



CERTIFIKÁT EÚ SKÚŠKY TYPU

EU – type examination certificate

Číslo dokumentu:
Document number:

SK 14-MI001-SMU036
Revízia 6 nahrádza certifikát zo dňa 9. október 2020
Revision 6 replaces the certificate issued by October 9, 2020

Revízia 6
Revision 6

V súlade s:
In accordance with:

prílohou č. 2, Modul B nariadenia vlády Slovenskej republiky č. 145/2016 Z. z. o sprístupňovaní meradiel na trhu v znení nariadenia vlády SR č. 328/2019 Z. z., ktorým sa preberá smernica Európskeho parlamentu a Rady 2014/32/EU o harmonizácii právnych predpisov členských štátov týkajúcich sa sprístupnenia meradiel na trhu
Annex II, Module B to Government Ordinance of the Slovak Republic No. 145/2016 Coll. relating to the making available on the market of measuring instruments as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll., which implemented the Directive 2014/32/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments

Žiadateľ/Výrobca:
Issued to (Manufacturer):

BMETERS s.r.l.
Via Friuli 3, 33050, Gonars (UD), Italy

Druh meradla:
Type of instrument:

Vodomer (MI-001)
Water meter (MI-001)

Označenie typu:
Type designation:

GMDM

Základné požiadavky:
Essential requirements:

príloha č. 1 a príloha č. 3 Vodomery (MI-001) k nariadeniu vlády SR č. 145/2016 Z. z. v znení nariadenia vlády SR č. 328/2019 Z. z.
Annex No. I and Annex No. III Water meters (MI-001) to Government Ordinance of the Slovak Republic No. 145/2016 Coll. as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll.

Platnosť do:
Valid until:

2. júna 2024
June 2, 2024

Notifikovaná osoba:
Notified body:

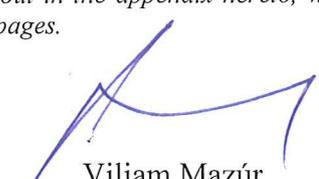
Slovenský metrologický ústav 1781
Slovak Institute of Metrology 1781

Dátum vydania:
Date of issue:

3. december 2021
December 3, 2021

Základné charakteristiky, popis meradla a podmienky schválenia sú uvedené v prílohe, ktorá je súčasťou tohto certifikátu. Certifikát vrátane prílohy má spolu 14 strán.
Essential characteristics, instrument description and approval conditions are set out in the appendix hereto, which forms the part of the certificate. The certificate including the appendix contains 14 pages.




Viliam Mazúr
zastupca notifikovanej osoby
representative of notified body

History of the Certificate

| Issue of the Certificate | Date | Modification |
|--------------------------------|-------------------|--|
| SK 14-MI001-SMU036, Revision 0 | June 3, 2014 | Initial certificate |
| SK 14-MI001-SMU036, Revision 1 | June 9, 2015 | Add vertical body |
| SK 14-MI001-SMU036, Revision 2 | March 3, 2016 | New plastic ring |
| SK 14-MI001-SMU036, Revision 3 | November 16, 2017 | Change material for the turbine, Add vertical position, Add new test according EN ISO 4064 |
| SK 14-MI001-SMU036, Revision 4 | December 13, 2019 | New brass body DN15, Q_3 2,5 L=110 , DN20 Q_3 4,0 L=160 and plastic body DN15 and DN20 |
| SK 14-MI001-SMU036, Revision 5 | October 9, 2020 | Removal of temperature class, minor corrections |
| SK 14-MI001-SMU036, Revision 6 | December 3, 2021 | Plastic body with brass insert DN15 and DN20 |

1 Instructions and standards used within assessment

1.1 Generally binding instructions

Meter type was examined in terms of request for given type provisions Government Ordinance of the Slovak Republic No. 145/2016 Coll. relating to the making available on the market of measuring instruments as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll., which implemented the Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments as later amended (next Government Ordinance).

Requirements are set out in Annex No. 1 and Annex No. 3 Water Meters (MI-001) to Government Ordinance of SR No. 145/2016 Coll. as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll..

