hidroconta
tecnología hidráulica

# WATER METERS

Certification
MID
potable water
CE


# ATLANTIS WATER METER

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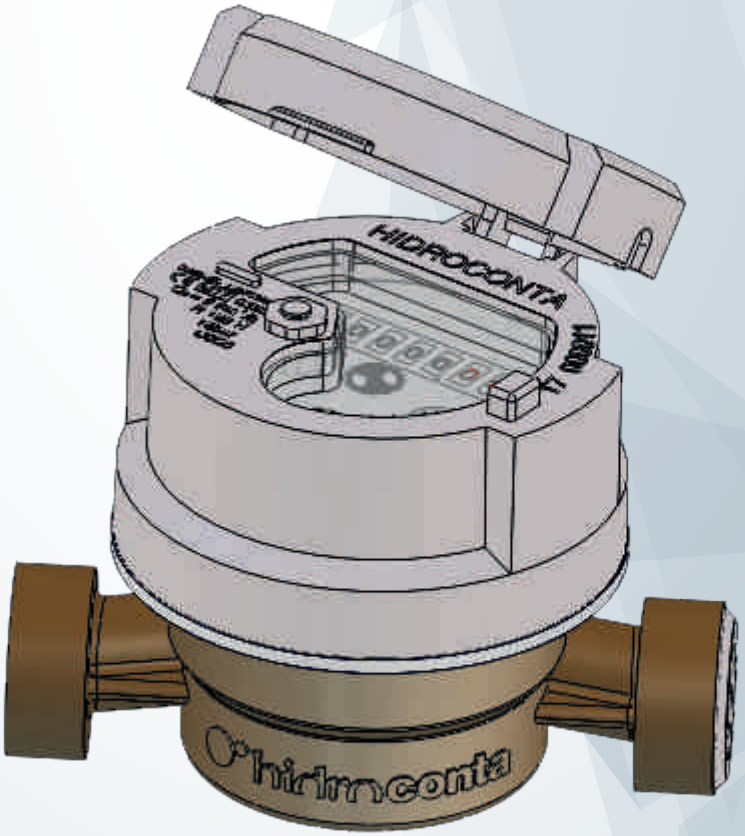
www.hidroconta.com

## Hydrodynamic design

The Hidroconta Atlantis water meter is based on the principle of single speed and sinlge jet. The water enters into the measuring chamber forming a single jet that pushes the vanes of the turbine, producing its movement. The turn of the turbine is transmitted by magnetic transmission, through a shaft and gears, to a head that accumulates in its totalizer the volume of water that has circulated
through the meter.

## High protection

Atlantis has a security system that prevents the rotation of the fixing ring of the water meter and the access to the adjustment device, there being no possibility to disassemble or modify the meter or its adjustment device. Our counters include a special shield that covers the watch, which prevents any possible fraud in the transmission and therefore in the reading.



