Annotative Scaling - Dimensions

AutoCAD 2013.

Annotative Scaling: This White Paper includes a worked example to illustrate the use of Annotative Scaling to scale drawing objects (dimensions) appropriately as they are used in Viewports of differing scales.

Annotative Scaling, Annotative Dimensions, Dimension Style Manager

Annotative Text

The idea behind Annotative Scaling is that you can have a single piece of text which will scale itself up or down based on the scale of your drawing.

Text Style

The key to making text magically scale itself is to make sure the "Annotative" checkbox is checked. (First introduced in 2008)

Annotations are every object in your drawing which is not a model or geometry. We use it to show dimensions, text as description, symbols, and pattern to show sections, materials etc.
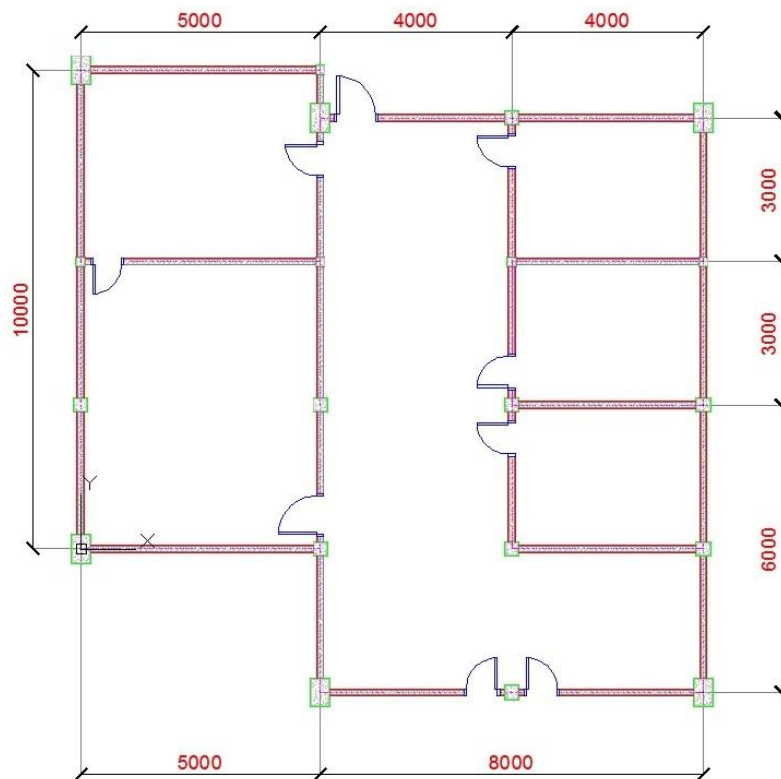
The problem / challenge with annotations occur when you need to represent your drawing at different scales.

Annotative Dimensions

1. Study the sample drawing. Fig 1 below. The active scale from the **Annotation** scale list (it's on the Status Bar) has been changed to 1:100. We are going to set our drawing for 1:100 first.
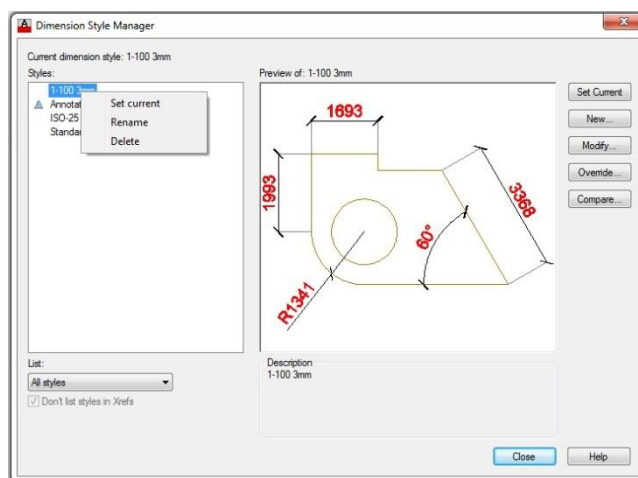
   Fig 1: Annotation Scale set to 1:100.

