PLATES AND ANGLE BRACKETS

POST BASES

SCREWS AND FASTENERS FOR TERRACES

SCREWS FOR TIMBER

SCREWS FOR METAL

CHEMICAL AND METAL ANCHORS

METRIC

SOUNDPROOFING

SEALANTS, TAPES AND PROFILES

ROOF ELEMENTS

MEMBRANES

TOOLS

d_K

TLL EVO

ICC ES
AC233 | AC257
ESR-4645

CE
ETA-11/0030

SCREW WITH C4 EVO COATING AND WASHER HEAD

- The mechanical performance of TLL and the corrosion resistance of EVO coating based on epoxy and aluminium flakes
- No rust after 1440 hours of salt spray exposure (ISO 9227)
- It can be used for service class 3 outdoor applications and under class C4 atmospheric corrosion conditions (industrial and coastal areas)


L

**MATERIAL:** carbon steel, with a 20 µm coating, highly resistant to corrosion

C4 EVO COATING

INCLUDED

b
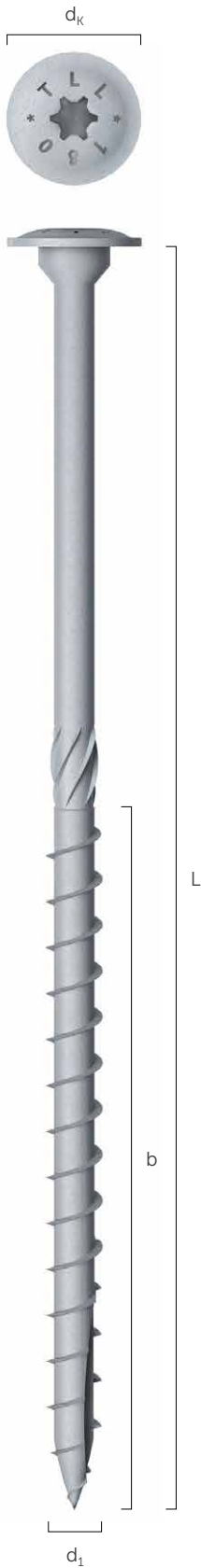
d_1 [mm]	d_K [mm]	CODE	L [mm]	b [mm]	A [mm]	pcs
6 TX 30	15,50	TLLEVO680	80	50	30	100
		TLLEVO6100	100	60	40	100
		TLLEVO6120	120	75	45	100
		TLLEVO6140	140	75	65	100
		TLLEVO6160	160	75	85	100
		TLLEVO6180	180	75	105	100
		TLLEVO6200	200	75	125	100
8 TX 40	19,00	TLLEVO8100	100	52	48	50
		TLLEVO8120	120	80	40	50
		TLLEVO8140	140	80	60	50
		TLLEVO8160	160	100	60	50
		TLLEVO8180	180	100	80	50
		TLLEVO8200	200	100	100	50

d_1

A maximum fastening thickness

A

HOLZ TECHNIC
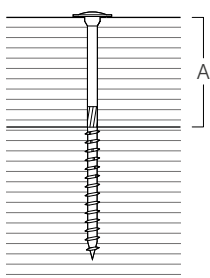
GEOMETRY AND MECHANICAL CHARACTERISTICS
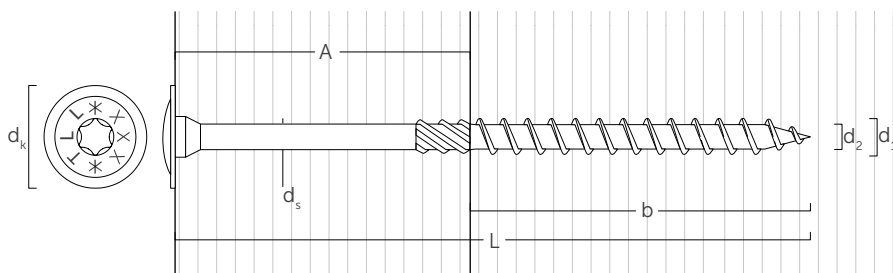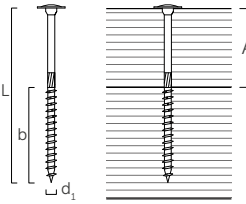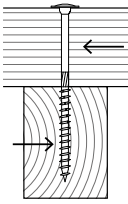
nominal diameter	d_1	[mm]	6	8
head diameter	d_K	[mm]	15,50	19,00
thread diameter	d_2	[mm]	3,95	5,40
shank diameter	d_S	[mm]	4,30	5,80
head thickness	t_1	[mm]	4,50	4,50
pre-drilling hole diameter[1]	d_V	[mm]	4,0	5,0
characteristic yield moment	$M_{y,k}$	[Nm]	9,5	20,1
characteristic withdrawal-resistance parameter[2]	$f_{ax,k}$	[N/mm^2]	11,7	11,7
characteristic head-pull-through parameter[2]	$f_{head,k}$	[N/mm^2]	10,5	10,5
characteristic tensile strength	$f_{tens,k}$	[kN]	11,3	20,1

[1] Pre-drilling valid for softwood.
[2] Valid for softwood - maximum density 440 kg/m^3. Associated density ρ_a = 350 kg/m^3.
For applications with different materials or with high density please see ETA-11/0030.

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STRUCTURAL VALUES

geometry				SHEAR	TENSION	
				timber-to-timber	thread withdrawal[1]	head pull-through[2]
d_1 [mm]	L [mm]	b [mm]	A [mm]	$R_{V,k}$ [kN]	$R_{ax,k}$ [kN]	$R_{head,k}$ [kN]
6	80	50	30	2,15	3,79	2,72
	100	60	40	2,35	4,55	2,72
	120	75	45	2,35	5,68	2,72
	140	75	65	2,35	5,68	2,72
	160	75	85	2,35	5,68	2,72
	180	75	105	2,35	5,68	2,72
	200	75	125	2,35	5,68	2,72
8	100	52	48	3,71	5,25	4,09
	120	80	40	3,41	8,08	4,09
	140	80	60	3,71	8,08	4,09
	160	100	60	3,71	10,10	4,09
	180	100	80	3,71	10,10	4,09
	200	100	100	3,71	10,10	4,09

NOTES

[1] The axial thread withdrawal resistance was calculated considering a 90° angle between the grain and the connector and for a fixing length of b.
[2] The axial resistance to head pull-through was calculated using timber elements.

GENERAL PRINCIPLES

- Characteristic values comply with the EN 1995:2014 standard in accordance with ETA-11/0030.
- Design values can be obtained from characteristic values as follows:

$$R_d = \frac{R_k \cdot k_{mod}}{\gamma_M}$$

The coefficients γ_M and k_{mod} should be taken according to the current regulations used for the calculation.
- For the mechanical resistance values and the geometry of the screws, reference was made to ETA-11/0030.
- For the calculation process a timber characteristic density ρ_k = 385 kg/m^3 has been considered.
- Values were calculated considering the threaded part as being completely inserted into the wood.
- Dimensioning and verification of the timber elements must be carried out separately.
- The characteristic shear strength are calculated for screws inserted without pre-drilling hole.

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