Mass timber construction fasteners

Code approved
SFS environmental impact focus

Being a worldwide leading supplier of mechanical fastening systems, assemblies, precision molded parts and logistics solutions, sustainable business practices are part of our DNA. Together with our customers we develop and supply customized solutions for the most varied of industries and markets that offer sustained added value.

The SFS Group has a microsite which describes the varied activities, posts statistics and shares success stories.

SFS Division Construction
North America

New initiative
Our North America Construction Division has undertaken initiatives to achieve sustainable success with improvements in production, facility infrastructure and logistics. Now we have expanded our commitment to activities in our marketing efforts. Utilizing FSC certified and 100% recycleable paper, LED-UV inks and participating in the PrintReleaf program will help SFS reduce our paper footprint in measurable ways.

Based on 2021-2022 print activities, these initiatives had the following environmental impact:

- **102.5 US Short tons less, a difference of 615.2 trees**
  Wood use: measures the amount of wood required to produce a given amount of paper.

- **262.8 million BTUs less, a difference of 311.9 residential refrigerators operated/year**
  Total energy: measures all energy required over the paper's life cycle, including all renewable and nonrenewable resource use, including black liquor and all wood sources.

- **GHG 299,700 pounds CO₂ equivalent less, a difference of 27.3 cars/year**
  Greenhouse gases/climate change impacts: measures carbon dioxide or CO2 from burning fossil fuels, methane from paper decomposing in landfills and short-lived climate pollutants (such as black carbon and organic carbon) which contribute to climate change by trapping energy from the sun in the earth’s atmosphere.

- **70,000 gallons less, a difference of 51.4 clothes washers operated/year**
  Water usage: measures the amount of process and cooling water that is consumed or degraded throughout the life cycle of the paper product.

- **2,160 pounds less, a difference of 487 people generating solid waste/day**
  Solid waste: measures sludge and other wastes generated during pulp and paper manufacturing and used paper disposed of in landfills and incinerators.

To find out more about the SFS Group sustainable activities, visit: sustainability.sfs.com

We make. You build. They plant.

We believe that as the use of mass timber grows, so does our responsibility to our planet. We're looking for partners to build a sustainable future together.

Every project built with our mass timber hardware supports the National Forest Foundation to plant trees and regenerate our forests. Join us in ensuring our industry and planet thrive.
Mass timber construction

SFS manufactures customized fastening solutions for timber construction, providing robust designs that meet the latest standards.

Low slope roofing

SFS has been at the forefront for setting standards in the mechanical fastening of membranes and insulation on low slope roofs for over 50 years.

Roofing and cladding

SFS is a pioneer in self-drilling and threading fasteners for roofing and cladding, offering a wide spectrum of products, backed up by comprehensive technical expertise.

Rainscreen support systems

SFS manufactures rainscreen support systems that are safe, economic and effective for use across a wide range of building types.

Rainscreen attachment systems

SFS offers a wide range of fasteners for secure installation of building facade materials, including HPL, fiber cement, ACM systems, curtain walls and insulated metal panels. All fasteners are designed to meet aesthetic, strength and sustainability requirements.

Post frame

SFS has a broad line of fasteners specifically designed for metal to wood applications that will meet budgetary, environment or unique project needs. Our first-rate engineering is accompanied by collaborative customer service.
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Product geometry

HTP-T-CS-PT-8,0×220

1 Product family
CC: Combination connect: double thread
WR: Wood reinforcement: special large diameter, full thread
WB: Wood bar: threaded rod
WS: Wood through steel: self-drilling dowel
VB: Verbundwerkstoff beton: (timber) concrete composite
HTP: Heavy timber: core products for variety of timber connections

2 Material
T: Tempered carbon steel
S: Stainless steel

3 Head style
CS: Countersunk
FH: Flange head
CH: Cylindrical head
H: Combination hexagon head

4 Thread
PT: Partial thread
FT: Full thread
DT: Double thread
VFT: Variable full thread with “magic close effect”

5 Diameter (D₂)
Outer thread, mm

6 Length (L)
Nominal length, mm
### Coatings

<table>
<thead>
<tr>
<th>Code</th>
<th>Treatment</th>
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</thead>
<tbody>
<tr>
<td>A2K</td>
<td>Fe/Zn5B per ASTM F1941</td>
</tr>
<tr>
<td>A3K</td>
<td>Fe/Zn8B per ASTM F1941</td>
</tr>
<tr>
<td>Durocoat®</td>
<td>Zinc rich organic multi-coat process for optimum corrosion resistance</td>
</tr>
</tbody>
</table>

### Material

- Carbon steel with zinc*
- 304 Stainless (1.4567)*
- Carbon steel with Duracoat®

*All HTP and CC fasteners are treated with a proprietary dry film torque modification system, providing for effortless installation.

---

<table>
<thead>
<tr>
<th>D2: Diameter</th>
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</thead>
<tbody>
<tr>
<td>L: Nominal length</td>
</tr>
<tr>
<td>Lg: Thread length</td>
</tr>
<tr>
<td>Dh: Head diameter</td>
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</table>
# Fastener matrix

<table>
<thead>
<tr>
<th>Screw type</th>
<th>Thread type</th>
<th>Diameter, in (mm)</th>
<th>Length range available, in (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Head type</td>
<td></td>
<td>Countersunk (CS)</td>
</tr>
<tr>
<td>CC</td>
<td>Double thread (DT)</td>
<td>1/4” (6.5)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5/16” (8.5)</td>
<td></td>
</tr>
<tr>
<td>WR</td>
<td>Full thread (FT)</td>
<td>1/2” (13)</td>
<td>15-3/4” to 39-3/8” (400–10000)</td>
</tr>
<tr>
<td>HTP</td>
<td>Partial thread (PT)</td>
<td>1/4” (6)</td>
<td>2” to 11-3/4” (50–300)</td>
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<td></td>
<td></td>
<td>5/16” (8)</td>
<td>3-1/8” to 19-5/8” (80–500)</td>
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<td></td>
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<td>3/8” (10)</td>
<td>3-1/8” to 19-5/8” (80–500)</td>
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<tr>
<td></td>
<td>Full thread (FT)</td>
<td>1/4” (6)</td>
<td>1-5/8” to 6-1/4” (40–160)</td>
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<td></td>
<td></td>
<td>5/16” (8)</td>
<td>2-3/8” to 15” (60–380)</td>
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<tr>
<td></td>
<td></td>
<td>3/8” (10)</td>
<td>4-3/4” to 15” (120–380)</td>
</tr>
</tbody>
</table>

1 HTP with milling pockets; WR without milling pockets
2 Internal T-drive
3 Raised flange
## Connection matrix

<table>
<thead>
<tr>
<th>Material</th>
<th>CLT</th>
<th>Glulam or timber</th>
<th>Concrete</th>
<th>Structural steel</th>
<th>Wood framing</th>
<th>Light guage steel framing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vertical</td>
<td>Horizontal</td>
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<td>Glulam/timber</td>
<td>Horizontal</td>
<td>• • • • • • • • •</td>
<td>• • • • • • • •</td>
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<tr>
<td>CLT</td>
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<tr>
<td></td>
<td>Vertical</td>
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<td>• • • • • • • •</td>
<td>• • • • • • • •</td>
<td>• • • • • • • •</td>
<td>• • • • • • • •</td>
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</tbody>
</table>
## Fastener overview

