



SLOVENSKI STANDARD SIST ISO 4190-1:2012

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Dvigala (lifti) - 1. del: Dvigala razredov I, II, III in VI

Lift (Elevator) installation - Part 1: Class I, II, III and VI lifts

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Installation d'ascenseurs - Partie 1: Ascenseurs des classes I, II, III et VI
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ICS:

91.140.90 Dvigala. Tekoče stopnice Lifts. Escalators

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INTERNATIONAL STANDARD

ISO
4190-1

Fourth edition
2010-05-15

Lift (Elevator) installation —

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

Installation d'ascenseurs —

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

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ISO 4190-1:2010(E)

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 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 4190-1 was prepared by Technical Committee ISO/TC 178, *Lifts, escalators and moving walks*.

This fourth edition cancels and replaces the third edition (ISO 4190-1:1999).

This edition reflects the requirements of the global marketplace and includes

- a) harmonization, where possible, of Japanese dimensions of car and door sizes, loads and speeds,
- b) relocation of the 450 kg lift from Figure 8 to Figure 5,
- c) relocation of the 320 kg lift from Figure 4 to Figure 9,
- d) introduction of 1 350 kg lift in Figures 6 and 7, and
- e) introduction of speeds 0,75 m/s, 1,5 m/s and 1,75 m/s.

NOTE 1 In certain instances, harmonization is not possible and these sizes are shown in Figures 9, 10 a), 10 b), and 10 c).

NOTE 2 National regulations can demand greater dimensions in some instances.

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

- *Part 1: Classes I, II, III and VI lifts*
- *Part 2: Class IV lifts¹⁾*
- *Part 3: Service lifts class V¹⁾*
- *Part 5: Control devices, signals and additional fittings*
- *Part 6: Passenger lifts to be installed in residential buildings — Planning and selection¹⁾*

1) It is intended that, upon revision, the introductory element of the title of this part will be harmonized with part 1.

Introduction

This part of ISO 4190 reflects the requirements of the global marketplace and includes:

- the special needs, access and full manoeuvrability of people with physical disabilities;
- appropriate use of stretchers, beds and ancillary medical equipment in hospitals and nursing homes;
- a range of intensive-use lifts²⁾ typically used for high-rise buildings for rated speeds of 2,5 m/s to 6,0 m/s; the rated speeds have been mainly based upon the Renard series for speeds of up to 2,5 m/s;
- improved utilization of building space by reducing well (hoistway) sizes where practicable.

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2) Hereinafter, the term “lift” is used instead of the term “elevator”.

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Lift (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 class I, II, III and VI.

The dimensions given reflect the requirements for the apparatus. This part of ISO 4190 is applicable to all new lift installations, irrespective of drive systems, including a car with one entrance, to be installed in a new building. However, for arrangements with counterweight at the side, a through-entrance configuration is possible. Where relevant, this part of ISO 4190 is also applicable to an installation in an existing building.

This part of ISO 4190 is not applicable to lifts, the speed of which is higher than 6,0 m/s.

NOTE It is the responsibility of the user to consult the manufacturer for such installations.

2 Terms and definitions

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

2.1 General

2.1.1

car

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

2.1.2

head room

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

lift GB

elevator US

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

ISO 4190-1:2010(E)**2.1.6****pit**

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

2.1.7**through entrance car**

car with doors at the front and rear which may or may not be able to open at the same time

2.1.8**well****hoistway**

space in which the car, the counterweight(s) and 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**

lift designed for the transport of persons

2.2.2**class II**

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

NOTE This differs from a class I, III and VI lift, essentially, by the inner fittings of the car.

2.2.3**class III**

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

2.2.4**class IV**

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

2.2.5**class V**

service lift GB

dumbwaiter US

2.2.6**class VI**

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

2.3 Dimensions

See Figure 1.

2.3.1**car width**

b_1

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

NOTE This dimension is measured as indicated in Figure 1, 1 m above the floor. In certain regions, e.g. Asia-Pacific and North American regions, the car width, b_1 , is measured between the finished panels, whereas in Europe, the car width is measured excluding decorative or protective panels.

2.3.2**car depth** d_1

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

NOTE This dimension is measured as indicated in Figure 1, 1 m above the floor. In certain regions, e.g. Asia-Pacific and North American regions, the car depth, d_1 , is measured between the finished panels, whereas in Europe, the car depth is measured excluding decorative or protective panels.

2.3.3**car height** h_4

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

NOTE 1 Light fittings and false ceilings should be accommodated within this dimension (see Figure 1).

NOTE 2 In certain regions, e.g. Asia-Pacific and North American regions, the car height, h_4 , is measured between the floor and the underside of the false ceiling, whereas in Europe, the car height is measured to the underside of the structural roof.

