

Cold water meter

type WP

AT 7110A

Internet_Variants

Dimension range	PN	Temperature range	Material
DN 40 - 150	16	+1 °C to 50 °C	Gray iron

Range of application

Measurement of cold water through a display showing total consumed amount. Suitable for distribution and pumping facilities and when low pressure loss is preferred. The meter is prepared with a remote reading sensor of like radio or combined pulse/M-Bus sensor. If a high resolution pulse is required a optic sensor including singal booster can be connected.

Program text

UGE.35 Water meter for flow, pipe mounted with digital display, accumulated value.

Cold water meter AT 7110A.... type MeiStream, prepared for remote reading module, Q3 m³/h, DN with flanges PN 16.



Quality assurance

MID-certificate, CE-marking.

Material specification

Component	Material
Body	Gray iron GG25
Meter chamber	PPO
Support pin	Hard metall

Dimensions and weight

DN	40	50	50	65	65	80	80	100	100	125	150	150
	-	WP	WS	WP	WS	WP	WS	WP	WS	-	WP	WS
A	220	200	270	200	300	225	300	250	360	250	300	500
B	120	120	120	120	120	150	150	150	150	160	177	177
C	200	200	200	200	200	270	270	270	270	280	356	356
D	69	73	73	85	85	95	95	105	105	118	135	135
Weight	6	6,3	8,1	8,6	10,5	11	13,1	15	16,8	17,5	30	38,3

Measurements in mm, weight in kg. WP and WS designates which build length should be selected to replace the existing Woltan gauges of the type WS and WP.

Function and design

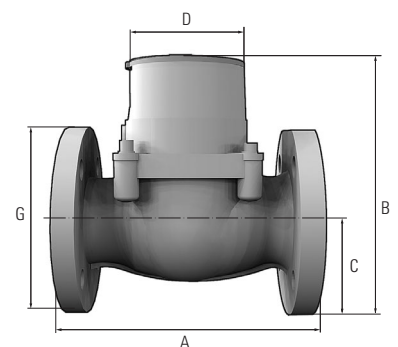
Cold water meter MeiStream type turbine wheel, where a free floating spherical turbine unit rotates in the water current, which entails low friction.

The movement is transferred with a magnetic coupling to the counter.

AT 7110A is replacing previous meters Woltman WP and Woltman WS and is therefore available in two build lengths (see measurement A in the table Dimensions and weight).

The counter is six figure, hermetically sealed and also rotatable in 360°, so the counter display can be turned to the suitable position. The counter is submersible, IP68.

DN 40-100: The consumption is shown m³. The meter also has three indicators that shows 1, 10, and respectively 100 liter per indicator lap.



DN 150: The consumption is shown 10's m³. The meter also has three indicators that shows 1, 10, 100 and respectively 1000 liter per indicator lap.

The meter is provided with an indicator for connection of remote reading module type HRI, with a combined pulse/M-Bus or radio output. Outlets for a optical pulse sensors are also available. See separate product sheet AT 7275MEI.

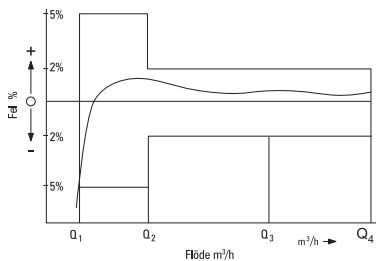
Function data

DN	40	50	65	80	100	125	150
Q ₃ , permanent flow (m ³ /h)	25	40	63	100	160	160	400
Q _{1V} , minimum flow (by vertical mounting), (m ³ /h)	0,25	0,32	0,5	0,5	0,8	1	2
Q _{1h} , minimum flow (by horizontal mounting), (m ³ /h)	0,2	0,25	0,39	0,32	0,51	0,64	1
Q _{2V} , boundary flow (by vertical mounting), (m ³ /h)	0,4	0,51	0,81	0,8	1,28	1,6	3,2
Q _{2H} , boundary flow (by horizontal mounting), (m ³ /h)	0,32	0,4	0,63	0,51	0,81	1,02	1,6
Q ₄ , Overload flow (m ³ /h)	31	50	78	125	200	200	500
Q ₃ /Q _{1H} , max Ratio* (R-value) by horizontal mounting	125	160	160	315	315	250	400
Q ₃ /Q _{1V} , max Ratio* (R-value) by vertical mounting	63	100	100	125	160	125	200
Q ₃ /Q ₁ , Ratio (R-tal) standard	100	100	100	100	100	100	100
Start flow, (m ³ /h)	0,05	0,05	0,07	0,1	0,11	0,15	0,3
Pressure loss by Q ₃ according to EN 14154, (bar)	0,08	0,18	0,37	0,16	0,34	0,36	0,32

