CTC

ELC-4645 ESR-4645 ETA-19/0244

CONNECTOR FOR TIMBER-TO-CONCRETE FLOORS

CERTIFICATION

Timber-to-concrete fastener with specific CE certification according to ETA-19/0244. Tested and calculated with parallel and crossed arrangement of 45° and 30° connectors, with and without wooden planking.

RAPID DRY SYSTEM

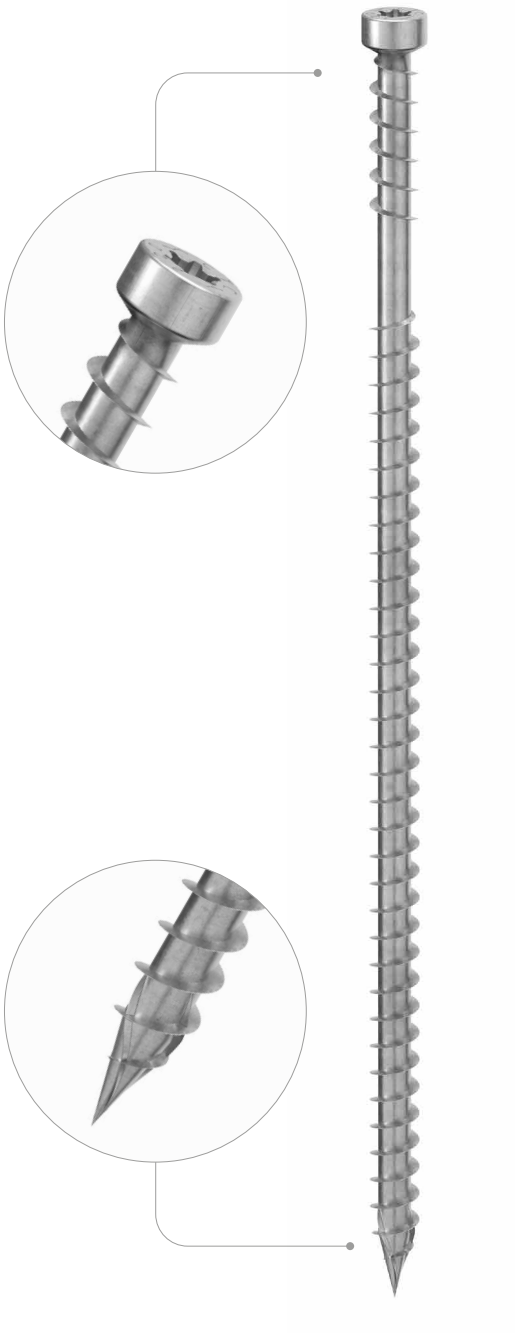
Approved, self-drilling, reversible, fast and minimally invasive system. Optimum static and noise performances, both for new projects and structural restoration.

COMPLETE RANGE

Self-perforating tip with notch and countersunk cylindrical head. Available in two diameters (7 and 9 mm - 0.28 and 0.36 inch) and two lengths (6 1/4" and 9 1/2") to optimize the number of fasteners.

INSTALLATION INDICATOR

During installation, the under head counter-thread serves as correct-installation indicator and increases the fastener tightness inside the concrete.



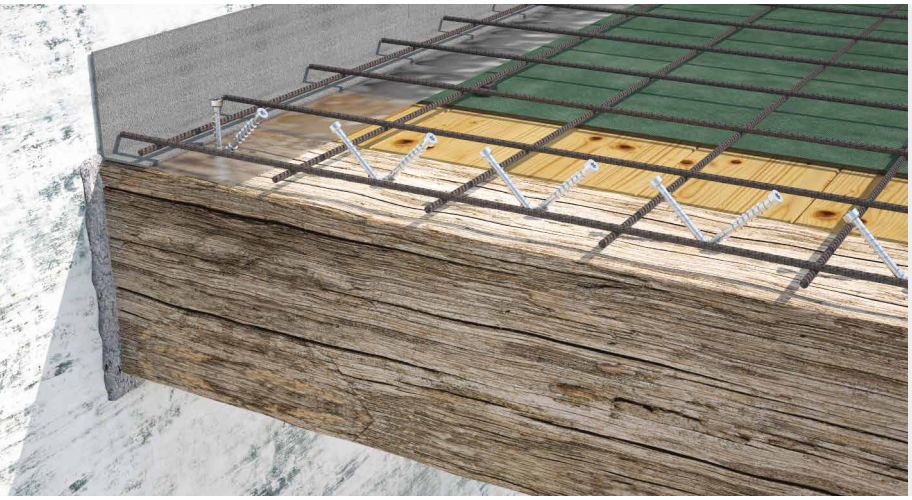
MY PROJECT SOFTWARE

BIT INCLUDED

DIAMETER [in]	0.24 (0.28) (0.36) 0.63
LENGTH [in]	2 1/16 (6 1/4) (9 1/2) 15 3/4
EXPOSURE CONDITION	EC1 DRY
ATMOSPHERIC CORROSIVITY	C1 C2
WOOD CORROSIVITY	T1 T2
MATERIAL	Zn ELECTRO PLATED electrogalvanized carbon steel

