

Specification for

Manually driven balanced personal homelifts

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Department of the Environment (Interdepartmental Construction Development Group)	National Association of Lift Makers
Department of the Environment (PSA)	Post Office
Department of Transport	Retail Trading-Standards Association
Electrical, Electronic, Telecommunications and Plumbing Union	Royal Association for Disability and Rehabilitation
	Scottish Development Department
	Individual manufacturers

This British Standard, having been prepared under the direction of the Mechanical Engineering Standards Committee, was published under the authority of the Executive Board and comes into effect on 31 July 1980

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The following BSI references relate to the work on this standard:
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Foreword

This British Standard has been prepared under the direction of the Mechanical Engineering Standards Committee.

It is intended that equipment manufactured according to the requirements of this standard is only for installation and use in a private dwelling.

It is assumed that a homelift complying with the requirements of this standard will be used only by a person either capable of using it safely and unaided after having been fully instructed in its use or, if not so capable, when adequately attended by an able-bodied person fully instructed in the safe and proper use of the equipment. Safeguards are incorporated to prevent unauthorized use or misuse by any person other than the intended user.

This British Standard specifies minimum safety requirements for the design, construction, installation, operation and maintenance of manually driven balanced personal homelifts which are specifically to be used by disabled persons, with a view to safeguarding against the risk of accidents associated with the operation of such equipment.

Appendix A is included to assist potential purchasers by highlighting various important aspects that should be investigated when considering the installation of a homelift for a specific user. This appendix also gives guidance on the provision of operation instructions for the user, the services that should be provided and the considerations arising from changes of user or use.

Additional information about homelifts is available from a number of sources, including the Disabled Living Foundation and similar information services, and local authority social services departments.

Two related specifications for similar devices for use by disabled persons in private dwellings are:

BS 5776, *Specification for powered stairlifts*.

BS 5900, *Specification for powered homelifts*.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 12, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope and field of application

This British Standard specifies minimum safety rules related to the design, construction, installation, operation and maintenance of manually driven balanced homelifts, which are to be specifically used by nominated disabled persons travelling between fixed floor levels, with a view to safeguarding against the risk of accidents associated with the operation of such equipment.

The standard specifies requirements for homelifts that do not normally travel a vertical distance greater than 6 m.

Homelifts complying with this standard are hand wound normally from within the carriage by the user, and may also be hand wound by an attendant standing alongside the homelift, but only when the carriage is loaded in accordance with the manufacturer's instructions.

Equipment manufactured according to the requirements of this standard will be capable of being operated in the normal domestic environment (as regards temperature and humidity); additional features will be necessary in more rigorous conditions.

Besides stating the manufacturers' responsibilities, the standard also details special features and actions that are the responsibility of the purchaser; these can be found in clauses 4.3, 5, 7.1.2, 7.2 and 7.4, supported by guidance given in Appendix A.

2 References

The titles of the standards publications referred to in this standard are listed on the inside back cover.

3 Definitions

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

3.1

approach ramp

a hinged flat surface, attached to the carriage, that when lowered provides access to the carriage and when raised may restrain a wheelchair

3.2

attendant

a capable person who has been fully instructed in the safe and proper use of the homelift

3.3

balanceweight

a weight or series of weights arranged to closely counterbalance the carriage with its safe working load (see 3.24)

3.4

braking device

a mechanism employed to bring the homelift to rest without shock and hold it in position

3.5

buffer

a resilient stop at the end of the travel of the carriage or balanceweight

3.6

carriage

the load-carrying unit complete with its platform and supporting structure

3.7

carriageway

the space in which the carriage and balanceweights travel. This space is bounded by the lowest floor, the carriageway enclosure and the ceiling of the top floor served

3.8

carriageway enclosure

any structure that separates the carriageway from its surroundings

3.9

chain

a simplex or duplex transmission chain that, if used as part of a drive system, either transmits rotary motion from one shaft to another or transmits motion directly to the homelift carriage

3.10

chainwheel

a wheel having machine-cut teeth designed to engage with a chain

3.11

disabled person

a person who has limited mobility

3.12

door

the hinged or sliding portion of the carriageway enclosure that closes the access openings between the carriageway and the landings

3.13

door lock

a mechanical device used to lock a landing door, the unlocking of which is controlled by the position of the carriage

3.14

guard

a substantially constructed device designed to prevent accidental contact with a potentially dangerous component

**3.15
guides**

components that guide the carriage sling or the balanceweight

**3.16
guide bracket**

a member attached to the structure and to which the guides are fixed

**3.17
handwinding mechanism**

a device that converts manual energy into carriage movement and which automatically holds the carriage in position when the mechanism is not being operated

**3.18
guide shoes**

attachments to the carriage frame and the balanceweights that provide continuous alignment with the guides

**3.19
homelift**

a permanent lifting equipment, installed to serve defined landing levels in a private dwelling, that comprises a carriage, *whose dimensions and means of construction clearly permit the access of a passenger or a passenger in a wheelchair*, running between rigid vertical guides

**3.20
landing**

the space required at the entrance to the homelift carriage at any defined level to permit the manoeuvring, boarding or alighting of users, either with or without a wheelchair

**3.21
platform**

a horizontal structure that is part of the carriage and that supports a person standing, sitting or in a wheelchair

**3.22
private dwelling**

a house, flat or maisonette occupied by one or more households

**3.23
safety factor**

the ratio, for a particular material under stated conditions, of the ultimate (i.e. failure) load that can be imposed on a member to the highest load that it is designed to carry

**3.24
safe working load**

the nominated load that the carriage is designed to carry safely, e.g. the user or the user in a wheelchair

**3.25
sustaining device**

a mechanical device to stop and prevent movement of the carriage within the guides in the event of drive system failure

**3.26
toothed belt**

a flexible continuous belt having teeth formed in one or other of its surfaces, and designed to engage with specially cut or moulded teeth in wheels attached to separate shafts in order to provide a drive between the two

**3.27
unlocking zone**

a zone, extending above and below each stopping level, in which the carriage platform has to be positioned to enable the landing doors and, where relevant, the approach ramp to be unlocked

**3.28
user**

the disabled person for whom the homelift is installed

4 Design considerations

4.1 Protection against hazards. Protection against all of the following possible hazards shall be incorporated:

- a) shearing, crushing, trapping or abrading;
- b) falling;
- c) physical shock.

4.2 Design features. All components shall be correctly designed and of sound mechanical construction using materials that are free from patent defects and that are of adequate strength and suitable quality.

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

Materials used in the construction of the homelift and its carriageway enclosure shall not support combustion.