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hydraulic technology

WATER METERS

Predator
hydraulic technology

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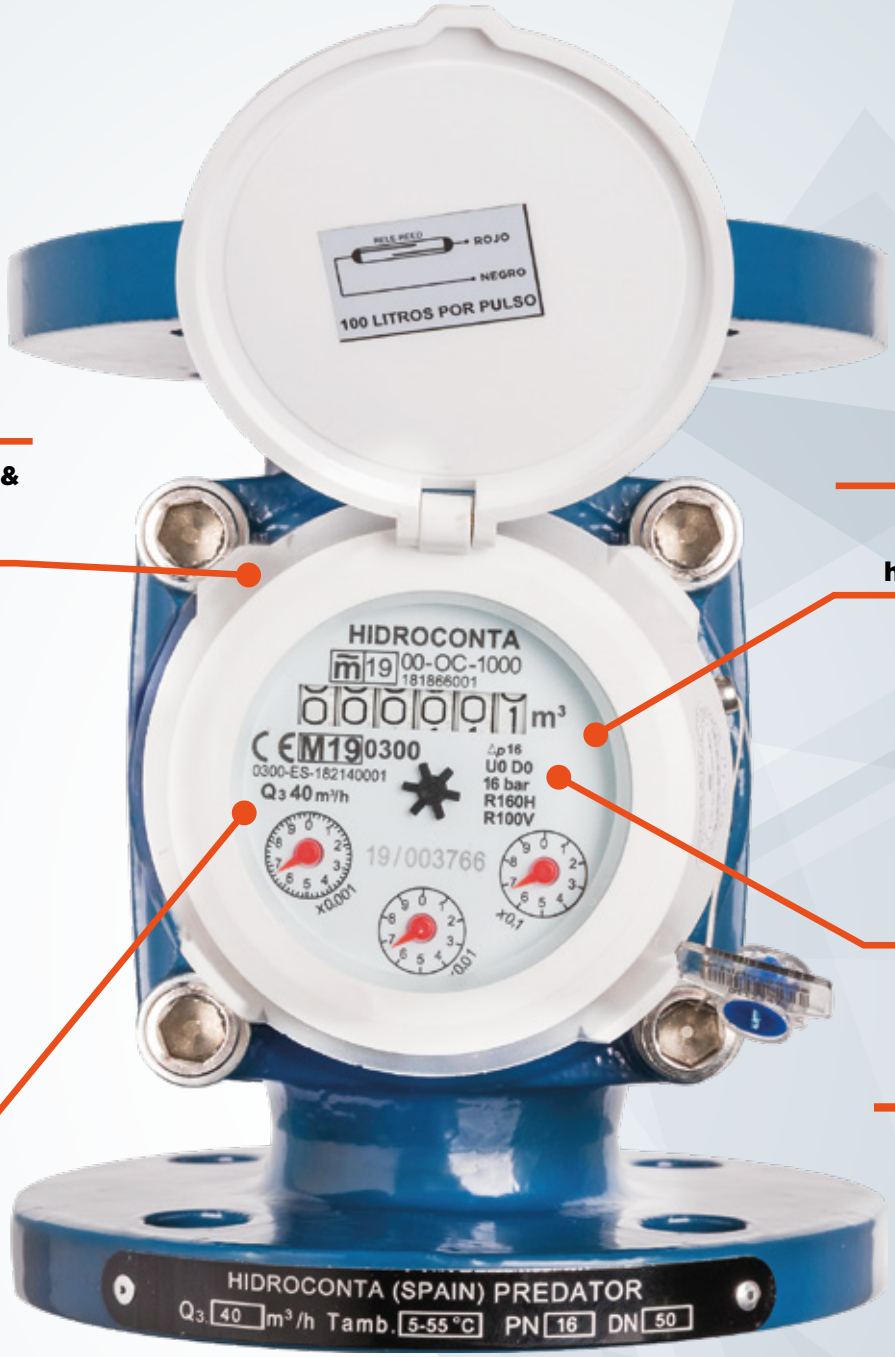


