

SPARTAN

SPARTAN TITAN STUD

SPARTAN TOP PLATE & STUD BRACKET

Product Code: STSB

The Spartan Top Plate & Stud Bracket (STSB) is a solution for creating service holes in timber framing. It allows drilling of a maximum 60mm diameter hole through top plates (including packers) or wall studs, facilitating the passage of utilities such as plumbing pipes, air conditioning ducts, or central vacuum lines. By installing the STSB, the structural integrity of the penetrated member is effectively restored.

The STSB is independently certified in New Zealand by an International Structural Engineering company.



SPECIFICATIONS

PRODUCT CODE	STSB
MATERIAL	Galvanised Steel
THICKNESS	1.6 mm
PRODUCT HEIGHT	35 mm
PRODUCT WIDTH	87 mm
PRODUCT LENGTH	240 mm
REQUIRED FASTENERS (SUPPLIED) (All screw holes must be filled)	12x 75mm Hex head Tek screws for Double stud or top plate. 12x 35mm Hex head Tek screws for single stud or top plate.

APPLICATION & USE

Spartan Top Plate & Stud Stiffener (STSB) - An Alternative Solution to NZS 3604

The STSB offers an alternative solution NZS 3604 regarding holes in top plates. It restores structural integrity to 90 x 45mm and 140 x 45mm wall frame top plates and studs with service holes up to 60mm diameter drilled through their centres.

Key Points:

- Certified for use when installed according to the product datasheet and using all provided components.
- No modifications to the STSB are permitted.
- Installation must be on continuous top plates, avoiding splice joints.
- Timber grade greater than or equal to SG8.
- Ensure there are no timber defects (i.e., knots, wane, want, resin pockets) within 100mm of the STSB

Top Plate Applications:

- For use in single or double 90x45mm top plates, within the limitations of Table 8.16 of NZS 3604.
- Maximum 1x 60mm Ø hole between studs. Further holes should skip at least one bay of studs.
- Maximum 60mm Ø hole is located centrally in the top plate (i.e. 15mm edge distance each side).
- Top plates are continuous for at least 2 stud spacings.

Stud Applications:

- For use in 90x45mm common studs within the limitations of Table 8.2 of NZS3604, excluding studs in subfloors beneath two storeys and studs supporting point loads (e.g. from trusses and floor beams).
- Maximum 1x 60mm Ø hole per stud.
- Maximum 60mm Ø hole is located centrally in the stud (i.e. 15mm edge distance each side).

New Zealand Building Code (NZBC) Compliance

The Spartan STSB is designed and manufactured to comply with the following provisions of the New Zealand Building Code:

- Clause B1 – Structure: Meets the performance requirements of B1.3.1, B1.3.2, and B1.3.4, addressing loads from self-weight, imposed gravity loads, earthquake, snow, and wind (i.e., B1.3.3 (a), (b), (f), (g), and (h)). Applicability may vary depending on the specific use case.
- Clause B2 – Durability: Complies with B2.3.1(a) for a minimum durability of not less than 50 years, and B2.3.2.
- Clause F2 – Hazardous Building Materials: Satisfies F2.3.1, ensuring the product does not present a health hazard when used as intended.

DURABILITY

The Spartan Top Plate & Stud Stiffener features a corrosion-resistant finish that meets or exceeds the requirements of **NZS 3604:2011 Table 4.1**, ensuring long-term durability and compliance with New Zealand building standards.

PRODUCT HANDLING & STORAGE

To ensure optimal performance and longevity, the STSB requires proper storage prior to use. It must be kept in a weatherproof environment, shielded from moisture to prevent any potential corrosion or degradation. Additionally, handle the bracket with care to avoid damage to its surface, protective galvanized coating, and profile, as any compromise could impact its functionality.

Installation

- Use 12 x 75mm hex head screws when fixing to a double top plate or stud.
- Use 12 x 35mm hex head screws when fixing to a single stud or top plate.
- The service hole must be centrally located across the timber member and must not exceed 60mm in diameter.
- The centre of the hole must be positioned at least 120mm central from the edge of the timber member or any intersection with another timber element (e.g., stud or top plate).
- The STSB must be installed within the wall framing, aligned parallel to the timber member it reinforces.
- All screw holes must be filled to ensure structural performance.

