



The specialist for fastening technology

OUR   
**WOOD CONSTRUCTION  
SCREWS**

**WOOD CONSTRUCTION  
SCREW DESIGN**

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**MATERIAL AND  
COATING**

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**SCREW  
PRODUCTION**

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**EUROTEC WOOD  
CONSTRUCTION SCREWS**



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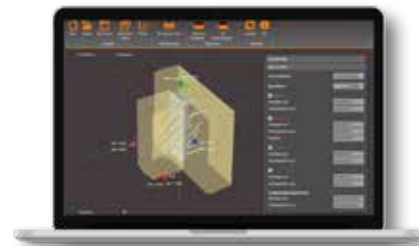
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## OUR EXPERTISE FOR YOU

### ECS DIMENSIONING SOFTWARE

Eurotec's professional calculation software (for short: ECS) is designed for **static preliminary measurements for Eurotec fasteners** and can help you with your specific projects. Our helpful dimensioning service is available free of charge to planners, tradespeople and architects.

ECS dimensioning software covers the **fields of structural timberwork, timber-concrete composite and timber engineering**. The software is also a useful tool to use as a basis for fastening timber-steel-attachment parts. Objects, intersections and details are measured in the corresponding modules. You can request the login details to use the software free of charge on our website [www.eurotec.team](http://www.eurotec.team).



CLICK **HERE** FOR A DIRECT LINK TO THE ECS DIMENSIONING SOFTWARE

## OUR ENGINEERING DEPARTMENT

Got any questions about EuroTec wood construction screws? Contact **our experts** now!



**Engineering Team**  
Tel. +49 (0)2331 62 45 444  
[technik@eurotec.team](mailto:technik@eurotec.team)

**WE'D BE DELIGHTED TO ADVISE YOU!**

## WE CAN TRAIN YOUR EMPLOYEES TOO!

To ensure that all requirements continue to be fulfilled, we keep the issue of sales in mind at all times and offer our customers an extensive range of services.

We aim to share our specialist expertise and many years of practical experience with you. We can offer you and your customers both online and in-house seminars and can also provide in-person training on the construction site.

