DRAFT EAST AFRICAN STANDARD

Steel filing cabinets for general office purposes — Specification

EAST AFRICAN COMMUNITY

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

DEAS 1156:2023 was prepared by Technical Committee EASC/TC 035, *Steel and steel products*.

Steel filing cabinets for general office purposes — Specification

1 Scope

This draft East African Standard specifies the requirements for materials, sizes, construction, finish and tests of steel filing cabinets for general office purposes.

2 Normative references

The following referenced documents are indispensable for the application of this document, for dated references, only the edition cited applies, for undated references, the latest edition of the referenced document (including any amendments) applies;

ISO 636, Welding consumables — Rods, wires and deposits for tungsten inert gas welding of non-alloy and fine-grain steels — Classification
ISO 2560, Welding consumables — Covered electrodes for manual metal arc welding of non-alloy and fine grain steels — Classification
ISO 5184, Straight resistance spot welding electrodes
ISO 4960, Steel strip, cold-reduced with a mass fraction of carbon over 0,25%
ISO 6932, Cold-reduced carbon steel strip with a maximum carbon content of 0,25 %
ISO 3574, Cold-reduced carbon steel sheet of commercial and drawing qualities
ISO 5954, Cold-reduced carbon steel sheet according to hardness requirements
ISO 1482, Slotted countersunk (flat) head tapping screws
ISO 2009, Slotted countersunk flat head screws — Product grade A
ISO 1518-1, Paints and varnishes — Determination of scratch resistance — Part 1: Constant-loading method
ISO 1518-2, Paints and varnishes — Determination of scratch resistance — Part 2: Variable-loading method
ISO 15184, Paints and varnishes — Determination of film hardness by pencil test
ISO 17132, Paints and varnishes — T-bend test
ISO 9227, Corrosion tests in artificial atmospheres — Salt spray tests

3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply:

3.1 Drawer

A drawer is a part of filing cabinet piece of office furniture usually used to store paper documents in file folders, supplies, and accessories.

3.2 Drawer Handle

A drawer handle is the attached piece of hardware to the filing cabinet that is used to open and close a cabinet door or drawer.

3.3 Label Holder

Label holder is the attached piece of hardware to the filing cabinet that is used to show the contents of your drawer and file cabinet.

4 Materials

4.1 Electrodes

Electrodes for gas, arc and spot welding shall conform to ISO 636, ISO 2560 and ISO 5184 respectively.

4.2 Mild Steel Sheets

Mild steel sheets shall conform to ISO 4960, ISO 3574, ISO 6932 or ISO 5954.

4.3 Screws

Screws shall conform to ISO 1482 or ISO 2009.

5 Types

5.1 The filing cabinets shall be of mainly two categories:
a) drawer type filing cabinet, and
b) door type filing cabinet

5.2 The drawer type filing cabinets shall be of three types, namely, two-drawer type, three-drawer type and four-drawer type.

