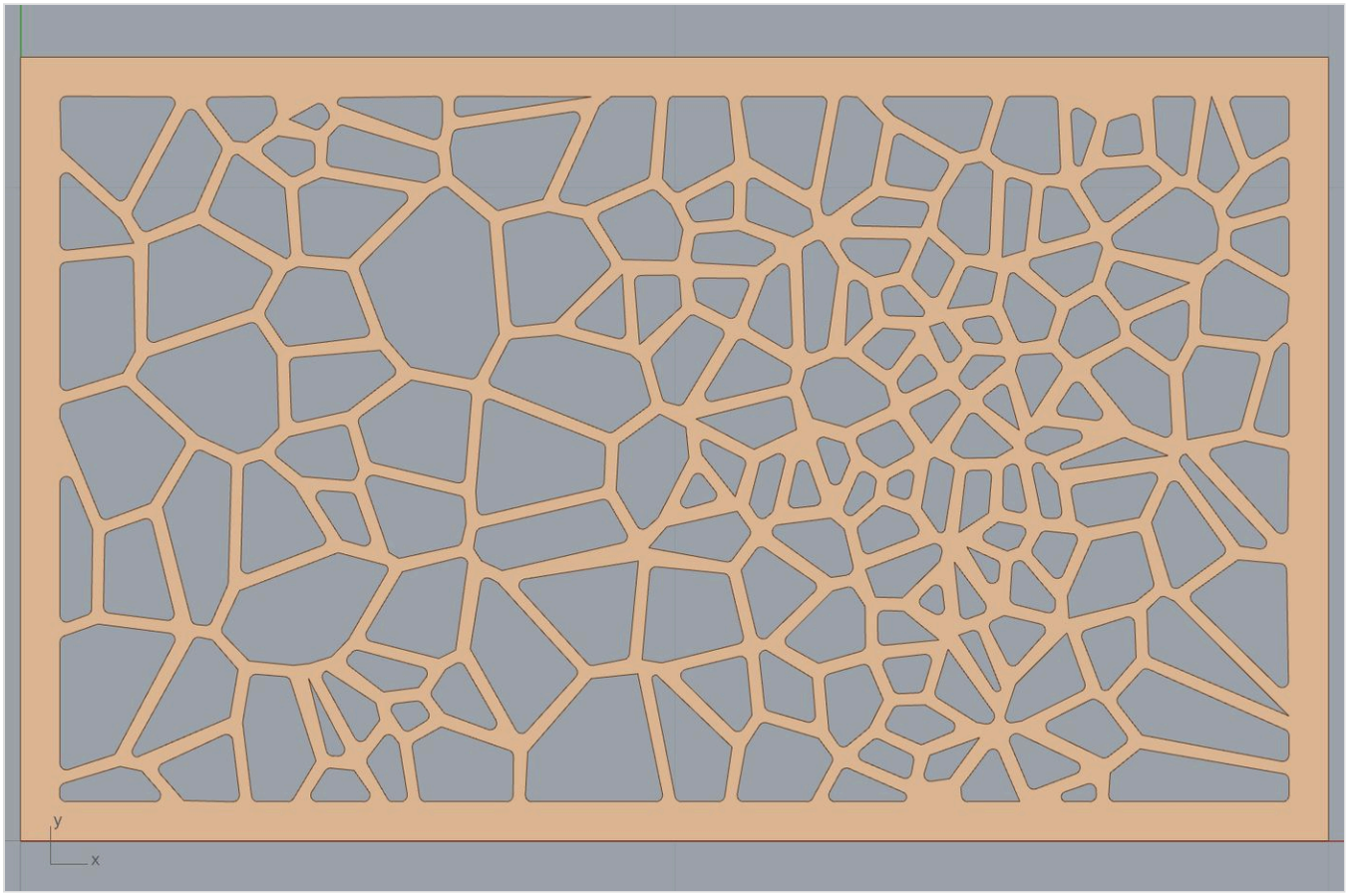
FACADE AND FABRICATION

VORONOI SCREEN

Laser-ready Voronoi panel, denser near an attractor, with open area



FREE | RHINO 7 · RHINO 8 | NATIVE COMPONENTS ONLY | VERSION 1.0 · NOVEMBER 2026

Seeds are scattered over the panel with a density that grows toward the attractor; their Voronoi cells become openings, shrunk by half a rib and rounded at the corners, inside a solid frame. Openings below the minimum size are dropped. The panel reports open area and cut length.

Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.

HOW TO USE

1. Open the file: a 2 × 1.2 m screen appears.
2. Set panel size, number of seeds and the random seed (try a few).
3. Move the 'Attractor' point and set the density ratio far / near.
4. Set rib and frame width, corner radius and the smallest opening.
5. Read 'Screen data' and bake 'Cut curves' for the laser or CNC.

BAKE

Cut curves

GOOD TO KNOW

- Tested on ten random seeds without errors.