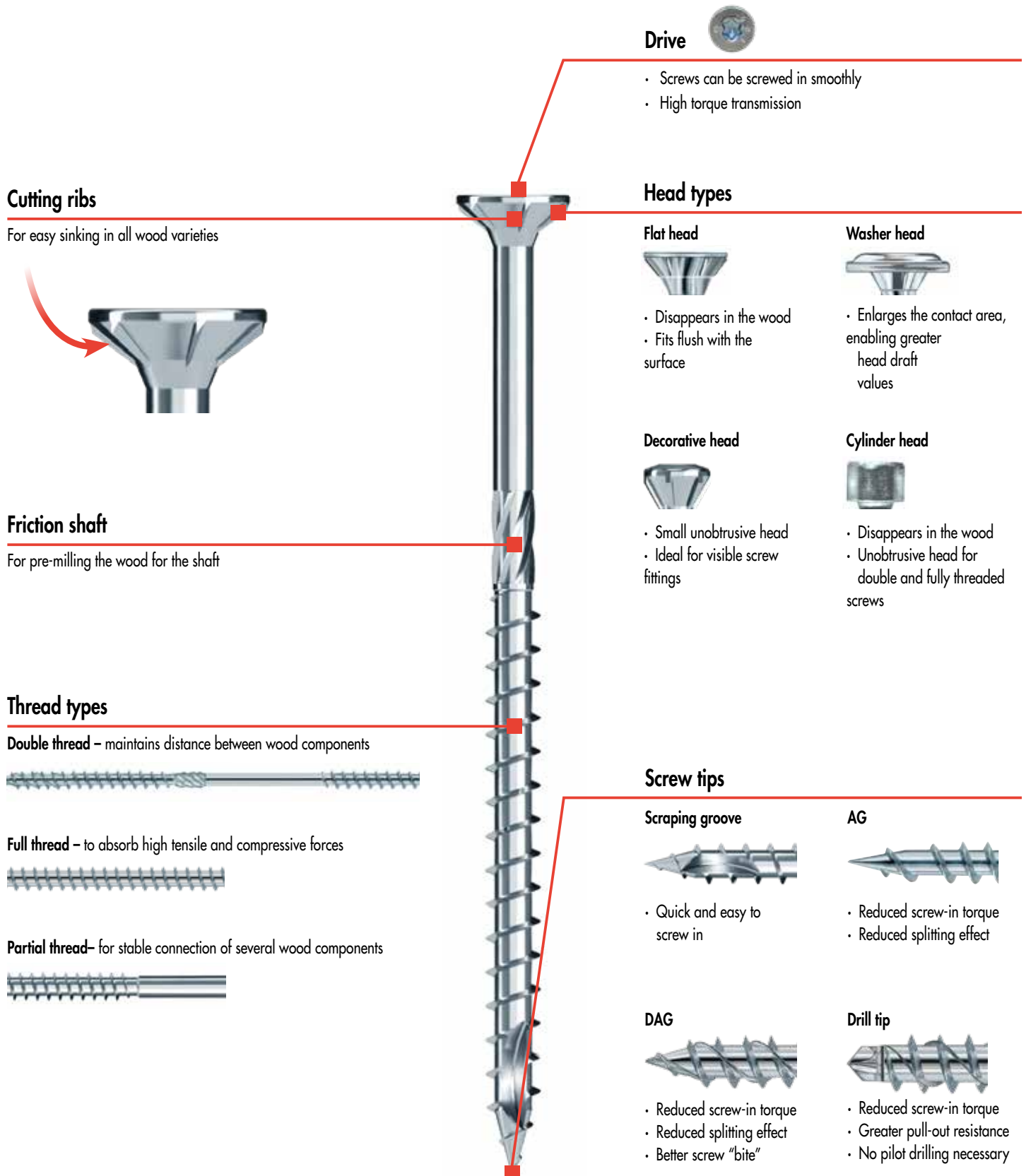
### Do you have any other unanswered questions?

Whether it's in person, by phone on **+49 2331 62 45-444** or via email at [technik@eurotec.team](mailto:technik@eurotec.team) – we are always happy to provide in-depth one-to-one advice and offer help.



# WOOD CONSTRUCTION SCREW DESIGN

FROM THE DRIVE TO THE TIP



# MATERIAL AND COATING

Eurotec wood construction screws **are long tried and tested and used worldwide**. A variety of different specifications such as the friction shaft and cutting ribs make them easier to screw in. These are available in **different quality classes and dimensions**, offering **the best possible fastening alternatives for the construction projects at hand**. The additional different thread types and screw tips offer the best solution for any application.

## MATERIAL AND COATING OVERVIEW

### Hardened carbon steel + special coating 1000

- Can be used in service classes 1 and 2 according to DIN EN 1995 (Eurocode 5)
- Can withstand up to 1000 hours of salt spray testing under DIN EN ISO 9227 NSS
- Corrosiveness category C4 long/ C5-M long under DIN EN ISO 12944-6
- Good resistance to mechanical stresses
- Not suitable for wood containing tannins

### Hardened carbon steel + blue/yellow electrogalvanised

- Resistant to corrosion
- Can be used in service classes 1 and 2 according to DIN EN 1995 (Eurocode 5)
- Good resistance to mechanical stresses
- Not suitable for wood containing tannins

### Hardened stainless steel

- Stainless steel according to DIN EN 10088 (magnetizable)
- Acid-resistant to a limited extent
- 10 years of experience without corrosion problems in suitable woods
- 50% higher breaking strength than A2 and A4
- Can be used in service classes 1, 2 and 3
- Not suitable for woods containing a large amount of tannins such as cumarú, oak, merbau, robinia, etc.
- Not suitable for saliferous or chlorinated atmospheres



### A2 stainless steel

- Suitable for saliferous atmospheres to a limited extent
- Acid-resistant to a limited extent
- Not suitable for chlorinated atmospheres
- Can be used in service classes 1, 2 and 3
- Only suitable for wood containing tannins to a limited extent



### A4 stainless steel

- Suitable for wood containing tannins
- Suitable for saliferous atmospheres
- Acid-resistant to a limited extent
- Can be used in service classes 1, 2 and 3
- Not suitable for chlorinated atmospheres



# SCREW PRODUCTION

## Production options

Whatever your requirements, with us you get everything from a single source. We use various production processes including **punching and punch-bending**, cold forming, **injection moulding**, and extrusion technology. Long screws of up to 3000 mm are produced in fully-automated machines.

