

Interior Panelling and Sarking Design Guide

JSC

PREMIUM ARCHITECTURAL & BUILDING SOLUTIONS



Cover image: JSC TMT Amba Interior Panelling | TMT836 profile, bandswan face
Penny Homes Showhome | Leanne Anderson, The Designerz

This image: JSC TMT Taxon Interior Panelling | Coating Coda Caliaby
Siganture Homes | Foundry Group | Amanda Aitken Photography

INTERIOR PANELLING & SARKING

DESIGN GUIDE

SCOPE

This guide covers the design and specification of JSC timber panelling and sarking for internal applications, including species selection, profile options, design layout, finishes, and soffit applications. It is intended for architects, designers, and specifiers.

For installation requirements, refer to the JSC Interior Panelling and Sarking Installation Guide.

TIMBER SPECIES

JSC panelling and sarking is available in a wide range of timber species, offering variety in colour, surface texture, and grain pattern.

Species suitable for panelling and sarking profiles include:

SPECIES	INTERIOR	EXTERIOR SOFFIT
Alaskan Yellow Cedar	✓	✓
Nordic Pine	✓	-
Radiata Pine	✓	✓ (H3.2 treated)
Rustic Cedar	✓	✓
Sambara	✓	-
TMT Amba	✓	✓
TMT Taiga	✓	✓
TMT Taxon	✓	✓
ThermoPine	✓	✓
Western Hemlock	✓	-
Western Red Cedar	✓	✓

All species are available in a choice of widths and thicknesses. Most can be supplied with a Bandsawn, Dressed or Brushed face finish.

See the JSC Interior Panelling Profile Chart or contact us on **sales@jsc.co.nz** for more information on sizes and finishes.



Above: Digitally rendered to show Sambara Interior Panelling with JSC Coda Luxury Wax coating.

MOISTURE CONTENT

Moisture content is an important design consideration. To minimise movement after installation, timber panelling should be specified at, or slightly below, the equilibrium moisture content of the space in which it will be installed.

Materials in seasonally heated buildings generally have a moisture content of 10–14%. Specifiers should consider the end-use environment when selecting species and profiles, as species vary in their dimensional stability in response to moisture change.

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Above: TMT Amba coated in one coat of Coda Caliaby | Signature Homes Botany & Manukau.

DESIGN LAYOUT

Prior to installation, board lengths and the panel layout should be determined. Individual boards should be selected to take advantage of the natural variation in timber colour to achieve an aesthetically pleasing distribution across the surface.

JSC interior panelling can be installed vertically, horizontally, or diagonally on framing or battens at the following maximum centres:

Care must be taken with joints at corners and between walls and ceilings. Joints between walls and floors are generally covered by skirting board.

> **Note:** When thin panelling (e.g. 9.5 mm) is specified, insulation or other materials behind must be restrained to avoid distortion through pressure from behind.

BOARD THICKNESS	CEILING - FIXING TO FRAMING	CEILING - OVER CONTINUOUS PLYWOOD	WALL - FIXING TO FRAMING	WALL - OVER CONTINUOUS PLYWOOD
9mm / 9.5mm	400mm max.	400mm max.	Not allowed	400mm max.
11mm / 12mm	400mm max.	450mm max.	400mm max.	600mm max.
18mm	450mm max.	600mm max.	600mm max.	600mm max.

The fixing centres above refer to mechanical fixing points (clips, nails, or screws). Where panelling is installed over continuous plywood, a flexible adhesive must be used in conjunction with mechanical fixing — adhesive alone is not a substitute for the stated fixing centres.

Right: Brushed TMT Taiga coated in Scumble Frost | Ebode Showhome



PROFILE OVERVIEW

JSC offers three categories of interior panelling profile:

- **Standard TG&V Panelling Profiles** — tongue and groove profiles suitable for a wide range of interior applications.
- **Architectural Panelling Profiles (matching JSC Weatherboards)** — profiles designed to match JSC's rusticated and vertical shiplap weatherboard ranges, so the exterior design carries through to the interior.
- **Architectural Panelling Profiles (Feature)** profiles designed to create visual interest and texture, including Wave and Triple Groove options.

