

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 729 (1979): drawer locks, cupboard locks and box locks
[MED 33: Utensils, Cutlery and Domestic Hardware]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



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

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE



Indian Standard

SPECIFICATION FOR DRAWER LOCKS, CUPBOARD LOCKS AND BOX LOCKS

(Third Revision)

First Reprint JANUARY 1993

UDC 683.338.3

© Copyright 1979

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

Indian Standard

SPECIFICATION FOR DRAWER LOCKS, CUPBOARD LOCKS AND BOX LOCKS

(Third Revision)

Builder's Hardware Sectional Committee, BDC 15

Chairman

SHRI YUSUF MOWJEE

Representing

M. C. Mowjee & Company Private Ltd, Calcutta;
and Builder's Hardware Industries Association
of India, Calcutta

Members

SHRI SAHIB SINGH (Alternate to Shri Yusuf Mowjee)	
SHRI D. R. BAHL	Engineer-in-Chief's Branch, Army Headquarters
SHRI S. G. MAHAJAN (Alternate)	Regional Testing Centre (Northern) , New Delhi
SHRI D. S. CHAUHAN	
SHRI S. K. KINRA (Alternate)	Ministry of Railways
CONTROLLER OF STORES, EASTERN RAILWAY	
SHRI S. K. DUTTA	Housing and Urban Development Corporations Ltd, New Delhi
SHRI K. H. GANDHI	Ministry of Defence (DGI)
SHRI VIJAY KUMAR (Alternate)	
SHRI N. S. KAMBOJ	Jayna Trading Corporation, Delhi
SHRI RAKESH KAMBOJ (Alternate)	
SHRI S. C. KAPOOR	Directorate General of Supplies & Disposals, (Ministry of Supply), New Delhi
SHRI RAM F. KEWALRAMANI	Indian Institute of Architects, Bombay
SHRI S. D. MAJUMDER	National Test House, Calcutta
PROF V. S. MOKASHI	Institution of Engineers (India), Calcutta
SHRI G. P. LAL (Alternate)	
SHRI AJAYENDU PAUL	Gobindo Sheet Metal Works & Foundry, Calcutta
SHRI AMITABH PAUL (Alternate)	
SHRI K. PURKAYASTHA	Indian Aluminium Co Ltd, Calcutta
SHRI R. K. MEHTA (Alternate)	
DR A. V. R. RAO	National Buildings Organization, New Delhi
SHRI O. P. RATRA (Alternate)	
SHRI H. S. SETHI	Everite Sales Corporation, New Delhi
SHRI Y. D. SAIGAL (Alternate)	

(Continued on page 2)

© Copyright 1979

BUREAU OF INDIAN STANDARDS

This publication is protected under the Indian Copyright Act (XIV of 1957) and reproduction in whole or in part by any means except with written permission of the publisher shall be deemed to be an infringement of copyright under the said Act.

(Continued from page 1)

<i>Members</i>	<i>Representing</i>
SHRI T. C. SOLANKI	Sen-Harvic, Bombay
SHRI N. K. RAGOOWANSHI (<i>Alternate</i>)	
SUPERINTENDING SURVEYOR OF WORKS (DAZ)	Central Public Works Department, New Delhi
SURVEYOR OF WORKS (DAZ) (<i>Alternate</i>)	
SHRI D. AJITHA SIMHA, Director (Civ Engg)	Director General, ISI (<i>Ex-officio Member</i>)
	<i>Secretary</i>
	SHRI S. SENGUPTA
	Assistant Director (Civ Engg), ISI

Locks and Latches Subcommittee, BDC 15 : 3

<i>Convener</i>	
SHRI I. C. KHANNA	Directorate General of Supplies & Disposals, New Delhi
<i>Members</i>	
SHRI MAHABIR PRASAD AGARWAL	Shri Gopal Metal and Wood Works, Aligarh; and The Quality Marked Locks Manufacturers Association, Aligarh
ASSISTANT DIRECTOR OF INDUSTRIES	Directorate of Industries, Government of Maharashtra, Bombay
SHRI D. S. CHAUHAN	Regional Testing Centre (Northern), New Delhi
SHRI S. K. KINRA (<i>Alternate</i>)	
SHRI S. F. DESAI	Godrej & Boyce Manufacturing Company Private Ltd, Bombay
HOUSING COMMISSIONER	Rajasthan Housing Board, Jaipur
SHRI K. H. GANDHI	Ministry of Defence (DGI), New Delhi
SHRI AMIT DAS (<i>Alternate</i>)	
SHRI VINOD KUMAR JAIN	P. P. Products, Aligarh
SHRI JASWANT SINGH	Eastern Commercial & Industrial Enterprises Private Limited, Visakhapatnam
SHRI U. C. LALL	Hemu Productions (India), Aligarh
SHRI S. P. JHUNJHUNWALA (<i>Alternate</i>)	
SHRI R. D. MATHUR	Engineer-in-Chief's Branch, Army Headquarters
SHRI M. V. KALANTRE (<i>Alternate</i>)	
SHRI S. MITRA	Directorate of Industries, Government of West Bengal
SHRI YUSUF MOWJEE	M. C. Mowjee & Company Private Ltd, Calcutta
SHRI SAHIB SINGH (<i>Alternate</i>)	
SHRI ARUN C. PATEL	Vaultex Industries, Vadodara
SHRI ASHOK C. PATEL (<i>Alternate</i>)	
SHRI SUBODH KUMAR SAIGAL	Tiger Products Private Limited, Aligarh
SHRI BRIJENDRA KUMAR (<i>Alternate</i>)	
SHRI RAM BABU SHARMA	H. R. Products, Aligarh
SHRI MAYURBHAI J. SHETH	Security Equipment Manufacturers Limited, Ahmadabad
SHRI PRAKASHBHAI B. SHETH (<i>Alternate</i>)	

