

# WATER METERS



## ATLANTIS WATER METER



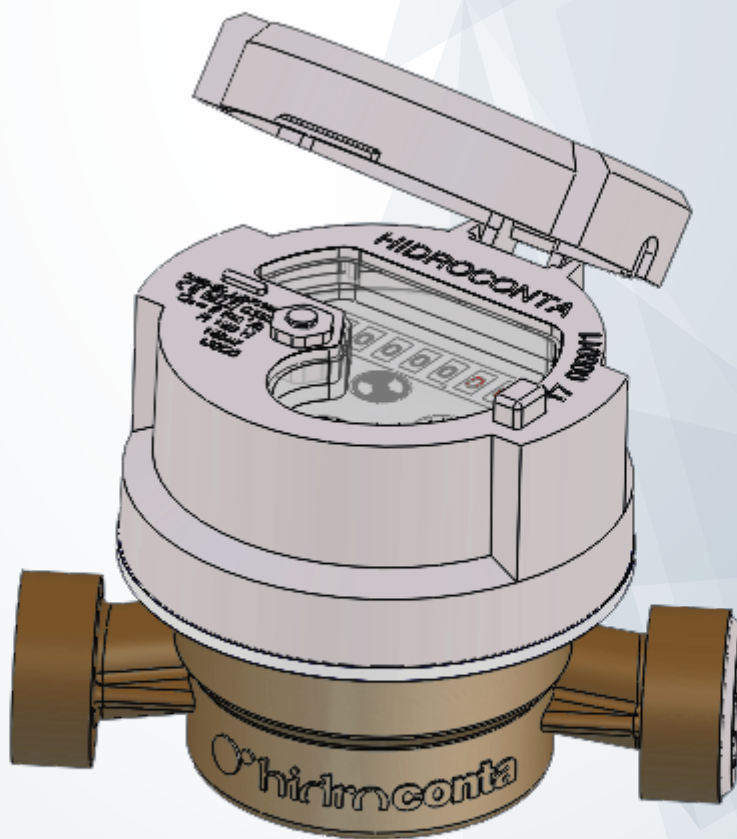
## Hydrodynamic design

The Hidroconta Atlantis water meter is based on the principle of single speed and single 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.