## Production options

- Screws measuring 40 mm – 3000 mm
- Single, double or reduced thread
- Milling tips
- Different materials
- Different coatings
- Individual customer specifications

## Surface treatment processes

From zinc-plated to blue galvanized for long-term durability in exposed areas (C4 – C5).

## Environmental consciousness

No oil on the ground, **no exhaust emissions** in the air and in-house energy production on our own roof. We see compliance with statutory and regulatory requirements within an economically feasible scope and the promotion of an **environmentally-aware approach** as our duty.



# EUROTEC WOOD CONSTRUCTION SCREWS

## PANELTWISTEC

THE FASTENER FOR LOAD-BEARING TIMBER STRUCTURES



Paneltwistec wood construction screws are used as **fasteners for load-bearing timber structures** between components made of solid timber, glued laminated timber, cross laminated timber and veneer laminated timber, as well as similar wood-based materials, board-shaped wood-based materials or steel-timber connections. Paneltwistec wood construction screws can generally be screwed in **without any need for pre-drilling**. The exception to this rule is when they are used in deciduous wood/hardwood. The scraping groove on the **screw tip ensures that the screws "grip" quickly**, even in OSBs, for example. The cutting ribs downstream of the thread keep the shaft clear, so even long screws can be inserted with ease.

The **special screw geometry reduces the splitting effect** when screwing in.

Paneltwistec wood construction screws come in countersunk head and washer head variants, and in coated carbon steel and a variety of stainless steels.

### MATERIAL

#### Hardened carbon steel, with a special coating

- A seal is applied to the galvanised surface, causing a reaction. As a result, any weak points in the galvanised surface are securely sealed and protected.
- The Topduo screw has up to 3 times the corrosion resistance of conventional galvanised blue steel
- Can be used in service classes 1 and 2 according to DIN EN 1995 (Eurocode 5)
- Good resistance to mechanical stresses
- Prevents contact corrosion with attachment parts
- Free from chromium(VI) oxide
- Not suitable for wood containing tannins

### ADVANTAGES

- Quicker and easier to screw in
- Minimal splitting effect
- National and international certification
- Higher corrosion resistance than traditional zinc plating
- Compatible with service classes 1 and 2
- Free from chromium(VI) oxide
- Resistant to mechanical stress
- Prevents contact corrosion with attachment parts
- Screws can be screwed in smoothly thanks to the TX drive





## MATERIAL

**Hardened carbon steel, blue/yellow electrogalvanised.**

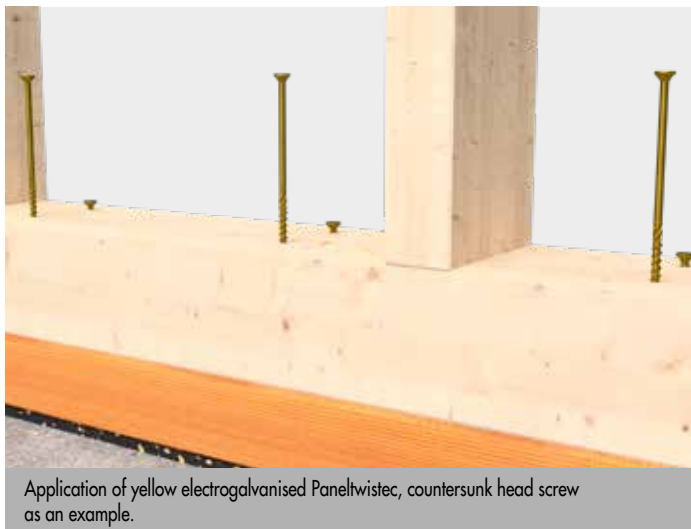
- Can be used in service classes 1 and 2 according to DIN EN 1995 (Eurocode 5)
- Not suitable for wood containing tannins

