

### DESCRIPTION

- The Model MW6 is manufactured to comply with applicable provisions of NSF 61 / NSF 372 and AWWA Standard No. C704-02 for propeller-type flow meters.
- As with all McCrometer propeller flowmeters, standard features include a magnetically coupled drive, instantaneous flowrate indicator and straight reading, six-digit totalizer.
- Model MW6 Weld-On Saddle Meter is machined to the same radius as the tube on which it is to be installed to provide accurate alignment.

### FEATURES

#### Weldment

- The meter head weldment is either Stainless Steel or fusion-bonded epoxy coated carbon steel for maximum corrosion protection.

#### Impellers

- Impellers are manufactured of high-impact plastic, capable of retaining their shape and accuracy over the life of the meter.
- Each impeller is individually calibrated at the factory to accommodate the use of any standard McCrometer register, and since no change gears are used, the MW6 can be field-serviced without the need for factory recalibration.

#### Bearings

- Factory lubricated, stainless steel bearings are used to support the impeller shaft.
- The shielded bearing design limits the entry of materials and fluids into the bearing chamber providing maximum bearing protection.



### Typical Applications

The McCrometer propeller meter is the most widely used flowmeter for municipal and wastewater treatment applications as well as agricultural and turf irrigation measurement. Typical applications include:

- Water and wastewater management
- Center pivot systems
- Sprinkler irrigation systems
- Drip irrigation systems
- Golf course and park water management
- Gravity turnouts for underground pipelines
- Commercial nurseries

#### Register

- The instantaneous flowrate indicator is standard and available in gallons per minute, cubic feet per second, liters per second and other units.
- The register is driven by a flexible steel cable encased within a protective vinyl liner.
- The register housing protects both the register and cable drive system from moisture while allowing clear reading of the flowrate indicator and totalizer.

## INSTALLATION

Standard installation is horizontal mount. If the meter is to be mounted in the vertical position, please advise the factory. A straight run of full pipe the length of ten pipe diameters upstream and two diameters downstream of the meter is recommended for meters without straightening vanes. Meters with optional straightening vanes require at least five pipe diameters upstream and two diameters downstream of the meter.

## SPECIFICATIONS

### Performance

<b>Accuracy / Repeatability</b>	<ul style="list-style-type: none"> <li>• <math>\pm 2\%</math> of reading guaranteed throughout full range.</li> <li>• <math>\pm 1\%</math> over reduced range</li> <li>• Repeatability 0.25% or better</li> </ul>
<b>Range</b>	4" to 48"
<b>Maximum Temperature</b>	(Standard Construction) 160°F constant
<b>Pressure Rating</b>	150 psi. Consult factory for higher rated version.

### Materials

<b>Top Plate</b>	Stainless steel (4") or fusion-bonded epoxy coated carbon steel (6" and larger)
<b>Weldment</b>	Carbon steel standard, stainless steel optional
<b>Coating</b>	Fusion-bonded epoxy
<b>Bearing Assembly</b>	Impeller shaft is 316 stainless steel. Ball bearings are 440C stainless steel.
<b>Magnets</b>	Permanent type. Alnico.
<b>Bearing Housing</b>	<ul style="list-style-type: none"> <li>• For models 4" to 16": 304 stainless steel standard, 316 stainless steel optional</li> <li>• For models 18" and larger: Brass standard, 316 stainless steel optional</li> </ul>
<b>Register</b>	An instantaneous flowrate indicator and six-digit straight-reading totalizer are standard. The register is hermetically sealed within a die cast aluminum case. This protective housing includes a domed acrylic lens and hinged lens cover with locking hasp.
<b>Impeller</b>	Impellers are manufactured of high-impact plastic, retaining their shape and accuracy over the life of the meter. High temperature impeller is optional.

### Options

- Extended warranty
- Weld-on saddle can be profiled to fit any outside diameter pipe dimensions
- Register extensions
- High temperature construction 180°F
- Marathon bearing assembly for higher than normal flowrates
- Digital register available in all sizes of this model
- A complete line of flow recording/control instrumentation
- Canopy boot
- SmartTrax on Board integrated telemetry for digital register option