5.3 The door type filing cabinets shall be of three types, namely, one-door type, two-door type and four-door type.

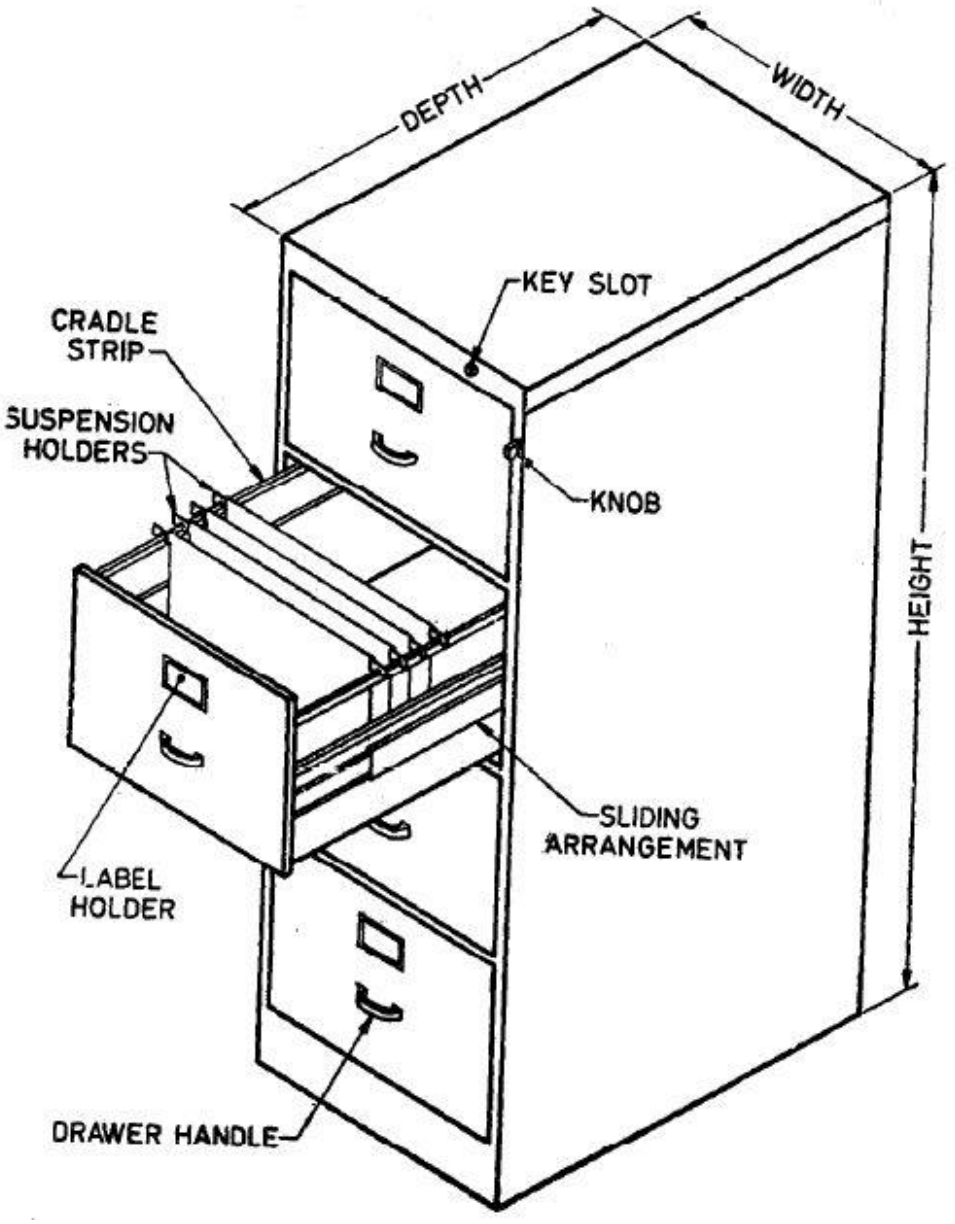

Figure 01: A Typical Four-Drawer Type Steel Filing Cabinet

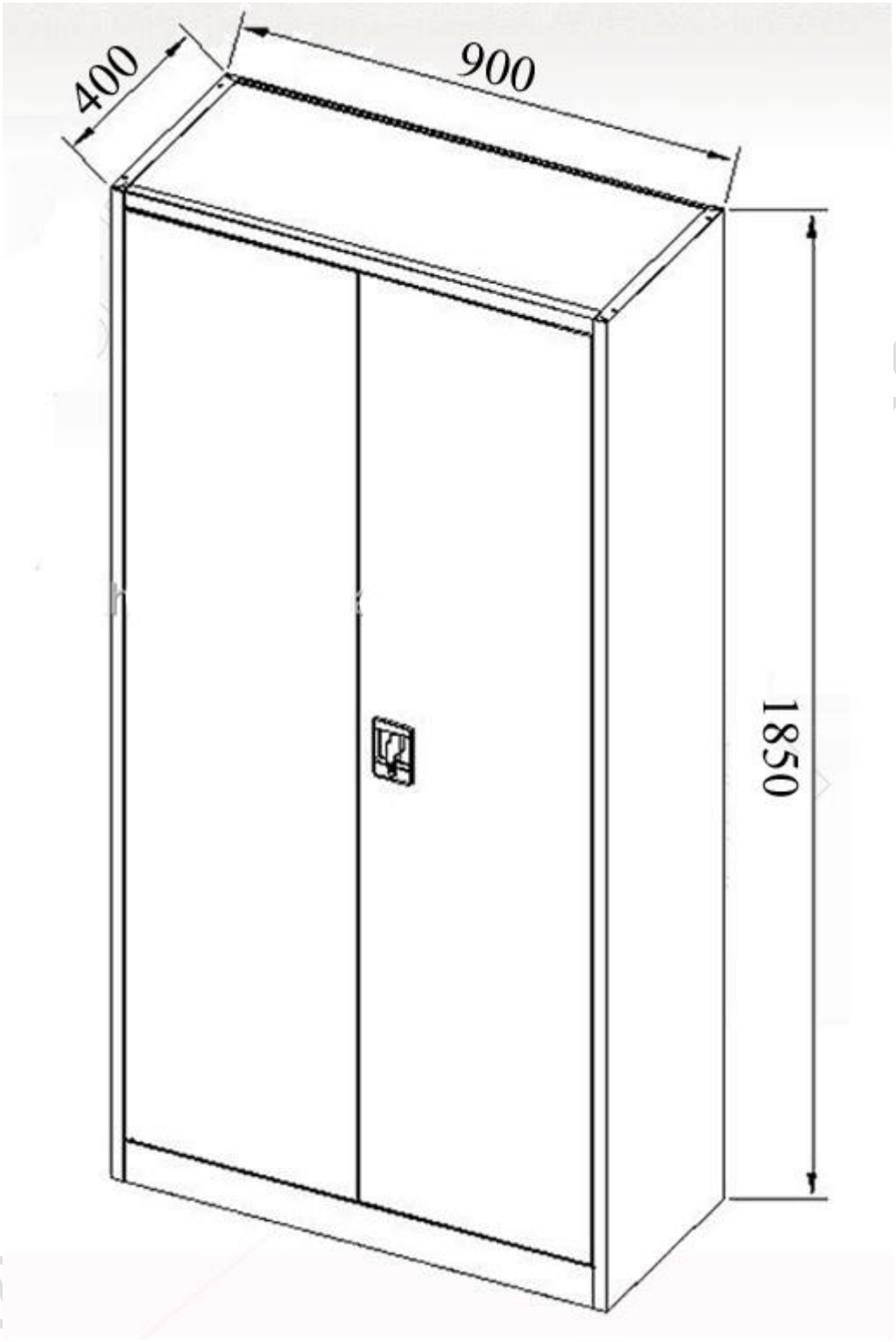

Figure 02: A Typical Two-Door Type Steel Filing Cabinet

6 Dimensions and Tolerances

6.1 Dimensions drawer-type filing cabinets

The overall dimensions, clearances and tolerances of the three types of drawer type lockable filing cabinets shall be as agreed between supplier and purchaser. The recommended dimensions are specified in Annex B.

6.2 Dimensions door-type filing cabinets

The overall dimensions, clearances and tolerances of the three types of door type filing cabinets shall be as agreed between supplier and purchaser. The recommended dimensions and tolerances are specified in Annex B.

7 Fabrications

7.1 Sides and Back
The sides and back shall be made from steel sheet not less than 0.8 mm thick and without any burrs or dents. The width of the side sheets shall correspond to the depth of the cabinet. The width of the back sheet shall correspond to the width of the cabinet. A top cover shall be provided and the sides and back shall extend from the bottom edge of the top cover to the floor.

