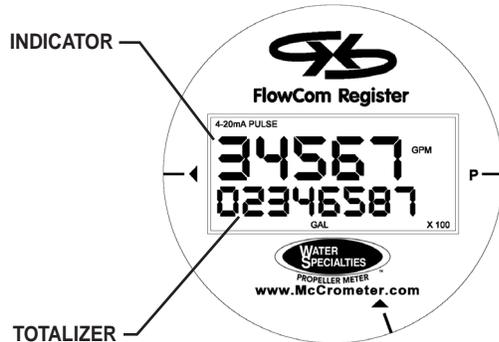




**MODEL ML16-D**  
 300 psi PLAIN END TUBE METER  
 SOLID STATE ELECTRONIC PROPELLER METER  
 DIGITAL INDICATOR - TOTALIZER  
 SIZES 3" thru 48"



TYPICAL  
 DIGITAL INDICATOR-TOTALIZER



#### DESCRIPTION

**MODEL ML16-D PLAIN END 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 plain end tube design permits use in a wide range of applications with up to 300 psi working pressure. Fabricated steel meter tubes have straightening vanes and are protected internally and externally with 12-15 mils of fusion epoxy resin.

**INSTALLATION** is made similar to placing a short length of plain end pipe in the line by welding, or using one of the many types of pipe couplings available. The meter can be installed in any of the following positions: 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 two pipe diameters downstream from the meter. An optional remote mounting kit with up to 100 feet of cable is available to locate the indicator-totalizer at remote locations.

**PROPELLER** is magnetically coupled with 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** 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.

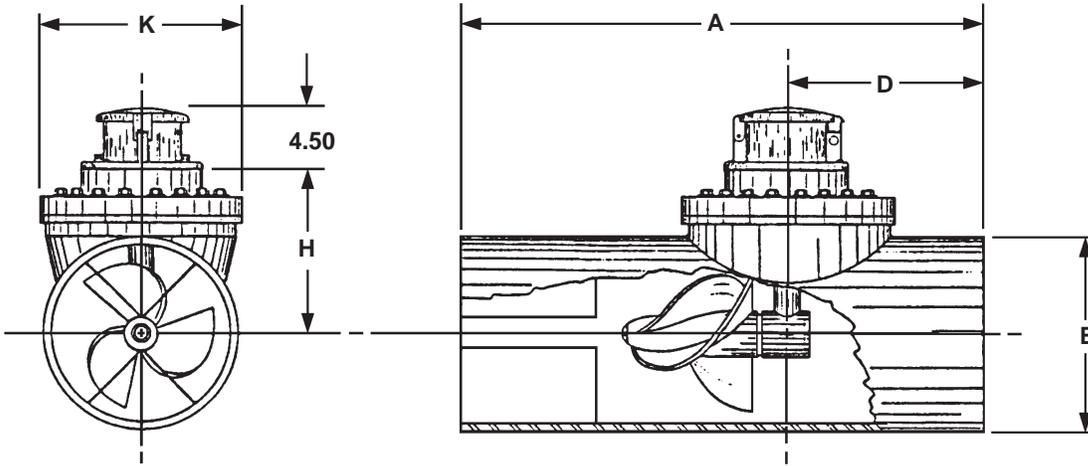
**DIGITAL INDICATOR-TOTALIZER** has a non-volatile EEPROM memory to store totalizer count (updated hourly while running). Features a large two line display. Five digit top line indicates flow rate, and eight digit bottom line provides volumetric flow data. Indicator is available in 22 different units, 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 300 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 required for accurate registration. 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.<br>PROPELLER MAGNET - permanent ceramic type<br>PROPELLER BEARING - ceramic sleeve type<br>PROPELLER SPINDLE - ceramic coated stainless steel<br>PROPELLER - injection molded thermoplastic<br>GEARBOX - cast bronze<br>SEPARATOR - stainless steel<br>METER HEAD BOLTS - stainless steel (3"-20"), plated steel (24"-48")<br>METER HEAD - cast iron or fabricated steel, fusion epoxy coated.<br>METER TUBE - fabricated steel with straightening vanes and coated inside and out with 12-15 mils of fusion epoxy by the fluidized bed method. |
| <b>OPTIONAL EQUIPMENT</b> | Includes a 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:<br>Minimum & maximum flow ranges<br>Temperature of meter environment<br>Indicator scale and units<br>Totalizer dial units<br>Type of materials and construction<br>Optional equipment desired  |

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| METER & PIPE SIZE | *LOW VELOCITY CONSTRUCTION MIN. - MAX. | FLOW RANGES, GPM STANDARD CONSTRUCTION MIN. - MAX. - INT. | HIGH VELOCITY CONSTRUCTION MIN. - MAX. | DIMENSIONS |                               |     |                                |     | EST. SHIPPING WEIGHT POUNDS |
|-------------------|--|---|--|------------|-------------------------------|-----|--------------------------------|-----|-----------------------------|
|                   |  |   |  | A          | B                             | D   | H                              | K   |                             |
| 3                 | 40-250                                 | 45-250-350  | N/A                                    | 17         | 3½                            | 6½  | 5 <sup>3</sup> / <sub>16</sub> | 9   | 45                          |
| 4                 | 50-500                                 | 55-500-700  | 200-700                                | 17         | 4½                            | 6½  | 5 <sup>3</sup> / <sub>16</sub> | 9   | 60                          |
| 6                 | 90-1200                                | 120-1200-1500   | 300-1500                               | 21         | 6 <sup>5</sup> / <sub>8</sub> | 8½  | 6¼                             | 9   | 95                          |
| 8                 | 100-1500                               | 150-1500-2000   | 400-2500                               | 23         | 8 <sup>5</sup> / <sub>8</sub> | 8½  | 7¼                             | 9   | 115                         |
| 10                | 125-2000                               | 180-2000-3000   | 500-3500                               | 25         | 10¾                           | 9½  | 8¼                             | 11  | 170                         |
| 12                | 150-2800                               | 200-3000-3500   | 800-5000                               | 27         | 12¾                           | 9½  | 9½                             | 11  | 195                         |
| 14                | 250-3750                               | 300-4000-4500   | 1000-6000                              | 41         | 14                            | 11½ | 10½                            | 13½ | 295                         |
| 16                | 350-4750                               | 400-5000-6000   | 1200-7500                              | 47         | 16                            | 11½ | 11½                            | 13½ | 435                         |
| 18                | 450-5625                               | 700-6000-7500   | 1500-9000                              | 53         | 18                            | 14½ | 12½                            | 13½ | 520                         |
| 20                | 550-6875                               | 850-8000-9000   | 2000-12000                             | 59         | 20                            | 14½ | 13½                            | 13½ | 610                         |
| 24                | 800-10000                              | 1000-10000-13500  | 3000-15000                             | 71         | 24                            | 17½ | 17¾                            | 23  | 1010                        |
| 30                | 1200-15000                             | 1800-15000-21000  | 4000-25000                             | 83         | 30                            | 17½ | 20¾                            | 23  | 1660                        |
| 36                | 1500-20000                             | 2000-20000-30000  | 5000-35000                             | 95         | 36                            | 19½ | 23¾                            | 23  | 2290                        |
| 42                | 2000-28000                             | 3000-30000-40000  | 6000-50000                             | 95         | 42                            | 23½ | 28                             | 36  | 3500                        |
| 48                | 2500-35000                             | 5500-35000-50000  | 7000-60000                             | 95         | 48                            | 23½ | 31                             | 36  | 3780                        |

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 C704-02.