

OIML Member State
The Netherlands

Number R 49/2013-A-NL1-21.02 revision 1
Project number 3506421
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Issuing authority
Person responsible: NMi Certin B.V.
M.Ph.D. Schmidt

Applicant
Badger Meter, Inc.
4545 West Brown Deer Road
Milwaukee, WI 53224
United States of America

Manufacturer
Badger Meter Europe GmbH
Nürtinger Straße 76
72639 Neuffen
Germany

Identification of the certified type
An electromagnetic **water meter**
Type: M2000

Characteristics
See page 2 and further

This OIML Certificate is issued under scheme A.

This 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):

R 49-1 (2013) "Water meters intended for the metering of cold potable water and hot water"

Accuracy class 1

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation identified above. This Certificate does not bestow any form of legal international approval.

This certificate and supporting reports comply with the requirements of OIML-CS-PD-07 clause 6.2.

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Issuing Authority **NMi Certin B.V., OIML Issuing Authority NL1**
17 March 2022

Certification Board

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The conformity was established by the results of tests and examinations provided in the associated reports:

- No. NMI-13200483-01 dated 24 November 2016 that includes 96 pages;
- No. 140901822 / M2000 dated 5 March 2016 that includes 58 pages.

Characteristics of the measuring instrument

In Table 1 the general characteristics of the measuring instrument are presented. Tables 2 and 3 give an overview of the general characteristics of the family of instruments. The construction of the measuring instrument is recorded in the Documentation folder no. T10970-1.

Table 1 General characteristics

Measuring principle	Electromagnetic flow metering							
Accuracy class	1							
Environmental class	M1 / O (installed outdoors)							
Electromagnetic environment	E2							
Temperature range ambient	-25 °C / +55 °C							
Water temperature class	T50 (+0,1 °C / +50 °C)							
Maximum admissible pressure (MAP)	1,6 MPa (16 bar)							
Orientation	All positions (Horizontal, vertical or diagonal)							
Flow profile sensitivity class	U0 and D0 (0 x DN upstream and 0 x DN downstream)							
Reverse flow	The sensor is intended to measure reverse flow							
Pressure loss class	Δp 10 (0,10 bar)							
Power supply	AC version: 85 – 265 VAC (45 – 65 Hz) or DC version: 9 – 36 VDC (grounding mandatory)							
Software identification								
	Version	Checksum for language English and:						
		German	Czech	Spanish	French	Russian	Swedish	Turkish
	1.15	DBDE	A020	7909	B8D6	A351	F370	477E
	1.18	6B41	6231	424E	83F6	74A1	DC9F	30AB

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Table 2 General characteristics of the family of instruments

Meter size	Ø in- and outlet [mm]	Flow rates [m ³ /h]				Ratio Q3/Q1
		Minimum Q1	Transitional Q2	Permanent Q3	Overload Q4	
DN50	50	0,252	0,4032	63	78,75	250
DN65	65	0,4	0,64	100	125	250
DN80	80	0,64	1,024	160	200	250
DN100	100	1	1,6	250	312,5	250
DN125	125	1,6	2,56	400	500	250
DN150	150	2,52	4,032	630	787,5	250
DN200	200	4	6,4	1000	1250	250
DN250	250	6,4	10,24	1600	2000	250
DN300	300	10	16	2500	3125	250

Table 3 General characteristics of the indicating device

Meter size	Indicating range [m ³]	Verification scale interval [m ³]
DN50	99 999	0,0001
DN65; DN80; DN100; DN125; DN150	999 999	0,001
DN200; DN250; DN300	9 999 999	0,01

Production location

The water meter is produced at one of the following production locations:

- Badger Meter Czech Republic s.r.o.
Maříkova 2082/26, 621 00 Brno, Czech Republic

Certificate history:

This revision replaces the previous version.

Revision	Date	Description of the modification
Initial	11 January 2021	-
1	17 March 2022	Added production location.