

Water Specialties Flow Meter Specification Sheet

Water Specialties Flanged Main Line Flow Meters Sized 2" to 48"

Model MLE
150 psi

Model MLF
300 psi

Applications

Water Specialties MLE and MLF flow meters are intended exclusively for clean water applications. These can include:

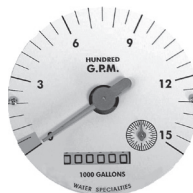
- Well Water
- Potable Water
- Pump Stations
- Rate-of-Flow Control
- Raw Water
- Transmission
- Distribution
- Effluent
- Filter balancing and backwash
- Pumping stations
- UV dosing
- Wells and booster stations

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Totalizer



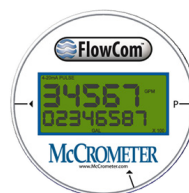
Indicator-Totalizer



FlowCom Register



FlowConnect Wireless Telemetry



Description

MODEL MLE AND MLF FLANGED TUBE METERS are manufactured to the highest standards. Materials used on all meters and flow ranges meet or exceed AWWA standard C704-02. The flanged end tube design permits use in a wide range of applications with up to 150 psi or 300 psi working pressure.

Model MLE flanged ends are 150 lb. AWWA class D flat face steel flanges.

Model MLF flanged ends are 300 lb. AWWA class "F" raised face steel flanges.

Fabricated steel meter tubes have straightening vanes and are protected internally and externally with 12-15 mils of NSF approved, fusion bonded epoxy resin.

Features

PROPELLER is magnetically coupled with the drive mechanism through the sealed oil filled gearbox. This completely eliminates water entering the meter assembly, as well as the need for any packing gland. The propeller is a conical shaped three bladed propeller, injection molded of thermoplastic material resistant to normal water corrosion and deformity due to high flow velocities.

BEARING in propeller is a water lubricated ceramic sleeve and spindle bearing system with a ceramic/stainless steel spindle. Dual ceramic thrust bearings, standard on all meters, handle flows in both forward and reverse directions. The bearing design promotes extended periods of maintenance free propeller operation. Bearings within the sealed meter mechanism are shielded precision stainless steel bearings and are factory lubricated for the life of the meter.

CHANGE GEARS may be easily exchanged in the field when changing the dial, or when recalibrating for different pipe sizes. It is not necessary to remove pressure from the line for these changes.

O-RING SEALS are used at the meter head and all points where seals are required, making the meter mechanism completely immune to any of the corrosive effects of atmospheric moisture or liquids.

Register Options

TOTALIZER is O-ring sealed and magnetically coupled with the driving mechanism, and features a six digit totalizer with a full 3" diameter, 100 division, center sweep dial that permits extremely accurate readings for timing purposes in determining flow rates. The totalizer dial can be furnished in gallons, cubic feet, acre feet or any standard liquid measuring units. The bonnet, with padlock hasp, can be positioned in four different directions for the easiest possible reading when the meters are mounted in unusual positions.

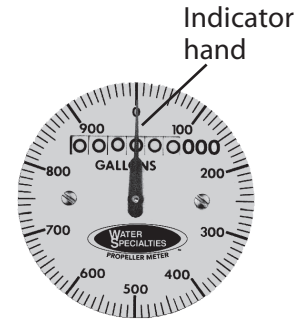
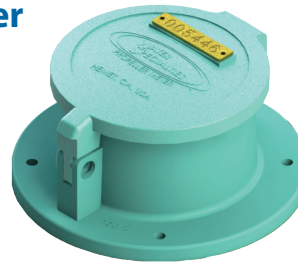
INDICATOR-TOTALIZER is mechanically driven by the meter mechanism and features a full 4" diameter, 250 degree sweep dial with a six digit, straight reading type totalizer and sweep test hand. The indicator drive mechanism is temperature compensated so the indicator will be accurate at all points on the dial when operated between 32° and 140° F. The indicator dial can be furnished in GPM, CFS, MGD or any standard liquid measuring units with choice of standard totalizer measuring units. The bonnet, with padlock hasp, is O-ring sealed to the meter head.

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.

