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Timber structures - Test methods - Joints made with punched metal plate fasteners

## EESTI STANDARDI EESSÕNA

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English Version

## Timber structures - Test methods - Joints made with punched metal plate fasteners

Structures en bois - Méthodes d'essai - Assemblages réalisés avec des connecteurs métalliques à plaque emboutie

Holzbauwerke - Prüfverfahren - Verbindungen mit Nagelplatten

This European Standard was approved by CEN on 7 November 2014.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 1075:2014) has been prepared by Technical Committee CEN/TC 124 "Timber Structures", 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of an identical text or by endorsement, at the latest by June 2015 and conflicting national standards shall be withdrawn at the latest by June 2015.

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 supersedes EN 1075:1999.

Compared to EN 1075:1999, the following changes have been made:

- a) replacement of EN 28970 by EN ISO 8970;
- b) modification of definition in 3.5 for density;
- c) modification of the formula in 6.6.1 for anchorage capacity;
- d) improvement of figures.

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.

## 1 Scope

This European Standard specifies the test methods for determining the strength capacity and stiffness of joints made with punched metal plate fasteners in load bearing timber structures, being used to join two or more pieces of timber of the same thickness in the same plane.

The properties measured are:

- load-slip characteristics and maximum load resulting from the lateral resistance of the embedded projections, at various angles between the direction of the applied force and
  - the axis of the fastener (load-fastener angle  $\alpha$ ),
  - the direction of the grain of the timber (load-grain angle  $\beta$ ),
- the tension capacity of the fastener at various angles  $\alpha$ ,
- the compression capacity of the fastener at various angles  $\alpha$ ,
- the shear capacity of the fastener at various angles  $\alpha$ .

A nail root test method is shown in Annex A.

## 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 336, *Structural timber — Sizes, permitted deviations*

EN 14358, *Timber structures — Calculation of characteristic 5-percentile values and acceptance criteria for a sample*

EN 26891:1991 *Timber structures — Joints made with mechanical fasteners — General principles for the determination of strength and deformation characteristics (ISO 6891:1983)*

EN ISO 8970, *Timber structures — Testing of joints made with mechanical fasteners — Requirements for wood density (ISO 8970)*

## 3 Terms and definitions

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

### 3.1

#### **punched metal plate**

fastener made of metal plate of nominal thickness not less than 0,9 mm and not more than 3,0 mm, having integral projections punched out in one direction and bent perpendicular to the base of the metal plate

### 3.2

#### **major axis of fastener**

direction giving the highest tension capacity per unit width of the fastener

Note 1 to entry: In many cases the punching pattern of the fastener gives rise to two main directions, perpendicular to each other, with different capacity properties.