Indian Standard

SPECIFICATION FOR DRAWER LOCKS, CUPBOARD LOCKS AND BOX LOCKS

(Third Revision)

0. FOREWORD

0.1 This Indian Standard (Third Revision) was adopted by the Indian Standards Institution on 24 February 1979, after the draft finalized by the Builders' Hardware Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 This standard was first published in 1956 and revised in 1963 and the second revision was issued in 1969. The Committee responsible for the preparation of this standard decided to issue this revision after taking into consideration various recommendations received from the users and the manufacturers. In this revision the requirement of non-interchangeability of keys has been brought in line with those specified in other Indian Standards on locks. The tables showing the dimensions and tolerances for the various component parts of locks have also been simplified by deleting certain dimensions which are not essential, and introducing certain new dimensions instead. The limiting dimensions shown in the tables are applicable only for locks having lever mechanism. However, the limiting dimensions for locks having locking mechanism different from lever mechanism shall be as agreed between the purchaser and the supplier. This revision also makes reference to the latest Indian Standards for various types of materials.

0.3 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 overseas markets 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.

0.4 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 practices in the field in this country.

0.5 This standard is one of a series of Indian Standards on items of builders' hardware. A list of standards published so far in the series is given on page 20.

0.6 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*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down the requirements regarding materials, dimensions, non-interchangeability, manufacture and finish of drawer locks, cupboard locks and box locks.

2. DEFINITIONS

2.1 Fore End or Front — The part of a lock through which the bolt or bolts protrude.

2.2 Rear-End — The end of the lock opposite the fore end.

3. SIZES

3.1 The sizes of locks shall be 40, 50, 65 and 75 mm.

3.1.1 The size of the lock shall be denoted by the overall length of the body in millimetres measured from the outside face of the fore end to the rear-end (see A in Fig. 1, 2, and 3).

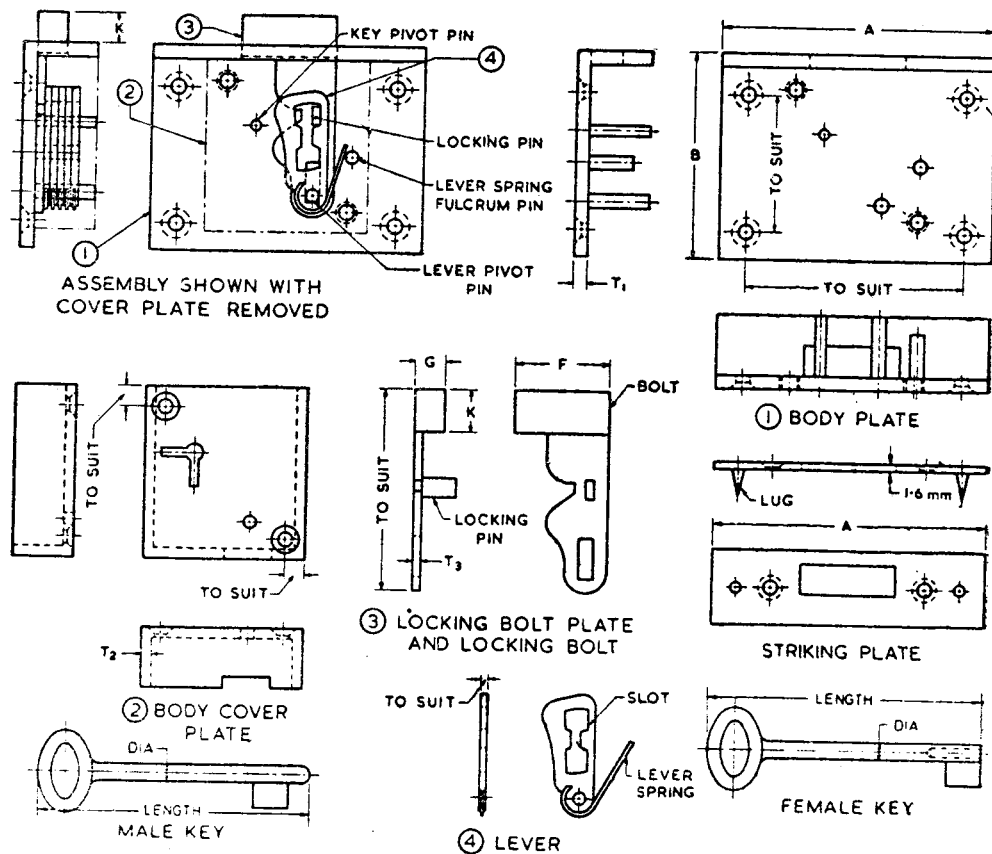
3.2 The locks of sizes other than those specified in **3.1** may be supplied by agreement between the purchaser and the supplier but the provisions laid down in this standard shall be generally followed.

