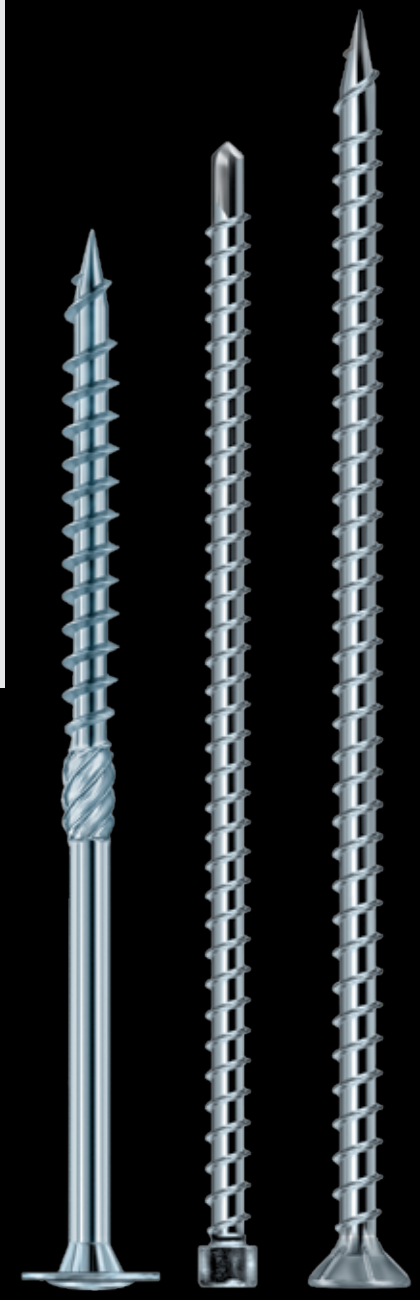
The specialist for fastening technology

Eurotec®

COMPLETE PROGRAMME

Timber | Deck and Garden | Roof | Façade | Concrete

more than **15** years of quality



Expansion of production capacity

Since the successful start of our own production in 2013, we have been able to produce an ever-growing part of our screw range in Germany.

Eurotec GmbH is a successful medium-sized enterprise with around 130 employees and a storage capacity of 11,000 storage bays.
The two managing directors, Gregor Mamys and Markus Rensburg, founded the company in May 1999. Eurotec GmbH grew cautiously but steadily – even during times of crisis.
It built its own production hall in Hagen in 2012, which entered operation with a first machine in January 2013.
Since then, we have been working constantly to further expand our in-house production. The purchase of further machines in 2015 means products "of german origin", which now provide an ever-growing part of the screw range we supply.

The benefits of production in Germany are clear:
We can implement and continuously monitor our customers' exacting quality standards. Other benefits include short delivery routes and the ability to respond rapidly to the needs of the market.
Quality from Germany – and we're proud of it!

Bit and accessories

Our colour-guide system will help you find the right bit quickly

TX-Bit

1/4" x 25 mm

Art. no.	Size	Bit	PU
945851	TX10		10
945852	TX15		10
945853	TX20		10
945854	TX25		10
945855	TX30		10
945856	TX40		10

TX-long-Bit

1/4" x 50/60 mm

Description

The long bit is suitable for installing screws in hard-to-access places in all fastening areas, e.g. deck boards, cladding, etc. It is suitable for common electric/cordless screwdrivers and can therefore be used either directly or with an adapter.

Length: 50 mm

Art. no.	Size	Bit	PU
954666	TX10		20
945975	TX15		20
945976	TX20		20
945977	TX25		20
945978	TX30		20
945979	TX40		20

Length: 60 mm

Art. no.	Size	Bit	PU
500047	TX50		5

Hint

6 long bit packs (20 bits in one size) just plug them together..... and you get a practical storage box.

The long bit is well-suited to use in relatively inaccessible screw positions. Fastening can be achieved easily without the chuck damaging the boards.

Quick-change bit holder

Can be used with all 1/4" x 25 mm bits

Art. no.	Description	Description*
945850	The Bit holder from Eurotec is an ideal aid for all craftsmen. Once the bit is inserted into the bit holder, it can no longer fall out of its own accord.	1

*Bit supplied separately

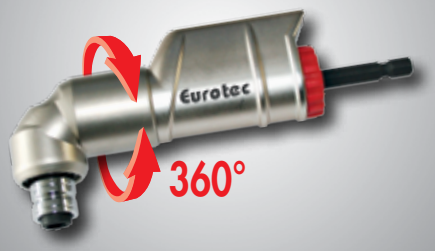
Advantage

A secure hold in every position!

Angled screwing attachment

for hard-to-reach locations

NEW
to our product range



Art. no.	Description	Description
499999	• Head angled at 90° • Compatible with all standard bits and machines - Magnetic 1/4" hexagonal bit holder - 1/4" hexagonal machine inputs • Handle can be rotated and locked in 30° steps • Suitable for clockwise and anti-clockwise rotation • Maximum torque: 62 Nm • Maximum speed of rotation: 2000 U/min	1

Advantage

Ideal solution for hard-to-reach locations.

Bit box

Specially tailored to wood construction

Art. no.	Description (content)
945857	31 TX bits and 1 quick-change bit holder in a practical box with a belt clip 5 x TX10 5 x TX15 5 x TX20 5 x TX25 2 x TX30 6 x TX40 1 x quick-change bit holder

Available to order individually or as a 10-pack incl. sales display.

Paneltwistec AG

Higher corrosion resistance than conventional galvanisation

ETA CE
Europ. Techn. Zulassung
European Technical Approval
ETA-11/0024

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 630 zugelassen

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 661 zugelassen

Corrosion protection

blue+ is an innovative coating system with greater corrosion resistance than conventional electrogalvanised surfaces.
In the ***blue+*** system, a sealant is applied to a galvanised surface and reacts with it. In this way, any weak points in the galvanisation are safely sealed and protected. The coating is free of chromium(VI) oxide, which is classified among other things as being hazardous to the environment.
Surfaces treated with ***blue+*** have excellent resistance to mechanical stress.

Advantages *blue+* coating

- Greater corrosion resistance than conventional galvanisation
- Can be used in usage classes 1 and 2
- Free of chromium(VI) oxide
- Resistant to mechanical stress

AG screw tip

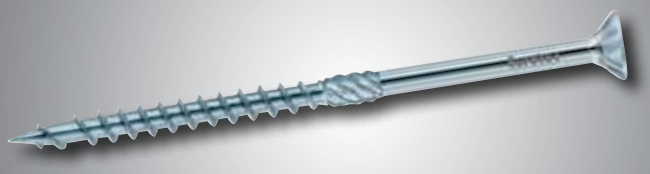
The special geometry of the AG screw tip considerably reduces the screwing torque, so the screw is easier to tighten. This delivers a reduced splitting effect during screwing compared to conventional screw tips.

Advantages AG screw tip

- Faster and easier screwing
- Reduced splitting effect
- With building-authority approval

Paneltwistec AG *blue+*

countersunk-head screw



Art. no.	Dimensions (mm)	Drive	PU
945436	3,5 x 30	TX15	1000
945838	3,5 x 35	TX15	1000
945437	3,5 x 40	TX15	1000
945490	3,5 x 50	TX15	500
945491	4,0 x 30	TX20	1000
945836	4,0 x 35	TX20	1000
945492	4,0 x 40	TX20	1000
945493	4,0 x 45	TX20	500
945494	4,0 x 50	TX20	500
945495	4,0 x 60	TX20	200
945496	4,0 x 70	TX20	200
945497	4,0 x 80	TX20	200
945498	4,5 x 40	TX25	500
945588	4,5 x 45	TX25	500
945499	4,5 x 50	TX25	500
945567	4,5 x 60	TX25	200
945568	4,5 x 70	TX25	200
945569	4,5 x 80	TX25	200
945574	5,0 x 40	TX25	200
945837	5,0 x 45	TX25	200
945575	5,0 x 50	TX25	200
945576	5,0 x 60	TX25	200
945577	5,0 x 70	TX25	200
945578	5,0 x 80	TX25	200
945579	5,0 x 90	TX25	200
945580	5,0 x 100	TX25	200
945581	5,0 x 120	TX25	200
945583	6,0 x 60	TX30	200
945584	6,0 x 70	TX30	200
945632	6,0 x 80	TX30	200
945633	6,0 x 90	TX30	100
945634	6,0 x 100	TX30	100
945636	6,0 x 120	TX30	100
945637	6,0 x 130	TX30	100
945638	6,0 x 140	TX30	100
945640	6,0 x 160	TX30	100
945641	6,0 x 180	TX30	100
945642	6,0 x 200	TX30	100
945643	6,0 x 220	TX30	100
945644	6,0 x 240	TX30	100
945645	6,0 x 260	TX30	100
945646	6,0 x 280	TX30	100
945647	6,0 x 300	TX30	100

Paneltwistec AG *blue+*

countersunk-head screw

Art. no.	Dimensions (mm)	Drive	PU
945648	8,0 x 80	TX40	50
945649	8,0 x 100	TX40	50
945650	8,0 x 120	TX40	50
945651	8,0 x 140	TX40	50
945652	8,0 x 160	TX40	50
945654	8,0 x 180	TX40	50
945655	8,0 x 200	TX40	50
945656	8,0 x 220	TX40	50
945657	8,0 x 240	TX40	50
945658	8,0 x 260	TX40	50
945659	8,0 x 280	TX40	50
945678	8,0 x 300	TX40	50
945679	8,0 x 320	TX40	50
945680	8,0 x 340	TX40	50
945681	8,0 x 360	TX40	50
945682	8,0 x 380	TX40	50
945683	8,0 x 400	TX40	50
945684	8,0 x 420	TX40	25
945685	8,0 x 440	TX40	25
945686	8,0 x 460	TX40	25
945876	8,0 x 480	TX40	25
945877	8,0 x 500	TX40	25
945879	8,0 x 550	TX40	25
945880	8,0 x 600	TX40	25
945687	10,0 x 100	TX50	50
945688	10,0 x 120	TX50	50
945689	10,0 x 140	TX50	50
945690	10,0 x 160	TX50	50
945691	10,0 x 180	TX50	50
945692	10,0 x 200	TX50	50
945693	10,0 x 220	TX50	50
945694	10,0 x 240	TX50	50
945695	10,0 x 260	TX50	50
945696	10,0 x 280	TX50	50
945697	10,0 x 300	TX50	50
945698	10,0 x 320	TX50	50
945699	10,0 x 340	TX50	50
945703	10,0 x 360	TX50	50
945709	10,0 x 380	TX50	50
945711	10,0 x 400	TX50	50

• Also suitable for fastening over-rafter insulation

Paneltwistec AG *blue+*

flanged button-head screw

Art. no.	Dimensions (mm)	Drive	PU
946158	4,0 x 40	TX20	500
946159	4,0 x 50	TX20	500
946160	4,0 x 60	TX20	500
946161	4,5 x 50	TX20	200
946162	4,5 x 60	TX20	200
946163	4,5 x 70	TX20	200
946037	5,0 x 50	TX25	200
946038	5,0 x 60	TX25	200
946039	5,0 x 70	TX25	200
946040	5,0 x 80	TX25	200
946042	5,0 x 100	TX25	200
946044	5,0 x 120	TX30	200
945947	6,0 x 30	TX30	100
945948	6,0 x 40	TX30	100
945712	6,0 x 50	TX30	100
945713	6,0 x 60	TX30	100
945716	6,0 x 70	TX30	100
945717	6,0 x 80	TX30	100
945718	6,0 x 90	TX30	100
945719	6,0 x 100	TX30	100
945720	6,0 x 110	TX30	100
945721	6,0 x 120	TX30	100
945722	6,0 x 130	TX30	100
945723	6,0 x 140	TX30	100
945724	6,0 x 150	TX30	100
945725	6,0 x 160	TX30	100
945726	6,0 x 180	TX30	100
945727	6,0 x 200	TX30	100
945728	6,0 x 220	TX30	100
945729	6,0 x 240	TX30	100
945730	6,0 x 260	TX30	100
945731	6,0 x 280	TX30	100
945732	6,0 x 300	TX30	100

- 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

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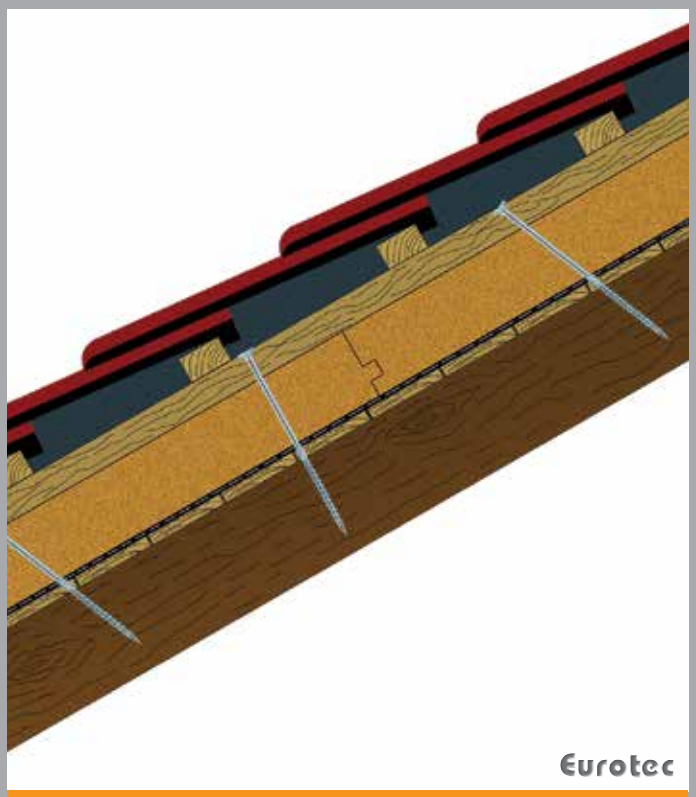
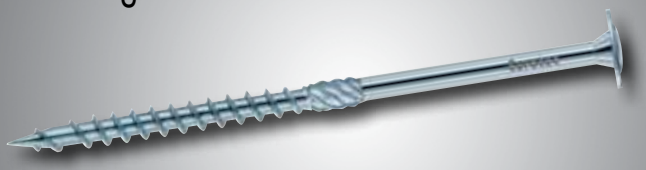


Fastening over-rafter insulation

Paneltwistec AG *blue+*

flanged button-head screw



Art. no.	Dimensions (mm)	Drive	PU
945733	8,0 x 80	TX40	50
945734	8,0 x 100	TX40	50
945735	8,0 x 120	TX40	50
945736	8,0 x 140	TX40	50
945737	8,0 x 160	TX40	50
945738	8,0 x 180	TX40	50
945739	8,0 x 200	TX40	50
945740	8,0 x 220	TX40	50
945741	8,0 x 240	TX40	50
945742	8,0 x 260	TX40	50
945743	8,0 x 280	TX40	50
945744	8,0 x 300	TX40	50
945745	8,0 x 320	TX40	50
945746	8,0 x 340	TX40	50
945747	8,0 x 360	TX40	50
945748	8,0 x 380	TX40	50
945749	8,0 x 400	TX40	50
946150	8,0 x 420	TX40	25
946151	8,0 x 440	TX40	25
946152	8,0 x 460	TX40	25
946153	8,0 x 480	TX40	25
946154	8,0 x 500	TX40	25
946155	8,0 x 550	TX40	25
946156	8,0 x 600	TX40	25
945750	10,0 x 80	TX50	50
945751	10,0 x 100	TX50	50
945752	10,0 x 120	TX50	50
945753	10,0 x 140	TX50	50
945754	10,0 x 160	TX50	50
945755	10,0 x 180	TX50	50
945756	10,0 x 200	TX50	50
945757	10,0 x 220	TX50	50
945758	10,0 x 240	TX50	50
945759	10,0 x 260	TX50	50
945760	10,0 x 280	TX50	50
945761	10,0 x 300	TX50	50
945762	10,0 x 320	TX50	50
945763	10,0 x 340	TX50	50
945764	10,0 x 360	TX50	25
945765	10,0 x 380	TX50	25
945766	10,0 x 400	TX50	25

- Also suitable for fastening over-rafter insulation
- 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

Paneltwistec, Washer

yellow/blue galvanised

Paneltwistec

countersunk-head screw, blue galvanised

bauaufsichtlich Zulassungs-Nr. Z-9.1-661 zugelassen

ETA CE Europ. Techn. Zulassung European Technical Approval ETA-11/0024

Art. no.	Dimensions (mm)	Drive	PU
b903045	3,5 x 30	TX15	1000
b903001	3,5 x 40	TX15	1000
b903002	3,5 x 50	TX15	500
b903003	4,0 x 30	TX20	1000
b903603	4,0 x 35	TX20	1000
b903004	4,0 x 40	TX20	1000
b902089	4,0 x 45	TX20	500
b903005	4,0 x 50	TX20	500
b903006	4,0 x 60	TX20	200
b903007	4,0 x 70	TX20	200
b903008	4,0 x 80	TX20	200
b903009	4,5 x 40	TX25	500
b903087	4,5 x 45	TX25	500
b903010	4,5 x 50	TX25	500
b903011	4,5 x 60	TX25	200
b903012	4,5 x 70	TX25	200
b903013	4,5 x 80	TX25	200
b903014	5,0 x 40	TX25	200
b903015	5,0 x 50	TX25	200
b903016	5,0 x 60	TX25	200
b903017	5,0 x 70	TX25	200
b903018	5,0 x 80	TX25	200
b903578	5,0 x 90	TX25	200
b903019	5,0 x 100	TX25	200
b903020	5,0 x 120	TX25	200
b903021	6,0 x 60	TX30	200
b903022	6,0 x 70	TX30	200
b903023	6,0 x 80	TX30	200
b903163	6,0 x 90	TX30	100
b903024	6,0 x 100	TX30	100
b903025	6,0 x 120	TX30	100
b903027	6,0 x 140	TX30	100
b903030	6,0 x 150	TX30	100
b903029	6,0 x 160	TX30	100
b903031	6,0 x 180	TX30	100
b903032	6,0 x 200	TX30	100
b903033	6,0 x 220	TX30	100
b903034	6,0 x 240	TX30	100
b903035	6,0 x 260	TX30	100
b903036	6,0 x 280	TX30	100
b903037	6,0 x 300	TX30	100

Paneltwistec

countersunk-head screw, yellow galvanised

Art. no.	Dimensions (mm)	Drive	PU
903000	3,5 x 30	TX20	1000
903044	3,5 x 35	TX20	1000
903001	3,5 x 40	TX20	1000
903002	3,5 x 50	TX20	500
903003	4,0 x 30	TX20	1000
903603	4,0 x 35	TX20	1000
903004	4,0 x 40	TX20	1000
902089	4,0 x 45	TX20	500
903005	4,0 x 50	TX20	500
903006	4,0 x 60	TX20	200
903007	4,0 x 70	TX20	200
903008	4,0 x 80	TX20	200
903046	4,5 x 35	TX20	500
903009	4,5 x 40	TX20	500
903087	4,5 x 45	TX20	500
903010	4,5 x 50	TX20	500
903011	4,5 x 60	TX20	200
903012	4,5 x 70	TX20	200
903013	4,5 x 80	TX20	200
903014	5,0 x 40	TX20	200
903015	5,0 x 50	TX20	200
903016	5,0 x 60	TX20	200
903017	5,0 x 70	TX20	200
903018	5,0 x 80	TX20	200
903578	5,0 x 90	TX20	200
903019	5,0 x 100	TX20	200
903020	5,0 x 120	TX20	200
903021	6,0 x 60	TX30	200
903022	6,0 x 70	TX30	200
903023	6,0 x 80	TX30	200
903163	6,0 x 90	TX30	100
903024	6,0 x 100	TX30	100
903025	6,0 x 120	TX30	100
903026	6,0 x 130	TX30	100
903027	6,0 x 140	TX30	100
903028	6,0 x 150	TX30	100
903029	6,0 x 160	TX30	100
903031	6,0 x 180	TX30	100
903032	6,0 x 200	TX30	100
903033	6,0 x 220	TX30	100
903034	6,0 x 240	TX30	100
903035	6,0 x 260	TX30	100
903036	6,0 x 280	TX30	100
903037	6,0 x 300	TX30	100

Paneltwistec

countersunk-head screw, yellow galvanised

Art. no.	Dimensions (mm)	Drive	PU
903550	8,0 x 80	TX40	50
903551	8,0 x 100	TX40	50
902920	8,0 x 120	TX40	50
902919	8,0 x 140	TX40	50
902921	8,0 x 160	TX40	50
902922	8,0 x 180	TX40	50
902923	8,0 x 200	TX40	50
902924	8,0 x 220	TX40	50
902925	8,0 x 240	TX40	50
902926	8,0 x 260	TX40	50
902927	8,0 x 280	TX40	50
902928	8,0 x 300	TX40	50
902929	8,0 x 320	TX40	50
902930	8,0 x 340	TX40	50
902931	8,0 x 360	TX40	50
902932	8,0 x 380	TX40	50
903030	8,0 x 400	TX40	50
903513	10,0 x 100	TX50	50
903491	10,0 x 120	TX50	50
903492	10,0 x 140	TX50	50
903493	10,0 x 160	TX50	50
903494	10,0 x 180	TX50	50
903495	10,0 x 200	TX50	50
903496	10,0 x 220	TX50	50
903497	10,0 x 240	TX50	50
903498	10,0 x 260	TX50	50
903499	10,0 x 280	TX50	50
903500	10,0 x 300	TX50	50
903501	10,0 x 320	TX50	50
903502	10,0 x 340	TX50	50
903503	10,0 x 360	TX50	50
903504	10,0 x 380	TX50	50
903505	10,0 x 400	TX50	50
904486	12,0 x 120	TX50	25
904488	12,0 x 160	TX50	25
904461	12,0 x 200	TX50	25
904463	12,0 x 240	TX50	25
904465	12,0 x 280	TK50	25
904489	12,0 x 320	TX50	25
904490	12,0 x 360	TX50	25
904491	12,0 x 400	TX50	25
904492	12,0 x 500	TX50	25
904493	12,0 x 600	TX50	25

• Also suitable for fastening over-rafter insulation

Paneltwistec

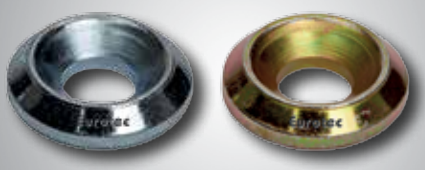
flanged button-head screw, yellow galvanised

Art. no.	Dimensions (mm)	Drive	PU
g903204	8,0 x 80	TX40	50
g903205	8,0 x 100	TX40	50
g903466	8,0 x 120	TX40	50
g903467	8,0 x 140	TX40	50
g903468	8,0 x 160	TX40	50
g903469	8,0 x 180	TX40	50
g903470	8,0 x 200	TX40	50
g903471	8,0 x 220	TX40	50
g903472	8,0 x 240	TX40	50
g903473	8,0 x 260	TX40	50
g903474	8,0 x 280	TX40	50
g903475	8,0 x 300	TX40	50
g903476	8,0 x 320	TX40	50
g903477	8,0 x 340	TX40	50
g903478	8,0 x 360	TX40	50
g904625	8,0 x 380	TX40	50
g904626	8,0 x 400	TX40	50

- Also suitable for fastening over-rafter insulation
- 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

Washer

yellow/blue galvanised steel



Art. no. (blue)	Screw diameter	PU
900098	Ø 6,0	50
900099	Ø 8,0	50
b901032	Ø 10,0	50

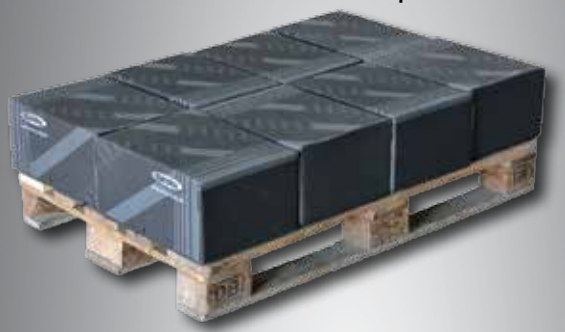
Art. no. (yellow)	Screw diameter	PU
900095	Ø 5,0	50
900096	Ø 6,0	50
900097	Ø 8,0	50
901032	Ø 10,0	50

Eurotec

maxi pack

Euro pallet

with 8 cartons Eurotec maxi pack



Euro pallet

with 16 cartons Eurotec maxi pack

Euro pallet

with 24 cartons Eurotec maxi pack

Paneltwistec 1000

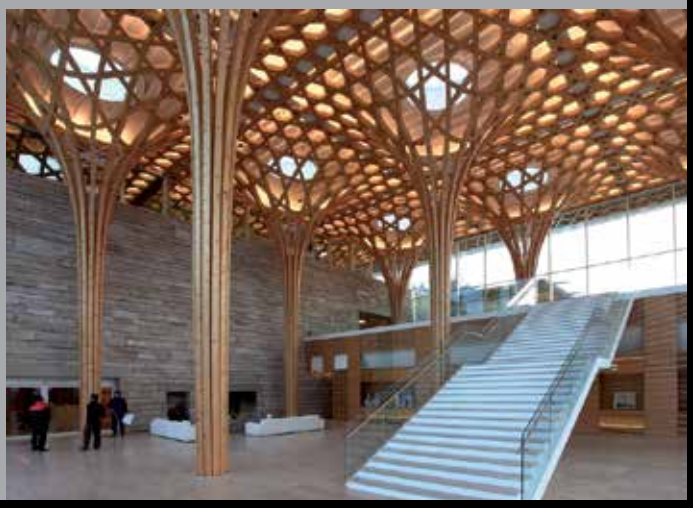
Corrosion-resistant up to 1000 h in salt spray test

Paneltwistec 1000

countersunk-head screw, special coated steel

Art. no.	Dimensions (mm)	Drive	PU
r945035	3,0 x 16	TX10	1000
r903038	3,0 x 20	TX10	1000
r903039	3,0 x 25	TX10	1000
r903040	3,0 x 30	TX10	1000
r903041	3,0 x 35	TX10	1000
r903042	3,0 x 40	TX10	1000
r945036	3,5 x 12	TX20	1000
r945037	3,5 x 16	TX20	1000
r903043	3,5 x 20	TX20	1000
r903044	3,5 x 25	TX20	1000
r903045	3,5 x 30	TX20	1000
r903046	3,5 x 35	TX20	1000
r903047	3,5 x 40	TX20	1000
r903048	3,5 x 50	TX20	500
r945038	4,0 x 16	TX20	1000
r903001	4,0 x 20	TX20	1000
r903002	4,0 x 25	TX20	1000
r903003	4,0 x 30	TX20	1000
r903049	4,0 x 35	TX20	1000
r903004	4,0 x 40	TX20	1000
r902089	4,0 x 45	TX20	500
r903005	4,0 x 50	TX20	500
r903006	4,0 x 60	TX20	200
r903007	4,0 x 70	TX20	200
r903008	4,0 x 80	TX20	200
r945039	4,5 x 16	TX20	1000
r903050	4,5 x 25	TX20	500
r903051	4,5 x 30	TX20	500
r903052	4,5 x 35	TX20	500
r903009	4,5 x 40	TX20	500
r903010	4,5 x 50	TX20	500
r903011	4,5 x 60	TX20	200
r903012	4,5 x 70	TX20	200
r903013	4,5 x 80	TX20	200
r903468	4,5 x 90	TX20	200
r903063	4,5 x 100	TX20	200

PLEASE NOTE: Screws with Ø = 3,0 mm are not regulated according to an ETA or building-authority approval.



Paneltwistec 1000

countersunk-head screw, special coated steel

Art. no.	Dimensions (mm)	Drive	PU
r903053	5,0 x 25	TX20	500
r903054	5,0 x 30	TX20	500
r903055	5,0 x 35	TX20	500
r903014	5,0 x 40	TX20	200
r903579	5,0 x 45	TX20	200
r903015	5,0 x 50	TX20	200
r903016	5,0 x 60	TX20	200
r903017	5,0 x 70	TX20	200
r903018	5,0 x 80	TX20	200
r903578	5,0 x 90	TX20	200
r903019	5,0 x 100	TX20	200
r903020	5,0 x 120	TX20	200
r903581	6,0 x 40	TX30	200
r903582	6,0 x 50	TX30	200
r903021	6,0 x 60	TX30	200
r903022	6,0 x 70	TX30	200
r903023	6,0 x 80	TX30	200
r903163	6,0 x 90	TX30	100
r903024	6,0 x 100	TX30	100
r903025	6,0 x 120	TX30	100
r903026	6,0 x 130	TX30	100
r903027	6,0 x 140	TX30	100
r903029	6,0 x 160	TX30	100
r903031	6,0 x 180	TX30	100
r903032	6,0 x 200	TX30	100
r903033	6,0 x 220	TX30	100
r903034	6,0 x 240	TX30	100
r903035	6,0 x 260	TX30	100
r903036	6,0 x 280	TX30	100

Paneltwistec 1000

flanged button-head screw, special coated steel

Art. no.	Dimensions (mm)	Drive	PU
r901357	6,0 x 100	TX30	100
r901359	6,0 x 120	TX30	100
r901361	6,0 x 140	TX30	100
r901364	6,0 x 180	TX30	100
r901365	6,0 x 200	TX30	100
r903060	8,0 x 80	TX40	50
r903062	8,0 x 100	TX40	50
r903064	8,0 x 120	TX40	50
r903066	8,0 x 140	TX40	50
r903067	8,0 x 160	TX40	50
r903470	8,0 x 180	TX40	50
r903069	8,0 x 200	TX40	50
r903472	8,0 x 220	TX40	50
r903071	8,0 x 240	TX40	50
r903072	8,0 x 260	TX40	50
r903073	8,0 x 280	TX40	50
r903074	8,0 x 300	TX40	50
r903475	8,0 x 360	TX40	50
r903476	8,0 x 400	TX40	50
r903077	10,0 x 60	TX40	50
r903079	10,0 x 80	TX40	50
r903081	10,0 x 100	TX40	50
r903083	10,0 x 120	TX40	50
r903085	10,0 x 160	TX40	50
r903086	10,0 x 180	TX40	50
r903087	10,0 x 200	TX40	50
r903088	10,0 x 220	TX40	50
r903089	10,0 x 240	TX40	50

For the screws with a diameter of 8.0 and 10.0 mm:

- Also suitable for fastening over-rafter insulation
- 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

Paneltwistec, Paneltwistec AG

hardened stainless steel

Paneltwistec

countersunk-head screw,
hardened stainless steel

Art. no.	Dimensions (mm)	Drive	PU
904474	4,0 x 40	TX20	500
904475	4,0 x 45	TX20	500
904476	4,0 x 50	TX20	500
904477	4,0 x 60	TX20	500
904478	4,5 x 45	TX20	200
904479	4,5 x 50	TX20	200
904480	4,5 x 60	TX20	200
904481	4,5 x 70	TX20	200
100981	4,5 x 80	TX20	200
904482	5,0 x 50	TX25	200
904483	5,0 x 60	TX25	200
904484	5,0 x 70	TX25	200
904485	5,0 x 80	TX25	200
904487	5,0 x 90	TX25	100
904011	5,0 x 100	TX25	100
904012	6,0 x 60	TX25 *	100
904013	6,0 x 70	TX25 *	100
904014	6,0 x 80	TX25 *	100
904015	6,0 x 90	TX25 *	100
904016	6,0 x 100	TX25 *	100
904017	6,0 x 120	TX25 *	100
904018	6,0 x 140	TX25 *	100
904019	6,0 x 160	TX25 *	100

* Successive changeover to TX30

Field of application for hardened stainless-steel screws:

- This steel combines the best properties of carbon steels and stainless steels. It is partially rust-resistant like an A2, but with the high mechanical values of a galvanised steel. Hardened stainless steel is not acid-resistant. It is therefore also not suitable for fastening woods that contain tannin (e.g. oak)
- Hardened stainless steel can be magnetised
- Stainless steel in accordance with DIN 10088
- The screw is suitable for use in timber–timber joints in outdoor installations and is used in garden, façade and balcony construction

Paneltwistec AG

flanged button-head screw,
hardened stainless steel

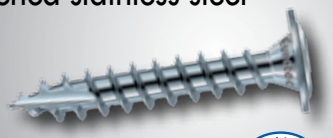
Art. no.	Dimensions (mm)	Drive	PU
975772	6,0 x 60	TX30	100
975773	6,0 x 80	TX30	100
975774	6,0 x 100	TX30	100
975775	6,0 x 120	TX30	100
975776	6,0 x 140	TX30	100
975777	6,0 x 160	TX30	100

Advantages AG screw tip

- Faster and easier screwing
- Reduced splitting effect
- With building-authority approval

Paneltwistec

flanged button-head screw,
hardened stainless steel



Art. no.	Dimensions (mm)	Drive	PU
945868	4,0 x 30	TX20 ●	500

- for fastening slate roofs
- Head diameter Ø 10 mm

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Paneltwistec

flanged button-head screw,
hardened stainless steel

Art. no.	Dimensions (mm)	Drive	PU
945278	8,0 x 80	TX40 ●	50
945270	8,0 x 100	TX40 ●	50
945271	8,0 x 120	TX40 ●	50
945272	8,0 x 140	TX40 ●	50
945364	8,0 x 160	TX40 ●	50
945365	8,0 x 180	TX40 ●	50
945366	8,0 x 200	TX40 ●	50
945367	8,0 x 220	TX40 ●	50
945368	8,0 x 240	TX40 ●	50
945369	8,0 x 260	TX40 ●	50
945370	8,0 x 280	TX40 ●	50
945371	8,0 x 300	TX40 ●	50
945372	8,0 x 320	TX40 ●	50
945373	8,0 x 340	TX40 ●	50
945374	8,0 x 360	TX40 ●	50
945375	8,0 x 380	TX40 ●	50
945376	8,0 x 400	TX40 ●	50

- Also suitable for fastening over-rafter insulation
- 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

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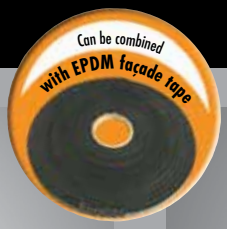
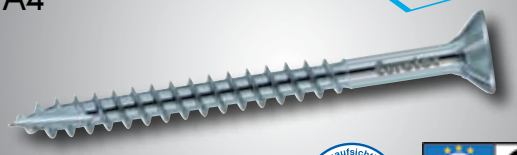
Paneltwistec A4

countersunk-head and ornamental-head
rust- and acid-resistant



Paneltwistec A4

countersunk-head screw,
A4



Art. no.	Dimensions (mm)	Drive	PU
901476	4,0 x 25	TX20	500
111442	4,0 x 35	TX20	500
903202	4,0 x 40	TX20	500
111443	4,0 x 45	TX20	500
901109	4,0 x 55	TX20	500
111444	4,0 x 60	TX20	500
111445	4,0 x 70	TX20	200
111446	4,0 x 80	TX20	200
111447	4,5 x 45	TX25	200
111448	4,5 x 60	TX25	200
111449	4,5 x 70	TX25	200
111450	4,5 x 80	TX25	200
903990	5,0 x 40	TX25	200
111451	5,0 x 50	TX25	200
111452	5,0 x 60	TX25	200
111453	5,0 x 70	TX25	200
111454	5,0 x 80	TX25	200
903580	5,0 x 100	TX25	200
944923	6,0 x 50	TX25 *	200
111459	6,0 x 60	TX25 *	100
944885	6,0 x 70	TX25 *	100
111460	6,0 x 80	TX25 *	100
111458	6,0 x 100	TX25 *	100
901478	6,0 x 120	TX25 *	100

* Successive changeover to TX30

Paneltwistec A4

ornamental-head,
A4

Art. no.	Dimensions (mm)	Drive	PU
901479	3,2 x 25	TX10	1000
903038	3,2 x 30	TX10	1000
901480	3,2 x 35	TX10	1000
901481	3,2 x 40	TX10	1000
903104	3,2 x 50	TX10	1000

Field of application for A4 stainless-steel screws:

- This steel is a stainless steel in accordance with the general building authority approval Z-30.3-6. Resistant to rust and partally add, it is also suitable for fastening tannin-containing woods (e.g. oak) and for use in saline atmospheres
- Not suitable for use in chlorine-containing atmospheres, e.g. in indoor swimming pools
- The screw is suitable for use in timber–timber joints in outdoor installations and is used in garden, façade and balcony construction

Hobotec screw

galvanised steel and hardened stainless steel

Hobotec screw

galvanised steel

Art. no. (yellow)	Art.Nr. (blue)	Dimensions (mm)	Drive	PU
110045	111494	4,0 x 30	TX15	1000
110046	111495	4,0 x 35	TX15	1000
110047	111496	4,0 x 40	TX15	1000
110044	111497	4,0 x 45	TX15	500
110048	111498	4,0 x 50	TX15	500
110049	111499	4,0 x 60	TX15	200
110051	900818	4,5 x 30	TX20	500
110050	111501	4,5 x 35	TX20	500
110077	111502	4,5 x 40	TX20	500
110052	111503	4,5 x 45	TX20	500
110053	111504	4,5 x 50	TX20	500
110054	111505	4,5 x 60	TX20	200
110055	111506	4,5 x 70	TX20	200
900877	111507	5,0 x 40	TX25	200
110056	111508	5,0 x 50	TX25	200
110057	111509	5,0 x 60	TX25	200
110058	111510	5,0 x 70	TX25	200
110059	111511	5,0 x 80	TX25	200
110060	111512	5,0 x 90	TX25	200
900462	903623	5,0 x 100	TX25	200
110092	903117	6,0 x 80	TX25	200
110093	903118	6,0 x 90	TX25	100
110094	903119	6,0 x 100	TX25	100
110096	903120	6,0 x 120	TX25	100
110097	903121	6,0 x 140	TX25	100
110098	903122	6,0 x 160	TX25	100

Hobotec screws allow easy, fast and tidy fastening of timber–timber joints. These screws are especially suitable for applications with a higher risk of cracking and splitting. The new type of thread and innovative drill point ensure a clean fit and high extraction-resistance values.

Advantages:
- No pilot-drilling necessary
- No cracking or splitting in narrow edge areas
- No hammering of the screws thanks to Tec drive

Especially suitable for:
applications in the fields of model-making, staircase construction and façade construction and for carpentry, joinery and roofing work.

Hobotec screw

hardened stainless steel

Can be combined with EPDM façade tape

Art. no.	Dimensions (mm)	Drive	PU
903323	4,0 x 30	TX15	500
110299	4,0 x 40	TX15	500
110300	4,0 x 45	TX15	500
110301	4,0 x 50	TX15	500
110302	4,0 x 60	TX15	500
110319	4,5 x 40	TX20	200
944839	4,5 x 45	TX20	200
110303	4,5 x 50	TX20	200
110304	4,5 x 60	TX20	200
110305	4,5 x 70	TX20	200
110306	4,5 x 80	TX20	200
110307	5,0 x 50	TX25	200
110308	5,0 x 60	TX25	200
110309	5,0 x 70	TX25	200
110310	5,0 x 80	TX25	200
110311	5,0 x 90	TX25	200
110312	5,0 x 100	TX25	200
110313	6,0 x 80	TX25	100
110314	6,0 x 90	TX25	100
110315	6,0 x 100	TX25	100
110316	6,0 x 120	TX25	100
110317	6,0 x 140	TX25	100
110318	6,0 x 160	TX25	100

Field of application for hardened stainless-steel screws:
- This steel combines the best properties of carbon steels and stainless steels. It is partially rust-resistant like an A2, but with the high mechanical values of a galvanised steel. Hardened stainless steel is not acid-resistant. It is therefore also not suitable for fastening woods that contain tannin (e.g. oak)
- Hardened stainless steel can be magnetised
- Stainless steel in accordance with DIN 10088

EcoTec, EcoTec A2, ECO PT
Angle-bracket screw, Fubofix

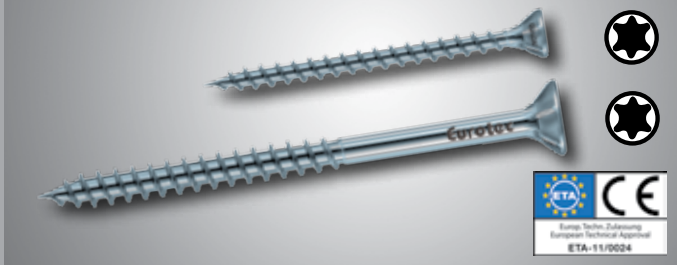
EcoTec

chipboard screw, blue galvanised

Art. no.	Dimensions (mm)	Drive	Thread	PU
903714	3,0 x 13	TX 10	FT	1000
903715	3,0 x 15	TX 10	FT	1000
903716	3,0 x 20	TX 10	FT	1000
903717	3,0 x 25	TX 10	FT	1000
903718	3,0 x 30	TX 10	FT	1000
903719	3,0 x 35	TX 10	FT	1000
903720	3,0 x 40	TX 10	PT	1000
903721	3,0 x 45	TX 10	PT	1000
903722	3,5 x 12	TX 20	FT	1000
903723	3,5 x 15	TX 20	FT	1000
903724	3,5 x 20	TX 20	FT	1000
903725	3,5 x 25	TX 20	FT	1000
903726	3,5 x 30	TX 20	FT	1000
903727	3,5 x 35	TX 20	PT	1000
903728	3,5 x 40	TX 20	PT	1000
903729	3,5 x 45	TX 20	PT	500
903730	3,5 x 50	TX 20	PT	500
903731	4,0 x 15	TX 20	FT	1000
903732	4,0 x 20	TX 20	FT	1000
903733	4,0 x 25	TX 20	FT	1000
903734	4,0 x 30	TX 20	FT	1000
903735	4,0 x 35	TX 20	FT	1000
903736	4,0 x 40	TX 20	PT	1000
903737	4,0 x 45	TX 20	PT	500
903738	4,0 x 50	TX 20	PT	500
903739	4,0 x 60	TX 20	PT	200
903740	4,0 x 70	TX 20	PT	200
903741	4,5 x 20	TX 20	FT	500
903742	4,5 x 25	TX 20	FT	500
903743	4,5 x 30	TX 20	FT	500
903744	4,5 x 35	TX 20	FT	500
903745	4,5 x 40	TX 20	PT	500
903746	4,5 x 45	TX 20	PT	500
903747	4,5 x 50	TX 20	PT	500
903748	4,5 x 60	TX 20	PT	200
903749	4,5 x 70	TX 20	PT	200
903750	4,5 x 80	TX 20	PT	200

EcoTec

chipboard screw, blue galvanised



Art. no.	Dimensions (mm)	Drive	Thread	PU
903751	5,0 x 20	TX 20	FT	500
903752	5,0 x 25	TX 20	FT	500
903753	5,0 x 30	TX 20	FT	500
903754	5,0 x 35	TX 20	FT	500
903755	5,0 x 40	TX 20	PT	200
903756	5,0 x 45	TX 20	PT	200
903757	5,0 x 50	TX 20	PT	200
903758	5,0 x 60	TX 20	PT	200
903759	5,0 x 70	TX 20	PT	200
903760	5,0 x 80	TX 20	PT	200
903761	5,0 x 90	TX 20	PT	200
903762	5,0 x 100	TX 20	PT	200
903763	5,0 x 120	TX 20	PT	200
903764	6,0 x 40	TX 30	FT	200
903765	6,0 x 50	TX 30	FT	200
903766	6,0 x 60	TX 30	PT	200
903767	6,0 x 70	TX 30	PT	200
903768	6,0 x 80	TX 30	PT	200
903769	6,0 x 90	TX 30	PT	100
903770	6,0 x 100	TX 30	PT	100
903771	6,0 x 120	TX 30	PT	100
903772	6,0 x 140	TX 30	PT	100
904540	6,0 x 160	TX 30	PT	100
904541	6,0 x 180	TX 30	PT	100
904542	6,0 x 200	TX 30	PT	100
904617	6,0 x 220	TX 30	PT	100
904618	6,0 x 240	TX 30	PT	100
904619	6,0 x 260	TX 30	PT	100
904620	6,0 x 280	TX 30	PT	100
904621	6,0 x 300	TX 30	PT	100

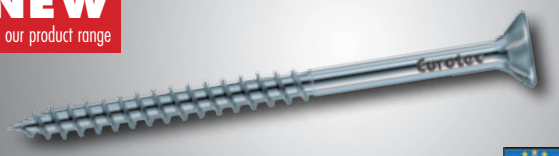
- Suitable for indoor use; with countersunk-head screw, self-milling ribs, TX drive, both fully threaded and partially threaded (FT, PT)
- Only three TX sizes are required for the entire series

PLEASE NOTE: Screws with Ø = 3.0 mm are not regulated by an ETA

EcoTec A2

chipboard screw, A2

NEW
to our product range



Art. no.	Dimensions (mm)	Drive	Thread	PU
903791	4,0 x 35	TX 20	PT	1000
903792	4,0 x 40	TX 20	PT	1000
903793	4,0 x 45	TX 20	PT	500
903794	4,0 x 50	TX 20	PT	500
903795	4,0 x 60	TX 20	PT	200
903796	4,0 x 70	TX 20	PT	200
903797	4,0 x 80	TX 20	PT	200
903798	4,5 x 45	TX 20	PT	500
903799	4,5 x 50	TX 20	PT	500
903800	4,5 x 60	TX 20	PT	200
903801	4,5 x 70	TX 20	PT	200
903802	4,5 x 80	TX 20	PT	200
903803	5,0 x 50	TX 25	PT	200
903804	5,0 x 60	TX 25	PT	200
903805	5,0 x 70	TX 25	PT	200
903806	5,0 x 80	TX 25	PT	200
903807	5,0 x 90	TX 25	PT	200
903808	5,0 x 100	TX 25	PT	200
903809	5,0 x 120	TX 25	PT	200
903810	6,0 x 50	TX 25	PT	200
903811	6,0 x 60	TX 25	PT	200
903812	6,0 x 70	TX 25	PT	200
903813	6,0 x 80	TX 25	PT	200
903814	6,0 x 90	TX 25	PT	100
903815	6,0 x 100	TX 25	PT	100
903816	6,0 x 120	TX 25	PT	100
903817	6,0 x 140	TX 25	PT	100
903818	6,0 x 160	TX 25	PT	100
903825	6,0 x 180	TX 25	PT	100
903826	6,0 x 200	TX 25	PT	100

- with countersunk-head screw, self-milling ribs, TX drive
- with partially threaded
- Only two TX sizes are required for the entire series

A2 stainless steel:
- Only partially rust-resistant, not acid-resistant
- Not suitable for atmospheres containing chlorine

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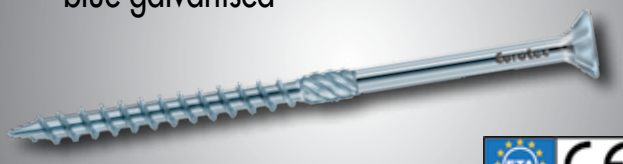
ECO PT

countersunk-head screw,
blue galvanised

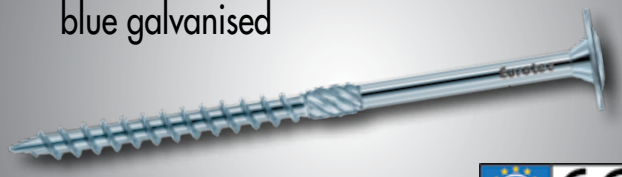


Art. no.	Dimensions (mm)	Drive	PU
954682	8,0 x 80	TX40	50
954683	8,0 x 100	TX40	50
954684	8,0 x 120	TX40	50
954685	8,0 x 140	TX40	50
954686	8,0 x 160	TX40	50
954687	8,0 x 180	TX40	50
954688	8,0 x 200	TX40	50
954689	8,0 x 220	TX40	50
954690	8,0 x 240	TX40	50
954691	8,0 x 260	TX40	50
954692	8,0 x 280	TX40	50
954693	8,0 x 300	TX40	50
954694	8,0 x 320	TX40	50
954695	8,0 x 340	TX40	50
954696	8,0 x 360	TX40	50
954697	8,0 x 380	TX40	50
954698	8,0 x 400	TX40	50

• Wood construction screw with countersunk head, self-milling ribs, TX drive

ECO PT

flanged button-head screw,
blue galvanised



Art. no.	Dimensions (mm)	Drive	PU
954699	8,0 x 80	TX40	50
954700	8,0 x 100	TX40	50
954701	8,0 x 120	TX40	50
954702	8,0 x 140	TX40	50
954703	8,0 x 160	TX40	50
954704	8,0 x 180	TX40	50
954705	8,0 x 200	TX40	50
954706	8,0 x 220	TX40	50
954707	8,0 x 240	TX40	50
954708	8,0 x 260	TX40	50
954709	8,0 x 280	TX40	50
954710	8,0 x 300	TX40	50
954711	8,0 x 320	TX40	50
954712	8,0 x 340	TX40	50
954713	8,0 x 360	TX40	50
954714	8,0 x 380	TX40	50
954715	8,0 x 400	TX40	50

• Wood construction screw with flanged button head, self-milling ribs, TX drive

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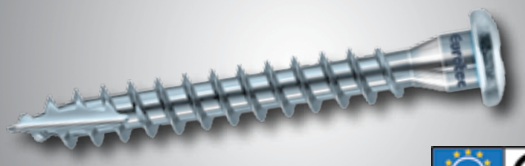
Angle-bracket screw

blue galvanised

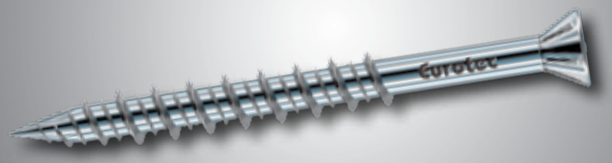


ETA-11/0024

Art. no.	Dimensions (mm)	Drive	PU
945343	5,0 x 25	TX20	250
945232	5,0 x 35	TX20	250
945241	5,0 x 40	TX20	250
945233	5,0 x 50	TX20	250
945344	5,0 x 60	TX20	250
945345	5,0 x 70	TX20	250

Fubofix

Chipboard screw, blue galvanised

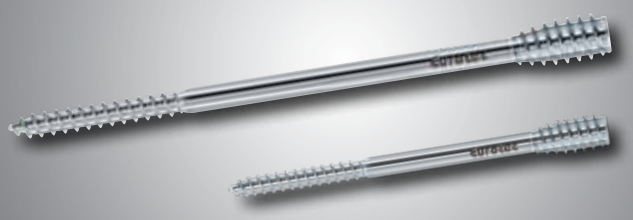


Art. no.	Dimensions (mm)	Drive	PU
945244-2	4,2 x 25	TX20	1000
945245-2	4,2 x 35	TX20	1000
945246-2	4,2 x 45	TX20	1000
945247-2	4,2 x 55	TX20	1000
945248-2	4,2 x 75	TX20	500

Spacer screw-/mini, Justitec, Pan-head TX

Spacer screw-/mini

galvanised steel, waxed



Art. no.	Dimensions (mm)*	Drive	Adjustment range (mm)	PU
110099	6/10,0 x 60/20	TX25 ●	0 – 15	200
110100	6/10,0 x 70/20	TX25 ●	15 – 25	200
110101	6/10,0 x 80/20	TX25 ●	15 – 35	200
110102	6/10,0 x 90/20	TX25 ●	25 – 45	200
110103	6/10,0 x 100/20	TX25 ●	35 – 55	200
110104	6/10,0 x 120/20	TX25 ●	55 – 75	100
110105	6/10,0 x 135/20	TX25 ●	70 – 90	100
110106	6/10,0 x 150/20	TX25 ●	75 – 105	100
110107	6/10,0 x 180/20	TX25 ●	100 – 135	100
110108	6/10,0 x 200/20	TX25 ●	135 – 155	100
944865	6/10,0 x 100/45	TX25 ●	35 – 55	200
901521	6/10,0 x 110/45	TX25 ●	45 – 65	100
900648	6/10,0 x 120/45	TX25 ●	55 – 75	100
900650	6/10,0 x 135/45	TX25 ●	70 – 90	100
900649	6/10,0 x 150/45	TX25 ●	75 – 105	100
901028	6/10,0 x 180/45	TX25 ●	100 – 135	100
903107	7/11,5 x 120/45	TX30 ●	55 – 75	—**
903109	7/11,5 x 135/45	TX30 ●	70 – 90	—**
903108	7/11,5 x 150/45	TX30 ●	75 – 105	—**
902911	7/11,5 x 180/45	TX30 ●	100 – 135	—**
905639	7/11,5 x 200/45	TX30 ●	135 – 155	—**
905640	7/11,5 x 220/45	TX30 ●	125 – 175	—**

* Ø screw thread / Ø head thread x screw length / head thread length

** On request

Mini spacer screw

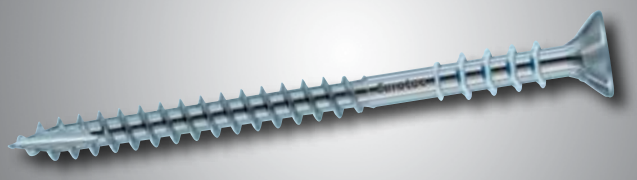
Art. no.	Dimensions (mm)*	Drive	Adjustment range (mm)	PU
110121	4,5/8 x 60	TX25 ●	0 – 15	—
110122	4,5/8 x 80	TX25 ●	15 – 35	—
110123	4,5/8 x 100	TX25 ●	35 – 55	—
110124	4,5/8 x 120	TX25 ●	55 – 75	—

* Ø screw thread / Ø head thread x screw length

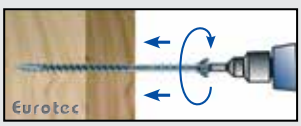
Fields of application:
Spacer screws for stress-free installation of wooden windows, aluminium/plastic windows and doors, as well as for fastening timber frames in wall and ceiling panelling and for ridge- and hip-batten installation

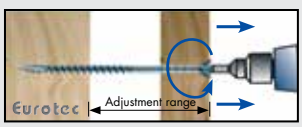
Justitec

galvanised steel, waxed



Art. no.	Dimensions (mm)	Drive	Adjustment range (mm)	PU
111804	6,0 x 60	TX 25 ●	0 - 10	200
111805	6,0 x 70	TX 25 ●	0 - 20	200
111806	6,0 x 80	TX 25 ●	0 - 30	200
111807	6,0 x 90	TX 25 ●	0 - 40	100
111808	6,0 x 100	TX 25 ●	0 - 50	100
111824	6,0 x 110	TX 25 ●	0 - 60	100
111809	6,0 x 120	TX 25 ●	0 - 70	100
905632	6,0 x 130	TX 25 ●	0 - 80	100
905633	6,0 x 145	TX 25 ●	0 - 95	100
905634	6,0 x 160	TX 25 ●	0 - 110	100

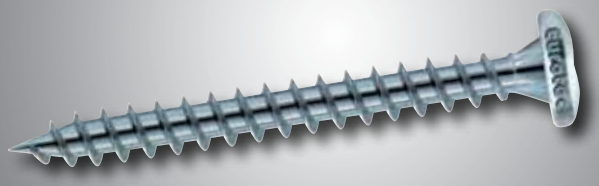




- No pilot-drilling necessary, infinitely adjustable
- No need to lay wedges underneath – work is carried out timber on timber

Pan-head TX

chipboard screw, blue galvanised

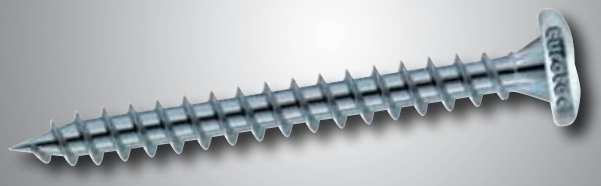


Art. no.	Dimensions (mm)	Drive	PU
111158	3,0 x 20	TX10	1000
111159	3,0 x 25	TX10	1000
111160	3,0 x 30	TX10	1000
904523	3,5 x 16	TX15	1000
111164	3,5 x 20	TX15	1000
111165	3,5 x 25	TX15	1000
111166	3,5 x 30	TX15	1000
111167	3,5 x 35	TX15	1000
111168	3,5 x 40	TX15	1000
944777	4,0 x 20	TX20	500
900034	4,0 x 25	TX20	500
900035	4,0 x 30	TX20	500
944808	4,0 x 35	TX20	500
900036	4,0 x 40	TX20	500
944809	4,0 x 45	TX20	500
900037	4,0 x 50	TX20	500
111186	4,5 x 20	TX25	1000
111187	4,5 x 25	TX25	1000
111188	4,5 x 30	TX25	1000
111189	4,5 x 35	TX25	1000
111190	4,5 x 40	TX25	500
111191	4,5 x 45	TX25	500
111192	4,5 x 50	TX25	500
111199	5,0 x 20	TX25	500
111200	5,0 x 25	TX25	500
111201	5,0 x 30	TX25	500
111202	5,0 x 35	TX25	500
111203	5,0 x 40	TX25	200
111204	5,0 x 45	TX25	200
111205	5,0 x 50	TX25	200
111206	5,0 x 60	TX25	200
111211	6,0 x 40	TX25	200
111212	6,0 x 50	TX25	200
111213	6,0 x 60	TX25	200
111234	6,0 x 80	TX25	200

- Fully threaded screws
- Pan-head
- Chipboard screw for indoor use

Pan-head TX 1000

chipboard screw, special coated steel



Art. no.	Dimensions (mm)	Drive	PU
R903090	3,5 x 16	TX20	1000
R903091	3,5 x 20	TX20	1000
R903092	3,5 x 25	TX20	1000
R903093	3,5 x 30	TX20	1000
R903094	3,5 x 35	TX20	1000
R903095	3,5 x 40	TX20	1000
R903096	4,0 x 20	TX20	1000
R903097	4,0 x 25	TX20	1000
R903098	4,0 x 30	TX20	1000
R903099	4,0 x 35	TX20	1000
R903100	4,0 x 40	TX20	500
R903101	4,0 x 50	TX20	500
R903102	4,0 x 60	TX20	200
R903103	4,5 x 20	TX20	500
R903104	4,5 x 25	TX20	500
R903105	4,5 x 30	TX20	500
R903106	4,5 x 35	TX20	500
R903107	4,5 x 40	TX20	500
R903108	4,5 x 50	TX20	200
R903109	4,5 x 60	TX20	200
R903110	5,0 x 20	TX20	500
R903111	5,0 x 25	TX20	500
R903112	5,0 x 30	TX20	500
R903113	5,0 x 40	TX20	200
R903114	5,0 x 50	TX20	200
R903115	5,0 x 60	TX20	200
R903116	5,0 x 70	TX20	200
R903117	5,0 x 80	TX20	200
R903118	6,0 x 40	TX30	200
R903119	6,0 x 50	TX30	200
R903120	6,0 x 60	TX30	200

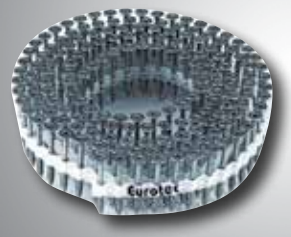
- Fully threaded screws
- Pan-head
- Chipboard screw for outdoor use

Screws in magazine

Holzher system

Paneltwistec

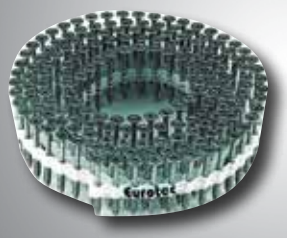
magazine, blue galvanised



Art. no.	Dimensions (mm)	Drive	Pieces/belt	Coils/carton
905613	4,0 x 40	TX20	167	12
905614	4,0 x 50	TX20	167	12
905615	4,0 x 60	TX20	167	10
905616	4,5 x 50	TX25	125	10
905617	4,5 x 60	TX25	125	10
905622	4,5 x 70	TX25	125	5
905635	5,0 x 50	TX25	125	10
905636	5,0 x 60	TX25	125	10
905637	5,0 x 70	TX25	125	5
905643	5,0 x 80	TX25	125	5

Paneltwistec

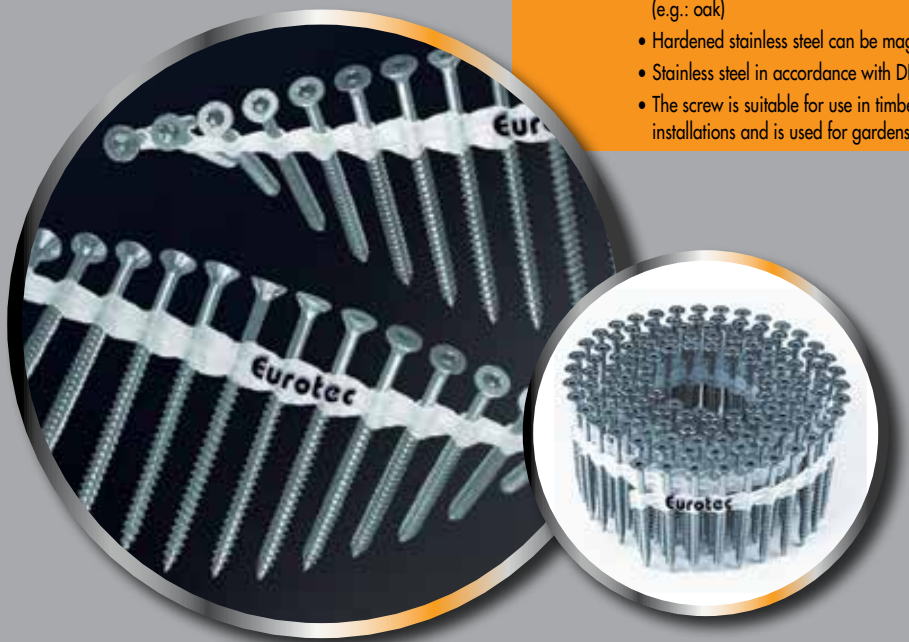
magazine, hardened stainless steel



Art. no.	Dimensions (mm)	Drive	Pieces/belt	Coils/carton
903605	4,5 x 50	TX25	125	10
903606	4,5 x 60	TX25	125	10
903609	5,0 x 70	TX25	125	5
903608	5,0 x 80	TX25	125	5

Field of application for hardened stainless-steel screws:

- This steel combines the best properties of carbon steels and stainless steels. It is partially rust-resistant like an A2 but with the high mechanical values of a galvanised steel. Hardened stainless steel is not acid-resistant. It is therefore also not suitable for fastening woods that contain tannin (e.g.: oak)
- Hardened stainless steel can be magnetised
- Stainless steel in accordance with DIN 10088
- The screw is suitable for use in timber–timber joints in outdoor installations and is used for gardens, façades and balconies



blue+ Topduo Roofing screw

The wood-construction screw for all over-rafter insulation systems

Europ. Techn. Zulassung
European Technical Approval
ETA-11/0024

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 630 zugelassen

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 661 zugelassen

Corrosion protection

blue+ is an innovative coating system with greater corrosion resistance than conventional electrogalvanised surfaces.
In the ***blue+*** system, a sealant is applied to a galvanised surface and reacts with it. In this way, any weak points in the galvanisation are safely sealed and protected. The coating is free of chromium(VI) oxide, which is classified among other things as being hazardous to the environment.
Surfaces treated with ***blue+*** have excellent resistance to mechanical stress.

Advantages *blue+* coating

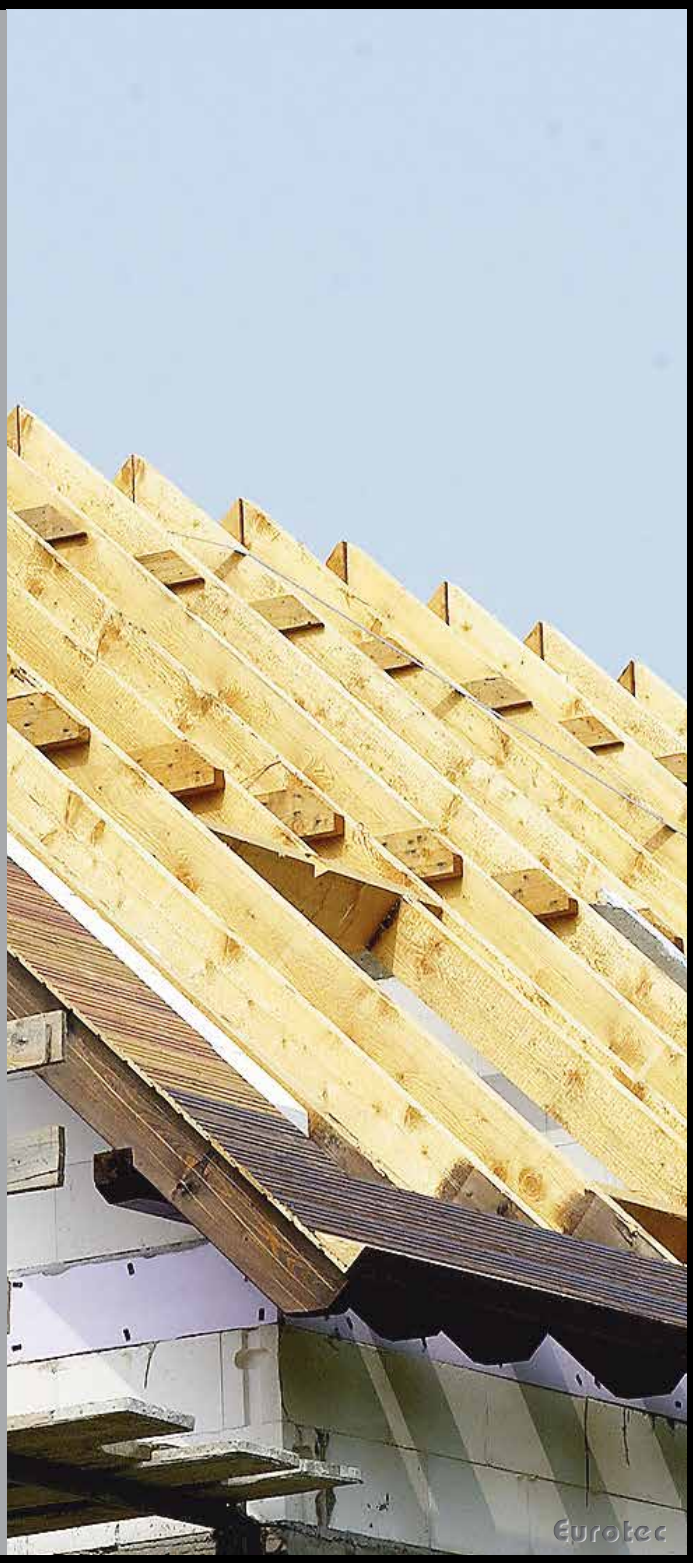
- Greater corrosion resistance than conventional galvanisation
- Can be used in usage classes 1 and 2
- Free of chromium(VI) oxide
- Resistant to mechanical stress

The Topduo double-threaded screw allows secure fastening of over-rafter insulation with both pressure-resistant and non-pressure-resistant insulating materials.

