

C3000 Compound Meter

Bronze, Magnetic Drive, Round Flanged Ends

Size 6"



Performance

97%-101% Accuracy GPM	GPM	.75
	m3/hr	.17
98.5%-101.5% Accuracy GPM	GPM	1.5-2500
	m3/hr	.341-568
Continuous Flow GPM	GPM	1560
	m3/hr	354
Maximum Flow GPM	GPM	2500
	m3/hr	568
Operating Pressure psi	psi	150
	bar	1034
Operating Temperature	°F	120
	°C	48.9

Register Resolution

Sweep Hand Registers - Direct Read*	Turbine	Bypass
US Gallons	1000	10
Cubic Feet	100	1
Cubic Meters	10	1/10
Capacity of Direct Read Registers	Turbine	Bypass
US Gallons (millions)	1000	100
Cubic Feet (millions)	100	10
Cubic Meters (millions)	10	1

*See individual specification sheet for outputs and sweep hand registration of encoder and digital registers

Register Type

Permanently sealed direct reading registers.

Materials

Main Case	Bronze
Top Cover Plate	Bronze
Case Nuts and 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
Changeover Valve	Polymer, Bronze, Stainless Steel & Rubber
Bypass Meter	Bronze
Measuring Chamber	Compounded Thermoplastic
Register Lens	Tempered Glass
Register Housing & Lid	Polymer or Bronze
Body O-Rings	Rubber & Nitrile

Operation The C3000 Compound Meter is designed for installations where large variations in flow rate can be expected. These flow ranges are measured by utilizing the low flow capability of a positive displacement meter and the higher flow capability of a Class II turbine meter. The small meter is a standard C700. The measuring element of the large meter is a T3000 turbine meter. Located on the downstream side of the turbine measuring chamber, a changeover valve operates on differential pressure. Before the valve opens, all flow is directed through the C700 bypass meter. After the valve opens, flow goes through both measuring chambers.

Compliance to Standards The C3000 compound meter fully complies with the American Water Works Association Standard C702 as most recently revised. The low lead version complies with NSF61 Annex G.

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 or inclined lines. The AWWA M6 manual recommends 10 pipe diameters upstream and 5 pipe diameters downstream of straight pipe for optimal accuracy of all inferential type flowmeters. It is recommended that a plate strainer be used to protect the turbine and help reduce the effects of turbulence. Optional bypass trim valves are available to facilitate in-line bypass meter replacement while under pressure.

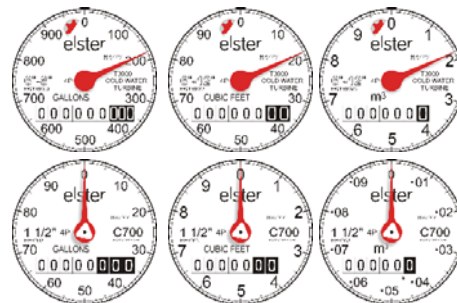


Application The meter is for use with POTABLE COLD WATER up to 120°F (50°C) and working pressures up to 150 psi. The meter will perform with accuracy registration of 100% ± 1 1/2% within its normal flows of 1 1/2 - 2500 GPM. Both pressure loss and accuracy tests are made before shipment. No adjustments are necessary before installation.

Construction The meter consists of a main case, turbine measuring element, changeover valve, main case cover, oscillating piston bypass meter and magnetically driven register assemblies. Both the main case and bypass meter can be cast in waterworks or low lead bronze with raised characters showing model, size and direction of flow. The main case has a throated inlet. A case dowel pin is inserted for locating the bronze cover plate. There are tapped bosses for 3/4" drain and 2" test plugs. 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 main cover with four stainless steel screws and washers, one insert of which is placed eccentrically in the cover. The internal regulator assembly is interconnected to an external regulator shaft located on top of the cover, allowing meter calibration without depressurizing the test bench or meter service. The main case and cover are assembled with an O-ring gasket and stainless steel bolts. The bypass consists of 1" piping and a 1" meter with an oscillating piston measuring chamber and a polymer strainer. A non-return valve installed in the meter's bypass arm, downstream of the bypass meter, prevents

backflow from the high flow chamber being registered on the bypass meter. Each register assembly is secured with a screw and is protected by a hinged lid bearing the same serial number.

Register Each register is contained within a steel or copper seamless can which is oven-cured at 150°F for 90 minutes to eliminate condensation. The tempered glass lens is secured with 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, extra thin sweep hands do not interfere with meter reading, and the low-flow indicator will detect plumbing leaks.



Connections This meter has 8-bolt round flanged end connections, conforming to ANSI B15.1 class 125. Both bronze and cast iron companion flanges are available. The companion flanges are faced, drilled and threaded to ANSI B2.1 internal taper pipe thread.

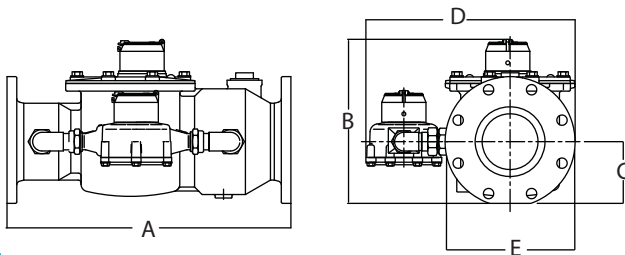
Maintenance The unitized turbine measuring element with integral straightening vanes can be removed and replaced without removing the main case from the service line. Blank cover plates are available for the utility's use. Pretested and calibrated turbine measuring elements with cover plates and registers as well as the bypass meter are available for exchange or purchase. In addition, Elster AMCO Water maintains a fully equipped and staffed repair facility in Ocala, Florida.

Reading Options C3000 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. Elster AMCO Water's Encoder and Digital registers interface to a variety of automated meter reading systems, allowing technology upgrade without register replacement.

Automatic Meter Reading (AMR) Elster AMCO Water 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 Elster AMCO Water's Encoder or Digital Register for reliable measurement inputs. RF Systems from Elster AMCO Water 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 Weight

Meter	A*		B		C		D		E			
Size	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	.lb	(kg)
6"	24	609	8 1/8	206	5 5/16	135	17 9/16	192	11 3/16	284	145	65.8



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