MODEL VF30 VERTICAL UPFLOW TEE TUBE METER
SEALLED METER MECHANISM - MAGNETIC DRIVE
INDICATOR - TOTALIZER
SIZES 4” thru 20”

DESCRIPTION

MODEL VF30 VERTICAL UPFLOW TEE TUBE METERS are designed to meet AWWA specifications. The flanged end tee design permits use in a wide range of applications with up to 150 psi working pressure. The base and side outlets 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 epoxy resin.

INSTALLATION is made to any vertical discharge line with the proper size flange connection or to vertical discharge concrete turnouts with the proper anchor bolts. The meter must be installed upright for a full flow of liquid through the pipe to assure 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.

PROPELLER is magnetically coupled with the drive mechanism through the sealed separator assembly. 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 propeller 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 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.

MAGNETS - permanent ceramic type

INTERIOR BEARINGS - shielded stainless steel

PROPELLER BEARING - ceramic sleeve type

PROPELLER SPINDLE - ceramic sleeve on stainless steel

PROPELLER - injection molded thermoplastic

DROP PIPE - stainless steel

SEPARATOR - stainless steel

SHAFTS AND BOLTS - stainless steel

METER HEAD - cast iron, fusion epoxy coated.

METER TUBE - fabricated steel with 12-15 mils of NSF approved fusion epoxy resin.

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, indicator scale and units, totalizer dial units, type of materials and construction and optional equipment desired.
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VERTICAL UPFLOW TEE TUBE METER  
SEALED METER MECHANISM - MAGNETIC DRIVE  
INDICATOR - TOTALIZER  
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**Table: Meter Flow Ranges, GPM Standard**

<table>
<thead>
<tr>
<th>METER &amp; PIPE SIZE</th>
<th>FLOW RANGES, GPM</th>
<th>STANDARD DIAL FACE (GPM/GAL)</th>
<th>DIMENSIONS</th>
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**Legend:**
- **A** - Bolt Circle
- **B** - Number of Bolts
- **C** - Size of Bolts

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