

Installation Guide - Yakisugi Cladding

Applicable products

Hakuu, Benii, Sumii (all finishes).

Profiles

Profile	Face width	Cover width	Length
Tongue and groove (T&G)	135 mm	122 mm	4.0 m set (actual 3,930 mm)
Shiplap	140 mm	128 mm	4.0 m set (actual 3,930 mm)

Supplied in set lengths only. No random length packs.

1. Compliance requirements

All installations must comply with:

- NCC 2022 Volume 2, Part H2 (Damp and Weatherproofing)
- AS 1684 (Residential Timber-Framed Construction)
- AS 4200.2 (installation of pliable building membranes)
- AS 3566 (corrosion-resistant fasteners)
- AS 3959:2018 where the project site is in a designated bushfire-prone area (see the separate Studio Tsukuru BAL Compliance Position paper)

2. Fasteners (recommendation only)

Studio Tsukuru does not supply fasteners.

The specifications below are provided as recommendations. The installer is responsible for sourcing fasteners that meet or exceed these specifications and are suitable for the project's exposure classification.

2.1 Primary fastener: coil nail (for T&G and shiplap)

Parameter	Recommended specification
Type	Coil nail, screw shank
Material	Stainless steel; see 2.3 for grade selection
Diameter × length	approx. 2.75 mm × 51.5 mm
Head diameter	approx. 5.85 mm, round head
Application	All profiles, face fix
Supply format	Coil packs for pneumatic nail guns

2.2 Alternative fastener: facade screw

Parameter	Recommended specification
Type	Facade screw with fixing thread
Material	Stainless steel; see 2.3 for grade selection
Diameter × length	approx. 4.5 mm × 50 mm
Head	approx. 8.8 mm raised countersunk, with milled ribs under the head
Drive	T-STAR plus T15 or equivalent
Application	T&G face fix; shiplap face fix only

Colour-matched screw heads are available from specialist fastener suppliers and can be chosen to match the yakisugi finish as a visible design feature.

2.3 Corrosion grade selection (mandatory)

Site condition	Recommended grade	Notes
Inland (more than 10 km from the coast)	SUS304 / A2 stainless, AS 3566 Class 3	Standard specification
Coastal (within 10 km of the coast)	SUS316 / A4 marine grade, AS 3566 Class 4	Mandatory. SUS304 will corrode.

