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IS 6189 (1985): metal stationary cupboards [CED 35: Furniture]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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IS : 6189 - 1985

*Indian Standard*  
SPECIFICATION FOR  
METAL STATIONERY CUPBOARDS  
( *First Revision* )

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

# *Indian Standard*

## SPECIFICATION FOR METAL STATIONERY CUPBOARDS

### *( First Revision )*

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*Indian Standard*  
SPECIFICATION FOR  
METAL STATIONERY CUPBOARDS  
( *First Revision* )

0. FOREWORD

**0.1** This Indian Standard ( First Revision ) was adopted by the Indian Standards Institution on 25 January 1985, after the draft finalized by the Furniture Sectional Committee had been approved by the Civil Engineering Division Council.

**0.2** With the advancement in the field of correspondence, standardization, methods of secretarial procedure, a new approach is coming into vogue which requires highly specialized filing system and classification in the correspondence techniques. As a result of this advancement, the need to provide proper filing and storage facilities for offices is being felt everyday. It is with this end in view that this standard was first prepared in 1971 to specify requirements of stationery cupboards in order to accommodate various sizes of papers forming office stationery. In this revision, besides incorporating three amendments, the grades of materials to be used in the components have been given. The height of the pedestal is changed from minimum 100 mm to 125 mm.

**0.3** In the formulation of this standard, due weightage has been given to International coordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in the country.

**0.4** The information to be supplied by the purchaser at the time of placing orders is given in Appendix A.

**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 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.

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

## 1. SCOPE

1.1 This standard deals with the requirements for metal stationery cupboards.

## 2. MATERIALS

2.1 **Electrodes** — Electrodes for gas, arc and spot welding shall conform to IS : 1278-1972\* and IS : 814 ( Part 1 )-1974†.

2.2 **Aluminium Sheets** — Aluminium sheets shall conform to  $\frac{1}{2}$  H condition of 31000 or 52000 quality of IS : 737-1974‡.

2.3 **Mild Steel Sheets** — Mild steel sheets shall conform to grade 0 of IS : 513-1973§ or grade 0 of IS : 1079-1973||.

2.4 **Screws** — Screws shall conform to IS : 1365-1978¶.

2.5 **Steel Wire** — Steel wire, where used, shall be steel wire for springs conforming to grade 1 of IS : 4454 ( Part 1 )-1975\*\*.

## 3. DESIGN AND DIMENSION

3.1 The type and design of the stationery cupboard shall be as given in Fig. 1.

## 4. FABRICATION

4.1 **Components** — Metal stationery cupboards shall be assembled from the components given in 4.2 to 4.8.5.

4.2 **Casings** — Casings shall be made from mild steel sheeting not less than 1.0 mm thick or aluminium sheeting not less than 1.6 mm thick.

4.3 **Doors** — When doors are provided, these shall be made flush fitting. Double doors shall be made from mild steel sheeting of minimum thickness of 1.0 mm or aluminium sheeting not less than 1.6 mm thick. The edge of each half of the door except the vertical free edge of the left-hand door shall be bent into a double return at least 15 mm deep, and at least 10 mm wide. The vertical free edge of the left-hand door shall be bent into an inverted Z to provide a ledge at least 10 mm wide against which the right-hand door can be closed. Each half of the door

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\*Specification for filler rods and wires for gas welding ( *second revision* ).

†Specification for welding products other than sheets ( *fourth revision* ).

‡Specification for wrought aluminium and aluminium alloys, sheet and strip ( for general engineering purposes ) ( *second revision* ).

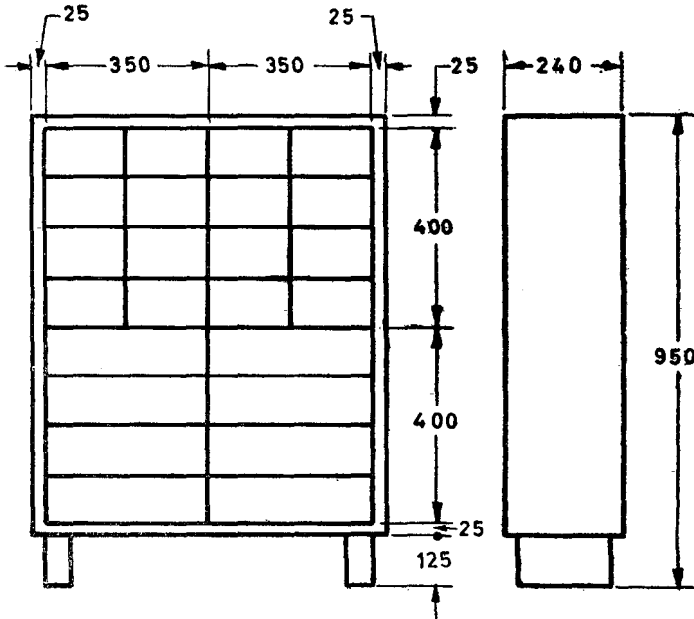
§Specification for cold rolled carbon steel sheets ( *second revision* ).

||Specification for hot rolled carbon steel sheet and strip ( *third revision* ).

