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IS 4621 (1975): Specification for indicating bolts for use in public baths and lavatories [CED 15: Builder Hardware]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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*Indian Standard*

**SPECIFICATION FOR  
INDICATING BOLTS FOR USE IN PUBLIC  
BATHS AND LAVATORIES**

*( First Revision )*

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

# *Indian Standard*

## SPECIFICATION FOR INDICATING BOLTS FOR USE IN PUBLIC BATHS AND LAVATORIES

### ( *First Revision* )

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**SURVEYOR OF WORKS ( I )**

*Indian Standard*

SPECIFICATION FOR  
INDICATING BOLTS FOR USE IN PUBLIC  
BATHS AND LAVATORIES

( *First Revision* )

**0. FOREWORD**

**0.1** This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 22 September 1975, after the draft finalized by the Builder's Hardware Sectional Committee had been approved by the Civil Engineering Division Council.

**0.2** The specification for indicating bolts was first published in 1968 to recommend suitable designs of indicating bolts which are fitted to doors in public baths and lavatories for showing whether they are engaged or vacant. After reviewing the standard the Sectional Committee has prepared a revision to specify materials of construction in accordance with the latest Indian Standards.

**0.3** In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practice in the field in this country.

**0.4** This standard is one of a series of Indian Standards on Builder's hardware.

**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 test, 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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**1. SCOPE**

**1.1** This standard lays down the requirements for indicating bolts for use in public baths and lavatories.

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

## 2. TYPES OF OPERATIONS

2.1 Operation of the bolt may be achieved by one of the following methods:

- a) Gear work, or
- b) Displacement.

## 3. NOMINAL SIZES

3.1 The indicating bolts shall be normally made in two sizes, namely, Size 1 and Size 2, however, the bolts may be made in other sizes where so agreed to between the manufacturer and the purchaser.

## 4. DIMENSIONS AND TOLERANCES

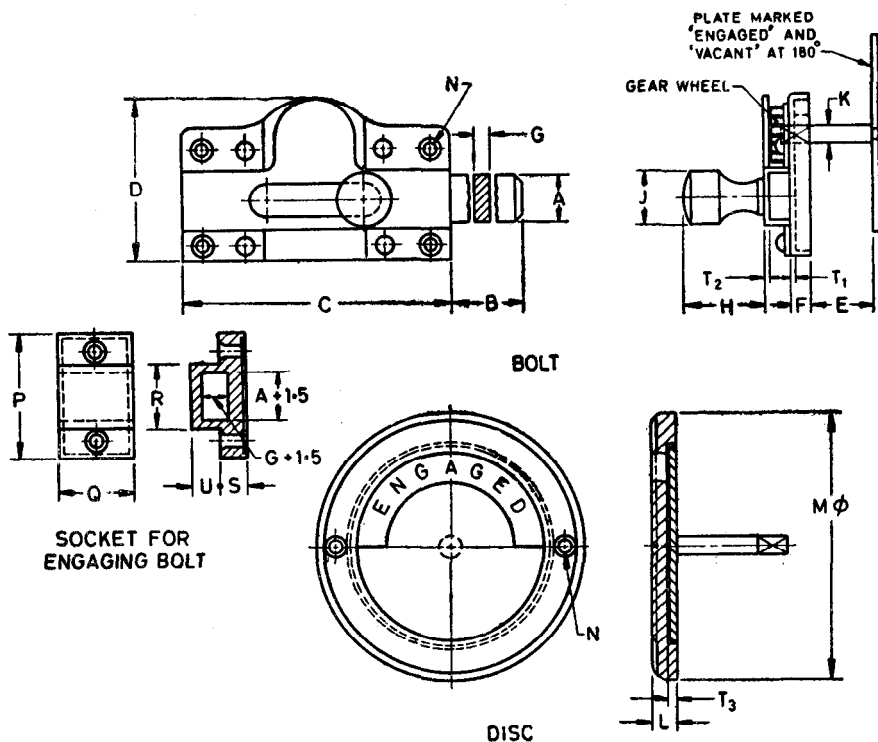
4.1 The dimensions and tolerances thereon for Size 1 and Size 2 bolts shall be as given in Table 1 and read with Fig. 1.

