

SPARTAN TITAN JOIST

SPARTAN TITAN JOIST BRACKET STJB (SINGLE JOIST)

The Spartan Titan Joist Bracket Single (STJB) is designed to allow larger holes to be cut in floor joists. Installing a Spartan Titan Joist Bracket re-instates the structural integrity of the penetrated joist.

SPECIFICATIONS

PRODUCT CODE	STJB	
MATERIAL	Galvanised Steel	
THICKNESS	1.6mm	
JOIST HEIGHTS SUITABLE	140 -290 mm	
JOIST WIDTH SUITABLE	45mm	
FASTENERS REQUIRED	30x 35mm Hex head Tek screws 10x 20mm Square head screws	

APPLICATION & USE

To ensure optimal performance and maintain its intended function, the Spartan Titan Joist Bracket requires strict adherence to the installation specifications and connection details outlined in the product datasheet.

All components included in the Spartan Titan Joist Bracket kit are crucial for proper installation and must be used exclusively.

Integration of any unauthorized components is strictly prohibited as it compromises the product's design integrity.

This product is intended for specific applications and environments, so ensure its use aligns with both its designated purpose and the environmental conditions outlined in NZS 3604:2011 Table 4.1.

Keys Points

- Drill the hole anywhere along the joist span, but ensure the penetration edge is at least one joist depth from the end of the timber joist. Refer to Table below for maximum hole size based on joist dimensions.
- The penetration zone around the hole must be free of defects like knots, cracks, twists, cupping, bowing, or splits that could compromise structural integrity.
- Timber Grade greater than or equal to SG8 required.
- No modifications are permitted to the STJB
- Minimum floor thickness of 19mm required

NEW ZEALAND BUILDING CODE (NZBC) COMPLIANCE PROVISIONS

The Spartan Titan Joist Bracket has been evaluated against the relevant provisions of the New Zealand Building Code and demonstrates compliance with the following:

- **Structural Requirements (Clause B1):** Supports performance under various load conditions including self-weight, occupancy, seismic forces, snow, and wind, as outlined in B1.3.1, B1.3.2, B1.3.4, and applicable parts of B1.3.3.
- **Material Durability (Clause B2):** Designed to meet or exceed a minimum service life of 50 years in accordance with B2.3.1(a) and B2.3.2.
- **Safety of Materials (Clause F2):** Constructed from materials that meet F2.3.1, ensuring they are non-hazardous for use in building environments.

ALTERNATIVE COMPLIANCE PATHWAY – NZS3604:2011

In situations where a timber joist has been altered by drilling or notching, reinforcement is necessary to meet structural standards. The Spartan Titan Joist Bracket offers a validated solution that aligns with the intent of **NZS3604:2011 clauses 8.5.1.6 and 8.7.5**, providing a practical method to restore strength and load capacity.

This bracket has been engineered to re-establish the joist's performance using verification techniques consistent with the **New Zealand Building Code Clauses B1 (Structure) and B2 (Durability)**, ensuring continued compliance after modification.

JOIST SIZE (MM)	MAXIMUM HOLE SIZE (MM)
140 x 45	60
190 x 45	122
240 x 45	122
290 x 45	122

DURABILITY ASSURANCE

The Spartan Titan Joist Bracket is finished with a corrosion-resistant coating that meets or exceeds the standards outlined in NZS 3604:2011 Table 4.1. This ensures long-term performance in compliant environments.

STORAGE AND HANDLING

To preserve the bracket's integrity before installation:

- Store the bracket in a dry, covered location away from moisture and corrosive agents.
- Avoid stacking or placing heavy objects on top of the bracket to prevent deformation.
- Handle with care to preserve the galvanized coating and structural profile, as damage may compromise performance.

SPARTAN TITAN JOIST BRACKET SINGLE INSTALLATION GUIDELINES:

Installation Steps:

1. Install the two angles on either side of the hole and securely screw them onto the joist and underside of the flooring. Ensure the bracket is snug against the timber member and flooring above.
2. Install the U-shaped channel to the joist's underside using the screws for a snug fit.
3. Ensure all holes are fixed with the supplied screw

