

Powered lifting platforms for use by disabled persons — Code of practice

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Committees responsible for this British Standard

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- Association of Loading and Elevating Equipment Manufacturers
- Association of Metropolitan Authorities
- British Federation of Care-Home Proprietors
- British Healthcare Trades Association
- Chartered Institute of Environmental Health
- Co-opted Members
- Consumer Policy Committee of BSI
- Department of the Environment, Transport and the Regions
(Construction Directorate)
- Department of Trade and Industry (Consumer Safety Unit, CA Division)
- Health and Safety Executive
- Institute of Trading Standards Administration
- Lift and Escalator Industries Association
- London Fire and Civil Defence Authority
- Royal Institute of British Architects
- Trades Union Congress

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Foreword

This British Standard has been prepared by Technical Subcommittee MHE/4/2. It supersedes BS 6440:1983 which is withdrawn. It makes recommendations for the design, selection, installation, and maintenance of powered lifting platforms specially designed for disabled persons. No specific power method is excluded, but whatever method is provided should include the minimum safety features recommended in this code of practice, and any other additional safety features appropriate to the system.

It is assumed that a powered lifting platform conforming to the recommendations given in this code of practice is for the use of persons capable of using it safely and unaided either after having been fully instructed in its use or having observed clear and simple instructions permanently displayed on the equipment. Persons not capable of safe unaided use of the powered lifting platform may be transported under the care of a fully instructed able-bodied attendant for whom additional control facilities can be provided if required.

In applying the recommendations of this code of practice, consideration should be given to siting of the equipment in order to avoid hazards, congestion and inconvenience, both in relation to present circumstances and foreseeable developments. Recommendations are included in this code of practice for exchange of information between the supplier, installer, purchaser, and user to avoid inappropriate siting of the equipment.

Annex A provides guidance for purchasers considering installing a powered lifting platform, including provision of operating instructions for users, services that can be provided, and some considerations on any variations made to the method of use of the platform.

Three related standards for similar devices for use by disabled persons in private dwellings are:

- BS 5776, *Specification for powered stairlifts*;
- BS 5900, *Specification for powered homelifts*;
- BS 5965, *Specification for manually driven balanced personal homelifts*.

This edition of this code of practice was prepared to increase the “travel” of the equipment from 1.98 m to 4 m as a response to concerns that the 1.98 m height restriction limited the use of powered lifting platforms for use by disabled persons to only a small proportion of public buildings. In response to government legislation regarding provision of access for disabled persons to public buildings, it was decided to amend the code of practice to allow owners and operators of buildings to provide access without incurring the high cost of providing full passenger lift products (i.e. lifts conforming to BS EN 81-1 and BS EN 81-2). A number of other changes have been made to this code of practice to cover the essential safety aspects of the increased travel amendment. These recommendations are based on work currently underway in ISO and CEN. In due course, the published EN will be implemented as a BS EN for powered lifting platforms. This BS EN will eventually supersede BS 6440.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 14, an inside back cover and a back cover.

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1 Scope

This British Standard provides minimum recommendations for safety in the design, construction, installation, operation, and maintenance of fixed powered lifting platforms with either a partially or fully enclosed platform.

The lifting platforms covered by this code of practice are for use by persons with impaired mobility, whether sitting, standing, or within a wheelchair, and accompanied by an attendant, if necessary, for transportation between fixed levels, and in which the maximum height of the platform above the lowest level does not exceed the following:

- a) without liftway enclosure or floor penetration:
 - 1) 2.0 m in public buildings;
 - 2) 4.0 m in private dwellings; or
- b) with a liftway enclosure: 4.0 m.

This code of practice also provides some recommendations for consideration by purchasers (see 5.4 and 8.4 and annex A).

2 Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS EN 55014-1:1997, *Electromagnetic compatibility — Requirements for household appliances, electric tools and similar apparatus — Part 1: Emission — Product family standard*.

BS 3535 (all parts), *Isolating transformers and safety isolating transformers*.

BS 5304:1988, *Code of practice for safety of machinery*.

BS 5619:1978, *Code of practice for design of housing for the convenience of disabled people*.

BS 5776:1996, *Specification for powered stairlifts*.

BS 5810:1979, *Code of practice for access for the disabled to buildings*.

BS 5900: 1991, *Specification for powered domestic lifts*.

