

DESCRIPTION

McCrometer M-Series and Q-Series Main Line Top Plate Flow Meters are manufactured to comply with AWWA Standard No. C704-02 for propeller type flowmeters.

- Model MW5 is designed for a maximum continuous working pressure of up to 150 psi and is fitted with AWWA Class D flanges.
- Model MZ5 is designed for a continuous working pressure of up to 300 psi and is fitted with ANSI B16.5 Class 300 flanges.
- Models MW9, MT9, and MT9 are manufactured in three different end connections:
 - MW9 with beveled ends
 - MG9 with grooved ends
 - MT9 in line sizes 2" to 6" NPT threaded ends

All models can be field-serviced without the need for factory recalibration. The meter flow tubes are coated with fusion-bonded epoxy for maximum corrosion protection and integral flow straightening vanes reduce upstream flow turbulence.

As with all McCrometer propeller flowmeters, standard features include a magnetically coupled drive, instantaneous flowrate indicator and straight reading, six-digit totalizer.

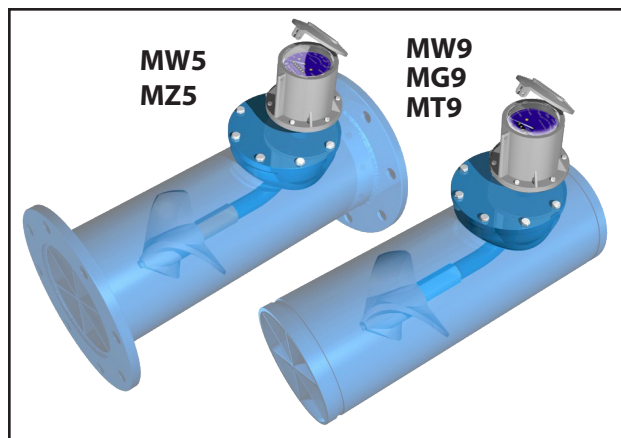
FEATURES

Top Plate / Meter Head Weldment

- The meter head weldment is either stainless steel or fusion-bonded epoxy coated carbon steel for maximum corrosion protection.
- The top plate is either stainless steel (for sizes 2" to 4") or fusion-bonded epoxy coated carbon steel (6" and larger).

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.
- The impeller and drive assembly are easily removed through the top flange connection.



MW5 MZ5 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 from underground pipelines
- Commercial nurseries

The meter flow tubes are coated with fusion-bonded epoxy for maximum corrosion protection, and integral flow straightening vanes reduce upstream flow turbulence.

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 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.

DESCRIPTION

The model QW500 is designed for a maximum continuous working pressure of up to 150 psi and is fitted with ANSI B16.5 Class 150 flanges.

Model QW500 and QZ500 main line propeller flow meters are manufactured to comply with the applicable provisions of the AWWA Standard No. C704-02 for propeller type flowmeters.

The model QZ500 is designed for a continuous working pressure of up to 300 psi and is fitted with ANSI B16.5 Class 300 flanges.

The impeller and drive assembly are easily removed through the top flange connection.

The meter flow tube is fabricated 304 stainless steel for maximum corrosion protection and integral flow straightening vanes reduce upstream flow turbulence.

As with all McCrometer propeller flowmeters, standard features include a magnetically coupled drive, instantaneous flowrate indicator and straight-reading, six-digit totalizer.

FEATURES

Impellers

- Factory lubricated stainless steel bearings are used to support the impeller shaft.
- 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 QW500 and QZ500 can be field-serviced without the need for factory recalibration.
- Impellers are manufactured of high-temp thermoplastic, capable of retaining their shape and accuracy over the life of the meter.

Bearings

- The sealed bearing design limits the entry of materials and fluids into the bearing chamber providing maximum bearing protection.