Most TMT profiles are designed to be installed with hidden clips. The exceptions are the Wave (TMT842) and Triple Groove (TMT845) profiles, which are fixed by secret nailing and adhesive. 9.5mm boards use the 9mm clip; 11mm boards use the 12mm clip. JSC Standard TG&V profiles (J83–J99) can be installed using face nailing or secret nailing and adhesive. Refer to the JSC Interior Panelling Profile Chart for full profile dimensions, effective covers, and fixing recommendations.



Hidden Clip
(9mm, 11/12mm & 18mm options available)

> **Note:** Custom profiles are available upon request. Contact sales@jsc.co.nz for further information.

BOARD THICKNESS	SOFFIT - FIXING TO FRAMING	SOFFIT - OVER CONTINUOUS PLYWOOD *(EXTERIOR GRADE H3.2)*
9mm / 9.5mm	400mm max.	400mm max.
11mm / 12mm	400mm max.	450mm max.
18mm	400mm max.	600mm max.

Fixing centres must be reduced in high wind zones or exposed sites in accordance with NZS 3604:2011 wind zone provisions.

SOFFIT APPLICATIONS

Timber panelling can be used in external soffit applications where the following design conditions are met:

- The soffit is located in a fully sheltered area and the design presents a low risk, such as a large overhang or a gable end with an overhang angle no greater than 45 degrees.
- All panelling boards are specified to be coated on all sides including cut ends prior to installation, with a topcoat applied after installation. Coatings must be exterior-grade and maintained according to manufacturer's recommendations.
- All fixings are compatible with the exposure zone. Stainless steel is always best practice.
- A regular maintenance schedule is included in the project documentation to monitor coating performance and timber condition.

Soffits and panelling are not covered by CodeMark. It is the responsibility of the designer to demonstrate compliance with the New Zealand Building Code (NZBC).



Ohauiti home with Alaskan Yellow Cedar coated in Scumble Desert. Profile J83, dressed face.

SUBSTRATE AND AIR BARRIER

A rigid sheet substrate, such as plywood, may be specified beneath panelling to provide additional rigidity, a continuous fixing surface, or support for the chosen fixing method. For example, as an alternative to battens where panelling is fixed with adhesive, or where the application is subject to greater movement, loading, or exposure.

Substrate thickness and specification should be determined on a project basis, taking into account:

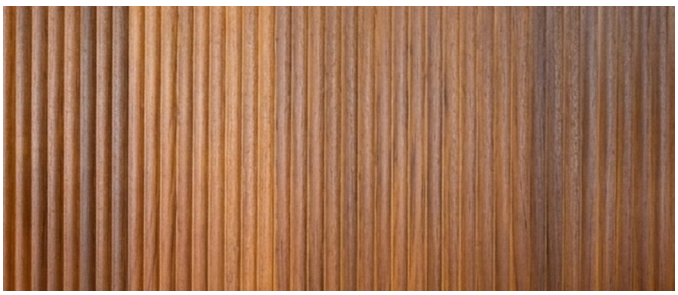
- Span between supporting battens or framing
- The fixing method selected (see Profile Overview, and the JSC Interior Panelling and Sarking Installation Guide)
- Deflection, loading, and stability requirements for the application
- Any relevant building code requirements or manufacturer specifications

Profile selection should also account for board thickness, width, and species, particularly in areas subject to heat or pressure differential. Where panelling is fixed to a diaphragm substrate (e.g. GIB or continuous plywood) rather than directly to bearing framing, additional requirements may apply, particularly where that diaphragm forms part of the building's bracing system, in which case NZS 3604:2011 Section 13.5 applies in addition to JSC's fixing recommendations.

Any ceiling area prone to heat build-up or air pressure differential needs particular attention at design and installation stage, as these conditions accelerate timber movement.

Where boards are fixed to rafters, in wet areas and for all skillion roofs, an air barrier must be installed directly above the panelling (or substrate, where used) to prevent air leakage from bringing moisture





Above: A sample of the JSC wave panelling profile in our Auckland showroom.

