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IS 2681 (1993): Non-ferrous metal sliding door bolts (alldrops) for with padlocks -Specification [CED 15: Builder Hardware]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

तालों में प्रयुक्त अल्लोह धातु के सरकवां दरवाजा
काबले की विशिष्टि

(तीसरा पुनरीक्षण)

Indian Standard

NON-FERROUS METAL SLIDING DOOR
BOLTS (ALDROPS) FOR USE WITH
PADLOCKS — SPECIFICATION

(*Third Revision*)

UDC 683-311-6 : 683-334

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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 Builders Hardware Sectional Committee had been approved by the Civil Engineering Division Council.

This standard was first published in 1964 and subsequently revised in 1966 and 1979. The present revision has been undertaken to incorporate the necessary modifications as a result of experience gained during the use of this standard. The present revision incorporates Amendment No. 1, 2 and 3 and material requirements have been modified. It also includes tolerance for hole position of clip and staple. The present revision excludes optional clause for sizes and dimensions though finish and fixing of clips has been retained (*see 7.2 and 8.1*).

While issuing this standard, the Sectional Committee took note of the acute scarcity of non-ferrous materials like copper, zinc and their alloys in the country and the need for conserving the use of the same in the national interest. However, in view of the demand for hardware items made of these materials in the overseas market, the Sectional Committee has retained them specifically to meet the requirements of export trade. For all indigenous use, it is recommended that hardware items made out of these materials should not be used.

The Committee responsible for the preparation of this standard is given at Annex. C.

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

NON-FERROUS METAL SLIDING DOOR BOLTS (ALDROPS) FOR USE WITH PADLOCKS — SPECIFICATION

(Third Revision)

1 SCOPE

1.1 This standard lays down the requirements for non-ferrous metal sliding door bolts (Aldrops) commonly used in general building construction for locking doors, gates, etc, with padlocks.

2 REFERENCES

2.1 The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 TYPES

3.1 Sliding door bolts shall be of the following types:

Type 1 — Brass sliding door bolts with sand-cast brass hasp, staple and fixing bolts or clips and rolled or drawn brass bolts.

Type 2 — Brass sliding door bolts with die-cast brass hasp, staple and fixing bolts or clips and rolled or drawn brass bolts.

Type 3 — Aluminium alloy sliding door bolts with hasp, staple and fixing clips of sheets, or extruded sections and fixing bolts and sliding bolts of extruded sections of aluminium alloy.

4 SIZES

4.1 Non-ferrous metal sliding door bolts shall be of the following sizes:

150, 200, 250, 300, 350, 375 and 450 mm.

4.1.1 The size of the sliding door bolts shall be denoted by the length of the bolt (*see A* in Fig. 1A and 1B).

5 MATERIALS

5.1 Materials used for different component parts of sliding door bolts shall comply with the requirements given in Table 1.

6 DIMENSIONS AND TOLERANCES

6.1 The essential dimensions of the different types of sliding door bolts and tolerances there on shall conform to those specified in Table 2 and 3 read with Fig. 1.

7 MANUFACTURE

7.1 General

Sliding door bolts shall be well made and free from defects. Cast parts shall be free from casting and other defects. The bolts shall have smooth sliding action. All screw holes shall be countersunk to suit the countersunk head wood screws conforming to IS 6760 : 1972 of size as specified in Table 2 and 3. All sharp edges and corners shall be finished smooth.

7.2 Brass Sliding Door Bolts or Aluminium Alloy Sliding Door Bolts

The hasp when not cast-integral with the bolt, shall be properly secured to the bolt as shown in Fig. 1. Sliding bolts shall be provided with fixing bolts or clips as specified by the purchaser. The fixing bolts shall have threaded ends and provided with round washers and nuts of square or hexagon type. Where so specified by the purchaser the clips may be provided with special type of screws and nuts approved by the purchaser for fixing the clips in a manner that these are not removable from outside easily.

8 FINISH

8.1 Brass sliding door bolts shall have satin finish or shall be polished or plated as specified by the purchaser.

8.2 Aluminium shall be anodized to a bright, natural, sat or satin finish or dyed. The anodic casting shall be not less than Grade AC 10 of IS 1868 : 1982 or as required by the purchaser.

