



# SLOVENSKI STANDARD

## SIST EN 12488:2016

01-november-2016

---

### Steklo v gradbeništvu - Priporočila za zasteklitev - Načela sestavljanja navpične in poševne zasteklitve

Glass in buildings - Glazing recommendations - Assembly principles for vertical and sloping glazing

Glas im Bauwesen - Empfehlungen für die Verglasung - Verglasungsgrundlagen für vertikale und abfallende Verglasung

Verre dans la construction - Recommandations pour la mise en oeuvre - Principes de pose pour vitrage vertical et incliné

[SIST EN 12488:2016](#)

[https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-](https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016)

[f4cb7dea3790/sist-en-12488-2016](https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016)

**Ta slovenski standard je istoveten z: EN 12488:2016**

---

#### **ICS:**

81.040.20      Steklo v gradbeništvu      Glass in building

**SIST EN 12488:2016**

**en,fr,de**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 12488:2016](#)

<https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016>

EUROPEAN STANDARD

EN 12488

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2016

ICS 81.040.20

English Version

## Glass in building - Glazing recommendations - Assembly principles for vertical and sloping glazing

Verre dans la construction - Recommandations pour la mise en oeuvre - Principes de pose pour vitrage vertical et incliné

Glas im Bauwesen - Empfehlungen für die Verglasung - Verglasungsgrundlagen für vertikale und abfallende Verglasung

This European Standard was approved by CEN on 8 April 2016.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>	<b>Page</b>
European foreword.....	4
Introduction .....	5
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	7
4 Basic requirements .....	12
4.1 General.....	12
4.2 Support of glazing .....	12
4.3 Mechanical stability .....	12
4.4 Durability .....	13
4.4.1 Ultraviolet attack on sensitive components.....	13
4.4.2 Chemical and atmospheric attack on sensitive components .....	13
4.4.3 Weather tightness.....	13
4.4.4 Additional considerations for sloping glazing.....	13
4.5 Special requirements.....	13
5 Requirements for the components .....	14
5.1 Frame selection, materials and finishes .....	14
5.1.1 Design of the frame.....	14
5.1.2 Selection .....	14
5.1.3 Frame materials .....	15
5.2 Sealants.....	15
5.3 Preformed strip materials .....	16
5.4 Putty.....	16
5.5 Glazing blocks.....	17
5.5.1 General.....	17
5.5.2 Setting blocks.....	18
5.5.3 Location block .....	19
5.5.4 Distance pieces.....	20
5.5.5 Temporary blocks.....	21
Annex A (informative) Recommendations for drainage and ventilation.....	22
A.1 General.....	22
A.2 Drainage and ventilation per module: .....	22
A.3 Cascading drainage and ventilation .....	24
Annex B (informative) Aspects for determining the rebate dimensions .....	26
B.1 General.....	26
B.2 Insulating glass unit .....	27
Annex C (informative) Positioning of glazing blocks as a function of frame type.....	28
C.1 General.....	28
C.2 Position of the glazing blocks for vertical windows and doors .....	29
C.3 Position of the glazing blocks for sloped glazings .....	35
Annex D (informative) Additional considerations for sloped glazing .....	37

<b>D.1</b>	<b>Water entrapment.....</b>	<b>37</b>
<b>D.2</b>	<b>Snow and ice entrapment.....</b>	<b>37</b>
	<b>Bibliography .....</b>	<b>39</b>

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 12488:2016](https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016)

<https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016>

**EN 12488:2016 (E)****European foreword**

This document (EN 12488:2016) has been prepared by Technical Committee CEN/TC 129 “Glass in building”, the secretariat of which is held by NBN.

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 December 2016, and conflicting national standards shall be withdrawn at the latest by December 2016.

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

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

**ITEH STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 12488:2016

<https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016>

## Introduction

This European Standard deals with the glazing system i.e. the glazing, the glazing blocks, the sealants, the gaskets and the components used to assemble the glazing into a frame, as well as the rebate.

It gives the basic principles to avoid damages due to the construction. The observance of these recommendations will ensure a reasonable working life of the glazing. Additional requirements and precisions are to be found in the national regulations and/or national codes of practice, in order to deal with regional particularities due to climate, professional habits, availability of materials, etc. Special requirements can also be specified by manufacturers of components of the glazing system, including glazing.

Mechanical, thermal, chemical and moisture conditions are essential to preserve the functionality and the operability of the glazing in the long term. Information with regards to the durability of a glass product is given in the applicable harmonized European Standard (hEN).

## iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 12488:2016](https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016)

<https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016>

**EN 12488:2016 (E)****1 Scope**

This European Standard defines principles of glazing as well as recommendations on the selection of components, e.g. frame sections, beads, drainage holes, etc., for fitting glazing into frames of any material.

