



University of Engineering &
Technology Peshawar

Striving for the highest level
of engineering excellence

Course Name: Introduction to CAD CAM

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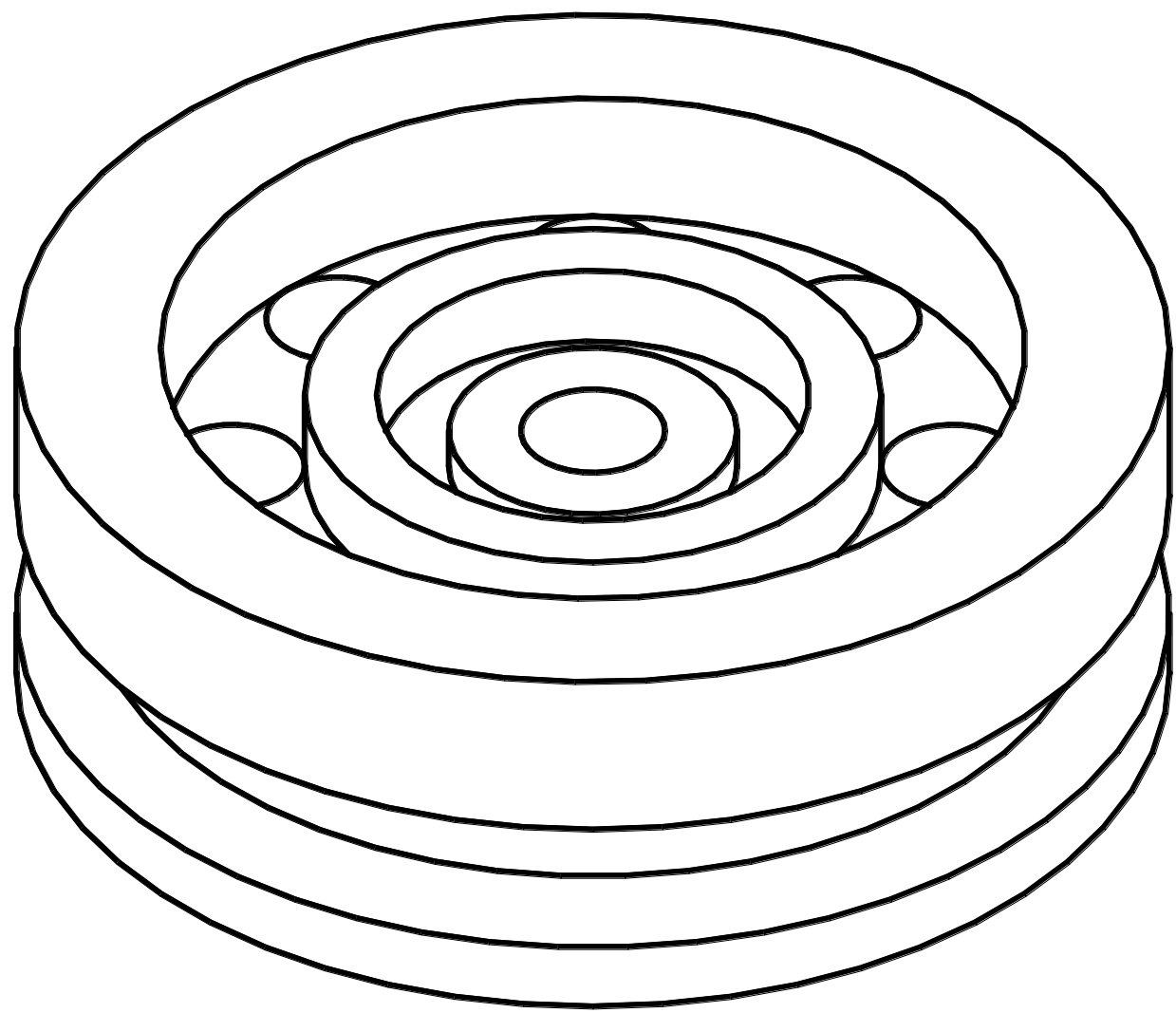
MED, UET Peshawar