9 MARKING

9.1 Each sliding door bolt shall be clearly marked, preferably on the hasp with the manufacture's name or trade-mark.

9.1.1 Sliding door bolt may also be marked with the Standard Mark.

10 PACKING

10.1 Sliding door bolts shall be suitably packed in cartons. Each carton shall bear a label showing following:

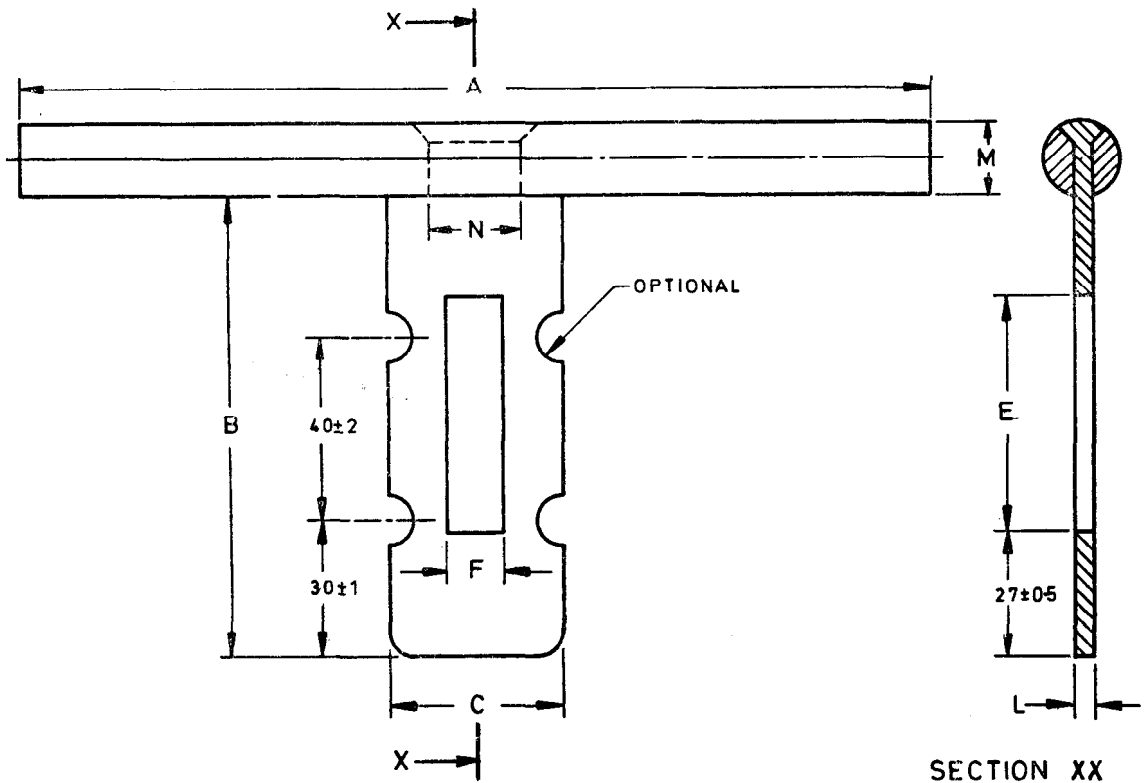
- a) Manufacturer's name or his trade-mark,
- b) Type,
- c) Size, and
- d) Quantity.

11 SCALE OF SAMPLING AND CRITERION FOR CONFORMITY

11.1 The method of sampling of sliding door bolts and the criterion for conformity shall be as given in Annex B.

Table 1 Requirements of Materials for Sliding Door Bolts
(Clause 5.1)

Materials	Conforming to Indian Standards
(1)	(2)
<i>Aluminium Alloy</i>	
Sheets	65032 or 52000 — H ₂ of IS 737 : 1987
Extruded	64430 WP of IS 733 : 1983
<i>Brass Sheet</i>	
Rolled	HD Grade CuZn40 of IS 410 : 1977 &
Cast	LCB2 of IS 292 : 1983
Extruded	Type 1 of IS 319 : 1985