### Part Numbers, Digital Registers

<b>MW6</b>										
<b>METER SIZE</b>										
4" Top Plate Meter	<b>04</b>									
6" Top Plate Meter	<b>06</b>									
8" Top Plate Meter	<b>08</b>									
10" Top Plate Meter	<b>10</b>									
12" Top Plate Meter	<b>12</b>									
14" Top Plate Meter	<b>14</b>									
16" Top Plate Meter	<b>16</b>									
18" Top Plate Meter	<b>18</b>									
20" Top Plate Meter	<b>20</b>									
22" Top Plate Meter	<b>22</b>									
24" Top Plate Meter	<b>24</b>									
30" Top Plate Meter	<b>30</b>									
36" Top Plate Meter	<b>36</b>									
42" Top Plate Meter	<b>42</b>									
48" Top Plate Meter	<b>48</b>									
<b>Assembly Component Options</b>										
Tube Style Saddle (Nominal Inch OD)	<b>T</b>									
Pipe Style Saddle (Nominal Pipe OD)	<b>P</b>									
Ductile Iron Standards Style Saddle	<b>A</b>									
Non Standard OD Style Saddle (In available Sizes)	<b>X</b>									
<b>Bearing</b>										
Standard	<b>1</b>									
Marathon	<b>2</b>									
SS316	<b>3</b>									
SS316 Marathon	<b>4</b>									
SS316 Ceramic	<b>5</b>									
<b>Register Options</b>										
Flowcom (FC200)	<b>F</b>									
Flow Connect (FC Smart Part on 2nd Line)	<b>T</b>									
<b>Output Options</b>										
No Outputs										
Open Collector Pulse	<b>1</b>									
4-20mA Analog Only	<b>2</b>									
4-20mA Analog + Open Collector Pulse	<b>3</b>									
<b>Output Cable Options</b>										
No Output Cables										
6 ft	<b>C1</b>									
15 ft	<b>C2</b>									
25 ft	<b>C3</b>									
50 ft	<b>C4</b>									
75 ft	<b>C5</b>									
100 ft	<b>C6</b>									
150 ft	<b>C8</b>									

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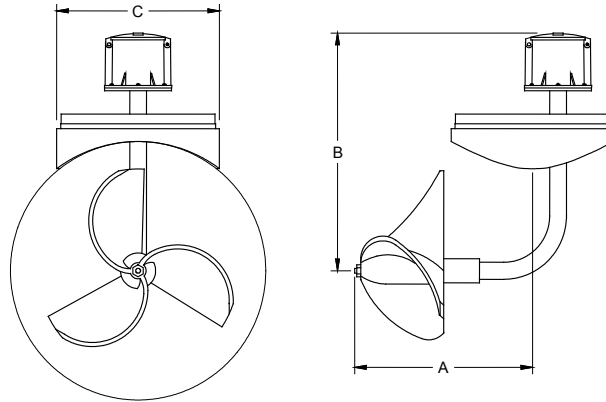
**Part Numbers, Digital Registers (cont.)**

<b>Smart Output Protocol / Telemetry Options</b>					
No AMI Outputs/Telemetry Options					
Sensus Protocol (6ft Open End Cable)	SEN				
Itron 6 digit Protocol (6ft Open End Cable)	IT6				
Itron 9 digit [100W] Protocol (6ft Open End Cable)	IT9				
Neptune Protocol (6ft Open End Cable)	NEP				
SmartTrax On-Board (Integrated Telemetry on FlowCom)	STX				
2 ft SmartTrax Standalone Unit ExactRead Cable	S02				
6 ft SmartTrax Standalone Unit ExactRead Cable	S06				
25 ft SmartTrax Standalone Unit ExactRead Cable	S25				
50 ft SmartTrax Standalone Unit ExactRead Cable	S50				
<b>Register Remote and Extension Options</b>					
Meter Mount (Standard)					
6 ft Cable Remote Mount (Flowcom only)	R06				
25 ft Cable Remote Mount (Flowcom only)	R25				
50 ft Cable Remote Mount (Flowcom only)	R50				
6" Long Extension					
1" Increments for Extensions Lengths	XXX				
150" Maximum extension length					
<b>SPECIAL OPTIONS</b>					
No Special Options					
High Temp Prop and Seals				H	
<b>No Batteries, Battery Tray Options</b>					
Includes Batteries (Standard)					
No Batteries (Alkaline Tray)					NBA
No Batteries (Lithium Tray)					NBL