1.2 Harmonized standards and normative documents used

| | |
|-------------------------|---|
| OIML R 49-1:2006 | Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements |
| OIML R 49-2:2004 | Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods |
| EN 14154-1:2005+A2:2011 | Water meters - Part 1: General requirements |
| EN 14154-2:2005+A2:2011 | Water meters - Part 2: Installation and conditions of use |
| EN 14154-3:2005+A2:2011 | Water meters - Part 3: Test methods and equipment |



1.3 Other instructions used:

| | |
|---------------------|---|
| OIML R 49-1:2013 | Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements |
| OIML R 49-2:2013 | Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods |
| OIML R 49-3:2013 | Water meters intended for the metering of cold potable water and hot water. Part 3: Test report format |
| EN ISO 4064-1: 2017 | Water meters for cold potable water and hot water. Part 1: Metrological and technical requirements |
| EN ISO 4064-2: 2017 | Water meters for cold potable water and hot water. Part 2: Test methods |
| EN ISO 4064-3: 2017 | Water meters for cold potable water and hot water. Part 3: Test report format |
| EN ISO 4064-5: 2017 | Water meters for cold potable water and hot water. Part 5: Installation requirements |

2 Type marking
Multi-Jet magnetic water meter – GMDM

Meter is made in following subgroups:

| Type of meter | Temperature class | Class | Nominal Diameter |
|---------------|-----------------------|------------------|------------------------------------|
| GMDM | T30, T50, T70, T30/90 | M1 ¹⁾ | DN15, DN20, DN25, DN32, DN40, DN50 |

3 Description of measuring instrument
Meter name: Multi-Jet magnetic water meter

Type marking: GMDM

Description of operating principle instrument design:

Multi-Jet magnetic vane-wheel water meter with sealed dry magnetic register and permanent flowrate of 2,5 m³/h, 4 m³/h, 6,3 m³/h, 10 m³/h, 16 m³/h and 25 m³/h have been designed to measure actual volume of clean cold potable water and hot water flowing in a completely filled up closed pipeline. The water meter is composed of a body, of the measuring mechanism and the counter. Water flowing through a meter sets the vane-wheel in a rotary motion that is transferred by magnetic coupling to the counting mechanism.

The meter is mainly composed of the body group and measuring unit group.

The body group consists of the body, the cap, the lid, adjusting device and the inlet strainer. The glass or plastic cover can protect the register against the external damages, and the lid provides the further protection to the register. The adjusting device built in the body is used to calibrate the meter.

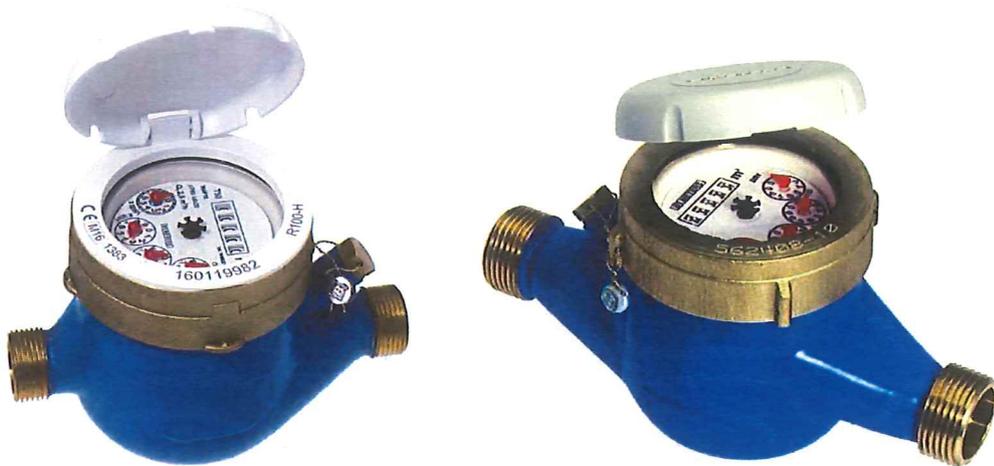
The body of the water meter is a brass and cast iron (from DN15 to DN50) or plastic (from DN15 to DN20) with inlet and outlet screw parts (for DN 50 could be body with flange). The plastic body can have brass or plastic inlet and outlet screw.



¹ according to Government Ordinance of the Slovak Republic, Annex No. 1

Water meters have been fitted for mounting on pipelines in horizontal positions or in pipeline in vertical position depends on the indications on the dial and the water meter body. Accidental occurrence of a reverse flow does not affect metrological characteristics provided for a normal flow.

