

DATA SHEET

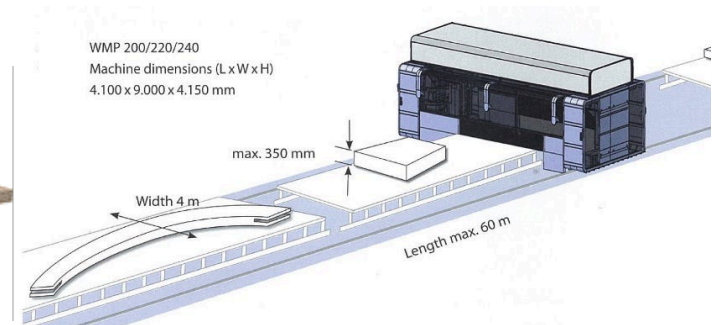
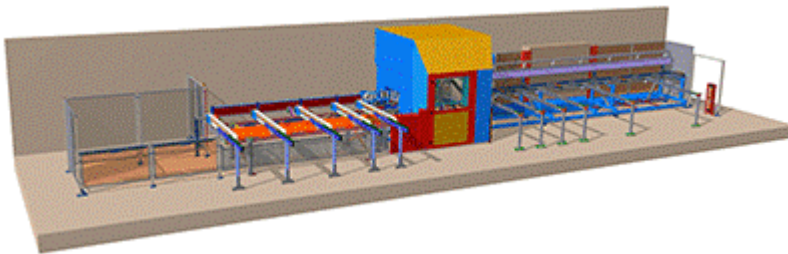
CNC Processing



Overview

Red Stag TimberLab, as New Zealand's most experienced manufacturer of structural Laminated Timber with over 66 years' experience, remains at the forefront of technological production capacity and capability.

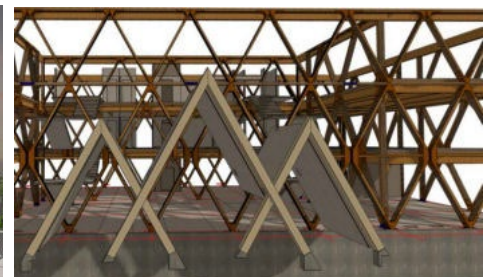
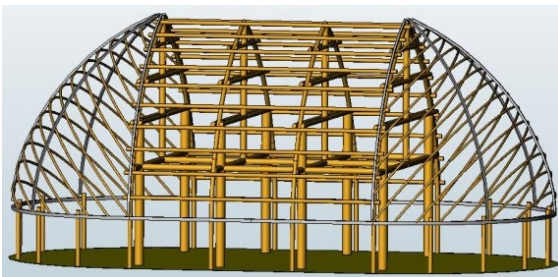
With our **5-axis CNC processing centres**, we deliver the full structural package of engineered wood products including Glulam, CLT, and LVL.



The fully automated Hundegger Speed-Cut SC-3 (purchased in 2018) greatly increased our capacity in processing smaller section linear product, allowing us to focus our Weinmann WMP240 on the more complex or larger-section projects. Red Stag TimberLab is the only NZ Glulam fabricator at this time to operate 5-axis CNC technology. Red Stag TimberLab now operates 5x 5-axis CNC Processing Centres.

Red Stag TimberLab Continues to Invest in CNC Technology

Designers in New Zealand can now create unique timber structures using timber profiles, connections, and designs that were not previously available. Red Stag TimberLab offers a 3D computer modeling service that allows accurate, detailed models that identify and resolve clashes and inconsistencies before on-site construction.



Essetre Techno Multiwall's

With dimensions spanning 16,800mm L x 4,900mm W x 450mm H, and its 5-axis CNC routers, the Essetre Techno Multiwall 1 is the largest CNC machine ever produced by Essetre and stands out as a versatile work centre for processing large CLT panels and Glulam beams. Equipped with twin 55kW 15,000RPM liquid-cooled 5-axis milling heads to reduce cycle times by executing multiple machining operations in a single pass, and a 55kW 5-axis saw blade of up to 1200mm diameter, it ensures high-speed and accurate operations. CLT panels and GLT members are automatically fed onto the worktop and zeroed to the datum point. The machine cabin, fitted with live tooling, performs intricate milling, drilling, and sawing operations with efficiency. A full-length rigid steel chassis guarantees high accuracy and reliability, making the Techno Multiwall a powerhouse in large-scale timber processing.

