SLOVENSKI STANDARD
SIST EN 131-7:2013

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Lestve - 7. del: Mobilne lestve s ploščadjo

Ladders - Part 7: Mobile ladders with platform

Leitern - Teil 7: Mobile Podestleitern

Échelles - Partie 7: Échelles mobiles avec plate-forme

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97.145 Lestve Ladders

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Ladders - Part 7: Mobile ladders with platform

Échelles - Partie 7: Échelles mobiles avec plate-forme

Leitern - Teil 7: Mobile Podestleitern

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

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Foreword

This document (EN 131-7:2013) 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of an identical text or by endorsement, at the latest by January 2014, and conflicting national standards shall be withdrawn at the latest by January 2014.

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 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 defines terms and specifies the general design characteristics of mobile ladders with platform. It applies to mobile ladders with a working platform, with a maximum area of 1 m^2, and a maximum platform height of 5 m, to be used only by one person at the time. The maximum load is 150 kg which includes a maximum combined load of the user and any tools, equipment and materials.

It does not apply to portable ladders according to EN 131-1, to portable ladders according to EN 131-4, to portable ladders for fire service use according to EN 1147, to loft ladders according to EN 14975, to step stools according to EN 14183, to Stairs, stepladders and guard-rails according to EN ISO 14122-3 and to insulating ladders according to EN 50528.

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

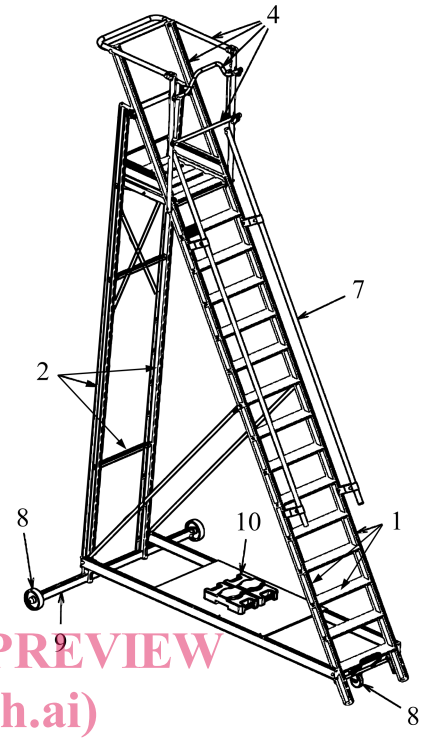
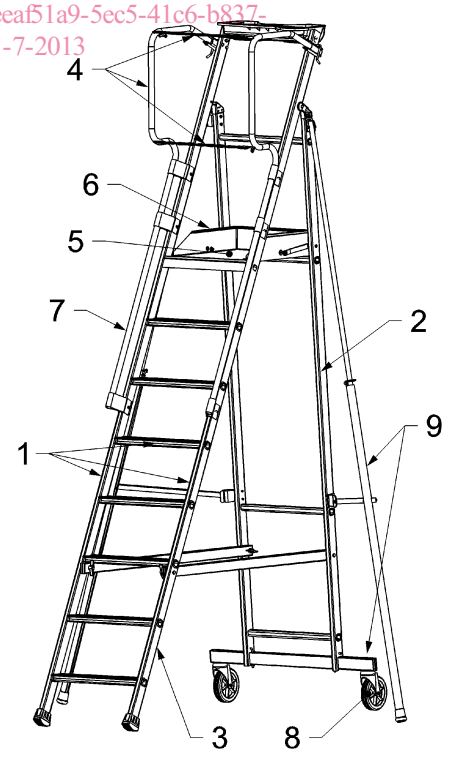
EN 131-3, *Ladders - Part 3: User Instructions*

3 Terms and definitions

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

Table 1 — Terms and definitions

Dimensions in millimetres

No	Term	Definition	Figure
3.1	ascending leg	leg of a ladder with climbing supports	 Figure 1
3.2	supporting leg	leg of a ladder without climbing supports	
3.3	stile	lateral part of a ladder which supports the rungs or steps as well as cross struts of supporting legs	
3.4	preventions from falls		
3.4.1	guard rail	device to hold and protect from falls, installed on the platform of mobile platform ladders	
3.4.2	middle rail	element of the guard rail, placed between the top rail and the platform	
3.4.3	gate at the ascending leg	rigid or flexible device, parallel to the platform, to hold and to protect from falls	
3.5	platform	topmost standing surface which is different from a step	 Figure 2
3.6	toe board	side protection fixed at the platform or the guard rail	
3.7	handrail	device for mobile ladders parallel to the ascending leg, which allows a secure grip during the ascending/descending	
3.8	wheel	device to facilitate the movement of the mobile platform ladder Note 1 to entry: Wheels can be: — used only use for transportation; or — used for transportation and as load bearing element; — fitted with brakes.	
3.9	stabiliser	device to increase the stability of the mobile platform ladder	