Water meter can be equipped with external devices that can read the volume by magnetic, inductive, optical sensors or reed contact which were not part of this certification. The water meter can be pre-equipped for further installation of such devices. Each of these devices they have no influence on metrology of water meter.



Picture No. 1 GMDM cold water standard version



Picture No. 2 GMDM cold water with inductive disc pre-equipped for external devices



Picture No. 3 GMDM cold water with optical pointer pre-equipped for external devices



Picture No. 4 GMDM with magnetic pointer pre-equipped for reed contact sensor



Picture No. 5 GMDM with plastic body





Picture No. 6 GMDM with plastic body with inductive disc



Picture No. 7 GMDM with plastic body with inlet and outlet brass screw



Picture No. 8 GMDM with inductive disc and plastic body with inlet and outlet brass screw



3.1 Description of subgroups

| | |
|--------------------|--|
| Marking: | GMDM |
| Size: | DN 15, DN 20, DN 25, DN 32, DN 40, DN 50 |
| Temperature class: | T30, T50, T70, T90, T30/90 |

The GMDM meter can be equipped by following devices:

- Reed contact impulse emitter
- Radio, pulse output or M-BUS device reading by optical sensor
- Radio, pulse output or M-BUS device reading by inductive sensor

Each of these devices was not part of this certification.



3.2 Measuring insert

The measuring unit group consists of the sealed register, the measuring chamber and the vane wheel assembly. It is a key group for the accuracy performance of the meter. The magnetic disc on the top of vane wheel shaft transmits the movement of the turbine to the clockwork and register. The calibration of the water meter can be done by adjusting the regulation screw.

3.3 Indicating device

The capacity of the counter is 99 999 m³ (for sizes DN15, DN20, DN25 and DN32) and 999 999 m³ (for sizes DN40 and DN50), minimum resolution of the reading is 0,05 dm³.

The counter design does not allow for resetting of meter indications.

Counter pointers rotate clockwise. Indicated digital values increase as the drums with digits marked on them move upwards. An indication increase by one digit is complete when a digit in a lower decade change from 9 to 0. In a decade of the lowest values digital indications change continuously. Black digits marked on digital drums or black pointers indicate cubic meters or their multiples whereas red digits or pointers indicate submultiples of cubic meters.

The pointers move round scales marked with proper multipliers and placed on an indicating dial.

The pointers can have:

- Half-moon metallic disc for reading with inductive external device
- Magnetic pointer for reading with reed contact impulse emitter
- Transparent-black pointer with red arrow for reading with optical device

3.4 Principle of operation

The potable water enters the meter from the inlet of the meter and distributed by the lower orifices that equally spaced on the circumference of the measuring chamber, the Multi-Jet distributed strike the vane wheel at the tip of the vane blades to make it rotation, the measured water by the vane wheel flows out from the top orifices on the measuring chamber. The rotation of the vane wheel (proportional to the velocity of water flow) is transmitted directly to the sealed register, the register totalizes the rotation of the vane wheel and indicates the water volume passing through the meter. The water meter is dedicated to measure the flow and the delivered water quantity.

3.5 Technical documentation

A number of drawings of technical documentation are listed in the following tables:

| Drawing No. | Description |
|-----------------|---|
| 2.1.DM.13 rev.1 | SECTION VIEW DN 15-32 |
| 2.5.DM.2 rev.1 | SECTION VIEW DN 40-50 |
| 2.6.DM.3 rev.1 | SECTION VIEW DN50 FLANGE |
| 2.1.DM.14 rev.1 | TOTALISIM MECHANISM DN 15-32 |
| 2.5.DM.4 | TOTALISIM MECHANISM DN40-50 |
| T.MM.6 | DIALS GMDM |
| 2.4.DM.8 | DISPLAY FOR RADIO OR MBUS DN 40-50 |
| 2.1.DM.8 rev.1 | RADIO OR MBUS OPTICAL |
| 2.1.DM.9 rev.1 | RADIO OR MBUS INDUCTIVE |
| 2.0.DM.10 | PULSE OUTPUT |
| 2.0.DM.11 | ANTIFRAUD PROTECTION |
| 2.0.DM.12 | GMDM VERTICAL BODY |
| 2.0.DM.13 | ROTATABLE PLASTIC RING |
| 2.1.DM.14 | GMDM with plastic body |
| 2.1.DM.15 | GMDM with plastic body and inlet and outlet brass screw |



