

## WOLTMANN COLD WATER METER FLANGED PN16 MID R100 PRE-EQUIPPED

Woltmann water meter high flow MID R100 for cold water with dry dial for water distribution.

Mineral glass with plastic cover and lid.

Horizontal or vertical position without straight length upstream and downstream needed (U0/D0).

Pre-equipped for radio MBUS, MBUS or pulse transmitter.



**Size :** DN50 to DN200

**Connection :** Flanges PN10/16 RF (PN16 for DN200)

**Min Temperature :** +0°C

**Max Temperature :** +50°C

**Max Pressure :** 16 Bars

**Specifications :** Axial helicoid

Dry dial

Magnetic transmission

**Materials :** Cast iron body

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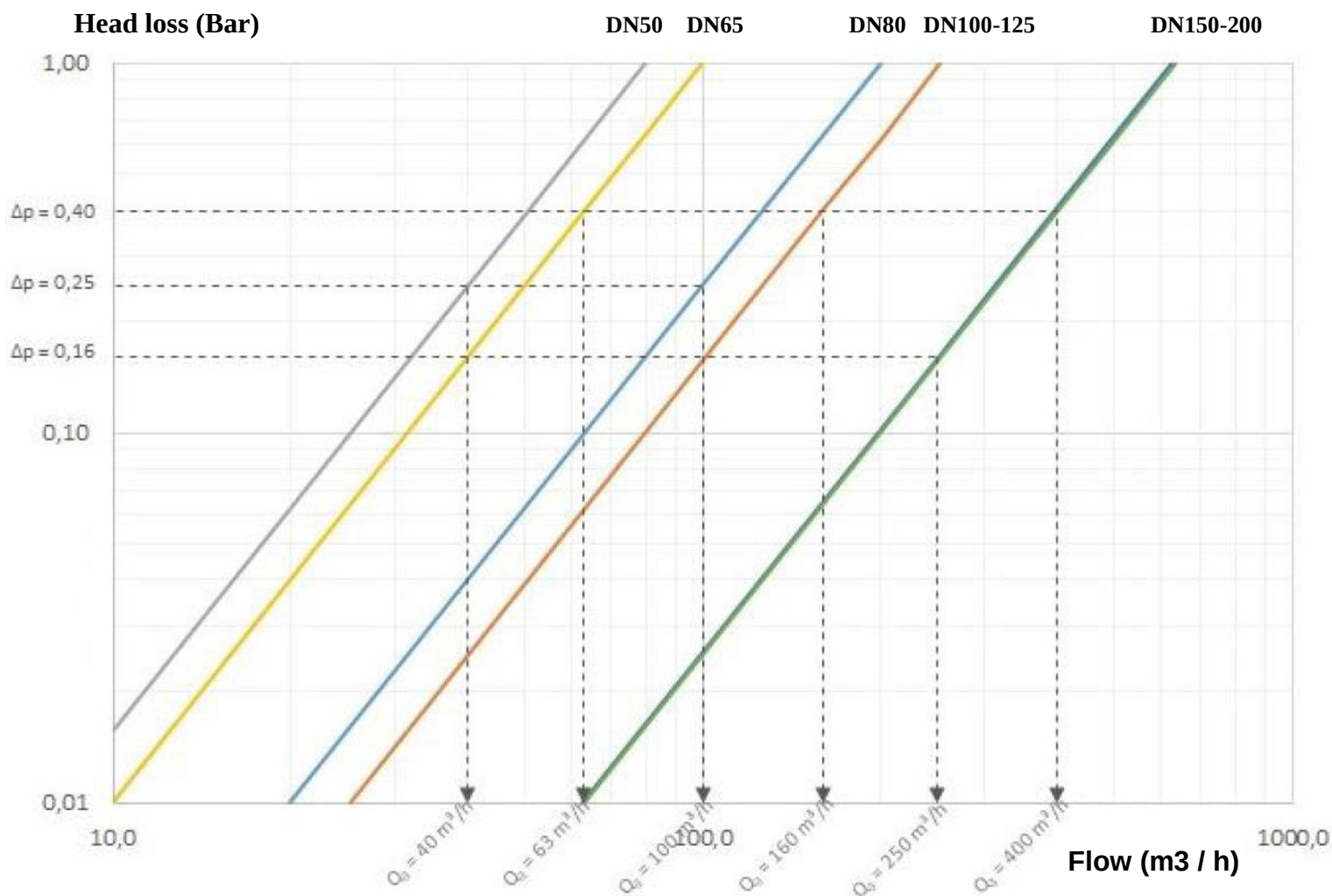
### SPECIFICATIONS :

