



NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Meter Indicating Volume  
Water Meter  
Positive Displacement (PD)  
Model: PPD  
Sizes: See Table Below  
Maximum Flow Rate: See Table Below  
Minimum Flow Rate: See Table Below

**Submitted By:**

ZENNER USA, INC (ZPM)  
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**Standard Features and Options**

- Unit of measure: gallons or cubic feet
- Minimum resolution: 0.1 gal or 0.01 cu ft
- Magnetic drive registers
- Flow direction arrow cast on discharge end of meter case
- External threaded spuds
- Short or long body meters
- Bronze main case
- Polymer or bronze register

**Meter Description (i.e there is no difference between the model identifiers)**

Model	Casting on Meter Housing	Description			Range of Flow Rates (US/GPM)
		Register Dia.	Housing Threads	Length	
PPD	5/8x1/2	5/8"	1/2"	7-1/2"	1/4 - 20
PPD	5/8x3/4	5/8"	3/4"	7-1/2"	1/4 - 20
PPD	3/4SL (Short Length)	3/4"	3/4"	7-1/2"	1/2 - 30
PPD	3/4X3/4	3/4"	3/4"	9"	1/2 - 30
PPD	3/4X1	3/4"	1"	9"	1/2 - 30
PPD	1	1"	1"	10-3/4"	3/4 - 50

Notes: The registers are interchangeable among 5/8" Meters  
The registers are interchangeable among 3/4" Meters

**Note:** Approved for use only when installed according to the manufacturer's instructions in a "HORIZONTAL" position. 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.

Gene Robertson  
Chair, NCWM, Inc.

Mahesh Albuquerque  
Chair, NTEP Committee  
Issued: April 10, 2024

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**ZENNER USA, INC. (ZPM)**  
Meter Indicating Volume / PPD

**Application:** Approved for use as a domestic cold-water meter in legal sub-metering installations.

**Identification:** The manufacturer's name (ZPM) is cast on the inlet end of the meter case. The serial number (SN) and the National Type Evaluation Program (NTEP), Certificate of Conformance (CC) number are engraved on a milled flat on the outlet end of the meter case. The meter model PPD series and meter measuring chamber size is on the register face plate under glass. The meter size is on the meter housing in raised letters.

**Sealing:** The enclosed magnetic drive register assembly is secured to the main case by a screw through the register shroud that is protected by a drilled bolt with wire security sealing provision. The bottom plate may be secured by threading a wire security seal through the drilled heads of the retaining bolts. Newer designs run a wire security seal through a drilled head screw to the bottom plate and through the drilled head of a retaining bolt.

**Operation:** This meter utilizes a positive displacement measuring element and a magnetically driven sealed register. The positive displacement meter relies on the water to physically displace the moving measuring element in direct relation to the amount of water that passes through the meter. The piston moves a magnet that drives the register. A register can also have an Electronic Pulse output Encoder attached over the reading face making it more difficult to read. The small test dial\* (not covered) is critical and is used to determine the reading more accurately. The large dial is only used to indicate approximate readings between whole numbers (i.e. the small test dial pointer is indexed to indicate the same value as the larger dial pointer).

**Test Conditions:** This certificate supersedes Certificate of Conformance Number 14-102A1 and was issued without additional testing to add model designations and notes to the chart in the "Standard Features and Options" box. Photos were also relabeled. Previous test conditions are listed below for reference.

**Certificate of Conformance 14-102A1:** This certificate supersedes Certificate of Conformance Number 14-102 and was issued without additional testing to reactivate Certificate of Conformance 14-102 without lapse. Previous test conditions are listed below for reference.

**Certificate of Conformance 14-102:** One meter with a gallon register and two meters with cubic feet registers were tested for accuracy three times each at three different flow rates. After a permanence test was conducted pumping over 200 000 gallons through all the meters, all accuracy tests were then repeated. The meters were also evaluated for marking and sealing requirements.

**Evaluated By:** J. Roach (CA) 14-102, J. Gibson (NCWM) 14-102A1, A. Katalinic (NCWM) 14-102A2 (CN 11058)

**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) 14-102, D. Flocken (NCWM) 14-102A1, 14-102A2



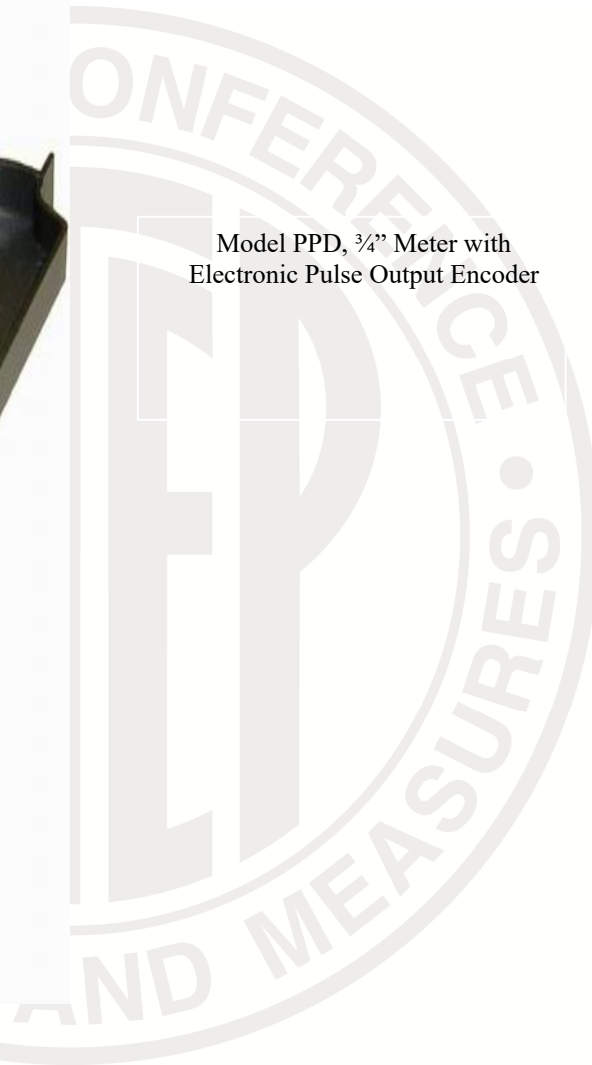
**ZENNER USA, INC. (ZPM)**  
Meter Indicating Volume / PPD

**Examples of Device:**



Small Test Dial\*

Model PPD, 3/4" Meter with  
Electronic Pulse Output Encoder





**ZENNER USA, INC. (ZPM)**  
Meter Indicating Volume / PPD



Model PPD, 3/4" Meter with the Sealing Provisions