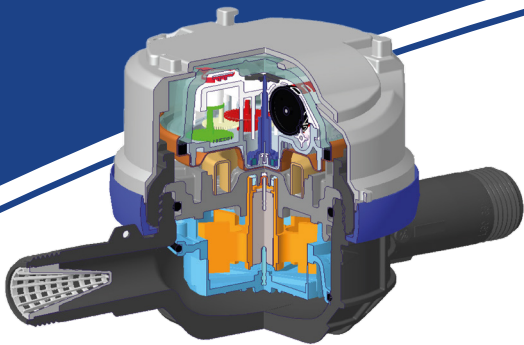




420 Plus/420+

DRY-DIAL MULTIJET METER



Dry-dial Multijet Water Meter with Composite or Metal Body

The 420 Plus is a multijet water meter with excellent accuracy and stability, thanks to the distinctive design of its measuring chamber. Available with body in metallic or composite material, which ensures high quality and resistance for both versions. The composite version aims to reduce weight and theft attempts, replacing the traditional metal alloy, but maintaining its performance, pressure and temperature ratings.

Main features

- Accurate, long lasting metrology
- Internationally recognized approval according to MID
- Inclined glass/copper register with IP68 rating, 360 degree rotation
- Multijet measurement principle, internal regulator
- Class C/R160, DN15 and 20/ MAP 16
- Dry dial, magnetic transmission
- Multiple body options
- AMR Ready

420 Plus/420+ DRY-DIAL MULTIJET METER

PERFORMANCE DATA ACC.OIML R49:2013

Metrological characteristics - ISO 14154

Nominal size	DN	mm	15/20			
Permanent flow rate	Q ₃	m ³ /h	2.5			
Body Material			Bronze/ Composite		Brass	
Installation orientation			Horizontal	Vertical	Horizontal	Vertical
Value of ratio R	Q ₃ /Q ₁	-	R160*	R40	R125**	R40
Transitional flow rate	Q ₂ (tolerance ±2%)	l/h	25	100	32	100
Minimum flow rate	Q ₁ (tolerance ±5%)	l/h	15.6	62.5	20	62.5
Overload flow rate	Q ₄	m ³ /h	3.125			
Starting flow rate	Q _{start}	l/h	7.5			

*Also available in R125, R100, R80, R63, R50 and R40

**Also available in R100, R80, R63, R50 and R40

Technical characteristics - ISO 14154

Nominal size DN	mm	15/20
Nominal flow Q ₃	m ³ /h	2.5
Register type	-	Dry dial, copper/ glass construction
Indication range	m ³	99999.999
Calibration value	L	0.02
Maximum admissible pressure /MAP	bar	16
Working pressure range / Δp	bar	0.3 to 16
Pressure loss	bar	0.63
Temperature class / MAT	°C	T 50
Flow profile sensitivity classes	-	U0, D0
Position	-	H, V

Dimensions

NOMINAL DIAMETER (DN)	UOM	15	20
		1/2"	3/4"
Thread	mm	G 3/4"	G 1"
A	mm	165*	190**
B	mm	98	98
C	mm	110	110
D	mm	80	80
E	mm	178	178

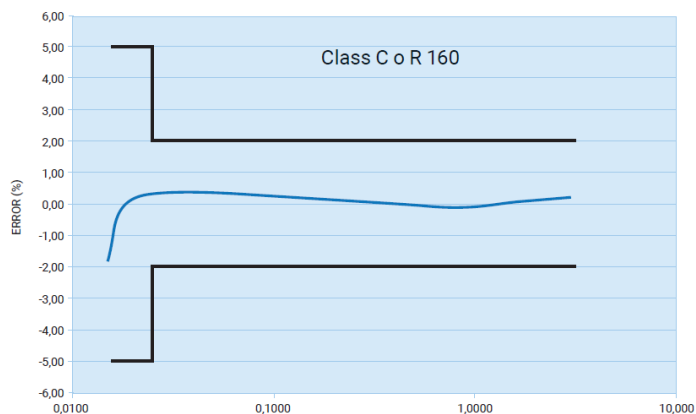
* Length 170mm available on request.

