



820

Single jet water meter Semi dry protected register

Main Features

- DN 15 to 20 PN16
- Semi dry protected register
- High resistance to foreign bodies
- Large measuring range
- Small pressure loss
- Noiseless operation
- Can be retro-fitted with the HRI pulser
- Available with MID approvals

APPLICATIONS

High accuracy metering of water containing solid particles is now possible, regardless of installation position

Due to its exclusive patented hydrodynamic balancing system, the 820 meter is the first velocity meter approved in R200 for horizontal and R160 for vertical position.

The 820 meter is the perfect solution for ensuring accurate and reliable metering regardless of installation and operating conditions.

Available options

- HRI electronic sensor (Pulse Unit, Data Unit)
- Pipe to meter couplings
- Non-return valve

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Accuracy

With the perfect control of the production process, the accuracy curve of the 820 meter is exceptional.

Effectively, its tolerance margins are very narrow and the measurement range is very wide, through the entire range of flowrates.

Reliability

An inlet strainer prevents large water-borne foreign particles (stones, plastic parts) from entering the meter.

The design of the measuring element limits the circulation of the water between the bottom of the meter and the totalizer.

Most of the solid particles in suspension therefore go directly from the inlet to the outlet between the blades of the impeller. Moreover, the most sensitive elements of the water meter (the wheels, the cubic decimetre pointer and the transmission worm gear) are protected by the glycerine solution. These features give the 820 meter mechanism an excellent protection against any foreign bodies.

The innovative design and the use of high quality materials guarantee a long service life and stable performance, even in poor operating conditions. As an example, the turbine pivots on two very hard synthetic sapphire rings between two stainless steel shafts, giving extremely low friction and wear.

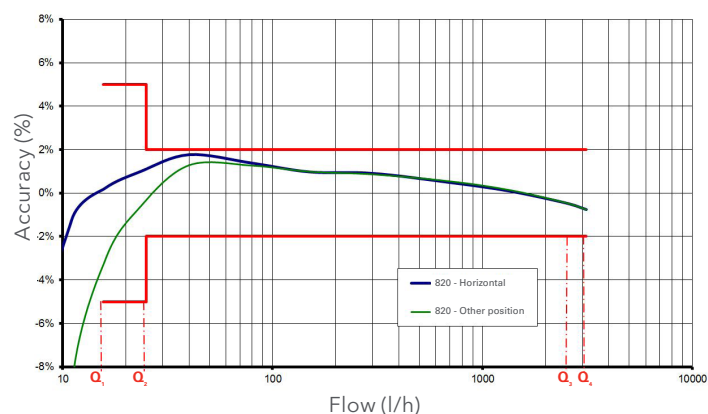
Legibility

The 5 wheels and the first pointer of the totalizer are protected from the network water by a capsule filled with a glycerine solution. The meter remains clearly readable, with no risk of deposits or condensation.

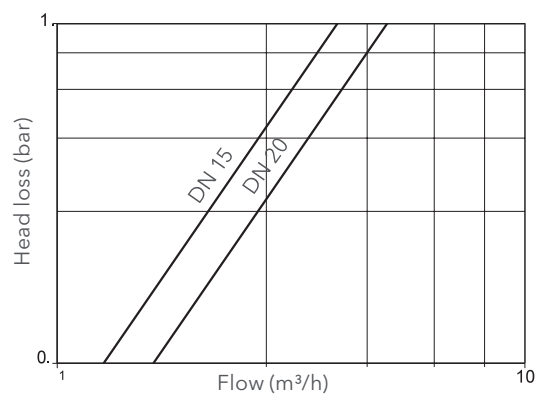
It is equipped with a 355° swivelling lid and sealing ring.

The lowest reading unit is 0.05 litres, which enables testing times to be reduced.

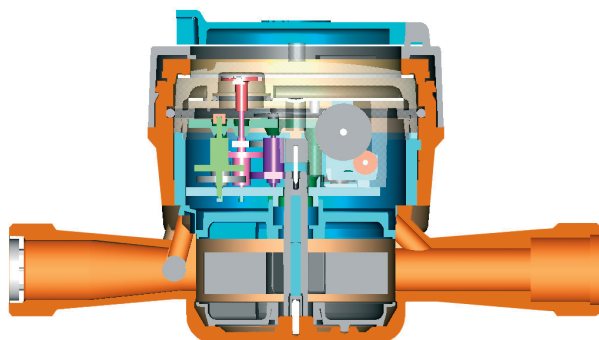
Typical Accuracy Curve



Typical Pressure Drop Curve



Cross Section



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Approvals

EC type-examination certificate

- in conformity with
- 2014/32/EU (MID)
 - OIML R49:2013
 - EN 14154-4:2014
 - ISO 4064:2017
- Q₃2.5 DE-10-MI001-PTB008
- Q₃4 DE-09-MI001-PTB002

