

TTUFS Countersunk Wood Screw - Electro Galvanised

*Suitable for interior use, the TTUFS screw has a serrated thread to reduce the resistance when driving.
It has a cut point which prevents cracking.
70mm or longer variants have an additional milling thread to further reduce the resistance.*
[Find it in the Solid Wood Application >](#)

Features

Material

-

Features

- 6 lobe drive.
- Flat head with facet.
- Type 17 point.
- Serrated thread.
- Electro galvanised.

Applications

Use on

-

Suitable For

- Wood to wood.

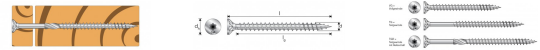


TTUFS
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Technical Data

TTUFS Countersunk Wood Screw - Electro Galvanised

Product Dimensions



References	Item Code	NOB nr.	Tun / DB nr.	Fastener dimensions [mm]						
				d	l	d _h	d ₁	l _g	bit	Thread
TTUFS3.0X16	74414	53293815	1949909	3	16	6	2	11	T-10	VG
TTUFS3.0X20	74415	53293826	1949910		20	6	2	15	T-10	VG
TTUFS3.0X25	74416	53293834	1949911		25	6	2	20	T-10	VG
TTUFS3.0X30	74417	53293845	1949912		30	6	2	25	T-10	VG
TTUFS3.0x40	77606	-	-		40	6	2	-	T-10	VG
TTUFS3.5X16	74418	53293853	1949913	3.5	16	7	2.2	11	T-15	VG
TTUFS3.5X20	74419	53293864	1949914		20	7	2.2	15	T-15	VG
TTUFS3.5X25	74420	53293872	1949915		25	7	2.2	20	T-15	VG
TTUFS3.5X30	74421	53293883	1949916		30	7	2.2	25	T-15	VG
TTUFS3.5X35	74422	53293898	1949917		35	7	2.2	30	T-15	VG
TTUFS3.5X40	74423	53293902	1949918		40	7	2.2	35	T-15	VG
TTUFS4.0X20	74425	53293921	1949920	4	20	8	2.5	15	T-20	VG
TTUFS4.0X25	74426	53293936	1949921		25	8	2.5	20	T-20	VG
TTUFS4.0X35	74428	53293955	1949923		35	8	2.5	30	T-20	VG
TTUFS4.0X70	74433	53294004	1949928		70	8	2.5	40	T-20	VG
TTUFS4.5X25	74434	53294012	1949929	4.5	25	8.4	2.8	20	T-20	VG
TTUFS4.5X30	74435	53294023	1949930		30	8.4	2.8	25	T-20	VG
TTUFS4.5X70	74441	53294080	1949937		70	8.4	2.8	40	T-20	TG
TTUFS4.5X80	74442	53294095	1949938		80	8.4	2.8	50	T-20	TGR
TTUFS5.0X30	74373	53294125	1949941	5	30	9.5	3.1	25	T-25	VG
TTUFS5.0x35	77629	-	-		35	9.5	3.1	30	T-25	VG
TTUFS5.0x45	77631	-	-		45	9.5	3.1	40	T-25	VG
TTUFS5.0X60 PT	74376	53294152	1949944		60	9.5	3.1	35	T-25	TG
TTUFS5.0X70	74377	53294163	1949945		70	9.5	3.1	40	T-25	VG
TTUFS5.0X80	74378	53294178	1949946		80	9.5	3.1	40	T-25	TGR
TTUFS5.0X90	74379	53294182	1949947		90	9.5	3.1	45	T-25	TGR
TTUFS5.0X100	74443	53294106	1949939		100	9.5	3.1	60	T-25	TGR
TTUFS5.0X120	74372	53294114	1949940		120	9.5	3.1	60	T-25	TGR
TTUFS6.0x30	77636	-	-		6	30	11.6	3.7	24	T-30
TTUFS6.0X40	74455	53294246	1949953	40		11.6	3.7	34	T-30	VG
TTUFS6.0X70	74459	53294273	1949956	70		11.6	3.7	40	T-30	TG
TTUFS6.0X80	74460	53294284	1949957	80		11.6	3.7	40	T-30	TGR
TTUFS6.0X90	74461	53294292	1949958	90		11.6	3.7	45	T-30	TGR
TTUFS6.0X100	74380	53294197	1949948	100		11.6	3.7	60	T-30	TGR
TTUFS6.0X120	74451	53294201	1949949	120		11.6	3.7	70	T-30	TGR
TTUFS6.0X140	74452	53294216	1949950	140		11.6	3.7	70	T-30	TGR
TTUFS6.0X160	74453	53294220	1949951	160		11.6	3.7	70	T-30	TGR
TTUFS6.0X180	74454	53294235	1949952	180		11.6	3.7	70	T-30	TGR

