

Vulcan Joinery



Overview

Vulcan Joinery is created from thermally modified New Zealand plantation timber and engineered with a vertical grain construction for superior weathering characteristics.

The thermal modification process combined with lamination means Vulcan Joinery has enhanced stability, reduced resin content, is a beautiful homogenous brown colour, and is naturally durable so does not require any chemical preservatives.

An excellent choice for windows, doors and interior joinery in both paint and stain finish.

Wood species: Thermally Modified Radiata Pine (Pinus Radiata).

Lengths: 3.6, 4.2, 4.8, 5.4, 6.0m (lengths are subject to availability).

*Specified fixed lengths may be available but are subject to conditions including minimum quantity of 1 packet per length, price premium and availability. Please check with Abodo prior to placement of order.

Sizes:

Standard rough sawn blank sizes

Approx only (mm)

72x47

91x47

147x47

184x47

91x72

147x72

184x72

*Ex stock UK, sawn from larger dimensions.

European laminated dimensions (PAR)

Approx only (mm)

72x86

72x115

72x145

86x86

86x115

86x145

96x86

96x115

96x145

Standard stock laminated block sizes

Approx only (mm)

147x147

184x147

Construction

(5x29.5mm)

(6x30.5mm)

*Ex stock UK

Custom laminated block sizes

Approx only (mm)

147x238

147x295

195x147

195x184

195x238

195x295

Construction

(8x29.5mm)

(10x29.5mm)

(5x29.5mm)

(6x30.5mm)

(8x29.5mm)

(10x29.5mm)

Dimensions and construction may vary.

Supplied as standard with fine band sawn and/or dressed blanked finish.

Some stepping and glue run-off may be present in the glue line edges of laminated blocks.

Custom laminated sizes >195mm width are subject to prior approval by Abodo, minimum order volume and lead time.

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Product specifications

Name:	Abodo Vulcan.
Quality:	Select Grade /Equal to BS1186:3 1990 Grade CHS and BS EN942 Grade J5.
Substrate colour:	Chocolate Brown. (Timber will weather to grey unless a pigmented coating is applied and maintained).
Finish:	Rough sawn with blanked edges. Some stepping and glue run-off may be present in the glue line edges of laminated blocks.
Durability:	Durability Class 1 (EN350-1).
Intended use:	Intended for above ground use in residential and light commercial buildings.
Serviceable life:	30 years or more when maintained according to manufacturer's recommendations.
Warranty:	15 years against fungal decay (subject to terms and conditions).
Moisture content:	Approx. 7% MC (+/-2%) at time of dispatch.
Construction:	Laminated with vertical grain orientation.
Glue:	Exterior polyurethane adhesive – VOC, solvent and formaldehyde free. Complies with EN 15425.
Fire:	Can be fire treated to Euroclass B-s2-d0 (s2 Smoke Production – d0 Flaming Droplets). BS EN 13823 & BS EN 11925-2 Single Burning Item Equivalent to UK "Class O" BS 476: Part 6 & BS 476: Part 7.
Average Density:	-420 kg/m ³ .
Hardness:	Low (2.5kN Janka).
Thermal properties:	-0.099 W/(mK) (Thermal conductivity is reduced by 20-25% compared with Radiata Pine).
pH (indicative):	3.9
Compatibility:	Vulcan has little or no corrosiveness on most metals (though should be separated from zinc) and can be placed in contact with most building materials. Normal PVA, PU, MUF glues and RF resins can be used.
Coating:	Vulcan will take most stains, penetrating oils and paints well, though up-take of coating is generally higher than normal. See separate coating section below.
Certification:	Forest Stewardship Council® (FSC®) Certified FSC MIX, FSC-C010962, SGS-COC-004944.

Characteristic strength/
stiffness:

Characteristic strengths (MPa)					Elastic moduli (GPa)	
Gl grade rigidity	Bending (MOR)	Tension parallel to grain	Shear in beam	Compression parallel to grain	Short modulus of elasticity parallel to end grain (MOE)	Short duration modulus for beams
8	20.50	9.60	-	38.50	10.40	-

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Product handling

- Must be kept clean, dry well ventilated, out of direct sunlight and out of weather prior to installation.
- Must be stored horizontally on bearers at least 100mm off the ground.
- Wear dust mask, eye protection when cutting timber.

General processing notes:

- Due to the increased stability from thermal modification and lamination significant movement is reduced when resawing.
- Material can contain some resin pockets that will be uncovered after resawing.
- Some glue spill may be evident on the edges of block, this can be easily cut to square the block for further machining.
- Sawdust can be fine, extraction required on bandsaw.
- Fitted dust masks should be worn, along with other PPE, especially when sanding, notching or routing.

Machining:

- Vulcan timber machines and moulds very well.
- A bandsawn face finished product can be created by moulding the back face and edges and leaving the clean sawn face without further finishing.
- Lower roller pressures should be used as the thermal modification process does increase the brittleness of the timber.
- Agitation of piping system may be required to prevent settling of dust at junctions.
- Suitable LEV systems should be used to protect operators.
- Laminated blocks should be cut using a fine kerf bandsaw perpendicular to the glue line in order to achieve vertical grain orientation in the face of the boards, or otherwise as appropriate to the profile being made.