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INPUTS

PARAMETER	RANGE	DEFAULT
Panel width (m)	0.30 – 4.00	2.00
Panel height (m)	0.30 – 4.00	1.20
Seeds	10 – 600	170
Random seed	0 – 100	4
Density far / near	0.02 – 1.00	0.12
Rib width (m)	0.005 – 0.100	0.018
Frame width (m)	0.010 – 0.300	0.060
Corner radius (m)	0.000 – 0.050	0.010
Smallest opening (cm2)	1.0 – 100.0	8.0

GEOMETRY YOU CAN REPLACE

Attractor · Point

RESULTS AT DEFAULT VALUES

SCREEN DATA

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Openings: 163   open area: 59.9 %
Rib 18 mm, frame 60 mm, smallest opening 11.1 cm2
Cut length: 64.8 m
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INSIDE THE DEFINITION

STAGES, LEFT TO RIGHT AND TOP TO BOTTOM

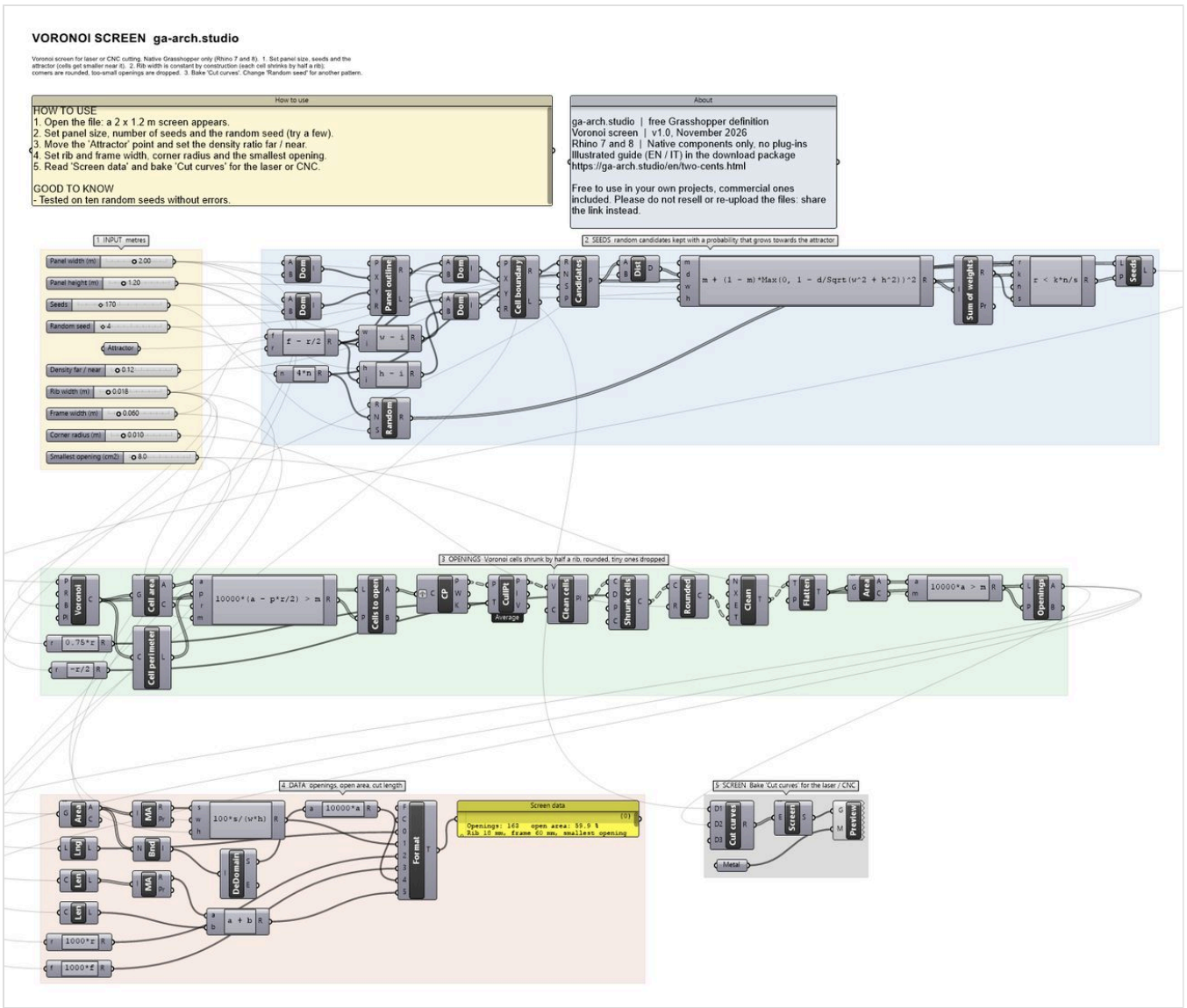
1 INPUT metres

2 SEEDS random candidates kept with a probability that grows towards the attractor

3 OPENINGS Voronoi cells shrunk by half a rib, rounded, tiny ones dropped

4 DATA openings, open area, cut length

5 SCREEN Bake 'Cut curves' for the laser / CNC



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