



General Description

Smartflow® mechanical flowmeters are durable, vane-operated devices which provide visual indication of flowrate in many different styles and sizes. Rugged wetted parts are compatible with many process liquids.

Optional temperature and pressure gauges add functionality and flexibility to Smartflow® flowmeters. Brass quick-connect fittings are available on the smaller flowmeters to create an excellent, portable tool for determining flow and locating clogged lines.

Features and Benefits

- **Compact size** works well in restricted-space locations.
- **Rugged construction** gives years of dependable service.
- **Variety of inlet sizes** provides exactly the right connection.
- **240°F (115°C) Temperature Rating** allows installation into a wide range of applications.
- **Optional Temperature and Pressure Gauges** give instant access to pressure and temperature information in addition to flow in one unit.
- **Common Flowmeter Configurations Stocked** to provide same-day delivery in most cases.
- **No Mounting Restrictions** ease installation in any position without extra brackets or hardware.

Turbulent Flow

Injection molders know that a certain rate of flow is needed to achieve turbulent flow in cooling lines. This concept applies to most cooling applications using a water-based coolant mixture*. This chart is provided for reference only.

Cooling Line Inside Diameter		Turbulent Flowrate	
NPT	drill size	gpm	lpm
1/16"	1/4	.33	1.3
1/8"	R	.44	1.7
1/4"	7/16	.55	2.1
3/8"	19/32	.74	2.8
1/2"	23/32	.90	3.4
3/4"	15/16	1.17	4.5
1"	1-5/32	1.44	5.5

* based on Reynolds Number of 4000

Design and specifications are subject to change without notice.



MECHANICAL FLOWMETERS 1.5, 2.5, AND 8 GPM

Model Number

		F 3 - D - 25		
Inlet Size			Flow Rate (maximum)	
1/4" NPT(F)	2	15	1.5 gpm	
3/8" NPT(F)	3	25	2.5 gpm	
1/2" NPT(F)	4	80	8.0 gpm	
3/4" NPT(F)	6	100	10 lpm (liters per minute)	
		300	30 lpm	

Accessories

- A** Flowmeter only
- B** Thermometer
- C** Thermometer and pressure gauge
- CL** Thermometer and liquid-filled pressure gauge
- D** Thermometer, pressure gauge, quick change socket and plug*
- DL** Thermometer, liquid-filled pressure gauge, quick change socket and plug
- E** Thermometer and quick change socket and plug*
- F** Pressure gauge
- FL** Liquid-filled pressure gauge