<table>
<thead>
<tr>
<th>Fastener Code</th>
<th>Head Type</th>
<th>Thread Type</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td>HTP-T-CS-PT-6xL</td>
<td>1/4&quot; countersunk, partial thread</td>
<td>2&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-8xL</td>
<td>5/16&quot; countersunk, partial thread</td>
<td>3-1/8&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10xL</td>
<td>3/8&quot; countersunk, partial thread</td>
<td>3-1/8&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-PT-6xL</td>
<td>1/4&quot; flange head, partial thread</td>
<td>3-7/8&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-FT-8xL</td>
<td>5/16&quot; flange head, full thread</td>
<td>3-1/8&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-FT-10xL</td>
<td>3/8&quot; flange head, full thread</td>
<td>4-3/4&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-PT-8xL</td>
<td>5/16&quot; flange head, partial thread</td>
<td>4-3/4&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-PT-10xL</td>
<td>3/8&quot; flange head, partial thread</td>
<td>5-1/2&quot;</td>
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</tr>
<tr>
<td>HTP-T-H-FT-8xL</td>
<td>5/16&quot; hex head, full thread</td>
<td>2&quot;</td>
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</tr>
<tr>
<td>HTP-T-H-FT-10xL</td>
<td>3/8&quot; hex head, full thread</td>
<td>5-1/2&quot;</td>
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<tr>
<td>HTP-T-H-PT-8xL</td>
<td>5/16&quot; hex head, partial thread</td>
<td>4-3/4&quot;</td>
<td></td>
</tr>
<tr>
<td>HTP-T-H-PT-10xL</td>
<td>3/8&quot; hex head, partial thread</td>
<td>5-1/2&quot;</td>
<td></td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Length (inches)</th>
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<td>19-5/8&quot;</td>
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### Fastener overview continued

<table>
<thead>
<tr>
<th>Fastener Code</th>
<th>Description</th>
<th>Length (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-CS-VFT-6xL</td>
<td>1/4&quot; countersunk, full thread</td>
<td>1-5/8&quot;</td>
</tr>
<tr>
<td></td>
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<td>6-1/4&quot;</td>
</tr>
<tr>
<td>HTP-T-CS-FT-8xL</td>
<td>5/16&quot; countersunk, full thread</td>
<td>2-3/8&quot;</td>
</tr>
<tr>
<td>HTP-T-CS-FT-10xL</td>
<td>3/8&quot; countersunk, full thread</td>
<td>4-3/4&quot;</td>
</tr>
<tr>
<td>HTP-T-CH-FT-6xL</td>
<td>1/4&quot; cylinder head, full thread</td>
<td>4-3/4&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7-7/8&quot;</td>
</tr>
<tr>
<td>HTP-T-CH-FT-8xL</td>
<td>5/16&quot; cylinder head, full thread</td>
<td>4-3/4&quot;</td>
</tr>
<tr>
<td>HTP-T-CH-FT-10xL</td>
<td>3/8&quot; cylinder head, full thread</td>
<td>4-3/4&quot;</td>
</tr>
<tr>
<td>WR-T-CS-FT-13xL</td>
<td>1/2&quot; countersunk, full thread</td>
<td></td>
</tr>
<tr>
<td>HTP-T-CH-DT-6.5xL</td>
<td>1/4&quot; cylinder head, double thread</td>
<td>3-7/8&quot;</td>
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<td>8-1/2&quot;</td>
</tr>
<tr>
<td>HTP-T-CH-DT-8.5xL</td>
<td>5/16&quot; cylinder head, double thread</td>
<td>3-7/8&quot;</td>
</tr>
<tr>
<td>WS-T-7xL</td>
<td>1/4&quot; self-drilling dowel with cylinder head</td>
<td>2-7/8&quot;</td>
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<td>9-1/8&quot;</td>
</tr>
<tr>
<td>VB-48-7.5xL</td>
<td>5/16&quot; timber-concrete composite with external T-</td>
<td>6-1/8&quot;</td>
</tr>
<tr>
<td></td>
<td>drive</td>
<td>8-5/8&quot;</td>
</tr>
</tbody>
</table>

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<tr>
<td>39-3/8&quot;</td>
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<td>39-3/8&quot;</td>
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</tbody>
</table>

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HTP partial thread

Value engineered for ultimate efficiency

Designers and installers alike can appreciate the wide range of timber connection possibilities within the HTP range. Generally used in laterally loaded connections, HTP partially threaded screws undergo a proprietary heat treatment process that results in superior bending yield strength, while maintaining incredible ductility. Generally a 90 degree bend is achieved without fracture of an HTP screw.

The revolutionary point and shank geometry of HTP partially threaded screws makes installation quick and effortless. A drilling tip with specially crafted milling ribs enables installation at reduced spacing without cracking of the timber members, even without pre-drilling. Shank ribs on these screws slightly enlarge the hole after the threaded part of the timber connection, minimizing the torque to install by reducing the friction effect of the shank and ensuring an efficient installation process. With a wide range of application flexibility, effortless installation without pre-drilling, superior bending yield strength and unbelievable ductility; HTP partially threaded screws epitomize value engineering, while ensuring the most secure connections.

Product Information

- No pre-drilling required
- Faster driving
- Reduced risk of splitting the wood
- Lower driving torque

Approvals

Combination hexagon head
The combination hexagon head with T-drive allows comfortable and universal processing with various tools

FH
Flange head provides higher load transmission due to the increased clamping surface of the head

CS
Countersunk head with milling grooves for flush countersinking of the head in timber and steel connections.

Shank ribs
Permit easy, stress free driving

Higher thread pitch
For faster driving

Tip with milling ribs
Reduces the risk of splitting the wood
# HTP countersunk

### Features
- Countersunk head with milling grooves
- T-drive
- Partial thread
- Bright zinc plated, A3K
- Carbon steel

### Approvals
- [CE](#)
- [ETS](#)
- [ESR-4480](#)

### Material
- [CHROME (VI) FREE](#)

## 1/4" (6 mm) Carbon steel countersunk head

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D2)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lg)</th>
<th>Head dia. (Dh)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-CS-PT-6.0×50</td>
<td>1/4&quot; 6.0</td>
<td>2&quot; 50</td>
<td>1-1/8&quot; 30</td>
<td>7/16&quot; 11.7</td>
<td>T30</td>
<td>200</td>
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<tr>
<td>HTP-T-CS-PT-6.0×60</td>
<td>2-3/8&quot; 60</td>
<td>1-3/8&quot; 36</td>
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<td>HTP-T-CS-PT-6.0×70</td>
<td>2-3/4&quot; 70</td>
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<td>HTP-T-CS-PT-6.0×80</td>
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<td>1-7/8&quot; 48</td>
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<td>7-1/8&quot; 180</td>
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<td>HTP-T-CS-PT-6.0×220</td>
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<tr>
<td>HTP-T-CS-PT-6.0×280</td>
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<tr>
<td>HTP-T-CS-PT-6.0×300</td>
<td>11-3/4&quot; 300</td>
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</tr>
</tbody>
</table>

---

For use in dry, interior applications

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HTP countersunk

Features

- Countersunk head with milling grooves
- T-drive
- Partial thread
- Bright zinc plated, A3K
- Carbon steel