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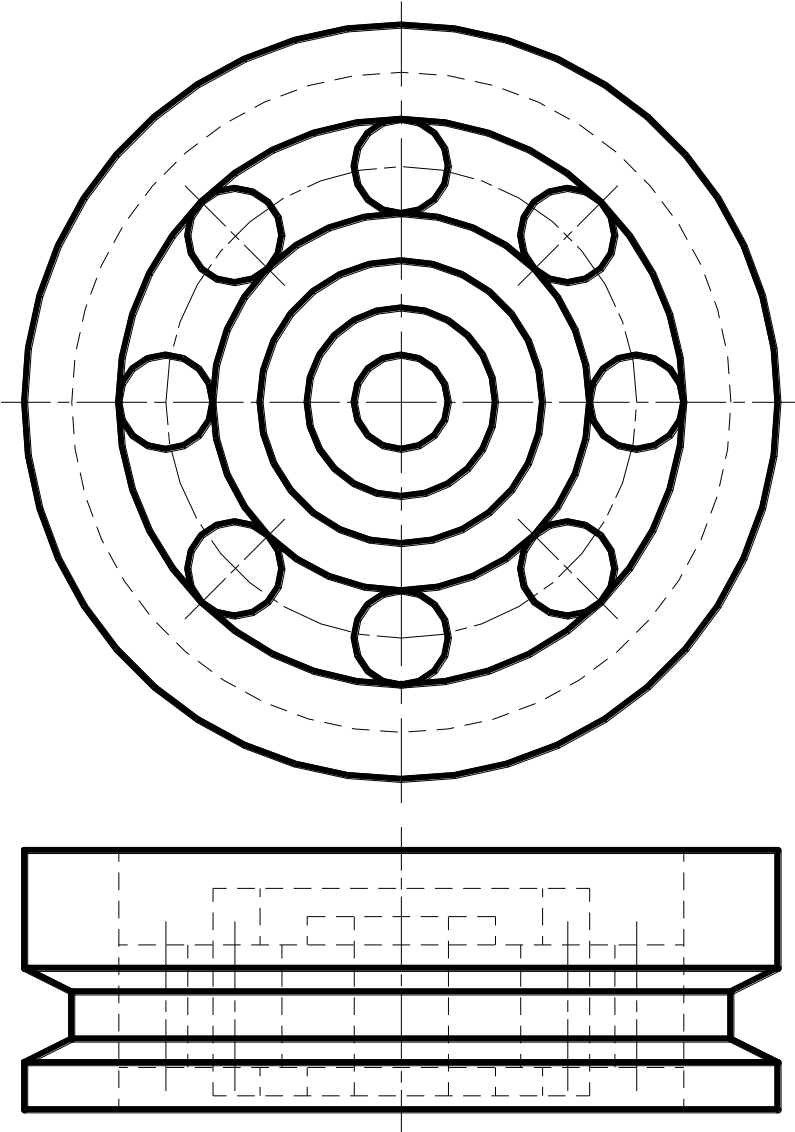
SECTIONAL VIEWS AND CONVENTIONS