Right: JSC Western Red Cedar Ceiling & Wall Panelling The Highlands Waipu | Makespace Build.

into roof cavities. JSC recommends installing an air barrier to separate the soffit air space from the main building. Without it, wind can pressurise the cavity and force air inside, causing ceiling flexing or draughts through light fittings.

Because temperature can vary significantly inside a building, ceilings should be well insulated and the space well-ventilated in summer to reduce heat build-up, limit timber movement, and maintain coating performance.

FINISHES

All dressed surfaces should be lightly sanded and wiped free of dust before coating.

> **Note:** Follow coating manufacturer's requirements at all times.



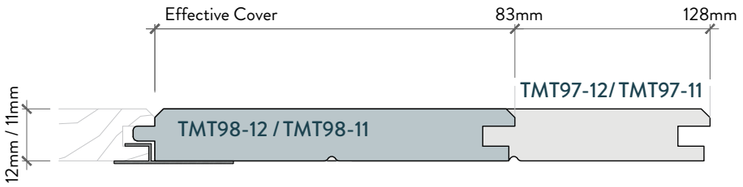
EXTERNAL REFERENCES

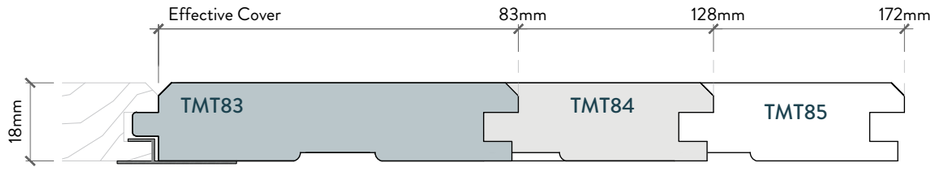
- NZS 3602:2003 — Timber and Wood-based Products for Use in Building
- NZS 3604:2011 — Timber-framed Buildings
- BRANZ Good Practice Guide — Internal Linings (Second Edition)
- JSC Interior Panelling BPIR Declaration
- BRANZ Bulletin 610 - Preventing Moisture Problems in Timber-Framed Skillion Roofs (June 2017)

Disclaimer: This guide is intended as general information only. It should be read in conjunction with the relevant coating manufacturer's product information, installation instructions, and in consultation with your installer. While JSC has taken care to ensure the information provided is accurate, for critical applications we recommend obtaining independent professional advice. JSC accepts no liability for the installation or performance of any component or accessory not supplied by JSC.

