



## WWM Series Paddle Wheel Flow Meters for Wastewater Effluent

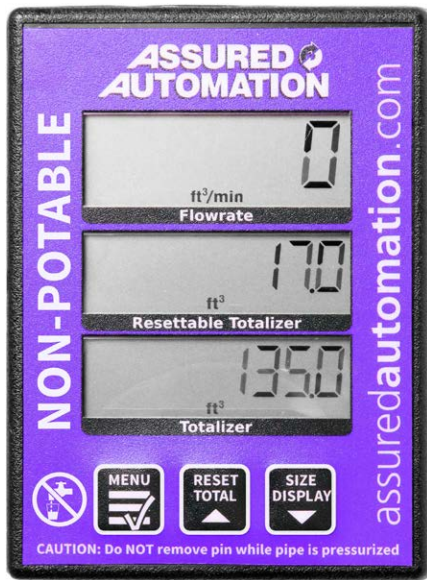


This paddle wheel flowmeter, can monitor flows in pipes ranging in size from ½” to 8”. Paddle wheel flow meters are universally accepted as a means of measuring flow electronically. They offer a wide range in flow rates, negligible headloss and good accuracy at a reasonable price.

Easy removal for cleaning and repair permit the meters to be mounted in lines with moderate particulate levels. A plug is included that can replace the meter so that the system can be used while the meter is removed.

This flow meter has a 21-digit liquid crystal display (LCD). Sturdy, compact, and water resistant design allows these meters to be mounted outdoors when shielded from direct sunlight. Remote displays are also available to allow easy reading for locations where the meter is difficult to get to. Isolated monitoring locations are also viable since power is supplied by a long, seven year, life battery.

The paddle wheel, spinning at a rate linearly proportional to the velocity of the flow, activates a switch once per revolution. The time it takes the paddle to rotate, divided into the diameter of the pipe, results in the flow rate. Flow rate variations are minimized by a microprocessor averaging process. The flow rate, a resettable and a non-resettable totalizer are simultaneously displayed.



### FEATURES

- Corrosion resistant to the caustic nature of wastewater effluent
- Displays current flow rate, lifetime total, and a resettable total
- Displays **Gallons**, Liters, and Cubic feet
- Negligible head loss (pressure drop)
- Easily identifiable as wastewater due to purple display face
- Can be field calibrated
- Choice of mounting styles:
  - pre-mounted on a 13" length of pipe
  - insertion mount using a saddle and clamps
- Choice of display location
  - local, on the meter
  - remote, connected to meter by wire
- Display can be rotated 360° for best reading orientation
- Easily removed with no tools for cleaning
- Plug included to allow system use when meter is removed

### SIZES AND FLOW RATE RANGES

Unit of Measure	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"
<b>GPM</b>	0.6 - 15	1.5 - 30	5 - 55	10 - 125	15 - 200	40 - 450	60 - 800	120 - 1800	250 - 3200
<b>l/min.</b>	2.27 - 57	6 - 114	19 - 208	38 - 473	57 - 757	1512 - 1703	227 - 3028	454 - 6814	946 - 12113
<b>ft³/min.</b>	0.08 - 2.0	0.20 - 4.0	0.67 - 7.35	1.34 - 17	2 - 27	5 - 60	8 - 107	16 - 241	33 - 428



## WWM



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### MOUNTING OPTIONS

There are 2 different meter installation options.



**Pipe Mount:** the meter comes installed centered on a 13” section of pipe. This style is simply inserted into your pipe using straight couplings.



**Saddle Mount:** the meter comes with a “saddle” and 2 hose clamps that are used to attach the meter to an existing pipe. Once the saddle is attached to the pipe, a hole must be drilled in it for the paddle wheel to enter the pipe through.

### REPLACEMENT PLUG

All WWM meters come with a plug that can be used in place of the meter so that the system can be used while the meter is being cleaned, repaired, or out for any reason. The plug is held in place by the same pin that is used to hold the meter in.

### DISPLAY OPTIONS

There are 2 different display options. Both display types come with either a saddle or pipe mount.



**Local:** the display is attached directly to the meter where the meter is installed.



**Remote:** the display is separate from the meter, and is connected to it with a wire.

### PROGRAMMING

Programming is accomplished using embossed buttons on the face. Programming consists of selecting the pipe size and schedule from a list; the default units are gallons/minute and gallons. For sizes not listed, the user can calibrate the meter using a factor derived from the inside diameter of the pipe. The meter can also be calibrated in Liters and cubic feet.

See the **WWM Installation, Operation, and Maintenance Manual** for complete programming instructions.

### USAGE GUIDELINES

Paddle wheel type meters will only operate properly when the pipe is full and the flow rate is within the recommended range. Low accuracy and fouling problems are typical when pipes are too large and flow rates are not within the recommend range. Mounting configurations that allow air to become entrapped around the paddle will greatly affect the results. These meters will tolerate considerable sediment and debris.