1. PURPOSE OF SECTIONAL VIEWS

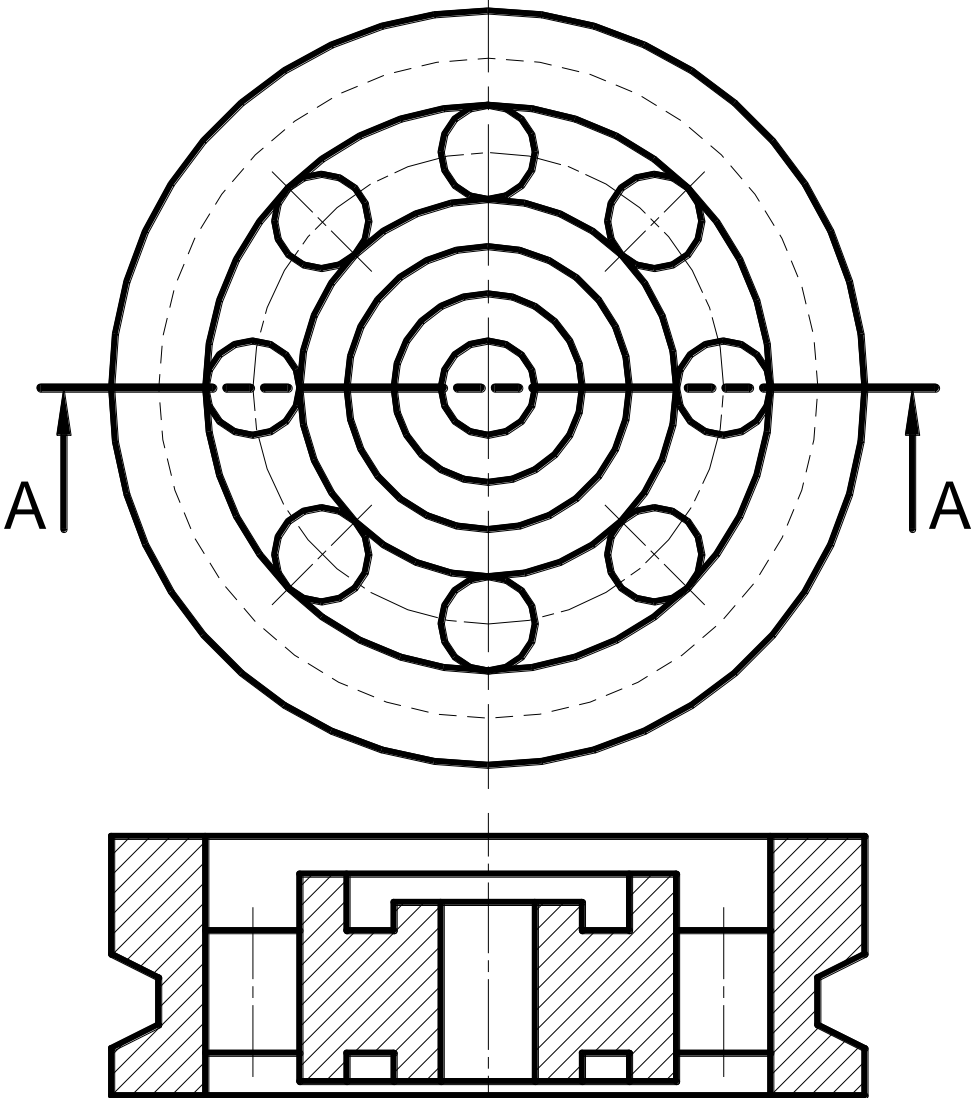
- To see the inner details of an object.
- Sectional views help in clarifying the interior shape of a part because in the outer view too many hidden lines can create confusion.
- To sometimes see small cross sections of a part.



Hidden Lines in the Front View create confusion in the understanding of the shape of part.



The sectioned Front View clearly shows the internal part shape.



