



# Multimag

## Version Composite

Multimag - Composite is a reliable and stable multijet type water meter. The composite parts are made of an high quality thermoplastic material, heat stabilized, with excellent characteristics of strength and durability and lighter than bronze.

### FEATURES AND BENEFITS

- » Designed for long term performance
- » Extra-dry register 360° orientable for comfortable reading in any position.
- » Accuracy and Quality with 100% of meters calibrated in electronic test benches
- » Anti-fraud ring to prevent tamper.
- » Pre-equipped for remote reading
- » Lightweight and durable plastic housing.
- » Adjusting screw internal or external
- » PN 16
- » Lead free
- » Not affected by dezincification

### New Material

Multimag is now available in composite, a special thermoplastic with excellent technical characteristics appropriate to replace traditional bronze, without any loss in terms of metrology and pressure resistance.

The plastic housing provides the additional benefit of being extremely lightweight with positive impact under the environmental point of view. Itron has acquired since years a very good experience in using composite material for water meters. Our volumetric meters are installed in all environmental conditions all over the world, providing benefit to all our Customers requiring this material.

### Metrological Performance

Multimag is developed and produced to comply the highest international standards, such as:

- » NM 212:1999 (Mercosur)
- » Portaria Inmetro 246:00 (Brazil)
- » NOM (Mexico)
- » ISO 4064:1993
- » OIML R49
- » MID 2005/22/EC
- » EN 14154

### Advantages

- » Plastic Housing not interesting for theft
- » Ready for Remote reading
- » Strong anti tampering features
- » Reliability in measuring
- » Not affected by corrosion and chemicals
- » Not affected even in harsh conditions
- » Not conduct electricity, does not suffer the effect electrolysis galvanic corrosion



### REGISTER

Made of copper and glass casing hermetically sealed and resistant to condensation and submersion (IP68). Alternatively plastic version available (IP67). Both equipped with Cyble pointer which is compatible with all modules cybles.

### ANTI-FRAUD SYSTEM

The systems consists of an anti-fraud ring which can not be disassembled without breaking it. If any attempt of opening the meter, the cover gets broken to prevent and identify frauds attempt.

### COMMUNICATION

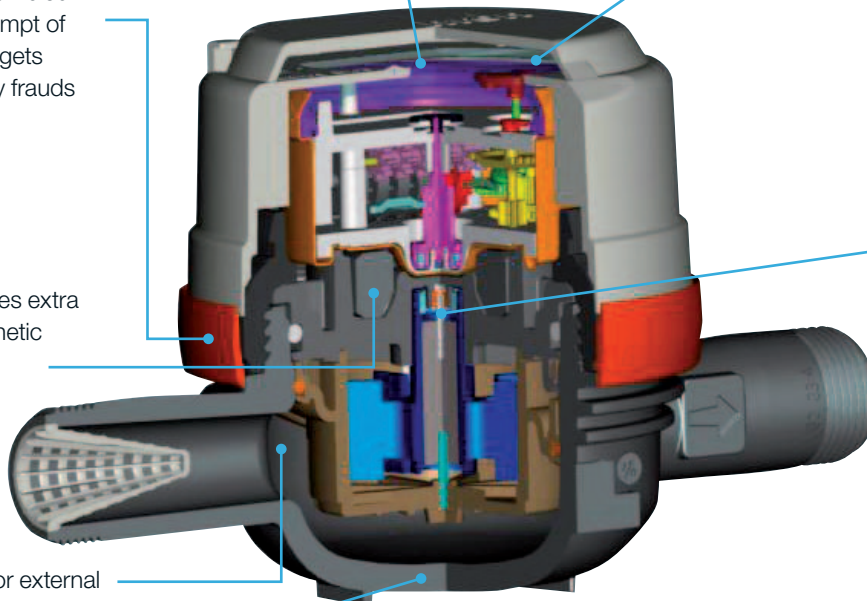
Pre-equipped with the recognized target Cyble allowing the integration of remote meter reading.

### MAGNETIC SHIELDING

Magnetic shield which provides extra extra protection against magnetic interference (magnetic fraud).

### MAGNETIC TRANSMISSION

Transmission between turbine an extra-dry register is done through a magnetic coupling ensures durability. No parts of register are in contact with the water flow.



Adjustment screw internal or external

### RESISTENT HOUSING

Lightweight housing, resistant to high pressure and UV rays, reducing the incidence of theft.

New concept of the measuring chamber, ensuring long-term stability and reducing the incidence of wear with the hydrodynamic system.

### ROBUST AND ENVIRONMENTAL IMPACTS

Severe internal validation test demonstrates the high performance thermoplastic material along with our design provides a high level of confidence to resist:

- » Static pressure and dynamic
- » Aging correlated with temperature
- » Mechanical strength of body and connections (secure facility)
- » Corrosion of metal

This results show that there is no restriction in using the composite compared with the metal version.

### ENVIRONMENT

A study conducted in cooperaton with CODDE (Conception Développement Durable Environnement) shows that the composite material provides advantages from the standpoint of environmental preservation. A comparison made with a water meter in metal production and distribution process shows less important impact in particular on the toxicity of air and energy depletion due to its low weight.

**ADAPTABILITY**

Multimag can be equipped with Cyble modules, making it an interface for remote reading.

