



**OIML Member State**  
Czech Republic

**OIML Certificate No.**  
R49/2013-A-CZ1-2021.02

**OIML CERTIFICATE ISSUED UNDER SCHEME A**

**OIML Issuing Authority**

Name: Czech Metrology Institute  
Address: Okružní 31, 638 00 Brno, Czech Republic

Person responsible: Jan Kalandra

**Applicant**

Name: Hunan Changde water meter manufacture Co., Ltd.  
Address: No.9, Gangzhong West Road, High-tech Industrial Development Zone, Dingcheng District, Changde City, Hunan Province, ( China )

**Manufacturer**

Name: Hunan Changde water meter manufacture Co., Ltd.  
Address: No.9, Gangzhong West Road, High-tech Industrial Development Zone, Dingcheng District, Changde City, Hunan Province, ( China )

**Identification of the certified type** *(the detailed characteristics will be defined in the additional pages)*

water meter - multi jet, dry dial  
LXSG-20

**Designation of the module** *(if applicable)*

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This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 49

Edition (year): 2013

For accuracy class (if applicable): 2

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

- No. 0511-ER-0002-21 dated 17 May 2021 that includes 25 pages including annex 1
- Test report No. 6015-PT-P5002-21 that includes 30 pages including annex 1

The technical documentation relating to the identified type is contained in documentation file:

0511-UL-V088-20

#### OIML Certificate History

Revision No.	Date	Description of the modification
Addition 0	19 May 2021	Issuing certificate

#### The OIML Issuing Authority

RNDr. Pavel Klenovský  
Head of Certification Body

Date: 19 May 2021



*Important note:* Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

### Measuring system description

The water meters type LXSG-20 are designed to measure, memorise and display the volume 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 the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments (implemented in Czech Republic by Government Order No. 120/2016 Coll.), as amended.

The water meters type LXSG-20 are multi jet rotary vane wheel water meters with dry mechanical indicating device.

The water meters type LXSG-20 consist of a brass body with connecting screw threads and adjusting screw, a rubber gasket, a strainer in front of wet measuring unit with a plastic distributor with tangential holes and a shaft, a rotary vane wheel and gear box, a magnetic coupling (wet and dry side), a rubber gasket, a brass ring closing the water meter, a magnetic shields, a mechanical indicating device with pointers and numbered drums. The mechanical indicating device is formed by numbered rollers with five drums and four pointers. The adjustment is realized by adjusting screw. The access to the adjusting screw is protected by sealed screw.

The water meters type LXSG-20 shall be installed to operate in horizontal position with the indicating device positioned at the top. The water meters type LXSG-20 are not designed to measure reverse flow.

### Marking and inscriptions

The water meters types LXSG-20 shall be clearly and indelibly marked with the following information:

- Unit of measurement (m<sup>3</sup>)
- Numerical value Q<sub>3</sub> in m<sup>3</sup>/h (Q<sub>3</sub> × ×) and the ratio Q<sub>3</sub> / Q
- OIML certificate of conformity number
- Name of trademark of the manufacturer
- Year of manufacture, two last digits of the year of manufacture, or the month and year of manufacture and serial number (as near as possible to the indicating device)
- Direction of flow, by means of an arrow (shown on both sides of the body or on one side only provided the direction of flow arrow is easily visible under all circumstances)
- Maximum admissible pressure (MAP × ×)
- Letter H↑ (horizontal position with the indicating device at the top)
- The temperature class (T × ×)
- The pressure loss class (Δp × ×)
- The installation sensitivity class (Ux Dx)

These markings shall comply with the requirements of OIML R 49 and shall be visible without dismantling the water meter after the instrument has been placed on the market or put into use.

### Characteristics

Basic technical data of water meters types LXSG-20:

Manufacturer:	Hunan Changde water meter manufacture Co., Ltd.					
Model number:	LXSG-20					
Nominal diameter:	20					
Type details:						
Q <sub>1</sub> [m <sup>3</sup> /h]:	0.032	0.040	0.050	0.064	0.080	0.100
Q <sub>2</sub> [m <sup>3</sup> /h]:	0.051	0.064	0.080	0.102	0.128	0.160
Q <sub>3</sub> [m <sup>3</sup> /h]:	4	4	4	4	4	4
Q <sub>4</sub> [m <sup>3</sup> /h]:	5	5	5	5	5	5
Q <sub>3</sub> /Q <sub>1</sub> :	125	100	80	63	50	40
Q <sub>2</sub> /Q <sub>1</sub> :	1.6					

$Q_4/Q_3$ :	1.25
Measuring principle:	Multi-jet water meter
Accuracy class:	2
Maximum permissible error for the lower flowrate zone ( $MPE_l$ ):	$\pm 5 \%$
Maximum permissible error for the upper flowrate zone ( $MPE_u$ ):	$\pm 2 \%$ 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
Water pressure class:	MAP16
Pressure loss class:	$\Delta p63$
Environmental class:	2
Electromagnetic environment:	-
Maximum admissible temperature [ $^\circ\text{C}$ ]:	50
Maximum admissible pressure [MPa]:	1.6
Orientation limitation:	H $\uparrow$ horizontal position with the indicating device positioned at the top
Indicating range [ $\text{m}^3$ ]:	99 999
Resolution of the indicating device [ $\text{m}^3$ ]:	0.00005
Resolution of the device for rapid testing [ $\text{m}^3$ ]:	-
Installation details:	
Connection type (screw thread):	G 1"
Minimum straight length of inlet pipe [mm]:	200
Minimum straight length of outlet pipe [mm]:	100
Flow conditioner (details if required):	no
The installation sensitivity class:	U10 D5
Length [mm]:	190

### Securing components and verification marks

The LXSG-20 meters have to be sealed by connecting the brass screw head ring to the adjusting screw using a wire with a plastic seal such that the head ring and the adjusting screw cannot be turned without damaging the seal or the sealing wire.