

SUPER WOOD TPL ZN – Ø 6 – Ø 8 – Ø 10 mm



EN 14592+A1:2012



PRODUCT DEFINITION

- Self-drilling wood screw Ø 6, Ø 8 and Ø 10 mm
- Torx flat head, reamer on the body and pointed tip with countersunk
- Shipped with bit

SCOPE OF APPLICATION

- Wood building
- Fastening for the assembly of wood elements for structural applications

MATERIAL & FINISH

Material:

- Screw: Treaded steel

Finish:

- Coating: Electrogalvanized without Chrome VI
- Thickness $\geq 12 \mu\text{m}$ according to EN ISO 4042
- Class 1 and 2 according to EN 1995-1-1

INSTALLATION

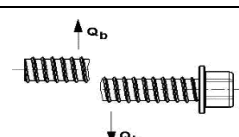
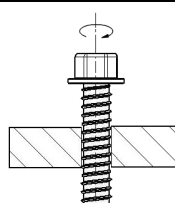
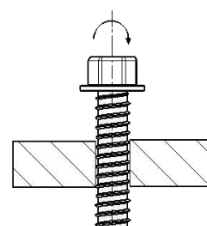
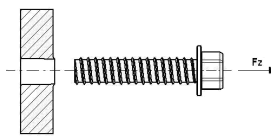
- Hammer drill MILWAUKEE M18 FDP-502X (code: 323 183)
- Drive bits: Torx 30 (code: 325 115), Torx 40 (code: 325 120), Torx 50 (code : 324 335)
- Magnetic bits holder 1/4"(6.35 mm) (code: 323 105)



PERFORMANCES

Detailed characteristics:

Screw Ø (mm) – d	Ø 6	Ø8	Ø 10
Screw head Ø (mm) – dh	16	22	25
Inner thread Ø (mm) – di	3,85	5,25	6,25
Smooth part Ø (mm) – ds	4,27	5,82	6,97
Effective Ø (mm) - def	4,24	5,78	6,88
Head thickness (mm) – ht	4	5	6
Torx pattern- TX	30	40	50
Pre-drilling Ø – dv	4,2	5,6	7

Characteristic tensile strength:	Ø 6 : $f_{tens,k} = 1359$ daN Ø 8 : $f_{tens,k} = 2420$ daN Ø 10 : $f_{tens,k} = 3123$ daN	
Characteristic shearing strength:	Ø 6 : $f_{shear,k} = 847$ daN Ø 8 : $f_{shear,k} = 1106$ daN Ø 10 : $f_{shear,k} = 1199$ daN	
Characteristic torsion strength:	Ø 6 : $f_{tor,k} = 12,0$ N.m Ø 8 : $f_{tor,k} = 25,6$ N.m Ø 10 : $f_{tor,k} = 36,7$ N.m	
Characteristic bending strength:	Ø 6 : $M_{y,k} = 14,9$ N.m Ø 8 : $M_{y,k} = 32,0$ N.m Ø 10 : $M_{y,k} = 45,9$ N.m	
Pure tensile strength in a wooden fir support 450 kg/m³: According to of the NF P 30-310 norm. The indicated values don't include the safety factor and are indicative.	Ø 6 : $P_k = 518$ daN implantation depth 50 mm Ø 8 : $P_k = 607$ daN implantation depth 52 mm Ø 10 : $P_k = 717$ daN implantation depth 52 mm	

CHARACTERISTIC STRENGTHS TABLE – WOOD-WOOD CONNECTION FIR WOOD 350 KG/M³ – ACCORDING TO THE NORM EN 1995-1-1

SUPER WOOD TPL ZN (mm)	Thread length (mm)	Thickness to fix (mm)	Thread tensile strength $F_{ax,Rk}$ (daN)		Head penetration resistance $F_{ax,Rk}$ (daN)	Shear strength $F_{v,Rk}$ (daN)		
			Perpendicular from the fibres	Parallel from the fibres		Perpendicular from the fibres	Parallel from the fibres	
$d \times L_0$	L_f	T_{fix}						
6 x 60	40	20	248	206	220	107		
6 x 80	52	28	325	271		141		
6 x 100		48				163		
6 x 120	75	45	468	390		206		
6 x 140		65				230		
6 x 160		85				231		
6 x 180		105						
6 x 200		125						
6 x 240		165						
8 x 80	52	28	481	401	175			
8 x 100		48			203			
8 x 120	80	40	749	624	266			
8 x 140		60			289			
8 x 160		80			325			
8 x 180		100			369			
8 x 200		120			392			
8 x 220		140						
8 x 240		160						
8 x 260		180						
8 x 280		200						
8 x 300		220						
8 x 320		240						
8 x 340		260						
8 x 360	280	536						
8 x 380	300			225				
8 x 400	320			328				
10 x 80	52			28	515	430	244	
10 x 100		40	355					
10 x 120	80	48	816	680	344			
10 x 140		60			499			
10 x 160		80			542			
10 x 180		100			419			
10 x 200		120			476			
10 x 220		140			526			
10 x 240		160						
10 x 260		180					606	
10 x 280		200						
10 x 300		220						
10 x 320		240						
10 x 340		260					526	
10 x 360		280						
10 x 380		300						
10 x 400	320							