Annotative Dimensions (cont'd)

2. Next we open the Dimension Style dialogue Fig 2. The style named 1:100 3mm has been renamed to 3mm (right click on the original name to rename).
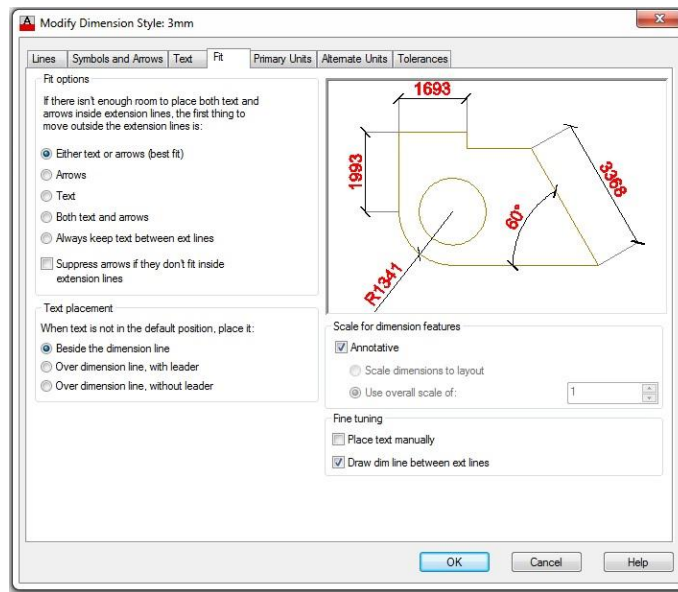
    Fig 2: Dimension Style Manager

After clicking the Modify button on the right side of this dialogue box, the following entries were made.

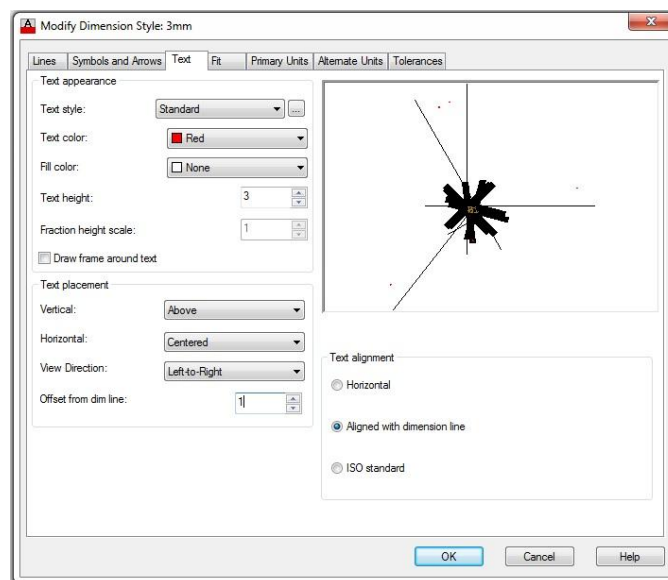3. Fit tab, scale for dimension features, **Annotative** activated Fig 3.

Fig 3: Modify Dimensions – Fit Tab – Annotative.

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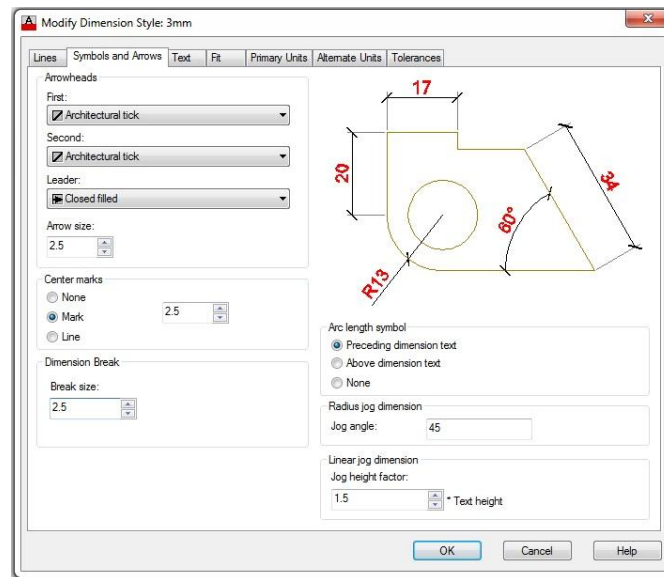**Annotative Dimensions (cont'd)**

4. Text tab, Text height set to 3, offset from dimension line to 1 Fig 4.

Fig 4: Modify Dimensions – Text Tab – Height & Offset.