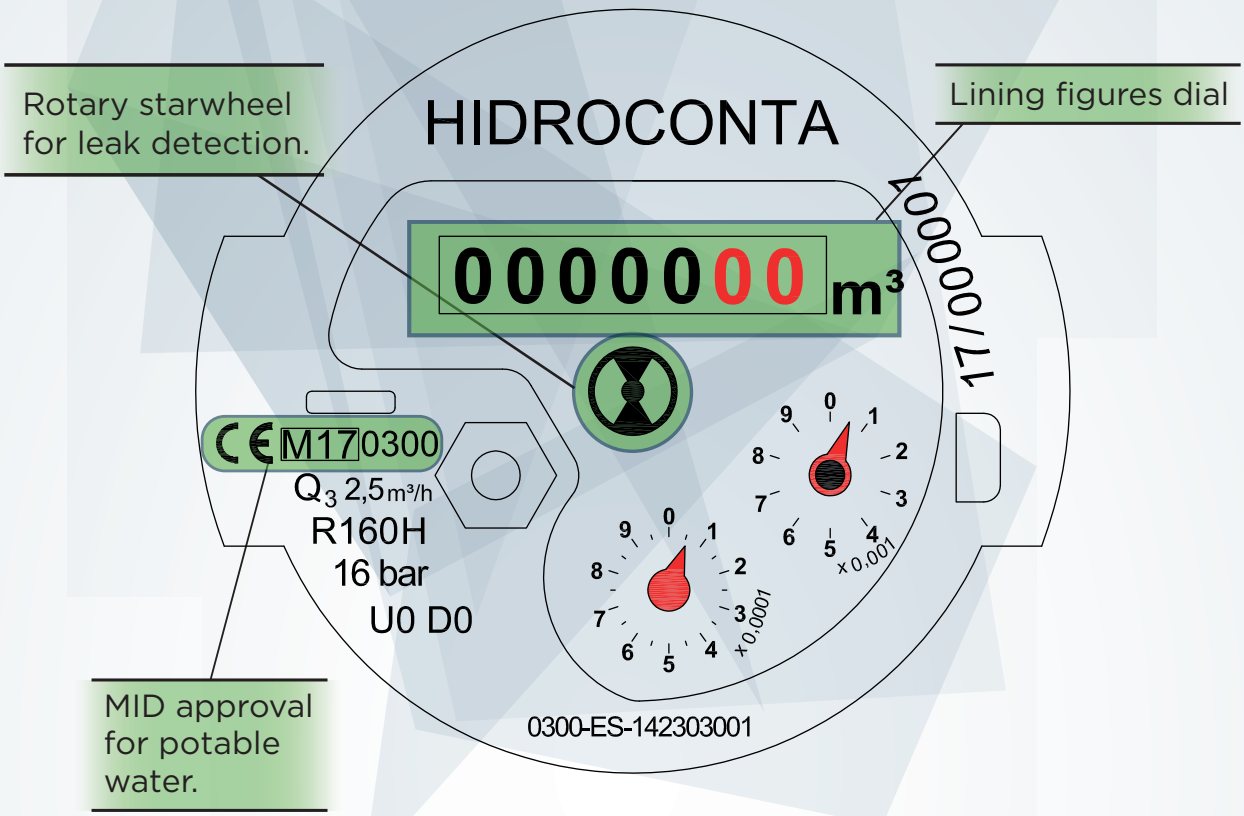
## Homologation MID

The Atlantis water meter from Hidroconta has the metrological requirements based on the Directive 2014/32 / EU, so they are normally used for the totalization and control of domestic water consumption. In Hidroconta we make strict tests in the counters that assure its quality and its precision.


## Water engineering

When the water go through the meter, the propeller begins to rotate. The axis propeller transforms the rotating motion into a rotating magnetic field. This magnetic field rotates the watch gears that end in an indicator device, which, by means of a drum of aligned numbers and the position of needles on circular scales, indicate the volume in cubic meters of water that has passed through the meter.

