PRODUCT DATA SHEET

PANELTWISTEC AG, FLANGE BUTTON HEAD TX40

PRODUCT DESCRIPTION

Paneltwistec AG TX40 flange button head screw made of blue galvanised and hardened carbon steel is a **wood construction screw** with a special screw tip and **milling ribs** above the thread. The special geometry of the screw tip reduces the torque needed to drive it in and **minimises the risk of the timber splitting**.

The **larger head diameter** allows for considerably higher torque and head pull-through capacity. This makes for better use of the **screw's tensile load-bearing strength**.

APPLICATIONS

- Conditionally corrosion-resistant and suitable for use in service classes 1 and 2 according to DIN EN 1995 (Eurocode 5)
- Timber Construction Screws Paneltwistec Ø 8.0 for fixing insulation above rafters
- Not suitable for use with woods containing tanning agents

MATERIAL

- Hardened carbon steel + blue galvanised
- Free of chromium (VI) oxide
- Good resistance to mechanical stresses

CERTIFICATION

- European Technical Assessment ETA-11/0024 Self-tapping screws as wood connectors

ETA
Europ. Techn. Bewertung
European Technical Assessment
ETA-11/0024

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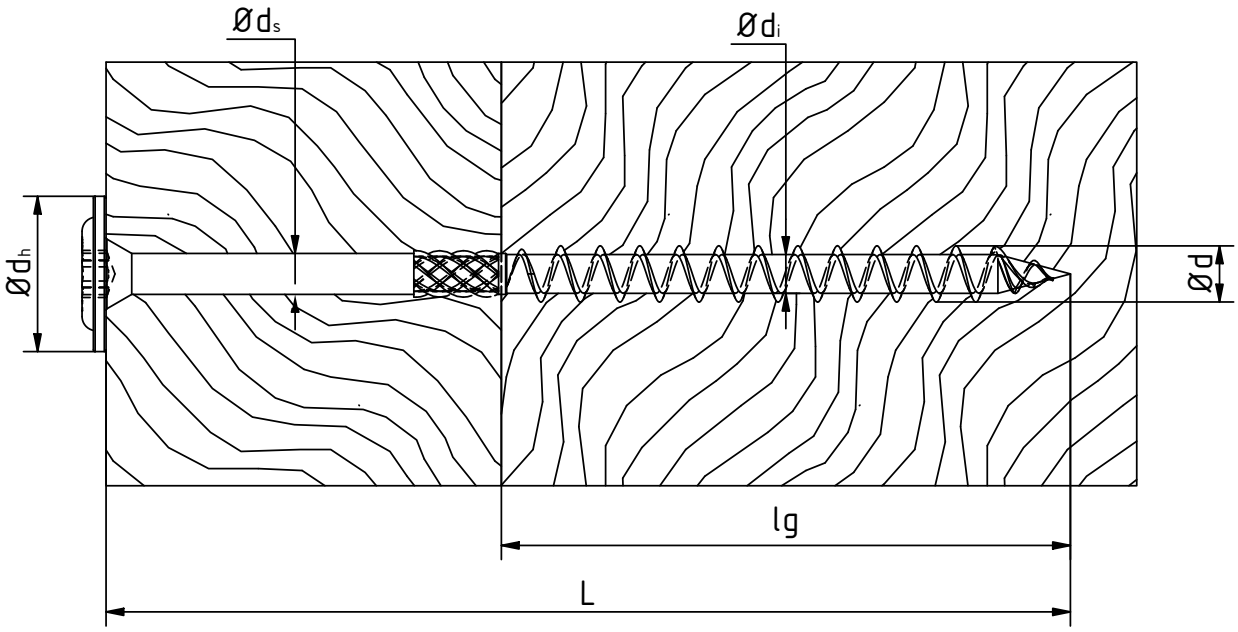
TECHNICAL INFORMATION



Side view

Paneltwistec AG, flange button head TX40, steel blue galvanized										
Nominal-Ø	Head-Ø	Root-Ø	Shank-Ø	Head shape	Head angle	char. tensile capacity	char. yield moment	char. withdrawal parameter	char. head pull-through parameter	char. torsional strength
d [mm]	d_h [mm]	d_i [mm]	d_s [mm]	–	[Degree °]	$f_{tens,k}$ [kN]	$M_{y,k}$ [Nm]	$f_{ax,k}$ [N/mm²]	$f_{head,k}$ [N/mm²]	$f_{tor,k}$ [Nm]
6	15,0	4,0	4,3	TK	60	11,0	9,5	11,4	12	9,5
8	22,0	5,3	5,7	TK	60	20,0	20,0	11,1	12	22,0

[1] The values have been taken from ETA 11/0024 and DoP-ETA110024-05-2017. We cannot guarantee that there are no typographical or printing errors and therefore recommend that you check the documents mentioned above.

