

Indian Standard

METHOD OF MEASUREMENT OF
PLINTH, CARPET AND RENTABLE
AREAS OF BUILDINGS

(*First Revision*)

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

Indian Standard

METHOD OF MEASUREMENT OF PLINTH, CARPET AND RENTABLE AREAS OF BUILDINGS

(First Revision)

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Indian Standard

METHOD OF MEASUREMENT OF PLINTH, CARPET AND RENTABLE AREAS OF BUILDINGS

(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 19 July 1975, after the draft finalized by Civil Works Measurement Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 At present different methods for calculating plinth/carpet areas of buildings are followed by various departments. This Indian Standard was formulated in 1966 to provide a basis for uniform method of measurement of such areas of buildings. This revision has been prepared to include rentable area of the building on the basis of recommendations of Central Public Works Department. Opportunity has also been taken to make the contents of the standard up-to-date and deleting provisions relating to cubical contents which is generally not followed.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, final value, observed or calculated, expressing result of a measurement, shall be rounded off in accordance with IS : 2 - 1960*. The number of significant places retained in rounded off value should be same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers method of measurement of plinth, carpet and rentable areas of old and new buildings.

2. TERMINOLOGY

2.0 For the purpose of this standard the following definitions shall apply.

2.1 Plinth Area — shall mean the built up covered area measured at the floor level of the basement or of any storey (*see 4*).

*Rules for rounding off numerical values (*revised*).

2.2 Carpet Area — shall mean the covered area of the usable rooms at any floor level (*see* 5).

2.3 Rentable Area — shall mean the usable carpet area at any floor level (*see* 6).

2.4 Balcony — A horizontal projection with a hand-rail, balustrade or a parapet, to serve as passage or sitting out place.

2.5 Mezzanine Floor — An intermediate floor in between two main floors having minimum height of 2.2 m from the floor and having a proper access to it.

NOTE—Where rules of the local bodies permit, intermediate floor of minimum 1.8 m clear height, these be also considered as mezzanine floor for the purpose of measurement.

2.6 Stair Cover (Mumty) — It is a space having a roof over a staircase and its landing, built to enclose only the stairs for the purpose of providing protection from weather and not used for human habitation.

2.7 Loft — An intermediate storage area in between two main floors.

2.8 Porch — It is a cover surface supported on pillars or otherwise for the purpose of pedestrian or vehicular approach to a building.

3. GENERAL

3.1 Linear measurement shall be measured to nearest 0.01 m, and areas shall be worked out to the nearest 0.01 m².

3.2 The areas of each of the following categories shall be measured separately:

- a) Basement,
- b) Floor without cladding (stilted floor),
- c) Floors including top floor which may be partly covered*,
- d) Mezzanine floor, and
- e) Garrage.

4. MEASUREMENT OF PLINTH AREA

4.1 For the purpose of plinth area, following shall be included for the categories mentioned in 3.2.

- a) Area of the wall at the floor level excluding plinth offsets, if any; when the building consists of columns projecting beyond cladding,

*Partly covered top floor in Delhi area is known as Barsati.

the plinth area shall be taken up to the external face of cladding (in case of corrugated sheet cladding outer edge of corrugation shall be considered);

- b) Internal shaft for sanitary installations and garbage chute, provided these do not exceed 2 m^2 in area, vertical duct for air-conditioning, lift well including landing;
- c) Stair cover (mumty);
- d) Machine room; and
- e) Porch.

4.2 The following shall not be included in the plinth area (*see 2.1*).

- a) Additional floor for seating in assembly building/theatres and auditorium, etc;
- b) Cantilevered porch;
- c) Balcony;
- d) Area of loft;
- e) Internal sanitary shaft and garbage chute provided these are more than 2 m^2 in area;
- f) Area of architectural band, cornice, etc;
- g) Area of vertical sun breaker or box louver projecting out and other architectural feature, for example slabs projection for flower pot, etc;
- h) Open platform;
- j) Terrace at floor one;
- k) Spiral staircase including landing; and
- m) Towers, turrets, domes projecting above the terrace level at terrace*.