## Dial

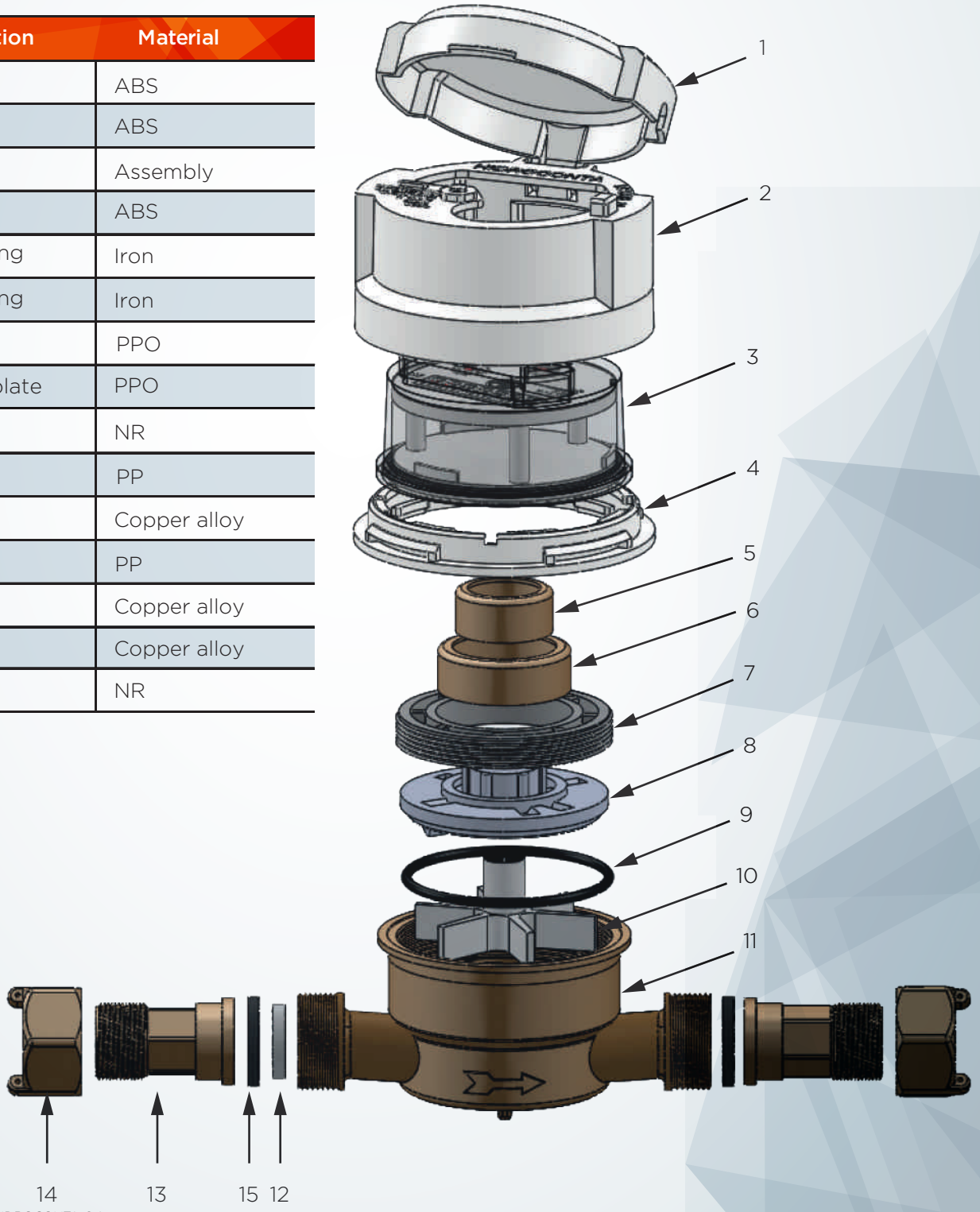



## Technical specifications

- For cold water up to 30 C°.
- Copper alloy body.
- Direct reading in 7-digit roller counter indicating m³.
- Completely dry and unsumerged dial.
- Magnetic transmission protected against external magnetic fields.
- The dial can be turned manually: For reading in any position.
- MID approval for potable water. Directive 2014/32 / EU.
- Straight sections are not necessary at the meter input or output U0-D0.

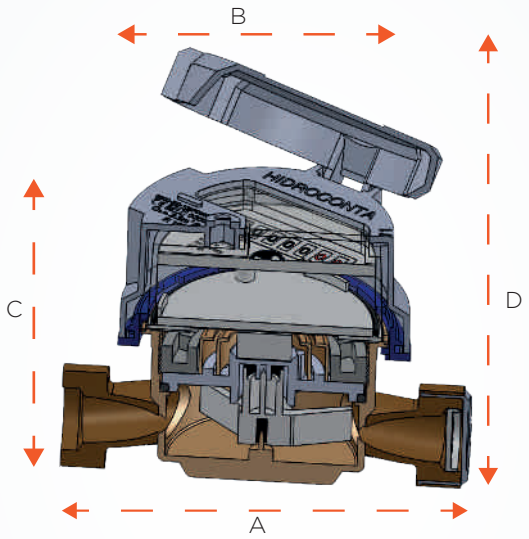
# Disassembly

| Nº | Description | Material |
|---|---|---|
| 1 | Lid | ABS |
| 2 | Cover | ABS |
| 3 | Dial | Assembly |
| 4 | Fixing ring | ABS |
| 5 | Antifraud-ring | Iron |
| 6 | Antifraud-ring | Iron |
| 7 | Fixing ring | PPO |
| 8 | Separated plate | PPO |
| 9 | O-ring | NR |
| 10 | Turbine | PP |
| 11 | Body | Copper alloy |
| 12 | Filter | PP |
| 13 | Fitting tube | Copper alloy |
| 14 | Nut | Copper alloy |
| 15 | Joint | NR |



# Dimensions

| Calibre | | A | A (with fittings) | B | D | C | Weight with Coupling | Weight with Coupling | Threaded Connections |
|---|---|---|---|---|---|---|---|---|---|
| mm | Inch | mm | | | | | Kg | | |
| 13 | 1/2" | 115 | 186 | 79 | 145 | 95 | 0,62 | 0,4 | G 7/8" x 3/4 BSP |
| 15 | 1/2" | 110 | 184 | 79 | 142 | 92,6 | 0,59 | 0,5 | G 3/4" BSP |
| | | 115 | 189 | 79 | 142 | 92,6 | 0,6 | 0,5 | G 3/4" BSP |
| | | 190 | 264 | 79 | 142 | 92,6 | 0,75 | 0,65 | G 3/4" BSP |
| 20 | 3/4" | 130 | 222 | 79 | 147 | 96 | 0,80 | 0,6 | G 1" BSP |




