Dynaflox

**2012 NEW RELEASE**

# DFW Ultrasonic Water Meters

Waterworks and Industrial applications, DN32 – 600 Available

- **Battery powered -- 6 years life expectancy**
- **No moving parts**
- **Rugged mechanical design -- IP68**
- **Built-in data logger for tracking the history**
- **Excellent measurement accuracy &reliability**
- **Extremely sensitive and accurate in low flows**
- **Significantly lower hydraulic losses - compared to conventional meters**
- **Molded products for DN32-200, CFD based structure design**

ISO9001:2008 CE

# DFW ULTRASONIC WATER METERS

***DFW Ultrasonic Water Meters are new released products of Dynaflox (new logo of Dynameters Shanghai) in Aug. 2012, the excellent performance reflected in rugged mechanical design based on CFD technology, sensitivity in low flows, accuracy and reliability in full range.***

***DFW water meters do not need any external power source, no moving parts, and compared to conventional mechanical meters, significantly lower hydraulic losses, no blockage.***

High accuracy and stable reading with **No strict requirement of straight pipeline**

Fluid dynamics structure design

## Types of DFW water meters

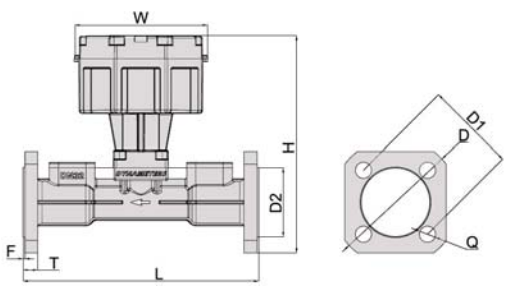
According to the structure and nominal diameter, there are three types of DFW water meters.

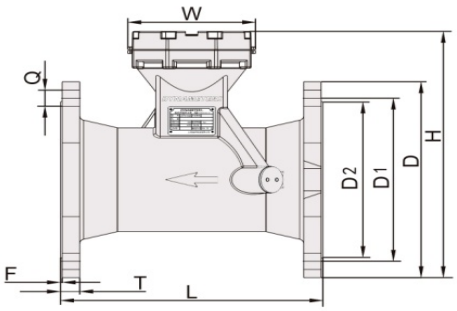
| 1. Flanged Small Pipe Size Water Meters DN32-DN50 | 2. Integrated Bulk Water Meters DN80-DN200 | 3. Water Meters DN250-DN600 |
|---|---|---|
|  |  |  |

## Mechanical Dimensions

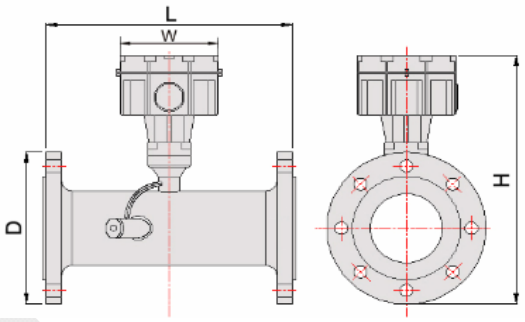
**DN32-DN50 Flanged Small Pipe Size Ultrasonic Water Meters**

| Nominal Diameter | Pressure | L (mm) | H (mm) | D (mm) | W (mm) |
|---|---|---|---|---|---|
| DN32 | 4 MPa | 260 | 243 | 140 | 146 |
| DN40 | | 260 | 250 | 150 | |
| DN50 | | 270 | 261 | 165 | |



| DN80-DN200 Integrated Bulk Ultrasonic Water Meters | | | | | | |
|---|---|---|---|---|---|---|
| Nominal Diameter | Pressure (MPa) | L (mm) | H (mm) | D (mm) | W (mm) |  |
| DN80 | 1.6MPa | 225 | 262.5 | 200 | 146 | |
| DN100 | | 250 | 283.0 | 220 | | |
| DN150 | | 300 | 334.5 | 285 | | |
| DN200 | 1.0 MPa | 350 | 385.0 | 340 | | |



| DN250-DN600 Bulk Ultrasonic Water Meters (DIN EN1092-1) | | | | | | |
|---|---|---|---|---|---|---|
| Nominal Diameter | Pressure (MPa) | L (mm) | H (mm) | D (mm) | W (mm) |  |
| DN250 | 1.0 MPa | 450 | 536 | 395 | 146 | |
| DN300 | | 500 | 588 | 445 | | |
| DN350 | | 550 | 645 | 505 | | |
| DN400 | | 600 | 699 | 565 | | |
| DN500 | 0.6 MPa | 800 | 815 | 670 | | |
| DN600 | | 1000 | 918 | 780 | | |



