

2-1. SHEET LAYOUT

(1) **Sheet sizes:** The preferred sizes of the drawing sheets recommended by the Bureau of Indian Standards (B.I.S.) are given below as per SP : 46 (2003). Refer fig. 1-30:

TABLE 2-1

Sheet designation	Trimmed size (mm)	Untrimmed size (mm)
A0	841 × 1189	880 × 1230
A1	594 × 841	625 × 880
A2	420 × 594	450 × 625
A3	297 × 420	330 × 450
A4	210 × 297	240 × 330
A5	148 × 210	165 × 240

The layout of the drawing on a drawing sheet should be done in such a manner as to make its reading easy and speedy. Fig. 2-1(a) and fig. 2-1(b) shows an A1 size sheet layout. All dimensions are in millimetres.

(2) **Margin:** Margin is provided in the drawing sheet by drawing margin lines [fig. 2-1(a)]. Prints are trimmed along these lines. After trimming, the prints would be of the recommended trimmed sizes of the trimmed sheets.

(3) **Border lines:** Clear working space is obtained by drawing border lines as shown in [fig. 2-1(a)]. More space is kept on the left-hand side for the purpose of filing or binding if necessary. When prints are to be preserved or stored in a cabinet without filing, equal space may be provided on all sides (fig. 2-3).

(4) **Borders and frames:** SP : 46 (2003) recommends the borders of 20 mm width for the sheet sizes A0 and A1, and 10 mm for the sizes A2, A3, A4 and A5. Frame shows the clear space available for the drawing purpose.

(5) **Orientation mark:** Four centring marks are drawn as shown in fig. 2-1(b) to facilitate positioning of the drawing for the reproduction purpose. The *orientation mark* will coincide with one of centring marks which can be used for the orientation of drawing sheet on the drawing board.

(6) **Grid reference system (zones system):** The *grid reference system* is drawn on the sheet to permit easy location on the drawing such as details, alterations or additions. The rectangle of grid along the length should be referred by numerals 1, 2, 3... etc. and along the width by the capital letters A, B, C, D etc. as shown in fig. 2-1(b).

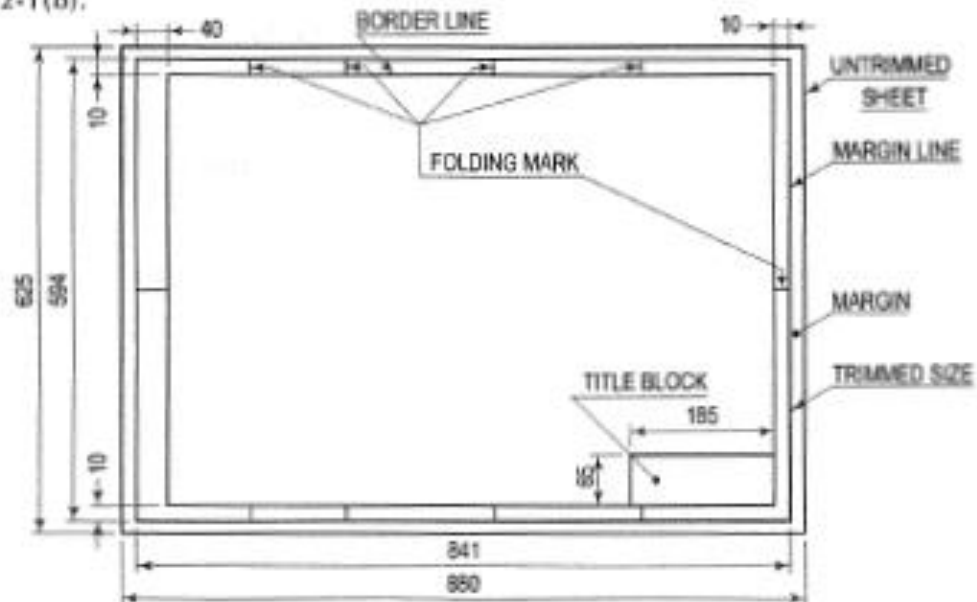


FIG. 2-1(a)

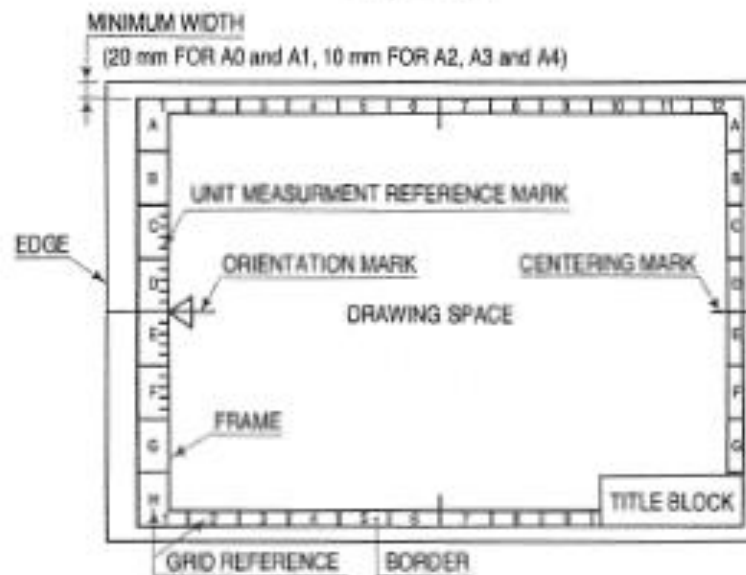


FIG. 2-1(b)

(7) **Title block:** Space for the title block must be provided in the bottom right-hand corner of the drawing sheet as shown in fig. 2-1(a) and fig. 2-1(b). The size of the title block as recommended by the B.I.S. is 185 mm × 65 mm for all designations of the drawing sheets. Fig. 2-2 shows the simplest type of a title block. All title blocks should contain at least the particulars as shown in table 2-2.

