



OIML Member State
Czech Republic

OIML Certificate No.
R49/2013-A-CZ1-2023.01

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: Cixi Cidong Flow Instrument Co., Ltd
Address: No. 148, Longzhen Road, Longshan Industrial Park, 315 311 Ningbo, Zhejiang (China)

Manufacturer

Name: Cixi Cidong Flow Instrument Co., Ltd
Address: No. 148, Longzhen Road, Longshan Industrial Park, 315 311 Ningbo, Zhejiang (China)

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

water meter – Woltmann
LXLC

Designation of the module *(if applicable)*

-

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-UL-V037-21 dated 25 January 2023 that includes 31 pages including annex 1
- Test report No. 6015-PT-P5002-23 that includes 57 pages including annex 1, 2, 3

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

0511-UL-V037-21

OIML Certificate History

Revision No.	Date	Description of the modification
Addition 0	31 January 2023	Issuing certificate

The OIML Issuing Authority

RNDr. Pavel Klenovský
Head of Certification Body

Date: 31 January 2023



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 Woltmann water meters type LXLC 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 LXLC are horizontal woltmann meter. The water meters type LXLC consist of a cast iron body with connecting flanges, an interchangeable wet measurement unit with adjusting device and a dry mechanical indicating device or super dry mechanical indicating device (Copper Can Calculator). There is water meter flange cover connected by screws and sealed by o-ring or rubber gasket on the measuring unit.

The measurement unit consists of a inlet flow straightener with stainless steel shaft, a plastic turbine with two composite axial bearings and two radial sapphire bearings, an outlet flow straightener with stainless steel , a transmission shaft with a magnetic coupling formed by two or four cube shape magnets protected by shaft tube, water meter flange cover, an adjusting screw sealed by silicon o-ring with adjusting slide, a dry indicating device (Plastic or Copper Can Calculator), a steel or plastic cap with an aluminium lid.

The water meters type LXLC are equipped with a dry (Plastic Calculator - LYG) or super dry (Copper Can Calculator - GB) indicating device formed by:

- Numbered rollers with six drums and three rotary pointers
- Numbered rollers with seven drums and two rotary pointers

The water meters type LXLC can be equipped by reed impulse transmitter which can be used for remote reading.

The water meters type LXLC shall be installed to operate in horizontal position only with the indicating device positioned at the top.

Marking and inscriptions

The water meters types LXSG-20 shall be clearly and indelibly marked with the following information (Figure 2):

- Unit of measurement (m³)
- Numerical value Q₃ in m³/h (Q₃ × ×) and the ratio Q₃ / 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 (Δ*p* ××)
- 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.

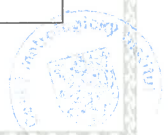
Characteristics

Basic technical data of water meters types LXLC:

Manufacturer:	Cixi Cidong Flow Instrument Co., Ltd		
Model number:	LXLC – 50	LXLC – 65	LXLC – 80
Dial plate design	GB	GB	GB
Nominal diameter:	50	65	80



Type details:						
Q_1 [m ³ /h]:	flowrates are shown in Table <i>Basic metrological data (flowrates)</i>					
Q_2 [m ³ /h]:						
Q_3 [m ³ /h]:						
Q_4 [m ³ /h]:						
Q_3/Q_1 :	40	50	40	50	40	50
Q_2/Q_1 :	1.6					
Q_4/Q_3 :	1.25					
Measuring principle:	Woltmann, dry dial					
Accuracy class:	2					
Maximum permissible error for the lower flowrate zone (MPE _l):	±5 %					
Maximum permissible error for the upper flowrate zone (MPE _u):	±2 % for water having a temperature ≤ 30 °C ±3 % for water having a temperature > 30 °C					
Temperature class:	T30; T50	T90	T30; T50	T90	T30; T50	T90
Water pressure class:	MAP16					
Pressure loss class:	4p63					
Reverse flow:	<i>Not designed to measure</i>					
Environmental class:	O					
Electromagnetic environment:	-					
Maximum admissible temperature [°C]:	50 or 90					
Maximum admissible pressure [MPa]:	1.6					
Orientation limitation:	H (for horizontal position with the indicating device at top)					
Indicating range [m ³]:	9 999 999		9 999 999		9 999 999	
Resolution of the indicating device [m ³]:	0.002		0.002		0.002	
Resolution of the device for rapid testing [m ³]:	-					
EUT testing requirements (OIML R 49-2:2013, 8.1.8):						
Category:	-					
Case:	-					
Installation details:						
Connection type (screw thread):	Flange					
Minimum straight length of inlet pipe [mm]:	500	650	800			
Minimum straight length of outlet pipe [mm]:	250	325	400			
Flow profile sensitivity class:	U10 D5					
Flow conditioner (details if required):	no					
Mounting:	-					
Orientation:	H (for horizontal position with the indicating device at top)					
Other relevant information:	-					
Length [mm]:	200	200	225			



