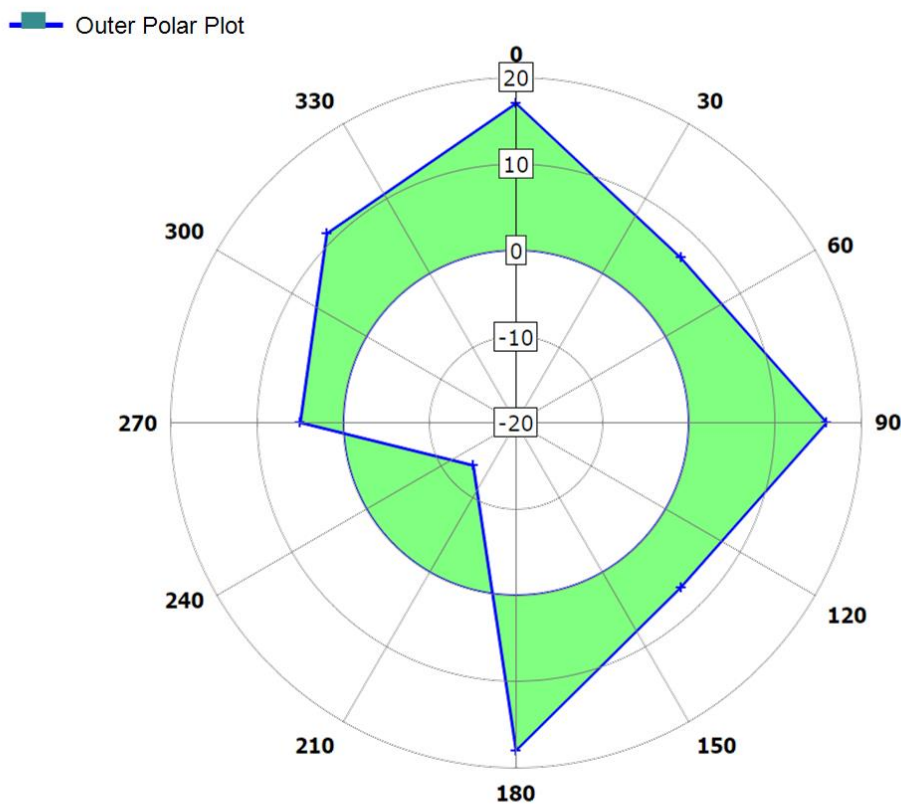## Negative values in polar area chart

In the Polar Area chart, it is now possible to display negative values. Previously, these led to a positive deflection of the graph on the opposite side, which is usually undesirable and can lead to ambiguities. In the new display, the zero line is pushed radially outwards, allowing the graph to display negative values without flipping to the opposite side of the chart. A special feature is the colored background of the difference area between curve and zero line. This provides a much faster and more intuitive understanding than in other representations.
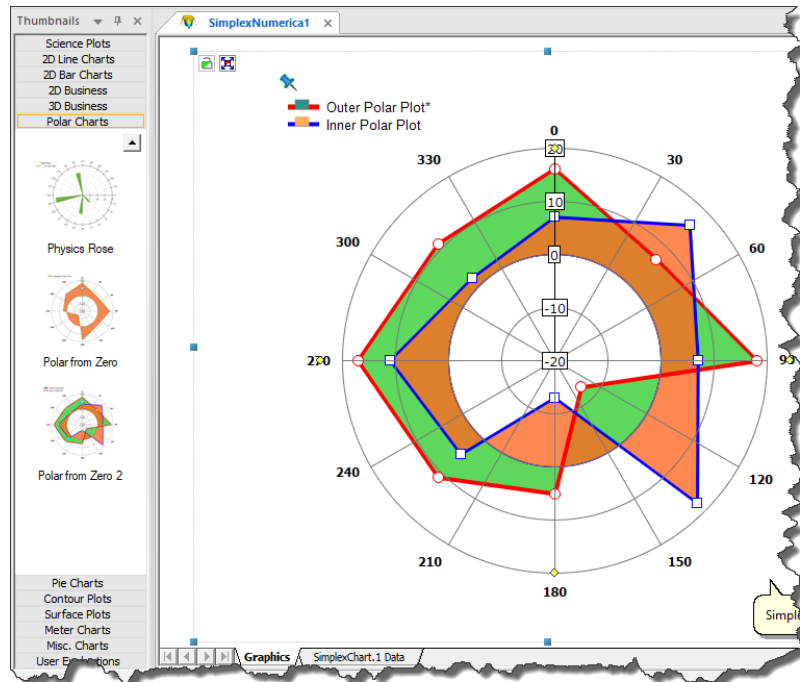
In the figure below, for example, you can see at first glance where the negative values are located. This is also possible for several graphs at the same time with a partially transparent representation.
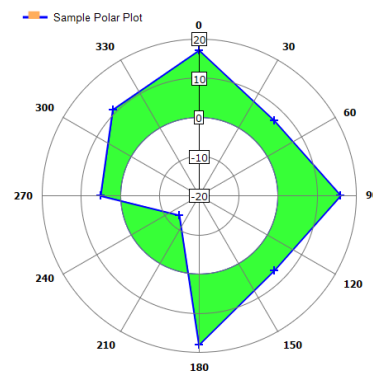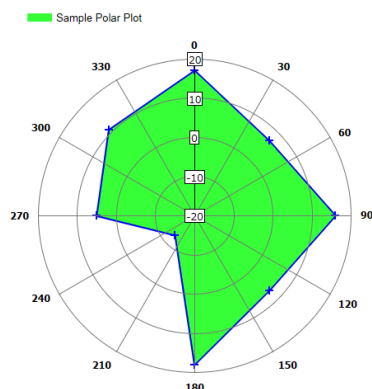
Polar Area Chart with negative Values

Creation of the plot

Use the example charts from the Thumbnail Window as good start-up (*Polar Charts → Polar from Zero* or *Polar from zero 2*).

