

# Wood–concrete composite

Strengthening of ceiling frameworks in new builds and renovations



High load capacities at the widest possible spans require, above all, high rigidity, i.e. low sagging of the ceiling framework under load. Here, timber joist ceilings reach the limits of what is possible relatively quickly with regard to usability.

Combining wood and reinforced concrete using the TCC screw exploits the best properties of these two materials to achieve a framework with a high load-bearing capacity.

The wood–concrete composite system is used both in new builds and in the renovation of residential and commercial buildings. In new builds, increased spans can therefore be taken into account at the planning stage. This technique can also be especially useful in the case of buildings affected by changes of use.



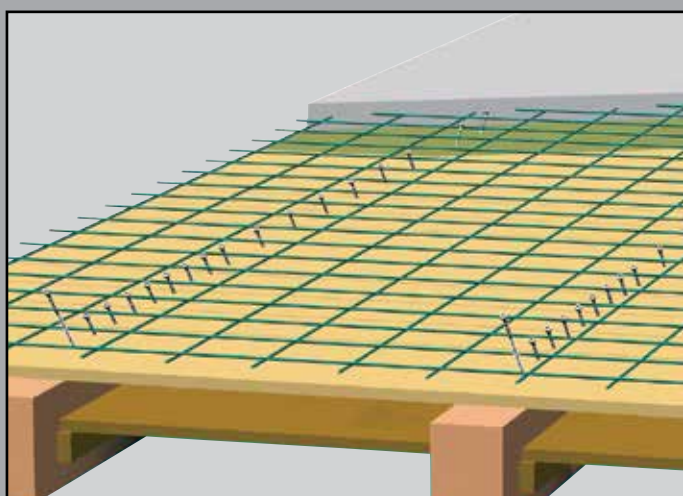
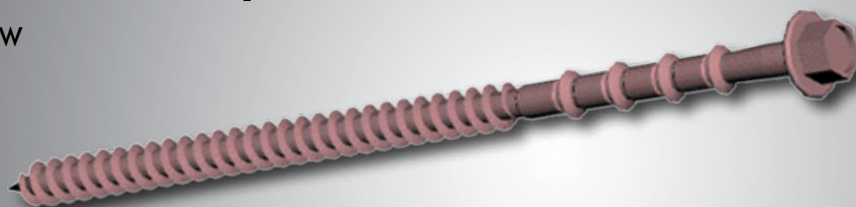
## Strengths of the wood–concrete composite system

- Increased load-bearing capacity
- Increased rigidity
- Improved sound insulation
- Increased fire resistance
- The existing joists are retained
- The boarding can be retained (Topfloor system)
- The assembly height is not significantly altered (Slimfloor system)

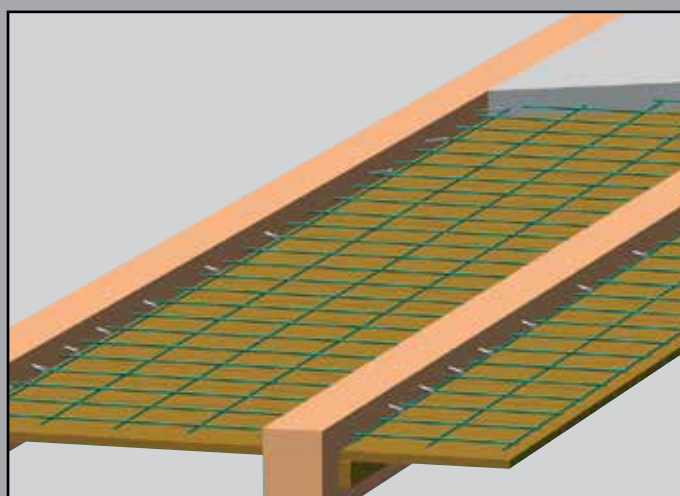


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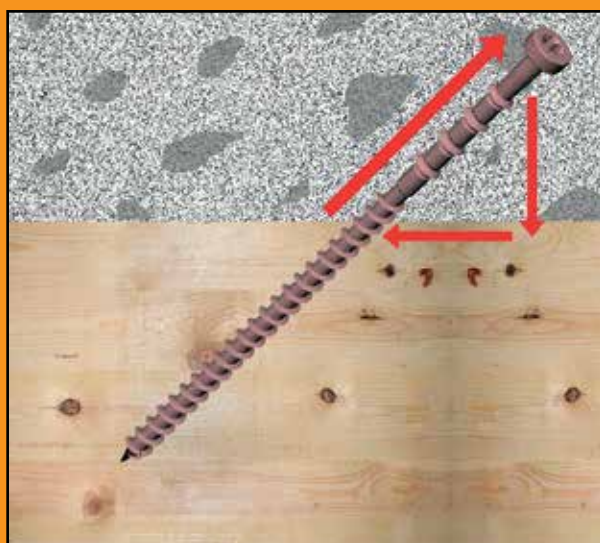
Composite screw



**Topfloor** (concrete on the top side)

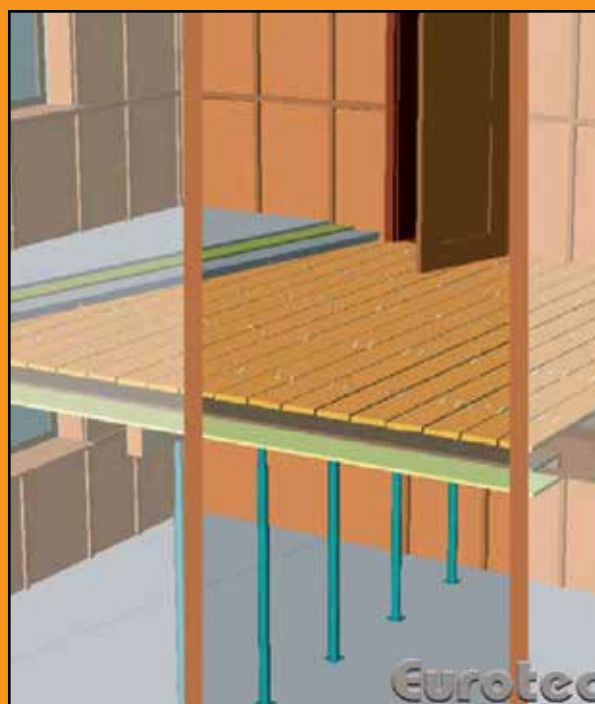


**Slimfloor** (concrete between the joists)



## Intelligent load conversion

The ceiling load is resolved into compression components between the concrete and timber and tension components in the special screw.



## Construction in the existing structure

Props lift the sag of the existing ceiling joists.



## Calculation aid

Projects for the wood-concrete composite system are precalculated by EuroTec. A customised software program based on Mathcad is available for this.

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