**TABLE 1 DIMENSIONS AND TOLERANCES FOR INDICATING BOLT**

LETTER REF IN FIG. 1	NOMINAL SIZE, mm		TOLERANCE, mm
	Size 1	Size 2	
(1)	(2)	(3)	(4)
<i>A</i>	12.5	20	$\pm 0.1$
<i>B</i>	20	25	$\pm 1$
<i>C</i>	75	85	$\pm 1$
<i>D</i>	45	50	$\pm 1$
<i>E</i>	To suit door thickness		
<i>F</i>	5	6.5	$\pm 0.5$
<i>G</i>	5	7.5	$\pm 0.5$
<i>H</i>	20	22	$\pm 0.5$
<i>J</i>	15	20	$\pm 0.5$
<i>K</i> (square)	5	5	$\pm 0.5$
<i>L</i>	10	10	$\pm 0.5$
<i>M</i> (dia)	70	70	$\pm 1$
<i>P</i>	35	50	$\pm 1$
<i>Q</i>	20	25	$\pm 1$
<i>R</i>	17	26	$\pm 1$
<i>S</i>	8	10	$\pm 1$
<i>T</i> <sub>1</sub>	3	3	$\pm 0.5$
<i>T</i> <sub>2</sub>	1.5	3	$\pm 0.5$
<i>T</i> <sub>3</sub>	1.5	1.5	$\pm 0.1$
<i>U</i>	7	10	$\pm 1$
Wood screw designation No.*	4	6	—
No. of holes	4	4	—

\*See IS : 6760-1972 Specification for slotted countersunk head wood screw.





NOTE — The shape of the parts are only illustrative and not binding.

FIG. 1 TYPICAL SKETCH OF AN INDICATING BOLT

**4.1.1** The indicating bolts may be made in other dimensions where so agreed to between the manufacturer and the purchaser.

## 5. MATERIAL

**5.1** The material used for the manufacture of indicating bolt shall be as given in Table 2.

## 6. MANUFACTURE

**6.1** When the bolt is drawn, it shall show the word 'ENGAGED' on a red background and when the bolt is withdrawn it shall show the word 'VACANT' in green background.

**TABLE 2 REQUIREMENTS FOR MATERIAL FOR INDICATING BOLTS**

( Clause 5.1 )

Sl. No.	ITEM	MATERIAL	EXAMPLE OF SUITABLE GRADE IN INDIAN STANDARD
(1)	(2)	(3)	(4)
i)	Body, knob and indicating spindle	Aluminium alloy casting	IS Designation A-5-M or A-6-M of IS : 617-1959*
		Extruded aluminium alloy	HE 20-WP or HE 30-WP of IS : 733-1967†
		Brass casting	Grade 3 of IS : 292-1961‡
		Extruded brass	IS : 319-1974§
		Zinc base alloy die casting	IS : 742-1966
ii)	Indicating disc	Aluminium alloy sheet	IS Designation NS4-H1 or HS 20-W of IS : 737-1974¶
		Brass casting	Grade 3 of IS : 292-1961‡
iii)	Gears	Aluminium alloy casting	IS Designation A-5-M or A-6-M of IS : 617-1959*
		Brass casting	Grade 3 of IS : 292-1961‡

\*Specification for aluminium and aluminium alloy ingots and castings for general engineering purposes ( revised ).

†Specification for wrought aluminium and aluminium alloys, bars, rods and sections ( for general engineering purposes ) ( first revision ).

‡Specification for brass ingots and castings ( revised ).

§Specification for free-cutting brass bars, rods and sections ( third revision ).

||Specification for zinc base alloy die castings ( first revision ).

¶Specification for wrought aluminium and aluminium alloys, sheet and strip ( for general engineering purposes ) ( third revision ).

## 7. WORKMANSHIP AND FINISH

7.1 Indicating bolts when assembled shall have smooth and easy working and shall be satin finished or bright polished. Aluminium indicating bolts shall be anodized and the quality of anodized finish shall not be less than Grade AC 10 of IS : 1868-1968\*.

## 8. MARKING

8.1 Each indicating bolt shall bear the manufacturer's name or trade-mark.

\*Specification for anodic coatings on aluminium ( first revision ).

**8.1.1** Indicating bolts may also be marked with the ISI Certification Mark.

**NOTE** — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution ( Certification Marks ) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

## **9. PACKING**

**9.1** Indicating bolts shall be packed according to the usual trade practice in cartons. The boxes shall be labelled with the manufacturer's name, trade-mark and particulars of quantity.