**Hardened stainless steel (martensitic stainless steel 1.4006 (C1))**

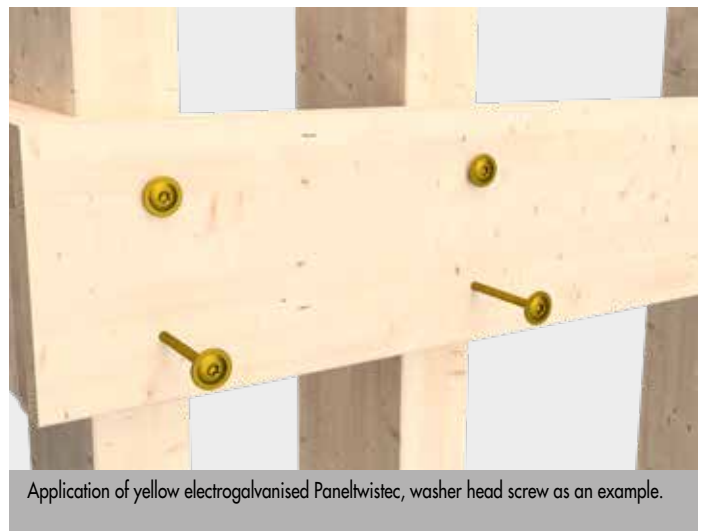
- Stainless steel according to DIN EN 10088
- Acid-resistant to a limited extent
- 20 years of experience without corrosion problems in suitable woods
- High strength
  - 50% higher breaking strength than A2 and A4 austenitic stainless steel
  - Hardened due to heat treatment
- Magnetisable
- Can be used in service classes 1, 2 and 3 according to DIN EN 1995 (Eurocode 5)
- Not suitable for woods containing a large amount of tannins such as cumarú, oak, merbau, robinia, etc.
- Not suitable for saliferous atmospheres
- Not suitable for chlorinated atmospheres

## ADVANTAGES

- Resistant to mechanical stress
- Scraping groove and cutting ribs ensure quick and easy screwing-in
- The scraping groove reduces the risk of the wood splitting
- Certification (European Technical Assessment) and CE Declaration of Performance
- Screws can be screwed in smoothly thanks to the TX drive



Application of yellow electrogalvanised Panelwistec, countersunk head screw as an example.



Application of yellow electrogalvanised Panelwistec, washer head screw as an example.

## KONSTRUX FULLY THREADED SCREW

THE POWERFUL SOLUTION FOR NEWBUILDS AND RENOVATIONS



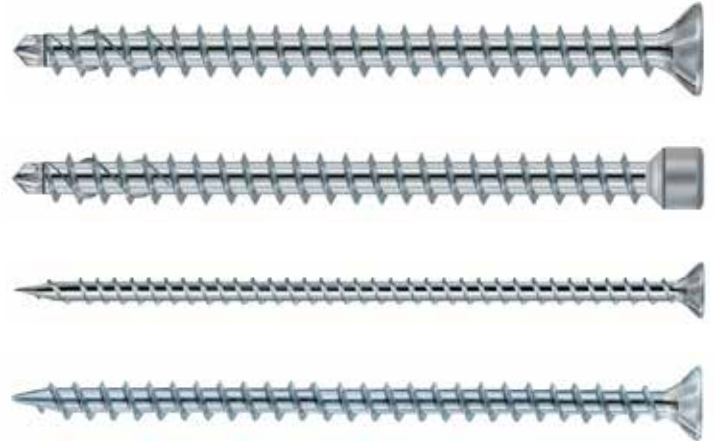
KonstruX fully threaded screws **maximise a joint's load-bearing capacity** with a high thread-extraction resistance in both components. If partially threaded screws are used, the joint's load-bearing capacity is limited by the considerably lower head pull-through resistance in the attached part. KonstruX fully threaded screws are a **cost-saving alternative** to traditional connections or wood connectors such as joist hangers and beams.

