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मानक

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Mazdoor Kisan Shakti Sangathan

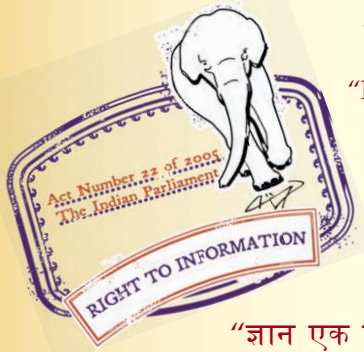
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“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 15833 (2009): Stainless steel tower bolts -Specification  
[CED 15: Builder Hardware]



“ज्ञान से एक नये भारत का निर्माण”

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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भारतीय मानक  
जंगरोधी इस्पात की चटखनियाँ — विशिष्टि

*Indian Standard*

STAINLESS STEEL TOWER BOLTS — SPECIFICATION

ICS 91.190; 77.140.20

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

## FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Builder's Hardware Sectional Committee had been approved by the Civil Engineering Division Council.

Tower bolts are commonly used in doors, windows, almirah, etc, for security purposes. Tower bolts are made from various materials like mild steel, brass and aluminium. However, in locations where atmospheric moisture content is high, ordinary mild steel gradually gets rusted. With the availability of stainless steel of suitable grade, tower bolts in stainless steel which are rust proof, durable and of good appearance are now available. Stainless steel tower bolts are especially useful in coastal areas where humidity levels are high.

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

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 this standard.

## Indian Standard

# STAINLESS STEEL TOWER BOLTS — SPECIFICATION

### 1 SCOPE

This standard lays down the requirements for barrel type tower bolts made of stainless steel.

### 2 REFERENCES

The standards listed below contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

<i>IS No.</i>	<i>Title</i>
6527 : 1995	Stainless steel wire rods — Specification ( <i>first revision</i> )
6760 : 1972	Specification for slotted countersunk head wood screws
6911 : 1992	Stainless steel plate, sheet and strip ( <i>first revision</i> )

### 3 NOMINAL SIZES

**3.1** Stainless steel tower bolts shall be of the following sizes:

100, 150, 200, 250 and 300 mm.

**3.2** The size of the tower bolt shall be denoted by the length of the barrel, *B* (*see* Table 1).

### 4 MATERIAL

The stainless steel used in the manufacture of tower bolts shall be as given in **4.1** and **4.2**.

#### 4.1 Sheet

The stainless steel for sheet shall conform to Grades X07Cr18Ni9 or X10Cr17Mn6 Ni4 N20 of IS 6911.

#### 4.2 Bolt

The stainless steel for bolts shall conform to Grades X04Cr13 or X12Cr13 or X04Cr18Ni10 or X07Cr18Ni9 of IS 6527.

### 5 MANUFACTURE

#### 5.1 General

Tower bolts shall be well made and shall be free from

defects. The bolts shall be finished to the correct shape and shall have a smooth action. All tower bolts made with sheets of thickness 0.70 mm and above shall have countersunk screw holes to suit countersunk head wood screws (*see* IS 6760). All sharp edges and corners shall be removed and finished smooth. (A typical illustration is shown in Fig. 1.)

**5.2** Tower bolts shall have a bolt of single piece construction with the knob integral with the bolt. Alternatively, the knob may be fitted to the bolt with a pin or screwed and riveted to the bolt, having round or any other shape with no sharp edges and of robust construction.

### 6 DIMENSIONS

The leading dimensions of stainless steel barrel type tower bolts and tolerances on them shall conform to those given in Table 1.

### 7 FINISH

Unless otherwise ordered for, the stainless steel tower bolts shall be polished bright with smooth surface.

### 8 MARKING

**8.1** Each stainless steel tower bolt shall be clearly marked with the name of manufacturer/indication of the source of manufacture or trade-mark and the word 'Stainless Steel' shall be legibly imprinted.