4. GRADES

4.1 The drawer locks, cupboard locks and box locks shall be of the following two grades:

- a) Grade 1 — Heavy, and
- b) Grade 2 — Light.

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



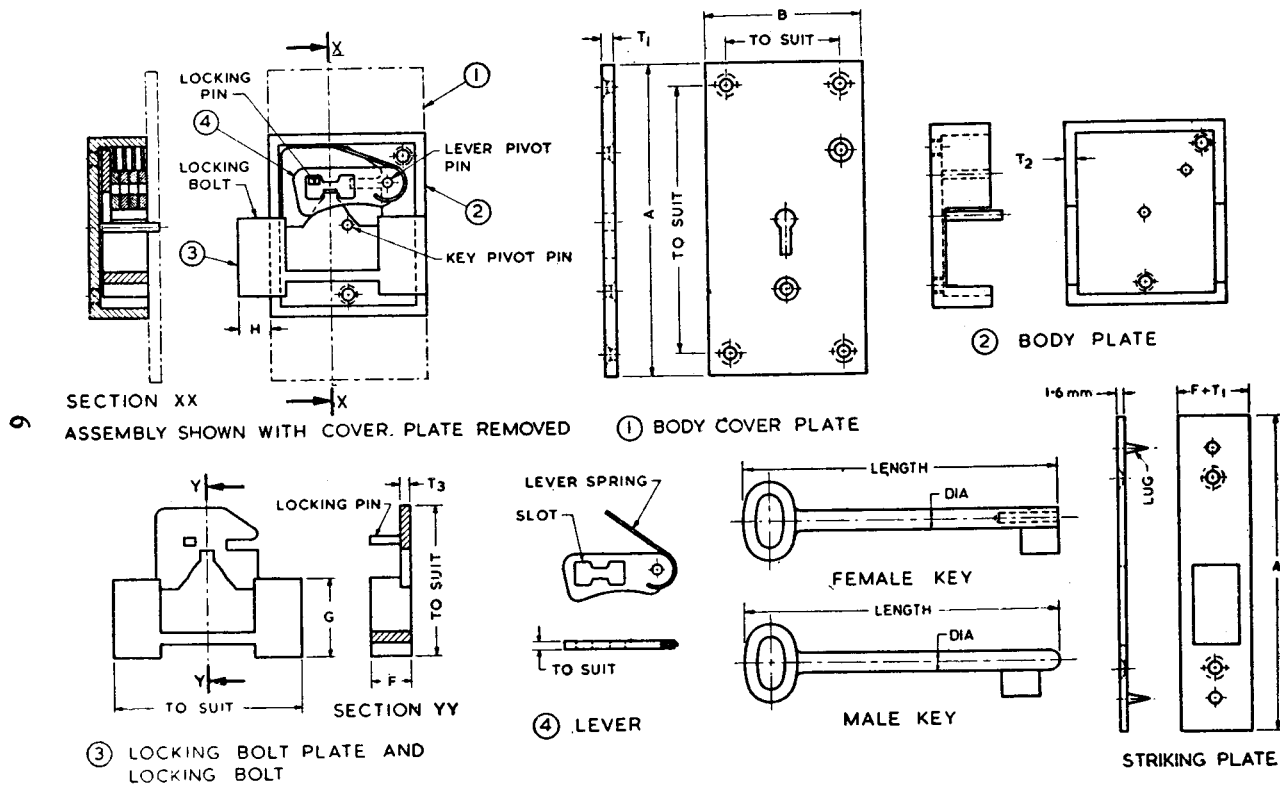
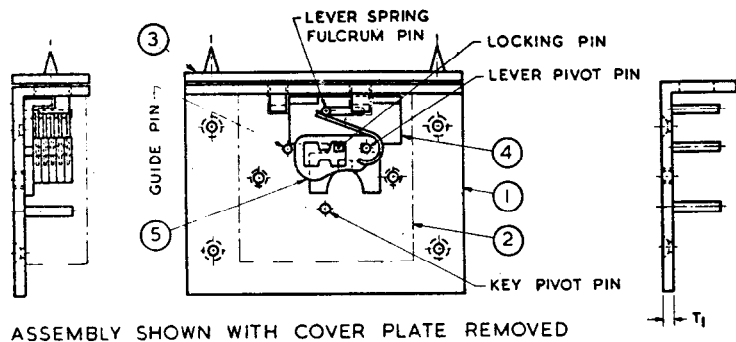
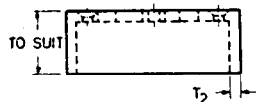
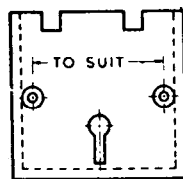


