

Specification Sheet

Industrial Positive Displacement Meter Model C-700 Bronze, Magnetic Drive, External Threaded Spuds

Size 1"



Description

Operation. The C-700 is an oscillating piston style, positive displacement water meter. Product utilizes a piston which the water 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 C-700 bronze meter fully complies with the American Water Works Association Standard C700 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.

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. Both pressure loss and accuracy tests are made before shipment. No adjustments need to be made before installation.

Construction. The meter consists of a main case, oscillating piston, measuring chamber, polymer strainer, removable bottom plate, gasket, body bolts and a magnetically driven register assembly. The main case is cast in bronze with raised characters showing model, size and direction of flow. A choice of frostproof or standard bottom plates is available.

Specifications

Size:	1"
95%-101% Accuracy GPM	1/2"
98.5% -101.5% Accuracy GPM	3/4-50
Continuous Flow GPM	25
Maximum Flow GPM	50
Operating Pressure psi	150
Operating Temperature °F	120
Sweep Hand Registers:	
US Gallons	10
Cubic Feet	1
m ³ Cubic Meters	1/10
Imperial Gallons	10
Capacity of Register:	
US Gallons (millions)	10
Cubic Feet (millions)	10
m ³ Cubic Meters (millions)	1/10
Imperial Gallons (millions)	100
Register Type:	Permanently sealed direct reading register
Materials:	
Main Case	Bronze
Bottom Plate	Bronze, 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 Lens	Tempered Glass
Register Housing and Lid	Synthetic Polymer or Bronze

The self-flushing measuring assembly consists of the measuring chamber with division plate, thrust roller insert, piston, chamber top assembly, drive bar, magnet and a locator pin. It is held to its seat by a spacer between the chamber and bottom plate, which is sealed to the main case with a gasket and stainless steel bolts. Each register assembly is attached to the main case with a screw and is positioned with its hinge over the inlet throat. However, the register may be rotated and locked in any 360 degree position therein.

Register. The register is contained within a 90% copper seamless can which is vacuum purged then filled with a dry nitrogen gas to eliminate condensation. The 1/4" 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 will detect plumbing leaks.

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. Both coupling nuts and 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 without removing the main case from the service line. Pretested measuring chamber assemblies are available for exchange or purchase, and spare parts are available from our central warehouse or designated regional locations. ABB Water Meters, Inc. staffs and operates a repair facility at its U.S. manufacturing plant in Ocala, Florida.

Pulser Type "B". The "B" pulser 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. For full details see specification sheet #C7-PUL-001.

Pulser Type "SF". The "SF" pulser is a solid state device which requires 6-24 VDC from an external source, (3 wire). 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 #C7-PUL-001.

Dimensions and Net Weights

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

