

OIML Member State  
Slovakia



OIML Certificate N°  
R49/2013-SK1-14.05

## OIML CERTIFICATE OF CONFORMITY

*Issuing Authority*

Name Slovak Legal Metrology  
Address Hviezdoslavova 31  
974 01 Banská Bystrica, Slovakia  
Person responsible Jaromír Markovič

*Applicant*

Name Ningbo Aimei Meter Manufacture Co., Ltd.  
Address 68, West Town Road, Shangtian Town, Fenghua City  
Zhejiang, 315511 P.R. of China

*Manufacturer of the certified type*

The applicant

*Identification of the certified type*

**Mechanical volumetric dry dial water meter type for metering  
of cold water**

Type **PD-B, PD-BP**

For further characteristics see pages 2 to 4

This Certificate attests the conformity of the above identified type (represented by the sample or samples identified in the associated Test Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

**R 49-1, edition 2013**  
Accuracy class 2

This Certificate relates only to the metrological and technical characteristics of the type of instrument covered by the relevant OIML Recommendation 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 OIML Test Report: N° 2014/MI-001/B035/312.03, that includes 67 pages.

  
**The Issuing Authority**  
Ing. Jaromír Markovič, PhD.

5 November 2014



  
**The OIML Member**  
Dr. h.c. mult. prof. Ing. Jozef Mihok, PhD.

5 November 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 of the associated Test Report is not permitted, although either may be reproduced in full.

## 1 Designation

The mechanical volumetric (rotary piston) water meters type *PD-B* and *PD-BP* are designed to measure, memorise and display the volume at metering conditions of water passing through the measurement transducer. They are intended for the measurement of volumes of clean cold water in residential use. The mechanical water meters type *PD-B* and *PD-BP* are volumetric water meters with dry mechanical indication device.

The water meter type *PD-B* consists of a brass body. The water meters type *PD-BP* consists of a plastic body. The water meters type *PD-B* and *PD-BP* shall be installed to operate in the horizontal position with the indication device positioned at the top or in the vertical position.

## 2 Description

Essential parts of the water meter:

- measuring mechanism – consisting of measuring chamber assembled with a rotary piston and top plate;
- dry type mechanical register and indication device with 5 numbered drums (least significant drum moves continuously) and 4 continuously moving rotating pointers;
- magnetic coupling for the connection of the register with the measuring mechanism (rotary piston)
- housing of water meter with inlet and outlet connections;
- adjustment device (optional) – an adjustment screw regulates the internal by-pass flow of the meter.

Non-essential parts of the water meter:

- sieve in the inlet of the meter (optional);
- non-return valve in the outlet of the meter (optional).

### 2.1 Metrological functions

- Measuring, memorizing and displaying the volume of water passing through the water meter

### 2.2 Software

- not applicable

### 2.3 Integrated equipment and functions

- pulse output (optional)

## 3 Technical and metrological data

Type	-	<i>PD-B / PD-BP</i>					
Nominal diameter <i>DN</i>	mm	15					
Permanent flowrate <i>Q<sub>3</sub></i>	m <sup>3</sup> /h	2,5					
Minimum flowrate <i>Q<sub>1</sub></i>	m <sup>3</sup> /h	0,005	0,00625	0,00794	0,01	0,0125	0,01563
Transitional flowrate <i>Q<sub>2</sub></i>	m <sup>3</sup> /h	0,008	0,01	0,0127	0,016	0,02	0,025
Overload flowrate <i>Q<sub>4</sub></i>	m <sup>3</sup> /h	3,125					
Ratio <i>Q<sub>3</sub>/Q<sub>1</sub></i>	R	500	400	315	250	200	160
Ratio <i>Q<sub>2</sub>/Q<sub>1</sub></i>	-	1,6					

Connection thread	-	G ¾ B
Construction length $L$	mm	165 / 190
Installation orientation	-	H / V
Water temperature range $\Theta$	°C	0,1 to 50 (T50)
Maximum working pressure	bar	16
Maximum permissible error in upper flow rates range $Q_2 \leq Q \leq Q_4$	%	$\pm 2$ (at $\Theta \leq 30^\circ\text{C}$ ) $\pm 3$ (at $\Theta > 30^\circ\text{C}$ )
Maximum permissible error in lower flow rates range $Q_1 \leq Q < Q_2$	%	$\pm 5$
Scale interval	m <sup>3</sup>	0,00002
Indication range of a water meter	m <sup>3</sup>	99999
Mechanical class	-	M1
Climatic class	°C	- 10 to + 55
Electromagnetic class	-	E1

Type	-	<b>PD-B / PD-BP</b>					
Nominal diameter $DN$	mm	20					
Permanent flowrate $Q_3$	m <sup>3</sup> /h	4					
Minimum flowrate $Q_1$	m <sup>3</sup> /h	0,008	0,01	0,0127	0,016	0,02	0,025
Transitional flowrate $Q_2$	m <sup>3</sup> /h	0,0128	0,016	0,02032	0,0256	0,032	0,04
Overload flowrate $Q_4$	m <sup>3</sup> /h	5					
Ratio $Q_3/Q_1$	R	500	400	315	250	200	160
Ratio $Q_2/Q_1$	-	1,6					
Connection thread	-	G 1 B					
Construction length $L$	mm	130 / 190					
Installation orientation	-	H / V					
Water temperature range $\Theta$	°C	0,1 to 50 (T50)					
Maximum working pressure	bar	16					
Maximum permissible error in upper flow rates range $Q_2 \leq Q \leq Q_4$	%	$\pm 2$ (at $\Theta \leq 30^\circ\text{C}$ ) $\pm 3$ (at $\Theta > 30^\circ\text{C}$ )					
Maximum permissible error in lower flow rates range $Q_1 \leq Q < Q_2$	%	$\pm 5$					
Scale interval	m <sup>3</sup>	0,00002					



Indication range of a water meter	m <sup>3</sup>	99999
Mechanical class	-	M1
Climatic class	°C	- 10 to + 55
Electromagnetic class	-	E1

#### 4 Interfaces and compatibility conditions

- not applicable

#### 5 Marking and inscriptions

The following data shall be marked on the water meter:

- manufacturer's name or mark;
- type of water meter;
- year of production and serial number;
- flowrate  $Q_3$  and ratio  $Q_3/Q_1$  indicated as (R) followed by the ratio;
- maximum working pressure, indicated as MAP 16;
- maximum water temperature, indicated as T50;
- installation position of the water meter: horizontally (H), vertically (V);
- OIML Certificate of conformity number.

The flow direction shall be marked on a water meter's body in form of an arrow.  
Markings on water meter must comply with the requirements OIML R 49.

Manufacturer can use following trademarks on its water meters:

**AIMEI**

**ASM**



#### 6 Security measures

The water meter shall be protected against unauthorised manipulation by one seal securing the water meter head with the screw cap of adjustment device for the meters with the adjustment device and the water meter head with the water meter body for the meters without the adjustment device.

#### 7 Documentation used for assessment purposes

- Test report No 2014/MI-001/B035/312.03;
- Manufacturer's technical documentation stored in folder *Ningbo\_PD-B\_PD-BP\_00*.

#### 8 Standards and regulations used for assessment purposes

- OIML R 49-1, edition 2013 (E);
- OIML R 49-2, edition 2013 (E);
- OIML R 49-3, edition 2013 (E).

