



SLOVENSKI STANDARD

SIST EN 13125:2001

01-september-2001

Dc`_bU]b`fc`Yh`!8 cXUhbUfcd`chbUi dcfbcgh!`8 c`c]h`j `fUhfYXUdfYdi gHbcgh]`nfU_U

Shutters and blinds - Additional thermal resistance - Allocation of a class of air permeability to a product

Abschlüsse - Zusätzlicher Wärmedurchlasswiderstand - Zuordnung einer Luftdurchlässigkeitsklasse zu einem Produkt

iTeh STANDARD PREVIEW

Fermetures pour baies équipées (fenêtres, stores intérieurs et extérieurs - Résistance thermique additionnelle - Attribution d'une classe de perméabilité a l'air a un produit

[SIST EN 13125:2001](https://standards.iteh.ai/catalog/standards/sist/en/13125-2001)

Ta slovenski standard je istoveten z: **EN 13125:2001**

<https://standards.iteh.ai/catalog/standards/sist/en/13125-2001>

ICS:

91.060.50	Vrata in okna	Doors and windows
91.120.10	Toplotna izolacija stavb	Thermal insulation

SIST EN 13125:2001

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 13125:2001

<https://standards.iteh.ai/catalog/standards/sist/ef92fea0-df48-4cec-999a-1971dc2f630f/sist-en-13125-2001>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13125

April 2001

ICS 91.060.50; 91.120.10

English version

Shutters and blinds - Additional thermal resistance - Allocation of a class of air permeability to a product

Fermetures pour baies équipées de fenêtres, stores
intérieurs et extérieurs - Résistance thermique additionnelle
- Attribution d'une classe de perméabilité à l'air à un produit

Abschlüsse - Zusätzlicher Wärmedurchlasswiderstand -
Zuordnung einer Luftdurchlässigkeitsklasse zu einem
Produkt

This European Standard was approved by CEN on 8 March 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

SIST EN 13125:2001

<https://standards.iteh.ai/catalog/standards/sist/ef92fea0-df48-4ccc-999a-1971dc2f630f/sist-en-13125-2001>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

CONTENTS

	Page
Foreword	3
1 Scope	3
2 Normative references	3
3 Terms and definitions	4
4 Shutters - Allocation of air permeability classes	4
4.1 Criteria for classes allocation	4
4.2 Minimum classes admitted without assessment	7
4.3 Conditions of allocation of class 5	7
5 External blinds, internal blinds, blinds incorporated into the glazing - Allocation of air permeability classes	9
5.1 Criteria for class allocation	9
5.2 External blinds	9
5.3 Internal blinds and blinds incorporated into the glazing	10
5.4 Blinds with one side with low emissivity coating	11
6 Presence of a top box (case of roller shutter)	11
6.1 Top box independent of window frame (roller shutter for subsequent installation for instance)	11
6.2 Top box installed inside the masonry (see Figure 3a) or with the framing (see Figure 3b)	11
ANNEX A (normative) Thermal resistance of PVC profiles curtain	13
ANNEX B (informative) Usual values of peripheral gaps for interior blinds and blinds incorporated into the glazing	14

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

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

Annex A is normative and annex B is informative.

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.

1 Scope

This European Standard specifies the classification criteria of shutters and internal and external blinds in relation with their air permeability for the calculation of additional thermal resistance given by these products according to EN ISO 10077-1.

This standard applies to shutters and blinds fitted to a window, a French window or a curtain walling in such a way that in extended and closed position they inclose an air layer of thickness roughly constant between 15 mm and 300 mm (shutters and blinds parallel to the window or to the façade).

This standard applies to the following shutters and blinds :

- **Shutters** : roller shutter, external venetian blind, wing shutter, sliding panel shutter, venetian shutter, concertina shutter, flat-closing concertina shutter ;
- **External blinds** : vertical awning, facade awning, conservatory awning ;
- **Internal blinds** : venetian blind, roller blind, vertical blind, pleated blind ;
- Blinds incorporated into glazing.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the 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).

