

ARC

There are 10 ways to draw an ARC in AutoCAD. Not all of the ARCS options are easy to create so you may find it is often easier to **trim a Circle** or use the **Fillet** command.

On the job, you will probably only use 2 of these methods. Which 2 depends on the application.

An **ARC** is a segment of a circle and must be less than 360 degrees.

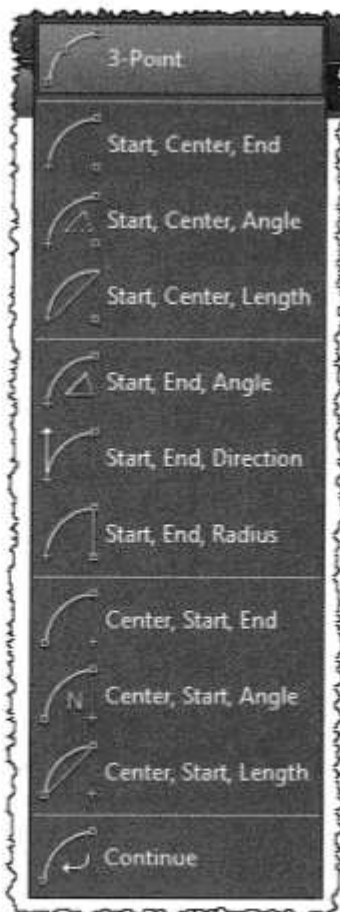
By default, ARCS are drawn counter-clockwise. You can change the direction by holding down the **Ctrl** key to draw in a clockwise direction. Or in some cases you can enter a negative input to draw in a clockwise direction.

1. Select the Arc Command using one of the following:

Ribbon = Home tab / Draw panel /
or
Keyboard = A <enter>



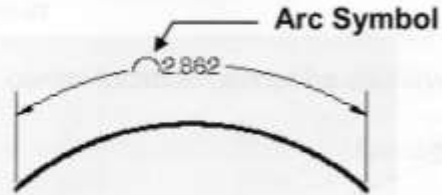
2. Refer to Exercises 22A through 22J for examples of each method listed below.




DIMENSIONING ARC LENGTHS

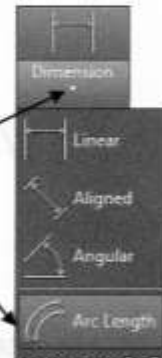
You may dimension the distance along an Arc. This is known as the **Arc length**. **Arc length** is an associative dimension.

Example:



1. Select the Arc length dimension command using one of the following:

Ribbon = Annotate tab / Dimension panel / 
or
Keyboard = dimarc <enter>



Command: `_dimarc`

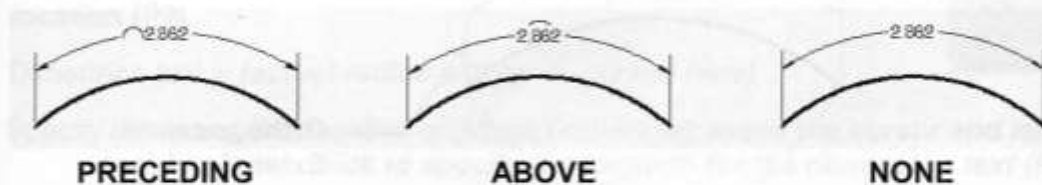
2. Select arc or polyline arc segment: **select the Arc**
3. Specify arc length dimension location, or [Mtext/Text/Angle/Partial/Leader]:
place the dimension line and text location

Dimension text = **dimension value will be shown here**

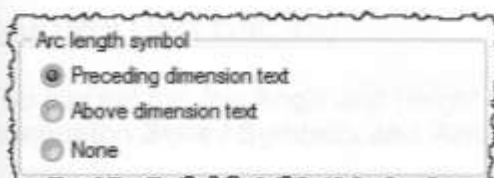
To differentiate the Arc length dimensions from Linear or Angular dimensions, arc length dimensions display an arc (⌒) symbol by default. (Also called a "hat" or "cap")

The arc symbol may be displayed either above, or preceding the dimension text. You may also choose not to display the arc symbol.

Example:



Specify the placement of the arc symbol in the **Dimension Style / Symbols and Arrows** tab or you may edit its position using the Properties Palette.