SECTION A-A

2. HOW SECTIONS ARE SHOWN

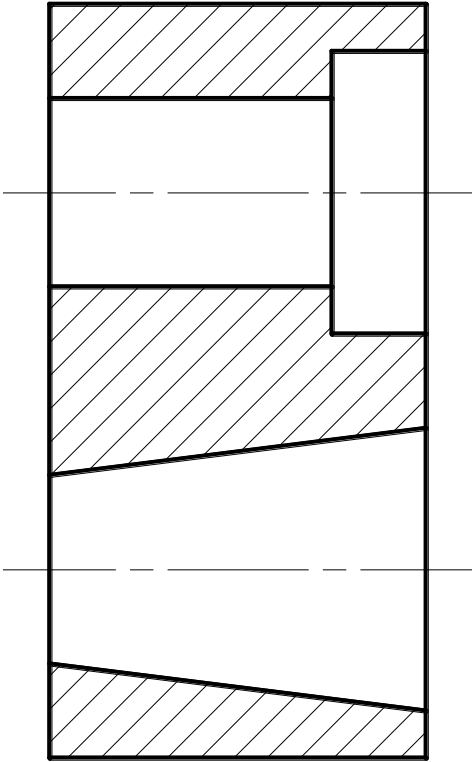
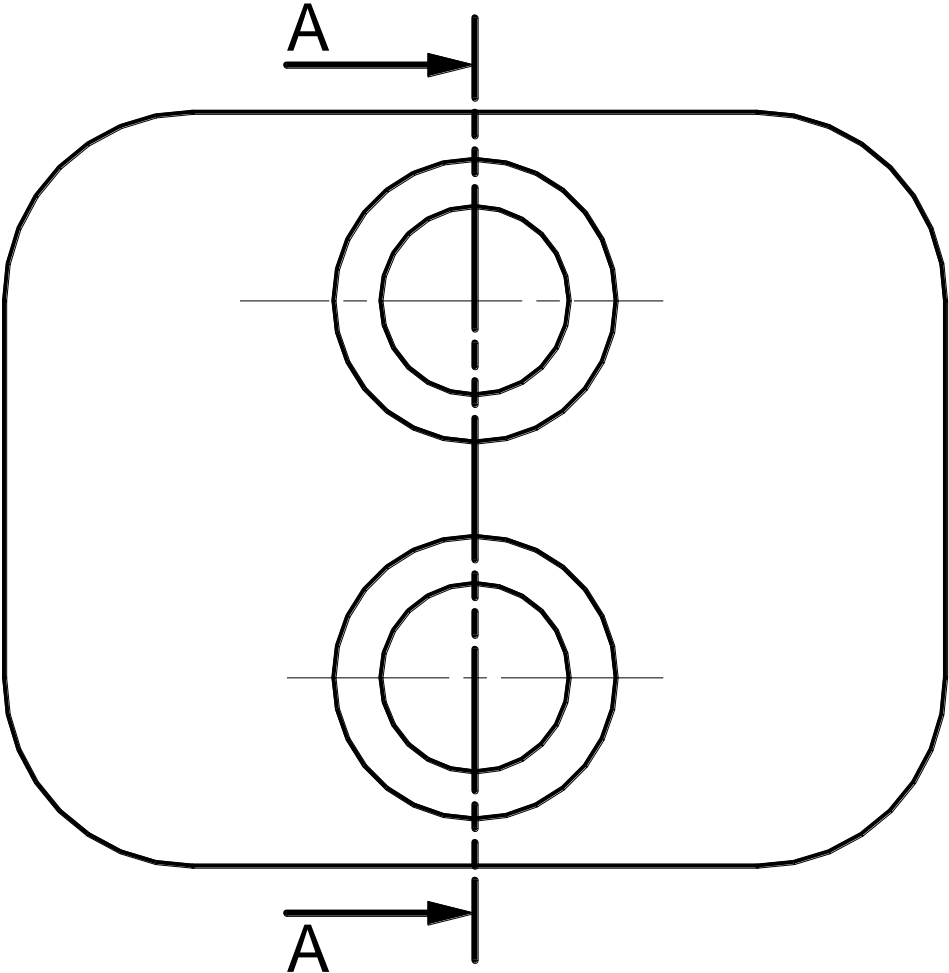
- The place from which the section is taken shall be clearly identified.
- A cutting plane, directional arrows and identification letters shall be used.
- A sectional view must show which portions of the object are solid material and which are spaces by drawing section lines in the solid parts.

3. TYPES OF SECTIONS

A. Full Section

- The cutting plane shall pass entirely through the solid.
- The cutting plane may cut straight across or change direction to pass through features to be shown.

