



CE 13001 Engineering Drawing and Graphics (Autumn 2011-12)

Drawing sheet

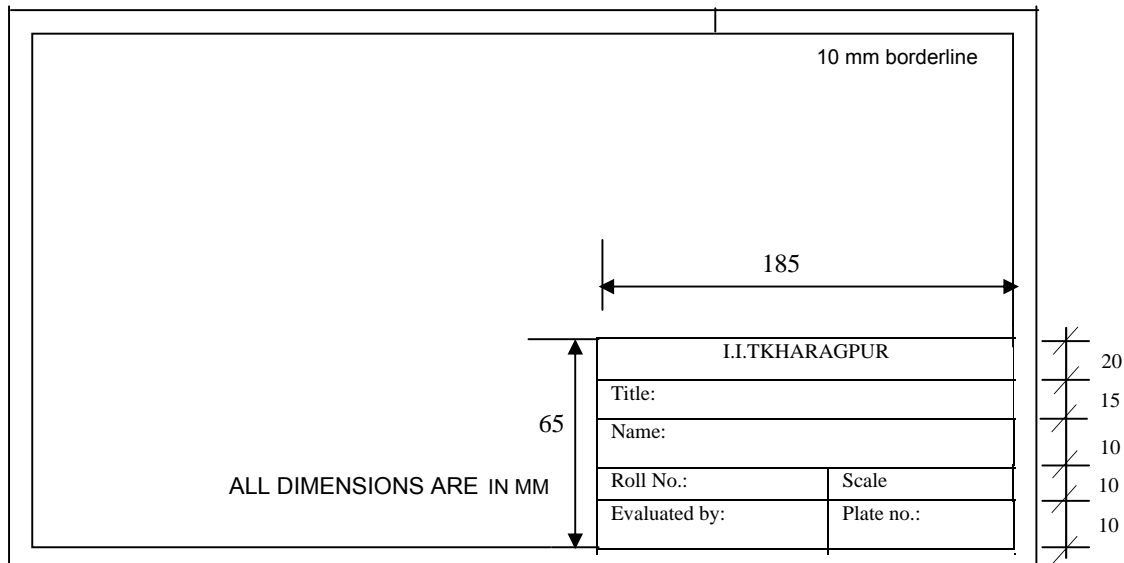
Designation	Trimmed Size (mm)	Untrimmed size (mm)
A0	841 x 1189	880 x 1230
A1	594 x 841	625 x 880
A2	420 x 594	450 x 625
A3	297 x 420	330 x 450
A4	210 x 297	240 x 330

Drawing Instruments

Drawing sheet- A2 size (420X 594mm); A black sheet; Mini-drafter/ T- square; Drawing pencils (H, 2H and HB); Large size compass, Large size divider; Scales- 300 mm; Protractor; French curves; Eraser; Drawing clip/pin/adhesive tape; Sharpener; Duster





