



Vaaro® Cladding – Vertical Grain



○ Overview

Vaaro® Cladding – Vertical Grain is an ultra durable timber with fire retardant properties, created from Abodo's signature heat tempered, rapidly renewable timber – and then infused with a special resin-based, fire retardant treatment.

The thermal modification process and engineered vertical grain structure means Vaaro® Cladding has enhanced stability, reduced resin content, is a beautiful homogeneous brown colour, with high durability.

Fire retardancy properties of the timber are enhanced so it can be used in Type A exterior cladding and interior applications up to Group 1-S specification.

Available in a range of architectural profiles and can be supplied factory coated in Abodo Protector – Abodo's high performance penetrating exterior coating.

○ Key Benefits

- Type A or Group 1-S classification for exterior and interior applications.
- Attractive homogeneous natural timber.
- Excellent long-term durability and high leach-resistance.
- Low dimensional movement.
- Increased density and hardness.
- FSC® certified timber from renewable resource.
- Fully tested with Abodo Protector semitransparent coating system.
- Can be left to weather uncoated or clear coated.
*If you are wanting to leave Vaaro® uncoated contact Abodo to discuss aesthetic expectations for your project.

○ Wood Species

Thermally Modified Impregnated Radiata Pine (Pinus Radiata).



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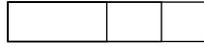
○ Standard Profiles

○ WB18



135x18 (115mm cover)
Vertical/Horizontal

○ Bandsawn Face Screening/Cover Boards



42x18, 68x18, 88x18

The above profiles are supplied as standard with one bandsawn face. Brushed finish available on request subject to price premium.

○ Made to Order Profiles

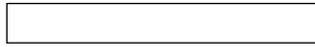
1000lm minimum order quantity per profile.

○ WB12



135x18 (115mm cover)
Vertical

○ Bandsawn Face Screening/Cover Boards



138x18

○ TG21

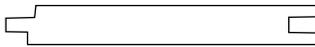
(Soffit and interior panelling only)



137x18 (127mm cover)

○ TG27

(Soffit and interior panelling only)



137x18 (127 cover)

○ D4S/BS4S Screening

Select Grade (Flatsawn)



42x42, 65x42, 138x42

Made to order profiles are standard bandsawn or dressed finish. Advise at time of order. Brushed finish is available with a price premium. Any profile being installed outside, a bandsawn or brushed finished is required for optimal coating performance.

Made to order profiles are subject to minimum order quantity and extended lead time. Please enquire with Abodo prior to specification.



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○ Colours

Colours presented are in Abodo’s Protector coating and are indicative only. Colour may change/fade as a part of the natural weathering process. Coating performance on brushed finish may be lower compared with bandsawn finish.

Clear coated and uncoated will fade with exposure to the weather, eventually settling to a silver grey colour in exposed areas.

Bandsawn Range:



Brushed Range:





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Product Specifications

- Name Abodo Vaaro® Cladding – Vertical Grain.
- Grade **Select Grade (C1LVG)/**Front face and edges virtually free of any defects but with one edge knot and one small face defect allowed per piece in 20% of boards only. Back side with some defects allowed. Skip dress and up to 4mm undersize lamina allowed on the back face.

Select Grade (Flatsawn)/Front face and edges virtually free of any defects but with one edge knot and one small face defect allowed per piece in 20% of boards only. Back side with defects allowed.
- Finish Fine bandsawn face. Brushed finish available optionally on request (some variation in the visual appearance of the finish can be expected).
- Process Thermally modified 230°C degrees schedule and pressure impregnated with Vaaro® heat-cured polymeric fire-retardant resin system.
- Durability Suitable for uses described in NZS3602:2003 Table 2A 'Requirements for wood-based building to achieve a 15 year durability performance Members exposed to exterior weather conditions and dampness'. Durability Class 1 (EN350-1). Durability Class 1 above ground (AS5640).
- Insect Attack Resistant to many wood boring insects but is not always resistant to termites.
- Scope of Intended Use Above ground exterior cladding, screening, soffits, interior wall and ceiling lining, in residential and commercial buildings.
- Warranty 40 years against fungal decay (subject to terms and conditions). Exterior fire performance is not warranted, but is sold in conformance with current compliance testing requirements.
- Fire Testing and Compliance Vaaro® has been third party tested before and after accelerated weathering, in both Protector coated and uncoated form.

