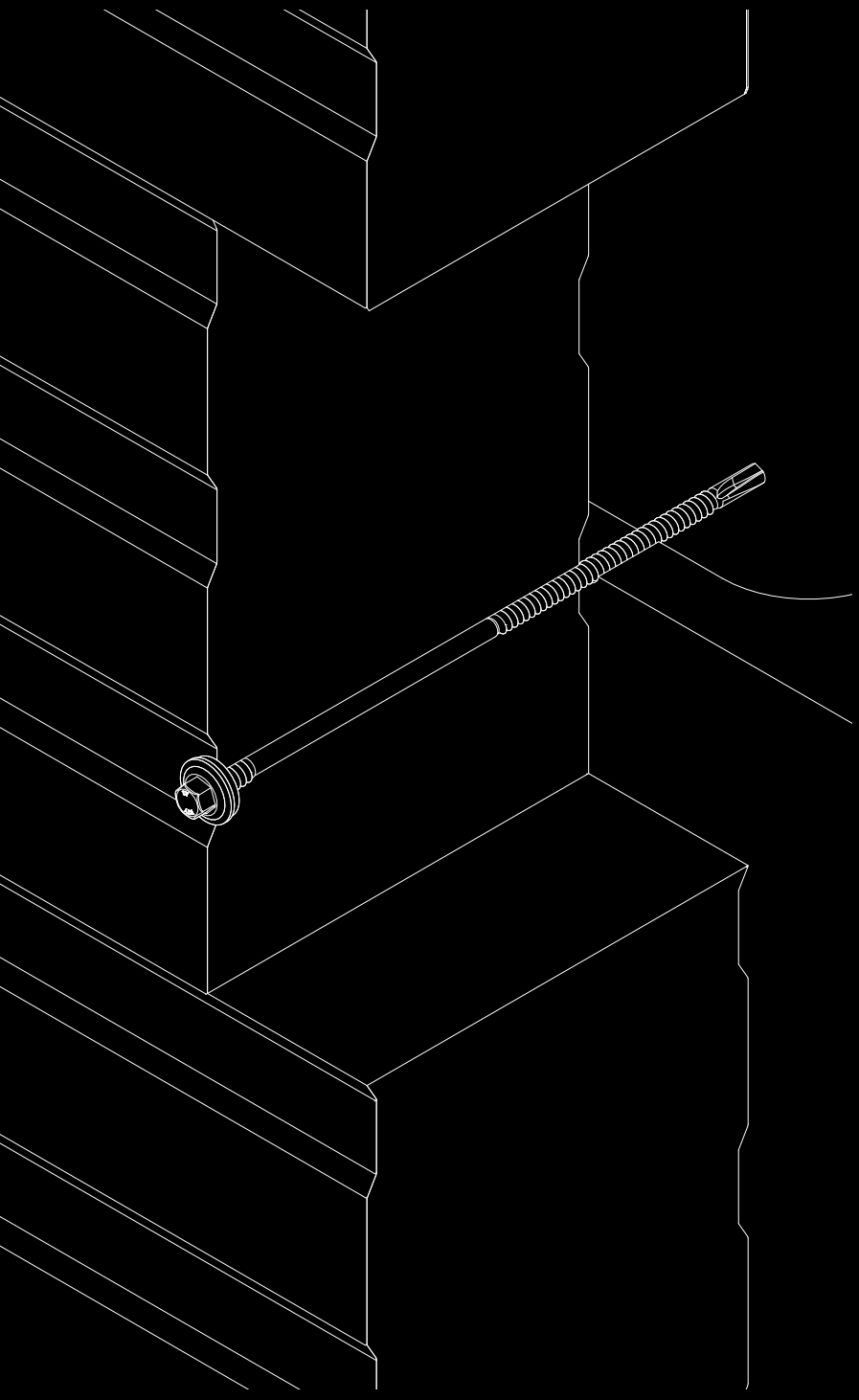
Eurotec®

The specialist for fastening technology

FASTENING SOLUTIONS IN LIGHTWEIGHT METAL CONSTRUCTION



BASIC PRINCIPLES

DRILLING SCREWS

SANDWICH PANEL SCREWS

FIBRE CEMENT SCREWS

www.eurotec.team/en

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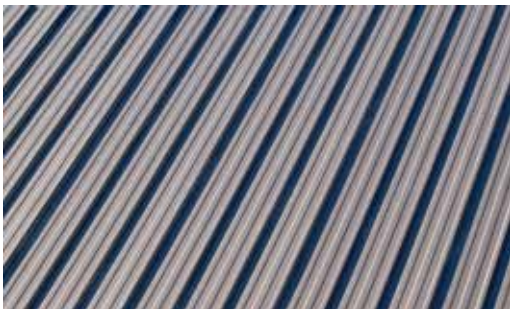
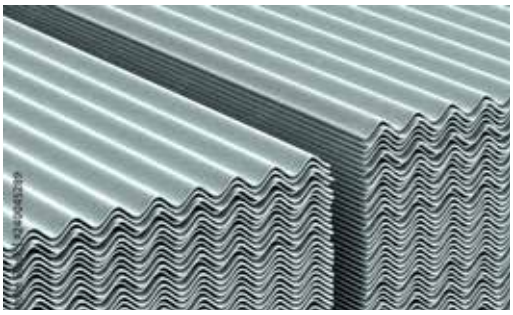
FASTENING SOLUTIONS FOR LIGHTWEIGHT METAL CONSTRUCTION

Construction methods have continued to develop over the years, and they now display innovation and high durability. Accordingly the connections used are expected to meet higher standards – including those in lightweight metal construction. The corresponding fastening technology can help to fulfil the strictest requirements and to ensure the functionality of the building or structure over the long term. Using lightweight metals in construction fundamentally provides a solution for reducing resource use and realising diverse applications.

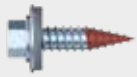
Lightweight metal construction work involves using industrially produced, large-scale construction elements made from lightweight metal and lightweight composite materials. This includes thin-walled parts such as trapezoidal profiles, cassette profiles, sandwich components and corrugated fibre cement sheets. The building envelope – including façade, suspended floor and roof – can be realised with these metal profiles. This field offers a wide range of architectural possibilities, such as the construction of warehouses in industrial and commercial applications, sports facilities and low-rise buildings like supermarkets.

Eurotec's product range covers the mechanical fastening elements needed for applications in lightweight metal construction for various materials in the form of roof and wall profiles and for fixing their substructures. Our selected products can support you in making your installation work easy and efficient. Our dedicated team is on hand to help you at any time.