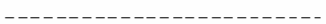
DRAWING SHEET

Trimmed edge



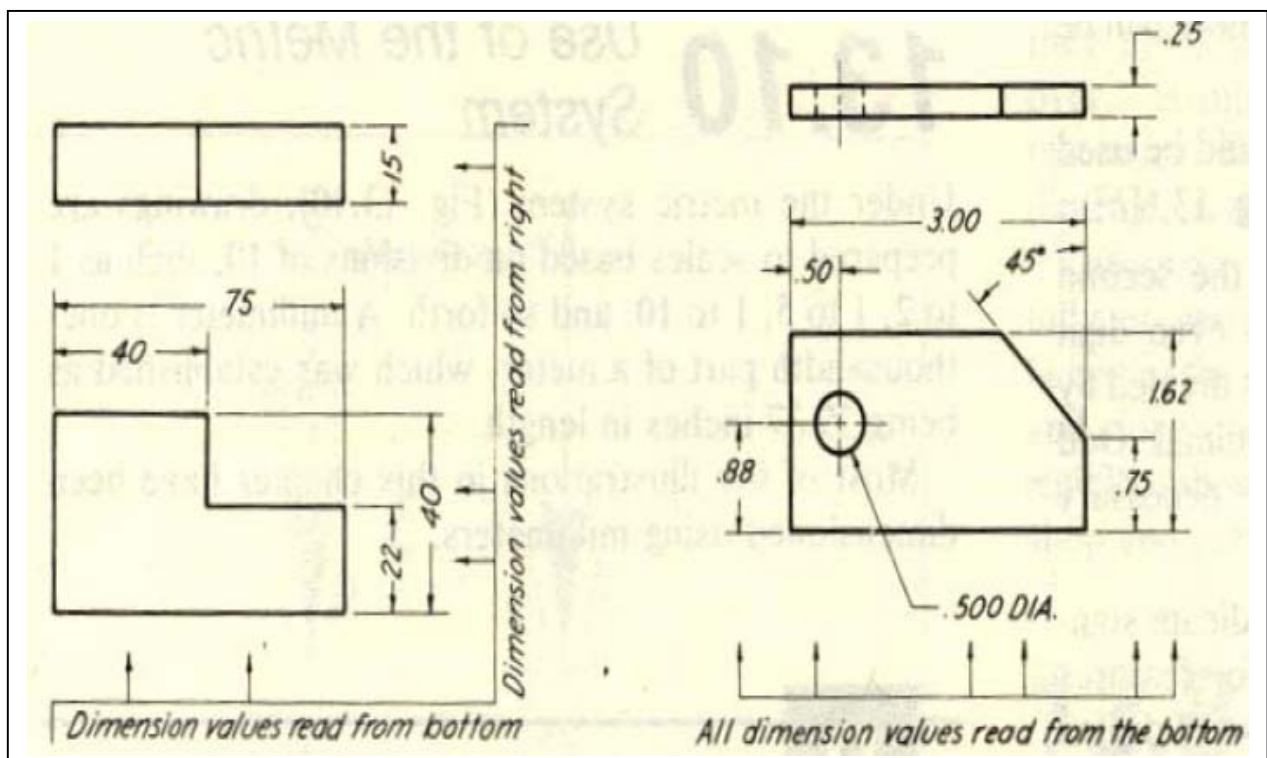
Letter size

Sr. No.	Item	Size (mm)
1	Name of the company	10, 14, 20
2	Drawing numbers, letters denoting section planes	10, 14
3	Title of the Drawing	7, 10
4	Sub-titles and heading	5, 7
5	Dimensioning, Notes, Schedules, Material list	3.5, 7
6	Alteration entries and tolerances	3.5

Illustration	Application	Pencil
Thick 	Outlines, visible edges, surface boundaries of objects, margin lines	H
Continuous thin 	Dimension lines, extension lines, section lines leader or pointer lines, construction lines, boarder lines	2H
Continuous thin wavy 	Short break lines or irregular boundary lines – drawn freehand	2H
Continuous thin with zig-zag 	Long break lines	2H
Short dashes, gap 1, length 3 mm 	Invisible or interior surfaces	H

DIMENSIONING

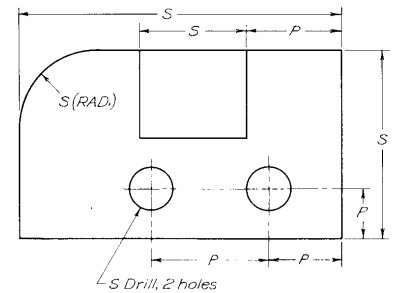
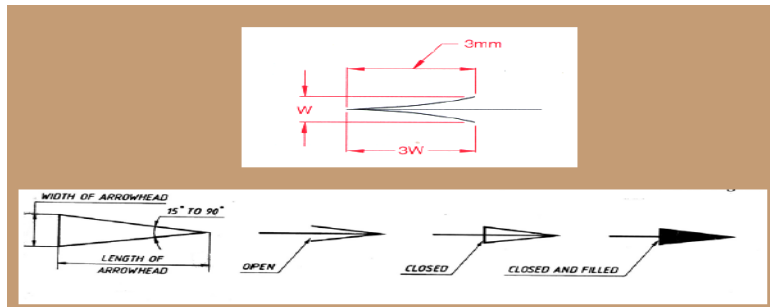
Follow one of the following methods for dimensioning