- Woltmann type with interchangeable insert
- **MID R100 range** in horizontal or vertical position (respect the flow direction indicated by the arrow)
- Horizontal or vertical mounting without straight length needed (U0D0)
- Dry dial IP68 with mineral glass
- Magnetic transmission
- Direct reading on 7 numerical rolls
- With lid
- Cast iron body
- Pre-equipped for pulse transmitter : DN50-125 1 impulse / 100L, over 1 impulse / 1000L
- Epoxy painting color RAL 5010, 150  $\mu$ m thickness

### USE :

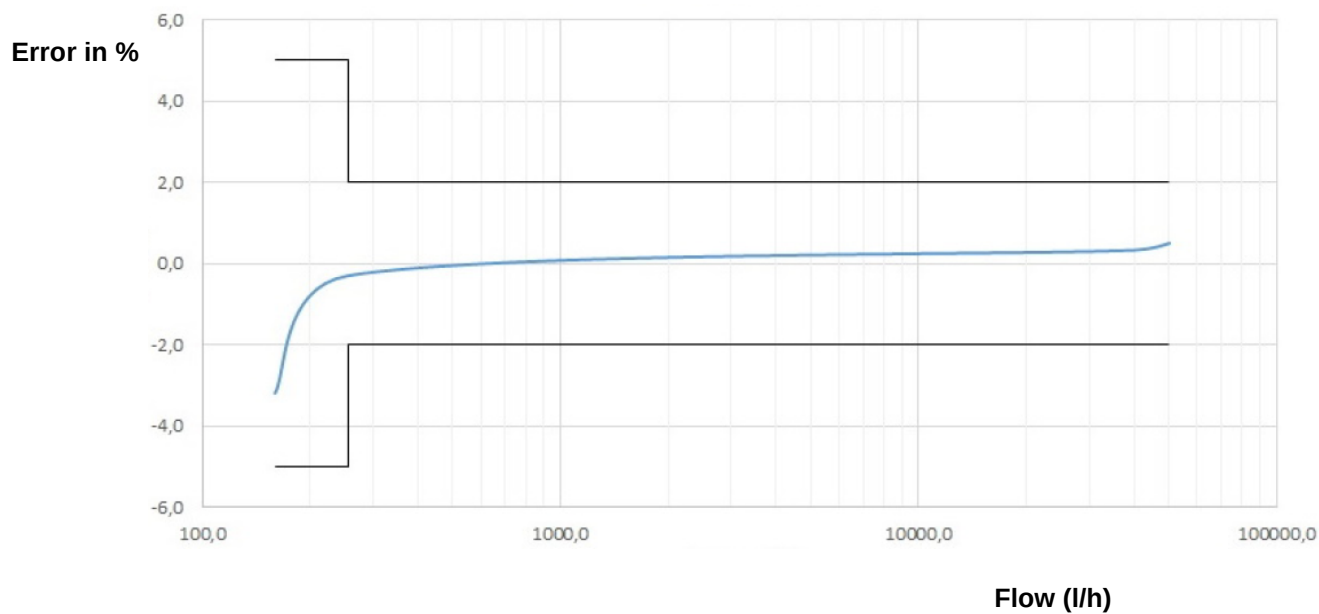
- Water distribution
- Min and max temperature  $T_s$  : 0°C to +50°C
- Max Pressure  $P_s$  : 16 bars

### HEAD LOSS GRAPH :



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**TYPICAL ERROR CURVE :**



**RANGE :**

- Woltmann Cold water meter flanged PN10/16 **Ref.2738** from DN50 to DN200

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**SPECIFICATIONS :**



- Copper can register and glass lens (IP68)
- The register is housed in a dry compartment, which has no contact with the water, for continued readability
- The serial number is printed on the dial both in numbers and in barcode format
- The MID inscriptions are engraved on a metallic label applied on the flange
- Direct read dial with 7 numbered drums for cubic meters (8 on DN150 and DN200 meters) and 2 pointers for Decimals
- Plastic cover and lid with magnetic shielding
- Cast iron flanged body; internal and external epoxy powder coating
- Steel pivot, synthetic sapphire bearing
- Internal mechanism made of anhygroscopic, anti-scaling and hard-wearing plastic materials
- The pulsed version retains the metrological seal and is protected by a cover
- No upstream and downstream straight pipe requirements (U0-D0)
- Hydraulic tests are carried out at three flow rates (Q1 , Q2 , Q3 ) on all the meters. Our testing benches comply with the Standards ISO 4064/3 and ISO 4185 (EN 14154/3) and are approved by a European notified body

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### ACCESSORIES :



- Pulse transmitter Reed Switch **Ref.9821017 CIWMAP**
  - DN50 à DN100 : 1 impulse /100 L
  - DN125 et DN200 : 1 impulse/1000 L



