

ES TIPĀ PĀRBAUDES SERTIFIKĀTS

EU TYPE EXAMINATION CERTIFICATE

Nr. VM23-02 MI-001 versija 0
No. VM23-02 MI-001 revision 0

Izdevējs Issued by	SIA „V&V VentMet laboratorija” Kuldīgas iela 127, Ventspils, LV-3601, Latvija „V&V VentMet laboratory” Ltd. Kuldīgas street 127, Ventspils, LV-3601, Latvia
Ražotājs Manufacturer	ŞENSOYLAR Klape Tesisat Malzeme San. ve Tic. Ltd. Şti. Bakırcılar ve Prinççiler Sanayi Sitesi Menekşe Cad. No.13 Beylikdüzü, ISTANBUL, TURKEY
Ražotnes adrese Address of factory	Bakırcılar ve Prinççiler Sanayi Sitesi Menekşe Cad. No.13 Beylikdüzü, ISTANBUL, TURKEY
Attiecībā uz In respect of	Daudzstrūklū, sausā tipa, mehāniskais aukstā ūdens patēriņa skaitītājs Multi-jet, dry dial, mechanical cold water meter NUR-15, NUR-20, trademark Türkoğlu
Saskaņā ar In accordance with	LR Ministru kabineta noteikumiem Nr.212 no 12.04.2016, kas transponē Eiropas Parlamenta un Padomes direktīvu 2014/32/ES no 2014.gada 26.februāra par dalībvalstu tiesību aktu saskaņošanu attiecībā uz mērinstrumentu pieejamību tirgū Latvijā. Cabinet Regulation of the Republic of Latvia No.212 dated 12.04.2016, transposing in the Republic of Latvia 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.
Piemērojamās būtiskās prasības Applicable essential requirements	Direktīvas 2014/32/ES Pielikums I & Pielikums III (MI-001) Annex I & Annex III (MI-001) of the directive 2014/32/EU

Derīgs līdz 25.10.2033.
Valid until

Galvenie raksturliešumi, apstiprināšanas nosacījumi ir izklāstīti pievienotajā pielikumā, kas ir daļa no apstiprināšanas dokumentiem, un sastāv no 8 lapām. Visi plāni, shematiskās diagrammas un dokumentācija ir reģistrēta lietā TEHD_TP-U22-1.

The principal characteristics, approval conditions are set out in the appendix hereto, which forms part of the approval documents and consists of 8 pages. All the plans, schematic diagrams and documentations are recorded under reference file TEHD_TP-U22-1.

Izsniegts 25.10.2023.
Issued on

Piezīme: ES tipa pārbaudes sertifikāts nav derīgs bez paraksta un zīmoga. Sertifikātu aizliegts pavairot nepilnā apjomā bez SIA "V&V VentMet laboratorija" rakstiskas atļaujas.

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(Jānis Landsbergs)

Pārbaudīja un apstiprināja:
Certificate approved by:

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History of the Certificate

Issue of the Certificate	Date	Modifications
VM23-02 MI-001 revision 0	25.10.2023	Type examination certificate first issued

Conclusions of the examination

For the measuring instrument mentioned in this Certificate, the following essential requirements of Directive 2014/32/EU apply:

- Annex I "Essential Requirements"
- Annex III (MI-001) "Water meters"

For the measuring instrument, the following standards and normative documents apply:

- EN ISO 4064-1:2017; EN ISO 4064-2:2017; EN ISO 4064-5:2017,
- OIML R 49-1:2013, OIML R 49-2:2013.

The measuring instrument's technical design which is described below complies with the above-mentioned essential requirements. With this Certificate, permission is given to attach the number of this Certificate to the instruments that have been manufactured in compliance with this Certificate.

The instrument must meet the following provisions:

1. Design of the instrument

1.1. Construction

The multi-jet, dry dial water meter type **NUR-15** and **NUR-20** is designed to measure and display the volume (consumption) of clean cold water in residential and commercial use at metering conditions of water passing through the measurement transducer in the sense of 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.

The water meter is produced under trademark **Türkoğlu**.

The water meter consists of a brass or Acrylonitrile butadiene styrene (ABS) body with connecting threads, central strainer and an inlet filter, a wet measuring part consisting of piston, lower and upper tightening plates with bearing hubs, gearing mechanism, magnetic coupling and mechanical dry-dial, vacuum encapsulated indicating device with rotary pointers and numbered drums, a glass with a brass or ABS plastic register cap.

The external view and main dimensions of water meter are laid down on drawings 1 and 3.

1.2. Transducer

The water meter shall be installed to operate in horizontal position.