5.   Symbols & Arrows tab, Arrow size, centre marks, and break size set to 2.5 Fig 5.

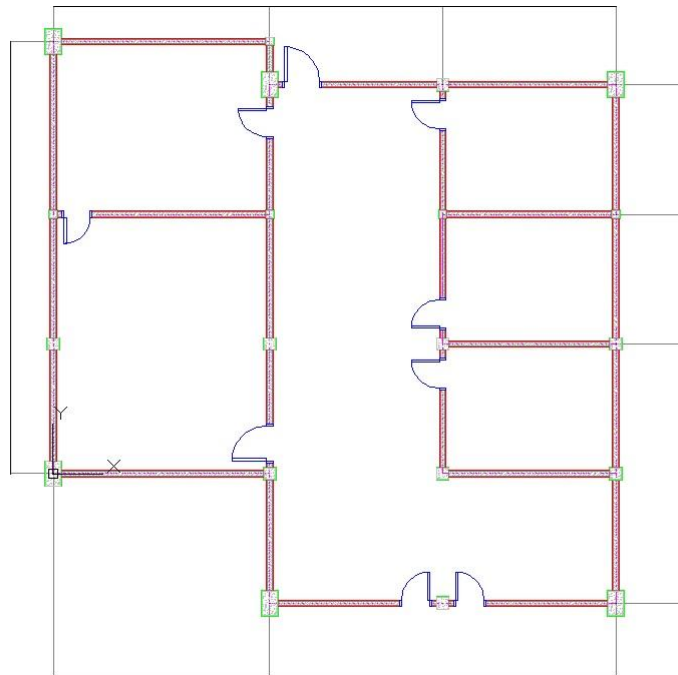**Fig 5:** Modify Dimensions – Arrow, Mark & Break size.

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Annotative Dimensions (cont'd)

6.   Close the Dimension Style dialogue box.

All dimension text and arrows now look too small Fig 6. We need to update them to apply the changes.

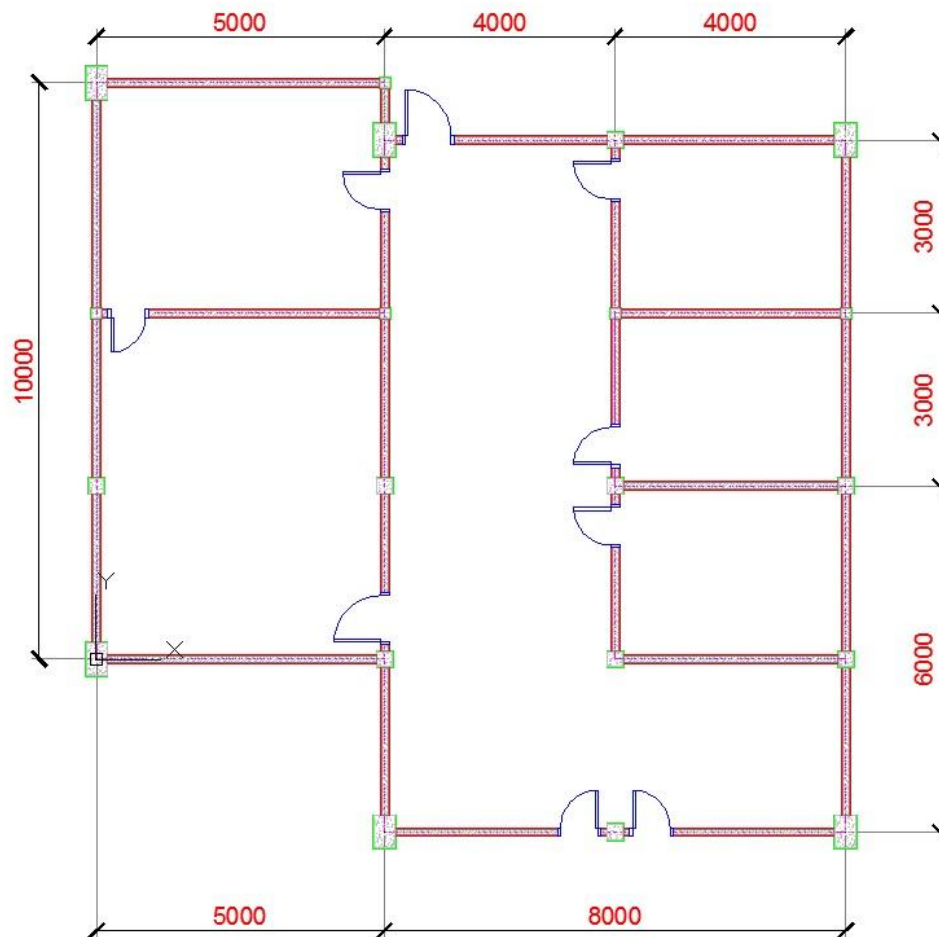**Fig 6:** Dimensions appear too small.