| Drawing No. | | | | | |
|-------------|--------------|-------------|-------------|-------------|-------------|
| 1.1.01.04.0 | 1.5.01.01.9 | 2.1.10.01.9 | 2.2.34.02.9 | 2.5.09.03.9 | 3.5.03.01.9 |
| 1.1.01.04.9 | 1.5.21.05.0 | 2.1.11.01.9 | 2.3.02.02.9 | 2.5.09.04.9 | 3.5.14.01.9 |
| 1.1.01.05.9 | 1.5.21.05.9 | 2.1.11.08.7 | 2.3.04.03.7 | 2.5.09.05.9 | 4.1.18.06.9 |
| 1.1.01.06.9 | 1.5.36.01.9 | 2.1.12.05.9 | 2.3.09.01.9 | 2.5.09.06.9 | 4.1.18.07.9 |
| 1.1.01.07.0 | 1.6.01.01.0 | 2.1.12.06.9 | 2.3.09.02.9 | 2.5.09.07.9 | 4.1.18.25.9 |
| 1.1.01.07.9 | 1.6.01.01.9 | 2.1.13.03.9 | 2.3.18.01.9 | 2.5.09.08.9 | 4.5.18.02.9 |
| 1.1.01.10.0 | 1.6.01.02.0 | 2.1.15.06.9 | 2.3.30.02.7 | 2.5.09.09.9 | 4.5.18.03.9 |
| 1.1.01.10.9 | 10.6.01.02.9 | 2.1.15.16.9 | 2.3.33.03.9 | 2.5.11.01.7 | 5.1.20.02.9 |
| 1.1.21.05.0 | 2.1.02.04.9 | 2.1.18.09.9 | 2.3.34.02.9 | 2.5.12.01.9 | 5.5.20.01.9 |
| 1.1.21.05.9 | 2.1.04.17.7 | 2.1.30.05.9 | 2.3.37.01.9 | 2.5.13.01.9 | 7.1.25.03.9 |
| 1.1.36.01.9 | 2.1.05.03.0 | 2.1.30.07.7 | 2.4.02.01.9 | 2.5.15.01.9 | 7.1.25.04.9 |
| 1.2.01.03.0 | 2.1.06.01.9 | 2.1.33.06.9 | 2.4.02.02.9 | 2.5.15.02.9 | 7.1.38.02.9 |
| 1.2.01.03.9 | 2.1.07.03.9 | 2.1.34.03.9 | 2.4.34.01.9 | 2.5.22.03.9 | 7.1.38.13.9 |
| 1.2.01.20.0 | 2.1.09.01.9 | 2.1.37.01.9 | 2.5.04.01.7 | 2.5.30.01.7 | 7.5.38.01.9 |
| 1.2.01.20.9 | 2.1.09.03.9 | 2.1.44.02.9 | 2.5.05.01.9 | 2.5.33.02.9 | 7.5.38.02.9 |
| 1.3.01.01.0 | 2.1.09.04.9 | 2.2.02.02.9 | 2.5.05.02.9 | 2.5.34.01.9 | 8.1.29.02.9 |
| 1.3.01.01.9 | 2.1.09.05.9 | 2.2.09.01.9 | 2.5.06.01.9 | 2.5.44.01.9 | 8.1.29.03.9 |

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 1.3.36.01.9 | 2.1.09.06.9 | 2.2.09.05.9 | 2.5.07.01.9 | 3.1.14.01.9 | 8.5.29.01.9 |
| 1.4.01.01.9 | 2.1.09.07.9 | 2.2.09.13.9 | 2.5.09.01.9 | 3.3.03.02.9 | 9.3.18.01.9 |
| 1.5.01.01.0 | 2.1.09.08.9 | 2.2.09.14.9 | 2.5.09.02.9 | 3.3.03.03.9 | 1.2.01.22.9 |
| 1.1.21.37.9 | 2.1.22.45.9 | 2.1.22.46.9 | 2.1.22.47.9 | 1.1.21.36.9 | 2.1.15.18.9 |
| 2.1.28.30.9 | 2.5.28.02.9 | 2.1.04.15.7 | 2.1.01.56.9 | 2.1.01.57.9 | 2.1.21.42.9 |
| 2.1.22.55.9 | 2.1.36.05.9 | 2.2.01.31.9 | 1.1.01.56.9 | 1.2.01.20.9 | 2.1.01.56.9 |
| 2.1.21.42.9 | 2.2.01.31.9 | | | | |

All drawings, schemes and technical documentations used during the conformity assessment are saved in document No. NO-262/14, NO-284/14, NO-315/15, NO-357/17, NO-420/19, NO-470/20 and NO-525/21.

