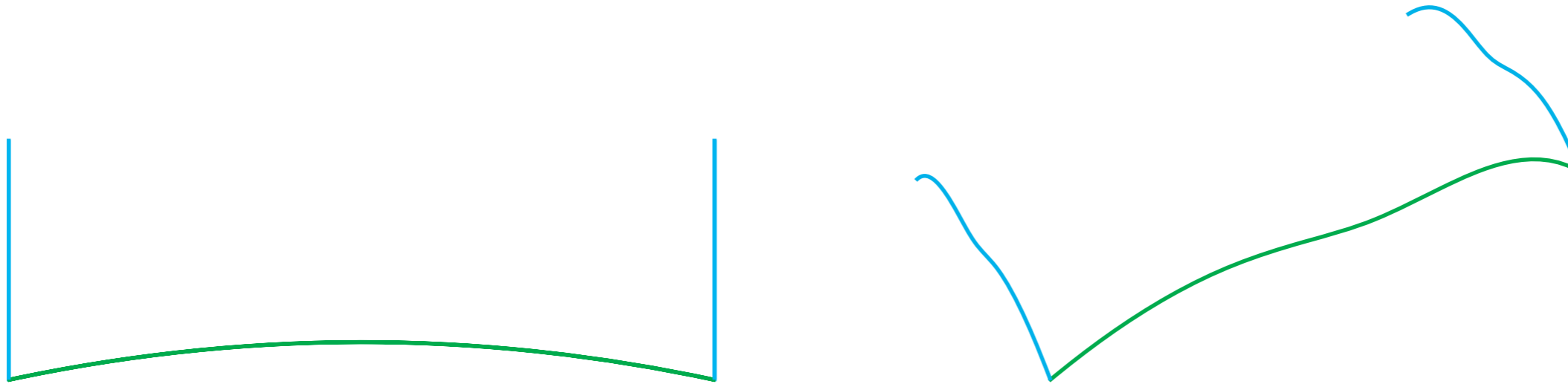


Sweep 1 command

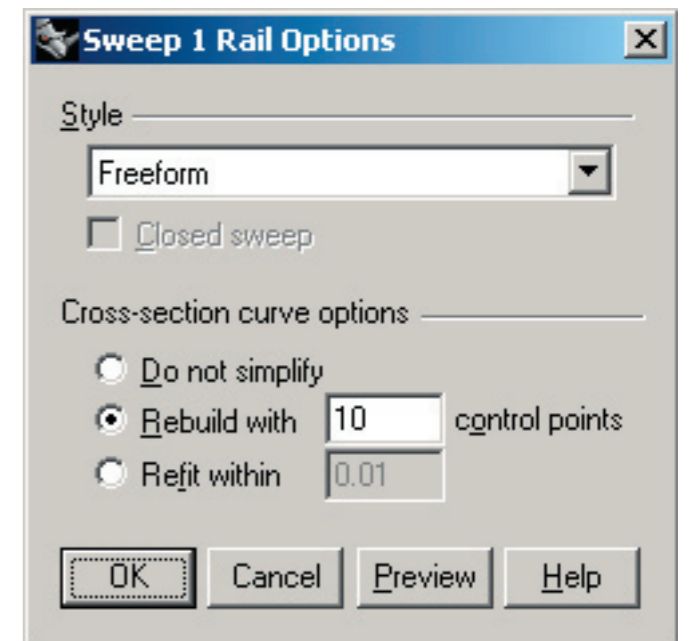
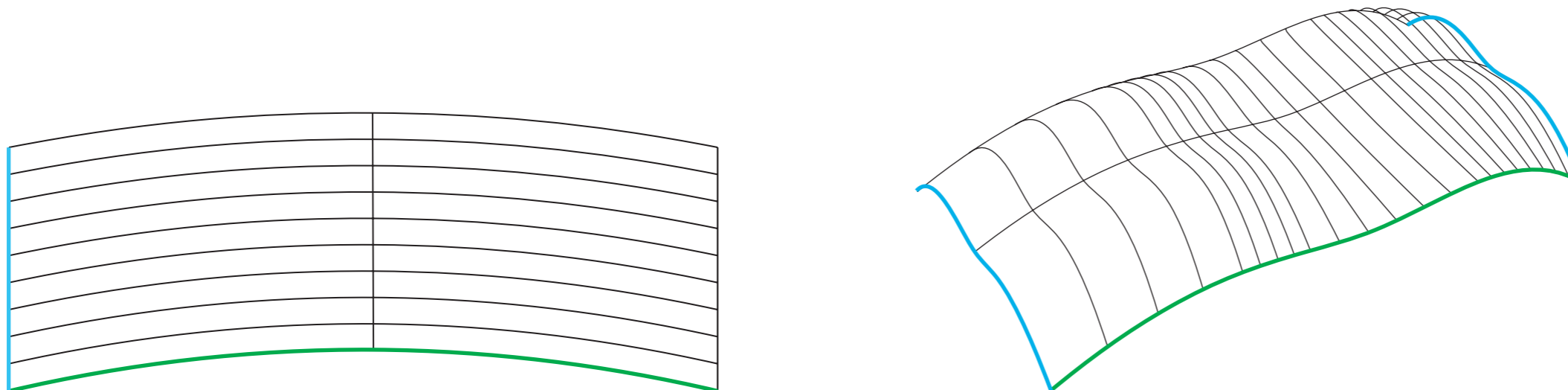
When you want to create a surface that passes through a sequence of shape curves, use the command that requires the least amount of input to generate the surface you desire. The rail curve directs the surface along it.