QW6 QZ5 Typical Applications

The McCrometer propeller meter is preferred for industrial process control and wastewater treatment plants because of its unique self-cleaning design of the support system which prevent solids build up. Typical applications include:

- Industrial process control
- Return activated sludge
- Water and wastewater management
- Valve actuation and control
- Multi-stage pump actuation and control
- Remote indication totalization and recording
- Bi-directional measurement
- Heating/air conditioning systems

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

Part Numbers, Digital Registers

M	XX								
CONNECTION OPTIONS:									
Flanged End 150 PSI (AWWA CI D)	W5								
Flanged End 300 PSI (ANSI 300#)	Z5								
Grooved End	G9								
Beveled End	B9								
Threaded End	T9								
METER SIZE									
2" Top Plate Meter	02								
2.5" Top Plate Meter	01								
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									
Standard Length Tube	A								
ANSI 150# Flange Standard Length Tube (MW Only)	B								
Non Standard Tube	X								
Bearing									
Standard	1								
Marathon	2								
SS316	3								
SS316 Marathon	4								
SS316 Ceramic	5								
Register Options									
Flowcom	D								
Flowcom Non Programmable	N								
Flow Connect (FC Smart Part on 2nd Line)	T								

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Part Numbers, Digital Registers (cont.)

Q	XX					-	-	
CONNECTION OPTIONS:								
Flanged End 150 PSI (ANSI 150#)	W5							
Flanged End 300 PSI (ANSI 300#)	Z5							
METER SIZE								
2" Top Plate Meter	02							
2.5" Top Plate Meter	01							
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							
Tube Options								
Standard Tube	A							
Non Standard Tube	X							
Bearing								
Standard	1							
Marathon	2							
SS316	3							
SS316 Marathon	4							
SS316 Ceramic	5							
Register Options								
Flowcom	D							
Flowcom Non Programmable	N							
Flow Connect (FC Smart Part on 2nd Line)	T							
Output Options								
No Outputs	-							
Open Collector Pulse(Flowcom 01)	1							
Opto Isolated Pulse & 4-20 Analog (Flowcom 02)	2							
Dry Contact Pulse & 4-20 Analog (Flowcom-03)	3							
Sensus Only (Flowcom 06)	6							
OC Pulse & Sensus (Flowcom-07)	7							
Opto Isolated Pulse & 4-20 Analog & Sensus (Flowcom-08)	8							
Dry Contact Pulse & 4-20 Analog & Sensus (Flowcom-09)	9							

Part Numbers, Digital Registers (cont.)

Q		XX					-	-	
Output Cable Options									
No Outputs								-	
6 ft								C1	
15 ft								C2	
25 ft								C3	
50 ft								C4	
75 ft								C5	
100 ft								C6	
125 ft								C7	
150 ft								C8	
7 pin Female pigtail Telemetry ready (Output Option 1 Only [Flowcom-05])								T1	
7 pin Male 25ft Telemetry ready (Output Option 1 Only)								T2	
7 pin Male 50ft Telemetry ready (Output Option 1 Only)								T3	
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	
6" Long Extension (Mech or Dlgital)								006	
7" Long Extension (Mech or Dlgital)								007	
8" Long Extension (Mech or Dlgital)								008	
1" Increments for Extensions Lengths								XXX	
150" Maximum extension length								150	

Part Numbers, Mechanical Registers

M	XX								
CONNECTION OPTIONS:									
Flanged End 150 PSI (AWWA CI D)	W5								
Flanged End 300 PSI (ANSI 300#)	Z5								
Grooved End	G9								
Beveled End	B9								
Threaded End	T9								
METER SIZE									
2" Top Plate Meter	02								
2.5" Top Plate Meter	01								
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									
Standard Length Tube	A								
ANSI 150# Flange Standard Length Tube	B								
Non Standard Tube	X								
Bearing									
Standard	1								
Marathon	2								
SS316	3								
SS316 Marathon	4								
SS316 Ceramic	5								

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Part Numbers, Mechanical Registers (cont.)

M	XX			-	-	
Register Options						
	6 Wheel	1				
	6 Wheel Anti Reverse	2				
	6 Wheel with Index	3				
	6 Wheel Anti Reverse & Index	4				
	7 Wheel	5				
	7 Wheel Anti Reverse	6				
	7 Wheel with Index	7				
	7 Wheel Anti Reverse & Index	8				
Output Options						
	No Outputs	-				
	4-20 Analog Only (E7000-000)	A				
	Dry Contact Pulse & 4-20 Analog (E7000-001)	B				
	Opto Isolated Pulse & 4-20 Analog (E7000-002)	C				
	Mechanical Datalogger (MC20-D2)	E				
	Non Powered Pulse (EA618-02)	G				
	CMOS Square Wave Pulse (EA631-002)	J				
	Sink to Ground Pulse (EA631-102)	K				
	Dry Contact Pulse (SA100)	L				
Extension Options						
	Meter Mount (Standard)	-				
	6" Long Extension (Mech or Digital)	006				
	7" Long Extension (Mech or Digital)	007				
	8" Long Extension (Mech or Digital)	008				
	1" Increments for Extensions Lengths	XXX				
	150" Maximum extension length	150				
SPECIAL OPTIONS						
	High Temp Prop and Seals (Up to 18")	H				

Part Numbers, Mechanical Registers (cont.)