### Part Numbers, Mechanical Registers

<b>MW6</b>									
<b>METER SIZE</b>									
4" Top Plate Meter	<b>04</b>								
6" Top Plate Meter	<b>06</b>								
8" Top Plate Meter	<b>08</b>								
10" Top Plate Meter	<b>10</b>								
12" Top Plate Meter	<b>12</b>								
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36" Top Plate Meter	<b>36</b>								
42" Top Plate Meter	<b>42</b>								
48" Top Plate Meter	<b>48</b>								
<b>Assembly Component Options</b>									
Tube Style Saddle (Nominal Inch OD)	<b>T</b>								
Pipe Style Saddle (Nominal Pipe OD)	<b>P</b>								
Ductile Iron Standards Style Saddle	<b>A</b>								
Non Standard OD Style Saddle (In available Sizes)	<b>X</b>								
<b>Bearing</b>									
Standard	<b>1</b>								
Marathon	<b>2</b>								
SS316	<b>3</b>								
SS316 Marathon	<b>4</b>								
SS316 Ceramic	<b>5</b>								
<b>Register Options</b>									
6 Wheel	<b>1</b>								
6 Wheel Anti Reverse	<b>2</b>								
6 Wheel with Index	<b>3</b>								
6 Wheel Anti Reverse & Index	<b>4</b>								
7 Wheel	<b>5</b>								
7 Wheel Anti Reverse	<b>6</b>								
7 Wheel with Index	<b>7</b>								
7 Wheel Anti Reverse & Index	<b>8</b>								
<b>Output Options</b>									
No Outputs									
4-20 Analog Only (E7000-000)	<b>A</b>								
Dry Contact Pulse & 4-20 Analog (E7000-001)	<b>B</b>								
Opto Isolated Pulse & 4-20 Analog (E7000-002)	<b>C</b>								
Mechanical Datalogger (MC20-D2)	<b>E</b>								
Non Powered Pulse (EA618-02)	<b>G</b>								
CMOS Square Wave Pulse (EA631-002)	<b>J</b>								
Sink to Ground Pulse (EA631-102)	<b>K</b>								
Dry Contact Pulse (SA100)	<b>L</b>								
<b>Extension Options</b>									
Meter Mount (Standard)									
6" Long Extension	<b>006</b>								
1" Increments for Extensions Lengths	<b>XXX</b>								
150" Maximum extension length	<b>150</b>								
<b>SPECIAL OPTIONS</b>									
High Temp Prop and Seals	<b>H</b>								

## DIMENSIONS



MW6	DIMENSIONS														
Meter Size	inches	4	6	8	10	12	14	16	18	20	24	30	36	42	48
	mm	102	152	203	254	305	356	406	457	508	610	762	914	1067	1219
Minimum Flow	GPM	50	90	100	125	150	250	275	400	475	700	1200	1500	2000	2500
	LPS	3.2	5.7	6.3	7.9	9.5	15.8	17.3	25.2	30.0	44.2	75.7	94.6	126.2	157.7
Maximum Flow	GPM	50	90	100	125	150	250	275	400	475	700	1200	1500	2000	2500
	LPS	3.2	5.7	6.3	7.9	9.5	15.8	17.3	25.2	30.0	44.2	75.7	94.6	126.2	157.7
Maximum Flow w/ Marathon Bearing	GPM	900	1800	2250	2700	3750	4500	6000	7500	9000	12750	18750	25500	37500	45000
Approx. Head Loss in Inches at Max. Flow	inches	23	17	6.75	3.75	2.75	2	1.75	1.5	1.25	1	0.7	0.5	0.45	0.3
	mm	432	171	95	70	51	44	38	32	25	18	13	11	8	0
Standard Dial Face*	GPM/ Gal	800/ 100	1300/ 100	2500/ 100	3000/ 1000	4000/ 1000	6000/ 1000	8000/ 1000	10000/ 1000	10000/ 10000	15000/ 10000	15000/ 10000	30000/ 10000	35000/ 1000	***
Approx. Shipping Weight, lbs.	lbs	30	45	70	90	120	125	130	150	175	190	205	210	220	230
	kg	13.6	20.4	31.8	40.8	54.4	56.7	59.0	68	79	86	93	95	100	104
A	inches	11.37	12.87	12.87	12.12	12.12	12.12	12.12	15	15	15	15	15	15	15
	mm	289	327	327	308	308	308	308	381	381	381	381	381	381	381
B	inches	10.75	10.75	11.75	13.75	14.75	14.75	16.75	16.75	18.75	20.75	22.375	26.375	29.375	32.375
	mm	273	273	298	349	375	375	425	425	476	527	568	670	746	822
C**	inches	5.5	7.5	7.5	10.75	10.745	10.75	10.75	12.75	12.75	12.75	18	20	20	20
	mm	140	191	191	273	273	273	273	324	324	324	457	508	508	508
No. of Bolts Per Flange		6	8	8	12	12	12	12	16	16	16	16	16	Contact factory	

\* Indicates the dial face range and multiplier

\*\* Dimension C is O.D. of saddle.

\*\*\* Per customer requirements. Larger flowmeters on special order.

To order, specify pipe I.D. and O.D. The pipe O.D. determines the meter size. The model number is established by taking the pipe O.D. to the next larger size. For example, a 14" cast iron pipe with a 15.3" O.D. would be a 16" meter, or a model 'MW616'.

## INSTALLATION

Standard installation is horizontal mount. If the meter is to be mounted in the vertical position, please advise the factory.