FIG. 2 TYPICAL DESIGN OF CUPBOARD LOCK

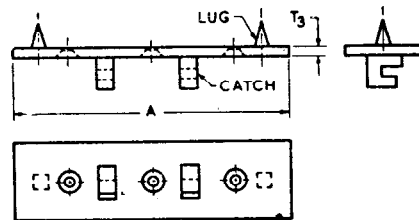


ASSEMBLY SHOWN WITH COVER PLATE REMOVED

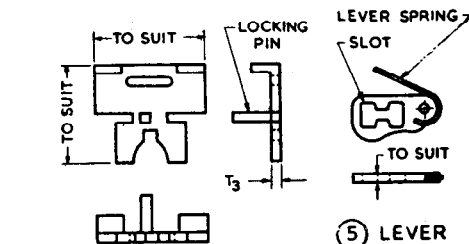
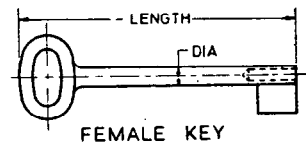
① BODY PLATE



② BODY COVER PLATE



③ STRIKING PLATE



④ LOCKING BOLT PLATE AND LOCKING BOLT

⑤ LEVER

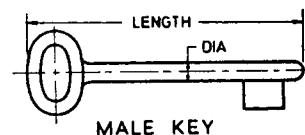


FIG. 3 TYPICAL DESIGN OF BOX LOCK

5. SHAPE AND DESIGN

5.1 The shape, design and mechanism of drawer locks, cupboard locks and box locks and their components indicated in Fig. 1, 2 and 3 respectively are illustrative only. The manufacturer may make locks of any shape other than those indicated in this standard to suit his design.

6. MATERIALS

6.1 The materials used in the manufacture of various component parts of the drawer locks, cupboard locks and box locks shall comply with the requirements given in Tables 1 and 2.

7. DIMENSIONS

7.1 The leading dimensions of drawer locks, cupboard locks and box locks having lever mechanism, and their components and tolerances thereon, shall conform to those given in Tables 3, 4 and 5 respectively.

8. MANUFACTURE

8.0 General — The drawer locks, cupboard locks and box locks shall consist essentially of a body plate with cover, locking bolt, locking bolt plate, locking mechanism and striking plate.

8.1 Drawer Locks

8.1.1 Body Plate — The body plate shall be of 'L' shape. The 'L' shall have a slot accurately cut in its centre to suit the locking bolt. It shall have four holes drilled and countersunk at the back at convenient points in it to facilitate fixing and two holes drilled and threaded to facilitate assembly. An additional hole shall be drilled to suit the end of the keys in case male keys are provided. The mild steel body plate shall be zinc plated according to Designation FeZn5 of IS : 1573-1970*.

8.1.2 Body Cover Plate — The body cover plate shall be of either aluminium alloy casting or aluminium alloy sheet, or cast brass, or mild steel sheet or brass sheet and shall have two slots cut in it for working the key. It shall have two holes drilled and countersunk at the front to facilitate assembling. It shall also have a hole drilled to fit accurately the lever pivot pin. The mild steel body cover plate shall be zinc plated according to Designation FeZn5 of IS : 1573-1970*.

8.1.3 Striking Plate — The striking plate shall be of either cast brass or brass sheet or aluminium alloy castings or aluminium alloy sheet, and shall have two pointed lugs cast integral with it; and shall have two or three holes, drilled and countersunk on the front to facilitate fixing. The catch plate (not shown in the figures) shall have a slot cut at its centre to suit the bolt.

*Specification for electroplated coatings of zinc on iron and steel (*first revision*),

TABLE 1 MATERIALS FOR VARIOUS COMPONENT PARTS OF DRAWER LOCKS, CUPBOARD LOCKS AND BOX LOCKS

(Clause 6.1)

COMPONENT	MATERIAL										
	Mild Steel	Cast Brass	Brass Sheet	Brass Wire	Phosphor Bronze Wire	Spring Steel Wire	Aluminium Alloy Pressure Die Castings	Aluminium Alloy Sheet	Aluminium Alloy	Stainless Steel	Malleable Iron
Body cover plate	Yes	Yes	Yes	—	—	—	Yes	Yes	—	—	—
Body plate	Yes	Yes	Yes	—	—	—	Yes	Yes	—	—	—
Key	Yes	Yes	Yes	—	—	—	—	—	—	Yes	Yes
Key pivot pin	Yes	Yes	—	—	—	—	—	—	—	Yes	—
Lever	Yes	Yes	Yes	—	—	—	—	—	—	—	—
Lever cover plate	—	—	Yes	—	—	—	—	—	—	—	—
Lever pivot pin	Yes	Yes	—	—	—	—	—	—	—	Yes	—
Lever spring	—	—	—	Yes	Yes	Yes	—	—	—	—	—
Lever spring fulcrum pin	Yes	Yes	—	—	—	—	—	—	—	Yes	—
Locking bolt	—	Yes	Yes	—	—	—	—	—	—	—	—
Locking bolt plate	—	Yes	—	—	—	—	—	—	—	—	—
Locking pin	Yes	Yes	—	—	—	—	—	—	—	—	—
Screws	Yes	Yes	—	Yes	—	—	—	—	—	—	—
Striking plate	—	Yes	Yes	—	—	—	Yes	Yes	—	—	—

