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Träkonstruktioner – Dymplingformade förbindares flytmoment – Provning

**Timber structures – Test methods – Determination of the
yield moment of dowel type fasteners**



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Denna standard ersätter SS-EN 409, utgåva 1.

The European Standard EN 409:2009 has the status of a Swedish Standard. This document contains the official English version of EN 409:2009.

This standard supersedes the Swedish Standard SS-EN 409, edition 1.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 409

April 2009

ICS 91.080.20

Supersedes EN 409:1993

English Version

Timber structures - Test methods - Determination of the yield moment of dowel type fasteners

Structures en bois - Méthodes d'essais - Détermination du moment plastique des organes d'assemblage de type tige

Holzbauwerke - Prüfverfahren - Bestimmung des Fließmoments von stiftförmigen Verbindungsmitteln

This European Standard was approved by CEN on 2 November 2006.

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 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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

This document (EN 409:2009) has been prepared by Technical Committee CEN/TC 124 "Timber structures", the secretariat of which is held by SFS.

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of an identical text or by endorsement, at the latest by October 2009, and conflicting national standards shall be withdrawn at the latest by October 2009.

This document supersedes EN 409:1993.

The following changes have been introduced in this version of EN 409:

- references added in Clause 2;
- symbols added in 4;
- text of 6.5 modified and extended;
- Figure 4 added;
- items added in 6.7.

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1 Scope

This European Standard specifies a method for determining the yield moment of dowel type fasteners.

2 Normative references

The following referenced documents are indispensable for the application 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 14592, *Timber structures — Dowel-type fasteners — Requirements*

3 Terms and definitions

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

3.1

dowel type fastener

fasteners specified in EN 14592

3.2

yield moment

bending moment when the specimen is deformed through a prescribed rotation angle

4 Symbols and abbreviations

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

d nominal dowel type diameter according to EN 14592, in millimetres

F_1, F_3 maximum support loads on the dowel type fastener, in newtons

F_2, F_4 test loads applied to the dowel type fastener, in newtons

l_1, l_3 distances between loading points and the nearest support, in millimetres, see Figure 1

l_2 free length of the nail in millimetres, see Figure 1

M_y yield moment of the dowel type fastener, in newton millimetres

$\alpha, \alpha_1, \alpha_2$ rotation angle, in degrees

ρ_k is the characteristic density of the timber, in kg/m^3

f_t is the tensile strength of the fastener, N/mm^2

5 Requirements

The requirements for dowel type fasteners as given in EN 14592 apply.