



SLOVENSKI STANDARD
SIST EN 131-4:2007

01-julij-2007

Če je potrebno, se lahko uporablja tudi slovenski prevod.

Ladders - Part 4: Single or multiple hinge-joint ladders

Leitern - Teil 4: Ein- oder Mehrgelenkleitern

Echelles - Partie 4: Echelles articulées à articulations simple et multiple

Ta slovenski standard je istoveten z: **EN 131-4:2007**

[SIST EN 131-4:2007](https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007)

<https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007>

ICS:

97.145

Lestve

Ladders

SIST EN 131-4:2007

en;de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 131-4:2007

<https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007>

ICS 97.145

English Version

Ladders - Part 4: Single or multiple hinge-joint ladders

Echelles - Partie 4: Echelles articulées à articulations
simple et multiple

Leitern - Teil 4: Ein- oder Mehrgelenkleitern

This European Standard was approved by CEN on 22 March 2007.

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.

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

STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 131-4:2007
<https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007>



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

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

Contents

Page

| | |
|---|----|
| Foreword..... | 3 |
| 1 Scope | 4 |
| 2 Normative references | 4 |
| 3 Terms and definitions | 4 |
| 4 Functional dimensions..... | 6 |
| 4.1 Ladders in single, standing and transformable position | 6 |
| 4.2 Ladders hinged in “leaning ladder or standing ladder” positions | 6 |
| 4.3 Hinged ladders in “platform” position | 7 |
| 4.4 Hinged ladders in “stand-off” position | 7 |
| 5 Requirements | 8 |
| 5.1 General..... | 8 |
| 5.2 Decking component | 8 |
| 5.3 Ladder hinged in the longitudinal direction..... | 8 |
| 6 Test methods..... | 8 |
| 6.1 General..... | 8 |
| 6.2 Tests method for ladders hinged in the longitudinal direction | 8 |
| 6.3 Test method for ladders hinged in the lateral direction | 11 |
| 7 Marking | 12 |
| 8 User instructions | 12 |
| Annex A (normative) Test sequence..... | 13 |
| Annex B (informative) A-deviations..... | 15 |

iTeh STANDARD PREVIEW
(standards.iteh.ai)
[SIST EN 131-4:2007](https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007)
<https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007>

Foreword

This document (EN 131-4:2007) has been prepared by Technical Committee CEN/TC 93 “Ladders”, the secretariat of which is held by DIN.

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 2007, and conflicting national standards shall be withdrawn at the latest by November 2007.

This European Standard is one of a series about ladders. Other standards of this series are listed in Clause 2.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 131-4:2007

<https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007>

1 Scope

This European Standard specifies the requirements, tests and marking of hinged combination ladders with one or several hinge joints.

This European Standard is not applicable to hinge-joints of combination and standing ladders as defined by EN 131-1.

This part of the standard is intended to be used in conjunction with EN 131-1 and EN 131-2.

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 131-1:2007, *Ladders — Part 1: Terms, types, functional sizes*

EN 131-2, *Ladders — Part 2: Requirements, testing, marking*

EN 131-3, *Ladders — Part 3: User Instructions*

3 Terms and definitions

For the purposes of this document the terms and definitions given in EN 131-1:2007 and the following apply.

3.1

ladder hinged in the longitudinal direction

ladder with hinge-joints of which enable folding (manual or automatic) in the longitudinal direction

NOTE Excluding ladders covered in EN 131-1.

3.1.1

ladder with one lockable hinge joint device

ladder including a hinge-joint device with at least one predetermined lockable position

NOTE See Figures 1 and 2.

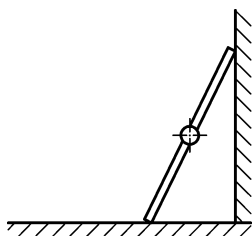


Figure 1 — Position as leaning ladder

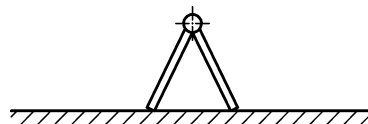


Figure 2 — Position as standing ladder

3.1.2**ladder with several lockable hinge-joint devices**

ladder having several hinge-joint devices with at least one fixed position which can be locked by hinge-joint devices at predetermined angles

NOTE See Figures 3 to 6.

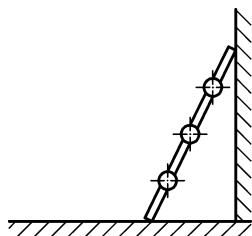


Figure 3 — Position 1 “Single ladder”

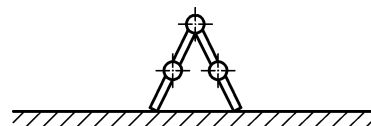


Figure 4 — Position 2 “Standing ladder”



Figure 5 — Position 3 “Stand – off”

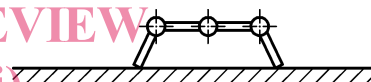


Figure 6 — Position 4 “Platform”

STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 131-4:2007

<https://standards.iteh.ai/catalog/standards/sist/33a162a8-91ec-432b-bd27-ec54ec0897fb/sist-en-131-4-2007>

3.2**ladder hinged in the lateral direction**

ladder having several hinge-joints enabling it to be folded laterally

NOTE 1 The hinge-joints can be located between the legs and the steps. The steps themselves can be equipped with hinge-joints.

NOTE 2 See Figure 7.