### WHAT CAN THEY BE USED FOR?

- For all load-bearing connections in timber constructions
- Timber engineering
- Carpentry
- Timber frame and timber sectional construction
- Renovation of floor slabs, etc.

### ADVANTAGES/SPECIFICATIONS

- Greater pull-out resistance and maximisation of load-bearing capacity
- Strong connection
- Time- and money-saving alternative
- Non-visible connections
- No pre-drilling required according to certification/ETA (recommended from screw lengths  $\geq 245$  mm)
- Maximum transmission of forces
- High fire resistance and no thermal bridges
- Diameter  $\varnothing 6.5 - 11.3$  mm
- Length 80 - 1,000 mm



### INSTRUCTIONS FOR USE

KonstruX fully threaded screws do not need to be pre-drilled into softwood timber. However, for longer screws and for KonstruX AG 11.3 mm it is recommended to drill a pilot hole of approx. 1/3 of the screw length in order to prevent the (long) screws from running too far into the wood.



The KonstruX used to connect two timber walls.



Example of KonstruX use in carport roof.

## VIDEOS ON HOW TO USE KONSTRUX

Have a look at our KonstruX videos too.

**Timber-timber tensile loading**

One system for all load-bearing connections in timber constructions Eurotec KonstruX fully threaded screws maximise a joint's load-bearing capacity with a high thread-extraction resistance in both components.

**Steel-timber tensile loading**

Our KonstruX fully threaded screws can be used for a wide range of applications, such as steel-timber connections, which are exposed to tension and shearing off stresses.

**Transverse-shear**

Our KonstruX fully threaded screws can be used for a wide range of applications, e.g. in the transverse reinforcement of timber.

**Support reinforcement**

KonstruX is used in timber engineering, carpentry, timber frame constructions, hall construction, timber sectional construction, floor slab renovation, etc.



## BRUTUS THREADED ROD

FULLY THREADED ROD FOR TRANSVERSE REINFORCEMENT OF GLUED TIMBER



Large timber components such as hall girders are exposed to the occurrence of **high internal tensions** which often cannot be absorbed by the timber itself. Since timber has little resistance across the grain, it is most at risk of transverse tension and, **in such cases, needs to be reinforced.**

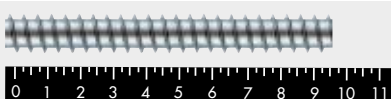
## WHAT CAN THEY BE USED FOR?

- For large timber components such as hall girders
- For use in newbuilds and existing buildings
- Newbuilds with greater span widths and thinner timber cross sections



## ADVANTAGES/SPECIFICATIONS

- BRUTUS threaded rods absorb transverse tensile forces
- Transverse reinforcement
  - of hall girders
  - of notches and gaps
  - at butting
- Can be cut to size!
- Dimensions 16 x 3000 mm



Can be cut to size!



The Brutus threaded rod is screwed in a hall girder.

## SAWTEC

HARDENED CARBON STEEL WOOD CONSTRUCTION SCREW



DESCRIPTION OF WOOD CONSTRUCTION SCREW FOR TIMBER-TIMBER AND STEEL CONNECTIONS.

