



SLOVENSKI STANDARD
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Toplotne značilnosti stavb - Ugotavljanje tesnosti obodnih konstrukcij - Metoda tlačne razlike z uporabo ventilatorja

Thermal performance of buildings -- Determination of air permeability of buildings -- Fan pressurization method

Performance thermique des bâtiments -- Détermination de la perméabilité à l'air des bâtiments -- Méthode de pressurisation par ventilateur

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Thermal performance of buildings — Determination of air permeability of buildings — Fan pressurization method

*Performance thermique des bâtiments — Détermination de la
perméabilité à l'air des bâtiments — Méthode de pressurisation par
ventilateur*



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Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	1
4 Apparatus	3
5 Measurement procedure	4
6 Expression of results	8
7 Test report	12
8 Uncertainty	13
Annex A (informative) Description of equipment used to pressurize buildings	14
Annex B (informative) Dependence of air density on temperature, dew point and barometric pressure	16
Annex C (informative) Recommended procedure for estimating uncertainty in derived quantities	17
Annex D (informative) Beaufort scale for wind force (extract)	20

Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 9972 was prepared by Technical Committee ISO/TC 163, *Thermal performance and energy use in the built environment*, Subcommittee SC 1, *Test and measurement methods*.

This second edition cancels and replaces the first edition (ISO 9972:1996), which has been technically revised.

Introduction

The fan-pressurization method is intended to characterize the air permeability of the building envelope or parts thereof. It can be used

- a) to measure the air permeability of a building or part thereof for compliance with a design air-tightness specification;
- b) to compare the relative air permeability of several similar buildings or parts of buildings;
- c) to identify the leakage sources;
- d) to determine the air-leakage reduction resulting from individual retrofit measures applied incrementally to an existing building or part of building.

The fan-pressurization method is suitable for the respective diagnostic purposes. Although the air infiltration and exfiltration cannot be measured directly, the results of this method can also be used to estimate with adequate precision by means of calculation both the mean infiltration through unintended leakages and the mean air flow through intended air flow devices from outside, in relation to the pressure conditions to be expected within the building.

This method does not measure the air-infiltration rate of a building. The results of the fan-pressurization test can be used to estimate the air infiltration by means of calculation. Other methods are applicable when it is desired to obtain a direct measurement of the air infiltration rate. It is better to use the fan-pressurization method for diagnostic purposes and measure the actual infiltration rate with tracer gas methods. A single tracer gas measurement gives limited information on the performance of ventilation and infiltration of buildings.

This method applies to measurements of air flow through the construction from outside to inside or vice versa. It does not apply to air flow measurements from outside through the construction and from other places within the construction back to outside.

The proper use of this International Standard requires a knowledge of the principles of air flow and pressure measurements. Ideal conditions for the test described in this standard are small temperature differences and low wind speeds. For tests conducted in the field, it needs to be recognized that field conditions can be less than ideal. Nevertheless, strong winds and large indoor-outdoor temperature differences should be avoided.