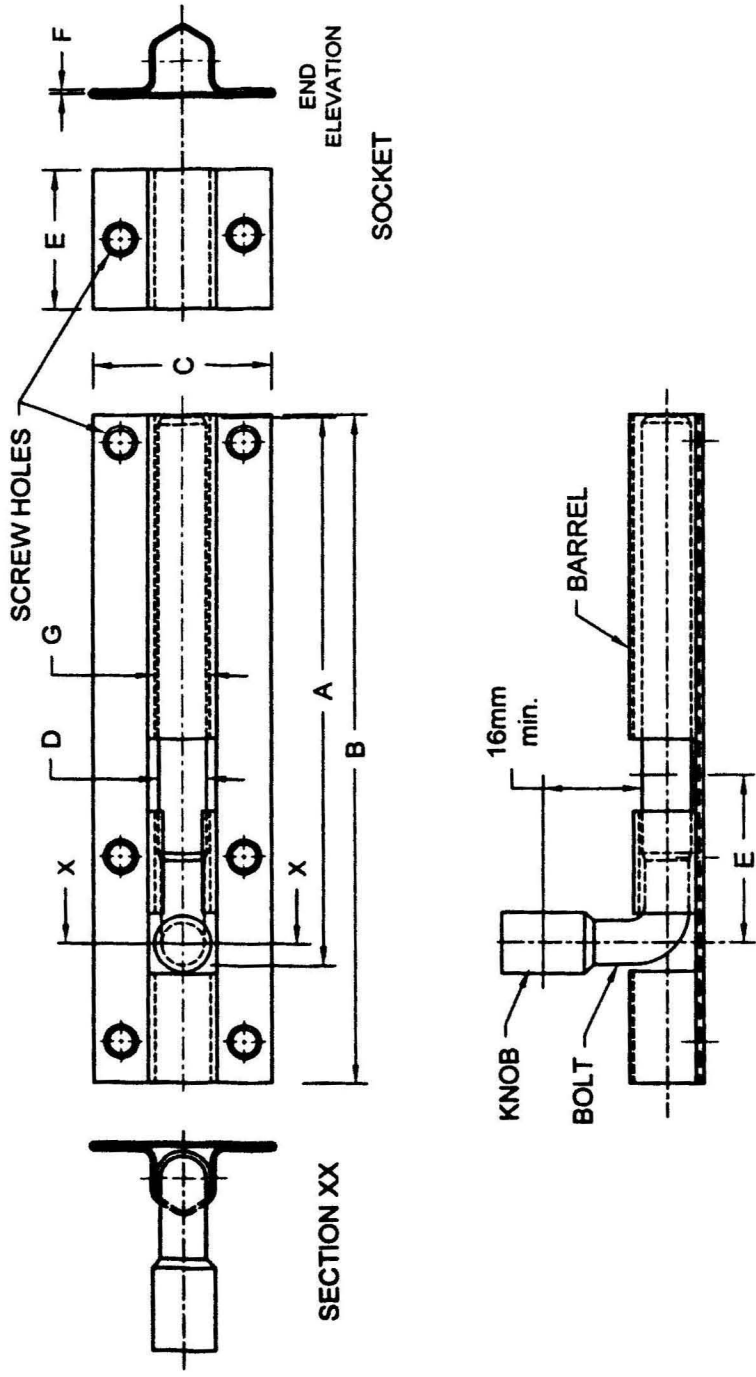
#### 8.1.1 BIS Certification Marking

The stainless steel tower bolts may also be marked with the Standard Mark.

**8.1.1.1** The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act*, 1986 and Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

### 9 PACKING

Stainless steel tower bolts shall be suitably packed in cartons. Each carton shall bear a label showing the indication of the source of manufacture or trade-mark, size and quantity of tower bolts.



All dimensions in millimetres.