Of course, the high extraction resistance in both connecting timbers also makes the Topduo attractive for many other applications in the field of timber-frame construction.

Advantages Topduo Roofing screw

- Double-threaded screw with new ***blue+*** coating
- Greater corrosion resistance than conventional galvanisation.



Topduo Roofing screw

blue+ flanged button-head

Art. no.	Dimensions (mm)	Length (mm)*	Drive	PU
945870	8,0 x 165	60/ 80	TX 40	50
945871	8,0 x 195	60/100	TX 40	50
945813	8,0 x 225	60/100	TX 40	50
945814	8,0 x 235	60/100	TX 40	50
945815	8,0 x 255	60/100	TX 40	50
945816	8,0 x 275	60/100	TX 40	50
945817	8,0 x 302	60/100	TX 40	50
945818	8,0 x 335	60/100	TX 40	50
945819	8,0 x 365	60/100	TX 40	50
945820	8,0 x 397	60/100	TX 40	50
945821	8,0 x 435	60/100	TX 40	50
945843	8,0 x 472	60/100	TX 40	50

* Under-head thread/drive thread

- For fastening over-rafter insulation
- Can also be used for many other applications in timber-frame construction thanks to its high extraction resistance.

Topduo Roofing screw

blue+ cylinder-head

Art. no.	Dimensions (mm)	Length (mm)*	Drive	PU
945956	8,0 x 225	60/100	TX 40	50
945965	8,0 x 235	60/100	TX 40	50
945957	8,0 x 255	60/100	TX 40	50
945958	8,0 x 275	60/100	TX 40	50
945960	8,0 x 302	60/100	TX 40	50
945961	8,0 x 335	60/100	TX 40	50
945962	8,0 x 365	60/100	TX 40	50
945963	8,0 x 397	60/100	TX 40	50
945964	8,0 x 435	60/100	TX 40	50

* Under-head thread/drive thread

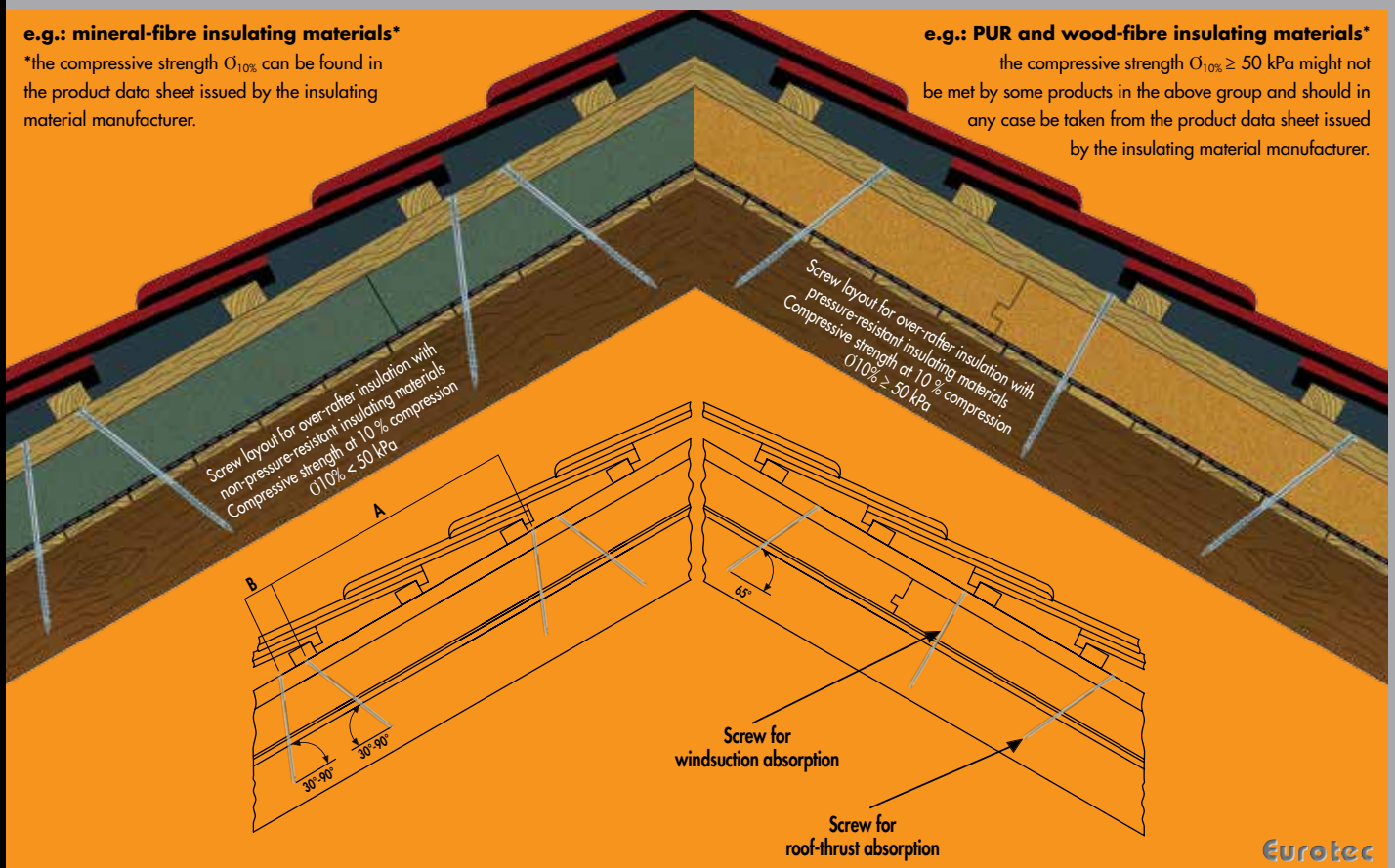
- For fastening over-rafter insulation
- Can also be used for many other applications in timber-frame construction thanks to its high extraction resistance.

e.g.: mineral-fibre insulating materials*

*the compressive strength $\sigma_{10\%}$ can be found in the product data sheet issued by the insulating material manufacturer.

e.g.: PUR and wood-fibre insulating materials*

the compressive strength $\sigma_{10\%} \geq 50$ kPa might not be met by some products in the above group and should in any case be taken from the product data sheet issued by the insulating material manufacturer.



Calculating quantities for Topduo roof-construction screw
Non-pressure-resistant insulating materials with $\sigma_{10\%} < 50$ kPa

Example calculation

Number of Topduo screws/m² [a] - Counter batten: 40 x 60 mm²

	Insulation thickness	40	60	80	100	120	140	160	180	200	220	240	260	280
	Boarding thickness	-	-	24	24	24	24	24	24	24	24	24	24	-
	Screwing depth [b]	77	58	66	74	72	77	88	66	106	84	62	78	82
	Dimensions	8 x 165	8 x 195	8 x 225	8 x 255	8 x 275	8 x 302	8 x 335	8 x 335	8 x 397	8 x 397	8 x 397	8 x 435	8 x 435
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
Roof pitch	20°	1,25	1,25	1,25	1,32	1,59	1,94	2,43	2,91	3,22	3,64	4,11	4,83	4,83
	25°	1,36	1,36	1,36	1,45	1,81	2,21	2,60	3,18	3,59	4,14	4,76	5,71	5,71
	30°	1,51	1,51	1,51	1,51	1,93	2,41	2,89	3,20	4,15	4,79	5,74	5,74	5,74
	35°	1,61	1,61	1,61	1,61	2,05	2,61	2,89	3,61	4,15	4,78	5,74	7,18	7,18
	40°	1,60	1,70	1,60	1,70	2,21	2,60	3,18	3,59	4,14	4,76	5,83	7,29	7,29
	45°	1,69	1,69	1,69	1,69	2,24	2,63	3,22	3,64	4,83	5,78	5,78	7,22	7,22
	50°	1,69	1,69	1,69	1,79	2,24	2,63	3,22	4,11	4,83	5,78	5,78	7,22	7,22
	55°	1,71	1,71	1,71	1,71	2,23	2,62	3,20	3,62	4,79	5,76	5,76	7,18	7,18
	60°	1,60	1,70	1,60	1,70	2,21	2,60	3,18	3,59	4,76	4,76	5,71	7,29	7,29

[a] With screw spacing A= B; screwing angle 65°.
[b] Screwing depth in the rafter.

Example conversion for screws/m² → max. screw spacing $= \frac{1}{(1{,}51 \times 0{,}7)} = 0{,}95$ m.

With 1,51 = number of screws/m²; 0,7 = rafter clearance in m. According to the Z-9.1-630 approval, the screw spacing should not exceed 1,75 m.
Calculation according to Z-9.1-630, DIN 1055-4:2005-03 and DIN 1055-5:2005. All listed values should be viewed as subject to the assumptions that have been made.
They therefore represent example calculations and are subject to typographical and printing errors.

Further assumptions:

Gable roof; ridge height max. 18 m; site elevation max. 285 m above sea level; wind load zone 1 (only wind-pressure values for roof area "H" are taken into account);
snow load zone 2 (snow guard present); unladen weight of roofing 0,55 kN/m²; usage class (NKL) 2; rafters C24 8/≥12 cm; rafter length 8 m; rafter spacing 70 cm; counter batten C24 4/6 x 4 m.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Calculating quantities for Topduo roofing screw
Pressure-resistant insulating materials with $\sigma_{10\%} \geq 50$ kPa

Example calculation: Screws for roof-thrust absorption

Number of Topduo screws/m² - 100 kPa/50 kPA[a] - Counter batten: 40 x 60 mm²

		Insulation thickness	40	60	80	100	120	140	160	180	200	220	240	260	280
		Boarding thickness	-	-	24	24	24	24	24	24	24	24	24	24	-
		Screwing depth[b]	77	58	66	74	72	77	88	66	106	84	62	78	82
		Dimensions	8 x 165	8 x 195	8 x 225	8 x 255	8 x 275	8 x 302	8 x 335	8 x 335	8 x 397	8 x 397	8 x 397	8 x 435	8 x 435
			mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
Roof pitch		20°	0,58/0,97	0,57/1,00	0,57/0,97	0,57/0,97	0,57/0,97	0,57/1,02	0,57/1,13	0,57/1,24	0,57/1,33	0,57/1,44	0,57/1,53	0,57/1,62	0,62/1,72
		25°	0,69/1,18	0,62/1,22	0,59/1,18	0,59/1,18	0,59/1,18	0,59/1,24	0,59/1,37	0,59/1,50	0,59/1,62	0,59/1,74	0,64/1,85	0,70/1,98	0,75/2,10
		30°	0,79/1,36	0,72/1,41	0,68/1,36	0,68/1,36	0,68/1,36	0,68/1,42	0,68/1,58	0,68/1,72	0,68/1,87	0,68/2,01	0,74/2,13	0,80/2,26	0,87/2,42
		35°	0,88/1,51	0,79/1,56	0,75/1,51	0,75/1,51	0,75/1,51	0,75/1,58	0,75/1,76	0,75/1,93	0,75/2,07	0,75/2,23	0,83/2,38	0,89/2,55	0,96/2,69
		40°	0,93/1,64	0,85/1,70	0,82/1,64	0,82/1,64	0,82/1,64	0,82/1,72	0,82/1,90	0,82/2,07	0,82/2,26	0,82/2,42	0,89/2,59	0,97/2,74	1,04/2,91
		45°	0,98/1,74	0,89/1,78	0,87/1,74	0,87/1,74	0,87/1,74	0,87/1,83	0,87/2,01	0,87/2,19	0,87/2,38	0,87/2,55	0,94/2,74	1,02/2,91	1,10/3,03
		50°	1,00/1,80	0,92/1,85	0,89/1,80	0,89/1,80	0,89/1,80	0,89/1,87	0,89/2,07	0,89/2,26	0,89/2,46	0,89/2,64	0,97/2,80	1,06/2,97	1,14/3,17
		55°	1,00/1,83	0,93/1,87	0,91/1,83	0,91/1,83	0,91/1,83	0,91/1,90	0,91/2,13	0,91/2,30	0,91/2,50	0,91/2,69	0,99/2,85	1,08/3,03	1,16/3,24
		60°	0,98/1,83	0,93/1,87	0,90/1,83	0,90/1,83	0,90/1,83	0,90/1,90	0,90/2,10	0,90/2,30	0,90/2,50	0,90/2,69	0,99/2,85	1,07/3,03	1,16/3,24

[a] Number of screws/m², differentiated for compressive strength of the insulation: 100 kPa oder 50 kPa.
[b] Screwing depth in the rafter.

Example conversion for screws/m² → max. screw spacing $= \frac{1}{(1{,}36 \times 0{,}7)} = 1{,}05$ m.

With 1,36= number of screws/m²; 0,7= rafter clearance in m. According to the Z-9.1-630 approval, the screw spacing should not exceed 1.75 m.
Calculation according to Z-9.1-630, DIN 1055-4:2005-03 and DIN 1055-5:2005.
All listed values should be viewed as subject to the assumptions that have been made. They therefore represent example calculations and are subject to typographical and printing errors.

Further assumptions:

Gable roof; ridge height max. 18 m; site elevation max. 285 m above sea level; wind load zone 1 (only wind-pressure values for roof area "H" are taken into account); snow load zone 2 (snow guard present); unladen weight of roofing 0,55 kN/m²; usage class (NKL) 2; rafters C24 8/≥12 cm; rafter length 8 m; rafter spacing 70 cm; counter batten C24 4/6 x 4 m.

Example calculation: Screws for wind-suction absorption

Number of Topduo screws/m² - max. screw spacing in m

		Insulation thickness	40	60	80	100	120	140	160	180	200	220	240	260	280
		Boarding thickness	-	-	24	24	24	24	24	24	24	24	24	24	-
		Screwing depth[c]	85	65	51	61	71	51	51	58	71	51	93	73	77
		Dimensions (mm)	8 x 165	8 x 165	8 x 195	8 x 225	8 x 255	8 x 255	8 x 275	8 x 302	8 x 335	8 x 335	8 x 397	8 x 397	8 x 397
Roof pitch		20° - 25°	0,77 screws/m²; screw spacing = 1,85 m												
		>25° bis 35°	0,79 screws/m²; screw spacing = 1,80 m												
		>35° bis 40°	0,81 screws/m²; screw spacing = 1,76 m												
		>40° bis 50°	0,84 screws/m²; screw spacing = 1,70 m												
		>50° bis 60°	0,88 screws/m²; screw spacing = 1,63 m												

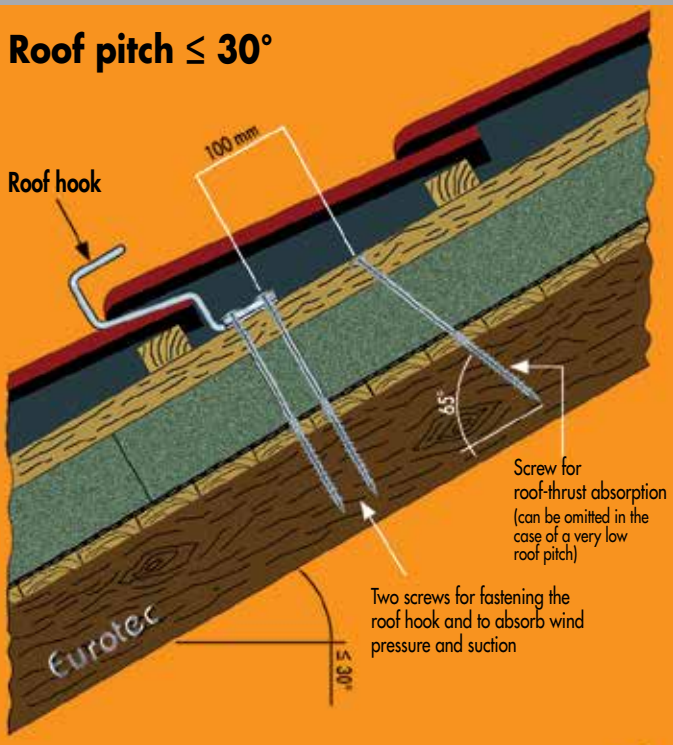
[c] Screwing depth in the rafter.
The following apply in addition to the assumptions made above: least favourable wind-suction values for the roof areas "H" and "I"; load-duration class (KLED) = short.

Roof hooks

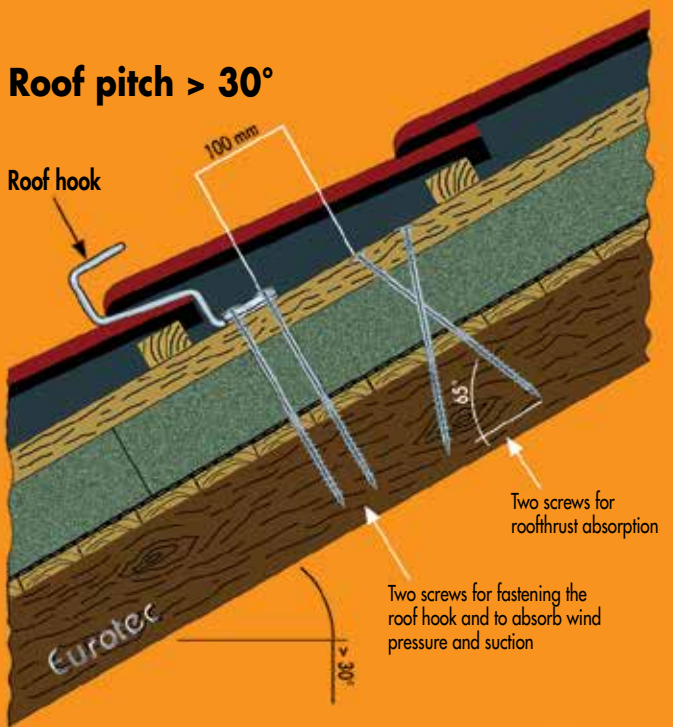
Fastening for over-rafter insulation

With the Topduo double-threaded screw, the additional point loads arising due to a photovoltaic or solar-thermal system are safely transferred to the rafter. The roof hooks are fastened to the rafter by means of two screws that pass through the entire assembly height of the over-rafter insulation.
This connection must then be reinforced with max. two further screws, depending on the roof pitch and other factors.

Roof pitch ≤ 30°



Roof pitch > 30°



Eurotec® Eurotec calculation service On-roof insulation in accordance with DIN EN 1995:2010-12

Paneltwistec and Topduo

With the ECS calculation software, you can create a calculation aid for the fastening of on-roof insulation systems in just a few minutes.
We will be delighted to handle your inquiry. Simply send the completed inquiry form to **Fax 02331 - 6245 200** or **Mail info@e-u-r-o-tec.de**
The software and inquiry form are available to download on the service page of our website **www.e-u-r-o-tec.de**

Contact

Traders:	Contractor:
Contact person:	Contact person:
E-Mail:	Tel.:
Construction project:	E-Mail:

We will email you the preliminary calculation, preferably in pdf format.

Details of the construction project

☐ Lean-to roof	☐ Gable roof	☐ Hipped roof	Boarding thickness (mm):
Eave length (m):			Width of counter batten (mm): (at least 60 mm)
Roof width (m):			Height of counter batten (mm): (at least 40 mm)
Rafter length (m): (if roof width unknown)			Length of counter batten (m): (Length of actually installed counter-batten pieces)
Ridge height (m): (above site)			Load from roofing and battens:
Roof overhang (m): Eaves_____ / Verge_____ (To be stated only if insulation will not be laid beyond the edge of the building)			☐ Standing metal seam roof (0,35 kN/m²)
Roof pitch (°): Main roof_____ / hip_____			☐ Concrete roofing tile, roof tile (0,55 kN/m²)
Insulation: (Product name)			☐ Flat-tile roof in double/crown formation (0,75 kN/m²)
			☐ or_____ (kN/m²)
Insulation thickness (mm):			Post code of the construction project: (to allow determination of the wind/snow load zone)
Rafter width (mm):			Characteristic snow load on base s_k (kN/m²): (only for municipalities with special regulation)
Rafter height (mm):			Site elevation above sea level (m):
Rafter spacing (mm):			Snow guard provided? ☐ Yes ☐ No

Screw selection

☐ Paneltwistec countersunk-head screw* ☐ Paneltwistec flanged button-head screw* ☐ Topduo**

*only for pressure-resistant insulating materials with compressive strength ≥ 50 kPa

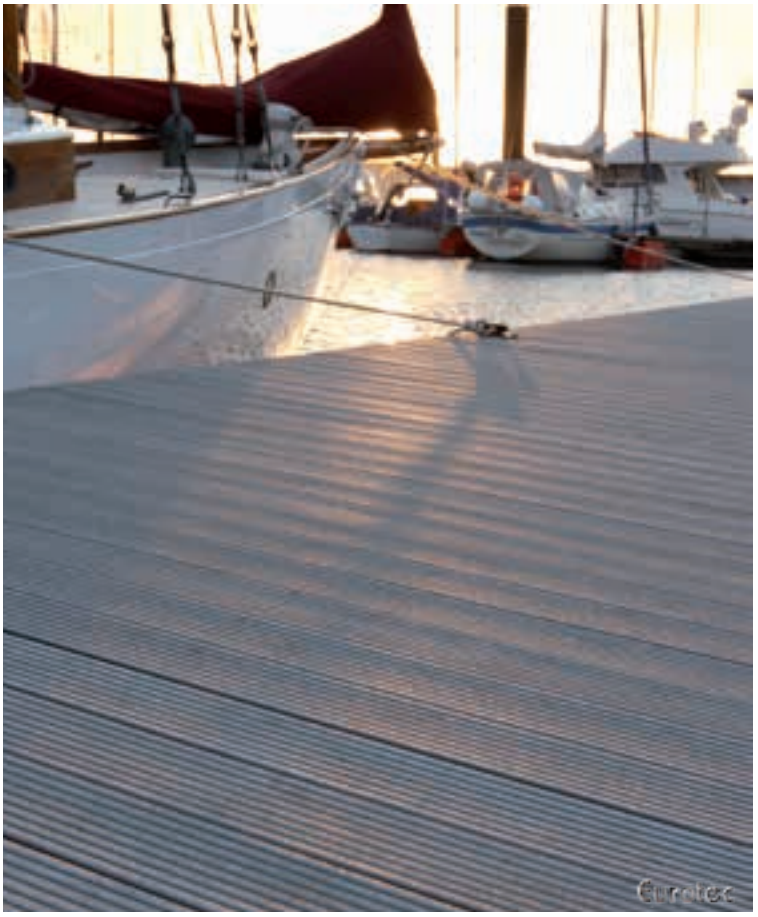
**also for non-pressure-resistant insulating materials

Deck construction and landscaping

Deck boards

Eurotec®
... living with nature


Model Foto: Colourbox.com



Overview of timber types*

A timber deck matches any ambience. Whether they are left natural and greying or are treated with care products: they lend a certain proximity to nature or even a sense of urban chic, and always a sense of well-being.

As well as a suitable fastening system, above all good planning and professional assembly are essential for long-lived, low-maintenance deck construction. Not all timber is the same: as well as aesthetics and price, it is advisable to weigh up the technological properties against one another. A timber with very high durability and an astoundingly beautiful exterior can, for example, have only moderate dimensional stability and may not be suited for indirect, hidden fastening. This overview of the most common deck timbers might assist you in your considerations.

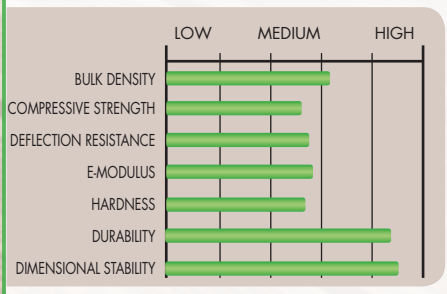
Glossary

- E-modulus (modulus of elasticity) – resistance of a material to elastic deformation. The higher the Young's modulus, the stiffer the component. This overview quotes the Young's modulus as measured parallel to the grain.
- Durability class – indication of the natural durability of the heartwood with respect to fungus, from 1 (very durable) to 5 (not durable).
- Dimensional stability – characteristic of the timber not to warp, twist, etc. due to swelling/shrinkage..

Please ensure that you refer to the information we provide on "Hazards in the construction of timber decks" on page 84.

Thermo Ash

Fraxinus spp.



General details:
- **Origin:** Central and Eastern Europe, North America
- **Colour:** Dark brown; also greying as untreated timber
- **Durability class:** 1–2; untreated: 5
- **Properties:** Low swelling and shrinkage, excellent dimensional stability, thermal treatment leads to reduction in strength and elasticity and causes the surface to become brittle.

Application:
Deck construction, parquet, floors, garden furniture, sometimes as a substitute for tropical timber, not to be used for structural applications.

Installation instructions:
- Centre distance in substructure: max. 50 cm
- Joint width between the boards: 4 to 6 mm
- Spacing between the butt joints: 3 to 4 mm

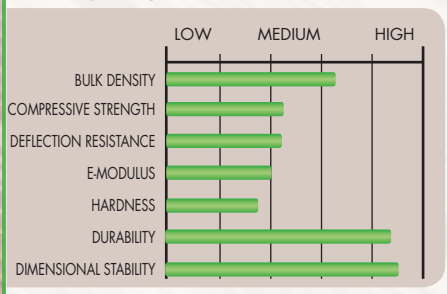
Fastening recommendation:
Use Thermofix screw with drill point for the deck glider (brittle surface!).
For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop.

+ High durability
+ No erosion
+ Low swelling and shrinkage
+ Very good dimensional stability
+ Substitute for tropical timber
+ Largely sourced from sustainable forestry

– *Surface made brittle by thermal treatment*
– *Not for structural applications*
– *Moderate hardness*

Thermo-Beech

Fagus sylvatica



General details:
- **Origin:** Central and South-Eastern Europe
- **Colour:** Dark brown; also greying as untreated timber
- **Durability class:** 1–2; untreated: 5
- **Properties:** Low swelling and shrinkage, excellent dimensional stability, thermal treatment causes reduction in strength and elasticity and makes the surface brittle, plain texture.

Application:
Deck construction, parquet, floors, worktops, sometimes as a substitute for tropical timber, not to be used for structural applications.

Installation instructions:
- Centre distance in substructure: max. 40 cm
- Joint width between the boards: 6 to 8 mm
- Spacing between the butt joints: 3 to 4 mm

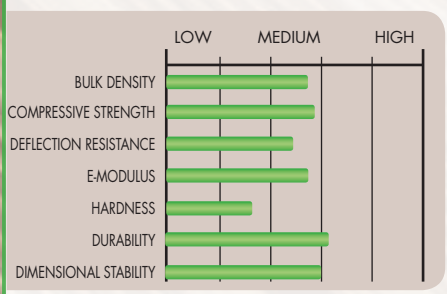
Fastening recommendation:
Use Thermofix screw with drill point for the deck glider (brittle surface!).
For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop.

+ High durability
+ No erosion
+ Low swelling and shrinkage
+ Very good dimensional stability
+ Substitute for tropical timber
+ Largely sourced from sustainable forestry

– *Surface made brittle by thermal treatment*
– *Not for structural applications*
– *Moderate hardness*

Siberian Larch

Larix sibirica



General details:
- **Origin:** Western and Southern Siberia, Mongolia
- **Colour:** Yellowish (European Larch: yellowish to reddish-brown)
- **Durability class:** Varies from 1 to 4 depending on where it is grown
- **Properties:** Very narrow rings, giving it a high wood density for softwood, high elasticity, low swelling and shrinkage, good to satisfactory dimensional stability, predominantly knot-free, low resin content, straight-grained texture.

Application:
Deck construction, façades, solid-wood floorboards, window frames, fencing, approved structural timber.

Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 8 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For direct fastening: Terrassotec, hardened stainless steel, 5.0 and 5.5 mm; Hapatec, hardened stainless steel, 5.0 mm; or Profile drilling screw, hardened stainless steel, 5.5 mm for Eurotec aluminium profiles.
Pilot-drilling with drill stop recommended.

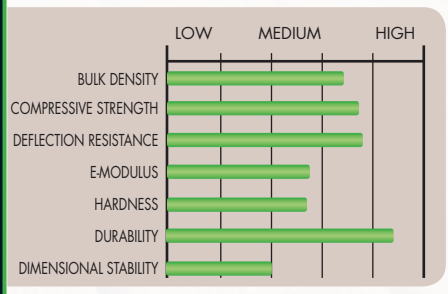
+ Low swelling and shrinkage
+ Predominantly knot-free
+ Approved structural timber

– *Resin bleed possible*
– *Often originates from overexploitation, so questionable as a substitute for tropical timber (use only certified timber wherever possible)*
– *Moderate hardness*

*Solid-timber deck boards do not form part of our product range. This brief overview represents a planning aid. All information without guarantee. For more timber types, please visit www.e-u-r-o-tec.de.

Overview of timber types*

Robinia, False Acacia
Robinia pseudoacacia



General details:
- **Origin:** North America, also cultivated in Europe since the 17th century (not to be confused with Acacia)
- **Colour:** Yellow-green to olive brown, darkening to golden brown
- **Durability class:** 1–2, most-durable domestic timber
- **Properties:** High swelling and shrinkage, satisfactory to moderate dimensional stability, high strength and hardness, distinctive texture.

Application:
Deck construction, window frames, playground construction, fencing, excellent structural timber for outdoor use, sometimes used as a substitute for tropical timber.

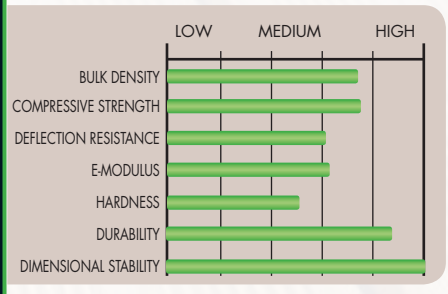
Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 10 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For timbers with high wood density and/or moderate dimensional stability, direct fastening of the boards is preferable to hidden. This applies above all to board thicknesses > 25 mm. For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles. It is always advisable to drill a pilot hole with a drill stop.

+ High durability
+ High strength
+ High hardness
+ Substitute for tropical timber
+ Largely sourced from sustainable forestry

– *Moderate dimensional stability*

Merbau
Intsia spp.



General details:
- **Origin:** Southeast Asia, trade name encompasses various species
- **Colour:** Light brown to reddish brown, darkening to brown to dark copper brown
- **Durability class:** 1–2
- **Properties:** Very low swelling and shrinkage, excellent dimensional stability, high strength and hardness

Application:
Deck construction, window frames, parquet, stairs, furniture

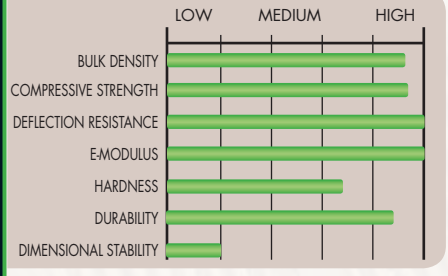
Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 4 to 6 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop.

+ High durability
+ High strength
+ High hardness
+ Low swelling and shrinkage
+ Exceptionally good dimensional stability

– *Possible erosion of constituent substances in the timber*
– *Originates almost exclusively from overexploitation (certified timber barely available)*

Massaranduba
Manilkara spp.



General details:
- **Origin:** Northern to central South America, trade name encompasses various species
- **Colour:** Meaty red colour, later darkening to dark brown
- **Durability class:** 1–2
- **Properties:** High swelling and shrinkage, satisfactory to moderate dimensional stability, extremely high strength, high hardness, homogeneous texture.

Application:
Deck construction, floors subject to heavy loads, noise barriers and privacy screens, fencing, structural timber, sometimes used in water engineering.

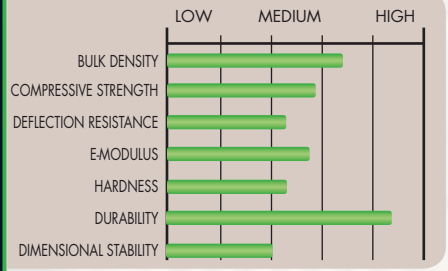
Installation instructions:
The installation is extremely dependent on the timber's moisture level. The wood moisture must always be determined before installation. Ask your timber supplier for more information.

Fastening recommendation:
For timbers with high wood density and/or moderate dimensional stability, direct fastening of the boards is preferable to indirect. This applies above all to board thicknesses > 25 mm. For direct fastening, use Terrassotec A4 5.5 mm in combination with the distance strip or profile drilling screw A4 5.5 mm for Eurotec aluminium profiles. It is always advisable to drill a pilot hole with a drill stop. Nevertheless, we cannot provide a general recommendation, as damage is repeatedly found to occur with this type of timber.

+ High durability
+ Extremely high strength
+ High hardness

– *Extremely low dimensional stability*
– *Often originates from overexploitation (use only certified timber wherever possible)*
– *We consider permanent, secure fastening to be highly critical*

Kapur
Dryobalanops spp.



General details:
- **Origin:** Southeast Asia, trade name encompasses various species
- **Colour:** Orange to reddish brown, darkening to brown
- **Durability class:** 1–2
- **Properties:** Moderate to high swelling and shrinkage, satisfactory to moderate dimensional stability, homogeneous texture.

Application:
Deck construction, fencing, structural timber

Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 10 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For timbers with high wood density and/or moderate dimensional stability, direct fastening of the boards is preferable to hidden. This applies above all to board thicknesses > 25 mm. For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop.

+ High durability

– *Possible erosion of constituent substances in the timber*
– *Often originates from overexploitation (use only certified timber wherever possible)*
– *Moderate hardness*
– *Moderate dimensional stability*

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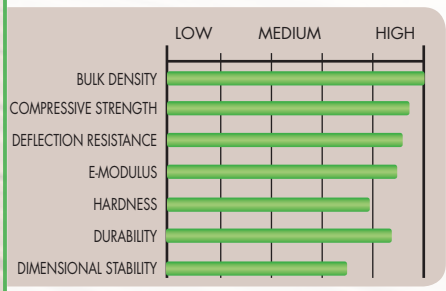
Ipé, Lapacho
Tabebuia spp.



General details:
- **Origin:** Northern to central South America, trade name encompasses various species
- **Colour:** Light brown to light yellowish brown, later darkening to brown to olive brown
- **Durability class:** 1–2
- **Properties:** Moderate to high swelling and shrinkage, good dimensional stability, extremely high strength, very high hardness, homogeneous texture.

Application:
Deck construction, bridge construction and shipbuilding, floating jetties, fencing, parquet, floors subject to heavy loads, approved structural timber, sometimes used in water engineering.

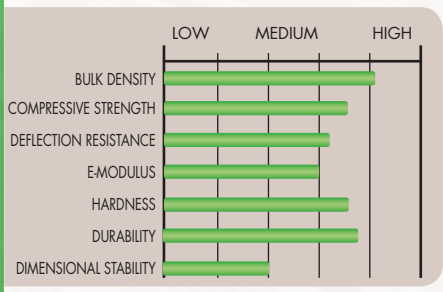
Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 8 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For timbers with high wood density and/or moderate dimensional stability, direct fastening of the boards is preferable to hidden. This applies above all to board thicknesses > 25 mm. For direct fastening: Terrassotec, hardened stainless steel, 5.0 and 5.5 mm; Hapatec, hardened stainless steel, 5.0 mm; or Profile drilling screw, hardened stainless steel, 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop.

+ High durability
+ Good dimensional stability
+ Extremely high strength
+ Very high hardness
+ Approved structural timber

– *Often originates from overexploitation (use only certified timber wherever possible)*

Garapa
Apuleia spp.



General details:
- **Origin:** South America, trade name encompasses various species
- **Colour:** Honey yellow, later darkening to yellowish brown or golden brown
- **Durability class:** Varies between 1 and 3
- **Properties:** Moderate to high swelling and shrinkage, satisfactory to moderate dimensional stability, plain, homogeneous texture.

Application:
Deck construction, furniture, window frames

Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 10 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For timbers with high wood density and/or moderate dimensional stability, direct fastening of the boards is preferable to hidden. This applies above all to board thicknesses > 25 mm. For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop.

+ High durability (variable)
+ High strength
+ Very high hardness

– *Possible erosion of constituent substances in the timber*
– *Often originates from overexploitation (use only certified timber wherever possible)*
– *Moderate dimensional stability*

Douglas Fir
Pseudotsuga menziesii

General details:
- **Origin:** North America, also cultivated in Europe since the 19th century
- **Colour:** Light yellowish brown to red brown, resembles European Larch.
- **Durability class:** 3–4
- **Properties:** High elasticity, low swelling and shrinkage, good dimensional stability, low resin content, fine texture.

Application:
Deck construction, façades, solid-wood floorboards, window frames, fencing, approved structural timber, sometimes used as a substitute for tropical timber.

Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 8 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For direct fastening: Terrassotec, hardened stainless steel, 5.0 and 5.5 mm; Hapatec, hardened stainless steel, 5.0 mm; or Profile drilling screw, hardened stainless steel, 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop (risk of splintering).

+ Low swelling and shrinkage
+ Good dimensional stability
+ Approved structural timber
+ Substitute for tropical timber
+ Largely sourced from sustainable forestry

– *Resin bleed possible*
– *Moderate durability but sufficient for deck construction*
– *Moderate hardness*

Cumarú
Dipteryx spp.

General details:
- **Origin:** Northern South America, trade name encompasses various species
- **Colour:** From yellowish to red to violet brown, later darkening to yellowish brown to olive brown
- **Durability class:** 1
- **Properties:** High swelling and shrinkage, good to satisfactory dimensional stability, extremely high strength, very high hardness, homogeneous texture.

Application:
Deck construction, floors subject to heavy loads, structural timber, sometimes used in water engineering.

Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 8 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For timbers with high wood density and/or moderate dimensional stability, direct fastening of the boards is preferable to hidden. This applies above all to board thicknesses > 25 mm. For direct fastening: Terrassotec A2 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles.
It is always advisable to drill a pilot hole with a drill stop.

+ Very high durability
+ Extremely high strength
+ Very high hardness

– *Possible erosion of constituent substances in the timber*
– *Often originates from overexploitation (use only certified timber wherever possible)*
– *Moderate dimensional stability*

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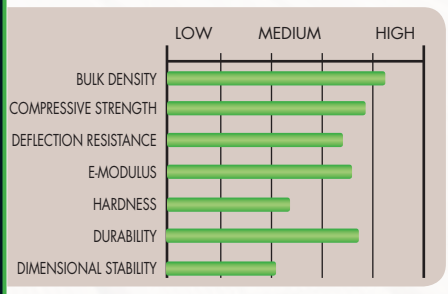
Overview of timber types*

Bangkirai, Yellow Balau
Shorea spp.



General details:
- **Origin:** South, Southeast and East Asia, trade name encompasses various species
- **Colour:** Yellowish brown, often darkening to olive brown
- **Durability class:** 2
- **Properties:** Medium to high swelling and shrinkage, satisfactory dimensional stability, high strength and hardness, distinctive texture.

Application:
Deck construction, piers, floating jetties, fencing, stables, flooring subject to heavy use, structural timber in water engineering. Many of the Shorea species of the Meranti group are used for window frames.

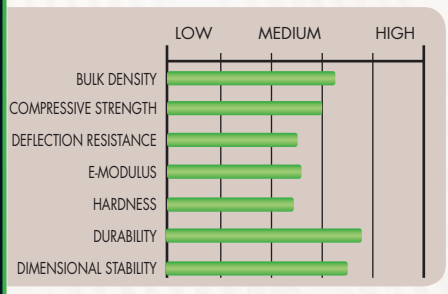
Installation instructions:
Installation is extremely dependent on the timber's moisture level. The wood moisture must always be determined before installation. Ask your timber supplier for more information.

Fastening recommendation:
For timbers with high wood density and/or moderate dimensional stability, direct fastening of the boards is preferable to hidden. This applies above all to board thicknesses > 25 mm. For direct fastening: Terrassotec, hardened stainless steel, 5.0 and 5.5 mm; Hapatec, hardened stainless steel, 5.0 mm; or Profile drilling screw, hardened stainless steel, 5.5 mm for Eurotec aluminium profiles. It is always advisable to drill a pilot hole with a drill stop.

+ High durability
+ High strength
+ High hardness

– *Possible erosion of constituent substances in the timber*
– *Often originates from overexploitation (use only certified timber wherever possible)*

Oak
Quercus robur, Quercus petraea



General details:
- **Origin:** Europe
- **Colour:** Yellow brown, darkening to brown to olive brown
- **Durability class:** 2
- **Properties:** Low swelling and shrinkage, good dimensional stability; distinctive, decorative texture.

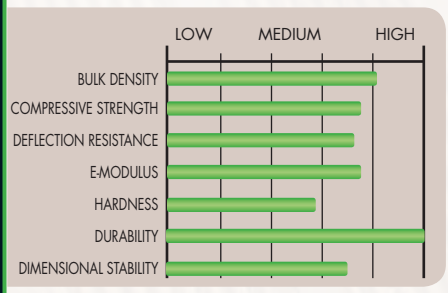
Application:
Deck construction, stairs, parquet, furniture, window frames, fencing, approved structural timber, sometimes used as a substitute for tropical timber.

Installation instructions:
- Centre distance in substructure: max. 60 cm
- Joint width between the boards: 6 to 8 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles. It is always advisable to drill a pilot hole with a drill stop.

+ High durability
+ Good dimensional stability
+ High hardness
+ Approved structural timber
+ Substitute for tropical timber
+ Largely sourced from sustainable forestry

Walaba
Eperua spp.



General details:
- **Origin:** As reservoir timber from the Brokopondo Reservoir in Suriname (South America), otherwise from northern South America; trade name encompasses various species.
- **Colour:** Red brown to dark brown
- **Durability class:** 1
- **Properties:** As reservoir timber: low swelling and shrinkage, good dimensional stability, high strength and hardness, very decorative.

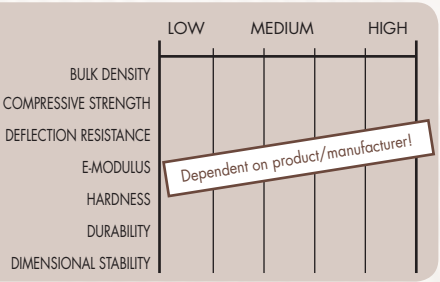
Application:
Deck construction, water engineering, fencing, piles, masts, structural timber.

Installation instructions:
- Centre distance in substructure: max. 40 cm
- Joint width between the boards: 6 to 8 mm
- Spacing between the butt joints: 3 to 4 mm

Fastening recommendation:
For direct fastening, use Terrassotec A4 5.5 mm or Profile drilling screw A4 5.5 mm for Eurotec aluminium profiles. It is always advisable to drill a pilot hole with a drill stop.

+ Very high durability
+ No erosion
+ Low swelling and shrinkage
+ Good dimensional stability
+ High strength and hardness
+ Timber from reservoirs means no destruction of primeval forest

WPC
Wood-Plastic-Composite



General details:
Depending on the product in question, wood-plastic composite materials consist of different proportions of wood, plastics and additives. The wood content varies from 50% to 70%. The natural fibres incorporated into the material originate predominantly from sustainable forestry. The properties of these polymer-bound products are equivalent to those of high-quality timber-based materials.

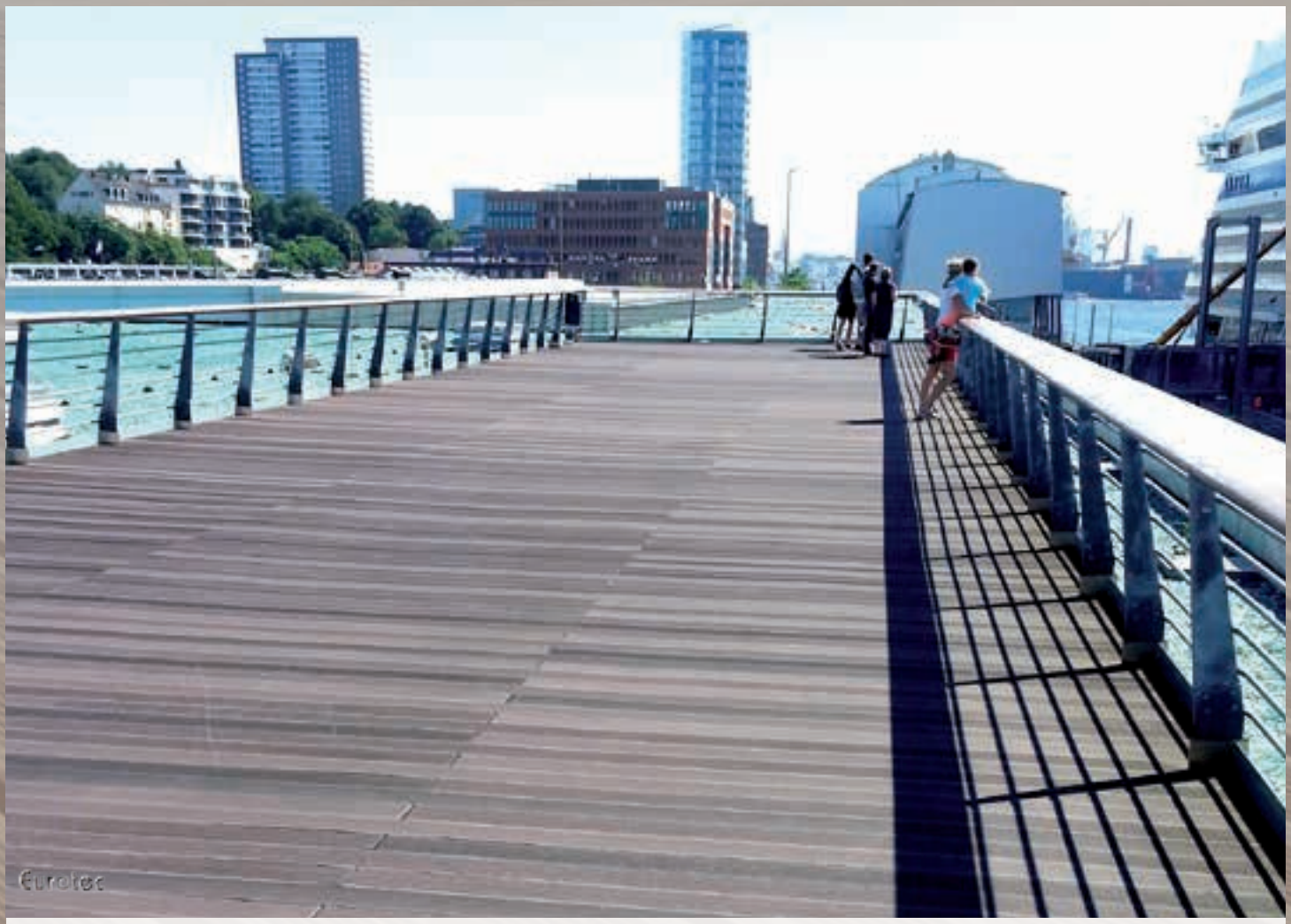
Application:
Deck construction, fencing, garden furniture, façades, edge profiles, privacy screen elements, sometimes used as a substitute for tropical timber.

Installation instructions:
Substructure spacing and joint width according to manufacturer's information.

Fastening recommendation:
WPC boards are usually fastened hidden and invisibly with clips, e.g. T-Stick on aluminium substructure.

+ Good dimensional stability
+ Barefoot board
+ No erosion
+ Substitute for tropical timber
+ Largely sourced from sustainable forestry

*Solid-timber deck boards do not form part of our product range. This brief overview represents a planning aid. All information without guarantee. For more timber types, please visit www.e-u-r-o-tec.de.



Eurotec®
...living with nature

Wood decks combine classic beauty with a warm and cosy atmosphere. Wood does not get too hot in summer and remains at a pleasant temperature in winter.


Model Foto: Colourbox.com

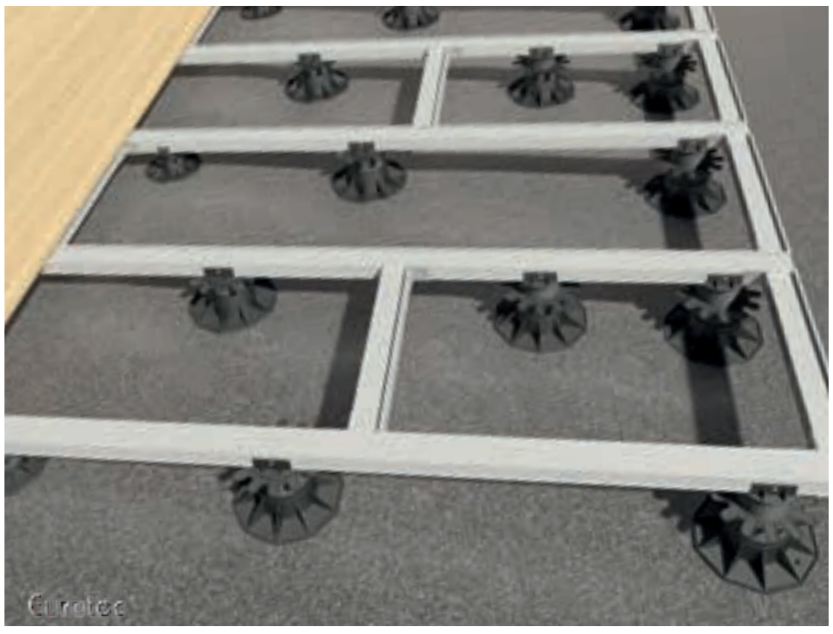
DECK SUBSTRUCTURE

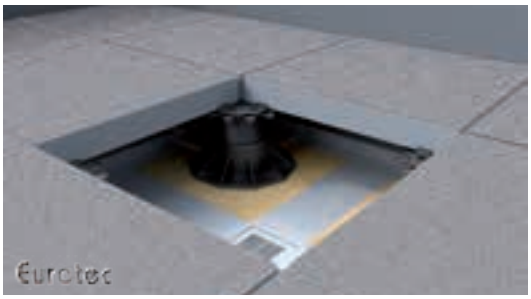
Essential for a perfect deck

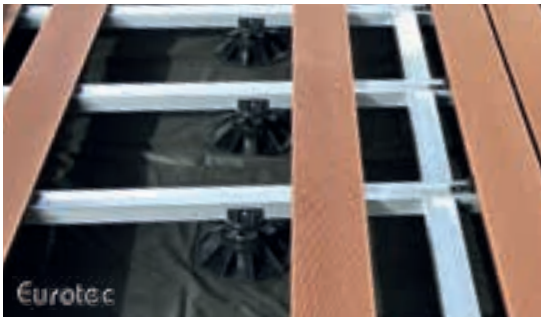
High-grade solutions for all types of substructure

Without a perfect substructure, your deck will soon become defective. We offer a number of aids that let your deck remain attractive for a long time.

We will show you what's important!







Cork accessories for deck substructures

»Free of PAHs«
(hazardous plasticisers in rubber).

Cork, what is it?

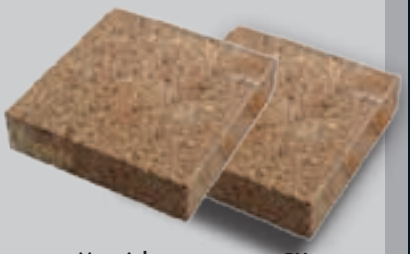
Cork is a natural product obtained from the bark of the cork oak. The cork oak is a deciduous tree that is native primarily to the western Mediterranean, e.g. Spain and Portugal. To harvest the cork, the bark is peeled directly off the tree by hand. As cork is a renewable natural product, a tree can be reharvested approx. every 10 years without causing damage to the tree. A cork oak has a life expectancy of up to 300 years and delivers approx. 100 to 200 kilograms of cork over its lifespan.

The cork pad spacers are laid between the deck substructure and the foundation/subsurface (self-adhesive on one side) and thus form a gap that aids constructive timber protection. The cork pad spacers are available in three sizes. These are 3 mm, 6 mm and 10 mm thickness/height (see Fig.). In addition to the advantages already mentioned, useful side effects of using the spacer include the option to adjust the height of the substructure and that the loads are distributed evenly.

Cork: properties and advantages

- Water-repellent (hydrophobic) and moisture-resistant
- Chemically neutral – free of PAHs (PAHs are toxic, carcinogenic plasticisers that are found primarily in rubber compounds)
- Does not decompose and is resistant to most acids and alkalis
- Dampens footfall sound, is non-slip and insulates against heat, noise and vibrations
- Resistant to rot, bacteria and germs
- Very pressure-stable and exhibits hardly any expansion
- Flame-resistant (fire class B2)

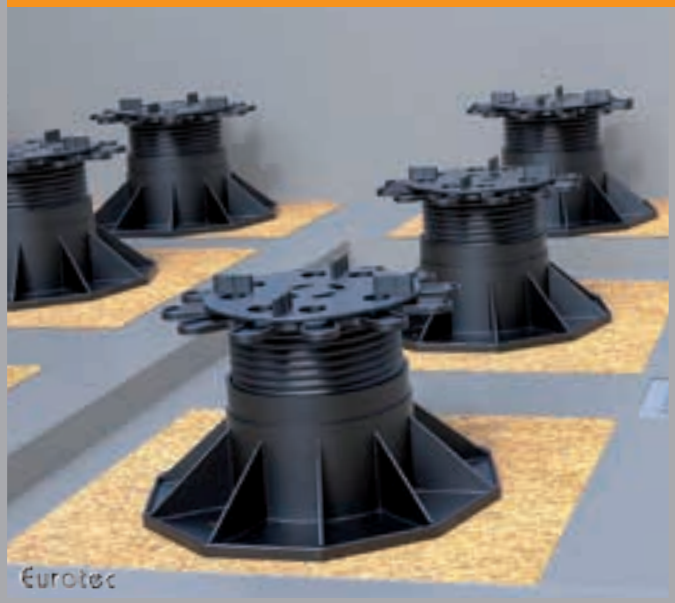
Cork is a sustainable, environmentally friendly natural product.



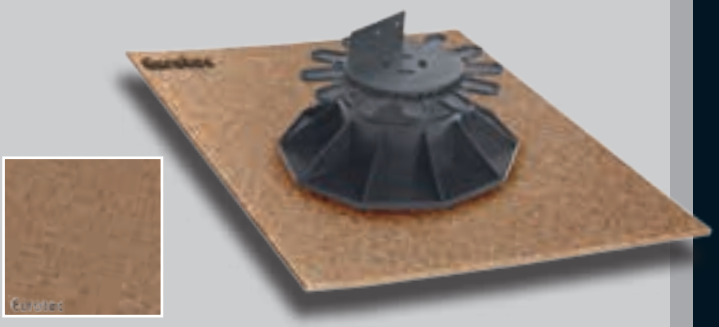
Cork pad spacer,
self-adhesive

Art. no.	Dimensions	Material	PU
945397	70 x 70 x 3 mm	Cork	25
945398	70 x 70 x 6 mm	Cork	25
945399	70 x 70 x 10 mm	Cork	25

Roof-protection cork, the natural underlay for adjustable feet



Using adjustable deck feet on, for example, PVC sheet roofs can lead to problems because of the plasticisers contained in the roofing.
The roof-protection cork provides natural protection against mechanical damage to the roof sheeting, at the same time as preventing contact between the two materials. Free of PAHs *(hazardous plasticisers in rubber).*



Art. no.	Dimensions	Material	PU
945395	250 x 250 x 3 mm	Cork	10

Accessories for substructures for decks

Root control fleece underlay

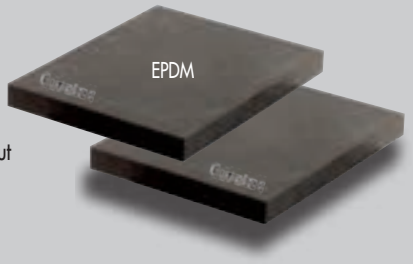
Permeable polypropylene underlay. Very limited permeability to water. Inhibits plant growth under the fleece.

Art. no.	Dimensions	Material	PU
944799	1,6 x 10,0 m	Polypropylene 50g/m²	1

Rolfi, spacers

These spacers form a gap between the substructure and the foundation/ support and thus help to protect the wood of the boarding beams.

Useful side effects are
- Height adjustment of the substructure possible
- Even load distribution, minor irregularities are balanced out
- Dampens footfall noise



Art. no.	Dimensions	Material	PU
945966	60 x 60 x 3 mm	EPDM, black	25
945967	60 x 60 x 6 mm	EPDM, black	25
945379	60 x 60 x 10 mm	EPDM, black	25

Protectus, timber-protection tape

The Protectus timber-protection tape provides lasting protection for your timber substructure from moisture, e.g. rain.

Advantages:
- Constructive timber protection
- Easy fastening thanks to adhesive film
- Optimum fit thanks to very thin material
- Tear-proof and durable
- Screws can be screwed through easily
- Can be individually cut to length

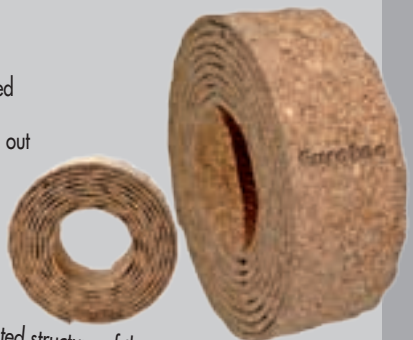
Art. no.	Dimensions	PU
946157	20000 x 75 x 0,5 mm	1

Rolfi, roll

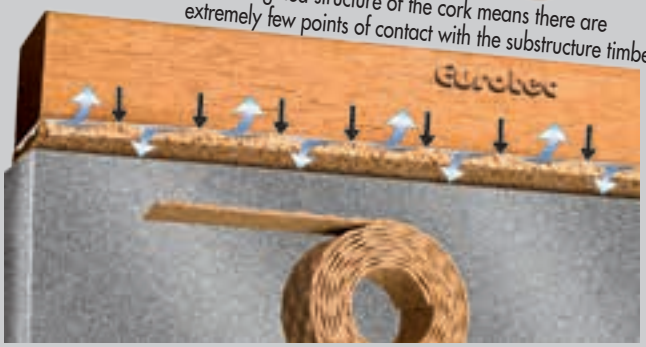
The Rolfi roll forms a gap between the deck substructure and foundation/subsurface.
Available in two materials.

Advantages:
- Constructive timber protection
- Substructure height can be adjusted
- Uniform load distribution
- Small irregularities can be evened out
- Dampens footfall noise
- Can be individually cut to length

»Free of PAHs«
(hazardous plasticisers in rubber).



The corrugated structure of the cork means there are extremely few points of contact with the substructure timber.



Art. no.	Dimensions	Material	PU
954040	4000 x 70 x 6 mm	Cork (corrugated)	8
945561	2015 x 70 x 8 mm	Granulated rubber	10

The new Profi-Line series of adjustable feet from Eurotec

NEW

From now on, we can offer you a modular system: innovative, universal, versatile and user-friendly!

PRO adjustable feet

Suitable for timber decks and stone patios with various assembly heights

Profi-Line adjustable feet

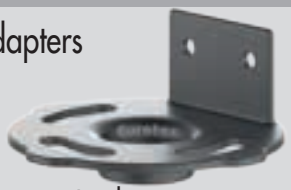
NEW

The new Profi-Line series of adjustable feet consists of three adjustable feet of different heights. Their assembly height can be altered with extension rings.

The new series of adjustable feet is completed by three different types of adapter:
- **L adapters** – for classic timber substructures or modern aluminium substructures
- **Click adapters** – for clicking Eurotec aluminium profiles into place in a time-saving manner
- **Stone adapters** – for laying stone slabs

This allows you to adapt the PRO adjustable feet to your individual requirements and local conditions in a quick and straightforward manner.

Adapters



L adapter

Click adapter in two sizes

Stone adapter

Upper part

Threaded ring

Extension ring

Baseplate

This is how the PRO L adjustable foot is put together

Option 1:
PRO adjustable foot plus
L adapter

Option 2:
PRO adjustable foot plus
Click adapter

Option 3:
PRO adjustable foot plus
Stone adapter

PRO adjustable feet

Can be fixed in place with a screw

Art. no.	Name	Assembly height	Load bearing capacity*	PU
946070	PRO S	3,0 - 5,3 cm	8,0 kN	10
946071	PRO M	5,3 - 8,2 cm	8,0 kN	10
946072	PRO L	7,0 - 11,7 cm	8,0 kN	10

Extension ring

for increasing the height of the PRO S, M and L adjustable feet

Art. no.	Name	Assembly height	Load bearing capacity*	PU
946074	Extension ring	4,0 cm	8,0 kN	10

* The quoted load-bearing capacities represent recommended values.
With these loads, the adjustable feet only deform by approx. 2 mm.
The load-bearing capacity before actual breakage is several times higher.

L adapter

for aluminium or timber profiles

NEW

Art. no.	Name	PU
946075	L adapter	10

Click adapter

for aluminium profiles with Click system

Click adapter 40
for Euro Deck aluminium system profile and ECO aluminium system profile

Click adapter 60
for aluminium system profile and HKP deck-support profile

Art. no.	Name	PU
946076	Click adapter 40	10
946077	Click adapter 60	10

Stone adapter

for stone slabs

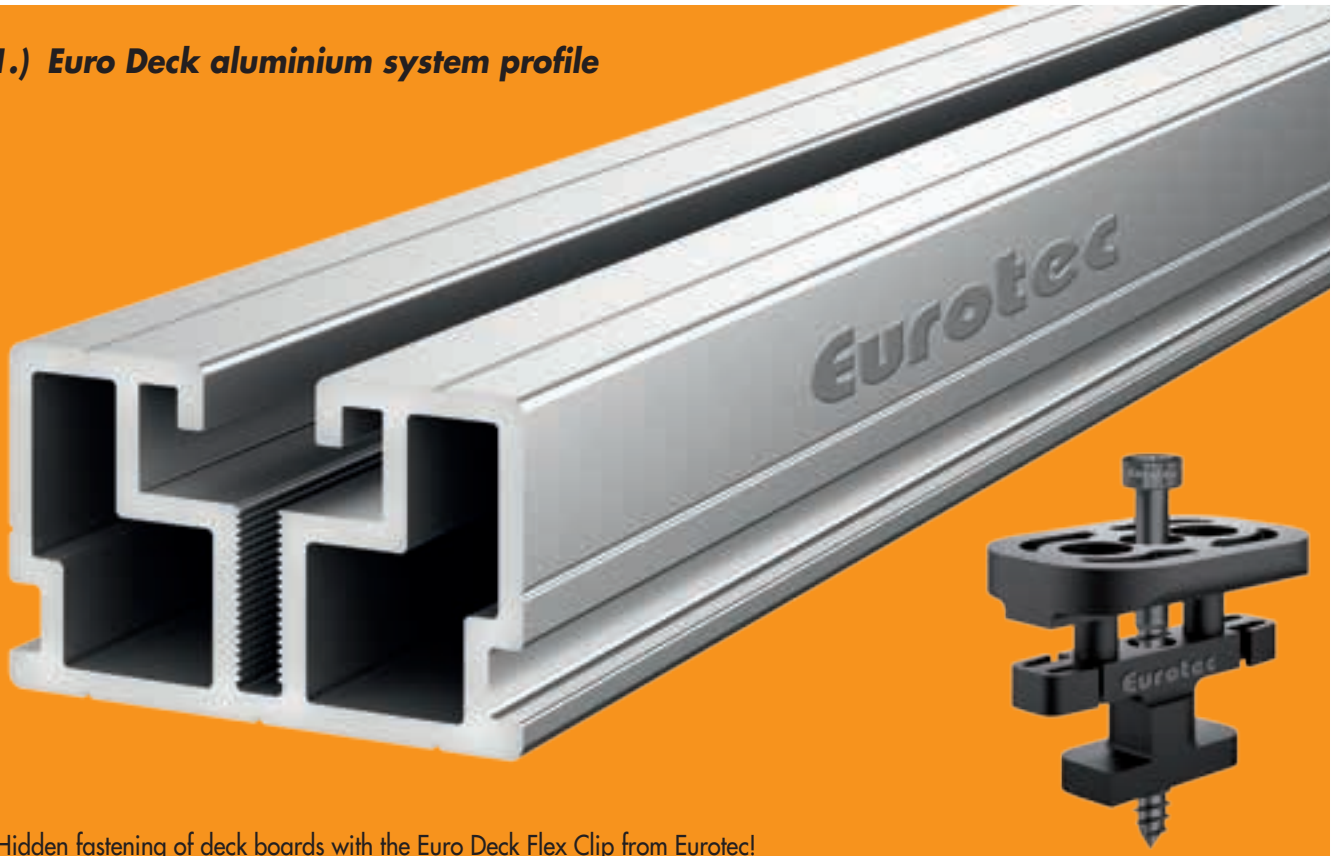
Art. no.	Name	PU
946078	Stone adapter	10

Euro Deck aluminium system profile

NEW

For hidden fastening of deck boards in combination with PRO adjustable feet and Click adapters

1.) Euro Deck aluminium system profile



Hidden fastening of deck boards with the Euro Deck Flex Clip from Eurotec!
This is suitable for WPC boards and for dimensionally stable timbers with grooved sides.

