DESCRIPTION

MODEL ML19 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 in any of the following positions; 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 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 five pipe diameters upstream and two pipe diameters downstream.

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 in 4” thru 54" propellers is a water lubricated ceramic sleeve and spindle bearing system with a ceramic/stainless steel spindle. Dual ceramic thrust bearings, standard on all 4” - 54” meters, handle flows in both forward and reverse directions. The 60” thru 72” propeller bearings are sealed stainless steel ball bearings that ride on a stainless steel spindle. 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.

TOTALIZER is o-ring sealed and magnetically coupled with the driving mechanism, and features a six digit totalizer with a full 3” diameter, 100 division, center sweep dial that permits extremely accurate readings for timing purposes in determining flow rates. The totalizer dial can be furnished in gallons, cubic feet, acre feet, or any standard liquid measuring units. The bonnet, with padlock hasp, can be positioned in four different directions for the easiest possible reading when the meters are mounted in unusual positions.

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 liquids.

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

MINIMUM FLOWS

As shown for each meter size and construction are required for accurate registration. See flow chart.

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 and construction 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.

MATERIALS

Used in construction are chosen to minimize the corrosive effects of the liquids measured by the meter assembly.

INTERIOR BEARINGS - shielded stainless steel

PROPELLER BEARING - ceramic sleeve type (4”-54”) or stainless steel ball type (60”-72”)

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

PROPELLER - injection molded thermoplastic

GEARBOX - cast bronze (4”-54”) or stainless steel (60”-72”)

SEPARATOR - stainless steel

SHAFTS - stainless steel

METER HEAD BOLTS - stainless steel (4”-20”), 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 constructions and materials are available upon request.

ORDERING INFO

Must be specified by the customer and includes:

Minimum & maximum flow ranges

Temperature of meter environment

Totalizer dial units

Type of materials and construction

Optional equipment desired

Pipe I.D. and O.D.
** Model ML19 **
150 psi WELDING SADDLE METER
SEALED METER MECHANISM-MAGNETIC DRIVE
SEALED TOTALIZER
SIZES 4" thru 72"

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**Please specify pipe I.D. and O.D.**

<table>
<thead>
<tr>
<th>Meter &amp; Pipe Size</th>
<th>Standard Construction Min. - Max. - Int.</th>
<th>Flow Ranges, GPM</th>
<th>High Velocity Construction Min. - Max.</th>
<th>Dimensions</th>
<th>Est. Shipping Weight Pounds</th>
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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.
† On High Velocity Meters "B" Dimension is 11 1/2" and "M" dimension is 13 1/2".