

F-1000

Molded In-line Fitting

Three Model Variations:

- Rate of flow display
- Total flow display
- Rate & Total display



Features:

- High accuracy digital paddlewheel technology.
- 3/8", 1/2", 3/4", 1", 1-1/2", and 2" male pipe threads.
- Flow rate from .4 to 200 GPM (1 to 700 LPM).
- Tamper proof factory programming.
- Easy to read 6 digit LCD display, up to 4 decimal places.
- Battery operated (2 AAA batteries included).
- Very low pressure drop.
- Total reset function can be disabled.

Specifications:

Max. working pressure:300 PSI (20 bar) @ 70° F (21° C)
 Max. fluid temperature:200° F (93° C) @ 0 PSI
 Max. ambient temperature: ..14° to 110° F/ -10° to 43° C
 Full scale accuracy:+/- 2%

Power requirement:2 AAA batteries (included)
 Enclosure:NEMA 4X (IP56)
 Maximum pressure drop:8 PSI (0.5 bar) (varies per model)
 Approximate shipping wt: ...2 lb. (.91 kg)

Materials of Construction:

Pipe fitting:Polypropylene (options: PVDF)
 Sensor, paddlewheel, axle: ..PVDF

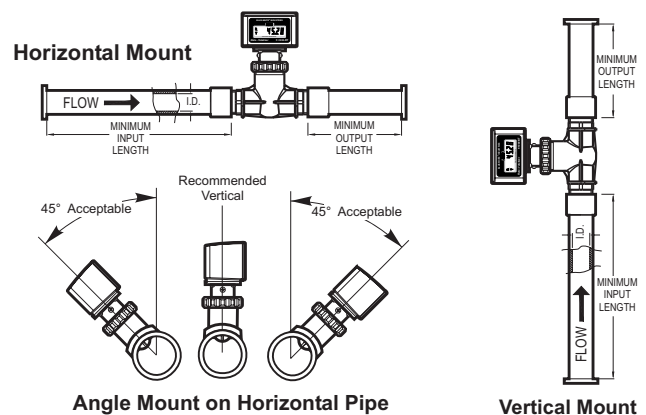
Sensor O-ring seals:Viton[®] (optional EP)
 Enclosure:ABS

Installation Requirements:

Minimum Straight Pipe Length Requirements

The meter's accuracy is affected by disturbances such as pumps, elbows, tees, valves, etc., in the flow stream. Install the meter in a straight run of pipe **as far as possible** from any disturbances. The distance required for accuracy will depend on the type of disturbance.

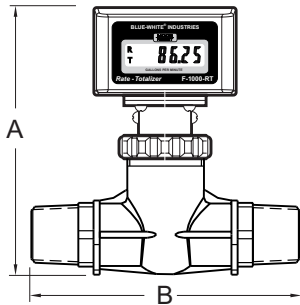
| Type Of Disturbance | Minimum Inlet Pipe Length | Minimum Outlet Pipe Length |
|--------------------------|---------------------------|----------------------------|
| Flange | 10 X Pipe I.D. | 5 X Pipe I.D. |
| Reducer | 15 X Pipe I.D. | 5 X Pipe I.D. |
| 90° Elbow | 20 X Pipe I.D. | 5 X Pipe I.D. |
| Two Elbows -1 Direction | 25 X Pipe I.D. | 5 X Pipe I.D. |
| Two Elbows -2 Directions | 40 X Pipe I.D. | 5 X Pipe I.D. |
| Pump Or Gate Valves | 50 X Pipe I.D. | 5 X Pipe I.D. |



Mounting location

- The meter is designed to withstand outdoor conditions. A cool, dry location, where the unit can be easily serviced is recommended.
- The meter can be mounted on horizontal or vertical runs of pipe. Mounting at the vertical (twelve o'clock) position on horizontal pipe is recommended. Mounting anywhere around the diameter of vertical pipe is acceptable, however, the pipe must be completely full of water at all times. Back pressure is essential on downward flows. See the minimum straight length of pipe requirement chart above.
- The meter can accurately measure flow from either direction.

