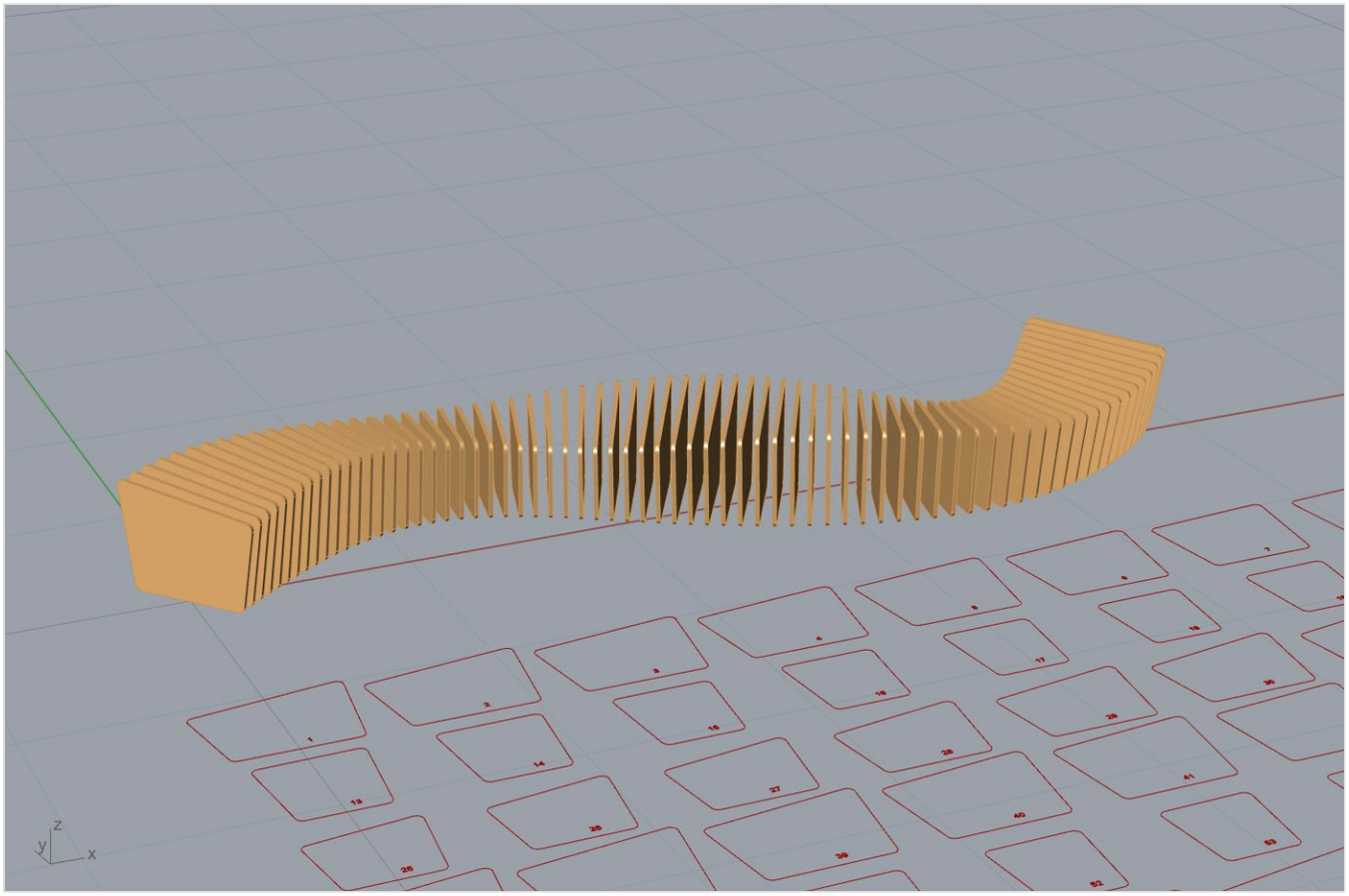
DIGITAL FABRICATION

RIB BENCH

Bench of CNC ribs along any curve, laid flat and numbered



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

Ribs are placed along a plan curve, each one square to it. Their profile is a trapezoid with inset feet whose depth, heights and seat wave change along the bench. The parts are laid flat and numbered, with cutting list and board area.

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 curved bench appears.

2 Right-click 'Plan curve' > Set one Curve and pick your bench line.

3 Set rib spacing and sheet thickness.

4 Shape the profile: depth and its variation, front and back height, waves, corner radius.

5 Read 'Cutting list' and bake 'Ribs', 'Cut curves' and 'Engrave curves'.

BAKE

Ribs | Cut curves | Engrave curves

GOOD TO KNOW

- Ribs need to be tied together (rods, spacers or a top board): the connection is up to you.