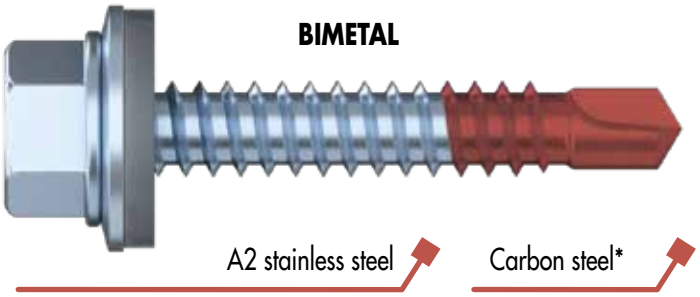
BRIEF OVERVIEW

Page	Screw/bore diameter [mm]		Application subs.	Ø d [mm]	Material	Clamp thickness [mm]	Corrosivity categories
25	BiGHTY BIM / 3		Steel on steel	4,8	Bimetal	0–32	≥ C2
25	BiGHTY BIM / 5		Steel on steel	5,5	Bimetal	0–62	≥ C2
26	BiGHTY BIM / 5		Steel on steel	6,3	Bimetal	0–62	≥ C2
26	BiGHTY BIM / 12		Steel on steel	5,5	Bimetal	0–10	≥ C2
27	BiGHTY ES / 3		Steel on steel	4,8	Hardened stainless steel	0–35	≥ C2
28	BiGHTY ES / 5		Steel on steel	5,5	Hardened stainless steel	0–43	≥ C2
28	BiGHTY ES / 5		Steel on steel	6,3	Hardened stainless steel	0–43	≥ C2
28	BiGHTY ES / 12		Steel and steel	5,5	Hardened stainless steel	0–14	≥ C2
27	BiGHTY BIM / 5		Steel on wood	6,5	Bimetal	–	≥ C2
31	SWPS BIM / 5 (sandwich panel screw)		Sandwich on steel	5,5/6,3	Bimetal	80–280	≥ C2
32	SWPS BIM / 12 (sandwich panel screw)		Sandwich on steel	5,5/6,3	Bimetal	75–275	≥ C2
34	BiGHTY DBS BIM / max. 2.4 (Thin-sheet screw)		Alum. on alum. Steel on steel Alum. on steel	4,5	Bimetal	0–8	≥ C2
34	BiGHTY DBS BIM / max. 2.4 (Thin-sheet screw)		Alum. on alum. Steel on steel Alum. on steel	6	Bimetal	0–20	≥ C2
37	Fibre cement screw		Fibre cement on wood	6,5	Steel, special coating	–	≥ C2
38	Fibre cement screw		Fibre cement on wood	6,5	A2 stainless steel	–	≥ C2
40	Washered screw		Stone Wood Insulation	4,5	A2 stainless steel	–	≥ C2
42	Insulating stud anchor		Insulation	7	Zinc die-cast	–	≥ C2
44	Coloured façade screw		Wood	4,8	A2 stainless steel	–	≥ C2
44	Coloured façade screw		Wood	5,3	A4 stainless steel	–	≥ C2

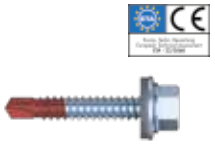
WHAT IS BIMETAL?

The drill tip and the first turns of the thread have undergone heat treatment to ensure optimal drilling performance. They are produced from hardened carbon steel. The rest of the screw, including the head, is made of stainless A2 steel, which has pronounced corrosion resistance. Thanks to highly effective friction welding, the hardened carbon steel and the stainless A2 steel are joined to form a single component, producing the body of the screw. This body combines the best properties of each type of steel.

The BiGHTY bimetal screw has excellent drilling properties combined with a self-tapping thread made from hardened carbon steel and corrosion-resistant stainless A2 steel. To protect the carbon steel parts from corrosion, the screws are galvanised. This gives them the visual appearance of conventional galvanised carbon steel screws, making them visually indistinguishable.



PRODUCT OVERVIEW – EUROTEC BIGHTY DRILLING SCREWS

	BiGHTY drilling screw bimetal*	BiGHTY drilling screw	BiGHTY drilling screw bimetal*	BiGHTY bimetal thin-sheet screw*
				
Material	A2 stainless steel, tip: Carbon steel	Hardened stainless steel, special coating	A2 stainless steel, tip: Carbon steel	A2 stainless steel, tip: Carbon steel
Applications	• Fastening steel to steel	• Fastening steel to steel • Fastening steel to wood	• Fastening steel to wood	• Fastening steel sheet to aluminium • Fastening steel sheet to steel sheet • Fastening aluminium to steel sheet • Fastening aluminium to aluminium
Bore diameter [mm]	3, 5, 12	3, 5, 12	5	3
Clamp thickness [mm]	1 – 62	2 – 43	170	1 – 20

*Does not actually have a red tip, for illustration purposes only

HOW IS A BIMETAL SCREW MANUFACTURED?

PRODUCTION METHOD

Chipless forming is the most common way to manufacture bimetal screws. Two different techniques can be used in chipless forming: cold forming and hot forming. The type of forming that we generally use at Eurotec for manufacturing our bimetal screws is cold forming. Cold forming is also referred to as cold extrusion.

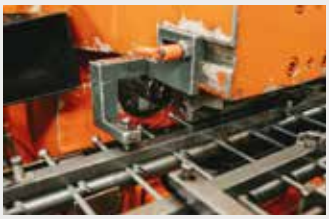
COLD FORMING (COLD EXTRUSION)

Screw compression: This is particularly interesting, as this is how the head of the screw is made. The cone without a tip in the pre-compression stage is what will later become the hexagon head. In the further steps of the compression, the entire head is created. To manufacture the thread, the thread is rolled. The screw blank is pressed between two rollers that are driven by machines. These two rolling dies are also referred to as flat dies. One of the flat dies is fixed, and the other is movable. The rolling movement of these dies creates the screw thread.

