Specification Sheet

T3000 Turbine Meter

Bronze, Magnetic Drive, Round Flanged Ends

Sizes: 4" - 8"

Description

Operation. T3000 Turbine Meters are designed for installation where occasional low and moderate to high sustained flows are expected. Water passes through the meter without a change in flow direction, driving a helix rotor in direct proportion to the quantity of water passing through the meter. Rotor revolutions are transferred to a register by appropriate reduction gearing and a magnetic drive.

Compliance to Standards. The T3000 Turbine Meter complies with all performance and material requirements of the American Water Works Association Standard C701, Class II In-Line (High-Velocity) Type, as most recently revised.

Installation. The meter must be installed in a clean pipeline, free from any foreign materials. Install the meter with direction of flow as indicated by the arrow cast in the meter case. The meter may be installed in horizontal, inclined or vertical lines. It is recommended that a plate strainer be used to protect the turbine and help reduce the effects of turbulence. The installer should consider a bypass pipe with gate valves for use during maintenance and a downstream test plug for future field testing.

Application. T3000 meters are for use in POTABLE COLD WATER up to 120°F (50°C) and working pressures up to 150 psi. The meter will perform with accuracy registration of 100% ± 1 1/2% within the normal flows*. Both pressure loss and accuracy tests are made before shipment. No adjustments need be made before installation.

Construction. The meter consists of a main case, a measuring element, a case cover and a magnetically driven register assembly. The main case is cast in bronze with raised characters showing model, size and direction of flow. The case has a throated inlet. A case dowel pin is inserted for locating the bronze cover plate. The measuring element assembly consists of the rotor, straightening vanes, accuracy regulator, spindles and gears, filters and undergear assembly. The measuring element is attached to the underside of the cover with four stainless steel screws and washers, one insert of which is placed eccentrically in the cover. The internal regulator assembly is interconnected with an external regulator

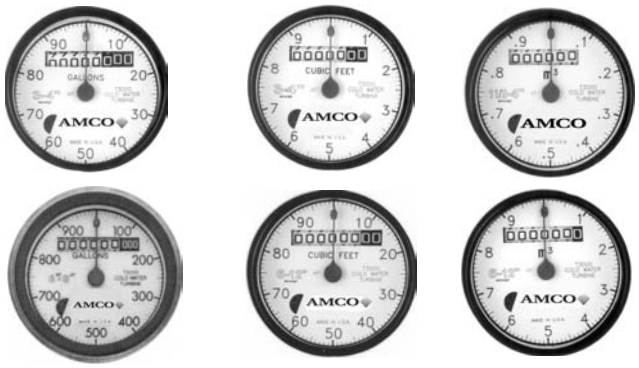
Specifications

Performance	**4"**	**6"**	**8"**
95% - 101% Accuracy GPM	7	15	25
*98.5%-101.5% Accuracy GPM	10-1250	20-2500	30-3500
Continuous Flow GPM	1000	2000	2800
Maximum Flow GPM	1250	2500	3500
Operating Pressure psi	150	150	150
Operating Temperature°F	120	120	120
Sweep Hand Registers			
US Gallons	100	1000	1000
Cubic Feet	10	100	100
Cubic Meters	1	10	10
Imperial Gallons	100	1000	1000
Capacity of Register			
US Gallons (millions)	100	1000	1000
Cubic Feet (millions)	10	100	100
Cubic Meters (millions)	1	10	10
Imperial Gallons (millions)	100	1000	1000

Register Type	Permanently sealed direct reading register.
Materials	
Main Case	Bronze
Top Cover Plate	Bronze
Body O-Ring	Neoprene Rubber
Case Bolts	Stainless Steel
Measuring Element	Polyphenylene Oxide
Rotor	Polypropylene
Rotor Bushings	PTFE Compound
Rotor Thrust Bearing	Ceramic Jewel
Rotor Spindle	Tungsten Carbide
Undergearing	Polyacetal Resin
Register Lens	Tempered Glass
Register Housing and Lid	Polymer or Bronze
Register Can	90% Copper Alloy

shaft located on top of the cover allowing meter calibration without depressurizing the test bench or meter service. The regulator is protected by a tamperproof device. The main case and cover are assembled with an O-ring gasket and stainless steel bolts. The register assembly is secured to the cover with a tamperproof screw and is hinged over the inlet throat. However, the register can be rotated and locked in any 360 degree position therein.

