

# C4000 Single Body Compound Meter

## Bronze, Magnetic Drive

Sizes 2", 3", 4"



Size	2"	3"	4"
> 95% Accuracy GPM	1/8	1/8	1/8
98.5%-101.5% Accuracy GPM	1-220	1-900	1-1100
Continuous Flow GPM	160	325	575
Maximum Flow GPM	220	900	1100
Operating Pressure psi	150	150	150
Operating Temperature °F	120	120	120

Sweep Hand Registers	Turbine	Bypass
US Gallons	100	10
Cubic Feet	10	1
Cubic Meters	1	1/10

Capacity of Registers	Turbine	Bypass
US Gallons (millions)	100	10
Cubic Feet (millions)	10	1
Cubic Meters (millions)	1	1/10

**Register Type** Permanently sealed direct read, InVISION and digital registers, available in polymer or bronze register housing and lids

Materials		Materials	
Main case	Bronze	Element security clip	Noryl
Cover	Bronze	Check valve assembly	Acetal, stainless steel, SBR
Valve chamber	Bronze	Changeover valve assembly	Brass, nylon, EPDM, stainless steel
Diaphragm	Glass loaded noryl	Rotor journal bearings	Synthetic sapphire
By-pass insert housing	Glass loaded noryl	Rotor bearing spacers	Noryl
Measuring element	Glass loaded noryl	Stub spindles	Tungsten carbide
Mask	Glass loaded noryl	Thrust pads	Tungsten carbide
Diaphragm support	Glass loaded noryl	Stub spindle box	Stainless steel
Rotor support	Glass loaded noryl	Worm wheel spindle	Stainless steel
Regulator blade	Glass loaded noryl	Magnet carrier	Glass loaded noryl
Front bearing unit	Glass loaded noryl	Magnets	Samarium cobalt
Rotor	Glass loaded polypropylene	Seals and gasket	Synthetic rubber
Rotor pin	Stainless steel	Fasteners	Stainless steel
Rotor worm	Glass loaded polypropylene	Body & cover finish	Epoxy powder coated
Worm wheel	Carbon fiber/PTFE loaded polyphenylene sulfide	Bypass meter assembly	Brass, ceramic, nylon

**Operation.** The C4000 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 efficiency of a Class II turbine meter. The bypass is a highly accurate positive displacement meter with initial sensitivity of 1/32 GPM. The measuring element of the large meter is a standard T4000 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 bypass meter. After the valve opens, flow goes through both measuring chambers.

**Compliance to Standards.** The C4000 Compound Meter fully complies with the American Water Works Association Standard C702 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 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. Both pressure and accuracy tests are made before shipment. No adjustments are necessary before installation.

**Register.** Each register is contained within a 90% copper seamless can which is oven-cured to eliminate condensation. The 1/4" true tempered glass lens is domed and 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.** The 2" is provided with 2-bolt oval flanged end connections and is also available with 4-bolt round flanged ends. The 3" is provided with 4-bolt holed flanged ends. The 4" is provided with 8-bolt holed flanged ends. Both bronze (1 1/2" and 2" only) and cast iron companion flanges are available. The companion flanges are faced, drilled and tapped with ANSI B2.1 internal taper pipe thread.

**Maintenance.** The C4000 unit features an easy-change metering insert, carrying both primary and secondary metering modules. For calibration, maintenance or replacement, this can be removed as a complete assembly - leaving the meter housing in the pipe. Alternatively, access to the bypass meter can be gained by removing it from the metering insert, without taking the meter out of service.

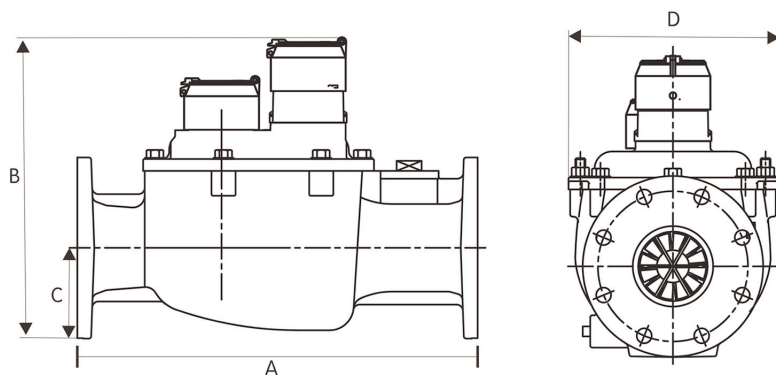
**Reading Options.** C4000 meters are available with Absolute Encoder and Digital register options to provide water usage output to the entire spectrum of electronic meter reading

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'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 Size	Dimensions (Inches)				Weight (lbs.)
	A	B	C	D	
2"	15 1/4	14	4	10	52
3"	17	17	5	12	86
4"	20	16	5	12	90



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