PRODUCT DATA SHEET

PANELTWISTEC A2, FLANGE BUTTON HEAD SCREW

Dimension Ød 3,0 – 6,0

Dimension Ød 8,0

PRODUCT DESCRIPTION

The Paneltwistec made of A2 stainless steel is a fastener for load-bearing timber structures between components made of solid timber, glued laminated timber, veneer laminated timber or similar glued wood materials.

The screw's special geometry ensures a lower splitting effect when screwing in.

ADVANTAGES

- The special tip geometry reduces the splitting effect
- No pre-drilling required
- The A2 stainless steel material allows a very wide area of application
- No need to hit the screws during the screwing-in process thanks to the TX drive

MATERIAL

A2 stainless steel

- Suitable for salty atmospheres under certain circumstances
- Conditionally acid-resistant
- Not suitable for chlorinated atmospheres
- Can be used in service classes 1, 2 and 3
- Not suitable for woods containing high levels of tannin, such as cumarú, oak, merbau, robinia, etc.

NKL 1 – 3

APPROVALS

- European Technical Assessment ETA 11/0024

  Self-drilling screws as wood fasteners

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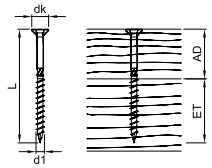
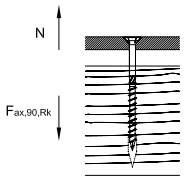
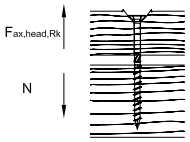
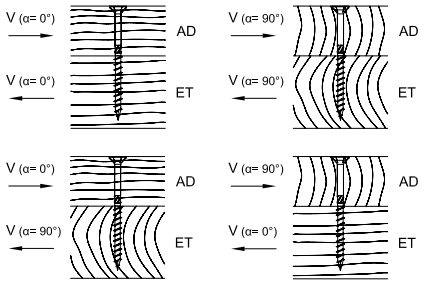
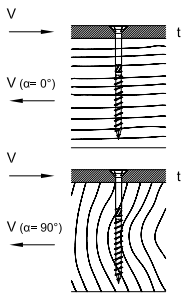
TECHNICAL INFORMATION

Dimensionsen				Extraction resistance	Head pull-through resistance	Shearing timber-timber				Shearing steel-timber		
										
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°
3,0 x 25	9	7	18	0,72	0,77	0,43				1	0,54	
3,0 x 30	9	12	18	0,72	0,77	0,51				1	0,54	
3,0 x 35	9	11	24	0,96	0,77	0,51				1	0,60	
3,0 x 40	9	16	24	0,96	0,77	0,55				1	0,60	
3,0 x 45	9	15	30	1,20	0,77	0,55				1	0,66	
3,0 x 50	9	20	30	1,20	0,77	0,55				1	0,66	
4,0 x 30	12	12	18	0,93	1,45	0,68				2	0,82	
4,0 x 40	12	16	24	1,24	1,45	0,84				2	0,89	
4,0 x 50	12	20	30	1,55	1,45	0,95				2	0,97	
4,0 x 60	12	24	36	1,86	1,45	0,95				2	1,05	
4,0 x 70	12	28	42	2,17	1,45	0,78				2	1,13	
4,5 x 40	13	16	24	1,35	1,73	0,94				2	1,06	
4,5 x 50	13	20	30	1,69	1,73	1,12				2	1,14	
4,5 x 60	13	24	36	2,03	1,73	1,15				2	1,23	
4,5 x 70	13	28	42	2,36	1,73	1,15				2	1,31	
4,5 x 80	13	32	48	2,70	1,73	1,15				2	1,40	
5,0 x 40	14	16	24	1,45	2,03	1,04				2	1,22	
5,0 x 50	14	20	30	1,82	2,03	1,23				2	1,31	
5,0 x 60	14	24	36	2,18	2,03	1,36				2	1,40	
5,0 x 70	14	28	42	2,54	2,03	1,36				2	1,50	
5,0 x 80	14	32	48	2,90	2,03	1,36				2	1,58	
5,0 x 100	14	40	60	3,63	2,03	1,36				2	1,76	
5,0 x 120	14	50	70	4,24	2,03	1,36				2	1,91	

Dimensioning according to ETA-11/0024. Bulk density ρ_k= 350 kg/m³. All stated mechanical values must be considered as dependent on the assumptions made and represent design examples.
All values are calculated minimum values and subject to typesetting and printing errors.
The characteristic values for the load-bearing capacity R_k must not be equated with the max. possible action (the max. force). Characteristic values for the load-bearing capacity R_k must be reduced to the design values R_d with regard to the service and load duration class: $R_d = R_k \cdot k_{mod} / \gamma_M$. The design values for the load-bearing capacity R_d must be compared with the design values for the actions E_d ($R_d \geq E_d$).