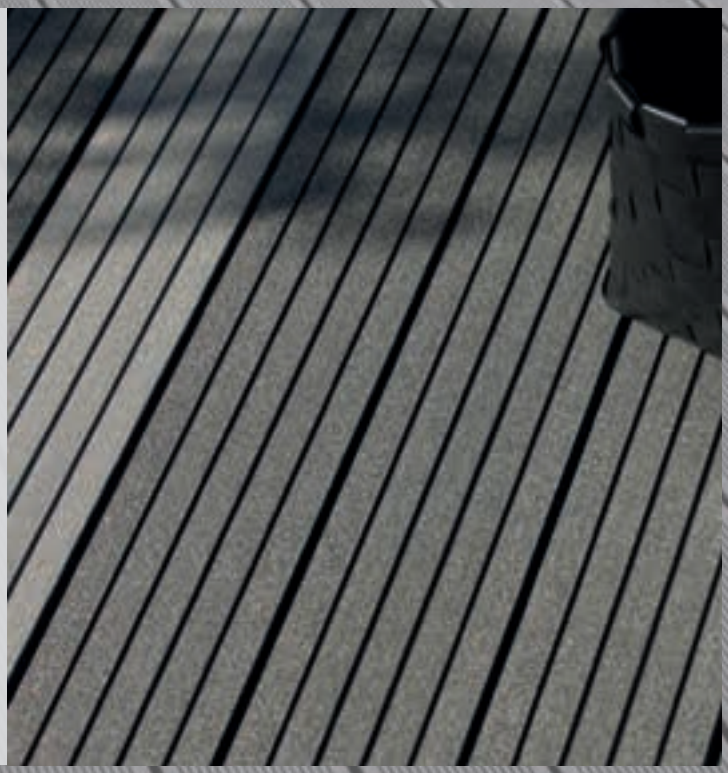
Euro Deck aluminium system profile

Art. no.	Dimensions[a]	Material	PU
945971	39 x 30 x 4000 mm	Aluminium	1

a) Width x height x profile length

The advantages at a glance:

- The strip simply clicks onto the adjustable feet
- Low assembly height
- It has a particularly high load-bearing capacity
- It is torsion-proof
- Durable, dimensionally stable and straight
- Can be laid in infinite lengths using the system connector
- A screw channel avoids tedious drilling times for screws



Accessories for the Euro Deck aluminium system profile NEW

Euro Deck aluminium system connector

"The profile butt joint is only to be positioned directly above a post or support."

Comes supplied with drilling screws

Art. no.	Dimensions*	Material	PU**
954042	10,5 x 7,5 x 200 mm	Aluminium	10

* Width x height x profile length

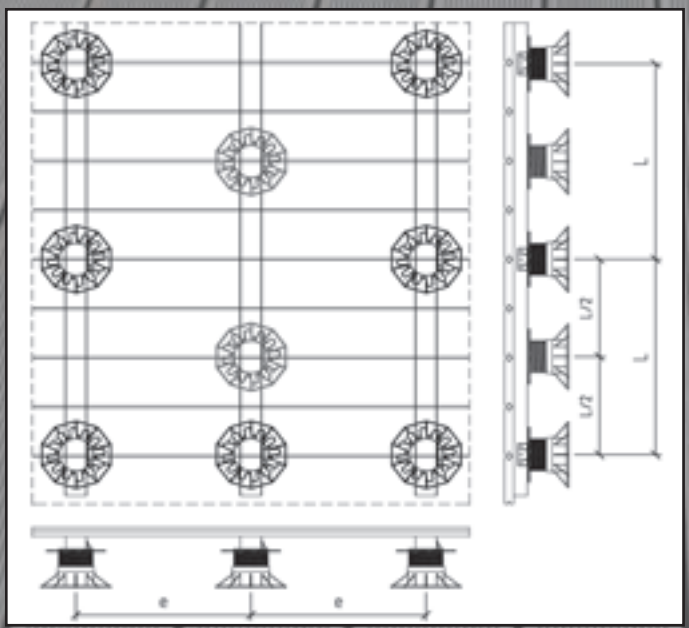
** Pair

Two aluminium system profile connectors are required per joint to connect the Euro Deck aluminium system profiles to one another. A secure joint is formed using drilling screws.

Technical application information

Profile butt joints of the substructure should always be made directly above a point of support. In order to reduce vibration, we recommend offsetting the adjustable feet of every second substructure profile by L/2!

Insert the connector and screw it tight; the Euro Deck aluminium system profile can now be extended.



	Max. support spacing L [mm] Adjustable ECO-Line (perm. F = 2.2 kN) with Euro Deck aluminium system profile[a)]								Max. support spacing L [mm] Adjustable Profi-Line (perm. F = 2.2 kN) with Euro Deck aluminium system profile[a)]							
Useful load	Centre distance e [mm] between the profiles								Centre distance e [mm] between the profiles							
[kN/m²]	250	300	350	400	450	500	550	600	250	300	350	400	450	500	550	600
2,0	950	900	850	800	750	750	700	700	950	900	850	800	750	750	700	700
4,0 [c)]	750	700	600	550	500	450	400	350	750	700	650	650	600	600	600	550
5,0 [c)]	700	600	500	450	400	350	300	300	700	650	600	600	550	550	550	500

a) Max. support spacing (L) for above mentioned adjustable feet at load capacities of 2, 4 and 5 kN/m², at a board thickness of 25 mm and a board density of 7 kN/m³ (larch, pine, douglas fir).

b) If WPC boards are used, the centre distance e between the profiles must not exceed 400 mm!

c) Load capacities according to DIN 1055-3:2006; roof terraces = 4 kN/m², decks for public use = 5 kN/m².

NEW

Euro Deck Flex Clip

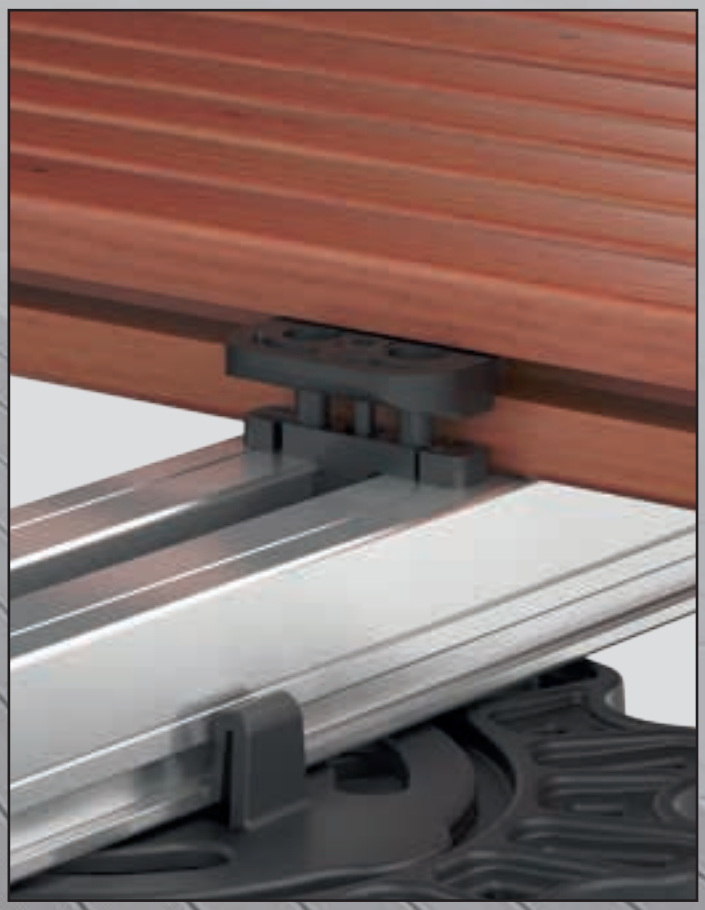
For hidden fastening of WPC boards and dimensionally stable timbers with grooved sides in combination with the Euro Deck aluminium system profile.

Not suitable for tropical timbers with pronounced swelling or shrinkage.

Art. no.	PU*
954043	100

*Product includes screw

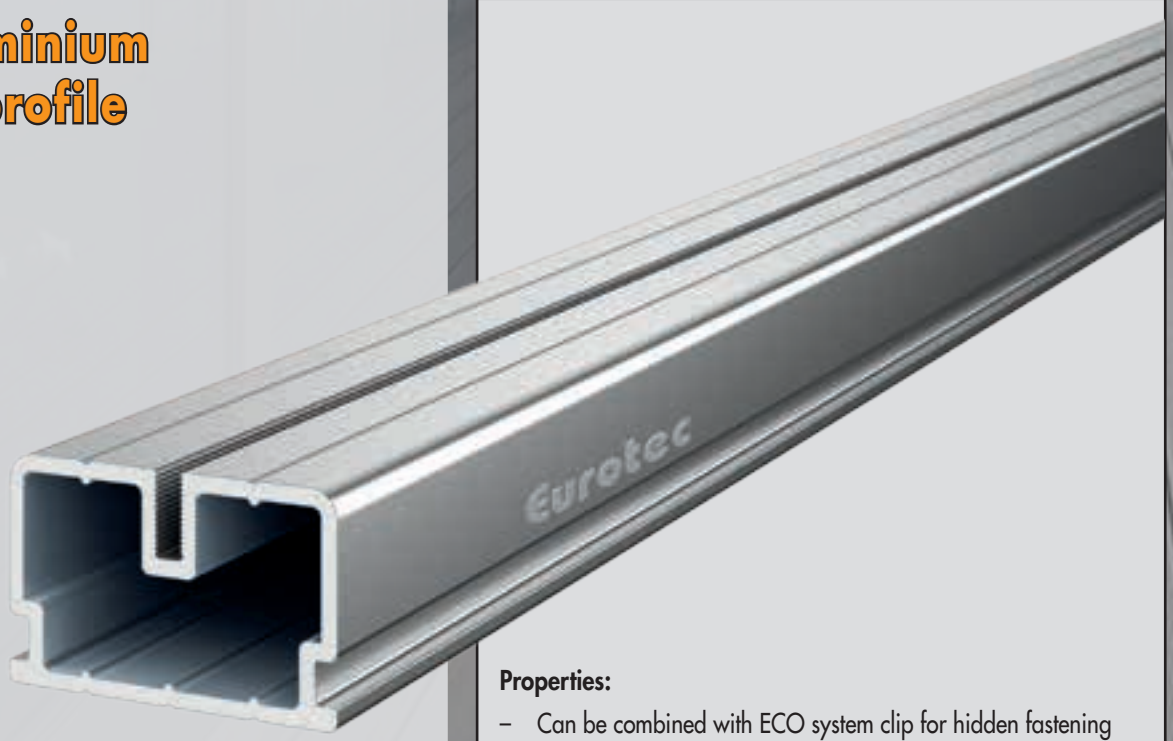
Details of the groove geometry can be found in the product data sheet on our website www.e-u-r-o-tec.de or obtained on request from our technical department.



ECO aluminium system profile

NEW

ECO aluminium system profile



Art. no.	Dimensions (B x H x L)	Material	PU
945537	39 x 24 x 4000 mm	Aluminium	1

Properties:

- Can be combined with ECO system clip for hidden fastening
- Universal: can also be used with many other fastening clips (screw diameter: 4.2 mm)
- Developed specially for PRO adjustable feet with Click adapter
- In case of low structure height, the profile can be used without pedestals
- Position retention thanks to Click system without screws
- Load-bearing, torsion-free, form-stable and straight
- Screw channels avoid lengthy drilling times

Max. support spacing L [mm] for ECO aluminium system profile without adjustable feet, e.g. on concrete foundations[a)]

Useful load	Centre distance e [mm] between profiles							
[kN/m²]	250	300	350	400	450	500	550	600
2,0	800	750	700	650	650	600	600	600
4,0 c)	650	600	550	550	500	500	500	450
5,0 c)	600	550	500	500	500	450	450	450

a) Indication of the max. span at which the profile's deflection does not exceed L/300.
b) Example: spacing between profiles = 550 mm; loading capacity = 2.0 kN/m² → max. span of the profile = 900 mm.
c) Load capacities according to DIN 1991-1-1; roof terraces = 4 kN/m², decks for public use = 5 kN/m²

Max. support spacing L [mm] for ECO aluminium system profile with adjustable feet[a)]

	Adjustable ECO-Line, F = 2,2 kN								Adjustable Profi-Line, F = 8,0 kN							
Useful load	Centre distance e [mm] between profiles								Centre distance e [mm] between profiles							
[kN/m²]	250	300	350	400	450	500	550	600	250	300	350	400	450	500	550	600
2,0	800	750	700	650	650	600	600	600	800	750	700	650	650	600	600	600
4,0 c)	650	600	550	550	500	450	400	350	650	600	550	550	500	500	500	450
5,0 c)	600	550	500	450	400	350	300	300	600	550	500	500	500	450	450	450

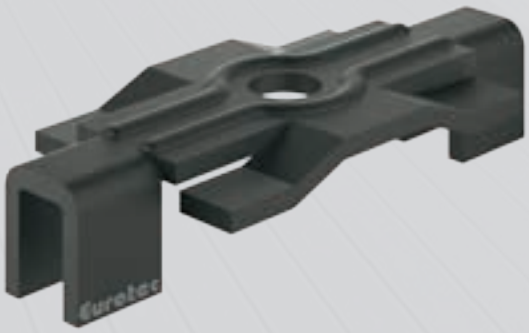
a) Max. support spacing (L) for adjustable feet at load capacities of 2, 4 and 5 kN/m², with an average board thickness of 25 mm and a board density of 7 kN/m³ as a load assumption for the calculation aid above.
b) If WPC boards are used, the centre distance e between the profiles must not exceed 400 mm!
c) Load capacities according to DIN 1991-1-1; roof terraces = 4 kN/m², decks for public use = 5 kN/m².

ECO system clip

NEW

ECO system clip

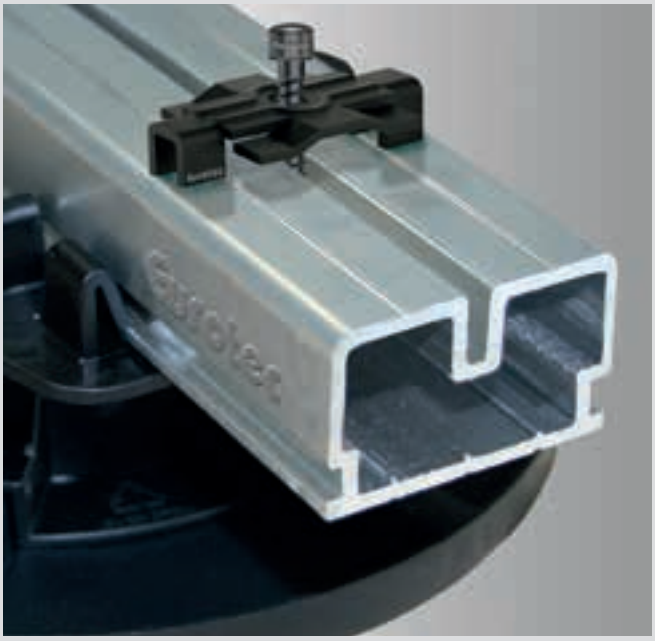
for ECO aluminium system profile



Art. no.	Dimensions (B x H x L)	Material	PU
975600-250	16 x 7,2 x 37 mm	Stainless steel, black	250

Comes supplied with screw

Details of the groove geometry can be found in the product data sheet on our website **www.e-u-r-o-tec.de** or obtained on request from our technical department.



Properties

- For hidden fastening of boards with grooved sides
- Only limited suitability for selected narrow tropical timbers (always consult your local specialist timber dealer)
- Simple, time-saving assembly
- Joint spacing automatically predefined
- Individual boards can be adjusted or replaced at any time

Aluminium system profile

Suitable for Profi-Line and Eco-Line adjustable feet!

The aluminium system profile is one of the alternatives to a deck substructure made of timber.

- In contrast to timber substructures, the profile is dimensionally stable and straight. It suffers from no climate-related effects such as warping, cracks, etc. that naturally occur with timber.
- The special shape prevents the screws from shearing off.
- Allows both hidden and visible fastening.

(Example: Adjustable foot PRO with L adapter)

Hidden fastening

using a deck glider on a Black Edition aluminium system profile

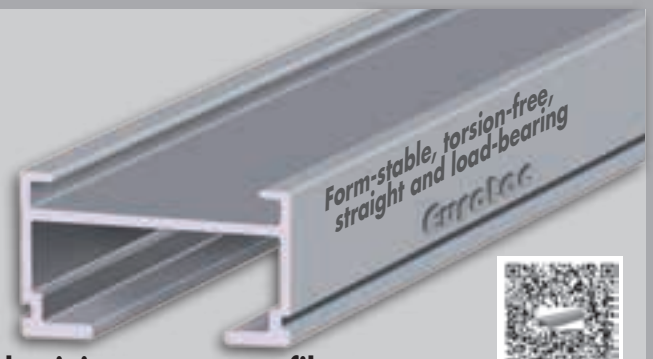
Aluminium system profile Black Edition

Art. no.	Dimensions[a)]	Material	PU
945616	40 x 60 x 4000 mm	Aluminium, black	1

a) Height x width x profile length

Visible fastening

using a profile drilling screw on an aluminium system profile



Aluminium system profile

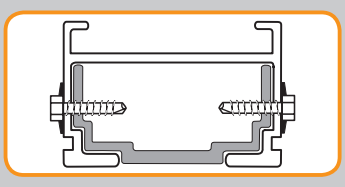
Art. no.	Dimensions[a)]	Material	PU
945545	40 x 60 x 4000 mm	Aluminium	1

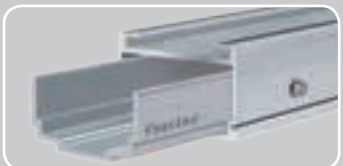
a) Height x width x profile length

Cross-section values[b)]	
W_y in mm³	I_y in mm⁴
3566	71694

b) W_y = section modulus; I_y = geometrical moment of inertia

Example of fastening an aluminium profile connector



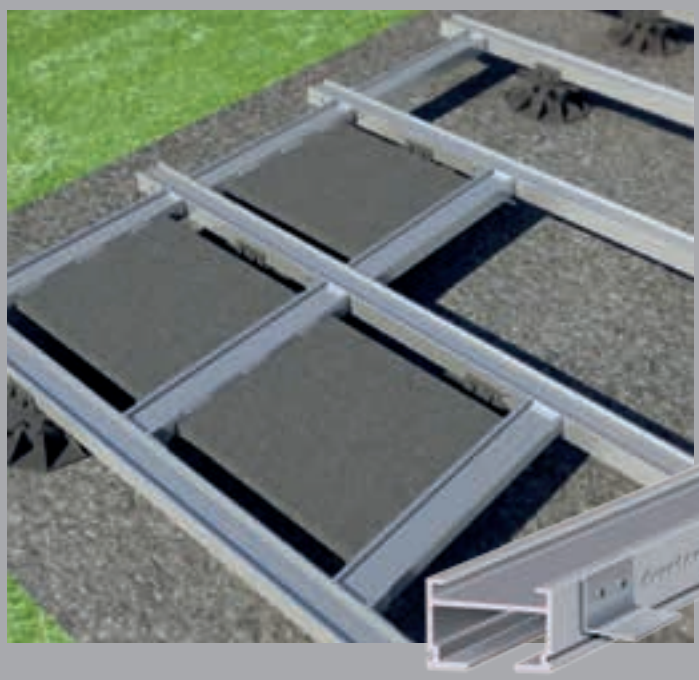


Aluminium system profile-connector*

Art. no.	Dimensions[a)]	Material	PU
945878	24 x 55 x 200 mm	Aluminium	10

a) Height x width x profile length
* Incl. 4 drilling screws per connector

"The profile butt joint is only to be positioned directly above a post or support."



Corner connector

Art. no.	Dimensions[a)]	Material	PU
975597-10	40 x 40 mm	Steel, hot galvanised	10*
975597-200	40 x 40 mm	Steel, hot galvanised	200**

*incl. 40 screws
** incl. 800 screws

Schematic representation

Spans for aluminium system profiles in mm

Max. spans for aluminium system profiles in mm[a)]							
Useful load	**Profile clearance in mm[b)]**						
kN/m²	300	350	400	450	500	550	600
2,0	1000	950	900	850	850	800	800
4,0[c)]	800	750	700	700	650	650	600
5,0[c)]	750	700	650	650	600	600	550

a) Specification of the max. span with which the deflection of the profile does not exceed L/600
b) Example: clearance of profiles to one another = 550 mm, useful load = 2.0 kN/m² → max. span of profile = 800 mm
c) Useful loads in accordance with DIN 1055-3:2006, roof terraces = 4 kN/m², terraces in public = 5 kN/m²

Profile drilling screw,
Hardened stainless steel

Art. no.	Dimensions	Drive	Board thickness	PU
905559	5,5 x 46 mm	TX25 ●	21 - 25 mm	200
905562	5,5 x 51 mm	TX25 ●	26 - 30 mm	200
905560	5,5 x 61 mm	TX25 ●	36 - 40 mm	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088

Profile drilling screw,
A4

Art. no.	Dimensions	Drive	Board thickness	PU
905563	5,5 x 46 mm	TX25 ●	21 - 25 mm	200
905564	5,5 x 51 mm	TX25 ●	26 - 30 mm	200
905565	5,5 x 61 mm	TX25 ●	36 - 40 mm	200

- Resistant to rust, limited resistance to acid
- Suitable for woods containing tanning agents and saline atmospheres
- Not suitable for use in indoor swimming pools

NB: The board should always be pilot-drilled to a diameter of 5.5 mm.

Wing-tipped profile drilling screw,
hardened stainless steel

Art. no.	Dimensions	Drive	Board thickness	PU
905568	5,0 x 55 mm	TX 20 ●	20 - 25 mm	200
905569	5,0 x 60 mm	TX 20 ●	26 - 30 mm	200
905570	5,0 x 70 mm	TX 20 ●	35 - 40 mm	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088

NEW

Special feature

- Screws in quickly without pilot drilling

Please refer to the information we provide on "Selecting screw steels" (p. 85), as not all timber types should be installed with hardened stainless-steel screws.

ECO-Line adjustable feet

NEW

ECO S

Assembly height 2,5 – 4,0 cm

Art. no.	Name	Assembly height	Load bearing capacity*	PU**
945591	ECO S	2,5 - 4,0 cm	2,2 kN	50

ECO S base

To increase the supporting area of the ECO S, the adjustable foot can be combined with a matching base.

This is done by simply clicking the ECO S onto the base. This increases the assembly height by 2 mm.

Art. no.	Name	PU**
945448	Bottom part ECO S	50

Balancing out for a perfect inclination

Unscrew for the exact height

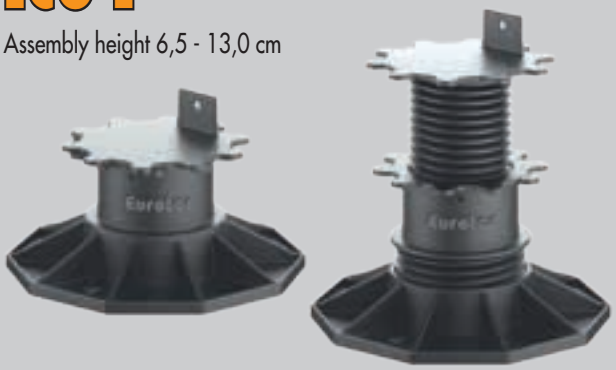
ECO M

Assembly height 3,5 – 6,5 cm

Art. no.	Name	Assembly height	Load bearing capacity*	PU**
946020	ECO M	3,5 - 6,5 cm	2,2 kN	20

ECO L

Assembly height 6,5 - 13,0 cm



Art. no.	Name	Assembly height	Load bearing capacity*	PU**
946024	ECO L	6,5 -13,0 cm	2,2 kN	20

ECO XL

Assembly height 13,0 - 19,8 cm

Art. no.	Name	Assembly height	Load bearing capacity*	PU**
946025	ECO XL	13,0 - 19,8 cm	2,2 kN	15

* The quoted load-bearing capacities represent recommended values. With these loads, the adjustable feet only deform by approx. 2 mm. The load-bearing capacity before actual breakage is several times higher.

** Supplied without screw. Position retention can be achieved with BiGHTY drilling screw (5.5 x 25 mm) (p. 61).

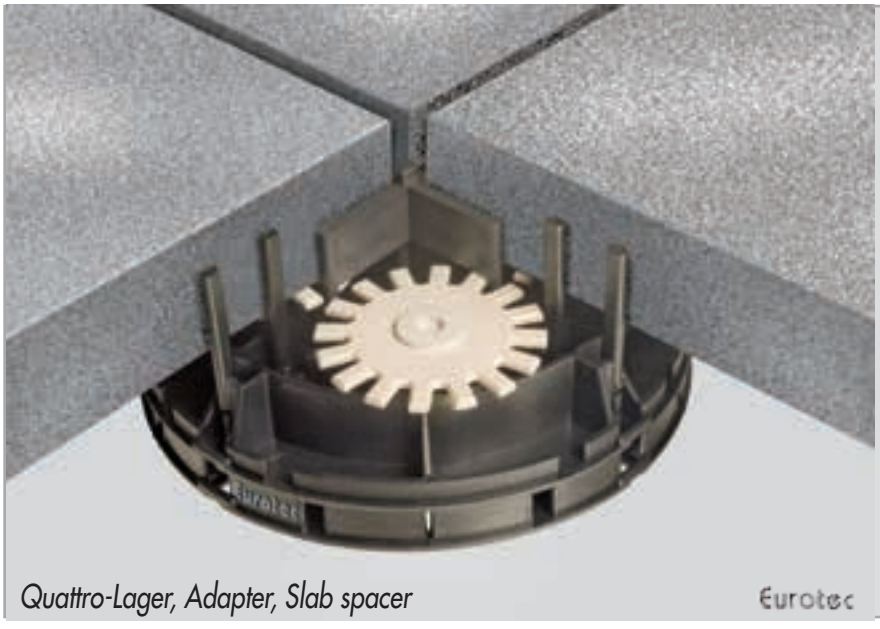
Slab supports and adjustable feet for slabs

The perfect solution for fast and safe installation of large-format floor slabs

Also ideal for your roof terrace

Thanks to modern slab supports and special adjustable feet for slabs, it is now possible to lay floor slabs easily and without mortar. The different support heights of the slab supports and adjustable feet allow you to easily correct height differences in the subfloor and to cover up unsightly outflows and drains. You can therefore achieve an even surface with little effort. Any surface water that arises can run off quickly and easily through the seams.

It is this easy! **Example:** *Quattro-Lager support*



Quattro-Lager, Adapter, Slab spacer

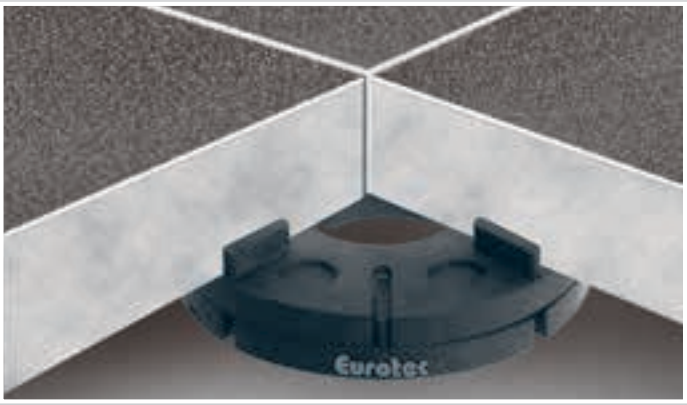
In order to achieve an even surface with the stone slabs, the height can be adjusted down to the last millimetre using gearwheels in the Quattro-Lager.

Slab supports

- Support height: 10 mm
- Joint spacer: 4 mm
- Up to three units can be stacked on top of one another
- Dampens footfall noise

Art. no.	Dimensions[a]	Material	PU
945432	Ø 120 x 18/10 mm	EPDM, black	45

a) Outside diameter x total height/Support height of a plate bearing



Adapter

for Quattro-Lager

- Support height: 15 mm
- Joint spacer: 4 mm
- Can be split and stacked
- Can also be used on its own

Art. no.	Dimension	Load-bearing capacity per corner*	Total load-bearing capacity*	PU
945342	Ø 180 x 15 mm	50 kN	200 kN	20

Quattro-Lager

- Four different support heights are possible thanks to individually adjustable gearwheels
- Support height: 3,0 - 5,0 cm
- Joint spacer: 4 mm
- The height can be extended by placing the Quattro-Lager adapter underneath
- Can be split

Art. no.	Dimension	Load-bearing capacity per corner*	Total load-bearing capacity*	PU
945340	3,5 – 5,0 cm	5 kN	20 kN	15

Slab spacer

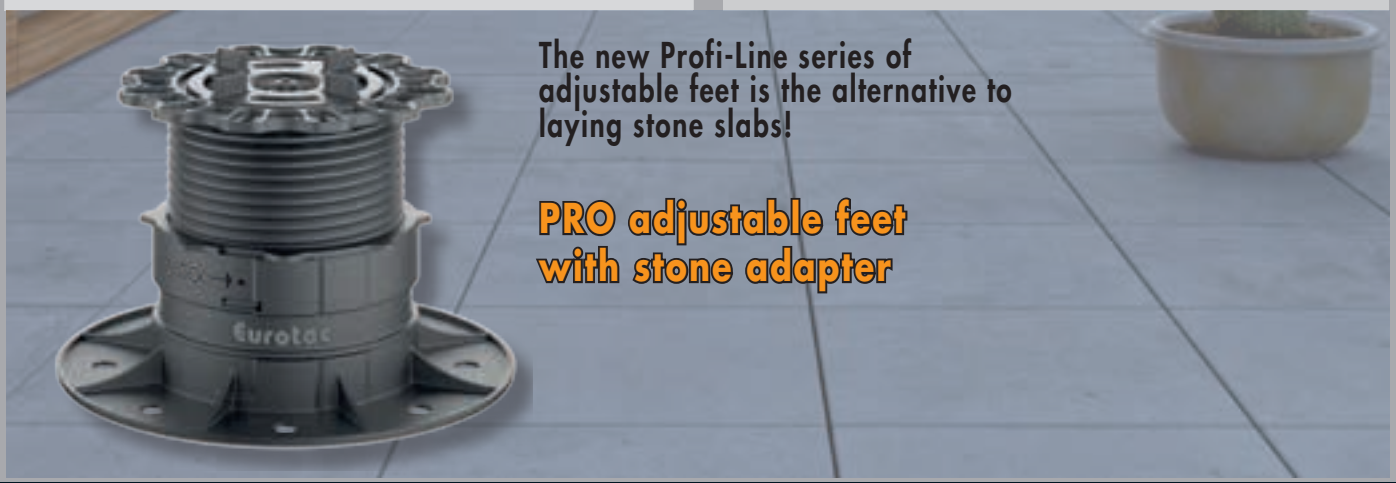
for Quattro-Lager

- Gap width: 4 mm
- With simultaneous reverse rotation locking

Art. no.	Dimensions[a]	Gap width	PU
945341	65 x 74 x 74 mm	4 mm	45

a) Width x height x length

* *The quoted load-bearing capacities represent recommended values. With these loads, the adjustable feet only deform by approx. 2 mm. The load-bearing capacity before actual breakage is several times higher.*



The new Profi-Line series of adjustable feet is the alternative to laying stone slabs!

PRO adjustable feet with stone adapter

Compensation disk

- For balancing out unevenness in the slabs
- Can simply be laid onto PRO adjustable feet with stone adapter
- Can be split into up to four parts

Art. no.	Dimension	PU
954064	Ø 150; h 2,5 mm	10

Stone-slab lifter

- Simplifies and speeds up the lifting and laying of floor slabs
- Subsequent lifting of already installed slabs is straightforward

Art. no.	Span width	PU
954045	30,0 – 50,0 cm	1

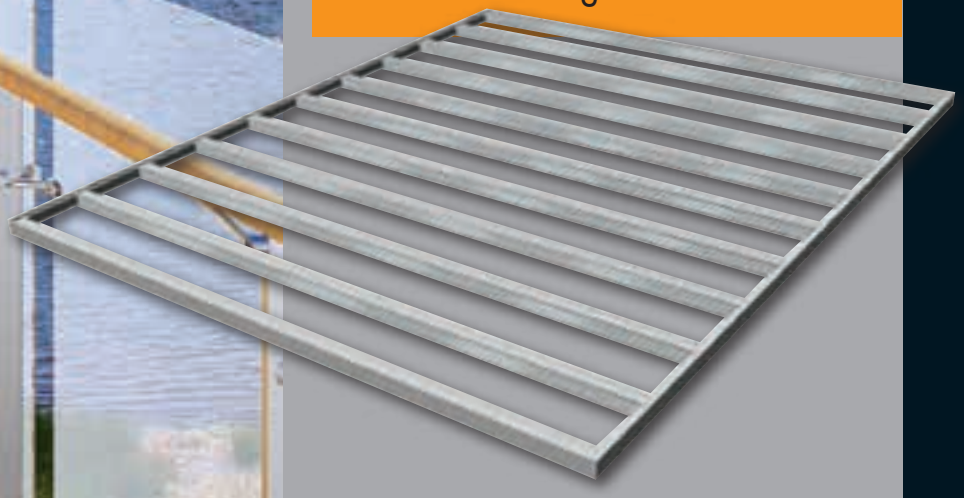
Aluminium Deck Support System HKP

DECK SUPPORT SYSTEM

For bridging wider spans

One system, many advantages:

- High load bearing capability
- Large support widths
- High dimensional stability and evenness
- Low dead load
- High flexibility
- High durability
- Attractive, clean enclosed frame
- Material savings



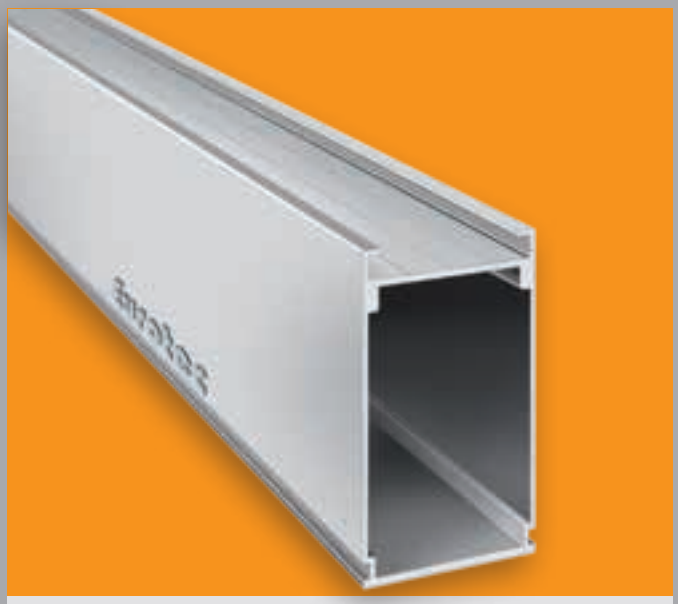
The new deck support system comprises an aluminium substructure that allows spans of up to 3 m, depending on the desired loading capacity.
The support system can therefore be tailored flexibly to meet a wide range of requirements. It is used especially on decks installed near to the ground in which only a few auxiliary supports are laid. Its versatile range of applications also includes elevated decks, load-bearing balconies and overhanging decks near to the ground.

The deck support system consists of two components that are joined together to form a closed, load-bearing system.

Aluminium deck support system HKP

Suitable for Profi-Line and Eco-Line adjustable feet!

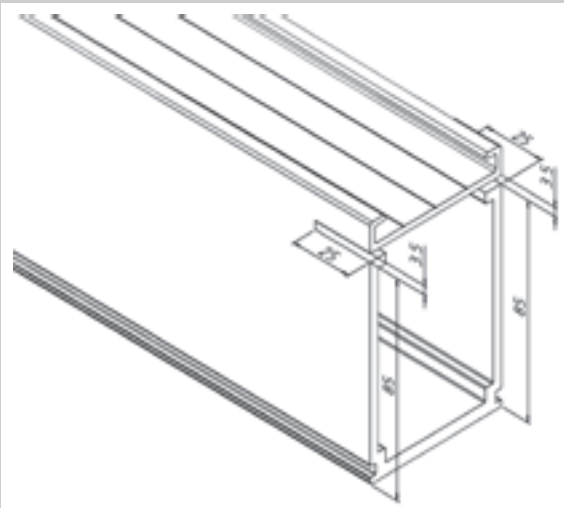
The two parts of the system form a complete deck substructure:



Art. no.	Dimensions[a]	Material	PU
954669	100x60x4000 mm	Aluminium	1

a) Height x width x length

1 Support profile HKP

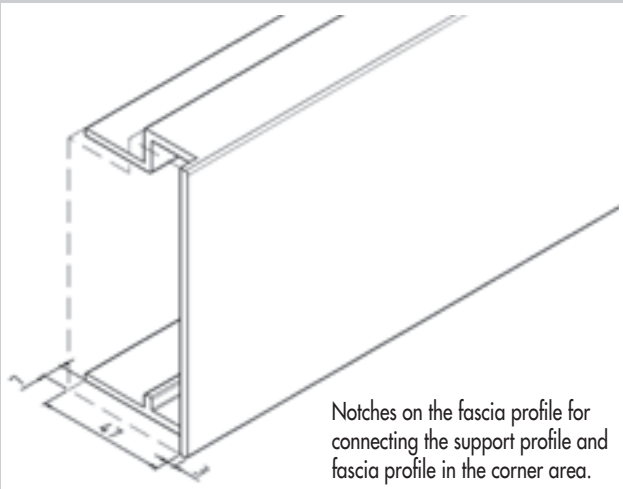


Notches on the central supporting profiles to accommodate the fascia profile.

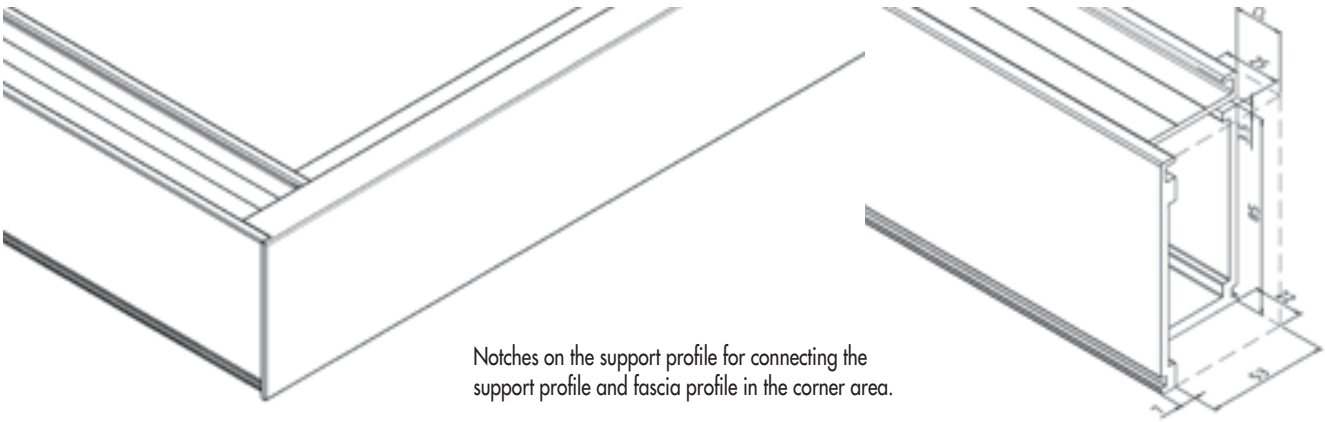
Art. no.	Dimensions[a]	Material	PU
954668	104x50x4000 mm	Aluminium	1

a) Height x width x length

2 Fascia profile HKP



Notches on the fascia profile for connecting the support profile and fascia profile in the corner area.



Notches on the support profile for connecting the support profile and fascia profile in the corner area.

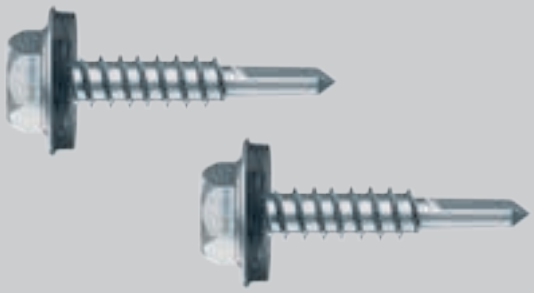
"The profile butt joint is only to be positioned directly above a post or support."

Aluminium support-profile connector*
for support-profile HKP

Art. no.	Dimensions[a)]	Material	PU
954670	74 x 50 x 250 mm	Aluminium	1

a) Height x width x length

*Incl. 8 drilling screw per connector



BiGHTY drilling screw
Stainless steel, hardened

For fastening wood to steel or steel to steel
Special coating, stainless steel in accordance with DIN 10088
Washer A2 and EPDM
Drilling capacity 5 mm

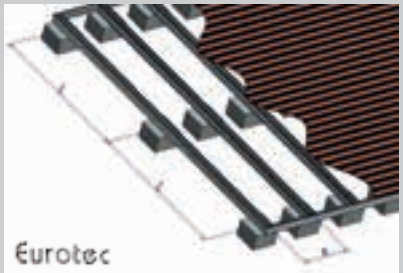
Art. no.	Dimensions	Spanner gap	Washer Ø	PU
945666	5,5 x 25 mm	SW 8	Ø 16 mm	500

Overview of load bearing capability – deck support system[a)]

Bearing type	Useful load kN/m²	Axis clearance e [mm] of bearing profiles –T1 to one another [b)]						
		300	350	400	450	500	550	600
Single-span beam L	2,0	3000	2750	2750	2500	2500	2500	2250
	4,0c)	2500	2250	2250	2000	2000	2000	2000
	5,0c)	2250	2000	2000	2000	1750	1750	1750
Twin-span beam L[mm]	2,0	3000	3000	3000	3000	3000	2750	2750
	4,0c)	2750	2500	2500	2500	2250	2250	2250
	5,0c)	2500	2500	2250	2250	2000	2000	2000
Single-span cantilever beam L[mm]/Lk[mm]	2,0	3000/1000	2750/1000	2750/1000	2500/1000	2500/1000	2000/1000	1750/1000
	4,0c)	1750/1000	1500/ 750	1500/ 750	1500/ 750	1500/ 750	1500/ 750	1500/ 750
	5,0c)	1500/ 750	1500/ 750	1500/ 750	1500/ 750	1500/ 750	1250/ 750	1250/ 750

a) Max. bearing clearances (L) for bearings with „direct support" with useful loads of 2, 4 and 5 kN/m², with a mean board thickness of 25 mm and a board weight of 7 kN/m²
b) If WPC boards are used, the axis clearance e between the profiles must not exceed 400 mm!
c) Useful loads in accordance with DIN 1055-3:2006, roof terraces = 4 kN/m², terraces in public = 5 kN/m²

Note: this table provides an overview only of the load bearing capability.
The information on load bearing capability in the technical information must be noted!

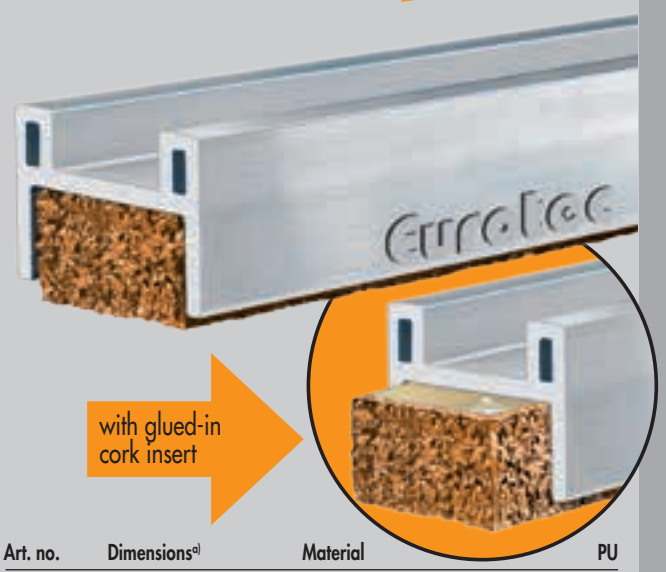


Aluminium function strips/Aluminium function strips DiLo

The aluminium function strips from Eurotec offer special solutions for substructures of timber decks with a low assembly height.

»Free of PAHs«
(hazardous plasticisers in rubber).

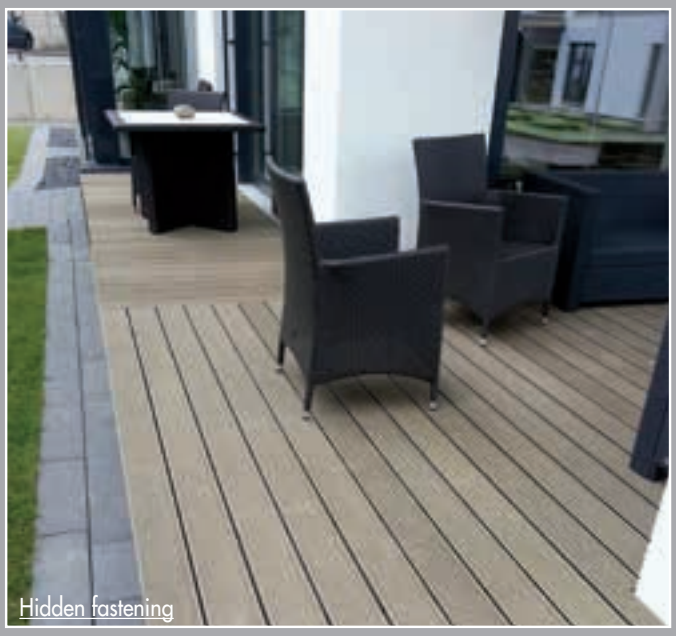
- The profile impresses with its low assembly height; for example: profile height 29 mm + board 24 mm = 53 mm.
- This low height means the profile is excellently suited to the construction of timber decks that are to be built on existing stone patios, balconies or roof terraces.
- The aluminium is dimensionally stable, does not rust and is extremely weather-resistant. These are key advantages over timber substructures.
- The small supporting surface is ideal for allowing water to run off and prevents the screw from shearing off.
- The self-adhesive cork insert is free of PAHs and ensures good footfall sound insulation on the underside of the profile.
- The aluminium function strip is available in two versions so that – here, too – one can choose between visible and hidden screw connections on a case-by-case basis.



Art. no.	Dimensions[a)]	Material	PU
945510	34 x 29 x 1750 mm	Aluminium	10

a) Width x height x profile length
See profile drilling screws (p. 53) for visible fastening of deck boards with a thickness of 21–25 mm.

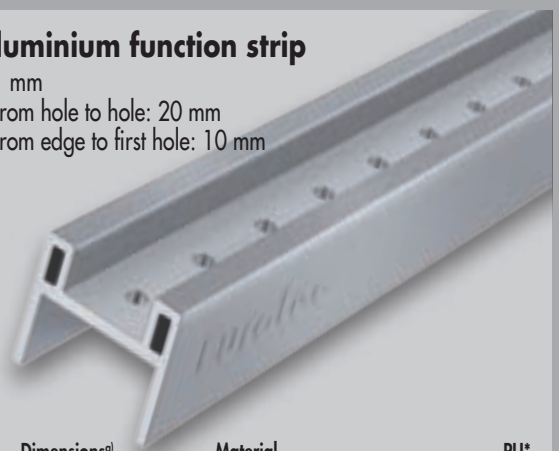
Visible fastening



Hidden fastening

DiLo aluminium function strip

Holes: 5.1 mm
Distance from hole to hole: 20 mm
Distance from edge to first hole: 10 mm



Art no.	Dimensions[a)]	Material	PU*
945535	34 x 29 x 2240 mm	Aluminium	10

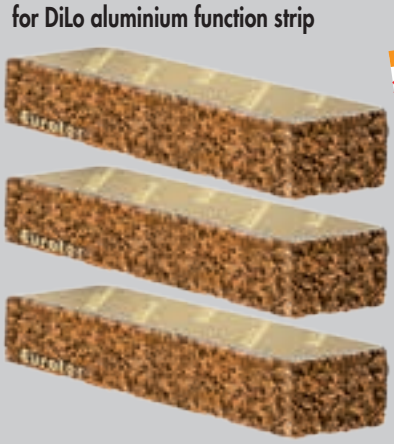
a) Width x height x profile length
* Cork pads are not included with this product.
See DiLo drilling screws (p. 63) for hidden fastening of deck boards with a thickness of 20–30 mm.

Procedure for hidden fastening of deck boards to **DiLo aluminium function strips.**

1. Cut the DiLo aluminium function strips and deck boards to the lengths you require.
2. Lay the cut boards down so that the underside is facing upwards.
3. Align the boards with a uniform joint spacing on a level subsurface. Use the Eurotec spacer for this.
4. Lay the DiLo aluminium function strips backwards onto the boards (at least two DiLo aluminium function strips per element).
5. Fasten each strip in place by screwing two DiLo drilling screws (Ø5x28.5; Ø5x33.5 or Ø5x38.5 mm) into the board for each intersection point (of board and substructure) through the prepared drill holes in the strip.
6. Stick the cork pads into the DiLo aluminium function strip so that almost the entire surface is used for support.
7. Finally, just turn the finished element over and position it. Done.

Schematic representation

Cork pad with adhesive tape,
for DiLo aluminium function strip



»Free of PAHs«
(hazardous plasticisers in rubber).

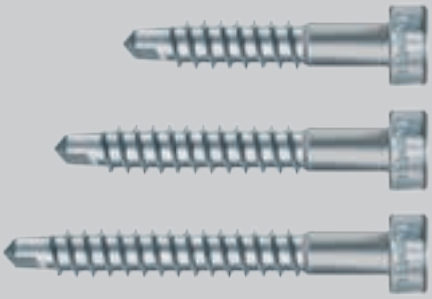
Art. no.	Dimensions	PU
945331	90 x 28 x 17 mm	100

DiLo drilling screw, hardened stainless steel

Art. no.	Dimensions	Drive	Board thickness	PU*
111860	5,0 x 28,5 mm	TX25 ●	min. 20 mm	200
111861	5,0 x 33,5 mm	TX25 ●	min. 25 mm	200
111862	5,0 x 38,5 mm	TX25 ●	min. 30 mm	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088

* Incl. 1 Bit



Overview of Eurotec adjustable feet

Properties/advantages:

- High load-bearing capacity of up to 8 kN/foot
- Quick and easy assembly
- Stepless height adjustment
- Resistant to weather, UV exposure, insects and rot

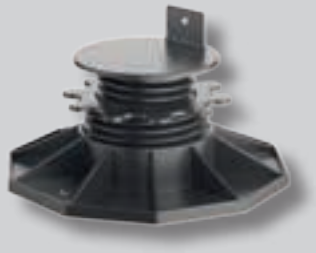
1

NEW

Profi-Line adjustable feet

- Versatile applications thanks to a modular system consisting of three base feet of different heights, a ring for increasing the height, and four adapters:
  - L adapter for substructures made of aluminium and timber
  - Click adapter 40 for Euro Deck aluminium system profile and ECO aluminium system profile
  - Click adapter 60 for aluminium system profile and HKP deck-support profile
  - Stone adapter for laying floor slabs
- Ground assembly heights of 3.0–11.7 cm
- Height can be increased with extension ring
- High load-bearing capacities of up to 8.0 kN/foot

2



NEW

Eco-Line adjustable feet

- Suitable for substructures made of aluminium and timber
- Assembly heights of 2.5–19.8 cm
- Load-bearing capacity of 2.2 kN/foot

Overview of Eurotec aluminium profiles

Properties/advantages:

- Form-stable, straight, load-bearing, torsion-free
- Resistant to weather, UV exposure, insects and rot
- The special shape of the profiles reduces the risk of fastening screws shearing off as a result of swelling and shrinking movements of the deck boards
- Supports constructive timber protection

1 Aluminium system profile

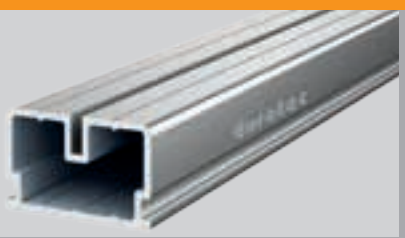
- Suitable for Profi-Line and Eco-Line adjustable feet
- For visible and hidden fastening of deck boards
- Can be extended using aluminium system-profile connectors

2 Euro Deck aluminium system profile

- Developed specially for PRO adjustable feet with Click adapter
- The aluminium profiles are simply clicked into place – with no need for screwing
- For hidden fastening of deck boards with Euro Deck Flex Clip
- Can be extended using Euro Deck aluminium system-profile connectors

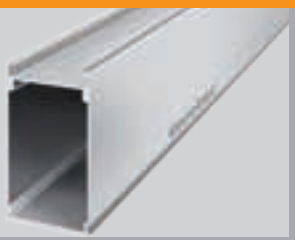
3 ECO aluminium system profile

NEW



- Developed specially for PRO adjustable feet with Click adapter
- Can also be used without adjustable foot for low assembly heights
- The aluminium profiles are simply clicked into place – with no need for screwing
- Hidden fastening of deck boards with ECO system clip

4 HKP deck support system



- Suitable for Profi-Line and Eco-Line adjustable feet
- For bridging large spans
- Consists of two system parts
- For visible and hidden fastening of deck boards

5 Aluminium function strips

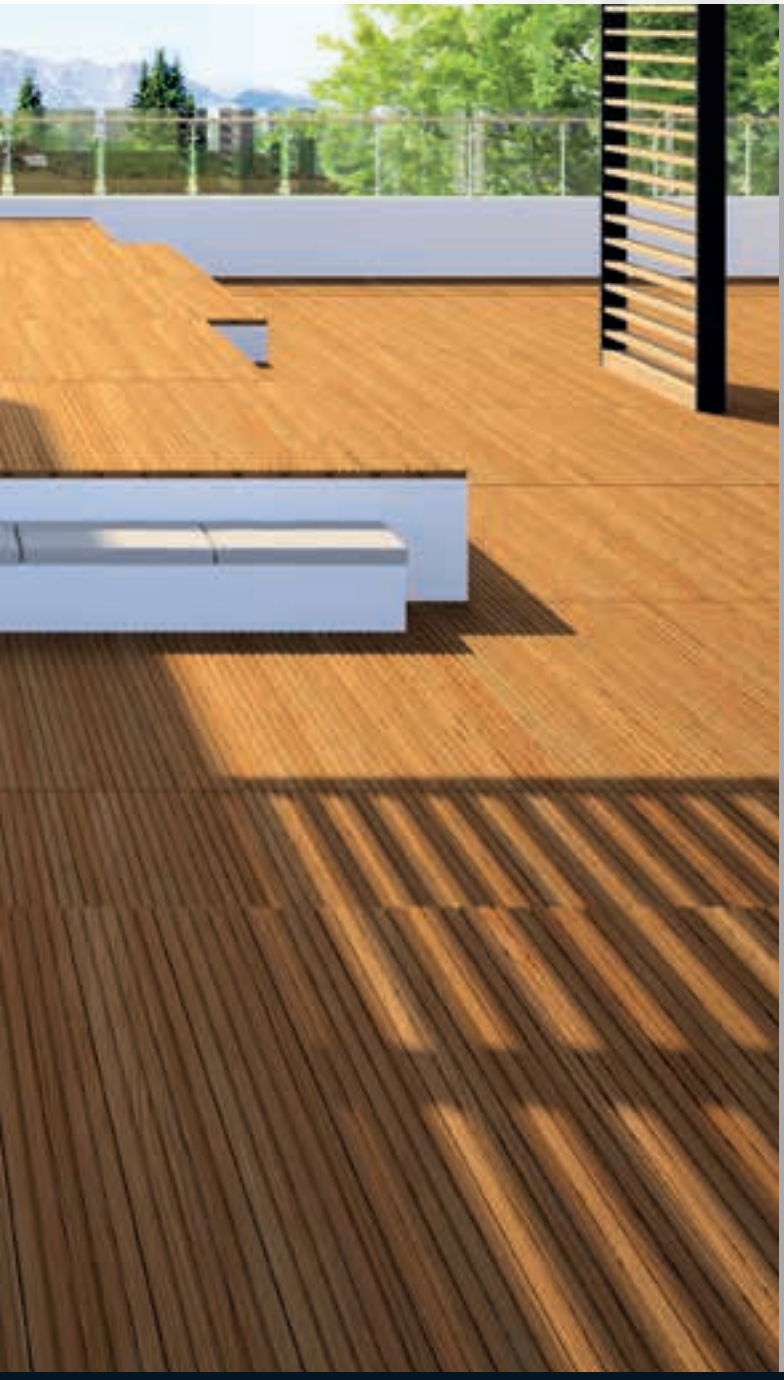
- Used without adjustable feet
- For low assembly heights
- With footfall sound insulation thanks to glued-in cork insert
- **Two models available:**
  for visible and hidden fastening of deck boards

Wood decks

We have the accessories that you need!

DECK BOARDS:

VISIBLE AND HIDDEN FASTENING



Innovative solutions for all types of substructures and deck boards

Deck boards can be fastened in different ways, depending on the type of wood. We provide innovative solutions that enable your individual requirements and wishes for fastening your deck boards.

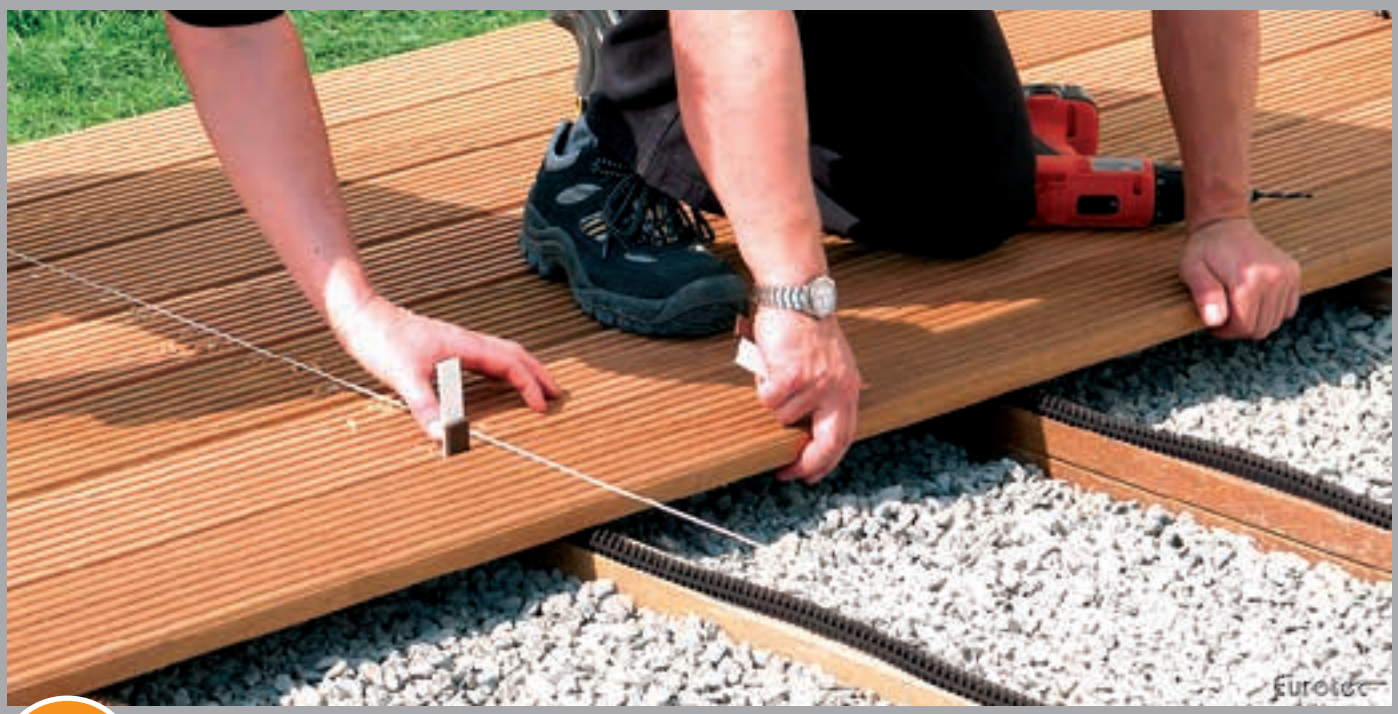
Distance strip

Distance strip – visible fastening of deck boards

Substructure: Timber

This deck substructure made of timber is suitable for both visible and hidden deck-board fastening. The deck boards can be fastened visibly using the distance strip, which acts as a spacer and allows freedom of movement between the board and the substructure. At the same time, it encourages air circulation beneath the deck, inhibiting the formation of rot. Normal wood screws, e.g. Terrassotec screws, are used to screw the strip onto the timber substructure.

Important: Hardwoods/tropical woods should always be pilot-drilled!



The distance strip and the deck gliders make a clearance between the deck board and the substructure. This is of great importance in particular when using tropical woods/hardwoods.

Differences between the uses of the two systems:

- **Distance strip:** The deck board fastenings are visible. These are screwed directly, from the upper side of the boards. The screw heads are therefore visible. The distance strip functions as a spacer.

- **Deck gliders:** Hidden fastening of the deck boards. The deck gliders are fastened first of all to the underside of the boards and then to the substructure. The boards are fastened hidden. The fasteners cannot be seen on the surface of the deck. The deck glider functions as a means of joining and as a spacer.

Distance strip,

Distance strip for visible fastening of deck boards

Art. no.	Dimensions WxHxL	Quantity* Piece/10m²	Material	PU
944801	16 x 13 x 730 mm	23	Hard plastic	50

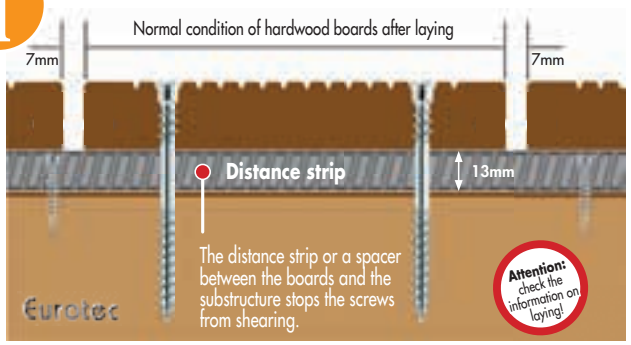
* Bearing beam clearance = 600 mm. Additional distance strips are to be added for the first and last bearing beams and for board joints.

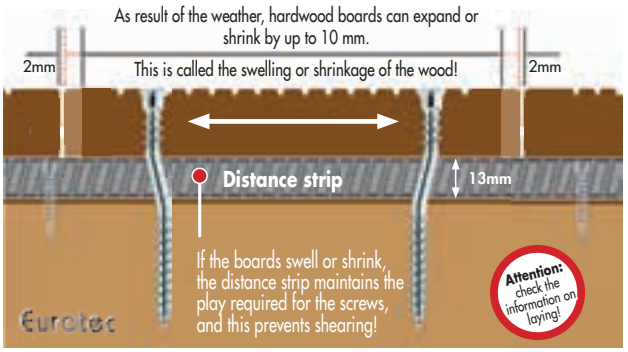
Screws are **not** included. Fastening with Terrassotec screws Ø 4 mm.

The distance strip reduces the risk of screws shearing off

The distance strip is made of hard plastic and is intended to prevent the stainless-steel screws from shearing off. Shearing is caused by swelling and shrinkage of the timber, or so-called warping. This warping is particularly pronounced in the boards' transverse direction. The timber "wants" to take the screw with it, while the lower part of the screw remains securely fixed in the substructure. Since the density of hardwood and tropical wood means the timber is very hard, the screw has no chance of pressing itself into the timber during warping. When the screw breaks off under this strain, this is known as shearing. The distance strip was developed to prevent stainless-steel screws from shearing off. It provides a leeway of 13 mm between the substructure and the deck board, allowing the stainless-steel screws to move with the wood.

The distance strips are fastened to the provided drill holes with Ø 4 mm Terrassotec screws and fixed in place (3 Terrassotec screws are required for each distance strip). The distance strip is 73.5 cm long and can easily be extended thanks to a plug-in system.





What does ‚shearing' mean?

Without a distance strip, the screw does not have any play (Fig. 1), it can break off. This is known as ‚shearing'.
With a distance strip the screw has a play of 13 mm (Fig. 2).
The screws can adjust to the movement of the wood. Shearing is prevented in this way.

The distance strip is screwed along half a side onto the substructure beams. This avoids having to drill through the strip again when laying the deck boards. With wider bearer beams it may be better to fasten the distance strip alternately left and right along half a side so that the deck screw does not pull the bearer beam on one side in the direction of the board when the boards are fastened, and then tilts.

Deck glider, start/end gliders and StarterClip

Deck gliders - hidden fastening of deck boards

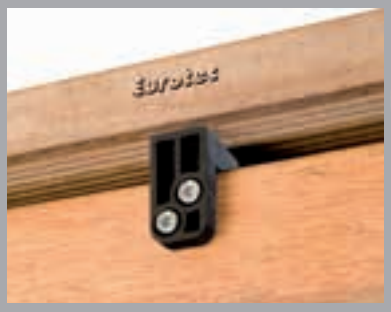
Deck gliders also prevent stainless steel screws from shearing through the clearance between the substructure and deck board (10 mm), above all when hardwood/tropical woods are used (see p. 69).
However, in contrast to distance strips, the boards are fastened indirectly, i.e. screw heads cannot be seen on the surface of the deck.

The gliders satisfy all criteria for fastening both wood and PVC boards.

The deck glider comes supplied with Thermofix screws made of hardened stainless steel.
If required, you can additionally buy the glider screws in A2 or A4 stainless steel.