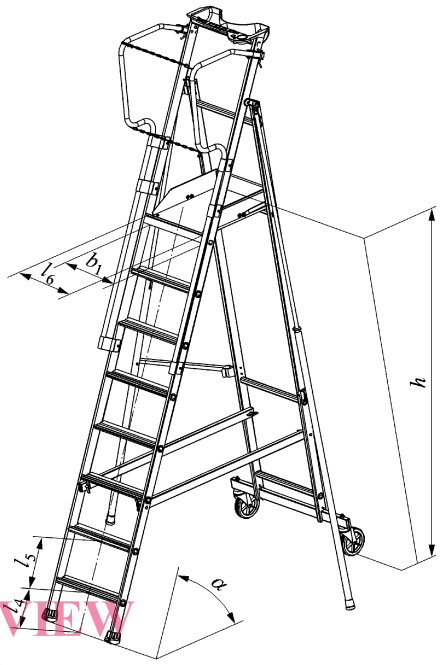
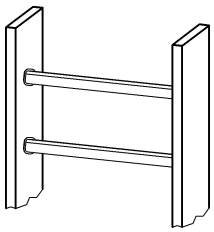
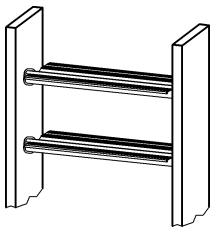
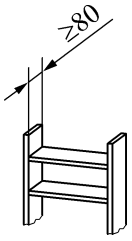
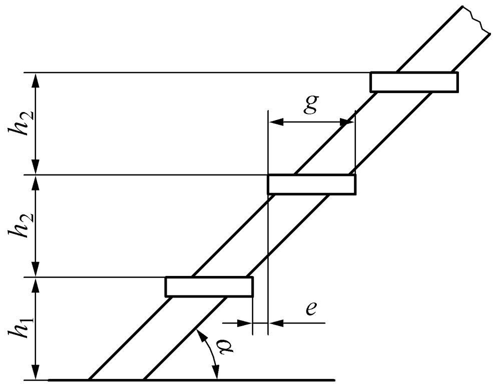
3.10	ballast	permanent/fixed load applied to the mobile platform ladder used to increase its resistance to overturning	
3.11	angle of inclination of the ascending leg α	angle between the floor and the imaginary line joining the upper edges of the sides of the front steps	 Figure 3
3.12	distance between the bottom end and the lowest rung/wide rung/ step l_4	distance from the lower end of the ladder to the upper edge of the lowest rung/wide rung/step, measured in the middle line between the stiles	
3.13	distance between rungs/wide rungs/steps l_5	distance between the rungs/wide rungs/steps and between the top rung/wide rung/step and the platform measured in the middle line between the stiles at the upper edges	
3.14	climbing height h	vertical distance between the ground and the top of the platform measured vertically when all feet are in contact with the ground	
3.15	inner width of ascending leg b_1	usable distance between the inner sides of the stiles measured at the level of the platform	
3.16	Rung (g)	climbing support with a standing surface from front to back of less than 50 mm and at least 20 mm	 Figure 4
3.17	wide rung (g)	climbing support with a standing surface from front to back equal to or greater than 50 mm and less than 80 mm	 Figure 5
3.18	Step (g)	climbing support with a standing surface from front to back equal to or greater than 80 mm	

			Figure 6
3.19	distance between the bottom end and the lowest rung/ wide rung/ step h_1	vertical distance between the floor and the top of the first rung/wide rung/step	 Figure 7
3.20	distance between rungs/ wide rungs/ steps h_2	vertical distance between the rungs/wide rungs/steps and between the top rung/wide rung/step and the platform measured in the middle line between the stiles at the upper edges	
3.21	clearance e	clearance between two rungs of consecutive ascending legs	

4 Requirements

4.1 General

A mobile platform ladder shall be designed and manufactured to prevent accidental slips of product and/or user.

The marking shall be legible and durable.

The durability of the marking shall be verified.

Wide rungs/steps and platforms shall be designed to be horizontal when the product is used on a flat floor.

Wide rungs, rungs, steps and platforms made of metal or plastics shall have a textured surface on the working face to reduce slipping. The contact surface of the coverings shall adhere firmly to the rungs or steps.

4.2 Surface finishes

This requirement shall be according EN 131-2.

The coating of wooden parts shall be transparent and permeable to water vapour. This does not apply to platform components manufactured from plywood materials.

4.3 Materials

4.3.1 General

The requirements on materials shall be according to EN 131-2 apply unless otherwise stated.

4.3.2 Wood

Wood used for the platform should be of durable quality and be suitable for both indoor and outdoor use.

The coating shall be transparent and permeable to water vapour.

Coatings applied to platform components manufactured from plywood materials shall be permeable to water but may be opaque.

The surface of the platform shall be slip resistant.

4.4 Stabiliser

If the design makes stabilisers necessary to fulfil the stability test requirements, they shall be supplied with the ladder. It shall be clear that the product is meant to be used with stabilisers. Specific safety instruction shall be visible on the ladder and may be repeated on the stabilisers.

4.5 Ballast

If the design makes ballasts necessary to fulfil the stability test requirements, they shall be supplied with the ladder. It shall be clear that the product is meant to be used with a ballast. Specific safety instruction shall be visible on the ladder and may be repeated on the ballast.