The X column contains the diagram values to be displayed ("deflection of the diagram in radial direction"), the Y column contains the corresponding angle position.
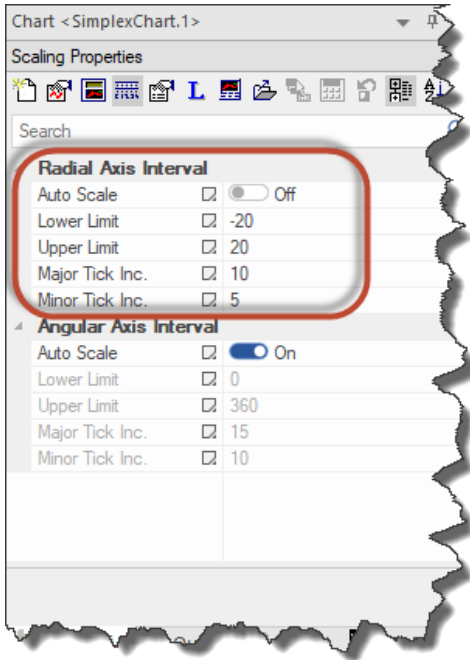
Legend	G0.x	G0.y
1	17,0	0,0
2	7,0	45,0
3	16,0	90,0
4	7,0	135,0
5	18,0	180,0
6	-13,0	225,0
7	5,0	270,0
8	11,0	315,0

My Polar Plot — ☐ View
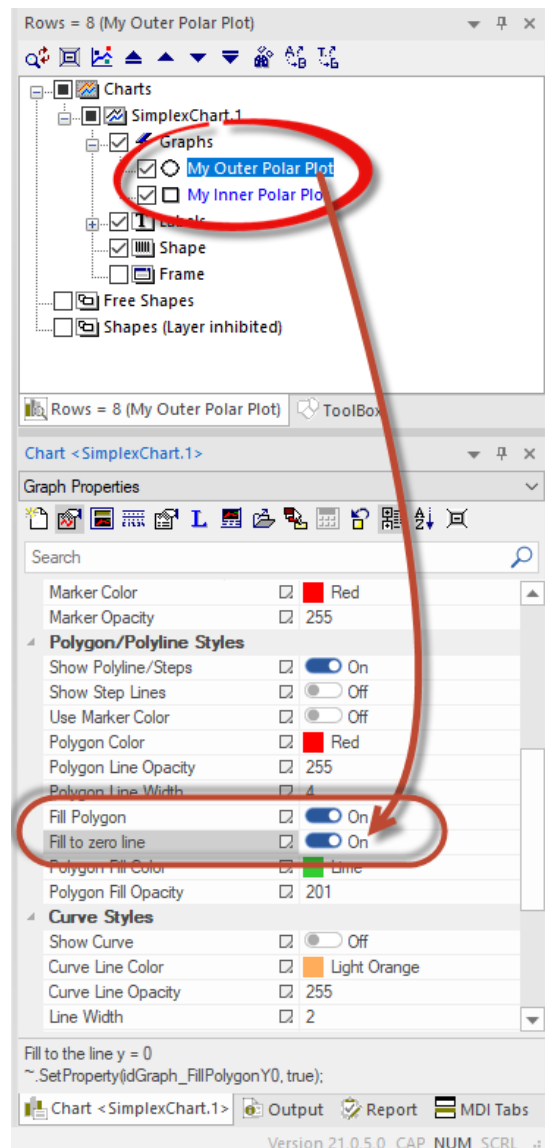
Polar Area Chart with negative Values

To move the zero-line outward, use the *Scaling Properties* → *Radial Axis Interval* → *Lower Limit*.

Enter the desired negative value in the *Lower Limit*. Here in the example -20.

Switch On/Off this Feature

Use *Graph Properties* → *Polygon/Polyline Styles* → *Fill to zero line*

Polar Area Chart with negative Values

User Input

This feature was initiated by a *SimplexNumerica* user (Thank you Felix!). He wrote...

I am trying to plot negative values in a polar chart. That's already possible as you can see in my example below, but the problem is the color infill. The infill starts at the middle of the circle (the most negative value) and ends at the specific value of the graph. Instead, I would like to show the deviation of the graph-value compared to zero. So, I would like the infill to start at the zero-line and go out (or in for negative values) until it reaches the graph-value. My second picture shows how the plot would look like for my example values. (I used paint to create it.) Would it be possible to do that with SimplexNumerica?