Application	Classification	Standard	Test Method	Test Report	Protector Coated	Uncoated
Interior/ Exterior Wall & Ceiling Linings	B-s2-d0	EN13501-1:2018	EN13283:2020+	RISE	Yes	Yes
	Group 1-S	NZBC Clause 3.4(a), NZBC Acceptable Solutions C/AS2- C/AS7 Group Surface Ratings	A1:2022 + ISO 11925-2:2020 ISO 9705:2003	O100741- 1206795 BRANZ FI 20045- 01-1-C1		
Exterior Cladding	Type A	NZBC Acceptable Solutions C/AS2, in accordance with Table C1.3: Classification of cladding materials	ISO 5660-1:2002 + accelerated weathering to ASTM D 2898 (B)	BRANZ FHT17743	Yes	Yes

Note: Always seek professional advice from a registered Fire Engineer and refer to the Building Code prior to specification and/or commencement of construction.



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○ Dry Weight ~12 kg/m² (18mm board thickness) ('light weight cladding' NZS3604).

○ Curved Walls (Min Radius) WB18 135x18 – 2.3m.



○ Coating Vaaro® can be left uncoated or can be coated with Abodo Protector that is a tested coating system. Protector coating is recommended to give optimal weathering performance. If natural weathering is desired, Protector Bare (Clear + 5% White) or Patina can be applied to start with, then allow the timber to silver off naturally. Vaaro® will take most stains, penetrating oils and paints well, though up-take of coating is generally higher than normal. Testing prior to using other coatings is required.

Available factory Protector pre-coated (minimum order quantity of 225LM applies).

○ Certification FSC® – certified mixed, No.: SGS-COC-004944.

○ Place of Manufacture New Zealand.

For a full set of technical data see Vaaro Species Technical Data Sheet at abodo.co.nz/resources

- Storage**
- Keep product dry and out of the weather or under plastic wrap, elevated minimum 100mm off the ground on even flat surface strapped on least four bearers.
 - Keep product strapped until installation time.
 - Avoid storing in direct sunlight as UV can change the colour of the timber.
 - Avoid moisture entry into timber packets as this can lead to water damage and mould growth. If this happens ensure that the timber is allowed to dry out by placing into fillet under cover out of the weather.
 - Moisture content of timber at supply is approximately 8%. Timber should not be installed if moisture content is above 16%.
 - For interior applications, acclimatize the timber by sitting it in the room it will be installed in, ensuring it will remain dry with plastic wrap removed for at least 3 days.
 - Installed product indicates acceptance of the product and quality.

Product Handling Vaaro® wood is not classified as dangerous goods however still requires to be handled as with any treated wood product.

See below guidelines and product Safety data sheet. This should be read in conjunction with local building regulations and best practice for handling treated wood.

- Wear recommended personal protective equipment when handling treated wood.
- Wear a dust mask and eye protection when cutting or sanding timber to protect against dust inhalation.
- If machining timber, ensure adequate mechanical extraction to remove wood dust.
- Wear gloves when working with timber is good practice to avoid splinters and finger marks.
- Wash exposed skin thoroughly.



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- All sawdust and construction debris should be cleaned up and disposed of after construction.
- Wash work clothes separately from other household clothing before re-use.
- Vaaro® timber should not be used where it may come into direct or indirect contact with drinking water, except for uses involving incidental contact such as freshwater docks and bridges.
- Do not use Vaaro® timber under circumstances where the timber may become a component of food, animal feed, or beehives.
- Only timber that is visibly clean and free of surface residue should be used.
- If the timber is to be used in an interior application and becomes wet during construction, it should be allowed to dry before being covered or enclosed.

Fixing Overview

The below is intended for guidance purposes only. Please refer to the project specification and detail drawings approved by a qualified fire engineer prior to installation.

○ Exterior Cladding

Timber framing is to be in accordance with NZS3604 or SED complying with AS/NZS 1170 and NZS3603 or steel framing according to NASH guidelines. Studs at max 600mm centres.

