



# Aquadis+

A New Standard for Volumetric Water Meters

Aquadis+ is a world-class piston type volumetric water meter, designed for the best metering and billing in residential applications.

## FEATURES AND BENEFITS

- » Long-term performance
  - Long-lasting high accuracy
  - High Efficiency
  - Any installation position
  - Permanent Readability
- » New Design Features
  - Enhanced Robustness
  - Pre-equipped for Communication
  - Compact
  - Easy Handling

## Efficiency

Focusing on reliable and long-term performance, Aquadis+ offers maximised revenue collection provided by an innovative design to maintain high efficiency over time.

## The Technology

The working principle of Aquadis+ is based on the combination of an extra dry register (no gears in the water), associated with a hermetical measuring element, using the concept of magnetic transmission.

## Communication Device

Pre-equipped for future communication through Cyble.

## Approvals and Standards

Aquadis+ is approved at Q3 1,6, 2,5 and 4m<sup>3</sup>/h from Ratio 50 to 400 according with:

- » MID, Directive 2004/22/EC of the European Parliament
- » European Standard EN14154  
International Standard ISO 4064
- » Recommendations OIML R49

Aquadis+ is compliant with regulations for products to use in contact with water intended for human consumption. Aquadis+ has approvals granted by the following laboratories:

- » ACS (France)
- » Belgaqua (Belgium)
- » Kiwa (Netherlands)
- » WRAS (United Kingdom)
- » KTW - DVGW W270 (Germany)

**Hermetically Sealed Register\* (Counter)** Glass lens and copper can register, condensation and water proof (IP 68), allows permanent readability

\* option for plastic case, for specific applications



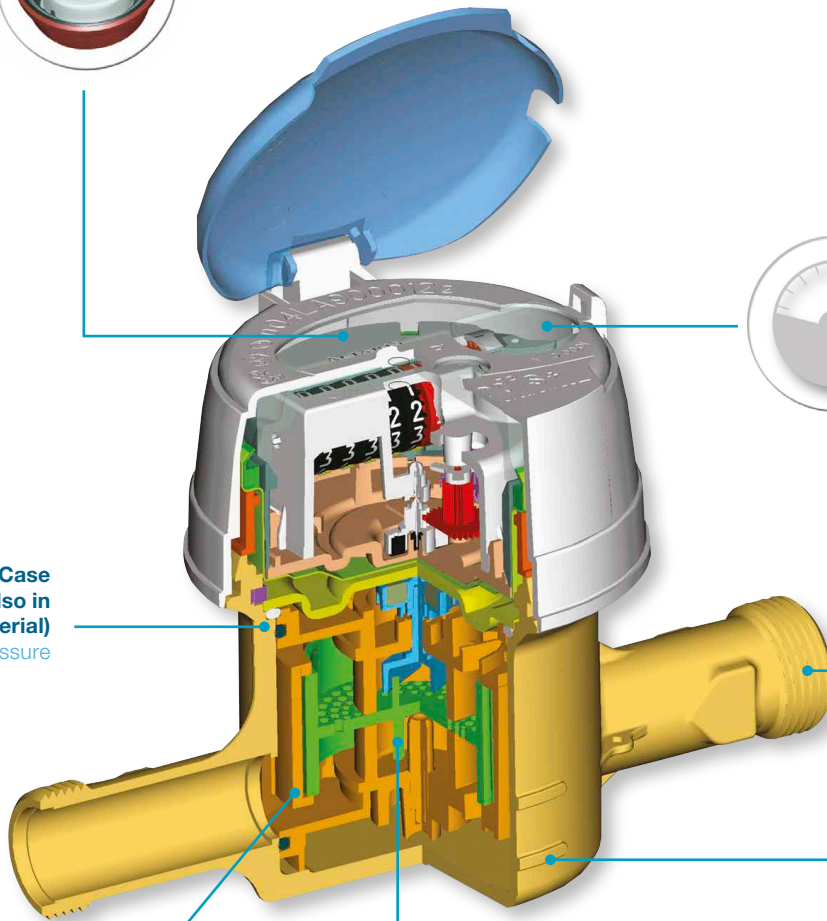
**Communication**  
Pre-equipped with the proven Cyble target allowing the meter's integration into remote reading systems by adding the relevant module



**Effective and Easy Maintenance Filter**  
Prepared to contain major particles, easy to clean

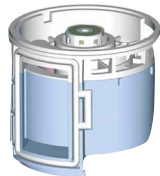
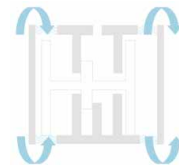
**Compact and Easy Handling**

**Robust Case (available also in thermoplastic material)**  
High resistance to pressure



Aquadis+ DN15

**Outstanding Accuracy and Long Term Performance**  
Hydro-dynamically balanced piston obtained by an innovative design of measuring elements enables not only detection and account of extremely low flows (typically, < 1L/h) in wide range of flow rates, but also long-lasting and stable accuracy.



**OPTION**

- Aquadis+ meters may be fitted with:
- » Cyble modules from the factory (please refer to specific leaflet),
  - » Non return-valve for outlet pipe,
  - » Removable cap.

**COMMUNICATION**

Aquadis+ is always pre-equipped with the proven Cyble technology, making it possible to mount plug-and-play Cyble modules at any time. This opens up to a large range of advanced and reliable AMR systems:

- » Radio walk-by systems
- » Radio fixed data collection systems
- » M-Bus wired systems (walk-by or fixed network)
- » or any other system based on universal pulse outputs

**Key Advantages of Cyble Technology**

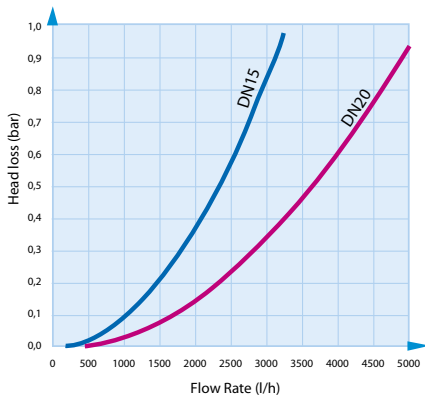
- » Itron standard meter interface
- » No need of additional investments on the water meter
- » Electronic detection principle (no wear or bounce)
- » Leak detection
- » Reverse flow detection
- » Fraud detection
- » Not sensitive to magnetic fields
- » Perfect index correlation

For further info, refer to the specific leaflet.

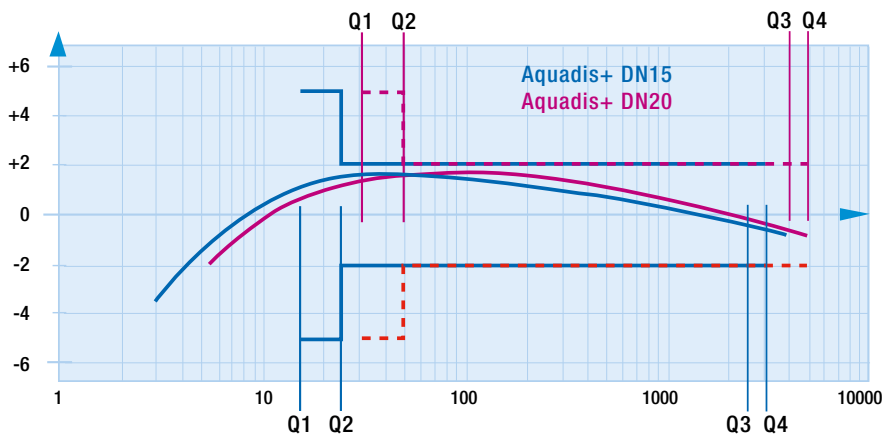


Cyble RF fitted on Aquadis+ DN15 meter

**HEAD LOSS**



**TYPICAL ACCURACY CURVE ACCORDING WITH R160 MID CHANNEL**



The dynamic range is defined as the Ratio (R) between the Nominal and the minimum flowrates. The MID approval proves the Aquadis+ real capacity to withstand to higher nominal flows (Q3 > Qn).



Aquadis+ DN20



Aquadis+ Manifold version



Aquadis+ DN15 composite version:  
 - robust  
 - lighter and ergonomic  
 - resistant to dezincification

## Technical Specifications

| Meter Capacity | mm     |  | 15   |      | 20   |  |
|----------------|--------|--|------|------|------|--|
|                | inches |  | 1/2" | 3/4" | 3/4" |  |

### In compliance with MID

|  |         |                   |           |       |           |      |
|--|---------|-------------------|-----------|-------|-----------|------|
| MID Accuracy Ratio (Q3/Q1) - all positions |         |                   | 50 / 400  |       | 63 / 400  |      |
| MID Type Approval Number                   |         |                   | LNE 13636 |       | LNE 16467 |      |
| Nominal Flow Rate                          | (Q3)    | m <sup>3</sup> /h | 1.6       | 2.5   | 2.5       | 4.0  |
| Standard Ratio (*)                         | (Q3/Q1) |                   | 100       | 160   | 100       | 160  |
| Minimum Flow Rate                          | (Q1)    | l/h               | 16        | 15.6  | 25        | 25   |
| Transitional Flow Rate                     | (Q2)    | l/h               | 25.6      | 25    | 40        | 40   |
| Overload Flow Rate                         | (Q4)    | m <sup>3</sup> /h | 2         | 3.125 | 3.1       | 5    |
| Pressure Loss Class at Q3                  |         | bar               | 0.25      | 0.63  | 0.25      | 0.63 |
| Maximum Admissible Pressure (MAP)          |         | bar               | 16        |       | 16        |      |
| Operating Temperature (T)                  |         | °C                | 0.1 / 50  |       | 0.1 / 50  |      |
| Climatic Environment                       |         | °C                | 5 / 55    |       | 5 / 55    |      |