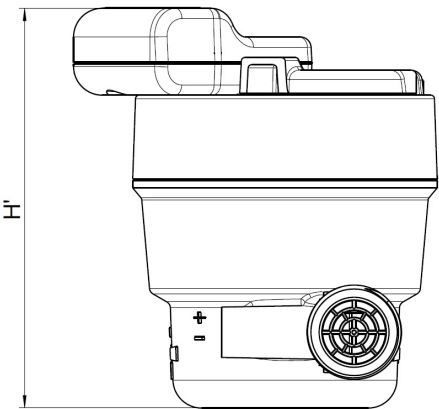
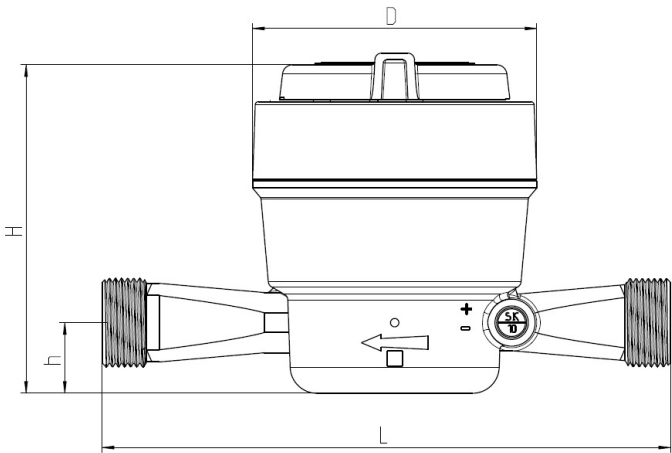
Marking

Arrows on the meter body indicate the direction of flow.

The year of production and the meter number are engraved on the sealing ring.

Manufacturers mark, name of model, nominal flowrate, Ratio, MID approval number are printed on the dial.

Dimensional Diagram



METROLOGICAL DATA

**Directive 2014/32/EU (MID),
EN 14154-4:2014 & ISO 4064:2017**

Nominal size	DN	mm	15	20
Permanent flow rate	Q ₃		2.5	4
Ratio "R"	Q ₃ /Q ₁	R	R200 Horizontal R160 Vertical	R250 Horizontal R160 Vertical
Maximum flow rate	Q4	m ³ /h	3.125	5
Minimum flow rate ⁽¹⁾ (tolerance ±5%)	Q ₁	l/h	15.6	25
Transitional flow rate ⁽¹⁾ (tolerance ±2%)	Q ₂	l/h	25	40

(1) Values for R160

DIMENSIONS AND WEIGHTS

Nominal size	DN	mm	15	20
Length	L	mm	170 ⁽¹⁾	190 ⁽²⁾
Width	W	mm	85.1	85.1
Total height	H	mm	91.5	91.5
Total height with HRI	H'	mm	116	116
Height to pipe axis	h	mm	21.8	21.8
Tail		inch	G¾"B ⁽²⁾	G1"B
Piece	Diameter	mm	26.44	33.25
Thread	Pitch		1.81	2.31
Weight		kg	1.05	1.15

(1) also available in length 110, 115 and 165 mm

(2) also available in length 110, 115 and 165 mm

HRI-Options

The dial of the meter is equipped as standard with a pointer, which is prepared to be scanned with compatible modules such as HRI or CompactRF. This inductive scanning is extremely robust and also takes the flow direction into account. This ensures that the counter reading of the mechanical dial is accurately reproduced. The HRI provides a reliable pulse or data interface for both mobile and remote reading. The HRI or Sensus CompactRF can be field mounted to already installed Sensus water meters, or ordered factory mounted to the meter.

For more information, please refer to the HRI, Sensus CompactRF and Sensus PulseRF module data sheets.

The HRI is available in two variants:

1. HRI-A Pulse Unit

The resolution of the input pulses is 1 liter per pulse. Different versions of the HRI-A with fixed output pulse values are available.

2. HRI-B Data Unit

The HRI data unit integrates a data interface. The meter reading as well as the serial number can be read out via an M-Bus network according to EN 13757. Alternatively, the pulse output can be used. This can be configured via the data interface.

3. Sensus CompactRF and Sensus PulseRF-A3 radio modules

a. Sensus CompactRF

The module can be placed on the meter and thus forms a meter with radio module.

b. Sensus PulseRF-A3

The pulse pickup is placed on the meter. The actual radio module is connected with a cable and allows remote operation, e.g. to enable a secure radio connection in difficult radio conditions.



HRI



Sensus CompactRF



Sensus PulseRF-A3