

Analyzing simple machine parts

[Technology](#)



The front view is shown as a full section. The disadvantage of this section is that it may not prove beneficial to show full internal details when the solid to be cut is asymmetrical from inside.

Half Section. This kind of section is advantageous when the object is symmetrical about a centre line. Here, the full section view may not be necessary. In this case, a half sectional view is drawn as a front view which shows internal details of half the component.

The disadvantage of this section is that it can be used only for symmetrical objects.

Offset section

In cases where full information cannot be obtained if the section is taken along the centre line, the offset section is used. To obtain full details the cutting plane is offset by 90 degrees to pass through all the holes and slots. The disadvantage of this section is, however, it can not be used to describe elongated parts like web, spokes and arms, as they can not be sectioned along their longitudinal axis.

Revolved and Removed Section

The advantage of this section lies where there are elongated parts of the object are also present. This is used to show the transverse section of one part of an object. The cutting plane is shown in section by cutting in a direction perpendicular to the longitudinal axis. An adjacent view is obtained by rotating the cut section by 90 degrees.

The Disadvantage of this kind of section is that when too many parts are present then using this section view may get complicated. In such cases, the removed section proves to be advantageous as the section are shown removed from the front view located adjacently.

Broken Out Section

This kind of sectional view has its own advantage as it does not use a cutting plane at all. Instead, the section view is shown with the front view and a jagged line is used to show the break. Hence, one may choose to break the object any way which helps to show the full internal details.

The disadvantage of this view is that it may somehow become difficult to decide how to introduce the break. In case, the object has elongated parts, the application of this section may become very confusing.