TABLE 2 REQUIREMENTS OF MATERIALS

(Clause 6.1)

SL No.	MATERIAL	SUITABLE GRADES IN INDIAN STANDARD
i)	Mild Steel	Designation Fe 410-S of IS : 226-1975 ¹
ii)	Cast brass	Grade 3 of IS : 292-1961 ²
iii)	Brass sheet	Designation CuZn40 of IS : 410-1977 ³
iv)	Brass wire	IS : 2704-1964 ⁴
v)	Phosphor bronze wire	IS : 7608-1975 ⁵
vi)	Spring steel wire	Grade 2 of IS : 4454 (Part I)-1975 ⁶
vii)	Aluminium alloy pressure die castings	Designation 5230 or 4600 of IS : 617-1975 ⁷
viii)	Aluminium alloy sheet	Designation 52000 of IS : 737-1974 ⁸
ix)	Aluminium alloy	IS : 740-1977 ⁹
x)	Stainless steel	Designation 04Cr13, 20Cr13 or 30Cr13 of IS : 1570 (Part V)-1972 ¹⁰
xi)	Malleable iron	Grade A or B of IS : 2108-1977 ¹¹

¹Specification for structural steel (standard quality) (*fifth revision*).²Specification for brass ingots and castings (*revised*).³Specification for cold rolled brass sheet, strip and coil (*second revision*).⁴Specification for brass wire for cold-headed and machined parts.⁵Specification for phosphor bronze wires for general engineering purposes.⁶Specification for steel wires for cold-formed springs: Part I Patented and cold drawn steel wire, unalloyed (*first revision*).⁷Specification for aluminium and aluminium alloy, ingots and castings for general engineering purposes (*second revision*).⁸Specification for wrought aluminium and aluminium alloys, sheet and strip for general engineering purposes (*second revision*).⁹Specification for wrought aluminium and aluminium alloys rivet stock for general engineering purposes (*revised*).¹⁰Specification for schedules for wrought steels: Part V Stainless and heat resisting steels (*first revision*).¹¹Specification for blackheart malleable iron castings (*first revision*).

8.1.4 Locking Mechanism — The locking mechanism shall be either of ordinary lever type or of any other type approved by the purchaser.

8.1.5 Levers — Ordinary lever mechanism (*see* Fig. 1 and 2 for illustration) shall be fitted with 2, 4, 5 or 6 levers as specified by the purchaser. The thickness of the lock shall depend on the number of levers. The levers shall be of a uniform thickness and smooth on both faces so as to obtain parallelism. The minimum thickness of a lever, shall be 1.25 mm.

TABLE 3 DIMENSIONS OF DRAWER LOCKS

(Clause 7.1 and Fig. 1)

All dimensions in millimetres.

NOMI- NAL SIZE	A	B	F	G	K	T ₁		T ₂		T ₃		THICK- NESS OF SPRING WIRE	HOLE TO ACCOM- MODATE SCREW OF DESIG- NATION No.	KEYS		
						Cast- ing	Sheet	Cast- ing	Sheet	Cast- ing	Sheet			Thick- ness of Ward	Out- side Dia	Len- gth
				Min	Min	Min	Min	Min	Min	Min	Min	Min				Min
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
a) Grade 1																
40	40	29	14	5	5	2.0	1.25	2.0	1.25	1.6	1.25	0.90	4	1.6	3.2	40
50	50	38	17	6	6	2.0	1.25	2.0	1.25	2.0	1.25	1.25	4	1.8	3.6	50
65	65	48	22	7	7	2.0	1.25	2.0	1.25	2.0	1.25	1.25	6	2.0	4.5	65
75	75	50	24	8	8	2.5	1.25	2.5	1.25	2.5	1.25	1.60	6	2.2	5.0	75
b) Grade 2																
40	40	29	14	5	5	2.0	1.25	1.6	1.25	1.6	1.25	0.90	4	1.6	3.2	40
50	50	36	17	6	6	2.0	1.25	1.6	1.25	1.6	1.25	1.25	4	1.8	3.6	50
65	65	38	20	7	7	2.0	1.25	1.6	1.25	1.6	1.25	1.25	6	2.0	4.5	65
75	75	41	22	8	8	2.0	1.25	2.0	1.25	2.0	1.25	1.25	6	2.0	4.5	75
TOLER- ANCES	±2	±1	—	—	—	—	—	—	—	—	—	—	—	±0.2	±0.3	—

TABLE 4 DIMENSIONS OF CUPBOARD LOCKS

(Clause 7.1 and Fig. 2)

All dimensions in millimetres.