Hidden screwing of start/end deck boards

If you want to fasten start/end deck boards without the screws showing, use ***deck start and end gliders or the StarterClip.***



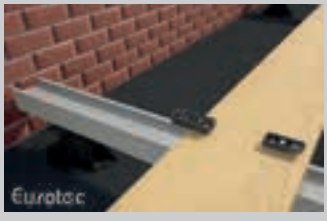
Deck start and end gliders

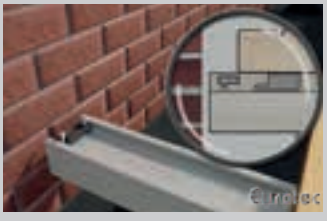
Deck start and end gliders enable a clean and hidden conclusion when deck boards are laid.

StarterClip

If deck start/end gliders cannot be used, eg because they cannot be screwed in from one side (house wall or brickwork), EuroTec has developed the StarterClip, which is the ideal solution in situations like this.

Presentation video and information on use





Deck gliders*,

For hidden fastening of deck boards

Art. no.	Dimensions W x H x L	Quantity* Piece/10 m²	Material	PU
944830	19 x 10 x 190 mm	123	Hard plastic	200

* Clearance of bearing beams = 600 mm, board width = 145 mm, Joint dimension = 5 mm (depending on type of timber).
Please use deck start and end gliders or the starter clip for the first and last bearing beams, and for the board butts.

Each deck glider includes 4 Thermofix screws made of hardened stainless steel.
If required, you can additionally buy the glider screws in A2 or A4 stainless steel.

Mini deck glider,

for hidden fastening of deck boards.
The Mini deck glider is used for narrow deck boards with a width of 90 to 100 mm.

Art. no.	Dimensions W x H x L	Quantity* Piece/10 m²	Material	PU
944767	14 x 10 x 140 mm	200	Hard plastic	200

* Clearance of bearing beams = 500 mm, board width = 90-100 mm, Joint dimension = 5 mm (depending on type of timber). Please use deck start and end gliders for the first and last bearing beams, and for the board butts. Each deck glider includes 4 Thermofix screws made of hardened stainless steel. If required, you can additionally buy the glider screws in A2 or A4 stainless steel.

Deck start and end gliders*

For hidden fastening of start/end deck boards

Art. no.	Material	PU
975584	Hard plastic	10

* 40 system screws are included in the scope of delivery

StarterClip*

For hidden fastening of start/end deck boards

Art. no.	Material	PU
975591	Hard plastic	10

* 40 system screws are included in the scope of delivery

Installation instructions for the deck glider

To fasten the boards in place, the gliders are first screwed onto the underside of the boards and then screwed onto the substructure from above. This fastening type avoids direct connections to the substructure. The deck boards therefore have greater freedom of movement (via the deck glider).

Per glider, we recommend using two screws for fastening the glider onto the board and two screws for fastening the glider onto the substructure. For the Mini deck glider, you should use two screws for fastening the Mini deck glider onto the board and one screw for fastening it to the substructure. The Mini deck gliders are suitable for boards with a width of 90 mm to 100 mm and a minimum board thickness of 20 mm.

Glider screw, A2

Art. no.	Dimensions	Drive	PU
944926	4,2 x 24 mm	TX20	100

Glider screw, A4

Art. no.	Dimensions	Drive	PU
944927	4,2 x 24 mm	TX20	100

- Resistant to rust, limited resistance to acid
- Suitable for woods containing tanning agents and saline atmospheres
- Not suitable for use in indoor swimming pools

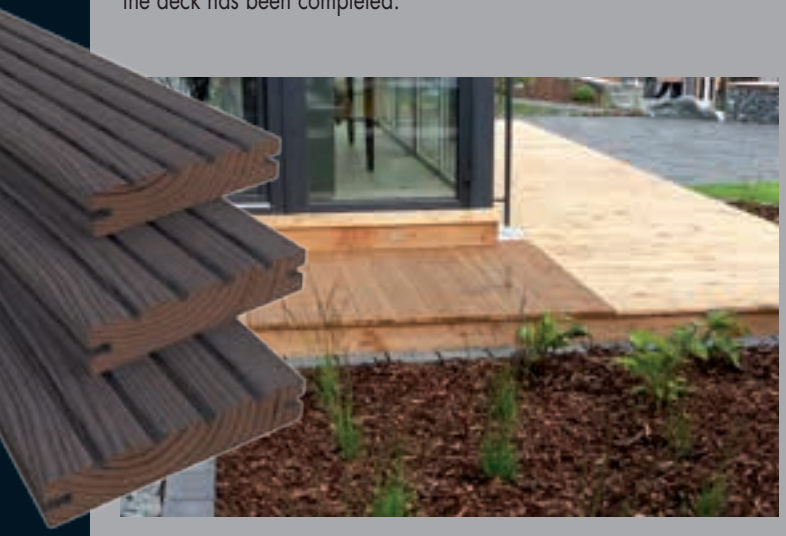
Thermofix screw with drill point, stainless steel, hardened

Art. no.	Dimensions	Drive	PU
945969	4,2 x 22 mm	TX20	100

T-Stick

T-Stick – hidden fastening of deck boards

The T-Stick is inserted between two wood boards and fastened in the board groove with a steel plate. The result is an attractive wood surface without visible screw heads. The board clearance is maintained automatically by the T-Stick. The clearance of 9 mm to the substructure enables good ventilation, and this prevents waterlogging. The service life is therefore affected positively.
If Eurotec's laying specifications are complied with, the T-Stick enables the boards to be adjusted easily before they are screwed down firmly. After screwing, the boards are absolutely firm. If a board has to be replaced, the system makes this possible even after the deck has been completed.



Note: *"Only suitable for dimensionally stable timbers and WPC."*

Art. no.	Stainless steel plate	Material	PU
111853	A2	Plastic, black	125
111855	A4	Plastic, black	125

Details of the groove geometry can be found in the product data sheet on our website www.e-u-r-o-tec.de or obtained on request from our technical department.

Using the T-Stick

Start with the start glider or StarterClip

Aligning and fixing the boards

Excellent substructure ventilation

Advantages:

Screwed boards can be replaced easily even after the deck has been completed!

Realigning is possible at any time, as well as replacing individual boards. When they are screwed tight, the boards have a safe and firm seat.

Material description: the T-Stick comprises a glass fibre reinforced, weather-resistant plastic cross with a stainless steel plate and a stainless steel screw.

There are two design variants:

1) **Stainless steel A2 plate for normal external use**
2) **Stainless steel plate A4** for chlorous and saline atmospheres (eg swimming pools, seawater) and in woods with increased tanning acid content (eg Robinia, oak)

Fast laying

The T-Stick fastening system can be used immediately. Using the StarterClip allows hidden screw connections even for the start and end boards.
No pilot drilling is needed.
Once the start board has been laid, the next board is put into position, aligned and fixed. Insert the T-Stick with the plate into the wood board groove, screw the screw in slightly to fix. After fixing the board, you can screw it in place.

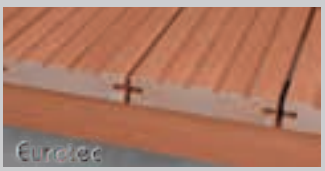
Make sure that your cordless screwdriver's torque is set correctly so that you never over-tighten the screws.

Align and fix the next board, screw down with the **T-Stick** until all boards are fastened.

The last board can then be fastened with the **StarterClip.**

A wood deck without visible screw heads.

This fastening system is suitable exclusively for deck boards with a side groove.



Accessories Aids for laying deck boards

TX-bit 1/4" x 25 mm

Art. no.	Size	PU	PU 2
945852	TX 15	10	10 x 10
945853	TX 20	10	10 x 10
945854	TX 25	10	10 x 10
945855	TX 30	10	10 x 10
945856	TX 40	10	10 x 10

TX-bit 1/4" x 50 mm

Art. no.	Size	PU
945975	TX 15	20
945976	TX 20	20
945977	TX 25	20
945978	TX 30	20
945979	TX 40	20

Bit box, specially made for wood construction

31 TX bits and 1 quick-change bit holder in a practical box with a belt clip.

32-piece

- 5 x TX10 white
- 5 x TX15 brown
- 5 x TX20 yellow
- 5 x TX25 blue
- 5 x TX30 red
- 6 x TX40 green
- 1 x quick-change bit holder

Art. no.	PU
945857	1

Quick-change bit holder

The bit holder from Eurotec is an ideal aid for all craftsmen. Once the bit is inserted into the bit holder, it can no longer fall out of its own accord.

Can be used with all 1/4" x 25 mm bits.

Advantage: *A secure hold in every position!*

Art. no.	PU*
945850	1

* Bit supplied separately

Drill-Stop, countersinking for deck screws

For Terrassotec Ø 5 and 5.5 mm, Hapatec Ø 5 mm and Hapatec Heli Ø 5 mm

a) Drilling diameter x drilling depth

Pilot drilling is strongly recommended for fastening tropical woods/hardwoods. This is advisable even with the relatively easily splittable Douglas fir, and when screwing close to wood cut against the grain.

- Boring and countersinking in a single pass
- Screwing torque for inserting Terrassotec and Hapatec screws is greatly reduced, ie no more shearing of the screws, above all with the combination hardwood/stainless steel A2 or A4.
- Perfect seat of the screw head

Art. no.	Dimensions	Material	Stopper collar	PU
945986	Ø 4,7 x 25 mm	Hard plastic/steel	orange	1

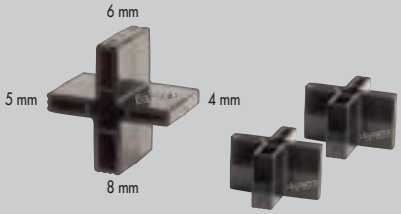
Screw Stop, Screw coupling with depth stopper

The Screw Stop is the ideal solution for driving screws to an even depth into the wood. In this way, your deck will be given an attractive, even surface pattern. You adjust the required screwing depth with the infinitely adjustable depth stopper. When this is reached, the drive uncouples and the screw stops.
You do not have to start again to adjust the seat of the screw head.

Art. no.	Dimensions	Material	PU
500000	Ø 27 x 80 mm	Hard plastic/steel	1

Spacer

This spacer can be used to set 4 different joint sizes when laying boards (4, 5, 6 and 8 mm)



Art. no.	Dimensions w x h	Material	PU
945381	40 x 25 mm	Plastic, black	25

Tenax spacer

If deck boards are to be screwed directly, ie visibly, the Tenax serves as a spacer to the underlay to prevent waterlogging in the joint. By placing the boards on top, the joint gap of 6 mm and the clearance to the substructure are set.

- Optimum back ventilation
- Optimum clearance

Art. no.	Dimensions	Material	PU
945968	11 x 30 x 86 mm	Plastic, black	300

Tension clamp, incl. detachable plastic jaws

The tension clamp is an essential aid for laying deck boards. Use at least 4 tension clamps to bring the boards into shape along their whole length.
Along with the spacers, for example, this achieves an even joint pattern with straight deck boards.

Art. no.	Dimensions	Material	PU
945380	270 x 830 x 55 mm	Hard plastic/steel	1

Terrassotec Trilobular/Terrassotec

Advantages of Terrassotec Trilobular:

Special screw geometry
- Drive thread ensures quick screwing
- Reinforced shank reduces risk of breaking or shearing off
- Under-head thread provides additional hold for deck boards

Trilobular base geometry
- Reduced screwing torque
- Reduced risk of screw breaking during screwing

Two-step head with under-head toothing
- Reduced splintering
- Reduced risk of timber splitting

Reinforced shank
- Suitable for many tropical woods
- Reduced risk of screw shearing off

Available types:

Trilobular, hardened stainless steel
Trilobular, A4

Trilobular, hardened stainless steel, antique
Trilobular, A4, antique

Terrassotec, hardened stainless steel *

Art. no.	Dimensions	Drive	PU
905530	5,5 x 50 mm	TX25 ●	200
905529	5,5 x 60 mm	TX25 ●	200
905531	5,5 x 70 mm	TX25 ●	200
905538	5,5 x 80 mm	TX25 ●	200
905545	5,5 x 90 mm	TX25 ●	200
905546	5,5 x 100 mm	TX25 ●	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088

* Discontinued item – Terrassotec Trilobular will be supplied in future

Terrassotec, A4 *

Art. no.	Dimensions	Drive	PU
905555	5,5 x 50 mm	TX25 ●	100
905556	5,5 x 60 mm	TX25 ●	100
905557	5,5 x 70 mm	TX25 ●	100
905558	5,5 x 80 mm	TX25 ●	100
905547	5,5 x 90 mm	TX25 ●	100
905548	5,5 x 100 mm	TX25 ●	100

- Rust-resistant and limited resistance to acid
- Suitable for use with woods containing tanning agents and saline atmospheres
- Not suitable for use in indoor swimming pools

* Discontinued item – Terrassotec Trilobular will be supplied in future

Terrassotec, hardened stainless steel, antique *

Art. no.	Dimensions	Drive	PU
B905530	5,5 x 50 mm	TX25 ●	200
B905529	5,5 x 60 mm	TX25 ●	200
B905531	5,5 x 70 mm	TX25 ●	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088

* Discontinued item – Terrassotec Trilobular will be supplied in future

Terrassotec, A4 antique *

Art. no.	Dimensions	Drive	PU
B905555	5,5 x 50 mm	TX25 ●	100
B905556	5,5 x 60 mm	TX25 ●	100
B905557	5,5 x 70 mm	TX25 ●	100
B905558	5,5 x 90 mm	TX25 ●	100
B905559	5,5 x 100 mm	TX25 ●	100

- Rust-resistant and limited resistance to acid
- Suitable for use with woods containing tanning agents and saline atmospheres
- Not suitable for use in indoor swimming pools

* Discontinued item – Terrassotec Trilobular will be supplied in future

Which screw steel for which wood?
Please see p. 85

Splintering

Pilot-drilling + Terrassotec screw

No splintering, no shearing!

Pilot drilling with the Drill-Stop and the specially developed head geometry of Terrassotec screws prevents splintering to the greatest extent.

The screws can be prevented from shearing thought the use of the distance strips.

Terrassotec, A2

Art. no.	Dimensions	Drive	PU
905539	5,5 x 50 mm	TX25 ●	200
905540	5,5 x 60 mm	TX25 ●	200
905541	5,5 x 70 mm	TX25 ●	200
905542	5,5 x 80 mm	TX25 ●	200

A2 stainless steel:
- Only partially rust-resistant, not acid-resistant, relatively soft
- Not suitable for atmospheres containing chlorine

PRACTICAL:

Here's everything you need.

Terrassotec screws, Ø 5,5 mm
Sales unit in bucket with 500 pieces

incl. Drill-Stop

incl. TX 25 Bit

EDELSTAHL Rostfrei

500 pieces

Drill-Stop for:

Terrassotec	Ø 5 and 5,5 mm
Hapatec	Ø 5 mm
Hapatec Heli	Ø 5 mm

Wood deck = pilot-drilling

When building a wood deck using premium woods pilot-drilling and pre-counterboring is recommended in all circumstances. This applies to soft coniferous wood as well as to hardwood.


PRACTICAL:
Everything you need in one box
Hapatec screws,
sold as a 500/1000-piece bucket
incl. TX 25 Bit
incl. Drill-Stop
500/
1000
pieces
Euratec

Hapatec

bauaufsichtlich Zulassungs-Nr. Z-9.1-661 zugelassen

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Hapatec

Panel fastener hardwood, stainless steel, hardened

Art. no.	Dimensions	Drive	PU
111803	4,0 x 30 mm	TX15	500
111810	4,0 x 40 mm	TX15	500
111821	4,0 x 45 mm	TX15	500
111811	4,0 x 50 mm	TX15	500
111812	4,0 x 60 mm	TX15	500
904569	4,5 x 45 mm	TX20	200
111813	4,5 x 50 mm	TX20	200
111814	4,5 x 60 mm	TX20	200
111815	4,5 x 70 mm	TX20	200
111816	4,5 x 80 mm	TX20	200
100048	5,0 x 40 mm	TX25	200
100049	5,0 x 45 mm	TX25	200
111817	5,0 x 50 mm	TX25	200
111818	5,0 x 60 mm	TX25	200
111819	5,0 x 70 mm	TX25	200
111820	5,0 x 80 mm	TX25	200
111888	5,0 x 90 mm	TX25	200
111889	5,0 x 100 mm	TX25	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088
- 60% greater breaking torque than A2 and A4
- Hardened stainless steel can be magnetised

Hapatec »antique«

Panel fastener hardwood, stainless steel, hardened

Art. no.	Dimensions	Drive	PU
B111817	5,0 x 50 mm	TX25	200
B111818	5,0 x 60 mm	TX25	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088
- 60% greater breaking torque than A2 and A4
- Hardened stainless steel can be magnetised

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Hapatec Heli A4

EDELSTAHL Rostfrei

Art. no.	Dimensions	Drive	PU
100059	4,5 x 50 mm	TX20	200
100055	4,5 x 60 mm	TX20	200
100056	4,5 x 70 mm	TX20	200
100057	4,5 x 80 mm	TX20	200
100051	5,0 x 50 mm	TX25	200
100052	5,0 x 60 mm	TX25	200
100053	5,0 x 70 mm	TX25	200
100054	5,0 x 80 mm	TX25	200
100058	5,0 x 100 mm	TX25	200

- Resistant to rust, limited resistance to acid
- Suitable for woods containing tanning agents and saline atmospheres
- Not suitable for use in indoor swimming pools

The special screw geometry reduces the screwing torque.
This reduces the danger of the shearing of the relatively soft A4 stainless steel screw.

NEW

Hapatec Heli A2

Art. no.	Dimensions	Drive	PU
100060	5,0 x 50 mm	TX25	200
100062	5,0 x 60 mm	TX25	200

A2 stainless steel:

- Only partially rust-resistant, not acid-resistant
- Not suitable for atmospheres containing chlorine

Terrassotec

Advantages of Terrassotec:
- Reduced splintering through special head
- With self-milling ribs for sinking easily in all wood types
- The screw geometry reduces the danger of splitting, but pilot drilling is recommended in particular for hardwoods and in deck and façade construction!

Check the information from the board manufacturer.

Which screw steel for which timber?

Please refer to p. 85.

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 661 zugelassen

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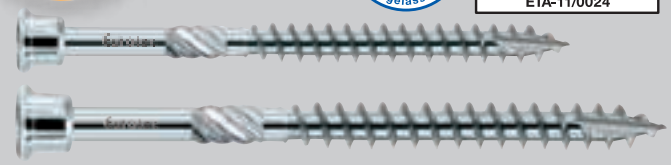
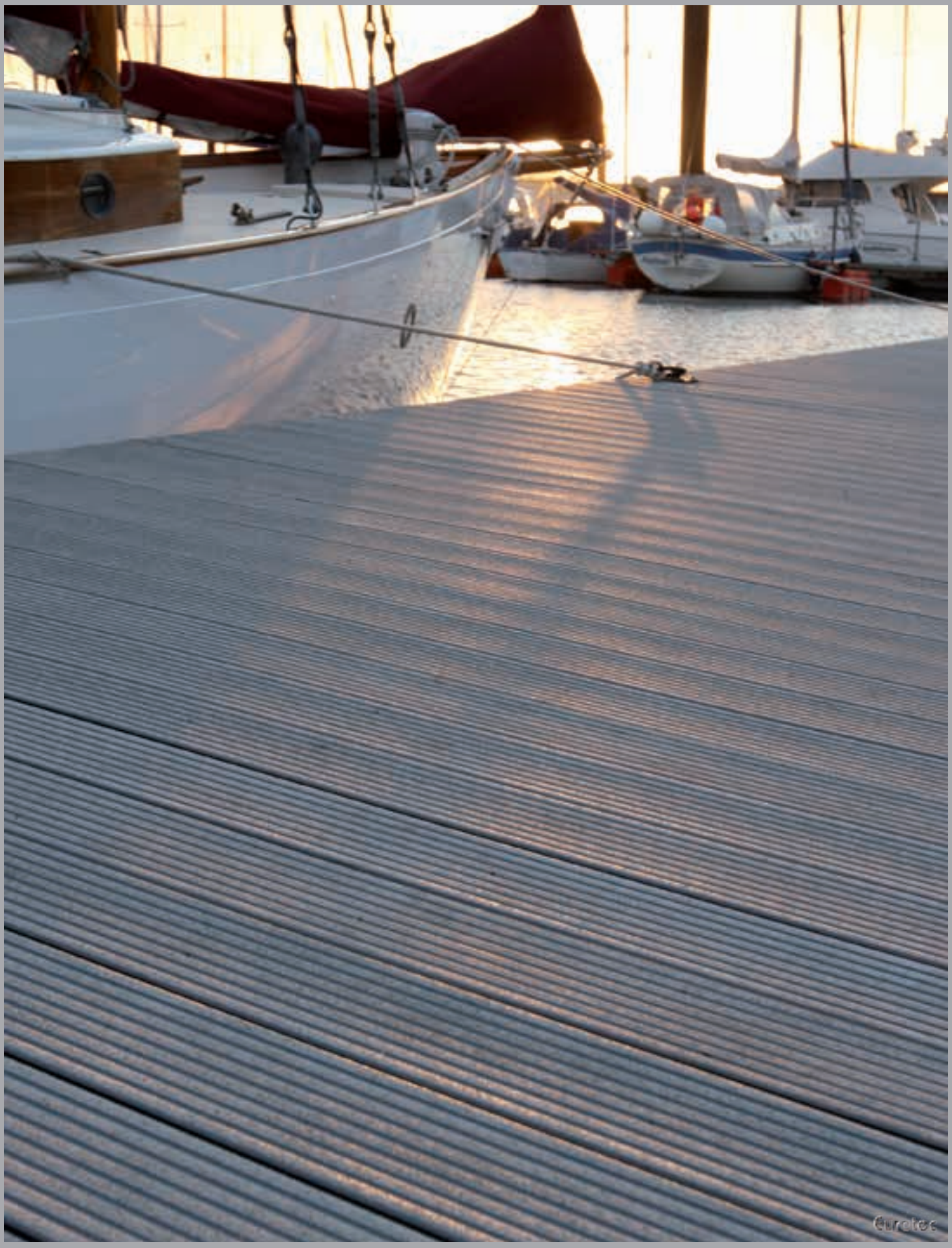


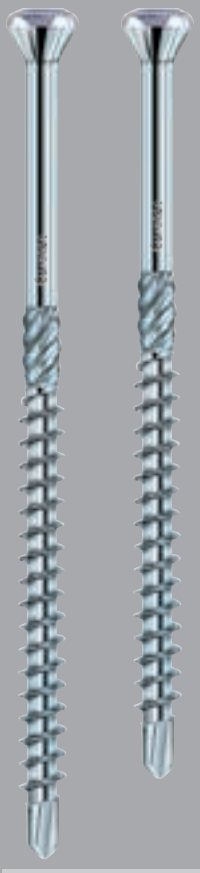
Terrassotec, stainless steel, hardened

Art. no.	Dimensions	Drive	PU
905535	4,0 x 40 mm	TX15	500
905536	4,0 x 50 mm	TX15	500
905537	4,0 x 60 mm	TX15	500
905528	4,5 x 45 mm	TX20	200
905520	4,5 x 50 mm	TX20	200
905521	4,5 x 60 mm	TX20	200
905522	4,5 x 70 mm	TX20	200
905527	5,0 x 45 mm	TX25	200
905523	5,0 x 50 mm	TX25	200
905524	5,0 x 60 mm	TX25	200
905525	5,0 x 70 mm	TX25	200
905526	5,0 x 80 mm	TX25	200
905544	5,0 x 90 mm	TX25	200
905543	5,0 x 100 mm	TX25	200

- Limited resistance to rust, not acid-resistant
- 10 years experience without corrosion problems with suitable woods
- Not suitable for woods containing high amounts of tanning agents, such as, eg, cumaru, oak, merbau, robinia, etc.
- Not suitable for use in chlorous atmospheres
- Stainless steel in accordance with DIN 10088
- 60% greater breaking torque than A2 and A4
- Hardened stainless steel can be magnetised



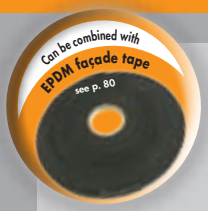
Hobotec ornamental head and EPDM façade tape



The new type of thread and the innovative drill point enable a clean fit and high extraction resistance values.

Particularly suitable for brittle woods

Not suitable for tannin-rich woods such as cumarú, oak, merbau, robinia, etc.



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Z - 9.1 - 661
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Hobotec ornamental head, hardened stainless steel

Art. no.	Dimensions	Drive	PU
945040	4,0 x 40	TX 15	500
945653	4,0 x 45	TX 15	500
945041	4,0 x 50	TX 15	500
945042	4,0 x 60	TX 15	500
945043	4,0 x 70	TX 15	500
945044	4,0 x 80	TX 15	500
945045	4,5 x 40	TX 20	200
945046	4,5 x 45	TX 20	200
945047	4,5 x 50	TX 20	200
945048	4,5 x 60	TX 20	200
945049	4,5 x 70	TX 20	200
945050	4,5 x 80	TX 20	200
945051	5,0 x 50/30	TX 25	200
945052	5,0 x 60/36	TX 25	200
945053	5,0 x 70/42	TX 25	200
945054	5,0 x 80/48	TX 25	200
945055	5,0 x 90/54	TX 25	200
945056	5,0 x 100/60	TX 25	200

Application:
- Façades
- Fences
- Decks

EPDM façade tape

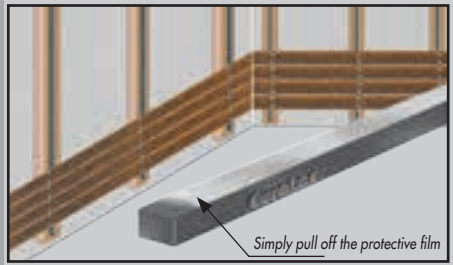
NEW

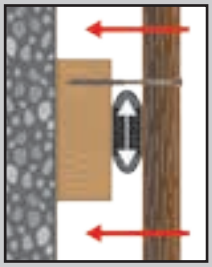
Art. no.	Dimensions H x W x L	PU
954041	8,0 x 10,0 x 9.750 mm	10

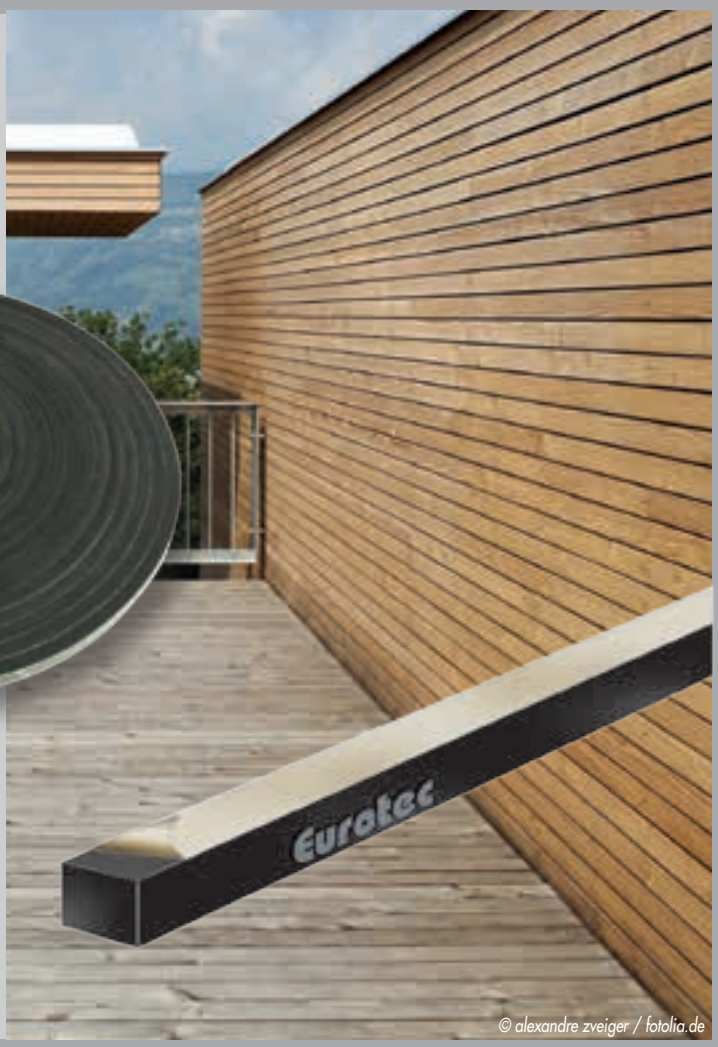
The EPDM façade tape protects the timbers of your façade substructure against moisture and thus aids constructive timber protection. It is tear-proof, durable and easy to fasten thanks to an adhesive film. The façade tape is supplied as a roll and can be cut to length individually.

Especially suited to:
Hapatec Heli, A4 stainless steel,
Terrassotec, hardened stainless steel,
Hobotec, ornamental head,
Hobotec screw,
Paneltwistec, A4 stainless steel

Also suitable for the deck substructure.







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Hobotec screws

Hobotec screws

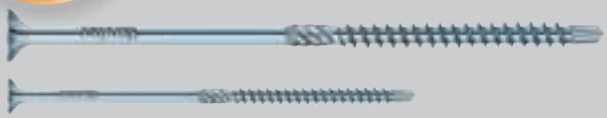
Hobotec screws enable simple, fast and clean connections of wood to wood. These screws are used in particular in applications where there is an increased danger of cracking and splitting. The new type of thread and the innovative drill point enable a clean fit and high extraction resistance values.

Specially suitable for:
applications in model construction, stairs construction, façade construction for carpentry work, joinery and roofing.

Advantages:
- No pilot drilling required
- No cracking or splitting in narrow edge areas
- No hammering of the screws through Tec drive

Europ. Techn. Zulassung
European Technical Approval
ETA-11/0024

bauaufsichtlich
Zulassungs-Nr.
Z - 9.1 - 661
zugelassen



Hobotec screw,
Stainless steel, hardened

Art. no.	Dimensions	Drive	PU
903323	4,0 x 30 mm	TX15	500
110299	4,0 x 40 mm	TX15	500
110300	4,0 x 45 mm	TX15	500
110301	4,0 x 50 mm	TX15	500
110302	4,0 x 60 mm	TX15	500
110319	4,5 x 40 mm	TX20	200
944839	4,5 x 45 mm	TX20	200
110303	4,5 x 50 mm	TX20	200
110304	4,5 x 60 mm	TX20	200
110305	4,5 x 70 mm	TX20	200
110306	4,5 x 80 mm	TX20	200
110307	5,0 x 50 mm	TX25	200
110308	5,0 x 60 mm	TX25	200
110309	5,0 x 70 mm	TX25	200
110310	5,0 x 80 mm	TX25	200
110311	5,0 x 90 mm	TX25	200
110312	5,0 x 100 mm	TX25	200
110313	6,0 x 80 mm	TX25	100
110314	6,0 x 90 mm	TX25	100
110315	6,0 x 100 mm	TX25	100
110316	6,0 x 120 mm	TX25	100
110317	6,0 x 140 mm	TX25	100
110318	6,0 x 160 mm	TX25	100

Application range for screws made of hardened stainless steel:
- This steel combines the best properties of carbon and stainless steels. Conditionally rust-resistant like an A2 with the high mechanical values of a galvanised steel. Hardened stainless steel is not acid-resistant, which is why it is also not suitable for fastening wood containing tanning agents (eg oak).
- Hardened stainless steel can be magnetised.
- Stainless steel in accordance with DIN 10088.

For further information on possibilities for using hardened stainless steel see p. 85.

Hobotec ornamental head, hardened stainless steel, blue/yellow galvanised, brass-plated


© D.aniel / fotolia.de

These screws are used in particular in applications where there is a high risk of splitting. The new type of thread and the innovative drill point enable a clean fit and high extraction resistance values.

e.g. when laying wood floors, wood mouldings, etc.

Hobotec ornamental head, steel blue galvanised

Art. no.	Dimensions	Drive	PU
110287	3,2 x 20 mm	TX 10 ○	500
110288	3,2 x 25 mm	TX 10 ○	500
110289	3,2 x 30 mm	TX 10 ○	500
110290	3,2 x 35 mm	TX 10 ○	500
110291	3,2 x 40 mm	TX 10 ○	500
110292	3,2 x 50 mm	TX 10 ○	500
110293	3,2 x 60 mm	TX 10 ○	500

Also available with head painted white:

Art. no.	Dimensions	Drive	PU
w110288	3,2 x 25 mm	TX 10 ○	500
w110289	3,2 x 30 mm	TX 10 ○	500
w110290	3,2 x 35 mm	TX 10 ○	500
w110291	3,2 x 40 mm	TX 10 ○	500
w110292	3,2 x 50 mm	TX 10 ○	500
w110293	3,2 x 60 mm	TX 10 ○	500

Hobotec ornamental head, hardened stainless steel

Art. no.	Dimensions	Drive	PU
900782	3,2 x 25 mm	TX 10 ○	500
110294	3,2 x 30 mm	TX 10 ○	500
110295	3,2 x 35 mm	TX 10 ○	500
110296	3,2 x 40 mm	TX 10 ○	500
110297	3,2 x 50 mm	TX 10 ○	500
110298	3,2 x 60 mm	TX 10 ○	500

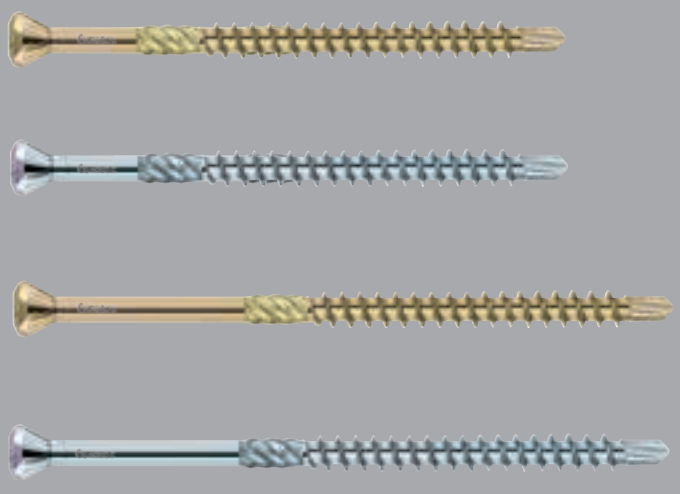

Eurotec

Hobotec ornamental head, brass-plated

Art. no.	Dimensions	Drive	PU
903436	3,2 x 25 mm	TX 10 ○	500
903437	3,2 x 30 mm	TX 10 ○	500
903438	3,2 x 35 mm	TX 10 ○	500
903439	3,2 x 40 mm	TX 10 ○	500
903440	3,2 x 50 mm	TX 10 ○	500
903441	3,2 x 60 mm	TX 10 ○	500

Hobotec ornamental head, steel yellow galvanised

Art. no.	Dimensions	Drive	PU
110280	3,2 x 20 mm	TX 10 ○	500
110281	3,2 x 25 mm	TX 10 ○	500
110282	3,2 x 30 mm	TX 10 ○	500
110283	3,2 x 35 mm	TX 10 ○	500
110284	3,2 x 40 mm	TX 10 ○	500
110285	3,2 x 50 mm	TX 10 ○	500
110286	3,2 x 60 mm	TX 10 ○	500
944778	4,2 x 70 mm	TX 15 ●	200
944779	4,2 x 80 mm	TX 15 ●	200

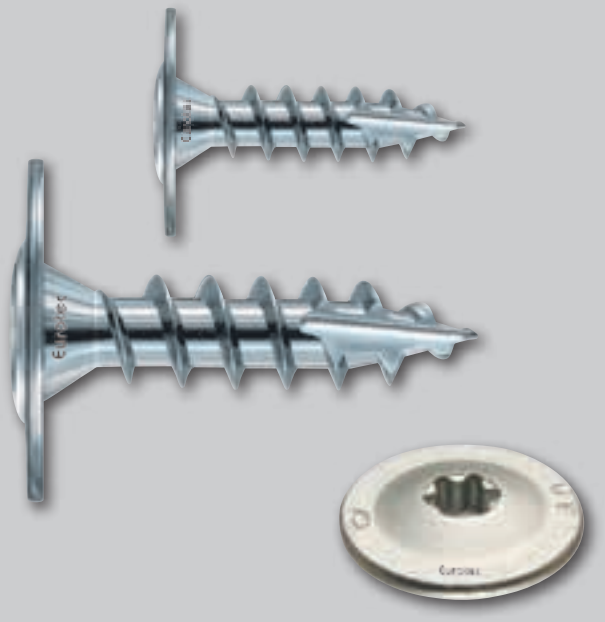


Fence post connection screw and interwoven fence fittings

Fence post connection screw

- Flange buttonhead screws, Ø 8 mm, head diameter 22 mm
- Special tip geometry reduces the splitting effect, no pilot drilling required
- Special protection against corrosion
- For use, eg, in fence and pergola construction

Not suitable for woods containing tanning agents.

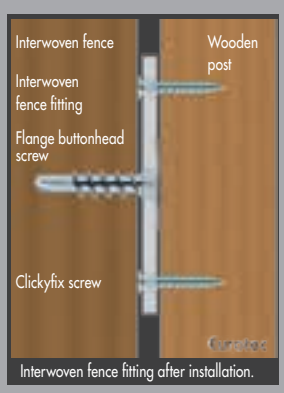


Art. no.	Dimensions	Drive	PU
r903056	8 x 40 mm	TX 40 ●	100
r903057	8 x 50 mm	TX 40 ●	100
975594	10 x 40 mm	TX 40 ●	50
975595	10 x 50 mm	TX 40 ●	50

Interwoven fence fitting set

	Art. no.	Dimensions	Material	Set
Set 1*	S900335	40 x 65 mm	A2	1

* A set consists of 4 fittings (A2) + 16 ClickyFix + 4 interwoven fence screws



Interwoven fence fitting after installation.

Screw the interwoven fence fitting with an interwoven fence screw at the head to the fence element. We recommend at least two fittings per side, ie 4 fittings for each fence element.

Now fasten the fence panel with the fitting to the wooden post.
We recommend using 4 Clickyfix screws per fitting.

Expert hints:

Hazards in the construction of timber decks

The various timber types differ from one another not only in their appearance but also in their technical properties:

- One particularly important property of wood with regard to deck construction is dimensional stability (also known as "resilience"). Experts use this term to refer to the property whereby wood changes shape in the course of use due to swelling or shrinkage. The various timber types exhibit different degrees of dimensional stability. For this reason, special attention must be paid to the choice of timber type. For deck construction, we recommend using timber with high dimensional stability. Some timber types, including Massaranduba, exhibit lower-than-average dimensional stability, so we expressly advise against using these timber types for deck construction. Since, from an absolute perspective, the swelling and shrinkage behaviour increases as the width of the timber boards increases, we also recommend a maximum board width of 120 mm. You can find details of the dimensional stability of some common timber types in the "Overview of timber types" on p. 35-38 of our catalogue, as well as on our website.

- Rift-sawn planks should always be used in preference to flat-sawn planks, as they have considerably better properties with respect to cracking, splintering, swelling and shrinkage, as well as dimensional stability, and therefore tend to distort and warp less. Often, so-called flat-sawn planks cannot be fastened permanently with either visible or hidden methods. In such cases, we cannot guarantee permanent fastening.

- Even fine particles of abraded metal can lead to dark spots of corrosion on the timber boards. Metalwork should not therefore be carried out in the direct vicinity of the deck.

- Constituent substances in the timber can cause contamination of adjacent surfaces; it is therefore important to take constructive precautions, such as maintaining sufficient distances from nearby components.

- As nature does not adhere to quality guidelines, the suitability of timber for deck construction does not depend solely on the timber type. Often, problems can occur even due to individual batches of a timber type that is normally harmless. Possible reasons for this include spiral grain and insufficient drying.

  → Spiral grain refers to a wood grain that has grown in a spiral around the trunk axis; this becomes a problem if, in the course of use, the moisture contained in the wood deviates from the moisture level at installation. If this happens, internal tension in the wood is released and can therefore cause the deck boards to warp. The energy released in this process is so enormous that it often overwhelms even perfectly installed fastening systems.

  → It is a property of every timber to be able to absorb and give out water. For the user, this property can primarily be perceived through the timber's swelling and shrinking. One task of the timber trade is to bring timber to the correct state of dryness for the respective area of use. If timber is used that has an incorrect moisture content at installation, this can quickly lead to damage.

- Many properties of the timber vary strongly depending on the grade. It is therefore advisable to contractually stipulate all criteria in advance with your timber dealer!

- Particular care should be taken when purchasing Bangkirai. In the past, increased demand often meant that substitute timber from South East Asia was – knowingly or unknowingly – traded as Bangkirai. Most of these substitute timbers are considerably less suitable for deck construction. This results in cracking and strong warping and bending of the boards.

- It is essential to use identical timber types in order to ensure the durability of the deck – i.e. the upper deck and substructure must be made of the same material.

- A lot of damage to deck structures can be prevented in advance by thoroughly inspecting the timber that is to be installed. If, for example, the tradesman responsible already notices deformation in the deck boards before installation, none of these boards should be installed.

Selecting screw steels for their corrosion resistance

Step by step:
Select the right screw material for your project by observing the following principles. Go through the three points one after the other. The right material is marked for points 1 and 2 with (X) at least, or even better with X. In the event of additional chemical stress, point 3 must conform as well.

1. What's the component's situation? Is it exposed to the weather (fence) or is it protected (ceiling beam)?
2. Which wood is being fastened? Is it simple construction wood, or tannin-rich tropical wood?
3. Are there any additional stresses in situ that encourage corrosion? Location near the sea? Heavy industry, etc.?

Example: fastening a façade made of Douglas fir
1. Use class = 3, because exposed to weather. Façade = optical requirements. → at least C1
2. Douglas fir → min. C1, but an A2 or A4 is to be preferred.
3. This point is not required, because there are no further external stresses.
Selection: C1 is possible, but A2 or A4 is to be preferred.

Steel group	**Carbon steel**		**Stainless steel, martensite**	**Stainless steel, austenite**	
	Electroplated	Special coating	C1, hardened stainless steel	A2	A4
Product examples	**Paneltwistec** blue/yellow **Hobotec** blue/yellow	**Paneltwistec 1000 Topduo**	**Terrassotec** stainless steel, hardened **Hapatec**	**Terrassotec A2**	**Terrassotec A4 Hapatec Heli A4**
1. Position of the component?					
NKL 1 [a]	X	X	X	X	X
NKL 2 [a]	X	X	X	X	X
NKL 3 [a]	-	(X) [b]	X	X	X
2. Which wood? [c]					
Structural timber, wood materialsd [d]	X	X	X	X	X
Beech (red beech)	X	X	X	X	X
Douglas fir	-	-	(X) [e]	X	X
Spruce	X	X	X	X	X
Pine	X	X	X	X	X
Larch	-	-	(X) [e]	X	X
Coniferous wood, pressure-impregnated	(X) [b]	(X) [b])	(X) [b]	(X) [b]	X
Red cedar	-	-	-	(X) [f]	X
Fir	X	X	X	X	X
Thermotreated wood from coniferous wood	-	-	-	(X) [f]	X
Abachi	-	-	-	(X) [f]	X
Afzelia, doussié	-	-	-	(X) [f]	X
Azobé, bongossi	-	-	-	-	X
Bangkirai, balau	-	-	(X) [e]	X	X
Bilinga	-	-	-	(X) [f]	X
Courbaril, jatobá	-	-	-	-	X
Cumarú	-	-	-	(X) [f]	X
Sweet chestnut	-	-	-	-	X
Oak	-	-	-	-	X
Eukalyptus	-	-	-	-	X
Garapa	-	-	-	-	X
Ipé	-	-	(X) [e]	X	X
Iroko	-	-	(X) [e]	X	X
Itaúba	-	-	-	-	X
Kosipo	-	-	-	-	X
Massaranduba	-	-	-	-	X
Merbau	-	-	-	-	X
Robinie	-	-	-	-	X
Thermally modified timber made from hardwood	-	-	-	(X) [f]	X
3. Additional chemical load?					
Constant condensationg [g]	-	-	-	(X) [b]	X
Salt load [h]	-	-	-	(X) [b]	X
Aggressive atmospheres [k]	-	-	-	-	(X) [m]
Chlorous atmospheres [l]	-	-	-	-	-

a) Use classes in accordance with EN 1995 – Eurocode 5. NKL 1 - components in structures enclosed on all sides, partly heated. NKL 2 - components in roofed, open structures without direct weather exposure. NKL 3 - freely weathered constructions.
b) Recommended only for less significant fastening points, or for temporary objects, or if there are no visual requirements.
c) Pilot-drilling and, where applicable, pre-countersinking, is recommended in general for hardwoods. This also applies for coniferous woods in deck and façade construction.
d) Untreated: spruce, fir, pine, composite timber, KVH®, veneering laminated wood, solid wood, etc., plywood, OSB, fibreboards, cement-bound and gypsum fibreboards, etc.
e) In our experience, using this timber with C1 does not lead to problems with corrosion or timber discolouration. Depending on the origin of the timber, however, this cannot be ruled out completely. Please also inquire at your timber dealer.
f) Use of A4 is recommended. Please contact your wood dealer as well.
g) Uninterrupted condensation in a water vapour atmosphere with only slight impurities.
h) Building components close to roads heavily affected by salting in winter, coastal areas, in offshore and other industrial installations.
k) For example: building components in road tunnels, pig stalls or in other aggressive atmospheres, possibly with additional higher air humidity.
l) Building components in indoor swimming pools or other chlorous atmospheres.
m) Use to be checked in the individual case.

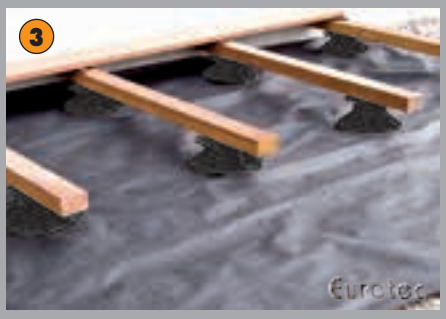
This overview cannot take account of all applications. Materials can be assigned to more unfavourable conditions as well in an individual case.

Information on building a deck

Substructure

For a stable and durable hardwood deck it is very important to build the substructure correctly. On the one hand this has the job of supporting the actual deck, so that an even surface is retained even under load. On the other hand, it serves for constructive wood protection, in that it forms a clearance between the ground and the deck flooring/bearing beams. In this way, the wood is not exposed to either waterlogging or increased wood moisture in the earth-air zone. These conditions, coupled with the use of unsuitable wood types, would be the nutrient medium for organisms that destroy wood. In the following sections we want to show you some approaches for constructing a deck substructure.

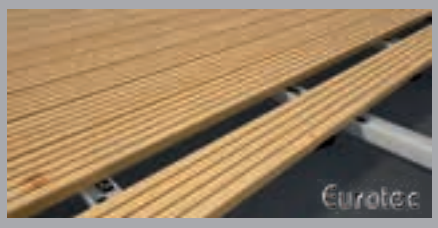
A supporting base is always required. This can be compressed earth, gravel, or similar. The foundations are then placed on this. The bearer beams are placed on them. The foundations form the above-mentioned required clearance between the earth and the wood and bear the ensuing loads.



Here are three examples of how substructures are implemented:
1. A strip footing is cast in concrete: this is very expensive and requires very accurate work. (See Fig. 1)
2. Concrete elements are laid on a gravel bed: these are quite heavy to transport and position. (See Fig. 2)

A problem becomes clear in types 1 and 2: you have to work very accurately to install the upper edges of the foundations at exactly the same height. Since this is not usually possible, the joists will require spacers at a later stage. **Rolfi spacers** (p. 41 + 42) are particularly well-suited to this.

3. **Adjustable feet from Eurotec:** the adjustable feet can be placed directly onto compacted subsoil or concrete. This removes the need to create expensive foundations and install spacers to even out the height of the substructure timbers. The height can be adjusted steplessly, together with that of the supported joist, which is connected directly to the adjustable foot with a bracket.



Information on working with wood decks

Wood decks

Because of constantly occurring problems with the use of hardwood/tropical woods we want to point out some fundamental working guidelines that must be observed. However, we refer in general to the recommendations of your wood dealer, because there can be extreme fluctuations in the wood properties with the same wood type, above all with tropical woods. Bangkirai wood, for example, which is often used, can have very different properties, because the properties depend heavily on the source in each case. If the variety of wood properties within a range is ignored, this can lead to various problems with regard to screws breaking off.

At a width of 140 mm, Bangkirai woods or other hardwood/tropical woods can swell or shrink by up to 7 mm, depending on the wood moisture. With direct screwing through the boards into the substructure we recommend using a pair of screws. If the board is fastened directly on the substructure and the board works from the centre by about 3.5 mm, this leads in some cases to the screws being sheared off. The hardwood/tropical wood does not allow the screw to absorb any movement because it can barely be compressed because of its own high density.

Although deck/wood construction screws today have a suitable deflection angle, hardwoods that are placed directly on top of each other function as shearing modules that shear the screws off if the wood swells or shrinks. (Per board half = 3.5 mm displacement, this conforms to about the inside diameter of a screw with a 5 mm thread, which is the minimum that should be used with tropical woods).

In certain circumstances, screwing in the centre of the board might be deducted from this. Unfortunately, tropical woods have an extremely high internal stress, which leads to the boards twisting (dishing), which in most cases requires pairs of screws.

However, using a spacer (eg distance strip or deck glider) between the substructure and deck board is very helpful here. This provides the screws with a possibility of bending in the direction of the working wood. The danger of shearing is greatly reduced. In addition, this clearance protects the wood from waterlogging at the support points. The ageing process is slowed down clearly.

A mistake that is frequently made is to have centre distances in the substructure that are too large. The most durable results are achieved if this clearance, and therefore the screw clearance in the lengthwise direction of the boards, is max. 60 cm.

Please note that the installation information provided here is merely a recommendation and does not constitute binding assembly instructions. Every assembly job is subject to different performance requirements, e.g. locally applicable building regulations, and the tradesman carrying out the installation is responsible for compliance with these requirements.

Pilot-drilling is always better with problematic woods. These are above all hardwood/tropical woods, but also some coniferous woods that tend to crack easily, such as eg Douglas fir.

Pilot drilling prevents the wood splitting. With regard to the edge distances make sure that there is at least 6 cm clearance to the end of the board.

(Please note: because of the high internal stress the boards can also crack open later at the ends and in the middle. This also applies to thermally treated woods).

» Another free service from Eurotec «

We always keep you up-to-date with new video clips in the Service section of our website!

Pay us a visit at
www.e-u-r-o-tec.de.

For display

PERFECTLY PRESENTED, SIMPLY AND

The Minishop and the Midishop are cost-effective and space-saving alternatives for selling Eurotec deck products.

Minishop

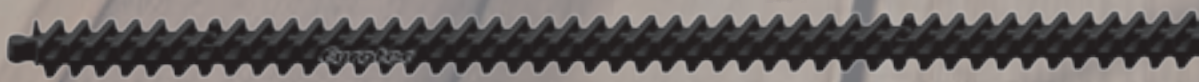
- Supplied as a mini sales unit on a europallet
- Incl. model deck as an example application
- Individually stocked with Terrassotec or Hapatec screws, incl. in bucket

Sales sample

Use the sales sample to present the advantages of the distance strip and deck glider systems quickly and understandably.

We supply everything you need to explain and present Eurotec deck products!

Offer your customers both variety and competence!



O UNDERSTANDABLY EXPLAINED!

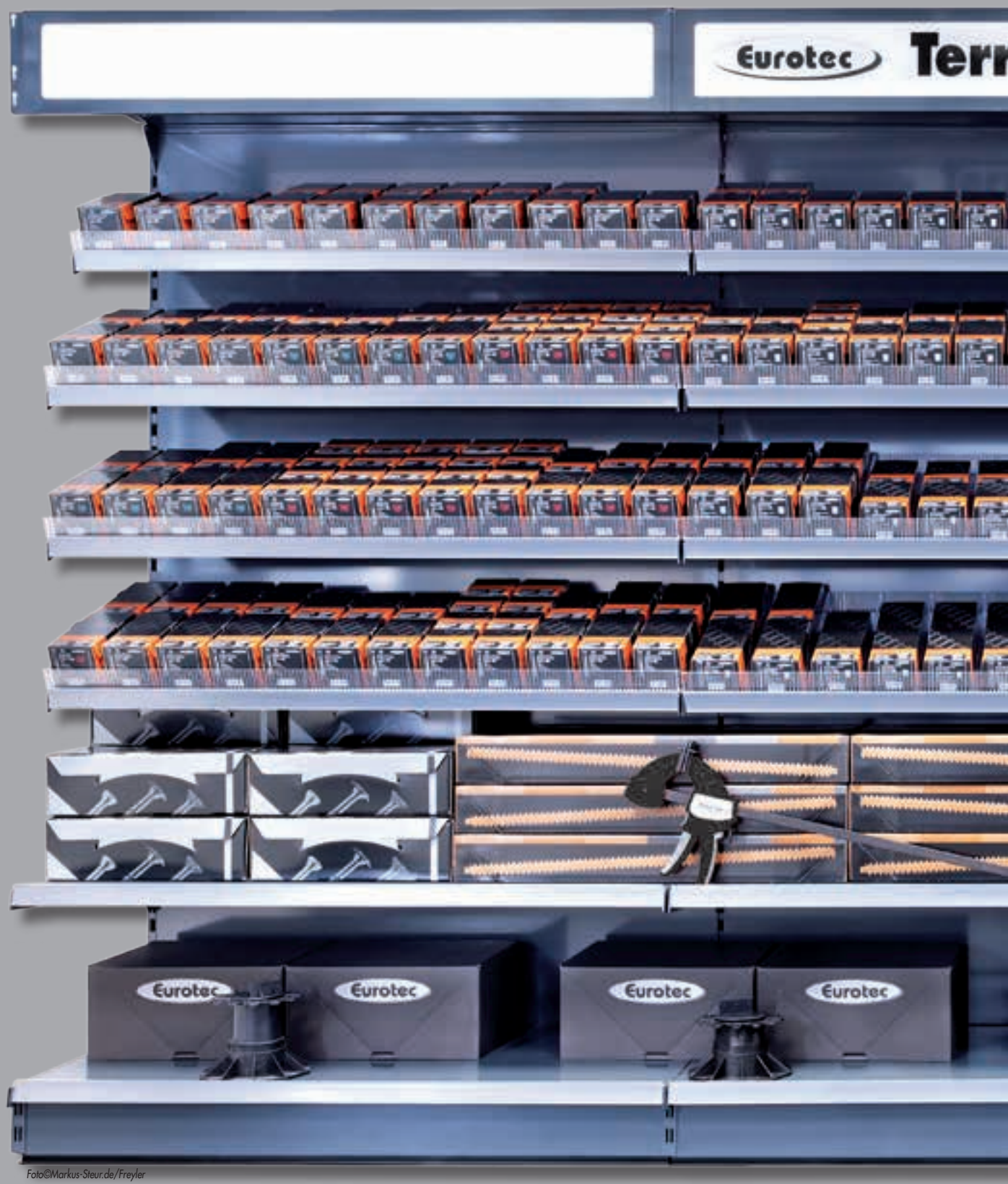
Midishop

- Supplied as a midi sales unit on a europallet
- Incl. model deck as an example application
- Individually stocked with deck accessories such as Terrassotec, Rolfi, adjustable feet, deck gliders, bit sets, etc.

It's always good to have something in reserve!!

1000 pieces

The EuroTec display system



Foto©Markus-Steur.de/Freyler

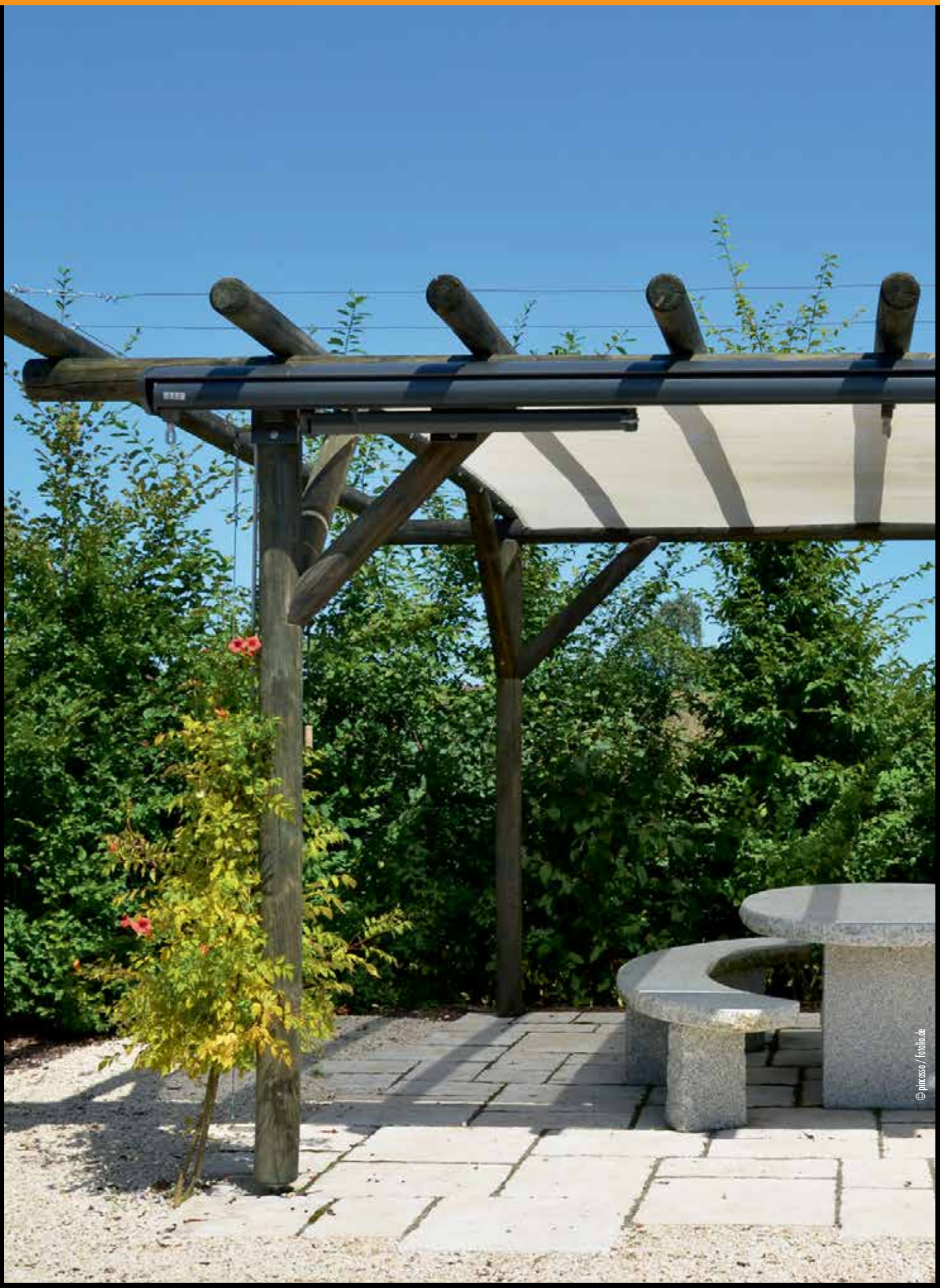
The EuroTec display system - everything at a glance

The practical and individually combinable display system for an attractive presentation of our products in your sales area.

Display example with 3 modules, 375 cm wide, 224 cm high, 65 cm deep; individual module depth 125 cm

Product presentation in a premium display system.

- Wood construction or deck shop
- Single, double … multiple unit
- We install and set up individually for you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PediX post feet

Quick to assemble, with an especially high load-bearing capacity

Europ. Techn. Zulassung
European Technical Approval
ETA-13/0550

PediX

The PediX post foot is a post bearer that meets the requirements for constructive timber protection. It can be mounted on the end grain of the post using fully threaded screws with no need for joinery work or pilot-drilling.

An EPDM gasket between the post foot and post provides additional protection for the wood against penetrating moisture.

After assembly, the height of the post foot can still be adjusted by up to 50, 100 or 150 mm (except PediX B500). Thanks to the height adjustment, manufacturing tolerances relating to the structure and subsequent settlement in the individual foundations can be balanced out. The post foot has high tensile and compressive load capacities.

The new PediX 300+150 HV can additionally absorb horizontal loads.

The foot's durability is ensured through hot-dip galvanisation in accordance with DIN EN ISO 12944-2 (C3).

Brief technical description:

- Simple assembly with fully threaded screws and no need for joinery
- Additional constructive timber protection via EPDM gasket measuring 90 x 90 x 1.5 mm on the end grain
- High tensile and compressive load capacities in accordance with ETA 13/0550
- Horizontal load bearing capacity for the new PediX 300+150 HV* of up to 2.3 kN
- Can be used in utilisation classes 1, 2 and 3 in accordance with DIN EN 1995-1-1
- Structural steel S235JR (ST37-2) hot-dip galvanised in accordance with DIN EN ISO 12944-2 (C3)
- Min. timber cross section of 100 x 100 mm
- Supplied with 12 fully threaded A2 screws measuring 5.0 x 80 mm
- Certificate of the load-bearing capacity of the individual parts

Advantages

- Easy assembly without milling
- Subsequent height adjustment
- High load bearing capacity

Europ. Techn. Zulassung
European Technical Approval
ETA-13/0550

Technical data: PediX post feet

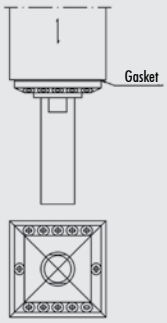
Name	Art. no.	Minimum fixing depth	Height adjustment in assembled state	Min. post cross section	Dimensions of baseplate	Compressiveload-bearing capacity	Tensile load-bearing capacity	PU
Post feet on concrete			[mm]	[mm]	LxBxH [mm]	$N_{c,d}$ [kN]	$N_{t,d}$ [kN]	pcs.
PediX 140+50	904681	–	140 - 190	100 x 100	160 x 100 x 8	48,0	9,2	4
PediX 190+100	904682	–	190 - 290	100 x 100	160 x 100 x 8	30,9	9,2	4
NEW PediX 300+150	904689	–	300 - 450	100 x 100	160 x 100 x 8	16,2	9,2	4
NEW PediX 300+150 HV	904689-HV	–	300 - 450	100 x 100	160 x 100 x 8	34,5	8,6	4
Post foot in concrete		[mm]	Height adjustability [mm]	[mm]	LxBxH [mm]	$N_{c,d}$ [kN]	$N_{t,d}$ [kN]	pcs.
PediX-B500+50*	904686	250	50	100 x 100	–	30,9	17,7	4
PediX-B500	904683	250	–	100 x 100	–	48,0	17,7	4

*PediX B500 + 50 is not regulated according to an ETA

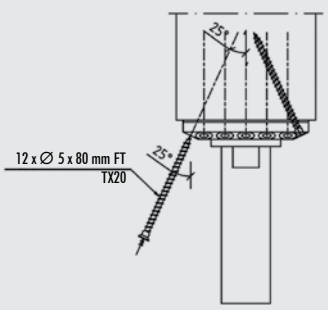
Please note: The stated values are only intended as planning aids. They are subject to typographical and printing errors. Projects must only be calculated by authorised persons.

As the PediX 300+150 and PediX 300+150 HV post feet permit height adjustment by up to 450 mm on concrete, they meet the requirements for protection against splashing water (min. 300 mm) laid down by German standard DIN 68800-2 – Preventive constructional measures in buildings – with no need for additional measures.

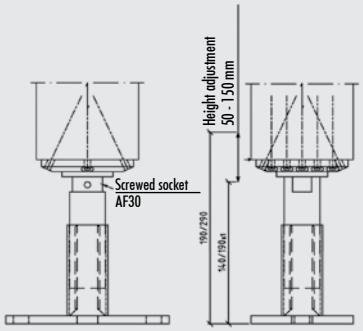
Installation instructions: You will find more-detailed information in our installation instructions.



The PediX post foot can be attached easily to the end grain. Place the seal on the support foot and then place both parts centrally on the end grain surface. Note: To make assembly easier, the base plate and the cover sleeve can be unscrewed.



After centring the head plate, screw in the 12 full-thread 5.0 x 80 mm screws at an angle of 25° without pilotdrilling.



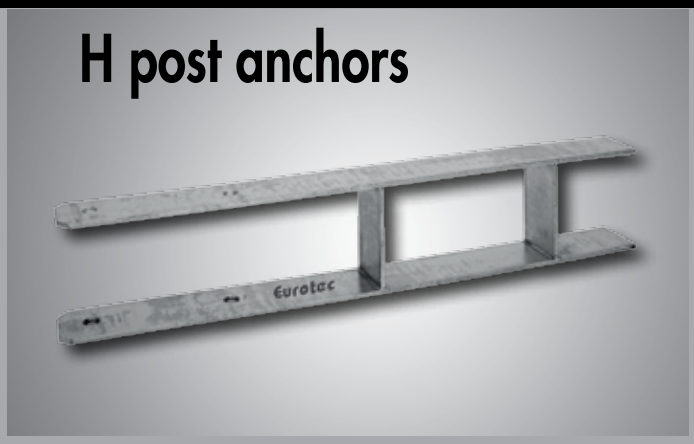
The protective sleeve and the baseplate can be reinstalled after all screws are fitted. After the post is erected with the post foot installed, it can be anchored on a concrete foundation with two or four cavity-wall ties or concrete bolts. Once the foot is installed on the socket, its height can be adjusted using an AF30 spanner.

Please note: Do not screw the post foot to a height greater than 190, 290 or 450 mm respectively.

