
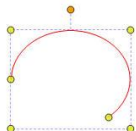
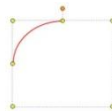


# Revu Tutorial: Draw and Customize Arcs and Curves

Sketch any shape you want using Bluebeam's arc and curve annotations. Learn how to create and customize these rounded markups.

## Create an Arc

To place a simple arc annotation, select the Arc icon  from the toolbar, or use keyboard shortcut "Shift + C". Draw the arc by holding down the left mouse button and dragging your mouse along the PDF.





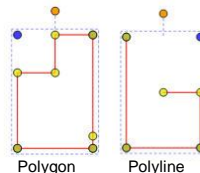
To extend the arc up to 360°, select one of the Control Points (i.e. yellow dot) and drag it with your mouse into the desired shape. Just like any other markup, you can customize the appearance from the toolbar or the Properties tab.

## Create a Curve


Use Revu's curve technology to create more complex shapes with multiple curves. Curve annotations start out as either polygons (for closed shapes) or polylines (for shapes with a start and end point). There are two ways to create Curve annotations:

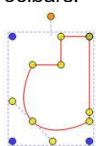
### Option 1: Transform angles into curves

- 1) Select either the **Polygon**  or **Polyline**  icon from the toolbar, or use keyboard short cuts "Shift + P" (polygon) or "Shift + N" (polyline).
- 2) Place the annotation on your PDF by using the left mouse button to define the length and direction of each segment of the shape. Double-click on the last point to finish.

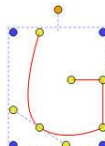


Each segment connects into a point, and each of these connections has a Control Point for adjusting the markup's size and shape. Transform these connections from angles to curves by doing one of the following:

- Click the **Control Point** while holding down the "Ctrl" key.
- Right-click on the **Control Point** and select **Convert to Arc**.
- Click the Convert icon  from the Control Point toolbar. You can turn this toolbar on by going to *View/Toolbars*.



Polygon with curve



Polyline with curve



## Option 2: Curve as You Go

A second option for creating curves is to curve the markup's connections as you make them. To do this, hold "Ctrl" and drag the mouse as you click a line segment for a Polygon or Polyline. The connection will instantly curve.

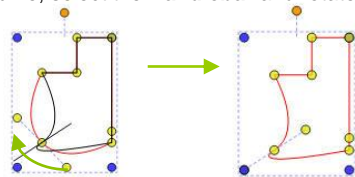


Hold down "Ctrl", drag your mouse and curve the annotation as you draw it.

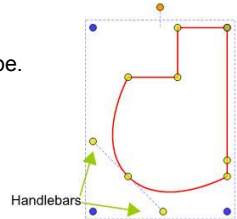
## Customize a Curve

Now that you have a curved annotation, it's time to manipulate its shape. Each curve has its own set of Control Points, called Handlebars.



To adjust the shape of the curve, select the **Handlebar** and rotate it.



Rotate the Handlebars to adjust the curve's shape.



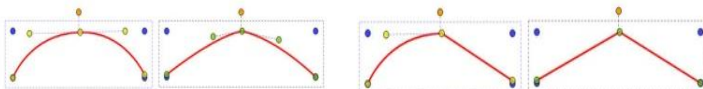
If you need to fine-tune the shape or size of the curved annotation even further, you can add or remove Control Points by performing one of the following:

- 1) Click the markup while holding down the Shift key to add a Control Point, or click on an unwanted Control Point while holding down Shift to remove it.
- 2) Right-click on the shape, go to *Control Point/Add*. A new Control Point will be inserted. To remove a Control Point, right-click on the shape and go to *Control Point/Subtract*.
- 3) From the toolbar, click the Add Control Point icon  and then click anywhere on the markup to place new Control Points. Or, click the Subtract Control Point icon  and then select unwanted Control Points to remove them.

As with all other annotations, you can customize a curve's appearance from the toolbar or the Properties tab.

## Examples of Curves

You can use curves to create a variety of markup types. The images below show the different ways that the annotation's segments can be joined:



When Handlebars are parallel (left), the curves will be connected as smooth. Otherwise, the curves will come to a point (right).

Handlebars don't have to exist on both sides of a point. The curve on the left is connected to a straight line segment. The case of no Handlebars (right) will result in connected line segments.