## Technical Parameters

| Nominal Diameter | | 32 | 40 | 50 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Q4 ($m^3$/h) | | 8 | 13 | 31 | 79 | 125 | 200 | 313 | 500 | 788 | 788 | 1250 | 2000 | 3125 |
| Q3 ($m^3$/h) | | 6.3 | 10 | 25 | 63 | 100 | 160 | 250 | 400 | 630 | 630 | 1000 | 1600 | 2500 |
| Q2 ($m^3$/h) | R=100 | 0.1 | 0.16 | 1.58 | 3.97 | 6.3 | 10.1 | 15.8 | 25.2 | 39.7 | 39.7 | 63 | 101 | 158 |
| | R=200 | 0.05 | 0.8 | 0.79 | 1.98 | 3.15 | 5.04 | 7.88 | 12.6 | 19.8 | 19.8 | 31.5 | 50.5 | 78.8 |
| Q1 ($m^3$/h) | R=100 | 0.06 | 0.1 | 0.25 | 0.63 | 1 | 1.6 | 2.5 | 4 | 6.3 | 6.3 | 10 | 16 | 25 |
| | R=200 | 0.03 | 0.05 | 0.13 | 0.32 | 0.5 | 0.8 | 1.25 | 4 | 3.15 | 3.15 | 5 | 8 | 1.25 |
| Starting flow (l/h) | | 3.5 | 5.8 | 9 | 24 | 36 | 88 | 127 | 353 | 509 | 692 | 904 | 1413 | 2035 |

| | |
|---|---|
| Accuracy class | ISO4064 rev.2005, R=100, 200 |
| Maximum Working Pressure | 1.6MPa(DN32-150); 1.0MPa(DN200-400); 0.6MPa(DN500-600); |
| Pressure loss | △p10 |
| Liquid temperature | 0.1℃-50℃ (T50), Other requirements, please contact with factory. |
| Work environment | Temperature: -25℃～55℃, Humidity: ≤100%（RH） |
| Climatic and mechanical environment | Class C |

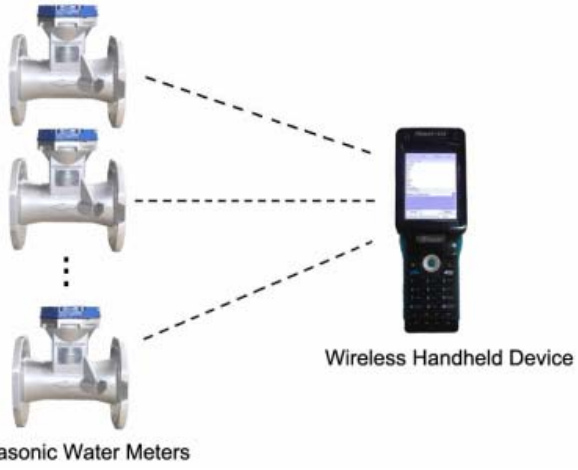
| | |
|---|---|
| Electromagnetic environment | Class E2 |
| Display | Max. 8 Digit LC display<br>Total flow(L, $M^3$, GAL), flow rate (l/min, gal/min, $m^3/h$), velocity, date and time<br>Alerts and statistics features |
| Data Storage | 1. Store every hour totalizer in 7 days, every day totalizer in two months, and every month totalizer in 32 months, users can read these data via RS485 or wireless handheld device (Modbus protocol).<br>2. We can also provide other storage modes for high-volume orders as required. (The data storage can up to 2000 in total). |
| Output | 4-20mA, Pulse, or RS485 Modbus), these outputs need external 12-24VDC power supply.<br>Wireless handheld devices, GPRS or ZigBee, battery power supply. |
| Power Supply | Over 6 years life expectancy. |
| Protection class | **IP68,** submersible. |
| Available sizes | DN32-DN600 |
| Construction | 304SS(DN32,40,50); WCB Steel(DN80,100,150,200) - epoxy coated drinking water approval; Carbon Steel (DN250-600) |
| Flange connection | Flange conforms to DIN, ANSI, or other standards. |

**Notes: 1.** If customers need DN20 and DN25, or have high metrological requirements, please contact us.

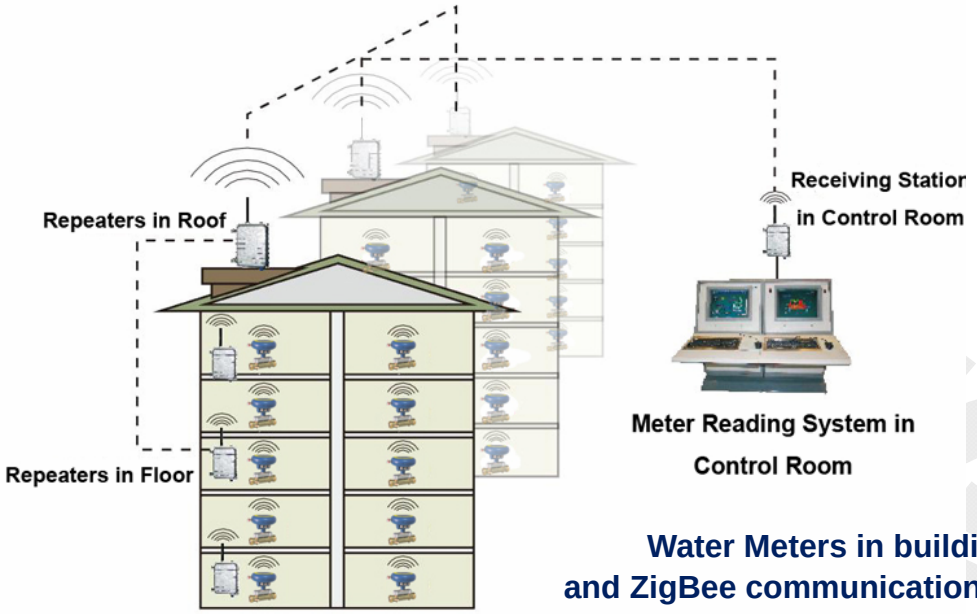
## Wireless handheld devices and ZigBee System