Approvals

Material

For use in dry, interior applications

5/16” (8 mm) Carbon steel countersunk head

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D₂)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lₜ)</th>
<th>Head dia. (Dₜ)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-CS-PT-8.0×80</td>
<td>5/16”</td>
<td>8.0</td>
<td>2-3/8”</td>
<td>60</td>
<td>9/16”</td>
<td>14.8</td>
</tr>
<tr>
<td>HTP-T-CS-PT-8.0×90</td>
<td>3-1/2”</td>
<td>90</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-8.0×100</td>
<td>3-7/8”</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-8.0×120</td>
<td>4-3/4”</td>
<td>120</td>
<td>2-7/8”</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-8.0×140</td>
<td>5-1/2”</td>
<td>140</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-8.0×160</td>
<td>6-1/4”</td>
<td>160</td>
<td>3-7/8”</td>
<td>100</td>
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<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-8.0×180</td>
<td>7-1/8”</td>
<td>180</td>
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<tr>
<td>HTP-T-CS-PT-8.0×200</td>
<td>7-7/8”</td>
<td>200</td>
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<tr>
<td>HTP-T-CS-PT-8.0×220</td>
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<tr>
<td>HTP-T-CS-PT-8.0×260</td>
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<td>260</td>
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<tr>
<td>HTP-T-CS-PT-8.0×320</td>
<td>12-5/8”</td>
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<tr>
<td>HTP-T-CS-PT-8.0×340</td>
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<tr>
<td>HTP-T-CS-PT-8.0×360</td>
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<tr>
<td>HTP-T-CS-PT-8.0×420</td>
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<tr>
<td>HTP-T-CS-PT-8.0×460</td>
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<td>460</td>
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<tr>
<td>HTP-T-CS-PT-8.0×500</td>
<td>19-5/8”</td>
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</tbody>
</table>
## HTP countersunk

**Features**
- Countersunk head with milling grooves
- T-drive
- Partial thread
- Bright zinc plated, A3K
- Carbon steel

**Approvals**

<table>
<thead>
<tr>
<th>Material</th>
<th>ETA-19/0053</th>
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</thead>
</table>

**Material**

3/8” (10 mm) Carbon steel countersunk head

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<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D2)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lg)</th>
<th>Head dia. (Dh)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-CS-PT-10.0×80</td>
<td>3/8”</td>
<td>10.0</td>
<td>3-1/8”</td>
<td>80</td>
<td>2-3/8”</td>
<td>60</td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×100</td>
<td>3-7/8”</td>
<td>100</td>
<td>3-1/4”</td>
<td>120</td>
<td>5-1/2”</td>
<td>140</td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×120</td>
<td>4-3/4”</td>
<td>120</td>
<td>7-1/8”</td>
<td>180</td>
<td>7-7/8”</td>
<td>200</td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×140</td>
<td>5-1/2”</td>
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<td>10-1/4”</td>
<td>260</td>
<td>11”</td>
<td>280</td>
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<tr>
<td>HTP-T-CS-PT-10.0×160</td>
<td>6-1/4”</td>
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<td>13-3/8”</td>
<td>340</td>
<td>14-1/8”</td>
<td>360</td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×180</td>
<td>7-1/8”</td>
<td>180</td>
<td>16-1/2”</td>
<td>420</td>
<td>18-1/8”</td>
<td>460</td>
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<tr>
<td>HTP-T-CS-PT-10.0×200</td>
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<td>19-5/8”</td>
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<tr>
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<td>220</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×240</td>
<td>9-1/2”</td>
<td>240</td>
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<td></td>
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</tr>
<tr>
<td>HTP-T-CS-PT-10.0×260</td>
<td>10-1/4”</td>
<td>260</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×280</td>
<td>11”</td>
<td>280</td>
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<tr>
<td>HTP-T-CS-PT-10.0×300</td>
<td>11-3/4”</td>
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<tr>
<td>HTP-T-CS-PT-10.0×320</td>
<td>12-5/8”</td>
<td>320</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×340</td>
<td>13-3/8”</td>
<td>340</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>HTP-T-CS-PT-10.0×360</td>
<td>14-1/8”</td>
<td>360</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×380</td>
<td>15”</td>
<td>380</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×400</td>
<td>15-3/4”</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×420</td>
<td>16-1/2”</td>
<td>420</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×460</td>
<td>18-1/8”</td>
<td>460</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-CS-PT-10.0×500</td>
<td>19-5/8”</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Features**
- Combination hexagon head
- T-drive
- Partial or full thread
- Bright zinc plated, A3K
- Carbon steel

**Approvals**

<table>
<thead>
<tr>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrome (VI) Free</td>
</tr>
<tr>
<td>ESR-4480</td>
</tr>
</tbody>
</table>

**5/16” (8 mm) and 3/8” (10 mm) Carbon steel combination hexagon head**

### Full thread

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D2)</th>
<th>Nominal length (L)</th>
<th>Thread length (L_g)</th>
<th>Head dia. (D_h)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-FT-8.0×50</td>
<td>5/16”</td>
<td>8.0</td>
<td>2”</td>
<td>50</td>
<td>1/2”</td>
<td>13 mm hex/T40 100</td>
</tr>
<tr>
<td>HTP-T-FT-8.0×60</td>
<td>2-3/8”</td>
<td>60</td>
<td>2”</td>
<td>52</td>
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</tr>
<tr>
<td>HTP-T-FT-8.0×70</td>
<td>2-3/4”</td>
<td>70</td>
<td>2-3/8”</td>
<td>62</td>
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<tr>
<td>HTP-T-FT-8.0×80</td>
<td>3-1/8”</td>
<td>80</td>
<td>2-7/8”</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-FT-8.0×100</td>
<td>3-7/8”</td>
<td>100</td>
<td>3-1/2”</td>
<td>92</td>
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<tr>
<td>HTP-T-FT-10.0×60</td>
<td>3/8”</td>
<td>10.0</td>
<td>2-3/8”</td>
<td>60</td>
<td>9/16”</td>
<td>15 mm hex/T40 50</td>
</tr>
<tr>
<td>HTP-T-FT-10.0×70</td>
<td>2-3/4”</td>
<td>70</td>
<td>2-3/8”</td>
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<td></td>
</tr>
<tr>
<td>HTP-T-FT-10.0×80</td>
<td>3-1/8”</td>
<td>80</td>
<td>2-3/4”</td>
<td>70</td>
<td></td>
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</tr>
<tr>
<td>HTP-T-FT-10.0×100</td>
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<td>100</td>
<td>3-1/2”</td>
<td>90</td>
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</tbody>
</table>

### Partial thread

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D2)</th>
<th>Nominal length (L)</th>
<th>Thread length (L_g)</th>
<th>Head dia. (D_h)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-PT-8.0×120</td>
<td>5/16”</td>
<td>8.0</td>
<td>4-3/4”</td>
<td>120</td>
<td>1/2”</td>
<td>13 mm hex/T40 50</td>
</tr>
<tr>
<td>HTP-T-PT-8.0×140</td>
<td>5-1/2”</td>
<td>140</td>
<td>3-1/4”</td>
<td>84</td>
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<td></td>
</tr>
<tr>
<td>HTP-T-PT-10.0×120</td>
<td>3/8”</td>
<td>10.0</td>
<td>4-3/4”</td>
<td>120</td>
<td>9/16”</td>
<td>15 mm hex/T40 50</td>
</tr>
<tr>
<td>HTP-T-PT-10.0×140</td>
<td>5-1/2”</td>
<td>140</td>
<td>3-1/4”</td>
<td>84</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Short lengths may resemble full thread configuration.

