# SLOVENSKI STANDARD
# SIST EN 1933:2000

**01-maj-2000**

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**Zunanja konzolna senļ ila - Odpornost proti obremenitvam zaradi zastajanja vode - Preskusna metoda**

Exterior blinds - Resistance to load due to water accumulation - Test method

Markisen - Widerstandsfähigkeit gegenüber der Belastung durch Wasseransammlung - Prüfverfahren



Stores extérieurs - Résistance a la charge due a l'accumulation d'eau - Méthode d'essai

**Ta slovenski standard je istoveten z:** **EN 1933:1998**



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**ICS:**

91.060.50 Vrata in okna Doors and windows

**SIST EN 1933:2000** **en**

# EUROPEAN STANDARD
# NORME EUROPÉENNE
# EUROPÄISCHE NORM

**EN 1933**

November 1998

ICS 91.060.50

Descriptors: buildings, roller, exterior, mechanical strength, loads : forces, water, tests

English version

## Exterior blinds - Resistance to load due to water accumulation - Test method

Stores extérieurs - Résistance à la charge due à l'accumulation d'eau - Méthode d'essai

Markisen - Widerstandsfähigkeit gegenüber der Belastung durch Wasseransammlung - Prüfverfahren

This European Standard was approved by CEN on 2 November 1999.

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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 Central Secretariat has the same status as the official versions.



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

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Ref. No. EN 1933:1998 E

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## FOREWORD

This European Standard has been prepared by Technical Committee CEN/TC 33 "Doors, windows, shutters and building hardware", 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of an identical text or by endorsement, at the latest by May 1999, and conflicting national standards shall be withdrawn at the latest by May 1999.

It is part of a package of standards dealing with blinds and shutters defined in prEN 12216.

The test method is linked to performance requirements for exterior blinds specified in a standard in preparation (WI 00033143 : "Exterior blinds - Requirements and classification").

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 a test method for determining the ability of exterior blinds to resist loads caused by the retention of rain water by the fabric.



This Standard is applicable to exterior blinds forming an overhang when they are in extended position. These are :



- folding arm blind
- trellis arm blind
- adjustable or fixed Dutch awning.

## 2. NORMATIVE REFERENCE

This European Standard incorporates by dated or undated references, 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.

| | |
|---|---|
| prEN 12216 | Terminology and definitions for blinds and shutters |
| prEN 12046 | Shutters and blinds - Measurement of operating force - Test methods |

## 3. DEFINITIONS

For the purposes of this Standard, the definitions given in prEN 12216 and in the standard in preparation (WI 00033143) apply together with the following :

### 3.1 Water pocket

A reservoir formed when, under the action of precipitation, the fabric of the external blind, in extended position, retains and accumulates water and suffers progressive deformation (see figure 1).

### 3.2 Slope

Angle of the fabric in relation to the horizontal expressed in degrees (see figure 1).

Does not apply to Dutch awning.

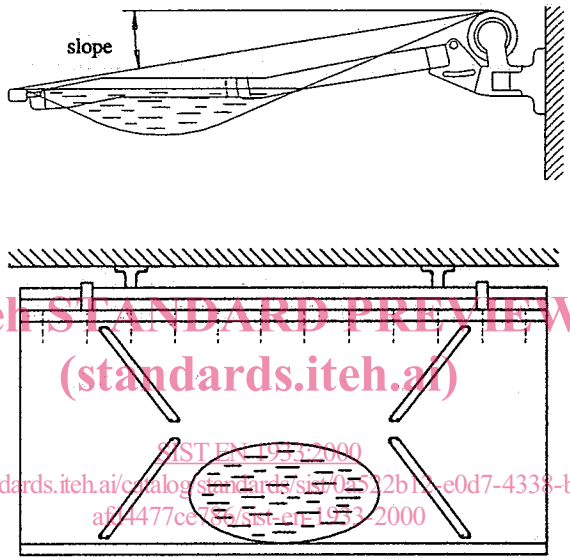





**Figure 1 : Water pocket caused by precipation (rain) for folding arm blind**

### 3.3 Drainage holes

Holes made in the fabric at carefully chosen points allowing the drainage of water retained by the fabric before water pockets form.

### 3.4 Projection

Distance AL measured horizontally with the blind in the fully extended position, between the wall and the front profile.

### 3.5 Width

Width L of the fabric, or the frame width for a Dutch awning.

## 4 TEST CONDITIONS

The extended blind is sprayed with a controlled amount of water and its mechanical performance is tested under the action of a weight of retained water.

## 5 EQUIPMENT

### 5.1 Test rig

The test rig is made up of rigid support in which the blind is installed using its fixtures according to the installation instruction. For trellis arm and folding arm blinds, the angle below the horizontal is 14° (slope 25%).

