



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 778.4-2018

**Meters for cold potable water and hot water -- Part 4:
Non-metrological requirements not covered in GB/T 778.1**

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Preface

GB/T 778 "Drinking Cold Water Meter and Hot Water Meter" is divided into the following 5 parts.

- Part 1.Measurement requirements and technical requirements;
- Part 2.Test method;
- Part 3.Test report format;
- Part 4.Non-measurement requirements not included in GB/T 778.1;
- Part 5.Installation requirements.

This part is Part 4 of GB/T 778.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this part is equivalent to ISO 4064-4:2014 "Cold drinking water meter and hot water meter Part 4.ISO 4064-1

Non-metering requirements not included in ".

The Chinese documents that have a consistent correspondence with the international documents cited in this section are as follows.

- GB/T 17241.1-1998 cast iron pipe flange type (ISO 7005-2:1988, NEQ)
- GB/T 17241.2-1998 cast iron pipe flange cover (ISO 7005-2:1988, NEQ)
- GB/T 17241.3-1998 cast iron pipe flange with neck thread (ISO 7005-2:1988, NEQ)
- GB/T 17241.4-1998 neck bottle welding and neck socket welding cast iron pipe flanges (ISO 7005-2:1988, NEQ)
- GB/T 17241.5-1998 Pipe end flanged loose-sleeve cast iron pipe flange with neck (ISO

7005-2.1988, NEQ)

---GB/T 17241.7-1998 cast iron pipe flange technical conditions (ISO 7005-2.1988, NEQ)

This section has made the following editorial changes.

---Modified the standard name.

This part was proposed by China Machinery Industry Federation.

This part is under the jurisdiction of the National Industrial Process Measurement Control and Automation Standardization Technical Committee (SAC/TC124).

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Equipment Co., Ltd., Hunan Changde Brand Water Meter Manufacturing Co., Ltd., Ningbo Jingcheng Technology Co., Ltd., Hunan Weiming Energy Technology Co., Ltd.

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1 Scope

This part of GB/T 778 stipulates that the volume of cold water and hot water is measured in a closed full pipeline and equipped with a cumulative flow indicator device.

Technical characteristics requirements for water meters and hot water meters.

This section applies to the following types of water meters.

- a) The maximum allowable pressure (MAP) is greater than or equal to 1MPa (0.6MPa for a water meter with a nominal pipe diameter $DN \geq 500\text{mm}$);
- b) Cold drinking water meter with a maximum allowable temperature (MAT) of 30 degrees

C;

c) A hot water meter with a maximum allowable temperature (MAT) of up to 180 degrees C according to the grade.

This part applies not only to water meters based on mechanical principles, but also to water meters based on electrical or electronic principles and with electronic devices based on mechanical principles.

A water meter for measuring the volume flow of cold drinking water and hot water. This section also applies to electronic auxiliary devices. Usually electronic auxiliary devices are optional

Installation parts, but national or international regulations may determine certain auxiliary devices as necessary parts based on the usage of the water meter.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 778.1-2018 Drinking cold water meter and hot water meter Part 1.Measurement requirements and technical requirements

3 Terms and definitions

The terms and definitions defined in GB/T 778.1-2018 apply to this document.

Note. Many definitions used in this part are in line with ISO /IEC Guide 99.2007/OIMLV2-200.2012[1], OIMLV1.2013[2] and OIMLD11.

2013[3] is consistent.

4.1.1 Caliber and overall dimensions of the water meter

The caliber of the water meter is expressed by the thread size of the connecting end or the nominal diameter of the flange. Each caliber of water meter has a set of fixed

Total size. The size of the water meter (see Figure 1) should meet the requirements of Table 1.

4.1.2 Threaded connection end

See Table 1 for the allowable values of dimension a and dimension b of the threaded connection end. The thread should meet the requirements of ISO 228-1.Figure 2 defines

dimension a and dimension b.

4.1.3 Flange connection end

The maximum allowable working pressure of the connecting flange should match the maximum allowable pressure of the water meter, in line with ISO 7005-2 and ISO 7005-3. related requirements. The size should meet the requirements of Table 1.

The manufacturer should leave a reasonable gap on the back of the flange to facilitate installation or removal.

4.1.4 Connection of multiple water meters

The size should meet the requirements of Table 2.

The total length of the compound water meter can be fixed or adjusted by using a sliding pipe joint. Under adjustable conditions, as specified in Table 2

Based on the nominal value of L, the minimum adjustable amount of the total length of the water meter is not less than 15mm.

At the time of publication of this section, due to the large differences in the heights of various types of multiple water meters, it is still impossible to standardize the height dimensions.

4.2.1 Caliber and overall dimensions of the water meter

The structural dimensions of the current water meter are shown in Figure 3 and Table 3.

4.2.2 Design of water meter manifold joint

The joint of the water meter should be designed to connect the water meter to the collecting pipe with threaded connection surface by thread. Suitable seals should be used to

Ensure that there is no leakage between the inlet connector and the outside of the water meter/collecting pipe, or between the inlet and outlet channels at the connection interface of the water meter/collecting pipe.

4.2.3.1 General

The size of the coaxial water meter can be illustrated by a cylinder that can hold the water meter, as shown in Figure 3. In the figure, J and K respectively represent the height and diameter of the cylinder that can hold the water meter.

4.2.3.2 Coaxial water meter

The dimensions of the coaxial water meter are shown in Table 3.