7. After activating the update button in the Dimension panel, Annotation tab, AutoCAD asks you to select an object, just type all then <Enter>. Now you will see your dimension correctly. Figs 7 & 8.

Fig 7: Ribbon – Annotate Tab – Dimensions Update Key.
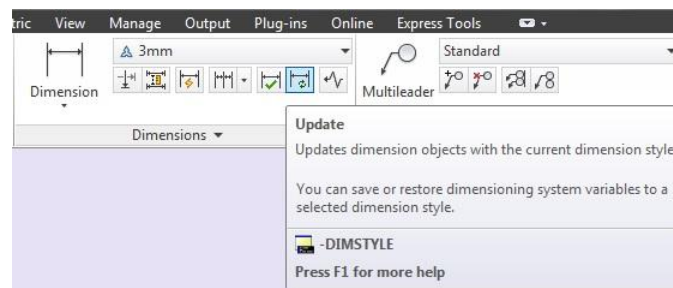
Annotative Dimensions (cont'd)

Fig 8: Dimensions updated – Text & Arrows visible.

Now we are going to add another scale to these dimensions.

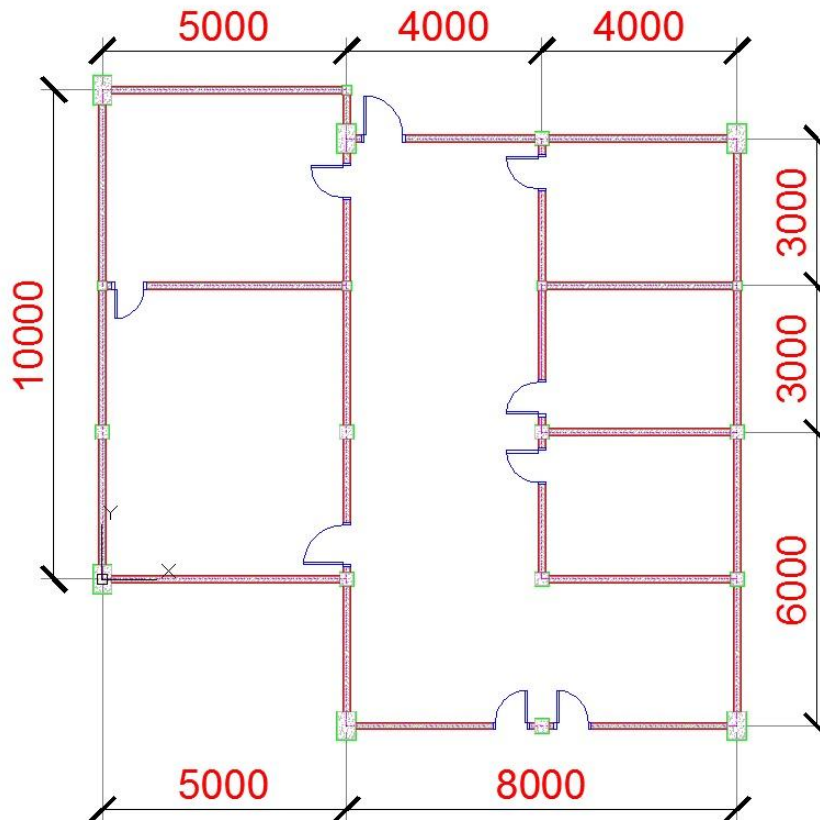8. Activate 'Automatically' add scales in annotation scale group Fig 9.

