

Cold water meter

Piston ring

AT 7420B, 7430B

Internet_Variants

Dimension range	PN	Temperature range	Material
G 3/4 - G 2	16	+2 °C to +50 °C	Brass
G 3/4 - G 1	16	+2 °C to +50 °C	Composite

Range of application

Measurement of cold water through a display showing total consumed amount. Water meter with a piston measuring chamber design for cold water with an accuracy MID R160 (Ratio) alternatively class C, which enables an extremely high accuracy even with low flows. Prepared for remote reading through separate Cyble-sensor with pulse, M-Bus or wireless M-Bus.

The meter should neither be used in cooling systems with additives of glycol or something similar, nor in industry applications or similar systems where there is a risk for powerful pressure loss, as an example where magnetic valves are mounted.

Program text

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

Meter with a rotary piston measuring chamber design for cold water AT 7420B-....., Q3 m³/h, DN, PN 16, in brass. Prepared for mounting of pulse, M-Bus sensor type Cyble.

Meter with a rotary piston measuring chamber design for cold water AT 7430B-....., Q3 m³/h, DN, PN 16, in composite. Prepared for mounting of pulse, M-bus sensor type Cyble.



Quality assurance

AT 7420B/7430B: MID-certificate including CE-marking.

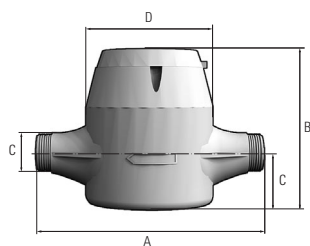
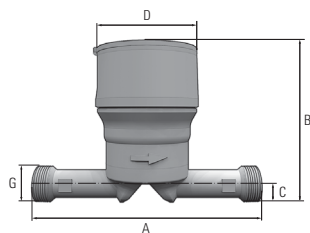
Material specification

	Component	Material
1	Body and insert ring	AT 7420B: Brass CW617N AT 7430B: composite PPA

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Dimensions and weight

	Q ₃ 2,5 fd Q _n 1,5 AT 742 0	Q ₃ 2,5 fd Q _n 1,5 AT 743 0	Q ₃ 4 fd Q _n 2,5 AT 742 0	Q ₃ 4 fd Q _n 2,5 AT 743 0	Q ₃ 6,3 AT 7420B	Q ₃ 10 AT 7420B	Q ₃ 16 AT 7420B
Connection after coupling	DN 15	DN 15	DN 20	DN 20	DN 20	DN25	DN40
A (Length)	110	110	190	190	260	260	300
B	115	123	143	123	143	178	180
C	22	26	20	26	42	55	57
D	85	92	88	92	104	140	140
Connection, meter	G 3/4"	G 3/4"	G 1"	G 1"	G 11/4"	G 11/ 4"	G 2"
Weight	0,9 5	0,6 5	1,5 8	0,6 8	2,6	5,4	6,2

Dimensions in mm, weight in kg

Function and design

AT 7420B is a water meter with a rotary piston measuring chamber design for cold water with an accuracy of R160. This means that the meter measures extremely thoroughly even at low flows. The design of the rotary piston meter allows mounting of the meter in any position with the exception of the meter body facing downwards. Piston meter AT 7420B doesn't have any after rotation. The meter has a self cleaning function and never goes against plus during its expiration time.

Piston meter AT 7420B is provided with indication display for connection of remote reading modules type Cyble, with M-Bus, wM-Bus and pulse. See separate product sheet AT 7275CY.

Cyble is an inductive AMR-system (Automatic Reading System) for remote reading and transfer of readings from the water meter to the measurement collection system. The Cyble-sensor's rotational frequency is read inductively through a metal fitted dial indicator.

Cyble-sensor can be mounted directly or at a later point, the meter's glass is prepared with attachment points with the help of the accompanying screws.

AT 7430B is made in composite. This means that the meter's manufacturing process is environmentally friendly through, among other things, less energy consumption and lack of heavy metals like lead, zinc and copper. The material in the meter is 100% recyclable and has a high resistance against chlorine and other substances that can be found in drinking water. Composite has the same strength as brass but with a significantly higher elasticity, which make meter bodies in composite absorbing pressure stroke better without taking damage. The material's low weight also makes it easier to store, handle and transport.

Rätten till ändringar utan föregående meddelande förbehålls.
Armatec ansvarar inte för eventuella tryckfel eller misstänksfel.
Dokumentet får kopieras endast i sin helhet.