Products with HTP-T-H-FT designation do not have shank ribs and are threaded to within 3/8” of the head.
HTP flange head

Features
- Flange head
- T-drive
- Partial thread
- Bright zinc plated, A3K
- Carbon steel

For use in dry, interior applications

Approvals

Material

CHROME (VI) FREE

1/4" (6 mm) Carbon steel flange head

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D_2)</th>
<th>Nominal length (L)</th>
<th>Thread length (L_g)</th>
<th>Head dia. (D_h)</th>
<th>Drive</th>
<th>Carton qty</th>
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</thead>
<tbody>
<tr>
<td>HTP-T-FH-PT-6.0×100</td>
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<td>6.0</td>
<td>3-7/8&quot;</td>
<td>100</td>
<td>2-3/8&quot;</td>
<td>60</td>
</tr>
<tr>
<td>HTP-T-FH-PT-6.0×120</td>
<td>4-3/4&quot;</td>
<td>120</td>
<td>2-7/8&quot;</td>
<td>72</td>
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<td></td>
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<tr>
<td>HTP-T-FH-PT-6.0×140</td>
<td>5-1/2&quot;</td>
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<td>HTP-T-FH-PT-6.0×160</td>
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</tr>
<tr>
<td>HTP-T-FH-PT-6.0×180</td>
<td>7-1/8&quot;</td>
<td>180</td>
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<td>HTP-T-FH-PT-6.0×200</td>
<td>7-7/8&quot;</td>
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<tr>
<td>HTP-T-FH-PT-6.0×220</td>
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</tr>
<tr>
<td>HTP-T-FH-PT-6.0×260</td>
<td>10-1/4&quot;</td>
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<td>HTP-T-FH-PT-6.0×280</td>
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<td>11-3/4&quot;</td>
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</table>
# HTP flange head

**Features**
- Flange head
- T-drive
- Partial or full thread
- Bright zinc plated, A3K
- Carbon steel

## Approvals
![CE, ES, PTSD, ETA-19/0053](image)

**Material**
- **Chromium (VI) free**

---

## 5/16" (8 mm) Carbon steel flange head

### Full thread

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D₂)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lₕ)</th>
<th>Head dia. (Dₘ)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
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<tbody>
<tr>
<td>HTP-T-FH-FT-8.0×80</td>
<td>5/16&quot; 8.0</td>
<td>3-1/8&quot; 80</td>
<td>2-7/8&quot; 74</td>
<td>11/16&quot; 18.0</td>
<td>T40</td>
<td>50</td>
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<tr>
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<td>3-3/4&quot; 94</td>
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<tr>
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<td>4-1/2&quot; 114</td>
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</table>

### Partial thread

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D₂)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lₕ)</th>
<th>Head dia. (Dₘ)</th>
<th>Drive</th>
<th>Carton qty</th>
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<tbody>
<tr>
<td>HTP-T-FH-PT-8.0×120</td>
<td>5/16&quot; 8.0</td>
<td>4-3/4&quot; 120</td>
<td>2-7/8&quot; 72</td>
<td>11/16&quot; 18.0</td>
<td>T40</td>
<td>50</td>
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<tr>
<td>HTP-T-FH-PT-8.0×140</td>
<td>5-1/2&quot; 140</td>
<td>3-7/8&quot; 100</td>
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<tr>
<td>HTP-T-FH-PT-8.0×160</td>
<td>6-1/4&quot; 160</td>
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<tr>
<td>HTP-T-FH-PT-8.0×180</td>
<td>7-1/8&quot; 180</td>
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<td>HTP-T-FH-PT-8.0×200</td>
<td>7-7/8&quot; 200</td>
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<td>8-5/8&quot; 220</td>
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</tr>
<tr>
<td>HTP-T-FH-PT-8.0×240</td>
<td>9-1/2&quot; 240</td>
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<tr>
<td>HTP-T-FH-PT-8.0×260</td>
<td>10-1/4&quot; 260</td>
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<tr>
<td>HTP-T-FH-PT-8.0×280</td>
<td>11&quot; 280</td>
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<tr>
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<td>HTP-T-FH-PT-8.0×320</td>
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</tr>
<tr>
<td>HTP-T-FH-PT-8.0×340</td>
<td>13-3/8&quot; 340</td>
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<td>HTP-T-FH-PT-8.0×360</td>
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<tr>
<td>HTP-T-FH-PT-8.0×380</td>
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</tr>
</tbody>
</table>

**Note:** Short lengths may resemble full thread configuration. Products with HTP-T-FH-FT designation do not have shank ribs and are threaded to within 1/4" of the head.

---

All information is non-binding and without guarantee. Before using the products, all specifications and calculations must be checked by a suitably qualified person and local regulations must be observed. This document is subject to revision. We reserve the right to make technical changes.

---

20 SFS | Mass timber construction fasteners
# HTP flange head

## Features
- Flange head
- T-drive
- Partial or full thread
- Bright zinc plated, A3K
- Carbon steel

## Approvals

![CE, BSi, ESR-4480 logos]

## Material

**CHROME (VI) FREE**

## 3/8" (10 mm) Carbon steel flange head

### Full thread

<table>
<thead>
<tr>
<th>Product code</th>
<th>Diameter ((D_2))</th>
<th>Nominal length ((L))</th>
<th>Thread length ((L_g))</th>
<th>Head dia. ((D_h))</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-FH-FT-10.0×80</td>
<td>3/8&quot;</td>
<td>10.0</td>
<td>3-1/8&quot;</td>
<td>80</td>
<td>2-7/8&quot;</td>
<td>73</td>
</tr>
<tr>
<td>HTP-T-FH-FT-10.0×100</td>
<td>3-7/8&quot;</td>
<td>100</td>
<td>3-5/8&quot;</td>
<td>93</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-FT-10.0×120</td>
<td>4-3/4&quot;</td>
<td>120</td>
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<td>100</td>
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### Partial Thread

<table>
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<th>Diameter ((D_2))</th>
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<th>Thread length ((L_g))</th>
<th>Head dia. ((D_h))</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>3-7/8&quot;</td>
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<tr>
<td>HTP-T-FH-PT-10.0×180</td>
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<td>180</td>
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</tr>
<tr>
<td>HTP-T-FH-PT-10.0×200</td>
<td>7-7/8&quot;</td>
<td>200</td>
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<tr>
<td>HTP-T-FH-PT-10.0×220</td>
<td>8-5/8&quot;</td>
<td>220</td>
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<td>HTP-T-FH-PT-10.0×240</td>
<td>9-1/2&quot;</td>
<td>240</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-PT-10.0×260</td>
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<td>260</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>HTP-T-FH-PT-10.0×280</td>
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<td>280</td>
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<td></td>
<td></td>
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<tr>
<td>HTP-T-FH-PT-10.0×300</td>
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<tr>
<td>HTP-T-FH-PT-10.0×320</td>
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<td>320</td>
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<tr>
<td>HTP-T-FH-PT-10.0×340</td>
<td>13-3/8&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>HTP-T-FH-PT-10.0×360</td>
<td>14-1/8&quot;</td>
<td>360</td>
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<tr>
<td>HTP-T-FH-PT-10.0×380</td>
<td>15&quot;</td>
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<tr>
<td>HTP-T-FH-PT-10.0×400</td>
<td>15-3/4&quot;</td>
<td>400</td>
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<td></td>
</tr>
</tbody>
</table>

Note: Short lengths may resemble full thread configuration.

Products with HTP-T-FH-FT designation do not have shank ribs and are threaded to within 1/4" of the head.
HTP full thread

Expertly engineered thread profiles
HTP fully threaded screws are generally used in axially loaded conditions such as angled attachments and connections, and reinforcements for tension and compression. These screws are available in very long lengths to accommodate a wide range of axial loading scenarios and they enjoy all the features and benefits of the HTP partially threaded fasteners and more.

1/4" countersunk HTP screws include a wildly innovative variable full thread (VFT), where the thread pitch varies along the length of the fastener, creating a contraction effect when connecting two timber members together. This creates an extremely tight, secure connection. All other HTP fully threaded fasteners have a specially engineered thread pitch based on screw diameter and length, the result of which is the optimal combination of installation time and ease; this is called “Perfect-Pitch”. Whether it’s an innovative variable thread or a custom curated “Perfect-Pitch” thread configuration, HTP fully threaded fasteners show years of engineering expertise can make the best even better.