Aligned method

Unidirectional method

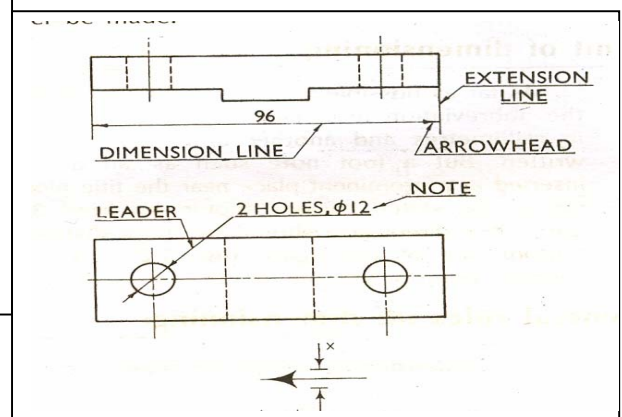
Arrows (In the dimension line)— 3 mm wide and should be 1/3rd as wide as they are long - symbols placed at the end of dimension lines to show the limits of the dimension. Arrows are uniform in size and style, regardless of the size of the drawing.



Dimension line—A thin, solid line that shows the extent and direction of a dimension. Dimension lines are broken for insertion of the dimension numbers.

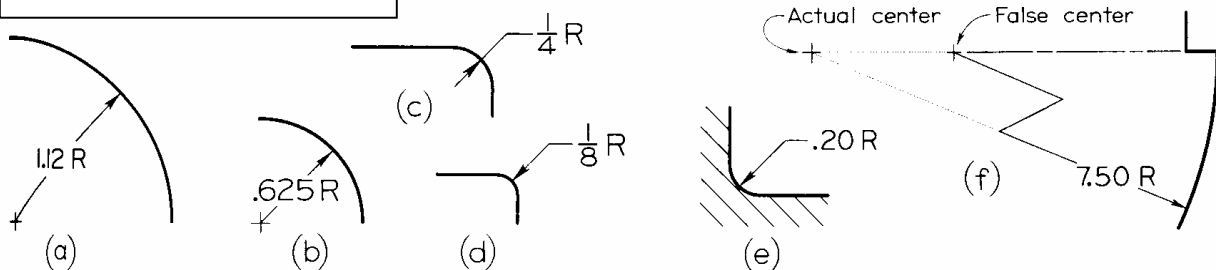
Extension line - a thin, solid line perpendicular to a dimension line, indicating which feature is associated with the dimension.

