IS 14665 (Part 1) : 2000
(Superseding IS 3534 : 1979)
(Reaffirmed 2005)
(Reaffirmed 2015)

भारतीय मानक

विद्युत संकर्षण लिफ्टें

भाग 1 यात्री, मालवाहक, सर्विस और अस्पताल प्रयोग की लिफ्टों के परिरेखा आयामों की मार्गदर्शिका

Indian Standard

ELECTRIC TRACTION LIFTS

PART 1 GUIDELINES FOR OUTLINE DIMENSIONS OF PASSENGER, GOODS, SERVICE AND HOSPITAL LIFTS

ICS 91.140.90

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

October 2000

Price Group 4

Lifts and Escalators Sectional Committee, ETD 25

FOREWORD

This Indian Standard (Part 1) was adopted by the Bureau of Indian Standards, after the draft finalized by the Lifts and Escalators Sectional Committee had been approved by the Electrotechnical Division Council.

The standard on this subject was originally published as IS 3534 in 1966 and was revised in 1976. This new series of standards is being brought out to reflect the latest trends in lift industry at National and International level. A detailed study of data collected over a long period has been made before preparing this standard. Every effort has been made to present the guideline in a simple form and it is hoped that the information furnished would be helpful to architects, consultants and lift makers.

The net internal areas are kept as close as possible to those specified in **5.1** of IS 14665 (Part 3/Sec 1) : 2000 and width and depth are generally chosen as modular dimensions in steps of 100 mm.

The dimensions given in Table 2 for goods lifts are for normal applications. For special requirements, the design can be modified to meet the requirements by mutual agreement between the purchaser and the supplier.

The clear inside dimensions should be measured at a height of one metre from the finished floor of the lift car from panel to panel.

The pit depth and the dimensions of headrooms suggested in this standard will satisfy all the provisions of **4.5** of IS 14665 (Part 2/Sec 1) : 2000 with regard to clearance and run by for car and counterweight.

The Composition of technical committee responsible for the preparation of this standard is given at Annex A.

This standard is one among the series of standards finalized by the Lifts and Escalators Sectional Committee as detailed below. This was done with a view to align the Indian Standards with the latest developments in the field of Lifts and Escalators and also to align the standards with the European Norms on Lifts and Escalators EN 81. Moreover, these standards are published with a view to have a uniform code for electric traction lifts all over the country, where presently different rules are being followed by different states:

New IS Series	*Superseding*
IS 14665 Electric traction lifts: Part 1 Guidelines for outline dimensions of passenger, goods, service and hospital lifts	IS 3534 : 1979 Outline dimensions of electric lifts (*first revision*)
Part 2 Code of practice for installation, operation and maintenance	
Section 1 Passenger and goods lifts	IS 1860 : 1980 Code of practice for installation, operation and maintenance of passenger and goods lifts (*first revision*)
Section 2 Service lifts	IS 6620 : 1972 Code of practice for installation, operation and maintenance of service lifts
Part 3 Safety rules	
Section 1 Passenger and goods lifts	IS 4666 : 1980 Electric passenger and goods lifts
Section 2 Service lifts	IS 6383 : 1971 Electric service lifts
Part 4 Components	
Section 1 Lift buffers	IS 9803 : 1981 Buffers for electric passenger and goods lifts

(*Continued on third cover*)

Indian Standard

ELECTRIC TRACTION LIFTS

PART 1 GUIDELINES FOR OUTLINE DIMENSIONS OF PASSENGER, GOODS, SERVICE AND HOSPITAL LIFTS

1 SCOPE

This standard specifies outline dimensions of lift cars for passenger, goods, service and hospital lifts. The corresponding well sizes, pit depth, headroom, machine-room details and type of car and landing doors are also specified.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	*Title*
14665 (Part 2 / Sec 1) : 2000	Electric traction lifts: Part 2 Code of practice for installation, operation and maintenance, Section 1 Passenger and goods lifts
(Part 3 / Sec 1) : 2000	Part 3 Safety rules, Section 1 Passenger and goods lifts
(Part 4 / Sec 4) : 2000	Part 4 Components, Section 4 Lift, safety gears and governors

3 TERMINOLOGY

3.1 For the purpose of this standard, the following definitions shall apply.

3.2 Passenger Lift — A lift designed for the transport of passengers.

3.3 Goods Lift — A lift designed primarily for the transport of goods but which may carry a lift attendant or other person necessary for the unloading and loading of goods.

3.4 Service Lift (Dumb-Waiter) — A lift with a car which moves in guides in a vertical direction; has net floor area of 1 m^2, total inside height of 1.25 m, whether or not provided with fixed or removable shelves; and capacity not exceeding 250 kg; and is exclusively used for carrying materials and shall not carry any person.

3.5 Hospital Lift — A lift normally installed in a hospital/dispensary/clinic and designed to accommodate one number bed/stretcher along its depth, with sufficient space around to carry a minimum of three attendants in addition to the lift operator.

4 GENERAL

The dimensions of well have been chosen to accommodate the doors inside the well which is the normal practice. In special cases, the doors may be accommodated in a recess in the front wall, for which prior consultation shall be made with the lift manufacturer.