Q	XX						
CONNECTION OPTIONS:							
Flanged End 150 PSI (ANSI 150#)	W5						
Flanged End 300 PSI (ANSI 300#)	Z5						
METER SIZE							
2" Top Plate Meter	02						
2.5" Top Plate Meter	01						
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						
Tube Options							
Standard Length Tube	A						
Non Standard Tube	X						
Bearing							
Standard	1						
Marathon	2						
SS316	3						
SS316 Marathon	4						
SS316 Ceramic	5						
Register Options							
6 Wheel	1						
6 Wheel Anti Reverse	2						
6 Wheel with Index	3						
6 Wheel Anti Reverse & Index	4						
7 Wheel	5						
7 Wheel Anti Reverse	6						
7 Wheel with Index	7						
7 Wheel Anti Reverse & Index	8						
Output Options							
No Outputs	-						
4-20 Analog Only (E7000-000)	A						
Dry Contact Pulse & 4-20 Analog (E7000-001)	B						
Opto Isolated Pulse & 4-20 Analog (E7000-002)	C						
Mechanical Datalogger (MC20-D2)	E						
Non Powered Pulse (EA618-02)	G						
CMOS Square Wave Pulse (EA631-002)	J						
Sink to Ground Pulse (EA631-102)	K						
Dry Contact Pulse (SA100)	L						

Part Numbers, Mechanical Registers (cont.)

Q		XX						-	
Extension Options									
Meter Mount (Standard)									-
6" Long Extension (Mech or Digital)									006
7" Long Extension (Mech or Digital)									007
8" Long Extension (Mech or Digital)									008
1" Increments for Extensions Lengths									XXX
150" Maximum extension length									150

M-SERIES FIXED ELL FLOW METER SPECIFICATIONS

	MW5 MZ5	MW9 MG9 MT9	QW5 QZ5
Performance			
Accuracy / Repeatability	<ul style="list-style-type: none"> ±2% of reading guaranteed throughout the full range ± 1% over the reduced range Repeatability 0.25% or better 	±2% of reading guaranteed throughout range. ±1% over reduced range. Repeatability 0.25% or better.	±2% of reading guaranteed throughout range.
Range	2" to 36"	2" to 24"	2" to 24"
Maximum Temperature	(Standard construction) 160°F constant	(Standard construction) 160°F constant	250°F constant in sizes 2" - 10"; 160°F in larger sizes
Pressure Rating	<ul style="list-style-type: none"> Model MW500: 150 psi Model MZ500: 300 psi 	150 psi	Model QW500: 150 psi, Model QZ500: 300psi

Materials			
Top Plate	Stainless steel (2" to 4") or fusion-bonded epoxy coated carbon steel (6" and larger)	Stainless steel (2" to 4") or fusion-bonded epoxy coated carbon steel (6" and larger)	Stainless steel
Top Plate Weldment	Stainless steel (2" to 4") or fusion-bonded epoxy coated carbon steel (6" and larger)	Stainless steel (2" to 4") or fusion-bonded exoxy coated carbon steel (6" and larger)	Stainless steel
Spool	Carbon steel standard, stainless steel optional	Carbon steel standard, stainless steel optional	Stainless steel
Coating	Fusion-bonded epoxy	Fusion-bonded epoxy	
Body	Epoxy-coated carbon steel pipe conforming to ANSI/ASME pipe schedules	Epoxy-coated carbon steel pipe conforming to A.S.A pipe schedules	
Magnets	(Permanent type) Alnico	(Permenant type) Alnico	
Bearing Assembly		Impeller shaft is 316 stainless steel. Ball bearings are 440C stainless steel	316 stainless steel
Bearing Housing	<ul style="list-style-type: none"> For models 2" to 16": 304 stainless steel standard, 316 stainless steel optional For models 18" and larger: Brass standard, 316 stainless steel optional 	<ul style="list-style-type: none"> For models 2" to 16": 304 stainless steel standard, 316 stainless steel optional For models 18" and larger: Brass standard, 316 stainless steel optional 	(Permanent type) Alnico
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.	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.	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 cover with locking hasp.