Diameters 3.0, 3.5 and 4.0 screws are not CE marked.

FT = Full Thread

PT = Partial Thread

PTM = Partial Thread with Milling Thread

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Product characteristic properties

References	Characteristic Yield Moment - $M_{y,k}$ [Nmm]	Characteristic withdrawal parameter - $f_{ax,k,90^\circ}$ [N/mm ²]	Characteristic head pull-through parameter - $f_{head,k}$ [N/mm ²]	Characteristic tensile capacity - $f_{tens,k}$ [kN]
TTUFS4.5X25	4660	14.7	15.6	7.8
TTUFS4.5X30	4660	14.7	15.6	7.8
TTUFS4.5X70	4660	14.7	15.6	7.8
TTUFS4.5X80	4660	14.7	15.6	7.8
TTUFS5.0X30	6720	15	17.1	7.9
TTUFS5.0x35	6720	15	17.1	7.9
TTUFS5.0x45	6720	15	17.1	7.9
TTUFS5.0X60 PT	6720	15	17.1	7.9
TTUFS5.0X70	6720	15	17.1	7.9
TTUFS5.0X80	6720	15	17.1	7.9
TTUFS5.0X90	6720	15	17.1	7.9
TTUFS5.0X100	6720	15	17.1	7.9
TTUFS5.0X120	6720	15	17.1	7.9
TTUFS6.0x30	9500	12.5	16.6	11.1
TTUFS6.0X40	9500	12.5	16.6	11.1
TTUFS6.0X70	9500	12.5	16.6	11.1
TTUFS6.0X80	9500	12.5	16.6	11.1
TTUFS6.0X90	9500	12.5	16.6	11.1
TTUFS6.0X100	9500	12.5	16.6	11.1
TTUFS6.0X120	9500	12.5	16.6	11.1
TTUFS6.0X140	9500	12.5	16.6	11.1
TTUFS6.0X160	9500	12.5	16.6	11.1
TTUFS6.0X180	9500	12.5	16.6	11.1

Refer to relevant ITTR or ETA for more details

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Installation

Spacing and Edge distances - Shear loaded screws

References	Minimum edge distances and spacing for shear loaded screws [mm]											
	Angle between load and grain = 0°						Angle between load and grain = 90°					
	a _{1.0}	a _{2.0}	a _{3.t.0}	a _{3.c.0}	a _{4.t.0}	a _{4.c.0}	a _{1.90}	a _{2.90}	a _{3.t.90}	a _{3.c.90}	a _{4.t.90}	a _{4.c.90}
TTUFS4.5X25	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X30	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X70	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X80	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X30	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x35	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x45	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X60 PT	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X70	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X80	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X90	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X100	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X120	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0x30	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X40	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X70	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X80	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X90	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X100	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X120	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X140	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X160	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X180	-	-	-	-	-	-	-	-	-	-	-	-

a₁ and a₂ can be multiplied by 0.85 for panel/timber assembly, and by 0.7 for steel/timber assembly.