MANUFACTURING STEPS FOR A BIMETAL DRILL TIP

1 Wire cutting (trimming the blank)

2 Pre-compression (first compression stage of the head geometry)



3 Final compression (second compression stage of the head geometry)

4 Welding (fusing a carbon steel wire section)

FINISHING

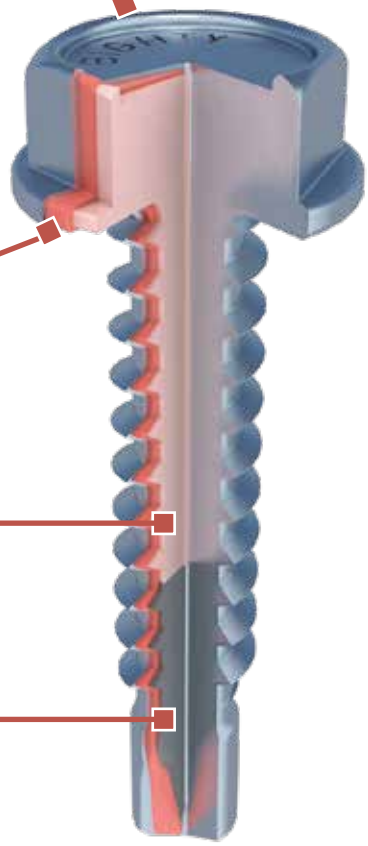
After the screw has been manufactured, it is not yet fully complete. Depending on the application, it may also require finishing. This means that the screw also needs to be given a surface coating.

Coating: **SlidingTec**, a high-efficiency lubricant layer

With **SlidingTec**, a colourless, glossy and non-slip film is formed on the workpiece. The lubricant layer fulfils the VDA guidelines in full. The procedure also has KTW approval. This means the coating is harmless in the case of contact with drinking water.

Another property of the **SlidingTec** technique is that the layer has non-smearing and non-oiling characteristics. It is also important to note that **SlidingTec** has no negative impact on screw locks of any kind. **Coating with SlidingTec** is a highly efficient method for applying solid polymer lubricants to bimetal screws that need to have good low-friction properties.

Furthermore, the **SlidingTec coating** effectively prevents the components from cold-welding during installation.



Coating: Zinc coating, passivated (CrVI)-free in acc. with ISO 4042

In the electroplating method in accordance with DIN EN ISO 4042, the zinc ions are separated from the electrolyte by applying voltage, creating a permanent and uniform protective coating in the required my range.

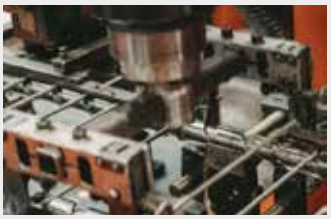
Foundation: A2 or A4 stainless steel

A2 and A4 screws made from stainless steel offer high corrosion resistance, tensile strength and temperature resistance. They are ideal for damp and aggressive environments, provide reliable connections and are suitable for a wide range of applications.

Carbon steel

Carbon steel features extreme stability and robustness. These characteristics make it significantly easier to create screw connections with other steel components.

