# International Standard 4190/2

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# Passenger lifts and service lifts — Part 2 : Lifts of class IV

*Ascenseurs et monte-charge — Partie 2 : Ascenseurs de classe IV*

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**Descriptors** : lifts, dimensions, characteristics.



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## Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.



International Standard ISO 4190/2 was developed by Technical Committee ISO/TC 178, *Lifts, escalators and passenger conveyors*, and was circulated to the member bodies in March 1981.



It has been approved by the member bodies of the following countries :

| | | |
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| Austria | Hungary | Spain |
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The member bodies of the following countries expressed disapproval of the document on technical grounds :

Canada
Denmark
United Kingdom
USA



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# Passenger lifts and service lifts — Part 2 : Lifts of class IV

## 1 Scope and field of application

**1.1** This part of ISO 4190 lays down the dimensions necessary to permit the installation of lifts of class IV, as defined in clause 3, generally used in industry for the transport of goods.

**1.2** It deals more specifically with electric lifts. However, the horizontal dimensions of the wells specified for these lifts permit the installation of hydraulic lifts with the same car and door dimensions.

For the other characteristics, the manufacturers should be consulted.

**1.3** This part of ISO 4190 applies to new lift installations 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.

## 2 Reference

ISO 4190/1, *Passenger lift installation — Part 1 : Lifts of classes I, II and III.*

## 3 Definitions

For the purposes of this part of ISO 4190, the definitions given in ISO 4190/1, from which the following definition is repeated as an *aide-memoire*, are applicable.

**lifts of class IV** : Lifts designed mainly for the transport of goods which are generally accompanied by persons.

## 4 Characteristics

Lifts of class IV recommended for current uses shall have the following characteristics :

— rated load (mass), in kilograms : 630 — 1 000 — 1 600 — 2 000

— rated speed, in metres per second : 0,40 — 0,63 — 1,00.



## 5 Dimensions

### 5.1 Car

See the table and figures 1 and 2.

### 5.2 Well

See the table and figures 1 and 2.

The lift well plan dimensions specified are the minimum clear plumb sizes. The architect[1], in agreement with the builder, shall ensure that adequate tolerances are added to the specified dimensions in the building design, so that these minimum plumb dimensions are satisfied when the work is finished. These dimensions only apply to lift installations in which the counterweight is guided by rigid metal guides.

In certain exceptional cases, the specified depths or widths may be insufficient when counterweight safety gear is provided.

1) Or any person assuming his functions.

Higher minimum values for the height above the highest level served may be required in certain countries to satisfy existing national regulations.

### 5.3 Distance between landings

The minimum distance necessary between two successive landings, to permit the installation of 2 100 mm high landing doors, shall be 2 550 mm.

### 5.4 Dimensions of the machine room

See the table and figure 1.

Greater machine room heights may be required in certain countries to satisfy existing national regulations.

### 5.5 Arrangement of the machine room

See figure 1.

The machine room shall be above the well.

The rear wall of the machine room shall be in line with the corresponding wall of the well and one of the lateral walls shall be in line with the corresponding wall of the well.

The lateral extension of the machine room with respect to the well (or common well) may be made either to the right or the left of the well.

The depth extension of the machine room with respect to the well shall be taken on the landing side.

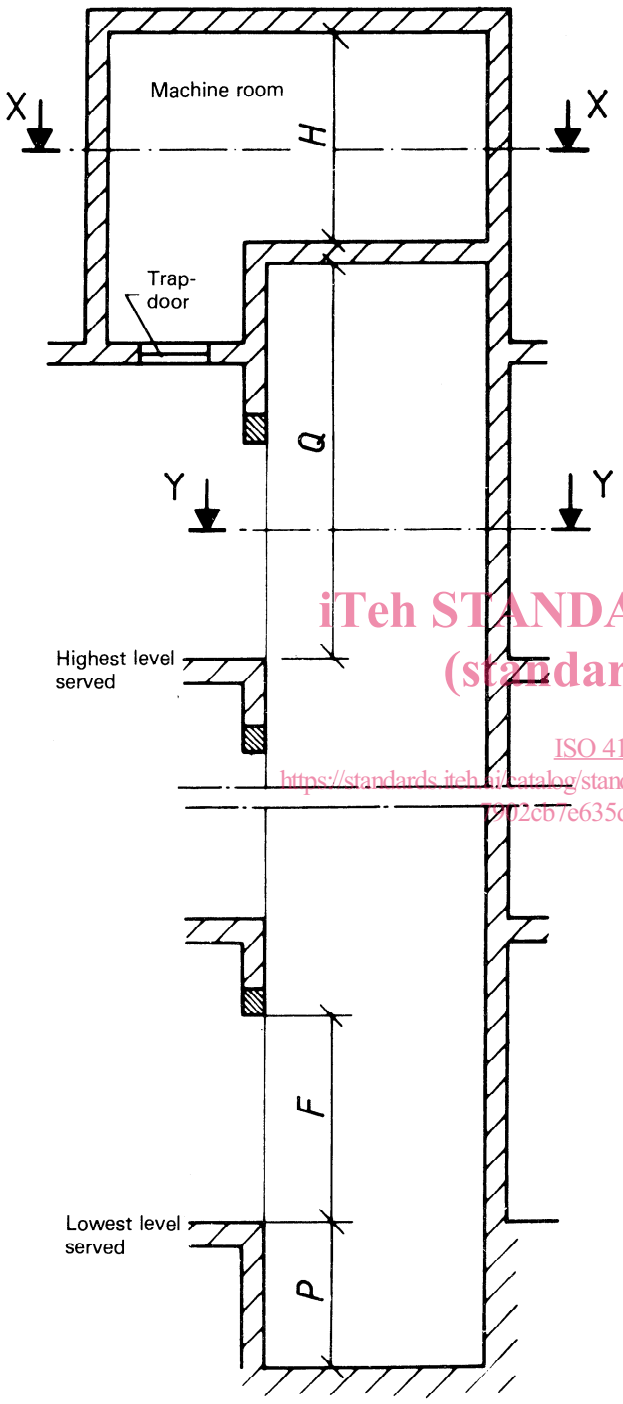
**Table — Standard electric lifts of class IV — Functional dimensions**