**FEATURES AND BENEFITS OF CYBLE:**

- » Ease of read in the toughest environments reducing the number of estimated bills.
- » Leak detection
- » Backflow detection
- » Tamper detection
- » Consumer profile study of the meter
- » Protection against magnetic fraud



Anti-fraud Ring

**CYBLE RF**

(Cyble AnyQuest)  
(Cyble EverBlu)



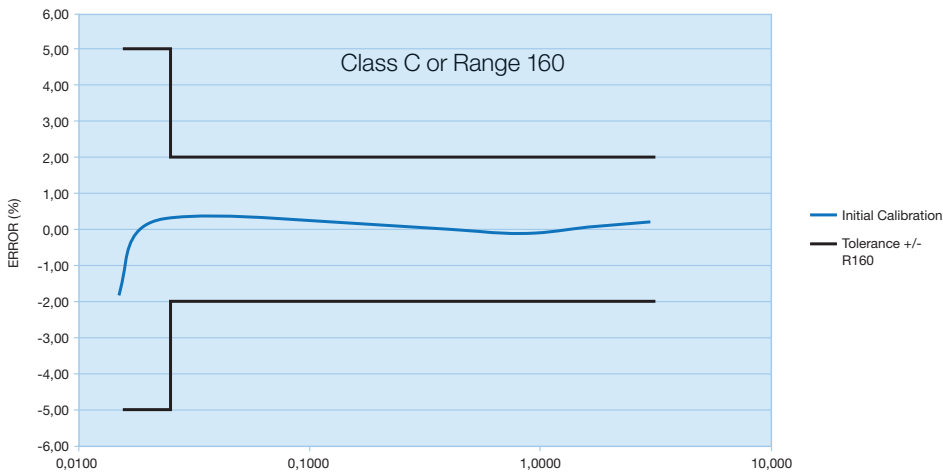
**CYBLE M-BUS**

**CYBLE PULSE**  
(Cyble Sensor)

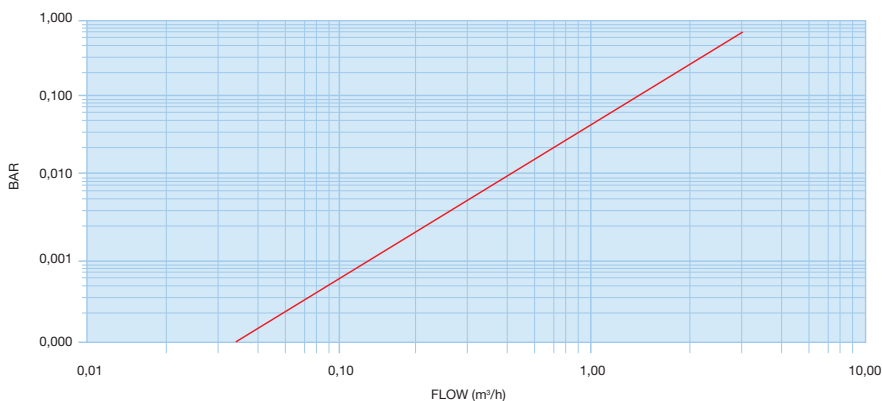


Multimag meter Dn15 L.190 3/4"

**TYPICAL CURVE MULTIMAG**



**HEAD LOSS TYPICAL**



Multimag equipped with Cyble AnyQuest

## Metrological Characteristics

Metrology ISO4064	Q3/Q1 (Range)		80	100	160
Minimum Flow Rate	Qmin	l/h	31,25	25	15,6
Transitional Flow Rate	Qt	l/h	50	40	25
Nominal Flow Rate	Qp	m <sup>3</sup> /h	2,5	2,5	2,5
Overload Flow	Qs	m <sup>3</sup> /h	3,125	3,125	3,125

\* Considering horizontal installation

Metrology ISO4064	Flow x Class		B	C
Minimum Flow Rate	Qmin	l/h	30	15
Transitional Flow Rate	Qt	l/h	120	22,5
Nominal Flow Rate	Qp	m <sup>3</sup> /h	1,5	1,5
Overload Flow	Qs	m <sup>3</sup> /h	3	3

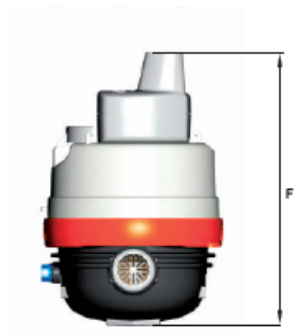
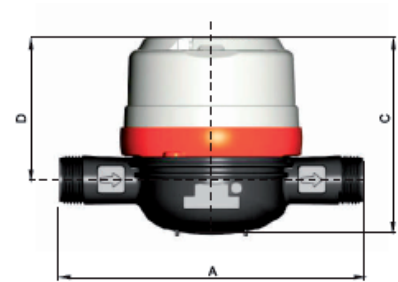
\* Considering horizontal installation

Characteristics	mm	B / R80	C / R160
Typical Start-up	l/h	8,5	7,5
Maximum Temperature	°C	40	40
Minimum Temperature (<1h)	°C	50	50
Maximum Operating Pressure	bar	10	10
Head Loss at Qs	bar	< 1	< 1
Maximum Reading	m <sup>3</sup> /h	9999 or 99999	
Minimum Reading	l	0,02	
Liters/Pulse	l	0,01526	

\* Considering horizontal installation

## Dimensions

Nominal Diameter (DN)	mm inches	15 1/2"	20 3/4"
Weight	Kg	0,55	0,57
Thread	mm	G 3/4"	G 1"
A	mm	165 / 170 / 190	
B	mm	98	
C	mm	110	
D	mm	80	
E	mm	178	
F	mm	150	



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