

# V100 Industrial Positive Displacement Meter

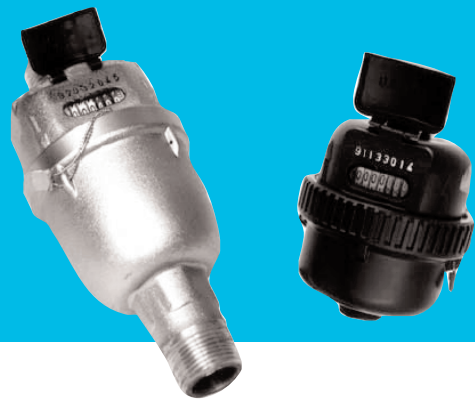
## External Threaded Spuds

Bronze:

Sizes 1/2" x 1/2", 5/8" x 1/2", 5/8" x 3/4"

Polymer:

Sizes 1/2" x 1/2"



Sizes:	1/2" x 1/2"	5/8" x 1/2"	5/8" x 3/4"
98.5% -101.5% Accuracy GPM	1/8-20	1/4-20	1/4-20
Continuous Flow GPM	10	10	10
Maximum Flow GPM	20	20	20
Operating Pressure psi	150	150	150
Operating Temperature °F	120	120	120

### 1 Rev 1st Wheel Equals

US Gallons	10	10	10
Cubic Feet	1	1	1
Cubic Meters	1/100*	1/100*	1/100*
Imperial Gallons	10	10	10

### Capacity of Register (millions)

US Gallons	10	10	10
Cubic Feet	1	1	1
Cubic Meters	1/100**	1/100**	1/100**
Imperial Gallons	10	10	10

\* 10 liters      \*\* 10,000 m<sup>3</sup>

**Register Type**      Liquid filled and sealed

### Materials

Body	Acetal co-polymer or bronze
Working chamber	Compounded thermoplastic
Piston	High-impact polymer
Division plate	Loaded nylon
Thrust bearing insert	Loaded nylon
Strainer	Polypropylene
Register case and lens	Polycarbonate
Gaskets	Neoprene rubber

**Operation.** The V100 (formerly PSM190) meter is a positive displacement type meter operating on the oscillating piston principle. This 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 appropriate reduction gearing to a straight reading, sealed totalizer.

**Installation.** The meter should be installed in a clean pipe line, free from any foreign materials. Install the meter with direction of flow as indicated by the arrows cast in the register case. The meter may be installed in horizontal or vertical lines.

**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 the normal flow range. Both pressure loss and accuracy tests are made before shipment. No adjustment need be made before installation. Should further tests be desired, the requirements in Table 5-3 AWWA Manual M6 should be followed.

**Construction.** The chamber case houses the oscillating piston measuring chamber, a polymer strainer and an optional non-return valve. The measuring chamber is a bottom-in and top-out design and consists of the measuring chamber with division plate and thrust bearing insert, the piston, the chamber cover including the drive bar assembly and a cover locator pin. The sealed



### How to Read V100 Meters

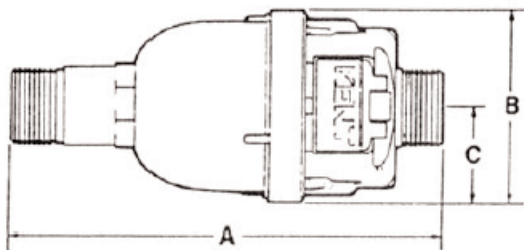
Direct Reading V100 totalizers are read exactly as indicated on the number wheels from left to right similar in fashion to reading the odometer representing miles in a US automobile. Reading the small horizontal lines (if present) on the first number wheel from the right is omitted except when comparing water throughput into a calibrated tank or through a test meter.

The first number wheel on the right without horizontal lines advances one (1) number for each unit of measurement and ten (10) numbers for one complete revolution as follows:

<u>Measuring</u>	<u>Each No.</u> <u>Equals</u>	<u>Each Rev.</u> <u>Equals</u>
Gallons	1	10
Cubic Feet	1/10	1
Cubic Meters/Liters	1/1000	1/1000

### V100 Meter Dimensions (Inches)

<u>Meter</u> <u>Size</u>	<u>Length</u> <u>A</u>	<u>Width</u> <u>B</u>	<u>To Center</u> <u>C</u>	<u>Weight</u> <u>(lbs.)</u>
1/2 x 1/2 poly	4 1/2	3 3/4	1 7/8	1
1/2 x 1/2"	4 1/2	3 3/8	1 7/8	3
5/8 x 1/2"	7 1/2	3 5/16	1 5/8	3
5/8 x 3/4"	7 1/2	3 5/16	1 5/8	3



BRONZE



POLYMER

### Meter Couplings Dimensions (Inches)

<u>Meter</u> <u>Size</u>	<u>Coupling</u> <u>Size</u>	<u>Tailpiece</u> <u>Length</u>	<u>Tailpiece</u> <u>Thread*</u>	<u>Coupling</u> <u>Nut Thread*</u>
1/2 x 1/2"	1/2	1 3/4	1/2	3/4
5/8 x 1/2"	1/2	2 3/8	1/2	3/4
5/8 x 3/4"	3/4	2 1/2	3/4	1

\*Nominal Thread Size (I.P.)

register is liquid filled and free from condensation and tampering. The polycarbonate register case has a magnified lens enlarging the totalizer numbers for easy reading. The meter flow direction arrows are cast on the register case. The unit of measurement is shown on the underside of the lens cover. A serial number is enscribed on the case or the lens cover, which is hinged toward the outlet end of the meter.

**Connections.** Meter casing spuds have external straight threads conforming to ANSI B2.1. Bronze or polymer coupling nuts and tailpieces are available.

**Maintenance.** The measuring chamber can be easily removed for repair or replacement. Pretested measuring chamber assemblies are available for exchange or purchase. All spare parts are available from our warehouse in the U.S. at Ocala, FL and in Canada at Burlington, Ontario. In addition, Elster AMCO Water maintains a fully equipped and staffed repair facility in Ocala, Florida.

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