
INTERNATIONAL STANDARD



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Measurement of water flow in closed conduits — Meters for cold potable water — Part II : Installation requirements

*Mesurage de débit d'eau dans les conduites fermées — Compteurs d'eau potable froide —
Partie II : Conditions d'installation*

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4064/11 was developed by Technical Committee ISO/TC 30, *Measurements of fluid flow in closed conducts*, and was circulated to the member bodies in October 1977.

It has been approved by the member bodies of the following countries :

Australia	India	South Africa, Rep. of
Belgium	Italy	Spain
Czechoslovakia	Japan	Turkey
Egypt, Arab Rep. of	Mexico	United Kingdom
Finland	Netherlands	U.S.A.
France	Poland	U.S.S.R.
Germany, F.R.	Romania	Yugoslavia

No member body expressed disapproval of the document.

Measurement of water flow in closed conduits — Meters for cold potable water — Part II : Installation requirements

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies criteria for the selection of water meters, associated fittings, installation, special requirements for some meters and the first operation of new or repaired meters to ensure accurate constant measurement and reliable reading of the meter.

The field of application is as defined in clause 2 of ISO 4064/I. This International Standard deals only with single-meter installations. Particular requirements dealing with installations including several meters will be specified in an additional document.

Where legal requirements exist, they will in all cases take precedence over the specifications in this International Standard.

2 CRITERIA FOR THE SELECTION OF WATER METERS

The type, metrological class and sizes of water meters are determined according to the operating conditions of the installation, taking into account, particularly, the following :

- the available supply pressure;
- physical and chemical characteristics of the water;
- acceptable pressure loss across the meter;
- the expected flow rates : the flow rates q_{min} , q_n , q_{max} of the meter (as defined in clause 3 of ISO 4064/I) must be compatible with the expected flow rate conditions of the installations;
- the suitability of the meter type for the installation conditions outlined below.

3 ASSOCIATED FITTINGS

The water meter installation shall include the following accessories :

3.1 Upstream side

3.1.1 A stopcock or valve, preferably with the direction of operation indicated. For flanged meters, a full-bore valve.

3.1.2 If recommended under clause 5, a flow straightening

device and/or a straight length of pipe fitted between the valve and the meter.

3.1.3 If required, a strainer fitted between the stop valve and the meter and, in the case of a helix type meter, upstream of the straight length or the straightening device.

3.1.4 If required, a means of sealing the water meter to the water inlet line in order to detect any unauthorized removal of the water meter.

3.2 Downstream side

3.2.1 If required, an adjustable length device to allow for easy installation and removal of the water meter. This device is recommended for meters with $q_n \geq 15 \text{ m}^3/\text{h}$.

3.2.2 If required, a device including a drain valve which may be used for pressure monitoring, sterilization and water sampling.

3.2.3 For meters with $q_n > 2,5 \text{ m}^3/\text{h}$, a stopcock; or a valve; for flanged meters, a full-bore valve, operated in the same sense as the upstream valve.

3.2.4 If required, a check valve.

4 INSTALLATION

4.1 General requirements

4.1.1 The water meter shall be easily accessible for reading (without the use of mirror or ladder, for instance), for fitting in, for maintenance, for removal and for *in situ* dismantling of the mechanism if required.

In addition, for water meters of mass in excess of 25 kg, clear access to the installation site to allow the water meter to be brought to, or removed from, its working position, and adequate space around the working position for the installation of lifting gear, shall be provided.

The following points shall be taken into account :

- adequate illumination of the installation site is required;
- flooring shall be clear of obstacles, and shall be even, rigid and not slippery.