EN 673	Glass in building - Determination of thermal transmittance (U value) - Calculation method
EN ISO 6946	Building components and building elements - Thermal resistance and thermal transmittance - Calculation method
ISO 8302	Thermal insulation - Determination of steady-state thermal resistance and related properties - Guarded hot plate apparatus
EN ISO 10077-1	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 1 : Simplified method (ISO 10077-1:2000)
prEN ISO 10077-2:1998	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Part 2 : Numerical method for frames (ISO/DIS 10077-2:1998)
EN ISO 10211-1	Thermal bridges in building construction - Heat flow and surface temperatures - Part 1: General calculation methods (ISO 10211-1:1995)
prEN 12216:1995	Terminology and definitions for blinds and shutters
EN 12835	Air tight shutters - Air permeability test

SIST EN 13125:2001

3 Terms and definitions <https://standards.iteh.ai/catalog/standards/sist/ef92fea0-df48-4ccc-999a-1971dc2f630f/sist-en-13125-2001>

For the purposes of this European Standard, the terms and definitions given in prEN 12216:1995 and EN ISO 10077-1 apply.

4 Shutters - Allocation of air permeability classes

4.1 Criteria for classes allocation

The air permeability criterion is expressed from geometrical considerations in terms of a total gap between shutter and its surrounding. The total gap is expressed as follows :

$$e_{\text{tot}} = e_1 + e_2 + e_3 \quad [\text{mm}]$$

where :

e_{tot} is the total gap

e_1 , e_2 , e_3 , are the average gap at the bottom, top and side of the shutter. These values are defined on Figure 1.

The gap conditions to be fulfilled will be specified by the shutter manufacturer in his installation instructions.

When the dimensions of the gap widths are not well defined, the air permeability is determined by test, according to EN 12835.