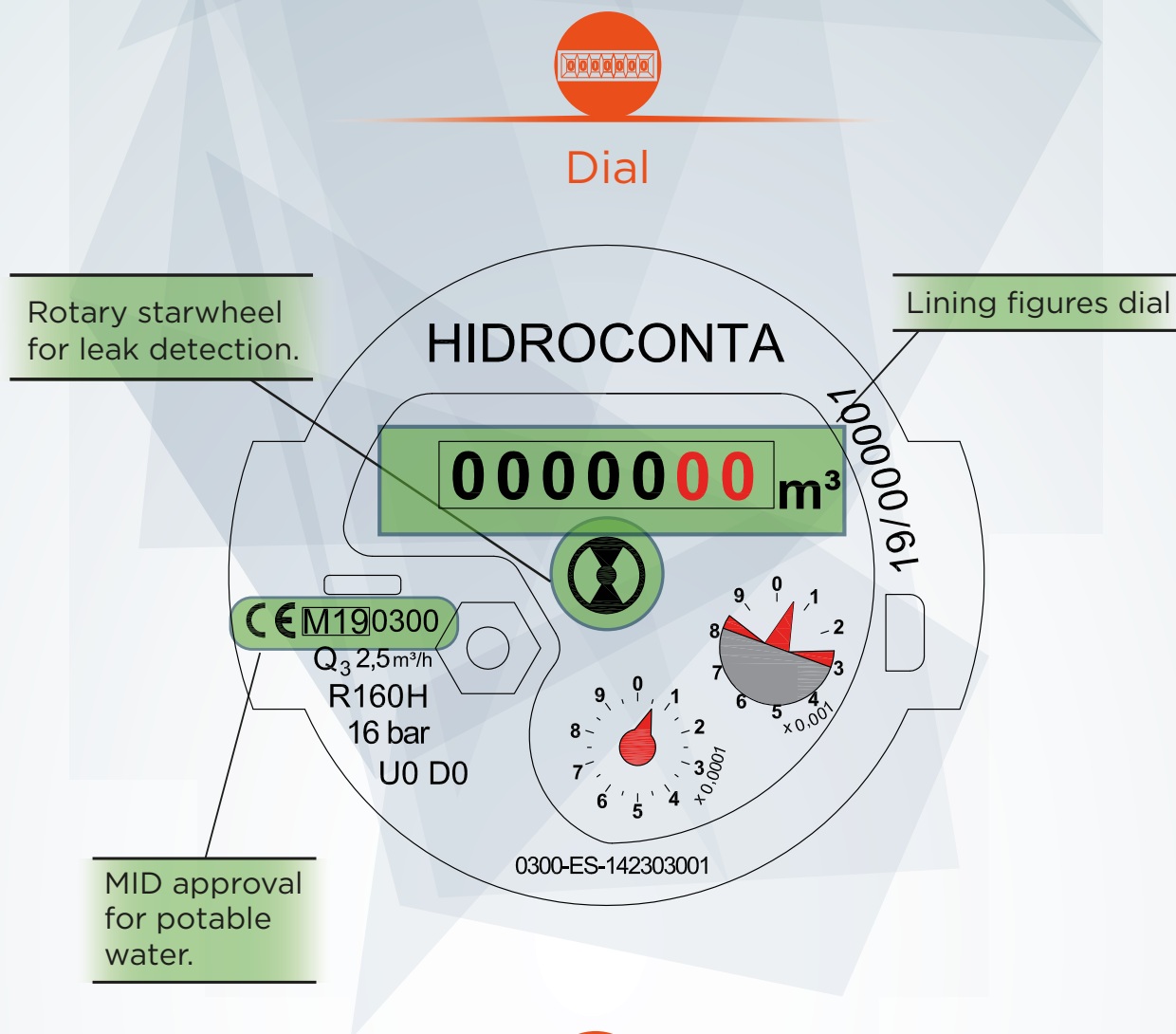
## Homologation MID

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 goes 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.



## Technical specifications

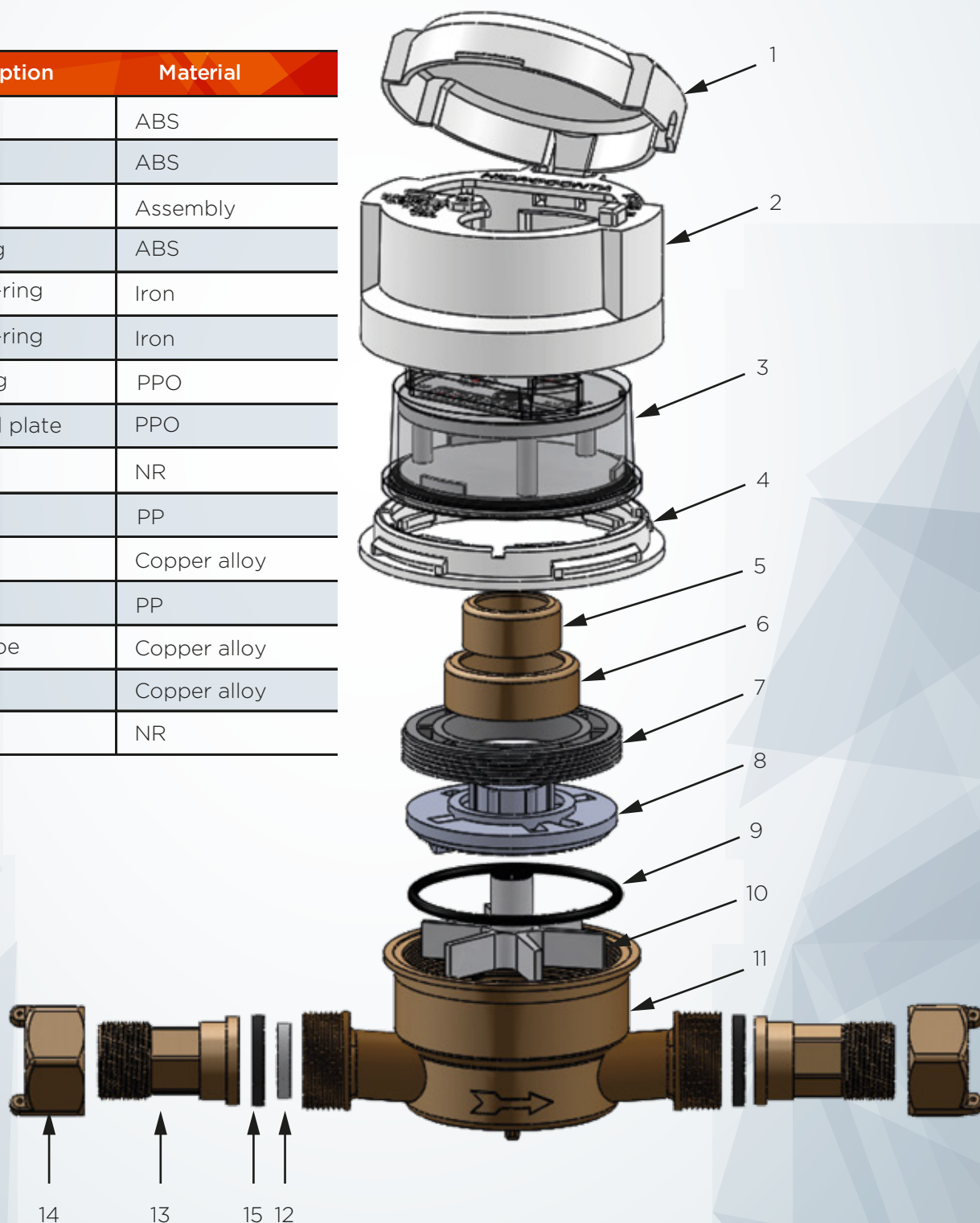
- ✓ - For cold water up to 30 C°.
- ✓ - Copper alloy body.
- ✓ - Direct reading in 7-digit roller counter indicating m³.
- ✓ - Completely dry and unsumerged dial.
- ✓ - Magnetic transmission protected against external magnetic fields.
- ✓ - The dial can be turned manually: For reading in any position.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