- RADIO ARROW module (to connect on the pulse output) IP68  
**Ref.2749046 MARROW**



- RADIO receiver set (USB or Bluetooth connection) **Ref.2749024 RRADIO**



- ARROW mobile radio software  
**Ref.2749014**



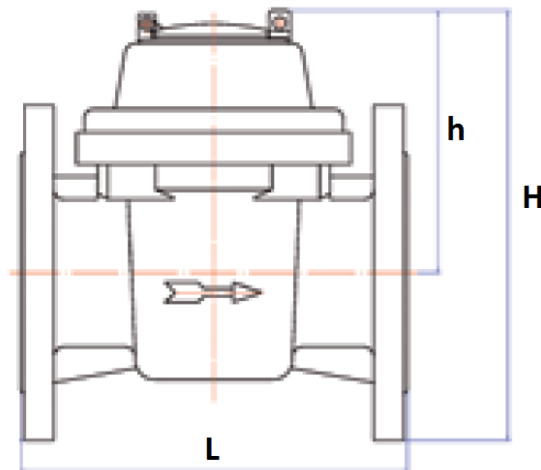
- LORA 868 MHZ Module ( to connect on the pulse output) IP68 (activation with smartphone Android and application Wiirgrid NFC) **Ref.2749926**



- Radio Module direct clip-on **Ref.2749060**
- M-BUS Module direct clip-on **Ref.2749061**
- Pulse transmitter Module direct clip-on **Ref.2749062**
  - DN50 à DN100 : 1 impulse /10 L
  - DN125 et DN200 : 1 impulse/100 L

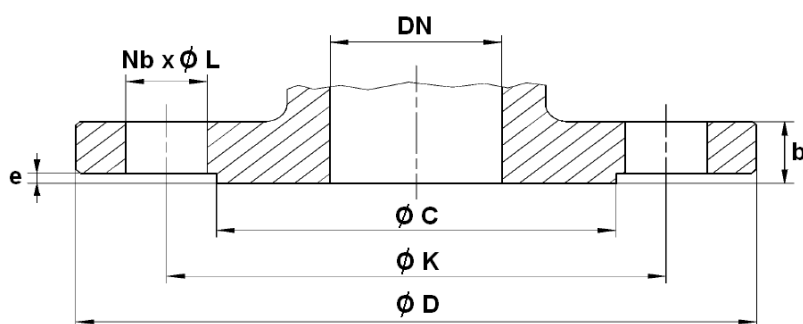
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**SIZE ( in mm ) :**



| DN          | 50      | 65      | 80      | 100     | 125     | 150     | 200     |
|-------------|---------|---------|---------|---------|---------|---------|---------|
| L           | 200     | 200     | 225     | 250     | 250     | 300     | 350     |
| H           | 213     | 220     | 275     | 290     | 305     | 320     | 368     |
| H           | 136     | 136     | 186     | 186     | 186     | 186     | 206     |
| Weight (Kg) | 10      | 11.2    | 15.2    | 17.2    | 22.4    | 29      | 42.6    |
| Ref.        | 2738050 | 2738065 | 2738080 | 2738100 | 2738125 | 2738150 | 2738200 |

**FLANGES SIZE ( in mm ) :**



| DN       | 50     | 65     | 80     | 100    | 125    | 150    | 200     |
|----------|--------|--------|--------|--------|--------|--------|---------|
| Ø C      | 102    | 122    | 138    | 158    | 188    | 212    | 268     |
| Ø D      | 165    | 185    | 200    | 220    | 250    | 285    | 340     |
| Ø K      | 125    | 145    | 160    | 180    | 210    | 240    | 295     |
| Nb x Ø L | 4 x 18 | 4 x 18 | 8 x 18 | 8 x 18 | 8 x 18 | 8 x 22 | 12 x 22 |
| b        | 20     | 18     | 20     | 20     | 22     | 22     | 24      |
| e        | 2      | 2      | 2      | 2      | 2      | 2      | 2       |

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**TECHNICAL FEATURES :**

| DN                                                       | 50        | 65   | 80   | 100  | 125  | 150        | 200  |
|----------------------------------------------------------|-----------|------|------|------|------|------------|------|
| Max flow Q4 max ( m3/h )                                 | 50        | 78.8 | 125  | 200  | 200  | 312.5      | 500  |
| Nominal flow rate Q3 ( m3/h )                            | 40        | 63   | 100  | 160  | 160  | 250        | 400  |
| Min flow Q1 ± with 5% error ( l/h )                      | 400       | 630  | 1000 | 1600 | 1600 | 2500       | 4000 |
| Transitional flow rate Q2 with ± 2% error ( L/h )        | 640       | 1008 | 1600 | 2560 | 2560 | 4000       | 6400 |
| Starting flow rate (l/h)                                 | 125       | 190  | 320  | 450  | 700  | 1200       | 1800 |
| Min reading ( l )                                        | 2         |      |      |      |      |            |      |
| Max reading ( m3 )                                       | 9.999.999 |      |      |      |      | 99.999.999 |      |
| Max head loss $\Delta P$ at nominal flow rate Q3 ( bar ) | 0.25      | 0.40 | 0.25 | 0.40 | 0.40 | 0.16       | 0.40 |
| Turbine revolutions / liter                              | 1.08      | 1.02 | 0.39 | 0.32 | 0.40 | 0.25       | 0.15 |