* Note that the table gives the maximum R-value for the meter and the actual meter could have a different, lower R-value.

The values above (exclusive start and pressure loss) shows the meteorological properties according to the standard MID.

The meter actual values surpasses the given data.



Largest allowed margin of error

Flow range	Largest allowed margin of error
Q1 - Q2	±5%
Q2 - Q4	±2%

Sizing

The smallest meter that can handle the given continuous flow Q₃ is selected. All though it's important to control that the pressure loss is too big. Short term overload is considered to be less than 1 hour each day, or at most 200 hours per year.

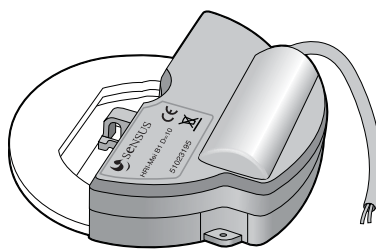
Accessories and options

Accessories

Remote reading module for radio Scout (AT 7087..), combined pulse/data/M-bus/Minibus-sensor (AT 7275MEI..) see separate product sheets.

Variants

- Pressure class PN40 (AT 7110A..-40)
- Larger R-Value R=315 (AT 7110..PL)
- Free from copper alloy, used for aggressive water (AT 7110A..BMF)



AT 7275MEI

Pressure loss

Installation

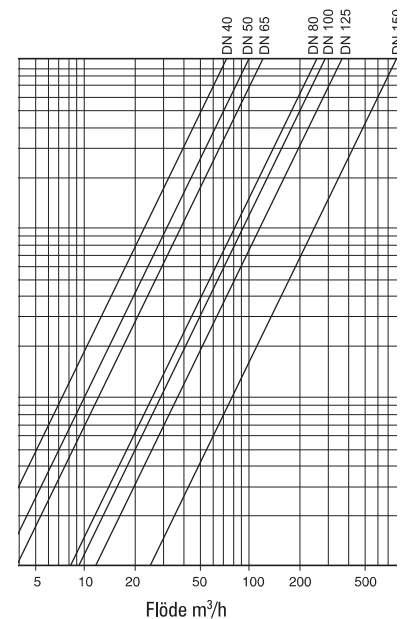
The meter can be mounted horizontally or vertically with the meter cluster upwards or to the side. See the function data section for information regard how the installation position affects the R-value. A straight line of 3 x DN in front of the meter is recommended. After the meter no straight line is needed, but there should not be any throttling means in the direct vicinity of the meter. The system should be clean flushed before the meter is mounted. During commissioning pressure impacts should be avoided. Flange gaskets are included in the delivery.

Maintenance and spare parts

Revision of the meter should be done in a accredited meter workshop. During this revision the worn out parts are replaced. Spare parts for this are available in the separate spare parts section.

Marking

The cold water meter is blue with a gray plastic lid. The meter cluster is marked with SENSUS, Q₃, R-value, manufacturing year, CE and serial number.



DN	Length WP	Length WS
40	AT 7110A40-220	AT 7110A40-220
50	AT 7110A50-200	AT 7110A50-270
65	AT 7110A65-200	AT 7110A65-300
80	AT 7110A80-225	AT 7110A80-300
100	AT 7110A100-250	AT 7110A100-360
150	AT 7110A150-300	AT 7110A150-500
	For DN 200-400, choose AT 7109-200 AT 7110A..PL (For Meistream Plus with R315)	