¶Specification for slotted countersunk head screws ( *third revision* ).

\*\*Specification for patented and cold drawn steel wires — unalloyed ( *first revision* ).





Overall height, H 950  
 Overall width, W 750  
 Overall depth, D 240

NOTE — Minimum clearance required for the stationery cupboards to be put into recesses or openings, where required, shall be as follows:

For top 20 mm  
 For each side 10 mm  
 For depth 5 mm

All dimensions in millimetres.

FIG. 1 OVERALL DIMENSIONS OF STATIONERY CUPBOARD

shall be reinforced on the the inside with at least one top hat reinforcement, at least 70 mm wide and 10 mm deep if standing to the full height of the door. The reinforcement shall be made from mild steel sheeting of minimum thickness, say, 1.0 mm or aluminium sheeting of minimum of thickness 1.6 mm and they shall be welded to the door.

**4.4 Hinges** — Each half of the double door shall be fitted with 3 butt hinges. The hinges shall be secured to the door and to the casing by means of welding. The hinges shall be made of metal sheeting not less than 1.25 mm thick and shall be secured to metallic hinge brackets not less than 3.15 mm thick on one side and shall be secured to the door on the other side of the fulcrum.

**4.5 Locks** — Stationery cupboards shall be provided with locks which may form integral part of the door handle. The lock shall not be less than three lever lock with duplicate keys of non-corrosive material. For locking arrangement, there shall be a three-way bolting device controlled by a lock and operated by a chromium plated metallic handle.

**4.6 Latch Rod** — A vertical latch rod, which operates in conjunction with the lock handle to secure the door at the top and the bottom of the stationery cupboard, shall be fitted. The rod shall be made from mild steel round of diameter at least 6 mm or from mild steel flat at least 12.5 × 3 mm. It shall be released fully when the lock handle is turned to the open position and it shall be locked positively when the lock handle is turned to the closed position. The operation of the latch rod shall be smooth and easy and the construction shall be such that the latch cannot be released without operating the lock handle.

**4.7 Latch Plates** — A latch plate made from mild steel sheeting of a minimum thickness of 3.0 mm shall be rigidly secured to the handle on the inside of the door. If the latch plate is secured by a nut and a bolt, washer shall be fitted under the nut and the bolt shall be riveted over.

#### **4.8 Shelves and Vertical Partitions for Non-Adjustable Cupboards**

**4.8.1 Shelves and Vertical Partitions** — Cupboard shelves and vertical partitions shall be made from mild steel sheeting of minimum thickness of 1.0 mm or aluminium sheeting of 1.6 mm thickness. The vertical partitions shall be flanged at the back, top and bottom and shall be attached to the casing by means of welding, riveting or bolting. The shelves shall be flanged and welded or riveted to the sides of the casing and to the partitions. The front edges of the partitions shall be bent in a knife edge and edges of the shelves shall be bent into a double return.

**4.8.2 Shelves and Vertical Partitions for Adjustable Cupboards** — Shelves shall be adjustable and shall be made from mild steel sheeting of minimum thickness of 1.0 mm or from aluminium sheeting of 1.6 mm thickness. The edges of the shelves shall be bent into a double return.

**4.8.3 Adjusting Strips** — The top hat strips shall be made from mild steel sheeting of minimum thickness of 1.0 mm or aluminium sheeting of 1.6 mm thickness. The edges of the strips shall be welded to the inner surface of the casing. The strips shall extend to full height of the casing except for 100 mm height at the top and at the bottom, and shall be positioned to provide adequate support for the shelves. The adjusting strips shall be held at 25 mm centres over their full length to provide for shelf adjustment.

**4.8.4 Shelf Brackets** — Each shelf shall be supported by four brackets. The bracket shall be made from mild steel sheeting of minimum thickness of 1.25 mm or aluminium sheeting of 1.6 mm thickness. The bracket shall be so designed and constructed that the shelf is securely supported and the adjustments in height of bracket can be made easily.

**4.8.5 Pedestal** — Pedestal shall be made from mild steel sheet not less than 1.0 mm thick or aluminium sheet not less than 1.6 mm thick and shall be properly stiffened. The pedestal shall be recessed inside on all sides by at least 5 mm and its height shall be  $125 \pm 5$  mm.

## 5. ASSEMBLY

**5.1** Various components shall be assembled by means of bolting or welding in case of non-adjustable cupboards, and by bolting in case of adjustable type of stationery cupboards.

