



BSI Standards Publication

Low-level work platform with one working platform with side protection for use by one person with a maximum working platform height of less than 2.5 m – Specification



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Foreword

This Publicly Available Specification (PAS) was sponsored by PASMA (Prefabricated Access Suppliers' and Manufacturers' Association). Its development was facilitated by BSI Standards Limited and published under licence from the British Standards Institution (BSI). It came into effect on 28 September 2012.

Acknowledgement is given to the PASMA Technical Committee and the following organizations that were involved in the development of this specification as members of the Steering Group:

- Association of British Certification Bodies
- Health and Safety Executive
- Hire Association Europe
- Ladder Association
- PASMA
- UK Contractors Group

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Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element. The word "should" is used to express recommendations, the word "may" is used to express permissibility and the word "can" is used to express possibility, e.g. a consequence of an action or an event.

Spelling conforms to The Shorter Oxford English Dictionary. If a word has more than one spelling, the first spelling in the dictionary is used.



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Introduction

Low-level work platforms (LLWPs), commonly referred to as podiums or pulpits, became extensively used following the implementation of The Work at Height Regulations 2005 [1]. In particular this led to demand for a LLWP with one working platform with side protection for use by one person.

These LLWPs fall outside the scope of standards for similar products. For instance, they:

- a) differ from mobile access and working towers specified by BS EN 1004 because LLWPs have working platform heights of less than 2.5 m;
- b) differ from mobile elevating work platforms specified in BS EN 280 because they are not powered;
- c) differ from room scaffolds specified in BS 1139-6 because LLWPs have smaller working platforms and are only designed for use by one person; and
- d) differ from standing ladders with platforms specified in BS EN 131, BS 2037 and BS 1129 because LLWPs have side protection to the working platform.

Designs that emerged for LLWPs have been developed in the absence of a formal standard. Whilst the majority of LLWPs provide a safe solution to low level access, there are aspects of some products that could be improved by adherence to relevant and specific design criteria.

Therefore PASMA, the Prefabricated Access Suppliers' and Manufacturers' Association, has sponsored the development of this PAS to provide minimum safety and performance criteria for LLWPs.

1 Scope

This PAS specifies requirements for a low-level work platform (LLWP) with one working platform with side protection, for use by one person, with a maximum working platform height of less than 2.5 m. The maximum working load of the LLWP is 150 kg.

In particular, it specifies requirements for materials, design loads, dimensions, strength and stability tests, marking and user instructions.

This PAS does not cover:

- a) mobile access and working towers with a height from 2.5 m to 12.0 m (indoors) and from 2.5 m to 8.0 m (outdoors), which are specified in BS EN 1004;
- b) mobile elevating work platforms, which are specified in BS EN 280;
- c) room scaffolds, which are specified in BS 1139-6;
- d) standing step ladders with platforms, which are specified in BS EN 131;
- e) aluminium standing step ladders with platforms, folding trestles and lightweight stagings, which are specified in BS 2037; and
- f) timber trestles and lightweight stagings, which are specified in BS 1129.

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.

BS EN 438-6, *High-pressure decorative laminates (HPL) – Sheets based on thermosetting resins (Usually called Laminates) – Part 6: Classification and specifications for Exterior-grade Compact laminates of thickness 2 mm and greater*

BS EN 12811-2:2004, *Temporary works equipment – Part 2: Information on materials*

BS EN 13706-3:2002, *Reinforced plastics composites – Specifications for pultruded profiles – Part 3: Specific requirements*

BS EN ISO 3834 (all parts), *Quality requirements for fusion welding of metallic materials*

BS EN ISO 6892-1, *Metallic materials – Tensile testing – Part 1: Method of test at ambient temperature*

BS EN ISO 14731, *Welding coordination – Tasks and responsibilities*

BS ISO 3864, *Graphical symbols – Safety colours and safety signs*

3 Terms and definitions

For the purposes of this Publicly Available Specification, the following terms and definitions apply.

3.1 adjustable leg

component of a low-level work platform that can be adjusted to level the low-level work platform on uneven or sloping ground

NOTE 1 Adjustable legs can be fitted with either a mobility device or a foot.

NOTE 2 Adjustable legs are not intended for use to gain additional working height.

3.2 access

series of climbing surfaces designed to provide a means of ascending to and descending from a working platform

3.3 climbing surface

component that provides a foothold or a handhold

3.4 castor wheel

wheel that swivels permitting it to turn towards its plane of rotation

NOTE Castor wheels are fitted to low-level work platforms to provide mobility.