This European Standard applies to all basic types of edge supported vertical and sloping glazing systems, in all types of fixed or opening frames used in buildings.

This European standard specifies also the functions, requirements and installation of glazing blocks within a frame during its manufacturing, transportation, installation and operational life. The standard applies to glazing blocks used for all types of flat or curved glass, as well as to derived processed types of glass.

For certain glass products, e.g. fire resistant glazing, security glass, other or additional requirements, rules or recommendations may apply.

The standard is applicable to European climate conditions.

This European Standard does not apply to the following:

- glass blocks and glass pavers (EN 1051-1);
- channel-shaped glass (EN 572-7);
- structural sealant glazing (see EN 13022-1 and EN 13022-2 and ETAG 002);
- adhesively bonded glazing in window;
- point fixed glazing;
- greenhouses (see EN 13031-1).

SIST EN 12488:2016  
<https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016>

As this standard gives basic assembly principles only, national requirements, rules or recommendations may also apply.

**2 Normative references**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1279-1, *Glass in Building — Insulating glass units — Part 1: Generalities, dimensional tolerances and rules for the system description*

EN 12365-1, *Building hardware — Gasket and weatherstripping for doors, windows, shutters and curtain walling — Part 1: Performance requirements and classification*

EN 13241-1, *Industrial, commercial and garage doors and gates — Product standard — Part 1: Products without fire resistance or smoke control characteristics*

EN 13830, *Curtain walling — Product standard*

EN 14351-1, *Windows and doors — Product standard, performance characteristics — Part 1: Windows and external pedestrian doorsets without resistance to fire and/or smoke leakage characteristics*



prEN 14351-2, *Windows and doors — Product standard, performance characteristics — Part 2: Internal pedestrian doorsets without resistance to fire and/or smoke leakage characteristics*

EN 16034, *Pedestrian doorsets, industrial, commercial, garage doors and openable windows — Product standard, performance characteristics — Fire resisting and/or smoke control characteristics*

EN 15651-2, *Sealants for non-structural use in joints in buildings and pedestrian walkways — Part 2: Sealants for glazing*

EN ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868)*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

NOTE Whenever the word “frame” is used, it refers also to the sash and casement, according to EN 12519.

#### 3.1

##### **glazing**

glass product that is monolithic, laminated, and/or insulating glass unit

Note 1 to entry: In French called “vitrage” and in German called “Glasaufbau”.

#### 3.2

##### **vertical glazing**

glazing which is not more than 15° from vertical, either inwards or outwards

#### 3.3

##### **sloping glazing**

glazing which is sloping between 15° and 85° from the vertical

Note 1 to entry: Glazing between 85° and 90° may be subjected to water ponding that should be prevented by proper design

#### 3.4

##### **glazing system**

materials and the conditions under which the glazing is installed into a frame

#### 3.5

##### **drained and pressure equalized glazing system**

glazing system that enable any water and water vapour which has entered the rebate to be effectively removed

Note 1 to entry: Openings for ventilation and drainage in the frame are designed to achieve partial water vapour pressure equalization and evacuation of water from the glazing rebate to the outside of the building.

Note 2 to entry: Recommendations for drainage and ventilation are given in informative Annex A.

#### 3.6

##### **fully bedded glazing system**

sealant that completely covers the perimeter of the glazing

Note 1 to entry: Fully bedded system is not recommended for insulating glass units and laminated glass.

**EN 12488:2016 (E)****3.7****glazing rebate**

part of a frame or surround into which the glazing is glazed

Note 1 to entry: See Figure 1.

**3.8****glazing rebate platform**

face of the glazing rebate which forms an angle with the upstand

Note 1 to entry: See Figure 1.

Note 2 to entry: This can be opened or closed.

**3.9****glazing rebate upstand**

fixed face of the glazing rebate parallel to the face of the glazing

Note 1 to entry: See Figure 1.

**3.10****glazing bead**

component holding the glazing in place in the glazing rebate

Note 1 to entry: See Figure 1.

Note 2 to entry: For vertical windows, the bead may be fixed either internally or externally. For sloping glazing, the bead is fixed externally.

[SIST EN 12488:2016](https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016)

**3.11****drainage channel**

channel in the rebate platform aiming at collecting possible water coming from infiltration and/or condensation, in order to evacuate it to the exterior of the frame, and to connect rebate spaces to equalise pressure around the glazing

Note 1 to entry: See Figure 1.

**3.12****drainage opening**

opening that evacuate the possible water collected in the drainage channel to the outside of the frame

Note 1 to entry: See Figure 1.

**3.13****glass retention area**

**r**

height of the perimeter of the glass that transmits loads to the frame

Note 1 to entry: See Figure 2 and Annex B.

**3.14****free intersection****f**

non load-bearing part of the glass around the perimeter

Note 1 to entry: See Figure 2 and Annex B.