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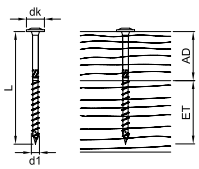

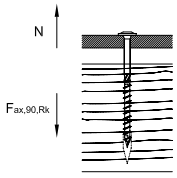

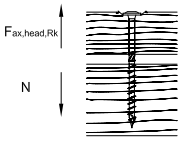

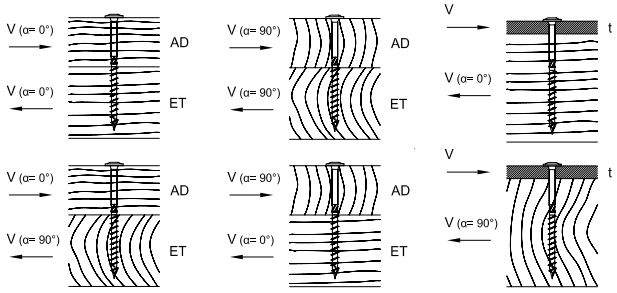

Dimensions				Extraction resistance	Head pull-through resistance	Wood-Wood shearing				Steel-Wood shearing		
d1 x L [mm]	dk [mm]	AD [mm]	ET [mm]	$F_{ax,90,Rk}$ [kN]	$F_{ax,head,Rk}$ [kN]	$F_{la,Rk}$ [kN]	$F_{la,Rk}$ [kN]	$F_{la,Rk}$ [kN]	$F_{la,Rk}$ [kN]	t [mm]	$F_{la,Rk}$ [kN]	$F_{la,Rk}$ [kN]
								α_{AD}= 0°	α_{AD}= 90°			
						α= 0°	α=90°	α_{ET}= 90°	α_{ET}= 0°		α= 0°	α= 90°
6,0 x 60	15,0	24	36	2,46	2,70		1,87			2	2,26	
6,0 x 80	14,0	32	48	3,28	2,35		2,09			2	2,46	
6,0 x 100	14,0	40	60	4,10	2,35		2,23			2	2,67	
6,0 x 120	14,0	50	70	4,79	2,35		2,23			2	2,84	
6,0 x 140	14,0	70	70	4,79	2,35		2,23			2	2,84	
6,0 x 160	14,0	90	70	4,79	2,35		2,23			2	2,84	
6,0 x 180	14,0	110	70	4,79	2,35		2,23			2	2,84	
6,0 x 200	14,0	130	70	4,79	2,35		2,23			2	2,84	
6,0 x 220	14,0	150	70	4,79	2,35		2,23			2	2,84	
6,0 x 240	14,0	170	70	4,79	2,35		2,23			2	2,84	
6,0 x 320	12,0	250	70	4,79	2,35		2,23			2	2,84	
6,0 x 340	12,0	270	70	4,79	2,35		2,23			2	2,84	
6,0 x 360	12,0	290	70	4,79	2,35		2,23			2	2,84	
6,0 x 380	12,0	310	70	4,79	2,35		2,23			2	2,84	
6,0 x 400	12,0	330	70	4,79	2,35		2,23			2	2,84	
8,0 x 80	22,0	30	50	4,26	5,81	4,14	3,34	4,14	3,34	3	4,56	3,94
8,0 x 100	22,0	40	60	5,33	5,81	4,83	4,01	4,83	4,01	3	4,83	4,20
8,0 x 120	22,0	50	70	5,86	5,81	4,95	4,32	4,95	4,32	3	4,96	4,34
8,0 x 140	22,0	40	100	8,44	5,81	4,95	4,13	4,95	4,13	3	5,60	4,98
8,0 x 160	22,0	60	100	8,44	5,81	4,95	4,32	4,95	4,32	3	5,60	4,98
8,0 x 180	22,0	80	100	8,44	5,81	4,95	4,32	4,95	4,32	3	5,60	4,98
8,0 x 200	22,0	100	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 220	22,0	120	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 240	22,0	140	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 260	22,0	160	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 280	22,0	180	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 300	22,0	200	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 320	22,0	220	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 340	22,0	240	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 360	22,0	260	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 380	22,0	280	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 400	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 420	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 440	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 460	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 480	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 500	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 550	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98
8,0 x 600	22,0	300	100	8,44	5,81	4,95	4,32	4,32	4,95	3	5,60	4,98