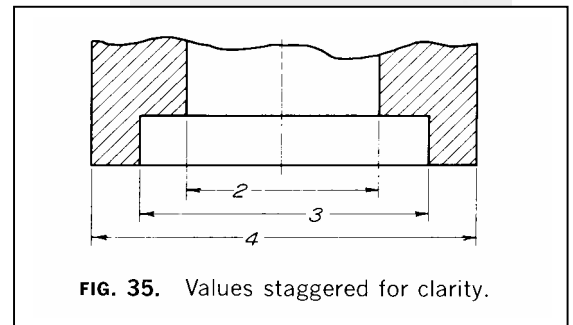
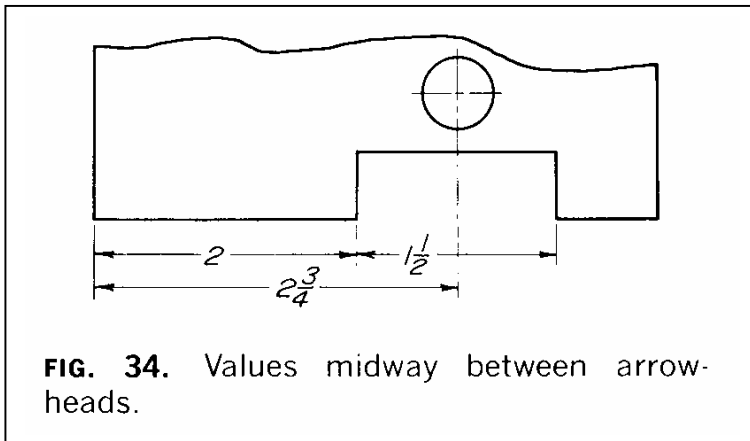
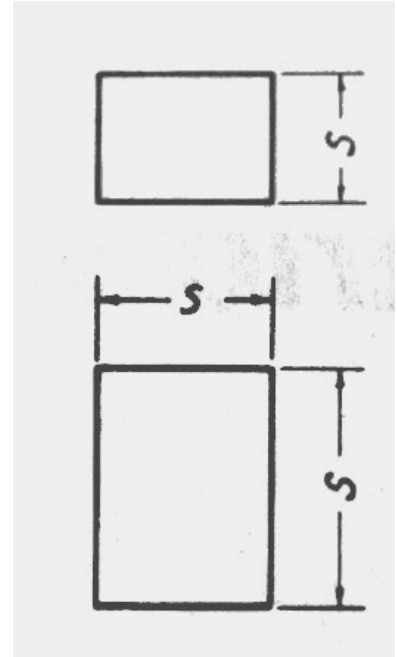
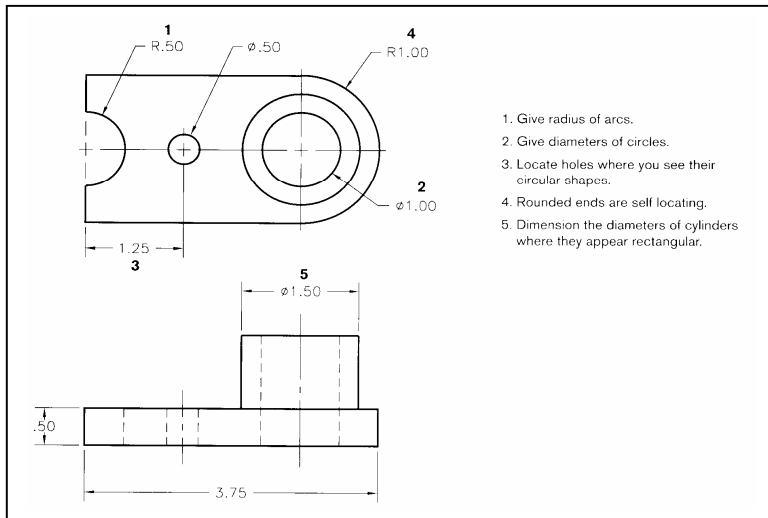
Visible gap - there should be a visible gap of 1.5 mm between the feature's corners and the end of the extension line.



Diameter symbol – ϕ - a symbol which precedes a numerical value, to indicate that the dimension shows the diameter of a circle.; **Radius symbol** – R 0.5

Dimensioning Arcs





Other important Instructions

- Use construction lines while drawing the objects and donot erase these lines
- Dimensioning of object is most important;
- Follow the dimensioning as per standards; Carries good proportion of marks
- Complete title box with all relevant information
- Use correct pencil for drawing various lines/objects
- Present the drawings by maintaining cleanliness
- Use both sides of the drawing sheet, if necessary

PS: In any labeled sketch or drawing, the ARROWHEADS SHOULD ALWAYS POINT TOWARDS the OBJECT and not the label.