued fittings are dried and lines are purged of all fumes. **Never** hold the meter body with pliers or like tools. Union nuts should be hand tightened only. **DO NOT OVER-TIGHTEN!**

#### 3. Vibration and heavy loads will damage the meter!

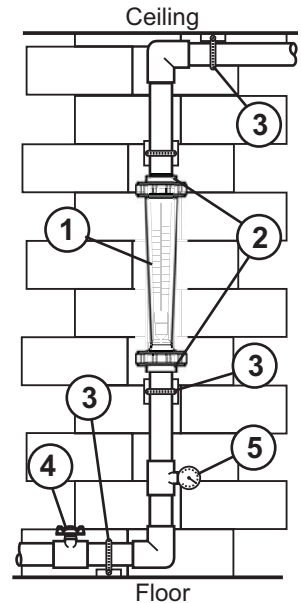
Wall, floor and ceiling mounts and supports must be carefully aligned with the meter body and sturdy enough to support the plumbing and prevent vibration. Never allow the flowmeter to support the weight of related piping.

#### 4. Solenoid valves will damage the meter!

**Avoid a system that will impose a sudden burst of flow to the meter.** Such a burst will cause the float to impact the float stop with destructive force. Solenoid valves, or other quick opening valves cannot be used unless meter is protected against sudden bursts of flow.

#### 5. High pressures and temperatures will damage the meter!

The maximum acceptable temperature and pressure is interdependent. The maximum acceptable working pressure is dependant on the actual fluid temperature. The maximum acceptable fluid temperature is dependant on the actual working pressure. (see Temperature Vs. Pressure chart).



### Flow Range and Model Options:

#### Standard Series - Equipped with 316 SS guide rod

Pipe Size	Dual Scale Range		Float Material	NON-SHIELDED	SHIELDED
	GPM	LPM		MODEL NUMBER	MODEL NUMBER
1"	.5 to 6	2 to 22	Teflon	F-451006LHN	F-451006LHNC
1-1/2"	.5 to 6	2 to 22	Teflon	F-451006LHN-24	F-451006LHNC-24
1"	1.0 to 10	4 to 40	316 SS	F-451001LHN	F-451001LHNC
1-1/2"	1.0 to 10	4 to 40	316 SS	F-451001LHN-24	F-451001LHNC-24
1"	2.0 to 20	6 to 76	316 SS	F-451002LHN	F-451002LHNC
1-1/2"	2.0 to 20	6 to 76	316 SS	F-451002LHN-24	F-451002LHNC-24
1"	3.0 to 30	12 to 115	316 SS	F-451003LHN	F-451003LHNC
1-1/2"	3.0 to 30	12 to 115	316 SS	F-451003LHN-24	F-451003LHNC-24
1"	4.0 to 40	15 to 155	316 SS	F-451004LHN	F-451004LHNC
1-1/2"	4.0 to 40	15 to 155	316 SS	F-451004LHN-24	F-451004LHNC-24

#### K-Series - Equipped with Hastelloy guide rod

K-Series models are specially equipped for highly corrosive applications.

Pipe Size	Dual Scale Range		Float Material	NON-SHIELDED	SHIELDED
	GPM	LPM		MODEL NUMBER	MODEL NUMBER
1"	.5 to 6	2 to 22	Teflon	F-451006LHKN	F-451006LHKNC
1-1/2"	.5 to 6	2 to 22	Teflon	F-451006LHKN-24	F-451006LHKNC-24
1"	1.0 to 10	4 to 40	Hastelloy	F-451001LHKN	F-451001LHKNC
1-1/2"	1.0 to 10	4 to 40	Hastelloy	F-451001LHKN-24	F-451001LHKNC-24
1"	2.0 to 20	6 to 76	Hastelloy	F-451002LHKN	F-451002LHKNC
1-1/2"	2.0 to 20	6 to 76	Hastelloy	F-451002LHKN-24	F-451002LHKNC-24
1"	3.0 to 30	12 to 115	Hastelloy	F-451003LHKN	F-451003LHKNC
1-1/2"	3.0 to 30	12 to 115	Hastelloy	F-451003LHKN-24	F-451003LHKNC-24
1"	4.0 to 40	15 to 155	Hastelloy	F-451004LHKN	F-451004LHKNC
1-1/2"	4.0 to 40	15 to 155	Hastelloy	F-451004LHKN-24	F-451004LHKNC-24

Note:

Models calibrated with water, Sp.Gr. 1.0. Custom Sp.Gr. calibrations available. Contact the factory.