Calculation according to ETA-11/0024. Wood density ρ_k= 350 kg/m³. All mechanical values provided should be viewed as subject to the assumptions that have been made and represent example calculations.
All values are calculated minimum values and are subject to typographical and printing errors.
a) The characteristic values of the load-bearing capacity R_k cannot be treated as equivalent to the max. possible load (the max. force). Characteristic values of the load-bearing capacity R_k should be reduced to dimensioning values R_d with regard to the usage class and class of the load duration: $R_d = R_k \cdot k_{mod} / \gamma_M$. The dimensioning values of the load-bearing capacity R_d should be contrasted with the dimensioning values of the loads ($R_d \geq E_d$).

Example:

Characteristic value for constant load (dead weight) G_k= 2,00 kN and variable load (e. g. snow load) Q_k= 3,00 kN. k_{mod}= 0,9. γ_M= 1,3. → Dimensioning value of the load E_d= 2,00 · 1,35 + 3,00 · 1,5= 7,20 kN. The load-bearing capacity of the joint is therefore considered to have been demonstrated if $R_d \geq E_d$. → min $R_k = R_d \cdot \gamma_M / k_{mod}$ I.e. the characteristic minimum value is calculated based on: min $R_k = R_d \cdot \gamma_M / k_{mod}$ → R_k= 7,20 kN · 1,3/0,9= 10,40 kN → comparison with table values.

Please note: These are planning aids. Projects must only be calculated by authorised persons.

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Art. no.	Dimensions Ød x L [mm]	Drive	Thread length [mm]	PU
945713-TX40	6,0 x 60	TX40 •	36	100
945717-TX40	6,0 x 80	TX40 •	48	100
945719-TX40	6,0 x 100	TX40 •	60	100
945721-TX40	6,0 x 120	TX40 •	70	100
945723-TX40	6,0 x 140	TX40 •	70	100
945725-TX40	6,0 x 160	TX40 •	70	100
945726-TX40	6,0 x 180	TX40 •	70	100
945727-TX40	6,0 x 200	TX40 •	70	100
945728-TX40	6,0 x 220	TX40 •	70	100
945729-TX40	6,0 x 240	TX40 •	70	100
945733	6,0 x 320	TX40 •	70	100
945734	6,0 x 340	TX40 •	70	100
945735	6,0 x 360	TX40 •	70	100
945736	6,0 x 380	TX40 •	70	100
945737	6,0 x 400	TX40 •	70	100
945806	8,0 x 60	TX40 •	36	50
944588	8,0 x 80	TX40 •	50	50
944589	8,0 x 100	TX40 •	60	50
944590	8,0 x 120	TX40 •	70	50
944591	8,0 x 140	TX40 •	100	50
944592	8,0 x 160	TX40 •	100	50
944593	8,0 x 180	TX40 •	100	50
944594	8,0 x 200	TX40 •	100	50
944595	8,0 x 220	TX40 •	100	50
944596	8,0 x 240	TX40 •	100	50
944597	8,0 x 260	TX40 •	100	50
944598	8,0 x 280	TX40 •	100	50
944599	8,0 x 300	TX40 •	100	50
944600	8,0 x 320	TX40 •	100	50
944601	8,0 x 340	TX40 •	100	50
944602	8,0 x 360	TX40 •	100	50
944603	8,0 x 380	TX40 •	100	50
944604	8,0 x 400	TX40 •	100	50
944605	8,0 x 420	TX40 •	100	50
944606	8,0 x 440	TX40 •	100	50
944607	8,0 x 460	TX40 •	100	50
944608	8,0 x 480	TX40 •	100	50
944609	8,0 x 500	TX40 •	100	50
944610	8,0 x 550	TX40 •	100	50
944611	8,0 x 600	TX40 •	100	50

If you are not familiar with this product's application, and particularly with the product's intended use, please contact our Application Technology department (technik@eurotec.team).

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