**3.15****mechanical edge cover****m**

sum of the glass retention area (r) and the free intersection (f)

Note 1 to entry: See Figure 2 and Annex B.

**3.16****edge clearance****Jp**

distance, which may be variable, between the edge of the glazing and the glazing rebate platform

Note 1 to entry: See Figure 2 and Annex B.

**3.17****rebate depth****t**

sum of the mechanical edge cover (m) and the edge clearance (Jp)

Note 1 to entry: See Figure 2 and Annex B.

Note 2 to entry: In German: Glasfalzhöhe. [SIST EN 12488:2016](https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016)**3.18****face clearance****d**

distance between either glazing and the rebate upstand or glazing and the bead

Note 1 to entry: See Figure 2 and Annex B.

**3.19****glazing block**

piece of suitable material placed between the glazing and the frame preventing direct contact between the two of them

Note 1 to entry: See Figure 3 and Annex C.

Note 2 to entry: Glazing blocks may not take over any loads from the construction.

Note 3 to entry: Glazing blocks include setting blocks, location blocks and distance pieces.

**3.20****setting block**

glazing block transferring the load of the glazing via the hardware and/or frame to the structure of the building

Note 1 to entry: See Figure 3 and Annex C.

iTeh STANDARD PREVIEW  
(standards.iteh.ai)<https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016>

## EN 12488:2016 (E)

## 3.21

**location block**

glazing block holding the correct position of the glazing in the frame

Note 1 to entry: See Figure 3 and Annex C.

## 3.22

**distance piece**

glazing block used to transmit the loads perpendicular to the plane of glazing

Note 1 to entry: See Figure 3 and Annex C.

Note 2 to entry: This function can also be ensured by a strip or a gasket.

## 3.23

**compensation block**

block that create a flat platform for the correct positioning of setting block or location block in certain frame profiles

Note 1 to entry: See Figure 3.

Note 2 to entry: Compensation block is generally used with aluminium or plastic profiles.

## 3.24

**temporary block**

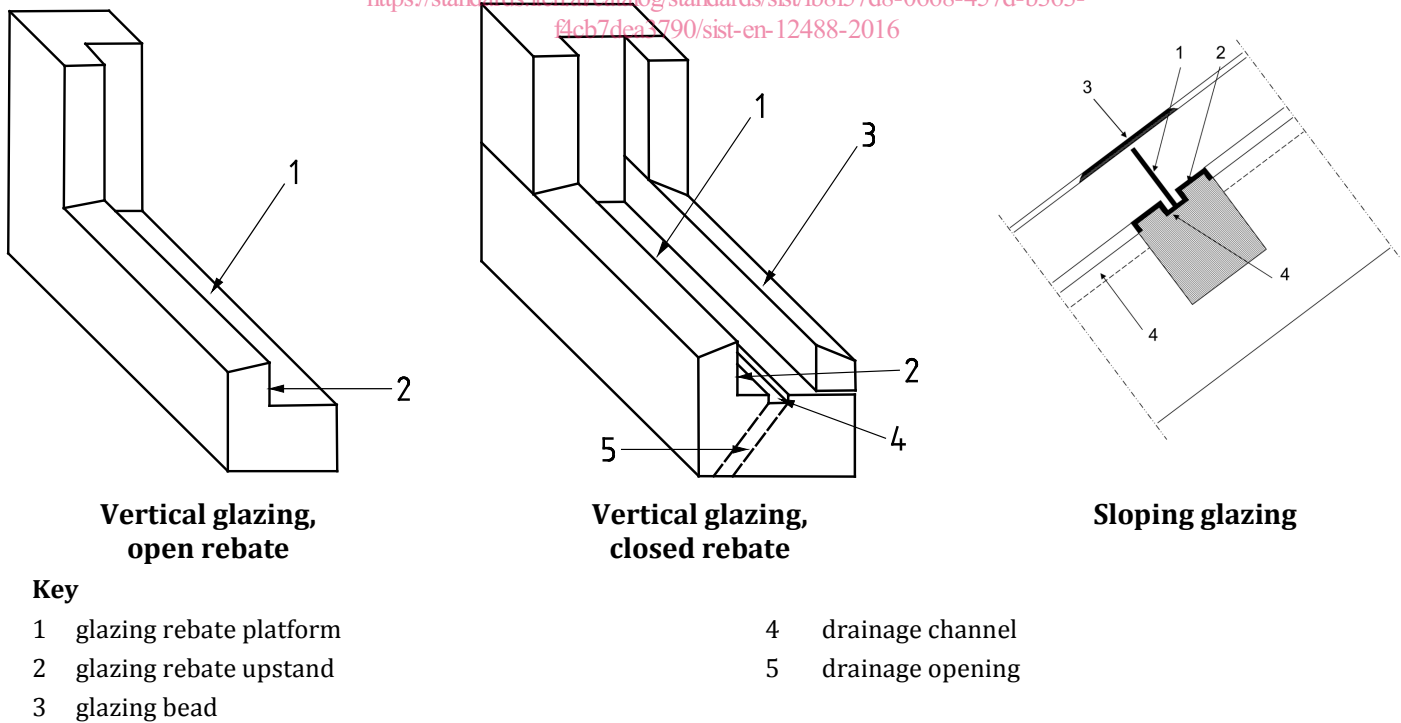
additional glazing block used to ensure the correct positioning of the glazing when glazed frames are transported to a work site, and that may be removed before installation of the glazed frame into the building