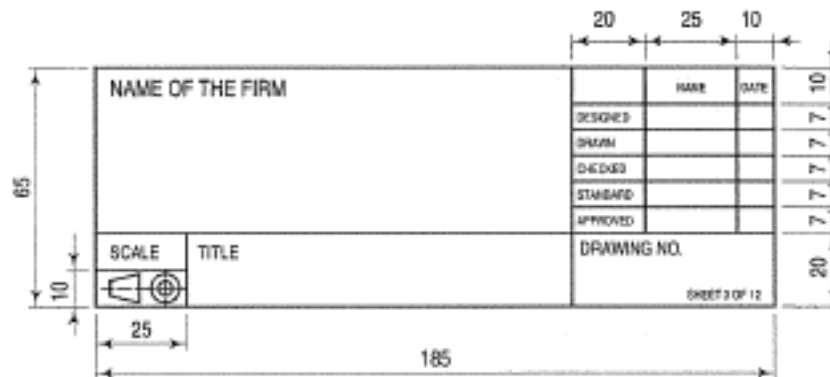


FIG. 2-2

TABLE 2-2
PARTICULARS OF TITLE BLOCK

1.	Name of the firm.
2.	Title of the drawing.
3.	Scale.
4.	Symbol for the method of projection.
5.	Drawing number.
6.	Initials with dates of persons who have designed, drawn, checked, standards and approved.
7.	No. of sheet and total number of sheets of the drawing of the object.

(8) **List of parts or the bill of materials:** When drawings of a number of constituent parts of an object are drawn in a single drawing sheet, a list of these parts should be placed above or beside the title block in a tabular form. It should provide the following minimum particulars for each part:

Part no., name or description, no. off i.e. quantity required, material and sometime stock size of raw material, remarks.

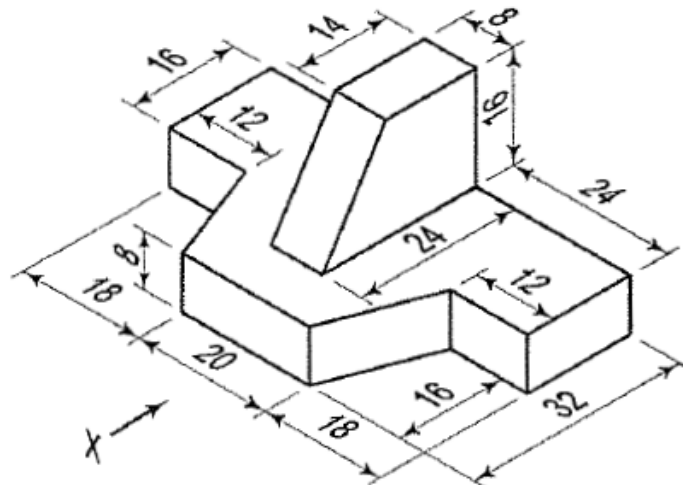
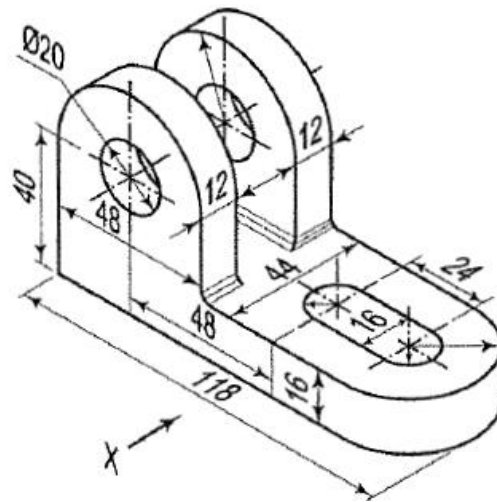
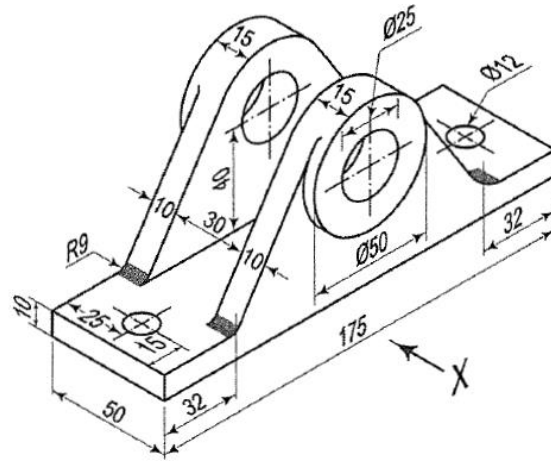
Additional information such as job and order number, instructions regarding finish, heat-treatment, tolerances (general) and references pertaining to jigs, fixtures, tools, gauges etc. may be, if necessary included in the title block or given separately in tabular form.

(9) **Revisions of drawing:** For locating a portion of the drawing for the purpose of revision etc., the sides of the three larger sizes of the drawing sheets viz. A0, A1 and A2 are divided into a number of equal zones.

Fig. 2-3 shows an A1 size sheet with zones marked on it. The zones along the length l are designated by numerals, while those along the width w are designated by letters. The location D8 is a rectangle formed by the intersection of the zones D and 8. The number of zones suggested by the B.I.S. for A0, A1 and A2 sizes of drawing sheets along the lengths l are 16, 12 and 8 respectively, while those along the widths w are 12, 8 and 6 respectively.

A revision panel is drawn either attached to the title block above it or in the top right-hand corner of the sheet. The revisions are recorded in it giving the revision number, date, zone etc. and also the initials of the approving authority.

Practice figures for Orthographic Projection.



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