

HO3+

Timber Tension Joint

HO3+ allows the calculation of tensile splices in timber construction.

The tensile splice joint can be used for multipart cross sections with butt straps of solid timber or steel.

Available standards

- DIN EN 1995
- ÖNORM EN 1995
- BS EN 1995
- NI EN 1995-1/NTC
- DIN 1052

The specified Eurocodes include the corresponding National Annex.

Calculation

The load-bearing capacity verifications of the fasteners are performed in accordance with Johansen's theory. Suspension effects can be considered, if applicable.

Based on the load-bearing capacity, the software calculates the

required number of fasteners, checks the minimum spacing to be complied with and performs the necessary verifications on the connected components in the area of the connection.

The weakening of the cross section caused by the fasteners is considered in the verification of the connection area. The additional moment from distortion of the exterior butt straps is considered in a simplified manner via a stress verification with reduced tensile strength.

Fasteners

Freely selectable fasteners in all construction variants:

- Dowel pins
- Fit bolts/bolts
- Threaded rods
- Nails

Selectable in addition:

- Special dowels for

all wood-to-wood connections and steel-to-wood connections without driven-in plates.

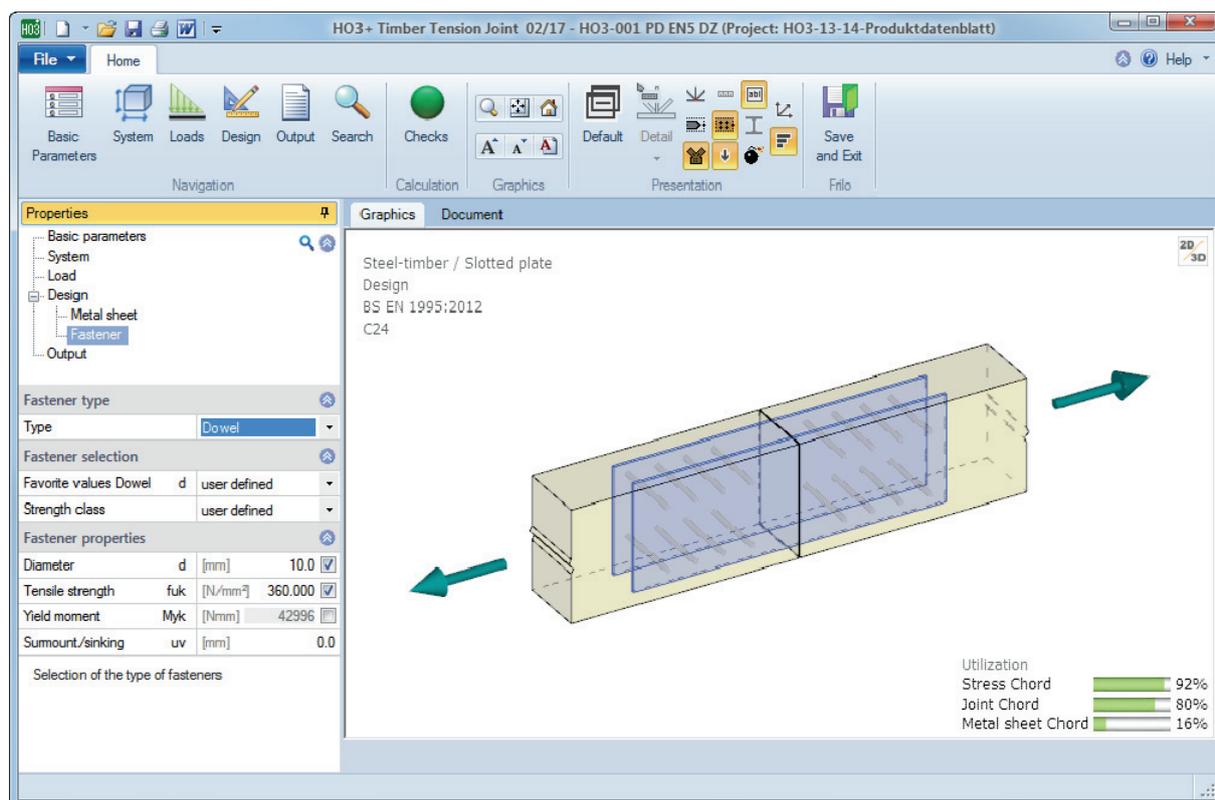
In wood-to-wood connections, combined arrangements of dowel pins and fit bolts are definable.

Construction variants for wood-to-wood joints

- Single-piece tension members with exterior butt straps.
- Two-piece and three-piece tension members with interior and exterior butt straps.

Construction variants for steel-to-wood joints:

- Single-piece tension members with up to four interior perforated plates or two exterior steel plates.
- Two-part to three-part tension members with interior and exterior tension butt straps of steel.



Prerequisites

The loads are assumed applying symmetrically to the member axis. The loading should mainly apply in the central area of the member parts. A timber member can consist of three parts maximum.