4 Basic technical characteristics

| Type marking | | GMDM | | | | | |
|--------------------------------------|----------------|---|----|----|-----------------|----|----|
| Nominal diameter DN | mm | 15 | 20 | 25 | 32 | 40 | 50 |
| Indicating range | m ³ | 10 ⁵ | | | 10 ⁶ | | |
| Resolution of the reading | m ³ | 0,00005 | | | | | |
| Maximum admissible pressure | - | MAP 16 | | | | | |
| Working pressure range | bar | from 0,3 to 16 | | | | | |
| Pressure loss | - | Δp 63 | | | | | |
| Temperature class | - | T30 ²⁾ , T50 ²⁾ , T70 ³⁾ , T90 ³⁾ , T30/90 ³⁾ | | | | | |
| Flow profile sensitivity classes | - | U0, D0 | | | | | |
| Mounting ⁴⁾ : | - | Flow axis in the horizontal plane Flow axis in the vertical plane | | | | | |
| Orientation ⁴⁾ : | - | Horizontal with indicating device position on the top (H↑) Horizontal with indicating device position at the side (H→) Vertical from bottom to top and from top to bottom | | | | | |
| Climatic and mechanical environments | - | closed spaces /from 5°C to 55°C/mech. class M1 | | | | | |

²⁾ The plastic body can be used only with these temperatures

³⁾ The hot water version has different material that support high temperatures

⁴⁾ Depends on marking on the dial



4.1 Additional technical characteristics

| | |
|--------|------------------------|
| Weight | from 0,6 kg to 7,25 kg |
|--------|------------------------|

5 Basic metrological characteristics

The maximum permissible error (accuracy class):

$$\pm 5 \% (Q_1 \leq Q < Q_2)$$

$$\pm 2 \% (Q_2 \leq Q \leq Q_4) \text{ for water temperature (from 0,1 to 30) } ^\circ\text{C}$$

$$\pm 3 \% (Q_2 \leq Q \leq Q_4) \text{ for water temperature greater than 30 } ^\circ\text{C}$$



| Water temperature: T30, T50 | | | | | | | | | |
|-----------------------------|-----------|-------------------|-------------------------------------|---------------------|-------------------|---------------------|--------------------|--------------------|--------------------|
| Size | DN | mm | Position | 15 | 20 | 25 | 32 | 40 | 50 |
| Overload flowrate | Q_4 | m ³ /h | | ≤ 3,125 | ≤ 5 | ≤ 7,875 | ≤ 12,5 | ≤ 20 | ≤ 31,25 |
| Permanent flowrate | Q_3 | m ³ /h | | ≤ 2,5 ⁵⁾ | ≤ 4 ⁴⁾ | ≤ 6,3 ⁴⁾ | ≤ 10 ⁴⁾ | ≤ 16 ⁴⁾ | ≤ 25 ⁴⁾ |
| Transitional flowrate | Q_2 | m ³ /h | H↑ ⁶⁾ | ≥ 0,025 | ≥ 0,04 | ≥ 0,063 | ≥ 0,1 | ≥ 0,16 | ≥ 0,25 |
| Minimum flowrate | Q_1 | m ³ /h | | ≥ 0,01563 | ≥ 0,025 | ≥ 0,03938 | ≥ 0,0625 | ≥ 0,1 | ≥ 0,15625 |
| Measuring range R | Q_3/Q_1 | - | | ≤ 160 ⁷⁾ | | | | | |
| Transitional flowrate | Q_2 | m ³ /h | H→ ⁷⁾ V ⁷⁾ | ≥ 0,08 | ≥ 0,128 | ≥ 0,2016 | ≥ 0,032 | ≥ 0,512 | ≥ 0,8 |
| Minimum flowrate | Q_1 | m ³ /h | | ≥ 0,05 | ≥ 0,08 | ≥ 0,126 | ≥ 0,200 | ≥ 0,320 | ≥ 0,5 |
| Measuring range R | Q_3/Q_1 | - | | ≤ 50 ⁶⁾ | | | | | |

