



OIML Member State

Czech Republic

OIML Certificate No.

R49/2013-A-CZ1-2020.02

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: Lianyungang Lianli First Meter Co., Ltd.

Address: 9# Yuzhou South Road

Haizhou Development Zone

Lianyungang, Jiangsu

China

Manufacturer

Name: Lianyungang Lianli First Meter Co., Ltd.

Address: 9# Yuzhou South Road

Haizhou Development Zone

Lianyungang, Jiangsu

China

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

Water meter- single jet, type CD TAR

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 report:

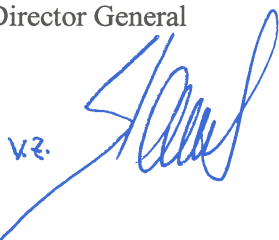
- OIML type evaluation report No. 0511-ER-0005-20 dated 15 October 2020 that includes 53 pages including annexes
- Test report No. 6015-PT-P5005-20 issued by CMI dated 30 September 2020 that includes 130 pages including annexes

The technical documentation relating to the identified type is contained in documentation file:
0511-UL-V105-18

OIML Certificate History

Revision No.	Date	Description of the modification
Addition 0	16 October 2020	Issuing certificate

Identification, signature and stamp
RNDr. Pavel Klenovský
Director General

VZ.




Date: 16 October 2020

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 meter type CD TAR is single jet rotary vane wheel water meters with dry mechanical indicating device (plastic can calculator) or super dry mechanical indicating device (plastic can calculator or copper can calculator). Two sub types of CD96TAR and CD97TAR were certified.

The type CD97TAR consists of a brass or bronze body with connecting threads, counter pivot, bottom adjusting plate and inlet strainer, a adjusting screw (DN15 and DN20), a turbine assembly, an anti-magnet gasket, two magnetic shields, a O-ring and a separating plate with a corundum bearings, super dry mechanical indicating device with transparent plastic cover (plastic can calculator) or with copper can with tempered glass (copper can calculator), a O-ring, a lower plate with a agate bearing and a plastic cap with a plastic lid. Adjusting is made by adjusting screw which is covered by adjusting plug.

The type CD96TAR consists of a brass or bronze body with connecting threads, counter pivot, bottom adjusting plate and inlet strainer, a turbine assembly, a magnet shield, a magnetic shield gasket, a O-ring, a gasket, a locking ring and a separating plate with a corundum bearings, super dry mechanical indicating device with transparent plastic cover (plastic can calculator), a O-ring, a lower plate with a agate bearing, a fixing ring and a plastic cap with a plastic lid.

There are two types of the mechanical indicating device. The first one is formed by numbered rollers with five drums and four rotary pointers. The second one is formed by numbered rollers with eight drums and one rotary pointer. These calculators can be designated for inclined reading. There is star wheel with ten arms which can be used for rapid testing in mechanical indicating device.

The water meter can be equipped by a reed impulse transmitter which can be used for remote reading.

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

Marking and inscriptions

The water meters type CD96TAR and CD97TAR shall be clearly and indelibly marked with the following information:

- Water meter type
- Unit of measurement (m^3)
- Numerical value Q_3 in m^3/h ($Q_3 \times \times$) and the ratio Q_3 / Q_1 ,
- 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)
- Serial number (as near as possible to the indicating device)
- Maximum admissible pressure (MAP $\times \times$)
- Letter H↑ (horizontal position with the indicating device at the top)
- The temperature class (T $\times \times$)
- The pressure loss class ($\Delta p \times \times$)
- The installation sensitivity class (U \times D \times)

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 characteristics (table).