**STANDARDS :**

- Manufacturer certified ISO 9001 : 2015 and ISO 14001 :2015
- DIRECTIVE 2014/68/EU : Products excluded from directive ( article 1, § 2b )
- Water Meters according to directive **2014/32/EU MID**
- Designing according to **EN 14154 and EN ISO 4064**
- French water agreement **A.C.S. N° 21 ACC LY 846**
- English water agreement **WRAS**
- Flanged according to EN 1092-2 PN16

**ADVICE :** Our opinion and our advice are not guaranteed and SFERACO shall not be liable for the consequences of damages.  
The customer must check the right choice of the products with the real service conditions.

## WOLTMANN COLD WATER METER FLANGED PN16 MID R100 PRE-EQUIPPED

### INSTALLATION INSTRUCTIONS OF WATER METER

#### BEFORE INSTALLATION :

Pipe-line must be cleaned and free from residual of weldings, rubbish, shaving and every kind of extraneous materials.

Pipe-line must be perfectly aligned and their support properly dimensioned so that there's no external constraint.

Tighten the bolts in cross

Use the right bolt tightening so that the ends won't be damaged.

It's recommended to install a strainer before the water meter if there are some solid particles in the water.

Installation of the meters in the vicinity of pumps must be avoided. It is advisable to install the meter as far as possible from them.

Make sure all the water supply outlets, served by the meter, sit higher than the meter itself otherwise its metering precision could be altered. The highest position of the count itself as the recording of the counter may not be reliable. To address these possibilities, simply place the meter after a 'large upward curve that ensures always a pipe completely filled with water (Fig 1). This will prevent air bubbles that could affect the accuracy of measurement

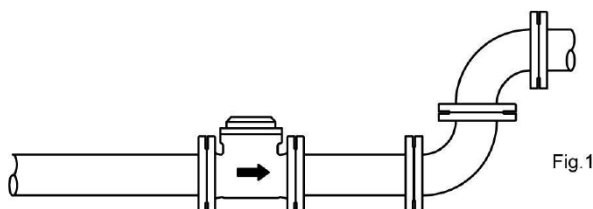


Fig. 1

Respect the flow direction indicated by the arrow.

We recommend installing a valve downstream and one upstream of the meter in order to facilitate a possible maintenance of the meter itself, without having to drain the complete pipeline.

During the water meter commissioning it is advisable to open first the valve placed downstream of the meter (so to flood the mechanical part of the instrument) and then slowly open the valve located upstream of the meter. This will prevent possible water hammers or acceleration of the flow that could damage the moving parts of the instrument.

#### TESTS :

During the tests under pressure, water meter must be removed to avoid overpressure risks.

#### INSTALLATION

Please make the water flow slowly to avoid water hammer.

The meter pit shall be protected from flooding, rainwater and frost.

Avoid direct solar exposition.

#### INSTALLATION POSITIONS :

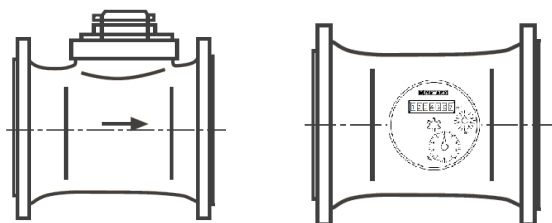
The counter should be normally placed in an horizontal position

The counter can be installed vertically with ascending flow or tilted without suffering any damage.

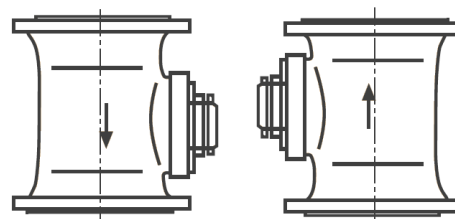
If necessary, the counter can be installed vertically with descending flow but the pipe should always be full of water in this case.

**NOTE: Never install the water meter in horizontal position with totalizer in upside down orientation.**

#### HORIZONTAL :



#### VERTICAL\* :



**\* : In vertical position, the pipe should always be full of water.**