| Water temperature: T30, T50, T70, T90, T30/90 | | | | | | | | | |
|---|-----------|-------------------|-------------------------------------|---------------------|-------------------|---------------------|--------------------|--------------------|--------------------|
| Size | DN | mm | Position | 15 | 20 | 25 | 32 | 40 | 50 |
| Overload flowrate | Q_4 | m ³ /h | | ≤ 3,125 | ≤ 5 | ≤ 7,875 | ≤ 12,5 | ≤ 20 | ≤ 31,25 |
| Permanent flowrate | Q_3 | m ³ /h | | ≤ 2,5 ⁴⁾ | ≤ 4 ⁴⁾ | ≤ 6,3 ⁴⁾ | ≤ 10 ⁴⁾ | ≤ 16 ⁴⁾ | ≤ 25 ⁴⁾ |
| Transitional flowrate | Q_2 | m ³ /h | H↑ ⁵⁾ | ≥ 0,04 | ≥ 0,064 | ≥ 0,1008 | ≥ 0,16 | ≥ 0,256 | ≥ 0,4 |
| Minimum flowrate | Q_1 | m ³ /h | | ≥ 0,025 | ≥ 0,04 | ≥ 0,063 | ≥ 0,1 | ≥ 0,16 | ≥ 0,25 |
| Measuring range R | Q_3/Q_1 | - | | ≤ 100 ⁶⁾ | | | | | |
| Transitional flowrate | Q_2 | m ³ /h | H→ ⁸⁾ V ⁷⁾ | ≥ 0,08 | ≥ 0,128 | ≥ 0,2016 | ≥ 0,032 | ≥ 0,512 | ≥ 0,8 |
| Minimum flowrate | Q_1 | m ³ /h | | ≥ 0,05 | ≥ 0,08 | ≥ 0,126 | ≥ 0,200 | ≥ 0,320 | ≥ 0,5 |
| Measuring range R | Q_3/Q_1 | - | | ≤ 50 ⁶⁾ | | | | | |

⁵⁾ The value of Q_3 shall be chosen from the R5 line of ISO 3:1973

⁶⁾ The water meter with vertical body can mounted only in V↑ position and have the same performances of the H↑ position of the horizontal body

⁷⁾ The ratio Q_3/Q_1 shall be chosen from the R10 line from ISO 3:1973 and this value shall be higher than 40

⁸⁾ Vertical position and horizontal with indicating device position at the side only for water meters with polypropylene turbine version. Turbine with POM material only horizontal position and indicating device position on the top

6 Results of conformity assessment

The results of tests, assessments and evaluations given in the evaluation report No. NO-525/21/B/ER dated December 2, 2021 give sufficient evidence, that the technical design of the measuring instrument – Multi-Jet magnetic water meter type GMDM is in compliance with the technical requirements of the Slovak Republic Governmental Ordinance No. 145/2016 Coll. relating to the making available on the market of measuring instruments as amended by Government Ordinance of the Slovak Republic No. 328/2019 Coll., Annex No. 1 and Annex No. 3 Water Meters (MI-001) and the EN 14154-1:2005+A2:2011, EN 14154-2:2005+A2:2011, EN 14154-3:2005+A2:2011 and OIML R49-1:2006, OIML R49-2:2004 (harmonised standards and normative documents) and other instructions EN ISO 4064-1:2017, EN ISO 4064-2:2017 and EN ISO 4064-3:2014 standards, which are relevant for this type of meter.

7 Data placed on the measuring instrument

On the shroud, the dial of the indicating device or on an identification plate of every water meter or in the product documentation minimum the following data should be marked:

- a) producer's name, registered trade name or registered trade mark and contact postal address at which they can be contacted
- b) type of the Multi-Jet meter
- c) measuring unit (m^3)
- d) numerical value of Q_3 and ratio Q_3/Q_1
- e) year of production and production serial number (the two last digits of the year are the first two digits of serial number, for example 1912345678 = product year 2019)
- f) number of EU-type examination certificate and conformity mark
- g) the highest admissible pressure if it differs from 1 MPa
- h) flow direction
- i) letter H \uparrow (Horizontal with indicating device position on the top) H \rightarrow (Horizontal with indicating device position at the side), V (Vertical from bottom to top and from top to bottom) V \uparrow (Vertical from bottom to top) V \downarrow (Vertical from top to bottom)
- j) class of pressure loss if it differs from Δp_{63}
- k) flow profile sensitivity classes where it differs from U0 - D0
- l) the temperature class where it differs from T30