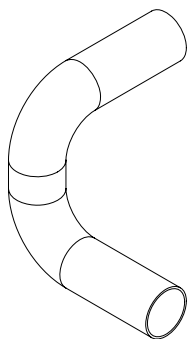
## PIPE RUN REQUIREMENTS

Configuration	A	B
Without straightening vanes	10	1
With straightening vanes	5	1
With FS100 Flow Straightener	1.5	1

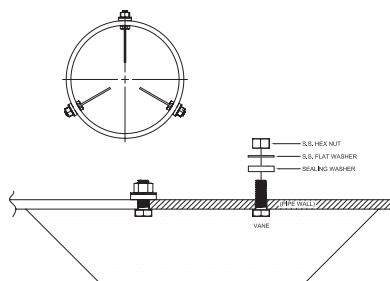
Elbow shown - Other piping components can be pumps, valves and expansions or reductions

## STRAIGHTENING VANES

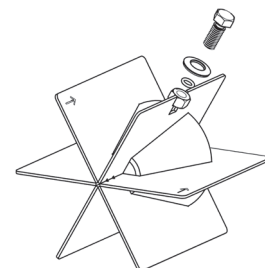
Special attention should be given to systems using two elbows “out of plane” or devices such as a centrifugal sand separator. These cause swirling flow in the line that affect propeller meters. Well developed swirls can travel up to 100 diameters downstream if unobstructed. Since most installations have less than 100 diameters to work with, straightening vanes become necessary to alleviate the problem. Straightening vanes will break up most swirls and ensure more accurate measurement. McCrometer actively encourages installing vanes just ahead of the meter. Straightening vanes are available in weld-in, bolt-in, and the FS100 Flow Straightener.



**Elbows out of plane**

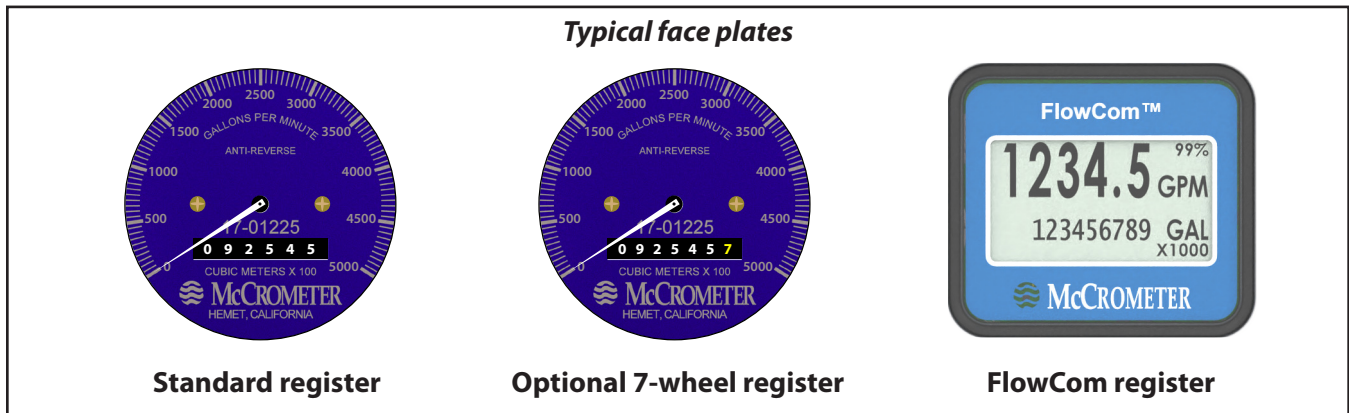


**Bolt-in straightening vanes**



**FS100 Flow Straightener**

## REGISTERS



### Mechanical Register

The instantaneous flowrate indicator is standard and available in gallons per minute, cubic feet per second, liters per second and other units. The register is driven by a flexible steel cable encased within a protective vinyl liner. The register housing protects both the register and cable drive system from moisture while allowing clear reading of the flowrate indicator and totalizer.



### Digital Register

The optional FlowCom digital register displays a flowmeter's flowrate and volumetric total. Available are four optional outputs: 4-20mA loop, open collector, optically isolated, and contact closure. Unique units of measurement for rate, total, 4-20mA, and pulse outputs. The FlowCom can be fitted to any new or existing McCrometer propeller flowmeter. The FlowCom also features a built-in data logger.



### SmartTrax on Board

In addition to features mentioned on the FlowCom digital register, SmartTrax On Board integrated telemetry provide a streamlined, all-in-one flow measurement and telemetry system allowing growers and districts to remotely monitor water usage and manage allocations across their territories. This affects input costs such as chemigation, fuel and electricity costs, and most importantly - your time! For natural resource districts and the like, SmartTrax on Board removes the need to manually collect flow data from each metered well, freeing up personnel time.

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