Product Information
- Transfer of high tensile and compressive loads via the full thread
- Reduced edge and center distances
- Fast and simple to use

Approvals

Cylinder head
for countersinking without splitting, even with a tight spacing between the screws. Concealed installation is possible.

CS
Countersunk head with milling grooves for flush countersinking of the head in timber and steel connections.

Optimized full thread design up to the head
For transmission of high tensile and compressive loads

Tip with milling ribs
Reduces the risk of splitting the wood
# HTP countersunk

**Features**
- Countersunk head with milling grooves
- T-drive
- Variable full thread
- Bright zinc plated, A3K
- Carbon steel

**Approvals**
- ETA-19/0053
- ESR-4480

**Material**

### 1/4" (6 mm) Variable full thread carbon steel countersunk head

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D₂)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lₙ)</th>
<th>Head dia. (Dₕ)</th>
<th>Drive</th>
<th>Carton qty</th>
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</thead>
<tbody>
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<td>1/4&quot;</td>
<td>6.0</td>
<td>1-5/8&quot;</td>
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<td>1-1/4&quot;</td>
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<tr>
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<td>60</td>
<td>2-1/8&quot;</td>
<td>53</td>
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<tr>
<td>HTP-T-CS-VFT-6.0x80</td>
<td>3-1/8&quot;</td>
<td>80</td>
<td>2-7/8&quot;</td>
<td>73</td>
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</tr>
<tr>
<td>HTP-T-CS-VFT-6.0x100</td>
<td>3-7/8&quot;</td>
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<td>3-5/8&quot;</td>
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<tr>
<td>HTP-T-CS-VFT-6.0x120</td>
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<td>4-1/2&quot;</td>
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<td>HTP-T-CS-VFT-6.0x140</td>
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<td>5-1/4&quot;</td>
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### Features

- Countersunk head with milling grooves
- T-drive
- Full thread
- Bright zinc plated, A3K
- Carbon steel

### Approvals

![Approvals](image)

**Material**

CHROME (VI) FREE

### HTP countersunk

5/16” (8 mm) and 3/8” (10 mm) Carbon steel countersunk head

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D2)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lg)</th>
<th>Head dia. (Dh)</th>
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<td>9/16”</td>
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<td>14.8</td>
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<td>3-1/8”</td>
<td>8.0</td>
<td>2-3/4”</td>
<td>80</td>
<td>3-1/2”</td>
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<tr>
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<td>3-7/8”</td>
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<td>4-3/8”</td>
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<tr>
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<td>8-1/4”</td>
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<td>HTP-T-CS-FT-8.0x240</td>
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<td>8.0</td>
<td>9”</td>
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<tr>
<td>HTP-T-CS-FT-8.0x260</td>
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<td>HTP-T-CS-FT-8.0x280</td>
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<td>10-5/8”</td>
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<td>3/4”</td>
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<td>HTP-T-CS-FT-10.0x280</td>
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<td>10-1/2”</td>
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<td>HTP-T-CS-FT-10.0x300</td>
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<td>HTP-T-CS-FT-10.0x340</td>
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<td>12-7/8”</td>
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<td>10.0</td>
<td>14-1/2”</td>
<td>380</td>
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<td>368</td>
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</table>
# HTP cylinder head

**Features**
- Cylinder head
- T-drive
- Full thread
- Bright zinc plated, A3K
- Carbon steel

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D2)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lg)</th>
<th>Head dia. (Dh)</th>
<th>Drive Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP-T-CH-FT-6.0x120</td>
<td>1/4&quot; 6.0</td>
<td>4-3/4&quot; 120</td>
<td>4-1/2&quot; 114</td>
<td>5/16&quot; 8.0 T30 100</td>
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<tr>
<td>HTP-T-CH-FT-6.0x140</td>
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<td>5-1/4&quot; 134</td>
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</tr>
<tr>
<td>HTP-T-CH-FT-6.0x160</td>
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<td>6-1/8&quot; 154</td>
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<td>HTP-T-CH-FT-6.0x180</td>
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</tr>
<tr>
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<table>
<thead>
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<th>Product code type</th>
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<th>Nominal length (L)</th>
<th>Thread length (Lg)</th>
<th>Head dia. (Dh)</th>
<th>Drive Carton qty</th>
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<tr>
<td>HTP-T-CH-FT-8.0x120</td>
<td>5/16&quot; 8.0</td>
<td>4-3/4&quot; 120</td>
<td>4-3/8&quot; 112</td>
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<td>7-1/2&quot; 192</td>
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</tr>
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</table>

1/4" (6 mm), 5/16" (8 mm) and 3/8" (10 mm) Carbon steel cylinder head

**Approvals**

![Approvals Icon]

**Material**

- CHROME (VI) FREE

**For use in dry, interior applications**

---

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# HTP cylinder head

## Features
- Cylinder head
- T-drive
- Full thread
- Bright zinc plated, A3K
- Carbon steel

## Approvals
- **Material**
  - 1/4” (6 mm), 5/16” (8 mm) and 3/8” (10 mm) Carbon steel cylinder head
  - [ETA-19/0053](#)

## Material
- [Chrome (VI) Free](#)

## Specifications

<table>
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<tr>
<th>Product code type</th>
<th>Diameter (D₂)</th>
<th>Nominal length (L)</th>
<th>Thread length (L&lt;sub&gt;g&lt;/sub&gt;)</th>
<th>Head dia. (Dₕ)</th>
<th>Drive</th>
<th>Carton qty</th>
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**HTP stainless**

**Safety and security with stainless steel**
Experts in the timber construction sector value the advantages of HTP 304 stainless steel screws when used in challenging environmental applications such as generally damp exterior exposure and use in treated lumber. Safety and security is knowing the inherent corrosion resistance of 304 stainless steel and not relying on coating systems that can be damaged during installation or break down over time of exposure. HTP stainless steel screws provide all the excellent benefit of carbon HTP screws, but with the safety and security of 304 stainless steel.

**Product Information**
- No pre-drilling required
- Faster driving
- Reduced risk of splitting the wood
- Lower driving torque

**Approvals**

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**FH**
Flange head provides higher load transmission due to the increased clamping surface of the head

**CS**
Countersunk head with milling grooves for flush countersinking of the head in timber and steel connections.

**Shank ribs**
Permit easy, stress free driving

**Higher thread pitch**
For faster driving

**Tip with milling ribs**
Reduces the risk of splitting the wood
### HTP countersunk stainless

---

**Features**
- Countersunk head with milling ribs
- T-drive
- Partial thread
- 304 Stainless steel (A2 1.4567)

---

**Approvals**

---

**Material**

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**3/16” (5 mm) and 1/4” (6 mm) Stainless steel countersunk head**

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<th>Nominal length ((L))</th>
<th>Thread length ((L_g))</th>
<th>Head dia. ((D_h))</th>
<th>Drive</th>
<th>Carton qty</th>
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<td>1-5/8”</td>
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<tr>
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<td>HTP-S-CS-PT-5.0x70</td>
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Features

- Countersunk head with milling ribs
- T-drive
- Partial thread
- 304 Stainless steel (A2 1.4567)

