

LAORT CADD LECTURE NOTES (Solids #3)

SLICING/SECTIONING SOLIDS

READING

SLICE

handouts, helpfiles

SECTION

handouts, helpfiles

OVERVIEW

SLICE and **SECTION** are two commands that are used to cut solids using a plane. **SLICE** cuts a solid using a user defined plane and results in either one or two solids as outputs. **SECTION** cuts through a solid and results in the curves that define the intersection of the solid and the plane.

SLICE

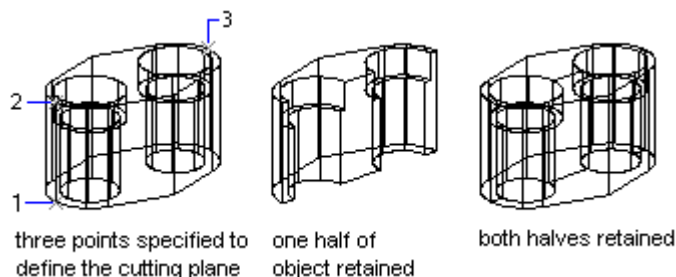
With **SLICE**, you can create a new solid by cutting the existing solid and removing a specified side. You can retain one or both halves of the sliced solids. The sliced solids retain the layer and color properties of the original solids. The default method of slicing a solid is to specify three points that define the cutting plane and then select which side to retain. You can also define the cutting plane by using another object, the current view, the Z axis, or the XY, YZ, or ZX plane.

To slice a solid

- 1 From the Draw menu, choose Solids Slice.
- 2 Select the objects to slice.
- 3 Specify three points to define the cutting plane.

The first point defines the origin (0,0,0) of the cutting plane. The second point defines the positive X axis, and the third point defines the positive Y axis.

- 4 Specify which side to retain, or enter b to retain both sides.



SECTION

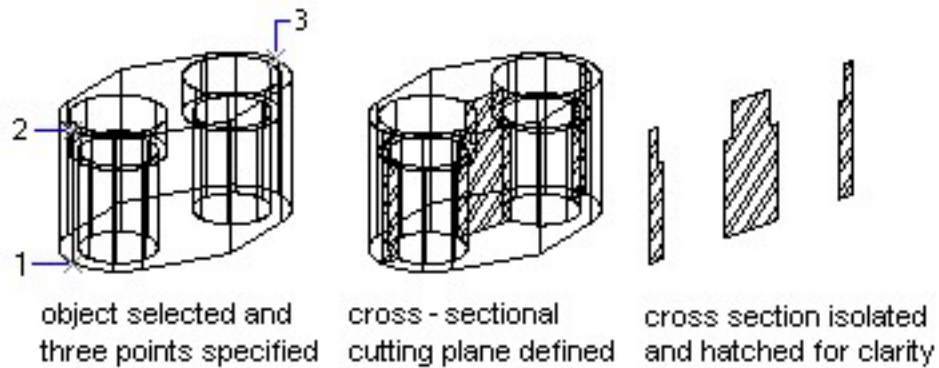
With **SECTION**, you can create a cross section through a solid as a region or an anonymous block. The default method is specifying three points to define the plane. Other methods define the cross-sectional plane by another object, the current view, the

Z axis, or the XY, YZ, or ZX plane. AutoCAD places the cross-sectional plane on the current layer.

To create a cross section of a solid

- 1 From the Draw menu, choose Solids Section.
- 2 Select the objects to cross-section.
- 3 Specify three points to define the cross-sectional plane.

The first point defines the origin (0,0,0) of the cutting plane. The second point defines the X axis, and the third point defines the Y axis.



Command line SECTION

NOTE If you are applying hatching to the cross-sectional cutting plane, you must align the UCS with the cross-sectional cutting plane first.