Impeller

Impellers are manufactured of high-impact plastic, retaining their shape and accuracy over the life of the meter. High temperature impeller is optional.

Impellers are manufactured of high-impact plastic, retaining their shape and accuracy over the life of the meter. High temperature impeller is optional.

Impellers are manufactured of high-temp thermoplastic, retaining their shape and accuracy over the life of the meter.

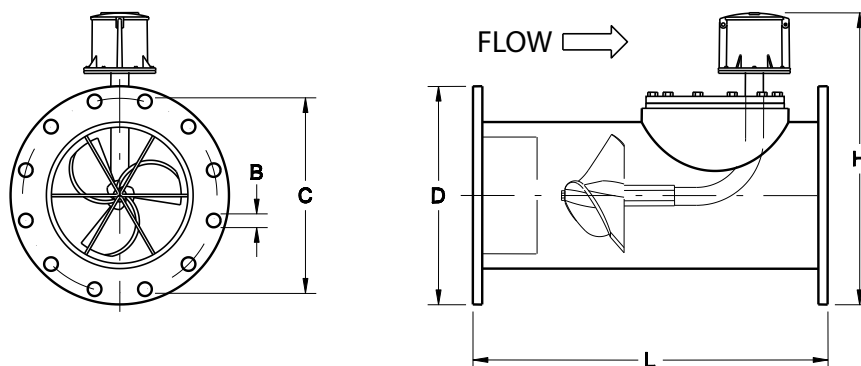
Options

- International flange standards available
- Other than standard laying lengths available
- Register extensions available
- All stainless steel construction
- High temperature construction
- "Over Run" bearing assembly for higher-than-normal flowrates
- Electronic propeller meter available in all sizes of this model
- A complete line of flow recording/control instrumentation
- Certified calibration test results
- Canopy boot

- Register extensions available
- All stainless steel construction
- High temperature construction
- "Over Run" bearing assembly for higher-than-normal flowrates (available only on 4" and larger)
- Electronic propeller meter available in all sizes of this model
- A complete line of flow recording/control instrumentation
- Certified calibration test results
- Stainless steel bearing housing
- Canopy boot

- Extended warranty
- International flange standards available
- Customer lay lengths available
- Register extensions available
- Marathon bearing assembly for higher-than-normal flow rates (available only on 4" and larger)
- Digital register available in all sizes of this model
- A complete line of flow recording/control instrumentation
- Canopy boot