Approvals

Material

3/8" (8 mm) Stainless steel countersunk head

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# HTP flange head stainless

## Features
- Flange head
- T-drive
- Partial thread
- 304 Stainless steel (A2 1.4567)

## Approvals

## Material

### 1/4" (6 mm) and 5/16" (8 mm) Stainless steel flange head

<table>
<thead>
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<th>Product code type</th>
<th>Diameter (D₂)</th>
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<th>Thread length (Lₙ)</th>
<th>Head dia. (Dₕ)</th>
<th>Drive</th>
<th>Carton qty</th>
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<td>mm</td>
<td>in</td>
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<th>Thread length (Lₙ)</th>
<th>Head dia. (Dₕ)</th>
<th>Drive</th>
<th>Carton qty</th>
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<td></td>
</tr>
<tr>
<td>HTP-S-FH-FT-8.0x80</td>
<td>3-1/8&quot;</td>
<td>80</td>
<td>2-7/8&quot;</td>
<td>74</td>
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</tr>
<tr>
<td>HTP-S-FH-FT-8.0x100</td>
<td>3-7/8&quot;</td>
<td>100</td>
<td>3-3/4&quot;</td>
<td>94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HTP-S-FH-FT-8.0x120</td>
<td>4-3/4&quot;</td>
<td>120</td>
<td>4-1/2&quot;</td>
<td>114</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Short lengths may resemble full thread configuration. Products with HTP-S-FH-FT designation do not have shank ribs and are threaded to within 3/8" of the head.*
Innovative double thread screws for efficient timber connections

Combination connect is what gives the system CC its name and it comes from the innovative double thread geometry of the screw. The double thread, which has different thread pitch and thread diameter on the point side of the fastener vs. the head side of the fastener creates a contraction effect when joining two timber members together; resulting in extremely tight, secure connections.

Tried and tested for many years in Europe, the CC system opens the door for a wide array of connection possibilities, even when making angled connections. The sleek cylinder head can be embedded into the timber member, resulting in a basically invisible connection. Particularly when used in crossing pairs, the system CC can create strong, reliable connections without the need for additional steel components. Tight, reliable connections that can be made virtually invisible, while eliminating the need for ancillary steel connection components make the CC system one of the most innovative and efficient timber connection systems available.

Product Information

- Very high load transfer
- Fast installation
- Varied pitch double thread tightly draws members together
- Low edge and spacing distances

Design

SFS provides guidance during the design and construction phase.

Approvals

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### CC

**Features**
- Cylinder head
- T-drive
- Double thread
- Bright zinc plated, A3K

**Approvals**

<table>
<thead>
<tr>
<th>Material</th>
<th>CHROME (VI) FREE</th>
</tr>
</thead>
</table>

**1/4” (6.5 mm) and 5/16” (8.5 mm) Carbon steel timber fastener**

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter ($D_2$)</th>
<th>Nominal length ($L$)</th>
<th>Thread length ($L_g$)</th>
<th>Head dia. ($D_h$)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in</td>
<td>in</td>
<td>in</td>
<td>in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC-T-CH-DT-6.5×100</td>
<td>1/4”</td>
<td>6.5</td>
<td>3-7/8”</td>
<td>100</td>
<td>3/8”</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5-1/8”</td>
<td>130</td>
<td>2-3/8”</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5-7/8”</td>
<td>150</td>
<td>2-3/4”</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7-1/2”</td>
<td>190</td>
<td>3-1/2”</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8-1/2”</td>
<td>215</td>
<td>3-7/8”</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter ($D_2$)</th>
<th>Nominal length ($L$)</th>
<th>Thread length ($L_g$)</th>
<th>Head dia. ($D_h$)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>in</td>
<td>in</td>
<td>in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC-T-CH-DT-8.5×100</td>
<td>5/16”</td>
<td>8.5</td>
<td>3-7/8”</td>
<td>100</td>
<td>1/2”</td>
<td>12.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5-7/8”</td>
<td>150</td>
<td>2-3/4”</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7-1/2”</td>
<td>190</td>
<td>3-1/2”</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8-1/2”</td>
<td>215</td>
<td>3-7/8”</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9-7/8”</td>
<td>250</td>
<td>4-3/8”</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10-5/8”</td>
<td>270</td>
<td>4-3/4”</td>
<td>122</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>11-3/4”</td>
<td>300</td>
<td>5-3/8”</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>13-3/4”</td>
<td>350</td>
<td>6-1/4”</td>
<td>158</td>
</tr>
<tr>
<td></td>
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<td>15-3/4”</td>
<td>400</td>
<td>7-1/8”</td>
<td>182</td>
</tr>
</tbody>
</table>

*2 threads each of this length.
WR

The full thread fastener for powerful connections and reinforcements

The WR is a 1/2" diameter, fully threaded screw that is available in lengths up to 39", making it the ideal solution for unique, high load connections and structural reinforcements. The high efficiency of the WR is derivative of its incredibly high mechanical properties in tension and bending, while still being able to be installed without pre-drilling. This all results in using fewer fasteners and installing them quicker, reducing the installed cost; WR is truly a powerful connection.

Product Information

- Up to 39-3/8" (1,000 mm) in length
- No pre-drilling required
- High corrosion resistance
- High technical values
- Low tendency to crack with low edge and spacing

Approvals

- ESR-4480
- ETA-12/0062

Countersunk head

Ready to countersink in the wood and for safe installation of metal attachments

High corrosion protection

The Durocoat® coating offers a significant increased corrosion resistance in a variety of applications

Efficient full thread

Very high efficiency of threading lengths up to 39-3/8" (1,000 mm) at the same time with fast installation speed

Special tip

Allowing less splitting in the wood as well as low edge and center distances, this allows slim components to be used
WR

Features
- Countersunk head
- T-drive
- Full thread
- Durocoat®

Approvals

Material

1/2" (13 mm) Carbon steel timber fastener

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D2)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lg)</th>
<th>Head dia. (Dh)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>WR-TCS-FT-13.0×400</td>
<td>1/2&quot;</td>
<td>13.0</td>
<td>15-3/4&quot;</td>
<td>15&quot;</td>
<td>7/8&quot;</td>
<td>T50</td>
</tr>
<tr>
<td>WR-TCS-FT-13.0×500</td>
<td></td>
<td>19-5/8&quot;</td>
<td>500</td>
<td>18-7/8&quot;</td>
<td>480</td>
<td></td>
</tr>
<tr>
<td>WR-TCS-FT-13.0×600</td>
<td></td>
<td>23-5/8&quot;</td>
<td>600</td>
<td>22-7/8&quot;</td>
<td>580</td>
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<tr>
<td>WR-TCS-FT-13.0×700</td>
<td></td>
<td>27-1/2&quot;</td>
<td>700</td>
<td>26-3/4&quot;</td>
<td>680</td>
<td></td>
</tr>
<tr>
<td>WR-TCS-FT-13.0×800</td>
<td></td>
<td>31-1/2&quot;</td>
<td>800</td>
<td>30-3/4&quot;</td>
<td>780</td>
<td></td>
</tr>
<tr>
<td>WR-TCS-FT-13.0×900</td>
<td></td>
<td>35-3/8&quot;</td>
<td>900</td>
<td>34-5/8&quot;</td>
<td>880</td>
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<tr>
<td>WR-TCS-FT-13.0×1000</td>
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<td>39-3/8&quot;</td>
<td>1,000</td>
<td>38-5/8&quot;</td>
<td>980</td>
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</tbody>
</table>

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The self-drilling dowel system for an economical wood-steel connection

The WS system allows you to create high quality and economical wood-steel connections.

The self-drilling dowels are installed in a single operation, saving time and money since neither the timber or steel plates require pre-drilling. With a drilling capacity of up to $3 \times 0.197''$ ($3 \times 5 \text{ mm}$) steel sheets or a single $0.394''$ ($10 \text{ mm}$) steel sheet (quality: ASTM A283 Grade C), a wide range of durable concealed connections are possible. The proprietary assembled drill tip configuration provides extremely reliable drill performance through even very thick steel sections while maintaining a high combination of bending yield and ductility within the dowel itself.