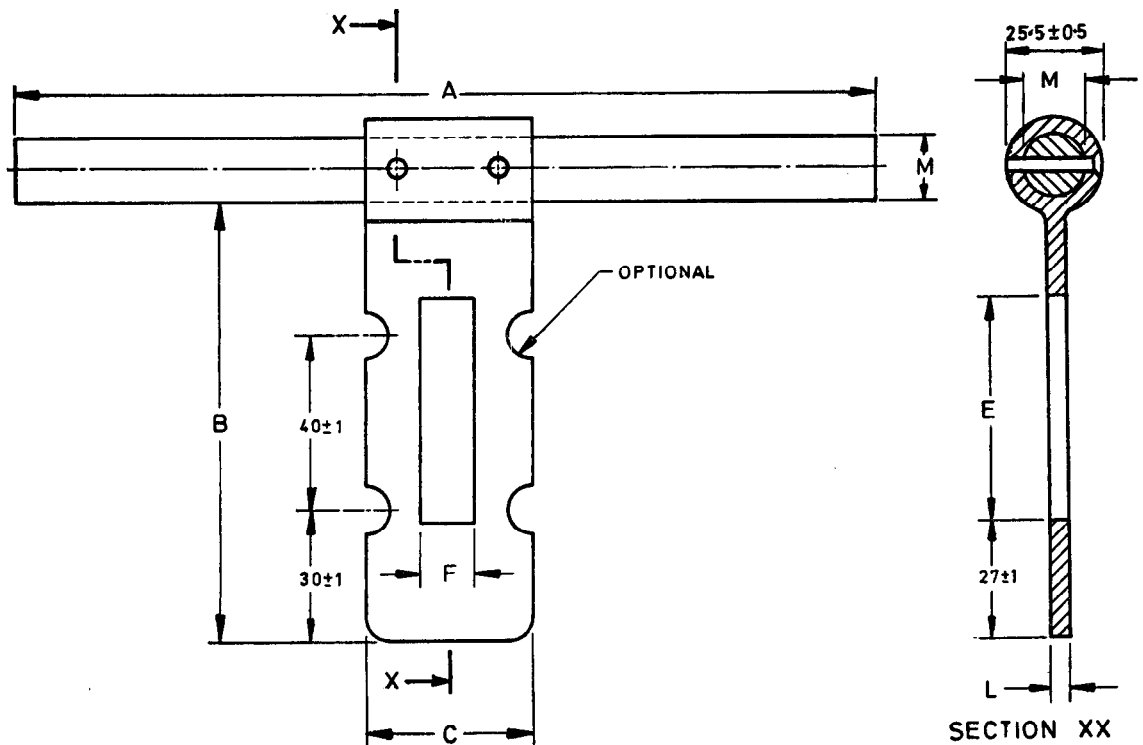


NOTE — The shape of the hasp is illustrative only but the dimensions and minimum requirements where specified are binding.

All dimensions in millimetres.