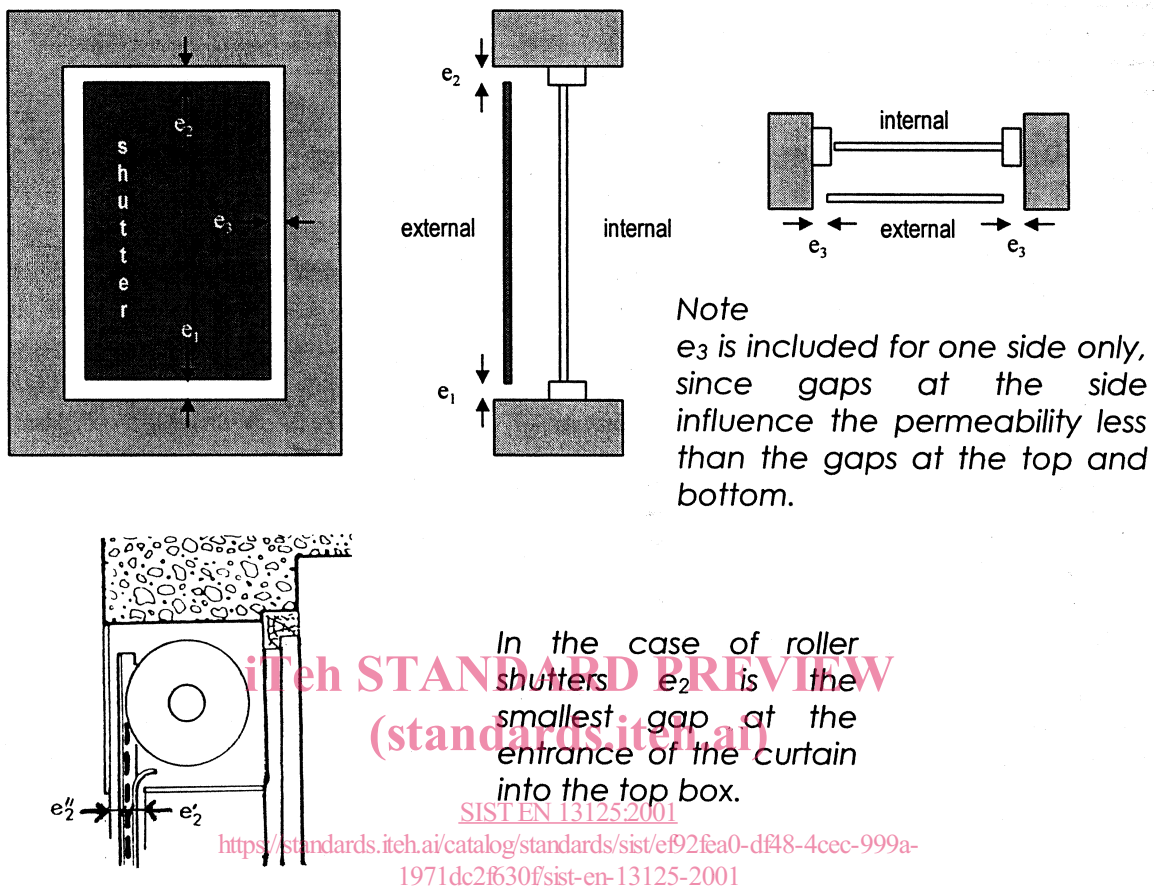


Figure 1 - Definition of edge gap widths

Class 1 : Shutters with very high air permeability

$$\Delta R = 0,08 \quad [\text{m}^2 \cdot \text{K/W}]$$

Shutters for which the total surface of slits (peripheral gaps, openings or slits within the curtain) is not greater than 25 % of the total curtain surface.

$$e_{\text{tot}} > 35 \text{ mm}$$

Class 2 : Shutters with high air permeability

$$\Delta R = 0,25R_{\text{sh}} + 0,09 \quad [\text{m}^2 \cdot \text{K/W}]$$

Shutters for which

- the curtain has no openings or slits
and

$$- 15 \text{ mm} < e_{\text{tot}} \leq 35 \text{ mm}$$

Class 3 : Shutters with average air permeability

$$\Delta R = 0,55R_{sh} + 0,11 \quad [m^2.K/W]$$

Shutters for which

- the curtain is without slits and with overlapped laths or slats
and
- $8 \text{ mm} < e_{tot} \leq 15 \text{ mm}$

Class 4 : Shutters with low air permeability

$$\Delta R = 0,8 R_{sh} + 0,14 \quad [m^2.K/W]$$

Shutters for which

- the curtain is without slits and with overlapped laths or slats
and
- $e_{tot} \leq 8 \text{ mm}$

Class 5 : "Air tight" shutters

$$\Delta R = 0,95R_{sh} + 0,17 \quad [m^2.K/W]$$

Shutters for which

- the curtain is without slits and with overlapped laths or slats
and
- $e_{tot} < 3 \text{ mm}$
and
- $e_1 + e_3 = 0$ or $e_2 + e_3 = 0$

R_{sh} is the thermal resistance of the shutter curtain.

The above equations are valid for :

$$R_{sh} < 0,3 \quad [m^2.K/W]$$

The thermal resistance value of the curtain R_{sh} is obtained :

- either by tests according to ISO 8302
- or by calculation according EN ISO 6946 for curtain with homogeneous materials or EN ISO 10211-1 for curtain with heterogeneous materials or profiles or according to prEN ISO 10077-2:1998 for profiles.

In the absence of measured or calculated values of R_{sh} , the thermal resistance of the PVC profiles in the curtain may be evaluated according to annex A.

The R_{sh} and ΔR values are given to two decimal places according to the following rule :

- $\geq 0,005 = 0,01$
- $< 0,005 = 0,00$

The R_{sh} value is not affected by a top box (see clause 6).

4.2 Minimum classes admitted without assessment

Table 1 gives minimum classes obtained by some types of shutters without having been proven e_{tot} , with the other conditions given in 4.1 having been fulfilled.

Table 1 - Minimum air permeability classes of shutters

Products	Minimal classes
Concertina shutter - Shutter with tilting slats or laths - Foldable shutter (wing or venetian shutter) with fixed openings	1
Shutter without openings or slits in extended position - External venetian blind with rigid joined laths in closed position	2
Flat-closing concertina shutter without openings or slots in extended position. Solid wing shutter closely adjusted	3
Roller shutter with strip gaskets (without slits in closed position)	4

iTeh STANDARD PREVIEW
(standards.iteh.ai)

4.3 Conditions of allocation of class 5

The criteria relating to class 5 are as follows:

<https://standards.iteh.ai/catalog/standards/sist/ef92fea0-df48-4ccc-999a-1971dc2f630f/sist-en-13125-2001>

a) roller shutter :

- e_3 is considered equal to 0 if strip gaskets are supplied in guide rails (brush or lip sealing), whatever the laths curvature ;
- e_1 is considered equal to 0 in presence of a strip gasket at bottom of the final lath ;
- e_2 is considered equal to 0 if any of the joint settings shown in Figures 2a and 2b are realised at the entrance of the roller shutter box.

Its installation needs additionally :

- realisation of air tightness of connection between the guide rails and the windows closure ;
- realisation of air tightness between the roller box and the masonry or framing (see Figures 3c and 3d) ;
- continuous contact with window-sill of the strip gasket at the bottom of the final lath.