5 Calibration (deburring the weld point)



6 Pinching (pressing on a drill tip, depending on specifications)

7 Rolling the thread

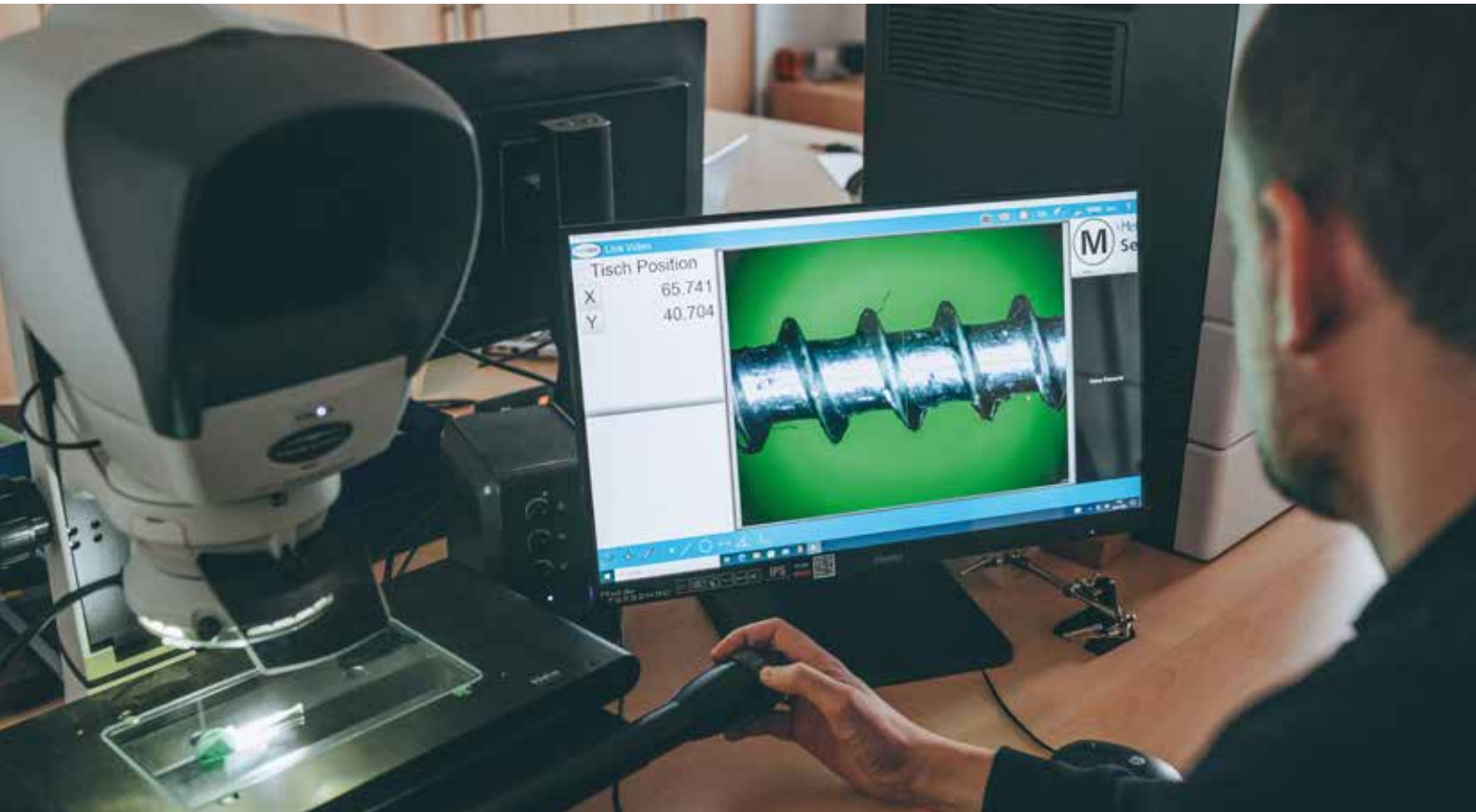
QUALITY ASSURANCE AND CERTIFICATIONS

Our ultimate goal is to provide our customers with flawless products and services. We also guarantee 100% adherence to delivery dates. We expect every one of our employees to commit to quality unwaveringly. Training and further development of customer- and quality-oriented ways of thinking and acting are always in focus. We feel duty-bound to comply with legal and regulatory requirements and within a given an economic framework, while at the same time promoting environmentally conscious action.

We are proud that almost all of our products in the timber, façade and concrete segments are ETA-certified.
It goes without saying that our quality assurance does daily checks on the batches produced for standards such as conformity to drawings, functionality, appearance, and compliance with customer-specific specifications.

That is the only way we can be sure to deliver the consistently high quality our customers have come to expect from us.

QUALITY FORMS THE BASIS
OF ALL OUR ACTIVITIES.




UNIVERSAL
PUNCH CORR

CERTIFICATIONS

The European Technical Assessment (ETA) is a product performance certificate that leads to CE-marking and makes it possible to market products in the entire European Economic Area, Switzerland and Turkey, and often also at a global level.