The multi-jet measurement transducer consists of the measuring chamber with a piston inside with an axle perpendicular to the flow direction. In the direction of water flow the piston moves back and forth within a chamber as the water flows through it. The motion of the piston is then transmitted by a magnetic coupling to the central gear and to dry dial counter indicating the measurement results, namely, the volume of water passed.

Drawing 4 presents an exploded diagram of water meter.



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1.3. Indication of the measurement results

The hermetically sealed non-resettable totalizing register which indicates up to 99999.99995 m³ is mounted on top of the body plate. The register comprises five drums in colour black, mechanical counter and a dial indicator (Drawing 5), the last significant drum indicates 1 m³ per numbered division. The least significant drum moves continuously whilst motion of the other drums from one digit to the next is completed during the time that the drum of the immediately next lowest value completes the last tenth of its revolution. Four dial indicators, marked "x 0.1", "x 0.01", "x 0.001" and "x 0.0001", have a metallic rotating pointer which moves continuously and displays 0.1 m³, 0.01 m³, 0.001 m³ and 0.0001 m³, respectively, per numbered division. The least dial is sub-divided to indicate 0.00005 m³.

The water meter can be equipped with pulse emitter device, which can be used for remote reading.

1.4. Technical documentation

Technical documents and drawings used for assessment purposes:

- General description, NUR-15/20 volumetric mechanical water meter, 25.10.2023;
- Structure and installation dimensions, NUR-15/20 volumetric water meter, 25.10.2023;
- Flow Designation, NUR-15/20 mechanical water meter, 25.10.2023;
- Technical data, NUR-15/20 mechanical water meter, 14.10.2022;
- Transport and storage, NUR-15/20 volumetric water meter, 10.09.2022;
- Warranty, NUR-15/20 volumetric water meter, 20.09.2022;
- Assembly drawings No.VLMC-01-1 to VLMC-25, VLMC-EXPLODED, VLMC-VLMC, REV:03.22
- Installation and repair, NUR-15/20 volumetric water meter, 25.10.2023;
- Applicable document list, 20.03.2022.

Other reference documents on which basis this certificate is issued are stored in a file No.TEHD_TP-U22-1.

2. Technical data

2.1. Rated operating conditions

2.1.1. Measurand

The volume of water (consumption) passing through the meter, indicated by mechanical dry dial.

2.1.2. Measurement range

The measurement range of the water meter NUR-xx and other technical characteristics are presented in table 1:

Table 1

Type (volumetric)	NUR-15	NUR-20
Nominal diameter, DN	15	20
Ratio Q_2/Q_1	1.6	
Ratio Q_3/Q_1	315	
Minimum flowrate Q_1 , m ³ /h	0.0079	0.0079
Transitional flowrate Q_2 , m ³ /h	0.0125	0.0125
Permanent flowrate Q_3 , m ³ /h	2.5	2.5
Overload flowrate Q_4 , m ³ /h	3.125	3.125
Water pressure class	MAP 16	
Maximum admissible pressure	1.6 MPa (16 bar)	
Pressure-loss class	ΔP 63	

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2.1.3. Accuracy class (MPE)

The maximum permissible errors are presented in table 2:

Table 2

Type	NUR-15	NUR-20
Accuracy class	2	
Maximum permissible error (MPE) in lower flow range $Q_1 \leq Q < Q_2$	$\pm 5 \%$	
Maximum permissible error (MPE) in upper flow range $Q_2 \leq Q \leq Q_4$	$\pm 2 \%$ for water having a temperature $\leq 30 \text{ }^\circ\text{C}$ $\pm 3 \%$ for water having a temperature $> 30 \text{ }^\circ\text{C}$	
Temperature class	T50	
Maximum admissible temperature	50 $^\circ\text{C}$	

2.1.4. Environment / influence quantities

Mechanical class:	M1
Electromagnetic class:	E1
Climatic and mechanical class:	B
Ambient temperature:	+5 $^\circ\text{C}$ to + 55 $^\circ\text{C}$
Installation:	in a building

2.2. Other operating conditions
2.2.1. Mounting position of the water meter

The water meter NUR-xx should be mounted horizontally with register up.

3. Requirements on production, putting into use and utilisation
3.1. Requirements on production

At the end of the manufacturing and adjustment process the water meters shall be tested (module D, Directive 2014/32/EU) or verified (module F, Directive 2014/32/EU) according to the requirements of the standard EN ISO 4064-2:2017, section 10.1, at a water temperature (20 ± 10) $^\circ\text{C}$ and at the following flowrates with the associated maximum permissible errors:

- between Q_1 and $1,1 Q_1$: $\pm 5 \%$;
- between Q_2 and $1,1 Q_2$: $\pm 2 \%$;
- between $0,9 Q_3$ and Q_3 : $\pm 2 \%$.

