

State of California
Department of Food and Agriculture
Division of Measurement Standards

Certificate Number: 5112-00
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California Type Evaluation Program
Certificate of Approval
for Water Meters

For:

Badger Magnetoflow
Magnetic Flow Batch Plant Meter
Meter Model: 7500P
Size: See Table Below
Flow Rate: See Table Below

Submitted by:

Badger Meter, Inc.
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Standard Features and Options

AISI 316 stainless steel flow tube with PTFE (Teflon) liner and alloy C electrodes
ANSI 150 carbon steel flanges
Amplifier/transmitter and internal scaling switches (used for calibration) (Category 1 method of sealing, physical seal) (see Sealing on Page 2) (Board part number 259025)
Solid state relay (output 1)
Opto-isolated open collector (output 2)
Minimum liquid conductivity of 5 micromhos/cm
Maximum working pressure: 150 PSI

Model	Size (inch)	Flow Rates (gallons per minute)
7500P	2	15-200
	3	25-400
	4	45-800

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable technical requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: December 20, 2000

Mike Cleary, Director

Badger Meter, Inc.
Magnetic Flow Batch Plant Meter
Meter Model: 7500P

Application: For use in stationary batch plant applications. The magnetic flow meter is used to measure water and reclaimed concrete water for batch plant operations. May be used with approved and compatible batch controllers.

Identification: An identification badge is secured on the flow meter housing.

Sealing: The amplifier/transmitter cover has provisions to wire security seal two drilled head screws to prevent access to the internal scaling switches. The amplifier/transmitter is mounted on the flow tube housing and has provisions to wire security seal the amplifier/transmitter to the flow tube with two drilled head screws.

Operation: Two electromagnetic coils are located outside the flow tube, diametrically opposed to each other and protected by a carbon steel housing. Two electrodes, inserted into the flow tube, are positioned flush with the internal diameter of the tube and perpendicular to the coils. The coils are energized by a pulsed DC voltage provided by the electronic converter, and a magnetic field is generated across the flow tube section. The voltage is directly proportional to the velocity and, therefore, to the actual volumetric flow rate of the liquid. The electronic converter measures the voltage, processes the signal, and provides two digital pulse outputs, scalable to the desired volumetric value.

Test Conditions: A Model 7500P three-inch magnetic flow meter, with amplifier/transmitter, was installed at a concrete batch plant. The meter was also connected to an Alkon/Auto Control batch controller. Six fast, three medium, and six slow flow tests were conducted alternating water and reclaimed concrete water without recalibration.

The permanence test was conducted by pumping 909 000 gallons of reclaimed water through the meter. Three fast, medium, and slow flow tests were repeated. Based on the testing that was performed and Publication 14, Technical Policy, Section E, Meter Sizes to be included on a Certificate, three meter sizes were approved.

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

Type Evaluation Criteria Used: Title 4, California Code of Regulations, 2000 Edition

Tested By: Dan Reiswig