

820

Single jet water meter
Semi dry protected register



Main characteristics

DN 15 to 20 PN16

- Semi dry protected register
- Class C any position
- High resistance to foreign bodies
- Large measuring range
- Small pressure loss
- Noiseless operation
- Can be retro-fitted with the HRI pulser
- Available with EEC and MID (DN 20) 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 class C for any 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, Radio Sensus((S))cout Unit)
- Pipe to meter couplings
- Non-return valve

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.

Its metrological performance is distinctly better than the requirements of Class C, irrespective of the operating position of the water meter.

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.

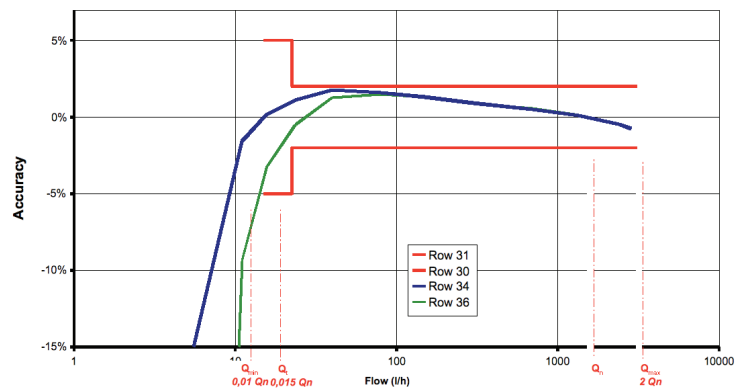
Legibility

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.

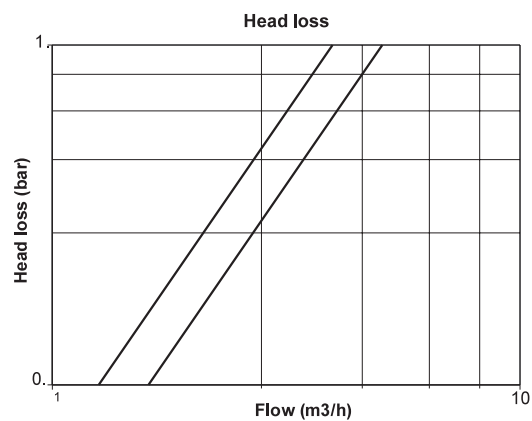
It is equipped with a 360° swivelling lid and sealing ring.

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

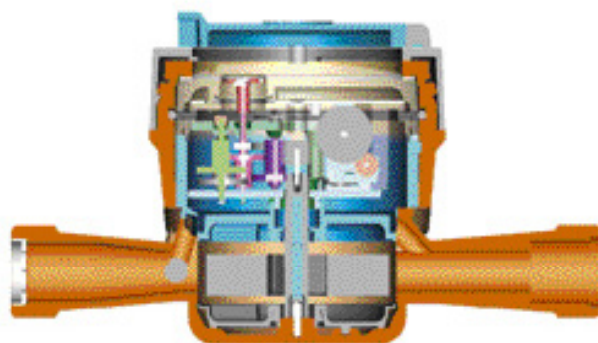
Typical Accuracy Curve



Typical Pressure Drop Curve



Cross Section

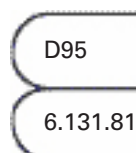


Compliance

The 820 water meter complies with Recommendation N°49 of the International Organisation of Legal Metrology, ISO Standard 4064 and EEC Directive N°75/33.

EEC Pattern Approval Number

The 820 meter has been approved according to the EEC pattern approvals:



Qn - 1.5 and 2.5 class C

all positions

MID approval
Q₃4 DE-09-MI001-PTB002

Marking

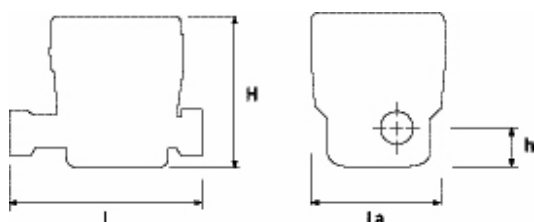
Arrows on the meter body indicate the direction of flow.

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

Manufacturers mark, name of model, nominal flowrate,

metrological class / Ratio, EEC pattern approval / MID approval number are printed on the dial.

Dimensional Diagram



Technical Characteristics

Requirements of the EEC directive n° 75/33

Nominal size	DN (Qn)	mm	15	20
Nominal flowrate	Qn	m ³ /h	1.5	2.5
Maximum flowrate	Qmax	m ³ /h	3.0	5.0
Minimum flowrate	Qmin	l/h	15.0	25.0
Transitional flowrate	Qt	l/h	22.5	37.5

Metrological Characteristics

Directive 2004/22/EC (MID) & EN 14154

Nominal size	DN (Qn)	mm	20
Permanent flowrate	Q ₃		4
Ratio "R"	Q ₃ /Q ₁	R	160 (vertical installation) / 250 (horizontal installation)
Maximum flowrate ⁽¹⁾	Q ₄	m ³ /h	5
Minimum flowrate ⁽¹⁾ (tolerance ±5%)	Q ₁	l/h	25
Transitional flowrate ⁽¹⁾ (tolerance ±2%)	Q ₂	l/h	40

(1) Values for Q₃ = 160

Operational Characteristics

(manufacturer's data)

Nominal size	DN (Qn)	mm	20
Permanent flowrate	Q ₃		4
Ratio "R"	Q ₃ /Q ₁	R	160 (vertical installation) / 250 (horizontal installation)
Maximum flowrate ⁽¹⁾	Q ₄	m ³ /h	5
Minimum flowrate ⁽¹⁾ (tolerance ±5%)	Q ₁	l/h	25
Transitional flowrate ⁽¹⁾ (tolerance ±2%)	Q ₂	l/h	40

(1) Values for Q₃ = 160

Dimensions and Weights

Dimensional characteristics

Nominal size	DN (Qn)	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
Height to pipe axis	h	mm	21.8	21.8
Tail		inch	G3/4" B (2)	G 1" 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

AMR Fitting

The 820 can be equipped with all the Sensus advanced module range.

Different modules with integrated functions are available:

1. HRI Pulse Unit (A-version)

The liter pointer activates the HRI allowing a basic resolution of one liter per pulse. The output pulse value can be factory set using the divisor D (e.g. D = 100 means 1 pulse per 100 liters). The possible pulse output D values are (amongst others):

1 / 10 / 100 / 1000 / 2.5 / 25 / 250

2. HRI Data Unit (B-version)

The HRI Data Unit is a data interface which provides an accurate meter reading as well as the serial or customer ID. The pulse output as described above is also included. The HRI Data Unit can be connected to a M-Bus network for remote read or a MiniPad for mobile inductive read (MiniBus), both in accordance with the IEC 870. HRI Data Unit with Sensus protocol can also be supplied on request.

3. Sensus((S))cout Radio Unit

This integrated module in conjunction with the reliable HRI sensing technology provides the option of an easy and quick remote reading capability through a mobile or fixed radio network.

For additional information about the AMR modules please refer to our website and to the datasheets LS 8100 and LS 3300.



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UK & Ireland Enquiries

Sensus UK Systems Ltd, International House, Southampton International Business Park,
George Curl Way, Southampton SO18 2RZ UK
T: +44 (0) 1794 526100 F: +44 (0) 1794 526101 Email: info.gb@sensus.com www.sensus.com

International Enquiries

Sensus GmbH Ludwigshafen, Industriestrasse 16, 67063 Ludwigshafen Germany
T: +49 (0) 621-6904-0 F: +49 (0) 621-6904-1409 Email: info.int@sensus.com www.sensus.com

