Technical Documentation

How to draw a smile emoji using ellipses in Inkscape

Conceptual document

With The Ellipse tool in Inkscape you can draw an ellipse, circle, or arc.

<u>How to create an ellipse:</u>
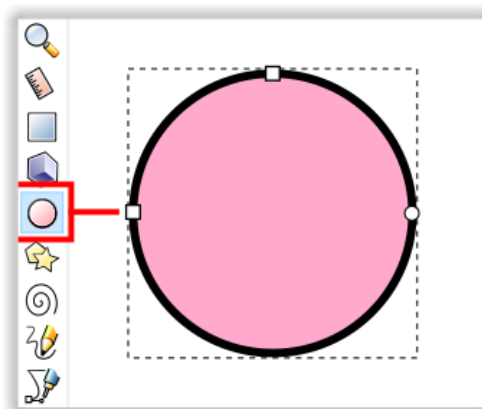
1. Click the Ellipse tool ⬭ or press F5 or press E .
2. Press the left mouse button and drag on the canvas.
3. Now the ellipse is created.

<u>Some important tips for drawing ellipses:</u>

- To draw a perfect circle, hold down the Ctrl key while you drag the mouse.
- Holding Shift will start drawing from the center of the shape.
- Using Alt + Ctrl while dragging will create a circle with a diameter defined by the distance between the start and stop point of the drag.
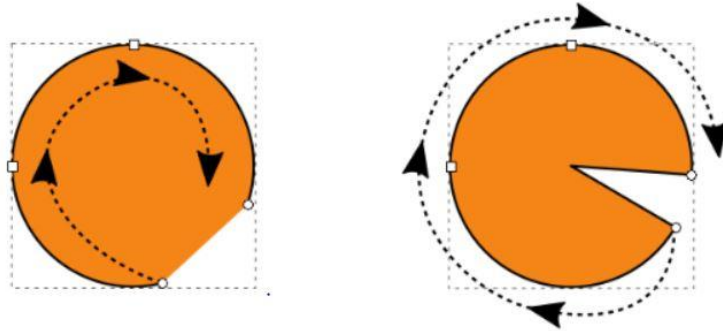
<u>Modification with handles:</u>

When an ellipse is drawn there are three edit handles: top (square), left (square) and right (circle).
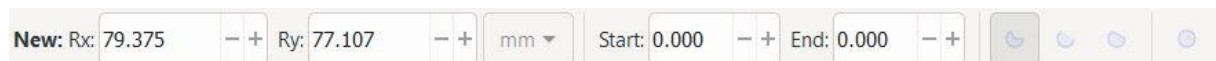

- To change the size of the ellipse, drag the handle (square) at the top or left.

- Dragging the right handle of a whole ellipse will create an arc or segment.

- To easily switch between an arc or pie segment, drag the handle inside or outside of the ellipse. For example, when dragging inside the bounds of the ellipse, the ellipse will be an arc; when dragging outside of them the arc will be closed and create a pie shape.

Modification with Control bar:

The other way to change the size or to convert the ellipse is with using the Control bar at the top of the screen.

New: Rx: 79.375 − + Ry: 77.107 − + mm ▾ Start: 0.000 − + End: 0.000 − +

- Rx sets the horizontal radius.
- Ry sets the vertical radius.
- Start and End fields sets the angle in degrees from the starting (Start field) point to the ending point (End field).
- Segment icon changes an arc to a segment.
- Arc icon changes a segment to an arc.
- Ellipse/circle icon changes an arc or a segment to a circle or an ellipse.
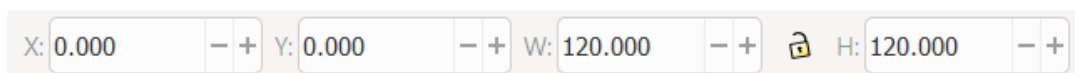
How to draw a smile emoji using ellipses in Inkscape

If you want to practice using Ellipses in Inkscape you can create a smile emoji in the following steps:

1. Click on the Ellipse tool ⬭ from the Tool box on the left.
2. To draw a perfect circle, hold down the Ctrl key while you drag the mouse.
3. Click on "yellow" from the Color box at the bottom of the screen to change the default color of the circle.

4. Click on the Select tool ▶ from the left tool box.
5. Use the Control bar on the top to set the coordinates (X, Y) and the size (W-width, H-height) of the object. For example:

X: 0.000   − +   Y: 0.000   − +   W: 120.000   − +   🔒   H: 120.000   − +

6. To draw an eye create a new ellipse from the Ellipse tool.
7. Fill it with brown color.
8. Set the size and the coordinates of the new ellipse so that it is in the upper left corner of the yellow circle. For example – X: 23, Y: 28, W: 30, H: 50.
9. Create another ellipse again and placed it horizontally on the brown one. Size and coordinates for example - X: 8, Y: 55, W: 60, H: 50.
10. Use the Path from the menu and click Difference to cut the eye.

File   Edit   View   Layer   Object   Path   Text   Filters   Extensions   Help

11. Now click on the right button of the mouse and choose Duplicate to draw the other eye.
12. Set its coordinates so that it is in the upper right corner of the yellow circle. For example - X: 67, Y: 28, W: 60, H: 50.
13. Let's continue with the mouth – Create a new ellipse.
14. Fill it with red color.
15. Set the width and height to be perfect for smile. For example – W: 80, H: 90.
16. Then create another ellipse and place it horizontally on the red one. Size for example – W: 150, H: 80.
17. Make their Difference to get the smile.
18. Place it at the bottom of the yellow circle.

19. The perfect emoji has white teeth so click on the Pen tool and make a straight line in the center of the smile.

20. With the help of the Node tool pull the straight line down.

21. Fill the first part of the mouth with white color.

22. Now the smile emoji is ready. ☺

Written By: Pavlina Todorova 62324