CODEMARK
BRANZ-CM-1018

Prolam®
Engineered Laminated Timber

# Prolam H5 Posts.

## Design and Install Guide

**NOVEMBER 2022**

**Register free for our Online Specifier at prolamnz.com/specifier**

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# INFORMATION

## General

### Purpose

This guide will help correctly specify and install Prolam H5 posts for use as structural posts.

### Important Documents

This guide must be read in conjunction with the:

- Prolam H5 Glue Laminated Post CodeMark
- Prolam H5 posts pass™
- Prolam Care and Maintenance
- Prolam online calculator output
- Prolam warranty.

### Skills Required

This guide is suitable for use by licensed building practitioners (or deemed practitioners) licensed to the applicable licence class.

### For more help

Technical assistance is available at **INFO@PROWOODNZ.COM**

While all reasonable efforts have been made to ensure the accuracy of information provided, this design and install guide is intended for guidance only and may be subject to change.

### For our warranty

Refer to **CLICK HERE**

# PROLAM H5 POSTS

## Description

Prolam H5 posts are glue laminated structural posts that are manufactured from H5 treated finger-jointed, solid NZ grown *Pinus Radiata*.

Resorcinol adhesive is used for the finger jointing and gluing of the treated lamina.

Prolam H5 posts are supplied in

- a range of sizes
- structural grades PL8 and PL12
- appearance grades A
- treatment hazard class H5 (MCA).

## Certifications and approvals

Prolam H5 Glue Laminated Posts have CodeMark issued by BRANZ.
Certificate number: BRANZ-CM-1018
Issue date: 02/12/2019

MORE INFO

Manufacture of Prolam H5 posts is third-party certified by AsureQuality:

- Engineered Wood Products Programme AEW.

MORE INFO

Certificate of Registration of Preservative Treatment & Allocated Brand Timber Treatment Plant Registration Authority; 709 90 H5, 709 01 H5.

MORE INFO

## Prowood Assurance Statement

For use, scope and limitations, and performance assurance refer to Prolam H5 posts pass™.

MORE INFO

# DESIGN

## Design steps

### 1 Select post size

To specify the correct size, use the Prolam online calculator. It delivers:

- project-specific post size options
- installation requirements (hole size, fixings, painting)
- our CodeMark Certificate
- our assurance statement (pass™)
- care and maintenance requirements
- our warranty.

Collectively, this is referred to as the Prolam project information.

Uses available through the online calculator are as follows:

- posts supporting decks
- posts supporting verandah/carport
- posts supporting deck and roof.

Before using the calculator, confirm project-specific factors including loads, wind zones, seismic zone.

### 2 Check for fire requirements

Determine whether NZ Building Code Clauses C3 and C6 apply. This will be determined by the position of the Prolam H5 posts (such as proximity to relevant boundaries).

Calculation of fire resistance must be performed by a suitably qualified fire engineer.

### 3 Confirm all design requirements are met and check buildability

Confirm that the chosen configuration and support spacings meet all relevant design requirements and that all selections are compatible with the design. Where bracing is required, check adequate bracing units provided.

### 4 Documentation

Ensure the building consent plans and specifications include:

- the size and location of the Prolam H5 posts, and
- Prolam Project Documentation.

# CONSTRUCTION

## Pre-installation

### Health and Safety

Take all necessary steps to ensure your safety and the safety of others:

- ensure adequate ventilation or mechanical dust extraction when cutting or drilling
- ensure the timber is well supported when cutting and nailing
- use appropriate safety equipment, clothing and footwear
- use all tools in accordance with relevant instruction manuals
- plan and monitor a safe approach for working at height; select and use the right equipment
- clear the work area of any obstructions before work starts
- treated wood offcuts should be disposed to landfill.

For further information refer to:

- WorkSafe July 2018. Small Construction Sites, The Absolutely Essential Health and Safety Toolkit.
- WorkSafe December 2016. Health and Safety at Work, Quick Reference Guide.

These documents are available at **WWW.WORKSAFE.GOVT.NZ**

### Handling and Storage

#### Delivery

Care must be taken during loading, unloading, and transporting in the yard and on-site to protect the Prolam H5 posts from pre-installation damage.

