

# Cold water meter

Vane

AT 7050B

## Internet\_Variants

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

## Range of application

Measurement of cold water through a display showing total consumed amount. The water meter is a multi-jet meter with accuracy class R80 (previously known as class B). Prepared for remote reading through separate HRI-sensor with pulse, radio or data port (M-Bus or Mini-bus).

## Program text

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

Liquid-immersed cold water meter for horizontal mounting AT 7050B....., Q3 .... m<sup>3</sup>/h, DN ....., PN 16, prepared for connection of pulse, radio and M-Bus sensor like HRI.

Liquid-immersed cold water meter in standpipe performance AT 7053B....., Q3 .... m<sup>3</sup>/h, DN ....., PN 16, prepared for connection of pulse, radio and M-Bus sensors, like HRI.



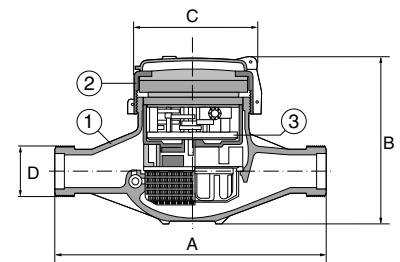
AT 7050B

## Quality assurance

MID-certificate, CE-marking

## Material specification

|   | Component     | Material               |
|---|---------------|------------------------|
| 1 | Body          | Brass GK-Ms 60         |
| 2 | Top           | Brass GK-Ms 60         |
| 3 | Measure probe | Polystyrene            |
| 4 | Axles         | Stainless steel 1.4021 |
| 5 | Bearing stone | Synthetic sapphire     |



AT 7050B

## Dimensions and weight

|  | AT 7050B |     |     |     | AT 7053B |     |     |  |
|--|----------|-----|-----|-----|----------|-----|-----|--|
| Permanent flow rate Q <sub>3</sub> (m <sup>3</sup> /h) | 4        | 4   | 10  | 16  | 4        | 10  | 16  |  |
| Connection after fitting DN                            | 20       | 20  | 25  | 40  | 20       | 25  | 40  |  |
|  | 19       | 22  | 26  | 30  | 10       | 15  | 20  |  |
| A (build length)                                       | 0        | 0   | 0   | 0   | 5        | 0   | 0   |  |
|  | 12       | 11  | 13  | 15  | 11       | 13  | 16  |  |
| B  | 0        | 2   | 5   | 2   | 1        | 1   | 0   |  |
|  |          |     | 10  | 13  |          | 10  | 13  |  |
| C  | 96       | 95  | 3   | 4   | 96       | 3   | 4   |  |
| Connection, meter G                                    | 25       | 25  | 32  | 50  | 25       | 32  | 50  |  |
|  | 15       | 15  | 16  | 18  | 15       | 16  | 18  |  |
|  | 0        | 0   | 5   | 2   | 0        | 5   | 2   |  |
| Total height including. HRI                            |          |     |     |     |          |     |     |  |
| Weight   | 1,6      | 1,7 | 2,3 | 5,0 | 1,6      | 2,7 | 5,4 |  |

Dimensions in mm, weight in kg

## Function and design

The water meter is a Liquid-immersed multi-jet meter with accuracy class R80 as a standard. Liquid-immersed means that the entire meter is water filled. The in-

sert is made out of four units: counter, beaker, vane and sieve mantle. For environmental reasons the meter is delivered unpainted.

The meter has a 5 figure rolling numerals and a 6-toothed indikator pulley and is provided with a dial indicator for connection of remote reading module like HRI, with pulse, radio or data output (M-Bus or Mini-Bus). See separate product sheet AT 7275HRI.

HRI 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 HRI-sensor's rotational frequency is read inductively through a metal fitted dial indicator. Remote reading of the type HRI is not affected by any external magnet and therefore has high operational integrity.

HRI-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. The sensor is also provided with a specially fitted protection cap that is mounted together with the sensor.