When installed the dowel does not break through the back of the connection and there is simple and reliable concealed connections.

Product Information

- Self-drilling with the special drill tip
- Removable
- Simple design
- High bending yield $\text{F}_{\text{yb}}=78.5 \text{ ksi (541 MPa)}$
- High fire resistance

Approvals

EN14592

Cylinder countersunk head
Countsinking without chips in the wood guarantees a visually appealing surface finish

Under head thread
Ensures reliable installation in the component as well as the possibility of removal

Simple design
The calculation of the tight and gap-free connection is reliable according to EN1995-1-1

Drill tip
Time-saving installation without pre-drilling in the timber and steel up to $3 \times 0.197''$ ($3 \times 5 \text{ mm}$)
### Features
- Cylinder countersunk head
- T-drive
- Bright zinc plated, A2K
- Self-drilling dowel

### Approvals

![CE](image)

EN14592

### Material

![Chrome VI Free](image)

### 1/4" (7 mm) Carbon steel timber fastener

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter ($D_2$)</th>
<th>Nominal length ($L$)</th>
<th>Thread length ($L_g$)</th>
<th>Head dia. ($D_h$)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS-T-7.0×73</td>
<td>1/4&quot;</td>
<td>7.0</td>
<td>2-7/8&quot;</td>
<td>1/2&quot;</td>
<td>3/8&quot;</td>
<td>10.0</td>
</tr>
<tr>
<td>WS-T-7.0×93</td>
<td></td>
<td></td>
<td>3-5/8&quot;</td>
<td>13</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>WS-T-7.0×113</td>
<td></td>
<td></td>
<td>4-1/2&quot;</td>
<td>113</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>WS-T-7.0×133</td>
<td></td>
<td></td>
<td>5-1/4&quot;</td>
<td>133</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WS-T-7.0×153</td>
<td></td>
<td></td>
<td>6&quot;</td>
<td>153</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WS-T-7.0×173</td>
<td></td>
<td></td>
<td>6-3/4&quot;</td>
<td>173</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WS-T-7.0×193</td>
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<td></td>
<td>7-5/8&quot;</td>
<td>193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WS-T-7.0×213</td>
<td></td>
<td></td>
<td>8-3/8&quot;</td>
<td>213</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WS-T-7.0×233</td>
<td></td>
<td></td>
<td>9-1/8&quot;</td>
<td>233</td>
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<td></td>
</tr>
</tbody>
</table>

### Accessories

Using suitable installation tools is recommended

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
<th>Material no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF-WS/M</td>
<td>Manual setting tool with dowel guidance</td>
<td>1236515</td>
</tr>
<tr>
<td>CF-WS/P</td>
<td>Pneumatically supported fram setting tool</td>
<td>730772</td>
</tr>
</tbody>
</table>

---

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Threaded rod system for maximum efficiency in tension and compression reinforcements

With the WB system, a diverse variety of reinforcement applications become feasible. For example: cross connections, notches, curved beams, main-secondary beams, etc.

Thanks to the very high tensile strength, aggressive thread geometry and large diameters; fewer threaded rods are needed, saving time and money. Load transmission is achieved strictly by the direct engagement of the coarse thread with the timber member; so the time-consuming, messy process of applying glue is eliminated. The option to cut the rods to custom lengths and the extensive complimentary installation accessories offer the greatest possible application flexibility and customer benefit.

Product Information

- Headless threaded rod
- High tensile strength of 115 ksi (800N/mm²)
- Available cut to length
- Easy application without glue
- Concealed connections and reinforcement

Cut to length

We can take care of the exact cut for you. Your advantages: no preliminary work, no cuttings, maximum economy.

Approvals

Headless threaded rod
Full embedment in the joint allows high fire resistance

Available cut to length
For a diverse range of applications and a reliable connection

Extensive range of accessories
Whether screw-in sleeves or drilling aids. Even demanding applications succeed efficiently and reliably

Powerful thread
The wood thread manufactured according to DIN 7998 offers a very high tensile strength of 115 ksi (800 N/mm²)
# WB

## Features
- Headless
- Full thread
- Bright zinc plated, A2K
- Threaded rod

## Approvals
[CE mark]

## Material
[Chrome (VI) Free]

## Carbon steel timber fastener

<table>
<thead>
<tr>
<th>Product code type</th>
<th>Diameter (D₂)</th>
<th>Nominal length (L)</th>
<th>Thread length (Lₚ)</th>
<th>Head dia. (Dₜ)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB-T16.0x3.000</td>
<td>5/8&quot;</td>
<td>16.0</td>
<td>118-1/8&quot;</td>
<td>3,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WB-T20.0x3.000</td>
<td>13/16&quot;</td>
<td>20.0</td>
<td>118-1/8&quot;</td>
<td>3,000</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

## Approvals

### Material
- Carbon steel timber fastener

## Accessories

Using suitable installation tools is recommended

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
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<th>Material no.</th>
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</thead>
<tbody>
<tr>
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<td>Drill bit for WB-T-16</td>
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<td>1119336</td>
</tr>
<tr>
<td>DWA-15-M9</td>
<td>Drill bit for WB-T-20</td>
<td>1</td>
<td>1119337</td>
</tr>
<tr>
<td>DWA-12-ZA-SET</td>
<td>Drill set for WB-T-16</td>
<td>1</td>
<td>1112594</td>
</tr>
<tr>
<td>DWA-15-ZA-SET</td>
<td>Drill set for WB-T-20</td>
<td>1</td>
<td>1112595</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZE-16-WB</td>
<td>Insertion sleeve Ø16 mm Setting tool with 1/2&quot; socket wrench drive</td>
</tr>
<tr>
<td>ZE-16-WB-blunt</td>
<td>Insertion sleeve Ø16 mm Setting tool with 1/2&quot; socket wrench drive</td>
</tr>
<tr>
<td>ZE-20-WB</td>
<td>Insertion sleeve Ø20 mm Setting tool with 1/2&quot; socket wrench drive</td>
</tr>
</tbody>
</table>
The leading and proven method for timber-concrete composite floors

The production of timber-concrete composite systems can be done simple, safe and economically with the help of VB-mounting solutions by SFS.

The complex fastener geometry developed and manufactured for this application ensures proper function in this demanding application. Coupled with ergonomic installation tools, comfortable and precise angled installation is achieved, ensuring the proper composite action. Speed and reliability of the system VB make it the most cost effective way to achieve timber-concrete composite structures in new or existing construction.

Product Information

• Very high efficiency
• Highest security
• Maximum installation comfort
• For renovation and new build construction

Approvals

Special head
External T-40 drive recess E8 for a good guide during installation and optimum power transfer allowing high tool life

Collar
Ensures the correct and reliable setting-depth

Proven system
The special geometry as well as the technical documents are aligned to highest performance requirements in wood-concrete composite systems

Thread
A low insertion-torque is realized even without pre-drilling
Features
- Special head
- T-drive
- Partial thread
- Bright zinc plated, A2K
- Timber-concrete composite

Approvals

Material

5/16" (7.5 mm) Carbon steel timber fastener

<table>
<thead>
<tr>
<th>Product code* Type</th>
<th>Diameter (D₂)</th>
<th>Nominal length (L)</th>
<th>Thread length (L₂)</th>
<th>Head dia. (D₃)</th>
<th>Drive</th>
<th>Carton qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>VB-48-7.5×100</td>
<td>5/16&quot;</td>
<td>7.5</td>
<td>6-1/8&quot;</td>
<td>4&quot;</td>
<td>1/2&quot;</td>
<td>100</td>
</tr>
<tr>
<td>VB-48-7.5×165</td>
<td>8-5/8&quot;</td>
<td>220</td>
<td>6-1/2&quot;</td>
<td>165</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Product code length designation reflects thread length (l₂). Unthreaded upper length (l₃) remains fixed at 55 mm for both nominal lengths 155 and 220.

