

## TIMBER-TO-CONCRETE JOINT SYSTEM

### HYBRID STRUCTURES

The VGS, VGZ and RTR full-thread connectors are now certified for any type of application where a timber element (wall, ceiling, etc.) must transmit stresses to a concrete element (bracing core, foundation, etc.).

### PREFABRICATION

The concrete prefabrication combines with timber prefabrication: the reinforcing bars inserted into the concrete casting accommodate the full thread timber connectors; the supplementary casting carried out after installing the timber components completes the connection.

### POST-AND-SLAB SYSTEMS

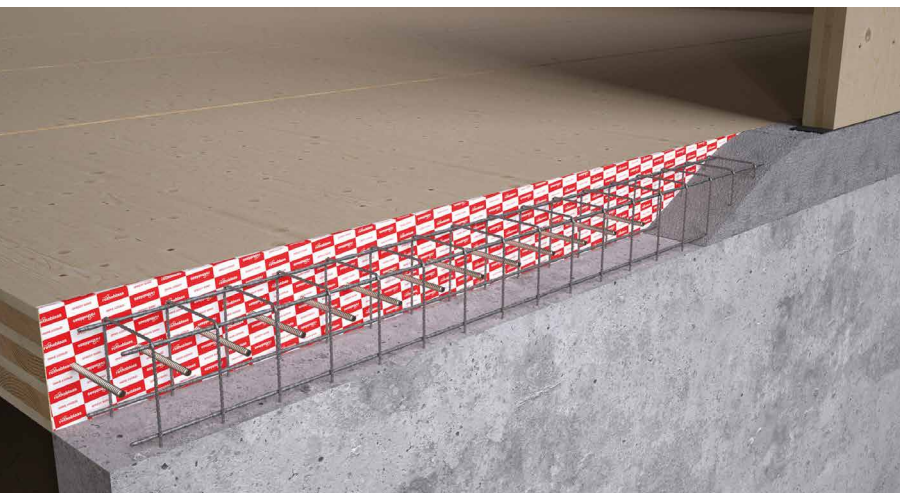
It allows connections between CLT panels with exceptional strength and stiffness for shear, bending moment and axial stress: an example is its use with SPIDER and PILLAR.



VGS



RTR



### FIELDS OF USE

Timber-to-concrete joints:

- CLT, LVL
- glulam and solid timber
- concrete according to EN 206-1

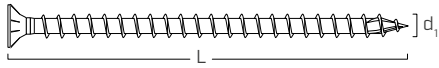
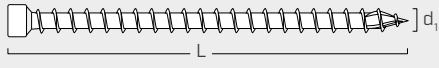
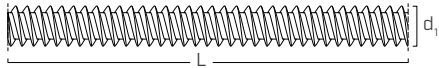




