

DESCRIPTION

APPLICATIONS: For use in testing the performance of any make of large potable cold water meter (sizes 1 1/2" - 10"). Testing can be performed without removing the meter from the service line.

BENEFITS OF TESTING: Badger's portable test meter is an invaluable tool in helping water utilities earn full revenue on all water distributed to customers. By checking the accuracy of meters already in service, the utility can easily determine when under-registration is curtailing water revenue.

Accuracy and revenue performance of meters can be affected by a number of factors, including the length of time in service, overloading, and damage from other causes. Because of its one person portability, the Badger device makes regular testing possible without removing the meter from the line and taking it back to a repair shop.

Small utilities with limited facilities also can use the Badger test meter right in their own shops to check the performance of meters before and after repair.

OPERATING PERFORMANCE: The tester contains all equipment necessary for field testing, including fire hoses and standard adapters. With the accessibility of a test plug on the meter or a test tee on the line, the unit will test all Badger and competitive large meter products. The 5/8" Recordall® Model 25 and 3" Recordall Turbo Series Fire Hydrant water meters meet or exceed the latest AWWA performance and accuracy. A certified accuracy test curve is provided with the assembly.

CONSTRUCTION: The Portable Large Meter Tester consists of a 5/8" Recordall Model 25 meter for measuring low flows (1/4 - 25 gpm) and a 3" Recordall Turbo Series Fire Hydrant meter for measuring high flows (25 - 450 gpm). Flow rates through the PLMT are controlled by two ball valves. Two 12.5 foot sections of fire hose, 1-1/2" and 2" test plug adapters, a spanner wrench, and four hold down stakes are included with the unit.

The cast bronze Recordall 25 housing is corrosion resistant. The Turbo's heat treated aluminum alloy housing is lightweight and corrosion resistant. The assembly weighs only 50 pounds and is mounted to a securable wooden base to prevent movement during testing. The assembly is designed for easy operation and handling by one person.

MAGNETIC DRIVE: Direct magnetic drive, through the use of high-strength magnets, provides positive, reliable, and dependable register coupling.

SEALED REGISTER: The standard registers consist of a straight-reading, odometer-type totalization display, 360° test circle with center sweep hand, and flow finder to detect leaks. Permanently sealed; dirt, moisture, tampering, and lens fogging problems are eliminated.

(OPTIONAL) RESETTABLE REGISTERS: (2) Electronic Resettable Registers with ER-10 style single indicators provide rate of flow and totalization for the main line and bypass meters. The totalization resettable function can be disabled. Flow Rate function is programmed independently of the totalization. Reference: IOM-124-01 for ER-10H programming. The flow rate value is approximate and if a more specific value is required, follow procedure outlined in Application Brief (PLMT-E-06) for flow rate calculation.

MAINTENANCE: The PLMT is designed and manufactured to provide long-term service with minimal maintenance. Interchangeable components are available through various maintenance and meter component exchange programs.

HOSE COUPLINGS: The PLMT is equipped with (2-1/2"-7-1/2" NST) fire hose swivel couplings as standard equipment unless otherwise specified.

CARE OF METER TESTER: Badger's portable test meter is a precision instrument and should not be subjected to rough handling. Used with proper care, it will provide many years of satisfactory service. The correct operating procedure is described on the laminated instruction sheet attached to the meter.

If the water supply contains sand, silt or pipe scale, the test meter should be flushed with clear water before being placed in storage. After each use, all water should be drained from the meter, hoses disconnected, and the ends capped. When the portable unit is in storage, it should be protected from excessive heat, cold and dusty conditions.



PLMT shown with optional electronic Resettable Registration.

SPECIFICATIONS

Typical Operating Range (100% ±1.5%)	(0.1 to 113 m ³ /h) 1/2 - 500
Typical Low Flow (Min. 95%)	1/4 GPM (0.06 m ³ /h)
Maximum Continuous Flow	450 GPM (102.2 m ³ /h)
Pressure Loss at Maximum Continuous Operation	45 PSI at 450 GPM (3.1 bar @ 102.2 m ³ /h)
Maximum Operating Temperature	80° F (26° C)
Maximum Operating Pressure	150 PSI (10 bars)
Register Type	Straight reading, permanently sealed magnetic drive standard
Register Capacity	Disc: 10,000,000 Gallons 1,000,000 Cubic Feet 100,000 m ³ Turbo: 100,000,000 Gallons 10,000,000 Cubic Feet 1,000,000 m ³
Meter Adapters	1 1/2" and 2" test plug adapters
Fire Hose	Two 12.5 foot lengths
Test Rings	Two provided

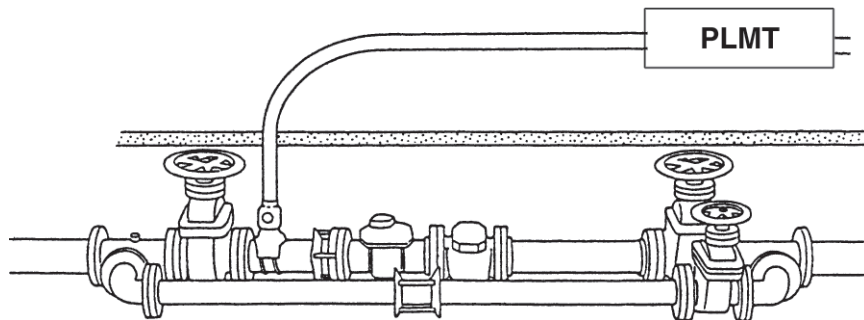
MATERIALS

Meter Housing	Cast Bronze (Disc), Heat Treated Aluminum Alloy (Turbo)
Housing Cover	Bronze
Measuring Elements	Thermoplastic
Trim	Stainless Steel
Connection Screen	Thermoplastic
Magnets	Ceramic
Magnet Spindles	Stainless Steel
Register Cover	Bronze - Non-Resettable Register Thermoplastic - Resettable Register
Flow Restriction Plate	Stainless Steel



⚠ WARNING - SAFETY CONSIDERATIONS

- Read the Application Brief completely before performing a test.
- To prevent severe water hammer, open and close valves slowly.
- Secure the tester for operating pressures above 80 psi.
- Tester should not be operated at pressures above 150 psi.
- Discharge hose should always be secured.
- Thrust or water pressure can cause property damage or injury if tester or hose is not controlled.



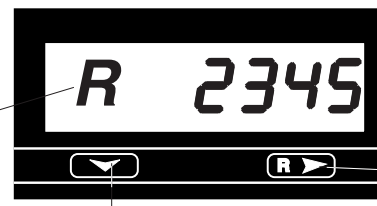
Typical Field Application

OPERATION (ER-10 Style Indicators)

Total Display: Indicates the present count value, which is equal to the number of pulses received (since the last reset), multiplied by the Totalizer Scaler Value programmed.



Rate Display: Indicates the rate value, which is equal to the input frequency multiplied by the Rate Prescale Value in Program Mode. (If no pulses are received for 2 seconds, the rate value goes to zero.)



Reset Key: **R** ➤

If the total value is being displayed, depressing this key will cause the value to be reset to 0 as long as program mode has not been set to disable function.

or

When the program input is active this key is used to select a menu item for editing.

- ▼ **Down Key:** Toggles the unit between the total and rate display. When the program mode is active this key is used to scroll through the menu items. After a menu item has been chosen for editing, the down key is used to set the value for the currently selected (flashing) digit. See IOM-124 for further programming detail.

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Please see our website at
www.badgermeter.com
for specific contacts.

Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists.



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