



Aquadis

Rotary piston volumetric type water meter



- > MID approved
- > Very low starting flow
- > Pre-equipped for communication

Aquadis is an MID 2004/22/EC approved piston type meter for residential and commercial & industrial billing applications.

The Technology

Aquadis combines the advantages of piston type technology together with proven reliability of the extra dry registers. No gear is in contact with water.

The high technology implemented to manufacture measuring chambers ensures stable and durable accuracy of Aquadis meter.

Metrological Performances

- > Very low starting flow allows leakage detection
- > Large measuring range

Robustness

- > Robust hermetically sealed IP68 register TVM (copper can/mineral glass enclosure) to face all field situations, DN20/25/30 in option and DN40-60/65 in standard
- > Plastic register TSN equipped with wiper to ensure readability in tough humid conditions (standard for DN20/25/30)
- > Maximum admissible working pressure is 16 bar

Easy Reading

- > Rotation close to 360° on site
- > Large numbered rollers with good contrast for excellent reading capability

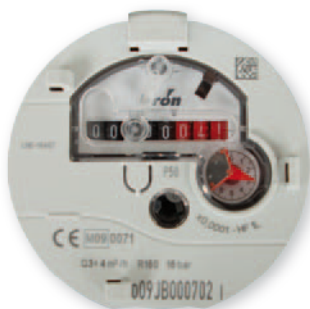
Communication Device

Pre-equipped for future communication through Cyble.

> Copper can/mineral glass register (TVM)



> Plastic register (TSN)
DN 20 to 30 meters



> Cyble RF fitted on Aquadis meter



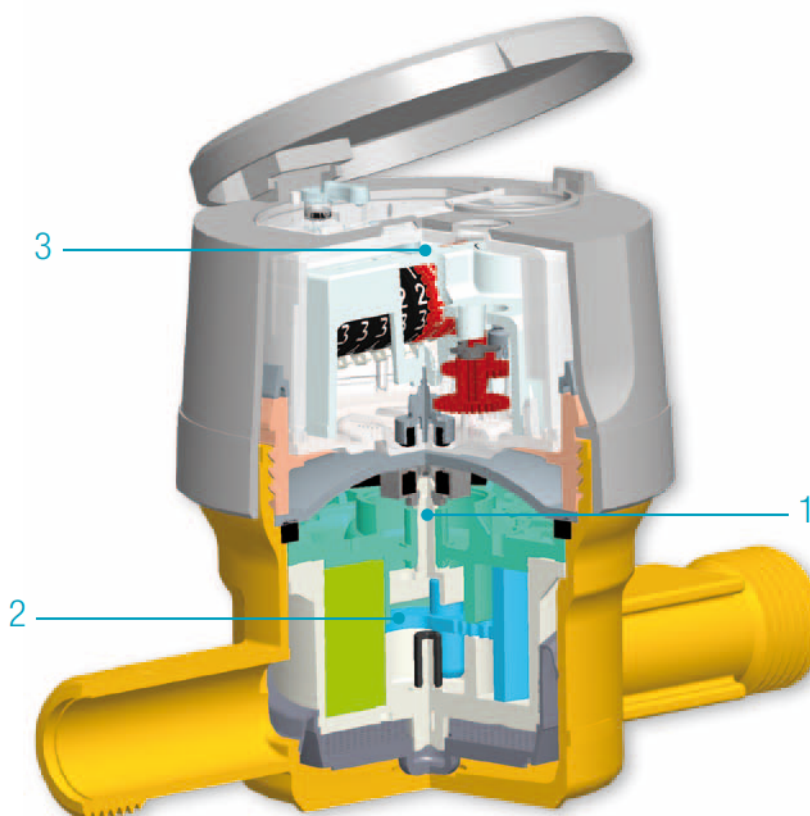
Working Principle

The Aquadis has two main components: the hydraulics that allows measurement of the water and the register that displays the measured water volume.

Transmission interface between those components is achieved by a strong magnetic coupling **1**.