**5.2** The method of gas welding, arc welding and spot welding shall conform to IS : 1323-1966\*, IS : 816-1969† and IS : 819-1957‡ respectively.

**5.3** Welding of aluminium parts shall be in accordance with IS : 2812-1964§.

## 6. FINISH

### 6.1 Sheet Metal Components

**6.1.1** All dents, burrs and sharp edges shall be removed from the various components. The components shall be individually pickled, scrubbed and rinsed to remove grease, rust, scale or any other foreign element.

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\*Code of practice for oxy-acetylene welding for structural work in mild steel (*first revision*).

†Code of practice for use of metal arc welding for general construction in mild steel (*first revision*).

‡Code of practice for resistance spot welding for light assemblies in mild steel.

§Recommendations for manual tungsten inert-gas arc-welding of aluminium and aluminium alloys.

**6.1.2** Immediately after pickling, all the mild steel parts shall be given phosphating treatment conforming to Class C of IS : 3618-1966\*. The process for application of phosphate coating shall be in accordance with IS : 6005-1970†.

NOTE — Putty shall be applied to all the surfaces requiring filling and shall conform to IS : 110-1968‡. Aluminium primer shall conform to IS : 5660-1970§.

**6.1.3** Coat/coats of enamel paint shall then be applied as follows:

Finish coat with enamels conforming to IS : 151-1950||, IS : 2932-1974¶ or IS : 2933-1975\*\*.

**6.1.3.1** In the case of stoving enamel the components shall thereafter be baked at a specified temperature in an oven heated uniformly. The finish shall be smooth and uniform with a hard and tough film of enamel, strongly adhering to the surface. The finish shall be free from all visible defects and shall not chip when tapped lightly with a dull pointed instrument.

**6.1.4** Aluminium parts may be anodized, if required by the purchaser.

## 7. PERFORMANCE REQUIREMENTS OF FINISH

**7.1 Scratch Hardness Test** — A sample of mild steel plate 150 × 50 mm in size and thickness 0.315 mm finished as described in 6 shall be subjected to scratch hardness test in accordance with 15.1 of IS : 101-1964††. A scratch showing the bare metal shall not be produced on the test sample.

**7.2 Pressure Test** — Samples prepared from mild steel plates of thickness 0.315 mm and finished as described in 6 shall be subjected to pressure test in accordance with 15.2 of IS : 101-1964††. The metal surface shall not be rendered visible when the test pieces are separated after the test.

**7.3 Flexibility and Adhesion Test** — A sample of mild steel plate 150 × 50 mm in size and thickness 0.315 mm finished as described in 6 shall be subjected to flexibility and adhesion test in accordance with 16 of IS : 101-1964††. The paint film on the test piece shall not show

\*Specification for phosphate treatment of iron and steel for protection against corrosion.

†Code of practice for phosphating of iron and steel.

‡Specification for ready mixed paint, brushing, grey filler, for enamels, for use over primers.

§Specification for ready mixed paint, brushing, aluminium red oxide primer.

||Specification for ready mixed paint, spraying, finishing, stoving, enamel, for general purposes, colour as required.

¶Specification for enamel, synthetic, exterior (a) undercoating, (b) finishing (*first revision*).

\*\*Specification for enamel exterior (a) undercoating, (b) finishing (*first revision*).

††Methods of test for ready mixed paints and enamels (*second revision*).

damage, detachment or cracking when examined under X10 magnification.

**7.4 Stripping Test** — A sample of mild steel plate  $150 \times 50$  mm in size and thickness 0.315 mm finished as described in 6 shall be subjected to stripping test in accordance with 17 of IS : 101-1964\*. The scratch produced after the test shall be free from jagged edges.

**7.5 Test for Protection Against Corrosion Under Conditions of Condensation** — A mild steel panel of size  $150 \times 100$  mm and thickness 1.25 mm finished as described in 6 shall be subjected to test for protection against corrosion under conditions of condensation in accordance with 18 of IS : 101-1964\*. The metal surface shall show no signs of corrosion after the test.

## 8. PACKING

**8.1** All the component parts shall be packed in such a way that no damage is caused to them during transit.

## 9. MARKING

**9.1** All metal stationery cupboards shall be marked with suitable mark identifying the manufacturer.

**9.1.1** The metal stationery cupboard 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.

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\*Methods of test for ready mixed paints and enamels ( *second revision* ).

**A P P E N D I X A**

( *Clause 0.4* )

**INFORMATION TO BE SUPPLIED BY THE PURCHASER**

**A-1.** The purchaser shall supply the following information along with the order:

- a) The material whether steel or aluminium;
- b) Whether the lock is required or not;
- c) Whether the lock is to form an integral part of the handle;
- d) Number of adjustable shelves required;
- e) Colour and finish; and
- f) Where alternative methods of construction and finish are specified, these shall be clearly stated in the order.



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