#### Storage

Store the posts flat on a hard, dry surface, laid flat on bearers which extend across the full width of the pack. Posts stored near the ground will absorb moisture. To prevent this, place a layer of plastic underneath the bearers.

Do not expose Prolam H5 posts to rapid change in moisture or temperature, such as may occur from temporary heating units.

When storage inside is not possible, remove any wrap, place timber fillets between the posts, then rewrap or cover with a waterproof cover.

### Moisture effects on Prolam H5 Posts

The posts are manufactured from treated NZ-grown radiata pine.

All exposed surfaces of the posts must be fully coated within 14 days of installation. It is recommended the in-ground portion of the Prolam post should also be coated before installation to ensure posts do not absorb moisture prior to the concrete curing.

1 Contact info@prowood.com for information on and to purchased coating.

# Installation

## Key documents

Refer to building consent documentation details (structural and architectural), spacing set out, post depths, and fixings.

Where specific assemblies are not contained in the consent documentation, refer to:

- engineering (specific design)
- information from supplier of structural bracket
- Prowood technical resources
  - the Prolam Project Documentation
  - this document.

## Installation requirements

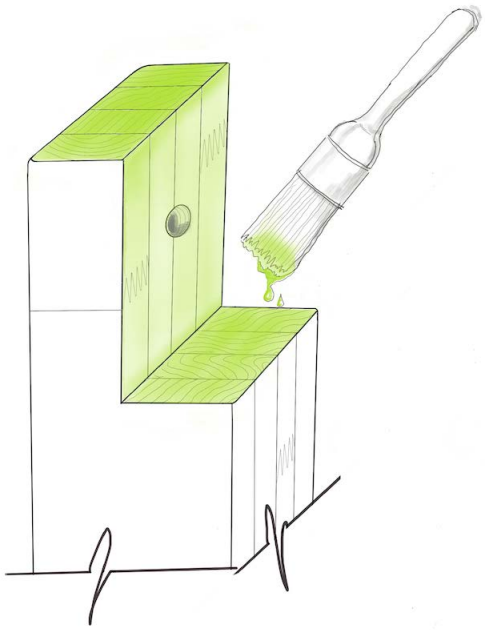
### Tools

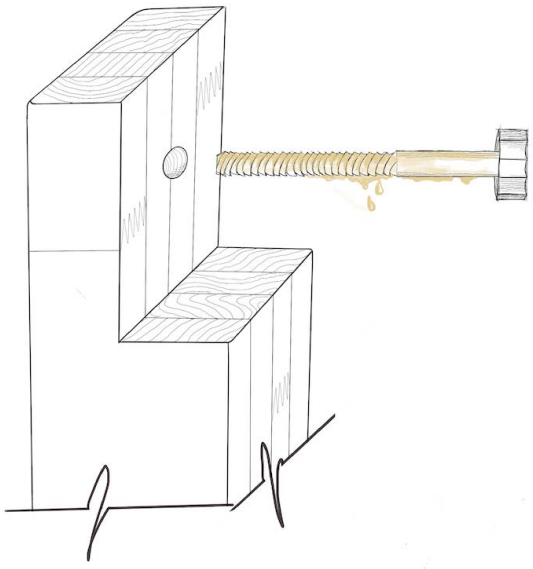
Prolam posts may be installed using standard carpentry equipment and tools. Ensure all tools are sharp, used in accordance with good trade practice, and supplier's specifications.

### In-ground section, cuts and holes

All saw cuts, notching, and drilled holes where the timber is exposed must be primed. Coat structural brackets, bolts and washers (stainless steel or galvanised) with a protective grease (non-petroleum) where the fixing is in contact with the post to reduce metal corrosion and to enable more easily future replacement.

It is recommended the in-ground portion of the Prolam post should also be coated before installation to ensure posts do not absorb moisture prior to the concrete curing.