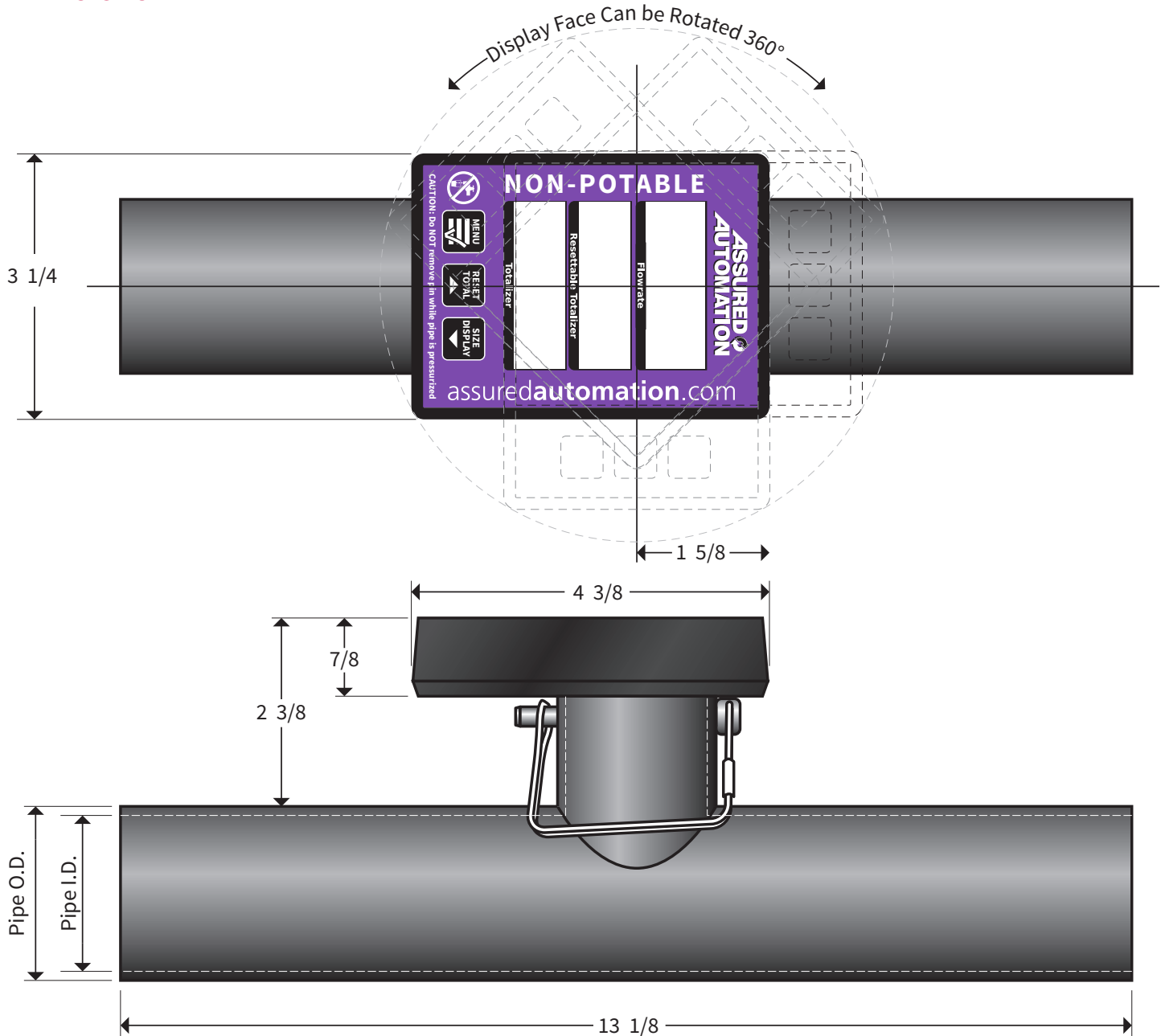


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### DIMENSIONS



### PIPE DIAMETERS

Size	1/2"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"						
Pipe Schedule	80	80	80	40	80	40	80	40	80	40	80	40	80	40	80
Inner Diameter (I.D.)	0.546	0.742	0.957	1.610	1.500	2.067	1.939	3.068	2.900	4.026	3.826	6.065	5.761	7.981	7.625
Outer Diameter (O.D.)	0.84	1.050	1.315	1.900	1.900	2.375	2.375	3.500	3.500	4.500	4.500	6.625	6.625	8.625	8.625
Wall Thickness	0.147	0.154	0.179	0.145	0.200	0.154	0.218	0.216	0.300	0.237	0.337	0.280	0.432	0.322	0.500



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### ORDERING INFORMATION

WWM				
Series	Connection	Schedule	Size	Display

Wastewater Flow Meter: \_\_\_\_\_

**WWM** = Corrosion resistant paddle wheel flow meter for wastewater effluent

Connection Type: \_\_\_\_\_

**P** = Pipe Mount - mounted on 13" pipe

**S** = Saddle Mount - insertion mount on existing pipe using a saddle and hose clamps

Pipe Schedule: \_\_\_\_\_

**40** = Schedule 40 (not available in 1/2", 3/4", or 1")

**80** = Schedule 80

Pipe Size: \_\_\_\_\_

**050** = 1/2" } Only available in Pipe Mount  
**075** = 3/4" }  
**100** = 1" }

**150** = 1 1/2"

**200** = 2"

**300** = 3"

**400** = 4"

**600** = 6" } Only available in Saddle Mount  
**800** = 8" }

Display Type: \_\_\_\_\_

**PT** = Local Display (on meter)

**RD** = Remote Display (wall mount)

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