Instructions:
How to Use the Pattern Collection

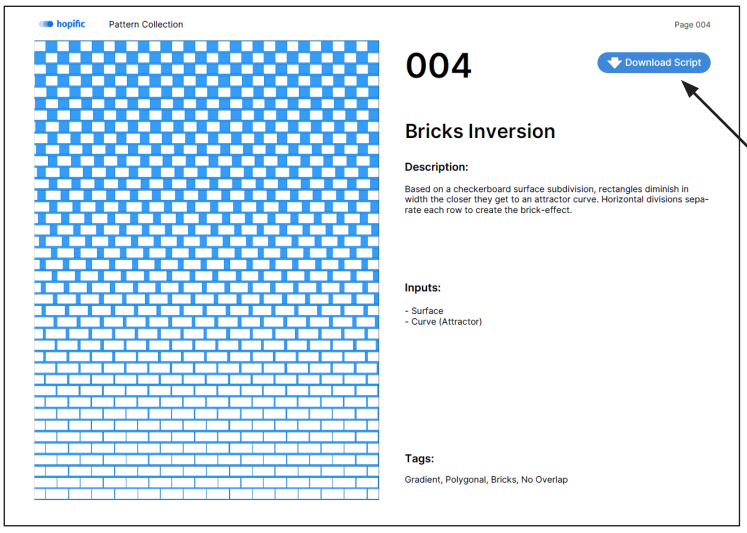
1. Pick a Pattern

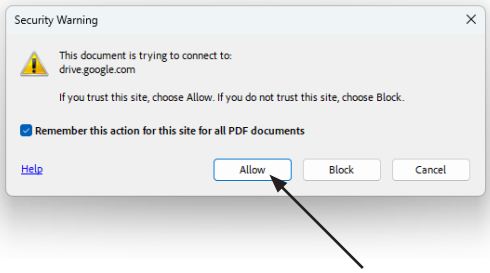
Use the Pattern Catalogue to browse the pattern collection.

2. Get the Grasshopper Script

Option A:

Download the pattern by clicking the ‘Download Script’ button on the top right of the Pattern Catalogue page. The link will download to the latest version of the script on our server. Make sure to allow links to external files within your PDF reader.





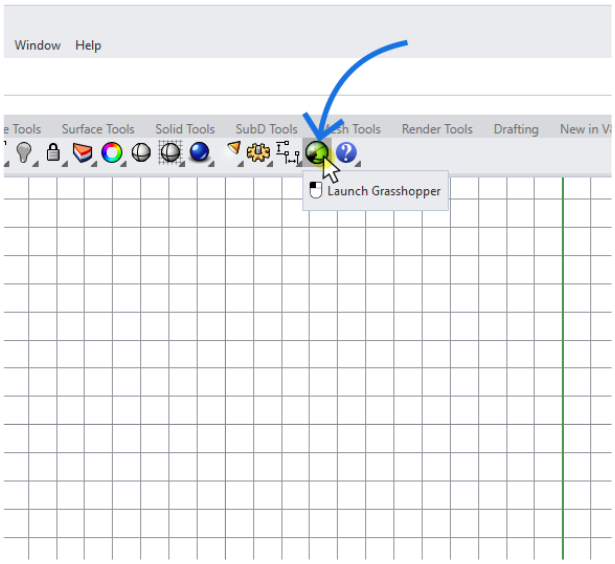
Option B:

If you downloaded the entire collection, find the Grasshopper Script using its name and create a copy in your project folder to avoid overwriting it.

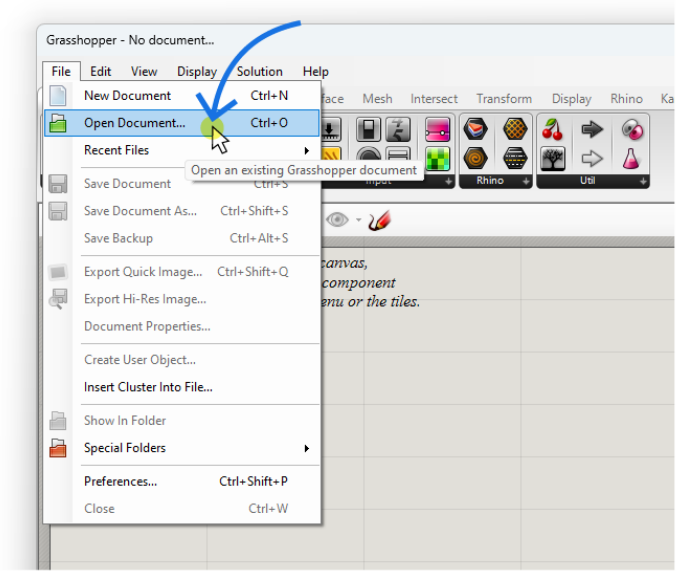
3. Open Grasshopper and Load the Script

Open Grasshopper by clicking the round, green icon in the top command bar. Load the script by going to File > Open Document and selecting the script.