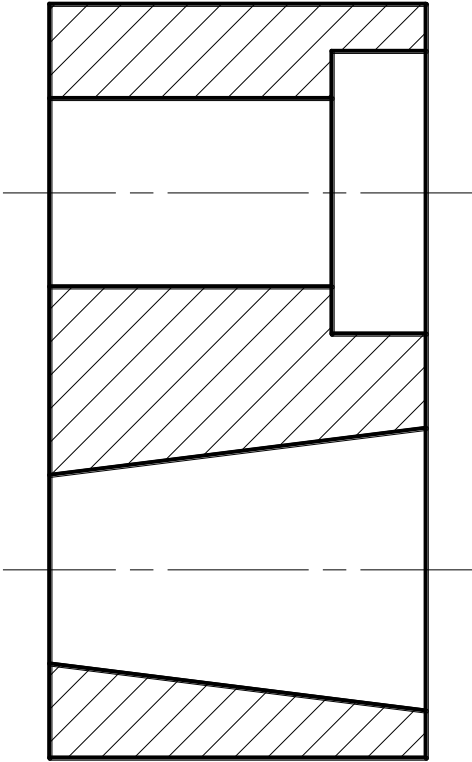
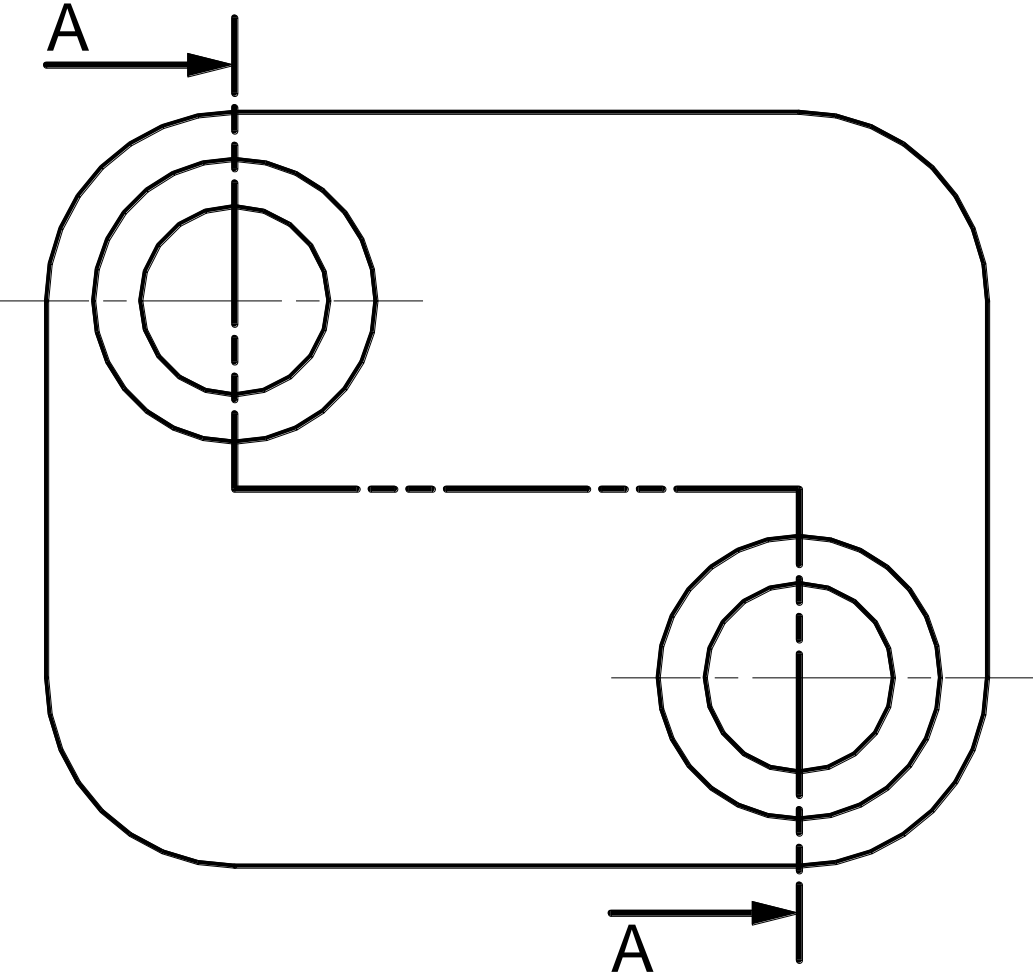
A full section with the cutting plane passing straight across.



SECTION A-A

A full section with the cutting plane changing direction

- Change in plane direction shall never be shown in the sectioned view.