DIMENSIONS - MW5 MZ5



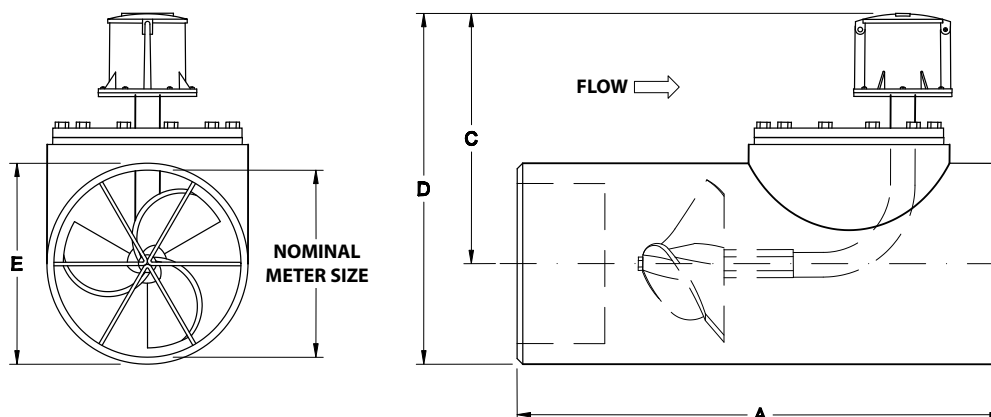
MW5/MZ5	DIMENSIONS														
Meter and Nominal Pipe Size	2	2 ½	3	4	6	8	10	12	14	16	18	20	24	30	36
Minimum Flow U.S. GPM	40	40	40	50	90	100	125	150	250	275	400	475	700	1200	1500
Maximum Flow U.S. GPM	250	250	250	600	1200	1500	1800	2500	3000	4000	5000	6000	8500	12,500	17,000
Max. Flow w/ Marathon Bearing				900	1800	2250	2700	3750	4500	6000	7500	9000	12750	18750	25500
Approx. Head Loss in Inches at Max. Flow	29.50	29.50	29.50	23.00	17.00	6.75	3.75	2.75	2.00	1.75	1.50	1.25	1.00	1.00	1.00
Standard Dial Face (GPM/Gal) *	250/10	250/10	250/10	1000/100	1800/100	2500/100	3000/1000	4000/1000	6000/1000	8000/1000	10000/1000	10000/10000	15000/10000	15000/10000	30000/10000
MW5															
Approx. Shipping Weight-lbs.	36	36	43	54	115	135	197	325	465	530	744	890	1,293	1450	1650
B (inches)	¾	¾	¾	¾	7/8	7/8	1	1	1 ⅛	1 ⅛	1 ¼	1 ¼	1 ⅜	1 ⅜	1 ⅝
C (inches)	4 ¾	5 ½	6	7 ½	9 ½	11 ¾	14 ¼	17	18 ¾	21 ¼	22 ¾	25	29 ½	36	42 ¾
D (inches)	6	7	7 ½	9	11	13 ½	16	19	21	23 ½	25	27 ½	32	38 ¾	46
H (inches)	11 ¾	12 ¼	12 ½	15 ¼	16 ¼	18 ½	21 ¾	24 ¼	25 ¼	28 ½	29 ¼	32 ½	36 ¾	42 ¾	49 ¼
L (inches)	14	16	16	20	22	24	26	28	42	48	54	60	60	60	60
No. of Bolts per Flange	4	4	4	8	8	8	12	12	12	16	16	20	20	28	32
No. of Topplate Bolts	6	6	6	6	8	8	12	12	12	12	16	16	16	16	16
MZ5															
Approx. Shipping Weight-lbs.	50	55	62	90	145	220	340	430	650	820	1,315	1,508	2,165		
B (inches)	¾	7/8	7/8	7/8	7/8	1	1 ⅛	1 ¼	1 ¼	1 ⅜	1 ⅜	1 ⅜	1 ⅝		
C (inches)	5	5 7/8	6 5/8	7 7/8	10 8/8	13	15 ¼	17 ¾	20 ¼	22 ½	24 ¾	27	32		
D (inches)	6 ½	7 ½	8 ¼	10	12 ½	15	17 ½	20 ½	23	25 ½	28	30 ½	36		
H (inches)	12	12 ½	12 7/8	15 ¾	17	19 ¼	22 ½	25	26 ¼	29 ½	32 ¾	34	38 ¾		
L (inches)	20	20	20	24	26	28	30	32	42	48	54	60	60		
No. of Bolts per Flange	8	8	8	8	12	12	16	16	20	20	24	24	24		

*Indicates the dial face range and multiplier

Note: Flanges meet ASTM-A-181 specs. Larger flowmeters on special order.

McCROMETER reserves the right to change design or specifications without notice.

DIMENSIONS - MW9 MG9 MT9



MW9 MG9 MT900		DIMENSIONS												
Meter Size	inches	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
	mm	51	64	76	102	152	203	254	305	356	406	457	508	610
Minimum Flow	GPM	40	40	40	50	90	100	125	150	250	275	400	475	700
	LPS	2.5	2.5	2.5	3.2	5.7	6.3	7.9	9.5	15.8	17.3	25.2	30.0	44.2
Maximum Flow	GPM	250	250	250	600	1200	1500	1800	2500	3000	4000	5000	6000	8500
	LPS	15.8	15.8	15.8	37.9	75.7	94.6	113.6	157.7	189.3	252.4	315.5	378.5	536.3
Maximum Flow w/ Marathon Bearing	GPM	n/a	n/a	n/a	900	1800	2250	2700	3750	4500	6000	7500	9000	12750
Approx. Head Loss in Inches at Max. Flow	inches	29.5	29.5	29.5	23	17	6.75	3.75	2.75	2	1.75	1.5	1.25	1
	mm	749	749	749	584	432	171	95	70	51	44	38	32	25
Standard Dial Face*	GPM/ Gal				1000/ 100	1800/ 100	2500/ 100	3K/ 1000	4K/ 1000	6K/ 1000	8K/ 1000	10K/ 1000	10K/ 10K	15K/ 10K
Approx. Shipping Weight, lbs.	lbs				25	45	80	110	190	232	259	300	596	680
	kg				11	20	36	50	86	105	117	136	270	308
A	inches				16	20	22	24	26	28	42	48	54	60
	mm				406	508	559	610	660	711	1067	1219	1372	1524
B	inches				5.25	5.25	6.25	6.25	8.25	10	13	13	14	16
	mm				133	133	159	159	210	254	330	330	356	406
C	inches				5.25	5.25	6.25	6.25	8.25	10	13	13	14	16
	mm				133	133	159	159	210	254	330	330	356	406
D	inches				10.5	13	14	16	19	21	21.75	24.75	25.75	28.75
	mm				267	330	356	406	483	533	552	629	654	730
H	inches				3.5	4.5	6.5	8.5	10.75	12.75	14	16	18	20
	mm				89	114	165	216	273	324	356	406	457	508
No. of Bolts Per Flange		6	6	6	6	8	8	12	12	12	12	16	16	16