The errors (of indication) observed for each of the above mentioned flowrates shall not exceed the maximum permissible errors.

If all the errors (of indication) of the water meter have the same sign, at least one of these errors shall not exceed one half of the maximum permissible error.

3.2. Requirements on putting into use

The water meter NUR-xx must be installed in accordance with the requirements of the user manual.

The water meter NUR-xx must be mounted in a horizontal position and in the direction of water flow according to arrow indicated on the water meter case. The installation must be done by a qualified technician. The straight pipelines installation in upstream and downstream is not necessary (flow profile sensitivity class U0 D0).

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4. Security measures

4.1. Mechanical seals

The water meter that passed the tests, is provided by sealing marks (stainless steel wire, optionally covered with plastic, and aluminum seal) securing the connection of the water meter body with the register cap. The location of seals is described in drawing 2.

5. Labelling and inscriptions

5.1. Information to be enclosed with the instrument

The following data shall be marked on the water meter:

- number of this EU-type examination certificate;
- manufacturer's name or his trademark;
- type of the water meter;
- year of production and serial number;
- permanent flowrate Q_3 in m^3/h and ratio Q_3/Q_1 (R315);
- unit of measurement (m^3);
- maximum pressure lost ($\Delta P..$);
- temperature class (T..);
- maximum admissible pressure (MAP..);
- installation orientation letter H (horizontal mounting);
- pipe diameter DN..;
- accuracy class 2.

The flow direction shall be marked on the water meter's body in form of an arrow.

5.2. Conformity marking

Each water meter that satisfies the applicable requirement of the Directive 2014/32/EU shall be marked with:

- "CE" marking;
- supplementary metrology marking consisting of the capital letter 'M' and the last two digits of the year of its affixing, surrounded by a rectangle;
- the identification number of the notified body that carried out the conformity assessment (module D or module F according to the Directive 2014/32/EU).

The inscriptions and marking shall comply with the requirements of Article 9, Annex 1 of the Directive 2014/32/EU.

5.3. Designation of trademark on the water meter



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6. List of drawings annexed to the certificate

- Drawing 1: Water meter type NUR-15, NUR-20, trademark Türkoğlu, photo
- Drawing 2: Location of seal of water meter type NUR-15, NUR-20
- Drawing 3: Main dimensions of water meter type NUR-15, NUR-20
- Drawing 4: Exploded diagram of water meter type NUR-15, NUR-20
- Drawing 5: Register of water meter type NUR-15, NUR-20

Drawing 1: Water meter type NUR-15, NUR-20, photo

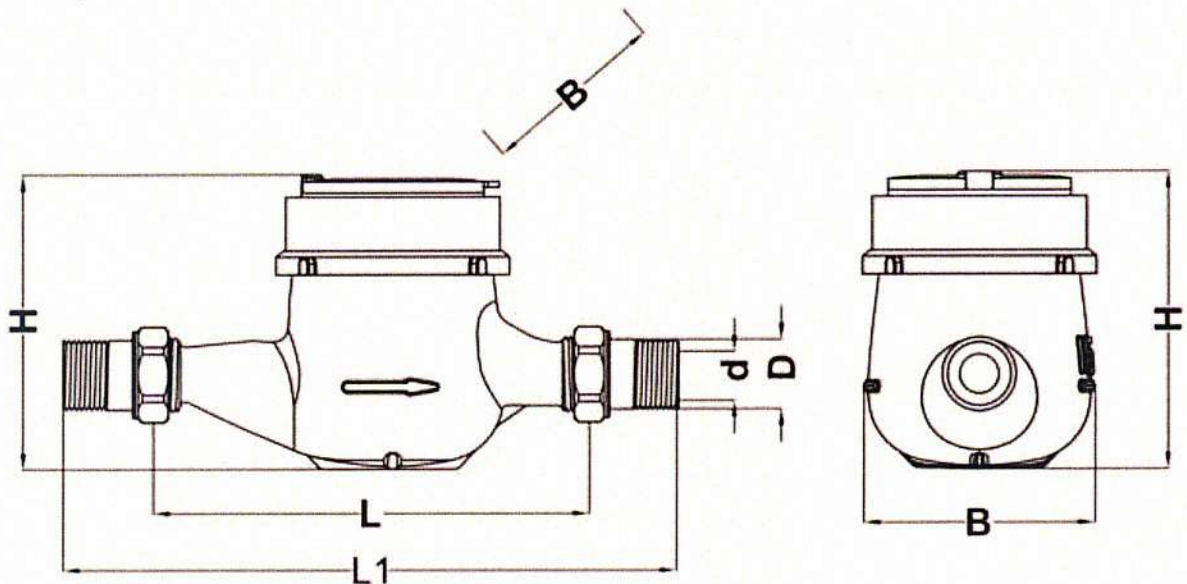


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Drawing 2: Location of seal of water meter type NUR-15, NUR-20