- Quicker and easier to screw in with DAG tip
- DAG tip reduces the screw-in torque
- Minimal splitting effect
- Screws can be screwed in smoothly thanks to the TX drive

SCREW HEAD ADVANTAGES

- Saw teeth under the head reduce splintering
- Ideal for fittings
- Original cylinder and washer head

SPECIFICATIONS

- Diameter Ø 5.0 – 10.0 mm
- Length 40 – 400 mm)

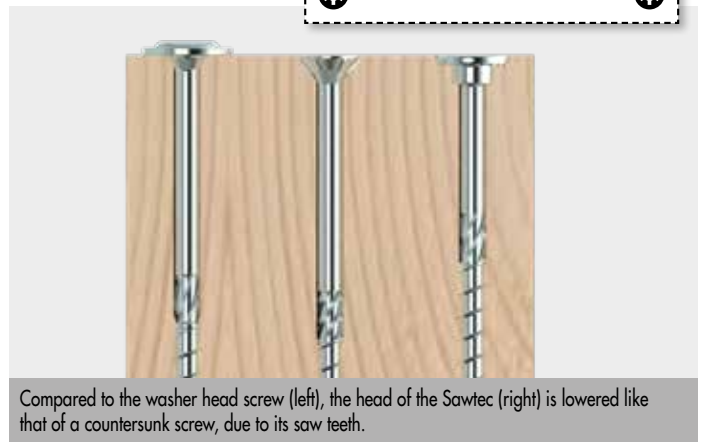


### INSTRUCTIONS FOR USE

Can be used in service classes 1 and 2 according to DIN EN 1995 (Eurocode 5)



With **SAW TEETH** under the head.



## LBS CONSTRUCTION SCREW

FOR FASTENING BEECH VENEER LAMINATED TIMBER ELEMENTS



### Application in beech veneer laminated timber without pilot drilling

The Eurotec LBS construction screw is a wood construction screw for connecting **beech veneer laminated timber elements to one another** or connecting attachment parts made of other types of wood, engineered wood or steel **to these elements**.

The LBS construction screw is designed for use in load-bearing structures in service classes 1 and 2. European Technical Approval is pending.

ADVANTAGES/SPECIFICATIONS

- No pilot drilling necessary
- Optimised anti-friction coating for use in hardwood
- DAG tip reduces the screw-in torque
- Minimal splitting effect
- Screws can be screwed in smoothly thanks to the TX drive
- Diameter Ø 8.0 mm
- Length 80 – 240 mm



The LBS construction screw in beech veneer laminated timber.