CHARACTERISTIC STRENGTHS TABLE – STEEL/WOOD CONNECTION FIR WOOD 350 KG/M³ – ACCORDING TO THE NORM EN 1995-1-1

SUPER WOOD TPL ZN (mm)	Thread length (mm)	Thickness to screw (mm)	Thread tensile strength $F_{ax,Rk}$ (daN)		Shear strength perpendicular from the fibres $F_{v,Rk}$ (daN)		Shear strength parallel from the fibres $F_{v,Rk}$ (daN)	
			Perpendicular from the fibres	Parallel from the fibres	Steel plate $E_p \geq d_{ef}$	Steel plate $E_p = d_{ef}/2$	Steel plate $E_p \geq d_{ef}$	Steel plate $E_p = d_{ef}/2$
6 x 60	40	20	248	206	304	126	304	126
6 x 80	52	30	312	260		164		164
6 x 100		50						
6 x 120	75	45	468	390		232		232
6 x 140		65						
6 x 160		85						
6 x 180		105						
6 x 200		125						
6 x 220		145						
6 x 240		165						
8 x 80	52	28	481	401	509	204	509	204
8 x 100		48						
8 x 120	80	40	749	624	511	313	511	313
8 x 140		60						
8 x 160		80						
8 x 180		100						
8 x 200		120						
8 x 220		140						
8 x 240		160						
8 x 260		180						
8 x 280		200						
8 x 300		220						
8 x 320		240						
8 x 340		260						
8 x 360		280						
8 x 380		300						
8 x 400	320							
10 x 80	52	28	515	430	658	263	797	382
10 x 100		48						
10 x 120	80	40	816	680	688	405	802	588
10 x 140		60						
10 x 160		80						
10 x 180		100						
10 x 200		120						
10 x 220		140						
10 x 240		160						
10 x 260		180						
10 x 280		200						
10 x 300		220						
10 x 320		240						
10 x 340		260						
10 x 360		280						
10 x 380		300						
10 x 400	320							

In the case of a steel plate with a different thickness, $E_p < d_{ef}$, an interpolation is possible for the calculation of $F_{v,Rk}$:

$$F_{v,Rk} = F_{v,Rk(d_{ef}/2)} + \frac{F_{v,Rk(d_{ef})} - F_{v,Rk(d_{ef}/2)}}{d_{ef} - d_{ef}/2} \times (E_p - d_{ef}/2)$$

The calculation value is obtained by applying coefficients:

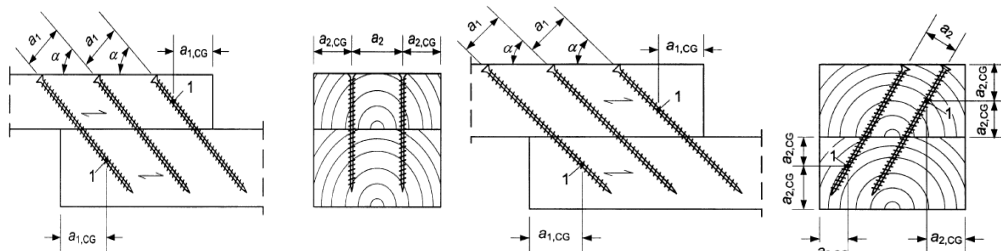
$$F_{Rd} = \frac{F_{Rk} \times k_{mod}}{\gamma_M}$$

The γ_M Coefficient for fir wood is 1,3.

CHARGING TIME CLASS	ABBREVIATION	K_{MOD} COEFFICIENT – SERVICE CLASS 1
Instantaneous	I	1,1
Short term	S	0,9
Middle term	M	0,8
Long term	L	0,7
Permanent	P	0,6