Registers and Totalizers

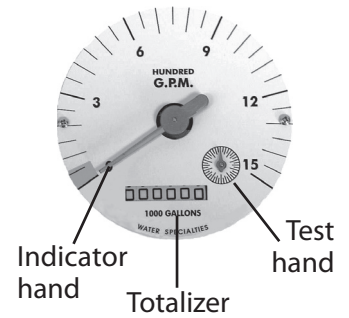
Mechanical Register and Indicator-Totalizer

The instantaneous flow rate indicator is standard and available in gallons per minute, cubic feet per second, liters per second and other units.



Standard register

The register housing protects both the register and cable drive system from moisture while allowing clear reading of the flow rate indicator and totalizer.



Indicator-totalizer

Digital Totalizer

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.



FlowCom register

Wireless Telemetry

The optional FlowConnect is designed specifically for wireless telemetry via either satellite or cellular data service. Manual meter reading is never required. It uses either the mechanical register or the digital register (both shown above).

You can determine how often readings are made and transmitted to the cloud database, which you can view on a PC or on a cell phone. The viewing utility provides data tools that can analyze flow rate, consumption, and possible anomalies in an irrigation system.



FlowConnect

Installation

Flanged end meters: A tube is inserted into a section of open pipe and each flanged end is joined to the existing pipe using the provided gaskets and bolts.

Plain, grooved, or threaded end meters: A tube is inserted into a section of open pipe and each end is joined to the existing pipe as appropriate to its type.

The meter can be installed horizontally, vertically, or inclined on suction or discharge lines. The meter must have a full flow of liquid for proper accuracy. Complete installation, removal, and reinstallation instructions can be found in the meter's Installation, Operation, and Maintenance Manual.

Pipe Run Requirements

Fully opened gate valves, fittings or other obstructions that tend to set up flow disturbances should be a minimum of ten pipe diameters upstream and two pipe diameters downstream from the meter. Installations with less than ten pipe diameters of straight pipe require straightening vanes. Meters with straightening vanes require at least five pipe diameters upstream and two pipe diameters downstream of the meter.

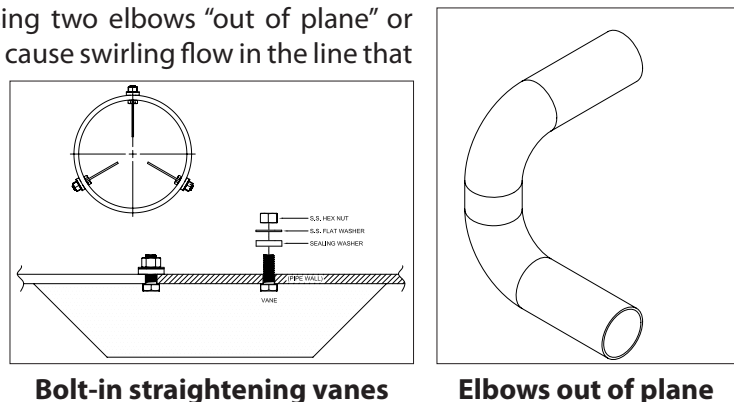
Configuration	A	B
Without straightening vanes	10	1
With straightening vanes	5	1

Dimension C varies depending on meter size.	
Meters 2 - 20"	8"
Meters 24" - 72"	11 1/2"

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 and bolt-in.



Bolt-in straightening vanes

Elbows out of plane

Flow Meter Specifications

All specifications apply to both models MLE and MLF except where noted.

Performance

Accuracy	Plus or minus 2% of actual flow within the range specified for each meter size
Pressure Range	MLE: Up to 150 PSI maximum working pressure MLF: Up to 300 PSI maximum working pressure
Temperature Range	140° F Maximum. Consult factory for special construction for higher temperatures.
Flow Ranges	See Min-Max-Int Flow Ranges column in the table of meter specifications on page 11. <ul style="list-style-type: none"> • Size and construction are rated for continuous operation. • Min and max flow ranges will vary according to meter size and construction. • Min flow will be higher when auxiliary equipment is added. • Intermittent flow is rated for 10%-15% of the total time the meter is operating. • Consult factory for high velocity construction when intermittent flows are higher than shown in the table of meter specifications on page 11 and/or when longer operating periods are required.

Materials

Materials used in construction are chosen to minimize the corrosive effects of the liquids measured by the meter assembly.