Pulse output with **plug & play system**

Higher accuracy **R160H**

Can be installed both **horizontal and vertical**

No straight sections required **U0 – D0**

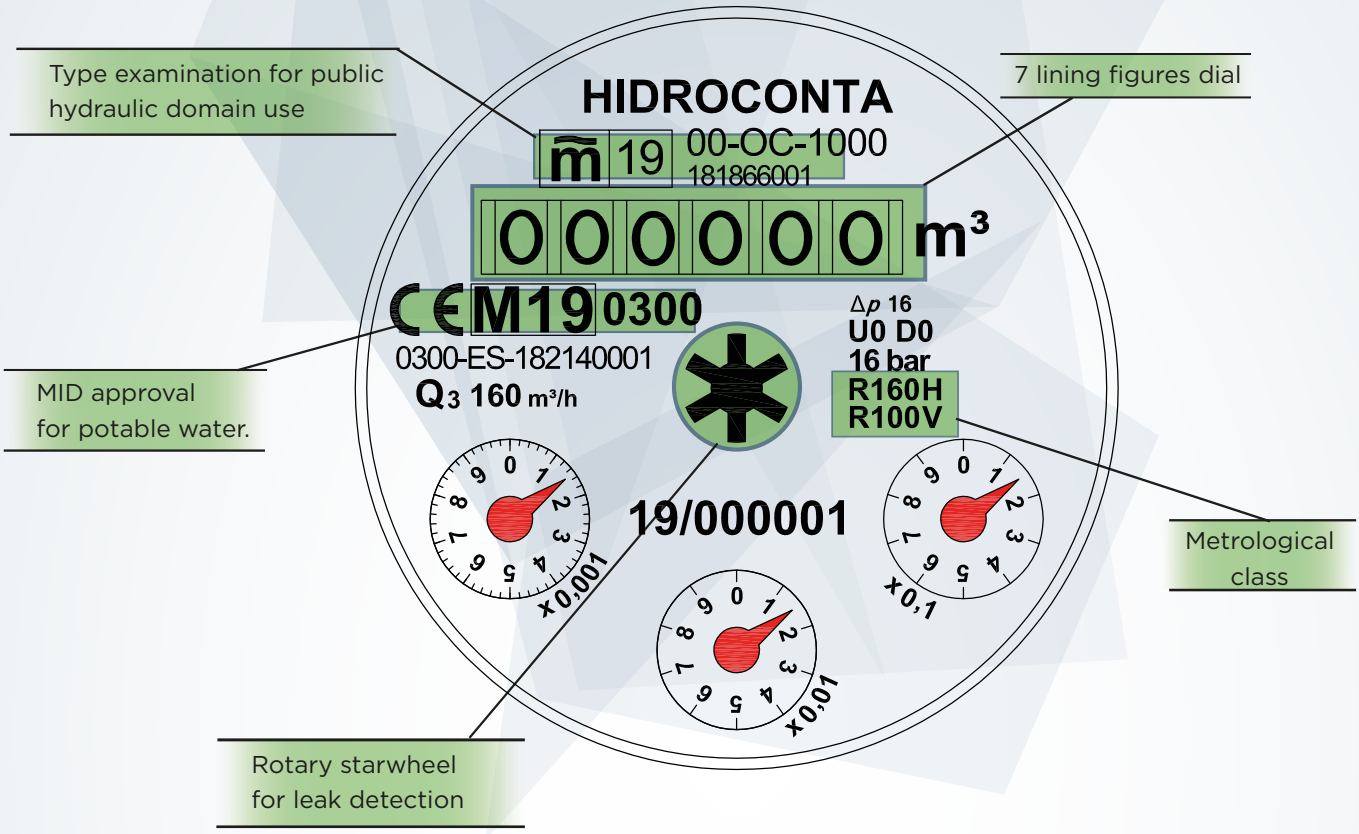
High resistance

To prolong the water meter life, Predator performs a hydrodynamic compensation avoiding external pushing on the shaft of the propeller.

Water engineering

Its operation is based on a turbine or propeller whose axis is located in the water flow line. The rotation of the propeller is transmitted by magnetic transmission through an axis and gear to a head that accumulates in its totalizer the volume of water that has gone through the water meter.