Fig 9: Activate automatically add scales.

Annotative Dimensions (cont'd)

10. Change the Annotation scale to 1:200. You should see the dimension size adjusted to 1:200 scales Fig 10.

**Fig 10:** Dimensions appear bigger at 1:200 scale.

11. Turn off the 'Automatically' add scale again. Try to change it to 1:50. What happens?

12. Open your layout. Select the left Viewport border, and change the scale to 1:100. Press escape. Change the right Viewport to 1:200.

Compare the dimension size in both Viewports. The text in both Viewports = 3mm for plotting Fig 11.

Annotative Dimensions (cont'd)

Fig 11: Dimension Text uniform in Viewports with different scales.
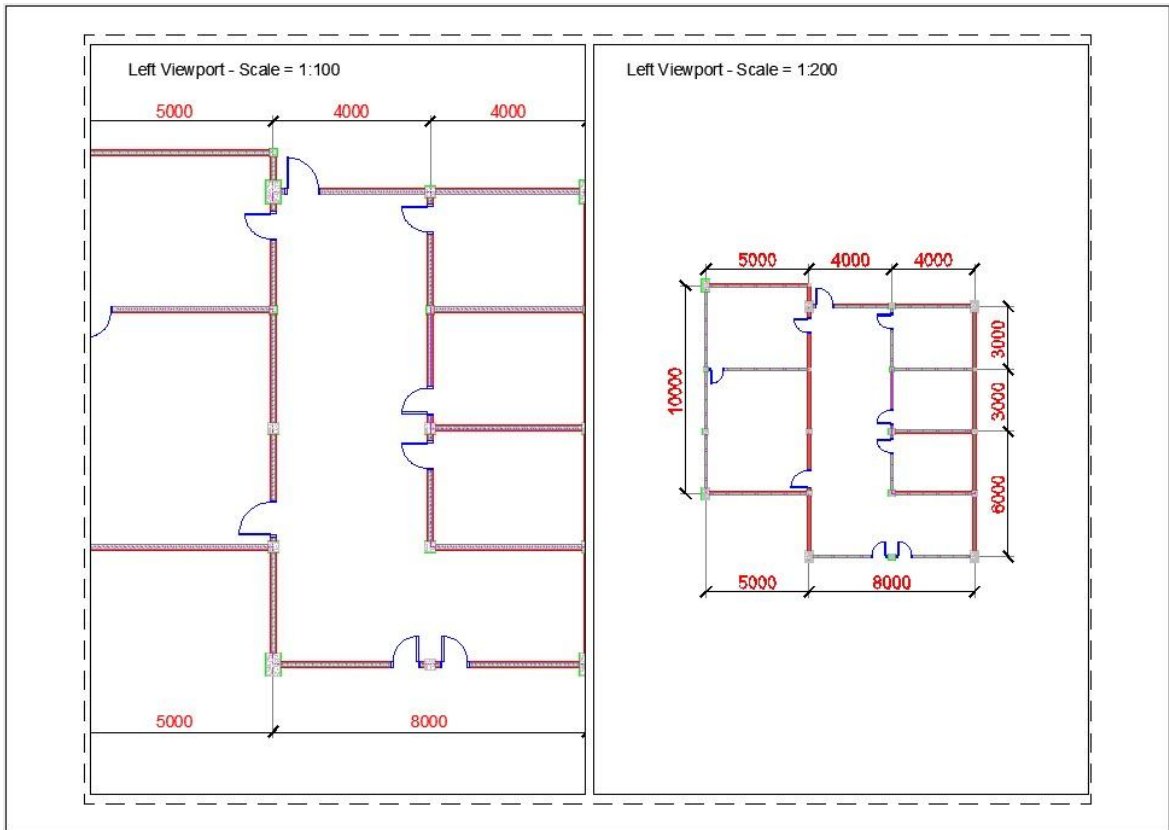
Conclusion

Drawing scales can differ widely from one design to the next and even within the same design it is common to have view of different scales. To facilitate efficient and uniform design annotations, you must be able to annotate you designs, regardless of its scale, with annotation objects that appear uniform in size regardless of the scale of the drawing or views.

Annotation Scaling enables you to create uniformly sized annotative objects regardless of the drawing scale.