BS 7671:1992, *Requirements for electrical installations — IEE wiring regulations — Sixteenth edition*.

BS EN 60947-1:1998, *Specification for low-voltage switchgear and controlgear — Part 1: General rules*.

BS EN 60947-5-1:1998, *Specification for low-voltage switchgear and controlgear — Part 5: Control circuit devices and switching elements — Section 1: Electromechanical control circuit devices*.

ISO 4196:1993, *Graphical symbols — Use of arrows*.

ISO 7000:1989, *Graphical symbols for use on equipment — Index and synopsis*.

3 Definitions

For the purposes of this British Standard the following definitions apply.

3.1

authorized person

person authorized and instructed to correctly operate a lifting platform and to remove persons from a lifting platform in an emergency

3.2

barrier

bar or assembly of bars arranged to protect a landing opening into the liftway when the platform is not at the landing

3.3

brake

electromechanical mechanism used to bring a platform to rest smoothly and to hold it in position

3.4

buffer

resilient stop at the end of the platform or counterweight travel

3.5

disabled person

person who has limited mobility

3.6

drive unit

unit that provides power to drive the platform

3.7

door

sliding, folding or hinged device that prevents access between a platform and a landing

3.8

final limit switch

emergency switch arranged to stop a platform automatically if it travels a predetermined distance beyond a terminal landing

3.9

guide

component that guides a platform and its counterweight (if provided)

3.10

landing

space at the entrance to a lifting platform (at any level) to permit manoeuvring, boarding and alighting of users, with or without wheelchairs

3.11

liftway

space through which the platform and its load travels

NOTE A liftway can be contained within the machine or can be a feature of the building construction.

3.12**platform**

horizontal structure that transports persons vertically

3.13**rated load**

safe load for which the equipment is designed and for which normal operation is guaranteed by the vendor

3.14**rated speed**

maximum raising or lowering speed for which a lifting platform is designed and for which normal operation is certified by the vendor

3.15**safety factor**

ratio, for a particular material under stated conditions, of the yield load and the maximum dynamic load that can be imposed upon a member

3.16**safety gear**

mechanical device attached to the platform to stop and maintain the platform (and any potentially dangerous counterweight) within the guides in case of suspension failure

3.17**sensitive edge**

edge with a safety device attached to obviate a hazard

3.18**sensitive surface**

surface with a safety device or devices attached to obviate a hazard

3.19**slack rope/chain switch**

switch or combination of switches, arranged to stop a platform if any of the suspension ropes or chains slacken by a predetermined amount

3.20**terminal stopping switch**

switch or combination of switches arranged to bring a platform to rest automatically at or near a terminal landing level

3.21**travel**

vertical distance between the top and bottom landing levels served by a platform

3.22**unlocking zone**

area above and below a stopping level that the platform surface has to be within to enable the landing door to be unlocked

4 Statutory requirements

The following statutory requirements may be applicable to powered lifting platforms, depending on their location and use, and these should be checked before installing a platform.

- Health and Safety at Work etc. Act 1974 (HSWA);
- Management of Health and Safety at Work Regulations 1992 (MHSWR);
- Workplace (Health, Safety and Welfare) Regulations 1992 (WPR);
- Electromagnetic Compatibility Regulations 1992 (EMCR);
- Supply of Machinery (Safety) Regulations 1992 [SM(S)R];
- Electric Equipment (Safety) Regulations 1994 [EE(S)R];
- Lifts Regulations 1997;
- Provision and Use of Work Equipment Regulations 1998 (PUWER);
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER).

Further advice should be sought, if required, from the Health and Safety Executive or the relevant local authority, as appropriate.

5 Design considerations**5.1 Safety**

Protection against the following hazards should be incorporated in the final installation:

- a) shearing, crushing, trapping, or abrading;
- b) entanglement;
- c) falling and tripping;
- d) physical shock and impact;
- e) electric shock;
- f) fire hazard from use of the lift.

5.2 Design features

Components should be correctly designed and of sound construction using materials free from patent defects and of appropriate strength and quality. The construction and reliability of the equipment, in whole or in part, should be appropriate to its intended use, operating environment and design life.

Means should be provided to minimize the transmission of noise and vibration to any surrounding walls and other supporting structures.

Materials of construction of the lifting platform should not support combustion, should not emit noxious or toxic fumes in case of fire, and should be asbestos-free.