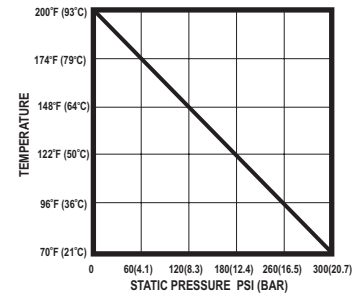
Dimensions:



| Pipe Size | A | B |
|-----------|--------------|--------------|
| 3/8" | 5-3/8" (137) | 4-3/4" (121) |
| 1/2" | 5-3/8" (137) | 5-1/8" (130) |
| 3/4" | 5-5/8" (143) | 5-1/4" (133) |
| 1" | 5-5/8" (143) | 5-5/8" (143) |
| 1-1/2" | 6-1/8" (156) | 6-1/2" (165) |
| 2" | 6-3/8" (162) | 6-3/4" (171) |

Inches (mm)

Maximum Temperature vs. Pressure



Flow Stream Requirements:

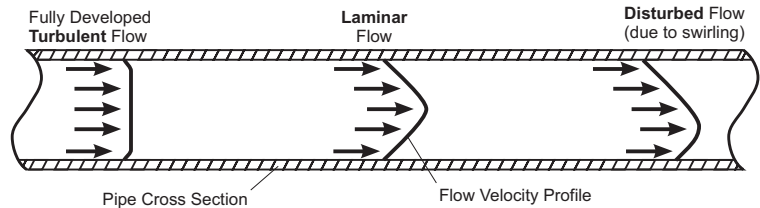
Measuring accuracy requires a fully developed **turbulent** flow profile. Pulsating, swirling and other disruptions in the flow stream will effect accuracy. Flow conditions with a **Reynolds Number** greater than 4000 will result in a fully developed **turbulent** flow. A Reynolds Number less than 2000 is **laminar** flow and may result in inaccurate readings.

REYNOLDS NUMBER EQUATION:

$$\text{REYNOLDS NUMBER} = \frac{3160 \times Q \times G}{D \times V}$$

Where:

- Flow rate of the fluid in GPM = Q
- Specific gravity of the fluid = G
- Pipe inside diameter in inches = D
- Fluid viscosity in centipoise = V



Pipe Size, Flow Range and Display Model Options:

Models with Polypropylene Pipe Fitting Material

Models With BSPT Threads Display in Imperial Gallons per Minute

| Pipe Size | Models With BSPT Threads Display in Imperial Gallons per Minute | | | |
|-----------|--|------------------------|-------------------------|---------------------------|
| | IGM Range | RATE ONLY Model Number | TOTAL ONLY Model Number | RATE & TOTAL Model Number |
| 3/8" | .8 to 8 | RB-375MB-IGM1 | TB-375MB-IGM1 | RT-375MB-IGM1 |
| 3/8" | .4 to 4 | RB-375MB-IGM2 | TB-375MB-IGM2 | RT-375MB-IGM2 |
| 1/2" | 2 to 20 | RB-500MB-IGM1 | TB-500MB-IGM1 | RT-500MB-IGM1 |
| 1/2" | .5 to 5 | RB-500MB-IGM2 | TB-500MB-IGM2 | RT-500MB-IGM2 |
| 3/4" | 3 to 30 | RB-750MB-IGM1 | TB-750MB-IGM1 | RT-750MB-IGM1 |
| 3/4" | .8 to 8 | RB-750MB-IGM2 | TB-750MB-IGM2 | RT-750MB-IGM2 |
| 1" | 5 to 50 | RB-100MB-IGM1 | TB-100MB-IGM1 | RT-100MB-IGM1 |
| 1" | 2 to 20 | RB-100MB-IGM2 | TB-100MB-IGM2 | RT-100MB-IGM2 |
| 1-1/2" | 4 to 40 | RB-150MB-IGM1 | TB-150MB-IGM1 | RT-150MB-IGM1 |
| 1-1/2" | 6 to 60 | RB-150MB-IGM2 | TB-150MB-IGM2 | RT-150MB-IGM2 |
| 1-1/2" | 10 to 100 | RB-150MB-IGM3 | TB-150MB-IGM3 | RT-150MB-IGM3 |
| 2" | 4 to 40 | RB-200MB-IGM1 | TB-200MB-IGM1 | RT-200MB-IGM1 |
| 2" | 6 to 60 | RB-200MB-IGM2 | TB-200MB-IGM2 | RT-200MB-IGM2 |
| 2" | 10 to 100 | RB-200MB-IGM3 | TB-200MB-IGM3 | RT-200MB-IGM3 |
| 2" | 20 to 200 | RB-200MB-IGM4 | TB-200MB-IGM4 | RT-200MB-IGM4 |

Models With U.S. NPT Threads Display in Liters per Minute.