To create a one-rail sweep

- 1 At the Select rail curve prompt, select the single rail curve for sweeping.
- 2 At the Select cross-section curves ... (Point) prompts, select curves in the order that the surface will pass through them and press Enter.



- 3 For closed curves, at the Adjust curve seams (Flip Automatic Natural) prompt make adjustments to the curve seams to control the sweep.
- 4 In the Sweep 1 Rail Options dialog box, adjust options.



Options

Point

Creates a surface that begins or ends at a point, use this option only at the start or end of the curve series.

Style

Freeform twisting

The shape curve rotates to maintain its angle to the rail throughout the sweep.

Roadlike top

The shape curve maintains its angle with the Top construction plane throughout the sweep.

Roadlike front

The shape curve maintains its angle with the Front construction plane throughout the sweep.

Align with surface

If the rail is a surface edge, the shape will twist with the surface edge. If the shapes are tangent to the surface, the new surface should also be tangent.

Closed sweep

Creates a closed surface, continuing the surface past the last curve around to the first curve. Only available after you enter three cross-section curves.

Simplify

Do not simplify

Does nothing to the shape curves before creating the sweep.

Rebuild with control points

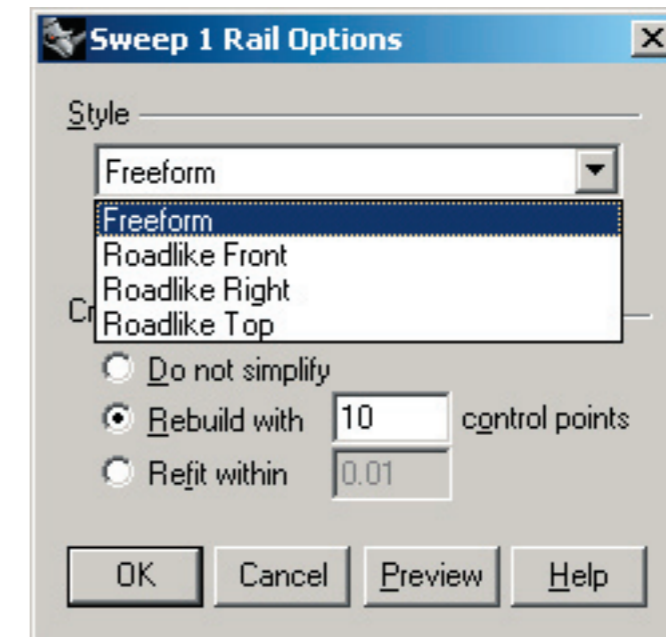
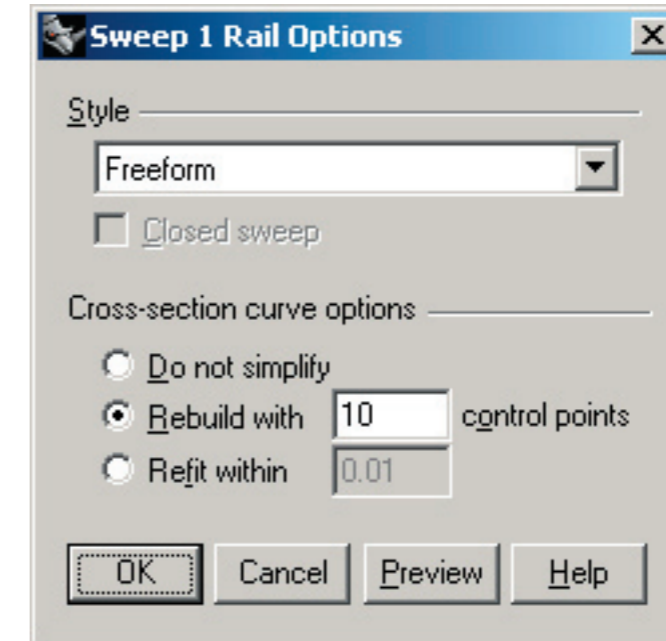
Rebuilds the shape curves before creating the sweep.

