

BS EN 131-6:2015



BSI Standards Publication

Ladders

Part 6: Telescopic ladders

bsi.

...making excellence a habit.
AVA Documents™
Document Sharing Hub

National foreword

This British Standard is the UK implementation of EN 131-6:2015.

BSI, as a member of CEN, is obliged to publish EN 131-6 as a British Standard. However, attention is drawn to the fact that during the development of this European Standard, the UK committee voted against its approval as a European Standard.

In the opinion of the UK committee the test requirements in EN 131-6 are different and in some cases less demanding than those in EN 131-2. To the user an extended telescopic ladder and a conventional ladder are the same product. However because of the different requirements between EN 131-6 and EN 131-2, a telescopic ladder certified compliant to EN 131 will not have been subjected to the same tests as a conventional ladder similarly certified compliant to EN 131.

The UK participation in its preparation was entrusted to Technical Committee B/512, Ladders.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2015.
Published by BSI Standards Limited 2015

ISBN 978 0 580 81769 4

ICS 97.145

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2015.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

Ladders - Part 6: Telescopic ladders

Échelles - Partie 6: Échelles télescopiques

Leitern - Teil 6: Teleskopleitern

This European Standard was approved by CEN on 3 January 2015.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of 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 United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Functional dimensions.....	7
4.1 General dimensions	7
4.2 Specific dimensions	7
5 Requirements	7
5.1 General requirements.....	7
5.2 Distance between rungs/steps	7
5.3 Additional requirements for the top of leaning ladders.....	7
5.4 Locking of the rung/step sections	7
5.5 Design	8
6 Testing	8
6.1 General.....	8
6.2 Drop test	8
6.3 Strength test of stiles	9
6.4 Bending test of the stiles	9
6.5 Lateral deflection test of the ladder	10
6.6 Bottom stile ends test	11
6.7 Rungs/steps strength test	11
6.7.1 Rungs/steps strength test – locked position	11
6.7.2 Rungs/steps strength test – unlocked position	12
6.7.3 Torsion test of rungs/steps	13
6.7.4 Pull out test of rung/step	13
6.8 Test of opening restraints and hinges of standing ladders	13
6.9 Test of locking mechanism.....	14
6.9.1 Cyclic test of locking mechanism	14
6.9.2 Static test of locking mechanism.....	15
6.9.3 Cyclic test of hinge joints	15
6.9.4 Requirements.....	15
6.10 Feet pull test.....	16
6.11 Torsion on ladder length.....	16
6.12 Test methods for plastic ladders	17
6.13 Test methods for plastic rung/step brackets	17
7 Marking and User Instruction	17
7.1 General.....	17
7.2 Marking	17
7.3 User instruction	18
Annex A (normative) Test sequence.....	19
Annex B (informative) A-deviations.....	20
B.1 Deviations from the Netherlands	20
B.2 Deviations from Sweden	21
Bibliography	22

Foreword

This document (EN 131-6:2015) 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 September 2015, and conflicting national standards shall be withdrawn at the latest by September 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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This European Standard is one of a series about ladders. The other standards of this series are listed in Clause 2 and in the Bibliography.

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 general design features, requirements and test methods and defines terms for leaning and standing telescopic ladders.

Ladders with extension elements are not covered by this part of EN 131.

This part of the standard is intended to be used in conjunction with EN 131-1:2007+A1:2011, EN 131-2:2010+A1:2012, EN 131-3:2007 and if applicable EN 131-4:2007.

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 131-1:2007+A1:2011, *Ladders - Part 1: Terms, types, functional sizes*

EN 131-2:2010+A1:2012, *Ladders - Part 2: Requirements, testing, marking*

EN 131-3:2007, *Ladders - Part 3: User Instructions*

EN 131-4:2007, *Ladders - Part 4: Single or multiple hinge-joint ladders*

3 Terms and definitions

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

3.1

telescopic ladder

ladder consisting of three or more rung/step sections with telescopic stiles

Note 1 to entry: Ladders with extension elements like in Figure 1 are not covered by this part of EN 131.