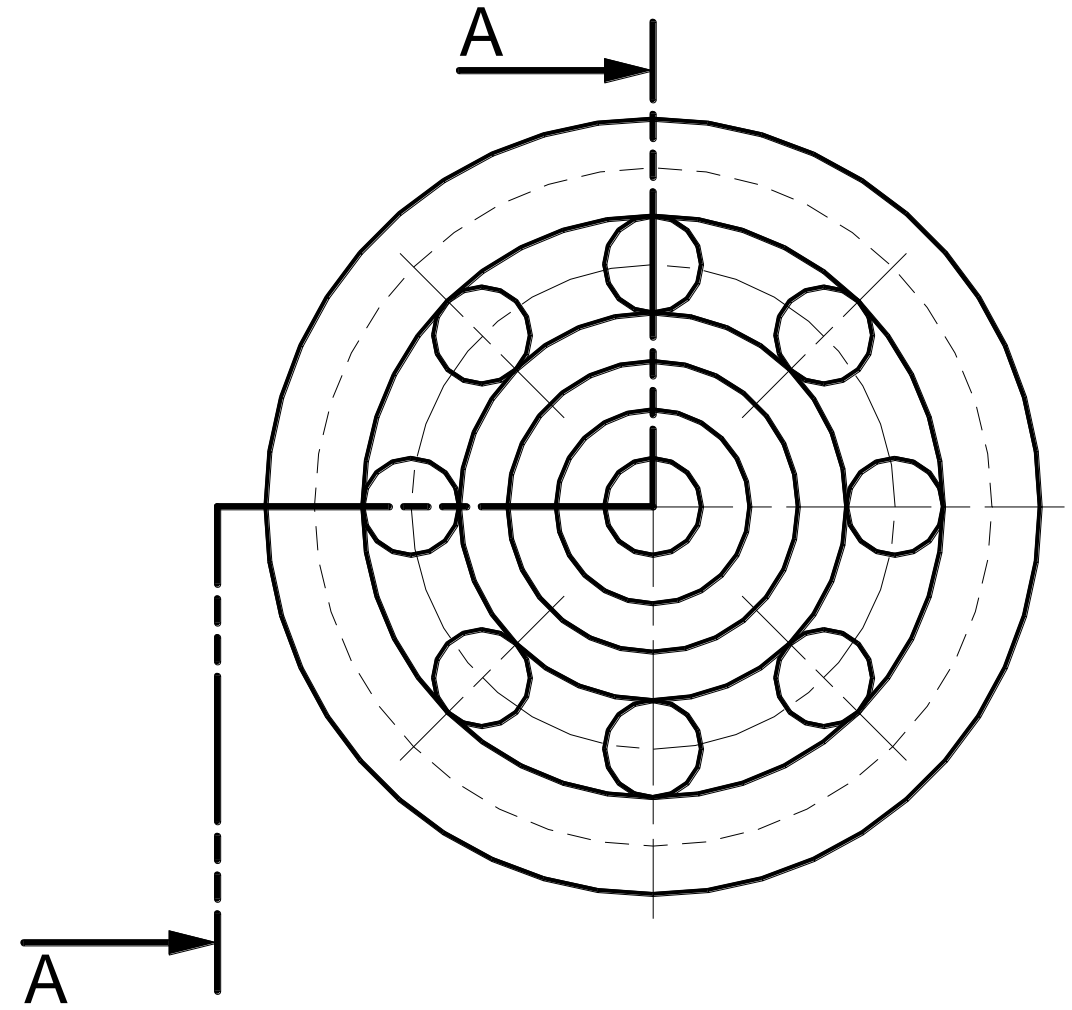
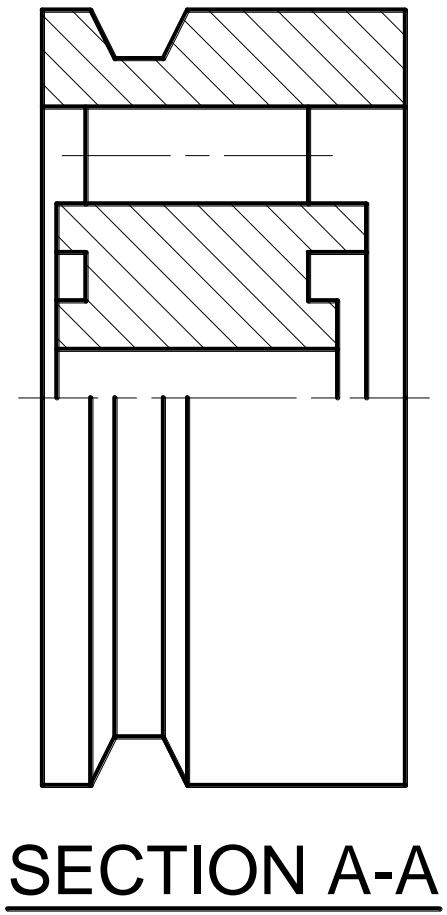


