



SLOVENSKI STANDARD
SIST EN 771-1:2004/A1:2005
01-april-2005

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Specification for masonry units - Part 1: Clay masonry units

Festlegungen für Mauersteine - Teil 1: Mauerziegel

Spécification pour les éléments de maçonnerie - Partie 1: Briques de terre cuite

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Ta slovenski standard je istoveten z: EN 771-1:2003/A1:2005

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ICS:

91.100.25

SIST EN 771-1:2004/A1:2005

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ICS 91.100.30

English version

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Spécification pour les éléments de maçonnerie - Partie
1: Briques de terre cuite

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This amendment A1 modifies the European Standard EN 771-1:2003; it was approved by CEN on 29 December 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. 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.

This amendment 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.

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

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

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

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Foreword

This document (EN 771-1:2003/A1:2005) has been prepared by Technical Committee CEN/TC 125 "Masonry", the Secretariat of which is held by BSI.

This Amendment to the European Standard EN 771-1:2003 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2005, and conflicting national standards shall be withdrawn at the latest by August 2005.

This document 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).

For relationship with EU Directive(s), see modifications to informative Annex ZA, which is an integral part of this document.

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

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1 Modification in Scope

Delete penultimate paragraph and substitute:

"This document does not specify standard sizes for clay masonry units, nor does it specify standard work dimensions, angles and radii of specially shaped clay masonry units. This document does not include method of measurement, tolerance and range requirements for dimensions, angles and radii characteristics of specially shaped clay masonry units."

2 Modification in Normative references

Add the following references:

"EN 772-9, Methods of test for masonry units — Part 9: Determination of volume and percentage of voids and net volume of clay and calcium silicate masonry units by sand filling

EN 772-20, Methods of test for masonry units — Part 20: Determination of flatness of faces of masonry units

EN 998-2, Specification for mortar for masonry — Part 2: Masonry mortar

EN 1996-1-1, Eurocode 6: Design of masonry structures — Part 1-1: Common rules for reinforced and unreinforced masonry structures

EN 1996-1-2, Eurocode 6: Design of masonry structures — Part 1-2: General rules — Structural fire design"

3 New 3.35 combined thickness of webs and shells

Add the following new definition:

"3.35

combined thickness of webs and shells

the sum of the thicknesses of the shells and webs from one face or header of a masonry unit to the opposite face or header respectively along whichever path, via the formed voids, gives the smallest value, expressed as a percentage of the unit width or length respectively

4 Modifications in 5.2.1.1

In line 4, delete "NOTE 1" and substitute "NOTE"

Add the following immediately below Figure 1:

"The following measurement procedure shall be used:

- when at least two of the work dimensions of the unit are not greater than 250 mm, 125 mm and 100 mm for length, width and height respectively procedure **b)** as described in EN 772-16 shall be followed using a calliper with overlapping jaws with the jaws aligning with the dotted lines in Fig. 1 b) of EN 772-16:2000 with the exception for the measurement of the height which is determined as the average of two measurements, where the second measurement is transverse to the dotted line at the middle of the unit. The width of the jaws shall be not less than 5 and not greater than 10 mm.
- for all other units procedure **a)** as described in EN 772-16 shall be followed."

Delete "The manufacturer shall also declare drawings to achieve these requirements" and substitute the following:

5.2.1.2 Dimensional tolerances (LD units)

5.2.1.2.1 Tolerances (LD units)

The manufacturer shall also declare which of the tolerance categories for mean values in 5.2.1.2.2 the clay masonry units fulfil.

When relevant to the uses for which the unit is put on the market, the manufacturer shall also declare which of the range categories in 5.2.1.2.3 a given consignment of the clay masonry units fulfils.

NOTE This additional declaration may be made for example in relation to:

- achievement of the required accuracy (planarity, bonds and thin layer joints) of the masonry;
- use of detailed project drawings to achieve these requirements."

5 Modifications in 5.2.1.2

Delete:

"5.2.1.2 Tolerances (LD units)

Mean value"

and substitute "5.2.1.2.2 **Tolerance of the mean value (LD units)**"

In line 2 delete "procedure stated below" and substitute "procedure stated in 5.2.1.1,"

Delete "Range" and substitute "5.2.1.2.3 **Range (LD units)**"

Delete "When declared and the clay masonry units . . . procedure stated below . . ." and substitute "When declared and regular shaped clay masonry units . . . procedure in 5.2.1.1, . . ."

Delete:

" Measurement procedure

The following measurement procedure procedure **a**) as described in EN 772-16 shall be followed."