IA Hasp Riveted

FIG. 1 TYPICAL ILLUSTRATION OF NON-FERROUS METAL SLIDING DOOR BOLT — Continued

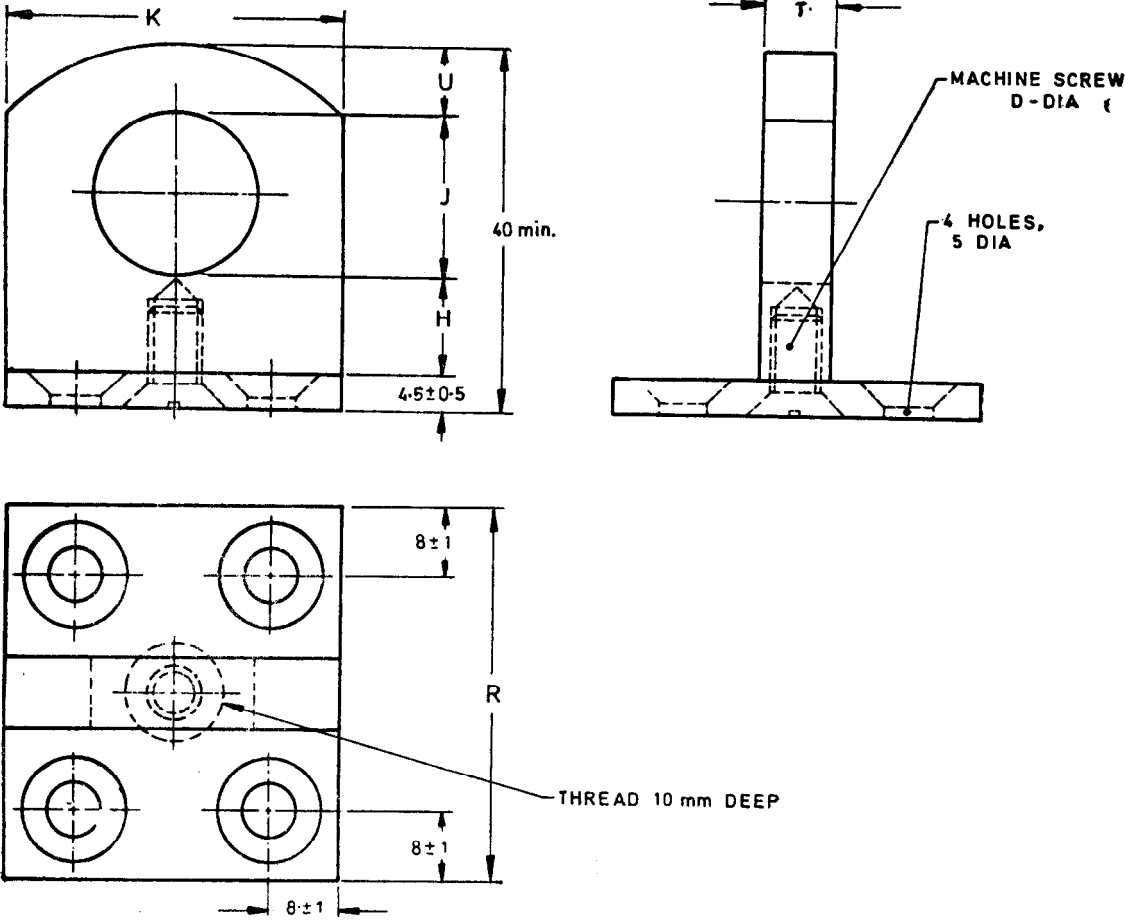


NOTE — The shape of the hasp is illustrative only but the dimensions and minimum requirements where specified are binding.

All dimensions in millimetres.

IB Pin Riveted

FIG. 1 TYPICAL ILLUSTRATION OF NON-FERROUS METAL SLIDING DOOR BOLT — *Continued*

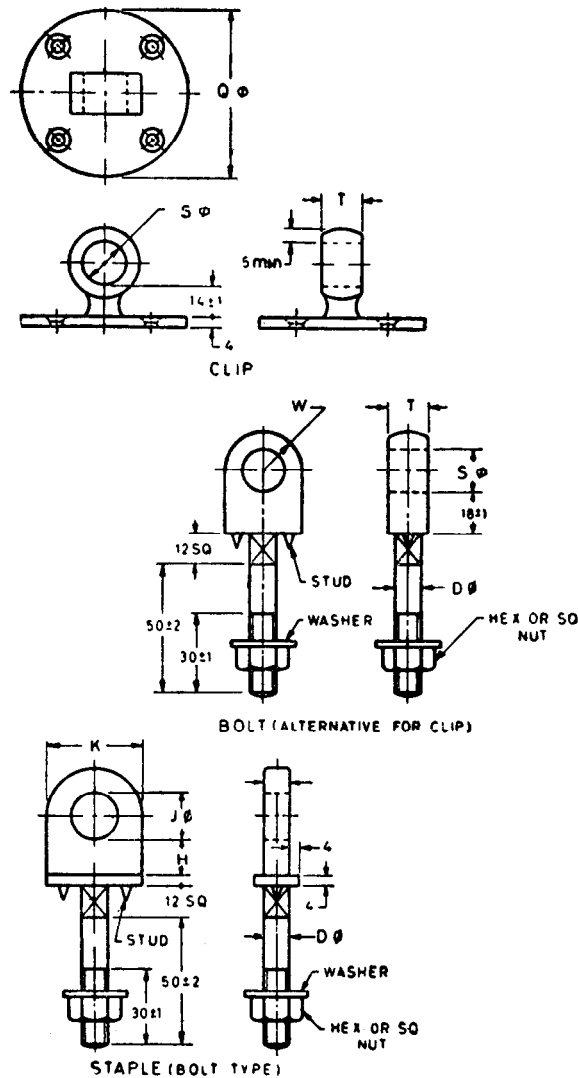


NOTE — The shape of parts are illustrative only but the dimensions and minimum requirements where specified are binding.

