

## Installation Guide

### ZENNER PMT and PMTB Series Turbine Water Meters

1. The meter is intended for measuring potable, cold water in one direction.
2. The meter is to be installed in a horizontal pipeline with the register facing upward.
3. Proper shut-off valves should be installed adjacent to both the inlet and outlet of the meter so service may be shut off without undue inconvenience to the customer whenever the meter must be removed.
4. Clean and flush the service line thoroughly on the inlet side of the meter before installing the meter.
5. Set the meter with the arrow on the meter pointed toward the customer's service line, and install using new bolts and gaskets.
6. Note: It is recommended that a strainer be installed in front of any of our ZENNER PERFORMANCE Turbine Water Meters.
7. To insure unrestricted flow of water through the meter, use the proper size and type of gaskets. Connections should only be sufficiently tight to seal; do not over-tighten.
8. After the meter is installed, shut off the outlet. Open the inlet shut-off valve slowly until the meter fills with water and then check for leaks.
9. Open the outlet valve slowly, allowing the trapped air to move through the service line and out of the meter. Then open a valve slowly downstream of the meter to allow complete water movement through the meter, checking that no foreign debris has obstructed the water flow.
10. Install an electrical grounding strap around the meter for maintenance while repairing or removing the meter.

To ensure proper registration and performance, the following points should be taken into consideration:

- a. When installing turbine meters without a strainer, a minimum of (10) times the pipe diameter should be allowed on the inlet and (5) times the pipe diameter should be allowed on the outlet side of the meter.
- b. When installing turbine meters with a strainer, minimum of (5) times the pipe diameter should be allowed on the inlet and five (5) times the pipe diameter should be allowed on the outlet side of the meter.
- c. The use of a ZENNER PERFORMANCE Strainer upstream of the meter offers protection against meter damage caused by debris and assists in reducing turbulence.
- d. Do not use elbows bends, check valves, back flow preventers, pressure reducing devices or nonconcentric reducers within ten (10) pipe diameters upstream or five (5) pipe diameters downstream.
- e. Gate valves are acceptable immediately upstream of the meter provided they are completely open during operation and are not utilized to restrict or throttle flow rates through the meter.
- f. Do not install butterfly valves within five (5) pipe diameters upstream or three (3) pipe diameters downstream of the meter.

Note that the installer should also reference the AWWA M6 Manual for Water Meters – Selection, Installation, Testing, and Maintenance.