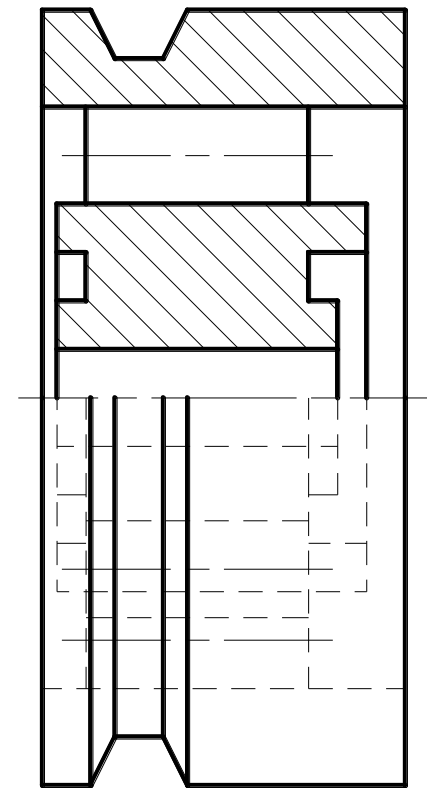
SECTION A-A

B. Half Section

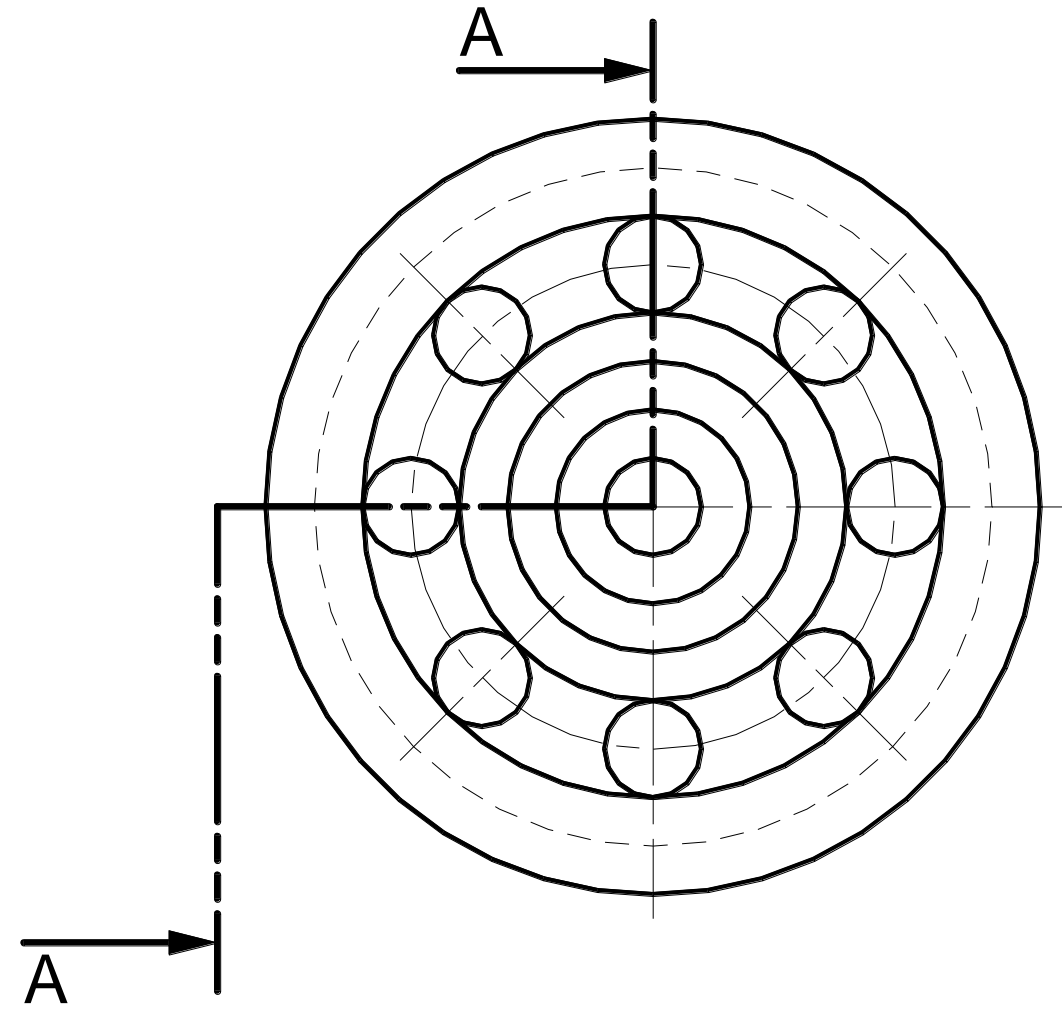
- The cutting plane passes through one half of the solid.
- Used for symmetrical solids.
- One half of the solid is sectioned while the other half is the regular exterior view.
- Advantageous in the fact that both interior and exterior can be shown without drawing hidden lines.
- Difficult in dimensioning