3. Fixing method

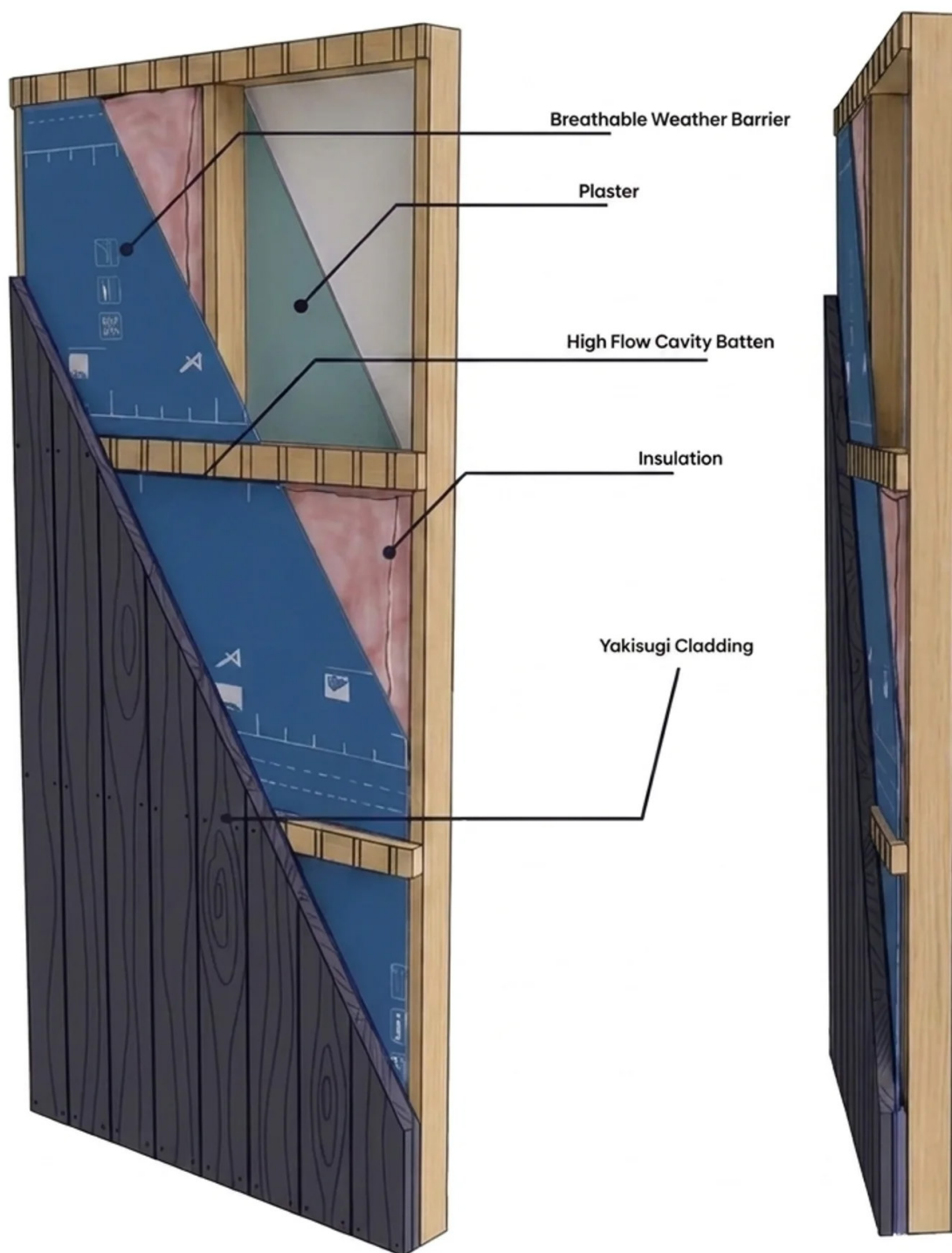
- All profiles are face-fixed with **two fasteners per board at every batten crossing**.
- Adhesive is **mandatory** at every batten contact point.
- Face fixing is the recommended method for all Studio Tsukuru profiles.

3.1 Adhesive specification

- Polyurethane-based, exterior grade, moisture curing.
- Rated for timber-to-timber bonding.
- Do **not** use PVA or silicone.
- Apply a continuous 6 mm diameter bead along the back of the board at each batten contact point.
- Do **not** apply adhesive to the tongue or groove edges.

4. Substrate and battens

- Treated timber ventilated battens, minimum 45 × 35 mm.
- Maximum batten centres: 450 mm.
- Battens run horizontally for vertical cladding; vertically for horizontal cladding.
- Minimum 20 mm ventilated air gap between the moisture barrier and the back of the cladding.
- Cavity open at top and bottom. Use perforated closers or insect mesh at entry and exit points.
- Breathable moisture barrier (wall wrap) installed over the structural frame, behind the battens, to AS 4200.2.



5. Fastener quantity estimator

Based on 450 mm batten centres and two fasteners per batten crossing:

Calculation	T&G (122 mm cover)	Shiplap (128 mm cover)	Notes
Batten crossings per board	9	9	$3,930 / 450 = 8.73$, rounded up
Fixings per board	18	18	9×2
Boards per m ²	2.09	2.00	$1 / (3.93 \times \text{cover width})$
Fixings per m ²	~38	~36	Add 10% for waste

Formula: fixings per m² = (board length / batten spacing, rounded up) × 2 fixings × boards per m². Always add 10% for waste.

6. Installation notes

Item	Detail
BAL rating	Studio Tsukuru yakisugi is supplied for BAL-LOW, BAL-12.5, and BAL-19 applications. BAL-29 and above are not supported. See the separate Studio Tsukuru BAL Compliance Position paper.
Pre-drilling	Required for hardwood boards and where the substrate is hardwood. Use a countersinking tool suitable for the fastener.
Drive tool	Rotary drill-driver only. Do not use an impact driver.
Penetration depth	Minimum 30 mm into the structural substrate.
Site cuts	Seal all cut ends with the supplied touch-up cream before installation.
Storage	Store flat on bearers, under cover, off the ground. Protect from rain and direct sun. Do not unwrap until ready to install.
Acclimatisation	Minimum 48 hours on site before installation, still wrapped.
Lead time	4 weeks from Melbourne stock. 12 weeks ex Japan for special orders.