MODEL ML20 WELDING SADDLE METER

SEAL METER MECHANISM - MAGNETIC DRIVE

INDICATOR - TOTALIZER

SIZES 4” thru 72”

DESCRIPTION

MODEL ML20 WELDING SADDLE 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 weld-on design permits use in a wide range of applications with up to 150 psi working pressure. It is necessary, upon ordering, to furnish the I.D. dimension of the pipe the meter is to be mounted on for calibration purposes. The O.D. dimension or wall thickness must also be furnished for proper fit of the saddle to the pipe.

INSTALLATION is made by cutting a hole in the existing pipe line and then welding the saddle to the line. The removable meter head assembly can then be bolted to the saddle. The meter can be installed 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 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.

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 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.

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.

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 the liquids measured by the meter assembly.

SPECIFICATIONS

ACCURACY

Plus or minus 2% of actual flow within the range specified for each meter size.

PRESSURE RANGE

Up to 150 PSI maximum working pressure.

TEMPERATURE RANGE

140° F Maximum. Consult factory for special construction for higher temperatures.

MINIMUM FLOWS

As shown for each meter size and construction are required for accurate registration. See flow chart. NOTE: Minimum flow will be higher when auxiliary equipment is added.

MAXIMUM FLOWS

As shown for each meter size and construction are rated for continuous operation. See flow chart.

INTERMITTENT FLOWS

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 greater than shown on flow chart and/ or when longer operating periods are required.

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 (4”-54”) or sealed stainless steel ball type (60”-72”)

PROPELLER SPINDLE - ceramic sleeve/stainless steel (4”-54”) or stainless steel (60”-72”)

PROPELLER - injection molded thermoplastic

GEARBOX - stainless steel (4”-54”)

SEPARATOR - stainless steel

SHAFTS - stainless steel

METER HEAD BOLTS - stainless steel (4”-20”) or plated steel (24”-72”)

METER HEAD - cast iron or fabricated steel, NSF approved fusion epoxy coated.

OPTIONAL EQUIPMENT

Totalizer Extensions and a wide range of controls and instruments for indicating, totalizing and recording flow data for each meter. Special construction and materials are available upon request.

ORDERING INFO

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

Pipe I.D. and O.D.
**PLEASE SPECIFY PIPE I.D. AND O.D.**

<table>
<thead>
<tr>
<th>METER &amp; PIPE SIZE</th>
<th>FLOW RANGES, GPM</th>
<th>DIMENSIONS</th>
<th>EST SHIPPING WEIGHT POUNDS</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>STANDARD CONSTRUCTION MIN. - MAX. - INT.</td>
<td>HIGH VELOCITY CONSTRUCTION MIN. - MAX.</td>
<td>A</td>
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<tr>
<td>4</td>
<td>55-500-700</td>
<td>200-700</td>
<td>4½</td>
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<tr>
<td>6</td>
<td>120-1200-1500</td>
<td>300-1500</td>
<td>6½</td>
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<tr>
<td>8</td>
<td>150-1500-2000</td>
<td>400-2500</td>
<td>8½</td>
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<td>180-2000-3000</td>
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<td>200-3000-3500</td>
<td>800-5000</td>
<td>12½</td>
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<tr>
<td>14</td>
<td>300-4000-4500</td>
<td>1000-6000</td>
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<td>72</td>
<td>9500-90000-115000</td>
<td>15000-125000</td>
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</table>

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

² On High Velocity Meters "B" Dimension is 11½" and "M" dimension is 13½".

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**Note:**

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- **On High Velocity Meters "B" Dimension is 11½" and "M" dimension is 13½".**
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