

## **ZENNER Displacement Type Magnetic Drive Cold Water Meters**

Model PPD

Sizes: 5/8", 3/4", 1", 1-1/2", 2"

U.S.A. Patent US D472,835 S

**INTRODUCTION:** ZENNER PPD Water Meters utilize a magnetically driven, positive displacement, oscillating piston design. It is designed to measure clean potable water where flow is in one direction only in residential, commercial and industrial settings.

**OPERATION:** Water flows through the meter's strainer and into the measuring chamber where it drives the piston. The hydro dynamically balanced piston oscillates around a control roller, guided by a division plate. A drive magnet transmits the motion of the piston to a driven magnet located within the hermetically sealed register. The magnet is



connected to a gear train which translates the piston oscillations into volume totalization displayed on the register dial face.

**CONSTRUCTION:** ZENNER PPD Water Meters consist of three basic components: main case, measuring chamber and a sealed register. The main cases are constructed using C89833 Brass Alloy. Measuring Chambers are constructed of a durable synthetic polymer. Bottom plates (for meter sizes 5/8" thru 1") are available in Bronze, Cast Iron or synthetic polymer. Registers are available as either direct read or electronic output.

**MAINTENANCE:** ZENNER PPD Water Meters are engineered and manufactured to provide long-term service and operate virtually maintenance free. The precise simple design allows for part interchangeability which reduces parts inventory. The register housing may be removed without affecting water pressure or removal of the main case.

**REGISTRATION:** ZENNER PPD Water Meters utilize a magnetically driven, hermetically sealed design. The sealed design eliminates dirt, moisture infiltration, and prevents fogging. The register includes a large odometer-type totalization display, center sweep hand (360°) test circle and low flow leak detection. All ZENNER Meters have electronic output capabilities for easy conversion to Automated Meter Reading. 5/8" through 1" capacities are: 10,000,000 Gallons, 1,000,000 Cubic Feet, 100,000 Cubic Meters, 6 odometer wheels. 1 1/2" and 2" registration capacities are: 100,000,000 Gallons, 10,000,000 Cubic Feet, 1,000,000 Cubic Meters, 6 odometer wheels.

**CONFORMANCE**: ZENNER PPD Water Meters are tested and comply with AWWA C700 and ISO 4064 performance standards. These Meters comply with the lead-free provisions of the Safe Drinking Water Act and are certified to NSF/ANSI Standards 61 and 372.

**TAMPERPROOF FEATURES:** Customer removal of the register to obtain free water is prevented through the use of a locking device that requires a special tool, only available to water utilities.

**CONNECTIONS:** These meters have been designed with ease of installation in mind through the use of built-in wrench pads on meter sizes 5/8" through 1". Tailpiece/Unions for installations of meters are available as an option for various pipe types, sizes and misaligned pipes. The 1-1/2" PPD09 and 2" PPD12 flanged meters are available with an optional 1" test port.

**DISCLOSURE:** Displacement meters are not recommended for use with fire suppression systems. (See AWWA Standard C700)

| MODEL                            |        | PPD01     | PPD02     | PPD03      | PPD04     | PPD05   | PPD07  |
|----------------------------------|--------|-----------|-----------|------------|-----------|---------|--------|
| SIZE                             |        | 5/8 x 1/2 | 5/8 x 3/4 | 3/4" Short | 3/4 x 3/4 | 3/4 x 1 | 1"     |
| High Flow Rate                   | USGPM  | 20        | 20        | 30         | 30        | 30      | 50     |
| Continuous Flow                  | USGPM  | 10        | 10        | 15         | 15        | 15      | 25     |
| Starting Flow                    | USGPM  | 3/64      | 3/64      | 5/64       | 5/64      | 5/64    | 5/64   |
| Normal Flow                      | USGPM  | 1 - 20    | 1 - 20    | 2 - 30     | 2 - 30    | 2 - 30  | 3 - 50 |
| Low Flow                         | USGPM  | 1/8       | 1/8       | 1/2        | 1/2       | 1/2     | 3/4    |
| Extreme High Flow (Intermittent) | USGPM  | 25        | 28        | 35         | 35        | 35      | 65     |
| Maximum Working Pressure         | P.S.I. | 200       | 200       | 200        | 200       | 200     | 200    |
| Maximum Temperature              | Deg. F | 122       | 122       | 122        | 122       | 122     | 122    |
| Length                           | Inches | 7 1/2     | 7 1/2     | 7 1/2      | 9         | 9       | 10 3/4 |
| Length with Couplings            | Inches | 12 1/2    | 12 1/2    | 12 1/2     | 14 1/2    | 14 1/2  | 16 1/2 |
| Height                           | Inches | 4 3/4     | 4 3/4     | 5 1/2      | 5 1/2     | 5 1/2   | 7      |
| Weight                           | Pounds | 5         | 5         | 7          | 7.2       | 7.2     | 13     |

| MODEL                            |        | PPD08                       | PPD09             | PPD09**T                          | PPD11                   | PPD12         | PPD12**T                      |
|----------------------------------|--------|-----------------------------|-------------------|-----------------------------------|-------------------------|---------------|-------------------------------|
| SIZE                             |        | 1-1/2"<br>Female<br>Threads | 1-1/2"<br>Flanged | 1-1/2"<br>Flanged<br>w/ Test Port | 2"<br>Female<br>Threads | 2"<br>Flanged | 2"<br>Flanged<br>w/ Test Port |
| High Flow Rate                   | USGPM  | 100                         | 100               | 100                               | 160                     | 160           | 160                           |
| Continuous Flow                  | USGPM  | 50                          | 50                | 50                                | 80                      | 80            | 80                            |
| Starting Flow                    | USGPM  | 1/2                         | 1/2               | 1/2                               | 3/4                     | 3/4           | 3/4                           |
| Normal Flow                      | USGPM  | 5-100                       | 5-100             | 5-100                             | 8-160                   | 8-160         | 8-160                         |
| Low Flow                         | USGPM  | 1 1/2                       | 1 1/2             | 1 1/2                             | 2                       | 2             | 2                             |
| Extreme High Flow (Intermittent) | USGPM  | 120                         | 120               | 120                               | 170                     | 170           | 170                           |
| Maximum Working Pressure         | P.S.I. | 200                         | 200               | 200                               | 200                     | 200           | 200                           |
| Maximum Temperature              | Deg. F | 122                         | 122               | 122                               | 122                     | 122           | 122                           |
| Length                           | Inches | 12 5/8                      | 13                | 13                                | 15 1/4                  | 17            | 17                            |
| Length with Couplings            | Inches | -                           | -                 | -                                 | -                       | -             | -                             |
| Height                           | Inches | 7 3/4                       | 7 3/4             | 7 3/4                             | 8                       | 8             | 8                             |
| Weight                           | Pounds | 25                          | 26                | 26                                | 31                      | 35            | 35                            |