6 New 5.2.1.2.4 Flatness of bed faces (LD units)

Add the following new subclause:

"5.2.1.2.4 Flatness of bed faces (LD units)

When clay masonry units are intended to be used with thin layer mortar, the manufacturer shall declare the maximum deviation from flatness of the bed faces.

When regular shaped clay masonry units are sampled from a consignment in accordance with Annex A and tested in accordance with EN 772-20, the deviation from flatness of the bed faces shall not exceed the declared value.

7 New 5.2.1.2.5 Plane parallelism of bed faces (LD units)

Add the following new subclause:

5.2.1.2.5 Plane parallelism of bed faces (LD units)

When clay masonry units are intended to be used with thin layer mortar, the manufacturer shall declare the maximum deviation from plane parallelism of the bed faces.

When regular shaped clay masonry units are sampled from a consignment in accordance with Annex A and tested in accordance with EN 772-16 by procedure **d)**, the deviation from plane parallelism of the bed faces shall not exceed the declared value.

8 Modification in 5.2.2.1 General (LD units)

Delete the existing text after Figure 2 and substitute the following:

"When relevant to the uses, for which clay masonry (LD) units are put on the market, the configuration shall be declared. The declaration may be made by reference to one or another of the groups defined in EN 1996-1-1 or EN 1996-1-2 and/or it may include one or more items such as those in the following list, as relevant:

- shape and features, including the direction of perforations (by means of a drawing or illustration, when relevant);
- volume of all formed voids as a percentage of the length x width x height of the unit;
- volume of the largest of any formed voids as a percentage of the length x width x height of the unit;
- volume of grip holes as a percentage of the length x width x height of the unit;
- thickness of webs;
- thickness of shells;
- combined thickness of webs and shells from face to face;
- combined thickness of webs and shells from header to header;
- area of voids on a bed face as a percentage of the length x width of the unit;

NOTE The header of clay masonry units may have interlocking features, e.g. mortar pockets, tongue and groove systems. The face of clay masonry units may have a surface-profile (rendering keyways).

Each declared value shall be stated as either an upper limit or a lower limit or as a range of values. When clay masonry units are sampled from a consignment in accordance with Annex A and tested in accordance with EN 772-16, EN 772-9 and EN 772-3, as specified below, the mean value derived from measurements of the test sample shall be within the range or limit declared."

9 Modification in 5.2.2.2 Thickness of shells and webs (LD units)

In the first paragraph, delete the second sentence "The minimum ...appropriate."

10 Modification in 5.2.3.1 Gross dry density (LD units)

Add new final paragraph:

“In addition, the manufacturer may declare the minimum and maximum individual values of gross dry density.”

11 Modification in 5.2.3.2 Net dry density (LD units)

At the start of the first sentence delete “The” and substitute the following:

“When relevant to the uses for which the unit is put on the market, the”

Add new final paragraph:

“In addition, the manufacturer may declare the minimum and maximum individual values of net dry density.”

12 Modifications in 5.2.4 Compressive strength (LD units)

Delete existing text and substitute the following:

“When relevant to the uses for which the unit is put on the market and in all cases for masonry units intended to be used in elements subject to structural requirements, the mean compressive strength shall be declared by the manufacturer. The manufacturer shall also declare the normalized compressive strength when relevant.

NOTE 1 The manufacturer may also inform in what way the declared compressive strength fits into a national classification system.

NOTE 2 EN 772-1 gives instructions on how to convert the unit compressive strength into the normalized compressive strength.

In addition, the manufacturer shall declare whether the clay masonry unit is Category I or Category II.

When the clay masonry units are sampled from a consignment in accordance with Annex A and tested in accordance with EN 772-1 using the surface preparation method described in 7.2.4 of EN 772-1: 2000 and conditioned in accordance with 7.3.2 of EN 772-1: 2000 then

- mean compressive strength of the specified number of clay masonry units from a consignment shall be not less than the declared compressive strength;
- individual strengths of specimens measured within the test sample shall be not less than 80% of the declared value.

The declaration shall relate to and indicate the orientation(s) of the clay masonry units as tested, the methods of bedding the units and whether any voids present are intended to be fully filled with mortar. If the grinding process significantly alters the contact area of the faces tested and the capping procedure is thereby used this shall be declared.

NOTE 3 The requirements for compressive strength given in this clause are not necessarily applicable to specially shaped and accessory masonry units.”

13 Modification in 5.3.1 Dimensions and tolerances (HD units)

Delete existing subclause 5.3.1 and substitute the following:

"5.3.1 Dimensions and tolerances (HD units)