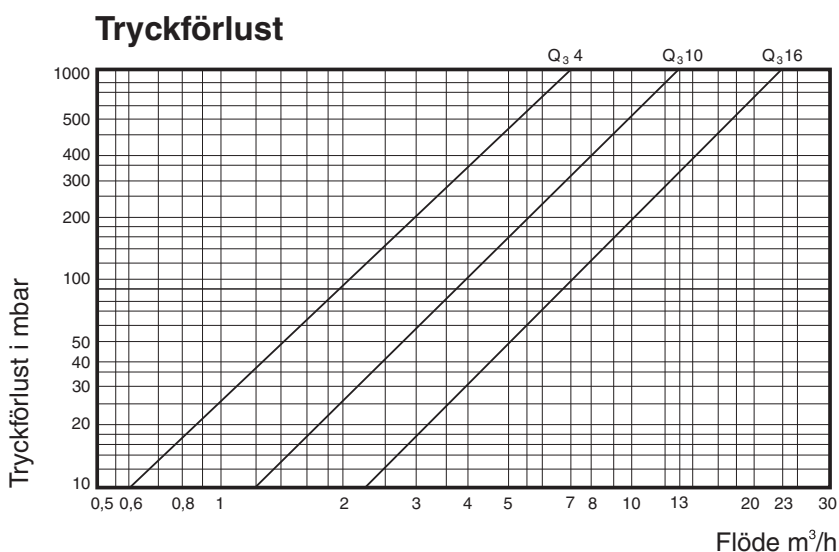
## Technical information

|                |   | DN<br>20 | DN<br>20 | DN<br>25 | DN<br>40 |
|----------------|---|----------|----------|----------|----------|
| Q <sub>3</sub> | Permanent flow, m <sup>3</sup> /h (meter size)  | 2,5      | 4        | 10       | 16       |
| Q <sub>1</sub> | Minimum flow, l/h   | 31,3     | 50       | 125      | 200      |
| Q <sub>2</sub> | Transitional flow, l/h  | 50       | 80       | 200      | 320      |
| Q <sub>4</sub> | Overload flow, m <sup>3</sup> /h  | 3,13     | 5,0      | 12,5     | 20,0     |
| R              | Ratio (Q <sub>3</sub> /Q <sub>1</sub> ) (Given value is standard,<br>Other R-values on request) | 80       | 80       | 80       | 80       |

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

## Sizing

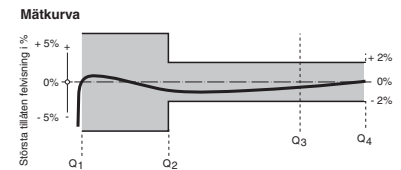
During sizing the pressure loss in the meter can go up to 50 kPa (500 mbar) during probable flow according to Svenskt Vatten's regulations P100.



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

## Largest allowed margin of error

| Largest allowed margin of error |                         |
|---------------------------------|-------------------------|
| Flow range                      | Allowed margin of error |
| Q <sub>1</sub> - Q <sub>2</sub> | ± 5%                    |
| Q <sub>2</sub> - Q <sub>4</sub> | ± 2%                    |



## Accessories and options

### Accessories

- Installation accessories, consoles and parallel couplings, see product sheet for AT 7358, 7359, 7360.

### Options

- Remote reading module, see separate product sheet AT 7275HRI and 7087.
- Meter with different R-values.
- Painted meter body.
- 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.

## Check valves

| Water meter              | Art.no (check valve incl. gasket ) |
|--------------------------|------------------------------------|
| Q <sub>3</sub> 4 (DN20)  | AT 7059A20                         |
| Q <sub>3</sub> 10 (DN25) | AT 7059M25                         |
| Q <sub>3</sub> 16 (DN40) | AT 7059M40                         |

## Installation

AT 7050B can only be mounted on a horizontal line with the number board upwards. AT 7053 can only be mounted on a vertical line with rising flow. 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, see product sheet 7275HRI.

## 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 10-16. 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 SENSUS, 420, 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 |
| 2,5                            | 20 | AT 7050B20-2,5                   |            |
| 4                              | 20 | AT 7050B20-4 (Length 190 mm)     | 518 15 99  |
| 4                              | 20 | AT 7050B20-4-220 (Length 220 mm) | 518 39 36  |
| 10                             | 25 | AT 7050B25-10                    | 518 15 40  |
| 16                             | 40 | AT 7050B40-16                    | 518 15 73  |