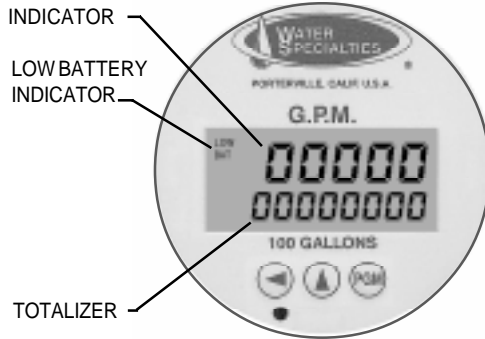




MODEL VF-30-D
 VERTICAL UPFLOW TEE TUBE METER
 SOLID STATE ELECTRONIC PROPELLER METER
 DIGITAL INDICATOR - TOTALIZER
 SIZES 4" thru 20"



TYPICAL
 DIGITAL INDICATOR-TOTALIZER



DESCRIPTION

MODEL VF-30-D 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 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 from the meter and one pipe diameter downstream from the meter. An optional kit of adapters with up to 100 feet of cable is available to locate the indicator-totalizer at remote locations.

PROPELLER is magnetically coupled with the electronic sensor through the sealed separator assembly. This completely eliminates water entering the meter assembly, and eliminates all moving parts except for the propeller. 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 bearing that rides on a ceramic coated 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.

DIGITAL INDICATOR-TOTALIZER has a non-volatile EEPROM memory to store totalizer count (updated every 60 minutes while running). The indicator dial can be furnished in GPM, CFS, MGD or any standard liquid measuring units with a choice of totalizer measuring units. The display is programmable to update from 0.5 to 5 seconds, and timeout from 1 to 9999 seconds.

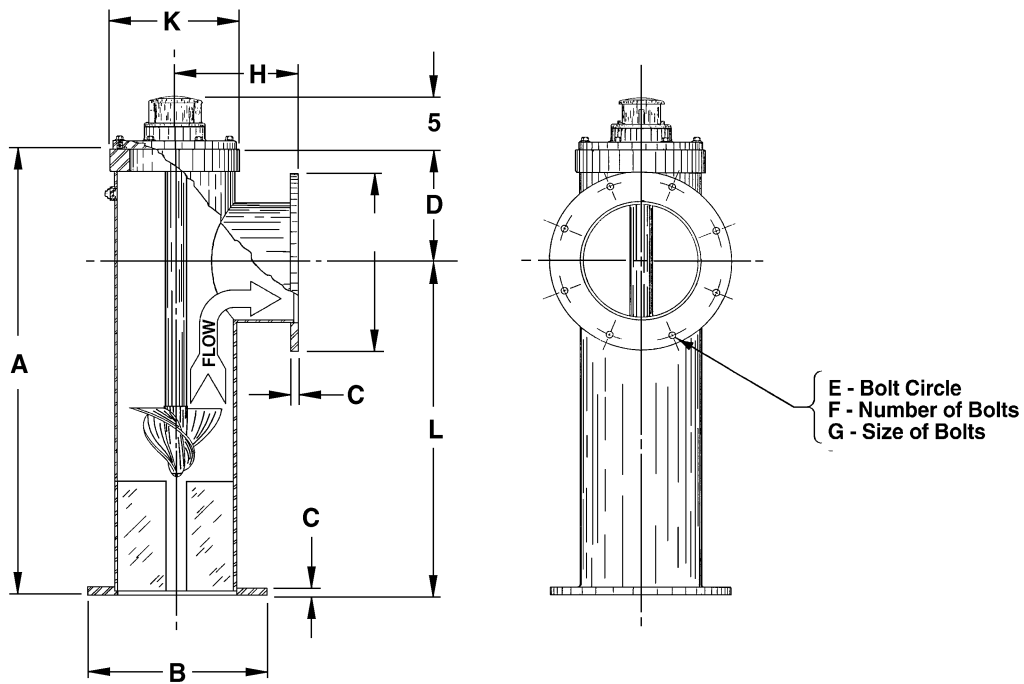
INDICATOR (rate) FUNCTION is a five digit indicator with .35" tall numbers, programmable with 0 to 4 decimal point place with 0.0001 to 9999 rate scaling factor. The calculation method is 1/Tau; programmable smoothing of 0 to 99%; rate zero time of 8 seconds.

TOTALIZER FUNCTION is an eight digit totalizer with .20" tall numbers, programmable with 0 to 4 decimal places, and a total scaling factor of 0.0001 to 9999. The totalizer can be reset from the front panel or disabled permanently 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. PROPELLER MAGNET - permanent ceramic type 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, NSF approved fusion epoxy coated. METER TUBE - fabricated steel with 12-15 mils of NSF approved fusion epoxy resin.
OPTIONAL EQUIPMENT	Remote mounting kit, with up to 100 feet of cable, 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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METER & PIPE SIZE	FLOW RANGES, GPM			DIMENSIONS										SHIPPING WEIGHT POUNDS
	MIN.	MAX.	INT.	A	B	C	D	E	F	G	H	K	L	
4	55	500	700	18	9	5/8	4½	7½	8	5/8	5	6	13½	180
6	130	1200	1500	40	11	11/16	10	9½	8	3/4	9	11	30	190
8	170	1500	2000	40	13½	11/16	10	11¼	8	3/4	10	11	30	240
10	200	2000	3000	40	16	11/16	10	14¼	12	7/8	11	11	30	330
12	220	3000	3500	40	19	13/16	10	17	12	7/8	12	11	30	440
14	320	4000	4500	40	21	15/16	10	18¼	12	1	14	11	36	520
16	420	5000	6000	54	23½	1	11½	21¼	16	1	15	11	42½	620
18	720	6000	7500	60	25	1 1/16	12	22¼	16	1 1/8	18	11	48	720
20	870	8000	9000	66	27½	1 1/8	14	25	20	1 1/8	20	11	52	820