Refit within

Refits the shape curves before creating the sweep. The default distance is the global tolerance value set in the Document Properties dialog box Units.

Preview

Click to preview the surface.

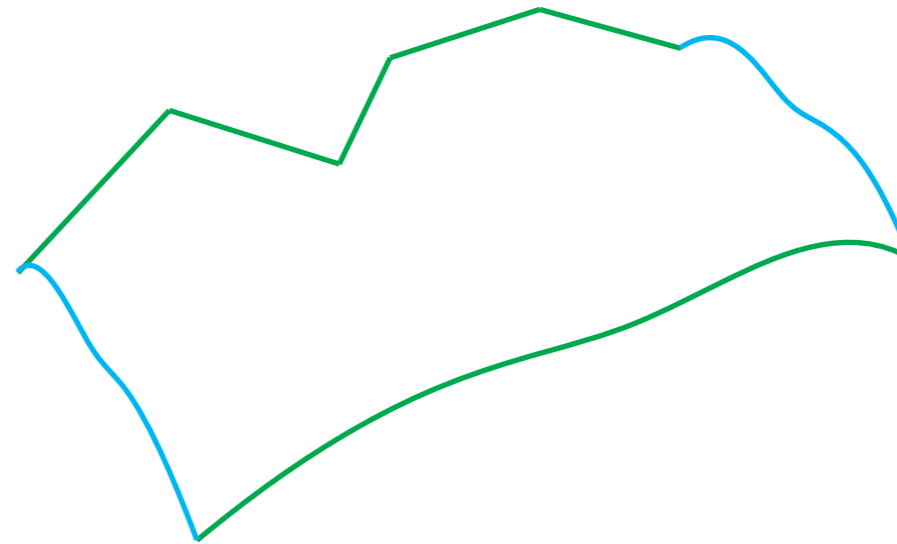
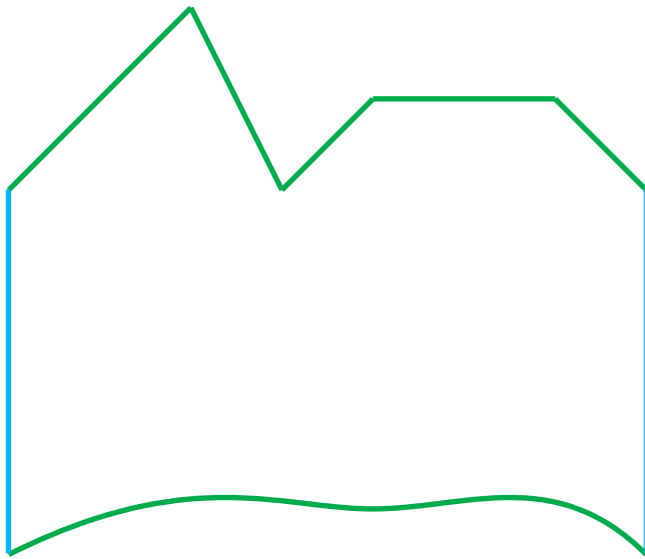




