RIPPFASSAADID. NIHKEÜHENDUSTE TUGEVUSE MÄÄRAMINE. KATSEMEETOD JA NÕUDED

Curtain walling - Determination of the strength of shear connections - Test method and requirements

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16758:2021 sisaldab Euroopa standardi EN 16758:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 16758:2021 consists of the English text of the European standard EN 16758:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.05.2021.	Date of Availability of the European standard is 12.05.2021.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 16758:2016

English Version

Curtain walling - Determination of the strength of shear connections - Test method and requirements

Façades rideaux - Détermination de la résistance des assemblages - Méthode d'essai et exigences

Vorhangfassaden - Bestimmung der Beanspruchbarkeit von auf Abscheren beanspruchten Verbindungen - Prüfverfahren und Anforderungen

This European Standard was approved by CEN on 12 April 2021.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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European foreword

This document (EN 16758:2021) 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 November 2021, and conflicting national standards shall be withdrawn at the latest by November 2021.

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

This document supersedes EN 16758:2016.

The main changes compared to the previous edition, EN 16758:2016, are listed below:

— new specifications were added in “5.1 General” when using an infill panel to apply the forces,

— new sample restraints “S” were added in figures where missing and the direction of application of “S” was modified in order to have the equilibrium of forces applied to samples represented in figures,

— new figures for cruciform/half cruciform glass support, showing the application of dead load and the position of DT, were added,

— the dimensions of the samples were modified, as described in 5.2,

— the deformation speed for vertical and horizontal loading was modified, as specified in 5.3,

— new specifications for horizontal loading were added (see 5.3.3.1),

— new subclause (5.3.4) was added, regarding the interpretation of the loading records with reference to Annex A and Annex B,

— more detailed information was added in the test report,

— in Annex A and Annex B, new reference to ISO 16269-6 and introduction of the variable $\tau_{\alpha\beta}$ as a function of the number of test pieces, in order to determine the design load of the connection.

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

1 Scope

This document specifies test methods for the determination of bearing capacity (ultimate limit state and serviceability limit state), of connections between curtain walling framing members which cannot be calculated in accordance with current codes or conventional calculations based upon the strength of the materials.

Mechanical performances of the curtain walling connections are already assessed in accordance with the provisions described in EN 13830. Additional information with respect to mechanical performance of the connections and direct applications can be determined with this document (see Annex C).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13119, *Curtain walling — Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13119 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
connection
set of components designed to transfer loads between framing members

EXAMPLE Cleat, screw and fittings.

4 Symbols and abbreviations

For the purposes of this document, the following symbols apply.

a	Total height of the sample
a_1, a_2	Partial height of the sample
b	Distance between the centre of gravity axes of the mullions
c_w	Elasticity constant
d	Distance between the vertical forces applied on the transom
C_h	Distance between the centre of gravity axis of the mullion and the horizontal forces
C_v	Distance between the centre of gravity axis of the mullion and the vertical forces
DT	Displacement transducer
e	Distance from the position of (α), the contact area between the internal infill gasket and the transom, and the vertical plane containing the centre of the gravity of the infill
$f_{ave,ela}$	Average of glass support deflections by $F_{ave,ela}$
F_{ave}	Average force