

# Marsh-McBirney Flo-Mate™ Portable Velocity Flow Meter



*The Flo-Mate 2000 is a hand held, battery powered point velocity meter. It is lightweight yet rugged with no moving parts, water resistant with data storage/recall capabilities and fixed period averaging.*

## Features and Benefits

### Flo-Mate—the Industry Standard for Over 35 Years

Determine volumetric flow in rivers, streams, irrigation ditches, sanitary pipes, or wherever water flows. Check the calibration of existing flow meters, as well as performance of weirs and flumes. Features that make Flo-Mate your clear choice of velocity meters include instantaneous readout, lightweight, rugged field construction with no moving parts, water resistant enclosure, and battery operation.

Flo-Mate's proven electromagnetic velocity sensor assures you of unsurpassed accuracy and dependability.

When the sensor is placed in flowing water, its magnetic field creates a voltage. This voltage is sensed by electrodes embedded in the sensor and is transmitted through the cable to the meter. The voltage amplitude, representing the rate of water flowing around the sensor, is electronically processed and displayed on the instrument panel. Turbulent/noisy flows are also easily metered with Flo-Mate's two user-selectable data averaging features—Fixed Period Averaging or Time Constant Mode.

### Applications

- Streams & Rivers
- Weir/Flume/Flow Meter Calibration
- Sewers
- Mining Channels
- Irrigation Channels
- Most Open Channels

### Features That Make the Difference

- Instantaneous readout of flow velocity
- Ideal for performance verification of flumes, weirs and other primary devices
- Check calibration of existing flow meters
- Proven electromagnetic sensor
- Water resistant electronics
- Lightweight — only 3.5 pounds
- Data Storage/Recall
- Rugged case made of high impact molded materials
- Measures low flows
- Direct replacement for USGS type mechanical meters
- Adjustable filter modes: Time constant or fixed period averaging
- System self-check function
- Battery saver mode/auto shut-off
- Battery powered—rechargeable or disposable
- Bar graph displays timing information
- Optional disconnectable sensor available

DW = drinking water WW = wastewater municipal PW = pure water / power  
IW = industrial water E = environmental C = collections FB = food and beverage



Be Right™

WW

E

C

## Specifications and Ordering Information

### FLO-MATE FLOW METER VELOCITY MEASUREMENT

#### Range

-0.5 to +20 ft./s (-0.15 to 6 m/s)

#### Zero Stability

±0.05 ft./s

#### Accuracy

±2% of reading plus zero stability

#### Method

Electromagnetic

#### Output

Display: 3 1/2 digit

#### Materials

Sensor: Polyurethane  
Cable: Polyurethane jacket  
Electronic Case: High impact molded plastic—NEMA 4X

#### Environmental

Sensor: 0 to 72°C (32 to 160°F)  
Electronics: 0 to 50°C (32 to 122°F)

#### Power Requirements

Batteries: Two D Cells  
Alkaline Battery Life: 25-30 continuous ON hours

#### Weight

With sensor and 20 ft. of cable:  
1.6 kg (3.5 lbs.)  
Without sensor: 1.1 kg (2.5 lbs.)

### Engineering Specifications

- The flow meter shall be capable of providing an instantaneous readout of flow velocity.
- The method of velocity measurement shall be electromagnetic.
- The range of velocity measurement shall be -0.15 to 6 m/s (-0.5 to +20 ft./s).
- The flow meter shall measure low flows.
- The flow meter shall be capable of storage and recall of up to 19 data points while profiling in the field.
- The flow meter shall have an external charging capability.
- The flow meter shall have adjustable filter modes of time constant or fixed period average.
- The flow meter shall have a system self-check function.
- The flow meter shall have a battery saver mode/auto shut-off.
- The flow meter shall be battery powered using rechargeable or disposable batteries.
- The flow meter shall have a bar graph that displays timing information.
- The flow meter shall have an optional disconnectable sensor available.
- The flow meter shall have no moving parts.
- The flow meter shall be water resistant.
- The flow meter shall be portable.
- The weight of the flow meter shall be no greater than 1.1 kg (2.5 lbs.) without the sensor and no greater than 1.6 kg (3.5 lbs.) with the sensor and 20 feet of cable.
- The flow meter shall be the Marsh-McBirney Flo-Mate Portable Velocity Flow Meter.

Flo-Mate	Model 2000-	Sensor Cable Connector	Sensor	Sensor Cable
No Sensor Connector		1		
Sensor with Disconnect		5		
Open Channel Velocity Sensor-Std			1	
20 Ft. Cable (Std)				0
Cable as needed Max Cable 100 Ft.				9

### Accessories

- 75002** Standard Wading Rod Kit, English—consists of four 2-foot long sections marked in tenth foot increments, double end hanger, and base plate.
- 75002M** Standard Wading Rod Kit, Metric—same as 75002 but marked in metric units.
- 75013** Top-Setting Wading Rod Kit, English—permits convenient setting of sensor. Marked in tenth foot increments.
- 75013M** Top-Setting Wading Rod Kit, Metric—same as 75013 but marked in metric units.
- 75003** Suspension Cable Kit - consists of a 15 lb. Finned weight, and hanger. Specify length of stainless steel cable required.

NOTE: Additional cable cannot be added after order is entered. Contact factory for lengths greater than 100 ft.

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