1 Launch Grasshopper



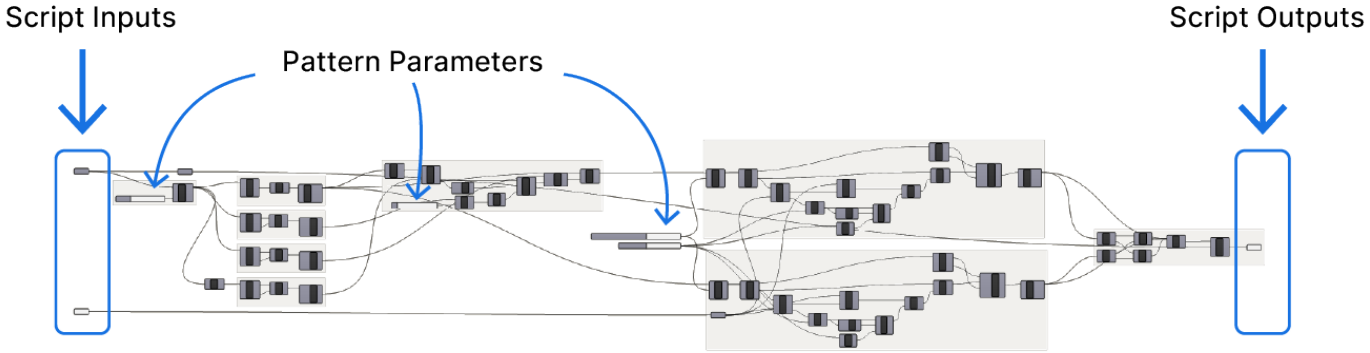
2 Open the Grasshopper Script



4. Preview the Script

Once the script is loaded, a live preview of the pattern will be displayed at the Rhino origin in the Top View viewport. This preview is generated with internalized inputs, or input geometry that has been saved within the Grasshopper script itself. You can use the preview to adjust the pattern parameters to see how they influence the design.

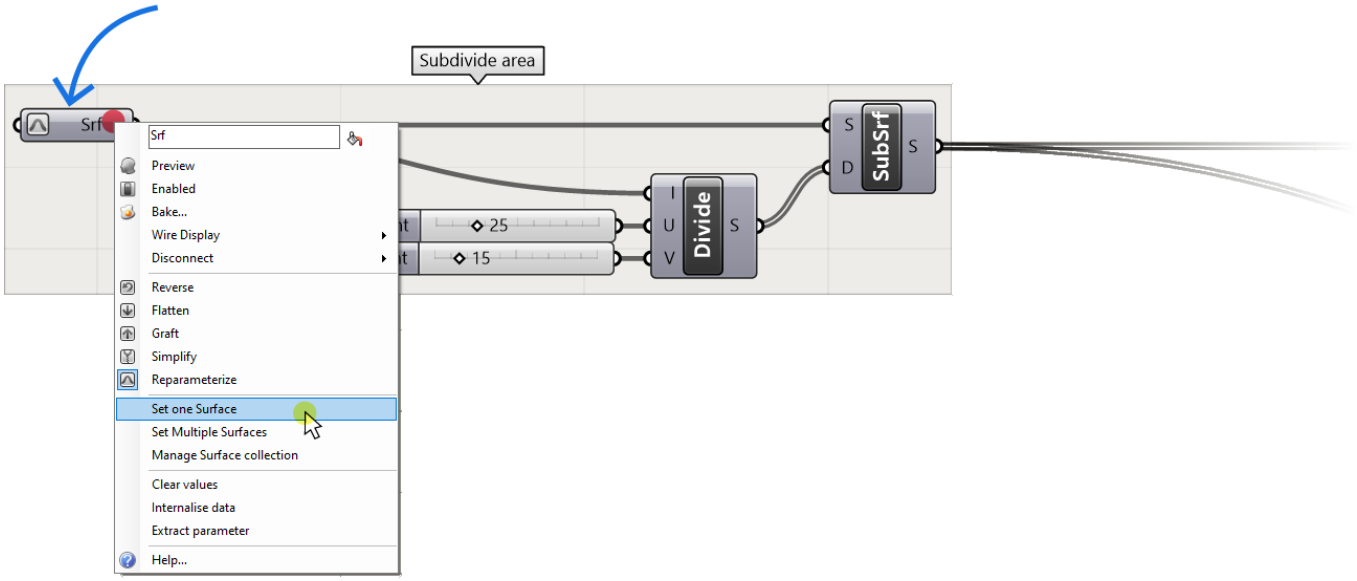
All scripts have inputs on the left, outputs on the right, and all the components that make up the pattern grouped and organized inbetween. The pattern parameters can be adjusted with Number Sliders located through-out the script.