7.2 Top and Bottom
The top and bottom shall be of steel sheet not less than 0.8 mm thick. The width of the top and bottom shall cover the width of the cabinet and the length shall cover the depth of the cabinet.

7.3 Filing Drawer
The drawer shall be made from steel sheet not less than 0.63 mm thick. The drawer front shall have a back cover secured to it to make it box type. The drawer shall have an arrangement on the sides to seat it on the slides and an arrangement by a locking mechanism to stop it when fully pushed in.

7.4 Clutch Compressor Plate or Cradle Strips
The clutch compressor plate shall be made from steel sheet not less than 1.0 mm thick and shall be suitably guided throughout the depth of the drawer. It shall have an arrangement for clutching the drawer at any desired position. If instead of clutch compressor plate cradle strips are provided, they shall be fitted to each drawer in pairs extending over the depth of the drawer. They shall be of aluminium, galvanized steel or mild steel. In the case of mild steel cradle strips, they shall be either painted or provided with a plastic or aluminium cladding, or cadmium plated. **7.5 Checks**
Each drawer of the cabinet shall be removable but shall be fitted with a positive stop to prevent inadvertent withdrawal. The drawers may be fitted with an automatic check to prevent rebound, if required by the purchaser.

7.6 Drawer Suspension
The drawer suspension shall be one of the following types to ensure withdrawal of the full depth of the drawer:
a) Ball-bearing suspension,
b) Solid-roller suspension, and
c) Ball-bearing-roller suspension

7.7 Handles
7.7.1 Each drawer shall be provided either with a handle made from corrosion-resistant material and fixed to the front of the drawer or with a built-in pull.
7.7.2 The drawer handle shall be strong enough to take a normal minimum pull of 50 N. There shall be no sharp corners or edges to avoid injury and damage to clothing.

7.8 Label Holders
The label holders shall be made from corrosion resistant metal sheet or mild steel sheet, not less than 0.63 mm in thickness, to hold card of size 100 x 50 mm and shall be fixed to the front of the drawers. Mild steel label holders shall be properly finished as laid down in 9.

7.9 Locks
Locks, if provided, shall be of the automatic unit type having not less than 6 levers or of the pin cylindrical type having not less than 4 pins, with duplicate keys of non-corrosive metal.

7.10 Locking Mechanism
7.10.1 The locking mechanism shall be made from steel sheet not less than 1.6 mm thick: The arrangement shall be such as to lock all the drawers simultaneously from the front of the cabinets.
7.10.2 At the time of locking the whole cabinet if one of the drawers has not been pushed in fully and thus remains partly open, that drawer shall remain unlocked. As soon as that drawer is pushed in fully, it shall get locked automatically without further operation by the user.

8 Assembly

The components shall be joined by either bolting, welding or riveting.

9 Finish

9.1 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.

9.2 All other components shall be finished as agreed to between the purchaser and the manufacturer.

10 Performance Requirements of Finish

10.1 Scratch and Hardness Test
A sample of mild steel plate shall be subjected to scratch hardness test in accordance with ISO 1518-1 and ISO 1518-2 and ISO 15184. A scratch, showing the bare metal shall not be produced on the test sample.

10.2 Flexibility and Adhesion Test
A sample of mild steel plate shall be subjected to flexibility and adhesion test in accordance with ISO 17132. The paint film on the test piece shall not show damage, detachment or cracking when examined under x 10 magnification.

10.3 Corrosion Test
A sample of mild steel plate shall be subjected to Salt spray test in accordance with ISO 9227. The metal surface shall show no signs of corrosion after the test.

11 Tests

11.1 Drawer Suspension

11.1.1 The suspension slides shall not show any apparent distortion, cracks or failure to operate in a normal, smooth manner after running for 50,000 cycles at a rate of 1,000 cycles per hour with an evenly distributed load of 30 kg (excluding the weight of the drawer) in any of the drawer. One opening and one closing of the drawer shall constitute one cycle. For guidance, the detail of the test apparatus and the procedure for the test is given in Annex A.
11.1.2 When a drawer is loaded with a uniformly distributed load of 20 kg, the cradle strips shall not deflect by more than 3 mm in the vertical direction. The operative edges of the cradle strips shall be smooth and rounded in order to facilitate easy movement of files.

