MODEL VF27 VERTICAL UPFLOW METER
SEAL METER MECHANISM - MAGNETIC DRIVE
SEAL TOTALIZER
SIZES 4" thru 20"

DESCRIPTION

MODEL VF27 VERTICAL UPFLOW METERS are designed to meet AWWA specifications. The bolt-on design permits use in a wide range of applications with up to 150 psi working pressure. The mounting flange conforms to ANSI class 125 drilling. It is necessary, upon ordering, to furnish the I.D. dimension of the pipe the meter is to be mounted on for calibration purposes.

INSTALLATION is made by bolting the meter assembly to an appropriate cast iron or fabricated steel tee. These tees usually replace an elbow in existing systems such as on the suction or discharge side of a centrifugal pump of laterals in irrigation systems. 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 one pipe diameter downstream from the meter. Instalations with less than ten pipe diameters of straight pipe require straightening vanes. Meters with straightening vanes require at least 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.

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 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 coated stainless steel
PROPELLER - injection molded thermoplastic
DROP-PIPE - stainless steel
SEPARATOR - stainless steel
SHAFTS AND BOLTS - stainless steel
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
I.D. of pipe
<table>
<thead>
<tr>
<th>METER &amp; PIPE SIZE</th>
<th>FLOW RANGES, GPM</th>
<th>STANDARD DIAL FACE (GPM/GAL)</th>
<th>DIMENSIONS</th>
<th>EST SHIPPING WEIGHT POUNDS</th>
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