Relojería

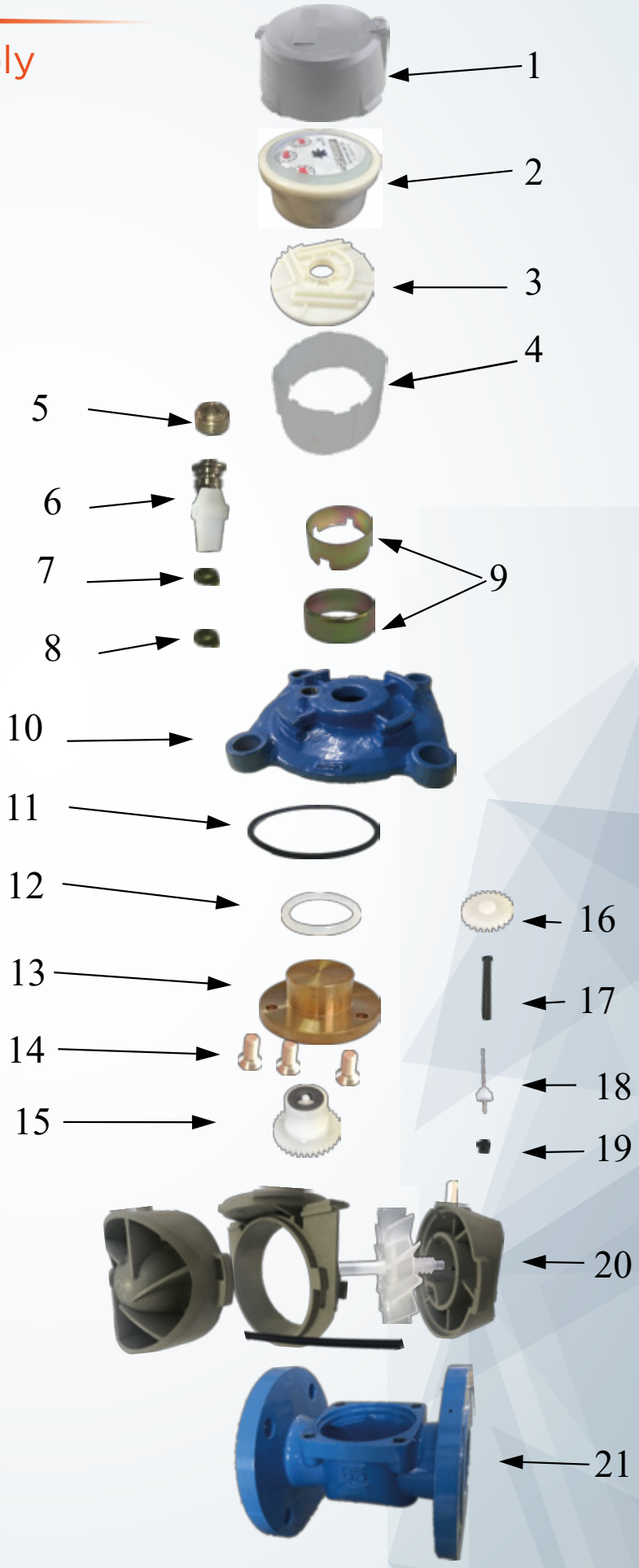


Technical specifications

- Pre-equipment of pulse transmitter with plug and play system.
- Calibres from 50 to 200 mm.
- Vacuum sealed dial(IP68).
- Metrology R160 horizontal position and vertical R100.
- Lost class of pressure Δp 16 (0,16 bar)
- Cold water use 0,1 - 30˚C.
- The Predator water meter can reach up to 16 bar.
- Potable water and irrigation type certificate.

