

# Building Product Information Sheet

## Class 1

**Product Name:**ThunderBolt<sup>®</sup>Pro Hex Head ETA**Date of Report:**

08 / 11 / 2023

**Product Line:**ICCONS ThunderBolt<sup>®</sup>Pro Screw-Bolt Anchors**Product Description and its intended use:**

ICCONS Thunderbolt<sup>®</sup>Pro Hex Head is the latest high tensile screw-in, self-tapping concrete and masonry anchor for use in a wide range of materials used in the construction Industry. Trusted by engineers and architects in New Zealand. Installation is quick and easy, simply drill, clean the hole and screw in the anchor. The Thunderbolt Pro is the most complete screw bolt range on the market with the entire range equipped with ETA assessments for cracked concrete, fire performance and seismic ratings (please see technical data for specification requirements). Ranging from 5mm to 18mm in various lengths, ICCONS new and improved Thunderbolt Pro is your anchor for all applications from racking and shelving to demanding structural steel applications.

**Key technical specifications:**

- Product type: Screw Anchor
- Finish options: High Tensile Steel - Zinc Yellow, High Tensile Steel - Galvanised Nautilus C, Stainless Steel.
- Head style: Hex head, Countersunk head
- Base material: Concrete, cracked concrete, stone, solid brick, hollow brick, aerated concrete.
- Special features: Removable, European Assessment ETA, Fire Rated.
- Load performance: Medium loads, light loads.
- Drill diameter, drill depth etc varies based on part number. Refer to document 'ThunderBolt<sup>®</sup>PRO Catalogue', available in the link below:

[https://sestofasteners.co.nz/products/thunderbolt%C2%AEpro-hex-head?\\_pos=1&\\_sid=2d18c2370&\\_ss=r](https://sestofasteners.co.nz/products/thunderbolt%C2%AEpro-hex-head?_pos=1&_sid=2d18c2370&_ss=r)

**Product Identifier**

Thunderbolt PRO-SXTB Hex Head

**Place of Manufacture:**

Overseas

**Manufacturer:**

ICCONS PTY LTD

**Importer:**

Sesto Fasteners Limited

Address: 5e Piermark Drive  
Rosedale, Auckland

Postcode: 0632

Website: [www.sestofasteners.co.nz](http://www.sestofasteners.co.nz)

Email: [orders@sestofasteners.co.nz](mailto:orders@sestofasteners.co.nz)

Phone: +64 94158564

NZBN: 9429041704103

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## Relevant Building Code Clauses:

- B1 Structure: Performance clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4
- B2 Durability: Performance clauses B2.2, B2.3.1(a), B2.3.2
- C6 Structural Stability (Fire Safety): Performance clauses C6.1, C6.2
- F2 Hazardous Building Materials: Performance clause F2.3.1

## Statement on how the building product is expected to contribute to compliance:

- B1 Structure: clauses B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3, B1.3.4:
  - ICCONS Thunderbolt Pro-SXTB bolts comply with standard AS 5216:2021 (Design of post-installed and cast-in fastenings in concrete).
  - ETA assessed for cracked concrete, fire performance and C1/C2 seismic ratings (ETA-20/0902, of 03/08/2021). Assessment options vary based on part number. Refer to document 'ETA - C1 & C2 Approval' and 'ThunderBolt®PRO Catalogue' to confirm the specific assessment options available per bolt:  
[https://sestofasteners.co.nz/products/thunderbolt%C2%AEpro-hex-head?\\_pos=1&\\_sid=6fa3d2993&\\_ss=r](https://sestofasteners.co.nz/products/thunderbolt%C2%AEpro-hex-head?_pos=1&_sid=6fa3d2993&_ss=r)
  - ICCONS Thunderbolt Pro-SXTB is compliant with the requirements referenced in the National Construction Code (NCC).
  - CE certified.
  - Suitable for medium loads.
  - Suitable for overhead applications.
  - Available on ICCONS Design Pro AS 5216:2021 compliant software.
  - Performance data values are available, derived from the product ETA (ETA 20/0902) and in accordance with AS 5216:2021. Data is available across a range of parameters and conditions, including qualification based on ETA 20/0902 - Option 1 and ETA 20/901 redundant non-structural systems (RNSS). Refer to page 16, document 'ThunderBolt®PRO Catalogue' and ETA 20/0902 for more details.
- B2 Durability: Performance clauses B2.2
  - Materials specifications:
    - Zinc: Carbon Steel Zinc Coating  $\geq 5 \mu\text{m}$  plus Red Tip.
    - Galvanised: Carbon Steel NAUTILUS C Coating plus Red Tip.
    - Stainless Steel: Shaft and Head 316 (A4) and Tip - Hardened Carbon Steel.
  - Corrosion resistant Nautilus® C coating available. Nautilus® C corrosion resistant coating is a multi layered corrosion resistant coating designed for indoor applications as well as outdoor applications based on urban and industrial atmospheres, moderate sulfur dioxide pollution and coastal areas with low salinity. This is typically covered in EN ISO 12944-2, corrosivity category environment C3 and durability range HIGH according to EN
  - 316 SS (A4) Stainless Steel: ideal for external use.
  - Screwbolt design provides no expansion, ideal for close to edge applications.
  - Suitable for installation with impact drivers.
  - Removable, tamperproof options available.
  - Optimum high-performance concrete and masonry screw-bolt anchor
  - Flanged hex head design with "lightning bolt" locking serrations for a secure fix.
  - Also available in CSK, internal thread, external thread, pan and truss head designs.
  - Stamped head markings for easy identification and traceability.
- C6 Structural Stability (Fire Safety): Performance clauses C6.1, C6.2:
  - ICCONS Thunderbolt Pro-SXTB bolts have been ETA assessed for fire performance (ETA-120/0902). Refer to document 'ETA - C1 & C2 Approval' in link below for testing data (Annex C8 and C9):  
<https://sestofasteners.co.nz/collections/screwbolts/products/screwbolt-hex-galv?variant=37578216538281>
- F2 Hazardous Building Materials: Performance clause F2.3.1
  - ICCONS Thunderbolt Pro-SXTB bolts are safe when handled.