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Spacing and edge distances - Axially loaded screws

References	Minimum edge distances and spacing for axially loaded screws [mm]			
	a ₁	a ₂	a _{3,c}	a _{4,c}
TTUFS4.5X25	-	-	-	-
TTUFS4.5X30	-	-	-	-
TTUFS4.5X70	-	-	-	-
TTUFS4.5X80	-	-	-	-
TTUFS5.0X30	-	-	-	-
TTUFS5.0x35	-	-	-	-
TTUFS5.0x45	-	-	-	-
TTUFS5.0X60 PT	-	-	-	-
TTUFS5.0X70	-	-	-	-
TTUFS5.0X80	-	-	-	-
TTUFS5.0X90	-	-	-	-
TTUFS5.0X100	-	-	-	-
TTUFS5.0X120	-	-	-	-
TTUFS6.0x30	-	-	-	-
TTUFS6.0X40	-	-	-	-
TTUFS6.0X70	-	-	-	-
TTUFS6.0X80	-	-	-	-
TTUFS6.0X90	-	-	-	-
TTUFS6.0X100	-	-	-	-
TTUFS6.0X120	-	-	-	-
TTUFS6.0X140	-	-	-	-
TTUFS6.0X160	-	-	-	-
TTUFS6.0X180	-	-	-	-

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Abacuses

Timber to Timber characteristic capacities

References	Product characteristic capacities - Timber to Timber C24															
	Axial resistance		Shear resistance parallel to the grain depending of t_1 [R _{v.0.k}] [kN]							Shear resistance perpendicular to the grain depending of t_1 [R _{v.90.k}] [kN]						
	t_1 [mm]	R _{ax.k} [kN]	35 [mm]	40 [mm]	45 [mm]	60 [mm]	75 [mm]	80 [mm]	≥100 [mm]	35 [mm]	40 [mm]	45 [mm]	60 [mm]	75 [mm]	80 [mm]	≥100 [mm]
TTUFS4.5X25	5	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X30	5	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X70	30	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X80	30	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X30	5	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x35	-	1.19	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x45	-	1.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X60 PT	25	1.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X70	30	1.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X80	40	1.64	1.64	1.64	1.64	-	-	-	-	1.64	1.64	1.64	-	-	-	-
TTUFS5.0X90	45	1.64	1.64	1.64	1.64	-	-	-	-	1.64	1.64	1.64	-	-	-	-
TTUFS5.0X100	40	1.64	1.64	1.64	1.64	-	-	-	-	1.64	1.64	1.64	-	-	-	-
TTUFS5.0X120	60	1.64	1.64	1.64	1.64	1.64	-	-	-	1.64	1.64	1.64	1.64	-	-	-
TTUFS6.0x30	-	2.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X40	6	2.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X70	30	2.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X80	40	2.73	2.09	2.09	2.15	-	-	-	-	2.09	2.09	2.15	-	-	-	-
TTUFS6.0X90	45	2.73	2.09	2.09	2.15	-	-	-	-	2.09	2.09	2.15	-	-	-	-
TTUFS6.0X100	40	2.73	2.09	2.09	2.15	-	-	-	-	2.09	2.09	2.15	-	-	-	-
TTUFS6.0X120	50	2.73	2.09	2.09	2.15	-	-	-	-	2.09	2.09	2.15	-	-	-	-
TTUFS6.0X140	70	2.73	2.09	2.09	2.15	2.15	2.15	-	-	2.09	2.09	2.15	2.15	2.15	-	-
TTUFS6.0X160	90	2.73	2.09	2.09	2.15	2.15	2.15	2.15	-	2.09	2.09	2.15	2.15	2.15	2.15	-
TTUFS6.0X180	110	2.73	2.09	2.09	2.15	2.15	2.15	2.15	2.15	2.09	2.09	2.15	2.15	2.15	2.15	2.15

These capacities are valid for:

- Timber element under the head with thickness $\leq t_1$ disclosed in adjacent column
- Screw axis between 45° and 90° from timber grain for ESCR(XXX), and 90° from timber grain for all other screws.