Aquadis is a piston type volumetric meter **2**. Each rotation of the piston in the measuring chamber represents a given volume of water passing through.

With extra-dry registers **3**, gears are protected by water and air proof enclosure.



Communication

The Aquadis is supplied pre-equipped with Cyble Target

Allows communication and remote reading through:

- > Pulse output (Cyble Sensor)
- > M-Bus protocol (Cyble M-Bus)
- > Radio frequency wireless link (Cyble RF)

Key Advantages of Cyble Technology

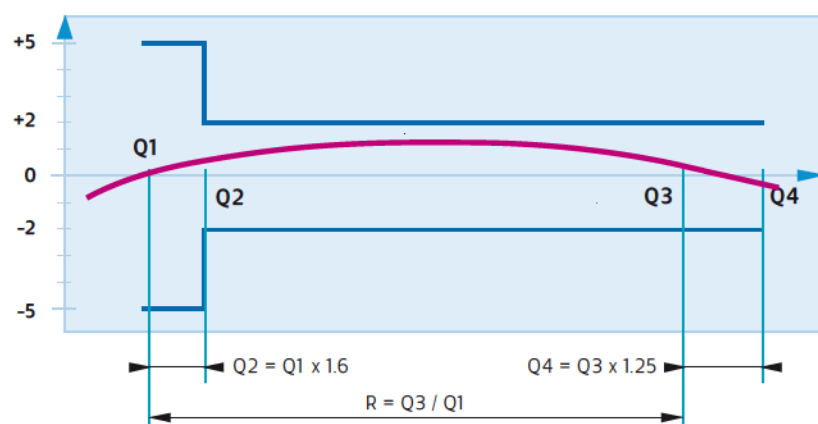
- > No need for additional investment on the meter to implement remote reading

- > Itron standardized meter interface, irrespective of meter technology and widely spread on Itron water meters range
- > Reliability brought by electronic switch (no wear or bouncing)
- > Reverse flow management
- > Principle proven on the field with a 20 years experience
- > Pre-equipment being immune to magnetic tampering

Metrological Characteristics

Nominal diameter (DN)		mm	20	25	30	40	60/65			
		inches	3/4"	1"	1 1/4"	1 1/2"	2 1/2"			
Register version			Plastic (TSN) or Copper can/mineral glass (TVM)				Copper can/mineral glass (TVM)			
Dynamic range MID (R) - all positions			100-250	80-100	80	80*	100*	63-100	125-160	
Nominal flow rate	Q3	m3/h	2,5	4,0	4	6,3	6,3	10	25	
Standard ratio	Q3/Q1		100	160	100	80	80	100	160	
Minimum flow rate	Q1	L/h	25	25	78,75	63	78,75	63	0,125	0,15625
Transitional flow rate	Q2	L/h	40	40	126	100,8	126	100,8	0,2	0,25
Maximum flow rate	Q4	m3/h	3,125	5,0	7,9	7,9	7,9	7,9	12,5	31,5
Pressure loss at Q3		bar	< 0,4	< 0,63	< 0,4	< 1	< 0,4	< 0,4	< 0,25	< 1
Pressure loss at Q4		bar	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Maximum admissible pressure (MAP)		bar	16	16	16	16	16	16	16	16
Maximum admissible temperature		°C	+ 0,1.... + 30	+ 0,1.... + 30	+ 0,1.... + 30	+ 0,1.... + 30	+ 0,1.... + 30	+ 0,1.... + 30	+ 0,1.... + 30	+ 0,1.... + 50
Operating temperature		°C	+5 + 55	+5 + 55	+5 + 55	+5 + 55	+5 + 55	+5 + 55	+5 + 55	+5 + 55

* Other ratios available on request.