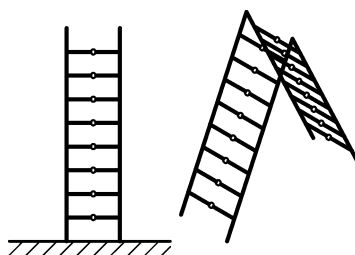


Figure 7 — Ladder hinged in the lateral direction

3.3**decking component**

single or multiple element forming a standing surface enabling the use of a multiple hinge-joint ladder in the “platform” position

3.3.1

reference level

upper surface of the decking component, including the anti-skid surface

3.3.2

decking component height h_3

height above ground of the reference level

3.3.3

overhang l_{10}

length of the decking component after the last support point

4 Functional dimensions

4.1 Ladders in single, standing and transformable position

Dimensions are given in EN 131-1.

4.2 Ladders hinged in “leaning ladder or standing ladder” positions

If these ladders can be used as leaning ladders then functional dimensions for leaning ladders will apply. If these ladders can be used as standing ladders then the functional dimensions for standing ladders will apply.

Refer to subclauses of EN 131-1 dealing with the type of position.

ITeH STANDARD PREVIEW

The inner width b_1 shall be measured as shown in Figure 8. (standards.iteh.ai)

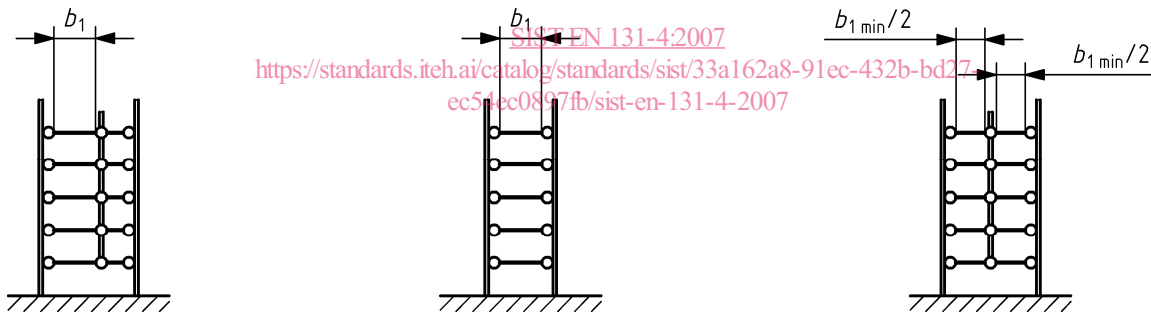


Figure 8 — Dimension b_1

4.3 Hinged ladders in “platform” position

Table 1 — Functional dimensions

Dimensions in millimetres

| | h_3 | l_{10} | α^a | α^b |
|------|-------|----------|------------|------------|
| min. | — | — | 65° | 65° |
| max. | 1 000 | 50 | 75° | 70° |

^a for rung ladders.
^b for step ladders.

If the decking component fits within the stiles the gap shall be no more than 5 mm. If the decking component fits across the stiles, the overhang shall be no more than 25 mm on each side. The platform shall be centred at ± 10 mm in relation to the longitudinal axis of the ladder. Where decking components consist of multiple elements they shall be assembled such that a person cannot fall through them.

NOTE b_1 and b_2 see EN 131-1 for the relevant ladder types.

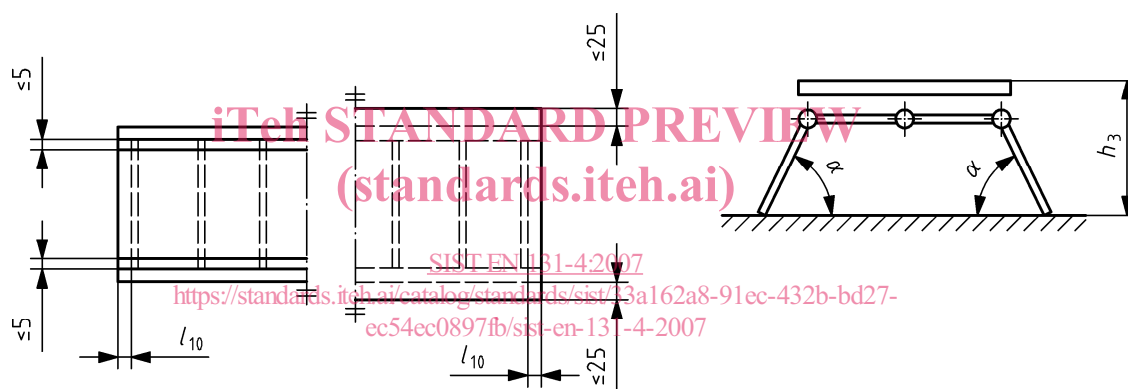


Figure 9 — Hinge-joint ladder in "Platform" position

4.4 Hinged ladders in “stand-off” position

Table 2 — Functional dimensions

| | l_2 | α |
|------|----------|----------|
| min. | — | 65° |
| max. | 1 200 mm | 75° |

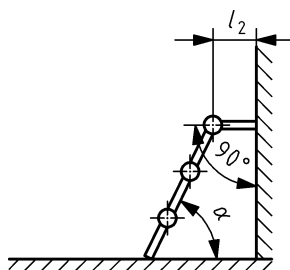


Figure 10 — Hinged ladder in “stand-off” position