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Water meters for cold potable water and hot water - Part 1: Metrological and technical requirements (ISO 4064-1:2024)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/25

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English Version

Water meters for cold potable water and hot water - Part 1: Metrological and technical requirements (ISO 4064-1:2024)

Compteurs d'eau potable froide et d'eau chaude - Partie 1: Exigences métrologiques et techniques (ISO 4064-1:2024)

Wasserzähler zum Messen von kaltem Trinkwasser und heißem Wasser - Teil 1: Metrologische und technische Anforderungen (ISO 4064-1:2024)

This European Standard was approved by CEN on 23 September 2024.

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Ref. No. EN ISO 4064-1:2025 E

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European foreword

This document (EN ISO 4064-1:2025) has been prepared by Technical Committee ISO/TC 30 "Measurement of fluid flow in closed conduits" in collaboration with Technical Committee CEN/TC 92 “Water meters” the secretariat of which is held by SNV.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2025, and conflicting national standards shall be withdrawn at the latest by August 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 4064-1:2017.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

Any feedback and questions on this document should be directed to the users’ national standards body/national committee. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Endorsement notice

The text of ISO 4064-1:2024 has been approved by CEN as EN ISO 4064-1:2025 without any modification.

Annex ZA
(informative)

Relationship between this European Standard and the essential requirements of Directive 2014/32/EU aimed to be covered

This European Standard has been prepared under a Commission's standardization request Mandate to CEN and CENELEC for standardisation in the field of measuring instruments "M/541 EN" to provide one voluntary means of conforming to essential requirements of Directive 2014/32/EU of the European Parliament and the Council of 26 February 2014 on measuring instruments.

Once this standard is cited in the Official Journal of the European Union under that Directive 2014/32/EU, compliance with the normative clauses of this standard given in Table ZA.1 and application of the edition of the normatively referenced standards as given in Table ZA.2 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive 2014/32/EU, and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2014/32/EU.

Essential Requirements (ERs) of Directive 32/2014/EU **Annex I Essential Requirements** **Note: Amended by Directive 2015/13/EU**	**Clause(s)/sub-clause(s) of this EN**	**Qualifying remarks/ Notes**
I.1.1 and 1.2 Allowable errors, Rated operating conditions	4.2.1 4.2.2 4.2.3 4.2.8 6.4	
I.1.3.1 Climatic environments, temperature limits	6.4 A.2 A.5	
I.1.3.2 Mechanical environments	A.2 A.5	
I.1.3.3 Electromagnetic environments	A.3 A.5	
I.1.3.4 Other influences	7.2.12.2.2 Annex A table A.1	
I.1.4.1 Basic rules for testing	7.1 A.1	
I.1.4.2 Ambient humidity	8.4 Annex A.5 table A.1	
I.2 Reproducibility	7.2.9.3	

I.3 Repeatability	7.2.4	
I.4 Discrimination and sensitivity	6.7.2 6.7.3.2	
I.5 Durability	4.2 7.2.6	
I.6 Reliability	6.1	
I.7.1 Fraudulent use	6.1.7 6.8	
I.7.2 Suitable for use	6.1.8 6.7.1 6.4	
I.7.3 Unduly biasing	6.1.9 6.2	
I.7.5 Robustness and suitability of materials	6.1	
I.7.6 Allow for control after placing on the market and put into use	4.3.4 5.1.3 6.7.1 Annex B	
I.8.1 Not to be influenced in any admissible way	4.3.4 5.1.1 6.3 6.8.2.2. 6.8.2.3	
I.8.2 Securing of hardware components	6.8	
I.8.3 Securing and identification of software	6.8	
I.8.4 Measurement data adequately protected against corruption	6.8	
I.8.5 Total quantity supplied not to be reset	6.8	
I.9.1 Inscriptions	6.6	
I.9.2 Marking of packaging and documents	6.6	
I.9.3 Information on operation	6.3 6.6	
I.9.5 Scale interval for the measurand	6.7. 3.2.1 6.7.3.2.3	
I.9.7 Unit of measurement	6.7.1.2	

