



NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Meter Indicating Volume  
Water Meter, Ultrasonic, Digital Electronic  
Model: ZSURxx

**Submitted By:**

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**Standard Features and Options**

- Ultrasonic Operation
- Digital Electronic Liquid Crystal Display with Segment Check
- Indicates in Gallons, Cubic Meters or Cubic Feet
- Indicates Flow in GPM (Gallons and Cubic Feet) or Meters<sup>3</sup>/Hour (Cubic Meters)

Model	Range of Flow Rates	Meter Sizes (Inches)	Construction Material
ZSUR01	0.06 TO 25 GPM	5/8 X 1/2	Brass Tube; Plastic Housing
ZSUR02, ZSUR03, ZSUR04	0.50 TO 35 GPM	5/8X3/4, 3/4SL, 3/4X3/4	Brass Tube; Plastic Housing
ZSUR07	0.75 TO 55 GPM	1.0	Brass Tube; Plastic Housing
ZSUR09	1.5 TO 120 GPM	1.5	Brass Tube; Plastic Housing
ZSUR12	2.0 TO 175 GPM	2.0	Brass Tube; Plastic Housing

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.

Mahesh Albuquerque  
Chairman, NCWM, Inc.

Ivan Hankins  
Chair, NTEP Committee  
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**ZENNER USA, INC.**  
Meter Indicating Volume / ZSURxx

**Application:** Certified for use as a domestic cold water meter in legal sub-metering installations. Certified for use as a domestic water meter in utility billing, commercial metering systems, and legal submetering applications.

**Identification:** All required identification information is located on the face of the water meter. Water flow direction is marked on the meter body. 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

**Sealing:** The meter has a wire security sealing provision for securing the two halves of the register body to prevent disassembly.

**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 subjected to testing at 25 gpm, 3 gpm and 0.5 gpm. Also, three 1 and one half inch meters were subjected to testing at 80 gpm, 8gpm, and 1.5 gpm. All tests were within tolerance and repeatability requirements. After 200 000 gallons of throughput all meters were retested at the same flow rates as the initial tests.

**Evaluated By:** A. Katalinic (NCWM/NTEP)

**Type Evaluation Criteria Used:** *Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2023 Edition. *NCWM Publication 14: Measuring Devices*, 2022 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)

**Example(s) of Device:**



Model ZSUR03  
3/4"SL



Model ZSUR03  
With NFC Communication Cable



**ZENNER USA, INC.**  
Meter Indicating Volume / ZSURxx



Model ZSUR03  
With the Sealing Provision



Model ZSUR03  
Showing NTEP CC Marking Location



Model ZSUR09  
1-1/2" Flanged