H post anchors

Hot-dip galvanised steel

H post anchors



Art. no.	Fork width (mm)	Dimensions[a] Overall/Post support (mm)	Drill holes[b] Post support (mm)	PU
904722	91	600 x 60 / 300	4 x 11	–
904723	101	600 x 60 / 300	4 x 11	–
904724	121	600 x 60 / 300	4 x 11	–

a) Length x width / length
b) Number x Ø

- For fixing square timber posts in place
- Fixed into concrete using H anchor
- Excellent corrosion protection thanks to hot-dip galvanisation

NEW
to our product range

Hammer-in ground sockets

Hot-dip galvanised steel

NEW
to our product range

Hammer-in ground socket

for square posts

Art. no.	Dimensions[a] Post socket (mm)	Length Spike (mm)	Drill holes[b] Post socket (mm)	PU
904703	71 x 71 x 150	750	4 x 11	—
904704	91 x 91 x 150	750	4 x 11	—

a) Length x width x height
b) Number x Ø

- For fixing square timber posts in place
- Socket is fixed into the ground with ground anchors
- Excellent corrosion protection thanks to hot-dip galvanisation

Hammer-in ground socket

for round posts

Art. no.	Dimensions[a] Pfosteneinlaß (mm)	Length Spike (mm)	Drill holes[b] Post socket (mm)	PU
904705	81 x 150	450	4 x 11	—
904706	101 x 150	450	4 x 11	—
904707	121 x 145	605	4 x 11	—

a) Ø x height
b) Number x Ø

- For fixing round timber posts into place
- Socket is fixed into the ground with ground anchors
- Excellent corrosion protection thanks to hot-dip galvanisation

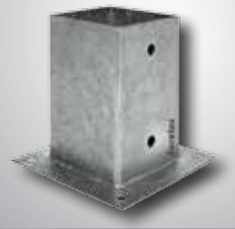
Screw-on sockets, Movable post holders

Hot-dip galvanised steel

NEW
to our product range

Screw-on socket

for square posts



Art. no.	Dimensions[a] Post socket (mm)	Dimensions[b] Baseplate (mm)	Drill holes[c] Baseplate/Post socket (mm)	PU
904695	71 x 71 x 150	150 x 150	4 x 11 / 4 x 11	–
904696	91 x 91 x 150	150 x 150	4 x 11 / 4 x 11	–
904697	101 x 101 x 150	150 x 150	4 x 11 / 4 x 11	–
904698	121 x 121 x 150	180 x 180	4 x 11 / 4 x 11	–

a) Length x width x height , b) Length x width, c) Number x Ø

- For fixing square timber posts in place
- Socket is fastened to the subsurface with four screws
- Excellent corrosion protection thanks to hot-dip galvanisation

Post holder

movable, for round posts

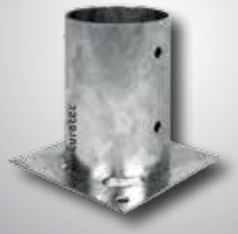
Art. no.	Dimensions[a] Post socket (mm)	Dimensions[b] Baseplate (mm)	Drill holes[c] Baseplate/Post socket (mm)	PU
904713	101 x 150	140 x 130	4 x 11 / 3 x 5	–
904714	121 x 150	160 x 150	4 x 11 / 3 x 5	–

a) Ø x height , b) Length x width, c) Number x Ø

- For fixing round timber posts into place
- Socket is fastened to the subsurface with four screws
- Movable upper section allows attachment to inclined subsurfaces
- Excellent corrosion protection thanks to hot-dip galvanisation

Screw-on socket

for round posts



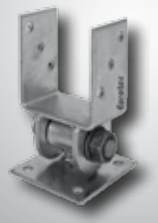
Art. no.	Dimensions[a] Post socket (mm)	Dimensions[b] Baseplate (mm)	Drill holes[c] Baseplate/Post socket (mm)	PU
904701	101 x 150	150 x 150	4 x 11 / 4 x 11	–
904702	121 x 147	180 x 180	4 x 11 / 4 x 11	–

a) Ø x height, b) Length x width, c) Number x Ø

- For fixing round timber posts into place
- Socket is fastened to the subsurface with four screws
- Excellent corrosion protection thanks to hot-dip galvanisation

U post holder

movable, for square posts



Art. no.	Fork width (mm)	Length Post support (mm)	Dimensions[a] Baseplate (mm)	Drill holes[b] Baseplate/Post support (mm)	PU
904708	71	100	100 x 100	4 x 11 / 6 x 11	–
904709	91	100	100 x 100	4 x 11 / 6 x 11	–

a) Length x width, b) Number x Ø

- For fixing square timber posts in place
- Socket is fastened to the subsurface with four screws
- Movable upper section allows attachment to inclined subsurfaces
- Excellent corrosion protection thanks to hot-dip galvanisation

U post holders, Corner connectors, U brackets

Hot-dip galvanised steel

NEW
to our product range

U post holders

Art. no.	Fork width (mm)	Dimensions[a] Post support (mm)	Drill holes[b] Baseplate/Post support (mm)	PU
904717	71	150 x 60	2 x 11 ; 1 x 14 / 6 x 11	–
904719	91	150 x 60	2 x 11 ; 1 x 14 / 6 x 11	–
904721	101	150 x 60	2 x 11 ; 1 x 14 / 6 x 11	–

a) Length x width, b) Number x Ø

- For fixing square timber posts in place
- The bracket is fastened to the subsurface with three screws
- Post supports in sides provide spacing between the ground and the timber profile, aiding constructive timber protection
- Excellent corrosion protection thanks to hot-dip galvanisation

Corner connectors

for square posts, hot-dip galvanised

Art. no.	Dimensions[a] Post socket (mm)	Dimensions[b] Baseplate (mm)	Drill holes[c] Baseplate/Post socket (mm)	PU
904710	105 x 105 x 200	82 x 155	2 x 11 / 6 x 11	–

a) Length x width x height, b) Length x width, c) Number x Ø

- For fixing square timber posts in place
- The corner connectors are fastened to the subsurface with four screws in total
- Allow variable width adjustment
- Excellent corrosion protection thanks to hot-dip galvanisation

U post holders

with stone pin

Art. no.	Fork width (mm)	Dimensions[a] Post support (mm)	Dimensions[b] Stone pin (mm)	Drill holes[c] Post support (mm)	PU
904716	71	150 x 60	16 x 200	6 x 11	–
904718	91	150 x 60	16 x 200	6 x 11	–
904720	101	150 x 60	16 x 200	6 x 11	–

a) Length x width, b) Ø x height, c) Number x Ø

- For fixing square timber posts in place
- The bracket is fixed in the concrete with a 200 m long stone pin
- Post supports in sides provide spacing between the ground and the timber profile, aiding constructive timber protection
- Excellent corrosion protection thanks to hot-dip galvanisation

U brackets

for fences, galvanised

Art. no.	Fork width (mm)	Dimensions[a] (mm)	Drill holes[b] Post support (mm)	PU
904711	101	233 x 40	4 x 6	–
904712	121	270 x 40	4 x 6	–

a) Length x width, b) Number x Ø

- For fixing round timber posts into place
- Corrosion protection

KonstruX fully threaded screw

The powerful solution for construction and renovation

Europ. Techn. Zulassung
European Technical Approval
ETA-11/0024

bauaufsichtlich
Zulassungs-Nr.
Z - 9.1 - 681
zugelassen

One system for all timber-frame construction joints

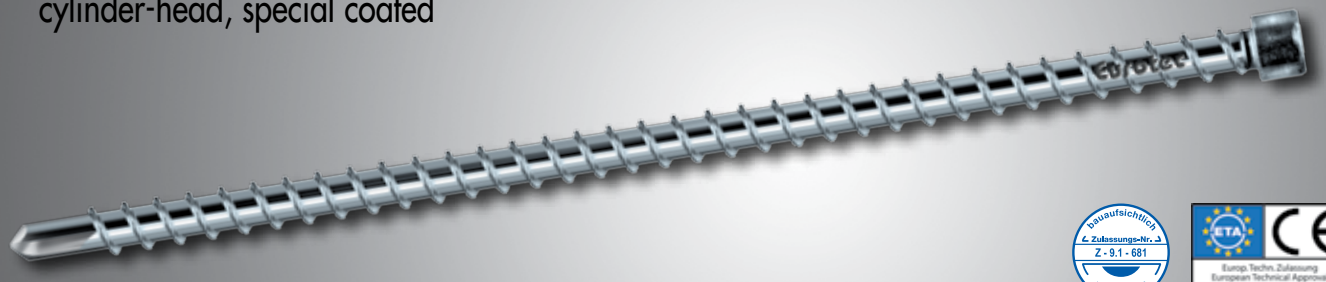
- Applications in timber engineering and carpentry, timber-frame construction, hall construction, construction of timber elements, renovation of ceilings, etc.
- Maximum load transmission
  KonstruX fully threaded screws maximise a joint's load-bearing capacity with a high thread-extraction resistance in both components. If partially threaded screws are used, the joint's load-bearing capacity is limited by the considerably lower head pull-through resistance in the attached part.
- Time saving
  A time- and cost-saving alternative to traditional connections or timber joints such as joist hangers, joist supports, etc.
- Timber has a low transverse compressive and shear strength. KonstruX fully threaded screws are inserted into the timber for reinforcement. The KonstruX "takes on" a large proportion of the forces.
- Doubling up of joists, for example, increases the load-bearing capacity of floor joists and reduces bending. Here, KonstruX fully threaded screws join the components together in a displacement-resistant manner.
- Hidden connections, high fire-resistance, no thermal bridges
- No pilot-drilling required in accordance with approval/ETA From screw lengths ≥ 245 mm, however, pilot-drilling to 1/3 of the screw length is advisable to guide the screw in the right direction (no screw wandering).
- The required edge and centre distances can be minimised for screws that are only exposed to tension.

KonstruX fully threaded screw

- High extraction resistance
- Strong joints

KonstruX fully threaded screw

cylinder-head, special coated



bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 681 zugelassen

ETA CE Europ. Techn. Zulassung European Technical Approval ETA-11/0024

Ø 6,5 mm

Art. no.	Dimensions (mm)	Drive	PU
905707	6,5 x 120	TX30 ●	100
905708	6,5 x 140	TX30 ●	100
905709	6,5 x 160	TX30 ●	100
905710	6,5 x 195	TX30 ●	100

Ø 8,0 mm

944786	8,0 x 155	TX40 ●	50
944787	8,0 x 195	TX40 ●	50
944788	8,0 x 220	TX40 ●	50
944789	8,0 x 245	TX40 ●	50
944790	8,0 x 295	TX40 ●	50
944791	8,0 x 330	TX40 ●	50
944796	8,0 x 375	TX40 ●	50
944797	8,0 x 400	TX40 ●	50

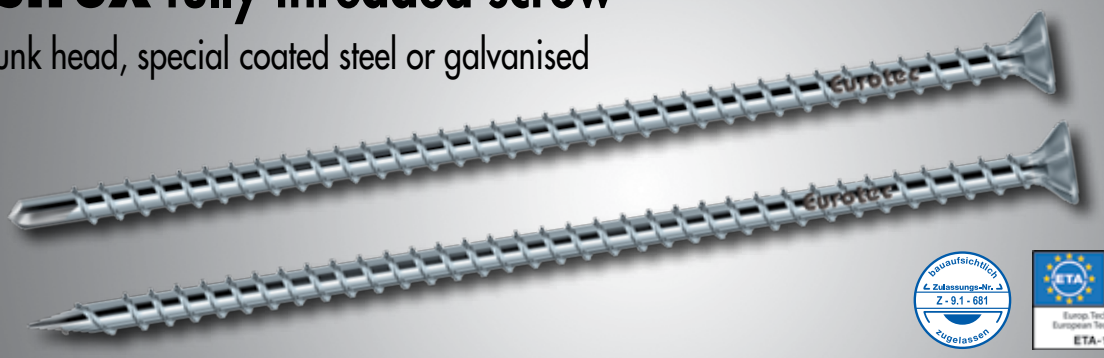
Ø 10,0 mm

905690	10,0 x 300	TX50 ●	25
905691	10,0 x 330	TX50 ●	25
905692	10,0 x 360	TX50 ●	25
905693	10,0 x 400	TX50 ●	25
905694	10,0 x 450	TX50 ●	25
905695	10,0 x 500	TX50 ●	25
905696	10,0 x 550	TX50 ●	25
905697	10,0 x 600	TX50 ●	25

• with drill point

KonstruX fully threaded screw

countersunk head, special coated steel or galvanised



bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 681 zugelassen

ETA Europ. Techn. Zulassung European Technical Approval ETA-11/0024

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Ø 8,0 mm with drill point, special coated

Art. no.	Dimensions (mm)	Drive	PU
904760	8,0 x 95	TX40 ●	50
904761	8,0 x 125	TX40 ●	50
904752	8,0 x 155	TX40 ●	50
904753	8,0 x 195	TX40 ●	50
904754	8,0 x 220	TX40 ●	50
904755	8,0 x 245	TX40 ●	50
904756	8,0 x 295	TX40 ●	50
904757	8,0 x 330	TX40 ●	50
904758	8,0 x 375	TX40 ●	50
904759	8,0 x 400	TX40 ●	50

Ø 11,3 mm with AG tip, galvanised

905737	11,3 x 300	TX50 ●	20
905738	11,3 x 340	TX50 ●	20
905739	11,3 x 380	TX50 ●	20
905740	11,3 x 420	TX50 ●	20
905741	11,3 x 460	TX50 ●	20
905742	11,3 x 500	TX50 ●	20
905743	11,3 x 540	TX50 ●	20
905744	11,3 x 580	TX50 ●	20
905745	11,3 x 620	TX50 ●	20
905746	11,3 x 660	TX50 ●	20
905747	11,3 x 700	TX50 ●	20
905748	11,3 x 750	TX50 ●	20
905749	11,3 x 800	TX50 ●	20
904750	11,3 x 900	TX50 ●	20
904751	11,3 x 1000	TX50 ●	20

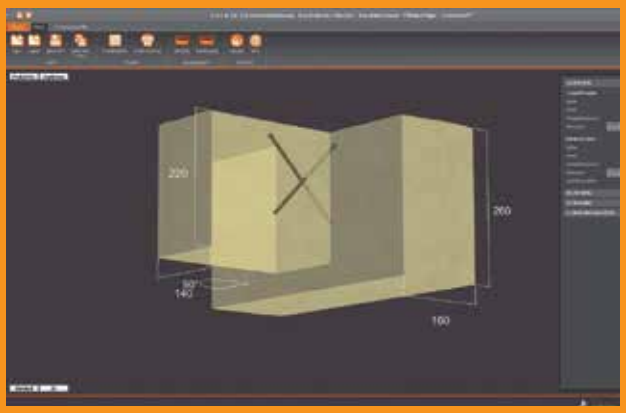
• with drill point or with AG tip

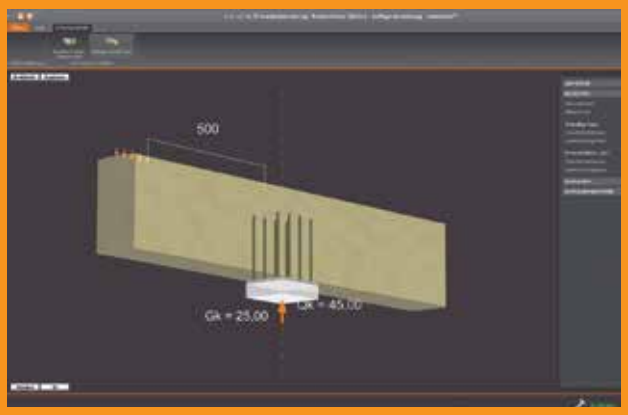
ECS calculation program for **KonstruX**

This user-friendly software allows pre-calculation of main–secondary beam connections, joist doubling and reinforcements of supports. Verifiable calculation aid in accordance with EN 1995 (Eurocode 5) and DIN 1052.

- **Ease of use**
- **Reliable planning**
- **Optimisation**

You can download the ECS software for free from our website: **www.e-u-r-o-tec.de**





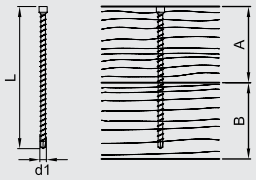
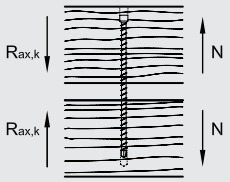
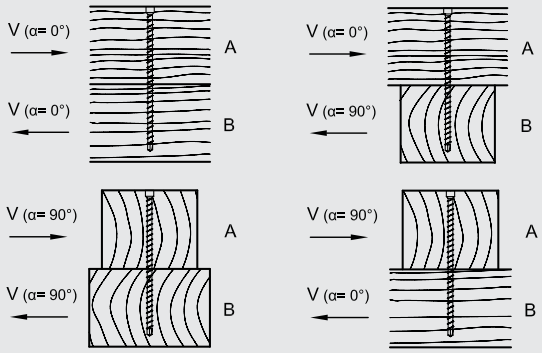
The fast and secure timber-joint system
KonstruX cylinder-head/countersunk-head screws

Example applications		Cylinder head			Countersunk head	
		Ø 6,5	Ø 8,0	Ø10,0	Ø 8,0	Ø 11,3
Timber–timber tensile loading	Timber–timber shearing	×	×	×	×	×
Timber–timber under tension at 45°	Timber–timber under tension at 45°	×	×	×	×	×
Steel–timber tensile loading	Steel–timber shearing	—	—	—	×	×
Steel–timber under tension at 45°	Steel–timber under tension at 45°	—	—	—	×	×
Main–secondary beam connection	Post–crosspiece connection	×	×	×	×	—
Support reinforcement	Support reinforcement	×	×	×	×	×
Transverse-shear reinforcement at notch	Transverse-shear reinforcement at opening	×	×	×	×	×
Joist doubling		—	×	×	×	×
Transverse-shear reinforcement of building trusses		—	—	—	—	×

KonstruX fully threaded screw

Technical informations

KonstruX with cylinder head and drill point 6,5 to 10,0 mm: timber – timber connection

Dimensions	Extraction resistance	Shearing
		

			Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ acc. to ETA-11/0024	Characteristic value of the joint's load-bearing capacity R_k acc. to ETA-11/0024			
d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]	R_k a) - [kN]	R_k a) - [kN]	R_k a) - [kN]
				$\alpha = 0^\circ$	$\alpha = 90^\circ$	$\alpha_A = 0^\circ$ $\alpha_B = 90^\circ$	$\alpha_A = 90^\circ$ $\alpha_B = 0^\circ$
6,5 x 120	60	80	3,75	3,68	3,22	3,68	3,22
6,5 x 140	80	80	3,75	3,68	3,22	3,22	3,68
6,5 x 160	80	100	5,00	3,99	3,53	3,99	3,53
6,5 x 195	100	100	5,94	4,22	3,76	3,76	4,22
8,0 x 155	80	80	5,77	5,34	4,65	4,65	5,34
8,0 x 195	100	100	7,31	5,72	5,04	5,04	5,72
8,0 x 220	120	120	7,69	5,82	5,13	5,13	5,82
8,0 x 245	120	140	9,23	6,20	5,52	6,20	5,52
8,0 x 295	140	160	10,77	6,59	5,90	6,59	5,90
8,0 x 330	160	180	12,30	6,97	6,29	6,97	6,29
8,0 x 375	180	200	13,84	7,35	6,42	7,35	6,42
8,0 x 400	200	220	15,38	7,74	6,42	7,74	6,42
10,0 x 300	160	160	13,46	8,81	7,81	7,81	8,81
10,0 x 330	160	180	15,38	9,29	8,29	9,29	8,29
10,0 x 360	180	200	17,30	9,77	8,77	9,77	8,77
10,0 x 400	200	220	19,22	10,25	8,90	10,25	8,90
10,0 x 450	220	240	21,15	10,73	8,90	10,73	8,90
10,0 x 500	240	280	23,07	10,89	8,90	10,89	8,90
10,0 x 550	260	300	24,99	10,89	8,90	10,89	8,90
10,0 x 600	300	320	28,84	10,89	8,90	10,89	8,90

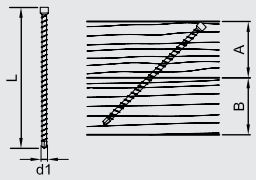
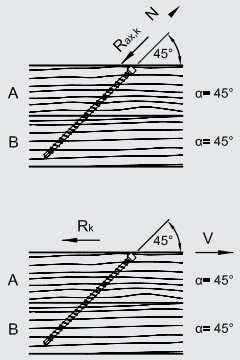
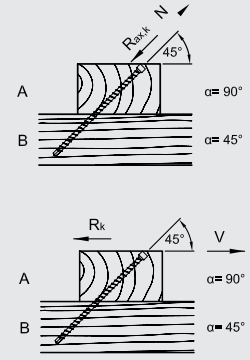
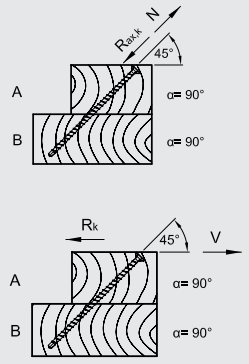
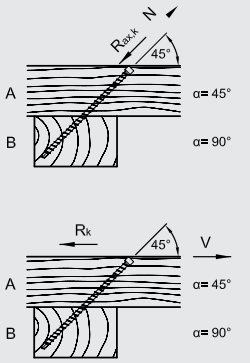
Calculation according to ETA-11/0024. Wood density $\rho_k = 380$ kg/m³. All mechanical values provided should be viewed as subject to the assumptions that have been made and represent example calculations.
All values are calculated minimum values and are subject to typographical and printing errors.
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: $R_d = R_k \times k_{mod} / \gamma_M$. 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. $k_{mod} = 0{,}9$. $\gamma_M = 1{,}3$.
→ Dimensioning value of the load $E_d = 2{,}00 \cdot 1{,}35 + 3{,}00 \cdot 1{,}5 = 7{,}20$ 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. $R_k = R_d \cdot \gamma_M / k_{mod} \rightarrow R_k = 7{,}20 \text{ kN} \cdot 1{,}3/0{,}9 = 10{,}40$ kN → comparison with table values.

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

KonstruX with cylinder head and drill point 6,5 to 10,0 mm: timber – timber connection

Dimensions	Tension connection			
				

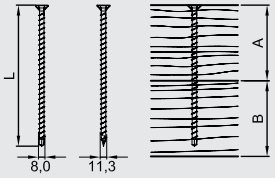
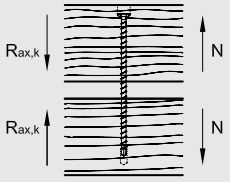
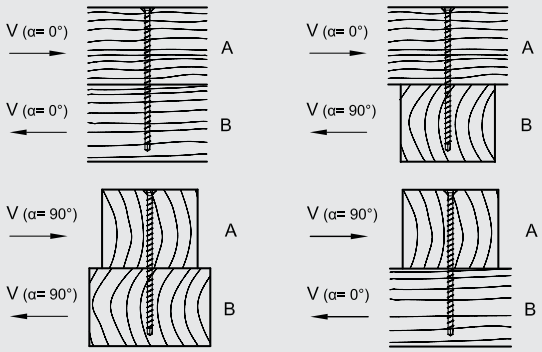
			Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ or R_k acc. to ETA-11/0024							
d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]
			$\alpha = 45°$		$\alpha_A = 90°$ $\alpha_B = 45°$		$\alpha_A = 90°$ $\alpha_B = 90°$		$\alpha_A = 45°$ $\alpha_B = 90°$	
6,5 x 160	60	80	4,27	3,02	4,27	3,02	4,70	3,32	4,70	3,32
6,5 x 195	80	80	4,65	3,29	4,65	3,29	5,11	3,62	5,11	3,62
8,0 x 155	60	60	4,90	3,47	4,90	3,47	5,39	3,81	5,39	3,81
8,0 x 195	80	80	5,72	4,05	5,72	4,05	6,29	4,45	6,29	4,45
8,0 x 220	80	100	7,47	5,28	7,47	5,28	8,22	5,81	7,91	5,59
8,0 x 245	100	100	7,24	5,12	7,24	5,12	7,96	5,63	7,96	5,63
8,0 x 295	120	100	8,76	6,19	8,76	6,19	9,63	6,81	9,63	6,81
8,0 x 330	120	140	11,21	7,92	11,21	7,92	12,33	8,72	11,86	8,39
8,0 x 375	140	140	12,37	8,75	12,37	8,75	13,61	9,62	13,61	9,62
8,0 x 400	160	140	12,14	8,59	12,14	8,59	13,36	9,45	13,36	9,45
10,0 x 300	120	120	11,39	8,05	11,39	8,05	12,52	8,86	12,52	8,86
10,0 x 330	120	140	14,01	9,90	14,01	9,90	15,41	10,89	14,83	10,49
10,0 x 360	140	140	14,16	10,01	14,16	10,01	15,57	11,01	15,57	11,01
10,0 x 400	160	140	15,18	10,73	15,18	10,73	16,70	11,81	16,70	11,81
10,0 x 450	160	180	19,55	13,82	19,55	13,82	21,50	15,21	19,77	13,98
10,0 x 500	180	200	21,45	15,17	21,45	15,17	23,59	16,68	22,24	15,73
10,0 x 550	200	200	23,34	16,51	23,34	16,51	25,68	18,16	24,72	17,48
10,0 x 600	220	220	25,24	17,85	25,24	17,85	27,77	19,63	27,19	19,22

Calculation according to ETA-11/0024. Wood density $\rho_k = 380$ 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: $R_d = R_k \times k_{mod} / \gamma_M$. 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. $k_{mod} = 0{,}9$. $\gamma_M = 1{,}3$.
→ Dimensioning value of the load $E_d = 2{,}00 \cdot 1{,}35 + 3{,}00 \cdot 1{,}5 = 7{,}20$ 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 $\cdot 1{,}3/0{,}9 = 10{,}40$ kN → comparison with table values.

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

KonstruX with countersunk head and drill point or AG tip 8,0 and 11,3 mm: timber – timber connection

Dimensions	Extraction resistance	Shearing
		

			Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ acc. to ETA-11/0024	Characteristic value of the joint's load-bearing capacity R_k acc. to ETA-11/0024			
d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}$ [a] - [kN]	R_k [a] - [kN]	R_k [a] - [kN]	R_k [a] - [kN]	R_k [a] - [kN]
				$\alpha = 0°$	$\alpha = 90°$	$\alpha_A = 0°$ $\alpha_B = 90°$	$\alpha_A = 90°$ $\alpha_B = 0°$
8,0 x 95	40	60	3,08	4,61	3,57	4,61	3,57
8,0 x 125	60	80	4,61	5,05	4,37	5,05	4,37
8,0 x 155	80	80	5,77	5,34	4,65	4,65	5,34
8,0 x 195	100	100	7,31	5,72	5,04	5,04	5,72
8,0 x 220	120	120	7,69	5,82	5,13	5,13	5,82
8,0 x 245	120	140	9,23	6,20	5,52	6,20	5,52
8,0 x 295	140	160	10,77	6,59	5,90	6,59	5,90
8,0 x 330	160	180	12,30	6,97	6,29	6,97	6,29
8,0 x 375	180	200	13,84	7,35	6,42	7,35	6,42
8,0 x 400	200	220	15,38	7,74	6,42	7,74	6,42
11,3 x 300	160	160	18,25	12,17	10,73	10,73	12,17
11,3 x 340	180	180	20,85	12,82	11,38	11,38	12,82
11,3 x 380	200	200	23,46	13,47	12,03	12,03	13,47
11,3 x 420	220	220	26,07	14,12	12,34	12,34	14,12
11,3 x 460	240	240	28,67	14,77	12,34	12,34	14,77
11,3 x 500	260	260	31,28	15,21	12,34	12,34	15,21
11,3 x 540	280	280	33,89	15,21	12,34	12,34	15,21
11,3 x 580	300	300	36,49	15,21	12,34	12,34	15,21
11,3 x 620	320	320	39,10	15,21	12,34	12,34	15,21
11,3 x 660	340	340	41,71	15,21	12,34	12,34	15,21
11,3 x 700	360	360	44,32	15,21	12,34	12,34	15,21
11,3 x 750	380	380	48,23	15,21	12,34	12,34	15,21
11,3 x 800	400	420	50,00	15,21	12,34	15,21	12,34
11,3 x 900	460	460	50,00	15,21	12,34	12,34	15,21
11,3 x 1000	500	520	50,00	15,21	12,34	15,21	12,34

Calculation according to ETA-11/0024. Wood density $\rho_k = 380$ 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.
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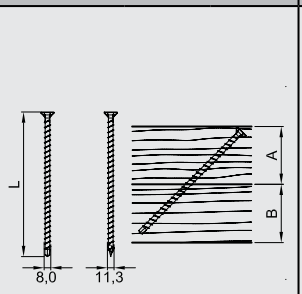
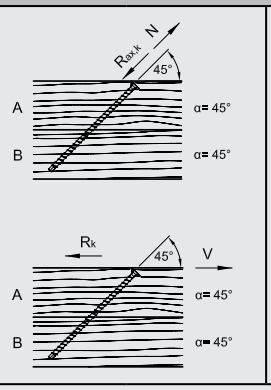
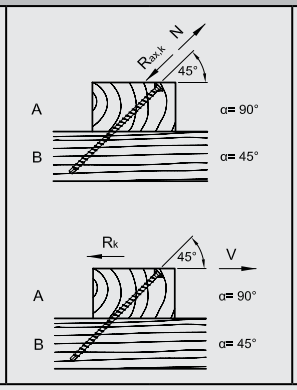
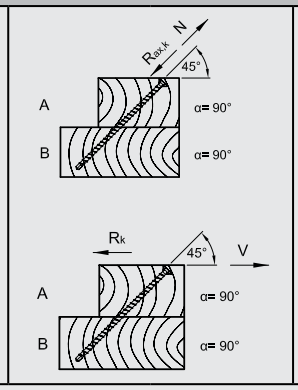
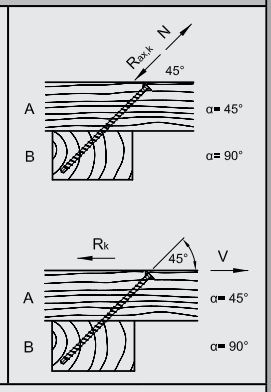
Example:

Characteristic value for constant load (dead weight) $G_k = 2{,}00$ kN and variable load (e.g. snow load) $Q_k = 3{,}00$ kN. $k_{mod} = 0{,}9$. $\gamma_M = 1{,}3$.
→ Dimensioning value of the load $E_d = 2{,}00 \cdot 1{,}35 + 3{,}00 \cdot 1{,}5 = 7{,}20$ 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 $\cdot 1{,}3/0{,}9 = 10{,}40$ kN → comparison with table values.

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

KonstruX with countersunk head and drill point or AG tip 8,0 and 11,3 mm: timber – timber connection

Dimensions			Tension connection							
										
			Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ or R_k acc. to ETA-11/0024							
d1 x L [mm]	A [mm]	B [mm]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]	$R_{ax,k}$ a) - [kN]	R_k a) - [kN]
			$\alpha = 45°$		$\alpha_A = 90°$ $\alpha_B = 45°$		$\alpha_A = 90°$ $\alpha_B = 90°$		$\alpha_A = 45°$ $\alpha_B = 90°$	
8,0 x 155	60	60	4,90	3,47	4,90	3,47	5,39	3,81	5,39	3,81
8,0 x 195	80	80	5,72	4,05	5,72	4,05	6,29	4,45	6,29	4,45
8,0 x 220	80	100	7,47	5,28	7,47	5,28	8,22	5,81	7,91	5,59
8,0 x 245	100	100	7,24	5,12	7,24	5,12	7,96	5,63	7,96	5,63
8,0 x 295	120	100	8,76	6,19	8,76	6,19	9,63	6,81	9,63	6,81
8,0 x 330	120	140	11,21	7,92	11,21	7,92	12,33	8,72	11,86	8,39
8,0 x 375	140	140	12,37	8,75	12,37	8,75	13,61	9,62	13,61	9,62
8,0 x 400	160	140	12,14	8,59	12,14	8,59	13,36	9,45	13,36	9,45
11,3 x 300	120	120	15,44	10,92	15,44	10,92	16,98	12,01	16,98	12,01
11,3 x 340	140	120	16,83	11,90	16,83	11,90	18,51	13,09	18,51	13,09
11,3 x 380	140	140	21,57	15,25	21,57	15,25	23,72	16,77	23,46	16,59
11,3 x 420	160	160	22,95	16,23	22,95	16,23	25,25	17,85	25,25	17,85
11,3 x 460	180	160	24,34	17,21	24,34	17,21	26,78	18,93	26,78	18,93
11,3 x 500	180	200	29,08	20,56	29,08	20,56	31,99	22,62	30,16	21,33
11,3 x 540	200	200	30,47	21,55	30,47	21,55	33,52	23,70	33,51	23,70
11,3 x 580	220	220	31,86	22,53	31,86	22,53	35,04	24,78	35,04	24,78
11,3 x 620	220	240	36,60	25,88	36,60	25,88	40,26	28,47	36,87	26,07
11,3 x 660	240	240	37,99	26,86	37,99	26,86	41,79	29,55	40,22	28,44
11,3 x 700	260	260	39,37	27,84	39,37	27,84	43,31	30,63	43,31	30,63
11,3 x 750	280	280	41,95	29,66	41,95	29,66	46,14	32,63	46,14	32,63
11,3 x 800	300	280	44,52	31,48	44,52	31,48	48,97	34,63	48,97	34,63
11,3 x 900	320	340	50,00	35,36	50,00	35,36	50,00	35,36	50,00	35,36
11,3 x 1000	360	360	50,00	35,36	50,00	35,36	50,00	35,36	50,00	35,36

Calculation according to ETA-11/0024. Wood density $\rho_k = 380$ kg/m³. All mechanical values provided should be viewed as subject to the assumptions that have been made and represent example calculations.
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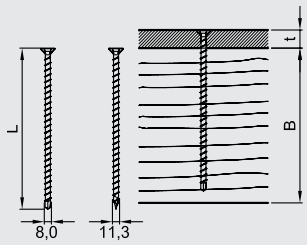
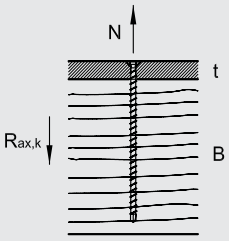
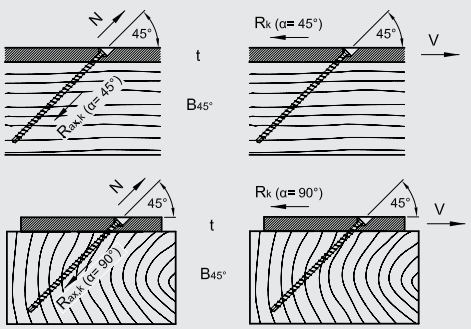
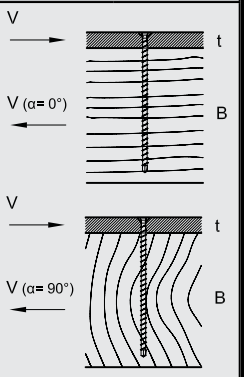
KonstruX with countersunk head and drill point or AG tip
8,0 and 11,3 mm: steel – timber connection

Dimensions	Extraction resistance	Tension connection	Shearing
			

				Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ acc. to ETA-11/0024	Characteristic value of the joint's load-bearing capacity $R_{ax,k}$ to R_k acc. to ETA-11/0024				Characteristic value of the joint's load-bearing capacity R_k acc. to ETA-11/0024	
d1 x L [mm]	t [mm]	B [mm]	B45° [mm]	$R_{ax,k}$ [a] - [kN]	$R_{ax,k}$ [a] - [kN]	$R_{ax,k}$ [a] - [kN]	R_k [a] - [kN]	R_k [a] - [kN]	R_k [a] - [kN]	R_k [a] - [kN]
					α= 45°	α=90°	α= 45°	α= 90°	α= 0°	α= 90°
8,0 x 95	15	100	80	6,15	5,16	5,67	3,65	4,01	5,80	4,83
8,0 x 125	15	120	100	8,46	7,26	7,98	5,13	5,64	5,80	4,83
8,0 x 155	15	160	120	10,77	9,35	10,29	6,61	7,27	5,80	4,83
8,0 x 195	15	200	140	13,84	12,15	13,36	8,59	9,45	5,80	4,83
8,0 x 220	15	220	160	15,76	13,90	15,29	9,83	10,81	5,80	4,83
8,0 x 245	15	240	180	17,69	15,64	17,21	11,06	12,17	5,80	4,83
8,0 x 295	15	300	220	21,53	19,14	21,05	13,53	14,89	5,80	4,83
8,0 x 330	15	340	240	24,22	21,59	23,74	15,26	16,79	5,80	4,83
8,0 x 375	15	380	280	25,00	24,73	25,00	17,49	19,24	5,80	4,83
8,0 x 400	15	400	280	25,00	25,00	25,00	18,72	20,60	5,80	4,83
11,3 x 300	20	300	220	36,49	32,20	35,42	22,77	25,04	11,41	9,38
11,3 x 340	20	340	240	41,71	36,94	40,63	26,12	28,73	11,41	9,38
11,3 x 380	20	380	260	46,92	41,67	45,84	29,47	32,42	11,41	9,38
11,3 x 420	20	420	300	50,00	46,41	50,00	32,82	36,10	11,41	9,38
11,3 x 460	20	460	320	50,00	50,00	50,00	36,17	37,79	11,41	9,38
11,3 x 500	20	500	360	50,00	50,00	50,00	39,52	43,48	11,41	9,38
11,3 x 540	20	540	380	50,00	50,00	50,00	42,87	47,16	11,41	9,38
11,3 x 580	20	580	420	50,00	50,00	50,00	46,23	50,00	11,41	9,38
11,3 x 620	20	620	440	50,00	50,00	50,00	49,58	50,00	11,41	9,38
11,3 x 660	20	660	460	50,00	50,00	50,00	50,00	50,00	11,41	9,38
11,3 x 700	20	700	500	50,00	50,00	50,00	50,00	50,00	11,41	9,38
11,3 x 750	20	740	540	50,00	50,00	50,00	50,00	50,00	11,41	9,38
11,3 x 800	20	800	560	50,00	50,00	50,00	50,00	50,00	11,41	9,38
11,3 x 900	20	900	640	50,00	50,00	50,00	50,00	50,00	11,41	9,38
11,3 x 1000	20	1000	700	50,00	50,00	50,00	50,00	50,00	11,41	9,38

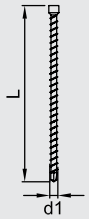
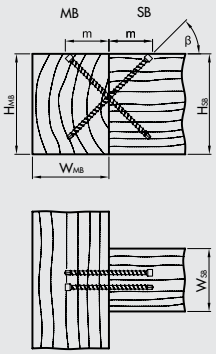
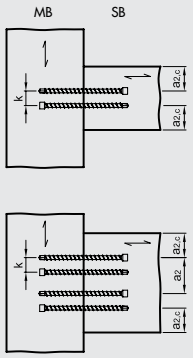
Calculation according to ETA-11/0024. Wood density ρ_k= 380 kg/m³. All mechanical values provided should be viewed as subject to the assumptions that have been made and represent example calculations.
All values are calculated minimum values and are subject to typographical and printing errors.
a) The 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: $R_d = R_k \times k_{mod} / \gamma_M$. 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.

KonstruX with cylinder head and drill point 6,5 mm: Main – secondary beam connection

Dimensions	Main–secondary beam connection
	 

	a_2 = min. 33 mm, $a_{2,c}$ = min. 20 mm, k = min. 10 mm						Characteristic value of the joint's load-bearing capacity $R_{v,k}$ acc. to ETA-11/0024	
d1 x L [mm]	min. W_{SB} [mm]	min. H_{SB} [mm]	min. W_{MB} [mm]	min. H_{MB} [mm]	m [mm]	β °	$R_{v,k}$ a) - [kN]	Pair (n)
6,5 x 195	60	160	80	160	69	45	7,32	1
	100						14,66	2
	120						21,99	3
	160						29,33	4

Calculation according to ETA-11/0024. Wood density ρ_k = 380 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: $R_d = R_k \times k_{mod} / \gamma_M$. The dimensioning values of the load-bearing capacity R_d should be contrasted with the dimensioning values of the loads ($R_d \geq E_d$).

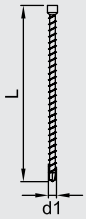
Example:

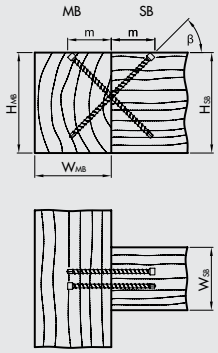
Characteristic value for constant load (dead weight) G_k = 2,00 kN and variable load (e.g. snow load) Q_k = 3,00 kN. k_{mod} = 0,9. γ_M = 1,3.
→ Dimensioning value of the load $E_d = 2{,}00 \cdot 1{,}35 + 3{,}00 \cdot 1{,}5 = 7{,}20$ kN.
The load-bearing capacity of the joint is therefore considered 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. $R_k = R_d \cdot \gamma_M / k_{mod} \rightarrow R_k = 7{,}20 \text{ kN} \cdot 1{,}3/0{,}9 = 10{,}40$ kN → comparison with table values.

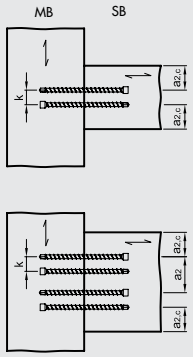
Please note: These are planning aids. Projects must only be calculated by authorised persons.

KonstruX with cylinder head and drill point
8,0 mm: Main – secondary beam connection

Dimensions	Main–secondary beam connection







	a_2 = min. 40 mm, $a_{2,c}$ = min. 24 mm, k = min. 12 mm						Characteristic value of the joint's load-bearing capacity $R_{v,k}$ acc. to ETA-11/0024	
d1 x L [mm]	min. W_{SB} [mm]	min. H_{SB} [mm]	min. W_{MB} [mm]	min. H_{MB} [mm]	m [mm]	β °	$R_{v,k}$ a) - [kN]	Pair (n)
8,0 x 245	80	200	100	200	87	45	11,38	1
	100						22,73	2
	140						34,10	3
	180						45,48	4
8,0 x 295	80	220	120	220	104	45	13,85	1
	100						27,67	2
	140						41,51	3
	180						55,36	4
8,0 x 330	80	260	140	260	117	45	15,57	1
	100						31,14	2
	140						46,71	3
	180						62,29	4
8,0 x 375	80	280	160	280	133	45	16,27	1
	100						32,53	2
	140						48,82	3
	180						65,08	4
8,0 x 400	80	300	160	300	142	45	16,27	1
	100						32,53	2
	140						48,82	3
	180						65,08	4

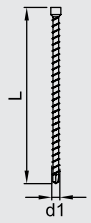
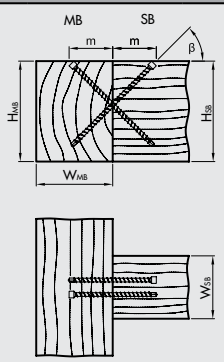
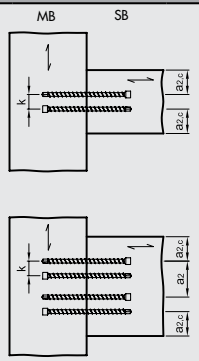
Calculation according to ETA-11/0024. Wood density ρ_k = 380 kg/m³. All mechanical values provided should be viewed as subject to the assumptions that have been made and represent example calculations.
All values are calculated minimum values and are subject to typographical and printing errors.
a) The 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: $R_d = R_k \times k_{mod} / \gamma_M$. 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 $E_d = 2{,}00 \cdot 1{,}35 + 3{,}00 \cdot 1{,}5 = 7{,}20$ 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. $R_k = R_d \cdot \gamma_M / k_{mod} \rightarrow R_k = 7{,}20 \text{ kN} \cdot 1{,}3/0{,}9 = 10{,}40$ kN → comparison with table values.

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

KonstruX with cylinder head and drill point
10,0 mm: Main – secondary beam connection

Dimensions	Main–secondary beam connection							
								
	a_2 = min. 50 mm, $a_{2,c}$ = min. 30 mm, k = min. 15 mm						Characteristic value of the joint's load-bearing capacity $R_{v,k}$ acc. to ETA-11/0024	
d1 x L [mm]	min. W_{SB} [mm]	min. H_{SB} [mm]	min. W_{MB} [mm]	min. H_{MB} [mm]	m [mm]	β °	$R_{v,k}$ [a] - [kN]	Pair (n)
10,0 x 300	80	220	120	220	105	45	17,42	1
	140						34,84	2
	180						52,28	3
	240						69,70	4
10,0 x 330	80	220	140	260	115	45	19,27	1
	140						38,56	2
	180						57,83	3
	240						71,11	4
10,0 x 360	80	280	140	280	126	45	21,13	1
	140						42,27	2
	180						63,39	3
	240						84,52	4
10,0 x 400	80	300	160	300	140	45	23,60	1
	140						47,21	2
	180						70,81	3
	240						94,41	4
10,0 x 450	80	340	180	340	158	45	26,00	1
	140						51,98	2
	180						77,98	3
	240						103,98	4
10,0 x 500	80	380	200	380	176	45	26,00	1
	140						51,98	2
	180						77,98	3
	240						103,98	4
10,0 x 550	80	400	220	400	193	45	26,00	1
	140						51,98	2
	180						77,98	3
	240						103,98	4
10,0 x 600	80	440	240	440	211	45	26,00	1
	140						51,98	2
	180						77,98	3
	240						103,98	4

Calculation according to ETA-11/0024. Wood density ρ_k = 380 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: $R_d = R_k \times k_{mod} / \gamma_M$. 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 $E_d = 2{,}00 \cdot 1{,}35 + 3{,}00 \cdot 1{,}5 = 7{,}20$ 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. $R_k = R_d \cdot \gamma_M / k_{mod}$ → $R_k = 7{,}20 \text{ kN} \cdot 1{,}3/0{,}9 = 10{,}40$ kN → comparison with table values.

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

IdeeFix 30/40/50

Hidden wood connector

ETA-14/0160

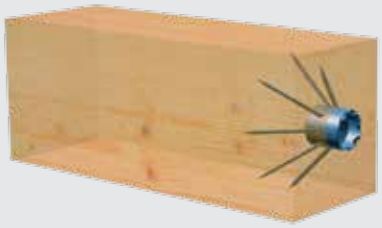
IdeeFix 30/40/50

- Hidden wood connector
- High load absorption for tensile and transverse loads
- Adjustable tension/detachable
- Universal application
- Low wood-weakening effect
- Quick and easy installation
- For single- or multiple-row serial connections
- Comes supplied with system screws

Drill

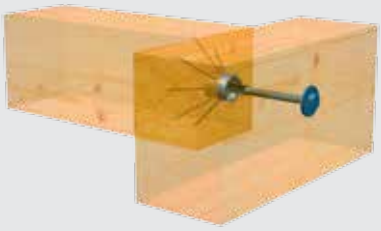
1

Insert and install supplied screws



2

Fix construction in place with construction screws – and THAT'S IT!



3

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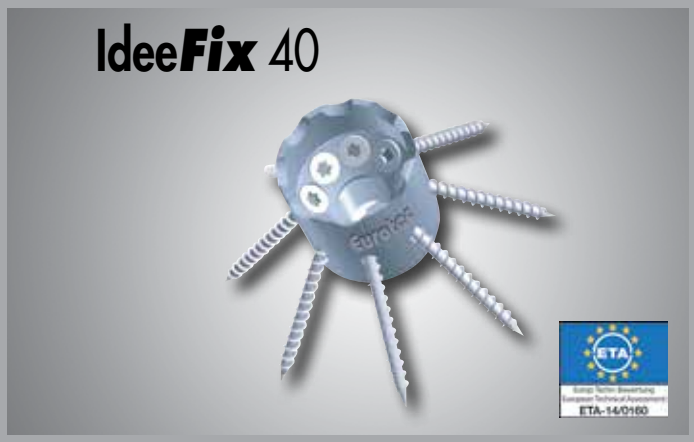
IdeeFix 30

Art. no.	Diameter/Height (mm)	PU
945390	30	25

incl. fully threaded screws, 5,0 x 40 mm

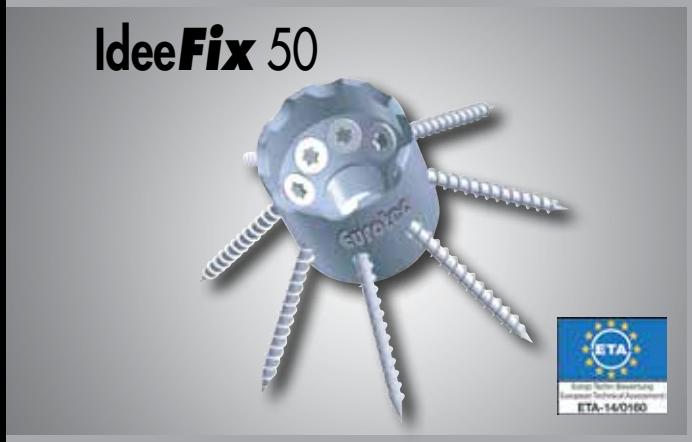
IdeeFix 40



Art. no.	Diameter/Height (mm)	PU
944890	40	25

incl. fully threaded screws, 6,0 x 60 mm

IdeeFix 50

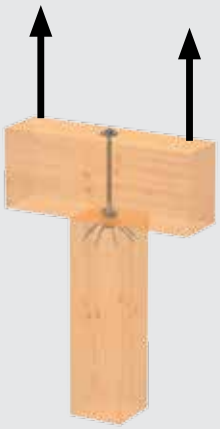


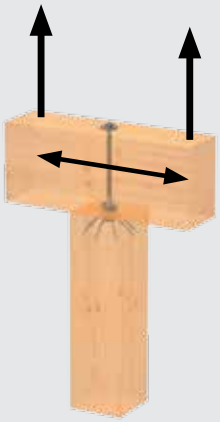
Art. no.	Diameter/Height (mm)	PU
944896	50	25

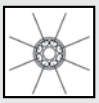
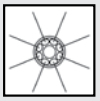
incl. fully threaded screws, 8,0 x 90 mm

Idee*Fix* 30/40/50

Technical informations





Idee*Fix*			**Timber** Dimensions		**Tension connection** with anti-twist element		**Mortise joint** with anti-twist element		**Tensile load** with threaded bolt		
Dimensions [mm]			**Min. cross section post**		**Drilling depth for post**	**Drilling depth for cross-piece**	**Drilling depth for post**	**Drilling depth for cross-piece**	**Perm. values**	**Char. Values**	**Screw pattern**
d_c	a_g	v_c	mm	mm	mm	mm	mm	mm	$N_{ze.}$ [kN]	$R_{1,t,k}$ [kN]	pc.
30	**M12**	**3**	**80**	80	**27**	-	**20**	7	**7,62**	17,33	
40	**M16**	**5**	**120**	120	**35**	-	**25**	10	**12,65**	28,79	
50	**M20**	**5**	**160**	160	**45**	-	**30**	15	**20,81**	47,35	
30	**M12**	**3**	**60**	80	**27**	-	**20**	7	**5,71**	13,00	
40	**M16**	**5**	**80**	120	**35**	-	**25**	10	**9,49**	21,59	
50	**M20**	**5**	**120**	160	**45**	-	**30**	15	**15,61**	35,51	
30	**M12**	**3**	**40**	80	**27**	-	**20**	7	**3,81**	8,67	
40	**M16**	**5**	**60**	120	**35**	-	**25**	10	**6,33**	14,39	
50	**M20**	**5**	**80**	160	**45**	-	**30**	15	**10,41**	23,67	
30	**M12**	**3**	**60**	60	**27**	-	**20**	7	**3,81**	8,67	
40	**M16**	**5**	**80**	80	**35**	-	**25**	10	**6,33**	14,39	
50	**M20**	**5**	**120**	120	**45**	-	**30**	15	**10,41**	23,67	

d_c is the diameter and the total height of the connector, a_g is the metric connection thread of the connector, v_c is the height of the integrated anti-twist system - Fully threaded screw, GoFix® FK IF 30 5,0 x 40 mm - IF 40 6,0 x 60 mm - IF 50 8,0 x 90 mm

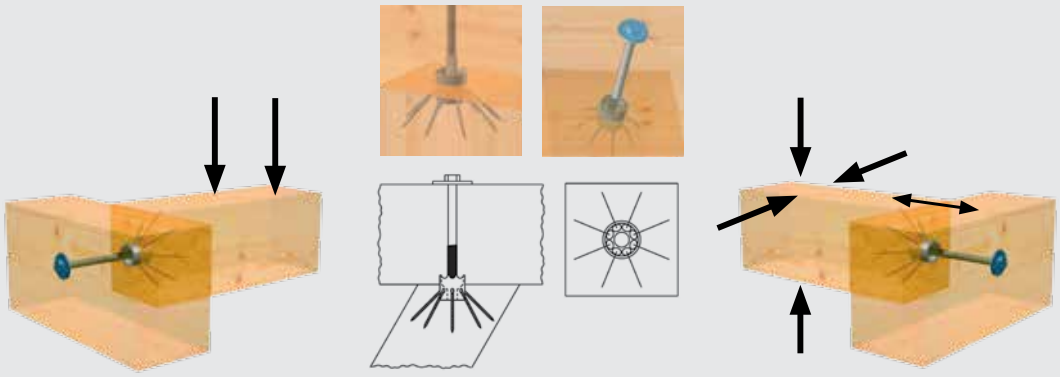
The connection is drawn together using a threaded rod or construction screw with a DIN 440 R washer

Tension connection as a mortise joint with simultaneous absorption of transverse forces

R_k characteristic value calculated according to DIN 1052:2004-08 Timber p_k 380 kg/m³ Nze. recommended permissible load $R_{,k}$ x 0,8 k_{mod} : 1,3 ym : 1,4. Factor 1,4 average load safety factor

Please note: The stated values are planning aids. Projects must only be calculated by authorised persons.

MAIN–SECONDARY BEAM



IdeeFix			Timber Dimensions		Timber Dimensions		Main–secondary beam with anti-twist element		Load-bearing capacity with threaded bolt		
Dimensions [mm]			Min. cross section of secondary beam		Min. cross section of main beam		Drilling depth for SB	Drilling depth for MB	Perm. values	Char. Values	Screw pattern
d_c	a_g	v_c	w [mm]	h [mm]	w [mm]	h [mm]	mm	mm	$N_{ze.}$ [kN]	$R_{23,k}$ [kN]	pc.
30	**M12**	**3**	**80**	80	**80**	80	**20**	7	**4,32**	8,94	
40	**M16**	**5**	**120**	120	**120**	120	**25**	10	**6,98**	14,66	
50	**M20**	**5**	**160**	160	**160**	160	**30**	15	**10,88**	21,09	
30	**M12**	**3**	**60**	80	**60**	80	**20**	7	**3,50**	7,97	
40	**M16**	**5**	**80**	120	**80**	120	**25**	10	**5,63**	12,80	
50	**M20**	**5**	**120**	160	**120**	160	**30**	15	**8,65**	19,68	
30	**M12**	**3**	**40**	80	**40**	80	**20**	7	**3,50**	7,97	
40	**M16**	**5**	**60**	120	**60**	120	**25**	10	**5,63**	12,80	
50	**M20**	**5**	**80**	160	**80**	160	**30**	15	**8,65**	19,68	
30	**M12**	**3**	**60**	60	**60**	60	**20**	7	**3,50**	7,97	
40	**M16**	**5**	**80**	80	**80**	80	**25**	10	**5,63**	12,80	
50	**M20**	**5**	**120**	120	**120**	120	**30**	15	**8,65**	19,68	

d_c is the diameter and the total height of the connector, a_g ag is the metric connection thread of the connector, v_c vc is the height of the integrated anti-twist system – Fully threaded screw, GoFix® FK
IF 30 5,0 x 40 mm - IF 40 6,0 x 60 mm - IF 50 8,0 x 90 mm

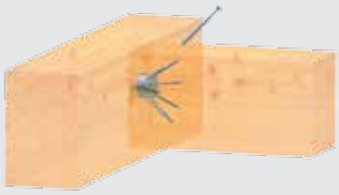
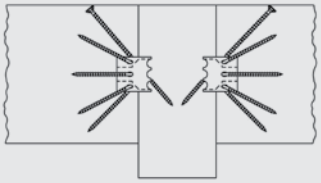
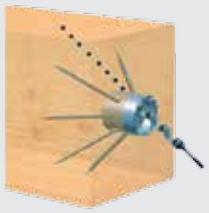
The connection is drawn together using a threaded rod or construction screw with a DIN 440 R washer

MB–SB connection as a mortise joint with simultaneous absorption of tensile forces

R_k characteristic value calculated according to DIN 1052:2004-08
Timber p_k 380 kg/m³ Nze. recommended permissible load
$R_{,k}$ x 0,8 k_{mod} : 1,3 ym : 1,4.
Factor 1.4 average load safety factor

Please note: The stated values are planning aids. Projects must only be calculated by authorised persons.

MAIN–SECONDARY BEAM, double-sided connection, with fixing screw

Idee***Fix***			**Timber** Dimensions		**Timber** Dimensions		**Main–secondary beam** with anti-twist element		**Load-bearing capacity** with threaded bolt		
Dimensions [mm]			**Min. cross section of secondary beam**		**Min. cross section of main beam**		**Drilling depth for SB**	**Drilling depth for MB**	**Perm. values**	**Char. Values**	**Screw pattern**
d_c	a_g	v_c	w [mm]	h [mm]	w [mm]	h [mm]	mm	mm	$N_{ze.}$ [kN]	$R_{23,k}$ [kN]	pc.
30	**M12**	**3**	**80**	80	**80**	80	**20**	10	**2,34**	5,32	
40	**M16**	**5**	**120**	120	**120**	120	**25**	15	**3,60**	8,19	
50	**M20**	**5**	**160**	160	**160**	160	**30**	20	**5,03**	11,44	
30	**M12**	**3**	**60**	80	**60**	80	**20**	10	**2,34**	5,32	
40	**M16**	**5**	**80**	120	**80**	120	**25**	15	**3,60**	8,19	
50	**M20**	**5**	**120**	160	**120**	160	**30**	20	**5,03**	11,44	
30	**M12**	**3**	**40**	80	**40**	80	**20**	10	**2,34**	5,32	
40	**M16**	**5**	**60**	120	**60**	120	**25**	15	**3,60**	8,19	
50	**M20**	**5**	**80**	160	**80**	160	**30**	20	**5,03**	11,44	
30	**M12**	**3**	**60**	60	**60**	60	**20**	10	**2,34**	5,32	
40	**M16**	**5**	**80**	80	**80**	80	**25**	15	**3,60**	8,19	
50	**M20**	**5**	**120**	120	**120**	120	**30**	20	**5,03**	11,44	

d_c is the diameter and the total height of the connector, a_g ag is the metric connection thread of the connector, v_c vc is the height of the integrated anti-twist system – Fully threaded screw, GoFix® FK IF 30 5,0 x 40 mm - IF 40 6,0 x 60 mm - IF 50 8,0 x 90 mm

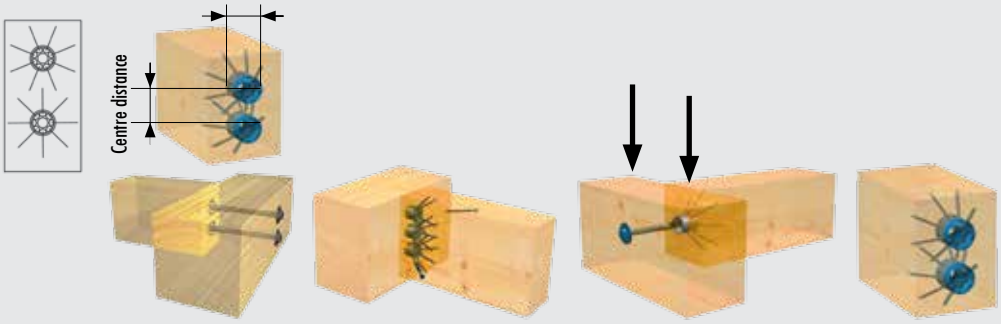
Position retention using GoFix® FK wood-construction screws IF 30 5.0 x 100 mm, IF 40 6.0 x 140 mm, IF 50 8.0 x 160 mmIF 50 8,0 x 160 mm

MB–SB connection as mortise joint for double-sided connection of secondary beam

R_k characteristic value calculated according to DIN 1052:2004-08 Timber p_k 380 kg/m³ Nze. recommended permissible load $R_{,k}$ x 0,8 k_{mod} : 1,3 ym : 1,4. Factor 1.4 average load safety factor

Please note: The stated values are planning aids. Projects must only be calculated by authorised persons.

MAIN–SECONDARY BEAM
multiple connection, single-row



Idee*Fix*			**Timber** Dimensions		**Edge and centre distance**		**Main–secondary beam** Multiple connection		**Load-bearing capacity** Single-row		
Dimensions [mm]			**Min. cross section of secondary beam**		**Edge distance**	**Centre distance**	**Drilling depth for SB**	**Drilling depth for MB**	**Perm. values**	**Char. Values**	**Number of connectors**
d_c	a_g	v_c	w [mm]	h [mm]	mm	mm	mm	mm	$N_{ze.}$ [kN]	$R_{23,k}$ [kN]	pc.
30	**M12**	**3**	**80**	80	**50**	50	**20**	7	**4,32**	8,94	**1**
40	**M16**	**5**	**120**	120	**60**	60	**25**	10	**6,98**	14,66	**1**
50	**M20**	**5**	**160**	160	**80**	80	**30**	15	**10,88**	21,09	**1**
30	**M12**	**3**	**80**	150	**50**	50	**20**	10	**8,64**	17,88	**2**
40	**M16**	**5**	**120**	180	**60**	60	**25**	15	**13,96**	29,32	**2**
50	**M20**	**5**	**160**	240	**80**	80	**30**	20	**21,76**	42,18	**2**
30	**M12**	**3**	**80**	200	**50**	50	**20**	10	**12,96**	26,82	**3**
40	**M16**	**5**	**120**	240	**60**	60	**25**	15	**20,94**	43,98	**3**
50	**M20**	**5**	**160**	320	**80**	80	**30**	20	**32,64**	63,27	**3**
30	**M12**	**3**	**80**	250	**50**	50	**20**	10	**17,28**	35,76	**4**
40	**M16**	**5**	**120**	300	**60**	60	**25**	15	**27,92**	58,64	**4**
50	**M20**	**5**	**160**	400	**80**	80	**30**	20	**43,52**	84,36	**4**
30	**M12**	**3**	**80**	300	**50**	50	**20**	10	**21,60**	44,70	**5**
40	**M16**	**5**	**120**	360	**60**	60	**25**	15	**34,90**	73,30	**5**
50	**M20**	**5**	**160**	480	**80**	80	**30**	20	**54,40**	105,45	**5**
30	**M12**	**3**	**80**	350	**50**	50	**20**	10	**25,92**	53,64	**6**
40	**M16**	**5**	**120**	420	**60**	60	**25**	15	**41,88**	87,96	**6**
50	**M20**	**5**	**160**	560	**80**	80	**30**	20	**65,28**	126,54	**6**
30	**M12**	**3**	**80**	400	**50**	50	**20**	10	**30,24**	62,58	**7**
40	**M16**	**5**	**120**	480	**60**	60	**25**	15	**48,86**	102,62	**7**
50	**M20**	**5**	**160**	640	**80**	80	**30**	20	**76,16**	117,63	**7**
30	**M12**	**3**	**80**	450	**50**	50	**20**	10	**34,56**	71,52	**8**
40	**M16**	**5**	**120**	540	**60**	60	**25**	15	**55,84**	117,28	**8**
50	**M20**	**5**	**160**	720	**80**	80	**30**	20	**87,04**	168,72	**8**

d_c is the diameter and the total height of the connector, a_g ag is the metric connection thread of the connector, v_c vc is the height of the integrated anti-twist system – Fully threaded screw, GoFix® FK
IF 30 5,0 x 40 mm - IF 40 6,0 x 60 mm - IF 50 8,0 x 90 mm

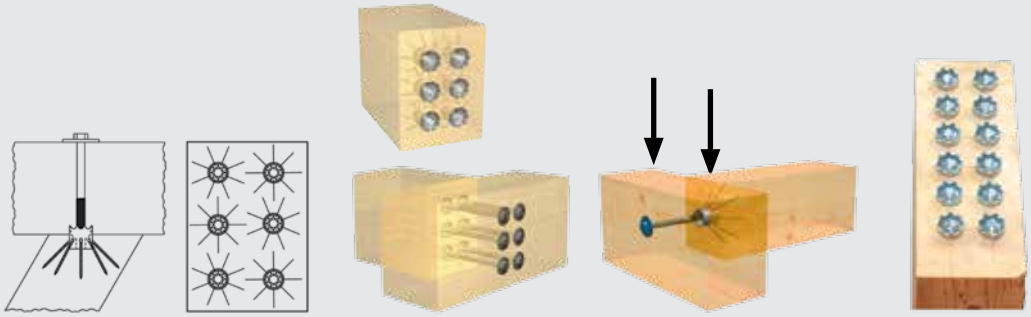
The connection is drawn together using a threaded rod or constructionscrew with a DIN 440 R washer

MB–SB connection as a mortise joint with simultaneous absorption of tensile forces

R_k characteristic value calculated according to DIN 1052:2004-08
Timber ρ_k 380 kg/m³ Nze. recommended permissible load
R_k x 0,8 k_{mod} : 1,3 ym : 1,4.
Factor 1.4 average load safety factor

Please note: The stated values are planning aids. Projects must only be calculated by authorised persons.