Register. The register is contained within a 90% copper seamless can which is oven cured at 150°F for 90 minutes to eliminate condensation. The 1/4" true tempered glass lens is domed and secured in an "L" shaped gasket, then roll sealed. To assure easy reading, the totalizer wheels are large and color coded. The applicable size, model, registration, part number and date code are printed on the calibrated dial face. Moving clockwise during operation, the extra thin sweep hand does not interfere with meter reading, and the flow indicator will detect plumbing leaks.



Magnetic Drive. The magnetic drive design eliminates miscoupling associated with right angle drives. Torque is absorbed in the undergear assembly below the driving magnet. Consequently, the driving magnet at all flows is turning slowly, assuring magnetic coupling with the register assembly. The undergearing is protected by an encasement appropriately filtered.

Connections. These meters are available with eight-bolt round flanged end connections. Round flanged connections conform to ANSI B16.1 cast-iron pipe flange, Class 125. Both bronze and cast-iron companion flanges are available. The companion flanges are faced, drilled and tapped with ANSI B2.1 internal taper pipe thread and conform to ANSI B16.1 cast-iron pipe flange, Class 125.

Maintenance. The measuring element with integral straightening vanes can be removed, repaired or replaced without removing the main case from the service line. Blank cover plates are available for use during repair. Pretested and calibrated measuring elements with cover plates and registers are available for exchange or purchase from our warehouses in the U.S. and Canada. In addition, AMCO Water Metering Systems maintains a fully equipped and staffed repair facility in Ocala, Florida.

Reading Options. T3000 meters are available with Absolute Encoder and Digital register options to provide water usage output to the entire spectrum of electronic meter reading systems, giving flexibility to utilities implementing or upgrading reading technologies. AMCO's Encoder and Digital registers interface to a variety of automated meter reading systems, allowing technology upgrade without register replacement.

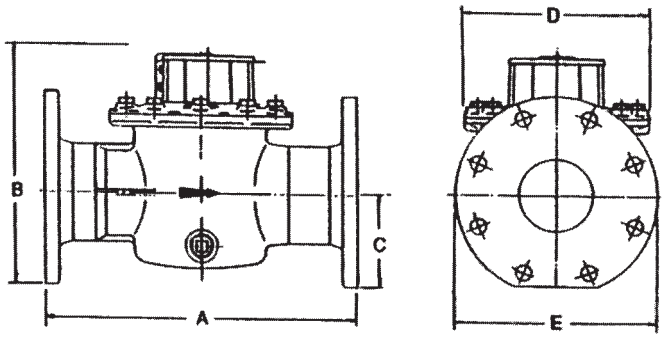
Remote Meter Reading (RMR). The RMR system provides utilities with inside-set meters the ability to visually read meters without directly accessing the meter, greatly reducing reading cost and estimation rates. A 2-conductor wire carries register pulses, equal to a predetermined volume of water throughput, to a battery-powered remote wall unit for accumulation and display.

Electronic Meter Reading (EMR). EMR permits electronic interrogation of the absolute encoder's six number wheels from a pit mounted or remote location. AMCO's encoder features an optional fully potted glass lens for pit settings, permanently sealed and nitrogen gas filled to totally eliminate any chance of moisture penetration. The absolute encoder features a programmable ID; leak detector that provides visual indication of plumbing leaks; factory potted reading pads for wall or pit-lid mounting; and low power voltage for Electronic and Automatic Meter Reading (AMR) applications.

Automatic Meter Reading (AMR). AMCO offers the full spectrum of RF technology alternatives - Walk-by, Drive-by and Fixed Network, to reduce reading cost beyond electronic meter reading, while further increasing personnel safety. RF Transmitters accept input from the AMCO's Encoder or Digital Register for reliable measurement inputs. RF Systems from AMCO are designed for reading both pit and inside set meter installations, and are to perform in the extremes of service conditions they will encounter.

Dimensions and Net Weights

Meter	Dimensions (inches)					Weight
Size	A	B	C	D	E	(lbs.)
4"	14	10 3/4	4 3/16	8 3/16	9	51 1/2
6"	18	13 3/8	5 1/4	10 15/16	11	90
8"	20	16 1/16	6 15/16	11 7/16	13 7/16	168



The company's policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice. These products have been manufactured with current technology and in accordance with applicable AWWA Standards.

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