- Fix cladding over a waterproof, breathable building wrap, rigid wall underlay or other suitable waterproof substrate in conformance with NZBC E2/AS1 and with suitable Type A or non-combustible fire performance for the specified wall system. Installation of underlay must be made in accordance with the manufacturer's instructions.
- A cavity system is required with minimum 45x18mm battens of suitable fire performance to suit the requirements of the specified wall system. Typically these will be made from Type A or non-combustible material such as metal e.g. Tanfor, Dimond NC Batten or fiber cement e.g. James Hardie CLD cavity batten (CLD is suitable for horizontal cladding installation only). Cavity battens must be fixed in accordance with the manufacturer's instructions. A cavity is not required for soffits or interiors.
- Horizontal cavity battens must be notched or perforated and beveled to allow water run-off and air flow in service in accordance with E2/AS1 drained cavities.
- Fix boards either vertically or horizontally as appropriate to the profile type specified at the following maximum batten spacings:
 - 480mm centres for vertically fixed cladding or
 - 600mm centres for horizontally fixed cladding.
 - 600mm centres for soffits.
- When secret fixing cladding, high quality hot dipped galvanised or stainless steel fixings must be used according to the exposure zones listed in E2/AS1. Stainless steel fixings must be used when face-fixing and/or in sea spray zones in all cases. Note: Silicone bronze/copper fixings can be subject to oxidation during weathering, resulting in discolouration and weeping around fixing head.
- For WB18 secret fix profile, use self-drilling self-countersinking head screws so as to achieve 30mm penetration into stud or batten if a structurally fixed cavity batten is used, or at least 3 threads penetration into metal battens, and positioned 12mm from the tongue edge.
- Fixings at ends of boards must be at least 12mm from edge, and must be pre-drilled before applying fastener.



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- Ensure 2mm expansion gap to back of boards.
- All exposed end grains and notches must be sealed using Abodo's Protector End Seal or Protector coating.
- Joins between board ends must be made over battens only, off-set by minimum 400mm using a 35degree mitre, and application of sealant at the join e.g. Sikaflex 11FC.
- Use perforated non-combustible cavity base closer flashing in accordance with E2/AS1 at base board to allow drainage, air flow and keep out vermin.
- Cladding must finish 100mm above paved surface or 175mm above un-paved surfaces. Base of cladding must not sit directly into flashings or other cladding materials such as masonry. Minimum 5mm gap must be left to flashings allowing fall to shed water away from the wall cavity.
- Use Abodo finishing mouldings backed by hemmed corrosion resistant internal flashings as required, corners, windows, doors and where cladding meets soffit. Fix mouldings with 40mm stainless steel flat head ring shank nail (hand driven) or screws at max 450mm centres.
- Protector coating may be optionally applied ideally to all sides prior to installation and then a further one or two coats applied once boards are fixed in place according to manufacturer's instructions.

Fixing details:

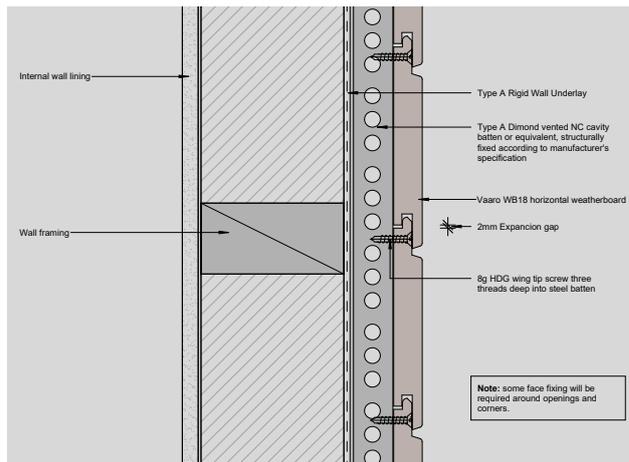


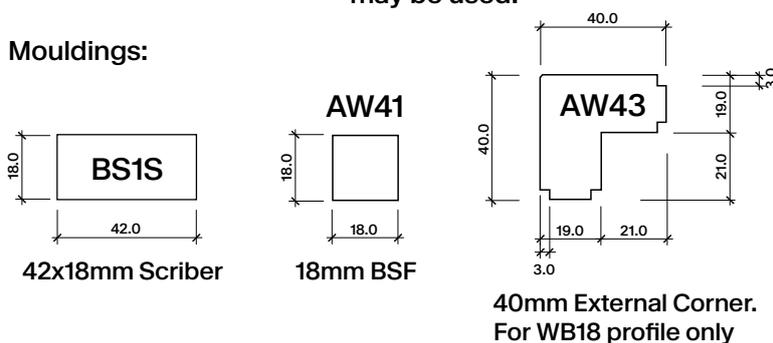
Fig 1: WB18 Secret Fix

Note: The above is an overview only.

