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

GB/T 34010-2026

Replacing GB/T 34010-2017

**Determination of air permeability of buildings - Fan
pressurization method**

建筑物气密性测定方法 风扇压力法

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document supersedes GB/T 34010-2017 "Test Method for Air Tightness of Buildings - Fan Pressure Method" and is consistent with GB/T 34010-2017.

Aside from structural adjustments and editorial changes, the main technical changes are as follows.

a) Added "air exchange rate", "nominal leakage rate", "nominal leakage rate", "effective leakage area", "nominal effective leakage area", and "nominal" the terms and definitions of "effective leakage area," "closed opening," and "sealed opening" (see 3.1.3, 3.1.5, 3.1.6, 3.1.7, 3.1.8, 3.1.9) are as follows.

3.1.10, 3.1.11);

b) The terms "internal volume," "ventilation rate based on reference pressure difference," "nominal leakage," "leakage area," and "nominal leakage area" have been removed.

Definitions (see 3.1.2, 3.1.4, 3.1.6, 3.1.7, and 3.1.8 in the 2017 edition);

c) The terms and definitions for "building envelope" and "air permeability" have been changed (see 3.1.2, 3.1.4, and 3.1.3 and 3.1.5 in the 2017 edition);

d) The descriptions of some symbols have been changed (see 3.2, 2017 edition 3.2);

e) The general requirements for instruments and equipment, and the accuracy requirements for pressure and temperature measuring instruments have been changed (see 4.1, 4.2.2).

4.2.4 (4.1, 4.2.2, and 4.2.4 in the 2017 version)

f) The overview of measurement conditions has been changed (see 5.1.1, 2017 version of 5.1.1);

g) The measurement preparation requirements have been changed (see 5.2, 2017 version 5.2);

h) The pressure differential sequence has been changed (see 5.3.4, 2017 version 5.3.4);

i) The area of the building envelope has been changed (see 6.1.2, 6.1.2.1 in the 2017 edition);

- j) General requirements for derived values have been added (see 6.3.1);
- k) The basic content that should be included in the test report has been increased [see Chapter 7b)];
- l) The range of uncertainty has been changed (see 8.2, 2017 edition).

This document adopts ISO 9972:2015 "Building thermal performance - Determination of building air permeability - Fan pressurization test method".

The following minimal editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Method for Determining the Airtightness of Buildings. Fan Pressure Method".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Ministry of Housing and Urban-Rural Development of the People's Republic of China.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Building Components (SAC/TC454).

Introduction

The fan pressure method described in this document is intended to determine the air permeability of a building envelope, either as a whole or in part, and can be used for.

- a) Test the air permeability of a building or part of a building to verify whether it meets the airtightness design standards;
- b) Compare the relative air permeability of several similar buildings or building sections;
- c) Determine the improvement in airtightness after upgrading or partially modifying the building.

This document is not applicable to measuring the air permeability of buildings, but the test results can be used to estimate the air permeability through calculation.

The heat load is obtained.

If other methods can directly measure air permeability, then this also applies. It is recommended to use the fan pressure method for diagnosis, and the tracer gas method.

Directly measure air permeability. A single tracer gas measurement provides limited information about ventilation performance and building permeability.

This method is suitable for measuring airflow through a building from the outside in and vice versa. It is not suitable for measuring airflow through building structures.

Airflow rate.

Using this document requires some basic knowledge of airflow and pressure measurement principles. This method is suitable for use under conditions of small temperature differences and low...

Wind speed. In field applications, it should be recognized that actual conditions may not be ideal, but strong winds and large indoor-outdoor temperature differences should be avoided.

Methods for measuring the airtightness of buildings. Fan pressure method

1 Scope

This document specifies methods for on-site measurement of air permeability of buildings or building sections by mechanical pressurization or depressurization, and describes the process of...

A method for measuring airflow under a given indoor-outdoor pressure difference.

This document is used to measure the air permeability of the building envelope of a single building or a section of a building, by opening doors to adjacent spaces or in adjacent areas.

Multiple spaces subjected to the same pressure can be considered as a single region.

This document is not applicable to the evaluation of air permeability of individual components.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

3.1 Terms and Definitions

The terms and definitions defined in ISO 7345 and the following terms and definitions apply to this document.

3.1.1

air leakage rate

Airflow through the building envelope.