

M190 Hot Water Meter

Sizes: 1" and 1 1/2"



| | Size: 1" | 1 1/2" |
|---------------------------|-----------------|---------------|
| Min. Flow gpm + 5% | .31 | .88 |
| Low Flow gpm + 3% | 1.23 | 3.52 |
| Rec.Cont. Flow ± 1% | 15.41 | 44.03 |
| Peak Flow gpm ± 1% | 30.82 | 88.06 |
| Pressure Loss psi /Min. | .14 | .14 |
| Pressure Loss psi Rec. | 2.5 | 3.5 |
| Pressure Loss psi Peak | 7.25 | 14.5 |
| Operating Pressure psi | 230 | 230 |
| Operating Temperature psi | 266 | 266 |

Register Reading Smallest Qty:

| | | |
|--------------|----------|---------|
| US Gallons | .01 | .10 |
| Cubic Meters | .10 Ltr. | 10 Ltr. |

Capacity of Register:

| | | |
|--------------------------|-----|-----|
| US Gallons (millions) | 10 | 100 |
| Cubic Meters (thousands) | 100 | 100 |

Contact Closure/Pulser::

| | IPG12 | IPG12 |
|--------------|--------------|---------------|
| US Gallons | Cont/Gal | 1 Cont/10 Gal |
| Cubic Meters | Cont/10 Ltr | 1 Cont/10 Ltr |

Materials:

| | |
|----------------------|-----------|
| Main Case | Brass |
| Top Plate | Brass |
| Measuring Chamber | Ryton |
| O-ring | EPDN |
| Impeller | Ryton |
| Magnet | Ceramic |
| Strainer | Dyflor |
| Register | Noryl |
| Register Housing Lid | Polyamide |
| Register & Number | Noryl |
| Gearing Wheels | Noryl |

Operation. The M190 (MTH) is a multijet (inferential) impeller meter. The impeller and magnet are the only moving parts in the measuring chamber. The impeller movement is transferred by a magnetic coupling to the vacuumized and hermetically sealed register, which can be turned to any position for easy reading.

Installation. The meter must be installed in a clean pipeline, free from any foreign materials. The meter shall be installed with the direction of flow as indicated by the arrow cast in the meter case. The meter may be installed in horizontal or inclined lines up to 45°, with the register facing upward. Note, the meter must have 10 pipe diameters ahead of the unit and 5 after, of straight pipe, to insure proper flow through the meter.

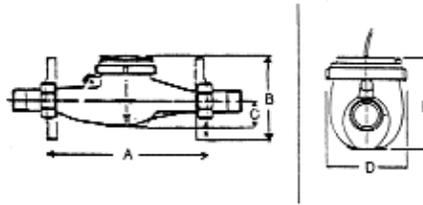
Application. The meter is for use with hot water up to 266°F (130°C) and working pressure to 230 psi (16 bar). Both pressure loss and accuracy tests are made before shipment. No adjustments need be made before installation.

Construction. The meter consists of the main case, a strainer, a measuring chamber, an impeller, a removable top plate and O-ring with a magnetically driven register or register pulser assembly and securing ring. The main case is cast bronze with raised characters showing direction of flow. The securing



Pulser Wiring. The pulse element is a 4-watt rated reed switch which requires power from an external source. The unit is to be wired in series with no regard to polarity.

Note: Maximum voltage: 42 V DC/AC.
Protective resistance: 20 OHM



ring secures the internal mechanism and top plate. The unit is sealed by the O-ring gasket. The measuring chamber is designed so the impeller/magnet transfers the flow to the register. The register is secured to the main case by the securing ring.

Register. The register is a dust and waterproof hermetically sealed unit (no condensation is caused by variation of temperature). The register can be turned to any position for easy reading.

Pulser. The IPG12 pulser consists of a molded insert with a clear housing to read the totalizing register. The pulse element is a dry contact reed switch rated at 4 watts, maximum voltage: 42V DC/AC, 20 OHM resistance. This unit requires power from an external source and normally is wired in series with no regard to polarity, approximately 9-10 feet of 2-wire unshielded cable exists in a sealed fitting.

Connections. The meter casing spuds have external straight threads conforming to ANSI B2.1. Bronze coupling nuts and tailpieces are provided.

Dimensions and Net Weights

| Meter Size | Dimensions (inches) | | | | | Weight | |
|------------|---------------------|------|------|------|-----|--------|-------|
| | A | B | C | D | E | Reg | Pul |
| 1" | 10.25 | 4.50 | 1.57 | 3.82 | 5.0 | 6.5 | 7.0 |
| 1 1/2" | 11.82 | 5.55 | 2.12 | 5.35 | 6.5 | 12.75 | 13.25 |

Temperature/Pressure Rating

| Temp. °F | 32-150 | 200 | 230 | 250 | 266 |
|----------|--------|-----|-----|-----|-----|
| MIN PSIG | - | 6 | 25 | 45 | 62 |

"MIN PSIG" is the minimum line pressure required to prevent flashing within the meter body.

US Gallon

Register



Pulser



Elster AMCO Water, Inc.
PO Box 1852
Ocala, FL 34478-1852
United States

T +1 800 874 0890
F +1 352 368 1950

watermeters@us.elster.com
www.elster.com

© 2007 by Elster. All rights reserved.

The company's policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice. These products have been manufactured with current technology and in accordance with applicable AWWA Standards.