(\*) Other Ratios available under specific request

### Other Characteristics

|                                      |                |              |              |
|--------------------------------------|----------------|--------------|--------------|
| Indication Range                     | m <sup>3</sup> | 99999,999    | 99999,999    |
| Minimum Scale Interval               | l              | 0.02         | 0.02         |
| Typical Starting Flow Rate           | l/h            | 1            | 2            |
| Accuracy +/- 5%                      | l/h            | 3            | 5            |
| Accuracy +/- 2%                      | l/h            | 5            | 8            |
| Testing Pressure                     | bar            | 25           | 25           |
| Maximum Accidental Water Temperature | °C             | 60 (<1h/day) | 60 (<1h/day) |

### In compliance with EEC 75/33 - Expiring date May 2014

|                                   |                      |                   |       |    |      |           |   |
|-----------------------------------|----------------------|-------------------|-------|----|------|-----------|---|
| EEC Metrology Class               | Class C all position |                   |       |    | -    |           |   |
| EEC approval number               | F-04-G-297           |                   |       |    | -    |           |   |
| Nominal Flow Rate                 | (Qn)                 | m <sup>3</sup> /h | 0.75  | 1  | 1.5  | 0.75/1,5* | - |
| Maximum Flow Rate                 | (Qmax)               | m <sup>3</sup> /h | 1.5   | 2  | 3    | 3         | - |
| Minimum Flow Rate                 | (Qmin)               | l/h               | 7.5   | 10 | 15   | 7.5       | - |
| Transitional Flow Rate            | (Qt)                 | l/h               | 11.25 | 15 | 22.5 | 11.25     | - |
| Maximum Admissible Pressure (PN)  |                      | bar               | 16    |    |      |           | - |
| Pressure Loss (Head Loss Group)   |                      | bar               | 1     |    |      |           | - |
| Maximum Operating Temperature (T) |                      | °C                | 30    |    |      |           | - |

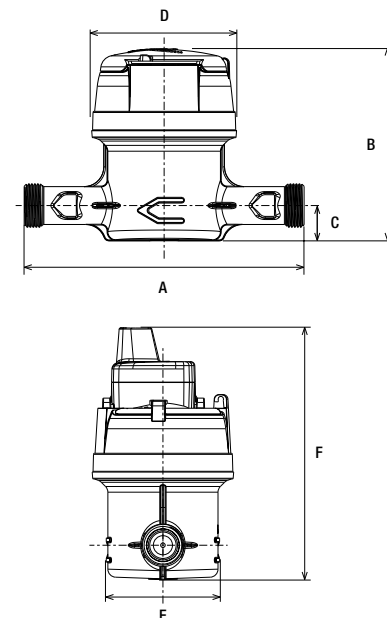
### In compliance with British Standard 5728 - Expiring date October 2014

|                        |                      |      |     |   |   |
|------------------------|----------------------|------|-----|---|---|
| BS Metrology Class     | Class D all position |      |     |   | - |
| Nominal Flow Rate      | m <sup>3</sup> /h    | 1    | 1.5 | - |   |
| Maximum Flow Rate      | m <sup>3</sup> /h    | 2    | 3   | - |   |
| Minimum Flow Rate      | l/h                  | 7.5  | -   | - |   |
| Transitional Flow Rate | l/h                  | 11.5 | -   | - |   |

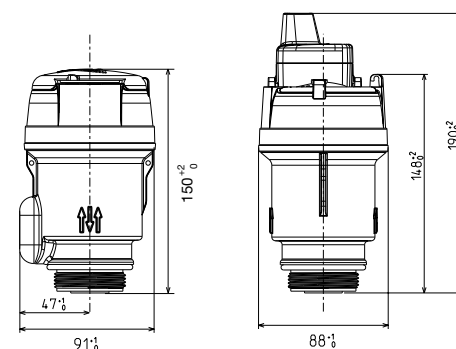
### Dimensions

|                  |        |              |             |
|------------------|--------|--------------|-------------|
| Nominal Diameter | mm     | 15           | 20          |
| Meter Thread     | inches | G 3/4"       | G 1"        |
|                  | mm     | 20 x 27      | 26 x 34     |
|                  | mm     | 105/110/115* | 130/165/190 |
| A                | mm     | 115          | 143         |
| B                | mm     | 22           | 20          |
| C                | mm     | 85           | 88          |
| D                | mm     | 68           | 70          |
| E                | mm     | 158          | 186         |
| F                | mm     |              |             |

(\*) Other available lengths: 134, 165, 170



In line version



Manifold version

### Weight - Brass Version

| Dimension      | mm | 15        | 20  |
|----------------|----|-----------|-----|
| Weight in line | Kg | 0.75/0.95 | 1.5 |
| Weight coaxial | Kg | 1.12      | -   |



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