FIG. 1 A TYPICAL SKETCH FOR BARREL TYPE TOWER BOLT

**Table 1 Stainless Steel Tower Bolts**  
(Clauses 3.2 and 6)

Sl No.	Size	Length of Bolt	Length of Barrel	Width of Barrel		Dia of Bolt	Length of Socket	Thickness of Steel Sheet for Barrel		Dia of Bore of Barrel or Socket	Minimum No. of Equally Spaced Screw Holes in Barrel and Sockets for Wood Screw No. 6		
				A	B			C				F	G
								When D = 10 mm	When D = 12 mm				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
i)	100	70	100	33	38	10.0 or 12.0	25	0.7	1.0	0.7 to 1.5 more than diameter of bolt	6		
ii)	150	120	150								8		
iii)	200	170	200								10		
iv)	250	220	250								12		
v)	300	270	300								12		
Tolerance	+3 -1	+3 -1	±1 ±1	±0.50	±1	±0.10	±0.15	—	—	—	—		

NOTE — The shapes given in Fig. 1 is only illustrative but the dimensions and minimum requirements where specified, are binding.

## 10 SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

### 10.1 Lot

In any consignment, all the stainless steel tower bolts of the same size and manufactured in a day shall be grouped together to constitute a lot.

### 10.2 Sample Size

The number of stainless steel tower bolts to be selected from a lot shall depend upon the size of the lot and shall be in accordance with col 2 and 3 of Table 2.

**10.2.1** The stainless steel tower bolts shall be selected at random from at least 10 percent of the packets subject to a minimum of three, equal number of stainless steel tower bolts being selected from each such packet.

### 10.3 Tests

**10.3.1** All the stainless steel tower bolts selected as in 10.2 shall be checked for dimensional requirements (see 6) and for finish (see 7). Any stainless steel tower bolt which fail to satisfy the requirements of dimensions or finish or both, shall be considered as a defective tower bolt. Each consignment of raw material shall be checked as per requirements of 4.

**10.3.2** If required by the purchaser, the material shall

be tested for corrosion resistance. Method of test and specification requirements shall be as agreed to between the purchaser and the manufacturer.

### 10.4 Criteria for Conformity

A lot shall be considered as conforming to the requirements of this standard, if the number of defective tower bolts among those inspected does not exceed the corresponding number given in col 4 of Table 2; otherwise it shall be considered as not conforming to the requirements of this standard.

**10.5** For conformity to the requirements of the materials, the manufacturer shall provide a certificate of compliance to the requirements given in 4.

**Table 2 Scale of Sampling and Criterion for Conformity**  
(Clauses 10.2 and 10.4)

Sl No.	Lot Size	Sample Size	Permissible Number of Defective Tower Bolts
(1)	(2)	(3)	(4)
i)	Up to 200	5	0
ii)	201 - 300	8	1
iii)	301 - 500	13	2
iv)	501 - 800	20	2
v)	801 and above	25	3

**ANNEX A**

*(Foreword)*

**COMMITTEE COMPOSITION**

**Builder's Hardware Sectional Committee, CED 15**

<i>Organization</i>	<i>Representative(s)</i>
In personal capacity (1421, Sector A, Pocket B & C, Vasant Kunj, New Delhi 110070)	SHRI B. MAJUMDAR ( <i>Chairman</i> )
Allied Anodisers, Kolkata	SHRI SUSHIL TAWAR
Appex Association of DDA Colonies (Regd), Delhi	SHRI R. P. AGRAWAL SHRI R. R. SHARMA ( <i>Alternate</i> )
Argent Industries, New Delhi	SHRI ANIL CHADHA SHRIMATI VANITA CHADHA ( <i>Alternate</i> )
Builders Association of India, Jamshedpur	REPRESENTATIVE
Building Materials & Technology Promotion Council, New Delhi	SHRI B. ANIL KUMAR SHRI V. K. SETHI ( <i>Alternate</i> )
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Central Public Works Department, New Delhi	REPRESENTATIVE
Construction Industries Development Council, New Delhi	SHRI P. R. SWARUP SHRI RAJEEV JAIN ( <i>Alternate</i> )
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Indian Institute of Architects, New Delhi	DR ABHIJIT RAY
M.C. Mowjee & Co Pvt Limited, Kolkata	SHRI SAJID MOWJEE
MECH (India) Industries, Delhi	SHRI SUDHIR BATRA SHRI RAJESH VASUDEVA ( <i>Alternate</i> )
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*Member Secretary*

SHRI NAVEEN KUMAR VEERAMALLA  
Scientist 'B' (CED), BIS

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Amend No.	Date of Issue	Text Affected

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