

Lift (US: Elevator) installation —

Part 1: Class I, II, III and VI lifts

ICS 91.140.90

National foreword

This British Standard reproduces verbatim ISO 4190-1:1999 and implements it as the UK national standard. Combined with BS ISO 4190-2:2001 it supersedes BS 5655-5:1989 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee MHE/4, Lifts, hoists and escalators, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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

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

This British Standard, having been prepared under the direction of the Engineering Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 8 October 2002

Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii to iv, pages 1 to 19 and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments

© BSI 8 October 2002

ISBN 0 580 40502 8

INTERNATIONAL STANDARD

ISO
4190-1

Third edition
1999-07-15

Corrected and reprinted
2001-03-01

Lift (US: Elevator) installation —

Part 1:

Class I, II, III and VI lifts

Installation d'ascenseurs —

Partie 1: Ascenseurs des classes I, II, III et VI



Contents

1 Scope 1

2 Terms and definitions 1

2.1 General 1

2.2 Lift classes 2

2.3 Dimensions 2

2.4 Other characteristics..... 3

3 Lift characteristics..... 3

3.1 Renard series 3

3.2 Rated loads 4

3.3 Rated speeds 4

3.4 Selection of class of lift..... 4

4 Dimensions 4

4.1 Inner dimensions of cars 4

4.2 Inner dimensions of well..... 5

4.3 Dimensions of landings 6

4.4 Dimensions of machine room for electric lifts 7

4.5 Dimensions of machine room for hydraulic lifts 8

4.6 Arrangement of machine room 9

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4190-1 was prepared by Technical Committee ISO/TC 178 *Lifts, escalators and passenger conveyors*.

This third edition cancels and replaces the second edition (ISO 4190-1:1990) and all amendments. This edition reflects the requirements of the global marketplace and includes:

- ¾ the special needs, access and full manoeuvrability of people with physical disabilities;
- ¾ appropriate use of stretchers, beds and ancillary medical equipment in hospitals and nursing homes;
- ¾ a range of intensive-use lifts typically used for high-rise buildings for rated speeds of 2,5 m/s to 6,0 m/s; the rated speeds have been based upon the Renard Series for speeds of up to 2,5 m/s;
- ¾ improved utilization of building space by reducing well (hoistway) sizes where practical.

ISO 4190 consists of the following parts, under the general title *Lift (US: Elevator) installation*:

- ¾ *Part 1: Class I, II, III and VI lifts*
- ¾ *Part 2: Class IV lifts*
- ¾ *Part 3: Service lifts class V*
- ¾ *Part 5: Control devices, signals and additional fittings*
- ¾ *Part 6: Passenger lifts to be installed in residential buildings — Planning and selection*

Lift (US: Elevator) installation —

Part 1: Class I, II, III and VI lifts

1 Scope

This part of ISO 4190 specifies the necessary dimensions to permit the installation of passenger lifts of classes I, II, III and VI as defined in 2.2.

The dimensions given reflect the requirements for the apparatus. Due note should be made of national regulations which may demand greater dimensions in some instances.

This part of ISO 4190 is applicable to all new lift installations, irrespective of drive systems, with a car with one entrance, to be installed in a new building. Where relevant, it may be used as a basis for an installation in an existing building.

It does not cover lifts whose the speed is higher than 6,0 m/s: manufacturers should be consulted for such installations.

2 Terms and definitions

For the purposes of this part of ISO 4190, the following terms and definitions apply.

2.1 General

2.1.1

car

that part of the lift which carries the passenger and/or other loads

2.1.2

head room

that part of the well situated above the highest landing served by the car

2.1.3

landing

area providing access to the car at each level of use

2.1.4

machine room

room in which the machine or machines and/or the associated equipment are placed

2.1.5

passenger lift (US: elevator)

permanent lifting appliance serving defined landing levels, comprising a car whose dimensions and means of construction clearly permit the access of passengers

2.1.6

pit

that part of the well situated below the lowest landing served by the car

2.1.7

well (US: hoistway)

space in which the car, the counterweight(s) and/or hydraulic jack(s) move

NOTE This space is usually bounded by the bottom of the pit, the walls and the ceiling of the well.

2.2 Lift classes

2.2.1

Class I

lifts designed for the transport of persons

2.2.2

Class II

lifts designed mainly for the transport of persons but in which goods may be carried

NOTE They differ from class I, III and VI lifts essentially by the inner fittings of the car.

2.2.3

Class III

lifts designed for health-care purposes, including hospitals and nursing homes

2.2.4

Class IV

lifts designed mainly for the transport of goods (freight) which are generally accompanied by persons

2.2.5

Class V

service lifts (US: dumbwaiters)

2.2.6

Class VI

lifts especially designed to suit buildings with intensive traffic, i.e. lifts with speeds 2,5 m/s and above

2.3 Dimensions

See Figures 1 to 3.

2.3.1

car width, b_1

horizontal distance between the inner surface of the car walls, measured parallel to the front entrance side

2.3.2

car depth, d_1

horizontal distance between the internal walls of the car, measured perpendicular to the front entrance side

NOTE These two dimensions (2.3.1 and 2.3.2) are measured, as indicated in Figure 1, at 1 m above the floor. Decorative or protective panels or handrails, if any, should be accommodated within these dimensions.

2.3.3

car height, h_4

vertical inner distance between the entrance threshold and the constructional roof of the car.

NOTE Light fittings and false ceilings should be accommodated within this dimension.