5. Reference a Surface

To apply the pattern to a surface of your choice, reference an input surface. The scripts are set up to work for surfaces in any orientation and rotation. All scripts work for planar (flat) input surfaces.

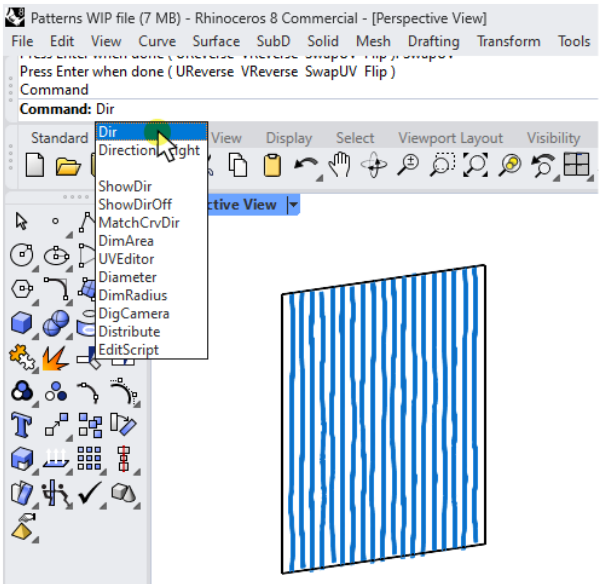
To reference a surface, right-click on the surface (Srf) component, select ‘Set One Surface’ and pick the surface in Rhino you want to apply the pattern to. If you created a surface in Grasshopper, simply connect it to the Surface (Srf) input.



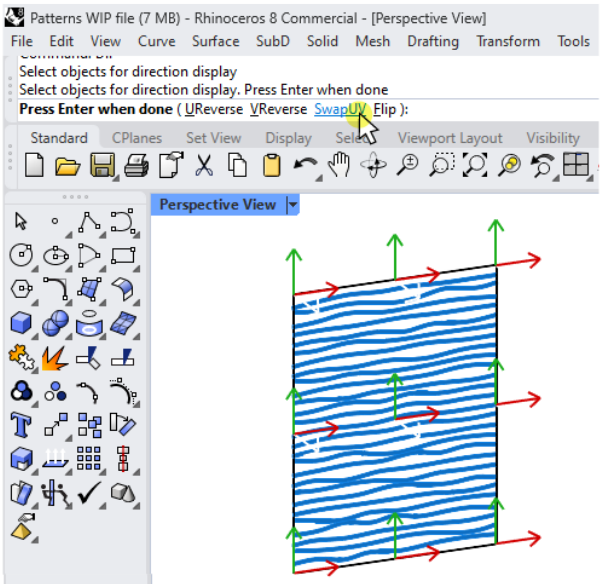
6. Adjust the Pattern Orientation

To flip the pattern 90 degrees, select the surface in Rhino, type ‘Dir’ to run the direction command and click ‘Swap UV’ in the command line options. Confirm with ‘Enter’.