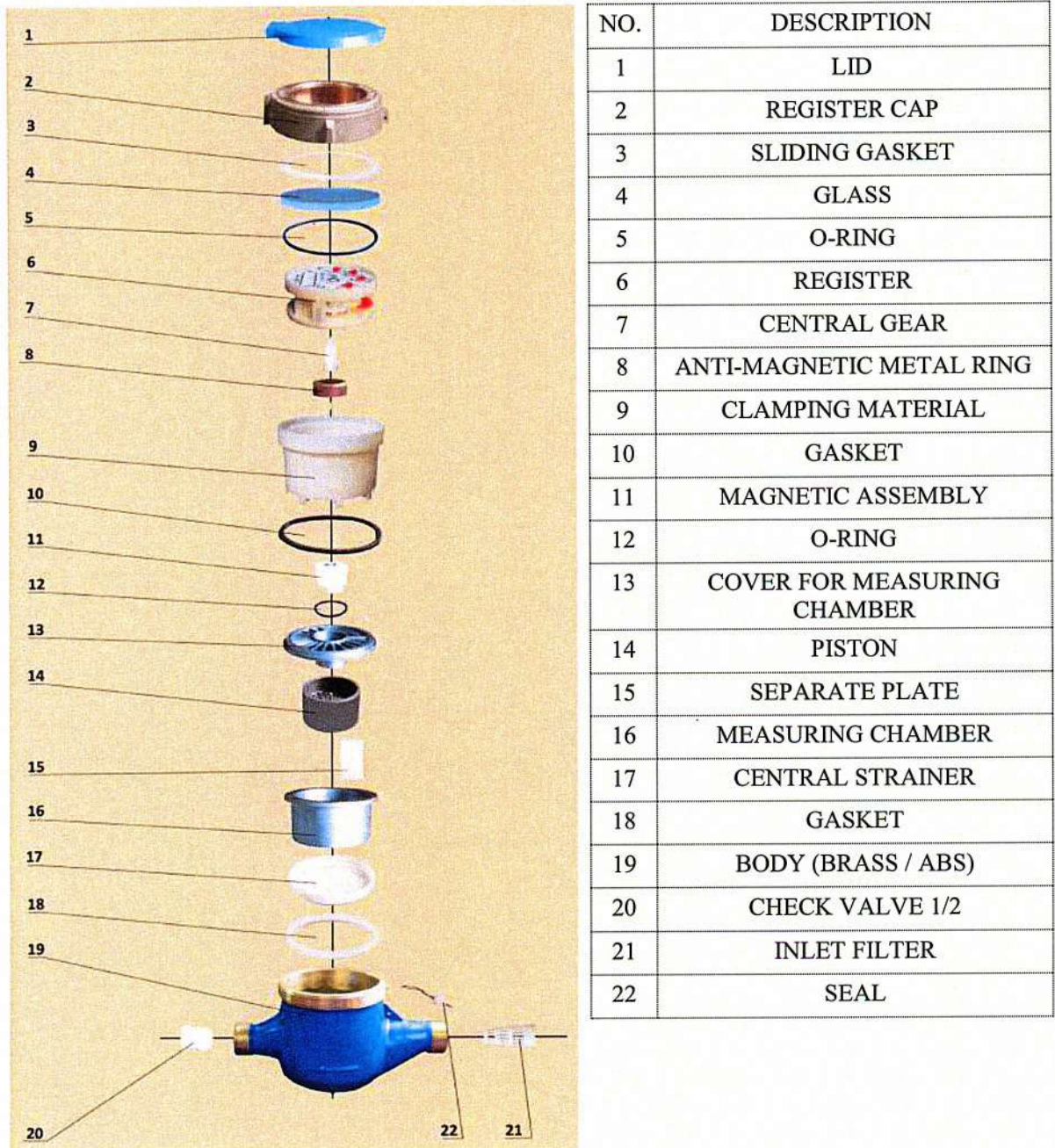
Drawing 3: Main dimensions of water meter type NUR-15, NUR-20



DN	L		L1		B		H		Connection Screw Thread	
	Brass body	ABS body	Brass body	ABS body	Brass body	ABS body	Brass body	ABS body	d	D
mm										
15	165	165	230	260	95	102,5	115	117	R 1/2 B	G 3/4 B
20	190	195	256	300	101	102,5	110	117	R 3/4 B	G 1 B

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Drawing 4: Exploded diagram of water meter type NUR-15, NUR-20



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Drawing 5: Register of water meter type NUR-15, NUR-20

