Unimag+

The domestic single jet

Unimag+ is a new single-jet water meter designed for domestic use, which can be transformed anytime into an advanced communicating device thanks to the application of the whole range of Itron Cyble communicating modules.

FEATURES AND BENEFITS

» Accuracy Performance:
- Stable and long-term accuracy
- Reduced risk of meter blockage
- Low starting flow

» Suitable for all installations and use:
- Compact, short length
- Cold and hot water
- Composite and brass bodies

» Robustness to tampering:
- Enhanced magnetic and mechanical protection

» Pre-equipped for communication:
- Radio mobile and fixed network
- Wired pulse and M-bus output

The Technology

Unimag+ is a velocity meter with turbine single-jet principle combined with the well-known Itron extra-dry register technology. No parts of the register are in contact with the water flow.

Metrological Performance

The meter exceeds the MID accuracy Ratio 100 for horizontal position, and keeps R63 for vertical position.

Excellent accuracy at low flow rate, with a low starting flow value to detect little leakages.

New features

» The hydraulic, with double pivoting principle has been conceived to increase the resistance against particles and deposit and assure more constant accuracy over time. With more error curve stability, Unimag+ is able to count flow rates below 8 l/h, thanks to frictionless materials used for bearings and contacts.

» The body is available in composite and brass materials to answer different customer requirements. For both, the Itron severe internal and field validation protocols assure equivalent robustness to high network pressure (PN16 bar), water hammers, external environmental conditions and high water temperatures.

» The meter is protected by magnetic tampering interferences through a design which has been validated against most known standardized magnets. Additional magnetic shielding is available as option.

» A security ring has been placed under the cap to provide better resistance and more evidence to mechanical fraud tampering

» The meter closure with shock-resistant plastic material is suitable for easy marking and customization.

» A wide lid is available to preserve the index reading.

» Three robust fixation points to fit the Itron AMR/AMI modules

Easy reading

» Clear and high contrast serial number

» 360° possible rotation of the register for comfortable reading in any position

» 8 numbered rollers with high contrast for easy and error-free reading up to 99,999,999 m^3

Compliance with Standards

» Metrology, approved according to:
- MID - 2014/32/EU
- ISO 4064
- EN 14154

» Materials
- Unimag+ use certified materials specific for contact with potable water (ACS-FRA, KIWA-NL, KTW-DE)
- All meter materials are compliant with RoHS normative.

» Manufacturing, 100 percent manufactured in the EEC
- ISO 9001
- ISO 14001
- MID H1

PRODUCT CHARACTERISTICS

Unimag+ is composed of two main sections: the hydraulic part that allows the measurement of the water flow and the register that totalizes and displays the measured water volume.

The transmission between the two parts is achieved by magnetic coupling, without any mechanical connection between the wet and the dry parts.

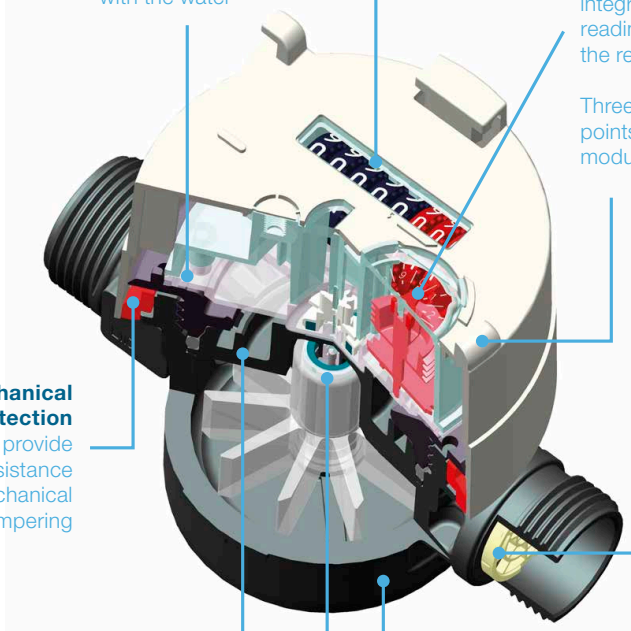
Brass Case
- Compliant with DIN normative for low lead brass (DIN50930-6:2013-10).
- Material traceability.

Extra Dry
All gears and rollers are enclosed inside the hermetically sealed case. No moving parts except the turbine are in contact with the water

Safe reading
Eight numbered rollers to ensure easy and error-free reading

Pre-Equipment
The proven Cyble target allows the meter to be integrated into a remote reading system by applying the relevant Cyble module

Three robust fixation points for communication modules



Mechanical Detection
Red ring provide an high resistance to mechanical tampering

Filter

Magnetic Shield
Enhanced protection against external magnetic fields

Meter Case
Available in brass and composite material

Enhanced Hydraulics
- Double pivoting increases resistance to sand and particles
- Turbine rotation more balanced
- No individual curve adjustement

Composite Case

KEY ADVANTAGES OF COMPOSITE MATERIAL

- Lighter (30 percent less of brass) and Ergonomic
- More suitable to be used with potable water (lead free)
- Not affected by corrosion (dezincification immunity)
- Theft deterant