MAIN–SECONDARY BEAM
multiple connection, double-row



IdeeFix			Timber Dimensions		Edge and centre distance		Main–secondary beam Multiple connection		Load-bearing capacity Double-row		
Dimensions [mm]			Min. cross section of secondary beam		Edge distance	Centre distance	Drilling depth for SB	Drilling depth for MB	Perm. values	Char. Values	Number of connectors
d_c	a_g	v_c	w [mm]	h [mm]	mm	mm	mm	mm	$N_{ze.}$ [kN]	$R_{23,k}$ [kN]	STK
30	**M12**	**3**	**150**	80	**50**	50	**20**	10	**8,64**	17,88	**2**
40	**M16**	**5**	**180**	120	**60**	60	**25**	15	**13,96**	29,32	**2**
50	**M20**	**5**	**240**	160	**80**	80	**30**	20	**21,76**	42,18	**2**
30	**M12**	**3**	**150**	150	**50**	50	**20**	10	**17,28**	35,76	**4**
40	**M16**	**5**	**180**	180	**60**	60	**25**	15	**27,92**	58,64	**4**
50	**M20**	**5**	**240**	240	**80**	80	**30**	20	**43,52**	84,36	**4**
30	**M12**	**3**	**150**	200	**50**	50	**20**	10	**25,92**	53,64	**6**
40	**M16**	**5**	**180**	240	**60**	60	**25**	15	**41,88**	87,96	**6**
50	**M20**	**5**	**240**	320	**80**	80	**30**	20	**65,28**	126,54	**6**
30	**M12**	**3**	**150**	250	**50**	50	**20**	10	**34,56**	71,52	**8**
40	**M16**	**5**	**180**	300	**60**	60	**25**	15	**55,84**	117,28	**8**
50	**M20**	**5**	**240**	400	**80**	80	**30**	20	**87,04**	168,72	**8**
30	**M12**	**3**	**150**	300	**50**	50	**20**	10	**43,20**	89,40	**10**
40	**M16**	**5**	**180**	360	**60**	60	**25**	15	**69,80**	146,60	**10**
50	**M20**	**5**	**240**	480	**80**	80	**30**	20	**108,80**	210,90	**10**
30	**M12**	**3**	**150**	350	**50**	50	**20**	10	**51,84**	107,28	**12**
40	**M16**	**5**	**180**	420	**60**	60	**25**	15	**83,76**	175,92	**12**
50	**M20**	**5**	**240**	560	**80**	80	**30**	20	**130,56**	253,08	**12**
30	**M12**	**3**	**150**	400	**50**	50	**20**	10	**60,48**	125,16	**14**
40	**M16**	**5**	**180**	480	**60**	60	**25**	15	**97,72**	205,24	**14**
50	**M20**	**5**	**240**	640	**80**	80	**30**	20	**152,32**	295,26	**14**
30	**M12**	**3**	**150**	450	**50**	50	**20**	10	**69,12**	143,04	**16**
40	**M16**	**5**	**180**	540	**60**	60	**25**	15	**111,68**	234,56	**16**
50	**M20**	**5**	**240**	720	**80**	80	**30**	20	**174,08**	337,44	**16**

d_c is the diameter and the total height of the connector, a_g ag is the metric connection thread of the connector, v_c vc is the height of the integrated anti-twist system – Fully threaded screw, GoFix® FK IF 30 5,0 x 40 mm - IF 40 6,0 x 60 mm - IF 50 8,0 x 90 mm

The connection is drawn together using a threaded rod or construction screw with a DIN 440 R washer

MB–SB connection as a mortise joint with simultaneous absorption of tensile forces

R_k characteristic value calculated according to DIN 1052:2004-08 Timber p_k 380 kg/m³ Nze. recommended permissible load R_k x 0,8 k_{mod} : 1,3 ym : 1,4. Factor 1.4 average load safety factor

Please note: The stated values are planning aids. Projects must only be calculated by authorised persons.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BRUTUS threaded rod

Fully threaded rod for transverse-shear reinforcement in laminated wood joists

Europ. Techn. Approval applied for

BRUTUS – for use in new and existing properties

High internal stresses occurring in large timber components such as building trusses, for example, often become too great to be absorbed by the timber alone. As timber is relatively weak in the direction perpendicular to the grain, it is particularly at risk due to transverse shear and must be reinforced in such cases.

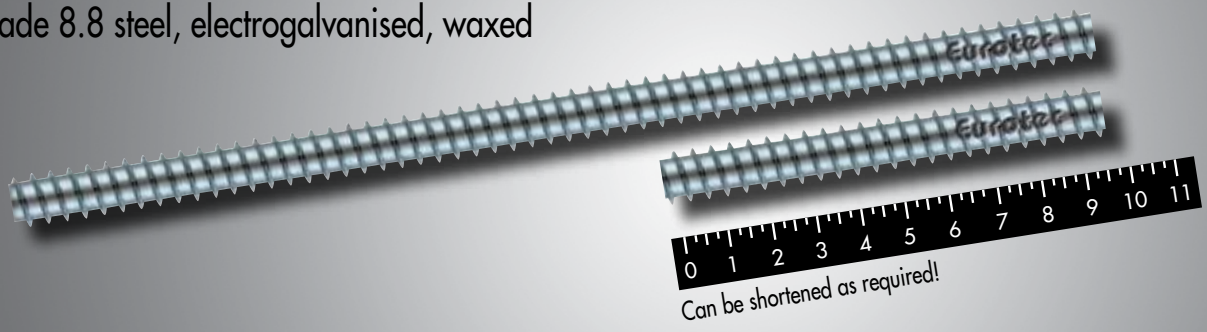
BRUTUS threaded rods absorb these transverse-shear forces!

They are applied both in new constructions (when building the trusses) and in renovations. Whereas in new constructions they allow larger spans and/or narrower timber cross sections, in renovations they help to safeguard the existing structure. Many trusses therefore do not need to be replaced or doubled up at considerable expense, even if they exhibit obvious cracking. In such cases, however, an expert report must always be obtained.

BRUTUS threaded rods can be shortened to any desired length but should be pilot-drilled to 13 mm. Care must be taken to avoid drill wander when drilling the holes.

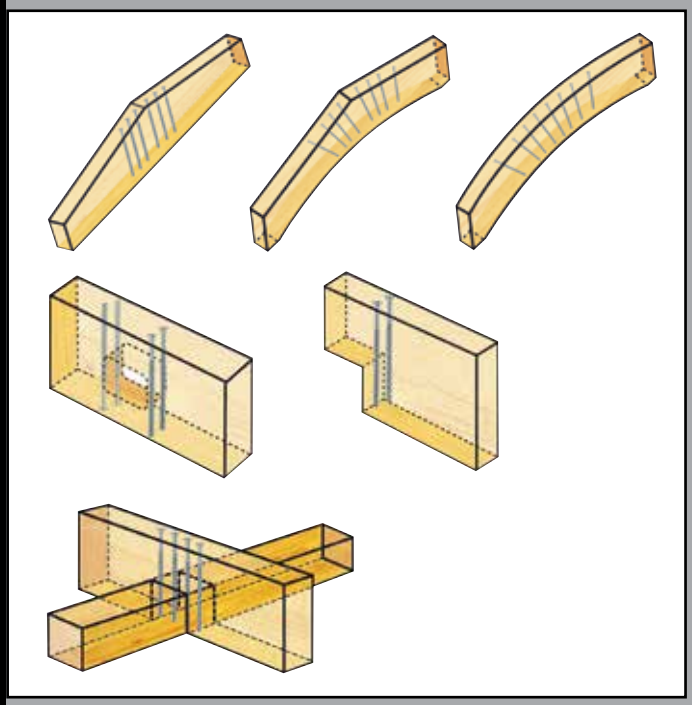
BRUTUS threaded rod, total length: 3,000 mm

grade 8.8 steel, electrogalvanised, waxed



Can be shortened as required!

It is used for transverse-shear reinforcement:
- **of building trusses**
- **at notches and openings**
- **at transverse connections**



Art. no.	Dimensions (mm)	PU
945247	16 x 3000	1

Insertion tool: Art. no. 945318

Things to bear in mind

- Pilot-drill to Ø 13 mm
- The drill bit can wander while drilling deeper holes

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EiSYS-2

Façade/adjusting screw

Compare the idea of thermal insulation with a hot-air balloon!

The principle is simple. In a hot-air balloon, the burner blows hot air into the envelope above. The hot air wants to escape upwards but cannot escape from the envelope.
It therefore lifts the balloon along with the attached load – and the balloon flies! But this flight only lasts until the air cools down, and it cools quite quickly because of the balloon's relatively thin skin.
Hot air must be added to the balloon to allow it to continue flying.

A similar principle applies to buildings

The heated room air that wants to escape through the building shell to the outside world is subject to the principle of heat conduction and convection. The warm air from the room wants to mix with the cold outside air until a temperature equilibrium is reached between inside and outside air – i.e. until it becomes cold inside the building. The better the construction material conducts heat and the more the building shell leaks heat, the faster this process will happen. Continuous heating is required to keep the indoor air at room temperature. This leads to high energy costs.

Solution:
The outer walls must be insulated to keep the wasted energy to a minimum. This can be achieved with composite thermalinsulation systems with an exterior plaster or with an insulated, rear-ventilated façade. The latter is used if you want to decorate the exterior wall with timber cladding, fibre-cement boards or other façade elements.
This is where the EiSYS-2 screw is used.

EiSYS-2 screw for use with suspended façades

The German Energy Saving Ordinance (as well as rising energy costs) requires efficient, environmentally sound thermal insulation for all heated buildings and, more recently, cooled buildings. Rear-ventilated rainscreen cladding combines this requirement with the possibility of finishing the building shell with a wide range of materials for aesthetic and/or technical reasons.

The EiSYS-2 screw from Eurotec is a façade/ adjusting screw.

This screw is fastened to the building wall with a plug.
The freely rotating threaded sleeve at the top of the screw allows the façade's substructure to be aligned parallel to the building wall. The advantages are clear: cost savings and reduced assembly times. High loads can be transmitted through the framework screw connections even in the case of larger distances from the building wall. Full design freedom is maintained for the façade.

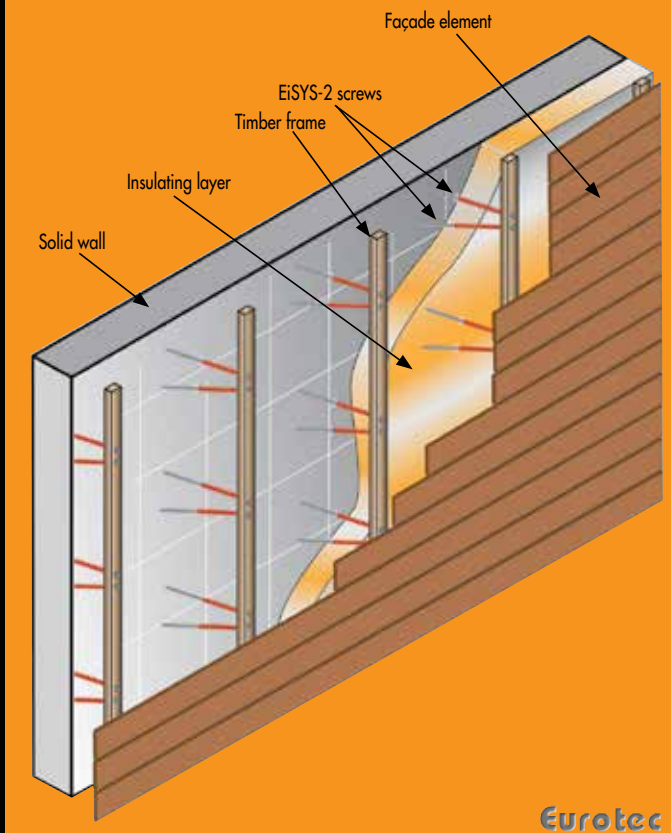
EiSYS-2

façade/adjusting screw

Art. no.	Dimensions (mm)	For insulation thicknesses[a] up to	PU
945935	7,2 x 198 II	60 mm	50
945925	7,2 x 218 II	80 mm	50
945926	7,2 x 238 II	100 mm	50
945927	7,2 x 258 II	120 mm	50
945928	7,2 x 278 II	140 mm	50
945929	7,2 x 298 II	160 mm	50
945474	7,2 x 318 II	180 mm	50
945930	7,2 x 338 II	200 mm	50
945931	7,2 x 358 II	220 mm	50
945932	7,2 x 378 II	240 mm	50
945933	7,2 x 398 II	260 mm	50
945934	7,2 x 418 II	280 mm	50

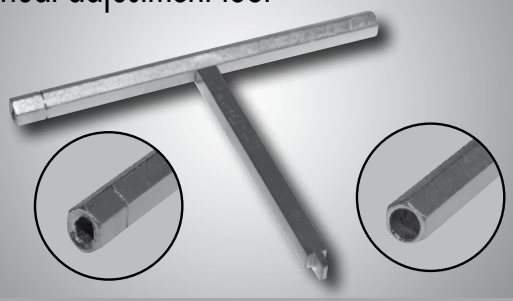
a) And for a counter-batten thickness of 40 mm

Example application:
The V-shaped arrangement of the EiSYS-2 screw pair achieves optimum stability and load capacity of the façade construction.



EiSYS-2

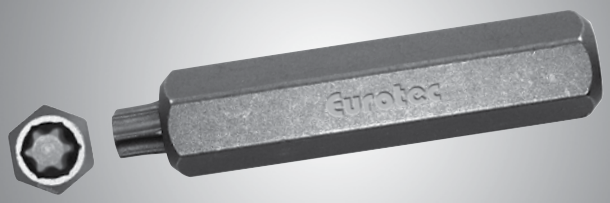
manual adjustment tool



Art. no.	Dimensions (mm)	PU
111828	10,0 x 150/115	1

EiSYS-2

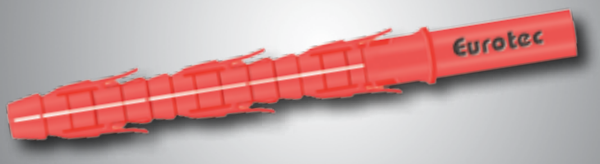
bit



Art. no.	Dimensions (mm)	Drive	PU
945936	10,0 x 50	TX30 ●	1

Plug

for EiSYS-2 screws



Art. no.	Dimensions (mm)	Type	PU
945404	10,0 x 130	B 10 H	200

Calculating the number of EiSYS-2 screw pairs per m² - counter batten 40x60 mm²
EiSYS-2 screws are always used in pairs. See system diagram.

Wind pressure $_k$ = 0,30 kN/m²							
Insulating-material thickness (mm)	EiSYS-2 Screw	Unladen weight of the façade					
		5 kg/m²	10 kg/m²	15 kg/m²	20 kg/m²	25 kg/m²	30 kg/m²
80	7,2 x 218	0,45	0,86	1,26	1,67	2,08	2,48
100	7,2 x 238	0,54	1,04	1,54	2,04	2,54	3,04
120	7,2 x 258	0,64	1,23	1,82	2,42	3,01	3,60
140	7,2 x 278	0,73	1,42	2,10	2,79	3,48	4,16
160	7,2 x 298	0,82	1,60	2,38	3,16	3,94	4,72
180	7,2 x 318	0,92	1,79	2,66	3,54	4,41	5,28
200	7,2 x 338	1,01	1,98	2,94	3,91	4,88	5,84
220	7,2 x 358	1,11	2,17	3,23	4,29	5,35	6,41

Wind pressure $_k$ = 0,60 kN/m²							
Insulating-material thickness (mm)	EiSYS-2 Screw	Unladen weight of the façade					
		5 kg/m²	10 kg/m²	15 kg/m²	20 kg/m²	25 kg/m²	30 kg/m²
80	7,2 x 218	0,75	0,90	1,31	1,72	2,12	2,53
100	7,2 x 238	0,75	1,09	1,59	2,09	2,59	3,09
120	7,2 x 258	0,75	1,28	1,87	2,46	3,06	3,65
140	7,2 x 278	0,78	1,46	2,15	2,84	3,52	4,21
160	7,2 x 298	0,87	1,65	2,43	3,21	3,99	4,77
180	7,2 x 318	0,96	1,84	2,71	3,58	4,46	5,33
200	7,2 x 338	1,06	2,02	2,99	3,96	4,92	5,89
220	7,2 x 358	1,15	2,21	3,27	4,33	5,39	6,45

Wind pressure $_k$ = 0,90 kN/m²							
Insulating-material thickness (mm)	EiSYS-2 Screw	Unladen weight of the façade					
		5 kg/m²	10 kg/m²	15 kg/m²	20 kg/m²	25 kg/m²	30 kg/m²
80	7,2 x 218	1,13	1,13	1,35	1,76	2,17	2,57
100	7,2 x 238	1,13	1,13	1,63	2,13	2,63	3,13
120	7,2 x 258	1,13	1,32	1,91	2,51	3,10	3,69
140	7,2 x 278	1,13	1,51	2,19	2,88	3,57	4,25
160	7,2 x 298	1,13	1,69	2,47	3,25	4,03	4,81
180	7,2 x 318	1,13	1,88	2,75	3,63	4,50	5,37
200	7,2 x 338	1,13	2,07	3,03	4,00	4,97	5,93
220	7,2 x 358	1,20	2,26	3,32	4,38	5,44	6,50

Wind pressure $_k$ = 1,20 kN/m²							
Insulating-material thickness (mm)	EiSYS-2 Screw	Unladen weight of the façade					
		5 kg/m²	10 kg/m²	15 kg/m²	20 kg/m²	25 kg/m²	30 kg/m²
80	7,2 x 218	1,50	1,50	1,50	1,81	2,21	2,62
100	7,2 x 238	1,50	1,50	1,68	2,18	2,68	3,18
120	7,2 x 258	1,50	1,50	1,96	2,55	3,15	3,74
140	7,2 x 278	1,50	1,55	2,24	2,93	3,61	4,30
160	7,2 x 298	1,50	1,74	2,52	3,30	4,08	4,86
180	7,2 x 318	1,50	1,93	2,80	3,67	4,55	5,42
200	7,2 x 338	1,50	2,11	3,08	4,05	5,01	5,98
220	7,2 x 358	1,50	2,30	3,36	4,42	5,48	6,54

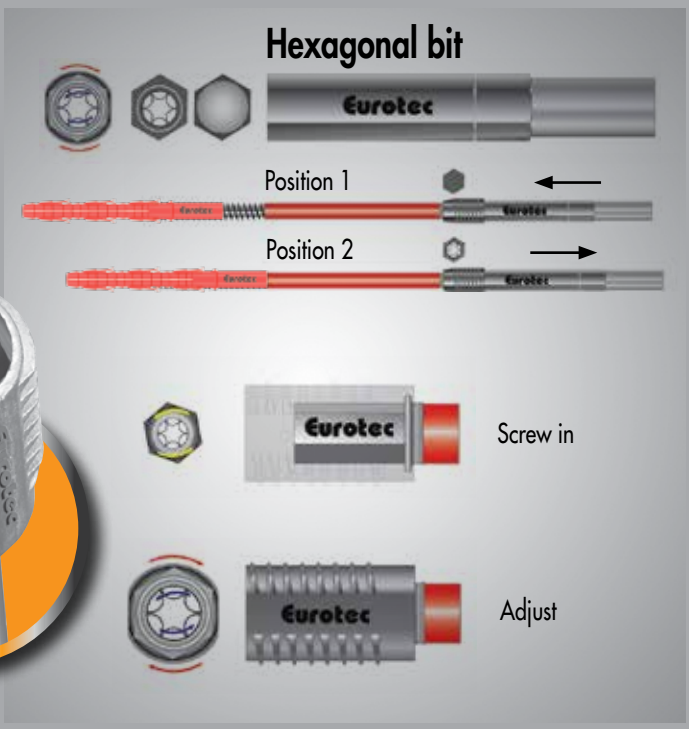
Please note: The stated values are planning aids. Projects must only be calculated by authorised persons.

EiSYS-2 façade/adjusting screw

This screw is used to fasten façades in place.
Insulation thicknesses of 80–280 mm can be handled easily with the EiSYS-2 screw from Eurotec.

Adjustment sleeve

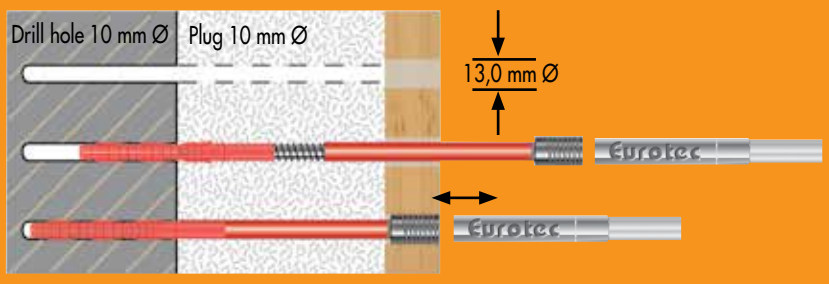
The EiSYS-2 screw is fitted with a freely rotating adjustment sleeve/head that allows the space between the brickwork and the substructure to be tailored to your needs. A hexagonal bit is supplied as an accessory. This is used to screw the screw into the subsurface, as well as to adjust the substructure with the adjustment head.

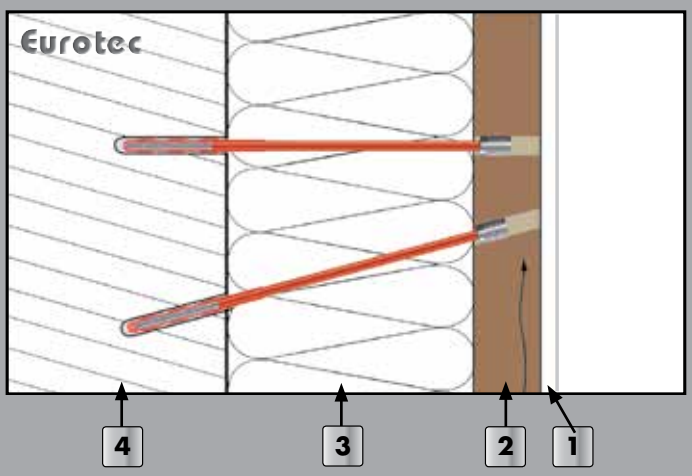


This is how it's done!

The principle is as ingenious as it is simple. Once the insulation is attached to the exterior wall, the counter batten is pilot-drilled to a diameter of 13 mm in accordance with the system. A hole of 10 mm diameter is then drilled within this hole through the insulation and into the subsurface to create the hole for the plug. The plug is attached to the adjusting screw and the two are then inserted into the prepared drill hole through the counter batten and the insulation

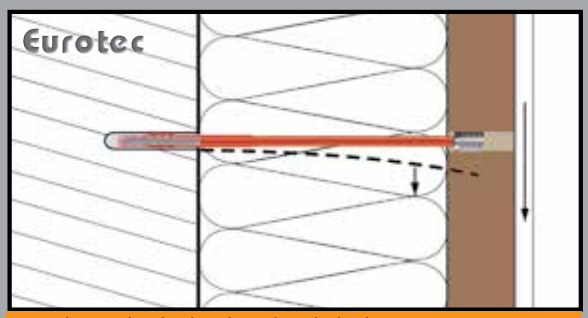
The EiSYS-2 façade/adjusting screw is screwed in completely in Position 1 using the hexagonal bit until the adjustment head also lies within the counter batten.
Now, the screw is simply pulled out to Position 2 using the hexagonal bit and the spacing between the brickwork and the counter batten is adjusted.





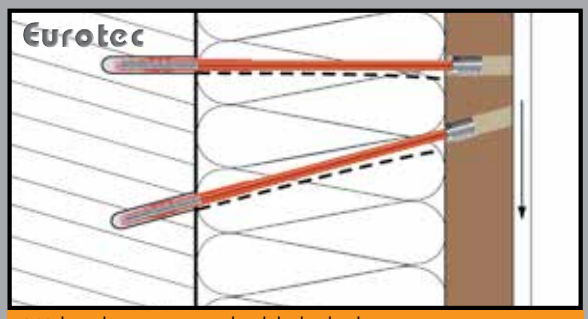
Example of a rear-ventilated façade (EiSYS-2 system diagram)

1. Façade element
2. Timber frame (min. 40x60 mm²)
3. Insulating layer
4. Brickwork (EiSYS fixing depth = 90 mm)

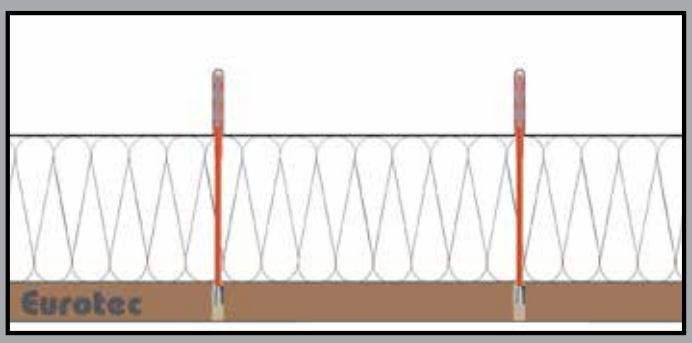


A single screw bends relatively easily under loading (F)

To increase the rigidity of the EiSYS-2 system, the adjusting screws are installed in pairs and in a V shape. This creates a framework screw connection. The framework principle consists of creating a large number of rigid triangles (see diagram) from multiple relatively pliable screws installed perpendicular to the wall.
For the same load, these triangles exhibit a much lower deflection than screws that are simply screwed in perpendicular to the wall.



A V-shaped screw pair can absorb higher loads



Example of a suspended ceiling

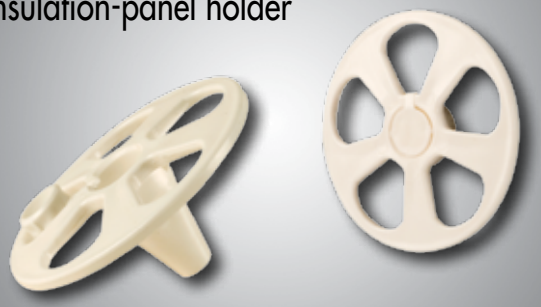
The Eisys-2's adjustment function can, of course, also be used in other applications, e.g. for a suspended ceiling.

Klimax insulation-panel holder

Ideal fastening of wood-fibre insulation elements

Klimax

insulation-panel holder

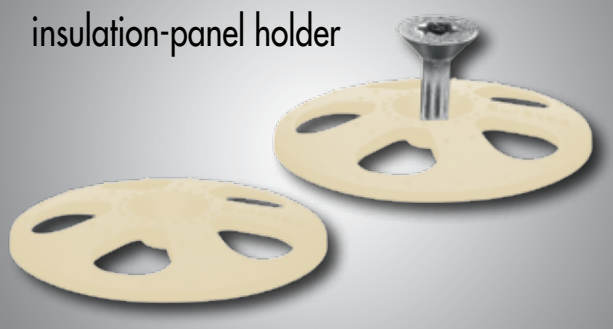


Art. no.	Dimensions (mm)	PU
945251	∅ 60	400

• For soft insulating materials

Klimax-slim

insulation-panel holder

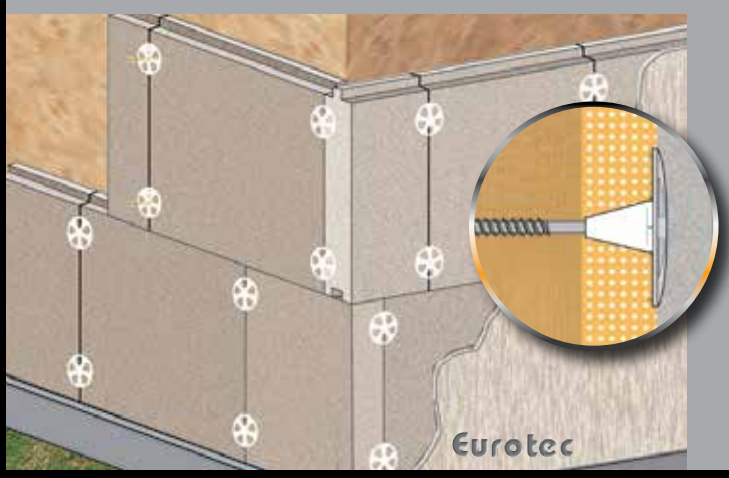


Art. no.	Dimensions (mm)	PU
945987	∅ 60	900

• For harder insulating materials

Energy-saving measures are becoming increasingly important in the construction of new houses and also enjoy state support!

Decoupling the individual fastening components avoids the creation of thermal bridges. Good insulation results in an extraordinarily comfortable environment. The Klimax insulation-panel holder, in conjunction with the Paneltwistec screws from Eurotec, offers an ideal combination for fastening wood-fibre insulation elements. The prerequisite for this is a load-bearing timber substructure.



Suitable screws for our Klimax insulation-panel holders: Paneltwistec AG *blue+* countersunk-head screws

Art. no.	Dimensions (mm)	Drive	PU
945583	6,0 x 60	TX30	200
945584	6,0 x 70	TX30	200
945632	6,0 x 80	TX30	200
945633	6,0 x 90	TX30	100
945634	6,0 x 100	TX30	100
945636	6,0 x 120	TX30	100
945637	6,0 x 130	TX30	100
945638	6,0 x 140	TX30	100
945640	6,0 x 160	TX30	100
945641	6,0 x 180	TX30	100
945642	6,0 x 200	TX30	100
945643	6,0 x 220	TX30	100
945644	6,0 x 240	TX30	100
945645	6,0 x 260	TX30	100
945646	6,0 x 280	TX30	100
945647	6,0 x 300	TX30	100

Klimax insulation plug

For fastening composite thermal insulation systems

Europ. Techn. Zulassung
European Technical Approval

NEW
to our product range

Universally suitable for use in numerous insulating materials and subsurfaces

The Klimax insulation plug allows secure wall-fastening of composite thermal insulation system boards with a thickness of 40–210 mm. The insulation plug is suitable for anchorages in solid sand-lime bricks, porous sand-lime bricks, masonry bricks, vertically perforated bricks, solid lightweight-concrete blocks and porous lightweight-concrete blocks. The product consists of a plastic plug and a nail made of electrogalvanised steel with a pressed-on plastic head. The plastic head prevents the formation of thermal bridges and also provides additional corrosion protection.
Installation is performed according to same principle as for a classic nail plug.

Art. no.	Dimensions (mm)	Disc diameter (mm)	Insulation thickness (mm)	PU
200027	8,0 x 90	60	40 - 60	250
200028	8,0 x 110	60	80	250
200029	8,0 x 130	60	100	200
200030	8,0 x 150	60	120	150
200031	8,0 x 170	60	140	150
200032	8,0 x 190	60	160	100
200033	8,0 x 210	60	180	100
200034	8,0 x 240	60	210	100

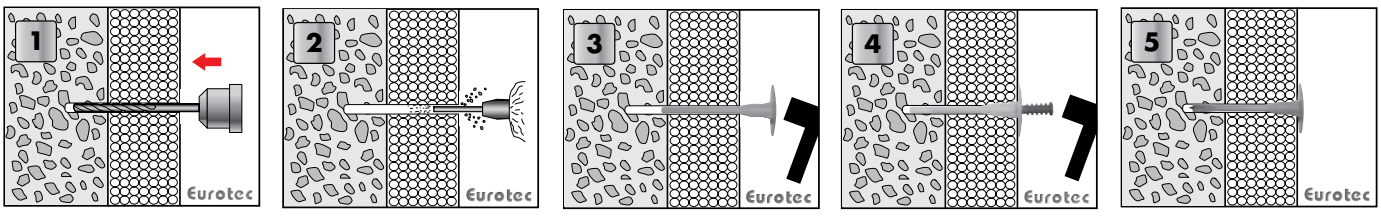
Advantages of Klimax insulation plugs

- Fast and efficient assembly
- Universally suitable for numerous insulating materials and subsurfaces
- Flat plug head

Installation parameters

- Nominal drill diameter: 8,00 mm
- Depth of drill hole to lowest point: 40,00 mm
- Effective anchorage depth: 30,00 mm

Installation instructions



Klimax ECO 1 / ECO 2

For secure fastening of soft mineral-fibre insulating materials

NEW
to our product range

Klimax ECO 1

insulation plug, one-piece

Art. no.	Dimensions (mm)	Disc diameter (mm)	Insulation thickness (mm)	PU
200065	Ø 8,0 x 60	90	30 - 40	250
200066	Ø 8,0 x 80	90	50 - 60	250
200067	Ø 8,0 x 100	90	70 - 80	200
200068	Ø 8,0 x 120	90	90 - 100	250
200069	Ø 8,0 x 140	90	110 - 120	200
200070	Ø 8,0 x 160	90	130 - 140	200

- With a hole in the head to accommodate a mesh fabric holder
- For insulating material thickness of 30–140 mm

Klimax ECO 2

insulation plug, two-piece

Art. no.	Dimensions (mm)	Disc diameter (mm)	Insulation thickness (mm)	PU
200071	Ø 8,0 x 80	90	30 - 50	250
200072	Ø 8,0 x 100	90	60 - 70	250
200073	Ø 8,0 x 120	90	80 - 90	250
200074	Ø 8,0 x 140	90	100 - 110	250
200075	Ø 8,0 x 160	90	120 - 130	250
200076	Ø 8,0 x 180	90	140 - 150	250
200077	Ø 8,0 x 200	90	160 - 170	250
200078	Ø 8,0 x 220	90	180 - 190	250
200079	Ø 8,0 x 240	90	200 - 210	250

- For insulating material thickness of 30–210 mm

For through-hole mounting

The Klimax ECO insulation plug allows secure wall-fastening of soft mineral-fibre insulating materials.

The insulation plugs consist entirely of impact-resistant plastic and are suitable for anchorages in concrete, solid sand-lime bricks, masonry bricks and other high-strength building materials.

In through-hole mounting, Klimax ECO insulation plugs are hammered into a drill hole with a diameter of 8.0 mm. In the course of the setting process, the bridges at the tip of the plug deform, producing a clamping pressure that ensures a secure plug grip.

Advantages of Klimax ECO 1/2

- No thermal bridges
- Time-saving and straightforward impact installation
- Impact-resistant plastic
- Particularly suitable for use with rear-ventilated curtain facades
- Temperature-resistant from -40 °C bis +70 °C

Installation parameters

- Nominal drill diameter: ECO 1 = 8,0 mm; ECO 2 = 8,0 mm
- Minimum drill-hole depth: ECO 1 = 25,0 mm; ECO 2 = 35,0 mm
- Minimum installation depth: ECO 1 = 20,0 mm; ECO 2 = 30,0 mm

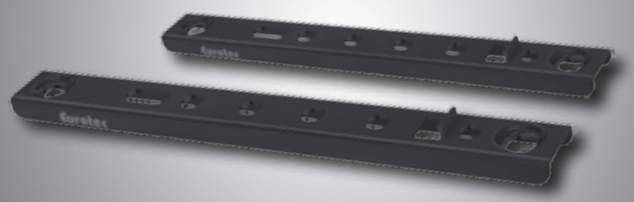
© simo / shutterstock.com

FaçadeClip

For hidden fastening of façade wood

FaçadeClip

black, electrogalvanised

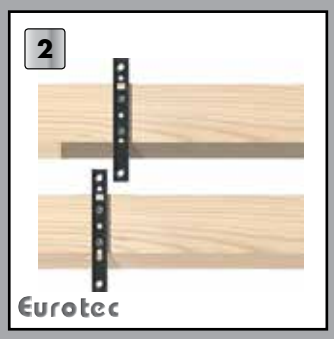


Art. no.	Dimensions (mm)*	Type	PU**
946010	115 x 15 x 5,5	F115 x 17	300
946012	115 x 15 x 5,5	F115 x 22	300
946013	115 x 15 x 5,5	F115 x 28	300
946014	130 x 15 x 5,5	F130 x 17	300
946015	130 x 15 x 5,5	F130 x 22	300
946016	130 x 15 x 5,5	F130 x 28	300
946017	145 x 15 x 5,5	F145 x 17	300
946018	145 x 15 x 5,5	F145 x 22	300
946019	145 x 15 x 5,5	F145 x 28	300

* Length x width x height
** Drilling screws are included with this product!

Advantages of FaçadeClip

- For façade timbers with a profile height of 57–95 mm
- Hidden fastening
- Perfect constructive timber protection
- Ventilated façade system with spaced installation
- The façade timber's surface that is exposed to the weather remains undamaged
- Efficient and easy installation



Rational and easy installation

1. Place FaçadeClip on the back with stopper and insert profile screws
2. Repeat on all façade boards displaced
3. Screw the façade wood to the counter-lathe with Terrassotec screw
4. Simply insert the next façade wood and screw on the top only with Terrassotec screw
5. The joint clearance is set automatically by the screw head of the Terrassotec screw, that's it!

Each façade clip comes supplied with one system screw (4.5 x 29 mm) and two profile screws (4.2 x L).

Technical data

Eurotec FaçadeClip					Dimensions façade profile			Joint clearance between façade profiles		Quantity required Façade clips per m² Example	
		Dimensions (mm)			min.-max. height	min. height	Profile screw length	Terrassotec in hole A	Terrassotec in hole B	Min. profile height	Max. profile height
Art. no.	Type	L	W	H	mm	mm	mm	mm	mm	Pce.	Pce.
946010	F115 x 17	115	15	5,5	57 - 68	19	17	10	variable	28	24
946012	F115 x 22	115	15	5,5	57 - 68	24	22	10	variable	28	24
946013	F115 x 28	115	15	5,5	57 - 68	30	28	10	variable	28	24
946014	F130 x 17	130	15	5,5	68 - 80	19	17	10	variable	24	20
946015	F130 x 22	130	15	5,5	68 - 80	24	22	10	variable	24	20
946016	F130 x 28	130	15	5,5	68 - 80	30	28	10	variable	24	20
946017	F145 x 17	145	15	5,5	80 - 95	19	17	10	variable	20	18
946018	F145 x 22	145	15	5,5	80 - 95	24	22	10	variable	20	18
946019	F145 x 28	145	15	5,5	80 - 95	30	28	10	variable	20	18
Screws are included with this product					Formula for determining quantity (1000 mm/substructure distance) x (1000 mm/bottom edge clearance) = pieces/m²					600 mm substructure clearance 10 mm joint clearance	

Please note: Before any work is carried out, all calculations must be checked and released by the responsible planner! For more information on this visit our homepage: www.e-u-r-o-tec.de

Atlas wood connector

The node connection for beam suspension

© mimmarek / fotolia.de

Europ. Techn. Zulassung
European Technical Approval
ETA-12/0068

Can be used in almost all fields of timber construction

The only hook connection that can be completely prefabricated, enabling quick and simple connections on site similarly to a conventional hook connector. Atlas wood connectors are used in nearly all areas of wood construction, irrespective of the wood's grain direction, and save the user a great number of additional connection means.

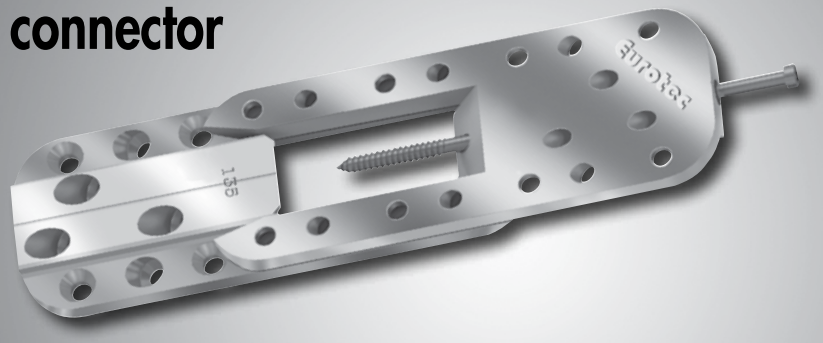
What is unique here is that a fixing screw is screwed into the Atlas wood connector from above, so that the components can be braced against each other. In addition, the Atlas consists of two identical parts that can be slid inside each other without restraint and smoothly, which is a great advantage during installation work.

The fixing screw that is used forms these two parts of the Atlas wood connector into a hook connector and at the same time is security against unintentional loosening of the connector.

The connection that is made in this way can be statically loaded in four directions with high tested values. Installation can therefore be both visible (for broad root with chamfer connections) and hidden (milled recess).

To allow problem-free installation, every system pack includes all system screws and the matching DuoBit, together with assembly instructions.

Atlas wood connector



ETA-12/0068

Art. no.	Designation	PU	Included in delivery
30036	Atlas HF 70	20 (= 10 connectors)	120 fully threaded screws TX15 - 4,0 x 60 mm, blue galvanised 10 fixing screws TX15 - 4,2 x 50 mm, blue galvanised Assembly instructions; 1 DUO-bit TX 15
30056	Atlas HF 100	20 (= 10 connectors)	160 fully threaded screws TX20 - 5,0 x 80 mm, blue galvanised 10 fixing screws TX20 - 4,8 x 80 mm, blue galvanised Assembly instructions; 1 DUO-bit TX 20
30076	Atlas HF 135	20 (= 10 connectors)	220 fully threaded screws TX20 - 5,0 x 80 mm, blue galvanised 10 fixing screws TX20 - 4,8 x 120 mm, blue galvanised Assembly instructions; 1 DUO-bit TX 20
30096	Atlas HF 170	20 (= 10 connectors)	280 fully threaded screws TX20 - 5,0 x 80 mm, blue galvanised 10 fixing screws TX20 - 4,8 x 120 mm, blue galvanised Assembly instructions; 1 DUO-bit TX 20
30116	Atlas HF 200	12 (= 6 connectors)	144 fully threaded screws TX25 - 6,0 x 100 mm, blue galvanised 6 fixing screwsn TX25 - 6,3 x 180 mm, blue galvanised Assembly instructions; 1 DUO-bit TX 25

Art. no.	Designation	for	Included in delivery
29606	Template set HFSS 70	Atlas HF 70	1 milling and assembling jig with stopper HFS 70 1 milling cutter with thrust ring HFF 70 4 fully threaded screws TX15 - 4,0 x 60 mm, blue galvanised 2 hexagon socket screws M 5 x 16 mm, 1 Allen key 4 mm Assembly instructions
29161	Template set HFSS 100	Atlas HF 100 Atlas HF 135 Atlas HF 170	1 milling and assembling jig with stopper HFS 100 1 milling cutter with thrust ring HFF 100 4 fully threaded screws TX20 - 5,0 x 40 mm, blue galvanised 2 hexagon socket screws M 5 x 16 mm, 1 Allen key 4 mm Assembly instructions
29626	Template set HFSS 200	Atlas HF 200	1 milling and assembling jig with stopper HFS 200 1 milling cutter with thrust ring HFF 200 4 fully threaded screws TX25 - 6,0 x 60 mm, blue galvanised 2 hexagon socket screws M 5 x 16 mm, 1 Allen key 4 mm Assembly instructions

Contents

1 x milling and assembly* jigs in various sizes
1 x carbide groove-milling cutters in various sizes
Screw set for fastening the milling and assembly jig

* The milling and assembly jig for easy, fast and secure assembly of the Atlas wood connector

Template

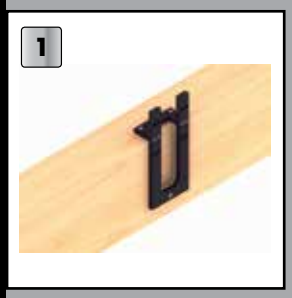
for Atlas wood connector

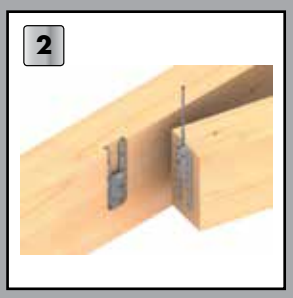
Art. no.	Suitable for	PU
29646	Atlas HF 70	1
29656	Atlas HF 100, HF 135, HF 170	1
29666	Atlas HF 200	1

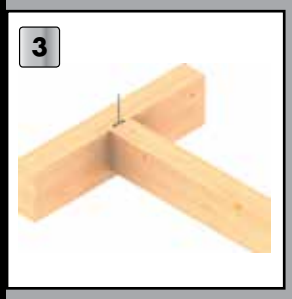
Milling cutter

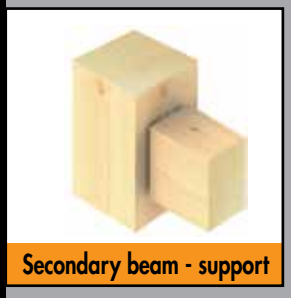
for Atlas wood connector

Art. no.	Suitable for	PU
29676	Atlas HF 70	1
29686	Atlas HF 100, HF 135, HF 170	1
29696	Atlas HF 200	1









Secondary beam - support

Bolt construction

Façade

Assembly

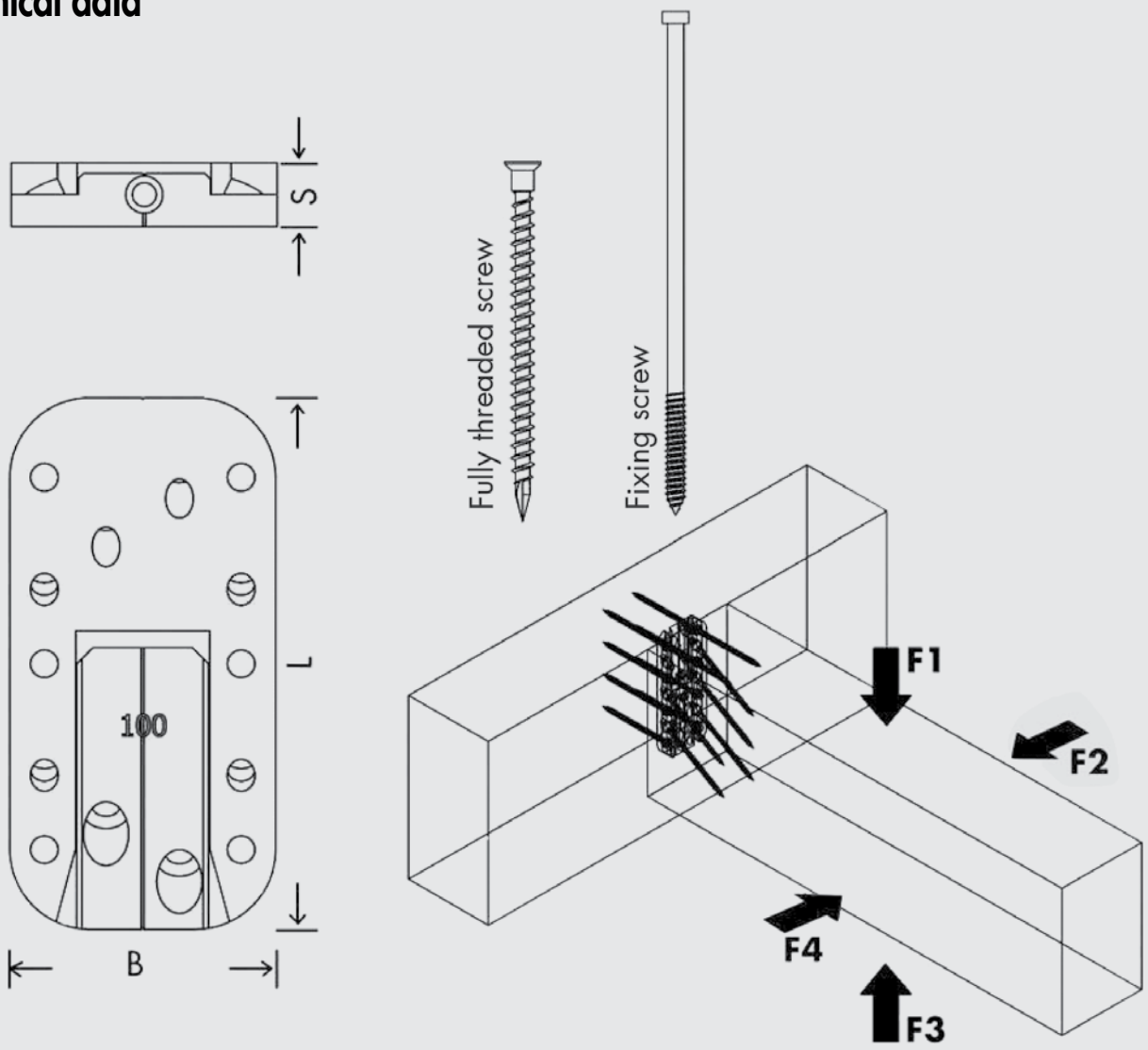
1. Simply set the stopper for the milling and assembling jig to the required size of the Atlas wood connector, put the milling and assembling jig in place, fix it and cut out the pocket with the corresponding groove miller.
2. The Atlas is then set into the milled recess and fastened with the supplied system screws. The milling and assembling jig is then placed in the same setting on the component that is to be connected and the identical second part of the Atlas wood connector is screwed in place. Pre-assembly is now complete and the component to be connected is suspended in place.
3. In conclusion, the fixing screw is inserted into the Atlas. In this way the Atlas wood connector is pulled together, if necessary, and the position security of the hook connector is guaranteed. THAT'S IT!

The installation can therefore be both visible (for broad root with chamfer connections) and invisible (milled recess).
The above assembly example shows the invisible installation.
With visible installation, there is no need for milling and the milling and assembling jig is only used as an assembling jig.

Applications

For nearly all areas of wood construction, irrespective of the direction of the wood grain, it can be used vertically and horizontally! Secondary and main beams, secondary beam supports, bolt construction, hall construction, façades, conservatories, balconies...
The Atlas wood connector's node connection is loaded in four directions with high statically verified values, and at the same represents security against unintended loosening of the connector.

Technical data



	Atlas permitted value	Secondary beam		Load F1	Load F3	Load F2 and F4
		Min. width	Min. height	Char. value of the load-bearing capacity R_k a)		Char. value of the load-bearing capacity R_k a)
Art. no.	Type	mm	mm	kN	kN	kN
30036	70	50	80	6,80	2,00	4,40
30056	100	80	115	17,40	8,56	10,60
30076	135	80	150	26,70	8,56	15,00
30096	170	80	185	33,40	8,56	16,00
30116	200	100	200	43,00	19,15	22,70

Calculation according to ETA-12/0068. Wood density $\rho_k = 350$ kg/m³. All echanical 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.

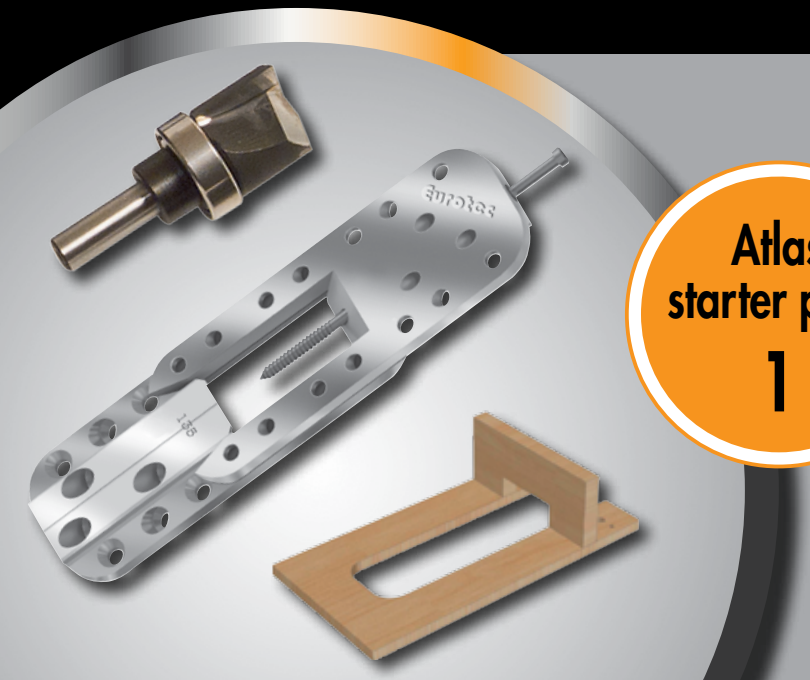
a) The characteristic values of the load-bearing capacity R_k should not be treated as equivalent to the max. possible load (the max. force).
Characteristic values of the load-bearing capacity R_k should be reduced to dimensioning values R_d with regard to the usage class and class of the load duration: $R_d = R_k \times k_{mod} / \gamma_M$.
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. $k_{mod} = 0{,}9$. $\gamma_M = 1{,}3$.
→ Dimensioning value of the load $E_d = 2{,}00 \cdot 1{,}35 + 3{,}00 \cdot 1{,}5 = 7{,}20$ kN. The load-bearing capacity of the joint is therefore considered to have been demonstrated i $R_d \geq E_d$.
→ min $R_k = R_d \cdot \gamma_M / k_{mod}$ D.h., i.e. the characteristic minimum value of the load-bearing capacity is calculated based on: min $R_k = R_d \cdot \gamma_M / k_{mod} \rightarrow R_k = 7{,}20$ kN $\cdot 1{,}3/0{,}9 = 10{,}40$ kN → comparison with table values.

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

Our Atlas starter packs

There are two packages with different configurations to choose from



Atlas starter pack 1

Contents

- 40 x Atlas HF 100 (= 20 pairs)
  - Screws are included with this product -
- 1 x timber milling & assembly
- 1 x milling cutter

Art. no. 30126

Atlas starter pack 2

Contents

- 40 x Atlas HF 135 (= 20 pairs)
  - Screws are included with this product -
- 1 x timber milling & assembly
- 1 x milling cutter

Art. no. 30136

Urs and Urs mini tie bars

Anchor timber-frame constructions securely against tension

The galvanised Urs and Urs mini tie bars can safely dissipate tensile and longitudinal-shear forces through the intermediate layer with no attenuation.

The **problem**

- Loading condition 1: loading in the plane of the wall
- Loading condition 2: loading transverse to the plane of the wall
- Single and double shear

The **solution**

- Resolving forces solves problems

The **advantages**

- Screwing onto OSB/Fermacell® butt joint
- Assembly tolerance of 30 mm on the construction site
- Tension strap disappears into planking area
- Disappears into 180 mm screed area
- Supplied with fastening set
- With static calculation and mark of conformity
- Tension and longitudinal-shear anchoring (13,4 kN/1,3 kN)

Urs tie bar

incl. fastening set

Art. no.	Dimensions (mm)*	PU
954047	410 x 60 x 65 x 2,5	10

* Height x length x width x depth

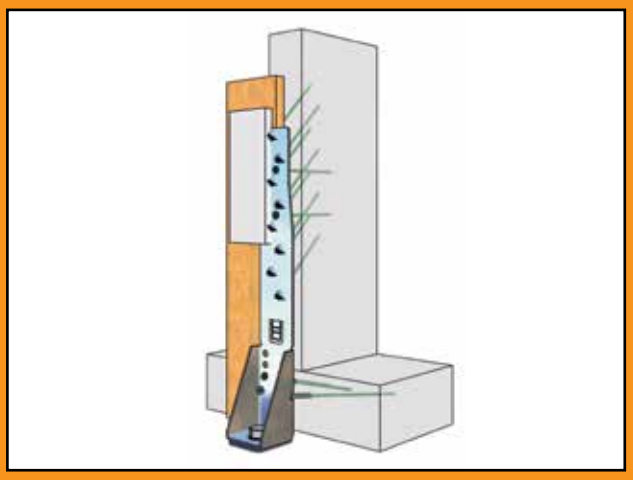
The newly developed Urs and Urs mini tie connectors (mark of conformity in accordance with DIN 1052) are one solution for the problems just mentioned. The Urs tie bar transfers the tension and longitudinal-shear forces into the anchoring system via a lanted screw connection without exposing the intermediate layer (OSB or gypsum fibre board) to shearing. This solution means that edge distances of fasteners in the panel area are no longer critical. The slanted screw connection leads to the forces being resolved, so that the screw need only transfer tensile forces and the intermediate layer need only transfer compressive forces.

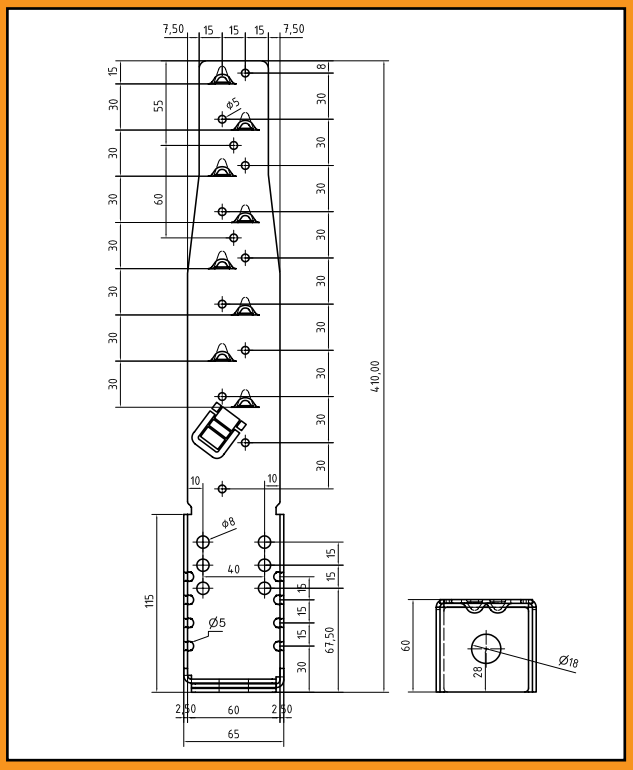
Installation is easy:

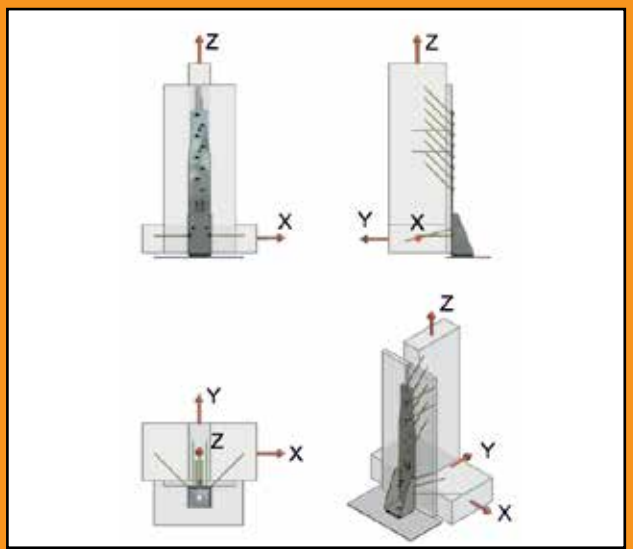
The fastener is simply positioned on the planking in the baseplate area and fastened to the post and the sill using slanted screws.

Here, the connection is capable of transferring tension and longitudinal-shear forces from loading conditions 1 and 2 via the slanted screws into the Urs tie bar and ultimately into the floor slab via a plug.

The connector is available in the Urs and Urs mini tie bar versions.

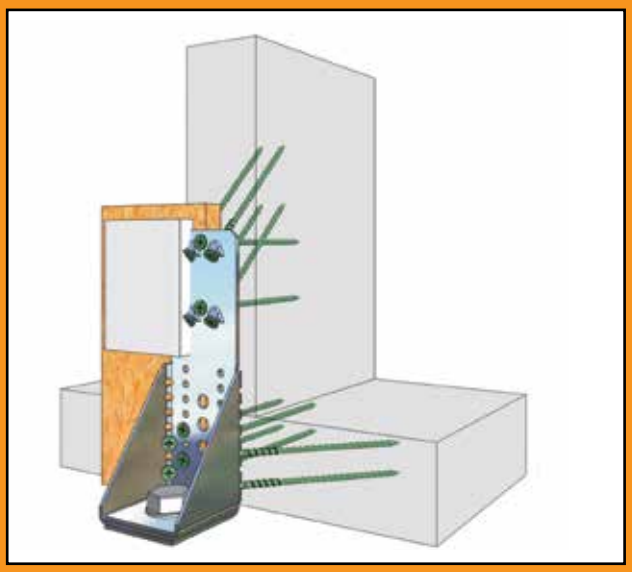






Urs tie bar

	Max. tension	
Loading condition 1: wind load z x	$R_{z,d} = 13,4$ kN	Wall thrust / $R_{x,d} = 1,3$ kN
Loading condition 2: wind load z y	$R_{z,d} = 13,4$ kN	Wind suction / $R_{y,d} = 2,1$ kN
	$R_{z,d} = 13,4$ kN	Wind pressure / $R_{y,d} = 1,2$ kN

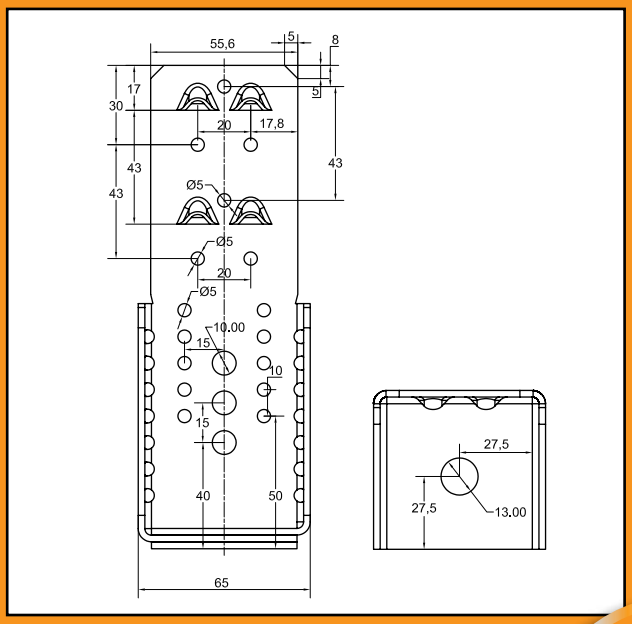


Urs mini tie bar

incl. fastening set

Art. no.	Dimensions (mm)*	PU
954048	180 x 60 x 65 x 2,5	10

* Height x length x width x depth



Slanted screw connection

At the construction site, the Urs mini tie bar is placed on the planking and fastened to the timber post through the OSB/Fermacell® panel using the patented slanted screw connection.

Directly from the post into the Urs mini tie bar

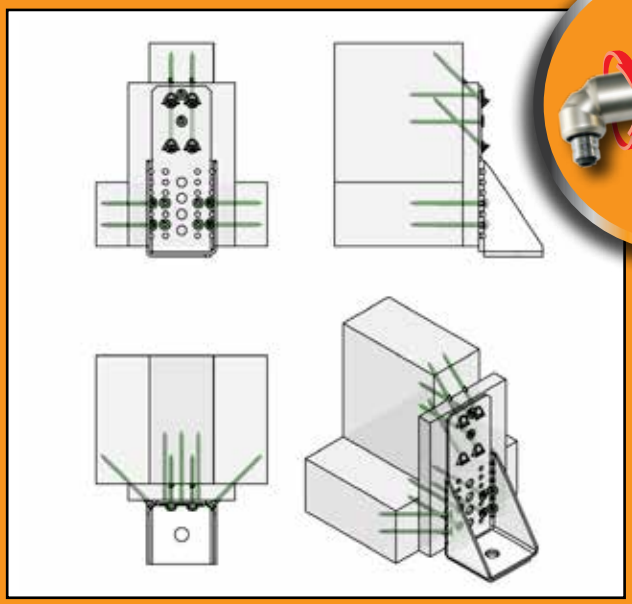
The forces are transferred directly into the Urs mini tie bar via the supplied screws without subjecting the screws to shearing. The compressive component resulting from resolution of the forces is dissipated via the OSB/Fermacell® panel.

Assembly tolerance 30 mm For all three force directions

Anchoring with the Urs mini tie bar is intended for the three loading directions z, x and y.

Secure anchoring in the butt joint

For the first time, an anchorage can also be used reliably in the OSB/Fermacell® butt joint without attenuation.

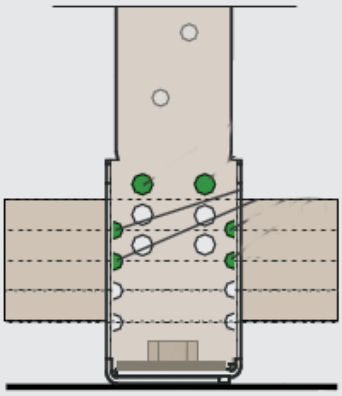


Our product recommendation: Eurotec angle-screw attachment for easy installation of the Urs mini tie bar

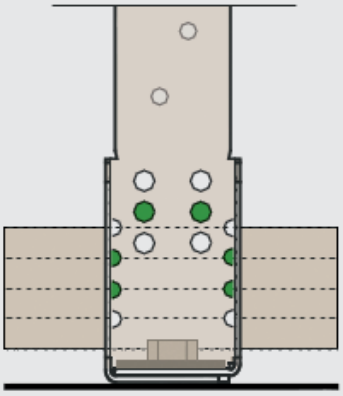
Urs mini tie bar

	Max. tension	
Loading condition 1: wind load z x	$R_{z,d} = 6,4$ kN	Wall thrust / $R_{x,d} = 2,1$ kN
Loading condition 2: wind load z y	$R_{z,d} = 6,4$ kN	Wind suction / $R_{y,d} = 1,7$ kN
	$R_{z,d} = 6,4$ kN	Wind pressure / $R_{y,d} = 2,5$ kN

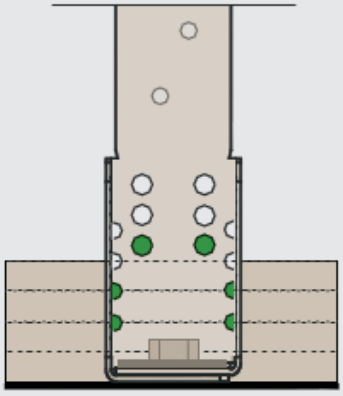
Urs tie-bar assembly instructions



+3 cm



+1,5 cm

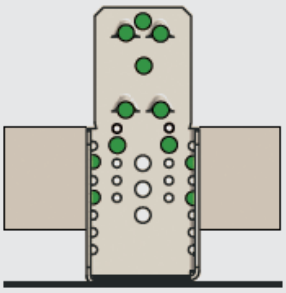


±0 cm

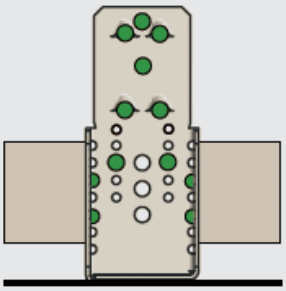
Firstly the plug is installed in concrete, then the slanted screws* are installed

* use a high-quality drill bit with three cutting edges

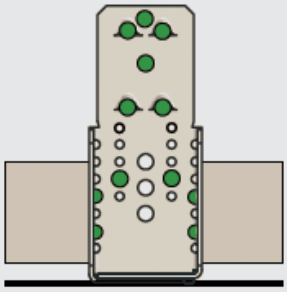
Urs mini tie bar assembly instructions



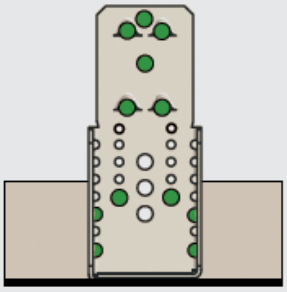
+3 cm



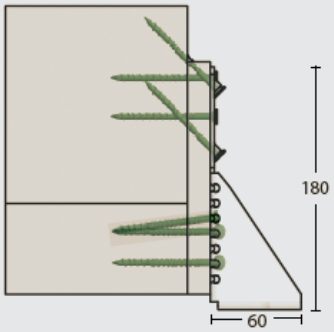
+2 cm



+1 cm



±0 cm



Simply tie bar

Anchor timber-frame constructions securely against tension

Europ. Techn. Bewertung
European Technical Assessment
ETA-14/0314

For quick and easy connections

The Simply tie bar allows quick and easy timber–timber, timber–concrete, timber–steel and timber–brickwork connections.