## **10. SAMPLING**

**10.1** The method of drawing representative samples of the material and the criteria for conformity shall be as prescribed in Appendix A.

# **APPENDIX A**

( *Clause 10.1* )

## **SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY**

### **A-1. SCALE OF SAMPLING**

**A-1.1 Lot** — In any consignment, all the indicating bolts of the same type, shape and size, manufactured from the same material, shall be grouped together to constitute a lot.

### **A-2. SAMPLE SIZE**

**A-2.1** The number of indicating bolts to be selected from a lot shall depend upon the size of the lot and shall be in accordance with col 1 and 2 of Table 3.

**A-2.1.1** Indicating bolts for the samples shall be selected at random from at least 10 percent of the packages, subject to a minimum of three packages, equal number of bolts being selected from each such package.

**TABLE 3 SCALE OF SAMPLING AND PERMISSIBLE NUMBER OF DEFECTIVES***( Clauses A-2.1 and A-3.1.1 )*

LOT SIZE	SAMPLE SIZE	PERMISSIBLE NO. OF DEFECTIVES IN THE SAMPLE
(1)	(2)	(3)
Up to 50	8	0
51 „ 100	13	0
101 „ 150	20	0
151 „ 300	32	1
301 „ 500	50	2
501 „ 1 000	80	3
1 001 and above	125	5

**A-3. NUMBER OF TESTS AND CRITERIA FOR CONFORMITY**

**A-3.1** All the bolts selected as in **A-2.1.1** shall be inspected for dimensional requirements ( *see 4.1* and Table 1 ), and workmanship and finish ( *see 7.1* ). Any bolt which fails to satisfy any one or more of the requirements shall be considered as defective.

**A-3.1.1** A lot shall be considered as conforming to the requirements of this specification if the number of defective bolts among those tested does not exceed the corresponding number given in col 3 of Table 3, otherwise it shall be considered as not conforming to the requirements of this standard.

# BUREAU OF INDIAN STANDARDS

## Headquarters :

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones : 3 31 01 31, 3 31 13 75      Telegrams : Manaksanstha  
( Common to all Offices )

## Regional Offices :

Telephone

\*Western : Manakalaya, E9 MIDC, Marol, Andheri ( East ), 6 32 92 95  
BOMBAY 400093

†Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, 36 24 99  
Maniktola, CALCUTTA 700054

Northern : SCO 445-446, Sector 35-C { 2 18 43  
CHANDIGARH 160036 { 3 16 41

Southern : C. I. T. Campus, MADRAS 600113 { 41 24 42  
{ 41 25 19  
{ 41 29 16

## Branch Offices :

Pushpak, Nurmohamed Shaikh Marg, Khanpur, { 2 63 48  
AHMADABAD 380001 { 2 63 49

'F' Block, Unity Bldg, Narasimharaja Square, 22 48 05  
BANGALORE 560002

Gangotri Complex, 5th Floor, Bhadbhada Road, T. T. Nagar, 6 27 16  
BHOPAL 462003

Plot No. 82/83, Lewis Road, BHUBANESHWAR 751002 5 36 27

53/5 Ward No. 29, R. G. Barua Road, —  
5th Byelane, GUWAHATI 781003

5-8-56C L. N. Gupta Marg, (Nampally Station Road), 22 10 83  
HYDERABAD 500001

R14 Yudhister Marg, C Scheme, JAIPUR 302005 { 6 34 71  
{ 6 98 32

117/418B Sarvodaya Nagar, KANPUR 208005 { 21 68 76  
{ 21 82 92

Patliputra Industrial Estate, PATNA 800013 6 23 05

Hantex Bldg ( 2nd Floor ), Rly Station Road, 52 27  
TRIVANDRUM 695001

## Inspection Office ( With Sale Point ):

Institution of Engineers ( India ) Building, 1332 Shivaji Nagar, 5 24 35  
PUNE 410005

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\*Sales Office in Bombay is at Novelty Chambers, Grant Road, 89 65 28  
Bombay 400007

†Sales Office in Calcutta is at 5 Chowringhee Approach, P. O. Princep 27 68 00  
Street, Calcutta 700072