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INPUTS

PARAMETER	RANGE	DEFAULT
Rib spacing (m)	0.030 – 0.300	0.075
Sheet thickness (m)	0.009 – 0.050	0.018
Depth (m)	0.30 – 1.20	0.55
Depth variation (m)	0.00 – 0.40	0.14
Front height (m)	0.25 – 0.60	0.42
Back height (m)	0.25 – 0.80	0.47
Wave height (m)	0.000 – 0.150	0.050
Waves	0.0 – 6.0	2.0
Corner radius (m)	0.000 – 0.100	0.030
Layout gap (m)	0.005 – 0.100	0.020
Parts per row	1 – 40	12

GEOMETRY YOU CAN REPLACE

Plan curve · Curve

RESULTS AT DEFAULT VALUES

CUTTING LIST

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Ribs: 69 x 18 mm, spacing 75 mm along 5.12 m
Net board area: 15.44 m2   cut length: 127.6 m
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INSIDE THE DEFINITION

STAGES, LEFT TO RIGHT AND TOP TO BOTTOM

1 INPUT

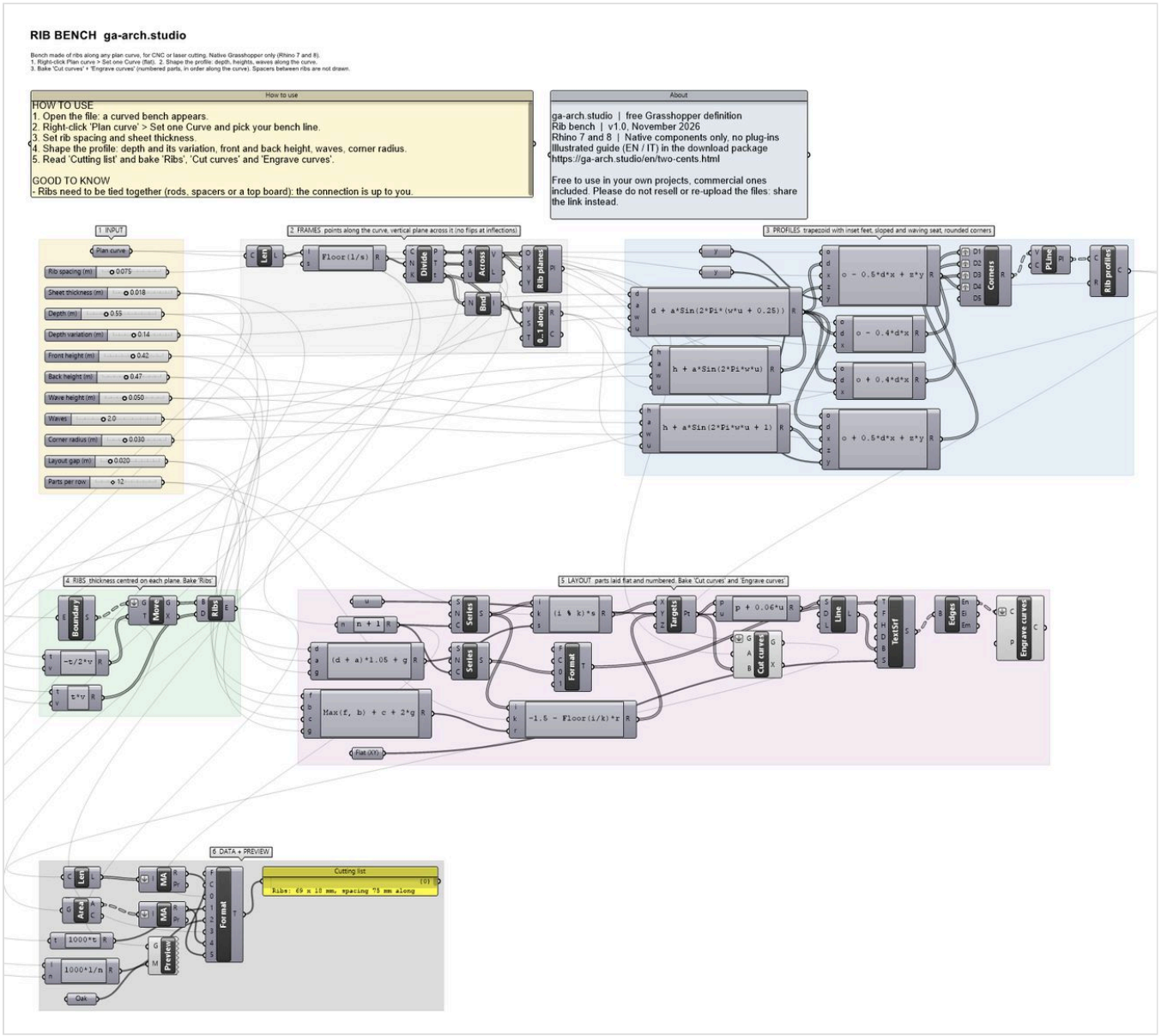
2 FRAMES points along the curve, vertical plane across it (no flips at inflections)

3 PROFILES trapezoid with inset feet, sloped and waving seat, rounded corners

4 RIBS thickness centred on each plane. Bake 'Ribs'

5 LAYOUT parts laid flat and numbered. Bake 'Cut curves' and 'Engrave curves'

6 DATA + PREVIEW



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