

**Akna- ja uksetarvikud. Üheteljelised hinged.  
Nõuded ja katsemeetodid**

Building hardware - Single-axis hinges - Requirements  
and test methods

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1935:2007 sisaldab Euroopa standardi EN 1935:2002+AC:2003 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 12.07.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 13.02.2002.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1935:2007 consists of the English text of the European standard EN 1935:2002+AC:2003.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 12.07.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 13.02.2002.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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**Võtmesõnad:** aknad, liigitus, omadused, tarvikud, ukSED

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English version

## Building hardware - Single-axis hinges - Requirements and test methods

Quincaillerie pour le bâtiment - Charnières axe simple -  
Prescriptions et méthodes d'essai

Baubeschläge - Einachsige Tür- und Fensterbänder -  
Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 7 December 2001.

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## Foreword

This document (EN 1935:2002) 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of an identical text or by endorsement, at the latest by August 2002, and conflicting national standards shall be withdrawn at the latest by November 2003.

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 informative annex ZA, which is an integral part of this document.

Wherever reference is made to classes, they are considered to be technical classes and not classes according to Article 3(2) of the Construction Products Directive (89/106/EEC).

A full contribution to the preparation of this standard has been made by the European manufacturers organisation "ARGE".

This European Standard is part of a series of European Standards dedicated to building hardware products.

The test method for the static load tests and the durability tests for hinges intended for side-hanging applications are derived from Swedish Standards SS 3442, SS 3443, and British Standard BS 7352:1990 (see bibliography).

Annexes B and C specify any additional requirements that apply to hinges for use on fire-resistant and/or smoke-control doors or on burglar-resistant doors.

Annexes D, E and F give guidance on the classification of duties and typical applications of hinges for use with doors wider than 950 mm, hinges for doors fitted with door closers and the maintenance of hinges, especially those fitted to emergency escape doors.

Annex J include a flow chart showing the sequence of testing for different test specimens.

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

## Introduction

Hinges suitable for side-hanging use are usually strong enough for top-hanging applications with hinged elements of the same mass. However the load bearing and wearing surfaces are totally different for the two types of application. It is intended to develop test methods for testing hinges in the top-hanging mode which will make it possible to grade hinges for top-hanging applications more precisely. When hinges are used in top-hanging applications it is important that all aspects of the hinge should be considered, e.g. it may be necessary to take action to prevent loose pins from falling out.

In terms of the Constructive Products Directive (89/106/EEC), the essential requirements of this European Standard are to allow self closing when used on fire/smoke compartmentation doors fitted with door closing devices.

## 1 Scope

This European Standard specifies requirements for single-axis hinges, of lift-off or fixed pin type, for use on access windows and doors. Such windows and doors may or may not be fitted also with door closing devices. It includes tests for static loads, shear strength and allowable wear during durability cycling for the following hinges:

- a) mounted on the edge of the door leaf or window sash and opening in one direction only;
- b) whose axis of rotation is within 30 mm of an edge of the movable element for a door leaf mass of up to 160 kg;
- c) whose axis of rotation is within 30 mm of the edge for a window sash with a mass up to 60 kg.

This European Standard classifies hinges for four categories of use (see annex A) and also specifies the maximum permissible torque arising from frictional resistance generated within the hinge during endurance testing.

Corrosion protection requirements are specified for those hinges which are not intended to be protected after fitting.

There are no restrictions on the materials or the methods of fabrication used providing the hinge conforms to the requirements relevant to its application.

The suitability of single axis hinges for use on fire/smoke compartmentation door assemblies is determined by performance tests conducted in addition to the performance tests required by this European Standard. Annex B indicates additional requirements for these products.

This European Standard does not apply to hinges incorporating spring-assisted door-closing mechanisms. Door closers incorporating door co-ordinator devices (with or without electrically powered hold-open devices) are covered by EN 1158.

Although the fastenings used to fix hinges to window assemblies and door assemblies are not covered by this European Standard, if the type of fastening to be used is supplied or specified by the manufacturer, such fastenings are used for the tests.

NOTE Performance standards for complete windows and door assemblies (in the course of preparation by CEN/TC 33/WG 1 and TC 33/WG 2) will ensure that the fastenings used to fix the hinge are adequate for their intended duty.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 1634-1, *Fire resistance tests for door and shutter assemblies - Part 1 : Fire doors and shutters*.

EN 1670:1998, *Building hardware — Corrosion resistance — Requirements and test methods*.

prEN 12519, *Doors and windows — Terminology*.

## 3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply:

### 3.1

#### **lift-off hinge**

single-axis pivot with only two knuckles, whose axis of rotation is within 30 mm of an edge of a movable element, either side or top fixing