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Technical information AT 7240/7430A

	Meteorological properties	AT 7420B15-2,5	AT 7420B20-4
		AT 7430B15-2,5/ 7430B20-2,5	
Q ₃	Permanent flow, m ³ /h (meter size)	2,5	4
R	Ratio (Q ₃ /Q ₁) (Standard is R160)	160	160
	Start flow, l/h. The value is for R400.	<1	<2
Q ₁	Minimum flow, l/h (tolerance +- 5%). The value is for R160.	15,6	25
Q ₂	Boundary flow, l/h (tolerance +-2%). The value is for R160.	25	40
Q ₄	Overload flow, m ³ /h	3,1	5,0

The values in the table above are within the meteorological properties that are described in Swedac's regulations for MID 2004/22/EC and EN 14154 (The machine instrument directive)

Technical information AT 7420A

	Meteorological properties	7420B25-6,3	7420B25-10	7420B40-16
Q ₃	Permanent flow, m ³ /h (meter size)	6,3	10	16
R	Ratio (Q ₃ /Q ₁) (Standard is R160)	160	160	160
Q ₁	Minimum flow, l/h (tolerance +- 5%)	39	63	100
Q ₂	Transitional flow, l/h (tolerance +-2%)	63	100	160
Q ₄	Overload flow, m ³ /h	7,9	12,5	20

The values in the table above describes the meteorological properties in Swedac's regulations for MID 2004/22/EC and EN 14154 (Machine Instrument Directive). The gauges characteristic is well within these values.

Largest allowed margin of error according to Swedac's regulations

Flow range	Q ₁ - Q ₂ (Q _{min} - Q _t)	± 5%
	Q ₂ - Q ₄ (Q _n - Q _{max})	± 2%

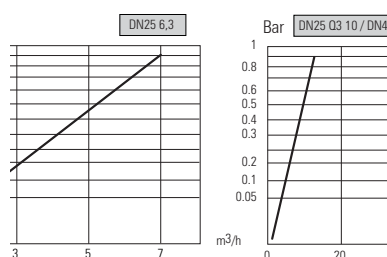
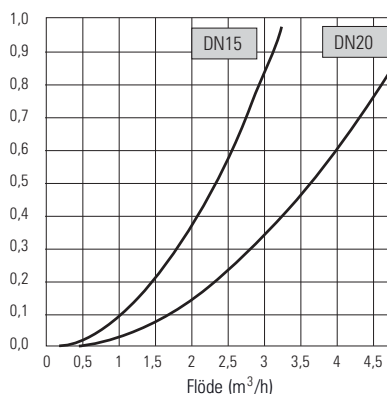
Sizing

The pressure drop in the water meter is not recommended to be higher than 0,5 bar (500 mbar) during permanent flow according to Svenskt Vatten's regulations P100.

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Accessories and options

- Meter body in composite material - AT 7430B.
- Installation accessories, consoles and parallel couplings, see separate product sheet for AT 7358, 7539, 75360.

Remote reading module type Cyble

The meter is provided with an indicator that registers meter readings, flow direction in a remote reading module type Cyble, that can be mounted on the meter glass. The Cyble-module can be ordered with pulse 1/10/100 liter per pulse, wM-Bus or M-Bus.

For more technical information see more in separate product sheet AT 7275CY.

Remote reading module type HRI with pulse output. Pulse type transistor (open collector), polarity dependent	Pulse values (l/puls)*
AT 7275HRI-A4-D1	1
AT 7275HRI-A4-D10 (most common, "standard")	10
AT 7275HRI-A4-D100	100

* When there is need for other pulse values above standard see product sheet for AT 7275HRI.

Remote reading module type HRI med data output for M-Bus and Mini-Bus in combination with the programmable pulse.	Pulse values by delivery* (l/puls)
AT 7275HRI-B4-D1	1

* Pulse values can be reprogrammed through service software MiniCom

Backflow protection

All water meters on incoming line for drinking water should, according to Boverket's building rules BBR and the Swedish standard SS-EN 1717, be provided with back flow protection. The cartridge check valve AT 7059 meets all the demands made on back flow protections and can be mounted in the meter's outlet.

Water meter size	Cartridge check valve including gasket
DN 20	AT 7059A20
DN 25	AT 7059M25
DN 40	AT 7059M40

Installation

The meter can be installed in any position, with the exception of with the meter body facing downwards. To secure the long term operation, the installation should always be performed with a water meter console (see under accessories). Shut-off valves should always be mounted on the console's in and outlet.

The back flow protection after the water meter should be a protection module type EA (controllable check valve) AT 1159 with shut-off valve mounted on the input side, alternatively cartridge check valve AT 7059 should be mounted in the meter's output.

Before the water meter is mounted, it's important to flush the pipeline. Mount the meter with the flow direction arrow in the correct flow direction.

For installation of remote reading module, see product sheet 7275CY.

Maintenance and spare parts

During debitation of household consumption after the meter's registration should SWEDAC's regulations STAFS 2007:2 be followed, which means that recurring

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control (meter revision) with an interval of at most 10 years for Q3 4 and 5 years for Q3 10 and 16. Control and revision is performed by accredited control body.

Marking

The meter is marked Itron Aquadis (AT 7420B) and Aquadis C AT 7430B and provided with a bar code of serial numbers. MID-approved meter is marked with Q3, R-value, manufacturing year, CE and serial number.

How to order

Dimension DN	Meter size	Article number	RSK-number
15	Q ₃ 2,5	AT 7420B15-2,5	5143842
15	Q ₃ 2,5	AT 7430B15-2,5 (composite)	5143847
20	Q ₃ 4	AT 7420A20-4	5143843
20	Q ₃ 4	AT 7430B20-2,5 (composite)	5143848
25	Q ₃ 6,3	AT 7420B25-6,3	5143844
25	Q ₃ 10	AT 7420B25-10	5143845
40	Q ₃ 16	AT 7420B40-16	5143846