NOMINAL SIZE	A	B	F	G	H	T ₁		T ₂		T ₃		THICK- NESS OF SPRING WIRE	HOLES TO ACCOM- MODATE SCREW OF DESIG- NATION No.	KEYS		
						Cast- ing	Sheet	Cast- ing	Sheet	Cast- ing	Sheet			Thick- ness of Ward	Out- side Dia	Len- gth
				Min	Min	Min	Min	Min	Min	Min	Min	Min				Min
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
a) Grade 1																
40	40	29	8	11	6	2	1.25	2	1.25	1.6	1.25	0.9	4	1.6	3.2	40
50	50	32	8	13	6	2	1.25	2	1.25	2	1.25	1.25	4	1.8	3.6	50
65	65	35	10	16	8	2	1.25	2	1.25	2	1.25	1.25	6	2	4.5	65
75	75	38	10	19	8	2.5	1.25	2.5	1.25	2.5	1.25	1.6	6	2.2	5	75
b) Grade 2																
40	40	27	7	9.5	5	1.6	1.25	2	1.25	1.6	1.25	0.9	4	1.6	3.2	40
50	50	29	7	11	5	1.6	1.25	2	1.25	1.6	1.25	1.25	4	1.8	3.6	50
65	65	32	8.5	14	7	1.6	1.25	2	1.25	1.6	1.25	1.25	6	2	4.5	65
75	75	35	8.5	16	7	2	1.25	2	1.25	2	1.25	1.6	6	2	5	75
TOLER- ANCES	±2	±1	—	—	—	—	—	—	—	—	—	—	—	±0.2	±0.3	—

TABLE 5 DIMENSIONS OF BOX LOCKS

(Clause 7.1 and Fig. 3)

All dimensions in millimetres.

NOMI- NAL SIZE	A	B	T ₁		T ₂		T ₃		THICKNESS OF SPRING WIRE	HOLE TO ACCOM- MODATE SCREW OF DESIG- NATION No.	KEYS		
			Casting	Sheet	Casting	Sheet	Casting	Sheet			Thick- ness of Ward	Out- side Dia	Length
			Min	Min	Min	Min	Min	Min	Min				Min
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
a) Grade 1													
40	40	29	2	1.25	2	1.25	1.6	1.25	0.9	4	1.6	3.2	40
50	50	38	2	1.25	2	1.25	2	1.25	1.25	4	1.8	3.6	50
65	65	48	2	1.25	2	1.25	2	1.25	1.25	6	2	4.5	65
75	75	50	2.5	1.25	2.5	1.25	2.5	1.25	1.6	6	2.2	5	75
b) Grade 2													
40	40	29	2	1.25	1.6	1.25	1.6	1.25	0.9	4	1.6	3.2	40
50	50	36	2	1.25	1.6	1.25	1.6	1.25	1.25	4	1.8	3.6	50
65	65	38	2	1.25	1.6	1.25	1.6	1.25	1.25	6	2	4.5	65
75	75	41	2	1.25	2	1.25	2	1.25	1.6	6	2.2	5	75
TOLER- ANCES	±2	±1	—	—	—	—	—	—	—	—	±0.2	±0.3	—

8.1.5.1 The slots in the levers shall be accurately cut so as to closely correspond with the respective wards of the key. The holes in the levers for the pivot pins shall be drilled or machine punched to the correct size. Hand punching of the holes shall not be permitted. However, holes may be provided in the casting itself when manufactured by casting and shall be machined to the correct size.

8.1.5.2 The false (dummy) levers shall not be used. The levers shall work without any appreciable friction or shake on the pivot pin. The holes and slots in the levers shall be free from burrs.

8.1.6 Lever Spring — Each lever shall be fitted with one flat or flattened wire spring which shall comply with the materials specified in Tables 1 and 2. Lever springs when made out of steel wire shall be electroplated to avoid corrosion. The lever spring fitted into the lever shall withstand the following tests without showing any sign of permanent set:

- a) The lever spring shall be pressed down completely so as to touch the top edge of the lever and released. This shall be repeated 12 times, and
- b) The lever spring shall also stand a transverse load of 15 kgf (1.5 N) before failure of the joint between the lever and the spring takes place.

NOTE — The lever shall be rigidly held flat and a point load of 15 kgf (1.5 N) applied to the spring gradually.

8.1.7 Locking Bolt — The locking bolt shall be cast or fabricated integral with the locking bolt plate.

8.1.8 Locking Bolt Plate — The locking bolt plate shall have a guide slot to suit the lever pivot pin and a cut on its side for engaging the key.

8.1.9 Locking Pin — The locking pin shall be either square or rectangular in section and shall be of mild steel or brass. It shall pass through the locking bolt plate, shouldered and countersunk riveted at the back. If specified by the purchaser, the locking pin may be cast integral with the locking bolt plate.

8.1.10 Lever Pivot Pin, Lever Spring Fulcrum Pin and Key Pivot Pin — The lever pivot pin, the lever spring fulcrum pin and the key pivot pin shall be of mild steel in the case of brass body and of stainless steel in the case of aluminium alloy body, and fitted to the body plate by passing through it and countersunk riveted at the back. If specified by the purchaser, the pins of brass may be used and shall be cast integral with the body plate or shouldered and countersunk riveted. The lever pivot pin and the key pivot pin shall be finished smooth and truly round.

8.1.11 Screws — Screws for fixing the body cover plate to the body plate shall be countersunk head machined screws conforming to IS : 1365-1968*. Screws shall be of mild steel and protected against corrosion. However, the screws may be of brass in case of aluminium alloy bodies.