All dimensions in millimetres.

IC Aluminium Alloy Clip and Staple

FIG. 1 TYPICAL ILLUSTRATION OF NON-FERROUS METAL SLIDING DOOR BOLT — *Continued*



NOTE — The shape of parts are illustrative only but the dimensions and minimum requirements where specified are binding.

All dimensions in millimetres.

ID Brass Clip and Staple

FIG. 1 TYPICAL ILLUSTRATION OF NON-FERROUS METAL SLIDING DOOR BOLT

Table 2 Dimensions of Brass Sliding Door Bolts (Types 1 and 2)
(Clause 6.1 and Fig. 1)

All dimensions in millimetres.																	
Size	A	B	C	D Dia	E	F	H	J Dia	K	L	M	N	Q Dia	S	T	W RAD	No. of Screw on Staple or Clip to Accommo- date Wood Screw No. 3
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
150	150	90	38	10	45	13	14	18	37	4	16	20	65	18	16	15	4
200	200	90	38	10	45	13	14	18	37	4	16	20	65	18	16	15	4
250	250	100	45	12	55	15	20	22	47	6	16	20	65	18	16	15	4
300	300	100	45	12	55	15	20	22	47	6	16	20	65	18	16	15	4
375	375	110	50	14	60	17	25	25	55	8	18	22	70	20	18	16	4
450	450	110	50	14	60	17	25	25	55	8	18	22	70	20	18	16	4
Toler- ances	±2	±2	±1	±0.5	±1	±1	±1	±1	±1	±0.5	±0.5	±1	±1	±0.5	±1	±0.5	—

Table 3 Dimensions of Aluminium Alloy Sliding Door Bolts (Type 3)
(Clause 6.1 and Fig. 1)

All dimensions in millimetres.																
Size	A	B	C	D Dia	E	F	H	J Dia	K	L	M	Pin* Dia	R	T	U Min	No. of Screw on Staple or Clip to Accom- modate Wood Screw No. 8
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
200	200	110	38	6	46	10	11	18	38	4	16	5	42	8	8	4
250	250	110	38													
300	300	110	38													
350	350	110	45													
375	375	110	45													
450	450	110	45													
Toler- ances	±2	+4 —2	±1	—	±1	±1	±1	±0.5	±1	±0.5	±0.5	±0.5	±1	±1	—	—

*Minimum two numbers of pins shall be used.

ANNEX A

(Clause 2.1)

LIST OF REFERRED INDIAN STANDARDS

<i>IS No.</i>	<i>Title</i>	<i>IS No.</i>	<i>Title</i>
292 : 1983	Leaded brass ingots and castings (<i>second revision</i>)		sections for general engineering purposes (<i>third revision</i>)
319 : 1989	Free cutting brass bars, rods and sections—Specification (<i>fourth revision</i>)	737 : 1986	Wrought aluminium and aluminium alloy sheet and strip for general engineering purposes (<i>third revision</i>)
410 : 1977	Cold rolled brass sheet, strip and foil (<i>third revision</i>)	1868 : 1982	Anodic coatings on aluminium and its alloy (<i>second revision</i>)
733 : 1983	Wrought aluminium and aluminium alloy bars, rods and	6760 : 1972	Slotted countersunk head wood screw

ANNEX B

(Clause 11.1)

SAMPLING AND CRITERION FOR CONFORMITY

B-1 LOT

B-1.1 In any consignment, all the door bolts of the same type and size and manufactured at the same time shall be grouped together to constitute a lot.

B-2 LOT SIZE AND SAMPLE SIZE

B-2.1 The number of door bolts to be selected from the lot shall depend on the size of the lot and shall be in accordance with col 1 and 2 of Table 4.

B-2.2 Door bolts for testing shall be selected at random from at least 10 percent of the packages subject to minimum of three packages, equal number of door bolts being selected from each such package.