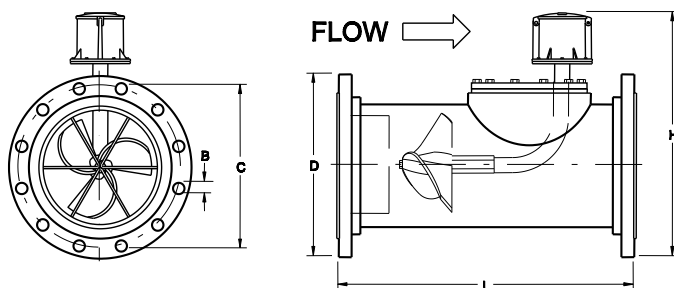
* Indicates the dial face range and multiplier

** SPECIAL NOTE: Reducing fittings (female threaded), are included to adapt the 3-inch model to 2" and 2 1/2" line sizes.

Larger flowmeters on special order.

MT900 available in sizes 2" through 6" only.

DIMENSIONS - QW5 QZ5



QW5 / QZ50	DIMENSIONS												
Meter and Nominal Pipe Size	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
Maximum Flow U.S. GPM	250	250	250	600	1200	1500	1800	2500	3000	4000	5000	6000	8500
Minimum Flow U.S. GPM	40	40	40	50	90	100	125	150	250	275	400	475	700
Approx. Head Loss in Inches at Max. Flow	29.5	29.5	29.5	23	17	6.75	3.75	2.75	2	1.75	1.5	1.25	1
QW5													
Approx. Shipping Weight-lbs.	36	36	43	54	115	135	197	325	465	530	744	890	1293
B (inches)	3/4	3/4	3/4	3/4	7/8	7/8	1	1	1 1/8	1 1/8	1 1/4	1 1/4	1 3/8
C (inches)	4 3/4	5 1/2	6	7 1/2	9 1/2	11 3/4	14 1/4	17	18 3/4	21 1/4	22 3/4	25	29 1/2
D (inches)	6	7	7 1/2	9	11	13 1/2	16	19	21	23 1/2	25	27 1/2	32
H (inches)	11 3/4	12 1/4	12 1/2	14.8	15.8	18.1	21.3	23.8	24.8	28.1	28.8	32.1	36.3
L (inches)	14	16	16	20	22	24	26	28	42	48	54	60	60
No. of Bolts per Flange	4	4	4	8	8	8	12	12	12	16	16	20	20
QZ5													
Approx. Shipping Weight-lbs.	50	55	62	90	145	220	340	430	650	820	1315	1508	2165
B (inches)	3/4	7/8	7/8	7/8	7/8	1	1 1/8	1 1/4	1 1/4	1 3/8	1 3/8	1 3/8	1 5/8
C (inches)	5	5 7/8	6 5/8	7 7/8	10 5/8	13	15 1/4	17 3/4	20 1/4	22 1/2	24 3/4	27	32
D (inches)	6 1/2	7 1/2	8 1/4	10	12 1/2	15	17 1/2	20 1/2	23	25 1/2	28	30 1/2	36
H (inches)	12	12 1/2	12 7/8	15 3/4	17	19 1/4	22 1/2	25	26 1/4	29 1/2	32 3/4	34	38 3/4
L (inches)	20	20	20	24	26	28	30	32	42	48	54	60	60
No. of Bolts per Flange	8	8	8	8	12	12	16	16	20	20	24	24	24

