Propeller Meter

Specification Sheet
M0300 Strap-on Saddle Flow Meter

DESCRIPTION

All Mc Propeller flow meters are manufactured to comply with applicable provisions of AWWA Standard No. C704-02 for propeller-type flow meters.

FEATURES

Saddle

- The fabricated stainless steel saddle eliminates the fatigue-related breakage common to cast iron and aluminum saddles and provides unsurpassed corrosion protection.
- Fabricated stainless steel construction offers the additional advantage of being flexible enough to conform to out-of-true pipe.

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 M0300 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.

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 with a magnetically coupled drive, encased within a protective vinyl liner.

Typical Applications

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

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

McCROMETER

SPECIFICATIONS

Performance

Accuracy / Repeatability	• ±2% of reading guaranteed throughout full range • ±1% over reduced range • Repeatability 0.25% or better
Range	4" to 16"
Maximum Temperature	(Standard Construction) 160°F constant
Pressure Rating	150 psi. Consult factory for higher rated version.

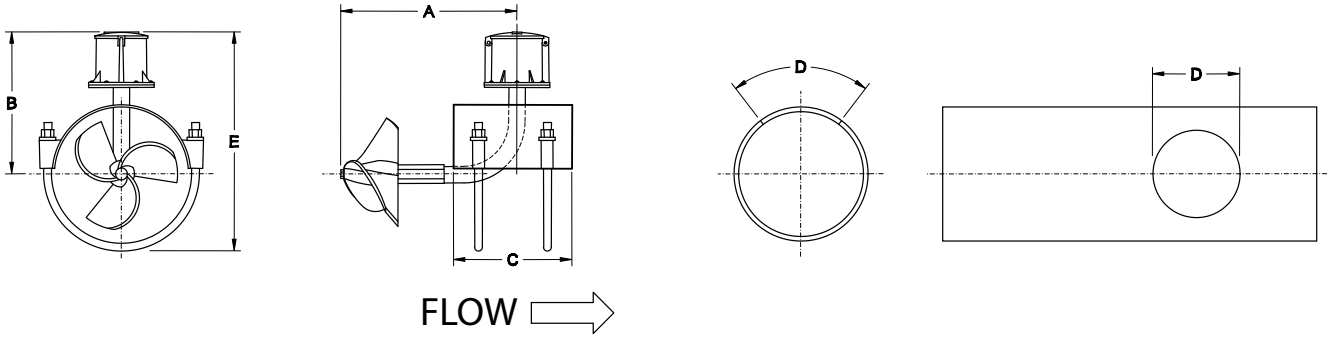
Materials

Saddle	304 stainless steel construction
Bearing Assembly	Impeller shaft is 316 stainless steel. Ball bearings are 440C stainless steel
Magnets	(Permanent type) Alnico
Bearing Housing	304 stainless steel standard, 316 stainless steel optional
Register	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.
Impeller	Impellers are manufactured of high-impact plastic, retaining their shape and accuracy over the life of the meter.

Options

- Extended warranty
- Register extensions
- High temperature construction, 180°F max
- Marathon bearing assembly for higher than normal flowrates 4" and larger
- Digital register available in all sizes of this model
- A complete line of flow recording / control instrumentation
- Canopy boot
- Saddle can be constructed to fit any outside diameter pipe dimensions, including metric sizes.
- Blank repair saddle
- Can be used on a variety of pipe materials such as steel, plastic, cast iron, cement or asbestos cement
- Straightening vanes

DIMENSIONS



M0300		DIMENSIONS						
Meter and Nominal Pipe Size	in.	4	6	8	10	12	14	16
	mm	102	152	203	254	305	256	406
OD up to	in.	5.5	7.5	9.5	11.5	13.5	15.5	17.5
	mm	140	190	241	292	343	394	444
Minimum Flow	GPM	50	90	100	125	150	250	275
	LPS	3.2	5.7	6.3	7.9	9.5	15.8	17.3
Maximum Flow	GPM	600	1200	1500	1800	2500	3000	4000
	LPS	37.9	75.7	94.6	113.6	157.7	189.3	252.4
Max. Flow w/ Marathon Bearing	GPM	900	1800	2250	2700	3750	4500	6000
Approx. Head Loss in Inches at Max. Flow	in.	23	17	6.75	3.75	2.75	2	1.75
	mm	584	432	171	95	70	51	44
Standard Dial Face *	GPM/ Gal	1000/ 100	1800/ 100	2500/ 100	3K/ 1000	4K/ 1000	6K/ 1000	8K/ 1000
Approx. Shipping Weight-lbs.	lbs	12	17	21	24	28	28	30
	kg	5.4	7.7	9.5	10.9	12.7	12.7	13.6
A	in.	7.625	15	15	15	15	15	15
	mm	194	381	381	381	381	381	381
B	in.	8.25	10.75	10.75	10.75	11.75	13.75	13.75
	mm	210	273	273	273	298	349	349
C	in.	7	8	8	9.5	9.5	9.5	9.5
	mm	178	203	203	241	241	241	241
D	in.	4**	5.125**	6**	7**	7.25	7.25	7.25
	mm	102	130	152	178	184	184	184
E	in.	10.75	14	15	17	19	20.625	21.625
	mm	273	356	381	432	483	524	549