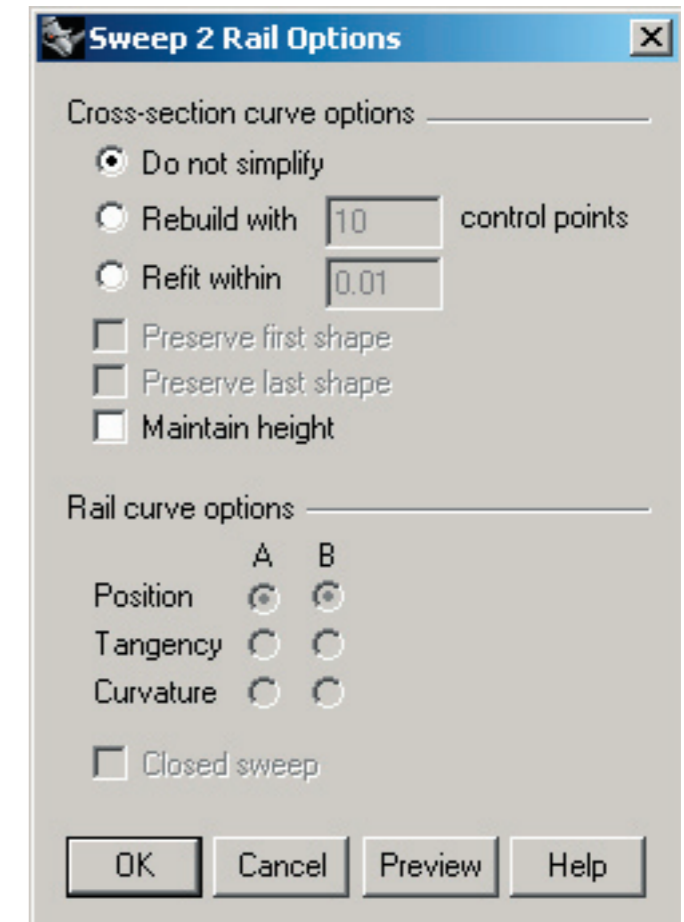
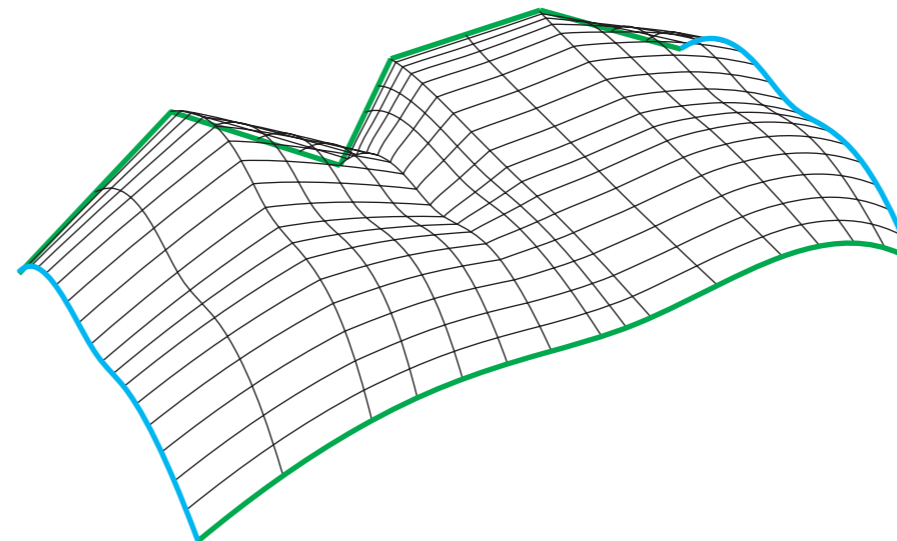
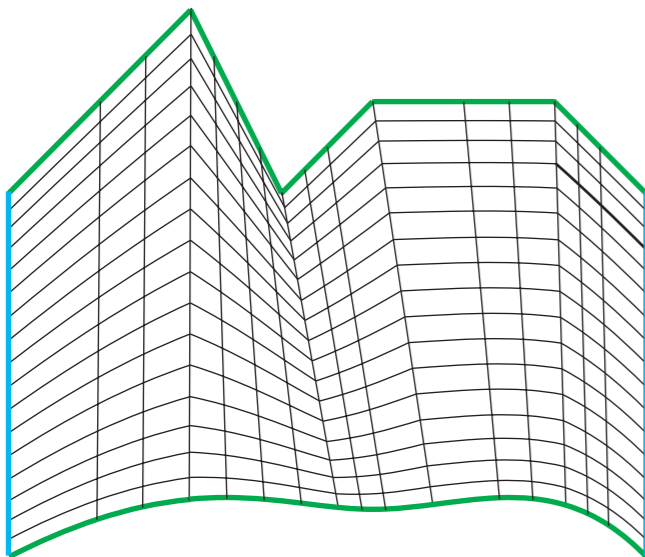
Sweep 2 command