8.2 Cupboard Locks

8.2.1 Body Plate — The body plate shall have two cuts on its sides to suit the locking bolt. It shall have two holes drilled and threaded to facilitate assembling. An additional hole shall be drilled to suit the end of the key in case male keys are provided. Mild steel body plate shall be zinc plated according to Designation FeZn5 of IS : 1573-1970†.

8.2.2 The body cover plate, locking mechanism, levers, lever springs, locking bolt, locking pin, lever pivot pin, lever spring fulcrum pin, key pivot pin, striking plate and screws shall conform to their appropriate requirements laid down under **8.1**.

8.2.3 Locking Bolt Plate — The locking bolt plate shall have a slot of suitable size at its centre for engaging the key and a cut on its side to suit the lever pivot pin.

8.3 Box Locks

8.3.1 Body Plate — The body plate shall be of 'L' shape. The 'L' shall have two slots accurately cut in it to suit the latches. It shall have four holes drilled and countersunk at the back at convenient points to facilitate fixing and two holes drilled and threaded to facilitate assembling. An additional hole shall be drilled to suit the end of the key in case male keys are provided. Mild steel body plate shall be zinc plated according to Designation FeZn5 of IS : 1573-1970†.

8.3.2 Body Cover Plate — The body cover plate shall conform to the requirements laid down under **8.1.2**. In addition, the top edge of the body cover plate shall be cut at two places to accommodate the catches.

8.3.3 Striking Plate — The striking plate shall have two pointed lugs and shall have two or three holes drilled and countersunk on the front to facilitate fixing. The striking plate shall have two catches. The catches in the case of brass striking plate shall be of brass, cast integral with the catch plate or mild steel fitted accurately to the catch plate, square shouldered and riveted at the back of the plate and shall be of aluminium alloy in the case of aluminium alloy striking plate.

*Specification for slotted countersunk head and slotted raised countersunk head screws (dia range 1.6 to 20 mm) (*second revision*).

†Specification for electroplated coatings of zinc on iron and steel (*first revision*).

8.3.4 The locking mechanism, levers, lever spring, locking bolt, locking bolt plate, locking pin, lever pivot pin, lever spring fulcrum pin, key pivot pin and screws shall conform to their appropriate requirements laid down under **8.1**.

8.4 Keys

8.4.1 Each lock shall be provided with a minimum of two keys.

8.4.2 The keys shall be either of the female or male type as specified by the purchaser.

8.4.3 The keys shall function smoothly and without any appreciable friction in the lock. The wards shall be evenly cut, clearly defined and free from burrs. The engaging ends of the key wards shall be rounded. The mild steel or malleable cast iron keys shall be nickel and chromium plated and shall conform to Service Grade No. 2 of IS : 1068-1968*. The keys may also be made out of stainless steel or brass if required by the purchaser.

8.4.4 The keys shall be suitably tied to the lock so that they are not lost or interchanged in transit.

8.5 Assembly — The components of the lock in the finally assembled position shall not be able to move relative to each other, without the application of key.

9. NON-INTERCHANGEABILITY

9.1 Two-Lever Locks — The drawer locks, cupboard locks and box locks shall be manufactured to have non-interchangeable keys in a batch consisting of a minimum of 24 locks. In case non-interchangeability in a higher number is required, it shall be so specified by the purchaser at the time of placing the order. A master key may be supplied if required by the purchaser.

9.1.1 For the purpose of testing non-interchangeability 6 locks from each batch of 24 locks shall be so selected that the wards of the keys differ from each other slightly. These locks shall then be tested for non-interchangeability. If key of any of the locks opens any other lock, amongst the 6 locks, the lot shall be rejected.

9.2 Locks with More Than Two Levers — The drawer locks, cupboard locks and box locks shall be manufactured so as to have non-interchangeability in a batch consisting of a minimum of 100 locks. In case, non-interchangeability in a higher number is required, it shall be so

*Specification for electroplated coatings of nickel and chromium on iron and steel (first revision).

specified by the purchaser at the time of placing the order. A master key may be supplied if required by the purchaser.

9.2.1 For the purpose of testing non-interchangeability, 12 locks from each batch of 100 locks shall be so selected that the wards of the keys differ from each other slightly. These locks shall then be tested for non-interchangeability. If key of any of the locks opens any other lock amongst the 12 locks, the whole lot shall be rejected.

10. WORKMANSHIP AND FINISH

10.1 Each lock shall be free from defects likely to prevent its correct fixing or affect adversely its reliability in use.

10.2 Unless specified otherwise, brass locks and keys shall be finished bright. Aluminium alloy locks shall be anodized. The anodic coating shall not be less than the Grade AC15 of IS : 1868-1968*. The anodic film may be either transparent or dyed as specified by the purchaser. Locks may also be lacquered or spirit polished if required by the purchaser.

11. MARKING

11.1 Each lock shall be stamped with the following information:

- a) Manufacturer's name or trade-mark,
- b) Number of levers,
- c) Size of the lock and grade,
- d) Serial number of the lock, and
- e) Year of supply (if specified by the purchaser).

