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*Indian Standard*

METHOD OF MEASUREMENT OF  
BUILDING AND CIVIL ENGINEERING WORKS

PART VII HARDWARE

*( Second Revision )*

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

*Indian Standard*METHOD OF MEASUREMENT OF  
BUILDING AND CIVIL ENGINEERING WORKS

## PART VII HARDWARE

*( Second Revision )*

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*( Continued on page 2 )*

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( Continued from page 1 )

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*Indian Standard*  
METHOD OF MEASUREMENT OF  
BUILDING AND CIVIL ENGINEERING WORKS  
PART VII HARDWARE  
( *Second Revision* )

0. FOREWORD

**0.1** This Indian Standard ( Part VII ) ( Second Revision ) was adopted by the Indian Standards Institution on 17 May 1972, after the draft finalized by the Civil Works Measurement Sectional Committee had been approved by the Civil Engineering Division Council.

**0.2** Measurement occupies a very important place in the planning and execution of any civil engineering work from the time of first estimates to the final completion and settlement of payments for a project. Methods followed for measurement are not uniform and considerable differences exist between practices followed by different construction agencies and also between various Central and State Government Departments. While it is recognized that each system of measurement has to be specifically related to administrative and financial organizations within a department responsible for the work, a unification of various systems at technical level has been accepted as very desirable specially as it permits a wider range of operation for civil engineering contractors and eliminates ambiguities and misunderstandings of various systems followed.

**0.3** Among various civil engineering items, measurement of buildings was the first to be taken up for standardization and this standard having provisions relating to building work was first published in 1958 and was revised in 1964.

**0.4** In the course of usage of this standard by various construction agencies in the country, several clarifications and suggestions for modifications were received and as a result of study, the technical committee responsible for this standard decided to cover method of measurement for civil engineering works like industrial and river valley projects.

**0.5** 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 measurement, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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

## **1. SCOPE**

**1.1** This standard ( Part VII ) covers the method of measurement of hardware in buildings and civil engineering works.

## **2. GENERAL**

**2.1 Description of Item** — The description of each item shall, unless otherwise stated, be held to include, wherever necessary, conveyance and delivery, handling, unloading, storing and all labour for fitting and fixing in position, cutting and waste, return of packing, etc.

**2.2 Limits of Measurement** — The dimensions shall be measured net in decimal system nearest to 0.01 m.

**2.3 Bills of Quantities** — The bills of quantities shall fully describe the materials and workmanship and accurately represent the work to be executed.

**2.4 Mode of Measurements** — The various kinds of builders hardware shall be described and measured separately according to the material, finish, size, pattern and method of fixing.

**2.4.1** All builders hardware shall be fully described and enumerated except the following which shall be measured in running metres:

- a) Curtain rods or poles, stating the outer diameter;
- b) Curtain Rails — Curtain runners, brackets and stops shall be described and included with the item stating the number per metre of rail;
- c) Rails for sliding sashes stating the size of the rail; and
- d) Sash Lines — The girth or diameter shall be stated.

**2.5** Fixing of hardware items shall include all fittings, cutting, sinking, boring and morticing, the supply of screws ( or bolts, nuts and washers in the case of hardware made for fixing with bolts ), to match.

**2.6** Hardware fixed to wood and metal shall each be measured separately.

**2.7** Hardware fixed flush shall be so described.

## **3. MEASUREMENT OF SIZES OF HARDWARE**

**3.1** The sizes of the hardware articles ( *see 2.4* ) shall be measured as indicated in Table 1.

**TABLE 1 MEASUREMENT OF HARDWARE***( Clause 3.1 )*

Sl No.	NAME OF ARTICLE	HOW MEASURED
1)	Bolts	a) The length of face plate in flush bolts b) The length of shoots ( bolt ) in other bolts
2)	Hinges	a) The length of the joint or knuckle of butt hinges b) The width between flanges and also the height of parliament hinges c) The length of the leaf ( that is, from the joint or knuckle to the point ), in case of tee and strap hinges d) The length of the spring cylinder for regulating spring of butt hinges e) The length of joint in case of back flap hinges
3)	Latches ( Suffolk or Norfolk )	The dimensions of the plate ( having the bow handle ) and the size number
4)	Latches, rim ( Night )	} The horizontal length of face across the body excluding the box staple or striking plate
5)	Locks, rim	
6)	Locks, mortice	
7)	Locks, cabinet or cup board	
8)	Locks drawer	
9)	Locks furniture	The maximum diameter of the knob
10)	Cleats belaying	Straight distance between two ends of cleat
11)	Catches, spring ( for fan-light )	The flat overall size in elevation of the plate with spring catch excluding the striking plate
12)	Fasteners, cockspur	The length of handle from the centre of pivot or hinged joint
13)	Fasteners and stays ( casement )	Extreme length including thickness of back plate
14)	Pivots and sockets	The dimensions of each plate
15)	Stays, quadrant ( for fan-light )	The shortest straight length between the extreme ends of the quadrant stay

*( Continued )*

**TABLE 1 MEASUREMENT OF HARDWARE — Contd**

Sl. No.	NAME OF ARTICLE	HOW MEASURED
16)	Brackets for shelving	The extreme width and height
17)	Door handles	Grip length
18)	Hat pegs	Extreme length including thickness of plate
19)	Hat and coat hooks	Measured diagonally from extreme top of fixing plate to the extreme top of knob
20)	Wardrobe hooks	Measured diagonally from extreme top of fixing plate to the extreme top of knob
21)	Screw hooks dresser or cup pattern	Straight length excluding screwed end
22)	Cabin or casement hook with two eyes on plate	Straight length between centre of two eyes when fixed
23)	Wire hooks with two screwed eyes	The overall length of the hook excluding the screwed eye. The diameter of wire shall be stated
24)	Knob	The maximum diameter of the knob
25)	Hasp and staples: a) Wire type b) Plate type	The overall length of hasp including the hinged plate The length measured from the centre of the hinge to the end of the hasp excluding the hinged plate
26)	Strips, rat-tail including friction plate	} Length measured from the centre of the spindle to the centre of the roller
27)	Springs, patent helical	
28)	Screwed eyes	The overall length of the screwed eye and diameter of wire shall be stated
29)	Door closer (hydraulically regulated)	The weight and the width of the door to which it is intended to be fitted shall be stated
30)	Finger plates	The length, width and thickness of the plates
31)	Sliding door bolt ( Aldrop )	Length of the bolt
32)	Floor door stopper with plate	Length of its plate
33)	Hooks and eyes	Length of the hook measured out to out

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