To create a 2-rail sweep

- 1 At the Select 2 rail curves prompts, select two curves as the rails for the sweep.
- 2 At the Select cross-section curves (Point) prompts, select curves in the order that the surface will pass through them and press Enter.



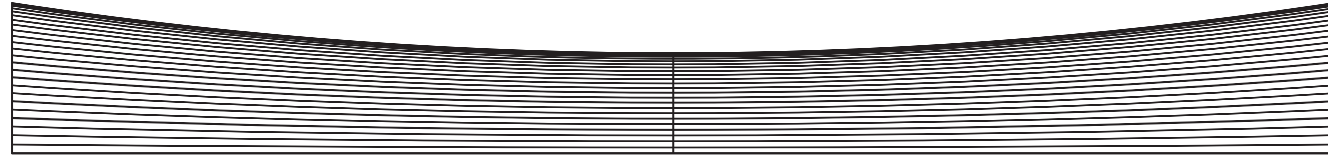
- 3 For closed curves, at the Adjust curve seams (Flip Automatic Natural) prompt make adjustments to the curve seams to control the sweep.
- 4 In the Sweep 2 Rail Options dialog box, adjust options. The swept surface is created.



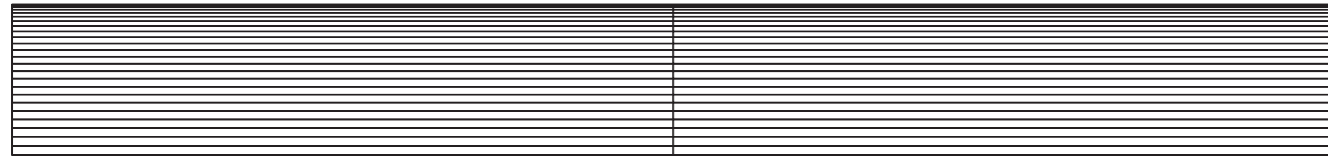
Options

Maintain height

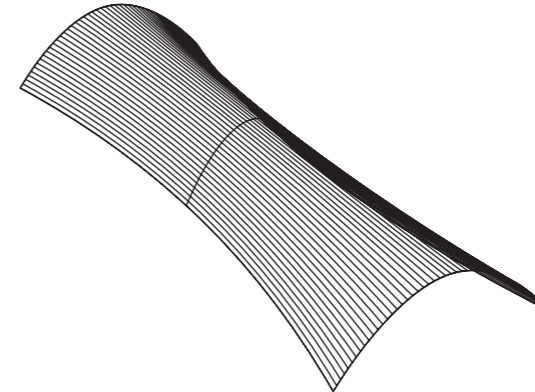
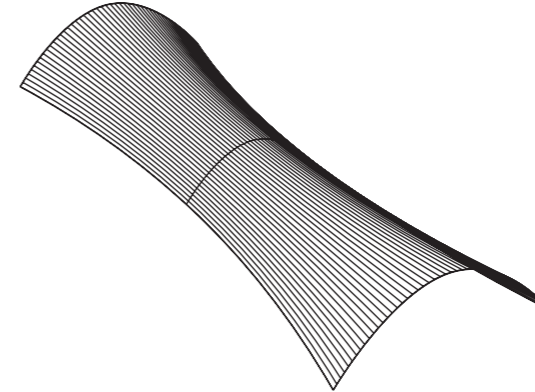
Shape curves are normally scaled in both the height and width dimensions by default. To decouple the height scaling from the width scaling, use the Maintain height option.