# Packing

| DIAMETER | UNITS PER BOX | BOX DIMENSIONS (CM) | | | GROSS WEIGHT |
|---|---|---|---|---|---|
| | | Length | Width | High | KG |
| DN 13 | 20 | 47 | 22,5 | 28 | 13,10 |
| DN 15 | 20 | 52,5 | 28 | 18,8 | 13,06 |
| DN 20 | 20 | 44,7 | 23 | 30,5 | 16,34 |

# Working conditions

| Room temperature | Maximum pressure |
|---|---|
| 0.1 ˚C ~ 40 ˚C | ≤ 16 bar |

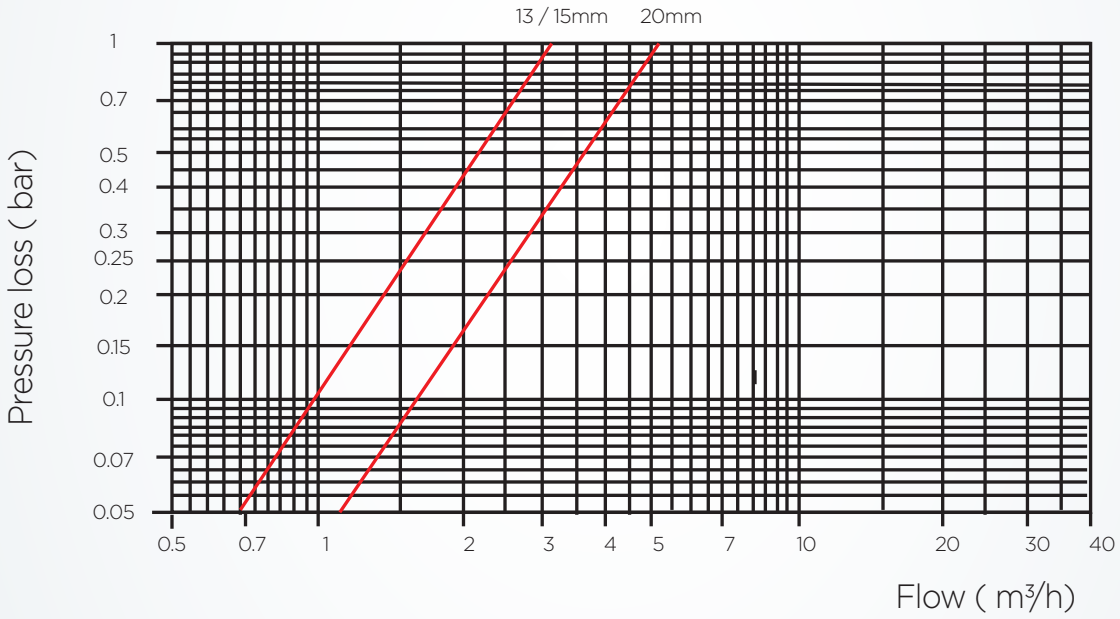
# Maximum permissible error

| Range | Error ( %) |
|---|---|
| $Q_1 \leq Q < Q_2$ | ± 5% |
| $Q_2 \leq Q \leq Q_4$ | ± 2% |

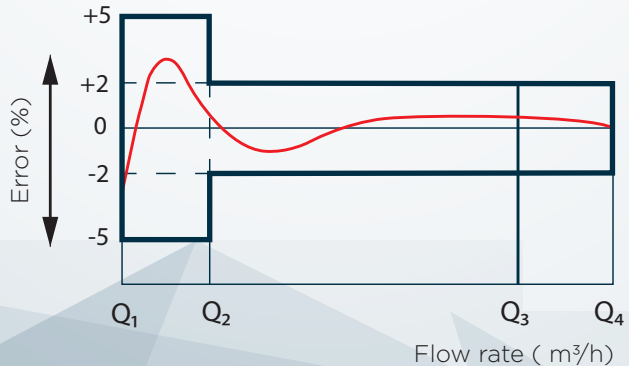
# Technical specifications

| Calibre | | $Q_4$ | $Q_3$ | $Q_2$ | $Q_1$ | Starting Flow Rate | Minimum Reading | Maximum Reading | Ratio |
|---|---|---|---|---|---|---|---|---|---|
| mm | Inch | $m^3/h$ | | l/h | | l/h | $m^3$ | | |
| 13 | 1/2" | 3,125 | 2,5 | 25 | 15,62 | 6 | 0,00005 | 99.999 | R160 |
| 15 | 1/2" | 3,125 | 2,5 | 25 | 15,62 | 6 | 0,00005 | 99.999 | R160 |
| 20 | 3/4" | 5 | 4 | 40 | 25 | 6 | 0,00005 | 99.999 | R160 |