## Disassembly

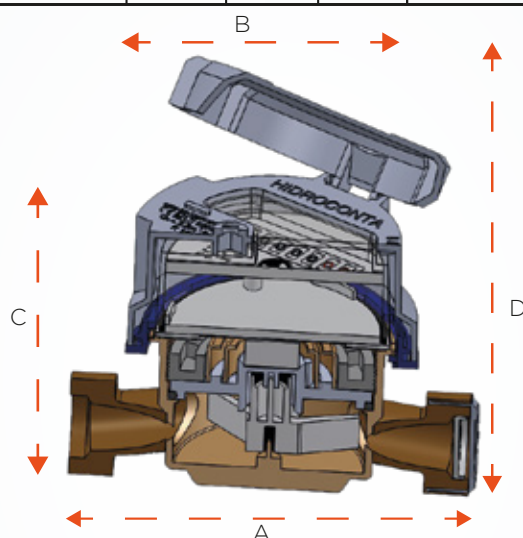
Nº	Description	Material
1	Lid	ABS
2	Cover	ABS
3	Dial	Assembly
4	Fixing ring	ABS
5	Antifraud-ring	Iron
6	Antifraud-ring	Iron
7	Fixing ring	PPO
8	Separated plate	PPO
9	O-ring	NR
10	Turbine	PP
11	Body	Copper alloy
12	Filter	PP
13	Fitting tube	Copper alloy
14	Nut	Copper alloy
15	Joint	NR





## 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	22,50	28,00	13,10
DN 15	20	50	29,50	25,50	13,00
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%