Two-rail sweep without Maintain height option



Two-rail sweep with Maintain height option



Closed sweep

Creates a closed surface continuing the surface past the last curve around to the first curve. Only available after you enter three cross-section curves.

Simplify

Do not simplify

Does nothing to the shape curves before creating the sweep.

Rebuild with control points

Rebuilds the shape curves before creating the sweep. Shape curves are reconstructed with non-rational curves, so the continuity option can be enabled.

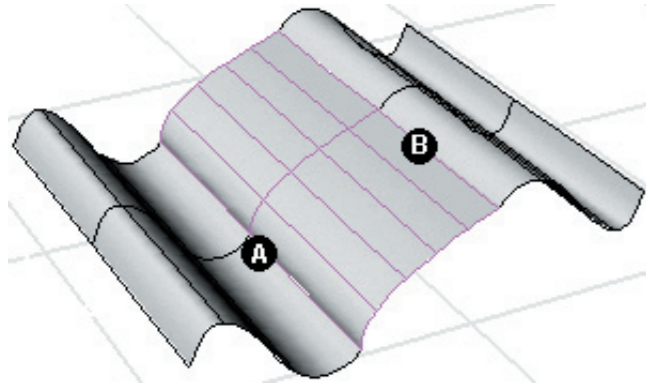
Refit within units

Refits the shape curves before creating the sweep. The default distance is the global tolerance value set in Document Properties dialog box Units. Shape curves are reconstructed with non-rational curves, so the continuity option can be enabled.

Continuity at rails

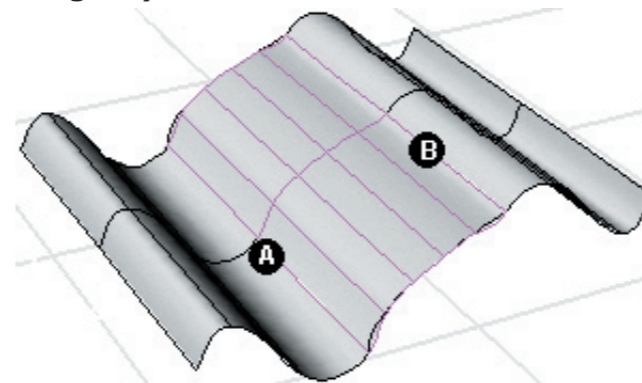
Continuity is only enabled if the rails are surface edges and the shape curves are non-rational (all control point weights are 1). Exact arcs and ellipse segments are rational.

Position



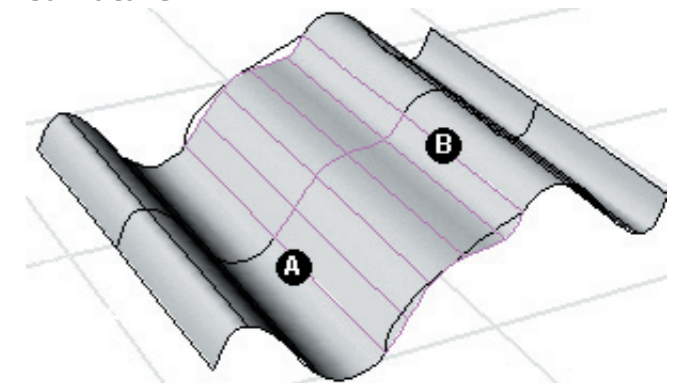
Matches the adjacent surface edge position.

Tangency



Matches the adjacent surface edge tangency.

Curvature



Matches the adjacent edge curvature.

Shape curves

Preserve first shape

When you are matching edge tangency or curvature, your surface may pull away from your profile curves. This option forces the surface shape to match the first profile curve.

Preserve last shape

When you are matching edge tangency or curvature, your surface may pull away from your profile curves. This option forces the surface shape to match the last profile curve.