It is especially sturdy and can withstand extremely high loads. It is an alternative to the Urs/Urs mini tie bar.

The Simply tie bar has nail holes on one side and screw holes (including a slot) in the other.

Simply LL* tie bar

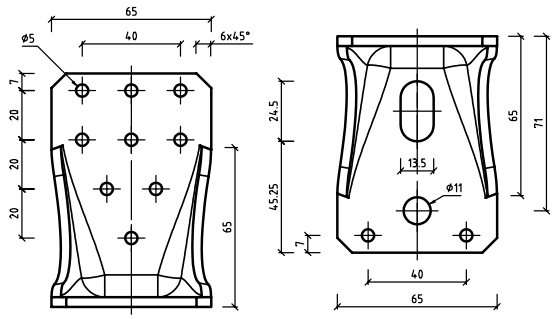
Slot, galvanised

Art. no.	Dimensions (mm)*	PU
954056	95 x 88 x 65 x 4	25
954057	135 x 88 x 65 x 4	25
954058	285 x 88 x 65 x 4	25

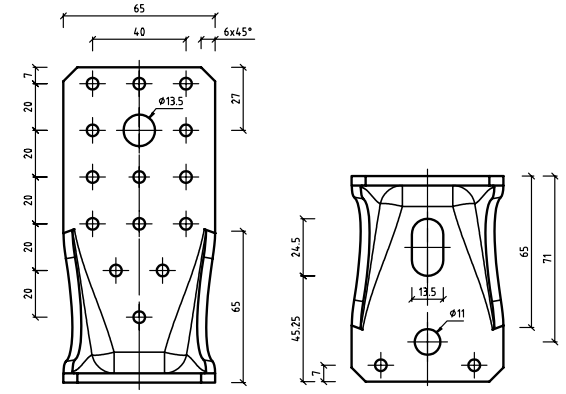
* Height x length x width x depth

	Holes	
Tie bar	Ø mm	Quantity
Simply LL 95	5 13,5 (x24,5) 11	9 + 2 0 + 1 0 + 1
Simply LL 135	5 13,5 (x24,5) 11	14 + 2 1 + 1 0 + 1
Simply LL 285	5 13,5 (x24,5) 11	28 + 2 3 + 1 0 + 1

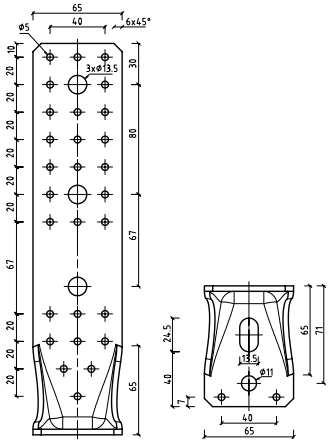
Simply LL 95



Simply LL 135



Simply LL 285



Angle bracket

Hot-dip galvanised steel

NEW
to our product range

© dexsvirid / shutterstock.com

Angle bracket
with a rib

Art. no.	Dimensions[a] (mm)	Drill holes[b] (mm)	PU
904725	70 x 70 x 55	16 x 5 / 2 x 11	50
904726	90 x 90 x 65	20 x 5 / 2 x 11	50
904727	105 x 105 x 90	24 x 5 / 4 x 13	50

a) Length x width x height
b) Number x Ø

- High stability thanks to reinforced rib
- Excellent corrosion protection thanks to hot-dip galvanisation

Our **competencies**

Cold forming

Cold forming refers to the targeted deformation of metals below their recrystallisation temperature. This production technique is used primarily in our timber construction and concrete screws.
Cold forming within the framework of our screw production involves feeding a plain wire into a machine, where it is successively straightened, cut to length, upset, reduced, rolled and, if necessary, milled.
The advantages of this production technique include, above all, the high degree of dimensional and geometrical accuracy it offers despite the high output quantity, as well as minimal material loss in the course of production and increased strength of the end product thanks to so-called strain hardening.

Extrusion technology

In the extrusion process, a raw material is heated and then squeezed under pressure through a shaping tool.
The result is a straight strand that can be cut to any desired length.
This process is applied in, among other products, our aluminium profiles and WPC deck boards.
The key benefit is that highly complex shapes can be produced in long lengths and with the utmost precision.

Stamping and stamping-bending technology

Stamping and stamping-bending technology can be used to stamp interior and exterior contours from sheets of various thicknesses and materials and to shape them as desired.
This production technique is applied in, among other products, some deck fastening systems, the Façade clip and tie rods.

Plastic injection-moulding process

Plastic is a highly versatile material and can therefore be used for a wide range of products and applications. You will find this raw material in, among other products, our adjustable feet for deck substructures, some fasteners for deck coverings, adjustment blocks, assembly wedges, insulation-panel holders and plugs.
In the plastic injection-moulding process, powdered or granulated plastic raw material is melted by applying heat.
The resulting molten substance is then squeezed under high pressure into so-called pockets in an injection mould.
In the course of the cooling process, the molten material sets into a solid, allowing the moulded parts to be ejected from the moulds.
The particular advantages of this process include the short production turnaround times, almost unlimited design possibilities in the injection-moulded parts and the fact that the completed parts require only minimum finishing work.

Wood–concrete composite

Strengthening of ceiling frameworks in new builds and renovations

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 603 zugelassen

© by-studio / fotoliaude

High load capacities at the widest possible spans require, above all, high rigidity, i.e. low sagging of the ceiling framework under load. Here, timber joist ceilings reach the limits of what is possible relatively quickly with regard to usability.
Combining wood and reinforced concrete using the TCC screw exploits the best properties of these two materials to achieve a framework with a high load-bearing capacity.

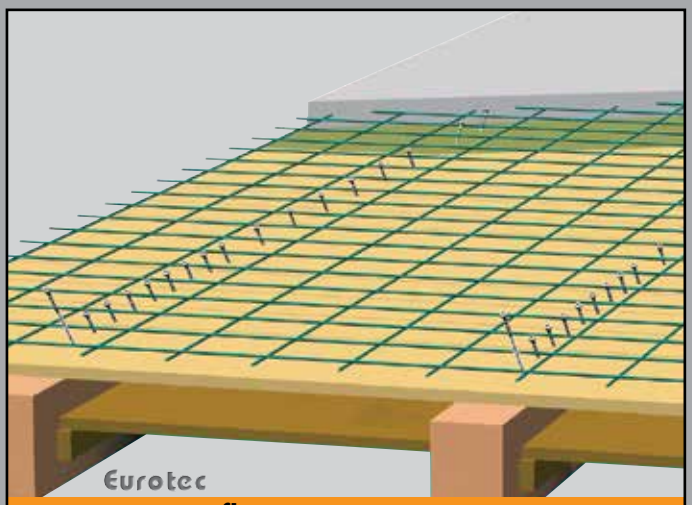
The wood–concrete composite system is used both in new builds and in the renovation of residential and commercial buildings. In new builds, increased spans can therefore be taken into account at the planning stage. This technique can also be especially useful in the case of buildings affected by changes of use.

Strengths of the wood–concrete composite system

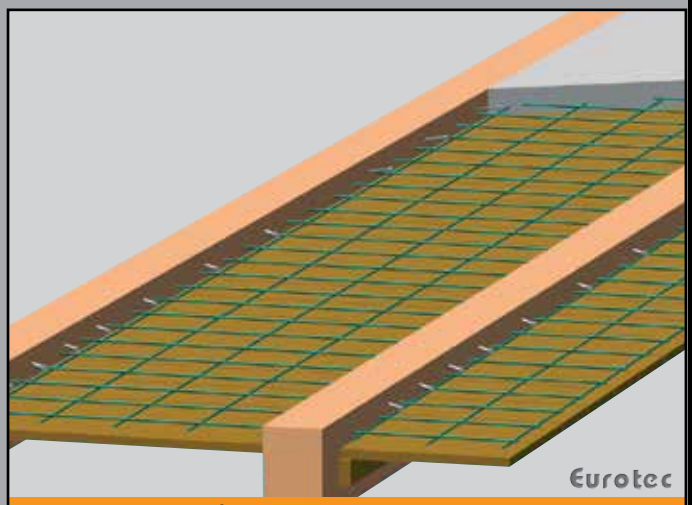
- Increased load-bearing capacity
- Increased rigidity
- Improved sound insulation
- Increased fire resistance
- The existing joists are retained
- The boarding can be retained (Topfloor system)
- The assembly height is not significantly altered (Slimfloor system)

Wood–concrete composite

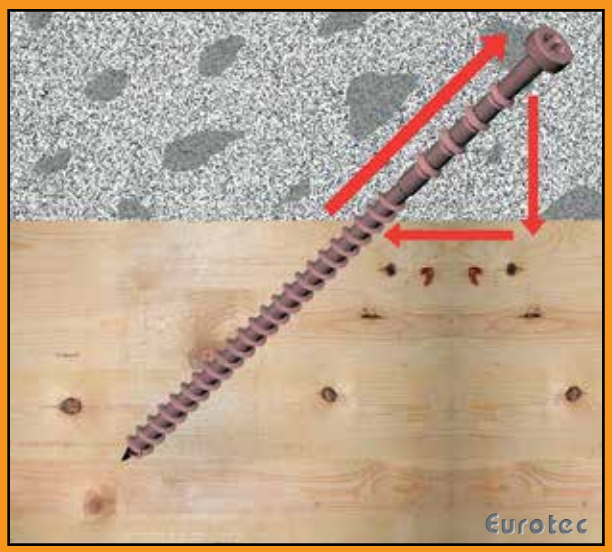
Composite screw



Topfloor (concrete on the top side)

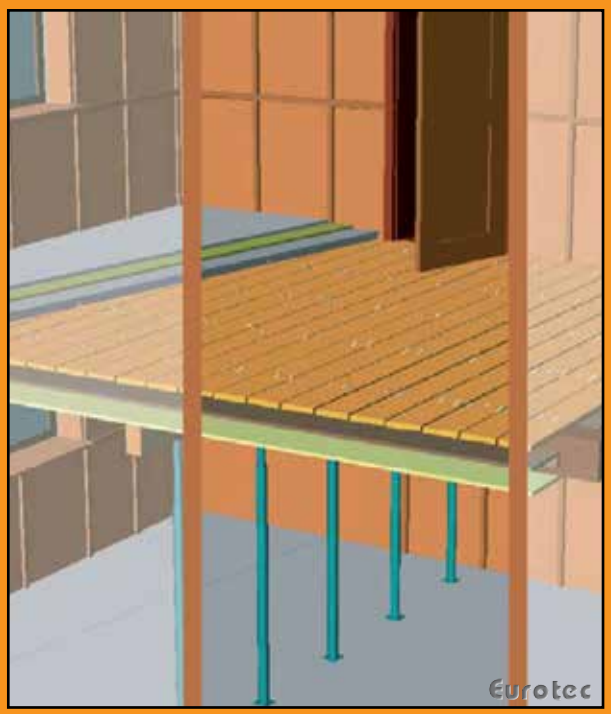


Slimfloor (concrete between the joists)



Intelligent load conversion

The ceiling load is resolved into compression components between the concrete and timber and tension components in the special screw.



Construction in the existing structure

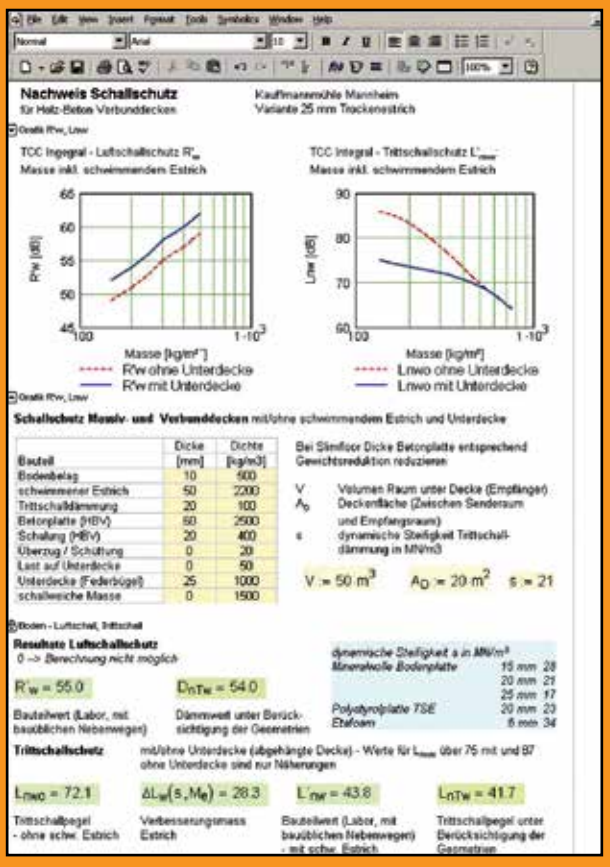
Props lift the sag of the existing ceiling joists.

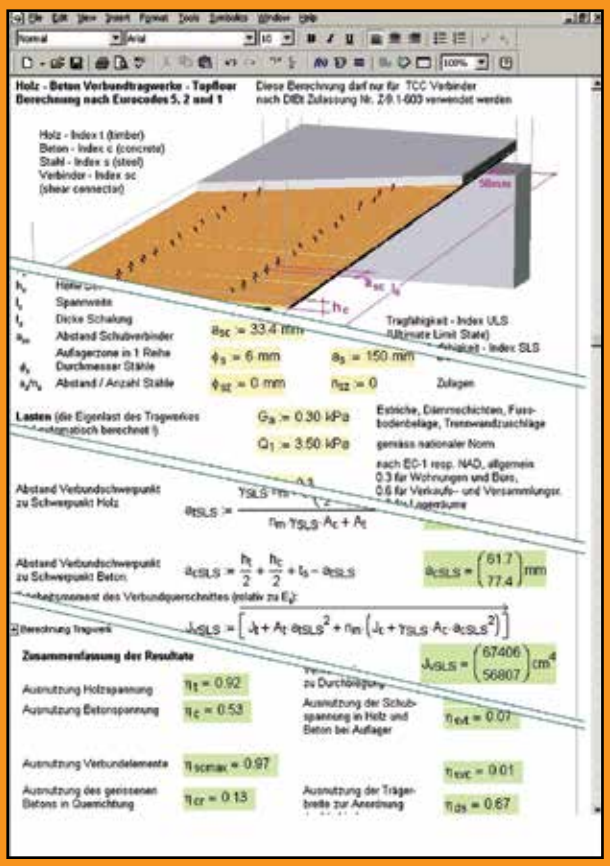
Calculation aid

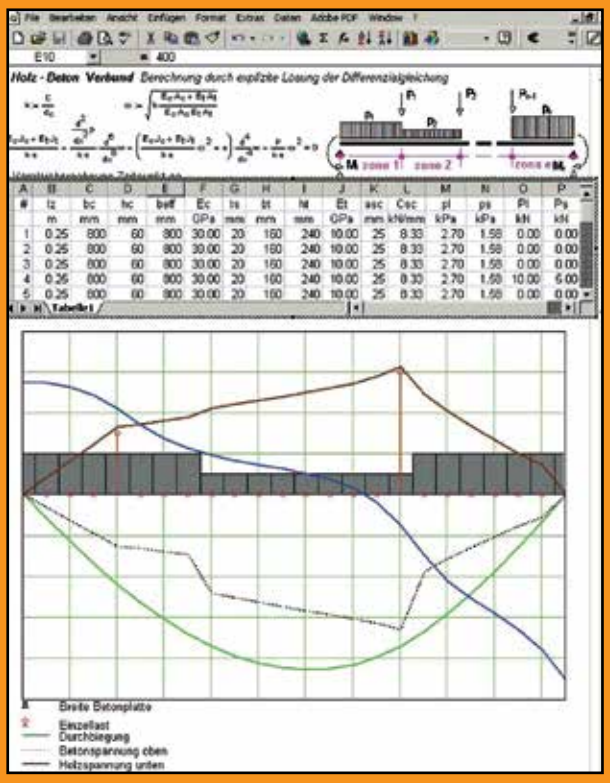
Projects for the wood–concrete composite system are precalculated by Eurotec. A customised software program based on Mathcad is available for this.

Please contact us:

Tel. 0049 (0) 23 31 - 62 45-0
E-Mail: info@e-u-r-o-tec.de







Beam grip with ratchet

Indispensable aid for carpenters

Beam grip = less force required

The beam grip is an indispensable aid for carpenters. Whether you want to align a roof truss or carry out other carpentry work, the beam grip allows you to prestress timber quickly and easily.

Product advantages

- Drop forged hooks
- No risk of splitting while driving in
- High-quality lead screw
- Ergonomic rubber hand
- 320 mm ratchet length for optimum load transmission
- Double-sided handling thanks to clockwise/ counterclockwise selector
- Span up to 600 mm
- Proven top quality

© Dmitka / fotolia.de

Beam grip

with ratchet, forged steel

Art. no.	Dimensions	Span	PU
954054	320 mm	bis 600 mm	2

Bracing strap tensioner

suitable for the beam grip with ratchet

Art. no.	Strap	PU
954055	for 2 mm bracing strap	1

Transport anchor system

Consists of transport anchor and transport anchor screws

The secure lifting system

Made of quality steel, this manual lifting attachment is used to lift all kinds of timber parts securely and easily. The transport anchors of the load group of up to 1.3 tons are expressly to be used only in conjunction with the Ø 11 x 160 mm Eurotec transport anchor screw tested in the ETA-11/0024 European Technical Approval.

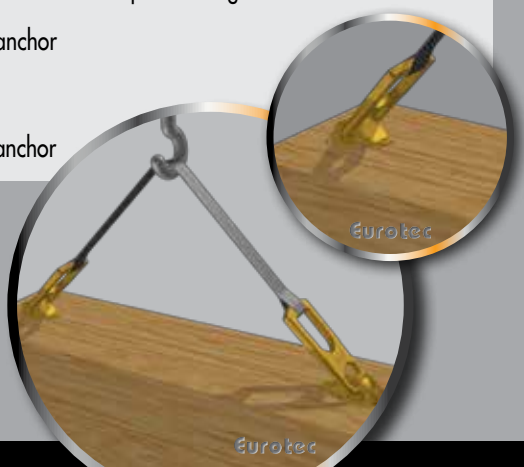
The Ø 11 x 160 Eurotec transport anchor screw is only to be used once! It can be screwed into solid wood (softwood), laminated veneer lumber, glue-laminated timber, composite laminated board and composite laminated beam without pilot-drilling. Use in hardwoods is not permitted!
The possible and/or approved assembly positions can be found in our operating instructions. We will be delighted to provide you with a copy of these.

Please note

- Transport anchor screws must only be used once
- Read the operating instructions in detail before use
- Users are to be trained prior to the first commissioning
- The transport anchor is to be examined for damage before each use and discarded where appropriate
- The weights of the parts to be lifted must be known and permissible
- Only the lifting equipment stated in the operating instructions may be used

How the system works

1. Screw in the screw without pilot-drilling
2. Engage the anchor
3. Lift the load
4. Release the anchor



Transport anchor

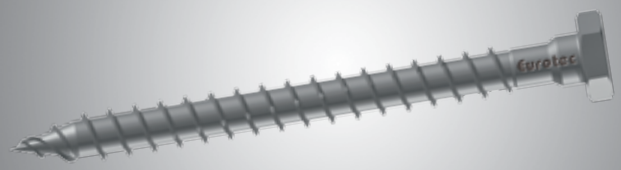
high-quality steel

Art. no.	Dimensions (mm)*	Load group	PU**
110361	190 x 70	up to 1.3 tons	2

* Length x width
** Screws must be ordered separately (see below)

Transport anchor screw

high-quality steel, with AG tip



Art. no.	Dimensions (mm)	Head	PU
110360	11 x 160	SW17	20

- AG screw tip

Extraction-resistance values for the Ø 11 transport anchor screw According to ETA-11/0024 approval

Subject to	kg
axial tension	792
diagonal tension	368
diagonal tension with precise sinking of the coupling head	792

Wall support

Provides support during the installation of prefabricated walls

Makes the assembly of prefabricated walls significantly easier

Thanks to their high load-bearing capacity, the Eurotec wall supports can support walls until they are fully assembled without any problems and therefore take the place of many helping hands. A locking pin system allows especially quick and easy adjustment of the wall support's height. Subsequent fine adjustment is also possible using threaded rods.

Art. no.	Length (mm)	Angle of inclination	PU
803572	1600-3000	max. 45°	1

Adjustment range of 160–300 cm:
- Basic adjustment via 13 stop positions at intervals of 10.6 cm
- Fine adjustment with an adjustment range of 19 cm

Advantages

- Universal application
- Easy operation
- Fast assembly
- Almost no force needed from the user
- Very secure and sturdy
- Saves time

Japanese saw

A tool for every craftsman's toolbox

Low force exertion thanks to thin saw blade

A Japanese saw is a collapsible handsaw and the counterpart of the precision saws that are common in Europe. The key difference is that Japanese saws only cut on the pull stroke. The especially thin saw blade is a great advantage, along with the associated fine cut, which is achieved with low force exertion. Thanks to the extremely sharp trapezoidal toothing, the cutted timber no longer requires finishing. This saves time and offers attractive results.

Art. no.	Length of saw blade (mm)*	Total length (mm)**	PU
800400	240 x 35 x 1	530/200	1

• Application areas: carpentry crafts, tree care, pruning of trees etc.

Art. no.	Dimensions (mm)*	PU
800401	240 x 35 x 1	1

* Length x width x thickness. ** Total length / handle length

Advantages

- Fine cuts
- Low force exertion
- Little material wear
- Saves time
- Easy to handle
- Flexible saw blade

Please note

- The cutting surfaces are very sharp
- Practise handling before first use to avoid injuries

Ripsaw

The ideal complement to the electrical saws frequently used in wood construction

NEW
to our product range

Art. no.	Designation	Length	PU
800405	Ripsaw Universal saw	500 mm	12

Saws timber, timber-based materials and plastic

Thanks to its easy handling, the ripsaw from Eurotec can be used as an ideal complement to the electric saws commonly used in timber construction.
One clear advantage over classic hand-operated ripsaws is the alternating triple-ground trapezoidal toothing, which allows fine yet rapid cutting with little expenditure of force. With a length of 500 mm, the saw blade cuts only on the pushing stroke and has extra posthardening in the cutting area, delivering a significant reduction in wear. The comfortable handle offers sufficient space for each hand and allows precise handling, as well as optimum force transmission.

Advantages

- is supplied in combination with a presentation-display
- Fine cuts, low force exertion
- Time saving due to high cutting speed
- Comfortable handle with non-slip rubber inlay
- Extra posthardening on toothing; less wear
- Handle with 45° and 90° guides for use as an angle template

Please note

- The cutting surfaces are very sharp
- Practise handling before first use to avoid injuries

Insulation knife

With specially ground cutting surface

Universal application for various insulating materials

The Eurotec insulation knife stands out in particular thanks to its innovative stainless-steel blade. It differs from conventional insulation knives in its special design and specially ground cutting surface. This ensures that various insulating materials can be cut effortlessly and without tearing, and that the insulation knife does not get stuck. The special knife tip allows you to drill or cut holes into the insulating materials for items that penetrate the insulation. The ergonomic plastic handle has a practical hole for hanging.

Art. no.	Designation	Blade (mm)	PU
800410	Insulation knife	340 x 50	1

- Total length: 480 mm
- Blade length: 340 mm
- Blade width: 50 mm
- Material: blade made of stainless steel, handle made of plasti

Assembly wedges, adjustment blocks

NEW
to our product range

The practical assembly wedges and adjustment blocks from Eurotec

Whether for temporary wedging or permanent support, Eurotec's practical assembly wedges and adjustment blocks are used in almost every field, making them a must for any well-equipped craftsman's business.
Our wedges and blocks are manufactured from high-quality polyethylene and offer a multitude of advantages over classical wooden varieties.

Advantages

- Straightforward and rapid assembly
- High load-bearing capacity
- No risk of cracks or splinters
  → Avoid problems while cutting
  → Avoid problems while fixing parts in place with brackets, screws or nails
- High impact strength
  → Avoid problems during assembly using hammers
- Lightweight
- Durable
- Resistant to temperature and weather
  → No tension cracks and no reduction in accuracy of dimensions or fit
- Resistant to insects and fungi
- Resistant to acids, alkalis and other chemicals

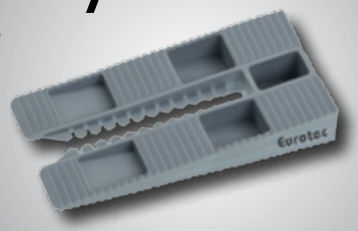
Assembly block
closed

Art. no.	Dimensions[a] (mm)	Load-bearing capacity (kg)	Height adjustment (mm)	Colour	PU
964546	65 x 28 x 8	≤ 200	8 - 12	red	1000
964547	88 x 43 x 15	≤ 500	15 - 22	grey	924
964548	140 x 43 x 25	≤ 800	25 - 42	black	364
964549	140 x 43 x 25	≤ 2000	25 - 42	blue	364

a) Length x Width x Height

- Firm grip thanks to special profiled surface

Assembly block
with slit

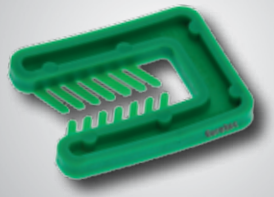


Art. no.	Dimensions[a] (mm)	Load-bearing capacity (kg)	Height adjustment (mm)	Colour	PU
964550	70 x 35 x 10	≤ 200	10 - 15	yellow	1000
964551	77 x 38 x 10	≤ 200	10 - 15	white	1000
964552	88 x 43 x 15	≤ 300	15 - 22	grey	500
964553	140 x 43 x 25	≤ 500	25 - 42	black	364

a) Length x Width x Height

- Firm grip thanks to special profiled surface
- Slit allows it to be slid onto nails and screws
- Serration inside the slit prevents it from slipping off the nail or screw

Mini adjustment block
with slit



Art. no.	Dimensions[a] (mm)	Load-bearing capacity (kg)	Colour	PU
964567	50 x 38 x 1	≤ 200	blue	500
964568	50 x 38 x 2	≤ 200	white	500
964569	50 x 38 x 3	≤ 200	red	500
964570	50 x 38 x 4	≤ 200	black	500
964571	50 x 38 x 5	≤ 200	green	500
964572	50 x 38 x 10	≤ 200	yellow	250

a) Length x Width x Height

- Slit allows it to be slid onto nails and screws
- Serration inside the slit prevents it from slipping off the nail or screw

Adjustment block
with slit

Art. no.	Dimensions[a] (mm)	Load-bearing capacity (kg)	Colour	PU
964561	80 x 50 x 1	≤ 200	blue	1000
964562	80 x 50 x 2	≤ 200	white	1000
964563	80 x 50 x 3	≤ 200	red	1000
964564	80 x 50 x 4	≤ 200	black	1000
964565	80 x 50 x 5	≤ 200	green	1000
964566	80 x 50 x 10	≤ 200	yellow	500

a) Length x Width x Height

- Slit allows it to be slid onto nails and screws
- The adjustment blocks can be connected to one another as required
- Serration inside the slit prevents it from slipping off the nail or screw

Adjustment block

Art. no.	Dimensions[a] (mm)	Load-bearing capacity (kg)	Colour	PU
964554	80 x 50 x 2	≤ 2000	red	500
964555	80 x 50 x 3	≤ 2000	green	500
964556	80 x 50 x 5	≤ 2000	blue	500
964557	80 x 50 x 7	≤ 2000	brown	500
964558	80 x 50 x 10	≤ 2000	black	500
964559	80 x 50 x 15	≤ 2000	yellow	250
964560	80 x 50 x 20	≤ 2000	black	250

a) Length x Width x Height

- High compressive strength
  → Load-bearing capacity of 2 tons
- When the blocks are stacked, peg and hole connections prevent them from sliding across one another sideways
- Pegs disappear under loading

Hint
With our practical mixed boxes, you are equipped for every application. The boxes are available in five different assortments.

Mixed box, assembly wedges
with and without slit

Art. no.	Contents (240 pcs.)	PU
964575	80 pcs. 964546 | 60 pcs. 964550 | 50 pcs. 964551 | 40 pcs. 964547 | 10 pcs. 964548	1 box

Mixed box, adjustment blocks
with slit

Art. no.	Contents (250 pcs.)	PU
964576	45 pcs. each 964561, 964562, 964563, 964564, 964565 & 25 pcs. 964566	1 box

Mixed box, assembly wedges
with slit

Art. no.	Contents (100 pcs.)	PU
964573	50 pcs. each 964553, 964552	1 box

Mixed box, adjustment blocks

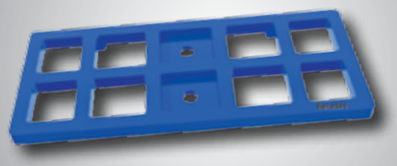
Art. no.	Contents (140 pcs.)	PU
964574	50 pcs. 964554 | 25 pcs. each 964555, 964556, 964558 | 15 pcs. 964560	1 box

Mixed box, mini adjustment blocks
with slit

Art. no.	Contents (450 pcs.)	PU
964577	100 pcs. each 964567, 964568, 964569, 964570 & 50 pcs. 964571	1 box

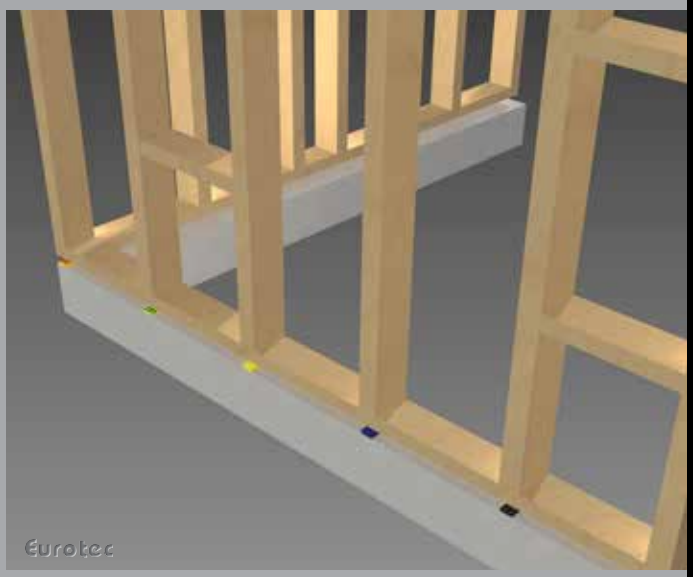
Thanks to the transparent transport box and the different colours, you can be sure of finding the right wedge quickly!

Adjustment block L



Art. no.	Dimensions[a] (mm)	Load-bearing capacity (kg)	Colour	PU
964578	120 x 50 x 2	≤ 4000	red	250
964579	120 x 50 x 3	≤ 4000	green	250
964580	120 x 50 x 5	≤ 4000	blue	250
964581	120 x 50 x 10	≤ 4000	white	100
964582	120 x 50 x 15	≤ 4000	yellow	100

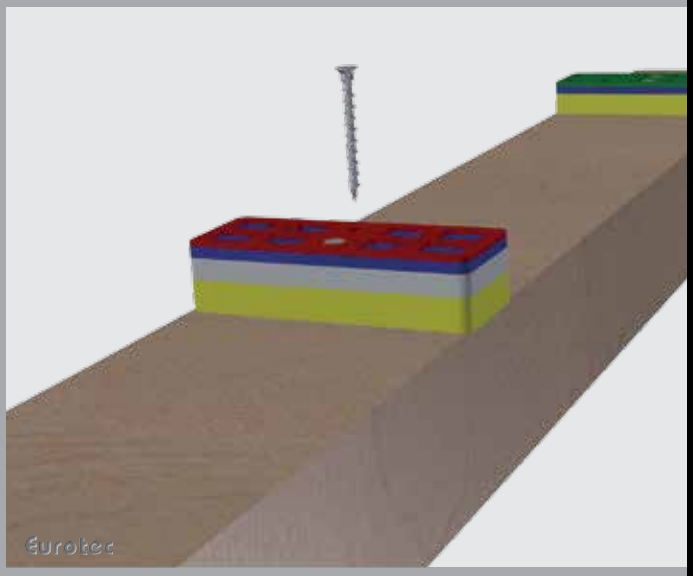
a) Length x Width x Height



Adjustment block XL

Art. no.	Dimensions[a] (mm)	Load-bearing capacity (kg)	Colour	PU
964583	160 x 50 x 2	≤ 4000	red	250
964584	160 x 50 x 3	≤ 4000	green	250
964585	160 x 50 x 5	≤ 4000	blue	250
964586	160 x 50 x 10	≤ 4000	white	100
964587	160 x 50 x 15	≤ 4000	yellow	100

a) Length x Width x Height



- Suitable for adjusting the height of stud frames
  → Constructive timber protection when used in lining timber stud frames
- High compressive strength
  → Load-bearing capacity of 4 tons
- Two screw holes for fixing in place with screws
- When the blocks are stacked, peg and hole connections prevent them from sliding across
  → Pegs disappear under loading

Glazing blocks

Suitable for all common types of window and door glazing

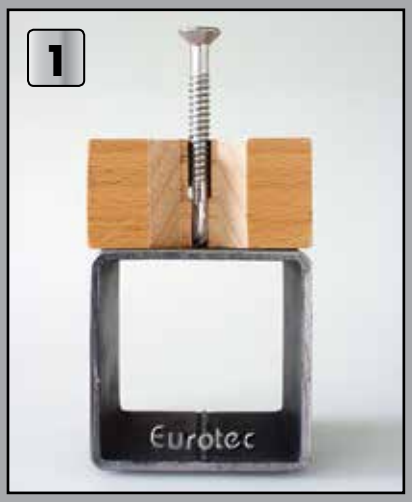
Additional sizes ranging from 50 x 15 mm to 100 x 36 mm available on request.

Art. no.	Dimensions[a] (mm)	Colour	PU
964588	100 x 22 x 1	blue	1000
964589	100 x 22 x 2	white	1000
964590	100 x 22 x 3	grey	1000
964591	100 x 22 x 4	black	1000
964592	100 x 22 x 5	brown	1000
964596	Mixed box glazing blocks		500

a) Length x Width x Height

Balcony board wing-tipped drilling screw

Not only suitable for balcony boards



Balcony board wing-tipped drilling screw

hardened stainless steel or blue galvanised

Art. no.	Dimensions (mm)	Drive	clamping thickness	drilling capacit	PU
Hardened stainless steel:					
901990	4,8 x 38	TX25	20	4	200
111404	5,5 x 45	TX30	25	5	200
111405	5,5 x 50	TX30	30	5	200
111406	6,3 x 60	TX30	35	6	200
901581	6,3 x 85	TX30	60	6	100
901584	6,3 x 110	TX30	85	6	100
Blue galvanised:					
111841	4,2 x 32	TX20	15	3	500
111842	4,2 x 38	TX20	20	3	500
111843	4,8 x 45	TX25	25	4	500
111844	5,5 x 50	TX30	30	5	200
111409	5,5 x 60	TX30	40	5	200
111410	5,5 x 70	TX30	50	5	200
111411	5,5 x 80	TX30	60	5	200
111412	5,5 x 100	TX30	80	5	200
111413	5,5 x 120	TX30	100	5	200
111845	6,3 x 50	TX30	25	6	200
111846	6,3 x 60	TX30	35	6	200
111847	6,3 x 70	TX30	45	6	200
111848	6,3 x 80	TX30	55	6	200
111414	6,3 x 100	TX30	75	6	200
111415	6,3 x 120	TX30	95	6	200

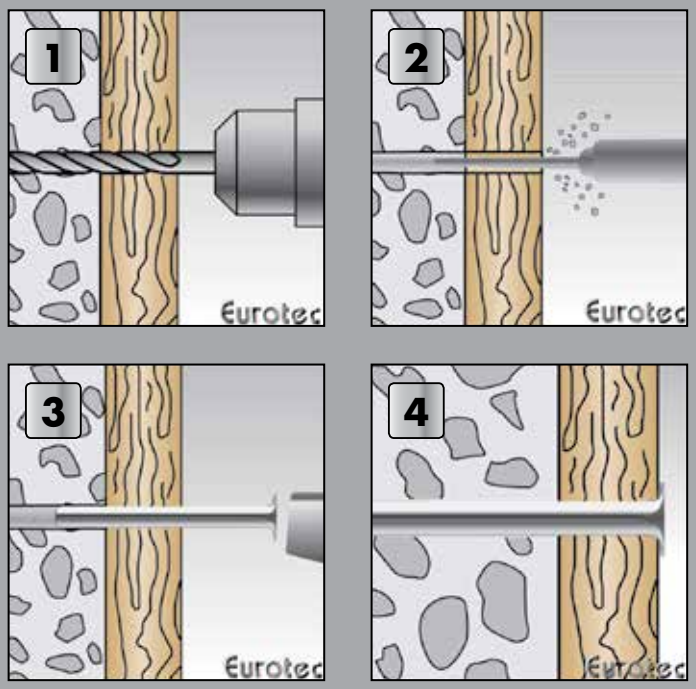
- No pilot-drilling necessary – the wings drill the timber wider than the thread diameter
- The screw drills/cuts its own core hole and mating thread in the steel
- Screws made of galvanised carbon steel or hardened stainless steel according to DIN 10088
- Hardened stainless steel can be magnetised
- Galvanised steel and hardened stainless steel are not resistant to acids. They are therefore also not suitable for fastening woods that contain tannin (e.g. oak)
- The screw is suitable for use in timber–steel joints in outdoor installations and is used in garden, façade and balcony construction.

Express nail/Assembly screws

Especially easy to use

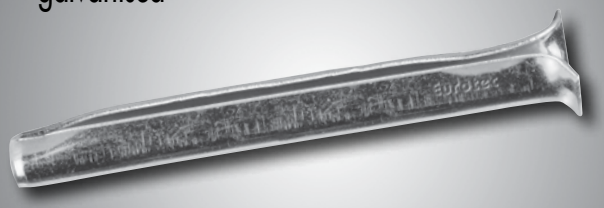
The express nail

is used for lightweight fastenings in concrete and brickwork;
it grips over its entire length in the drilled hole. It is used in concrete, natural stone, dense structures, solid brick and solid sand lime brick.



Express nail

galvanised

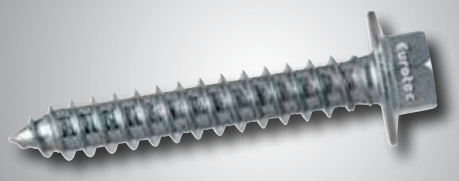


Art. no.	Dimensions (mm)	Attachment thickness (mm)	PU
110143	6,0 x 30	3	200
110144	6,0 x 40	10	200
110145	6,0 x 50	20	200
110146	6,0 x 60	30	200
110147	6,0 x 80	50	200
900089	6,0 x 100	70	200
110148	8,0 x 70	30	100
110149	8,0 x 90	50	100
110150	8,0 x 110	70	100
110151	8,0 x 130	90	100
110152	8,0 x 150	110	100
110153	8,0 x 180	140	100

- Perfectly suited to attaching:
  e.g.: squared timbers, timber and metal substructures and metal profiles.
- Advantages/benefits:
  The wax coating makes it easy to hammer into the drilled hole.
  No screws or plugs are needed.

Assembly screws

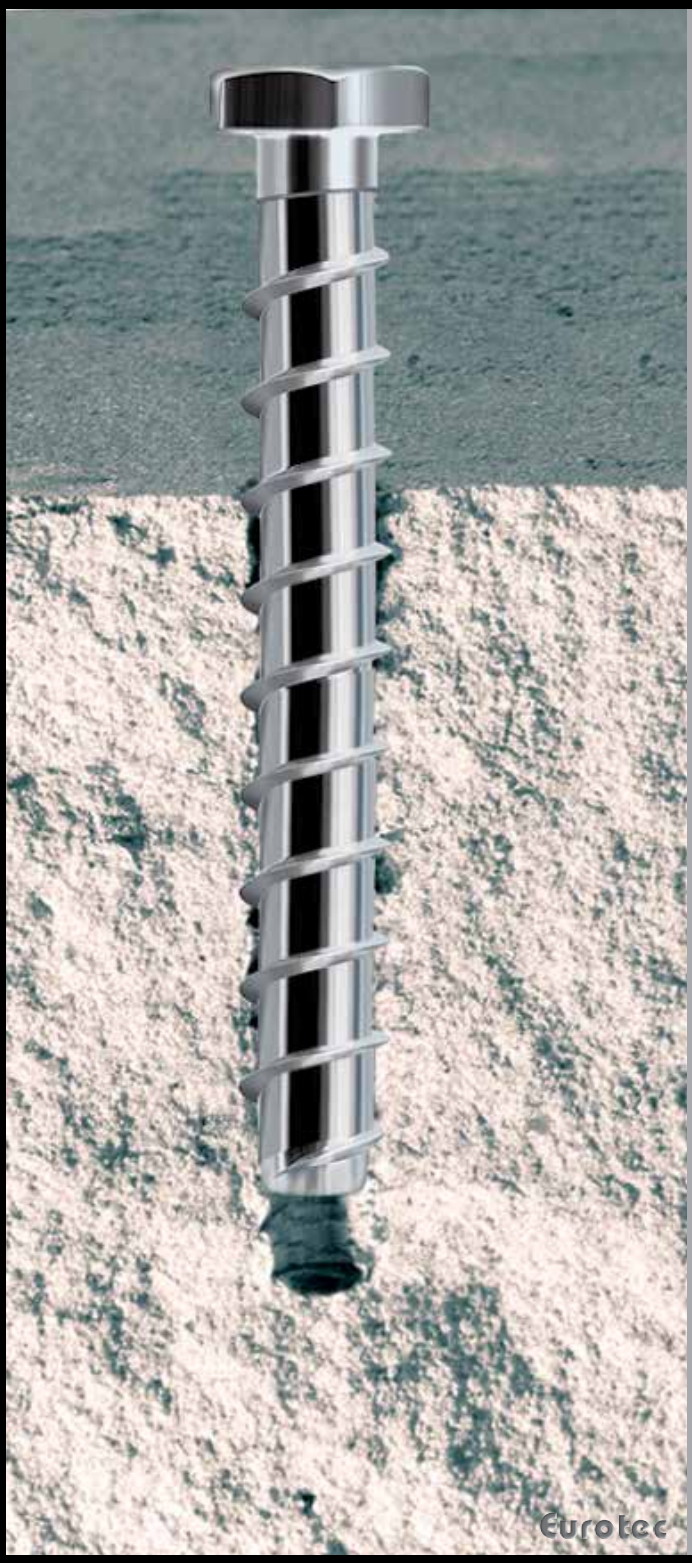
blue galvanised



Art. no.	Dimensions (mm)	PU
111255	6,5 x 40	100
111256	6,5 x 50	100
111257	6,5 x 60	100
111258	6,5 x 75	100
111259	6,5 x 100	100

Rock concrete screws

With optimized mechanical properties!



Europ. Techn. Approval applied for Europ. Techn. Approval

Fastening without plugs

The Rock concrete screw is used for direct fastening, without a plug, in solid subsurfaces such as concrete and brickwork.
Once the hole is pilot-drilled, the screws are simply screwed in.
During screwing, the thread cuts a perfectly fitting mating thread in the subsurface.

Advantages

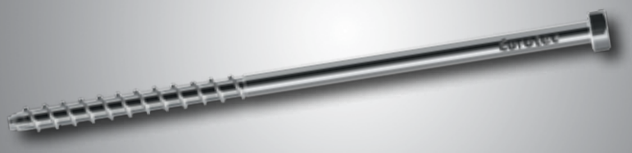
- Installation without plugs
- No expansion effect, so shorter edge distances are possible
- High extraction-resistance values

Application

- Drill hole according to specification
- Position the part to be attached
- Insert the screw

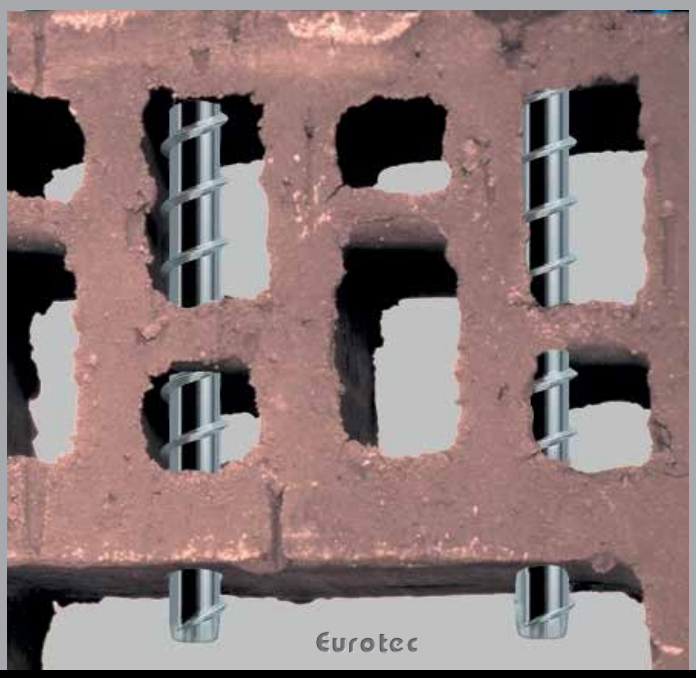
Rock concrete screw

hexagonal, galvanised steel



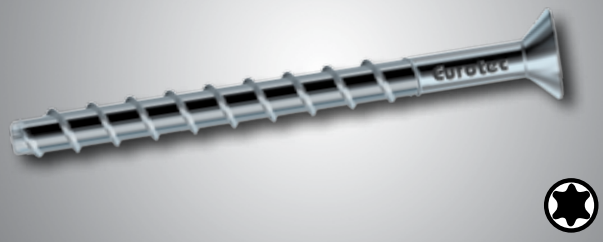
Art. no.	Dimensions (mm)	Head	PU
110338	7,5 x 40	SW13	100
110339	7,5 x 50	SW13	100
110340	7,5 x 60	SW13	100
110341	7,5 x 80	SW13	100
110342	10,5 x 60	SW15	100
110343	10,5 x 80	SW15	100
110344	10,5 x 100	SW15	100
110345	10,5 x 120	SW15	100
110346	10,5 x 140	SW15	100
110347	10,5 x 160	SW15	100
110336	12,5 x 60	SW17	100
110337	12,5 x 80	SW17	100
110327	12,5 x 100	SW17	100
110328	12,5 x 120	SW17	100
110329	12,5 x 140	SW17	50
110330	12,5 x 160	SW17	50
110331	12,5 x 180	SW17	50
110332	12,5 x 200	SW17	50
110333	12,5 x 240	SW17	50
110334	12,5 x 280	SW17	50
110335	12,5 x 320	SW17	50

- Suitable for fastening in: concrete, solid brick, lightweight concrete, porous concrete (from type G5 onwards), pumice, sand-lime brick, perforated brick.

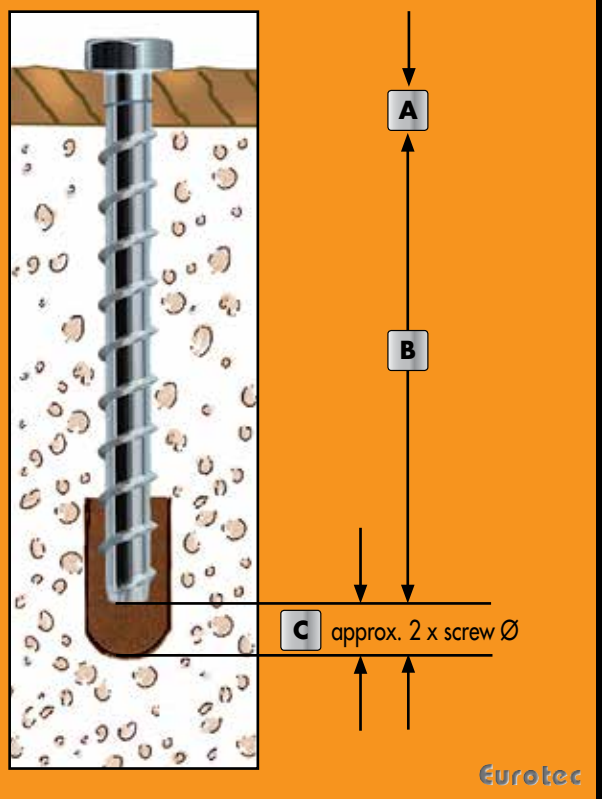


Rock concrete screw

countersunk head, galvanised steel



Art. no.	Dimensions (mm)	Drive	PU
110348	7,5 x 40	TX40	100
110349	7,5 x 60	TX40	100
110350	7,5 x 80	TX40	100
110351	7,5 x 100	TX40	100
110352	7,5 x 120	TX40	100
110353	7,5 x 140	TX40	100
110354	7,5 x 160	TX40	100



A Thickness of the material to be fastened

B Minimum screwing depth

A + **B** Screw length

B + **C** Depth of drill hole

Technical informations
Rock concrete screw

Dimensions (mm)	Ø Head (mm)	Attachment thickness (mm)	Insertion depth (mm)	Tensile load capacity[1] kN Concrete type C20/25		Transverse load[2] kN Calculation ETAG 001		Edge distance (mm) Recommended minimum values		Drill hole (mm) Production
Ø x length	dk	AT	ID	Concrete cracked	Concrete uncracked	Timber-on-concrete connection	Steel-on-concrete connection	Edge/centre distance	Min. subsurface thickness	Ø x depth
Rock hexagonal										
7,5 x 40	SW13	5	35	1,97	2,76	1,15	3,08	50	90	6 x 50
7,5 x 50	SW13	10	40	2,41	3,37	1,19	3,16	50	90	6 x 55
7,5 x 60	SW13	20	40	2,41	3,37	1,19	3,16	50	90	6 x 55
7,5 x 80	SW13	40	40	2,41	3,37	1,19	3,16	50	90	6 x 55
10,5 x 60	SW15	10	50	3,37	4,71	1,63	4,35	60	110	8 x 70
10,5 x 80	SW15	20	60	4,43	6,20	1,69	4,51	60	110	8 x 80
10,5 x 100	SW15	40	60	4,43	6,20	1,69	4,51	60	110	8 x 80
10,5 x 120	SW15	60	60	4,43	6,20	1,69	4,51	60	110	8 x 80
10,5 x 140	SW15	80	60	4,43	6,20	1,69	4,51	60	110	8 x 80
10,5 x 160	SW15	100	60	4,43	6,20	1,69	4,51	60	110	8 x 80
12,5 x 80	SW17	10	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 100	SW17	30	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 120	SW17	50	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 140	SW17	70	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 160	SW17	90	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 180	SW17	110	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 200	SW17	130	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 240	SW17	170	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 280	SW17	210	70	5,58	7,81	5,33	8,54	90	125	10 x 90
12,5 x 320	SW17	250	70	5,58	7,81	5,33	8,54	90	125	10 x 90
Rock countersunk-head										
7,5 x 40	14,0	5	35	1,97	2,76	1,15	3,08	50	90	6 x 50
7,5 x 60	14,0	20	40	2,41	3,37	1,19	3,16	50	90	6 x 55
7,5 x 80	14,0	40	40	2,41	3,37	1,19	3,16	50	90	6 x 55
7,5 x 100	14,0	60	40	2,41	3,37	1,19	3,16	50	90	6 x 55
7,5 x 120	14,0	80	40	2,41	3,37	1,19	3,16	50	90	6 x 55
7,5 x 140	14,0	100	40	2,41	3,37	1,19	3,16	50	90	6 x 55
7,5 x 160	14,0	120	40	2,41	3,37	1,19	3,16	50	90	6 x 55

[1] ETAG 001 / 1997 Annex C calculation method for anchorages in concrete. Permissible recommended tensile load in compliance with the stated insertion depths and edge distances. Safety concept ETAG 001 Annex C, 3.2.3.1 and 3.2.3.2. Calculation resistance for tensile load of an individual plug with no edge effect; concrete reinforced normally.
[2] Calculation of transverse load ETAG 001 Annex C Fig. 4.7a. Steel connection without lever arm and without edge effect. Timber connection with lever arm* and without tensile load. * Half of the attached part is calculated as a lever arm.

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

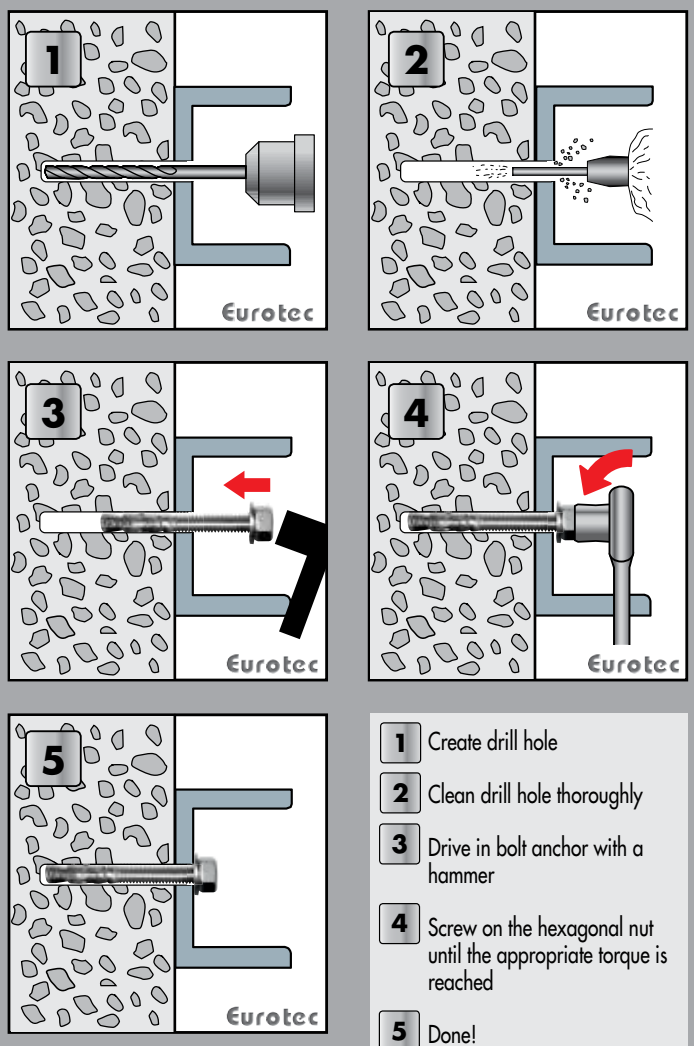
Bolt anchor

For heavy-duty fastening in uncracked concrete

Europ. Techn. Bewertung
European Technical Assessment
ETA-14/0409

Torque-controlled expanding plug

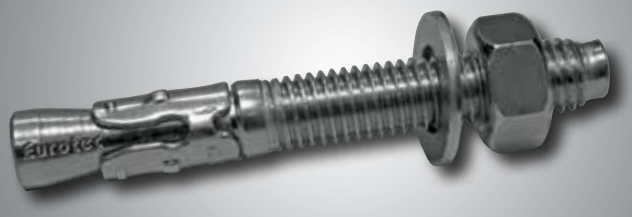
The Eurotec bolt anchor is a torque-controlled expanding plug made of electrogalvanised steel for through-hole mounting in uncracked concrete. The special thing about the bolt anchor is that it is possible to maintain small centre and edge distances despite the high load-bearing capacity. Different anchoring depths and various sizes mean the bolt anchor can be used in a variety of ways. Every bolt anchor is fitted with an expansion clip, which ensures high load-bearing capacity and means less fastening points are needed.



1. Create drill hole
2. Clean drill hole thoroughly
3. Drive in bolt anchor with a hammer
4. Screw on the hexagonal nut until the appropriate torque is reached
5. Done!

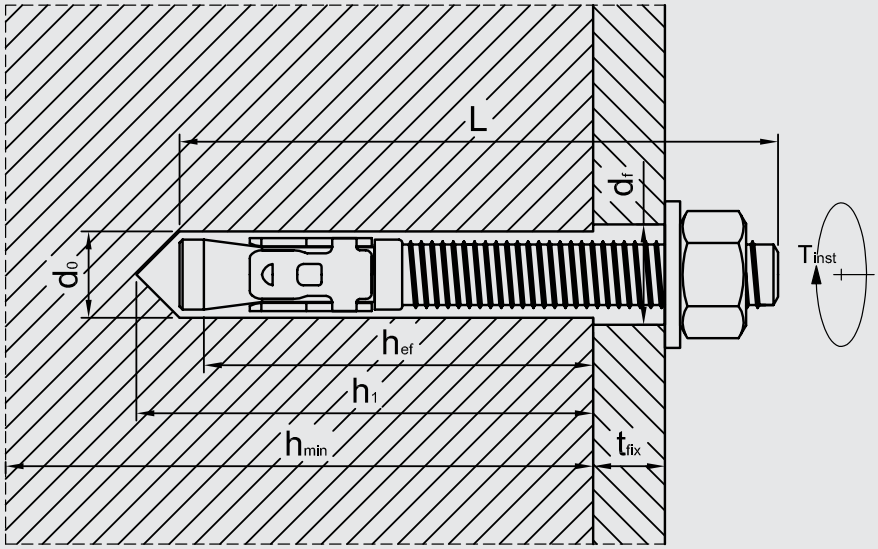
Bolt anchor

with washer, electrogalvanised



Art. no.	Dimensions (mm)	Head	PU
946170	6,0 x 55	SW10	200
646171	6,0 x 85	SW10	200
946172	8,0 x 50	SW13	100
946173	8,0 x 75	SW13	100
946174	8,0 x 95	SW13	100
946175	8,0 x 115	SW13	100
946176	8,0 x 135	SW13	100
946177	10,0 x 60	SW17	100
946178	10,0 x 80	SW17	50
946179	10,0 x 100	SW17	50
946180	10,0 x 120	SW17	50
946181	10,0 x 140	SW17	50
946182	12,0 x 80	SW19	50
946183	12,0 x 95	SW19	50
946184	12,0 x 110	SW19	50
946185	12,0 x 130	SW19	50
946186	12,0 x 160	SW19	25
946187	12,0 x 180	SW19	25
946188	16,0 x 125	SW24	25
946189	16,0 x 140	SW24	20
946190	16,0 x 180	SW24	20
to DIN 440:			
946191	12,0 x 200	SW19	20
946192	12,0 x 220	SW19	20
946193	12,0 x 240	SW19	15
946194	12,0 x 260	SW19	15
946195	16,0 x 220	SW24	10
946196	16,0 x 240	SW24	10
946197	16,0 x 260	SW24	10

Technical informations



Dimensions [mm] Ø x length	Min. subsurface thickness h_{min} [mm]	Drill diameter d_o [mm]	Min. depth of drill hole h_1 [mm]	Min. anchoring depth h_{ef} [mm]	Max. drill diameter in attached part d_f [mm]	Max. working length t_{fix} [mm]	Installation torque T_{inst} [Nm]
Bolt anchor with washer							
6,0 x 55	100	6	50	35	7	10	
6,0 x 85	100	6	50	35	7	40	
8,0 x 50	100	8	55	40	9	10	15
8,0 x 75	100	8	55	40	9	25	15
8,0 x 95	100	8	55	40	9	45	15
8,0 x 115	100	8	55	40	9	65	15
8,0 x 135	100	8	55	40	9	85	15
10,0 x 60	100	10	65	50	12	10	25
10,0 x 80	100	10	65	50	12	20	25
10,0 x 100	100	10	65	50	12	40	25
10,0 x 120	100	10	65	50	12	60	25
10,0 x 140	100	10	65	50	12	80	25
12,0 x 80	110	12	80	65	14	10	40
12,0 x 95	110	12	80	65	14	15	40
12,0 x 110	110	12	80	65	14	30	40
12,0 x 130	110	12	80	65	14	50	40
12,0 x 160	110	12	80	65	14	80	40
12,0 x 180	110	12	80	65	14	100	40
16,0 x 125	120	16	90	80	18	25	80
16,0 x 145	120	16	90	80	18	45	80
16,0 x 180	120	16	90	80	18	80	80
Bolt anchor with washer according to DIN 440							
12,0 x 200	110	12	80	65	14	120	40
12,0 x 220	110	12	80	65	14	135	40
12,0 x 240	110	12	80	65	14	175	40
12,0 x 260	110	12	80	65	14	195	40
16,0 x 220	120	16	90	80	18	120	80
16,0 x 240	120	16	90	80	18	160	80
16,0 x 260	120	16	90	80	18	180	80

Frame fixing

Set consisting of fixing and screw

Europ. Techn. Zulassung
European Technical Approval
ETA-12/0426

ERD frame fixing

The Eurotec countersunk/cylinder-head frame fixing can be used for multiple fastenings of, e.g., façade substructures in concrete and brickwork. It consists of a plastic plug and an electrogalvanised countersunk screw (TX 40) / hexagon screw (AF 13).

Advantages

- Through-hole mounting
- Ready for loading immediately
- The hammer-in stop prevents premature expansion of the plug during installation

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ERD SK frame fixing

countersunk head

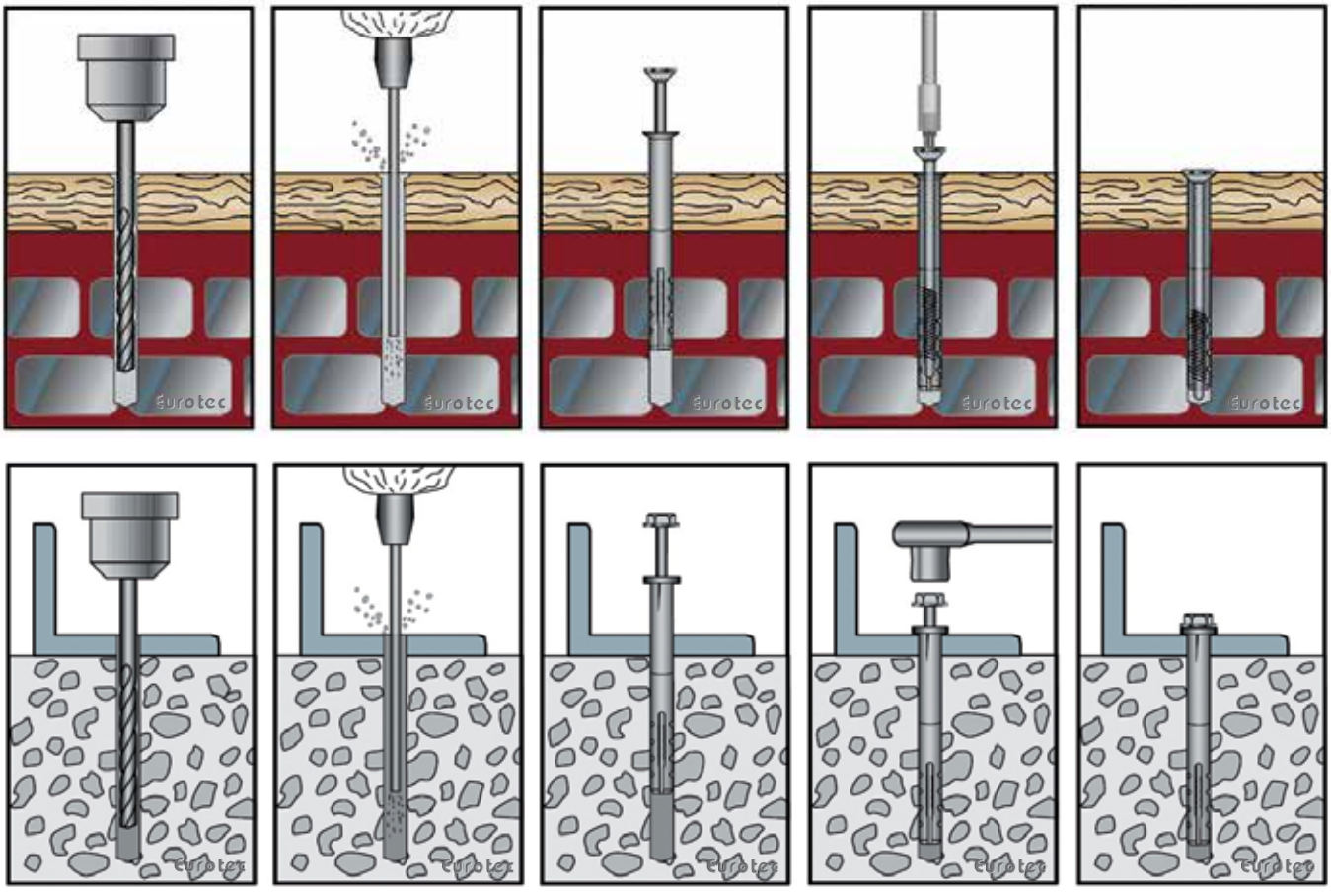
Art. no.	Dimensions (mm)	Drive	PU
200012	Ø 10,0 x 80	TX40	50
200013	Ø 10,0 x 100	TX40	50
200014	Ø 10,0 x 120	TX40	50
200015	Ø 10,0 x 140	TX40	50
200016	Ø 10,0 x 160	TX40	50
200017	Ø 10,0 x 180	TX40	50
200018	Ø 10,0 x 200	TX40	50
200019	Ø 10,0 x 230	TX40	25
200020	Ø 10,0 x 260	TX40	25

ERD ZK frame fixing

cylinder head

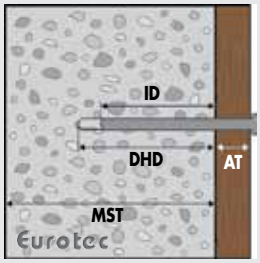
Art. no.	Dimensions (mm)	Drive	PU
200021	Ø 10,0 x 80	SW13	50
200022	Ø 10,0 x 100	SW13	50
200023	Ø 10,0 x 120	SW13	50
200024	Ø 10,0 x 140	SW13	50
200025	Ø 10,0 x 160	SW13	50
200026	Ø 10,0 x 180	SW13	50

Application example



Our hint: Drill using rotary mode for perforated bricks and hollow blocks. Do not use hammer mode! Remove the drillings from the drill hole!