8 Conditions of conformity assessment of measuring instruments produced with type approval

Multi-Jet magnetic water meter put onto the market in line with the procedure of conformity assessment according to the Annex No.2 (Module D or F) of the Governmental ordinance should be in compliance with the technical description by the item 3 of this report and at test should be in compliance with the requirements determined in OIML R 49-1:2013 and EN ISO 4064-1:2017. Metrological test is performed by testing equipment which should be in compliance with the requirements determined in STN EN 14154-3:2005+A2 and EN ISO 4064-2:2017 and water at temperature $20\text{ }^\circ\text{C} \pm 5\text{ }^\circ\text{C}$ (for temperature class T30, T50, T70, T90) and $50\text{ }^\circ\text{C} \pm 5\text{ }^\circ\text{C}$ (for temperature class T70, T90, T30/90) at the following flowrates:

- a) Minimum flowrate $Q_1 \leq Q \leq 1,1Q_1$
- b) Transitional flowrate $Q_2 \leq Q \leq 1,1Q_2$



c) Permanent flowrate $0,9Q_3 \leq Q \leq Q_3$

A metrological test may only be performed by a producer, or a notified body respectively in line with the conformity assessment procedure according to the Annex No.2 (Module D or F) of the Governmental ordinance respectively.

9 Measures asked for providing measuring instrument integrity

9.1 Identification

The Multi-Jet magnetic meter should be in compliance with the description provided on item 3 of this Annex and should be in compliance with the marking specified the item 7 of this Annex.

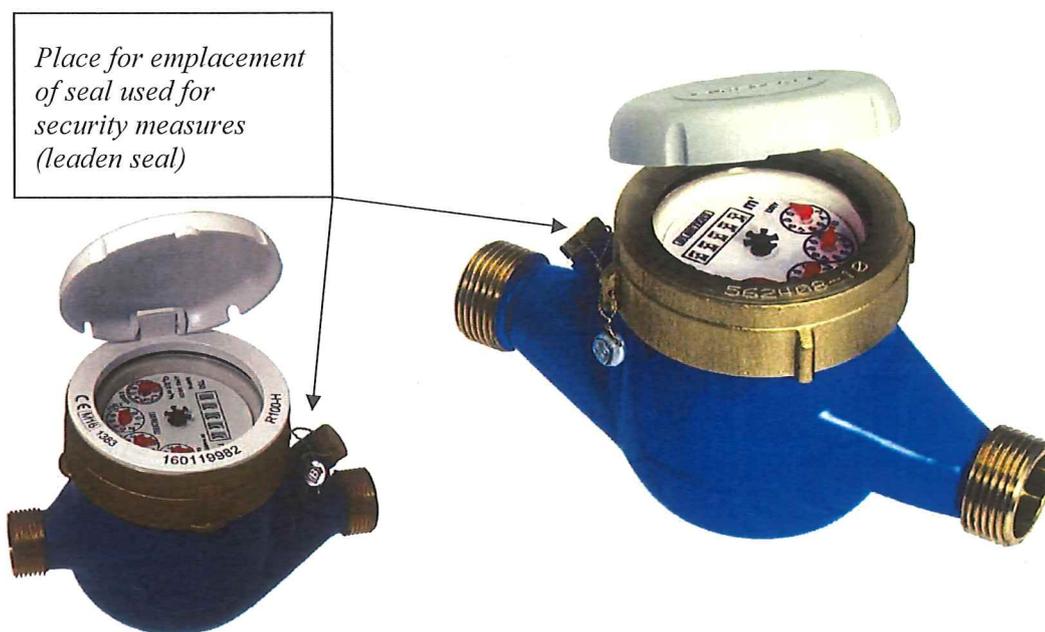
The number given to the EU-type examination certificate is put at each piece of the measuring instrument.

Emplacement of the conformity mark is determined by § 15 of the Governmental ordinance.

9.2 Sealing of the measuring instrument

The Multi-Jet magnetic water meter shall be sealed before the conformity assessment according to the Annex No.2 (Module D or F) of the Governmental ordinance sealed by following sealing marks.

