



# VVM Multi jet water meter with wet mechanism

*MID certified water meter in accordance with 2014/32/EU  
examination certificate number: TCM 142/12-5000*

***This class of meter is used to measure the volume  
of clean water, temperatures up to  
50°C and pressure up to 16 bars.***

## DESCRIPTION AND PURPOSE

Insa's Multi Jet water meter is produced in accordance with EU Directive 2014/32/EU. A primary characteristic of these meters is the dial mechanism submerged in water. Meters of this type are designed to measure the volume of potable water with temperatures up to 50° C and pressure up to 16 bars.

Our VVM type water meter is of the type: multi jet - water meter with wet mechanism.

The smallest hand on the dial, the "liter wheel", contains a small metal plate that is used to generate pulses in the electronic device for remote readout. This water meter is suitable for remote sensing based on the need for AMR technology, whereby the pulse generator is mounted on the "liter wheel". The dial gauge contains a security hologram with a serial number.

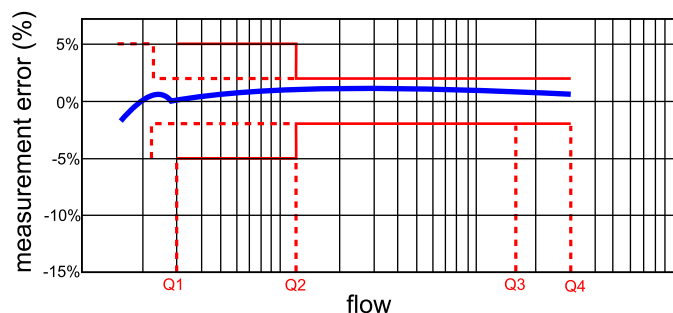
## MECHANISM CHARACTERISTICS

- The mechanism is compatible with currently produced water meters.
- The mechanism housing has a square shaped intake and exit opening. This type of opening provides for much better water flow and causes a more favorable error curve.
- By changing the design and materials used in production of the impeller and mechanism, sensitivity and life of the gauge are significantly increased.
- The dial includes a fifth red hand which enables precise readout of deciliters.

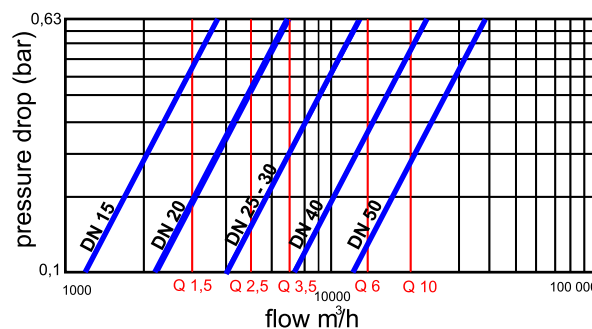
## INSTRUCTIONS FOR INSTALLATION AND USE

- Before installation of the meter, the water supply network should be flushed with water, to remove any debris.
- The filter should be installed at the entrance of the water meter.
- The direction of the arrow on the meter should follow the direction of the water flow through the supply network.
- Water meter should be placed horizontally with the dial facing up.
- Be sure to protect the water meter from freezing. Any use of open flame for warming the water meter is prohibited.

## TYPICAL ERROR CURVE



## TYPICAL PRESSURE DROP CURVE



## METEOROLOGICAL CHARACTERISTICS

Nominal Diameter (DN) mm:	15	20	25	32	40	50
Overload flow rate ( $Q_4$ ) m³/h:	≤ 3.13	≤ 5.0	≤ 7.9	≤ 12.5	≤ 20.0	≤ 31.25
Permanent flow rate ( $Q_3$ ) m³/h:	≤ 2.5	≤ 4.0	≤ 6.3	≤ 10.00	≤ 16.0	≤ 25.0
Transition flow rate ( $Q_2$ ) m³/h:	≥ 0.025	≥ 0.040	≥ 0.063	≥ 0.128	≥ 0.205	≥ 0.320
Minimum flow rate ( $Q_1$ ) m³/h:	≥ 0.016	≥ 0.025	≥ 0.040	≥ 0.080	≥ 0.128	≥ 0.200
Ratio $Q_3 / Q_1$ :	≤ 160	≤ 160	≤ 160	≤ 125	≤ 125	≤ 125
Ratio $Q_2 / Q_1$ :	1.6	1.6	1.6	1.6	1.6	1.6
Ratio $Q_4 / Q_3$ :	1.25	1.25	1.25	1.25	1.25	1.25
Temperature class:	T30 and T50	T30 and T50	T30 and T50	T30 and T50	T30 and T50	T30 and T50
Length (mm):	165	190	260	260	300	300

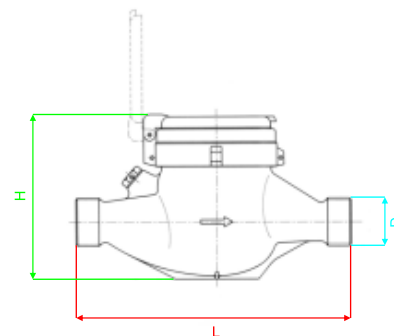
Dimensions								
		mm/ inch	15 1½"	20 3/4"	25 1"	32 5/4"	40 6/4"	50 2"
Lenght	L	mm	165	190	260	260	300	300
Height	H	mm	115	120	130	130	160	121
Thread diameter	D	inch	3/4"	1"	5/4"	6/4"	2"	3/4"
Weight		kg	1,75	2,00	2,70	2,70	6,20	1,80

## REMOTE READOUT SYSTEM



### AMR OPTIONS

The VVM3 series of water meters are ready to be upgraded for remote readout. Upgrade consists of replacement of the "deciliter" hand and replacing the old glass with a new one. The new glass contains two fixing points for ADO devices.



\* compatible AMR devices are ADO RF868, ADO M-Bus, ADO wM-Bus

## A.D. INSA - MANUFACTURER OF MEASUREMENT INSTRUMENTS

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