| Pipe Size | Models With U.S. NPT Threads Display in Liters per Minute. | | | |
|-----------|---|------------------------|-------------------------|---------------------------|
| | LPM Range | RATE ONLY Model Number | TOTAL ONLY Model Number | RATE & TOTAL Model Number |
| 3/8" | 3 to 30 | RB-375MI-LPM1 | TB-375MI-LPM1 | RT-375MI-LPM1 |
| 3/8" | 1 to 10 | RB-375MI-LPM2 | TB-375MI-LPM2 | RT-375MI-LPM2 |
| 1/2" | 7 to 70 | RB-500MI-LPM1 | TB-500MI-LPM1 | RT-500MI-LPM1 |
| 1/2" | 2 to 20 | RB-500MI-LPM2 | TB-500MI-LPM2 | RT-500MI-LPM2 |
| 3/4" | 11 to 110 | RB-750MI-LPM1 | TB-750MI-LPM1 | RT-750MI-LPM1 |
| 3/4" | 3 to 30 | RB-750MI-LPM2 | TB-750MI-LPM2 | RT-750MI-LPM2 |
| 1" | 20 to 200 | RB-100MI-LPM1 | TB-100MI-LPM1 | RT-100MI-LPM1 |
| 1" | 7 to 70 | RB-100MI-LPM2 | TB-100MI-LPM2 | RT-100MI-LPM2 |
| 1-1/2" | 15 to 150 | RB-150MI-LPM1 | TB-150MI-LPM1 | RT-150MI-LPM1 |
| 1-1/2" | 25 to 250 | RB-150MI-LPM2 | TB-150MI-LPM2 | RT-150MI-LPM2 |
| 1-1/2" | 40 to 400 | RB-150MI-LPM3 | TB-150MI-LPM3 | RT-150MI-LPM3 |
| 2" | 15 to 150 | RB-200MI-LPM1 | TB-200MI-LPM1 | RT-200MI-LPM1 |
| 2" | 25 to 250 | RB-200MI-LPM2 | TB-200MI-LPM2 | RT-200MI-LPM2 |
| 2" | 40 to 400 | RB-200MI-LPM3 | TB-200MI-LPM3 | RT-200MI-LPM3 |
| 2" | 70 to 700 | RB-200MI-LPM4 | TB-200MI-LPM4 | RT-200MI-LPM4 |

Models with PVDF Pipe Fitting Material

| Pipe Size | Models with PVDF Pipe Fitting Material | | | |
|-----------|--|------------------------|-------------------------|---------------------------|
| | IGM Range | RATE ONLY Model Number | TOTAL ONLY Model Number | RATE & TOTAL Model Number |
| 3/8" | .8 to 8 | RB-38BFI-IGM1 | TB-38BFI-IGM1 | RT-38BFI-IGM1 |
| 3/8" | .4 to 4 | RB-38BFI-IGM2 | TB-38BFI-IGM2 | RT-38BFI-IGM2 |
| 1/2" | 2 to 20 | RB-50BFI-IGM1 | TB-50BFI-IGM1 | RT-50BFI-IGM1 |
| 1/2" | .5 to 5 | RB-50BFI-IGM2 | TB-50BFI-IGM2 | RT-50BFI-IGM2 |
| 3/4" | 3 to 30 | RB-75BFI-IGM1 | TB-75BFI-IGM1 | RT-75BFI-IGM1 |
| 3/4" | .8 to 8 | RB-75BFI-IGM2 | TB-75BFI-IGM2 | RT-75BFI-IGM2 |
| 1" | 5 to 50 | RB-10BFI-IGM1 | TB-10BFI-IGM1 | RT-10BFI-IGM1 |
| 1" | 2 to 20 | RB-10BFI-IGM2 | TB-10BFI-IGM2 | RT-10BFI-IGM2 |
| 1-1/2" | 4 to 40 | RB-15BFI-IGM1 | TB-15BFI-IGM1 | RT-15BFI-IGM1 |
| 1-1/2" | 6 to 60 | RB-15BFI-IGM2 | TB-15BFI-IGM2 | RT-15BFI-IGM2 |
| 1-1/2" | 10 to 100 | RB-15BFI-IGM3 | TB-15BFI-IGM3 | RT-15BFI-IGM3 |
| 2" | 4 to 40 | RB-20BFI-IGM1 | TB-20BFI-IGM1 | RT-20BFI-IGM1 |
| 2" | 6 to 60 | RB-20BFI-IGM2 | TB-20BFI-IGM2 | RT-20BFI-IGM2 |
| 2" | 10 to 100 | RB-20BFI-IGM3 | TB-20BFI-IGM3 | RT-20BFI-IGM3 |
| 2" | 20 to 200 | RB-20BFI-IGM4 | TB-20BFI-IGM4 | RT-20BFI-IGM4 |

Optional Display Volume Units: U.S. Gallons, U.S. Ounces, Imperial Gallons, Cubic Feet, Cubic Meters.
Optional Display Time Units: Minutes, Hours, Days.