Technical informations



AT = Attachment thickness

ID = Insertion depth

DHD = Drill-hole depth

MST = Minimum subsurface thickness

ERD frame fixing SK

Art. no.	Dimensions plug (mm)	Drive screw	Drill Ø subsurface (mm)	Min. drill hole depth DHD (mm)	Min. plug insertion depth ID (mm)	Max. drill Ø in attached part (mm)	Max. attachment thickness AT (mm)
200012	Ø 10 x 80	TX40	10	70	60	10,5	20
200013	Ø 10 x 100	TX40	10	70	60	10,5	40
200014	Ø 10 x 120	TX40	10	70	60	10,5	60
200015	Ø 10 x 140	TX40	10	70	60	10,5	80
200016	Ø 10 x 160	TX40	10	70	60	10,5	100
200017	Ø 10 x 180	TX40	10	70	60	10,5	120
200018	Ø 10 x 200	TX40	10	70	60	10,5	140
200019	Ø 10 x 230	TX40	10	70	60	10,5	170
200020	Ø 10 x 260	TX40	10	70	60	10,5	200

ERD frame fixing ZK

Art. no.	Dimensions depth (mm)	Head screw	Drill Ø subsurface (mm)	Min. drill hole depth DHD (mm)	Min. plug insertion depth ID (mm)	Max. drill Ø in attached part (mm)	Max. attachment thickness AT (mm)
200021	Ø 10 x 80	SW13	10	70	60	10,5	20
200022	Ø 10 x 100	SW13	10	70	60	10,5	40
200023	Ø 10 x 120	SW13	10	70	60	10,5	60
200024	Ø 10 x 140	SW13	10	70	60	10,5	80
200025	Ø 10 x 160	SW13	10	70	60	10,5	100
200026	Ø 10 x 180	SW13	10	70	60	10,5	120

Subsurface	Strength class [a]	Char. load-bearing capacity $N_{Rk,p}$ (kN)	Drilling method [b]	Min. subsurface thickness MST (mm)	Min. edge distance (mm)	Min. centre distance (mm)
Concrete	C12/15 ≥ C16/20	3,0 4,5	H	100	140 100	110 80
Vertically perforated brick DIN 105	HLz 6 - 0,7 HLz 8 - 0,9 HLz 10 - 0,9 HLz 12 - 0,9	0,4 0,4 0,5 0,6	R	100	100	250
Hollow block made of light-weight concrete DIN EN 771-3	Hbl 4 -1,2	1,5	R	100	100	250
Perforated sand-lime brick DIN 106	KSL 8 -1,4 KSL 10 -1,4 KSL 12 - 1,4	1,5 1,5 2,0	R	100	100	250
Solid sand-lime brick DIN 106	KS 10 -2,0 KS 20 - 2,0 KS 28 - 2,0	1,2 1,5 2,0	R	100	150	250
Solid lightweight concrete brick DIN 18152	V 4 -1,2 V 6 - 1,2	1,5 2,0	R	100	100	250
Masonry brick DIN 105	Mz 10 - 1,8 Mz 20 - 1,8	3,0 4,0	H	100	100	250

a) Indication of strength class of masonry blocks: e.g. MB 10 – 1.8 = masonry brick with min. compressive strength 10 N/mm² and min. bulk density of 1.8 kg/m³
b) H = hammer drilling, R = rotary drilling

Multi plug

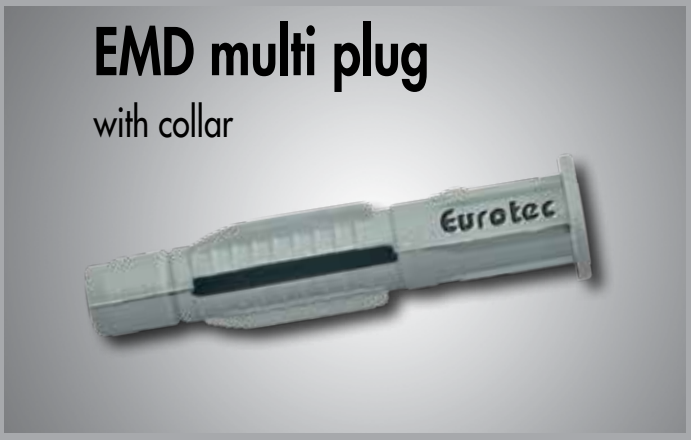
For chipboard screws and wood construction screws

EMD multi plug

The Eurotec multi plug (EMD) with collar is made of plastic and is suitable for installation in concrete, solid bricks, perforated bricks and other highstrength building materials.
The EMD expands in solid building materials and forms a knot in hollow building materials. The plastic plug can be installed using a chipboard screw or a wood-construction screw.

Advantages

- The collar prevents the plug from penetrating too deep into the drill hole.
- The anti-twist element prevents it from turning with the screw in the hole.



Art. no.	Dimensions (mm)	PU
200000	Ø 6,0 x 36	200
200001	Ø 8,0 x 50	200
200002	Ø 10,0 x 60	100
200003	Ø 12,0 x 70	50

Art. no.	Drill Ø subsurface (mm)	Min. drill-hole depth (mm)	Screws (mm)
200000	6	45	4,0
200001	8	60	4,5
200002	10	70	6,0
200003	12	80	8,0

Porous concrete plug

For anchorages in porous/aerated concrete

NEW
to our product range

Eurotec porous concrete plug

The Eurotec aerated concrete plug was designed especially for anchorages in porous/aerated concrete and is suitable both for screws with a wood thread and for screws with a metric thread.

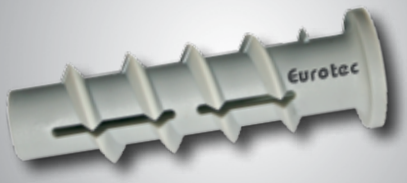
The plug can be screwed easily into the hole already drilled in the concrete using a hexagon head/socket tool. As it is screwed in, the plug cuts a form-closed mating thread in the concrete and therefore facilitates a secure hold.

Advantages

- For anchorages in porous/aerated concrete
- Straightforward and rapid assembly
- Almost expansion-free anchoring allows low centre and edge distances
- Suitable both for screws with metric threads and for screws with wood threads

Porous concrete plug

plastic



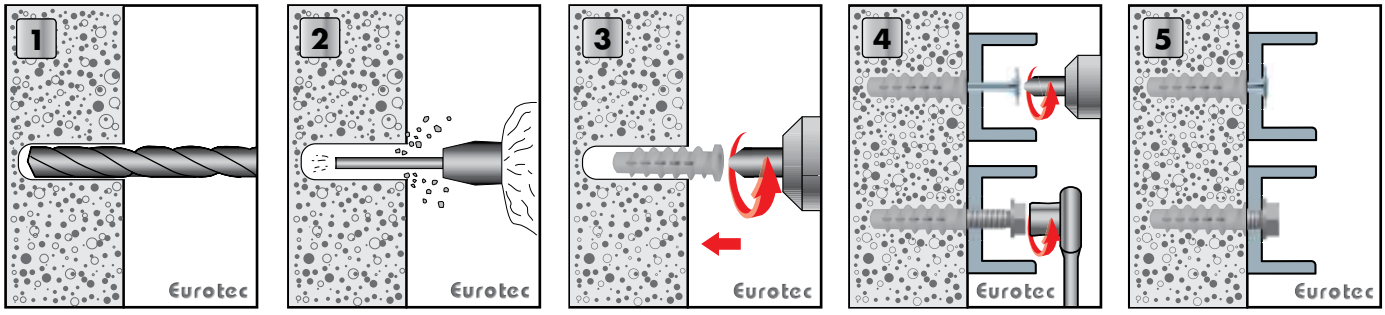
Art. no.	Dimensions (mm)	PU
944825	Ø 6,0 x 50	100
944826	Ø 8,0 x 60	50
944827	Ø 10,0 x 70	50

Installation parameters and extraction-resistance values

Art.no.	Screw Ø Wood construction	Screw Ø Metric	Hex key Ø	Drill hole Ø Lightweight concrete	Drill hole Ø Aerated concrete	Drilling depth	Extraction-resistance values Lightweight concrete	Extraction-resistance values Aerated concrete
	mm	mm	mm	mm	mm	mm	kN*	kN*
944825	5,0 - 6,0	M 5	6	10	8	60	1,1	2,6
944826	7,0 - 8,0	M 8	8	12	10	70	1,7	3,8
944827	9,0 - 10,0	M 10	10	14	12	80	2,3	5,5

* Safety factor 3

Installation instructions



Rigid foam plug, Gypsum board plug

Straightforward and time-saving with no pilot-drilling

NEW
to our product range

For anchorages in expanded polystyrene, rigid foam boards and other soft building materials

The Eurotec rigid-foam plug is suitable for direct anchorages in expanded polystyrene, rigid-foam boards and other soft building materials. During installation, the plug's conical shape causes compaction of the material surrounding the point where it is screwed in, therefore ensuring a secure plug grip. The plug has a TX/hexagon drive and is screwed in in a straightforward and time-saving manner with no need for pilot drilling.

Rigid foam plug

plastic

Art. no.	Dimensions (mm)	For screw Ø*	Drive	PU
200060	Ø 20 x 50	4,0 - 4,5	TX30	50
200061	Ø 30 x 95	8,0 / M8	TX55 + SW17	50
200062	Ø 30 x 95	10,0 / M10	SW17	50

* Screw not included

Gypsum board plug

incl. setting tool

Art. no.	For screw Ø*	PU
200056	3,5 – 5,0 mm	100

* Screw not included

For anchorages in plasterboard/gypsum board

The Eurotec gypsum board plug is made of plastic and is used to fasten light components onto plasterboard/gypsum board.
The plug is screwed directly into the plasterboard/gypsum board in a straightforward and time-saving manner using the setting tool.

Suitable for wood or chipboard screws with Ø of 3.5–5.0 mm.
The screw length should equal at least 23 mm + the thickness of the mounted part.

One setting tool is included per PU.

Nail plug

Set consisting of plug and screw

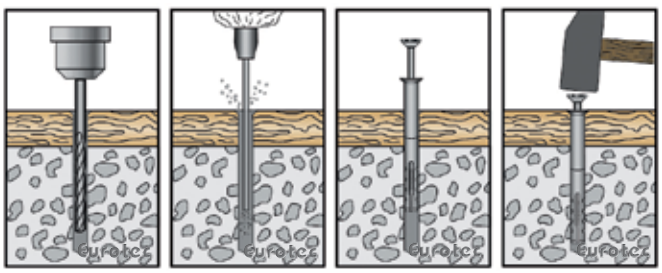
END Nail plug

The Eurotec hammer-in frame fixing (END) is suitable for fastening in concrete, solid bricks, sand-lime bricks and other high-strength building materials. It consists of an electrogalvanised crosshead screw (PZ2) and a countersunk plastic plug.

Advantages

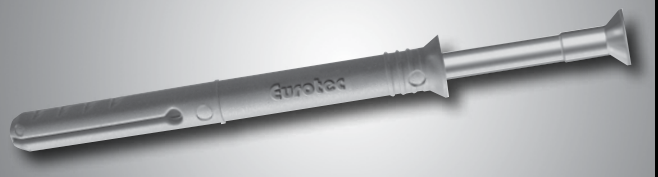
- Fast and efficient installation
- Saves time thanks to preinstalled threaded nail
- Especially suited to working with timber and lightweight-construction profiles
- Easy to remove with crosshead drive

Application example



END Nail plug

countersunk head



Art. no.	Dimensions (mm)	Drive	PU
200004	Ø 5,0 x 30	PZ 2	200
200005	Ø 5,0 x 40	PZ 2	200
200006	Ø 6,0 x 40	PZ 2	200
200007	Ø 6,0 x 60	PZ 2	200
200008	Ø 6,0 x 80	PZ 2	200
200009	Ø 8,0 x 60	PZ 2	100
200010	Ø 8,0 x 80	PZ 2	100
200011	Ø 8,0 x 100	PZ 2	100

Art. no.	Dimensions	Drill Ø subsurface (mm)	Min. drill hole depth DHD (mm)	Min. plug insertion depth ID (mm)	Max. drill Ø in attached part (mm)	Max. attachment thickness AT (mm)
200004	Ø 5 x 30	5	30	20	5	10
200005	Ø 5 x 40	5	30	20	5	20
200006	Ø 6 x 40	6	35	25	6	15
200007	Ø 6 x 60	6	35	25	6	35
200008	Ø 6 x 80	6	35	25	6	55
200009	Ø 8 x 60	8	50	40	8	20
200010	Ø 8 x 80	8	50	40	8	40
200011	Ø 8 x 100	8	50	40	8	60

Sealing plug

Plastic plug with cross-head screw and seal ring

NEW
to our product range

Sealing plug

with neoprene seal

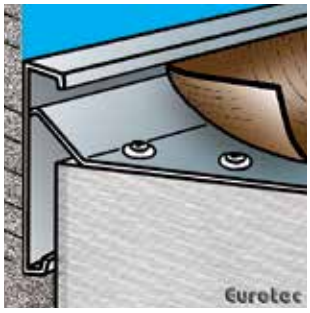
Art. no.	Dimensions (mm)	Drive	PU
Stainless steel A2:			
200040	Ø 6,0 x 30	PZ 2	200
200041	Ø 6,0 x 40	PZ 2	200
200042	Ø 6,0 x 50	PZ 2	100
200043	Ø 6,0 x 60	PZ 2	100
Copper:			
200050	Ø 6,0 x 30	PZ 2	200
200051	Ø 6,0 x 40	PZ 2	200
200052	Ø 6,0 x 50	PZ 2	100
200053	Ø 6,0 x 60	PZ 2	100

Eurotec sealing plug

The Eurotec sealing plug is a cross-head screw made of stainless steel/ copper-plated stainless steel and a seal ring made of stainless steel with a neoprene seal vulcanised onto it.
After installation, the premounted seal ring reliably prevents moisture from penetrating into the component through the drill hole.

Especially suitable for:

- anchorages in concrete, solid bricks, sand-lime bricks and other high-strength building materials



Technical data

Art. no.	Type	Plug	Nail	Seal ring	Plug	Nail	Drill Ø subsurface	Min. drill hole depth DHD	Min. plug insertion depth ID	Max. drill Ø in attached part	Max. attachment thickness AT
		Ø mm			Length mm		mm	mm	mm	mm	mm
200040	Stainless steel A2	6	4	15	30	35	6	35	25	6	5
200041	Stainless steel A2	6	4	15	40	42	6	35	25	6	15
200042	Stainless steel A2	6	4	15	50	52	6	35	25	6	25
200043	Stainless steel A2	6	4	15	60	62	6	35	25	6	35
200050	Copper	6	4	15	30	35	6	35	25	6	5
200051	Copper	6	4	15	40	42	6	35	25	6	15
200052	Copper	6	4	15	50	52	6	35	25	6	25
200053	Copper	6	4	15	60	62	6	35	25	6	35

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Impact rivets

A multi-purpose fastening element with outstanding holding force

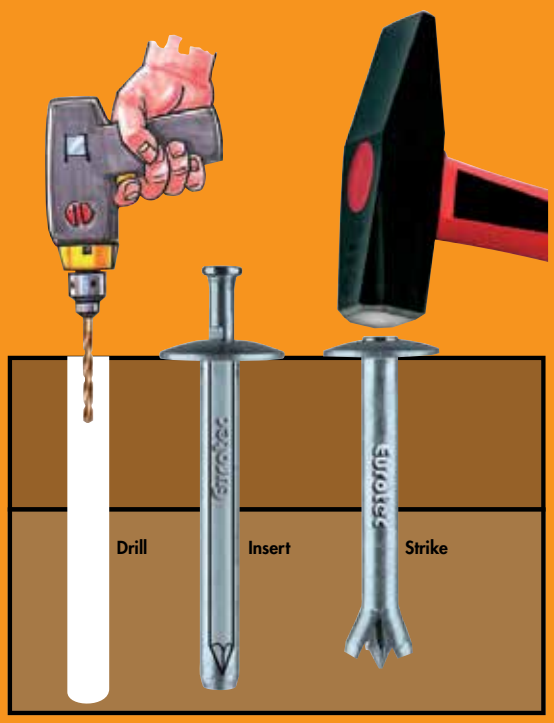
Product features

– Can be used in concrete, sand-lime brick, ordinary construction bricks, timber and firm plaster
– Installation is like child's play: drill hole, insert impact rivet, expand by hitting with a hammer – done
– Can be used irrespective of drill-hole depth

Fields of application: concrete, brickwork, firm plaster, timber; substructures for roof, ceiling and wall

Impact fastening of

- Aluminium, sheet-metal, wall-end and roof-edge profiles
- Chimney flashing, wall coping
- Skylights, roof gullies, roof hatches, smoke extractors, flues
- Moisture-proof roofing sheets, flat-roof end profiles
- Linings and membrane connections for swimming pools
- Flange fastenings
- Frames, door and window frames
- Battens, insulation material
- Floor coverings and much more



Impact rivets

aluminium rivet body/stainless-steel mandrel

Art. no.	Shaft Ø x rivet length (mm)	Drill Ø (mm)	Max. attachment thickness AT (mm)	PU
111246	4,8 x 16	5,0	11,0	200
111247	4,8 x 20	5,0	15,0	200
111248	4,8 x 26	5,0	20,0	200
111249	4,8 x 30	5,0	25,0	200
111250	4,8 x 35	5,0	30,0	200
111251	4,8 x 40	5,0	35,0	200
111252	4,8 x 50	5,0	45,0	200
111253	5,0 x 20	5,0	5,0	200
111254	5,0 x 30	5,0	15,0	200
111260	5,0 x 40	5,0	25,0	200

Ceiling anchor

The through-hole mounting

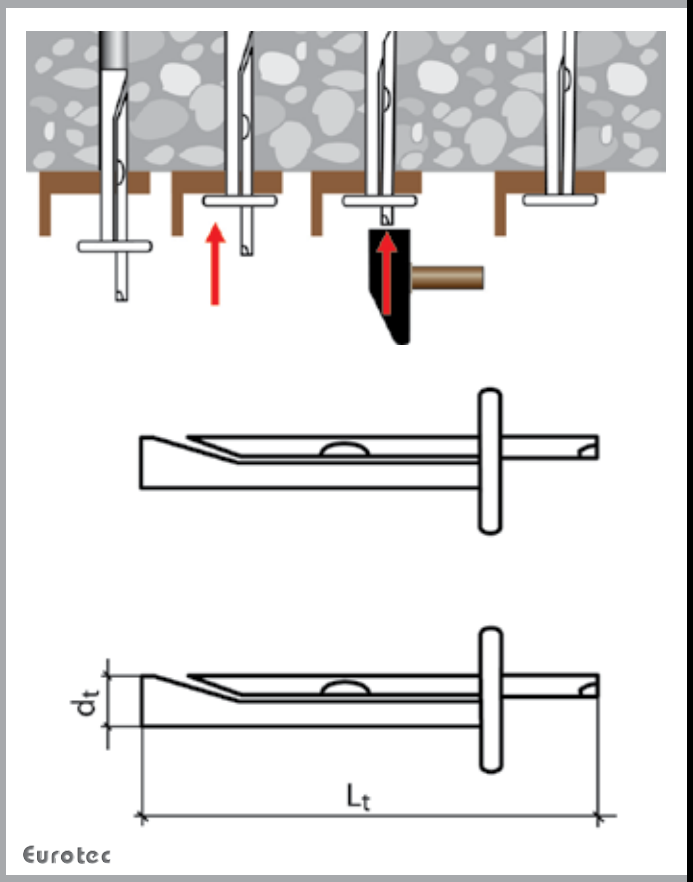
Europ. Techn. Zulassung
European Technical Approval
ETA-14/0132

Galvanised ceiling anchor

The ceiling anchor is used as a through-hole mounting for fastening substructures/joining devices into concrete.
It is suitable for concrete of strength classes from C20/25 to C50/60.
The ceiling anchor must only be used for fastening non-load bearing systems at multiple locations.

Application

- Pilot-drill the base material to the desired depth (but at least 40 mm) with a diameter of 6 mm
- Minimum anchoring depth in the concrete: 32 mm
- Insert the ceiling anchor through the pre-drilled attachment
- Hammer in the pin



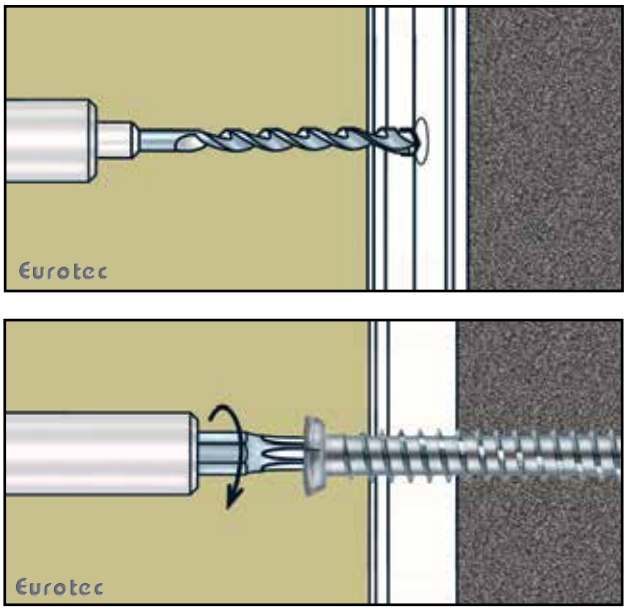
Art. no.	Dimensions (mm)	PU
110000	6,0 x 40	200
110001	6,0 x 70	200

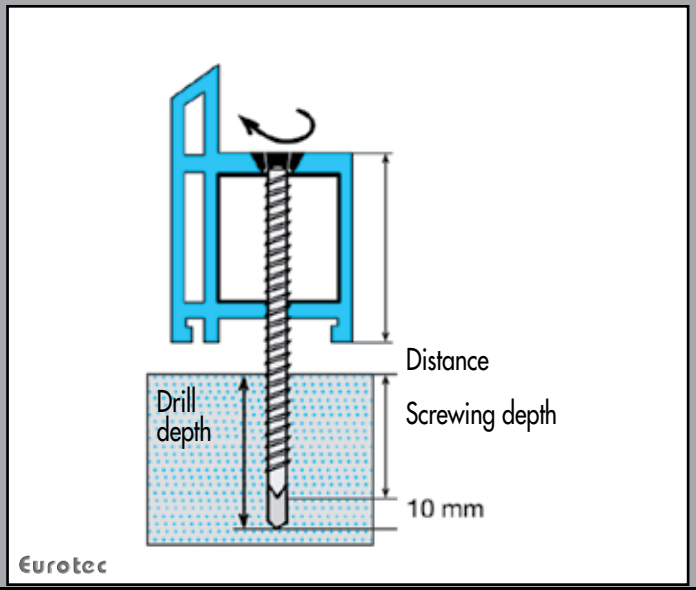
Concrete frame screw

Countersunk head and cylinder head

Application

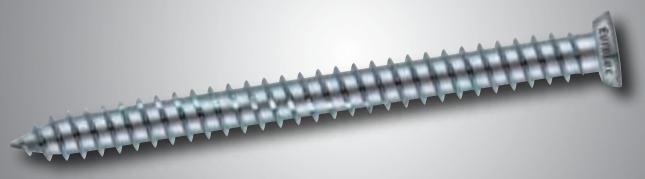
- Pilot-drill the frame to Ø 6,2 mm; insert and align window
- Pilot-drill the anchoring surface to Ø 6,0; screw in concrete frame screws





Concrete frame screw

countersunk head, case-hardened steel



Art. no.	Dimensions (mm)	Drive	Head-Ø (mm)	PU
B110061	7,5 x 42	TX30	11	100
B900903	7,5 x 52	TX30	11	100
B900620	7,5 x 62	TX30	11	100
B110062	7,5 x 72	TX30	11	100
B900621	7,5 x 82	TX30	11	100
B110063	7,5 x 92	TX30	11	100
B900896	7,5 x 102	TX30	11	100
B110064	7,5 x 112	TX30	11	100
B900724	7,5 x 122	TX30	11	100
B110065	7,5 x 132	TX30	11	100
B110066	7,5 x 152	TX30	11	100
B110067	7,5 x 182	TX30	11	100
B110068	7,5 x 212	TX30	11	100
B944642	7,5 x 232	TX30	11	100
B944638	7,5 x 252	TX30	11	100
B944643	7,5 x 272	TX30	11	100
B944639	7,5 x 302	TX30	11	100
B944641	7,5 x 342	TX30	11	100
B944644	7,5 x 372	TX30	11	100
B944645	7,5 x 402	TX30	11	100

Mounting disc

Sendzimized steel

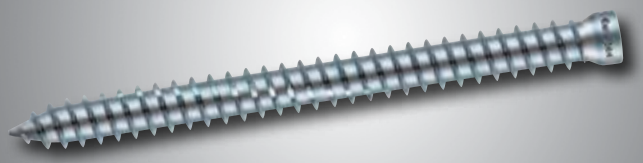
Art. no.	Plate-Ø (mm)	Ø-Hole (mm)	PU
800308	40	7,35	—*

* On request

- Versatile mounting disc for secure and uniform load distribution
- Can be combined with different screws, nails and plugs

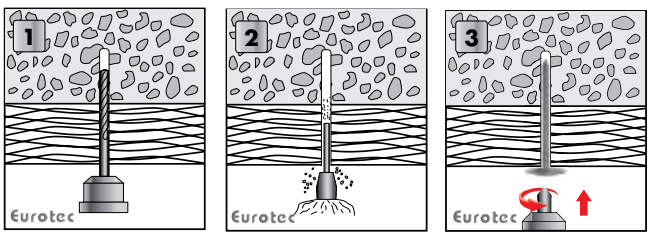
Concrete frame screw

cylinder head, case-hardened steel

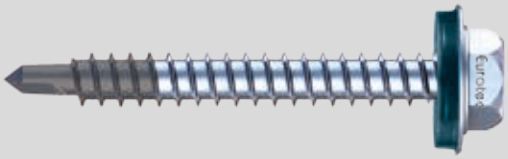


Art. no.	Dimensions (mm)	Drive	Head-Ø (mm)	PU
B110069	7,5 x 42	TX25	7,5	100
B944847	7,5 x 52	TX25	7,5	100
B900905	7,5 x 62	TX25	7,5	100
B110070	7,5 x 72	TX25	7,5	100
B900906	7,5 x 82	TX25	7,5	100
B110071	7,5 x 92	TX25	7,5	100
B900907	7,5 x 102	TX25	7,5	100
B110072	7,5 x 112	TX25	7,5	100
B900725	7,5 x 122	TX25	7,5	100
B110073	7,5 x 132	TX25	7,5	100
B110074	7,5 x 152	TX25	7,5	100
B110075	7,5 x 182	TX25	7,5	100
B110076	7,5 x 212	TX25	7,5	100
B901087	7,5 x 42	TX30	8,5	100
B900023	7,5 x 62	TX30	8,5	100
B900017	7,5 x 72	TX30	8,5	100
B900018	7,5 x 82	TX30	8,5	100
B900019	7,5 x 92	TX30	8,5	100
B900021	7,5 x 102	TX30	8,5	100
B900024	7,5 x 112	TX30	8,5	100
B900020	7,5 x 122	TX30	8,5	100
B900025	7,5 x 132	TX30	8,5	100
B900707	7,5 x 152	TX30	8,5	100
B900383	7,5 x 182	TX30	8,5	100
B901034	7,5 x 212	TX30	8,5	100
B944636	7,5 x 252	TX30	8,5	100
B944637	7,5 x 302	TX30	8,5	100

Mounting disc installation instructions



BiGHTY drilling screw

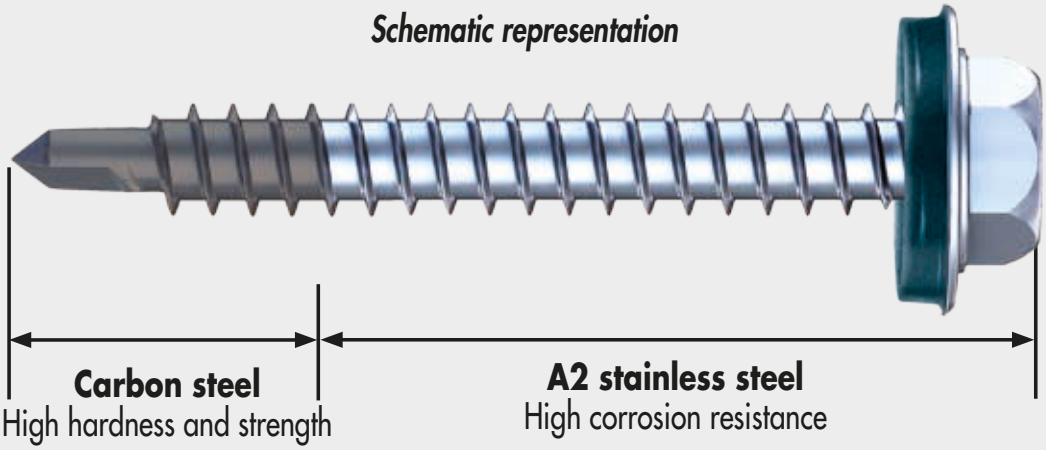


BiGHTY in bimetal and hardened stainless steel

BiGHTY is a drilling screw for steel–steel and timber–steel connections that drills its own core hole and cuts its own mating thread in the component. There is therefore no need for pilot-drilling or for selecting the correct drill-hole diameter.
The specially shaped drill tip prevents the screw from drifting on the surface of the component. This allows fast drilling. It is no longer necessary to centre-punch the drilling site.
The **BiGHTY** drilling screw therefore presents a time-saving alternative to conventional self-tapping screws.
The **BiGHTY** drilling screw can be screwed in with a commercially available spanner or socket spanner.

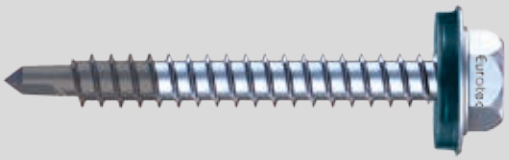
The **BiGHTY** bimetall combines the high corrosion resistance of A2 stainless steel with the outstanding mechanical properties of a carbon steel.

Schematic representation

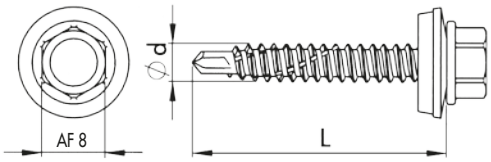


BiGHTY drilling screw

Europ. Techn. Zulassung
European Technical Approval
ETA-12/0085



BiGHTY bimetal



- bimetal
- A2 stainless steel, high corrosion resistance
- tip: Carbon steel, high hardness and strength
- Stainless steel in accordance with DIN 10088
- Seal ring in A2 and EPDM

Fastening timber on steel/steel on steel

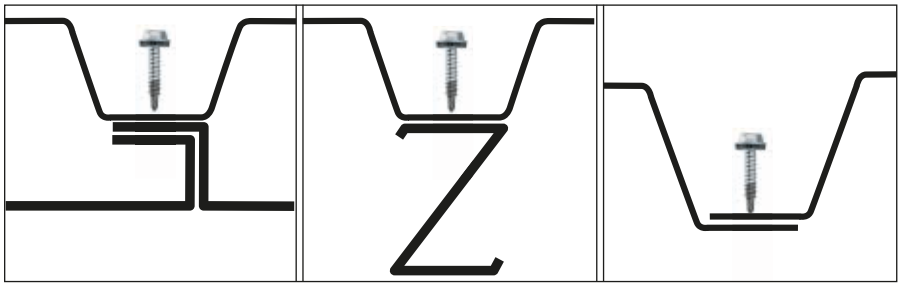
Drilling capacity 3 mm

Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a] mm	PU
945884	4,8 x 16	AF 8	Ø 14	1	500
945885	4,8 x 19	AF 8	Ø 14	4	500
945886	4,8 x 25	AF 8	Ø 14	9	500
945887	4,8 x 32	AF 8	Ø 14	16	500
945888	4,8 x 38	AF 8	Ø 14	20	200
945847	4,8 x 50	AF 8	Ø 14	32	200

Drilling capacity 5 mm

Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a] mm	PU
945890	5,5 x 22	AF 8	Ø 16	3	500
945891	5,5 x 25	AF 8	Ø 16	7	500
945892	5,5 x 32	AF 8	Ø 16	14	500
945893	5,5 x 38	AF 8	Ø 16	20	500
945894	5,5 x 45	AF 8	Ø 16	27	200
945875	5,5 x 50	AF 8	Ø 16	32	200
945895	5,5 x 63	AF 8	Ø 16	45	200

a) H = clamping thickness + sheet thickness t; t_{max} = drilling capacity



Please always refer to the information in the ETA-12/0085.

BiGHTY drilling screw

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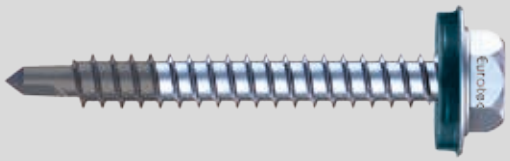
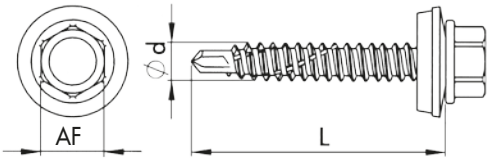
ETA-12/0085



BiGHTY bimetall



- bimetal
- A2 stainless steel, high corrosion resistance
- tip: Carbon steel, high hardness and strength
- Stainless steel in accordance with DIN 10088
- Seal ring in A2 and EPDM

Fastening timber on steel/steel on steel

Drilling capacity 5 mm

Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a] mm	PU
945896	6,3 x 25	AF 10	Ø 16	7	500
945897	6,3 x 32	AF 10	Ø 16	14	200
945898	6,3 x 38	AF 10	Ø 16	20	200
945899	6,3 x 45	AF 10	Ø 16	27	200
945841	6,3 x 50	AF 10	Ø 16	32	200
945900	6,3 x 63	AF 10	Ø 16	45	200
945901	6,3 x 70	AF 10	Ø 16	52	200
945902	6,3 x 80	AF 10	Ø 16	62	200

Drilling capacity 12 mm

Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a] mm	PU
945844	5,5 x 38	AF 8	Ø 16	10	500

a) H = clamping thickness + sheet thickness t; t_{max} = drilling capacity

Please always refer to the information in the ETA-12/0085.

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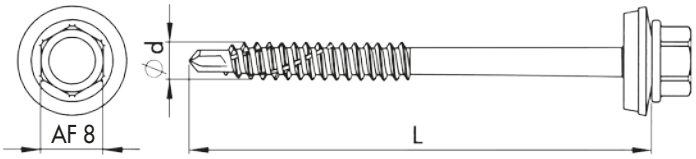
European Technical Approval
ETA-12/0085

BiGHTY bimetall



- bimetal
- A2 stainless steel, high corrosion resistance
- tip: Carbon steel, high hardness and strength
- Stainless steel in accordance with DIN 10088
- Seal ring in A2 and EPDM

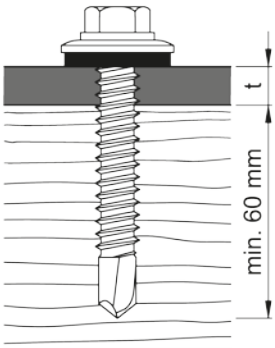
Fastening timber on timber/steel on timber

Drilling capacity 5 mm

Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	PU
945839	6,5 x 120	AF 8	Ø 16	200
945915	6,5 x 140	AF 8	Ø 16	200
945916	6,5 x 160	AF 8	Ø 16	200
945917	6,5 x 180	AF 8	Ø 16	200
945918	6,5 x 200	AF 8	Ø 16	200
945919	6,5 x 220	AF 8	Ø 16	200

a) H = clamping thickness + sheet thickness t; t_{max} = drilling capacity

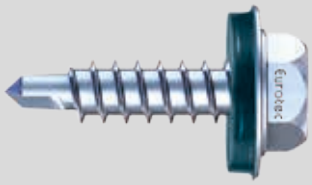
Connection option



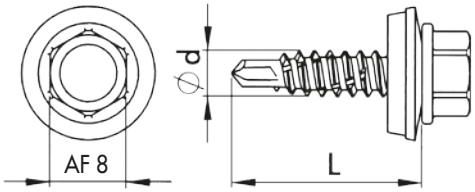
Steel on timber/timber on timber for BiGHTY bimetal 6.5 x L, drilling capacity 5 mm

Please always refer to the information in the ETA-12/0085.

BiGHTY drilling screw



BiGHTY
hardened stainless steel



- hardened stainless steel
- specially coated
- Stainless steel in accordance with DIN 10088
- Seal ring in A2 and EPDM

Fastening timber on steel/steel on steel

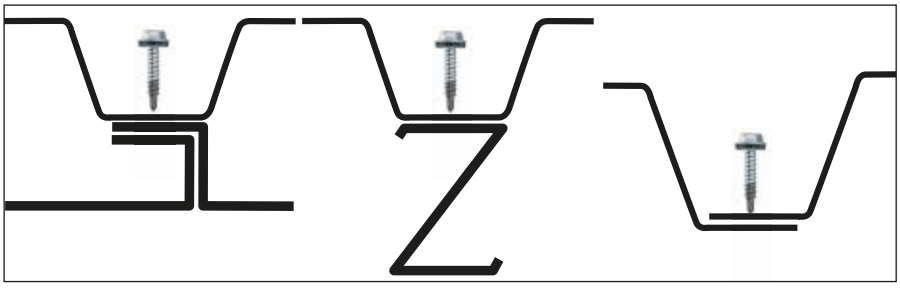
Drilling capacity 3 mm

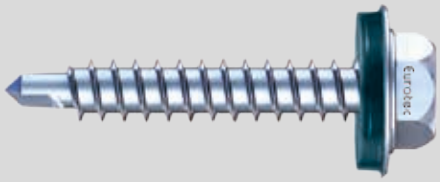
Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a] mm	PU
945660	4,8 x 19	AF 8	Ø 14	4	500
945661	4,8 x 25	AF 8	Ø 14	10	500
945662	4,8 x 32	AF 8	Ø 14	17	500
945663	4,8 x 38	AF 8	Ø 14	23	200
945664	4,8 x 50	AF 8	Ø 14	35	200

Drilling capacity 5 mm

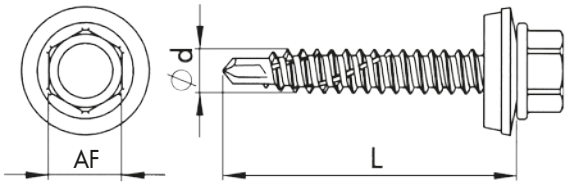
Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a] mm	PU
945665	5,5 x 19	AF 8	Ø 16	2	500
945666	5,5 x 25	AF 8	Ø 16	8	500
945667	5,5 x 32	AF 8	Ø 16	15	500
945668	5,5 x 38	AF 8	Ø 16	21	500
945669	5,5 x 50	AF 8	Ø 16	33	200
945670	5,5 x 60	AF 8	Ø 16	43	200

a) H = clamping thickness + sheet thickness t; t_{max} = drilling capacity





BiGHTY
hardened stainless steel



- hardened stainless steel
- specially coated
- Stainless steel in accordance with DIN 10088
- Seal ring in A2 and EPDM

Fastening timber on steel/steel on steel

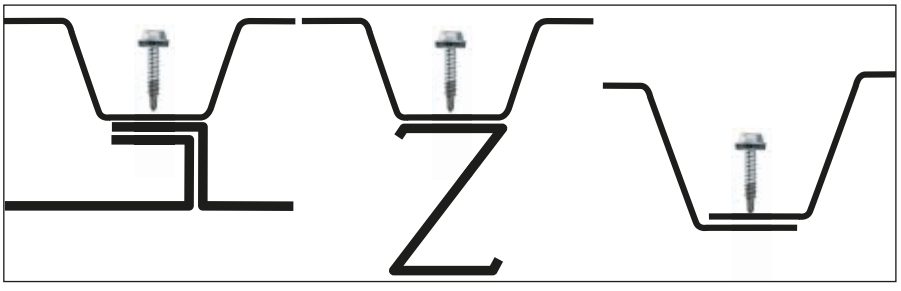
Drilling capacity 5 mm

Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a)] mm	PU
945672	6,3 x 25	AF 10	Ø 16	8	500
945673	6,3 x 32	AF 10	Ø 16	15	200
945674	6,3 x 38	AF 10	Ø 16	21	200
945675	6,3 x 50	AF 10	Ø 16	33	200
945676	6,3 x 60	AF 10	Ø 16	43	200

Drilling capacity 12 mm

Art. no.	Dimensions mm	Width across flats	Ø Seal ring mm	H[a)] mm	PU
945671	5,5 x 38	AF 8	Ø 16	14	500

a) H = clamping thickness + sheet thickness t; t_{max} = drilling capacity



Sandwich-panel screw

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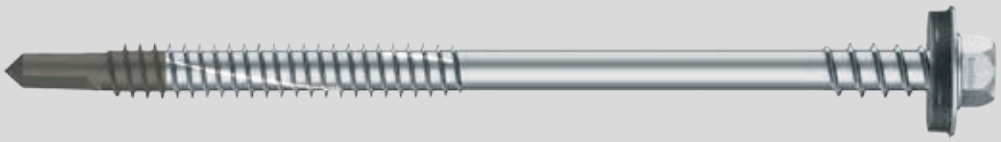
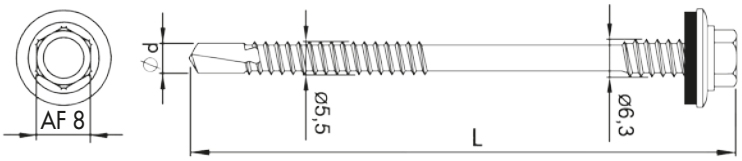
ETA-13/0185



SWPS bimetal,

- specially coated
- Seal ring in A2 and EPDM



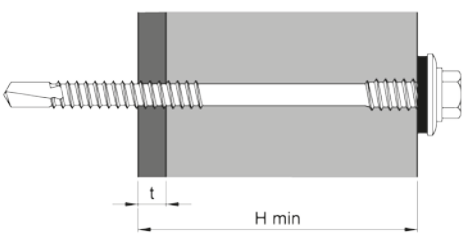
Drilling capacity 5 mm

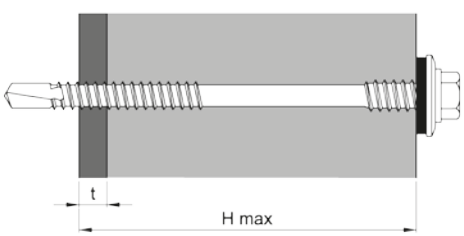
Art. no.	Dimension[a] mm	Width across flats	Ø Seal ring mm	H_{min}[b] mm	H_{max}[b] mm	PU
945903	6,3/5,5 x 155	AF 8	Ø 16	80	135	200
945904	6,3/5,5 x 175	AF 8	Ø 16	100	155	200
945846	6,3/5,5 x 200	AF 8	Ø 16	125	180	200
945905	6,3/5,5 x 235	AF 8	Ø 16	160	215	200
945906	6,3/5,5 x 250	AF 8	Ø 16	175	230	200
945907	6,3/5,5 x 275	AF 8	Ø 16	200	255	200
945908	6,3/5,5 x 300	AF 8	Ø 16	225	280	200

Drilling capacity 12 mm

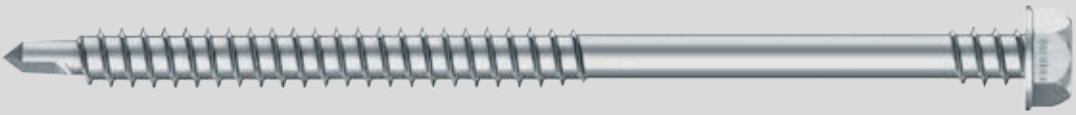
Art. no.	Dimension[a] mm	Width across flats	Ø Seal ring mm	H_{min}[b] mm	H_{max}[b] mm	PU
945909	6,3/5,5 x 155	AF 8	Ø 16	75	130	200
945910	6,3/5,5 x 175	AF 8	Ø 16	95	150	200
945845	6,3/5,5 x 200	AF 8	Ø 16	120	175	200
945911	6,3/5,5 x 235	AF 8	Ø 16	155	210	200
945912	6,3/5,5 x 250	AF 8	Ø 16	170	225	200
945913	6,3/5,5 x 275	AF 8	Ø 16	195	250	200
945914	6,3/5,5 x 300	AF 8	Ø 16	220	275	200

a) Ø head thread / Ø drive thread x screw length
b) H = clamping thickness + sheet thickness t; t_{max}= drilling capacity



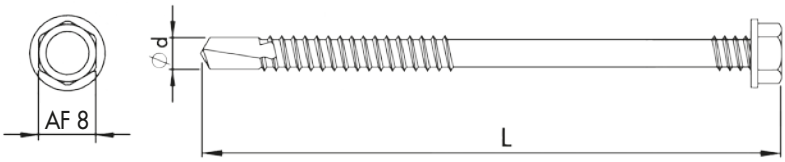


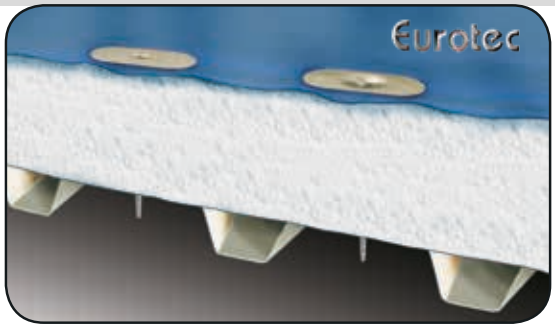
Roofing screw



Roofing screw,

- with hexagon head,
  secondary thread and drill point



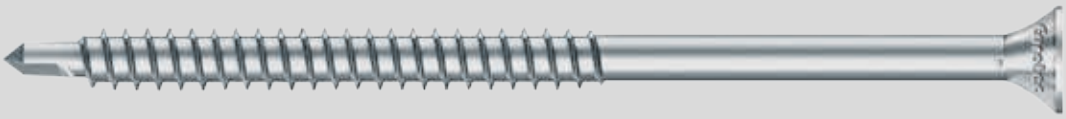


Art. no.	Dimension mm	Width across flats	PU*
900428	4,8 x 80	AF8	1000
111377	4,8 x 100	AF8	1000
111378	4,8 x 120	AF8	1000
111379	4,8 x 140	AF8	1000
111380	4,8 x 160	AF8	500
111381	4,8 x 180	AF8	500
111382	4,8 x 200	AF8	500
111383	4,8 x 220	AF8	500
111384	4,8 x 240	AF8	250
111385	4,8 x 260	AF8	250

* Plates not included with product

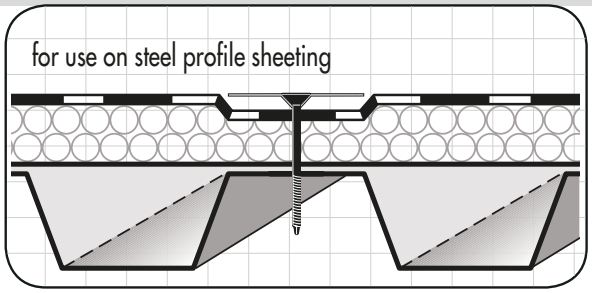
Fields of application:
for flat-roof insulation (with anti-slip matting)

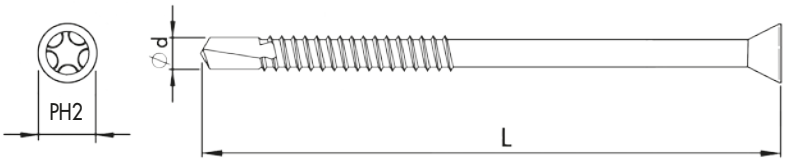
Bugle-head screw



Bugle-head screw,

- with bugle-head and drill point
- hardened steel, double-coated



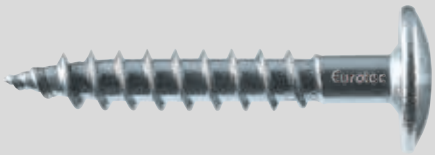


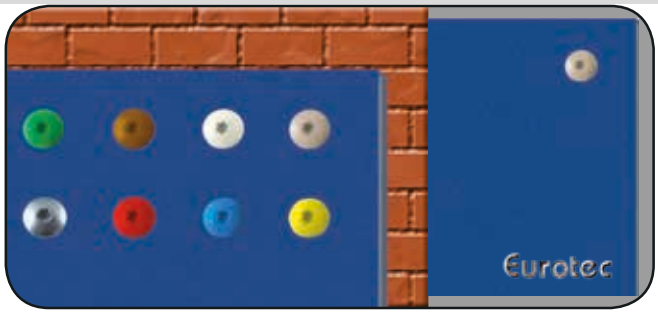
Art. no.	Dimensions mm	Cross recess	PU*
901113	4,8 x 35	PH2	1000
900290	4,8 x 50	PH2	1000
111388	4,8 x 60	PH2	1000
111389	4,8 x 70	PH2	1000
111390	4,8 x 80	PH2	500
111391	4,8 x 90	PH2	500
111392	4,8 x 100	PH2	500
111393	4,8 x 120	PH2	500
111394	4,8 x 140	PH2	500
111395	4,8 x 150	PH2	500
111396	4,8 x 160	PH2	500
111397	4,8 x 180	PH2	500
111398	4,8 x 200	PH2	500
111399	4,8 x 220	PH2	500
111400	4,8 x 240	PH2	500
111401	4,8 x 260	PH2	500
111402	4,8 x 280	PH2	250
111403	4,8 x 300	PH2	250

* Plates not included with product

Fields of application:
for flat-roof insulation (without anti-slip matting)

Coloured façade screw





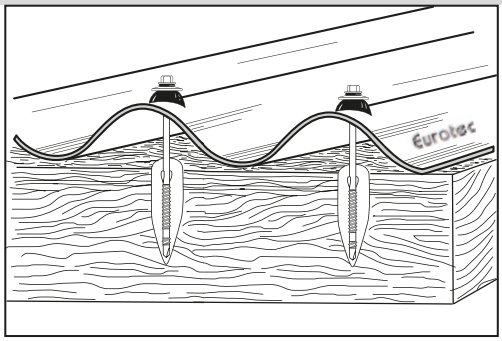
Coloured façade screw,
A2 and A4 stainless steel

Art. no.	Dimensions mm	Colour	Material	Drive	PU
904670	4,8 x 25	blank	A2	TX 20	250
904671	4,8 x 32	blank	A2	TX 20	250
904672	4,8 x 38	blank	A2	TX 20	250
904675	4,8 x 60	blank	A2	TX 20	250
w904670	4,8 x 25	white/RAL 9010	A2	TX 20	250
w904671	4,8 x 32	white/RAL 9010	A2	TX 20	250
w904672	4,8 x 38	white/RAL 9010	A2	TX 20	250
w904675	4,8 x 60	white/RAL 9010	A2	TX 20	250
g904670	4,8 x 25	grey/RAL 7016	A2	TX 20	250
g904671	4,8 x 32	grey/RAL 7016	A2	TX 20	250
g904672	4,8 x 38	grey/RAL 7016	A2	TX 20	250
g904675	4,8 x 60	grey/RAL 7016	A2	TX 20	250
900429	5,5 x 35	blank	A4	TX 20	100
900430	5,5 x 35	brown/RAL 8014	A4	TX 20	100
900431	5,5 x 35	white/RAL 9010	A4	TX 20	100
900432	5,5 x 35	grey/RAL 7016	A4	TX 20	100

Roofing screw/Washered screw

Roofing screws,

- Hexagon head, with drill point and wings
- Case-hardened steel and double-coated
- Mushroom seal, A2 and EPDM

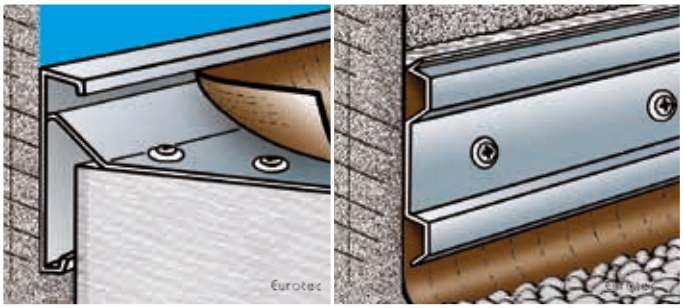


Art. no.	Dimensions mm	Drive	PU
111353	6,5 x 130	AF 8	100

Fields of application
screwing corrugated fibre-cement boards onto timber.

Washered screw,

A2 stainless steel, two-part with seal ring



Art. no.	Dimensions mm	Ø Seal ring mm	Drive	PU
111551	4,5 x 25	15	TX 20	200
111552	4,5 x 35	15	TX 20	200
111553	4,5 x 45	15	TX 20	200
111557	4,5 x 65	15	TX 20	200
111558	4,5 x 80	15	TX 20	200
111559	4,5 x 100	15	TX 20	200
111560	4,5 x 120	15	TX 20	200
111561	4,5 x 150	15	TX 20	200

Fields of application:
Interior construction; e.g. for (commercial) kitchens, cooling systems, etc.

Index

General Terms and Conditions / Conditions of sale and delivery

All sales are made exclusively subject to the following terms and conditions unless other agreements are made in writing in the individual case:

1. General provisions, scope

Our terms and conditions shall apply exclusively! We will not accept contradictory terms and conditions of our customers that deviate from our conditions unless we have given our express written consent to their validity. Our terms and conditions shall apply even if we execute orders without reservation despite being aware of contradictory conditions or conditions that deviate from our terms and conditions. Our terms and conditions shall also apply to all future transactions with our contractual partners.

2. Offers, written form

Our offers are non-binding and subject to alteration without notice until we issue our final order confirmation. Contracts and agreements, as well as transactions brokered by our representatives, shall become binding only when we issue our written order confirmation. Verbal agreements, even within the framework of contract execution, are not valid unless confirmed by us in writing.

3. Prices, packaging, offsetting

Unless otherwise indicated by the order confirmation, our prices are ex-works and exclusive of packaging. This is billed separately. The minimum order value is €50.00. For smaller quantities, we charge a flat processing fee of €30.00.

a) Our prices are exclusive of statutory value added tax. This is stated and charged separately in the invoice at the statutory rate applicable on the date of billing.

b) Our contractual partner may only claim a right of offsetting insofar as counterclaims are established to be legally binding or are undisputed or accepted. A right of retention may only be exercised with respect to counterclaims resulting from the same contractual relationship.

4. Delivery period and force majeure

Statements relating to delivery periods are to be seen only as approximate and non-binding. They shall begin on the date of our order confirmation but not before all of the order details are clarified in full. They refer to the time of consignment ex-works and shall be considered met when the goods are reported to be ready for dispatch.

Without prejudice to our rights arising due to the buyer's default, they shall be extended by the period for which the buyer is in arrears to us with respect to their obligations arising from this or other orders.

The following grounds, even if they arise at our suppliers, shall release us from the obligation to adhere to the delivery period and shall entitle us to extend the delivery periods, to make partial deliveries or to wholly or partially withdraw from the part of the contract that is not yet fulfilled without becoming liable to pay damages as a result, unless we are guilty of intent or gross negligence: interruptions of operations and difficulties in delivery of any kind, e.g. shortages of machinery, goods, materials or fuels, or incidents of force majeure, e.g. export and import embargos, fires, strikes, lock-outs or new official measures that adversely affect production costs and shipping.

5. Shipping

Goods are shipped at the expense and risk of the contractual partner even if prepaid delivery was agreed. Additional costs for express shipping shall always be borne by the contractual partner. Freight costs paid by us are to be seen only as an advancement of freight charges on behalf of the customer. Additional freight costs for urgent and express parcels shall be borne by the customer, even if we have borne the transport costs on individual occasions. Goods reported as ready for shipping must be accepted immediately and will be charged as ex-works. If the goods are to be shipped abroad or passed directly to third parties, they must be examined and accepted in our factory; otherwise, the goods shall be deemed to have been delivered in accordance with the contract to the exclusion of any complaints. The risk, including that of confiscation, shall be transferred to the contractual partner when the goods are handed over to the forwarder or freight carrier and, at the latest, when they leave our facility. Return shipments always require prior consultation with our internal sales department. Goods that are free of defects are only taken back with our express consent. A credit note is then issued for the value of the goods with the deduction of a 25% return fee per item. Strictly no debit notes are accepted.

6. Design and property rights

The customer shall bear sole responsibility and be liable for ensuring that the goods it orders do not violate third-party property rights. No verification is performed on our part in this respect. The customer shall indemnify us against injunctions or claims for damages by third parties. If an injunction is requested against us, the customer shall meet the legal costs and shall compensate us for the damages we have incurred.

7. Acceptance, quantity tolerances and call-offs

For contracts with ongoing deliveries, the goods are to be accepted in monthly quantities that are as consistent as possible over the course of the contractual period. If a call-off is not made on time, we shall be entitled, after the expiry of a grace period that we have granted, to divide the order at our own discretion, withdraw from the part of the contract that has not yet been executed, or make a claim for damages due to non-performance. In the case of call-off orders, the call-offs must always be made within 12 calendar months. Over- or under-shipment by up to 10% of the order shall be permissible.

8. Payment terms for invoices, right of retention

Invoices shall be payable with a 2% discount within 10 days of the invoice date or net within 30 days, regardless of when the goods are received and without prejudice to the right to make a complaint for defects. Payment by means of acceptance or customer's bill of exchange shall require special written agreement in advance. Discount charges will be charged in the case of payment by means of acceptance, which must have a term no longer than 3 months and be issued within 1 week of the invoice date.

Credit notes for bills of exchange or cheques shall apply subject to receipt and regardless of the purchase price's earlier due date in the event of default by the customer. They shall be issued with the value at the date on which the equivalent amount will be available to us; the discount charges will be charged at the respective bank rate. In the event that the payment term is exceeded, interest and commissions may be charged without prejudice to other rights at the respective bank rate for overdrafts but at a rate at least 5% above the respective discount rate of the Deutsche Bundesbank [German Federal Bank].

If the payment terms are not adhered to or we become aware of circumstances that, in our view, are sufficient to reduce the buyer's credit worthiness, all of our claims shall become payable immediately regardless of the term of any bills of exchange that have been accepted or credited.

We shall then also be entitled to perform outstanding deliveries only in exchange for advance payment, to withdraw from the contract after a reasonable grace period, and to demand compensation for default. We may also prohibit the resale or processing of the delivered goods and demand their return or the transfer of indirect possession of the delivered goods at the buyer's expense. The buyer hereby already authorises us to enter its premises and confiscate the delivered goods in the above cases.

We shall be entitled to the usual securities for our claims according to their nature and extent, even if they are subject to conditions or of limited duration. Offsetting or withholding payments as a result of any counterclaims or notifications of defects shall be prohibited, except where claims are undisputed or established to be legally binding.

8.2 Terms of payment for web-shop customers

Payment shall be made exclusively in advance. Once the order process in our online shop is complete, you will receive an email with the bank details for our business account. The invoiced amount must be transferred to our account within 7 days. We cannot carry out your order until the payment arrives.

9. Retention of title

Until all liabilities arising from the business relationship are paid in full and especially until all bills of exchange and cheques, including finance bills, given as payment are cashed, the goods delivered by us shall remain our property and may be taken back by us at the buyer's expense in the event of default in payment. Until this point, the buyer shall not be entitled to pledge or assign the goods to third parties as a security; it must neither sell them on nor process them within the framework of its ongoing business transactions. The buyer shall be obliged to inform us immediately of any seizure by third parties of the goods delivered subject to retention of title. In the event of further processing, the buyer shall not acquire ownership of the goods delivered by us as set out in section 950 of the German Civil Code (BGB), as any processing is carried out by the buyer on our behalf. Without prejudice to the rights of third-party suppliers, the newly created thing shall serve as security for us up to the amount of our total claims arising from the business relationship. It shall be kept safe for us by the buyer and shall be regarded as goods for the purpose of these terms and conditions. If the item is intermixed or otherwise combined with other objects that to do not belong to us, we shall acquire at least co-ownership of the new thing in proportion to the value of the contract item to that of other objects that have been processed with it. If the buyer sells the goods delivered by us, regardless of their condition, it hereby already assigns to us all claims against its customers arising from sales, as well as all ancillary rights, until all of our claims arising from delivery of goods are paid in full. At our request, the buyer shall be obliged to notify its customers of the assignment and to hand over the information and documents we require in order to assert our rights against the buyer's customers. If the total value of the securities given to us exceeds our claims arising from delivery by more than 20%, we shall be obliged to retransfer securities to this extent at the buyer's request. If the retention of title or assignment is invalid in the territory in which the goods are located, a security corresponding to the retention of title or assignment in this territory shall be deemed to be agreed. If the buyer's cooperation is required in this process, it shall take all necessary measures to establish such rights.

10. Notification of defects, liability

Our contractual partner shall be entitled to a warranty only if they have properly fulfilled their legal obligations under sections 377 and 378 of the German Commercial Code (HGB) with respect to the duties of examination and notification. If defects are present, we shall be entitled at our choice to either repair the defects or provide a replacement; if we are not prepared or not able to do so, and especially if repair/replacement is delayed beyond reasonable deadlines for reasons that we are responsible for, or if repair/replacement otherwise fails, our contractual partner shall be entitled at its choice to withdraw from the contract or to demand a corresponding reduction in the price. Unless otherwise stipulated below, further claims of the contractual partner shall be excluded regardless of their legal basis. We shall not be liable for damage that did not occur to the delivered item itself. In particular, we shall not be liable for lost profit or other pecuniary losses of the buyer. The above exemption from liability shall not apply if the damage is caused by intent or gross negligence; it shall also not apply if the buyer asserts claims for damages for non-performance due to the lack of a warranted characteristic. If we breach an essential contractual duty through negligence, our duty of reimbursement for property damage or personal injury shall be restricted to the level of cover provided by our product liability insurance. We are prepared to allow the buyer to view our policy. The warranty period is 6 months calculated from the date of transfer of risk. This period is a limitation period. The period shall also apply to claims under sections 1 and 4 of the German Product Liability Act (ProdHaftG). Insofar as our liability is excluded or restricted, this shall also apply to the personal liability of our employees, workers, staff, representatives and agents. Goods that are subject to a complaint must not be sent back without obtaining our prior written consent, as otherwise we may refuse to accept them at the sender's expense. Goods that have been partially or wholly processed will not be taken back under any circumstances.

The user is obliged to make sure that the purchased product is suitable for the intended application using technical descriptions, where available, and based on their specialist knowledge and to familiarise themselves with the application of this product. If they are not familiar with the product's application, our company staff are available to provide advice.

All information and advice from our staff is provided carefully and conscientiously. Under no circumstances does this information and advice replace the indispensable consultancy services of architects and specialist planning companies or the services they provide during construction. Only the authorised professional groups are entitled to provide these services.

11. Place of performance and jurisdiction, miscellaneous

Our company's registered office shall be the place of performance for all obligations arising from this contract, including liabilities from cheques and bills of exchange. Provided our contractual partner is a merchant, the place of jurisdiction for all disputes arising from the contractual relationship shall be, at our choice, the Local Court of Hagen.

Contracts with our contractual partner shall be governed exclusively by German law to the exclusion of the UN Convention on Contracts for the International Sale of Goods of 11 April 1980. The language of the contract shall be German.

Hagen, 5 February 2015
Managing directors: Markus Rensburg, Gregor Mamys
Court of registration: Local Court of Hagen · Registration number: HRB 3817 · VAT ID No.: DE 812674291
Tax number: 321/5770/0639

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www.e-u-r-o-tec.de

E.u.r.o.Tec GmbH
Unter dem Hofe 5
D-58099 Hagen

Tel. 0049 (0)2331 62 45-0
Fax 0049 (0)2331 62 45-200
email: info@e-u-r-o-tec.de

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