

NOVA WORKBENCH

Nova Facade Patterns

Cladding · section hatch · roof & floor patterns · custom tiles — line-work for permit drawings, inside SketchUp



User Guide — version 2.0

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Contents

1. What Nova Facade Patterns does
2. Installation
3. Free licence activation
4. Quick start — a facade in 30 seconds
5. The panel
6. Facade cladding patterns
7. Section hatch (poche)
8. Roof patterns
9. Floor patterns (plan)
10. Custom tiles — draw your own pattern
11. Scene visibility — how patterns know where to appear
12. Editing: regenerate, delete, move
13. Quantity takeoff
14. Languages & troubleshooting

1 · What Nova Facade Patterns does

Nova Facade Patterns dresses your 2D documentation. It lays clean, clipped **line-work patterns** over the faces you select — cladding on facades, standard hatch (poche) on section cuts, roofing patterns on roofs, tiles and planks on floor plans — and shows each of them **only in the scenes where they belong**. Elevations get cladding, sections get hatch, plans get floor tiles; your 3D views stay clean.

- **Cladding patterns** — horizontal and vertical boards at any spacing, double-line boards, 45° hatch, grid, and a true **brick bond** with offset head joints.
- **Section hatch** — concrete, insulation, steel, glass, wood, earth and gypsum drawn to the conventions of NS/ISO 128-50 — picked automatically from the face material, or manually.
- **Roof patterns** — roof tiles, shingles, standing seam and corrugated sheet, correctly oriented on sloped faces (courses across the fall, seams along it).
- **Floor patterns** — tiles (square, rectangular, offset) and planks for floor plans.
- **Custom tiles** — draw ONE repeat cell with normal SketchUp edges, save it as a named tile, and repeat it across any face. Share tiles as small JSON files.
- **Quantity takeoff** — read the applied patterns back as m² and running metres per facade direction, in the panel and as JSON.
- Everything is clipped to the exact face outline — gables, L-shapes and window/door holes are handled automatically.

Why line-work and not textures? Permit and working drawings read best as crisp vector output. Because every stripe is real geometry on its own tag, it prints razor-sharp at any scale, exports to DWG/PDF cleanly, and never depends on texture resolution.

2 · Installation

1. In SketchUp, open **Window → Extension Manager**.
2. Click **Install Extension** and select `nova-facade-patterns.rbz`.
3. Restart SketchUp. You will find **Nova Facade Patterns** in the Extensions menu, and a toolbar button that opens the panel.

Requirements: SketchUp 2023 or newer, Windows 10/11 or macOS 12+.

3 · Free licence activation

Nova Facade Patterns is **free**. When you downloaded it from novaworkbench.no you received an e-mail with an **activation token**:

1. Open the plugin — the licence dialog appears on first run.
2. Paste the token and click **Activate on this computer**.
3. Restart SketchUp. The licence is stored on this machine and works offline from then on.

No token yet? Get one at **novaworkbench.no** — the plugin also starts with a 7-day period so you can try it right away. If the computer running SketchUp is offline, use the manual fallback at `novaworkbench.no/activate` with the machine ID shown in the dialog.

4 · Quick start — a facade in 30 seconds

1. Select the facade face(s) — or simply the whole building group.
2. Open **Extensions → Nova Facade Patterns → Open panel...**
3. Pick a pattern (say *Horizontal cc 150*) and click **Apply to facade**.
4. Done. The pattern is clipped around every window and gable, sits 2 mm proud of the wall on its own tag, and appears only in scenes whose name says elevation (`North Elevation`, `MOT Nord`, `Front ...`).

Tip — select the group, not the faces. The plugin walks into groups and components and finds every face for you, with correct positions even for nested components.

5 · The panel

The panel has one section per surface type, and shared controls at the bottom:

Section	What it does
Preview	Live preview of the selected pattern at roughly 1:50 — updates as you change pattern, cc or tile.
Facade cladding	Pattern, cc override, gap/brick length → <i>Apply to facade</i> .
Section hatch	Hatch type (or Auto from material), density → <i>Apply to section</i> .
Roof pattern	Roofing type, cc → <i>Apply to roof</i> .
Floor pattern	Tiles/planks, cc → <i>Apply to floor</i> .
Custom tiles	Your tile library: save from selection, import/export, apply to facade, roof or floor.
Quantities	Takeoff of all applied patterns — table in the panel, optional JSON file.
Placement & scenes	Offset from the face (default 2 mm), extra scene keywords, update visibility, regenerate, delete.

Feedback appears in the **status line** at the bottom of the panel — no pop-up boxes interrupting your flow.

6 · Facade cladding patterns

Pattern	Reads as	Notes
Horizontal cc 120/150/200	Lap / horizontal boarding	cc = board exposure
Vertical cc 100/120/150	Board cladding	cc = board width
Double horizontal / vertical	Board-and-batten shadow lines	Gap field sets the shadow distance (default 20 mm)
Hatch 45°	Generic surface marking	
Grid	Panels / plates	
Brick bond 225×75	Masonry in running bond	Head joints offset ½ brick every course. Second field overrides brick length; cc override scales the whole format proportionally.

The **cc field** overrides the preset spacing. Every line is clipped to the face outline — including window and door openings, gable triangles and L-shapes.