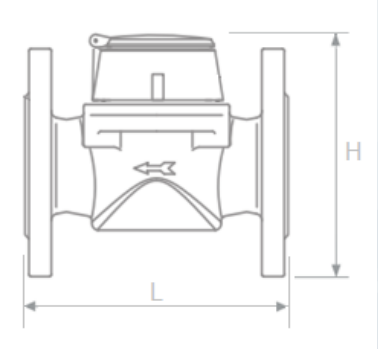
Disassembly

Nº	Description
1	Lid
2	Dial
3	Plate
4	Inferior lid
5	Adjusting screw
6	Adjusting lever
7	O-ring
8	O-ring
9	Ring anti magnetic fields
10	Closing flange
11	O-ring
12	Plastic joint
13	Brass insert
14	Brass screw
15	General gear
16	Gear
17	Upper bearing
18	Gear
19	Lower bearing
20	Propeller parts
21	Body



Dimensions

Coupling	Calibre		L	H	Weight
	mm	Inch		mm	Kg
Flanged	50	2"	200	201	7,8
	65	2-1/2"	200	210	9,5
	80	3"	225	244	14,5
	100	4"	250	253	16,5
	125	5"	250	280	19,5
	150	6"	300	310	32,0
	200	8"	350	370	61,0
Victaulic	80	3"	248	217	8,0
	100	4"	278	218	9,5
	150	6"	432	285	32,0



Conexions- Flange PN16

Packing

Coupling	Diameter		Unit. Per box	Box dimensions (CM)			Gross weght
	mm	Inch		Lenght	High	Width	KG
Flanged	50	2"	1	29,6	21,5	23	9
	65	2-1/2"	1	31,8	24,0	25,1	11
	80	3"	1	31,8	23,9	25	16
	100	4"	1	31,9	25,7	27,8	18
	125	5"	1	36,0	28,2	27,2	21,5
	150	6"	1	38,8	32,3	32,4	34,5
	200	8"	1	40,8	38,4	36,9	63,5
Victaulic	80	3"	1	31,5	26,0	29,0	9
	100	4"	1	32,0	26,5	29,0	10,5
	150	6"	1	49,0	26,0	35,0	34,0