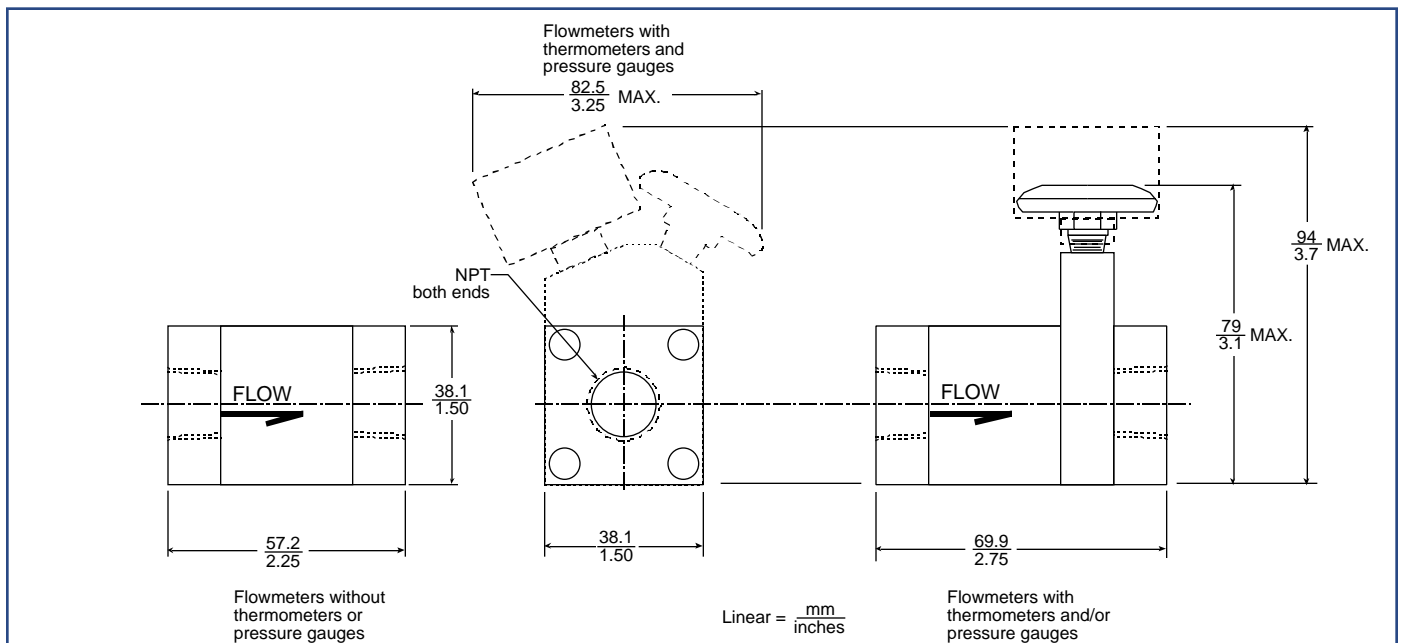
* Not available with 3/4" inlet

Wetted Parts and Materials

End Caps	Brass
Body	Polysulfone
Vane.....	Glass-Filled Nylon
Spring	Stainless Steel
O-Rings.....	EPDM
Cap Screws.....	Stainless Steel
Optional Quick-Connect Fittings	Brass

Specifications

Flow Accuracy.....	±10% full scale
Operating Temperature.....	240°F max. 115°C max.
Operating Pressure.....	150 psi max.
Dial Thermometer.....	0° to 250°F (-20° to 120°C) ±2% accuracy (full scale)
Pressure Gauge	0 to 100 psi (0 to 700 Kpa) ±3% accuracy (full scale)



Model Number

F 6 - B - 20

Inlet Size

3/4"NPT(F)
1"NPT(F)

6
8

Accessories

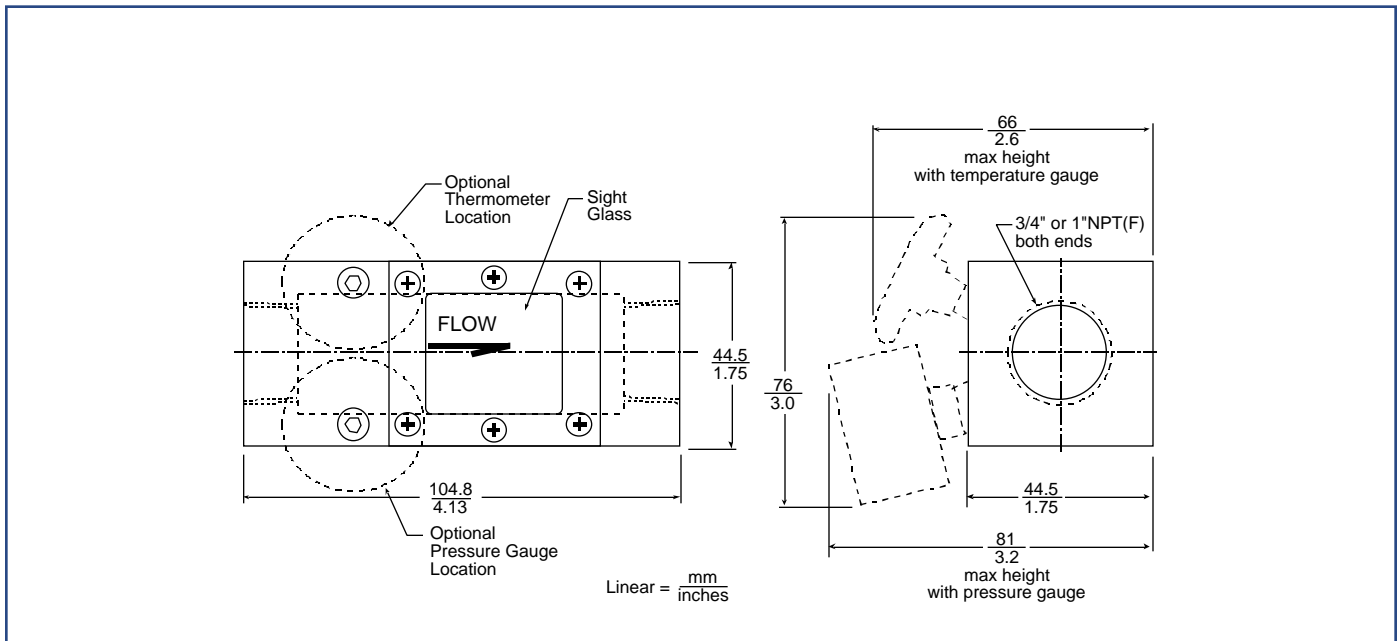
- A Flowmeter only
- B Thermometer
- C Thermometer and pressure gauge
- CL Thermometer and liquid-filled pressure gauge
- F Pressure gauge
- FL Liquid-filled pressure gauge