7 · Section hatch (poche)

Select the cut faces in a section and click **Apply to section**. With **Auto**, the hatch type is chosen from each face's material name:

Material contains	Hatch
concrete / betong / B30 / B35	Dot stipple (drawn as small + marks — readable at 1:100)
insulation / PIR / mineral wool / EPS / XPS	Batt wave
steel / stål / S355 / IPE / HEA	Dense 45°
glass	Open 45°
wood / timber / tre / C24	Grain lines along the length
earth / terrain / gravel / soil	45°
gypsum / plaster / gips	Fine dots

Faces with unknown materials are skipped and reported — pick a type manually for those. Hatch appears only in scenes whose name contains **Section** / **SNITT**.

8 · Roof patterns

Roof tiles (grid), shingles (fine courses), standing seam and corrugated sheet (lines along the fall). On a sloped face the pattern is oriented from the slope itself: courses run level with the ridge, seams run down the fall — no setup needed. Roof patterns show in elevation scenes *and* roof-plan scenes (**Roof** / **TAK**).

9 · Floor patterns (plan)

For floor-plan documentation: **Tiles 300×300**, **Tiles 600×600**, **Tiles 600×300 offset ½** and **Planks cc 190**. Select the floor faces, apply, and the pattern shows only in scenes whose name contains **Plan** / **Floor** / **Etasje** (and never in roof plans). The overlay always sits just *above* the floor face so it is visible from the top.

10 · Custom tiles — draw your own pattern

Any repeating pattern you can draw, you can apply:

1. **Draw one repeat cell** anywhere in the model with normal SketchUp edges — for example one herringbone unit, one fish-scale shingle, one decorative concrete block. Flat on the ground or on a wall, at real size (mm).
2. Select the linework and click **Save selection as tile**. The bounding box of your selection becomes the repeat size — so include the full cell (add a thin frame or a diagonal guide line if your linework doesn't

reach the edges).

3. Pick the tile in the dropdown, choose target (facade / roof / floor), optional **scale** and **row offset** ½, then **Apply tile to faces**.

Tiles live in your personal library (stored per user, not per model) and travel as small JSON files: **Export...** to share with a colleague, **Import...** to load theirs. A tile that has been applied is also embedded in the model — regeneration works even if the library entry is deleted later.

Limits. A tile is ONE repeat cell — up to 5 000 segments. If you select a whole facade of linework, the plugin will tell you to select just the cell.

11 · Scene visibility — how patterns know where to appear

Each pattern kind lives on its own tag, and the plugin sets per-scene visibility for those tags from the **scene name**:

Kind	Tag	Visible in scenes containing
Facade	Nova-Facade-Pattern	Elevation, Facade, North/South/East/West, Front, Rear, Side, MOT, Fasade
Section	Nova-Section-Hatch	Section, Snitt, Seksjon
Roof	Nova-Roof-Pattern	elevation words + Roof, Tak
Floor	Nova-Floor-Pattern	Plan, Floor, Etasje — but not roof plans

- Scenes that match none of the words — typically 3D/perspective scenes — hide all patterns.
- Name your scenes in English or Norwegian; both are recognised out of the box.
- Use your own scene naming? Add your keywords in **Extra scene keywords** in the panel — they are stored in the model and respected by every later visibility update.
- Added scenes later? Click **Update visibility** and every Nova tag is re-synced.

12 · Editing: regenerate, delete, move

Every overlay remembers what it is and which face it came from. That gives you real editing:

- **Regenerate overlays** — redraws every pattern from its source face's *current* geometry. Moved the building? Stretched a wall? Added a window? One click and every pattern follows, with the same settings.
- **Delete selected** — select overlay groups (or old v1 pattern groups) and remove them cleanly.
- Want a different spacing? Just apply again with a new cc — applying a pattern of the same kind to a face **replaces** the previous one, so quantities are never counted twice.

13 · Quantity takeoff

Take off patterns reads every applied pattern in the model and aggregates per facade direction (North, South-East, Roof...) and pattern:

- **m²** — net face area, holes subtracted.
- **lm** — running metres of boards for horizontal/vertical/grid cladding, counted as physical courses (`courses = ceil(height / cc)`) and clipped around openings — exact also on gables and L-shapes.
- A built-in cross-check ($m^2 \div cc$) flags any suspicious mismatch with $\triangle$.

Take off + save JSON also writes `facade-quantities.json` next to your model — plain, stable, English keys — ready for your estimating spreadsheet or ERP import.

Quantities only. The takeoff never invents prices — it gives you exact quantities to price with your own rates.

14 · Languages & troubleshooting

The interface follows your SketchUp language: Norwegian SketchUp gets Norwegian, everything else English. Scene-name matching always understands both.

Symptom	Fix
Pattern not visible	You are in a scene whose name doesn't match — check §11, or click Update visibility . Outside scenes (working view) patterns are always visible.
Pattern on the wrong side of the wall	The face normal points inwards. Right-click the face → <i>Reverse Faces</i> , delete the overlay and apply again.
«No faces found in the selection»	Select faces, or a group/component that contains faces.
Hatch skipped some faces	Unknown material — choose the hatch type manually instead of Auto.
Moved the building, patterns stayed	Click Regenerate overlays .
Save tile refuses my selection	The selection must contain edges and span at least 1×1 mm in the cell plane — include the full repeat cell.