11.1.1 The lock 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.

11.2 The key shall be stamped with the serial number of the lock to which it relates.

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

12. PACKING

12.1 Each lock, along with the keys, shall be wrapped in a thin paper and packed in a cardboard box.

12.2 Each box may contain 10 locks of 40 mm size or 5 locks of 50 mm, 65 mm or 75 mm size.

12.3 Each box shall be marked with the following information:

- a) Manufacturer's name or trade-mark,
- b) Type and grade of the lock,
- c) Size of the lock, and
- d) Quantity.

13. SAMPLING AND CRITERION FOR CONFORMITY

13.1 Sampling and inspection of consignment of locks shall be carried out in accordance with the provisions laid down in Appendix A.

A P P E N D I X A

(Clause 13.1)

SAMPLING AND CRITERIA FOR CONFORMITY

A-1. LOT

A-1.1 In any consignment all the locks of the same type, grade and size manufactured from the same raw materials under essentially similar conditions of manufacture shall be grouped together to constitute a lot.

A-1.2 For ascertaining the conformity of a lot to the requirements of this standard, the sample of locks shall be selected and tested separately for each lot.

A-2. SELECTION OF SAMPLE

A-2.1 The number of locks to be selected at random from a lot shall depend upon the size of the lot and shall be in accordance with col 1 and 2 of Table 6.

A-2.2 The locks in the sample shall be selected at random from the lot and in order to ensure randomness of selection, random number table may be used.

TABLE 6 SAMPLE SIZE AND CRITERIA FOR CONFORMITY

(Clause A-2.1)

LOT SIZE	SAMPLE SIZE	PERMISSIBLE NUMBER OF DEFECTIVES
(1)	(2)	(3)
Up to 100	8	0
101 „ 150	13	0
151 „ 300	20	0
301 „ 500	32	1
501 „ 1 000	50	2
1 001 and above	80	3

A-3. NUMBER OF TESTS

A-3.1 The locks selected according to **A-2.2** shall be inspected for dimensions, workmanship and finish, manufacturing details and smooth working.

A-4. CRITERIA FOR CONFORMITY

A-4.1 The lot shall be considered as conforming to these requirements if the number of locks failing in any one or more of the requirements does not exceed the permissible number of defective locks given in Col 3 of Table 6.

BUREAU OF INDIAN STANDARDS

Headquarters :

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

Telephones : 331 01 31

331 13 75

Telegrams : Manaksanstha

(Common to all Offices)

Regional Offices :

Telephone

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

{ 331 01 31

{ 331 13 75

37 86 62

* Eastern : 1/14 C.I.T. Scheme VII M,

V.I.P. Road, Maniktola, CALCUTTA 700054

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

2 18 43

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

41 29 16

† Western : Manakalaya, E9 MIDC, Marol, Andheri (East),

6 32 92 95

BOMBAY 400093

Branch Offices :

'Pushpak', Nurmohamed Shaikh Marg, Khanpur, AHMADABAD 380001

2 63 49

‡ Peenya Industrial Area, 1st Stage, Bangalore-Tumkur Road,

39 49 55

BANGALORE 560058

Gangotri Complex, 5th Floor, Bhadbhada Road, T.T. Nagar,

55 40 21

BHOPAL 462003

Plot No. 82/83, Lewis Road, BHUBANESHWAR 751002

5 36 27

Kalai Kathir Building, 6/48-A Avanasi Road, COIMBATORE 641037

2 67 05

Quality Marking Centre, N.H. IV, N.I.T., FARIDABAD 121001

—

Savitri Complex, 116 G. T. Road, GHAZIABAD 201001

8-71 19 96

53/5 Ward No. 29, R.G. Barua Road, 5th By-lane,

3 31 77

GUWAHATI 781003

5-8-56C L. N. Gupta Marg, (Nampally Station Road)

23 10 83

HYDERABAD 500001

R14 Yudhister Marg, C Scheme, JAIPUR 302005

6 34 71

117/418 B Sarvodaya Nagar, KANPUR 208005

21 68 76

Plot No. A-9, House No. 561/63, Sindhu Nagar, Kanpur Road,

5 55 07

LUCKNOW 226005

Patliputra Industrial Estate, PATNA 800013

6 23 05

District Industries Centre Complex, Bagh-e-Ali Maidan,

—

SRINAGAR 190011

T. C. No. 14/1421, University P. O., Palayam,

6 21 04

THIRUVANANTHAPURAM 695034

Inspection Offices (With Sale Point) :

Pushpanjali, First Floor, 205-A West High Court Road,

52 51 71

Shankar Nagar Square, NAGPUR 440010

Institution of Engineers (India) Building, 1332 Shivaji Nagar,

5 24 35

PUNE 411005

*Sales Office Calcutta is at 5 Chowringhee Approach,

27 68 00

P. O. Princep Street, CALCUTTA

† Sales Office is at Novelty Chambers, Grant Road, BOMBAY

89 65 28

‡ Sales Office is at Unity Building, Narasimharaja Square,
BANGALORE

22 39 71