### 5.2 Watering spray pipe

The shower of water is obtained using a row of 1 1/2" (38 mm diameter) pierced with holes of $2{,}0\ ^{+0{,}5}_{0}$ mm diameter spaced at regular intervals of 50 mm ± 1 mm and positioned above the blind as shown in figures 2a) and 2b).

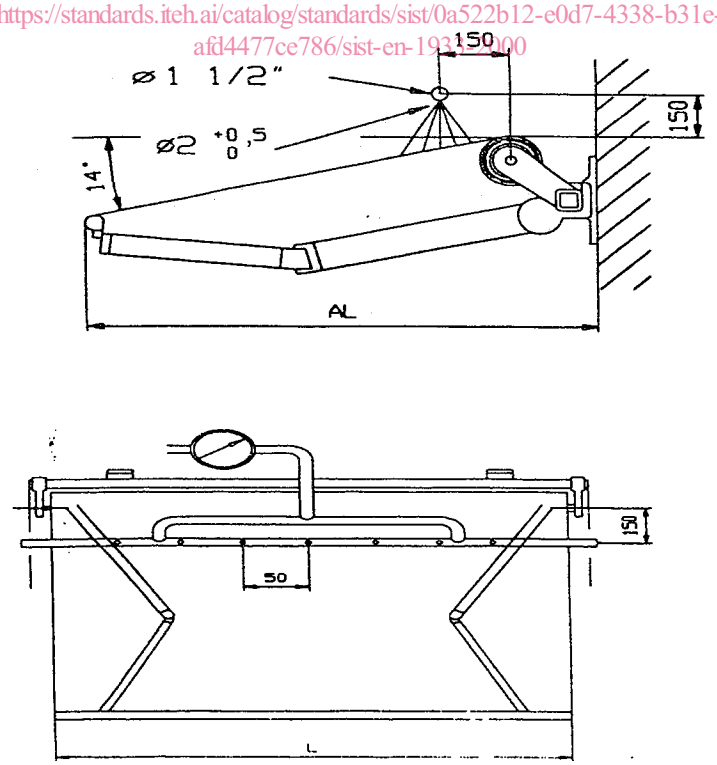
A uniform spraying requires a two point entry of water to the spray pipe equidistant from the middle. The distance between the two entry points is between one third and one half of the total pipe length.

The pipe length shall be at least the width of the awning. If the awning width is less, it shall be positioned in the middle of the water spray pipe. The extra holes shall be sealed.



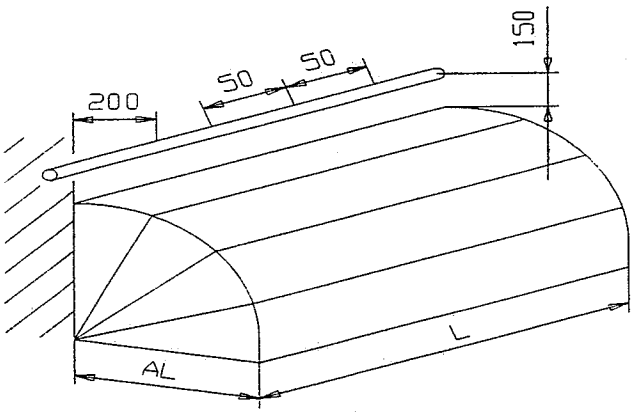
Dimensions in millimetres






**2a) : Projecting and trellis arm blinds**

Dimensions in millimetres




**2b) : Dutch awning**

**Figure 2 : Positioning of watering spray pipe and holes**

### 5.3 Measuring equipment

An installation capable of measuring the water flow to an accuracy of ±5%.

## 6 TEST SAMPLE DIMENSIONS



### 6.1 Folding and trellis arm blinds



Use the maximum dimensions (width and projection) of the manufacturer's specification for a pair of arms.

Smaller sizes awnings receive the same class.

### 6.2 Dutch awning

Use the maximum dimensions (width and projection) of the manufacturer's specification for the maximum distance between the arms.

Smaller sizes awnings receive the same class.

## 7 TESTS

For adjustable blinds, measure and record the operating force Pi, according to prEN 12046, prior to the test.

With the flow of water set for the class being tested, the spraying is maintained for 1 h. In the case of class 1 : 17 l/m²/h, for class 2 : 56 l/m²/h (surface = L x AL).

The test method described also applies to test the correct functioning of the drainage holes where they exist.

Once the showering has stopped, the water has drained and the fabric dried for 30 mn, measure the operating force Pe as described in prEN 12046.