** Length 165mm available on request.

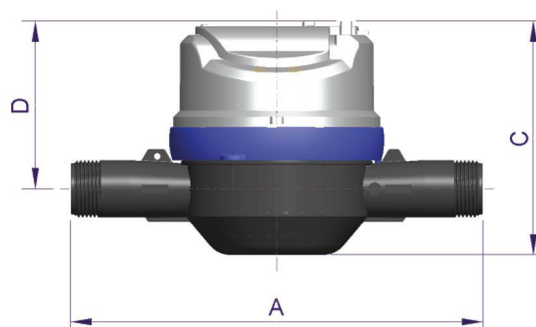
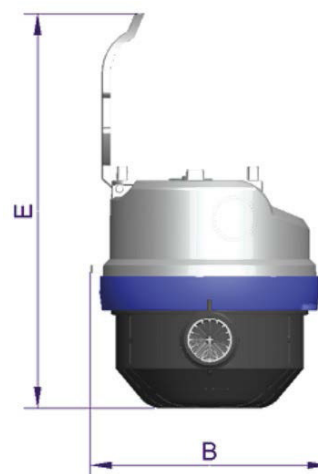
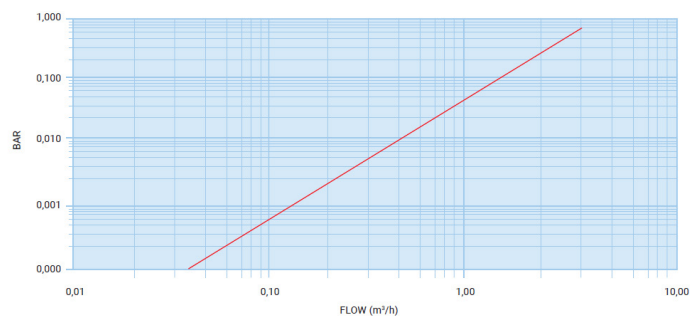
WEIGHTS

MATERIAL	UOM	DN 15	DN 20
Brass	KG	0,89	0,95
Bronze	KG	0,91	0,99
Durethan	KG	0,48	0,52

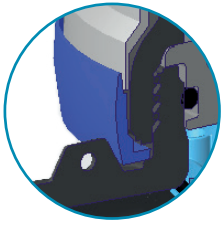
Typical Accuracy Curve



Typical Head Loss Curve



420 Plus/420+ DRY-DIAL MULTIJET METER



Anti-fraud System

Consists of a protective device, installed on the closing ring, to show possible attempts at fraud. If an attempt is made to open the meter, this ring will be damaged, showing the attempted tampering of the meter.

- Register copper/glass
- Anti fraud ring
- Magnetic shielding against cheats
- Metal strap for plastic register

Magnetic Shielding

Protects the meter from fraud attempts by external magnets.

Sturdy Housing

Robust housing, resistant to pressure and UV rays, reduces environmental impact.