11.2 Ease of Drawer Operation

With an evenly distributed load of 30 kg (excluding the weight of the drawer) in any of the drawers, the force required to move the drawer from the position of rest shall not exceed 50 N.

12 Packing

All component part of the cabinets shall be packed in such a way that no damage is caused to them during transportation.

13. Information to Be Supplied by the Purchaser

13.1 The purchaser shall supply the following information to the supplier along with the order:

a) Type required,
b) Desired colour of finish,
c) Whether the drawers to be provided with clutch compressor plate or cradle strips, and

d) Whether corners to be rounded or not.

13.2 Where alternative methods of construction and finish are specified they shall be clearly stated in the order.

14 Marking

14.1 All steel filing cabinets shall be marked legibly and indelibly with the following information:
a) manufacturer's name or registered trademark,
b) date of manufacture or batch number, and
c) country of origin.

ANNEX A

(Normative)

PROCEDURE AND APPARATUS FOR DRAWER SUSPENSION TEST

A-1 APPARATUS

A-1.1 The testing apparatus (see Fig. 3) shall be capable of reciprocating drawer of a filing cabinet at a uniform speed so as to generate 1000 reciprocating cycles per hour. Each cycle comprises the activity from opening out to closing in of filing cabinet drawer. Drawer may open out to 90 percent of its total depth. Force applied per drawer reciprocation should be parallel to the direction of drawer sliding.

A-1.2 The essential parts of one testing apparatus which has been found suitable are reciprocating rod actuated by pneumatic hydraulic cylinder through mechanical linkages (alternatively motorized crank mechanism converting rotary motion into reciprocating one can be used). The stroke of reciprocation can be adjusted with the intermediate links connecting oscillating slotted arm and pneumatic/hydraulic cylinder to suit different depths of drawers of filing cabinets.

A-2 PROCEDURE

A-2.1 Connect the free end of reciprocating arm of apparatus to centre of front end of the drawer which is to be tested.

A-2.2 Adjust speed of reciprocation of drawer to give 1,000 cycles per hour.

A-2.3 Test the drawer for 50,000 cycles and check for any functional or material failures during and at the end of the test.