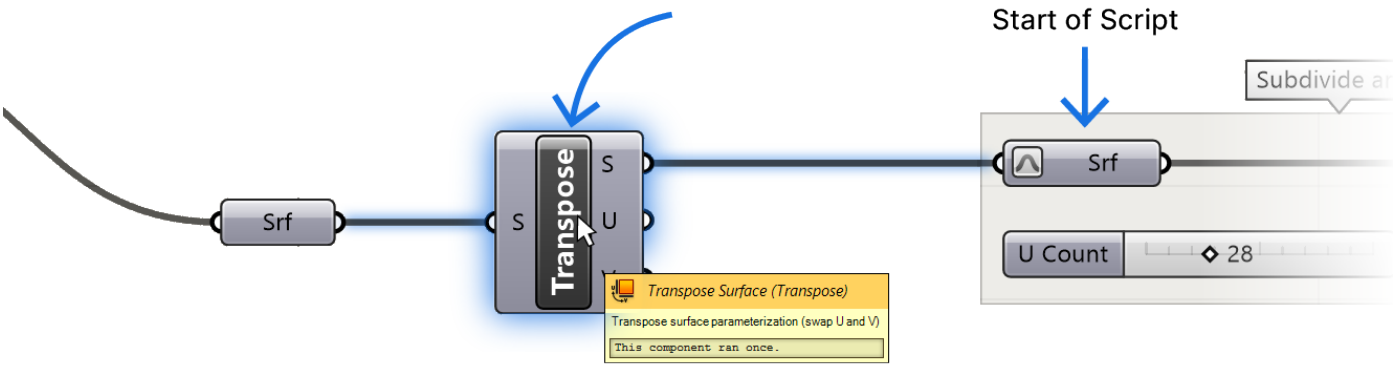
1 Run the ‘Dir’ Command



2 Select ‘SwapUV’ & Press Enter



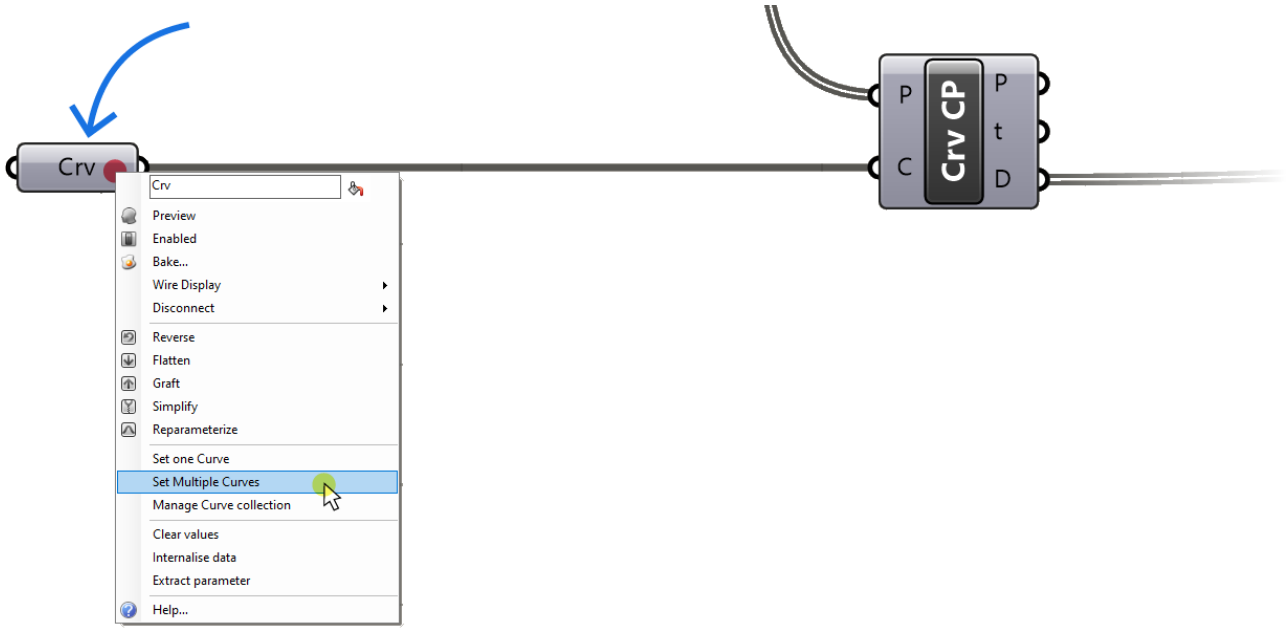
To flip a pattern applied to a surface generated within Grasshopper, insert a ‘Transpose Surface (Transpose)’ component between the surface and the start of the script.



7. Reference Additional Geometry if Required

Some scripts require additional inputs, for example point attractors or curve attractors. If they are required, you can find them below the surface (Srf) component, at the beginning of the script.