For tightening screws (partially threaded), t_1 dimension is the maximum thickness of the under-head timber member for which the thread is fully in the pointside timber member, for an optimum installation and tightening.

The shear capacities are given for several timber thicknesses t_1 of the under-head member under the following configurations:

- Load axis at 0° from both timber grains R_{v.0°.k}
- Load axis at 90° from both timber grains R_{v.90°.k}

These capacities are valid for C24 timber grades or higher

The pre-drilled hypothesis for capacity and distances calculation is fulfilled.

For partial threaded screws, capacities are only given for configurations where the thread is less than 5mm in under-head timber member, in order to achieve optimum installation and tightening.

Clause (2) in 8.3.1.2 from EN1995-1-1:2004+A2:2014 about embedment length is ignored in these calculations.

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Steel to Timber characteristic capacities

References	Product characteristic capacities - Steel to Timber C24				
	Axial resistance [R _{ax.st.k}] [kN]	Shear resistance - Thin plate		Shear Resistance - Thick steel	
		R _{v.0.st.k} [kN]	R _{v.90.st.k} [kN]	R _{v.0.st.k} [kN]	R _{v.90.st.k} [kN]
TTUFS4.5X25	1.73	0.8	0.8	1.54	1.54
TTUFS4.5X30	2.16	0.98	0.98	1.77	1.77
TTUFS4.5X70	3.46	1.98	1.98	2.44	2.44
TTUFS4.5X80	4.32	2.19	2.19	2.65	2.65
TTUFS5.0X30	1.65	1.1	1.1	1.87	1.87
TTUFS5.0x35	-	-	-	-	-
TTUFS5.0x45	-	-	-	-	-
TTUFS5.0X60 PT	2.31	1.98	1.98	2.56	2.56
TTUFS5.0X70	2.64	2.06	2.06	2.64	2.64
TTUFS5.0X80	2.64	2.06	2.06	2.64	2.64
TTUFS5.0X90	2.97	2.14	2.14	2.72	2.72
TTUFS5.0X100	3.96	2.39	2.39	2.97	2.97
TTUFS5.0X120	3.96	2.39	2.39	2.97	2.97
TTUFS6.0x30	-	-	-	-	-
TTUFS6.0X40	3.51	1.74	1.74	3.05	3.05
TTUFS6.0X70	4.13	2.96	2.96	3.76	3.76
TTUFS6.0X80	4.13	2.96	2.96	3.76	3.76
TTUFS6.0X90	4.64	3.09	3.09	3.89	3.89
TTUFS6.0X100	6.19	3.48	3.48	4.28	4.28
TTUFS6.0X120	7.22	3.74	3.74	4.54	4.54
TTUFS6.0X140	7.22	3.74	3.74	4.54	4.54
TTUFS6.0X160	7.22	3.74	3.74	4.54	4.54
TTUFS6.0X180	7.22	3.74	3.74	4.54	4.54

Shear capacities are given for thick (tst = d) and thin (tst = 0,5xd) steel plates under the following configurations:

- Load axis at 0° from timber grain R_{v.0°.k}
- Load axis at 90° from timber grain R_{v.90°.k}

These capacities are valid for C24 timber grades or higher.

For intermediate steel thicknesses, capacities shall be calculated by linear interpolation between the limiting thin and thick plate values.

The pre-drilled hypothesis for capacity and distances calculation is fulfilled.