## SPIDER AND PILLAR

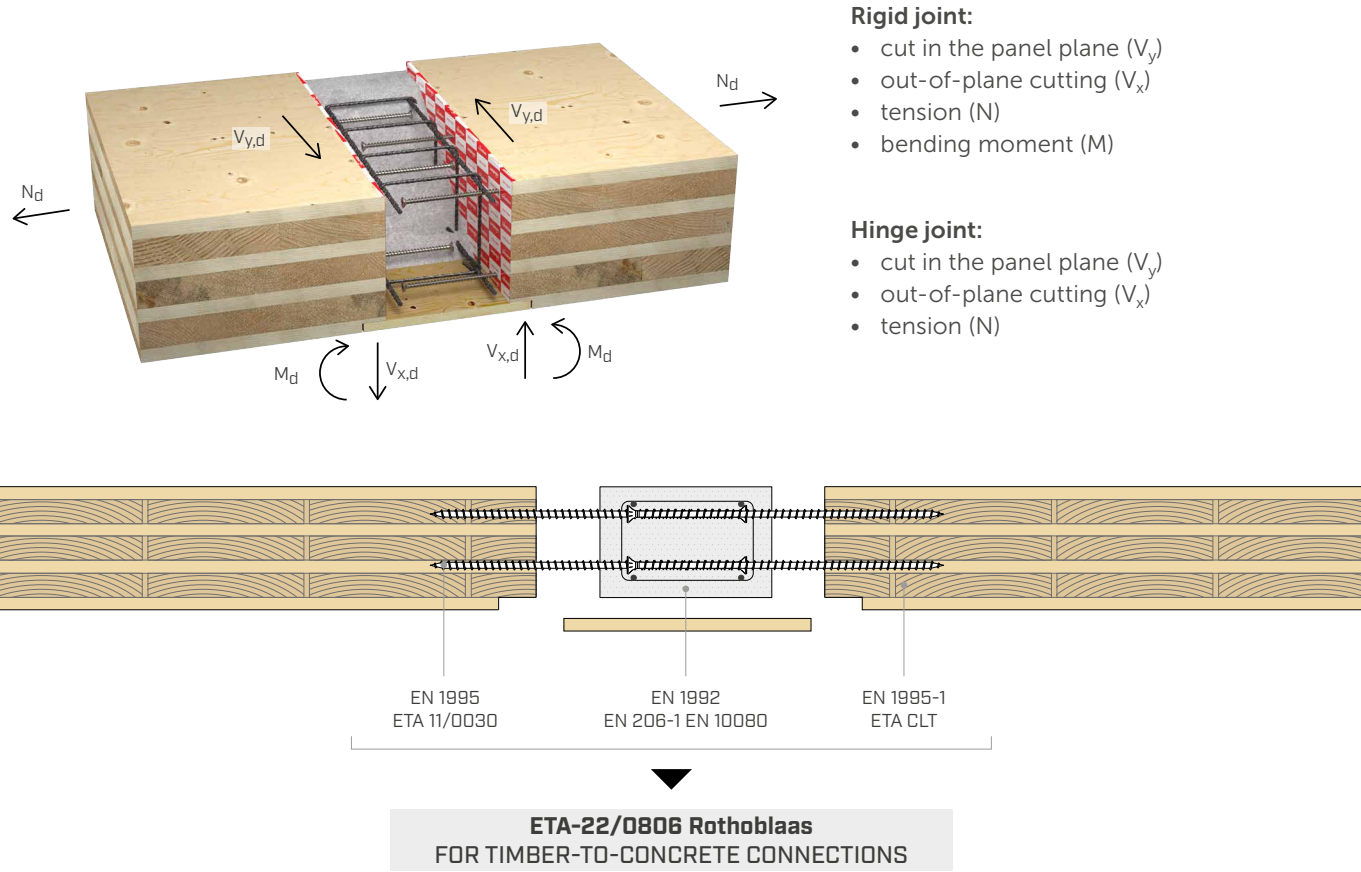
TC FUSION complements the SPIDER and PILLAR systems, allowing the implementation of moment connections between panels. Rothoblaas waterproofing systems make it possible to separate timber and concrete.

# CONNECTORS

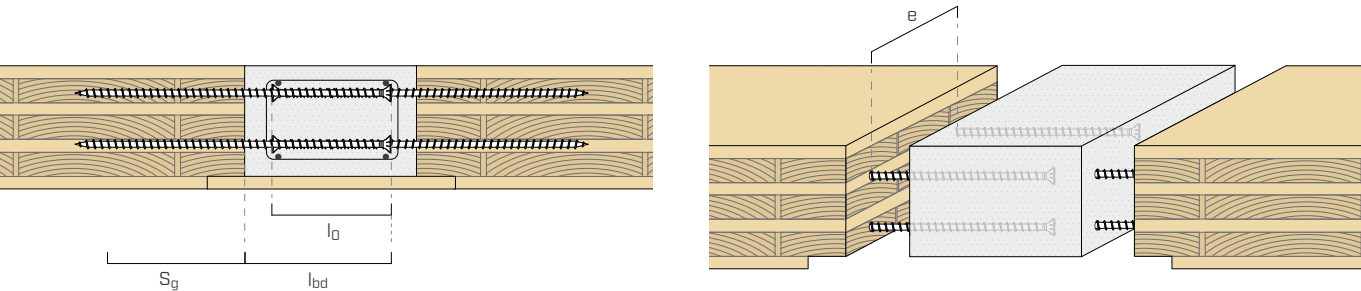
type	description	$d_1$ [mm]	L [mm]	
VGS	screw for timber	9 – 11 – 13	200 ÷ 1500	
VGZ	screw for timber	9 – 11	200 ÷ 1000	
RTR	threaded rod	16	2200	

# FIELD OF USE

ETA 22/0806 is specifically for timber-concrete applications with VGS, VGZ and RTR all-thread connectors. The calculation method for evaluating both joint strength and stiffness is made explicit. The connection allows the transfer of shear, tensile and bending moment stresses between timber elements (CLT, LVL, GL) and concrete, both at floor and wall level.



