



# **OIML** Certificate

# **OIML Member State**The Netherlands



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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: M5000

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 and 2

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.

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was 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.

Issuing Authority

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

Certification Board

NMi Certin B.V. Thijsseweg 11 2629 JA Delft The Netherlands T +31 88 636 2332 certin@nmi.nl www.nmi.nl This document is issued under the provision that no liability is accepted and that the applicant shall indemnify third-party liability.

The notification of NMi Certin B.V. as Issuing Authority can be verified at <a href="https://www.oiml.org">www.oiml.org</a>

This document is digitally signed and sealed. The digital signature can be verified in the blue ribbon at the top of the electronic version of this certificate.











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

- No. NMi-13200198-01 dated 4 March 2016 that includes 77 pages;
- No. 130601023 / M5000 dated 19 February 2016 that includes 55 pages.

## Characteristics of the measuring instrument

In Table 1 the general characteristics of the measuring instrument are presented.

Tables 2 – 4 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. T10554-1.

### **Table 1 General characteristics**

| Measuring principle               | Electromagnetic flow metering                     |              |              |
|-----------------------------------|---|--------------|--------------|
| Accuracy class                    | 1 and 2   |              |              |
| 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                      | Replaceable battery (2,9 – 3,7 V)                 |              |              |
| Software identification           | Version   | OTP checksum | APP Checksum |
| - }                               | 9.5.28  | bdFc         | 63b5         |









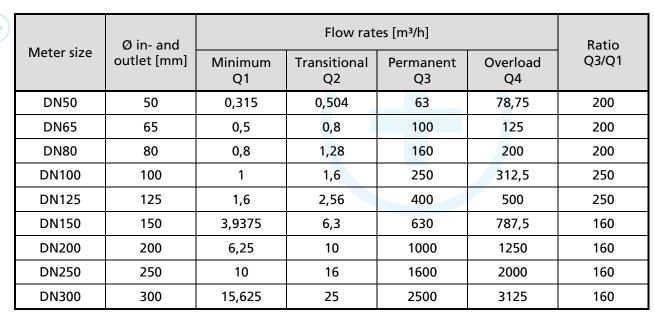
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# Table 2 General characteristics of the family of instruments with accuracy class 1



## Table 3 General characteristics of the family of instruments with accuracy class 2

| Ø in- and              |               | Flow rates [m³/h]  |                 |                |       | Ratio |
|------------------------|---------------|--------------------|-----------------|----------------|-------|-------|
| Meter size outlet [mm] | Minimum<br>Q1 | Transitional<br>Q2 | Permanent<br>Q3 | Overload<br>Q4 | Q3/Q1 |       |
| DN150                  | 150           | 2,52               | 4,032           | 630            | 787,5 | 250   |
| DN200                  | 200           | 4                  | 6,4             | 1000           | 1250  | 250   |

## **Table 4 General characteristics of the indicating device**

| Meter size               | Indicating range<br>[m³] | Verification scale interval [m³] |  |  |  |
|--------------------------|--------------------------|----------------------------------|--|--|--|
| DN50                     | 99 999                   | 0,0001                           |  |  |  |
| DN65; DN80; DN100; DN125 | 999 999                  | 0,001                            |  |  |  |
| DN150                    | 999 999                  | 0,01                             |  |  |  |
| DN200; DN250             | 9 999 999                | 0,01                             |  |  |  |
| DN300                    | 9 999 999                | 0,1                              |  |  |  |





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### **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.      |  |