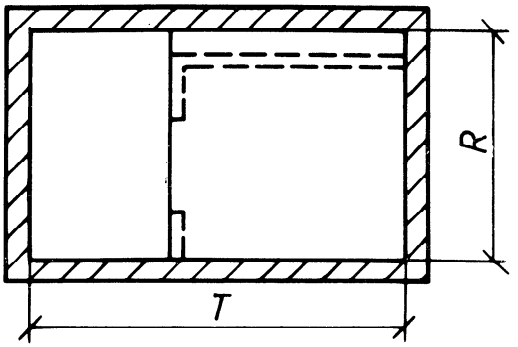
| **Rated load** (mass)[1] | | (kg) | **630** | **1 000** | **1 600** | **2 000** |
|---|---|---|---|---|---|---|
| **Car** | Width | $A$ (mm) | 1 100 | 1 300 | 1 500 | 1 500 |
| | Depth | $B$ (mm) | 1 400 | 1 750 | 2 250 | 2 700 |
| | Height | (mm) | 2 200 | 2 200 | 2 200 | 2 200 |
| **Car and landing doors** | Width | $E$ (mm) | 1 100 | 1 300 | 1 500 | 1 500 |
| | Height | $F$ (mm) | 2 100 | 2 100 | 2 100 | 2 100 |
| **Well** | Width | $C$ (mm) | 2 100 | 2 400 | 2 700 | 2 700 |
| | Depth | $D$ (mm) | 1 900 | 2 300 | 2 800 | 3 200 |
| **Pit** | Depth | $P$ (mm) | | | | |
| | $v_n \leqslant 1{,}0$ m/s | | 1 500 | 1 500 | 1 700 | 1 700 |
| **Height above the highest level served** | | $Q$ (mm) | | | | |
| | $v_n \leqslant 1{,}0$ m/s | | 4 100 | 4 100 | 4 300 | 4 300 |
| **Machine room** | $v_n \leqslant 1{,}0$ m/s | | | | | |
| | Surface | $S$ ($m^2$) | 12 | 14 | 18 | 20 |
| | Width[2] | $R$ (mm) | 2 800 | 3 100 | 3 400 | 3 400 |
| | Depth[2] | $T$ (mm) | 3 500 | 3 800 | 4 500 | 4 900 |
| | Height | $H$ (mm) | 2 200 | 2 200 | 2 400 | 2 400 |

1) Pending the establishment of an internationally agreed ratio of load to surface area of the lift car in national safety regulations, values of rated load somewhat different from those given above may be used in the meantime in countries where the load/surface area ratio is given in national standards.

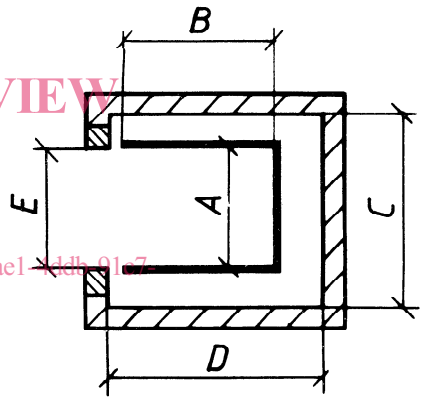
2) The values given for $R$ and $T$ are minimum ones. The actual dimensions shall lead to an area equal to at least $S$.




