

# Cold water meter

Vane

AT 7051

## Internet\_Variants

Dimensionsområde	PN	Temperaturområde	Material
G 3/4 - G 2	16	+ 1 °C to + 50 °C	Brass

## Range of application

Measurement of cold water through a display showing total consumed amount. The water meter is a single-jet meter with accuracy class R160 (H). Prepared for remote reading through separate Cyble sensor with pulse or data port (M-Bus).

## Quality assurance

,MID-certificate, CE-marking

## Material specification

	Component	Material
1	Body	Brass CW167N
2	Top	A.B.S
3	Measure probe	Poly propene
4	Gear	Ferrite



AT 7051

## Program text

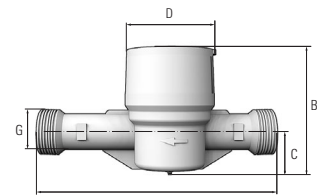
UGE.35 Gauge for flow, pipe mounted with digital visual, accumulated value.

Cold water meter for horizontal mounting AT 7051....., Q3 .... m<sup>3</sup>/h, DN ....., PN 16, prepared for connection of pulse and M-Bus sensor Cyble

## Dimensions and weight

	AT 7051		
Permanent flow rate Q <sub>3</sub> (m <sup>3</sup> /h)	4	6,3	16
Connection after fitting DN	20	25	40
A (build length)	190	260	300
B	123	130	178
C	22,5	39	45
D	92	92	144
Connection, meter G	25	32	50
Total height including. Cyble sensor	165	172	
Weight	1,6	2,3	5,7

Dimensions in mm, weight in kg



AT 7051

## Function and design

The water meter is a dry single-jet meter with accuracy class R160 as a standard. The insert is made out of four units: counter, beaker, vane and sieve mantle. AT 7051 has two main components; the hydraulic that allows measurement of the water flow and the register that displays the measured water volume. Transmission interface between those components is achieved by a magnetic coupling. Equipped with an upstream filter, AT 7051 is protected against impurities accidentally conveyed by water. The magnetic coupling transmission, is accompanied by an extra-dry register. Both gears and register are in a waterproof and air proof enclosure. The turbine is the only moving part of the meter in motion in water.

The meter is provided with a dial indicator for connection of remote reading module Cyble, with pulse or data output (M-Bus or wM-Bus). See separate product sheet AT 7275CY.

Cyble is an inductive AMR-system (Automatic Reading System) for remote reading and transfer of meter data from the water meter to the measurement collection system. The Cyble-sensor's rotational frequency is read inductively through a metal fitted dial indicator. Remote reading of the type Cyble is not affected by any external magnet and therefore has high operational integrity.

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

## Technical information

		DN 20	DN 25	DN 40
$Q_3$	Permanent flow, m <sup>3</sup> /h (meter size)	4	6,3	16
$Q_1$	Minimum flow, l/h	25	39,4	100
$Q_2$	Transitional flow, l/h	40	63	160
$Q_4$	Overload flow, m <sup>3</sup> /h	5,0	7,9	20,0
R	Ratio ( $Q_3/Q_1$ ) (Given value is standard, Other R-values on request)	160	160	160

The table above describes the metrological properties according to Swedacs regulations for MID.

## Sizing

During sizing the pressure loss in the meter can go up to 50 kPa (500 mbar) during probable flow according to Svenskt Vatten's regulations P100.

## Largest allowed margin of error

Flow range	Allowed margin of error
$Q_1 - Q_2$	± 5%
$Q_2 - Q_4$	± 2%

## Accessories and options

### Accessories

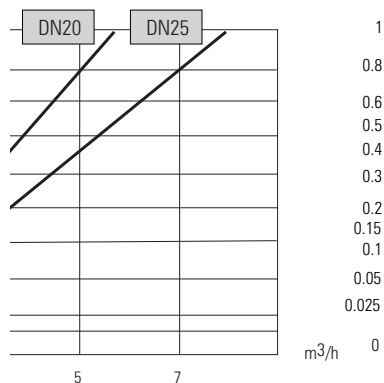
- Installation accessories, consoles and parallel couplings, see product sheet for AT 7358, 7360A and AT 7056A.

### Options

- Remote reading module, see separate product sheet AT 7275CY.
- Meter with its own number series.

## 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.



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## Check valves

Water meter	Art.no (check valve incl. gasket )
Q <sub>3</sub> 4 (DN20)	AT 7059A20
Q <sub>3</sub> 6,3 (DN25)	AT 7059M25
Q <sub>3</sub> 16 (DN40)	AT 7059M40

## Installation

AT 7051 shall be mounted horizontal , but always with the number board upwards with accuracy R160.

To secure the water meter's long term drive, the installation should always be performed with water meter consol (see under accessories). Shut-off valves should always be mounted on the consoles in and output.

The backflow 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 the cartridge check valve AT 7059 can be mounted on the meter's output.

Before the the meter can be mounted, it's important to clean flush the pipeline. Mount the meter with flow direction arrow in the right flow direction.

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

## Maintenance and spare parts

When charging of household consumption using the meter's registreted counter it should be done according to Swedacs regulations STAFS 2007:2, which means that recurring control of (meter revision) with an interval of at max 10 year for Q3 4 and max 5 years for Q3 6,3-16. Control and revision shall be performed by the meter work shop that is accredited controlling body. During this revision the worn out pieces are replaced. Spare parts for this can be found in separate spare parts designation.

## Marking

The cold water meter has a gray plastic cap. The meter board is marked Itron, Flo-dis (DN 20) Flostar (DN 25, DN 40), Q3-value for respective meter size, R-values, manufacturing year, CE series number.

## How to order

AT 7050B (horizontal mounting)			
Q <sub>3</sub>	DN	Art.no	RSK-number
4	20	AT 7051-20-4 (Length 190 mm)	5143849
6,3	25	AT 7051-25-6,3	5143850
16	40	AT 7051-40-16	5143851