MATERIAL CHARATERISTICS

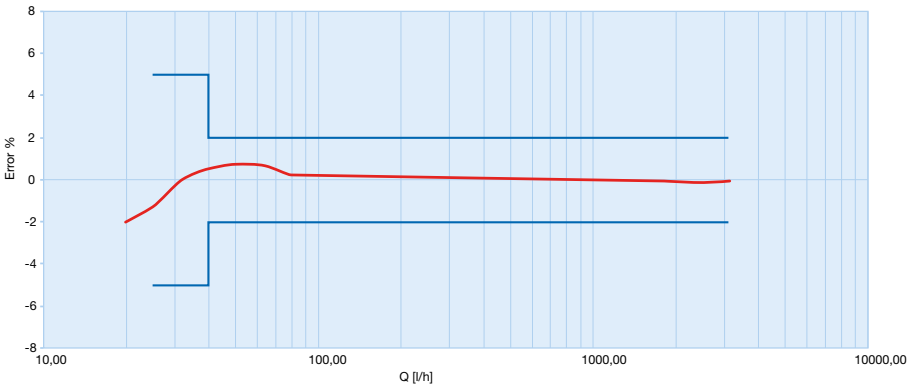
- Polymer fiber glass reinforced
- High resistance to chemicals
- High dimensional stability to temperature
- Robustness to handling and installation

Technical characteristics

Nominal diameter (DN)		mm	15				20	
MID approval					LNE - 33564			
Water Temperature Range	(T)	°C	T30 - T50	T30/90 - T90	T30 - T50	T30/90 - T90	T30 - T50	T30/90 - T90
MID Metrology class (horizontal)	(Q3/Q1)		80	63	125	100	125	100
MID Metrologica Ratio (other positions)*			40*	40*	63	63	63	63
Permanent Flow Rate	(Q3)	m^3/h	1.6	1.6	2.5	2.5	4	4
Overload Flow Rate	(Q4)	m^3/h	2	2	3.125	3.125	5	5
Minimum Flow Rate	(Q1)	L/h	20	25.40	20	25	32	40
Transitional Flow Rate	(Q2)	L/h	32	40.63	32	40	51.20	64
Starting Flow Rate		L/h			<8			<11
Max Pressure Loss Class at Q4		bar	0.25	0.25	0.63	0.63	0.63	0.63
Maximum Admissible Pressure	MAP	bar			16**			
Indicating Range		m^3/h			99999.999			
Minimum Scale Interval		L			0.05			
Mechanical Environment Class					M1 / B***			
Climatic Environment		°C			-25°C.... +70°C			
Flow Sensitivity Class U0/D0					U0/D0			
Pre-equipment for communication					Itron Full Set of Communication Devices			

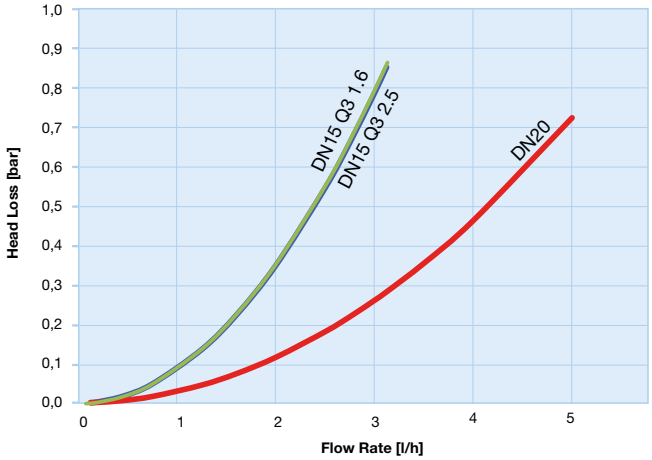
** According to ISO4046:2017 | ** MAP10 for hot water composite body | *** B according to EN14154-1:2005+A2:2011*

TYPICAL ACCURACY CURVE Q3=2,5 m^3/h - R100



Unimag+ Cold water version

HEAD LOSS

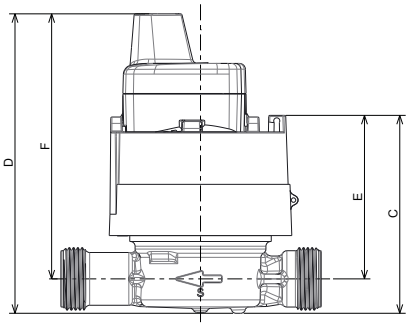


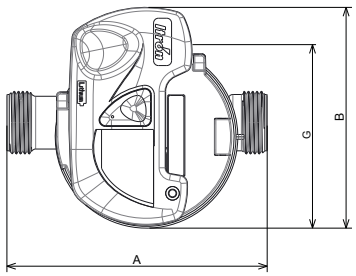
Unimag+ Warm water version

Dimensions

Nominal diameter (DN)	mm	15 Brass	15 Composite	20 Brass
Meter Thread		G ¾" - G 7/8" - G 1" - M22	G ¾"	G 1"
A	mm	80 - 100 - 105 - 110 - 115 -130	80 - 110	115 - 130
B	mm	93	93	93
C	mm	84	86	85
D	mm	127	129	128
E	mm	69	69	69
F	mm	112	112	112
G	mm	77	77	77

* For other lenghts, contact your local Itron representative





COMMUNICATION

The Unimag+ is ready to be equipped with the proven Cyble technology, allowing it to mount Cyble modules at any time in field, enabling instantaneously the remote communication function.

This opens the meters up to a large range of advanced and reliable AMR systems:

» Radio walk-by systems
» Radio fixed data collection systems
» M-Bus wire systems
» Any other system based on universal pulse outputs

Cyble RF (wireless, radio frequency)

Cyble M-Bus

Cyble sensor (pulse output)

Unimag+ Composite cold water equipped with EverBlu cyble

ACCESSORIES

» Brass connection set
» Liner extensions
» Non-return valve
» Connection plastic seal

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