5 Dimensional requirements

5.1 Ascending legs

5.1.1 Ascending legs with angle 60° ≤ α ≤ 75°

The dimensional requirements for ascending legs angle 60° ≤ α ≤ 75°are shown in Table 2.

Table 2 — Dimensional requirements for ascending legs with angle 60° ≤ α ≤ 75°

Dimensions in millimetres

	b_1	h	g	l_4	l_5
min.	400		20	0,5 × l_5	230
max.		5 000		l_5 + 15	300

This product is ascended and descended facing the ladder.

Handrails can be added to this product.

5.1.2 Ascending legs with angle 45° ≤ α < 60°

This product shall be fitted with a handrail on each side of the ascending leg.

The dimensional requirements for ascending legs with angle 45° ≤ α < 60° are shown in Table 3.

Table 3 — Dimensional requirements for ascending legs with angle 45° ≤ α < 60°

Dimensions in millimetres

	b_1	h	g	e	h_1	h_2
min.	400		80		150	200
max.		5 000		50	h_2 + 40	250

This product can be descended facing away from the ladder.

5.2 Supporting legs

The projection on the horizontal plan of the platform shall be within the contact points of the ladder with the ground within a maximum tolerance of 100 mm due to the possible eccentricity of the swivel casters or other design of the platform ladder.

If the projection on the horizontal plan of the platform within the contact points of the ladder with the ground is greater than 100 mm, additional precautions are taken regarding the stability. The stability test described in 6.7 is not suitable for such described products.

5.3 Platform and toe board

The platform shall be permanently fixed to the ladder. The platform shall be equipped with toe board on all sides where access is not permitted, except the ascending side.

The dimensions (width and length) shall be between 400 mm and 1 000 mm (see Table 4).

The platform shall be equipped with a solid toe board such that its top edge is at least 50 mm above the adjacent platform level. A toe board on the access side is not permitted unless it is removable during access to and from the platform.

Table 4 — Dimensions of platform and toe board

Dimensions in millimetres

	a	l_6	l_7	b
min.	50	400	400	0
max.		1 000	1 000	≤ a

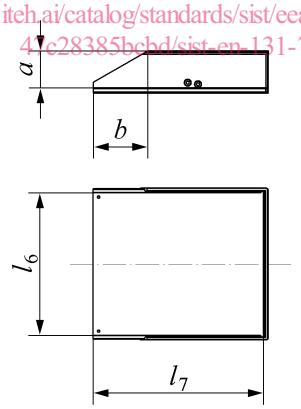


Figure 8 — Dimensions of platform and toe board

5.4 Working area

The working area is shown in Figure 9. The dimensional requirements are given in Table 5.

Distance between the guardrail and the top of the platform: **w**

Interior distance between the front guardrail and the gate: **x**

Interior distance between the guardrails: **y**

Clear between the platform and the guardrail: **z**

Table 5 — Dimensional requirements for the working area

Dimensions in millimetres

	w	x	y	z
min.	950	400	400	
max.	1100			80

If the gate is flexible (e.g. chain), the measurement is taken during the test in 6.4.

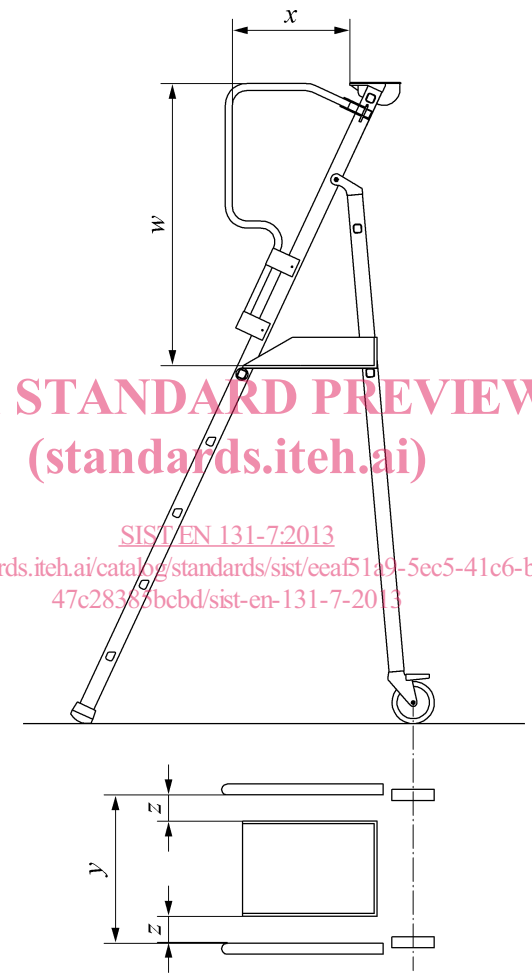


Figure 9 — Working area

5.5 Wheels and castors

The mobile ladder shall be fitted with devices which ensure that there is no movement of the mobile ladder while in position of use.

5.6 Prevention of falls: Guardrails, Middle rails

The height of the guardrail shall be at least 950 mm from the platform to the top of the guardrail. The guardrails and middle rails shall avoid a sphere (470 mm diameter d) to pass (see Figure 10).