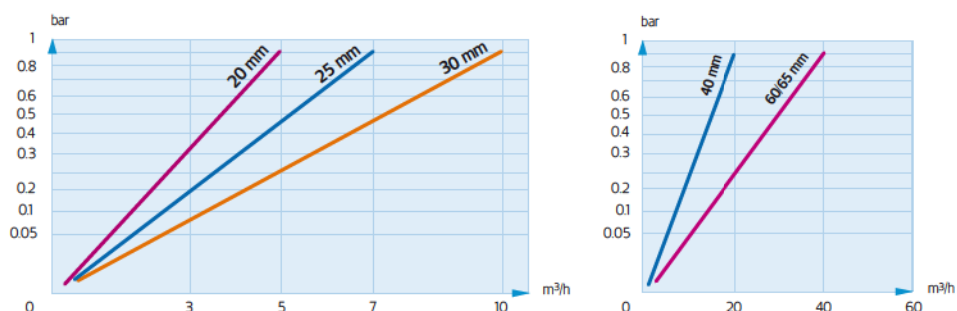
According to MID, ISO standard and OIML recommendation, the metrology classes A, B, C, D are replaced by the value of the ratio (R) between nominal flow (Q3) and minimum flow (Q1).

Pulse Value

	HF Signal	LF Signal (according to K factor for Cyble Sensor Module)					
Meter range		K=1	K=2.5	K=10	K=25	K=100	K=1000
DN 20 to 40*	1 L	1 L	2.5 L	10 L	25 L	100 L	1 m ³
DN 60/65	10 L	10 L	25 L	100 L	250 L	1 m ³	10 m ³

* For size 20 mm, 4/4 register divides by 10 the table values.

Head Loss



> **Aquadis DN40 TVM**



Dimensions

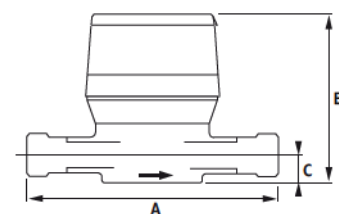
Nominal diameter (DN)	mm	20	25	30	40	60/65
Register version		TSN/TVM	TSN/TVM	TSN/TVM	TVM	TVM
Meter thread	inches	G 1" B	G 1" 1/4 B	G 1" 1/2 B	G 2" B	Flanges
	mm	26x34	33x42	40x49	50x60	PN 10/16
A	mm	190	260	260	300	420
B	mm	143	156/142	156/142	180	254
C	mm	18	44	44	57	93
D	mm	88	110	110	140	202
Weight	kg	1.3/1.6	3.2/3.5	3.3/3.6	6.2	22.6

Options (non exhaustive list)

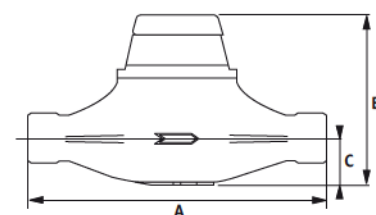
Aquadis meters may be fitted with:

- > Cyble modules from the factory (please refer to specific leaflet),
- > Non return-valve for outlet pipe 20, 25, 30 and 40,
- > Removable cap for in line meters DN 20, on TSN registers,
- > Removable cap for DN ≥ 25 .

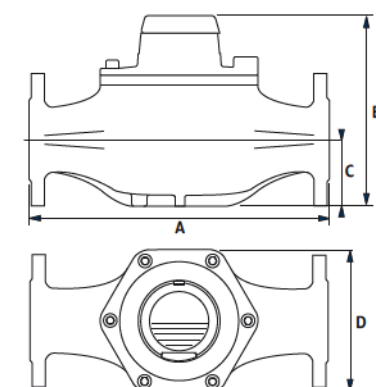
> In line version



> In line version



> In line version



About Itron Inc.

Itron Inc. is a leading technology provider to the global energy and water industries. Our company is the world's leading provider of metering, data collection and utility software solutions, with nearly 8,000 utilities worldwide relying on our technology to optimize the delivery and use of energy and water. Our products include electricity, gas and water meters, data collection and communication systems, including automated meter reading (AMR) and advanced metering infrastructure (AMI); meter data management and related software applications; as well as project management, installation, and consulting services. To know more, start here: www.itron.com

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