The Essetre Techno Multiwall 2 with a CNC router identical to our Multiwall 1, has a narrower worktop (3600mm) with already fitted twin milling heads.

Essetre Techno PF

The CNC Beam Processor features 17,000mm Infeed and 17,000mm Outfeed decks, facilitating efficient handling of materials. Equipped with twin 5-axis milling heads, it offers precise and versatile machining capabilities. CLT and GLT beams are loaded onto the Infeed deck using a Vacuum Handling Crane. The machine's large grippers securely hold the member as it passes through the stationary milling centre. This setup enables the twin heads to machine all six sides of the member simultaneously in a single pass.

Ideal for applications such as stairs and beams that demand intricate milling, drilling, and sawing on all surfaces, ensuring streamlined and high-quality production.

Red Stag TimberLab's continuous investment in the latest manufacturing technology undoubtedly enhances our capabilities and capacity even further, for growing demands in the industry for mass timber products. With each new advanced CNC machine, we gain more potential to tackle an even broader range of projects, offer more diverse services, and improve overall efficiency and quality in our manufacturing processes.

Weinmann WMP 240

The Weinmann WMP 240 is the largest CNC bridge Weinmann offers. A 5-axis gantry designed to handle large members and complex shapes & geometry, it can complete demanding tasks with speed and precision. A safety housing encloses the entire gantry, ensuring the safety of workers and the machine during processing. The machine can work on one very long piece across the full length of the CNC bed. Or, it can be split into two separate zones, allowing staff to work on previous or upcoming workpieces. All support tables can be lowered within the processing area. This enables the machine to process extremely deep (up to 600mm) and large section-size elements.

It has an automatic tool changer for the 5-axis head to access. The tool carousel holds various tools such as drills, routers, milling heads, saws, and a chainsaw. In addition to the 5-axis head, this machine also employs a separate deep drilling capacity that can drill horizontally up to 1200mm into a workpiece; a large morticing unit and a large diameter ripping saw.

Hundegger Speed-Cut SC3

The Speed-Cut SC3 is specifically developed for rapid and precise cutting, drilling, milling, slotting, marking, and labelling of timber parts. It handles timber cross-sections ranging from 20mm x 40mm to 200mm x 450mm, and items up to 10,000mm long. The Speed-Cut incorporates a flexible saw unit and a 3-axis multi-tool head fitted with routers, drills, and milling heads. The flexible saw can make cuts at any angle and inclination, and the 3-axis head combined with the drive/conveyor systems enables complex geometry milling, similar to what can be produced with a 5-axis head. All these features make it suitable for a wide range of cutting needs. With two independently operating conveyor systems, it ensures fast and precise timber handling, minimizing retooling and re-setting requirements.



Weinmann WMP 240



Hundegger Speed-Cut SC3



Essetre Techno Multiwall 1



Essetre Techno: Multiwall 1, Multiwall 2, PF

Advantages of Using Red Stag TimberLab

Lead Time – Red Stag TimberLab’s CNC processing hub’s capability and machining capacity significantly reduce lead times for bespoke product. State-of-the-art CNC technology also improves efficiency to ensure the most cost-effective solutions are delivered.

Accuracy - With computer controlled (CNC) processing, precise dimensional accuracy is guaranteed with each element fabricated to the same tolerances and accuracy to 1 mm; giving reliable quality solutions.

One-Stop-Shop - Providing options for a range of structural products (Glulam, LVL & CLT) means the structural system can be optimised and still delivered under a single procurement package. Having one fabricator responsible for modelling and CNC processing all products ensures each element is fabricated to the same tolerances and to the same accuracy.

Prefabrication - Accurately detailed components enable efficient prefabrication, saving costly on-site construction time.

Quality - With our skilled 3D computer modelling service & in conjunction with our CNC capabilities, we produce precise, detailed models that incorporate every component and connection within very fine tolerances. This enables us to identify and resolve clashes and inconsistencies that would not have otherwise been noticed until the construction phase.

Connections - Complex connection detailing can be produced to demanding tolerances.

Innovation - Flexibility of form means innovative designs can be achieved that were not previously possible.

Shaping - With 5-axis processing capable of forming complex surfaces, 3D shapes can be produced effortlessly in timber.