Reed switch power supply (U_{max} / I_{max}):	-
Reed switch K-factor (impulse / L):	-
Installation details (electrical):	
Wiring instructions:	-
Mounting arrangement:	-
Orientation limitations:	-
Power supply:	
Type (battery, mains AC, mains DC):	-
U_{max} (V):	-
U_{min} (V):	-
Frequency:	-
Minimum battery life time [years]:	-
Software version (of legally relevant SW):	-
CRC checksum (of legally relevant SW):	-
Information specified by the manufacturer (information in the table below are not certified)	
-	-

Manufacturer:	Cixi Cidong Flow Instrument Co., Ltd					
Model number:	LXLC – 100		LXLC – 150		LXLC – 200	
Dial plate design	GB		GB		GB	
Nominal diameter:	100		150		200	
Type details:						
Q_1 [m ³ /h]:	flowrates are shown in Table <i>Basic metrological data (flowrates)</i>					
Q_2 [m ³ /h]:						
Q_3 [m ³ /h]:						
Q_4 [m ³ /h]:						
Q_3/Q_1 :	40	50	40	50	40	50
Q_2/Q_1 :	1.6					
Q_4/Q_3 :	1.25					
Measuring principle:	Woltmann, dry dial					
Accuracy class:	2					
Maximum permissible error for the lower flowrate zone (MPE _l):	±5 %					
Maximum permissible error for the upper flowrate zone (MPE _u):	±2 % for water having a temperature ≤ 30 °C ±3 % for water having a temperature > 30 °C					
Temperature class:	T30; T50	T90	T30; T50	T90	T30; T50	T90
Water pressure class:	MAP16					
Pressure loss class:	Ap63					
Reverse flow:	Not designed to measure					
Environmental class:	O					



<i>Electromagnetic environment:</i>	-		
Maximum admissible temperature [°C]:	50 or 90		
Maximum admissible pressure [MPa]:	1.6		
Orientation limitation:	H (for horizontal position with the indicating device at top)		
<i>Indicating range [m³]:</i>	9 999 999	99 999 999	999 999 999
<i>Resolution of the indicating device [m³]:</i>	0.002	0.02	0.02
<i>Resolution of the device for rapid testing [m³]:</i>	-		
EUT testing requirements (OIML R 49-2:2013, 8.1.8):			
Category:	-		
Case:	-		
Installation details:			
Connection type (screw thread):	Flange		
Minimum straight length of inlet pipe [mm]:	1000	1250	1500
Minimum straight length of outlet pipe [mm]:	500	625	750
<i>Flow profile sensitivity class:</i>	U10 D5		
Flow conditioner (details if required):	no		
Mounting:	-		
Orientation:	H (for horizontal position with the indicating device at top)		
Other relevant information:	-		
<i>Length [mm]:</i>	250	250	300
<i>Reed switch power supply (U_{max} / I_{max}):</i>	-		
<i>Reed switch K-factor (impulse / L):</i>	-		
Installation details (electrical):			
Wiring instructions:	-		
Mounting arrangement:	-		
Orientation limitations:	-		
Power supply:			
Type (battery, mains AC, mains DC):	-		
U _{max} (V):	-		
U _{min} (V):	-		
Frequency:	-		
<i>Minimum battery life time [years]:</i>	-		
<i>Software version (of legally relevant SW):</i>	-		
<i>CRC checksum (of legally relevant SW):</i>	-		
Information specified by the manufacturer (information in the table below are not certified)			
-	-		