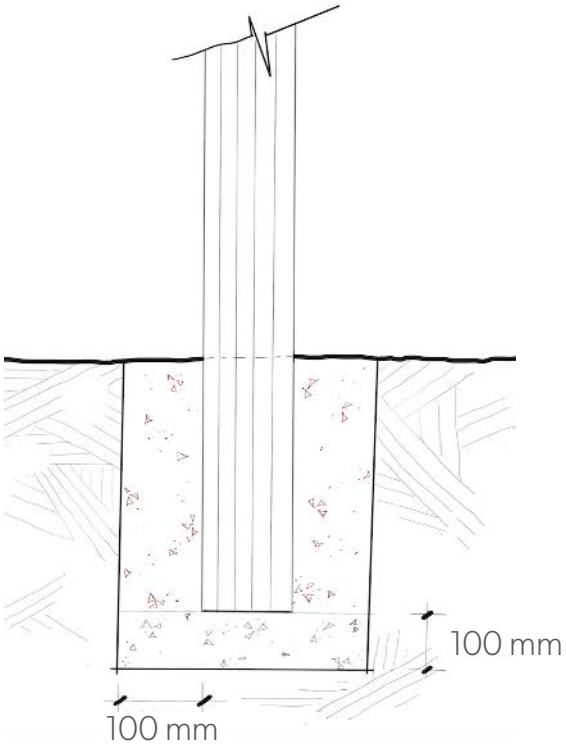


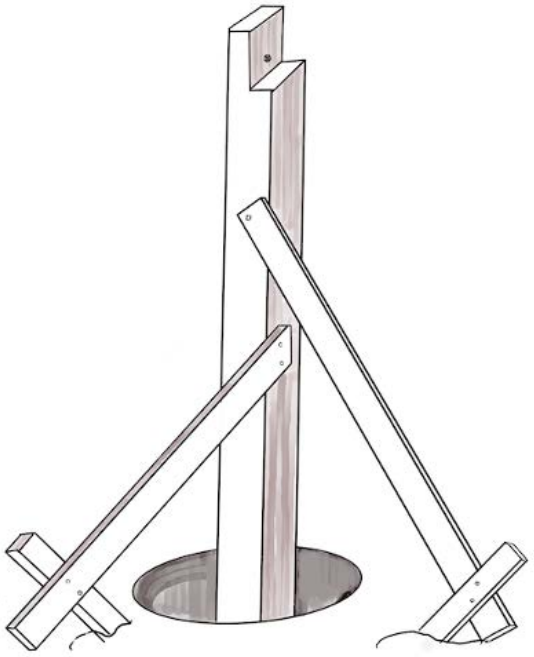
## Prepare footing

Prepare the hole and concrete for the post footing in accordance with the Prolam Project Documentation.

## Position posts

Where practical smaller posts maybe manhandled into position. Large posts may require mechanical lifting. Where a hiab or crane is used, woven strops with a spreader bar is recommended to minimise potential damage to the post.



## Install Prolam H5 Posts

Place a minimum 100 mm of concrete (punch pad) into the base of the foundation.

Plumb the post to vertical in both directions.

Centralise the post in position and allow a minimum of 100 mm concrete cover between the post and the outer edge of the foundation hole.

Brace the post with diagonal timber members using minimal fastenings so the posts can be easily repaired.

### Fastenings

Refer to the Building Consent plans and specifications, Prolam Project Documentation or specific engineering design documentation.

Steel fixings and fastening shall be selected in accordance with section 4 of NZS 3604.

## Finish posts

### Sealing

Fill and sand any damage e.g., depressions, temporary fixing holes or unintended transport damage. Where unsightly holes or large imperfections exist insert a timber plug using a glue that has exterior timber qualities.

Sand back until surface is smooth and completely free from dirt and dust.

### Repair of damage

Apply primer or clear sealer to any areas where the surface coat has been damaged. If the posts have been coated with a factory-applied coating, contact Prolam for product compatibility.

If damage has resulted in delamination or the structural adequacy cannot be assured, contact Prolam for a replacement post.

### Painting

All exposed surfaces, cut ends and joints must be sealed with a good quality stain or alkyd primer and allowed to dry as per manufacturer's instructions.

The Prolam H5 post must be painted within 14 days of installation. Apply a single enamel undercoat and then apply two full topcoats compatible with the undercoat.

Painting is to be carried out in accordance with best practice: 1 x undercoat and 2 x topcoats to achieve a total DFT (dry film thickness) of 80 microns, (comprised of undercoat DFT 30 microns, topcoat DFT 25 microns/coat).

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