B-3 TESTS

B-3.1 All the door bolts selected as in **B-2** shall be checked for dimensional requirements (*see 5*), defects in manufacture (*see 8*) and finish (*see 7*). Any door bolt which fails to satisfy

any one or more of the requirement for these characteristics shall be considered as a defective door bolts.

B-4 CRITERION FOR CONFORMITY

B-4.1 The lot shall be considered as conforming to the requirements of this standard if the number of defective door bolts among those inspected does not exceed the corresponding number given in col 3 of Table 4.

Table 4 Scale of Sampling and Criterion for Conformity

(*Clauses B-2.1 and B-4.1*)

Lot Size	Sample Size	Permissible No. of Defective Door Bolts
(1)	(2)	(3)
Up to 150	5	0
151 to 300	20	1
301 to 500	32	2
501 to 1 000	50	3
1 001 and above	80	5

ANNEX C

(Foreword)

COMMITTEE COMPOSITION

Builders Hardware Sectional Committee, CED 15

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SHRI BALKRISHAN AGARWAL (*Alternate*)

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SUPTD ENGINEER

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SHRI SAHIB SINGH VIRDI

SHRI S. MOWJEE (*Alternate*)

Y. R. TANEJA,

Director (Civ Engg)

Representing

Central Public Works Department, New Delhi

Hindalco Industries Ltd, Bombay

Regional Testing Centre, Northern Region, Ministry of Industry,
New Delhi

Mech (India) Industries, Delhi

Delhi Development Authority, New Delhi

National Test House, Calcutta

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Argent Industries, New Delhi

Indian Aluminium Co Ltd, Calcutta

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J H Aluminium Pvt Ltd, Madras

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Revision 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 Handbook' and 'Standards Monthly Additions'. Comments on this Indian Standard may be sent to BIS giving the following reference:

Doc : No. CED 15 (5090)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 11002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
Common to all Offices)

Regional Offices :

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

Telephone
{ 331 01 31
{ 331 13 75

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

{ 37 84 99, 37 85 61
{ 37 86 26, 37 86 62

Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036

{ 53 38 43, 53 16 40
{ 53 23 84

Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113

{ 235 02 16, 235 04 42
{ 235 15 19, 235 23 15

Western : Manakalaya, E9 MIDC, Marol, Andheri (East)
BOMBAY 400093

{ 632 92 95, 632 78 58
{ 632 78, 91, 632 78 92

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AMENDMENT NO. 1 OCTOBER 1997
TO
IS 2681 : 1993 NON-FERROUS METAL SLIDING DOOR
BOLTS (ALDROPS) FOR USE WITH PADLOCKS —
SPECIFICATION

(Third Revision)

(Page 2, Table 1, col 1) : a) Substitute 'Brass' for 'Brass Sheet'.

b) Substitute 'Rolled Sheet' for 'Rolled'.

(Page 2, Table 1, col 2) : a) Substitute 'IS 737:1986' for 'IS 737 : 1987'
against Aluminium Alloy Sheets.

b) Substitute 'Grade 1 of IS 319 : 1989' for
'Type 1 of IS 319:1985' against Brass Extruded.

(Page 2, Fig. 1A) — Substitute ' 40 ± 1 ' for ' 40 ± 2 '.

(Page 3, Fig. 1B) — Substitute ' 27 ± 0.5 ' for ' 27 ± 1 '.

(Page 4, Fig. 1) — Substitute 'THREAD 10 mm MINIMUM DEEP' for 'THREAD
10 mm DEEP'.

(Page 6, Table 2, col 18) — Substitute 'Screw No. 8' for 'Screw No. '.

(Page 7, clause B-3.1, lines 3 and 4) — Substitute '6, 7 and 8' for '5, 8
and 7' respectively.

(CED 15)

AMENDMENT NO. 2 APRIL 2003
TO
IS 2681 : 1993 NON-FERROUS METAL SLIDING DOOR
BOLTS (ALDROPS) FOR USE WITH PADLOCKS —
SPECIFICATION

(Third Revision)

(Page 1, clause 8.2, line 4) — Delete ‘or as required by the purchaser’.

(CED 15)

Reprography Unit, BIS, New Delhi, India