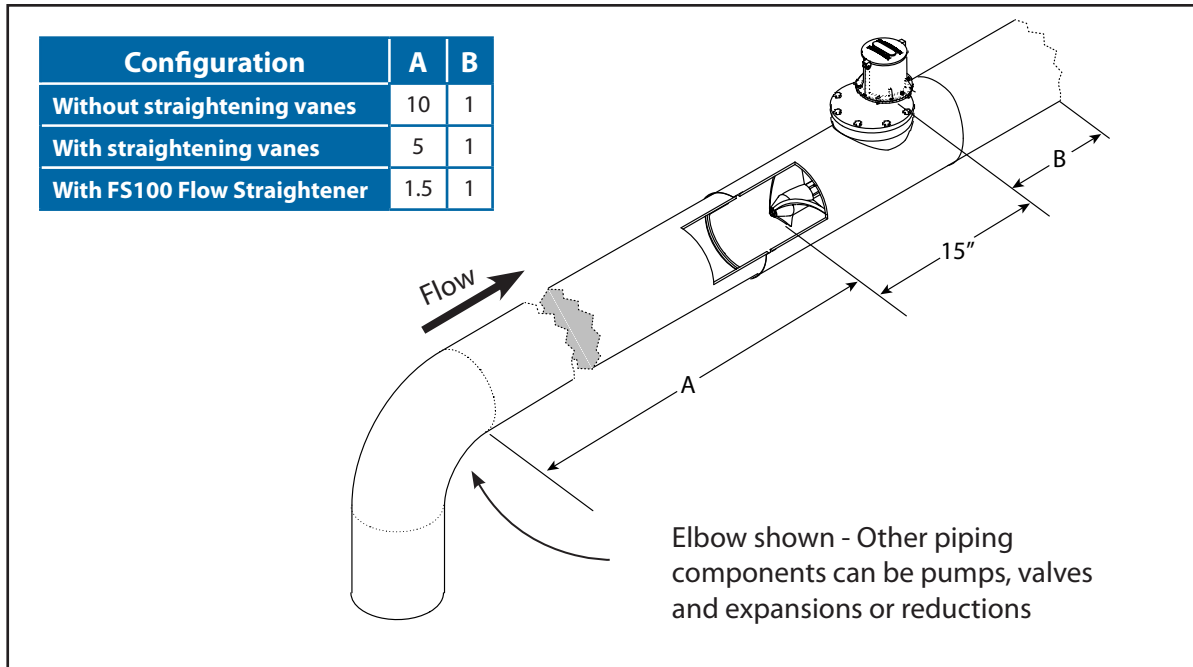
Note: Flanges meet ASTM-A-181 specs.

Larger flowmeters on special order.

INSTALLATION

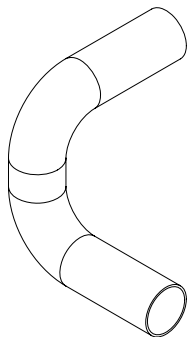
Standard installation is horizontal mount. If the meter is to be mounted in the vertical position, please advise the factory.

PIPE RUN REQUIREMENTS

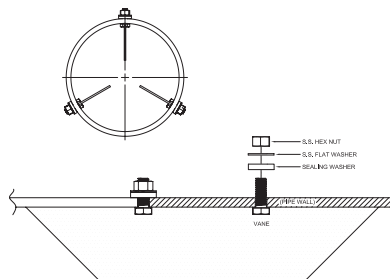


STRAIGHTENING VANES

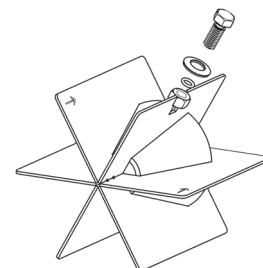
Special attention should be given to systems using two elbows "out of plane" or devices such as a centrifugal sand separator. These cause swirling flow in the line that affect propeller meters. Well developed swirls can travel up to 100 diameters downstream if unobstructed. Since most installations have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

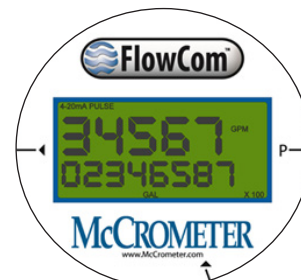
Typical face plates



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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