- In a half section, hidden lines are usually not shown in the exterior half.
- The two halves in the sectioned view are separated by a center line.





SECTION A-A



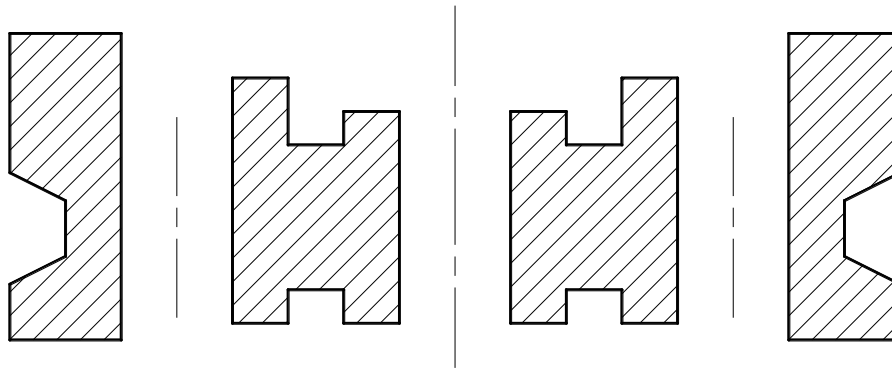
4. DRAWING PRACTICES FOR SECTIONAL VIEWS

A. Unnecessary Hidden Detail

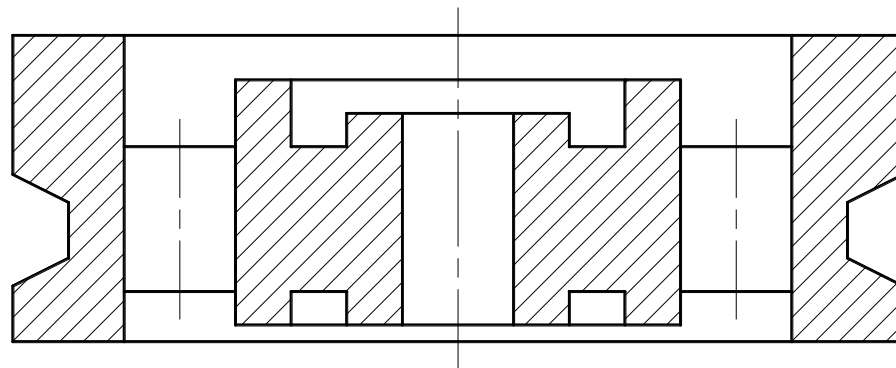
- Hidden edges and surfaces are not shown behind the cutting plane.

B. Visible Detail

- Visible edges and surfaces shall be shown behind the cutting plane.
- Shall be omitted only if the section is to be emphasized on.



Visible Edges not shown (Not recommended)



Visible Edges shown (Recommended)