Manufacturer:	Lianyungang Lianli First Meter Co., Ltd. 9# Yuzhou South Road, Haizhou Development Zone, Lianyungang, Jiangsu, China			
Model number:	CD97TAR			
Nominal diameter:	15	20	25	32
Type details:				
Q_1 [m³/h]:	0.050	0.080	0.126	0.200
Q_2 [m³/h]:	0.080	0.128	0.202	0.320
Q_3 [m³/h]:	2.500	4.000	6.300	10.000
Q_4 [m³/h]:	3.125	5.000	7.875	12.500
Q_3/Q_1 :	50			
Q_2/Q_1 :	1.6			
Q_4/Q_3 :	1.25			
Measuring principle:	water meter single jet			
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			
Water pressure class:	MAP16			
Pressure loss class:	Δp63			
Environmental class:	O			
Electromagnetic environment:	E1			
Maximum admissible temperature [°C]:	30; 50; 90			
Maximum admissible pressure [MPa]:	1.6			
Orientation limitation:	H↑ (horizontal with the indicating device at the top)			
Indicating range [m³]:	99 999			
Resolution of the indicating device [m³]:	0.00005			
Resolution of the device for rapid testing [pulse / L]:	110.2222; 112.5000 112.5185	76.3704 71.8889	37.1852 37.0741	40.1053
EUT testing requirements (OIML R 49-2:2013, 8.1.8):				
Category:	Positive displacement meters and turbine water meters			
Case:	A			
Installation details:				
Connection type (screw thread):	G ¾	G 1	G 1-¼	G 1-½
Minimum straight length of inlet pipe [mm]:	0			
Minimum straight length of outlet pipe [mm]:	0			

Flow conditioner (details if required):	-			
Mounting:	-			
Orientation:	H↑ (horizontal with the indicating device at the top)			
Other relevant information:	Flow profile sensitivity classes U0 and D0			
Length [mm]:	110	130	160	160
Reed switch power supply (U_{\max} / I_{\max}):	Max 24V DC / 0.01A			
Reed switch K-factor (impulse / L):	0.001, 0.01, 0.1 and 1			

Manufacturer:	Lianyungang Lianli First Meter Co., Ltd. 9# Yuzhou South Road, Haizhou Development Zone, Lianyungang, Jiangsu, China							
Model number:	CD96TAR							
Nominal diameter:	15	20	25	32				
Type details:								
Q_1 [m³/h]:	0.032	0.031	0.050	0.050	0.080	0.079	0.126	0.125
Q_2 [m³/h]:	0.051	0.050	0.080	0.080	0.128	0.126	0.202	0.200
Q_3 [m³/h]:	1.600	2.500	2.500	4.000	4.000	6.300	6.300	10.000
Q_4 [m³/h]:	2.000	3.125	3.125	5.000	5.000	7.875	7.875	12.500
Q_3/Q_1 :	50	80	50	80	50	80	50	80
Q_2/Q_1 :	1.6							
Q_4/Q_3 :	1.25							
Measuring principle:	water meter single jet							
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							
Water pressure class:	MAP16							
Pressure loss class:	Δp63							
Environmental class:	O							
Electromagnetic environment:	E1							
Maximum admissible temperature [°C]:	30; 50; 90							
Maximum admissible pressure [MPa]:	1.6							
Orientation limitation:	H↑ (horizontal with the indicating device at the top)							
Indicating range [m³]:	99 999							
Resolution of the indicating device [m³]:	0.00005							
Resolution of the device for rapid testing [pulse / L]:	110.2222; 112.5185	84.5556 76.3704	37.1852 37.0741	40.1053				

EUT testing requirements (OIML R 49-2:2013, 8.1.8):

Category:	Positive displacement meters and turbine water meters			
Case:	A			
Installation details:				
Connection type (screw thread):	G ¾	G 1	G 1-¼	G 1-½
Minimum straight length of inlet pipe [mm]:	0			
Minimum straight length of outlet pipe [mm]:	0			
Flow conditioner (details if required):	-			
Mounting:	-			
Orientation:	H↑ (horizontal with the indicating device at the top)			
Other relevant information:	Flow profile sensitivity classes U0 and D0			
Length [mm]:	110	130	160	160
Reed switch power supply (U_{\max} / I_{\max}):	Max 24V DC / 0.01A			
Reed switch K-factor (impulse / L):	0.001, 0.01, 0.1 and 1			

Securing components and verification marks

The CD96TAR and CD97TAR water meters have to be secured by means of a plastic cover with the indicating device fitted to the body by plastic seal ring, using a wire and cannot be separated without damaging the sealing wire.