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## Limitations on the use of the building product:

- Performance data is derived from ETA 20/0902, based on a single anchor with no edge or spacing influence. For detailed calculations involving multiple anchors please download the ICCONS anchor software program (ICCONS Design PRO) for assistance. This download is available via the ICCONS website [www.iccons.com.au](http://www.iccons.com.au).
- Use the correct diameter drill bit, drill to the required anchor embedment depth plus at least one anchor diameter deeper.
- Ensure hole is drilled perpendicular to the concrete surface with maximum deviation of up to 5° degrees. Failure to do so may cause anchor breakage
- Clean dust and other material from the hole before installation.
- DO NOT use a worn drill bit outside of drill bit tolerance specification. Worn Drill bits will affect the anchor installation either during installation or post installation.
- When installing with an Impact screw gun do not exceed the recommended torque specifications, failure to comply may result in anchor breakage.
- When securing the screwbolt, do not over tighten and exceed the recommended clamping torque requirements, failure to comply may result in anchor breakage.
- ICCONS Thunderbolt PRO bolts cut a thread in the base material drilled hole during installation and do not require an installation torque setting to ensure proper installation. A clamping torque is recommended for the ICCONS Thunderbolt PRO to ensure that the fixture being fastened is tight against the base material surface. Refer to the document 'Install Torque Specs' in the link below for maximum torque guide values:  
<https://sestofasteners.co.nz/collections/screwbolts/products/screwbolt-hex-galv?variant=37578216538281>
- Impact Screw Gun Torque specification: Always refer to specific product torque specifications prior to installation. This can be found in ICCONS® Technical Data Sheets, ICCONS® Product Guide or on the individual product labels. Link below:  
<https://www.iccons.com.au/support/downloads?type=tech>

## Design requirements that would support the use of the building product:

ICCONS ThunderBolt®Pro SXTB bolts have been designed for use in the following applications:

- Structural fixings in cracked and uncracked concrete
- Tunnel fit out
- Cable tray support systems
- Seismic bracing of MEP systems
- Fastening steel strut channel and support straps for MEP
- Facade structures
- Guard rails
- Bollards and protective barriers
- Machinery and plant equipment
- Stadium and theatre seating
- Acoustic barriers
- Balustrades and hand rails
- Scaffolding ties
- Formwork
- Plumbing and fire services
- Steel frame construction
- Timber frame construction
- Glazing, windows and storefronts
- Racking and shelving
- Fixing wood structures in concrete

Features that support use of the building product:

- Optimum high-performance concrete and masonry screw bolt anchor
  - AS 5216 compliant
  - ETA assessed for cracked concrete and fire performance
  - Countersunk head design with "lightning bolt" locking serrations for a secure fix
  - Also available in Hex Head and Internal thread head designs
  - Stamped head markings for easy identification and traceability
  - Zinc, corrosion resistant Nautilus C and stainless steel coating options
  - Fast installation at reduced torque
  - No expansion, ideal for close to edge applications
  - Suitable for installation with impact drivers
  - Removable
  - Available on ICCONS Designfix software.
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## Installation requirements:

Refer to document 'How To Install' for an illustrated guide, and 'Install Torque Specs', available in the link below:  
[https://sestofasteners.co.nz/products/thunderbolt%C2%AEpro-hex-head?\\_pos=1&\\_sid=6fa3d2993&\\_ss=r](https://sestofasteners.co.nz/products/thunderbolt%C2%AEpro-hex-head?_pos=1&_sid=6fa3d2993&_ss=r)

Refer to page 9, document 'ThunderBolt®PRO Catalogue' for in depth installation data, available in the link above.

### Installation steps:

1. Using the correct diameter drill bit, drill a hole to the required anchor embedment depth plus at least one anchor diameter deeper. (This ensures residual dust doesn't interfere with the anchor installation).
  - Caution: Ensure hole is drilled perpendicular to the concrete surface with maximum deviation of up to 5 degrees. Failure to do so may cause anchor breakage.
2. Clean dust and other material from the hole.
  - Caution: DO NOT use a worn drill bit outside of drill bit tolerance specification. Worn Drill bits will affect the anchor installation either during installation or post installation.
3. Screw in the anchor using a torque wrench or impact screw gun. Apply pressure against the fixing and rotate to engage the first thread. Continue to tighten the anchor until flanged head is firmly seated against fixture.
  - Caution: When installing with an impact screw gun do not exceed the recommended torque specifications, failure to comply may result in anchor breakage.
4. Installation complete!
  - Caution: Do Not over tighten and exceed the recommended clamping torque requirements, failure to comply may result in anchor breakage.

### Impact Screw Gun Torque Specification:

Important: Always refer to specific product torque specifications prior to installation. This can be found in ICCONS Technical Data Sheets, ICCONS Product Guide or on the individual product labels.

## Maintenance requirements:

N/A. no ongoing maintenance required.

## Is the building product subject to warning or ban under section 26?:

No