I.9.8 Marking properties	6.6.1 6.6.2	
I.10.1 Display or hard copy	6.7.2	
I.10.2 Reading properties	6.7.1.1	
I.10.5 Properties of display for remote reading	6.1.8	
I.12 Conformity evaluation	3.6 7.2	
MI.1 Values of flow rate range Note: addresses amendment of Directive 2015/13/EU	4.1 6.4	
Specific Requirements of Annex III for WATER METERS (MI-001)	**Clause(s)/subclause(s) of this European Standard**	**Qualifying remarks/Notes**
MI.2 Temperature range of the water	4.2.4 6.4	
MI.3 Relative pressure of the water	4.2.8 6.4	
MI.4 Nominal value of AC voltage supply and limits of DC supply	5.2	
MI.5 MPE ±2 % for water temperature ≤ 30 °C for flow rate between Q2 (included) and Q4	4.2.3	
MI.5 MPE ±3 % for water temperature > 30 °C for flow rate between Q2 (included) and Q4	4.2.3	
MI.6 MPE ±5 % for any water temperature for flow rate between Q1 and Q2 (excluded)	4.2.3	
MI.6 Non exploitation of MPE	4.3.3 6.1.9 6.2.1 7.2.3 7.3.6	
MI.7.1.1 Electromagnetic immunity	A.3	
MI.7.1.2 Condition after electromagnetic disturbance	5.1.1 A.3 A.5	
MI 7.1.3 Critical change value	5.1.2 A.3	
MI 7.2.1 Variation of measurement after durability	7.2.6.3	

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Table ZA.2 — Normative references from Clause 2 of this document and their corresponding European publications

Column 1 Reference in Clause 2	**Column 2 International Standard Edition**	**Column 3 Title**	**Column 4 Corresponding European Standard Edition**
ISO 4064-2:2024¦OIML R 49-2:2024	ISO 4064-2:2024¦OIML R 49-2:2024	Water meters for cold potable water and hot water — Part 2: Test methods	EN ISO 4064-2:2025

The documents listed in the Column 1 of Table [ZA.2], in whole or in part, are normatively referenced in this document, i.e. are indispensable for its application. The achievement of the presumption of conformity is subject to the application of the edition of Standards as listed in Column 4 or, if no European Standard Edition exists, the International Standard Edition given in Column 2 of Table [ZA.2].

WARNING 1 Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

International Standard

ISO 4064-1

Water meters for cold potable water and hot water —

Part 1: Metrological and technical requirements

Compteurs d'eau potable froide et d'eau chaude —

Partie 1: Exigences métrologiques et techniques

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 30, *Measurement of fluid flow in closed conduits*, Subcommittee SC 7, *Volume methods including water meters* and OIML Technical Subcommittee TC 8/SC 5, *Water meters,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 92, *Water meters,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition of ISO 4064-1 cancels and replaces the fourth edition (ISO 4064-1:2014), which has been technically revised.

The main changes are as follows:

— a few editorial and technical changes were done throughout the document.

This edition of ISO 4064-1 is identical to the corresponding edition of OIML R 49-1, which has been issued concurrently. OIML R 49-1 was approved for final publication by the International Committee of Legal Metrology at its 59th meeting in October 2024. It will be submitted to the International Conference on Legal Metrology in 2025 for formal sanction.

A list of all parts in the ISO 4064 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

International Standard **ISO 4064-1:2024(en)**

Water meters for cold potable water and hot water —

Part 1:
Metrological and technical requirements

1 Scope

This document specifies the metrological and technical requirements for water meters for cold potable water and hot water flowing through a fully charged, closed conduit. These water meters incorporate devices which indicate the accumulated volume.

In addition to water meters based on mechanical principles, this document applies to devices based on electrical or electronic principles, and mechanical principles incorporating electronic devices, used to measure the volume of cold potable water and hot water.

This document also applies to electronic ancillary devices. Ancillary devices are optional. However, it is possible for national or regional regulations to render some ancillary devices mandatory in relation to the utilization of water meters.

NOTE Any national regulations apply in the country of use.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4064-2:2024|OIML R 49-2:2024, *Water meters for cold potable water and hot water — Part 2: Test methods*