



OIML Member State
Czech Republic

OIML Certificate No.
R49/2013-A-CZ1-2022.04

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: GWF MessSysteme AG
Address: Obergrundstrasse 119, 6002 Luzern, Switzerland

Manufacturer

Name: GWF MessSysteme AG
Address: Obergrundstrasse 119, 6002 Luzern, Switzerland

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

Water meter single – jet
Unico2coder MP

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-V132-21 dated 15th June 2022 that includes 95 pages including annexes 1-3.
- Test report No. 6015-PT-P5002-22 Revision 1 that includes 36 pages including annex 1.
- Test report No. 6015-PT-P5005-22 that includes 35 pages including annex 1.

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

0511-UL-V132-21

OIML Certificate History

Revision No.	Date	Description of the modification
Addition 0	22 June 2022	Issuing certificate

The OIML Issuing Authority

RNDr. Pavel Klenovský
Head of Certification Body

Date: 22 June 2022



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 Unico2coder MP are designed to measure, memorise and display the volume at metering conditions of water passing through the measurement transducer.

The water meters type Unico2coder MP are single jet rotary vane wheel water meters with dry mechanical indicating device.

The water meters type Unico2coder MP consist of a brass body with connecting screw threads, 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 shield, a mechanical indicating device with pointers and numbered drums. The mechanical indicating device is formed by numbered rollers with eight drums and one pointer.

The water meters type Unico2coder MP shall be installed to operate in three positions (a - horizontal position with the indicating device at the top; b - for horizontal position with the indicating device at side; c - for vertical position with flow from bottom to top). The water meters type Unico2coder MP are not designed to measure reverse flow.

Marking and inscriptions

The water meter types Unico2coder MP shall be clearly and indelibly marked with the following information:

- 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)
- Maximum admissible pressure (MAP $\times \times$) if it differs from MAP 16
- mounting position designation
 - a) Letter H \uparrow , (horizontal position with the indicating device at the top)
 - b) Letter H \rightarrow , (for horizontal position with the indicating device at side)
 - c) Letter V \uparrow , (for vertical position with flow from bottom to top)
- The temperature class (T $\times \times$) if it differs from T30
- The pressure loss class ($\Delta p \times \times$) if it differs from $\Delta p 63$
- The installation sensitivity class (Ux Dx) if it differs from U0 D0

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 Unico2 coder MP:

Manufacturer:	GWF MessSysteme AG; Obergrundstrasse 119; 6002 Luzern; Switzerland	
Model number:	Unico2coder MP	
Nominal diameter:	15	
Type details:		
Q_1 [m ³ /h]:	0.0313	0.0625
Q_2 [m ³ /h]:	0.050	0.100
Q_3 [m ³ /h]:	2.500	
Q_4 [m ³ /h]:	3.125	
Q_3/Q_1 :	80	40
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):	±3 % for water having a temperature > 30 °C	
Temperature class:	T30/90	
Water pressure class:	MAP 16	
Pressure loss class:	Δp63	
Environmental class:	B	
Electromagnetic environment:	-	
Maximum admissible temperature [°C]:	90	
Maximum admissible pressure [MPa]:	1.6	
Orientation limitation:	H↑ - for horizontal position with the indicating device at top	H→ - for horizontal position with the indicating device at side V↑ - for vertical position with flow from bottom to top
Indicating range [m ³]:	99 999	
Resolution of the indicating device [m ³]:	0.00005	
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):	G3/4	
Minimum straight length of inlet pipe [mm]:	0	
Minimum straight length of outlet pipe [mm]:	0	



Flow conditioner (details if required):	no
Mounting:	-
Orientation:	-
Other relevant information:	-
<i>Length [mm]:</i>	<i>110</i>
<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>	-

Securing components and verification marks:

The sealing of the water meter Unico2coder MP is realized by encapsulating the cover (snapping hood and holding ring) to the body of the water meter. The cover can be removed only by destroying these parts. The cover holds the counter and is labelled with specific meter specifications. The sealing is described in Figure 1.

Figure 1: The sealing of water meter Unico2coder MP.

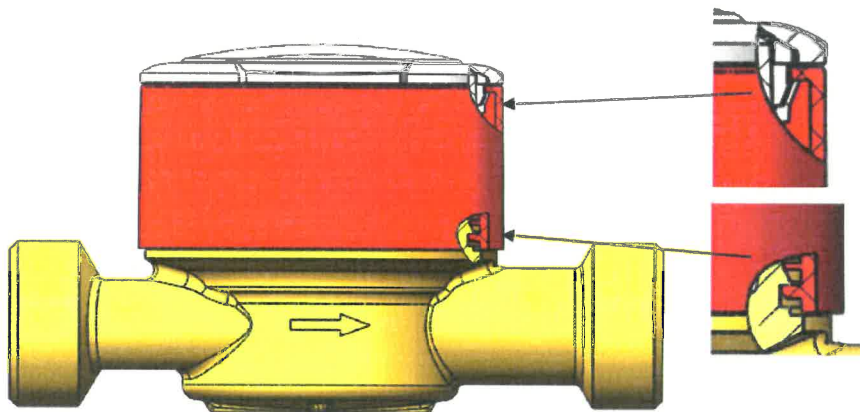


Figure 2: Cover for Unico2coder MP.

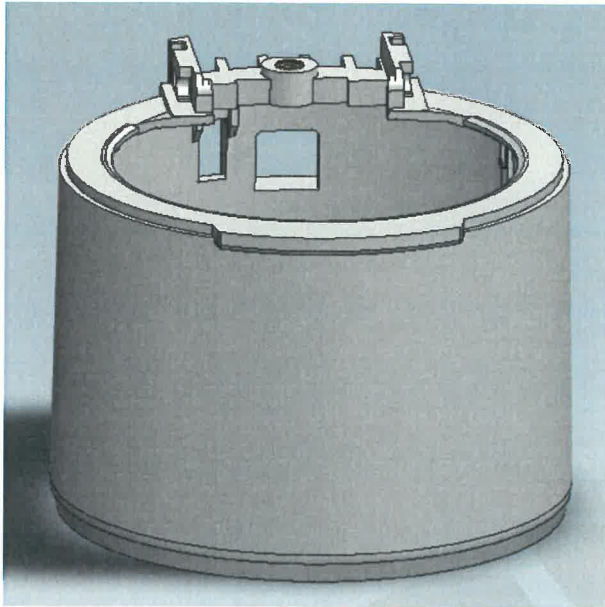


Figure 3: Example of cover labeling for Unico2coder MP.