Please refer to CodeMark Weatherboard Cladding Manual and detail drawings at: abodo.co.nz/resources for detailed installation information prior to specification or commencement of construction.

- Interior Ceiling/ Interior Wall Lining
 - Timber or steel framing with studs at maximum 600mm centres. If fixing board vertically nogs at maximum 600mm centres.
 - Boards may be direct fixed to studs/nogs or battens at max 600mm centres using secret fixing method with screws to achieve 20mm penetration into timber or minimum 3 threads depth into steel. Regular interior grade fixings may be used.

Mouldings:





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Maintenance

○ Lightening of the Timber



Vaaro® Teak
As delivered

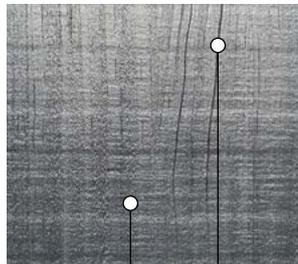


Vaaro® Teak
Weathered 12 months
exterior install

We cannot guarantee against wear or color changes to any products which result from weather, sun, wind and/or the natural aging process of the wood.

○ Surface Checking

- Checking (cracks) may be observed on the face and ends of Vaaro® timber. Checks are acceptable to install. Checking may become more apparent as the material weathers naturally in place. Fibre pull at laminated glue lines is also possible. These are not defects and are considered a natural part of this wood product. Maintenance with a coating and thorough sealing of end grains with wax sealer will improve long term weathering characteristics.



Laminated
glue seams

Face
check



End split/
Glue pull

○ Exterior Maintenance

- Wash down every 12 months with gentle detergent, warm water and soft brush.
- Make a maintenance check every two summers. Check all weatherboards, junctions, flashings, mouldings and replace or remediate as required to maintain weather tightness of the cladding system.
- For heavily soiled or mouldy areas use Rejuvenator or similar timber cleaner, then apply active mouldicide to areas with mould.
- Uncoated or Protector Clear coated timber may be left to weather off.
In addition, if the cladding has been coated:
 - Re-coat every 2-4 years or as required to maintain colour and integrity of coating.
 - Re-coat period may be longer or shorter depending on climatic conditions and/or positioning of cladding to the sun.
 - Preparation with Rejuvenator or other similar oxalic timber cleaner is recommended prior to coating.

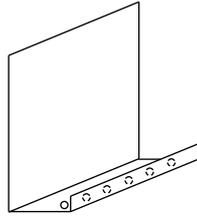
○ Interior Maintenance

- Wipe clean as necessary with a wet cloth.

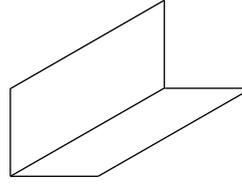


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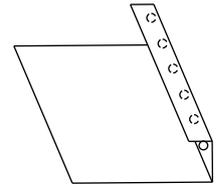
Abodo Flashings



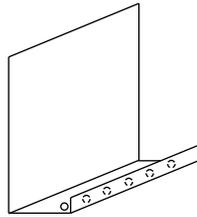
AWF1 Abodo WB18
20mm cavity closer.
Measures 28x71mm.
For WB18 horizontal cladding only.
S/Steel 3m.



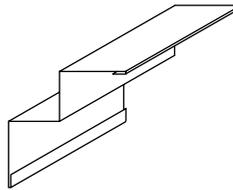
AWF4 100x100 /
AWF2 120x120
Abodo Unhemmed
Corner Flashings
S/Steel 3m.



AWF3 Abodo Window
Jamb Flashing.
S/Steel 3m.



AWF6 Abodo WB18
45mm cavity closer.
Measures 53x71mm.
For WB18 horizontal cladding only.
S/Steel 3m.



AWF5
W flashing
Internal corner.

Accessories

Abodo Protector:



Abodo Protector – End Seal, 1L:

