



**MODEL VF32**  
 VERTICAL DOWN FLOW METER  
 SOLID STATE ELECTRONIC PROPELLER METER  
 INDICATOR-TOTALIZER  
 SIZES 4" thru 20"

## SPECIFICATIONS

**METER** shall be a velocity propeller type, magnetic drive, sealed housing, vertical down flow meter for 150 psi working pressure. It shall comply with the applicable provisions of AWWA, except for the higher standard required in this specification. In the event of conflict, the specification herein shall prevail. The meter shall be a **WATER SPECIALTIES** \_\_\_\_\_ inch **MODEL VF32** with a sealed indicator having a range of 0 to \_\_\_\_\_ and shall be equipped with a six digit totalizer reading in units of \_\_\_\_\_ and shall be accurate within  $\pm 2\%$  of true flow within a range of \_\_\_\_\_ to \_\_\_\_\_ GPM or an approved equal. The meter assembly shall be constructed as follows:

**METER HEAD** shall be connected to the tube by means of a flanged, flat gasket sealed connection with stainless steel bolts designed for easy removal for inspection or repair. The meter head shall be blasted to near white metal and coated with 12-15 mils of fusion bonded epoxy coating, applied by the fluidized bed method.

**DROP-PIPE AND SEPARATOR** shall be a stainless steel factory sealed unit having four straightening vanes welded to the drop pipe. However, parts shall be coupled so with proper instructions the parts can be replaced in the field without returning the meter to the factory. The drive mechanism shall be magnetically driven from the propeller through a ceramic sleeve magnetic coupling, and be isolated from the water flow by means of an o-ring sealed housing. A rigid stainless steel vertical shaft is required from the separator to the indicator drive gear.

**PROPELLER** shall utilize a water lubricated ceramic sleeve and spindle bearing system. The stainless steel/ceramic spindle on which the propeller is mounted shall be parallel to the direction of the water flow in the pipe. Dual ceramic thrust bearings shall be standard on all meters to handle flows in both the forward and reverse directions. The propeller shall be a conical shaped, three bladed propeller, injection molded of thermoplastic material, resistant to normal water corrosion and deformity due to high flow velocities.

**INDICATOR-TOTALIZER** shall have a full 4" diameter indicator dial having a range of 0 to \_\_\_\_\_ (specify indicator range and units) and shall be equipped with a six digit, straight reading type totalizer with black numbers on white wheels at least 3/16" high. The totalizer shall read in units of \_\_\_\_\_ (specify totalizer units) and shall have a test hand to check the accuracy of the indicator. The indicator drive mechanism shall be temperature compensated, so the indicator hand shall be accurate and linear within  $\pm 1\%$  at all points on the dial when the unit is operated within the temperature range of 32°- 140° F. The unit shall be equipped with change gears to facilitate easy change of registration without removing pressure from the line or removing the meter head from the meter tube. The indicator-totalizer shall be protected by an o-ring sealed bonnet made from injection molded 20% glass filled engineered grade of thermoplastic. The bonnet shall be attached to the meter head by screws located under the hinged lid, which has a padlock hasp.

**PARTS & SERVICE:** Supplier must have test facilities, spare parts, personnel to maintain, instruct, train or whatever is necessary to assure meters will be maintained throughout the warranty.

**VOLUMETRIC TESTING** of all meters must be performed and approved prior to shipment. The completed meter head assembly will be accuracy tested. The testing will be conducted in accordance to AWWA testing procedure, rates, and volume. The amount of water used to conduct the test shall be left on the totalizer. Prior to shipping, a tag shall be attached to the meter showing the totalizer reading after testing. The test facility must be certified annually to an accuracy of  $\pm 0.25\%$  and be traceable to the National Institute of Standards and Technology. If desired, the test can be witnessed by the customer or their selected agent. Certified accuracy test records will be furnished at no charge.

**ONE MANUFACTURER** shall make all meter sizes and styles required for this contract. The meters shall be manufactured and tested in the U.S.A. and shall be of design in production in the U.S.A. for at least 5 years.