Example:

Characteristic value for the continuous action (dead load) G_k= 2,00 kN and variable action, e.g. snow load Q_k= 3,00 kN. k_{mod}= 0,9. γ_M= 1,3.
→ Design value of the action E_d= 2,00 · 1,35 + 3,00 · 1,5= 7,20 kN.
The load-bearing capacity of the connection is considered to be proven if $R_d \geq E_d$. → min $R_k = R_d \cdot \gamma_M / k_{mod}$
That is to say that the characteristic minimum value for the load-bearing capacity is calculated as: min $R_k = R_d \cdot \gamma_M / k_{mod}$ → R_k= 7,20 kN · 1,3/0,9= 10.40 kN → Comparison with the table values.

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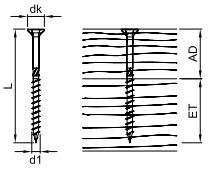
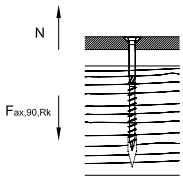
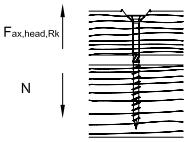
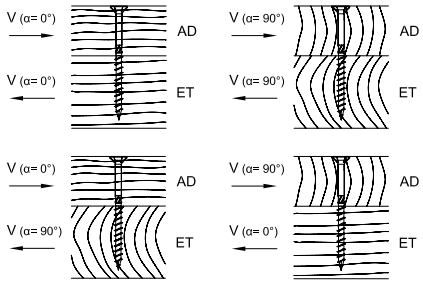
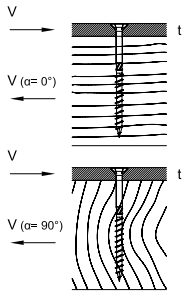
Dimensionsen	Extraction resistance	Head pull-through resistance	Shearing timber-timber	Shearing steel-timber











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	24	36	2,46	2,35	1,64				3	1,77	
6,0 x 80	15	32	48	3,28	2,35	1,74				3	1,97	
6,0 x 100	15	30	70	4,79	2,35	1,74				3	2,35	
6,0 x 120	15	50	70	4,79	2,35	1,74				3	2,35	
6,0 x 140	15	70	70	4,79	2,35	1,74				3	2,35	
6,0 x 160	15	90	70	4,79	2,35	1,74				3	2,35	
6,0 x 180	15	110	70	4,79	2,35	1,74				3	2,35	
6,0 x 200	15	130	70	4,79	2,35	1,74				3	2,35	
8,0 x 80	14,5	30	50	4,26	2,52	3,08	2,50	2,83	2,62	3	3,51	3,08
8,0 x 100	14,5	40	60	5,33	2,52	3,08	2,65	2,83	2,83	3	3,78	3,35
8,0 x 120	14,5	40	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 140	14,5	60	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 160	14,5	80	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 180	14,5	100	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 200	14,5	120	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 220	14,5	140	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 240	14,5	160	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 260	14,5	180	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 280	14,5	200	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 300	14,5	220	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 320	14,5	240	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 340	14,5	260	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 360	14,5	280	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 380	14,5	300	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80
8,0 x 400	14,5	320	80	7,10	2,52	3,08	2,65	2,83	2,83	3	4,22	3,80