iTeh STANDARD PREVIEW

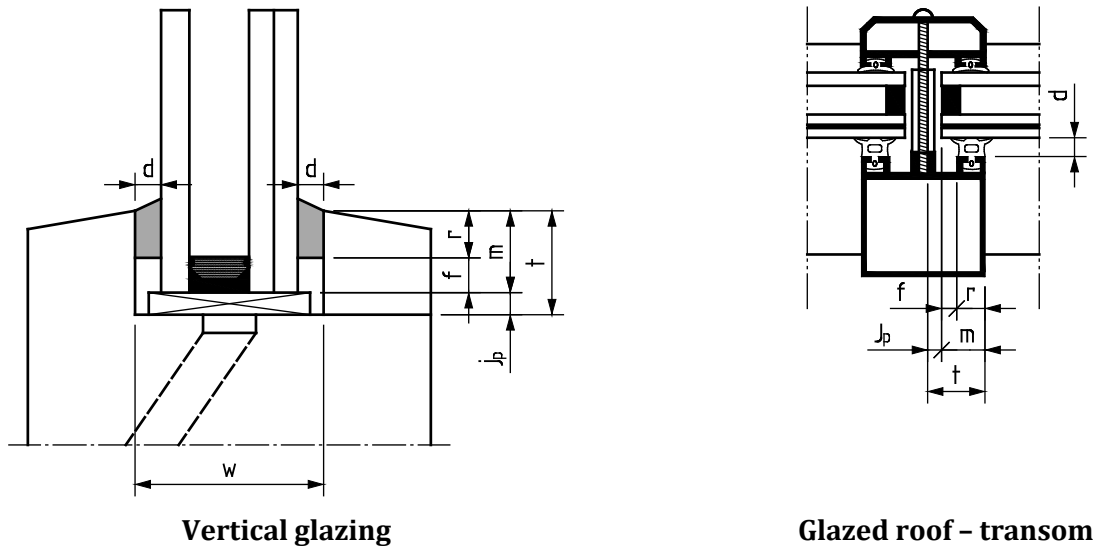
(standards.iteh.ai)

SIST EN 12488:2016

<https://standards.iteh.ai/catalog/standards/sist/fb8f57d8-0668-457d-b363-f4cb7dea3790/sist-en-12488-2016>



**Figure 1 — Definition of a glazing rebate**

**Key**

r = glass retention area

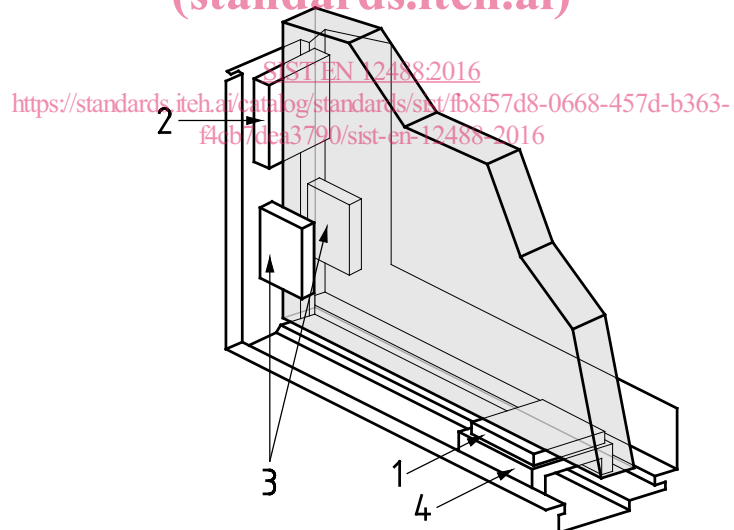
f = free intersection

m = mechanical edge cover =  $r + f$ 

w = width of glazing rebate

 $J_p$  = edge clearancet = rebate depth =  $m + J_p$ 

d = face clearance

**Figure 2 — Symbols and terms for glazing rebate dimensions****(standards.iteh.ai)****Key**

1 setting block

2 location block

3 distance pieces

4 compensation block

**Figure 3 — Types of blocks**