3.5 deployed position

position of use with all components assembled and positioned in accordance with the manufacturer's instructions

NOTE Components include, for example, access, mobility devices, toe-boards and stability devices.

3.6 foot

component of a low-level work platform that rests on the ground, supports the low-level work platform and is not designed to enable the movement of the low-level work platform

NOTE 1 For example, a base plate.

NOTE 2 See also mobility device (3.8).

3.7 low-level work platform (LLWP)

mobile, freestanding structure incorporating one working platform

NOTE 1 A LLWP is mobile in the sense that it can be moved manually through physical effort alone or with the aid of mobility devices.

NOTE 2 Examples of LLWPs and their components are given in Figure 1.

3.8 mobility device

component of a low-level work platform that rests on the ground, supports the low-level work platform and is designed to enable the movement of the low-level work platform

NOTE 1 For example, a wheel or ski.

NOTE 2 See also foot (3.6).

3.9 rotational mobility device

mobility device with rotating parts

NOTE For example, a ball wheel, castor wheel or fixed wheel.

3.10 side protection

barrier designed to prevent a person accidentally falling

NOTE 1 For example, guard-rails, railings or mesh panels.

NOTE 2 Attention is drawn to The Work at Height Regulations 2005 [1], Schedule 2, paragraph 3(a), which refers to side protection as a guard-rail or similar means of protection above the edge from which any person is liable to fall.

3.11 side protection gate

section of the side protection that can be opened to permit entry to and exit from the area enclosed by the side protection

NOTE 1 It is sometimes referred to as a guard-rail gate.

NOTE 2 A side protection gate can be made up of several components. These can include, for example, vertical supports, railings or mesh panels.

3.12 stability device

component that assists in preventing the low-level work platform from overturning

NOTE For example, an outrigger or counterweight.

3.13 toe-board

barrier along the edge of a working platform to prevent the fall of tools or materials and also to prevent a person overstepping the edges of the working platform

NOTE It is sometimes referred to as a toe-rail or kick plate.

3.14 working height

height a user can reach when standing on a working platform without overreaching

3.15 working platform

raised surface on which a person stands to work

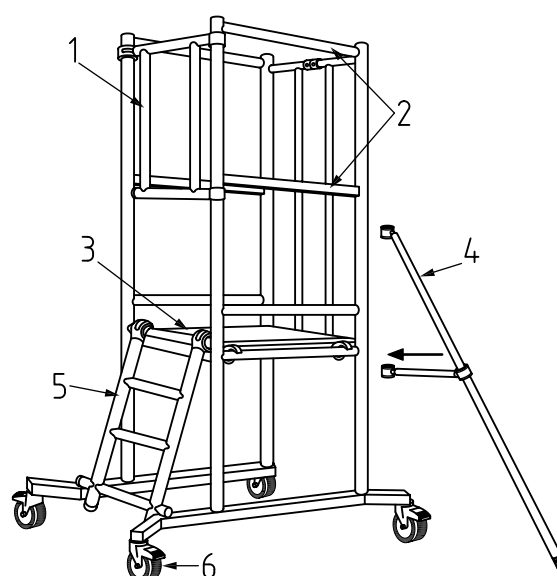
3.16 working platform height

height from the ground to the top surface of the working platform with any adjustable legs set at their minimum extension

3.17 working load

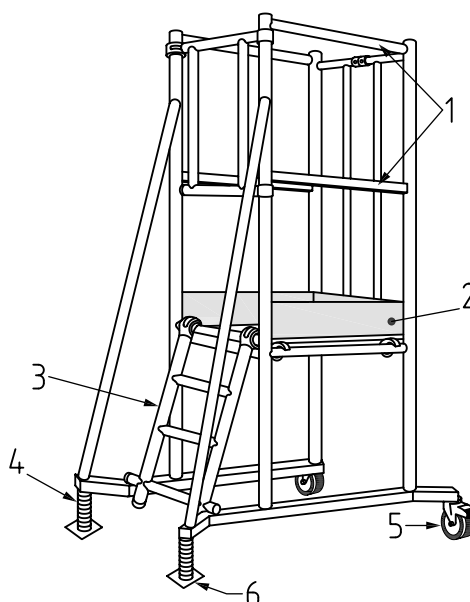
combined mass of a user, their clothing, materials and tools

Figure 1 Examples of low-level work platforms

**Key**

- | | |
|------------------------|--------------------|
| 1 Side protection gate | 4 Stability device |
| 2 Side protection | 5 Access |
| 3 Working platform | 6 Castor wheel |