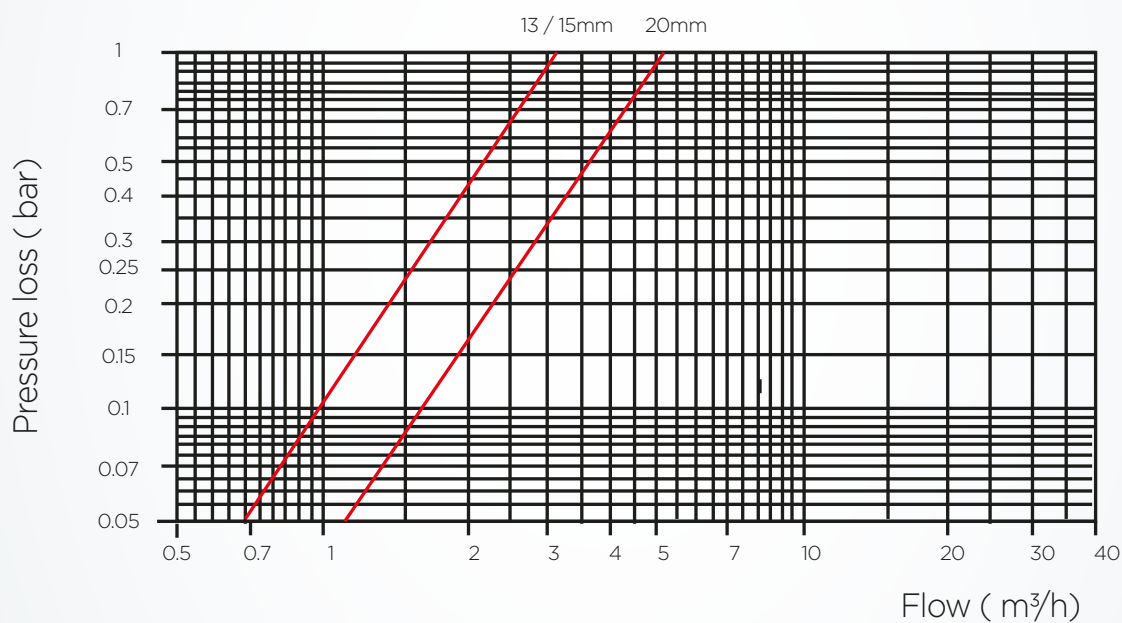


## Technical specifications

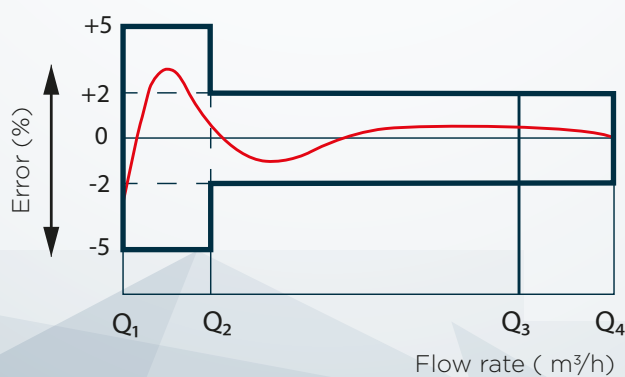
Calibre		Q <sub>4</sub>	Q <sub>3</sub>	Q <sub>2</sub>	Q <sub>1</sub>	Starting Flow Rate	Minimum Reading	Maximum Reading	Ratio
mm	Inch	m <sup>3</sup> /h		l/h		l/h	m <sup>3</sup>		
13	1/2"	3,125	2,5	25	15,62	6	0,00005	99.999	R160
15	1/2"	3,125	2,5	25	15,62	6	0,00005	99.999	R160
20	3/4"	5	4	40	25	6	0,00005	99.999	R160



## Pressure loss curve



## Flow error curve





## Pulse emisor

### DIRECT PULSES OUTPUT

Pulse value	Standard 1 pulse = 10 l
Type of output	Open Collector
Maximum current for contact closure	20mA @ 20V (internally limited)
Maximum polarization voltage	20V
Contact resistance closed	0.85 Ohms maximum
Contact duration closed	25 mS

### INVERSE PULSES OUTPUT

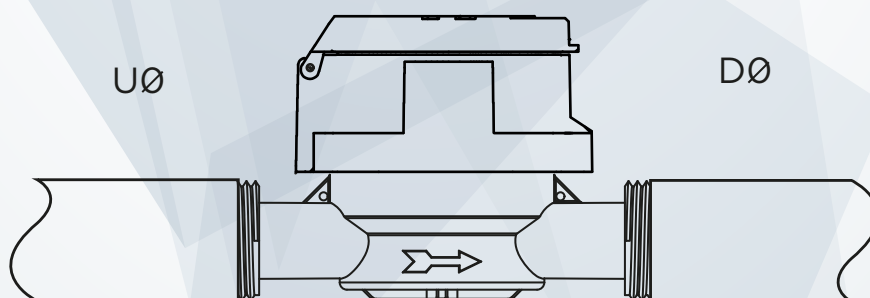
Pulse value	Standard 1 pulse = 10 l
Type of output	Open Collector
Maximum current for contact closure	20mA @ 20V (internally limited)
Maximum polarization voltage	20V
Contact resistance closed	0.85 Ohms maximum
Contact duration closed	25 mS

### ALARM OUTPUT TECHNICAL CHARACTERISTICS

Value	Handling alert
Type of output	Open Collector
Maximum current for contact closure	20mA @ 20V (internally limited)
Maximum polarization voltage	20V
Contact resistance closed	0.85 Ohms maximum
Contact duration closed	While the alert is active



## 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 pressure 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  $\leq 30^{\circ}\text{C}$ .

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.



# ATLANTIS WATER METER

WHEN WATER COUNTS

CUANDO EL AGUA ES LO QUE CUENTA

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