Chapter 20: Mechanical Part - Layouts

This example shows how to use Rhino to model a simple mechanical part. You will learn to create a layout with a title block for printing.

Open the tutorial model

1. From the Rhino File menu, click Open.
2. Browse to the Tutorial Models folder that you downloaded with the User's Guide.
3. Click Toolblock.3dm and then click the Open button.

![3D model of a mechanical part](image-url)
Layout viewports

Use a layout to arrange the 2-D lines for printer.

**Add viewport tabs**

1. On the Viewport tabs, click the Add new tab (ө) icon.
2. On the menu, click New Layout.

3. In the New Layout window, select the following:
   Orientation = Landscape
   Width = 11 inches
   Height = 8.5 inches
   Initial Detail Count = 1
   Page 1 will appear in the viewport tabs.
Insert a title block

In this section you will add a title block and re-size the detail to fit.

**Set up the layers**

1. In the Layers panel, make the Title Block layer current.
2. Confirm that you are in layout space.

**Insert the title block**

1. On Edit menu, click Block > Insert Block Instance.
2. From the name list, select Ansi_A_TB.
3. Under Insertion point, check the Prompt box, and click OK.
4. Select the detail.

**Note:** Click on the detail edge to select it. Make sure the detail is not active.

5. On the Edit menu click Control Points > Control Points On (F10).

6. Drag the control point in the lower left corner to re-size the detail to fit in the title block.
7. Press the Esc key to turn off the control points.

**Lock the detail view**

1. Select the detail.
2. On the Edit menu, click Object Properties (F3).
3. In the Properties panel on the Detail page, under Scale, set the inches on page and inches in model to 1.0.
4. Check the Locked box
   
   This prevents future panning and zooming so the details stays the correct size.

**Add print widths**

1. In the status bar, right-click the Layer pane to open the Layer panel.
2. Click Default in the PrintWidth column, and set the values to the following:
   
   Dimension = .35
   Title Block = .5
   Make2D > visible > lines = .70
The layout view displays a preview of the print widths as they will appear on the printed page.