FIELDS OF USE

- timber based panels
- solid timber
- glulam (Glued Laminated Timber)
- CLT and LVL
- high density woods
- concrete EN 206-1
- lightweight concrete EN 206-1
- silicate-based lightweight concrete



TIMBER-TO-CONCRETE

Ideal for composite floors and for renovation of existing floors. Stiffness values also calculated in the presence of vapour barrier sheet or soundproofing layer.

STRUCTURAL RESTORATION

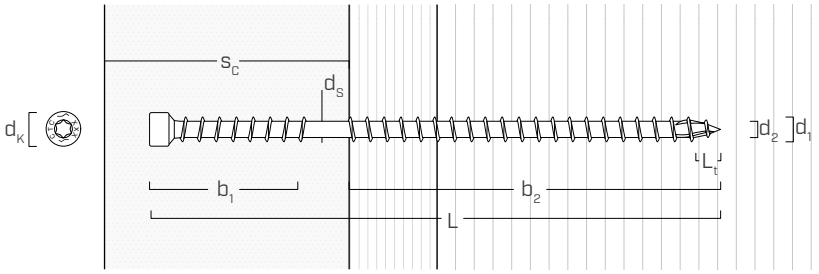
Values also tested, certified and calculated for high density woods. Certification specific for application in timber-concrete structures.

CODES AND DIMENSIONS

d_1 [mm] [in]	CODE	L [mm]	L [in]	b_1 [mm]	b_1 [in]	b_2 [mm]	b_2 [in]	pcs
7 **0.28** TX 30	**CTC7160**	160	6 1/4	40	1 9/16	110	4 3/8	100
	CTC7240	240	9 1/2	40	1 9/16	190	7 1/2	100

d_1 [mm] [in]	CODE	L [mm]	L [in]	b_1 [mm]	b_1 [in]	b_2 [mm]	b_2 [in]	pcs
9 **0.36** TX 40	**CTC9160**	160	6 1/4	40	1 9/16	110	4 3/8	100
	CTC9240	240	9 1/2	40	1 9/16	190	7 1/2	100

GEOMETRY



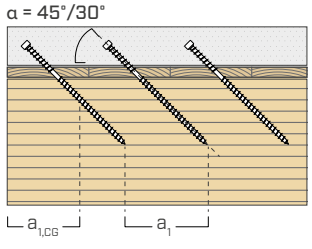
Nominal diameter	d_1	**[in]**(1)	**0.28**	**0.36**
Outer thread diameter	d_1	[mm]	7	9
		[in]	**0.276**	**0.354**
Head diameter	d_K	[in]	0.374	0.453
Root diameter	d_2	[in]	0.181	0.232
Shank diameter	d_S	[in]	0.197	0.256
Tip length	L_t	[in]	0.276	0.354
Pre-drilling hole diameter(2)	$d_{V,G\leq0.55}$	[in]	5/32	13/64
Pre-drilling hole diameter(3)	$d_{V,G<0.55}$	[in]	13/64	15/64

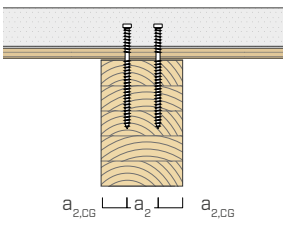
(1)The nominal diameter of the screw is converted into imperial units and rounded up to the nearest decimal point.
(2)Pre-drilling applies to wood elements with G ≤ 0.55.
(3)Pre-drilling applies to timber with G > 0.55

MINIMUM DISTANCES FOR AXIALLY LOADED CONNECTORS

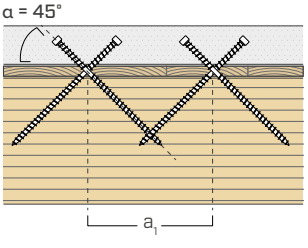
d_1	**[mm]**	**0.28**	**0.36**
	[mm]	7	9
a_1	[in]	1.93*sin(α)	2.48*sin(α)
a_2	[in]	1 1/8	1 3/4
$a_{1,CG}$	[in]	2 3/4	3 1/2
$a_{2,CG}$	[in]	1 1/8	1 7/16
a_{CROSS}	[in]	7/16	9/16

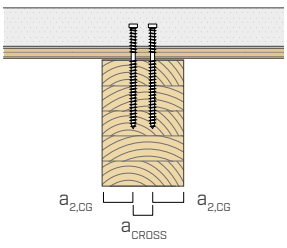
α = angle between connector and grain





parallel at 30°/45°





45° crossed