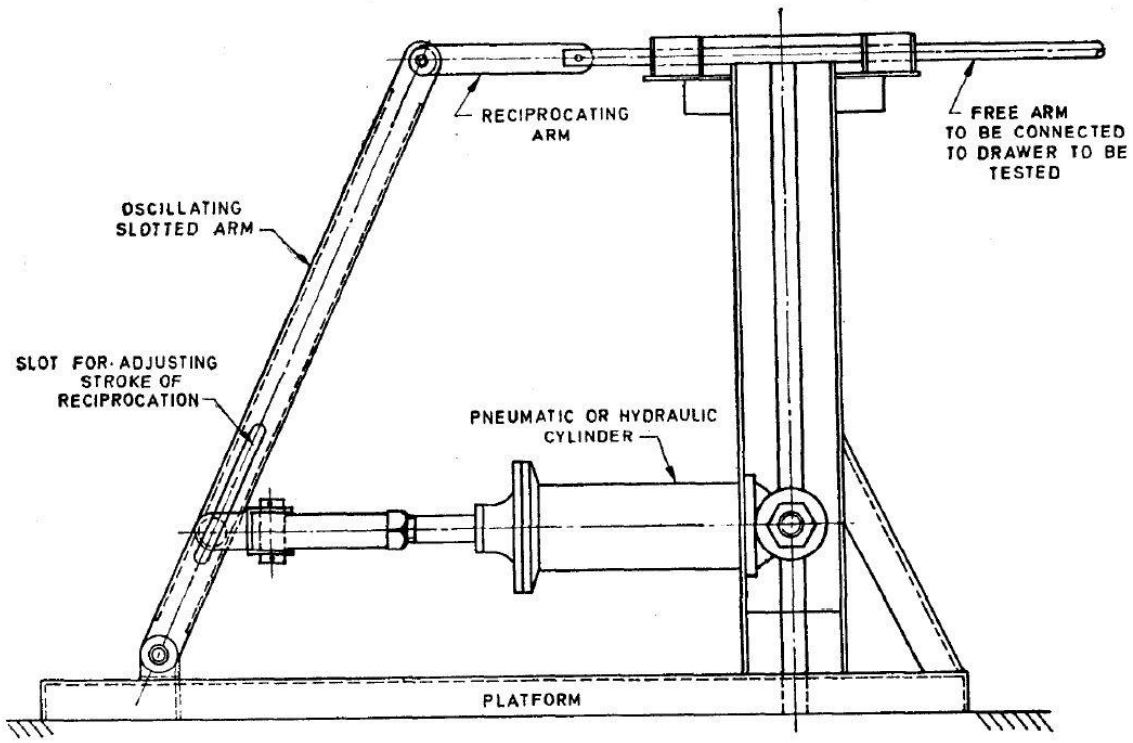

Figure 03: Apparatus for Drawer Suspension Test

ANNEX B

(Informative)

DIMENSIONS AND TOLERANCES

B.1 DIMENSIONS DRAWER-TYPE FILING CABINETS

B.1.1 The overall dimensions of the three types of drawer type lockable filing cabinets shall be as given in Table B.1.

Table B.1: Overall Dimensions of Drawer Type Steel Filing Cabinets

S/No.	Dimensions, mm	Two-Drawer Type	Three-Drawer Type	Four-Drawer Type
1	Overall height from finished floor level to top of the cabinet including pedestal	750	1080	1380
2	Depth from face to back	700	700	700
3	Width	470	470	470
NOTE: Other dimensions may be applied as agreed between supplier and purchaser.				

B.1.2 The minimum clearances required for the filing cabinets to be put into recesses or openings, where required, shall be as follows:

a) For top of cabinet – 20 mm,

b) For each side of cabinet – 10 mm, and

c) For depth of cabinet – 5 mm.

B.1.3 Drawer Dimensions

The minimum clear internal dimensions of the drawers for all the three types shall be suitable for holding a standard suspension holder running on cradle strips having centre to centre distance of 385 mm, the height of the largest holder being 255 mm including 15 mm high tab. The depth of the drawers shall be not less than 600 mm. The bottom of the lowest drawer shall be minimum 75 mm above the floor level.

B.2 DIMENSIONS DOOR-TYPE LOCKABLE FILING CABINETS

B.2.1 The overall dimensions of the three types of door type lockable filing cabinets shall be as given in Table B.2.

Table B.2: Overall Dimensions of Door-Type Lockable Steel Filing Cabinets

S/No.	Dimensions, mm	One-Door Type	Two-Door Type	Four-Door Type
1	Overall height from finished floor level to top of the cabinet including pedestal	1800	1850	1850
2	Depth from face to back	450	400	400
3	Width	380	900	900
NOTE: Other dimensions may be applied as agreed between supplier and purchaser.				

B.2.2 The minimum clearances required for the filing cabinets to be put into recesses or openings, where required, shall be as follows:

a) For top of cabinet – 20 mm,

b) For each side of cabinet – 10 mm, and

c) For depth of cabinet – 5 mm.

B.3 TOLERANCES

All dimensions specified in 6.1 and 6.2 shall not vary by more than ± 5 mm.

Bibliography

1) US 1908:2019, Furniture — Steel filing cabinets for general office purposes — Specification.

2) TZS 3191:2021, Steel filing cabinets for general office purposes — Specification.

3) IS 3313, Steel filing cabinets for general office purposes — Specification.