## TOPDUO ROOFING SCREW

THE WOOD CONSTRUCTION SCREW FOR EVERY RAFTER INSULATION SYSTEM

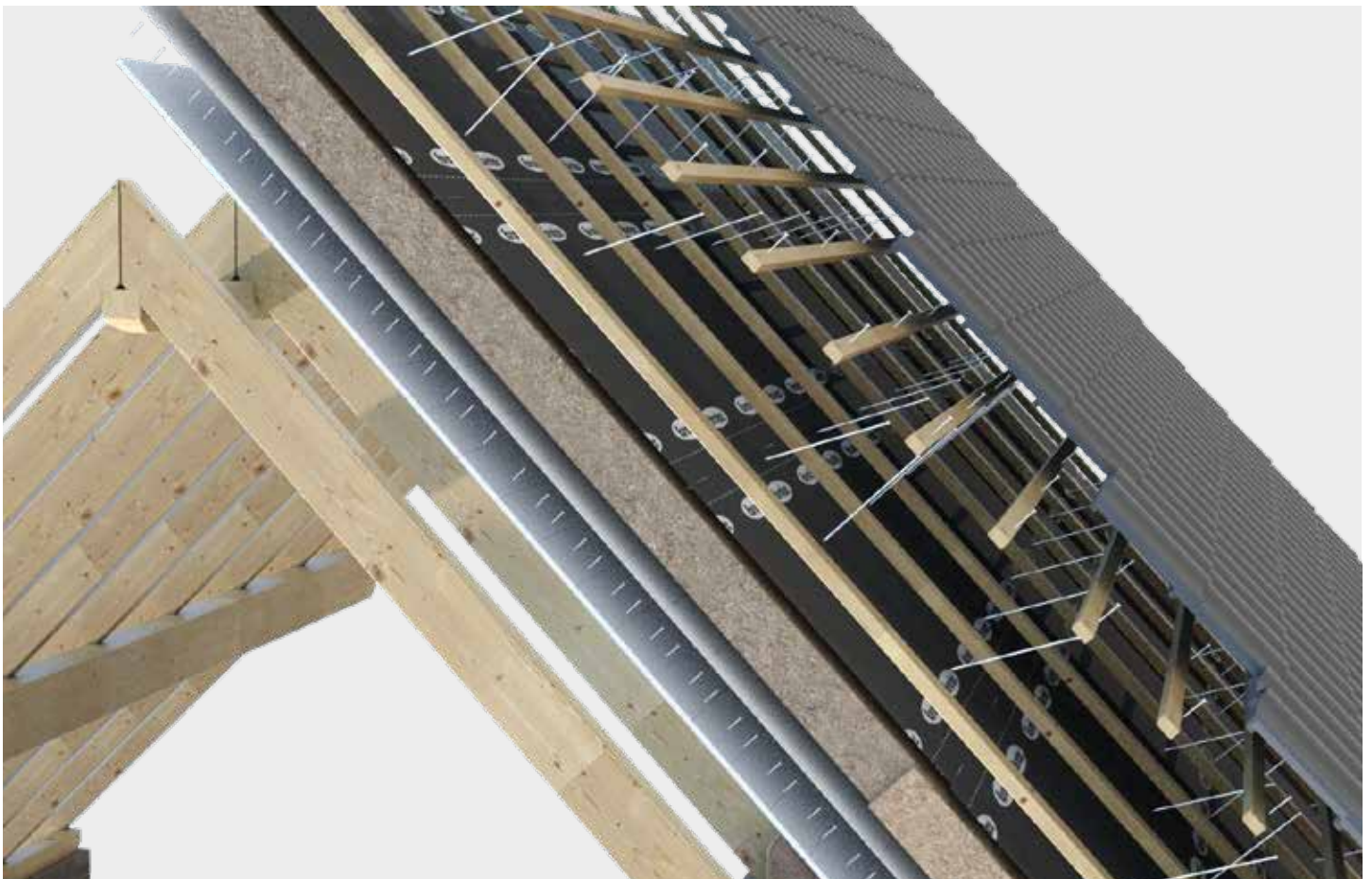


The Topduo roofing screw allows fastening of over-rafter insulation materials with **high or low compressive resistance**.

In addition, the high extraction resistance in both connecting timbers also makes the Topduo suitable for **many other applications in timber-frame construction**. The screw has a double thread and is available with a washer head or a cylinder head.

### ADVANTAGES/SPECIFICATIONS

- Double thread allows the attachment of both pressure-resistant and non-pressure-resistant insulating materials
- Due to the high pull-out resistance, it is universal for many applications in timber construction
- Resistant to mechanical stress
- Length 165 – 472 mm
- Diameter Ø 8.0



Roof insulation for a slanting roof with Topduo roofing screw

## HOBOTEC SCREW

THE FASTENER FOR TIMBER-TIMBER CONNECTIONS



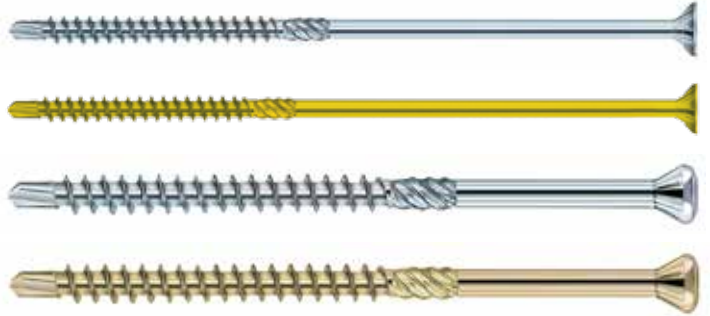
Hobotec screws enable quick, easy and clean fastening when it comes timber-timber connections. These screws are particularly suited for applications, where an increased risk of cracking and splitting exists.

### ADVANTAGES/SPECIFICATIONS

- Diameter Ø 3.2 – 6.0 mm
- Length 20 – 160 mm
- High pull-out resistance

### IDEAL FOR

applications in the fields of model construction, staircase construction, façade constructions for carpentry shops, joinery firms and roofing companies. These screws are particularly suited for applications where there is an increased risk of splitting, for instance, when laying wooden flooring, wooden trims, etc.



