

Specification Sheet

Industrial Turbine Meters

Model T3000 Cast Iron, Magnetic Drive, Round Flanged Ends



T3000CP



T3000CI

Sizes 1 1/2" - 8"

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, vertical or inclined lines. It is recommended that a plate strainer be used to protect the measuring element and 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° (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 iron 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 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 a concealed and tamperproof regulator shaft located on top of the cover, allowing meter calibration without depressurizing the test

Specifications

Accuracy (GPM)	1 1/2" & 2"	3"	4"	6"	8"
95%-101% Accuracy	3	4	7	15	25
*98.5%-101.5% Accuracy	4-200	5-750	10-1250	20-2500	30-3500
Continuous Flow	160	600	1000	2000	2800
Maximum Flow	200	750	1250	2500	3500
Operating Pressure psi **	150	150	150	150	150
Operating Pressure psi ***	230	230	230	---	---
Operating Temperature °F (67°C)	120	120	120	120	120

** Cast Iron top plate
 *** Polymer top plate

Sweep Hand Registers

US Gallons	100	100	100	1000	1000
Cubic Feet	10	10	10	100	100
Cubic Meters	1	1	1	10	10
Imperial Gallons	100	100	100	1000	1000

Capacity of Register

US Gallons (millions)	100	100	100	1000	1000
Cubic Feet (millions)	10	10	10	100	100
Cubic Meters (millions)	1	1	1	10	10
Imperial Gallons (millions)	100	100	100	1000	1000

Register Type

Permanently sealed direct reading register

Materials

Main Case	Spheroidal Graphite Iron (1 1/2" is Cast Iron)
Top Cover Plate	Polymer (1 1/2" - 4") or Cast Iron (6" - 8")
Body O-Ring	Neoprene Rubber
Case Nuts and Bolts	Stainless Steel
Body Coating Paint	Styrene Modified Alkyd
Measuring Element	Polyphenylene Oxide
Rotor	Polypropylene
Roto Bushings	PTFE Compound
Roto Thrust Bearing	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

NOTE: For 6" or 8" meters, cast iron top will have a polymer disc to accept LRP/HRP pulser.

bench or the meter service. The regulator is protected by a tamper-proof device. The main case and cover are assembled with an O-ring gasket and stainless steel nuts, bolts and washers. The register assembly is secured to the cover 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 assure easy reading, the totalized 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 magnetic 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. Meter sizes 1 1/2" - 3" are available with four-bolt round flanged end connections, and the 4" - 8" 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.

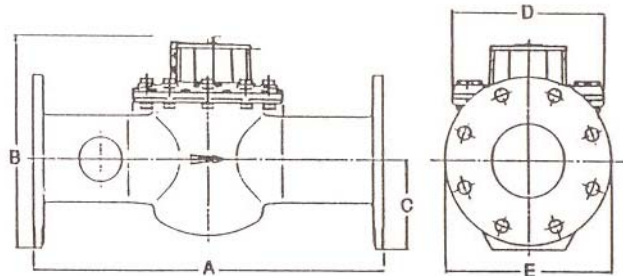
Maintenance. The measuring element with integral straightening vanes can be removed, repaired or replaced without removing the main case from the service line. Blank cover plates are available for use during repair. Pretested and calibrated measuring elements with cover plates and registers are available for exchange or purchase from AMCO's warehouses in the US and Canada. 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	Dimensions (inches)					Weight (lbs)
	A	B	C	D	E	
1 1/2"	12 1/4	8 9/16	3 15/16	7 3/8	5 15/16	20 9/10
2"	12 1/4	8 11/16	3 3/8	7 3/8	6 7/16	26 1/2
3"	16 1/4	9 15/16	4 1/8	7 3/8	7 13/16	37 1/4
4"	19	11 3/8	4 13/16	8 3/16	9 1/16	52 1/8
6"	19 3/4	15	5 13/16	11 7/16	11 3/16	82 1/2
8"	20 1/2	16 1/16	6 15/16	11 7/16	13 7/16	110

Note: Add 3/4" to overall height with polymer top plate (1 1/2" - 4").



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IND-T3-CI-1128/02-03