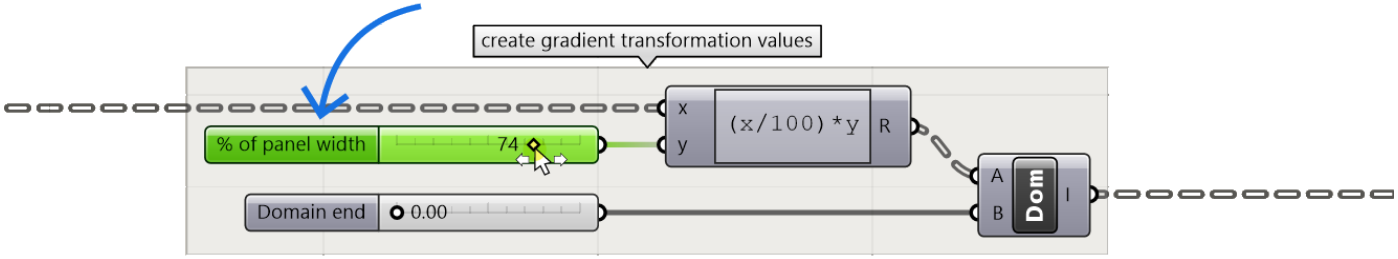
If the script accepts more than one attractor input, right-click on the geometry container and select ‘Set Multiple Objects’. For a single attractor, select ‘Set One Object’.



8. Adjust the Pattern With the Number Sliders

To adjust the fully parametric scripts, change the values of the Number Sliders in the script. The Number Sliders are located throughout the script and control pattern-specific properties. Descriptive names and grouping clarify what the parameters control.

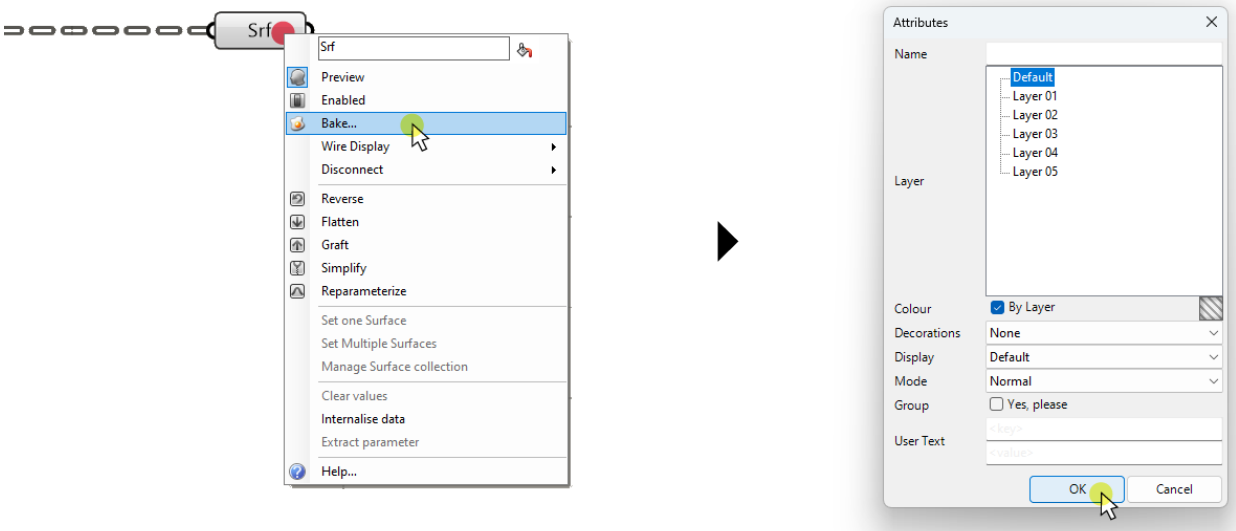
To ensure that the scripts lead to the desired results regardless of scale and units, dimensions are expressed as a percentage of the input surfaces's dimensions. For example instead of specifying an extrusion length of 1 unit, a percentage of the surface length is used. Replace these values with custom values if you need specific sizing.



9. Bake the Result

To bake the script's output, go to the far right end of the script, right-click on the outputs you wish to bake, and select 'Bake'. Specify the layer you want to bake to in the popup menu and confirm with 'OK'.

Some scripts have multiple ouputs. Repeat the process for each.



Happy designing!