5. MEASUREMENT OF CARPET AREA

5.1 From the plinth area as worked out in 4, the area of the wall shall be deducted. Thickness of wall shall be inclusive of finishing and dado if the height of such finish is more than 1 m from floor finish.

5.1.1 The following shall be included in the wall area:

- a) Door and other openings in the wall;

*This item may also be measured, if required

- b) Intermediate pillars, supports or any other such obstruction within the plinth area irrespective of their location;
- c) Pilaster along wall exceeding 300 cm^2 in area;
- d) Flues which are within the wall;
- e) Built in cupboard, almirah and shelf appearing within a height of 2.2 m from floor; and
- f) Fire place projecting beyond the face of the wall in living or bed room.

5.1.2 The following shall be excluded from the wall area:

- a) Pilaster along wall not exceeding 300 cm^2 in area, and
- b) Chullah platform projecting beyond the face of the wall.

5.2 The carpet area shall be the plinth area worked out as in 5.1 excluding the area of the following portion:

- a) Verandah;
- b) Corridor and passage;
- c) Entrance hall and porch;
- d) Staircase and stair-cover (mumty) (*see Note*);
- e) Shaft and machine room for lift;
- f) Bathroom and lavatory;
- g) Kitchen and pantry;
- h) Store;
- j) Canteen;
- k) Air-conditioning duct and plant room; and
- m) Shaft for sanitary piping.

NOTE—In a hall or basement areas of portion 1 m beyond last step shall be part of the staircase.

5.2.1 The carpet area of category mentioned in 3.2(b) and (e) are not to be accounted for plinth area.

6. MEASUREMENT OF RENTABLE AREA

6.1 Residential Buildings

6.1.1 The rentable area shall be the carpet area as worked out in 5 but shall further include the following:

- a) The carpet area of kitchen, pantry, store, lavatory, bath-room; and
- b) Fifty percent of carpet area of unglazed and 100 percent of glazed verandah.

6.1.1.1 It shall, however, exclude the carpet area of the following:

- a) Covered portion of the building within portion specified in 5.1, such as storage space on top, landings of staircase, under and first landing and waist slab on floor one.
- b) Fifty percent of the carpet area of balcony.

6.1.2 While accounting the rentable area for the category mentioned in 3.2(b), one-fourth carpet area shall be accounted for when stilts have height more than 2.4 m.

6.2 Non-Residential Buildings — The rentable area shall be the carpet area as worked out in 5 but shall further include the carpet area of the canteen including store, kitchen and pantry attached to it.

6.2.1 It shall, however, not include carpet areas of bathroom and lavatory.

6.2.2 While accounting the rentable area for the category mentioned in 3.2(b), one-fourth carpet area shall be accounted for when stilts have height more than 2.4 m.

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TO

IS:3861-1975 METHOD OF MEASUREMENT OF PLINTH,
CARPET AND RENTABLE AREAS OF BUILDINGS

(First Revision)

Addendum

(Page 5, clause 5.1) - Add the following new Note
after 5.1:

'NOTE - The various dimensions could be measured
internally or externally.'

(BDC 44)

Reprography Unit, BIS, New Delhi, India

AMENDMENT NO. 2 FEBRUARY 1984
TO
IS: 3861-1975 METHOD OF MEASUREMENT OF PLINTH,
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Addendum

(Page 7, clause 6.2) - Add the following Note
after 6.2:

'NOTE - The rentable area for basement meant for storage purposes may also be worked out on cubical content basis in which case after calculating the carpet areas as mentioned in 6.2, cubical content shall be worked out by multiplying the carpet area by the average height between the floor level and bottom of roof.'

(BDC 44)

AMENDMENT NO. 3 OCTOBER 1987

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(Page 4, clause 4.1) - Add the following new
item in the end:

'f) Usable area of slab(s) projected outside
walls.'

(BDC 44)

Reprography Unit, BIS, New Delhi, India