Connection of counter shroud and water meter body shall be sealed by seal used for security measures (leaden seal) (Picture No. 9)

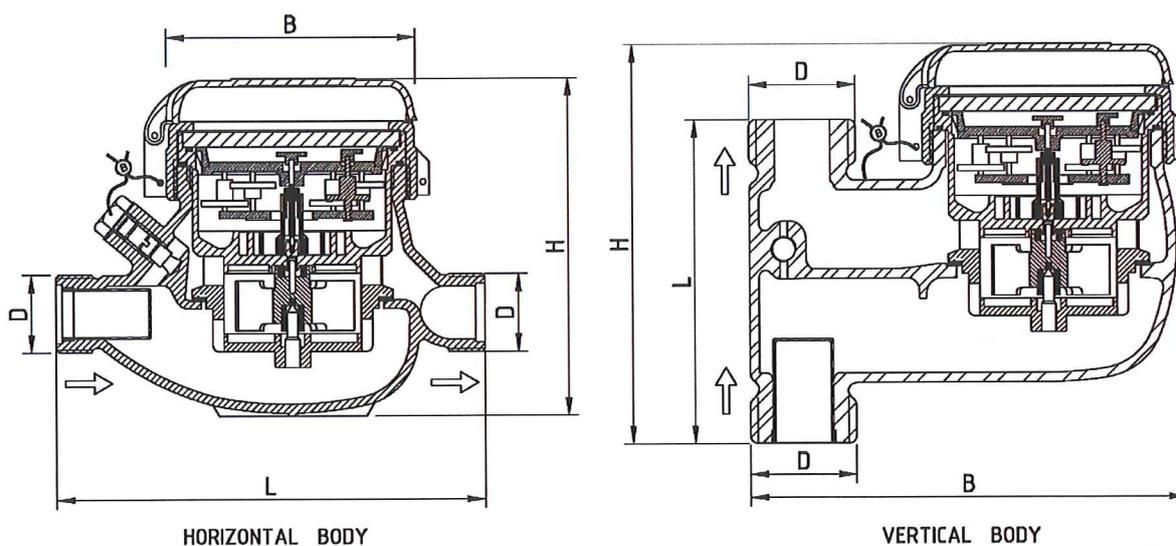


Picture No.9 Emplacement of the seal for security measures

10 Requirements for installation, especially conditions of usage
10.1 Installation data

| Horizontal body | | | | | | | |
|-------------------------------------|--------|-----------------|-----------------|--------|--------|--------|------------------|
| Nominal size | [mm] | 15 | 20 | 25 | 32 | 40 | 50 |
| | [inch] | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
| Construction length [mm] - <i>L</i> | | from 110 to 190 | from 160 to 190 | 260 | 260 | 300 | 300 |
| Width [mm] - <i>B</i> | | 85 | 85 | 85 | 85 | 112 | 112 |
| High [mm] - <i>H</i> | | 115 | 115 | 120 | 120 | 155 | 167 |
| Connection - <i>D</i> | | 3/4" or 1" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" or flange |
| Weight (brass body) [kg] | | 1,35 | 1,45 | 2,04 | 2,11 | 4,58 | 7,25 |
| Weight (plastic body) [kg] | | 0,6 | 0,63 | | | | |

| Vertical body | | |
|-------------------------------------|--------|--------------|
| Nominal size | [mm] | 15 or 20 |
| | [inch] | 1/2" or 3/4" |
| Construction length [mm] - <i>L</i> | | 105 |
| Width [mm] - <i>B</i> | | 147 |
| High [mm] - <i>H</i> | | 135 |
| Connection - <i>D</i> | | 3/4" or 1" |
| Weight [kg] | | 1,45 |



Picture No.10 Installation dimensions

10.2 Installation requirements

A Multi-Jet magnetic water meter is introduced into the operation by a worker having a certificate for this activity performance. The Multi-Jet magnetic meter is possible to be put into use after a construction in line with this report and in line with a producer instruction by “Instruction of installation and conditions of use of water meters”. A measuring instrument should be installed in direction of water flow arrow marked on the meter body.

The indicating device should be oriented in the position indicating on the dial

- H↑ Mean flow horizontal and the indicating device position on the top
- H→ Mean flow horizontal the indicating device position on the side
- V Mean flow vertical from bottom to top and from top to bottom
- V↑ Mean flow vertical from bottom to top
- V↓ Mean flow vertical from top to bottom

10.3 Conditions of use

Within using the measuring instrument, it is needed to be managed by recommendations of a producer by “Instruction of installation and conditions of use of water meters”.

Assessment done by:  Ing. Viliam Mazúr

