

Specification Sheet

Industrial Positive Displacement Meter

Model C700 Bronze, Magnetic Drive, External Threaded Spuds

Size: 1"



Description

Operation. The C700 is an oscillating piston style, positive displacement water meter. The product utilizes a piston that water use rotates in a measuring chamber, each piston revolution being equivalent to a known volume of water. The piston movement is transferred by a magnetic drive to a straight reading sealed register which contains the appropriate reduction gearing.

Compliance to Standards. The C700 fully complies with American Water Works Association Standard C700, latest revision, and is California Department of Weights and Measures approved. C700 low-lead bronze models are NSF-61 certified and comply with California Proposition 65.

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.

Application. The meter is for use only with POTABLE COLD WATER up to 120°F (50°C) and working pressures up to 150 psi. The meter will register accurately to 100% ± 1 1/2% within the normal flows. Accuracy tests are made before shipment, so no adjustments need to be made before installation.

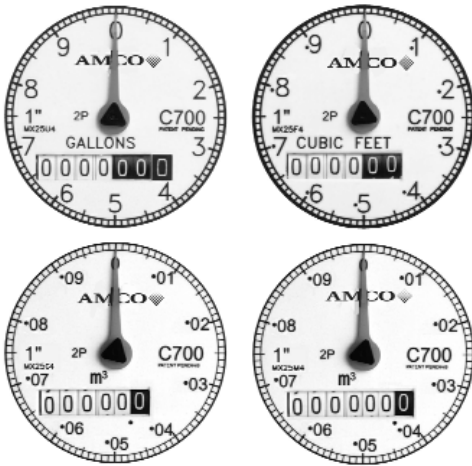
Construction. The meter consists of a straight through-flow main case, dual inlet measuring chamber, vertically grooved oscillating piston, high capacity strainer, removable bottom plate, full rubber liner, body bolts with integral washers and a magnetically driven register. The main case is cast in waterworks or low-lead bronze with raised characters designating model, size and direction of flow. A choice of cast iron, waterworks or low-lead bronze bottom plate is available. The 2-piece snap-fit measuring chamber is of a top and bottom inlet, side output design and features a unique self-flushing sediment well. Other features include a removable, contoured division plate, captive drive bar and high torque magnet complete with a nylon bushing.

Specifications

| | |
|-----------------------------------------|-------------------------------------------------|
| Size: | 1" |
| 95%-101% Accuracy GPM | 3/4 |
| 98.5% -101.5% Accuracy GPM | 3-50 |
| Continuous Flow GPM | 25 |
| Maximum Flow GPM | 50 |
| Operating Pressure psi | 150 |
| Operating Temperature °F | 120 |
| <u>Sweep Hand Registers:</u> | |
| US Gallons | 10 |
| Cubic Feet | 1 |
| Cubic Meters (Canada) | 1/10 |
| Cubic Meters (Intl.) | 1/10 |
| <u>Capacity of Register (millions):</u> | |
| US Gallons (millions) | 10 |
| Cubic Feet (millions) | 10 |
| Cubic Meters (Canada) | 1/10 |
| Cubic Meters (Intl.) | 1 |
| <u>Register Type:</u> | Permanently sealed direct reading |
| <u>Materials:</u> | |
| Main Case | Standard waterworks or optional low-lead Bronze |
| Bottom Plate Options | Waterworks or low-lead Bronze or Cast Iron |
| Bottom Gasket-Liner | Nitrile |
| Body Bolts | Stainless Steel |
| Measuring Chamber | Compounded Polymer |
| Division Plate | Loaded Nylon |
| Piston | High Impact Polymer |
| Thrust Bearing Insert | Loaded Nylon |
| Driving Bar | Loaded Nylon |
| Strainer | Polypropylene |
| Register Can | 90% Copper Alloy |
| Register Housing | Tempered Glass |
| Register Housing and Lid | Polymer or Bronze |

The flow-stream balanced piston has a unique thrust bearing insert and features a Turbulence Seal™ system which passes debris while sustaining the most linear accuracy curve in the industry. Each register is secured to the main case with a tamperproof plug to eliminate tampering.

Direct Read 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 5 mm true tempered glass lens is secured with 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 center sweep hand does not interfere with meter reading, and the 1:1 piston ratio low-flow indicator gives visual indication of plumbing leaks. For accurate meter testing, 100 clear graduations appear at the register's circumference.



Magnetic Drive. The magnetic drive design facilitates coupling between the measuring chamber and the external register. The coupling is absolute at all rated flows.

Connections. Meter casing spuds have external straight threads conforming to ANSI B2.1. Bronze coupling nuts and tailpieces are available. Tailpieces have external taper pipe threads conforming to ANSI B2.1. Their lengths and thread sizes are as specified by AWWA Standards.

Maintenance. The measuring chamber assembly can be removed, repaired or replaced. Pretested measuring chamber assemblies are available for exchange or purchase, and spare parts are available from our central warehouse or designated regional locations. AMCO Water staffs and operates a repair facility at its U.S. manufacturing plant in Ocala, Florida.

Pulsar Type "BI". The "BI" pulsar is a limit switch device which requires power from an external source (2 wire). Contact closure: 1 contact = 1 USG. The switch is rated to 3 amps at 125 VAC max. Note: Register housing and register are 3½ in. diameter style. For full details see specification sheet INDC7-PUL-001.

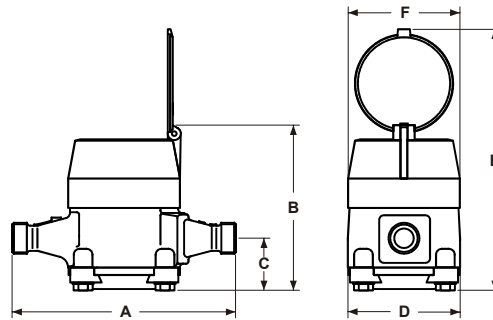
Pulsar Type "SFI". The "SFI" pulsar is a solid state device which requires 6-24 VDC from an external source (3 wire). Note: Register housing and register are 3½ in. diameter style. Contact closure:

| | | |
|--------|--------------------|--------------------|
| 1" Old | 24.6 Cont/USG Std. | 49.2 Cont/USG Opt. |
| 1" New | 30 Cont/USG Std. | 60 Cont/USG Opt. |

For full details see specification sheet INDC7-PUL-001.

Dimensions and Net Weights

| Meter Size | Dimensions (inches) | | | | | | Weight (lbs.) |
|------------|---------------------|-------|-------|---------|-------|-------|---------------|
| | A | B | C | D | E | F | |
| 1" | 10 3/4 | 6 5/8 | 2 1/8 | 6 15/16 | 9 3/4 | 3 3/4 | 10 1/5 |



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