



## NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Meter Indicating Volume  
Water Meter  
Multi-Jet Domestic Style  
Model: MJ-20  
Size: 3/4"

**Submitted By:**

Meter Technology Werks, d/b/a MTW  
2315 East 3<sup>rd</sup> Avenue  
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Contact: Matthew T. White  
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**Standard Features and Options****Standard Features**

- Eight Wheel Odometer Type Register with One Decimal Place
- US Gallon Unit of Measure
- Polymer Main Case and Register
- Magnetic Drive Register
- External Threaded Spuds 7.5: Length
- Flow Direction Arrow Cast on Inlet side of the meter case
- 150 PSI Maximum Operating Pressure
- Remote Pulsing Reed Switch Counter (functions not evaluated)

**Note:** Approved for use only when installed according to the manufacturer's instructions in a "HORIZONTAL" position with the register facing up. The American Water Works Association cautions against installing cold-water meters in such locations where the line temperature consistently exceeds 80 °F (27 °C). These devices are to be installed where they are protected from excessive heat and freezing conditions.

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages. \*Editorial changes, not affecting the type or metrological content, corrected this certificate.

Ronald Hayes  
Chairman, NCWM, Inc.

John Gaccione  
Committee Chair, National Type Evaluation Program Committee  
Issued: September 3, 2014

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**Meter Technology Werks, d/b/a MTW**  
Water Meter / MJ-20

**Application:** Approved for use as a domestic cold water meter (80 °F maximum) in legal sub-metering installations. The flow direction indications are cast into the body of the meter.

**Identification:** The Meter Technology Werks (MTW) logo, US gallon unit of measure, pulse and flow specs, serial number, and model number are printed on the register face. The National Type Evaluation Program Certificate of Conformance number is permanently marked on the side of the meter.

**Sealing:** The meter can be sealed with a wire security seal threaded through a hole in the register ring and through a hole in the external threaded inlet or outlet spud (this also sealing the measuring chamber). The factory seal uses the same sealing provisions and should be left in place for warranty purposes.

**Operation:** This is a velocity type meter where in-flowing water, distributed by multiple jets, flows past an impeller in the measuring chamber, creating an impeller velocity directly proportional to water velocity. The meter's register interprets the velocity into total flow indicated in a volumetric gallon unit of measure.

**Test Conditions:** Three MJ-20 meters were initially submitted for evaluation. The meters were mounted in line on a volumetric water meter test bench at the California Division of Measurement Standards laboratory. The meters were subjected to three tests each at the maximum, intermediate, and minimum flow rates. After successful initial testing, throughput in excess of 227 000 gallons of cold water flowed through the meters. The emphasis of the evaluation was on the device design, marking requirements, accuracy, and repeatability of the meter. All tests were then repeated.

**Evaluated By:** J. Roach (CA)

**Type Evaluation Criteria Used:** *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2014 Edition. *NCWM Publication 14 Measuring Devices*, 2014 Edition.

**Conclusion:** The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

**Information Reviewed By:** J. Truex (NCWM)

**Example of Device:**

