



## 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 single - jet dry dial water meter type for metering of cold water**

Type **SD-A, SD-AP**

For further characteristics see pages 2 to 5

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° 2015/CV009/312.03 that includes 59 pages.

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

8 March 2016



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

8 March 2016

*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 single-jet dry dial water meter of types *SD-A*; *SD-AP* are designed to measure, memorize 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 household or a residential use. The water meters of type *SD-A*; *SD-AP* shall be installed to operate in horizontal position with the indication device positioned at the top and vertical position.

## 2. Description

Essential parts of water meter:

- measuring mechanism (in the lower part of the meter body) - consisting of the rotary vane wheel with an axle perpendicular to the flow direction, lower and upper tightening plates with bearing hubs;
- dry type mechanical register (the register chamber casing can be made from the plastic material) with 8 numbered drums and 1 continuously moving rotating pointers;
- housing of the water meter with inlet and outlet thread connections – brass body (for type *SD-A*) or plastic body (*SD-AP*);
- adjustment device – the adjustment of the water meter is enabled by the angular orientation of the seal plate or adjustment is enabled by hinge plug screw (optionally);
- magnetic coupling for the connection of the measuring mechanism with the mechanical register.

Non-essential parts of the water meter:

- inlet strainer (optional);
- non-return valve (optional).

### 2.1 Metrological functions

- measuring and displaying the volume of the 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

Technical parameters of the water meters type SD-A and SD-AP are listed in Table 1.

Table 1: Technical parameters of the water meters

Type	Unit	SD-A / SD-AP							
Nominal diameter $DN$	mm	15				20			
Connection thread	-	G ¾ B				G 1B			
Construction length $L$	mm	110/115/130/165				130/165/190			
Water temperature range $\Theta$	°C	T30, T50							
Maximum working pressure	bar	16							
MPE in upper flow rates range $Q_2 \leq Q \leq Q_4$	%	± 2 (at $\Theta \leq 30^\circ\text{C}$ ) ± 3 (at $\Theta > 30^\circ\text{C}$ )							
MPE in lower flow rates range $Q_1 \leq Q < Q_2$	%	± 5							
Scale interval	m³	0,000 05							
Capacity of calculator	m³	9999,99995							
Mechanical class	-	M1							
Climatic class	°C	- 10 to + 55							
Installation orientation	-	H							
Nominal diameter $DN$	mm	15				20			
Permanent flowrate $Q_3$	m³/h	2,5				4			
Minimum flowrate $Q_1$	m³/h	0,03125	0,025	0,02	0,015625	0,05	0,04	0,032	0,025
Transitional flowrate $Q_2$	m³/h	0,05	0,04	0,032	0,025	0,08	0,064	0,0512	0,04
Overload flowrate $Q_4$	m³/h	3,125				5			
Ratio $Q_3/Q_1$	R	80	100	125	160	80	100	125	160

Type	Unit	SD-A / SD-AP	
Ratio $Q_2/Q_1$	-	1,6	
Installation orientation	-	V	
Nominal diameter $DN$	mm	15	20
Permanent flowrate $Q_3$	m <sup>3</sup> /h	2,5	4
Minimum flowrate $Q_1$	m <sup>3</sup> /h	0,0625	0,1
Transitional flowrate $Q_2$	m <sup>3</sup> /h	0,1	0,16
Overload flowrate $Q_4$	m <sup>3</sup> /h	3,125	5
Ratio $Q_3/Q_1$	R	40	
Ratio $Q_2/Q_1$	-	1,6	

\*) horizontal position with the indication device positioned at the top only

#### 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;
- measuring unit  $m^3$ ;
- year of production and serial number;
- flowrate  $Q_3$  and ratio  $Q_3/Q_1$ ; (R);
- maximum working pressure (MAP 16);
- temperature class (T30, T50);
- installation position of the water meter (H, 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 on wire securing the connection of the measuring mechanism (in the lower part of the water meter body) with upper part of water meter (mechanical register) via the lock ring, which serve as connection of the upper part of water meter (mechanical register) and measuring mechanism (in the lower part of the meter body) or by one seal securing the connection of the water meter head with the screw cap of adjustment device for water meter with adjusting screw alternatively

## 7. Documentation used for assessment purposes

- Test report No 2015/CV009/312.03;
- Manufacturer`s technical documentation stored in folder *Aimei\_SD\_A\_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).