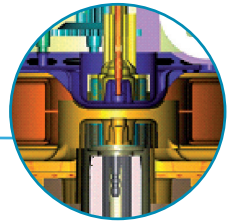
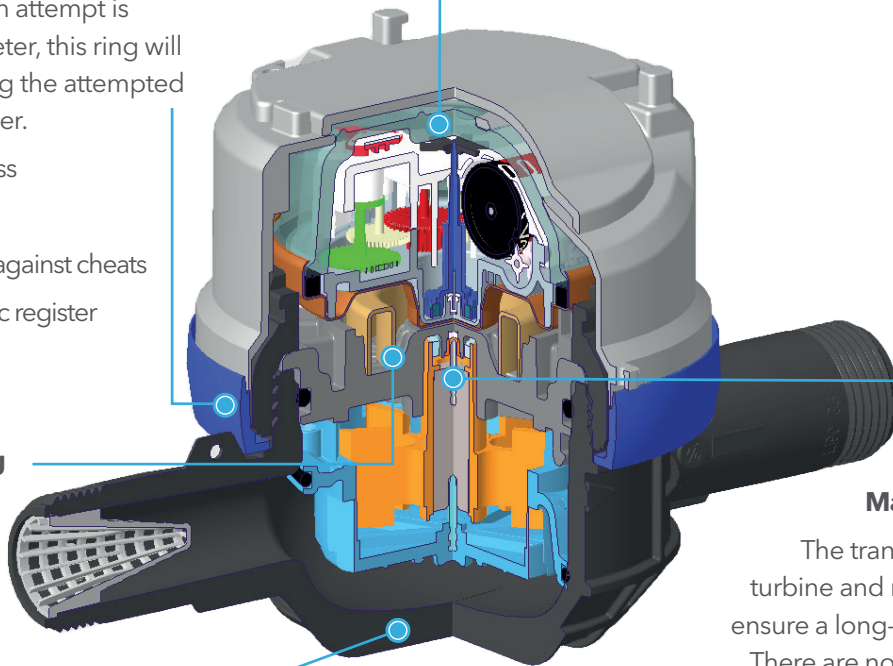
The design of the measuring chamber ensures long-term stability and reduces the incidence of wear due to the hydrodynamic system.



Register

- Hermetically sealed, developed with copper base and glass or polycarbonate lenses.
- Inductive pickup for AMR integration.
- Both waterproof and condensation resistant (IP68) *.

* 3 months to 1m deep.



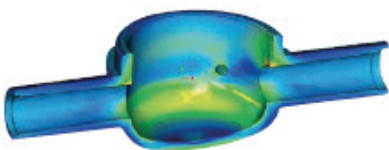
Magnetic Transmission

The transmission between the turbine and register is magnetic to ensure a long-life cycle of the meter. There are no parts of the register in contact with the water flow.



Robust and Resistant to Environmental Impact

Rigorous internal validation tests demonstrate the high performance of materials used, in both thermoplastic and metal version, proving their efficiency and ability to resist static and dynamic pressure and aging caused by high temperatures. In addition, its design has mechanical resistance of both the body and the connections, to ensure the meter a safe installation and greater durability



420 Plus/420+ DRY-DIAL MULTIJET METER



Metal Alloy Body



Composite Body

Available Options:

- Inlet strainer
- Inline non-return valve in outlet
- Metal alloy (Brass or Bronze) or Composite body options available for different environments and conditions

Applications

- Measurement of clean potable water
- Residential and billing applications
- Low flow applications
- Areas at risk of submersion

Approvals

Metrology

EU design-examination certificate based on the following regulations (guidelines, standards, normative documents)

2014/32/EU (MID)

- OIML R49
- ISO 4064
- EN 14154-4

Drinking water

The meter conforms to the following potability standards:

- WRAS*
- NSF*

* Certification in progress

Other approvals

Other approvals include:

- IP68

Marking

- An arrow on the body show the direction of flow.
- The nominal flowrate, the metrological class, the MID pattern approval number, the year of manufacture and the individual meter number are engraved on the identification plate on top of meter.
- The manufacturer's name and the type of the meter are printed on the dial.
- The meter can be customized on request with specific serial number, bar code or logo.

Installation and maintenance instructions

- The 420+ meter must be installed in a low point of the pipeline.
- The meter must be installed with the arrow cast on the body corresponding to the direction of water flow.
- Before fitting the water meter, all pipe work must be flushed out to remove all foreign bodies.
- An upstream valve is recommended to allow installation and removal of the meter. When turning on the water supply, the upstream valve must be opened slowly in order to fill the meter with water smoothly.
- During tightening, the meter should be held in position to prevent it from rotating.
- No special maintenance is required.