JSC TMT PANELLING PROFILES

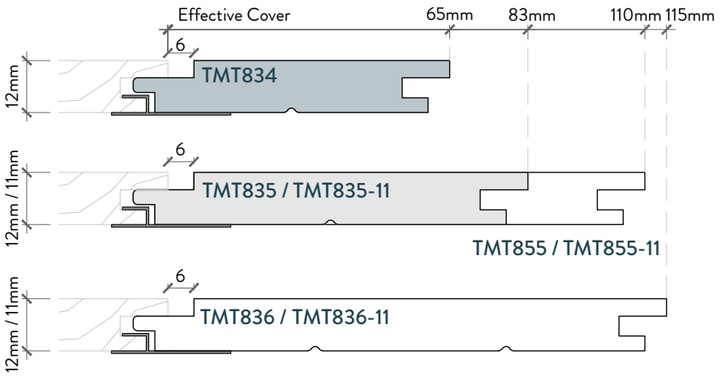
JSC STANDARD TG&V PANELLING PROFILES *HIDDEN CLIP FIXING REQUIRED*

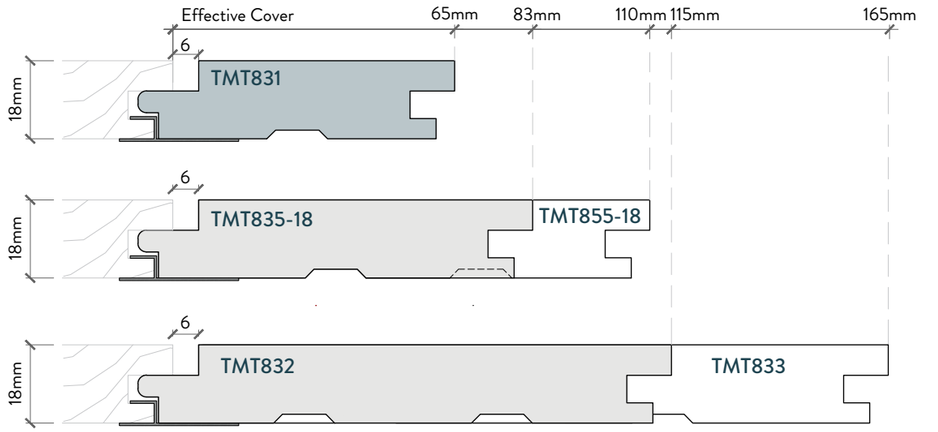




NOTE: 12 mm profiles are not available in TMT Taxon or TMT Taiga

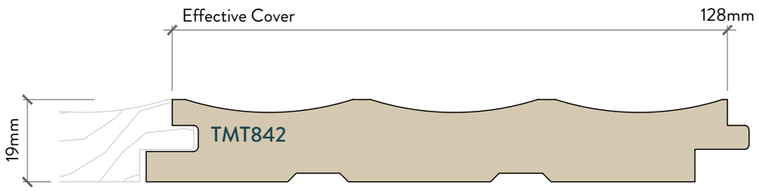
JSC ARCHITECTURAL PANELLING PROFILES *HIDDEN CLIP FIXING REQUIRED*

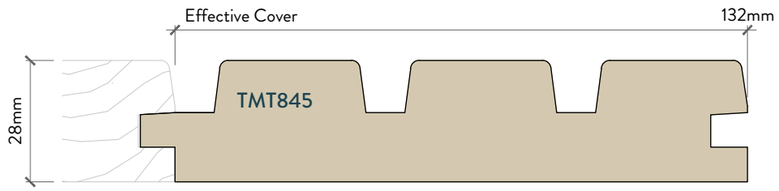




NOTE: 12 mm profiles are not available in TMT Taxon or TMT Taiga

JSC ARCHITECTURAL PANELLING PROFILES (FEATURE)





NOTES

1. Custom profiles available upon request.
2. Not all lengths are available in all profiles.
3. Profiles on this chart show the standard JSC TMT profile range.
4. Not all profiles or lengths are in stock.
5. Profiles are available in Band Sawn finish. Dressed and Brushed finishes are available depending on chosen specie and coating requirement.
6. Fixings: Hidden clips are the recommended fixing method for all TMT profiles except TMT842 and TMT845. TMT842 and TMT845 are fixed by secret nailing with adhesive. Refer to the JSC Panelling Guide for full fixing requirements.
7. Profile thickness varies by species: TMT Amba profiles are 11mm thick; ThermoPine profiles are 12mm thick. Refer to Species Availability table for thickness options by species.
8. Details are subject to change without notification. Refer to www.jsc.co.nz for up to date documentation.
9. JSC panelling must be installed by a suitably qualified and experienced tradesperson in accordance with the chosen cladding specification, installation and maintenance documentation.

SPECIES AVAILABILITY

SPECIES	THICKNESS	AVAILABLE PROFILES
TMT Amba	11mm, 18mm, 28mm	TMT83, TMT84, TMT97-11, TMT98-11, TMT831, TMT833, TMT835-11, TMT835-18, TMT832, T836-18, TMT855-11, TMT855-18, TMT842, TMT845
ThermoPine	12mm, 18mm, 19mm, 28mm	All profiles
TMT Taxon	18mm, 19mm, 28mm	TMT83, TMT84, TMT85, TMT831, TMT833, TMT835-18, TMT832, TMT842, TMT845, TMT855-18
TMT Taiga	18mm, 19mm, 28mm	TMT83, TMT84, TMT85, TMT831, TMT833, TMT835-18, TMT832, TMT842, TMT845, TMT855-18

