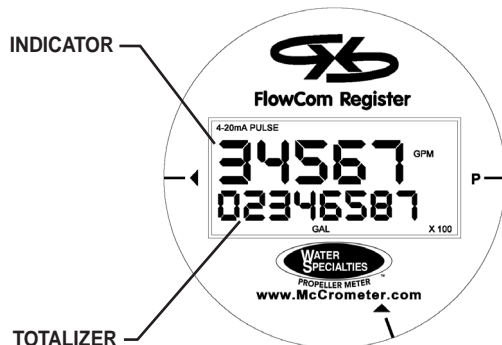




**MODEL ML04-D**  
 150 psi FLANGED TUBE METER  
 SOLID STATE ELECTRONIC PROPELLER METER  
 DIGITAL INDICATOR - TOTALIZER  
 SIZES 2" thru 48"



TYPICAL  
 DIGITAL INDICATOR-TOTALIZER



#### DESCRIPTION

**MODEL ML04-D FLANGED TUBE METERS** are manufactured to the highest standards. Materials used on all meters and flow ranges for the low velocity meter 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 working pressure. Flanged ends are 150 lb. AWWA class D flat 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.

**INSTALLATION** is made similar to placing a short length of flanged end pipe in the line. The meter can be installed vertically, horizontally or inclined on suction or discharge lines. The meter must have a full flow of liquid for proper accuracy. Fully opened gate valves, fittings or other obstructions that tend to set up flow disturbances should be a minimum of five pipe diameters upstream and one pipe diameter downstream from the meter. An optional kit of adapters with up to 100 feet of cable is available to locate the indicator-totalizer at remote locations.

**PROPELLER** is magnetically coupled with the electronic sensor through the sealed gearbox. This completely eliminates water entering the meter assembly, and eliminates all moving parts except for the propeller. 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 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.

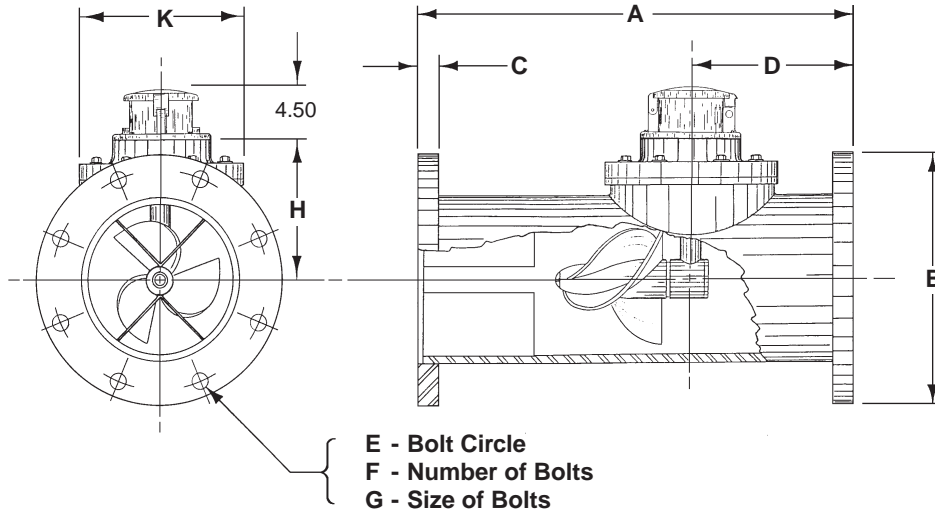
**DIGITAL INDICATOR-TOTALIZER** has a non-volatile EEPROM memory to store totalizer count (updated hourly while running). Features a large two line display. Five digit top line indicates flow rate, and eight digit bottom line provides volumetric flow data. Indicator is available in 22 different units, including GPM, CFS, MGD. Totalizer is available in 20 different units, including Gallons, AF, CF. Units of measurement are user-selectable. Battery life is 6 -10 years. Housing is NEMA 4X rated.

Available with optional 4-20mA and/or pulse output.