DFW ultrasonic water meters can be configured with wireless data collection by handheld device or zigbee reading system.

Wireless handheld device utilizes the wireless communication of 433/470M. According to the different address of water meters, data collect by peer-to-peer. It's easy to use and communication range is about 200 meters in free range space.




Wireless zigbee meter reading system is more complex than wireless handheld device in application, which can transmit for remote distance and is suitable for networking in big system. The PC software displays the quantity of using water in each family and then calculating the costs by the data from Zigbee.

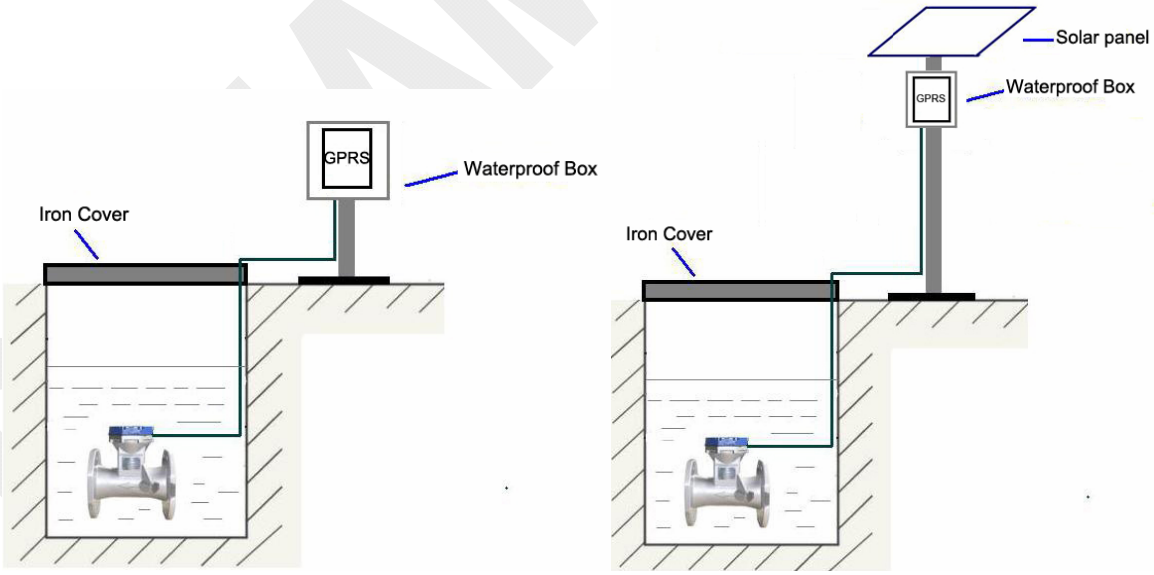



**Water Meters in building and ZigBee communication system**

## GPRS Wireless Remote Transmission Systems

**GPRS SYSTEM** utilizes mobile communication network platform for data transmission, it is suitable for decentralized data acquisition management. The GPRS is battery-powered, and supports RS485 or other standard data interface. When it is used with DYNAMETERS water meters together, it can help customer to monitor water meters remotely.

The Ultrasonic water meter can be installed in the well, and communicate with GPRS. The application can be in steel industry, petrochemical industry, water supply industry, etc. The installation instruction is as below.



# Packing Size and Weight of DFW

| Nominal Diameter | Packing size (mm) | packing weight (kg) |
|---|---|---|
| DN32 | Carton size: 380*200*220<br>Wooden Bottom: 380*200 | 8 |
| DN40 | | 8.5 |
| DN50 | | 10.5 |
| DN80 | Carton size: 450*270*270<br>Wooden Bottom: 450*270 | 14.5 |
| DN100 | | 20 |
| DN150 | Carton size: 530*360*370<br>Wooden Bottom: 530*360 | 29.5 |
| DN200 | | 41.5 |
| DN250 | Carton size: 660*500*520<br>Wooden Bottom: 660*500 | 60 (ANSI: 65) |
| DN300 | | 81 (ANSI: 110) |



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