

Airtight shutters - Air permeability test

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12835:2001 sisaldab Euroopa standardi EN 12835:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 04.04.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12835:2001 consists of the English text of the European standard EN 12835:2000.</p> <p>This document is endorsed on 04.04.2001 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies a test method for determining the air permeability of shutters that claim to conform to class 5 of thermal resistance airtight shutters according to standards prEN ISO 10077-1:1999 and prEN ISO 13125:1998, when allocation cannot be given by geometrical criteria.</p>	<p>Scope: This European Standard specifies a test method for determining the air permeability of shutters that claim to conform to class 5 of thermal resistance airtight shutters according to standards prEN ISO 10077-1:1999 and prEN ISO 13125:1998, when allocation cannot be given by geometrical criteria.</p>
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Võtmesõnad: air permeability, air tightness, construction, definitions, doors, endings, gas permeability, sealing, testing, windows

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English version

Airtight shutters

Air permeability test

Fermetures étanches – Essai de
perméabilité à l'air

Luftdichte Abschlüsse – Prüfung der
Luftdurchlässigkeit

This European Standard was approved by CEN on 2000-10-27.

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 33 "Doors, windows, shutters, building hardware and curtain walling", the secretariat of which is held by AFNOR.

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 May 2001, and conflicting national standards shall be withdrawn at the latest by May 2001.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

It is part of a series of standards dealing with blinds and shutters for buildings as defined in prEN 12216:1995.

The additional thermal resistance provided by shutters positioned in front of windows in the closed position depends on their air permeability in the conditions defined by the standards prEN ISO 10077-1:1999, the criteria of attribution of a class of air permeability being developed in prEN 13125:1998.

The annexes A and B are normative.

1 Scope

This European Standard specifies a test method for determining the air permeability of shutters that claim to conform to class 5 of thermal resistance "airtight shutters" according to standards prEN ISO 10077-1:1999 and prEN 13125:1998, when allocation cannot be given by geometrical criteria.

2 Normative reference

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

prEN ISO 10077-1:1999	"Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 1 : simplified method (ISO/FDIS 10077-1:1999)"
EN 12114:2000	"Thermal performance of buildings - Air permeability of building components and building elements - Laboratory test method"

prEN 12216:1995	"Terminology and definitions for blinds and shutters"
prEN 13125:1998	"Shutters and blinds - Additional thermal resistance - Classification - Attribution of a class to a product"

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in prEN 12216:1995, and EN 12114:2000 together with the following apply :

3.1

test pressure

positive difference of static air pressure ΔP between the two faces of the test specimen. It is expressed in pascals [Pa].

3.2

positive difference of pressure positive

the pressure acting on the external face of the test specimen is greater than that acting on the internal face.

3.3

air permeability

airflow rate crossing the test specimen, under ambient conditions, expressed in m^3/h and by surface area of the shutter expressed in m^2 and for a positive difference of pressure of 10 Pa.

3.4

overall surface area

area calculated from the overall dimensions of the test specimen.

4 Principle

The principle of the test adopted is specified in EN 12114:2000, the test conditions being simplified in order to take into account the low difference in pressure involved in the thermal exchanges between the external face and the internal face of the shutters.

The test consists of a set of positive air pressure difference steps and measurement of the air flow rate of each step with a suitable device. The air permeability of the shutter is determined in clause 8.

5 Apparatus (see figure 1)

The test apparatus includes :

- An airtight casing with an opening in which the test specimen is installed.

The casing is installed in a closed room. The airtightness of the casing is checked according to Annex B. This casing is also sufficiently rigid to withstand test pressures without sustaining damage that could interfere with the results.

- Means of applying a controlled difference of air pressure to the test specimen (up to 100 Pa).