Magnets	Anticorrosive aluminized barrier coated magnets; Everlube 6155
Interior Bearings	Shielded stainless steel
Propeller Bearing	Ceramic sleeve type
Propeller Spindle	Ceramic sleeve/stainless steel
Propeller	Injection molded thermoplastic
Gearbox	Stainless steel
Separator	Stainless steel
Shafts	Stainless steel
Meter Head Bolts	2" - 20": Stainless steel 24"-48": Plated steel
Meter Head	Cast iron or fabricated steel NSF approved, fusion bonded epoxy coated
Meter Tube	Fabricated steel with straightening vanes and coated, inside and out, with 12-15 mils of NSF approved, fusion bonded epoxy by the fluidized bed method.

Options

Equipment	Optional equipment is available upon request, including remote mounting kit with up to 50 feet of cable, totalizer extensions, digital transmitter, and a wide range of controls and instruments for indicating, totalizing and recording flow data for each meter. Special constructions and materials are also available upon request.
Warranty	A five-year guarantee is available for 2" - 36" meters.

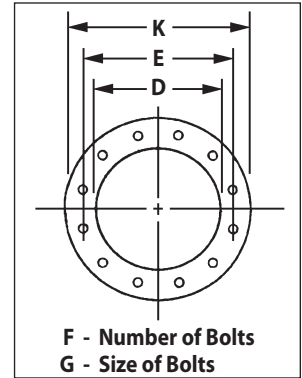
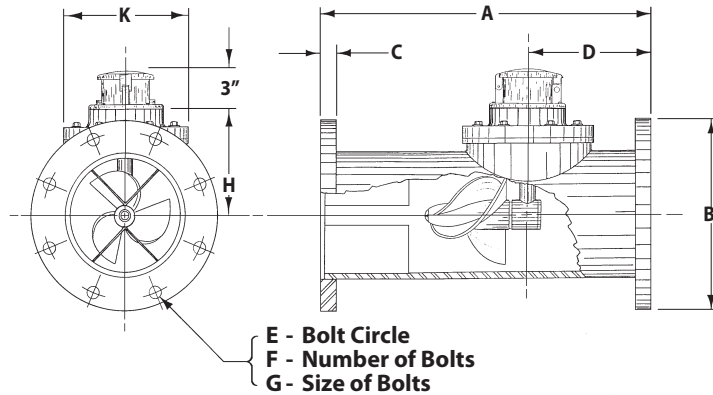
Ordering Info

Meters must be specified by the customer and order should include the following:

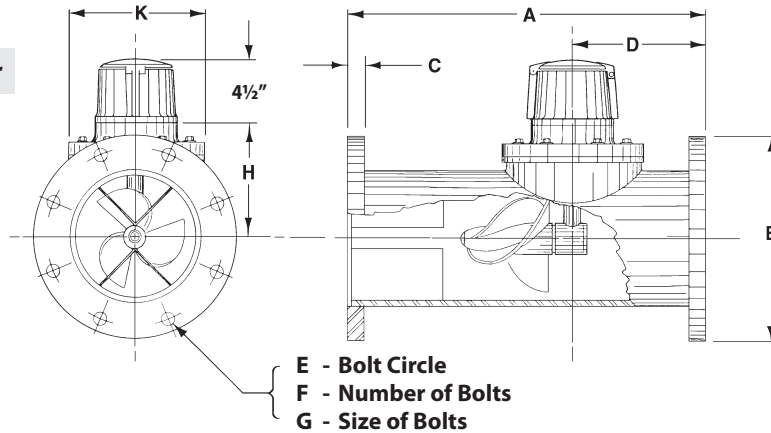
- Minimum and maximum flow ranges
- Temperature of the meter environment
- Totalizer dial units required
- Type of materials/construction needed
- Optional equipment desired.