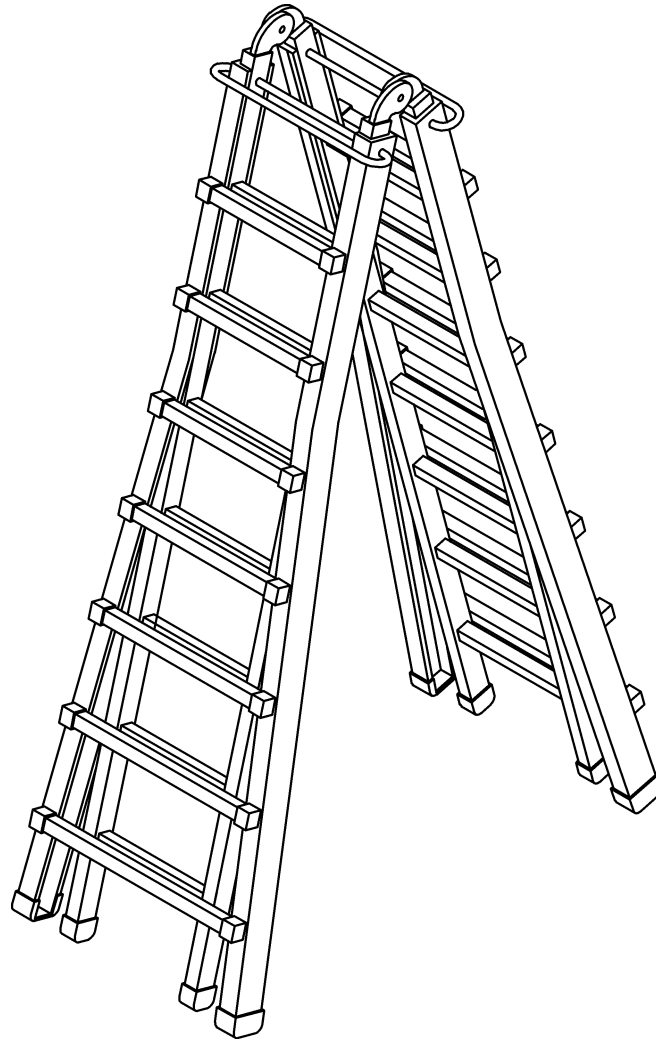


Figure 1 – Extension elements not covered by this part of EN 131

3.2

hinge-joint telescopic ladder

ladder including one or more hinge-joint devices with at least one predetermined lockable position

3.3

rung/step section

section of ladder that consists of one rung/step connected to two telescopic stiles

3.4

rung/step bracket

part that attaches the rung/step to the stile

3.5

rung/step section locking mechanism

mechanism that locks a rung/step section

3.6

locking indicator

mechanism or part that indicates that one rung/step section or part of one rung/step section is locked/unlocked

- 3.7**
locking pin
part that locks each rung/step section and that is engaged when the locking mechanism is locked
- 3.8**
top bar
connection between the upper parts of the two stiles where the distance between the topmost connection and the upper end of the ladder is less than, or equal to, 15 mm

Note 1 to entry: See Figure 2.

Note 2 to entry: If the distance between the end of the stiles and the upper connection of the two stiles do fulfill the requirement of l_3 , as defined in EN 131-1:2007+A1:2011, 3.37, it should be considered as a rung/step (see Figure 3).

Dimensions in millimetres

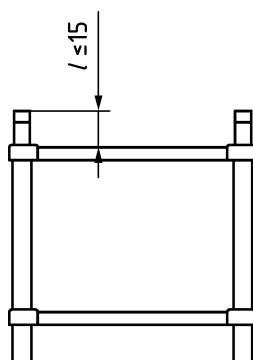


Figure 2 — Top bar

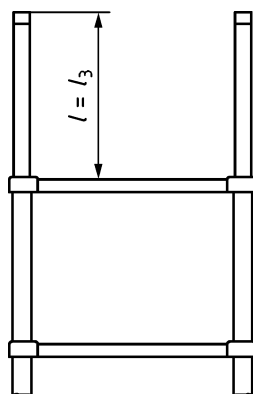


Figure 3 — Rung/step

- 3.9**
protection against squeezing
mechanism or part that minimizes the risk of squeezing when the ladder is shortened

Note 1 to entry: For example brake system.

- 3.10**
release function
function which releases the locking mechanism

- 3.11**
base section
section starting from the lower end of the ladder