Working conditions

Room temperature	Maximum pressure
5 °C - 5 5°C	≤ 16 bar

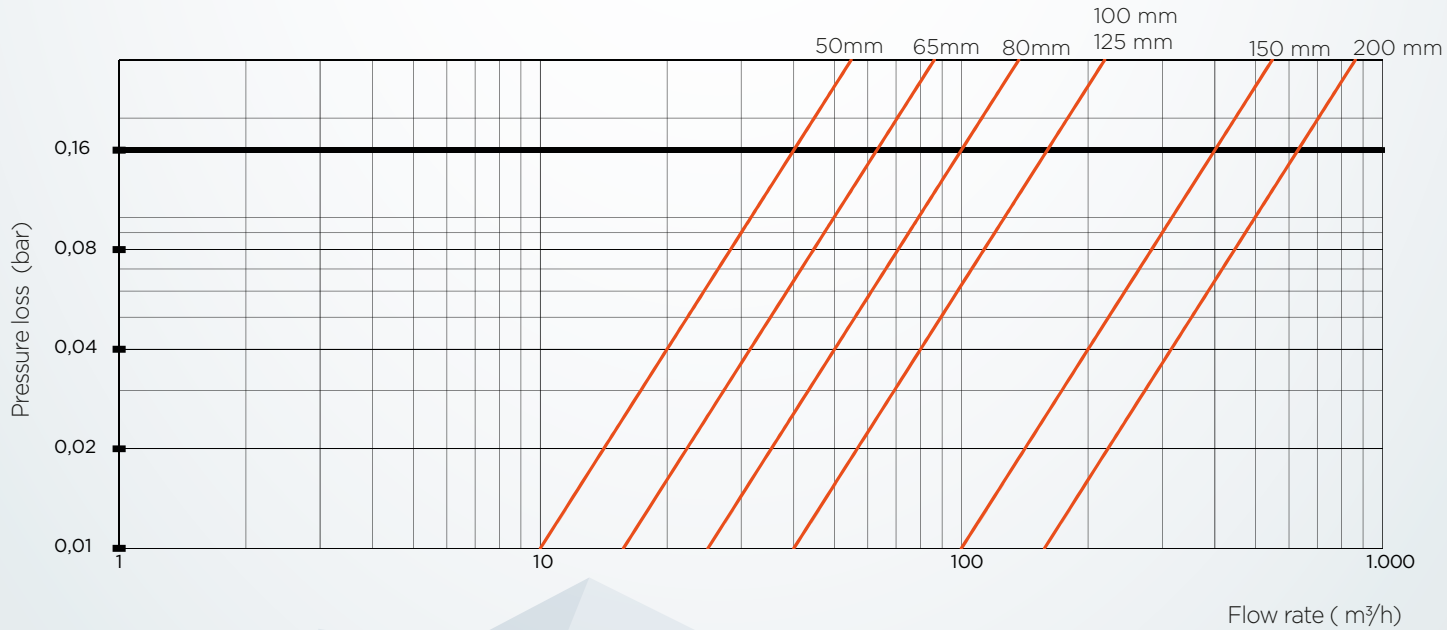
Maximum permissible error

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

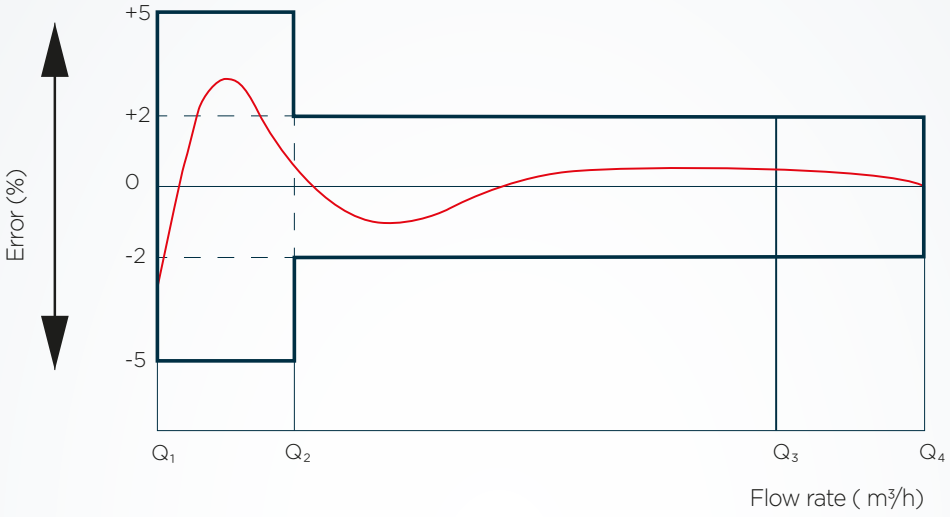
Technical specifications

Caliber		Q_4	Q_3	Q_2	Q_1	Minimum Reading	Maximum Reading	Ratio
mm	Inch	m^3/h				m^3		
50	2"	50	40	0,4	0,25	0,0005	999.999	R160H
				0,64	0,4			R100V
65	2-1/2"	78,75	63	0,63	0,394	0,0005	999.999	R160H
				1,008	0,63			R100V
80	3"	125	100	1	0,625	0,0005	999.999	R160H
				1,6	1			R100V
100	4"	200	160	1,6	1	0,0005	999.999	R160H
				2,56	1,6			R100V
125	5"	200	160	1,6	1	0,0005	999.999	R160H
				2,56	1,6			R100V
150	6"	500	400	4	2,5	0,005	9.999.999	R160H
				6,4	4			R100V
200	8"	787,5	630	6,3	3,938	0,005	9.999.999	R160H
				10,08	6,3			R100V

Pressure loss curve



Flow error curve



Pulse emisor

Type	Reed sensor
Pulse value	DN 50-125: 1 pulse 100L DN 150-200: 1 pulse 1000L
Min. amperage to close contact	0 mA
Max. amperage to close contact	100 mA
Closed contact impedance	< 1 Ω
Open contact impedance	~∞
Max. supportable voltage	24V
Max. stabilization time	100us
Closed contact lapsed time	40% of cycle
Standard wire length	1,5 m