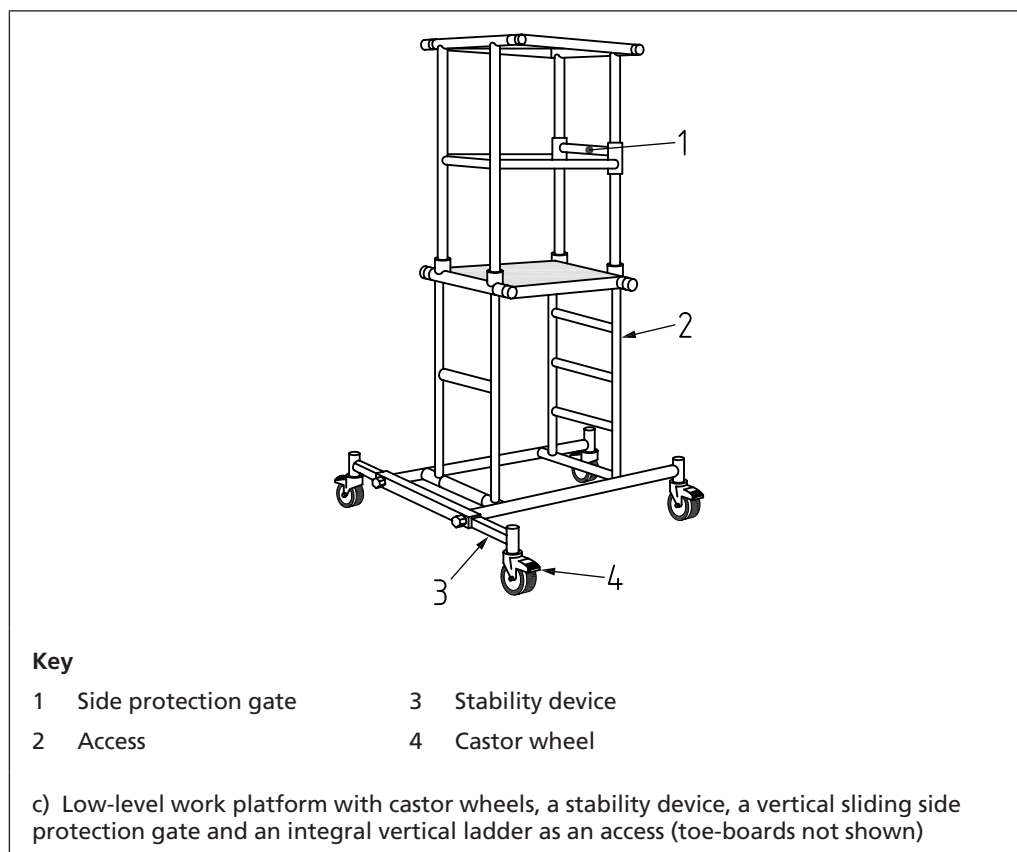
a) Low-level work platform with castor wheels, a stability device, side protection and an inclined ladder as an access (toe-boards not shown)

**Key**

- | | |
|-------------------|------------------|
| 1 Side protection | 4 Adjustable leg |
| 2 Toe-board | 5 Castor wheel |
| 3 Access | 6 Foot |

b) Low-level work platform with feet, adjustable legs, castor wheels, toe-boards, side protection and an inclined ladder as an access

Figure 1 Examples of low-level work platforms (continued)



4 Materials

4.1 All components made from ferrous metals shall be protected against corrosion by one of the methods given in BS EN 12811-2:2004, 8.1.

4.2 All load bearing components made of aluminium alloy shall have a minimum percentage elongation after fracture (A) of 5% when measured in accordance with BS EN ISO 6892-1.

4.3 If cold rolled steel or a special alloy steel is used, the ratio between 0.2% yield stress and ultimate strength ($R_{p0.2}/R_m$) shall be lower than 0.92.

4.4 Load bearing components made from reinforced plastic composites shall conform to BS EN 13706-3:2002, grade E23.

COMMENTARY ON CLAUSE 4

Guidance on where to find information on materials often used in an LLWP is given in BS EN 12811-2. It draws attention to a number of points for designers to take into account. The information given is limited to commonly-used steel, aluminium alloys, cast iron, timber and timber-based materials. Requirements are also given for welding, for limiting corrosion and other deterioration. It is limited to the selection of types and grades of material from standards, which are either international or European standards.

The minimum values for yield stress or proof stress and for the tensile strength specified in the material standards referenced in BS EN 12811-2 should be used as characteristic values in design calculations for an LLWP.

The effects of forming or other fabrication techniques such as welding that can affect material properties should be taken into account in the design of an LLWP.