5 PLAN DIMENSIONS

5.1 All plan dimensions of lift well are the minimum clear plumb sizes. The architect, in conjunction with the builder, shall ensure that adequate tolerances are included in the building design so that the specified minimum clear plumb dimensions are obtained in the finished work.

NOTE —The words 'clear plumb dimensions' should be noted particularly in case of high rise buildings.

5.2 Rough openings in concrete or brick walls to accommodate landing doors depend on design of architrave. It is advisable to provide sufficient allowances in rough opening width to allow for alignment errors of openings at various landings.

5.3 Where more than one lift is located in a common well, a minimum allowance of 100 mm for separator beams shall be made in the widths shown in Tables 1 to 4.

5.4 Where governor operated counterweight safety is required under conditions stipulated in **3.1.2** of IS 14665 (Part 4/Sec 4), the tabular values should be revised in consultation with the lift manufacturer.

5.5 For outline dimensions of lifts having more than one car entrance, lift manufacturer should be consulted.

6 OUTLINE DIMENSIONS

6.1 The outline dimensions of machine-room, pit depth, total headroom, overhead distance and sill for four classes of lifts to which the standard applies are specified in Tables 1 to 4 as indicated below:

Passenger lifts	Tables 1 and 1A
Goods lifts	Table 2
Hospital lifts	Table 3
Service lifts	Table 4

6.2 Travel

The tables have been established for a maximum travel of 30 m. For travels above 30 m, the lift manufacturer should be consulted.

6.3 Pit

The pit depth of the lifts will normally accommodate compensating chains. If compensating ropes are required, pit depth shall be increased for all loads and speeds and lift manufacturer should be consulted.

6.4 Minimum Floor to Floor Height

Minimum floor to floor height for landings on same side for horizontally sliding door is f+750 mm and for vertically biparting doors is 1.5 f+250 mm, where 'f' is clear entrance height in mm.

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Lift and Escalator Sectional Committee, ET 25

Chairman	*Representing*
SHRI D. H. PATIL	Maharashtra Public Works Department
Members	
PRESIDENT	Practicing Engineers, Architects & Town Planners, Mumbai
PRESIDENT	Builderrs Association of India, Mumbai
SHRI S.V. KAMAT	Bharat Bijlee Ltd, Mumbai
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SHRI P. GUJRAL (*Alternate*)	
SHRI M. I. KHUMRI	Govt. of Gujarat (IW), Energy & Petrochemical Dept, Gandhinagar
SHRI K. KRISHNAMURTHY NAIK	Chief Electrical Inspector (Karnataka), Bangalore
SHRI M. S. BASAVARJU (*Alternate*)	
SHRI S. KULASEKHARAN	Chief Electrical Inspector (Tamil Nadu), Chennai
SHRI N. RANGASWAMY (*Alternate*)	
SHRI D. K. SEN	Chief Electrical Inspector (West Bengal), Calcutta
SHRI S. K. MITRA (*Alternate*)	
SHRI M. S. BHATTACHARJEE	Central Mechanical Engineering Research Institute, Durgapur
SHRI SANATAN CHATTERJEE (*Alternate*)	
CE(E)	Central Public Works Department, New Delhi
SE (E) DCEVI (*Alternate*)	
SHRI S. K. KAILA	Ministry of Defence, New Delhi
SHRI B. K. BEHL (*Alternate*)	
SHRI I. Q. NAJAM	Maharastra Public Works Department, Pune
SHRI N. SUBRAMANAN	Directorate General of Supplies & Disposals, New Delhi
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SHRI A. S. HERWADKAR	OTIS Elevator Co (India) Ltd, Mumabi
DR G. M. MALKANI/SHRI S. P. RAO (*Alternate*)	
SHRI K. M. BHATIA, Director (Elec tech)	Director General, BIS (*Ex-officio Member*)

Member-Secretary
SHRI G. BABU
Deputy Director (Elec tech), BIS

(*Continued from second cover*)

New IS Series	*Superseding*
Section 2 Lift guide rails and guide shoes	IS 10191 : 1982 Car and counter weight guide rails, guide rail supports and fastenings for lifts and IS 11615 : 1986 Car and counter weight guide shoes for electric passenger and goods lifts
Section 3 Lift carframe, car, counter weight and suspension	IS 11706 : 1986 General requirements for car-frame for electric passengers and goods lift
Section 4 Lift safety gears and governors	IS 9878 : 1981 Safety gears and governors for electric passenger and goods lifts
Section 5 Lift retiring cam	IS 10448 : 1983 Retiring cam for passenger and goods lifts
Section 6 Lifts doors and locking devices and contacts	IS 7759 : 1975 Lift door locking devices and contacts and IS 11633 : 1986 Lift doors
Section 7 Lift machines and brakes	IS 10913 : 1984 Brakes for electric passenger and goods lifts
Section 8 Lift wire ropes	—
Section 9 Controller and operating devices for lifts	—
Part 5 Inspection manual	—

Details about installation, maintenance and operation of electric traction lifts, passenger and service lifts are covered in IS 14665 (Part 2/Sec 1 and 2). The constructional and safety aspects of these types of lifts are given in (Part 3/Section 1 and 2).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in the standard.

Bureau of Indian Standards

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Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc : No. ETD 25 (4098).

Amendments Issued Since Publication

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