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Ledger on stud characteristic capacities

References	Product characteristic capacities - Ledger on stud C24									
	Minimum width of the stud [mm]	Minimum distance to the bottom side of the ledger $a_{4,c}$ [mm]	Shear capacity depending of thickness of ledger t_1 [Rv.90-0.k] [kN]							
			35 [mm]	40 [mm]	45 [mm]	60 [mm]	75 [mm]	80 [mm]	90 [mm]	≥100 [mm]
TTUFS4.5X25	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X30	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X70	27	13.5	1.41	-	-	-	-	-	-	-
TTUFS4.5X80	27	13.5	1.41	-	-	-	-	-	-	-
TTUFS5.0X30	30	15	-	-	-	-	-	-	-	-
TTUFS5.0x35	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x45	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X60 PT	30	15	-	-	-	-	-	-	-	-
TTUFS5.0X70	30	15	1.81	-	-	-	-	-	-	-
TTUFS5.0X80	30	15	1.81	1.81	1.81	-	-	-	-	-
TTUFS5.0X90	30	15	1.81	1.81	1.81	-	-	-	-	-
TTUFS5.0X100	30	15	1.81	1.81	1.81	-	-	-	-	-
TTUFS5.0X120	30	15	1.81	1.81	1.81	1.81	-	-	-	-
TTUFS6.0x30	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X40	36	18	-	-	-	-	-	-	-	-
TTUFS6.0X70	36	18	2.44	-	-	-	-	-	-	-
TTUFS6.0X80	36	18	2.62	2.6	2.44	-	-	-	-	-
TTUFS6.0X90	36	18	2.62	2.62	2.62	-	-	-	-	-
TTUFS6.0X100	36	18	2.62	2.62	2.62	-	-	-	-	-
TTUFS6.0X120	36	18	2.62	2.62	2.62	-	-	-	-	-
TTUFS6.0X140	36	18	2.62	2.62	2.62	2.62	2.62	-	-	-
TTUFS6.0X160	36	18	2.62	2.62	2.62	2.62	2.62	2.62	2.62	-
TTUFS6.0X180	36	18	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.62

The pre-drilled hypothesis for capacity and distances calculation is fulfilled.

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Panel to Timber characteristic capacities

References	Panel (OSB, Fibreboard $\rho_k \geq 380 \text{ kg/m}^3$) on Timber C24 depending on panel thickness t_p														
	13 [mm]			15 [mm]			18 [mm]			22 [mm]			25 [mm]		
	$R_{ax.k.13}$ [kN]	$R_{v.0.k.13}$ [kN]	$R_{v.90.k.13}$ [kN]	$R_{ax.k.15}$ [kN]	$R_{v.0.k.15}$ [kN]	$R_{v.90.k.15}$ [kN]	$R_{ax.k.18}$ [kN]	$R_{v.0.k.18}$ [kN]	$R_{v.90.k.18}$ [kN]	$R_{ax.k.22}$ [kN]	$R_{v.0.k.22}$ [kN]	$R_{v.90.k.22}$ [kN]	$R_{ax.k.25}$ [kN]	$R_{v.0.k.25}$ [kN]	$R_{v.90.k.25}$ [kN]
TTUFS4.5X25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X30	-	-	-	0.56	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X70	0.56	0.84	0.84	0.56	0.88	0.88	0.56	0.94	0.94	0.71	1.06	1.06	0.71	1.06	1.06
TTUFS4.5X80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X60 PT	0.72	1.03	1.03	0.72	1.06	1.06	0.72	1.11	1.11	0.9	1.24	1.24	0.9	1.31	1.31
TTUFS5.0X70	0.72	1.03	1.03	0.72	1.06	1.06	0.72	1.11	1.11	0.9	1.24	1.24	0.9	1.31	1.31
TTUFS5.0X80	0.72	1.03	1.03	0.72	1.06	1.06	0.72	1.11	1.11	0.9	1.24	1.24	0.9	1.31	1.31
TTUFS5.0X90	0.72	1.03	1.03	0.72	1.06	1.06	0.72	1.11	1.11	0.9	1.24	1.24	0.9	1.31	1.31
TTUFS5.0X100	0.72	1.03	1.03	0.72	1.06	1.06	0.72	1.11	1.11	0.9	1.24	1.24	0.9	1.31	1.31
TTUFS5.0X120	0.72	1.03	1.03	0.72	1.06	1.06	0.72	1.11	1.11	0.9	1.24	1.24	0.9	1.31	1.31
TTUFS6.0x30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X70	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64
TTUFS6.0X80	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64
TTUFS6.0X90	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64
TTUFS6.0X100	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64
TTUFS6.0X120	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64
TTUFS6.0X140	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64
TTUFS6.0X160	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64
TTUFS6.0X180	1.08	1.31	1.31	1.08	1.36	1.36	1.08	1.41	1.41	1.35	1.56	1.56	1.35	1.64	1.64