2.3.4**entrance width into car** b_2

clear width of the entrance, measured when the landing and car doors are fully open

2.3.5**entrance height** h_3

clear height of the entrance, measured when the landing doors and car doors are fully open

2.3.6**well width GB****hoistway width US** b_3

horizontal distance between the inner surface of the well walls, measured parallel to the car width

2.3.7**well depth GB****hoistway depth US** d_2

horizontal dimension between the inner surface of the well walls, perpendicular to the width

2.3.8**pit depth** d_3

vertical distance between the finished floor of the lowest landing served and the bottom of the well

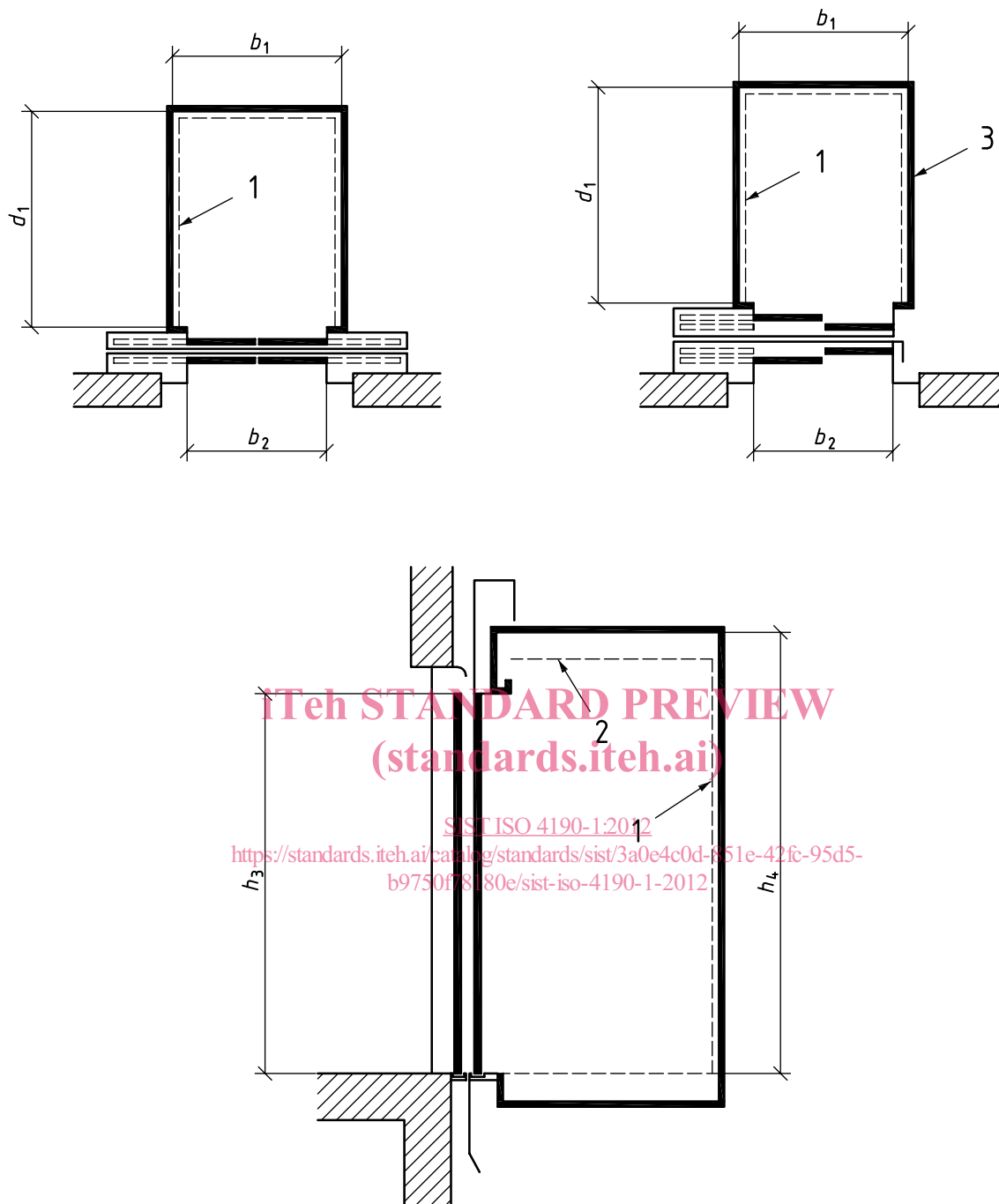
2.3.9**headroom height** h_1

vertical distance between the finished floor of the highest landing served and the ceiling of the well (not including any pulley over line of car)

2.3.10**machine room width** b_4

horizontal dimension between the inner surface of the walls, measured parallel to the car width

See Figure 3.

**Key**

- 1 decorative panels
- 2 false ceiling
- 3 car wall
- b_1 car width
- b_2 entrance width
- d_1 car depth
- h_3 entrance height
- h_4 car height

Figure 1 — Car and entrance dimensions