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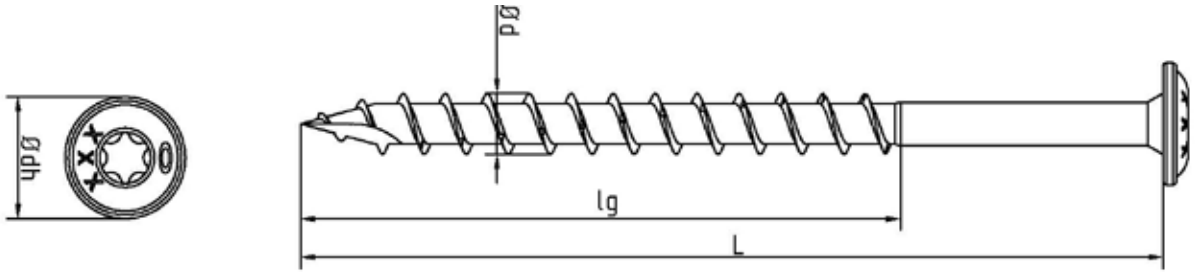
DRAWING



Top view

Side view

PRODUCT TABLE

Paneltwistec, flange button head screw, A2 stainless steel					
Art. no.	Dimensions Ød x L [mm]	Thread length lg [mm]	Head diameter Ødh [mm]	Drive	PU
946266[a)]	3,0 x 25	18	9	TX10 ○	1000
946267[a)]	3,0 x 30	18	9	TX10 ○	1000
946268[a)]	3,0 x 35	24	9	TX10 ○	1000
946269[a)]	3,0 x 40	24	9	TX10 ○	1000
946270[a)]	3,0 x 45	30	9	TX10 ○	1000
946271[a)]	3,0 x 50	30	9	TX10 ○	1000
946272	4,0 x 30	18	12	TX20 ●	1000
946273	4,0 x 40	24	12	TX20 ●	1000
946274	4,0 x 50	30	12	TX20 ●	500
946275	4,0 x 60	36	12	TX20 ●	500
946276	4,0 x 70	42	12	TX20 ●	200
946277	4,5 x 40	24	13	TX20 ●	500
946278	4,5 x 50	30	13	TX20 ●	500
946279	4,5 x 60	36	13	TX20 ●	200
946280	4,5 x 70	42	13	TX20 ●	200
946281	4,5 x 80	48	13	TX20 ●	200
946282	5,0 x 40	24	14	TX25 ●	200
946283	5,0 x 50	30	14	TX25 ●	200
946284	5,0 x 60	36	14	TX25 ●	200
946285	5,0 x 70	42	14	TX25 ●	200
946286	5,0 x 80	48	14	TX25 ●	200
946287	5,0 x 100	60	14	TX25 ●	200
946288	5,0 x 120	70	14	TX25 ●	200

a) There is currently no European Technical Assessment (ETA) available for this product.

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PANELTWISTEC A2, FLANGE BUTTON HEAD SCREW

PRODUCT TABLE

Paneltwistec, flange button head screw, A2 stainless steel					
Art. no.	Dimensions Ød x L [mm]	Thread length lg [mm]	Head diameter Ødh [mm]	Drive	PU
946289	6,0 x 60	36	15	TX30 ●	200
946290	6,0 x 80	48	15	TX30 ●	200
946291	6,0 x 100	70	15	TX30 ●	100
946292	6,0 x 120	70	15	TX30 ●	100
946293	6,0 x 140	70	15	TX30 ●	100
946294	6,0 x 160	70	15	TX30 ●	100
946295	6,0 x 180	70	15	TX30 ●	100
946296	6,0 x 200	70	15	TX30 ●	100
903211	8,0 x 80	48	16	TX40 ●	50
903212	8,0 x 100	60	16	TX40 ●	50
903213	8,0 x 120	80	16	TX40 ●	50
903214	8,0 x 140	80	16	TX40 ●	50
903215	8,0 x 160	80	16	TX40 ●	50
903216	8,0 x 180	80	16	TX40 ●	50
903217	8,0 x 200	80	16	TX40 ●	50
903218	8,0 x 220	80	16	TX40 ●	50
903219	8,0 x 240	80	16	TX40 ●	50
903220	8,0 x 260	80	16	TX40 ●	50
903221	8,0 x 280	80	16	TX40 ●	50
903222	8,0 x 300	80	16	TX40 ●	50
903223	8,0 x 320	80	16	TX40 ●	50
903224	8,0 x 340	80	16	TX40 ●	50
903225	8,0 x 360	80	16	TX40 ●	50
903226	8,0 x 380	80	16	TX40 ●	50
903227	8,0 x 400	80	16	TX40 ●	50

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

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