# Pressure loss curve

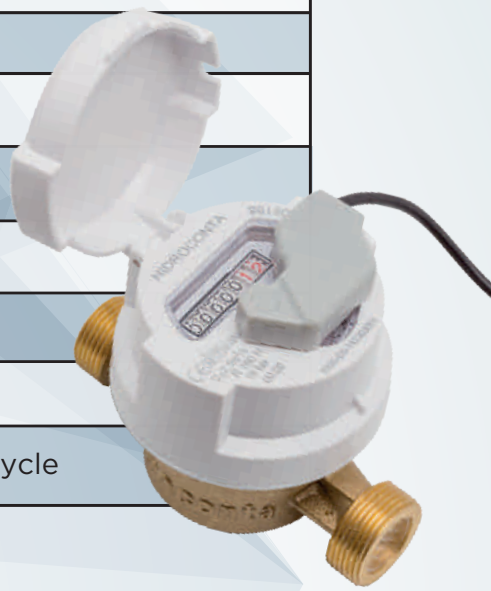



# Flow error curve

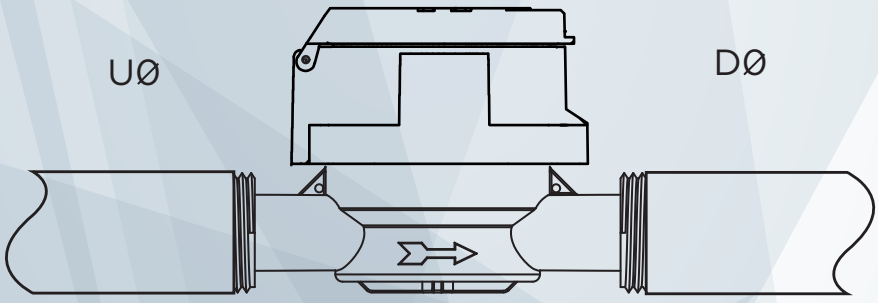


## Pulse emisor

| | |
|---|---|
| Type | Reed sensor |
| Pulse value | Standar 1 pulse = 10L |
| Min. amperage to close contact | 0 mA |
| Max. amperage to close contact | 100 mA |
| Closed contact impedance | < 1 Ω |
| Open contact resistance | ~∞ |
| Max. supportable voltage | 24V |
| Max. stabilization time | 100us |
| Close contact lapsed time | 40% of cycle |



## Diagrams for installing




Straight sections are not necessary at the Atlantis input or output U0-D0.

## Installation instructions

- The meters must always be full of water when operating, minimum presure 0,3 bar, and installed below the slope of the rest of the pipeline. This stops air pockets from forming inside.

- If there is air in the pipeline, suckers must be fitted to avoid incorrect readings. If the water in the pipeline contains large suspended particles, an initial screening filter should be installed.

- Fit a valve upstream from the meter to facilitate maintenance or repair.

- A new pipeline should be drained before fitting a meter to eliminate particles.

- Do not force the meter during assembly; avoid tension or torsional stress, especially to the threaded connections.

# FAQ

## 1- Which is the difference between dry dial, wet dial and semi-dry water meter dial?

On water meters with dry dial the reading mechanism (clock) is tightly separated from the wet chamber of the meter.
On Wet dial water meter the watch is totally immersed in the fluid.
For water meters with semi-dry dial, the reading mechanism is totally immersed in the fluid but the dial is partially serrated and protected by a sealed capsule.

## 2- What are the ranges of measurement and precision?

The measuring range of the meters is determined by the Directive MID 2014/32 / UE establishing the ratio between the value of the permanent flow (Q3) and that of the minimum flow (Q1). The water meter can measure up to the maximum flow rate (Q4) for short periods of time without deterioration.
The maximum permissible error, positive or negative, in volumes between the transition flow (Q2) (included) and the overload flow (Q4) would be 2% with a water temperature ≤ 30 ° C.
The maximum permissible error, positive or negative, in volumes between the minimum flow rate (Q1) and the transition flow (Q2) (excluded) would be 5%.

## 3- The MID directive and its compliance

The MID Directive (2014/32 / EU Measuring Instruments Directive) is a directive of the European Union whose purpose is to harmonize the different aspects of Legal Metrology in the member states.
The most important aspect of this directive is that equipment in possession of a MID certificate can be used in the EU.

## 4- How should the single jet water meters be installed?

HIDROCONTA single jet counters do not require special installation conditions.
If you have any doubt about the installation of these equipments, it is recommended to follow the instructions indicated in the technical data sheet of the product.

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# ATLANTIS WATER METER

WHEN WATER COUNTS

CUANDO EL AGUA ES LO QUE CUENTA

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