TTUFS Countersunk Wood Screw - Electro Galvanised

Plywood to Timber Characteristic Capacities

References	Plywood ($\rho_k \geq 490 \text{ kg/m}^3$) on Timber C24 depending on panel thickness t_p														
	10 [mm]			15 [mm]			18 [mm]			22 [mm]			25 [mm]		
	$R_{ax.k.10}$ [kN]	$R_{v.0.k.10}$ [kN]	$R_{v.90.k.10}$ [kN]	$R_{ax.k.15}$ [kN]	$R_{v.0.k.15}$ [kN]	$R_{v.90.k.15}$ [kN]	$R_{ax.k.18}$ [kN]	$R_{v.0.k.18}$ [kN]	$R_{v.90.k.18}$ [kN]	$R_{ax.k.22}$ [kN]	$R_{v.0.k.22}$ [kN]	$R_{v.90.k.22}$ [kN]	$R_{ax.k.25}$ [kN]	$R_{v.0.k.25}$ [kN]	$R_{v.90.k.25}$ [kN]
TTUFS4.5X25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS4.5X70	0.69	0.94	0.94	0.69	1.01	1.01	0.69	1.08	1.08	1.64	1.44	1.44	1.64	1.5	1.4
TTUFS4.5X80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0x45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS5.0X60 PT	0.88	1.14	1.14	0.88	1.2	1.2	0.88	1.28	1.28	2.07	1.59	1.59	1.88	1.56	1.7
TTUFS5.0X70	0.88	1.14	1.14	0.88	1.2	1.2	0.88	1.28	1.28	2.07	1.59	1.59	1.88	1.56	1.7
TTUFS5.0X80	0.88	1.14	1.14	0.88	1.2	1.2	0.88	1.28	1.28	2.07	1.59	1.59	1.88	1.56	1.7
TTUFS5.0X90	0.88	1.14	1.14	0.88	1.2	1.2	0.88	1.28	1.28	2.07	1.59	1.59	1.88	1.56	1.7
TTUFS5.0X100	0.88	1.14	1.14	0.88	1.2	1.2	0.88	1.28	1.28	2.07	1.59	1.59	1.88	1.56	1.7
TTUFS5.0X120	0.88	1.14	1.14	0.88	1.2	1.2	0.88	1.28	1.28	2.07	1.59	1.59	1.88	1.56	1.7
TTUFS6.0x30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TTUFS6.0X70	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3	2.15	2.15	3	2.25	2.2
TTUFS6.0X80	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3.1	2.17	2.17	3.1	2.27	2.2
TTUFS6.0X90	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3.1	2.17	2.17	3.1	2.27	2.2
TTUFS6.0X100	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3.1	2.17	2.17	3.1	2.27	2.2
TTUFS6.0X120	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3.1	2.17	2.17	3.1	2.27	2.2
TTUFS6.0X140	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3.1	2.17	2.17	3.1	2.27	2.2
TTUFS6.0X160	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3.1	2.17	2.17	3.1	2.27	2.2
TTUFS6.0X180	1.32	1.48	1.48	1.32	1.53	1.53	1.32	1.61	1.61	3.1	2.17	2.17	3.1	2.27	2.2