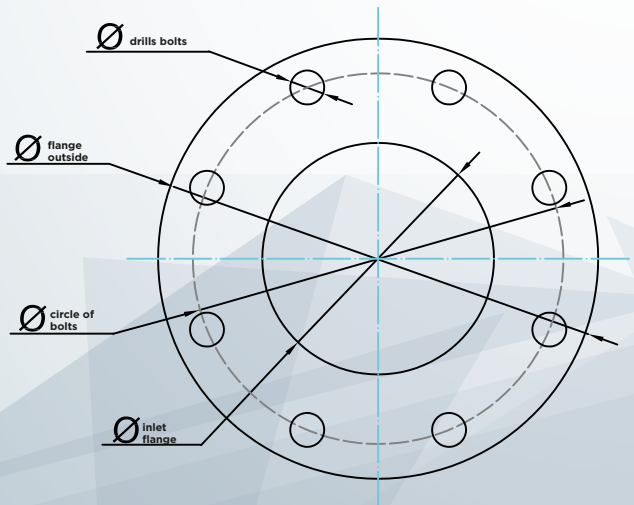
Flange dimensions

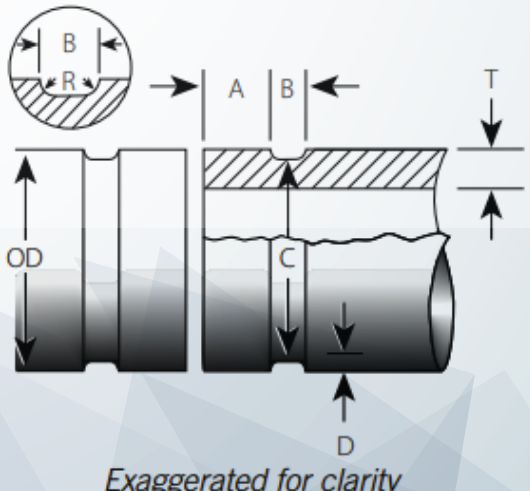
DN (MM)	PN	OUTSIDE DIAMETER (MM)	BOLTS CIRCLE DIAMETER (MM)	Nº BOLTS	BOLTS DRILL DIAMETER (MM)	
50	PN10/16	165	125	4	18	UNE-EN 1092-1
65	PN10/16	185	145	4	18	
80	PN10/16	200	160	8	18	
100	PN10/16	220	180	8	18	
125	PN10/16	250	210	8	18	
150	PN10/16	285	240	8	22	
200	PN10	340	295	8	22	
200	PN16	340	295	12	22	
250	PN16	405	355	12	26	
300	PN16	460	410	12	26	

For ANSI flanges consult.

VICTAULIC

DN (mm)		PIPE OUTSIDE DIAMETER			GASKET SEAT A	GROOVE WIDTHE B	GROOVE DIAMETER C		GROOVE DEPTH D
mm	Pulg.	Actual	Tolerance +	Tolerance -	±0,76mm	±0,76mm	Actual	Tolerance	
80	3"	88,9	+0,89	-0,79	15,88	7,95	84,94	-0,018/-0,46	1,98
100	4"	114,3	+1,14	-0,79	15,88	9,53	110,08	-0,020/-0,51	2,11
150	6"	168,3	+1,6	-0,79	15,88	9,53	163,96	-0,022/-0,56	2,16





Exaggerated for clarity

Installation instructions

- It is recommended to place the watermeter at a low point in the installation

- Place the meter so that the arrow matches the direction of the water flow.

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

- The meters must always be full of water when operating 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.

- The internal diameter of the pipe must be equal to the nominal diameter of the meter.

- No straight sections are required upstream and downstream water meter U0-D0.

- Suitable for installation in horizontal position R160H and vertical position R100V.

FAQ

1- Has the turbine broken?

The rupture of the turbine may be caused by the presence of solid particles of considerable size, for example, blocks and stones which may be suspended in the water.

In this case you must replace the counter mechanism and place a filter before the counter so it does not happen again.

2- The water meter does not add up?

It is likely that it is stuck, has some internal part damaged or has suffered wear and tear due to aging.

When an aging wear occurs, the meter may add up to m^3, but not the actual ones.

In this case, the damaged element must be replaced. Our counters thanks to its hydrodynamic design with independent mechanism makes this type of repairs very simple.

Tip: have complete mechanisms to replace the faulty meter while it is being repaired