Hobotec decorative head screwed into terrace decking made from Douglas fir.

The thread and the innovative screw tip guarantee a tight fit and a high extraction value.



Screw heads can be supplied in RAL colours on request.

## HAPATEC/HAPATEC HELI

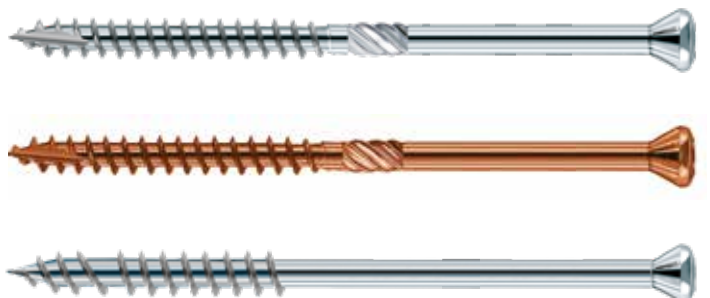
THE PANEL FASTENER FOR HARDWOOD



The Hapatec Heli of A2/A4 stainless steel is a panel fastener. The screw has an ornamental head with TX drive.

### ADVANTAGES/SPECIFICATIONS

- The special screw geometry reduces the screw-in torque
- The risk of the screw breaking off the relatively soft V4A/V2A stainless steel is thereby reduced
- Screws can be screwed in smoothly thanks to the TX drive



# OTHER ADVANTAGES OF OUR WOOD CONSTRUCTION SCREWS

## SEISMIC PERFORMANCE

EUROTEC PANELTWISTEC 8.0 MM AND TOPDUO IN THE HIGHEST "EARTHQUAKE CLASS", S3

Fasteners may be assigned to "low-cycle ductility classes" for application in earthquake-prone areas. The classes are designated as S1, S2 or S3 in ascending order of "seismic performance".

To achieve this, the screws are bent at a specific angle alternately in up to 3 cycles. With each cycle, checks are performed to determine whether at least 80% of the mean flow torque<sup>a)</sup> of an unbent screw of the same type is still being achieved. If this is the case, the screws may be classified according to the respective ductility class.

Despite their high strength these screws are ductile, meaning they are flexible enough to be bent backwards and forwards multiple times without failing due to becoming brittle. In the event of an earthquake, this increases the likelihood that, for example, a timber-timber connection would yield "softly" rather than failing suddenly. This may be the decisive factor when it comes to potential damage to life, limb and property.

<sup>a)</sup>The flow torque describes the resistance of the screw to bending; in other words, the "bending stiffness".

For more information and exact test logs see our seismic performance brochure at [www.eurotec.team/catalogue](http://www.eurotec.team/catalogue)



## IMPACT WRENCH

RELIABILITY FOR WOOD CONSTRUCTION SCREWS

### Can screws be inserted using an impact wrench?

The method of screwing in (continuous rotary drilling or tangential impact) wood construction screws is regulated neither under EN 14592 nor under European Technical Approvals (ETA). However, inserting long screws by rotary drilling is laborious for the user, leading to the question as to the admissibility of using an impact wrench with tangential impact.

To clarify this question, Eurotec hardened carbon steel wood construction screws with a nominal diameter of 8.0 mm were subjected to comparative tests. The screws were inserted using both rotary drilling and with tangential impact. Pull-out resistance and tensile strength were then tested.

**The outcome was that the screw-in method had no significant impact on the load-bearing capacity of the screw itself or the pull-out resistance.**

With this in mind, an impact wrench may also be used for driving Eurotec wood construction screws with partial or full threads made from hardened carbon steel into solid timber, glued laminated timber, laminated beams or veneer laminated timber made from softwood timber.

For more information and exact test logs see our brochure on impact wrenches and their compatibility with wood construction screws at [www.eurotec.team/catalogue](http://www.eurotec.team/catalogue)





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