Manufacturer:	Cixi Cidong Flow Instrument Co., Ltd					
Model number:	LXLC – 50	LXLC – 65	LXLC – 80	LXLC – 100	LXLC – 150	LXLC – 200
Dial plate design	LYG	LYG	LYG	LYG	LYG	LYG
Nominal diameter:	50	65	80	100	150	200
Type details:						
Q_1 [m ³ /h]:	flowrates are shown in Table <i>Basic metrological data (flowrates)</i>					
Q_2 [m ³ /h]:						
Q_3 [m ³ /h]:						
Q_4 [m ³ /h]:						
Q_3/Q_1 :	40					
Q_2/Q_1 :	1.6					
Q_4/Q_3 :	1.25					
Measuring principle:	Woltmann, dry dial					
Accuracy class:	2					
Maximum permissible error for the lower flowrate zone (MPE _l):	±5 %					
Maximum permissible error for the upper flowrate zone (MPE _u):	±2 % for water having a temperature ≤ 30 °C ±3 % for water having a temperature > 30 °C					
Temperature class:	T30; T50					
Water pressure class:	MAP16					
Pressure loss class:	4p63					
Reverse flow:	Not designed to measure					
Environmental class:	O					
Electromagnetic environment:	-					
Maximum admissible temperature [°C]:	50 or 90					
Maximum admissible pressure [MPa]:	1.6					
Orientation limitation:	H (for horizontal position with the indicating device at top)					
Indicating range [m ³]:	999 999	999 999	999 999	999 999	999 999	999 999
Resolution of the indicating device [m ³]:	0.0005	0.0005	0.0005	0.0005	0.002	0.002
Resolution of the device for rapid testing [l/dm ³]:	-					
EUT testing requirements (OIML R 49-2:2013, 8.1.8):						
Category:	-					
Case:	-					
Installation details:						
Connection type (screw thread):	Flange					
Minimum straight length of inlet pipe [mm]:	500	650	800	1000	1250	1500
Minimum straight length of outlet pipe [mm]:	250	325	400	500	625	750
Flow profile sensitivity class:	U10 D5					
Flow conditioner (details if required):	no					



Mounting:	-					
Orientation:	H (for horizontal position with the indicating device at top)					
Other relevant information:	-					
<i>Length [mm]:</i>	200	200	225	250	250	300
<i>Reed switch power supply (U_{max} / I_{max}):</i>	-					
<i>Reed switch K-factor (impulse / L):</i>	-					
Installation details (electrical):						
Wiring instructions:	-					
Mounting arrangement:	-					
Orientation limitations:	-					
Power supply:						
Type (battery, mains AC, mains DC):	-					
U_{max} (V):	-					
U_{min} (V):	-					
Frequency:	-					
<i>Minimum battery life time [years]:</i>	-					
<i>Software version (of legally relevant SW):</i>	-					
<i>CRC checksum (of legally relevant SW):</i>	-					
Information specified by the manufacturer (information in the table below are not certified)						
-	-					

Basic metrological data (flowrates)

Manufacturer:	Cixi Cidong Flow Instrument Co., Ltd											
Model number:	LXLC											
<i>Nominal diameter:</i>	50	65	80	100	150	200						
Type details:												
Q_1 [m ³ /h]:	1.250	0.800	1.250	0.800	1.575	1.260	2.500	2.00	6.250	5.00	10.00	8.00
Q_2 [m ³ /h]:	2.00	1.28	2.00	1.28	2.52	2.02	4.00	3.20	10.00	8.00	16.00	12.8
Q_3 [m ³ /h]:	40	40	40	40	63	63	100	100	250	250	400	400
Q_4 [m ³ /h]:	50	50	50	50	78.75	78.75	125	125	312.5	312.5	500	500
Q_3/Q_1 :	40	50	40	50	40	50	40	50	40	50	40	50