*Indicates the dial face range and multiplier
**Standard pipe only. For other than standard pipe, consult factory for cutout dimensions.

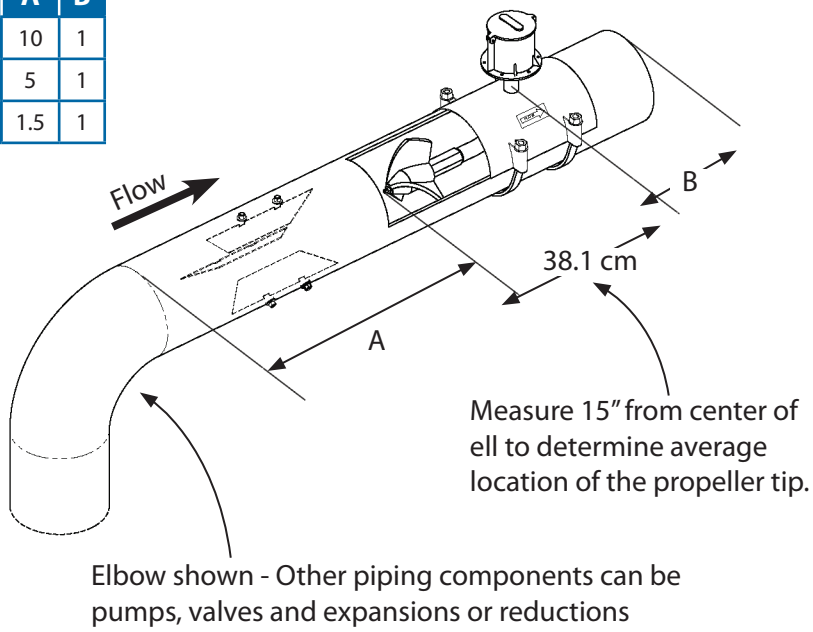
For larger sizes see Model M1400.
McCrometer reserves the right to change design or specification without notice.
Please specify the inside diameter of the pipe when ordering.

INSTALLATION

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

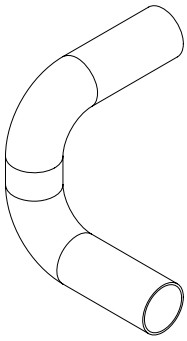
PIPE RUN REQUIREMENTS

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

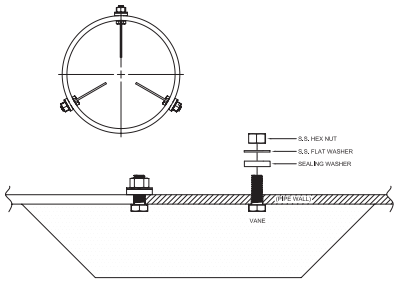


STRAIGHTENING VANES

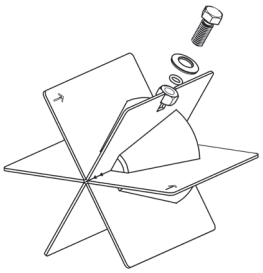
Special attention should be given to systems using two elbows "out of plane" or devices such as a centrifugal sand separator. These cause swirling flow in the line that affect propeller meters. Well developed swirls can travel up to 100 diameters downstream if unobstructed. Since most installations have 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

TOTALIZERS

Typical face plates

Standard register

Optional 7-wheel totalizer

FlowCom register

Mechanical Totalizer

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 Totalizer

The optional FlowCom register displays a flowmeter's flowrate and volumetric total. Available are optional outputs: scaled pulse and/or industry standard 4-20mA signal. The FlowCom can be fitted to any new or existing McCrometer propeller flowmeter.

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.

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