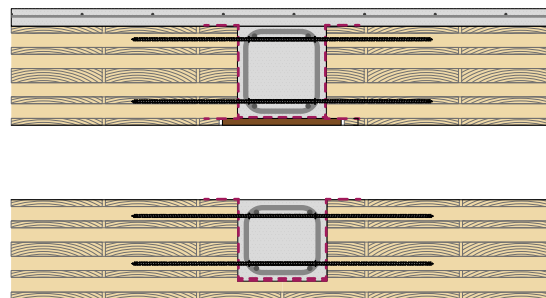
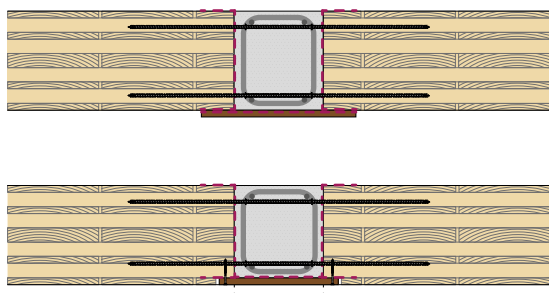
# INSTALLATION



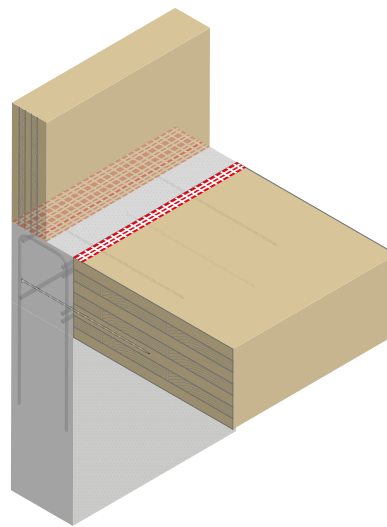
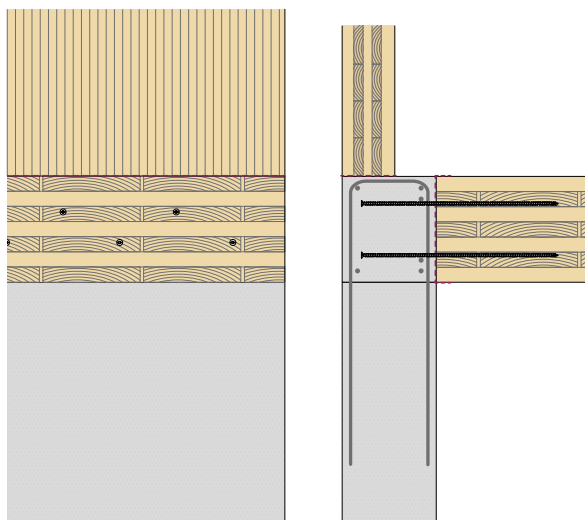


## APPLICATIONS | CLT-CONCRETE

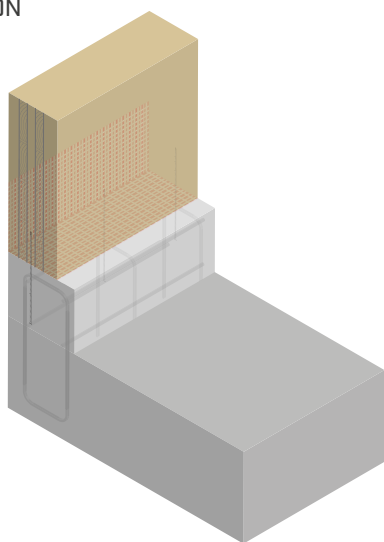
### FLOOR-FLOOR



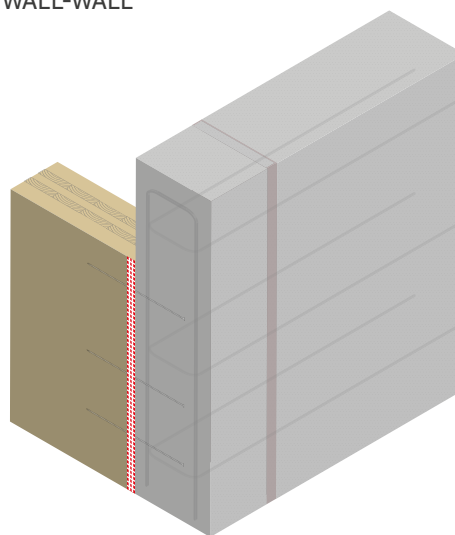
### FLOOR-WALL



### WALL-FOUNDATION



### WALL-WALL



## VGS

FULLY THREADED SCREW WITH  
COUNTERSUNK OR HEXAGONAL HEAD



More information on applications with the TC FUSION system in the data sheets of the VGS and RTR connectors.

Discover them on page 184 and page 230.

## RTR

STRUCTURAL REINFORCEMENT SYSTEM