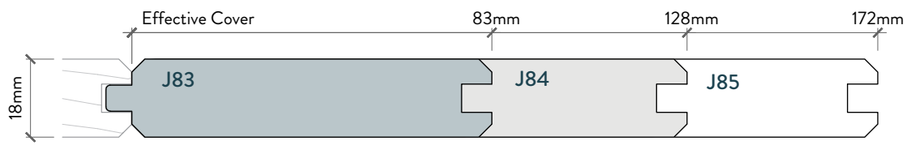
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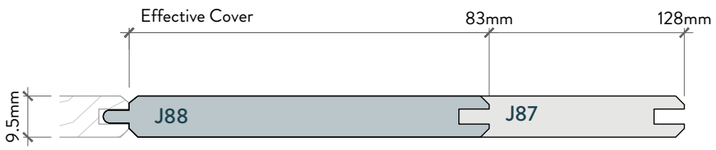
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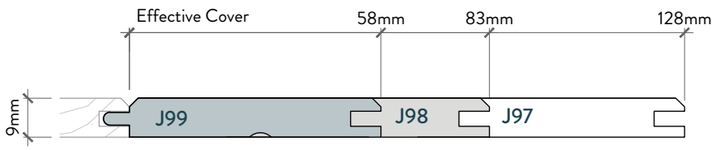
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JSC INTERIOR PANELLING AND SARKING PROFILES

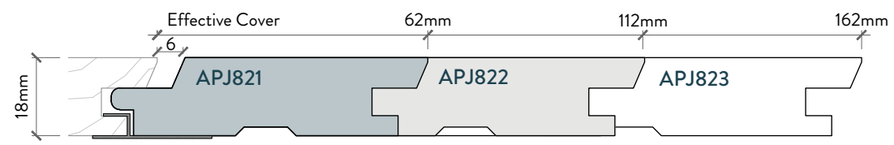
JSC STANDARD TG&V PANELLING PROFILES

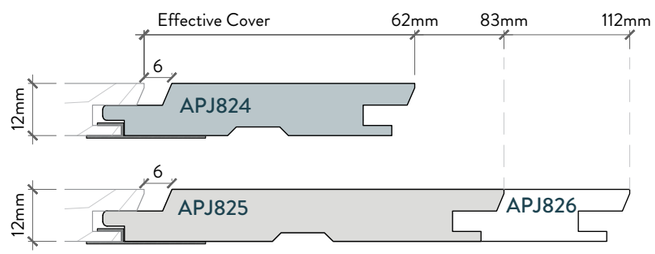


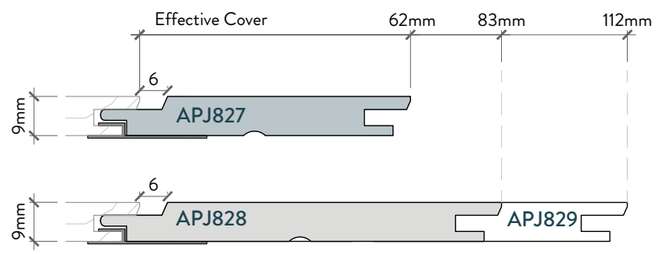




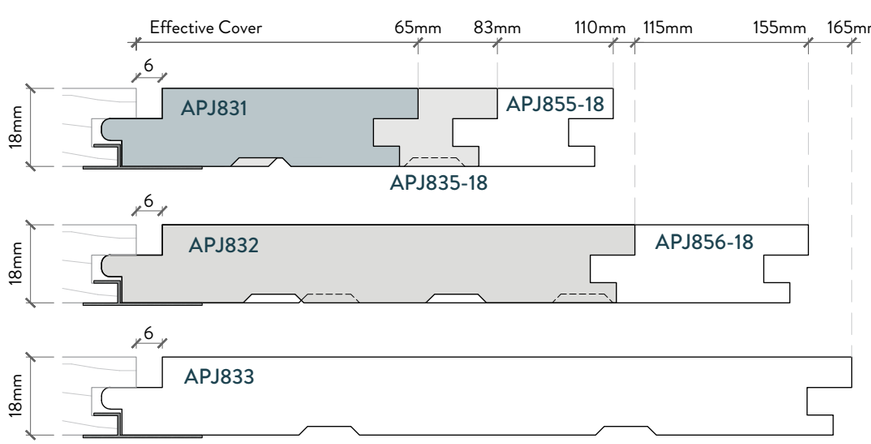
JSC ARCHITECTURAL PANELLING PROFILES (MATCHING JSC RUSTICATED WEATHERBOARDS) *HIDDEN CLIP FIXING RECOMMENDED*

