



# Drawing vs. Engineering Drawing

- Drawing

Describing any object/ information diagrammatically

- Engineering Drawing

Graphical means of expression of technical details without the barrier of a language.

- Universal language for engineers

Graphical representation of an object – Drawing

Engineering drawing – A drawing of an object that contains all information like actual shape, accurate size, manufacturing methods, etc., required for its construction.

No construction / manufacturing of any (man -made) engineering objects is possible without engineering drawing.



### What will you learn in this course?

- Visualization – the ability to mentally control visual information.
- **Graphics theory** – geometry and projection techniques.
- **Standards** – set of rules that govern how parts are made and technical drawings are represented.
- You will learn - How industry communicates technical information.
- **Conventions** – commonly accepted practices and methods used for technical drawings.
- **Tools** – devices used to create technical drawings and models.
- **Applications** – the various uses for technical drawings.



- Engineering drawing is completely different from artistic drawing, which are used to express aesthetic, philosophical, and abstract ideas.

	Manual
Engineering	Drawing
Drawing	
	CADD

- Computer has a major impact on the methods used to design and create technical drawings.
- Design and drafting on computer are cheap and less time consuming.



### Standard Codes

Country	Code	Full name
USA	ANSI	American National Standard Institute
Japan	JIS	Japanese Industrial Standard
UK	BS	British Standard
Australia	AS	Australian Standard
Germany	DIN	Deutsches Institute for Normung
India	BIS	Bureau of Indian Standards
	ISO	International Standards Organization



### BIS standards

BIS Code	Topics
IS 10711:2001	Size and Layout of Drawing Sheets
IS 10714:1983	Line Types and Uses
IS 9609:2001	Lettering
IS 15021:2001	Projection Methods
IS 11669:1986	Dimensioning



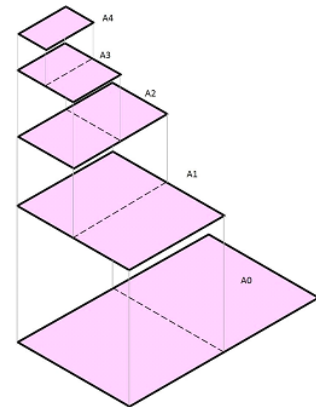
### Drawing Instruments

1. Drawing board
2. Drawing sheet [A3 Size]
3. Mini-drafter / T- square
4. Instrument box (Compass, Divider, Protractor etc.,)
5. Drawing pencils [H, 2H, HB]
6. Scales, Sharpener, Eraser
7. Drawing clip / pin / adhesive tape



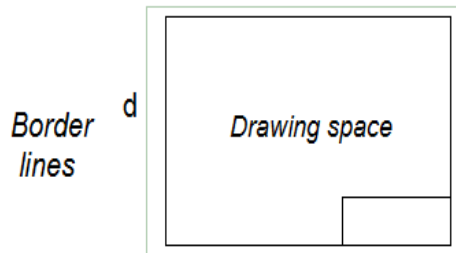
A Series Formats (mm)

A0	841 × 1189
A1	594 × 841
A2	420 × 594
<b>A3</b>	<b>297 × 420</b>
A4	210 × 297
A5	148 × 210
A6	105 × 148
A7	74 × 105

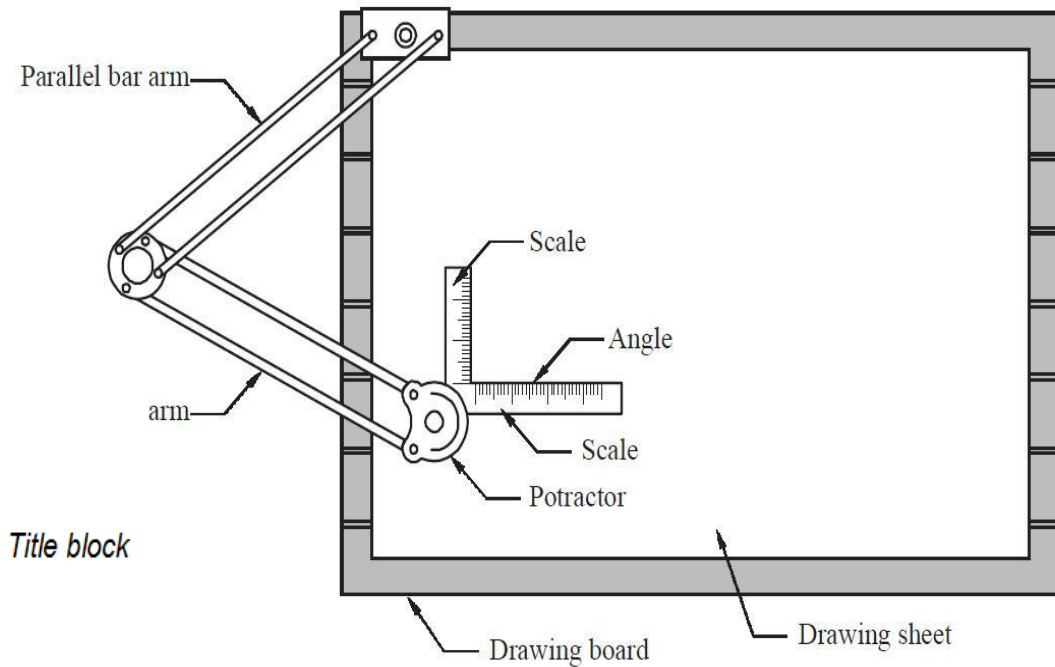
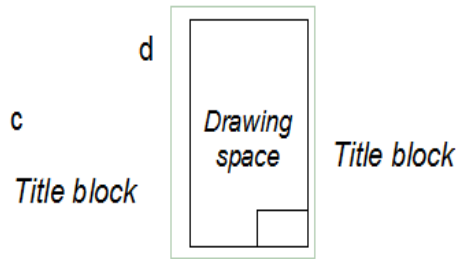




### 1. Type X (A0~A4)



### 2. Type Y (A4 only)







### Dimensioning