Wetted Parts and Materials

BodyAnodized Aluminum
Sight GlassPolysulfone
Vane.....Stainless Steel
SpringStainless Steel
Pin.....Stainless Steel
GasketNeoprene

Specifications

Operating Temperature.....240°F max.
115°C max.
Pressure100 psi max.
6.9 bar
Accuracy.....±10%
Thermometer.....0° to 250°F
(-20° to 120°C)
Pressure Gauge.....0 to 100 PSI
(0 to 700 Kpa)





MECHANICAL FLOWMETERS 40, 100, AND 150 GPM

Model Number

F 8 - B - 40

Inlet Size		Flow Rate (maximum)
1"NPT(F)	8	40 40 gpm
1-1/4"NPT(F)	10	100 100 gpm (only available with 12 or 16 inlet size)
1-1/2"NPT(F)	12	150G 150 gpm (only available with 16 inlet size)
2"NPT(F)	16	
Accessories		
Flowmeter only	A	150 19 to 150 lpm (only available with 8 or 10 inlet size)
Thermometer	B	375 38 to 375 lpm (only available with 12 or 16 inlet size)
Thermometer and pressure gauge	C	
Thermometer and liquid-filled pressure gauge	CL	
Pressure gauge	F	
Liquid-filled pressure gauge	FL	

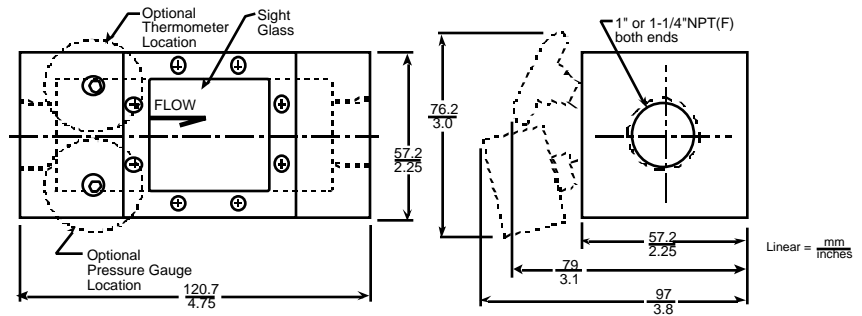
Materials

Body	Anodized Aluminum
Sight Glass	Polysulfone
Vane	Stainless Steel
Spring	Stainless Steel
Pin	Stainless Steel
Gasket	Neoprene
Thermometer	0° to 250°F (-20° to 120°C)
Pressure Gauge	0 to 100 PSI (0 to 700 kg/cm ²)

Specifications

Operating Temperature	240°F max. 115°C max.
Pressure	100 psi max. 6.9 bar
Accuracy	±10%
Thermometer	0° to 250°F (-20° to 120°C)
Pressure Gauge	0 to 100 PSI (0 to 700 Kpa)

1" and 1-1/4" Flowmeters
40 gpm
150 lpm



1-1/2" and 2" Flowmeters
40, 100, and 150 gpm
375 lpm