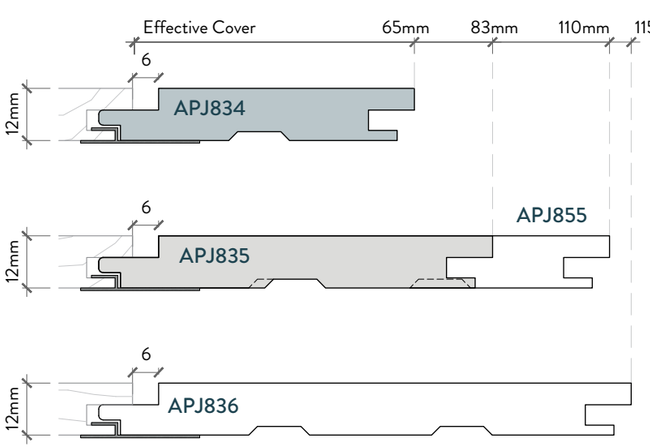


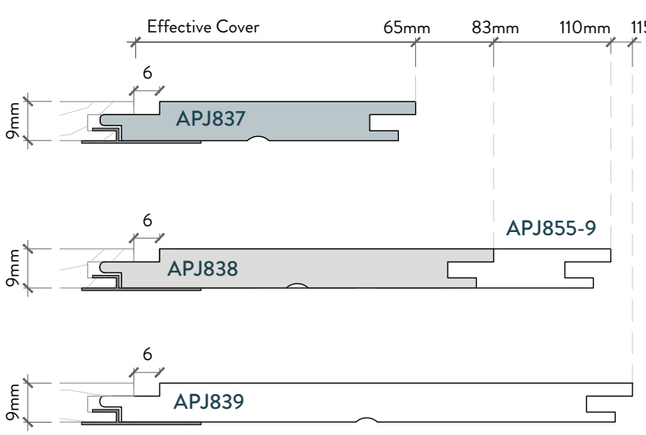




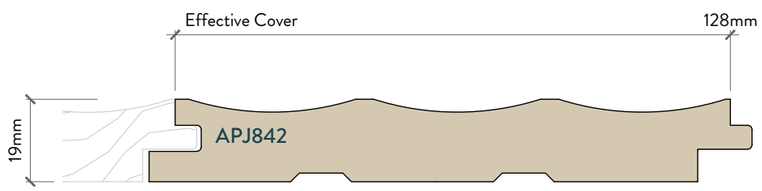
JSC ARCHITECTURAL PANELLING PROFILES (MATCHING JSC VERTICAL SHIPLAP WEATHERBOARDS) *HIDDEN CLIP FIXING RECOMMENDED*

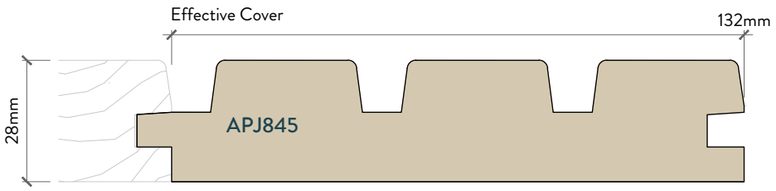






JSC ARCHITECTURAL PANELLING PROFILES (FEATURE)





NOTES

1. Profiles on this chart show the standard JSC Profile range.
2. Some profiles are available end matched.
3. Custom profiles available on request.
4. Not all lengths are available in all profiles.
5. Not all profiles or lengths are in stock.
6. Fixing method varies by category. Hidden clips are recommended for all Architectural profiles except APJ842 and APJ845.
7. Details are subject to change without notification. Refer to www.jsc.co.nz for up to date documentation.

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