

Specification Sheet

Industrial Turbine Meters

Model T3000 Cast Iron, Magnetic Drive,
Round Flanged Ends



Sizes 10" & 12"

Description

Operation. T3000 Turbine Meters are designed for installation where occasional low and moderate to high sustained flows are demanded. 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 measuring element 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. The meter is 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 top cover and a magnetically driven register assembly. The main case is cast in iron with raised characters showing model, size, and direction of flow. The measuring element assembly consists of the rotor, accuracy regulator, spindles and

Specifications

| Performance | 10" | 12" |
|---------------------------|---------|----------|
| 95%-101% Accuracy GPM | 55 | 95 |
| 98.5%-101.5% Accuracy GPM | 65-5500 | 110-7000 |
| Continuous Flow GPM | 3200 | 4300 |
| Maximum Flow GPM | 5500 | 7000 |
| Operating Pressure psi | 150 | 150 |
| Operating Temperature °F | 120 | 120 |

Sweep Hand Registers

| | | |
|------------------|------|------|
| US Gallons | 1000 | 1000 |
| Cubic Feet | 100 | 100 |
| Cubic Meters | 10 | 10 |
| Imperial Gallons | 1000 | 1000 |

Capacity of Register

| | | |
|-----------------------------|------|------|
| US Gallons (millions) | 1000 | 1000 |
| Cubic Feet (millions) | 100 | 100 |
| Cubic Meters (millions) | 10 | 10 |
| Imperial Gallons (millions) | 1000 | 1000 |

Register Types

Permanently sealed direct reading register

Materials

| | |
|-----------------------------|--------------------------|
| Main Case | Spheroidal Graphite Iron |
| Top Cover Plate | Spheroidal Graphite Iron |
| Body O-Ring | Neoprene Rubber |
| Case Nuts and Bolts | Epoxy Coating |
| Body Coating Paint | Epoxy Coating |
| Measuring Element | Bronze |
| Straightening Vane Assembly | Bronze |
| Regulator Seal Plug | Stainless Steel |
| Rotor | Polypropylene |
| Rotor Bushings | PTFE Compound |
| Rotor Thrust Bearings | Ceramic Jewel |
| Rotor Spindle | Tungsten Carbide |
| Undergearing | Polyacetal Resin |
| Domed Register Lens | Tempered Glass |
| Register Housing and Lid | Polymer or Bronze |
| Register Can | 90% Copper Alloy |

gears, filters and undergear assembly. The measuring element is attached to the underside of the cover by four lugs, securing nuts and washers. The flow straightener and front vane bearing are secured to the measuring element assembly by four (4) stainless steel bolts.

The main case and cover are assembled with a flat gasket and stainless steel nuts, bolts and washers. Two (2) joint breaking screws are provided to aid in disassembly. There is a register adapter plate secured to the top cover. The register assembly is secured to the plate with a slotted 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 produce a permanently sealed design. 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 give visual indication of 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 appropriately filtered encasement.

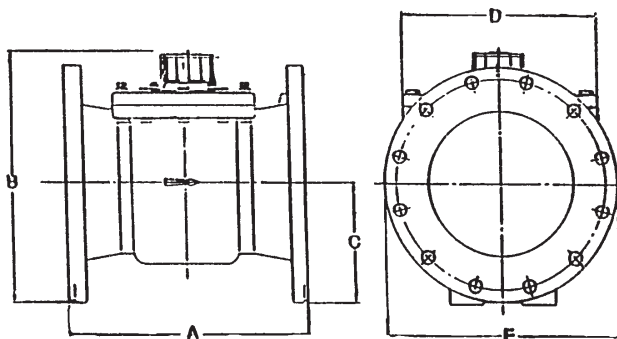
Connections. This meter is available with twelve-bolt round flanged end connections. Round flanged connections conform to ANSI B16.1 cast iron pipe flange, Class 125. Cast iron companion flanges are available. The companion flanges are faced, drilled and tapped with ANSI B2.1 internal taper pipe thread and conform to ANSI B16.1 cast iron pipe flange, Class 125.

Maintenance. The measuring element and flow straightener can be removed, repaired or replaced without removing the main case from the service line. Pretested and calibrated measuring elements with cover plates and registers are available for exchange or purchase. In addition, AMCO Water Metering Systems maintains a fully equipped and staffed repair facility in Ocala, Florida.

Pulsers. See Specification Sheet #LRP/HRP-T3000. LRP (2-wire) Reed Switch, 4 Watt (50V AC/DC Max.) HRP (3-wire) Slotted Disc, 6-15 VDC Both units require power from an external source.

Dimensions and Net Weights

| Meter Size | Dimension (Inches) | | | | | Weight (lbs.) |
|------------|--------------------|----------|-------|--------|---------|---------------|
| | A | B | C | D | E | |
| 10" | 17 3/4 | 18 15/16 | 8 1/4 | 15 7/8 | 16 1/8 | 246 |
| 12" | 19 3/4 | 20 3/8 | 9 3/4 | 15 7/8 | 19 1/16 | 278 |



AMCO Water Metering Systems Inc.

www.amcowater.com

United States - ISO 9002 Registered
 AMCO Water Metering Systems
 P. O. Box 1852
 Ocala, FL 34478-1852
 352-732-4670 FAX 352-368-1950
 Outside Florida: 800-874-0890
 Inside Florida: 800-356-6829
 e-mail:
 watermeters@amcowater.com

Canada
 Elster Metering
 3450 Harvester Road
 Burlington, Ontario L7N 3W5
 866-703-7582
 905-634-4895
 FAX 905-634-6705
 e-mail:
 watermeters@ca.elster.com

Caribbean
 AMCO Water Metering Systems
 P. O. Box 225
 Carretera 112 KM 2.3
 Isabela, PR 00662
 787-872-2006
 FAX 787-872-5427
 e-mail:
 prwatermeters@amcowater.com

Mexico
 Elster Medidores
 Lago Omega #281
 Col. Modelo Pensil.
 Del. Miguel Hidalgo
 C P 11460
 525 55 203 8002
 FAX 525 55 203 8270
 e-mail:
 amcowater@prodigy.net.mx

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