Securing components and verification marks

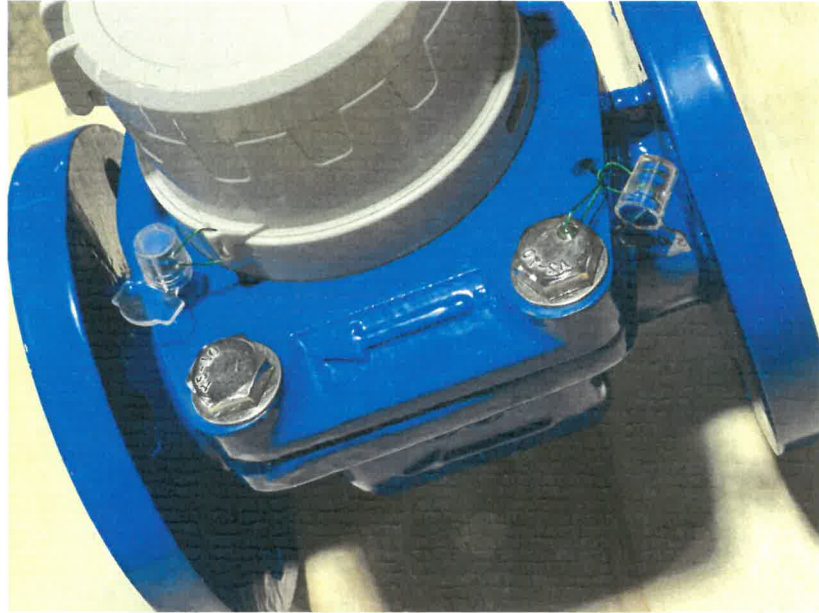
A screw fixing the base plate of the meter has to be sealed (1 seal) together with a screw fixing the plastic ring to the body of the meter. The location of seals is described in Figure 1.

If the meter is equipped by the reed impulse transmitter or the inductive sensor, the cover of the meter which protects the transmitter has to be sealed.



Figure 1: The view and sealing photo of the LXLC water meter

Water meter with dial plate design type LYG



Water meter with dial plate design type GB

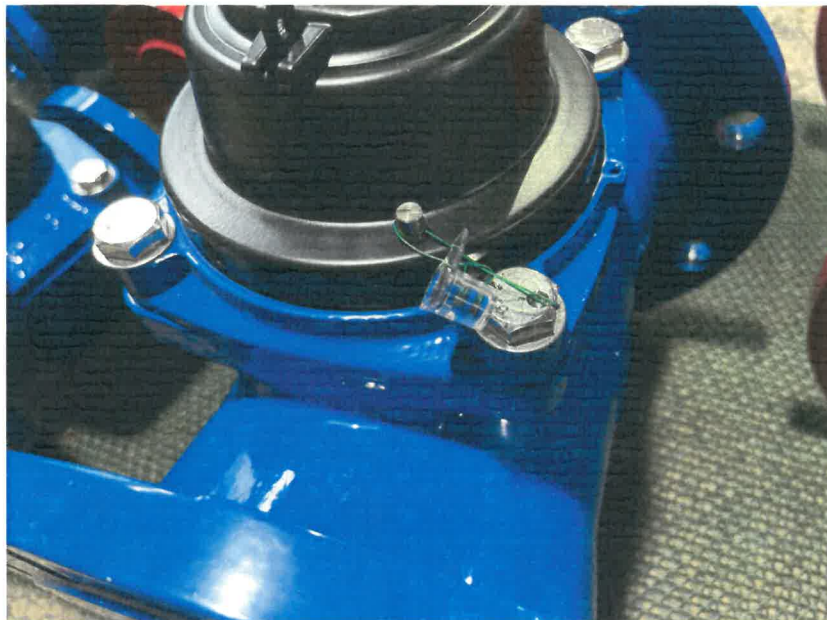
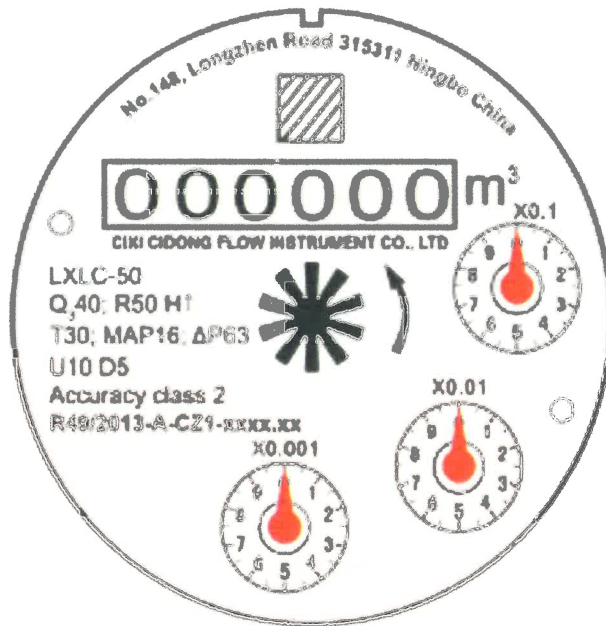


Figure 2: The dials with the parameters of the LXLC water meter - example



 Customer's logo name