Vertical section
of well and
machine room




**Section X-X**
of machine room




**Section Y-Y**
of well and car



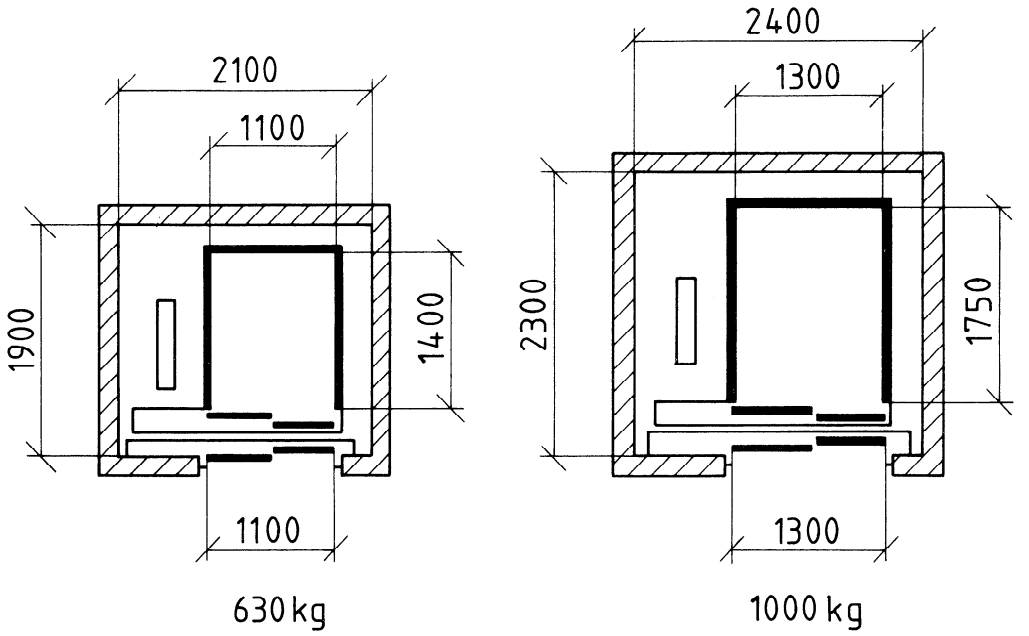
NOTES

1 Close-hatched areas schematically represent the infill between the rough opening and the door assembly.

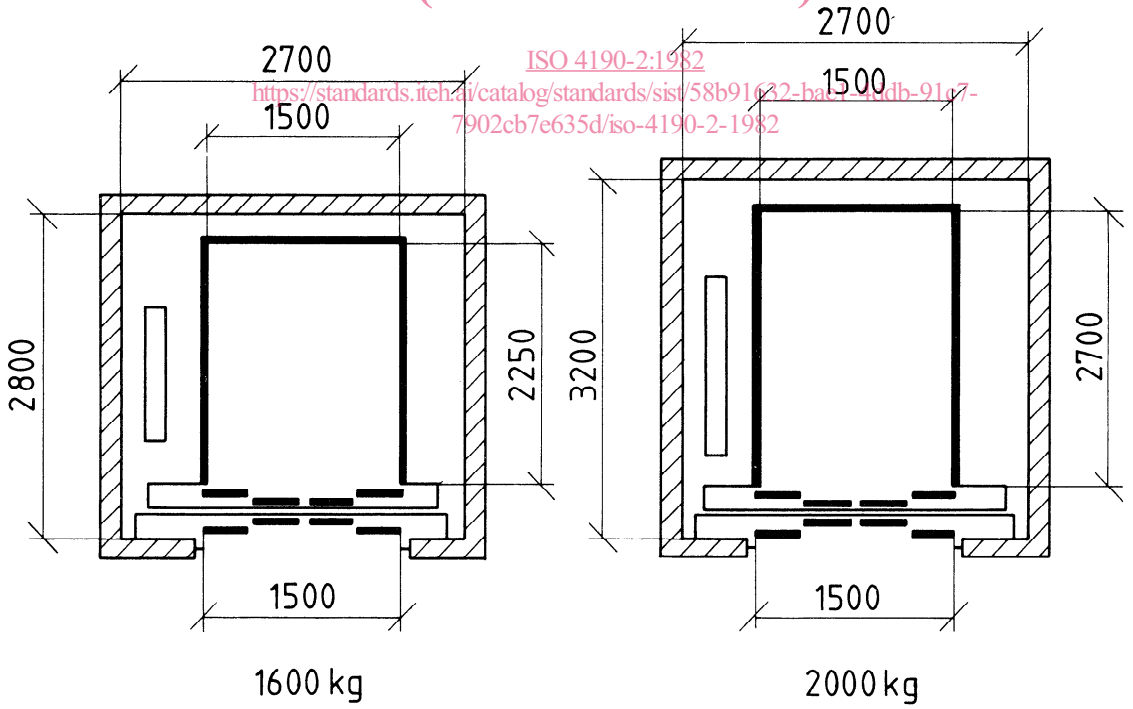
2 It is desirable to install an access door to the machine room although this is not indicated on the sketch.

**Figure 1**

Dimensions in millimetres






Car height : 2 200
Clear entrance : 2 100

NOTE — Other types of doors can be used.

**Figure 2**

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