

Flodis

Single jet turbine type water meter



- > *Single jet Class C with wide measuring range*
- > *Pre-equipped for communication*
- > *Patented measuring chamber*

Flodis is single jet turbine type meter, designed to measure cold drinking water, offering the capability to measure accurately a wide range of flow rates.

The Technology

Flodis has one of the simplest but highly engineered design, that enables a high performance to measure accurately over time from very low flow rates up to peak flows, even in severe environmental conditions when in service.

Reliability-Durability

- > Proven stable accuracy in tough installation conditions and high turbidity water. Flodis has been in service for our main customers for over 10 years now.
- > Millions of Flodis are currently in service around the world in many different climate conditions, always offering one of the best return of investment over time.

- > The high quality of pivoting and levitation of the balanced turbine ensures exceptional endurance
- > The turbine is the single dynamic part in contact with water, offering the well-known durability of the product.
- > No need for external adjustment due to its design and high technology implemented in manufacturing

Easy Reading

Flodis register combines the following advantages:

- > Rotation close to 360° on site
- > Large numbered rollers with good contrast for excellent reading capability
- > Wiper ensures readability of the extra-dry register in tough humid conditions
- > Case protection: IP 68

Communication Device

- > Pre-equipped for communication through Cyble.

Working Principle

Flodis has two main components; the hydraulic that allows measurement of the water flow and the register that displays the measured water volume. Transmission interface between those components is achieved by a magnetic coupling **1**.

Flodis is a single jet velocity meter.

Flow coming from the inlet, diverted by a specially shaped injector **2** drives the turbine **3**.

This technology is suitable for all types of distribution water quality.

Equipped with an upstream filter **4**, Flodis is

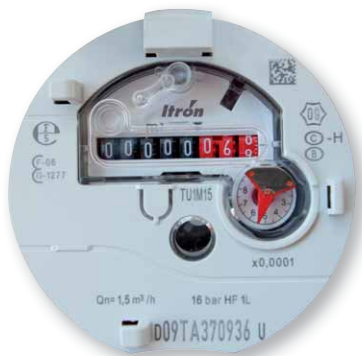
protected against impurities accidentally conveyed by water.

The magnetic coupling transmission, standard on the Flodis line, is accompanied by an extra-dry register.

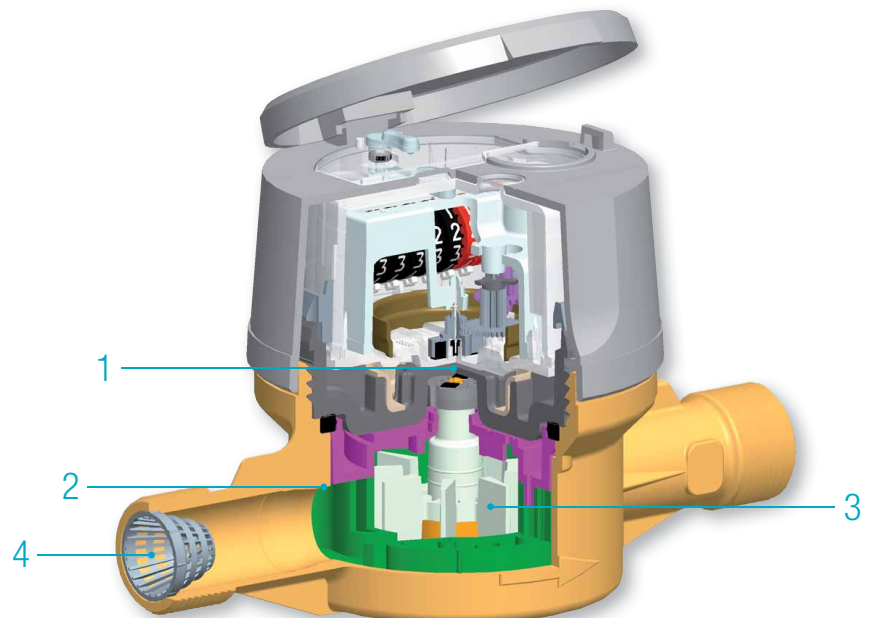
Both gears and register are in a waterproof and air proof enclosure.

The turbine is the only moving part of the meter in motion in water.

> Flodis indicator



> Cyble RF fitted on Flodis meter



Communication

Flodis 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

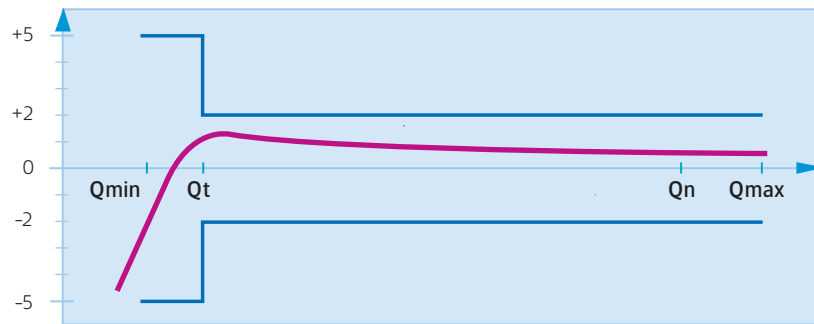
In compliance with EEC 75/33

Nominal diameter (DN)	mm	15	20	25	32
EEC metrology class		C horizontal - B all other positions			
EEC approval		F-06-G-1277			
Maximum admissible temperature	°C	30			
Maximum temperature for short period	°C	50			
Maximum admissible pressure	bar	16			
Testing pressure	bar	25			
Pressure loss group at Qmax	bar	0.8			
Nominal flow rate	Qn m3/h	1.5	2.5	3.5	6
Maximum flow rate	Qmax m3/h	3	5	7	12
Minimum flow rate	Qmin L/h	15	25	35	60
Transitional flow rate	Qt L/h	22.5	37.5	52.5	90
Starting flow rate	L/h	5	6	10	12
Indicating range	m3	99999.999			
Minimum scale interval	L	0.05			
Communication pre-equipment		Cyble Technology			

