



Member state
Czech Republic

OIML Certificate No.
R49/2006-CZ-14.01

OIML CERTIFICATE OF CONFORMITY

Issuing Authority

Name: Czech Metrology Institute
Address: Okružní 31,
638 00 Brno, CZ
Person responsible: Jan Kalandra

Applicant

Name: Ningbo Water Meter Co., LTD.
Address: No. 99, Lane 268, Beihai Road
315032 Ningbo
China

Manufacturer of the certified type

Name: Ningbo Water Meter Co., LTD.
Address: No. 99, Lane 268, Beihai Road
315032 Ningbo
China

Identification of the certified type

Multijet water meter
Type: MULTI

Further characteristics see page 3

This certificate attests the conformity of above identified type (represented by the sample or samples identified in the associated test report) with the requirements of the following Recommendation(s) of the International Organization of Legal Metrology (OIML):

R 49, edition 2006, for accuracy class 2

This certificate relates only to the metrological and technical characteristics of the type of instrument covered by the relevant OIML Recommendation(s) identified above.

This 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 Test report: No. 6015-PT-P0036-12 that includes 30 pages.

Measuring system description:

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

The water meters type MULTI consist of a brass or bronze body with connecting screw threads, inlet strainer and adjusting screw; plastic casing for an impeller with multiple inlets and outlets, protecting strainer and a stainless steel shaft with plastic tip; rotary vane impeller with agate bearing and magnetic ring. The remaining parts differ for various variants of the meter.

For a variant MULTI E the remaining parts consist of a plastic casing for an indicating device with a rubber O-ring separating the wet and the dry part of the meter, antimagnetic protection ring and plastic shaft with a magnetic ring; a dry mechanical indicating device; rubber O-ring, glass window and brass screw head ring with a plastic sliding gasket and a plastic lid.

For a variant MULTI G the remaining parts consist of a plastic cover separating the wet and the dry part of the meter which is fixed by a brass, steel or plastic inner head ring with a rubber O-ring and a plastic sliding gasket in between; antimagnetic protection ring; a plastic capsule containing a plastic shaft with a magnetic ring and a dry mechanical indicating device inside; and a plastic covering cap with a lid.

For the variant MULTI E the indicating device is formed by numbered rollers with five drums and four pointers. For the variant MULTI G the indicating device is formed by numbered rollers and pointers in combinations 5 rollers + 4 pointers or 7 rollers + 2 pointers or 8 rollers + 1 pointer. The water meters type MULTI G admit several variants for the indicating device – there are two variants with reading of the drums from the top and one variant with inclined reading.

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

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


The Issuing Authority
Jan Kalandra




The CIML Member
Pavel Klenovský

12 February 2014

12 February 2014

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 the associated test report is not permitted although either may be reproduced in full.

Characteristics:

Basic technical data of water meters type MULTI DN 15 and DN 20:

Nominal diameter (DN) [mm]:	15	20
Overload flowrate (Q_4) [m^3/h]:	≤ 3.13	≤ 5.00
Permanent flowrate (Q_3) [m^3/h]:	≤ 2.50 ¹	≤ 4.00 ¹
Transitional flowrate (Q_2) [m^3/h]:	≥ 0.0320	≥ 0.0512
Minimum flowrate (Q_1) [m^3/h]:	≥ 0.0200	≥ 0.0320
Ratio Q_3 / Q_1 :	≤ 125 ²	
Ratio Q_2 / Q_1 :	1.6	
Ratio Q_4 / Q_3 :	1.25	
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 classes:	T30 and T50	
Water pressure class:	MAP 16	
Pressure-loss class:	ΔP 63	
Indicating range [m^3]:	99 999	
Resolution of the indicating device [m^3]:	0,00005	
Resolution of the device for the rapid testing [pulse/L]:	71.1852	60.0000
Flow profile sensitivity classes:	U0 D0	
Orientation limitation:	H	
Length of water meter L [mm]:	165 to 190	190
Connection type – Screw thread size:	G $\frac{3}{4}$ B or G1B	G1B
Reed switch power supply ($U_{\text{max}} / I_{\text{max}}$):	max. 24 V / 0.01 A	
Reed switch K-factor [impulse / L]:	0,001; 0,01; 0,1 and 1	

¹ The value of Q_3 shall be chosen from the R5 line of ISO 3:1973.

² The ratio Q_3 / Q_1 shall be chosen from the R10 line from ISO 3:1973 and this value shall be higher than or equal to 40.