MINIMUM SPACING AND EDGE DISTANCES OF AXIALLY CHARGED SCREW (MM) FIR WOOD 350 KG/M³ – ACCORDING TO EN 1995-1-1

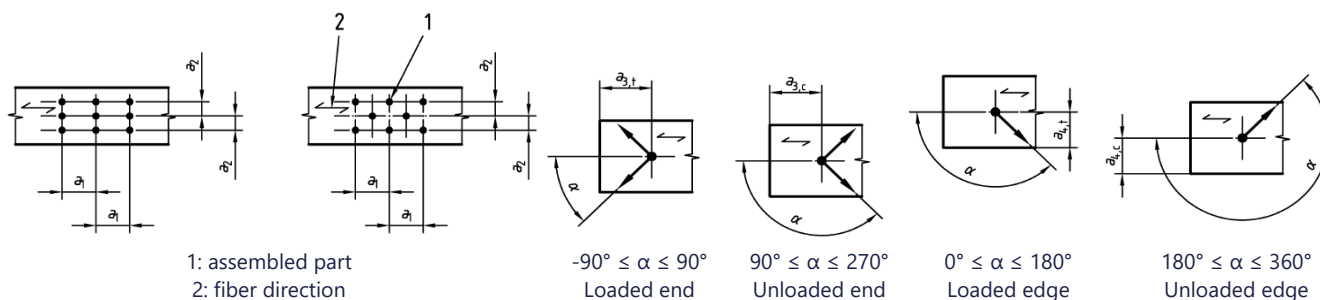
d_1	a_1	a_2	$a_{1,CG}$	$a_{2,CG}$
6	42	30	60	24
8	56	40	80	32
10	70	50	100	40



1: centre of gravity of the pitched part of the assembled part in the element.

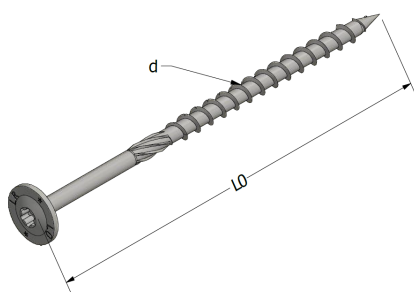
MINIMUM SPACING AND EDGE DISTANCES OF LATERALLY CHARGED SCREW (MM) FIR WOOD 350 KG/M³ – ACCORDING TO EN 1995-1-1

Without pre-drilling	Shearing Parallel to the fibre direction			Shearing Perpendicular to the fibre direction		
	d ₁	a ₁	a ₂	d ₁	a ₁	a ₂
	6	8	10	6	8	10
	42	69	83	21	29	34
	21	29	34	21	29	34
	64	87	103	42	58	69
	42	58	69	42	58	69
	21	29	34	30	58	69
	21	29	34	21	29	34
With pre-drilling	Shearing Parallel to the fibre direction			Shearing Perpendicular to the fibre direction		
	d ₁	a ₁	a ₂	d ₁	a ₁	a ₂
	6	8	10	6	8	10
	21	29	34	17	23	28
	13	18	28	17	23	28
	51	69	80	30	40	80
	30	40	28	30	40	48
	13	17	21	21	40	28
	13	17	21	13	17	21



DIMENSIONS & CODES

SUPER WOOD TPL ZN SCREW

d x L0	d x L0	Packaging	d x L0	d x L0	Packaging	d x L0	d x L0	Packaging
6 x 60	34 700	50	8 x 80	34 710	50	10 x 80	34 727	50
6 x 80	34 701		8 x 100	34 711		10 x 100	34 728	
6 x 100	34 702		8 x 120	34 712		10 x 120	34 729	
6 x 120	34 703		8 x 140	34 713		10 x 140	34 730	
6 x 140	34 704		8 x 160	34 714		10 x 160	34 731	
6 x 160	34 705		8 x 180	34 715		10 x 180	34 732	
6 x 180	34 706		8 x 200	34 716		10 x 200	34 733	
6 x 200	34 707		8 x 220	34 717		10 x 220	34 734	
6 x 220	34 708		8 x 240	34 718		10 x 240	34 735	
6 x 240	34 709		8 x 260	34 719		10 x 260	34 736	
			8 x 280	34 720	10 x 280	34 737		
			8 x 300	34 721	10 x 300	34 738		
			8 x 320	34 722	10 x 320	34 739		
			8 x 340	34 723	10 x 340	34 740		
			8 x 360	34 724	10 x 360	34 741		
			8 x 380	34 725	10 x 380	34 742		
			8 x 400	34 726	10 x 400	34 743		

ACCORDANCE

- DTU 31.1: Frames and stairs in wood
- DTU 31.2: House buildings and timber frame buildings
- CE marking according to the harmonized European standard EN 14592+A1:2012: n° CPR-J-00754-21

MARKING - LABELLING

- On the product: Screw length
- On the packaging: SUPER WOOD TPL ZN Ø x L + CODE

QUALITY CONTROL

- ISO 9001 certified quality management system according to the certificate in force

NOTA

These products are intended for professional installers landlords whose the related service includes supply and installation. In accordance with rules and normative regulation, it's their responsibility to check that the use of these products is in conformity to themselves needs and their customers. They have to insure as well the adequacy of this material with their real operating conditions. The company excludes any guarantee for the use that does not respect these conditions. His responsibility is limited to the strict compliance with the specifications stipulated on the customer's purchase order. The guarantee is limited to the replacement of defective parts acknowledged by the Company's technical service, without workforce costs and travel expenses. It excludes material damage or physical injury and others direct or indirect damages, material or immaterial, which may result from defective parts including installation that not complying with the use for which they are designed and produced.

Registration date: 2021/06/08 – Revision C

LR ETANCO is associate member of:



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