#### SPECIFICATIONS

<b>ACCURACY</b>	Plus or minus 2% of actual flow within the range specified for each meter size.
<b>PRESSURE RANGE</b>	Up to 150 PSI maximum working pressure.
<b>TEMPERATURE RANGE</b>	140° F Maximum. Consult factory for special construction for higher temperatures.
<b>MINIMUM FLOWS</b>	As shown for each meter size and construction are required for accurate registration. See flow chart.
<b>MAXIMUM FLOWS</b>	As shown for each meter size and construction are rated for continuous operation. See flow chart.
<b>INTERMITTENT FLOWS</b>	As shown for each meter size are rated for 10% to 15% of the total time the meter is operating. Consult factory for High Velocity construction when intermittent flows are higher than shown on flow chart and/or when longer operating periods are required.
<b>MATERIALS</b>	Used in construction are chosen to minimize the corrosive effects of the liquids measured by the meter assembly. PROPELLER MAGNET - permanent ceramic type. PROPELLER BEARING - ceramic sleeve type. PROPELLER SPINDLE - ceramic sleeve/stainless steel. PROPELLER - injection molded thermoplastic. GEARBOX - cast bronze. SEPARATOR - stainless steel. METER HEAD BOLTS - stainless steel (2" - 20"), plated steel (24" - 48"). METER HEAD - cast iron or fabricated steel, NSF approved fusion epoxy coated. METER TUBE - fabricated steel with straightening vanes and coated inside and out with 12-15 mils of NSF approved, fusion epoxy by the fluidized bed method.
<b>OPTIONAL EQUIPMENT</b>	Remote mounting kit with up to 100 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 available upon request.
<b>ORDERING INFO</b>	Must be specified by the customer and includes: Minimum & maximum flow ranges Temperature of meter environment Indicator scale & units Totalizer dial units Type of materials and construction Optional equipment desired

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METER & PIPE SIZE	*LOW VELOCITY CONSTRUCTION MIN. - MAX.	FLOW RANGES, GPM		DIMENSIONS (INCHES)									EST SHIPPING WEIGHT POUNDS
		STANDARD CONSTRUCTION MIN. - MAX. - INT.	HIGH VELOCITY CONSTRUCTION MIN. - MAX.	A	B	C	D	E	F	G	H	K	
2	35-120	40-160-225	N/A	18¼	6	5/8	71/8	4¾	4	5/8	5¼	9	70
3	40-250	45-250-350	N/A	18	7½	5/8	7	6	4	5/8	5¼	9	70
4	50-500	55-500-700	200-700	18	9	5/8	7	7½	8	5/8	5¼	9	80
6	90-1200	120-1200-1500	300-1500	22	11	11/16	9	9½	8	¾	6¼	9	150
8	100-1500	150-1500-2000	400-2500	24	13½	11/16	9	11¾	8	¾	7¼	9	170
10	125-2000	180-2000-3000	500-3500	26	16	11/16	10	14¼	12	7/8	8½	11	230
12	150-2800	200-3000-3500	800-5000	28	19	13/16	10	17	12	7/8	9½	11	288
14	250-3750	300-4000-4500	1000-6000	42	21	15/16	12	18¾	12	1	10½	13½	396
16	350-4750	400-5000-6000	1200-7500	48	23½	1	12	21¼	16	1	11½	13½	547
18	N/A	700-6000-7500	1500-9000	54	25	1⅞	15	22¾	16	1⅞	12½	13½	665
20	N/A	850-8000-9000	2000-12000	60	27½	1⅞	15	25	20	1⅞	13½	13½	780
24	N/A	1000-10000-13500	3000-15000	72	32	1¼	18	29½	20	1¼	17½	21	1250
30	N/A	1800-15000-21000	4000-25000	84	38¾	1⅜	18	36	28	1¼	20½	21	2010
36	N/A	2000-20000-30000	5000-35000	96	46	1⅝	20	42¾	32	1½	23½	21	2840
42	N/A	3000-30000-40000	6000-50000	96	53	1¾	24	49¼	36	1⅞	28	32	4300
48	N/A	5500-35000-50000	7000-60000	96	59½	1⅞	24	56	44	1⅝	31	32	4730

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

\* Low velocity (LV) construction has the same low and maximum flow rates as AWWA C704.



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