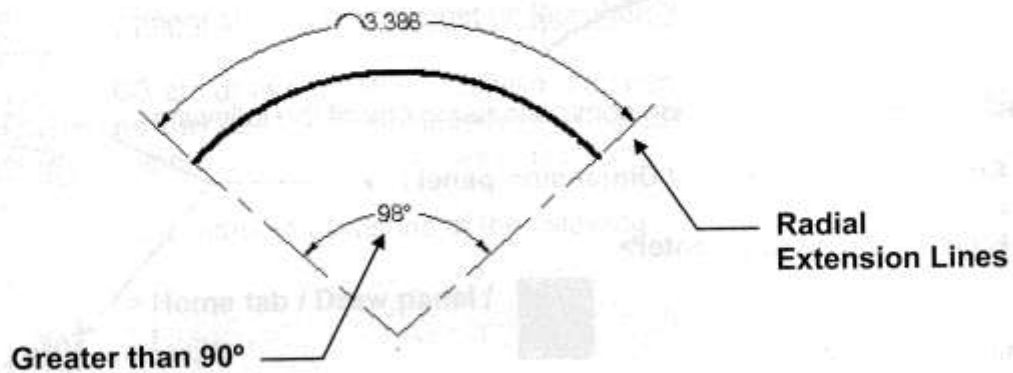


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DIMENSIONING ARC LENGTHS....continued

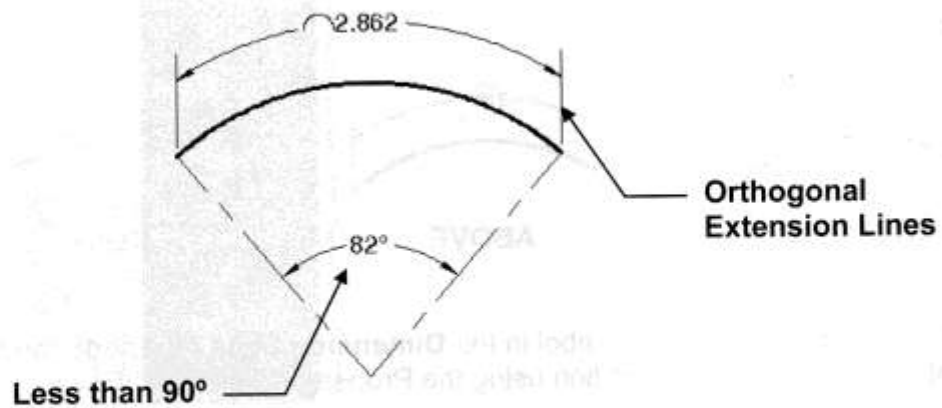
The extension lines of an Arc length dimension are displayed as radial if the included angle is greater than 90 degrees.

Example:



The extension lines of an Arc length dimension are displayed as orthogonal if the included angle is less than 90 degrees.

Example:

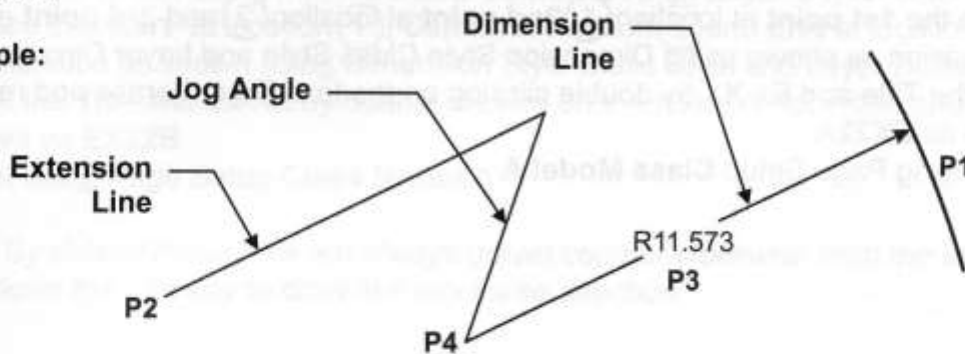


DIMENSIONING A LARGE CURVE

When dimensioning an arc the dimension line should pass through the center of the arc. However, for large curves, the true center of the arc could be very far away, even off the sheet.

When the true center location cannot be displayed you can create a "Jogged" radius dimension.

Example:



You can specify the jog angle in the **Dimension Style / Symbols and Arrows** tab.

1. Select the Jogged radius dimension using one of the following:

Ribbon = Annotate / Dimension panel /
or
Keyboard = dimjogged <enter>



2. Select arc or circle:
select the large arc or circle (P1 anywhere on arc)
3. Specify center location override:
move the cursor and left click to specify the "fake" center location (P2).
 Dimension text = *(actual radius will be displayed here)*
4. Specify dimension line location or [Mtext/Text/Angle]: **move the cursor and left click to specify the location for the dimension text (P3).**
5. Specify jog location: **move the cursor and left click to specify the location for the jog (P4).**

CONTROLLING THE JOG

You can set the Jog Angle and Height factor in:
Dimension Style / Symbols and Arrows tab