Vertical grain oriented towards the weather



Weather-exposed face



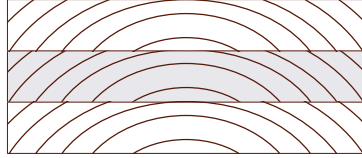
Weather-exposed face

Vulcan Joinery

Product handling

Vulcan – Laminated Vertical Grain

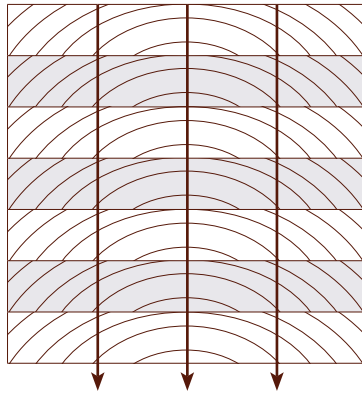
Abodo's flagship product is produced from Thermally Modified Radiata Pine that has been laminated and grain oriented into large blocks.



Quarter sawn grain

Bandsawing

Bandsawing is the first step to process larger pieces known as "laminated block". It is critical that the bandsaw runs perpendicular to the glue lines. Some stepping can occur during the glue lamination process – a centre cut through the block allows a square edge to run against guides.

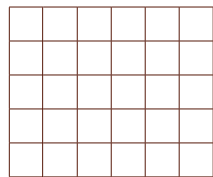


Cutting direction

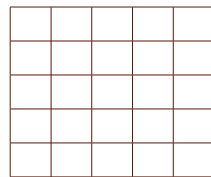
Standard laminated block dimensions

Block size 147mm wide

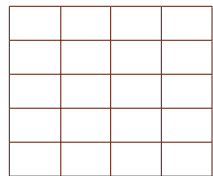
6 out – 23mm blanks



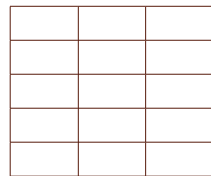
5 out – 28mm blanks



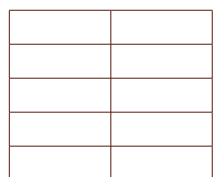
4 out – 35mm blanks



3 out – 47mm blanks

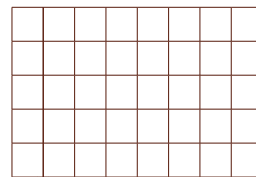


2 out – 72mm blanks

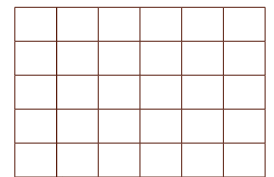


Block size 195mm wide

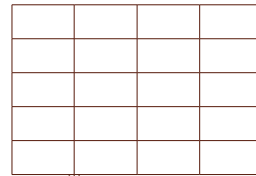
8 out – 23mm blanks



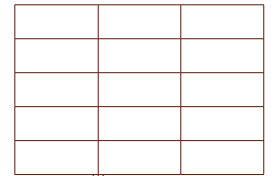
6 out – 30mm blanks



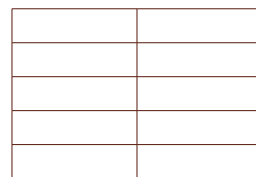
4 out – 47mm blanks



3 out – 63mm blanks



2 out – 96mm blanks



Sizes can vary slightly from indicated.

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Fastening

- For exterior appearance applications, high quality stainless steel fixings (screws or nails) are recommended.
- Stainless steel 316 (A4) fixings should be used in areas near the sea.
- Note: Silicone bronze/copper fixings can be subject to oxidation during weathering, resulting in discolouration and weeping around fixing head.
- For interior applications bright or zinc coated fixings may be used.
- In applications close to the ground, including door sill type applications, a hardwood or metal style sill should be used.

Coating

In all cases timber must be thoroughly sanded, clean and free of dust prior to application of coatings. The following points are guidelines to help ensure best results are obtained. You should always follow the coating manufacturers own recommendations to obtain best performance with their products.

Exterior:

For weather-exposed applications such as window and door joinery, approved exterior grade semi-transparent coating or paint finish must be applied to all sides and end grains sealed thoroughly.

In fully exposed applications, where joinery is exposed with no eaves or protection from the prevailing weather a paint finish is recommended.

Paint finish:

Factory Prefinished Exterior Vulcan TMT Joinery.

The performance of paint systems on exterior doors and windows is dependent on careful surface preparation and painting. Top and bottom surfaces must have the full coating system applied to them. This is best undertaken before they are hung or fitted.

Particular attention is needed to ensure that there are proper flashings above doors and windows and that the sides of joinery are properly weatherproofed by use of adequate flashings and/or sealants.

All edges of the joinery and future hidden surfaces must be primed before assembly with particular attention to priming the seal end grains.

Attention is needed to ensure all sharp edges on joinery are sanded to a rounded profile and clean before coating to manufacturers specifications.

Colour note:

Unlike lighter colours that reflect the light, dark colours absorb the light and the result is an increase in surface temperature and therefore potential movement. Vulcan Joinery has been thermally modified at 230 deg C so is well placed to deal with these variations in temperature. As a result of the process movement is reduced meaning that the integrity of the coating is protected longer. However, as is generally the case with darker colours an increase in maintenance can be expected.

Semi-transparent finish:

Semi-Transparent finishes are more susceptible to the effects of UV light and so we believe ideally best used in protected or semi protected applications i.e. under large eaves. Your coatings provider will be able to give more guidance on this.

Care must be taken to ensure that timber profiles are oriented with vertical grain exposed to the weather only.

Specialist exterior joinery finishes must be used. Pigmented, UV stable, film forming or high solids coatings are recommended for UV protection and to maintain colour.

Interior:

For interior applications coating is optional, though sealing is recommended to allow for easy cleaning and to maintain colour.

Specialist interior finishes should be used only. Options include high solids hard wax oils for a more natural appearance, or film forming polyurethane or acrylic systems that tend to be harder wearing but less natural in appearance.

Contact coating manufacturer for specification and maintenance of appropriate coatings.

Note: The above is an overview only. Installers should refer to specific design information on the construction specification for more details.

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