MLE Dimensions

Indicator



Indicator-totalizer

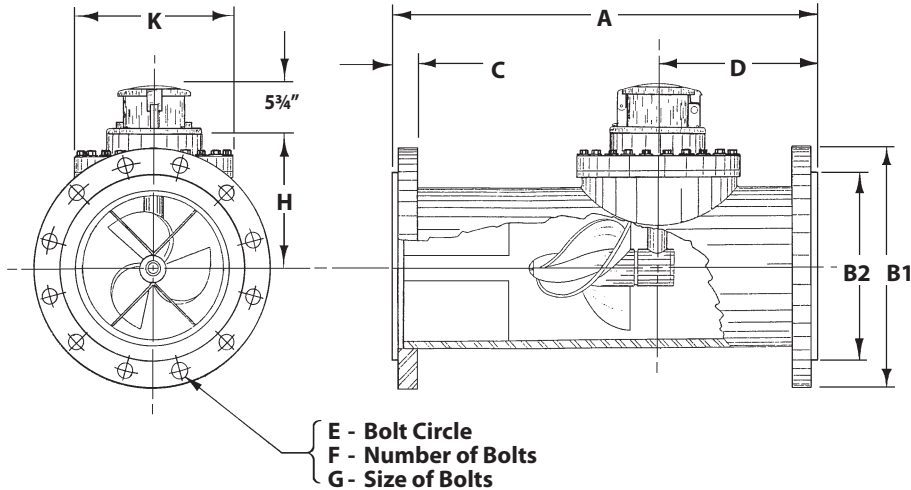


Meter & Pipe size (inches)	Flow Ranges, GPM		Dimensions									Est. Shipping Weight (lbs.)
	Flow Ranges, Standard Construction Min - Max - Int	High Velocity Construction Min - Max	A	B	C	D	E	F	G	H	K	
2	40-160-225	N/A	18	6	5/8	7	4 3/4	4	5/8	5 1/4	9	70
3	45-250-350	N/A	18	7 1/2	5/8	7	6	4	5/8	5 1/4	9	70
4	55-500-700	200-700	18	9	5/8	7	7 1/2	8	5/8	5 1/4	9	80
6	120-1200-1500	300-1500	22	11	11/16	9	9 1/2	8	3/4	6 1/4	9	150
8	150-1500-2000	400-2500	24	13 1/2	11/16	9	11 3/4	8	3/4	7 1/4	9	170
10	180-2000-3000	500-3500	26	16	11/16	10	14 1/4	12	7/8	8 1/2	11	230
12	200-3000-3500	800-5000	28	19	13/16	10	17	12	7/8	9 1/2	11	288
14	300-4000-4500	1000-6000	42	21	15/16	12	18 3/4	12	1	10 1/2	13 1/2	396
16	400-5000-6000	1200-7500	48	23 1/2	1	12	21 1/4	16	1	11 1/2	13 1/2	547
18	700-6000-7500	1500-9000	54	25	11/16	15	22 3/4	16	11/8	12 1/2	13 1/2	665
20	850-8000-9000	2000-12000	60	27 1/2	11/8	15	25	20	11/8	13 1/2	13 1/2	780
24	1000-10000-13500	3000-15000	72	32	1 1/4	18	29 1/2	20	1 1/4	17 1/2	21	1250
30	1800-15000-21000	4000-25000	84	38 3/4	13/8	18	36	28	1 1/4	20 1/2	21	2010
36	2000-20000-30000	5000-35000	96	46	15/8	20	42 3/4	32	1 1/2	23 1/2	21	2840
42	3000-30000-40000	6000-50000	96	53	1 3/4	24	49 1/2	36	15/8	28	32	4300
48	5500-35000-50000	7000-60000	96	59 1/2	17/8	24	56	44	15/8	31	32	4730

Standard construction will be supplied for all main line meters unless special flow range, materials, or construction are required.

MLF Dimensions

FlowCom register



Meter & Pipe size (inches)	Flow Ranges, GPM		Dimensions										Est. Shipping Weight (lbs.)
	Standard Construction Min - Max - Int	High Velocity Construction Min - Max	A	B1	B2	C	D	E	F	G	H	K	
2	40-160-225	N/A	18	6 1/2	3 5/8	7/8	7	5	8	3/4	5 3/16	9	85
3	45-250-350	N/A	18	8 1/4	5	1 1/8	7	6 5/8	8	3/4	5 3/16	9	85
4	55-500-700	200-700	18	10	6 3/16	1 1/8	7	7 7/8	8	3/4	5 3/16	9	122
6	120-1200-1500	300-1500	22	12 1/2	8 1/2	1 3/8	9	10 5/8	12	3/4	6 1/4	9	167
8	150-1500-2000	400-2500	24	15	10 5/8	1 9/16	9	13	12	7/8	7 1/4	9	237
10	180-2000-3000	500-3500	26	17 1/2	12 3/4	1 5/8	10	15 1/4	16	1	8 1/2	11	310
12	200-3000-3500	800-5000	28	20 1/2	15	1 13/16	10	17 3/4	16	1 1/8	9 1/2	11	400
14	300-4000-4500	1000-6000	42	23	16 1/4	1 15/16	12	20 1/4	20	1 1/8	10 1/2	13 1/2	600
16	400-5000-6000	1200-7500	48	25 1/2	18 1/2	2 1/16	12	22 1/2	20	1 1/4	11 1/2	13 1/2	800
18	700-6000-7500	1500-9000	54	28	21	2 3/16	15	24 3/4	24	1 1/4	12 1/2	13 1/2	1080
20	850-8000-9000	2000-12000	60	30 1/2	23	2 7/16	15	27	24	1 1/4	13 1/2	13 1/2	1260
24	1000-10000-13500	3000-15000	72	36	27 1/4	2 11/16	18	32	24	1 1/2	17 3/4	23	2040
30	1800-15000-21000	4000-25000	84	43	35	2 15/16	18	39 1/4	28	1 3/4	20 3/4	23	3220
36	2000-20000-30000	5000-35000	96	50	42	3 3/16	20	46	32	2	23 3/4	23	4550
42	3000-30000-40000	6000-50000	96	57	50 7/16	3 7/16	24	52 3/4	36	2	28	36	5900
48	5500-35000-50000	7000-60000	96	65	58 7/16	3 9/16	24	60 3/4	40	2	31	36	7200

Standard construction will be supplied for all main line meters unless special flow range, materials, or construction are required.

Part Numbers, Digital Registers

ML															
CONNECTION OPTIONS:															
Flanged End 150 PSI (ML03/ML04)		E													
Flanged End 300 PSI (ML08)		F													
METER SIZE															
2" Top Plate Meter	02														
3" Top Plate Meter	03														
4" Top Plate Meter	04														
6" Top Plate Meter	06														
8" Top Plate Meter	08														
10" Top Plate Meter	10														
12" Top Plate Meter	12														
14" Top Plate Meter	14														
16" Top Plate Meter	16														
18" Top Plate Meter	18														
20" Top Plate Meter	20														
24" Top Plate Meter	24														
30" Top Plate Meter	30														
36" Top Plate Meter	36														
42" Top Plate Meter	42														
48" Top Plate Meter	48														
Tube Options															
AWWA Class D Standard Tube Length		A													
ANSI Flange (150) Standard Tube Length		B													
Non Standard Tube		X													
Prop Options															
Standard		1													
High Velocity		2													
Standard Velocity Slip on Seperator		3													
High Velocity Slip on Seperator		4													
Register Options															
Flowcom (FC200)		F													
Flow Connect (FC Smart Part on 2nd Line)		T													
Output Options															
No Outputs															
Open Collector Pulse		1													
4-20mA Analog Only		2													
4-20mA Analog + Open Collector Pulse		3													
Output Cable Options															
No Output Cables															
6 ft		C1													
15 ft		C2													
25 ft		C3													
50 ft		C4													
75 ft		C5													
100 ft		C6													
150 ft		C8													

continued on next page

Part Numbers, Digital Registers (cont.)

ML														
Smart Output Protocol / Telemetry Options														
No AMI Outputs/Telemetry Options														
Sensus Protocol (6ft cable, Nicor Connector hardwired only)														
													SEN	
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)														
													IT6	
Itron 9 digit [100W] Protocol (6ft cable, Nicor Connector hardwired only)														
													IT9	
Neptune Protocol (6ft cable, Nicor Connector hardwired only)														
													NEP	
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	
Register Remote and Extension Options														
Meter Mount (Standard)														
													R06	
6 ft Cable Remote Mount (Flowcom only)														
													R25	
25 ft Cable Remote Mount (Flowcom only)														
													R50	
50 ft Cable Remote Mount (Flowcom only)														
													006	
6" Long Extension														
													XXX	
1" Increments for Extensions Lengths														
													240	
240" Maximum extension length														
SPECIAL OPTIONS														
High Temp Prop and Seals														
													H	
No Batteries, Battery Tray Options														
Includes Batteries (Standard)														
No Batteries (Alkaline Tray)														
													NBA	
No Batteries (Lithium Tray)														
													NBL	

Part Numbers, Mechanical Registers

ML							
CONNECTION OPTIONS:							
Flanged End 150 PSI (ML03/ML04)		E					
Flanged End 300 PSI (ML08)		F					
METER SIZE							
2" Top Plate Meter	02						
3" Top Plate Meter	03						
4" Top Plate Meter	04						
6" Top Plate Meter	06						
8" Top Plate Meter	08						
10" Top Plate Meter	10						
12" Top Plate Meter	12						
14" Top Plate Meter	14						
16" Top Plate Meter	16						
18" Top Plate Meter	18						
20" Top Plate Meter	20						
24" Top Plate Meter	24						
30" Top Plate Meter	30						
36" Top Plate Meter	36						
42" Top Plate Meter	42						
48" Top Plate Meter	48						
Tube Options							
AWWA Class D Standard Tube Length		A					
ANSI Flange (150) Standard Tube Length		B					
Non Standard Tube		X					
Prop Options							
Please select a value							
Standard		1					
High Velocity		2					
Standard Velocity Slip on Seperator		3					
High Velocity Slip on Seperator		4					
Register Options							
Please select a value							
Totalizer		1					
Indicator/Totalizer		2					
Output Options							
No Outputs							
4-20 Analog Only (TR15/TR16)		A					
Dry Contact Pulse & 4-20 Analog (TR04/TR12 + TR15/TR16)		B					
Dry Contact Pulse (TR04/TR12)		C					

continued on next page

FlowCom Digital Register Specification

Physical Specifications

Electronic Housing	Diecast aluminum, powder coated enclosure w/ tamper resistant seal, 6½" x 6½" x 43/8" tall
Digital register Dimensions	See "Dimensions" section for meter mount and remote mount digital register dimensions.
Power	Battery: Standard: three 3.6V lithium-thionyl chloride (Li-SOCl ₂) D size batteries
Electrical Connections	Optional shielded cable for pulse out

Performance and Operational Specifications

Battery Life	Five-year expected battery life, five-year battery warranty
Location	Indoor or outdoor use
Altitude	Operating: 2000 meters Storage: 12,000 meters
Operating Temperature	-4° to 140° F (-20° to 60° C)
Storage Temperature	-4° to 140° F (-20° to 60° C)
Relative Humidity	0% to 100%
IP Rating	IP67 Die cast aluminum digital register
Outputs	<p>Digital output: Digital pulse (open collector) output for volumetric</p> <ul style="list-style-type: none"> - Two isolated digital pulse (open collector) outputs for volumetric - AMI output <p>Analog output: 4-20mA: Galvanically Isolated, 16 Bit resolution. All power configurations (including battery).</p> <p>Note: 9-30 VDC loop power required (not supplied via digital register)</p>

Display and Measurement

Display	<ul style="list-style-type: none"> • 2-Line LCD display (no backlight) • Non-volatile memory • Anti-reverse totalizer (standard) • Total (to 9 digits of precision) 	<ul style="list-style-type: none"> • Flow rate and velocity (to 5 digits of precision) • Two alarms: low battery and empty pipe (optional) • Opening lid activates display
Digits	5 Rate, 9 Total	
Units	<p>GPM Gallons per minute</p> <p>MGD Mega gal per day</p> <p>CFS Cubic feet per second</p> <p>MLD Megaliters per day</p> <p>LPS Liters per second</p> <p>CMH Cubic meters per hour</p> <p>LPM Liters per minute</p> <p>GPH Gallons per hour</p> <p>IGM Imperial gal per minute</p> <p>MI9 Miners inch (9G)</p> <p>MI1 Miners inch (11.22G)</p> <p>APD Acre feet per day</p>	<p>KLH Kiloliters per hour</p> <p>LPH Liters per hour</p> <p>CMM Cubic meters per minute</p> <p>CFM Cubic feet per minute</p> <p>CFM Cubic feet per minute</p> <p>B5M Barrels per minute (55G)</p> <p>B5H Barrels per hour (55G)</p> <p>B5D Barrels per day (55G)</p> <p>B4M Barrels per minute (42G)</p> <p>B4H Barrels per hour (42G)</p> <p>B4D Barrels per day (42G)</p>

FlowCom Digital Register Specification (cont.)

Totalizer Units	GAL	Gallons	AIN	Acre Inch
	CUF	Cubic Feet	TON	Ton (Short)
	AFT	Acre Feet	MM1	Miners Inch Minute (11.22G)
	CUM	Cubic Meters	MM9	Miners Inch Minute (9G)
	LIT	Liters	MH1	Miners Inch Hour (11.22G)
	MML	Megaliter	MD1	Miners Inch Day (11.22G)
	MTT	Metric Ton (KL)	MH9	Miners Inch Hour (9G)
	B31	Barrel (31G)	MD9	Miners Inch Day (9G)
	B42	Barrel (42G)	KGL	Kilo Gallons
	B46	Barrel (46G)	MGL	Mega Gallons
	B55	Barrel (55G)	IN3	Cubic Inch
	IMG	Imperial Gallon		
	Data Logger	Standard with all models, minimum of five years of data stored (4gb)		

Other Specifications

Options and Accessories

- Data Logger - included as standard with five years of data storage at default (12hr) interval. (Cable sold separately)
- AC, DC, and battery powered available

FlowCom Part Number Matrix

FC2							
Product Line							
McCrometer		00					
Water Specialties		01					
Assembly Component Options							
Conversion Kit (From Mechanical)		K					
Flowcom (FC100 to FC200) Upgrade Kit		R					
Flowcom (FC200) Replacement Kit		F					
Output Options							
No Outputs							
Open Collector Pulse		1					
4-20mA Analog		2					
4-20mA Analog and Open Collector Pulse		3					
Output Cable Options							
No Output Cables							
6 ft		C1					
15 ft		C2					
25 ft		C3					
50 ft		C4					
75 ft		C5					
100 ft		C6					
150 ft		C8					
Smart Output Protocol / Telemetry Options							
No AMI Outputs/Telemetry Options							
Sensus Protocol (6ft cable, Nicor Connector hardwired only)		SEN					
Itron 6 digit Protocol (6ft cable, Nicor Connector hardwired only)		IT6					
Itron 9 digit [100W] Protocol (6ft cable, Nicor Connector hardwired only)		IT9					
Neptune Protocol (6ft cable, Nicor Connector hardwired only)		NEP					
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					
Register Remote and Extension Options							
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					
No Batteries, Battery Tray Options							
Includes Batteries (Standard)							
No Batteries (Alkaline Tray)		NBA					
No Batteries (Lithium Tray)		NBL					

FlowConnect Specifications

Communication

Network Type	Cellular	Satellite
Protocols	GSM/GPRS	Iridium
Operating Frequency (MHz)	824–849	1616-1626.5
	869–894	
	1850–1910	
	1930–1990	
	1710–1755	
Antenna	External Bulkhead Extension TNC Antenna 800/1800/1900 MHz	External Bulkhead Extension TNC Antenna 1,600 Mhz

Power

Batteries	Batteries can be replaced by user on-site Battery Only: 2 Primary D-Cells 3.6V 13Ah (Both batteries need to be replaced at the same time) Rechargeable: 1 Primary D-Cell 3.6V and 3 Secondary C-Cells, 1.2V in series
External Power	Requires Rechargeable Battery Configuration listed above. Recommended 9-12 VDC, 0-1000mA Max: 14.5 VDC (Power supply or solar panel)
Recommended Battery Replacement Interval	Battery Only: 3 years (Daily Report Interval) Rechargeable: 4 years

Environmental

Operating Temperature	- 30°C to 70°C (-22°F to 158°F)
Electrical / Mechanical Protection	All electrical components are grounded to fluid column and pipe. Manufactured in accordance with IP-67 Standards and ESD-safe
Environmental Protection	Ingress Protection (Dust Tight / Water Tight) to IP67 Vibration proof while operating: Validated Vibration and 20G Sinusoidal testing to JEDEC 22B103B Section 4.3, Table 3, Service Condition C, for all axis and 20G sin sweep 20 - 2,000Hz for all axis.
Tamper Protection	Factory installed tamper-evident wire lock system

FlowConnect Specifications (cont.)

Other Characteristics

Mounting	Top Plate compatible with any McCrometer Propeller or Water Specialties (Digital Register Only)
External Interface	Five-pin serial-USB cable
Flow Indicator	Digital Register or McPropeller Mechanical Register
Operating Temperature	- 30°C to 70°C (-22°F to 158°F)
Inputs	Two analog sensors, 1 pulse accumulator (for rain gauge)
Outputs	Mechanical Register: None Digital Register: 4-20 mA, Open Collector Pulse, Dry Contact Pulse, Optically Isolated Pulse (via 5-pin output cable)
Data Collection Method	Digital Register: Serial interface between FlowConnect and digital register allows FlowConnect to read totalizer and rate value directly. No pulse counting required and always a perfect match. Mechanical Register (McPropeller only): Pulse counter and high-low digital signal for forward-reverse pulses. Accuracy between meter and Web totalizer: ±0.25%
Data Storage	Capable of storing up to 1,000 reports in local memory

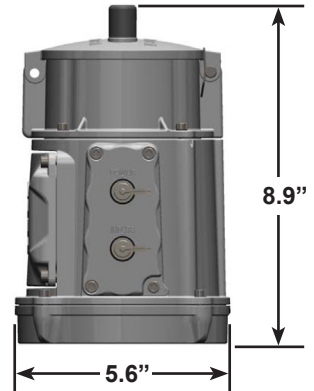
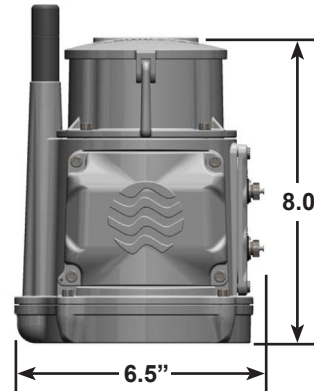
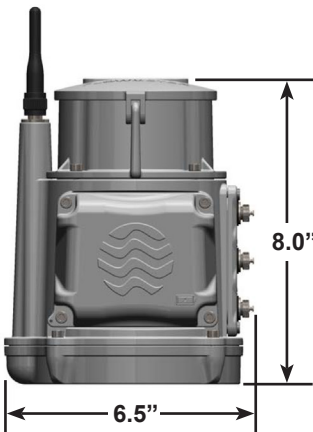
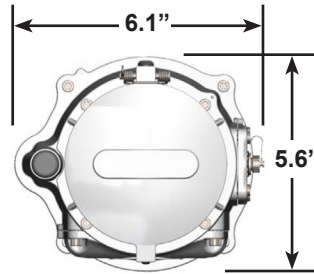
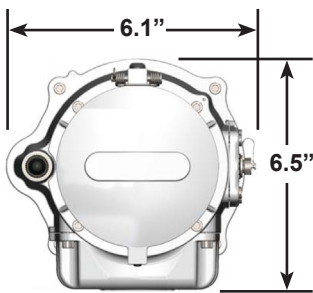
Accessories

Optional Protective Cover	Gray boot cover, p/n TOB065	
Serial Accessories	200.720.542 serial-USB cable	
Power Accessories	Rechargeable: 200.723.520 2.5W 220mA Solar Panel 200.733.522 5W 540 mA Solar Panel 200.720.523 115V Power Supply Battery Only: No Power Accessories	
Sensor Accessories	Adcon PA1 Cables - Pressure 10bar 500.000.120 - 16 ft. Cable 500.000.119 - 32 ft. Cable 200.733.048 - RGI Rain Gauge 200 200.720.510 - Y Cable 200.733.902 - A902 1/2/3 Cable	
Communication Accessories	Cellular	Satellite
	900.000.590 TNC Rigid Antenna (Included)	TOB039 Helical Antenna (Included)
	900.000.565 Directional Antenna	MCC-510-AI-A Extension Antenna, Magnet Mount
	900.000.567 Extension Antenna	

FlowConnect Dimensions

Dimensions

Network Type	Cellular	Satellite
Unit Enclosure Size	W x D x H	W x D x H
Non-Rechargeable	6.5" x 5.6" x 9.9"	6.5" x 5.6" x 9.8"
Rechargeable	6.5" x 6.1" x 9.9"	6.5" x 6.1" x 9.8"
Packaged Dimensions	11" x 11" x 11"	11" x 11" x 11"
Packaged Weight	6 lbs.	6 lbs.



Specification Sheet

ML Series Flanged Mainline Flow Meter



McCrometer, Inc.
3255 West Stetson Avenue
Hemet, CA 92545 USA
Tel: 951-652-6811
800-220-2279
Fax: 951-652-3078
customerservice@mccrometer.com
www.mccrometer.com