Accessories
Using suitable installation tools is recommended

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
<th>Qty.</th>
<th>Material no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF-VB/L</td>
<td>Stand-up setting tool</td>
<td>1</td>
<td>1130228</td>
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<tr>
<td>V40-15VB</td>
<td>Insert bit</td>
<td>1</td>
<td>98173</td>
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<tr>
<td>ZA1/4&quot;-CF-WS/M</td>
<td>Magnetic bit holder</td>
<td>1</td>
<td>1659455</td>
</tr>
</tbody>
</table>

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## Accessories

### Special HD bits

for ultimate drive stability when installing SFS timber fasteners

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Drive</th>
<th>Qty.</th>
<th>Material no.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1/4” HEX x 2” T20 wedgefit</td>
<td>3</td>
<td></td>
<td>1205168</td>
</tr>
<tr>
<td>HD-30 drive bit</td>
<td>T30 wedgefit</td>
<td></td>
<td></td>
<td>1205169</td>
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<tr>
<td>HD-40 drive bit</td>
<td>T40 wedgefit</td>
<td></td>
<td></td>
<td>1205170</td>
</tr>
<tr>
<td>HD-20 drive bit</td>
<td>1/4” HEX x 1” T20 wedgefit</td>
<td>10</td>
<td></td>
<td>1205164</td>
</tr>
<tr>
<td>HD-25 drive bit</td>
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<td>HD-30 drive bit</td>
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<tr>
<td>HD-40 drive bit</td>
<td>T40 wedgefit</td>
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<td>1205167</td>
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<tr>
<td>Bit-set-HD-11 x</td>
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<td>1205178</td>
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<tr>
<td></td>
<td>1 x HD10,15,25</td>
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<tr>
<td></td>
<td>2 x HD30,40</td>
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</tr>
<tr>
<td></td>
<td>3 x HD20</td>
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<td></td>
<td>1 x ClicFix bit holder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magic flip, magnetic</td>
<td>1/4” HEX x 8”</td>
<td></td>
<td></td>
<td>1205175</td>
</tr>
<tr>
<td>ClicFix, magnetic</td>
<td></td>
<td></td>
<td></td>
<td>1205057</td>
</tr>
</tbody>
</table>

### HTP and WR bits

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Drive</th>
<th>Qty.</th>
<th>Material no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZA HEX 11,5-5/16-WR</td>
<td>Telescoping drive bit assembly holds fastener head captive for effortless installation</td>
<td>-</td>
<td>1</td>
<td>1205173</td>
</tr>
<tr>
<td>T40 drive bit*</td>
<td>5/16” x 2” T40*</td>
<td></td>
<td></td>
<td>1205176</td>
</tr>
<tr>
<td>T50 drive bit*</td>
<td></td>
<td></td>
<td></td>
<td>1205177</td>
</tr>
</tbody>
</table>

*Use independent or with ZA HEX tool 5/16*
### HTP washers

<table>
<thead>
<tr>
<th>Product</th>
<th>Diameter</th>
<th>Qty.</th>
<th>Material no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTP countersunk head 90° washer</td>
<td>8mm screw/25mm washer</td>
<td>1</td>
<td>1204958</td>
</tr>
<tr>
<td>HTP countersunk head 90° washer</td>
<td>10mm screw/30mm washer</td>
<td></td>
<td>1204959</td>
</tr>
</tbody>
</table>

### WB bits and insertion sleeves

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Qty.</th>
<th>Material no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWA-12-M7</td>
<td>Drill bit for WB-T-16</td>
<td>1</td>
<td>1119336</td>
</tr>
<tr>
<td>DWA-15-M9</td>
<td>Drill bit for WB-T-20</td>
<td></td>
<td>1119337</td>
</tr>
<tr>
<td>DWA-12-ZA-SET</td>
<td>Drill set for WB-T-16</td>
<td></td>
<td>1112594</td>
</tr>
<tr>
<td>DWA-15-ZA-SET</td>
<td>Drill set for WB-T-20</td>
<td></td>
<td>1112595</td>
</tr>
<tr>
<td>ZE-16-WB</td>
<td>Insertion sleeve Ø16 mm Setting tool with 1/2” socket wrench drive</td>
<td></td>
<td>1039597</td>
</tr>
<tr>
<td>ZE-16-WB-blunt</td>
<td>Insertion sleeve Ø16 mm Setting tool with 1/2” socket wrench drive</td>
<td></td>
<td>1333186</td>
</tr>
<tr>
<td>ZE-20-WB</td>
<td>Insertion sleeve Ø20 mm Setting tool with 1/2” socket wrench drive</td>
<td></td>
<td>1039598</td>
</tr>
</tbody>
</table>
CF-VB/L

Technical Data

<table>
<thead>
<tr>
<th>Material no.</th>
<th>1119336</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>230 V</td>
</tr>
<tr>
<td>Absorbed power</td>
<td>1100 W</td>
</tr>
<tr>
<td>Full load regime</td>
<td>2800 rpm</td>
</tr>
<tr>
<td>Overall length</td>
<td>9.4&quot;/240 mm</td>
</tr>
<tr>
<td>Height</td>
<td>39.7&quot;/1008 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>9.5 lbs/4.3 kg</td>
</tr>
<tr>
<td>Angle control</td>
<td>45° level on tool</td>
</tr>
</tbody>
</table>

Application

Manual laying machine for VB connectors.

DWA-Box

Technical Data

- Aluminum guide and wick support straps
- Drill length 1500 mm
- Drill length 2300 mm
- Compressed air connection for chip evacuation

Application

Rod air drill kit for WB. Provided with 16 mm screwdriver chuck.

<table>
<thead>
<tr>
<th>Product code</th>
<th>Drill diameter</th>
<th>Qty.</th>
<th>Material no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWA-12-BOX</td>
<td>12</td>
<td>1</td>
<td>1170391</td>
</tr>
<tr>
<td>DWA-15-BOX</td>
<td>16</td>
<td>1</td>
<td>1358172</td>
</tr>
<tr>
<td>DWA-12-15-BOX</td>
<td>12 and 16</td>
<td>1</td>
<td>1067217</td>
</tr>
</tbody>
</table>
**CF-WS/P**

![Image of CF-WS/P]

**Technical Data**

<table>
<thead>
<tr>
<th>Material no.</th>
<th>1017417</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>230 V</td>
</tr>
<tr>
<td>Absorbed power</td>
<td>1200 W</td>
</tr>
<tr>
<td>Full load regime</td>
<td>1600 rpm</td>
</tr>
<tr>
<td>Weight</td>
<td>193 lbs/87.5 kg</td>
</tr>
</tbody>
</table>

**Application**

Installation machine with pneumatic assistance for fast and economical installation of WS pins.

**CF-WS/M**

![Image of CF-WS/M]

**Technical Data**

<table>
<thead>
<tr>
<th>Material no.</th>
<th>1067215</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>230 V</td>
</tr>
<tr>
<td>Absorbed power</td>
<td>1200 W</td>
</tr>
<tr>
<td>Full load regime</td>
<td>1600 rpm</td>
</tr>
<tr>
<td>Overall length</td>
<td>16&quot;/410 mm</td>
</tr>
<tr>
<td>Height</td>
<td>31&quot;/790 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>17 lbs/7.5 kg</td>
</tr>
</tbody>
</table>

**Application**

WS manual pin setting machine.
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