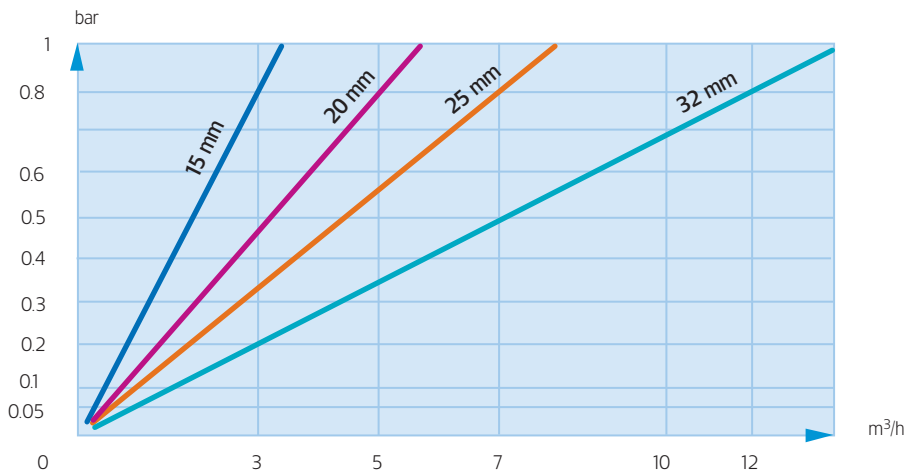
In compliance with MID - (MI-001)

Nominal diameter (DN)	mm	25	32
MID Type Approval Number		LNE 14887	
Nominal Flow Rate	(Q3) m3/h	6.3	10
Standard Ratio *	(Q3/Q1)	100 - 125 - 160 - 200	
Minimum Flow Rate	(Q1) L/h	63 - 50.4 - 39.37 - 31.5	100 - 80 - 62.5 - 50
Transitional Flow Rate	(Q2) L/h	100.8 - 80.64 - 62.99 - 50.4	160 - 128 - 100 - 80
Overload Flow Rate	(Q4) m3/h	7.875	12.5
Maximum Admissible Pressure (MAP)	bar	16	
Operating Temperature	(T) °C	0.1 - 30	
Climatic Environment	°C	5 - 55	

Typical Accuracy Curve, Flodis range



Head Loss



> Flodis DN32



Nominal diameter (DN)	mm	15	20	25	32
Meter thread	inches	G 3/4"	G 1"	G 1" 1/4	G 1" 1/2
	mm	20x27	26x34	33x42	40x49
A	mm	170*	190	260	260
A1	mm	85	95	110	110
A2	mm	85	95	150	150
B	mm	104	123	130	130
B'	mm	183	203	210	210
C	mm	21.5	22.5	39	39
D	mm	46	64	64	67
E	mm	46	28	28	25
Weight	kg	1	1.3	2	2.2

* Other available lengths 115, 145, 165 mm (G 3/4"), 115 mm (G 3/4" 7/8") and 165, 190 mm (G 1").

Pulse Value

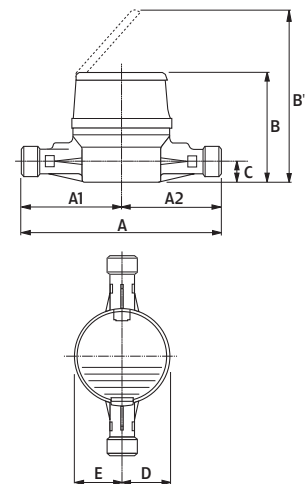
	HF Signal	LF Signal (according to K factor for Cyble Sensor Module)					
Meter range		K=1	K=2.5	K=10	K=25	K=100	K=1000
DN 15 to 32	1 L	1 L	2.5 L	10 L	25 L	100 L	1 m ³

Options (none exhaustive list)

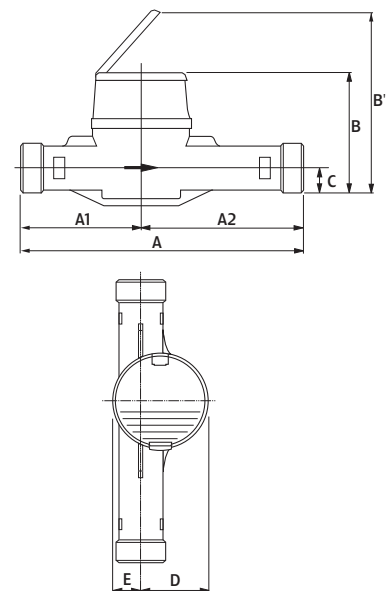
Flodis meters may be fitted with:

- > Copper can register in case wiper is not accessible
- > Non return-valve for outlet pipe
- > Removable cap
- > Equipped Cyble RF from the factory (please refer to specific leaflet)

> DN 15



> DN 20, 25 and 32



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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