



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Meter Indicating Volume
Digital Electronic Water Meter
Model: E-Series G2

Submitted By:

Badger Meter Inc.
4545 West Brown Deer Road
Milwaukee, WI 53223
Tel: 414-371-5763
Contact: Dennis Schwartz
Email: dshwartz@badgermeter.com
Website: www.badgermeter.com

Standard Features and Options

Model	Meter Size (Inches)	Flow Rates (GPM)	Meter Construction Material
E-Series G2	5/8	0.08 to 30	Bronze
	5/8 X 3/4	0.08 to 30	Bronze
	3/4 X 7-1/2 Lay Length	0.1 to 35	Bronze
	3/4 X 9 Lay Length	0.1 to 35	Bronze
	1	0.16 to 62	Bronze

- Ultrasonic Technology
- Cold Water
- Digital Communications
- Flow Rate Indication
- Measures in Gallons, Cubic Feet or Cubic Meters
- Digital Indications

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of *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.

Marc Paquette
Chair, NCWM, Inc.

Gene Robertson
Chair, NTEP Committee
Issued: September 20, 2024

9011 South 83rd Street / Lincoln, Nebraska 68516

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**Badger Meter Inc.**

Meter Indicating Volume / E-Series G2

Application: Certified for use as a domestic water meter in utility billing, commercial metering systems, and legal submetering applications. All positions for cold water.

Identification: All required identification information is located on the face of the water meter. Water flow direction is marked on the meter face. The required identification (ID) markings detailing the make, model, serial number, meter size, flow direction arrow and National Type Evaluation Program (NTEP) Certificate of Conformance (CC) number are labeled on the meter face.

Sealing: No sealing is required. There are no metrological features that can be changed or altered in the field. The meter is of a single piece design. The electronics will have a seal plug over the mounting screws that cannot be removed unless they are drilled out. The electronics will be locked so they cannot be changed after the meter leaves the factory.

Operation: Ultrasonic flow meters measure the difference of the transit time of an ultrasonic sound wave beam propagating in and against the flow direction of time. This time difference is a measure for the average velocity of the fluid along the path of the ultrasonic beam. By using the absolute transit times, both the average fluid velocity and the speed of sound can be calculated. This meter is to be tested as “other than multi-jet” per the National Institute of Standards and Technology (NIST) Handbook 44 Specifications and Tolerances, Section 3.36. Water Meters, Table T.1. Accuracy Classes and Tolerances for Water Meters.

Test Conditions: Three ¾ inch meters were tested. Flow rates were 30 gpm, 3 gpm, and 0.5 gpm. All test results were within tolerance and repeatability requirements. After a throughput of more than 200,000 gallons, the meters were retested, and results were within tolerance and repeatability requirements.

Evaluated By: A. Katalinic (NTEP) 24-098 (CN 11170)

Type Evaluation Criteria Used: *Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2024 Edition. *NCWM Publication 14: Measuring Devices*, 2024 Edition.

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

Information Reviewed By: D. Flocken (NCWM) 24-098



Badger Meter Inc.
Meter Indicating Volume / E-Series G2

Example(s) of Device:

When configured for NTEP, the registration artwork will indicate "NTEP CC XX-XXX" in the bottom left-hand corner.

The registration artwork will show the meter size. In the example shown, the size is 1", but other options are listed in Table 2.

The registration artwork will list the encoder output. In the example shown, the output is Encoder & Scaled/Unscaled, but other options are listed in Table 1.

The E-Series G2 Ultrasonic meter shown below has the lid closed. The lid will need to be opened to see the NTEP artwork.

Encoder
BadgerTouch®
Pulse
Encoder & Encoder
Encoder & Scaled/Unscaled
Encoder & 4-20
Scaled/Unscaled & 4-20

5/8" x 1/2"
5/8" x 3/4"
3/4" x 7-1/2"
3/4" x 9"
1"