ETA applications are only possible for construction products that are fully covered by a harmonised standard. Unlike the harmonised standard, the ETA can be customised to suit the product. Performance characteristics that are not covered by existing harmonised standards can also be documented in the ETA.

One advantage of the ETA over national approval is that it covers a larger geographical area. However, with ETA certificates, the certified performance always needs to be checked against the national building requirements.

ETA-22/0568

Screws for fastening metal sheets to metal or wood substructures. The sheets can be used either as wall or roof panelling or as load-bearing wall and roof elements. They are used as fastening screws and for connections in indoor and outdoor applications. Fastening screws intended for use in outdoor areas with corrosion ≥C2 in accordance with the standard EN ISO 12944-2 are manufactured from stainless steel. These screws are also used for connections with mainly static load (e.g. wind load, intrinsic load).

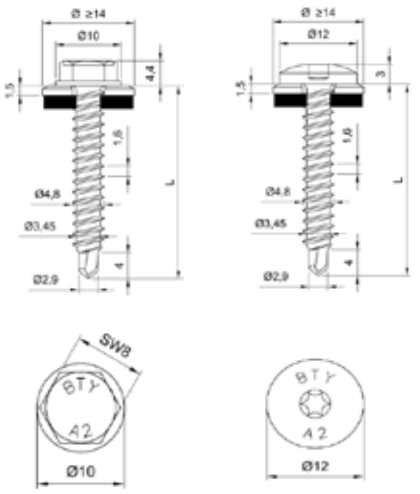
ETA-11/0024

Screws for load-bearing wood structures. Partially and fully threaded screws for the following applications: wood-to-wood and steel-to-wood connections, mounting over-rafter insulation systems, supplementary beam panels, main-beam/sub-beam connections, transverse tension and transverse compression reinforcements etc. in softwood (sawn timber, solid structural timber, glue-laminated timber, cross-laminated timber (CLT), laminated veneer lumber), beech veneer lumber and various other wood materials.

ETA-21/0318

Screws for fastening flat, slightly profiled or fully profiled sandwich elements to steel substructures. The core material of the sandwich elements must be made from polystyrene (PS) – or polyurethane (PUR) – ribbed foam or mineral wool with a minimum core material pressure resistance of 0.04 N/mm² (in accordance with the specifications for sandwich elements, for example those of the CE-marking). The sandwich elements can be used either as wall or roof panelling or as load-bearing wall and roof elements. They are used as fastening screws and for connections in indoor and outdoor applications.

APPROVAL EXPLANATION



Materials

Fastener: stainless steel (1.4301) EN10088 — Base material

Washer: stainless steel (1.4301) EN10088 — Sealing washer

Component I: S280GD, S320GD or S350GD - EN 10346 — Component to be fastened

Component II: S235 - EN 10025-1
S280GD, S320GD or S350GD - EN 10346 — Substructure, component

Drilling capacity $\Sigma t_i \leq 2{,}00$ mm — Bore diameter in mm

Timber substructures

for timber substructures no performance determined — Wood substructure

	$t_{N,II}$ =	0,40	0,50	0,55	0,63	0,75	0,88	1,00	1,13	1,25	1,50
$V_{R,k}$ für $t_{N,I}$ =	0,40	0,64 a) —	0,64 a) —	0,64 a) —	0,64 a) —	0,64 a) —	0,64 a) —	0,64 a) —	0,64 a) —	0,64 a) —	0,64 a) —
	0,50	0,64 a) —	0,91 a) —	0,91 a) —	0,91 a) —	0,91 a) —	0,91 a) —	0,91 a) —	0,91 a) —	0,91 a) —	0,91 a) —
	0,55	0,64 a) —	0,91 a) —	1,03 a) —	1,03 a) —	1,03 a) —	1,03 a) —	1,03 a) —	1,03 a) —	1,03 a) —	--- —
	0,63	0,64 a) —	0,91 a) —	1,03 a) —	1,22 a) —	1,22 a) —	1,22 a) —	1,22 a) —	1,22 a) —	1,22 a) —	--- —
	0,75	0,64 a) —	0,91 a) —	1,03 a) —	1,22 a) —	1,53 a) —	1,53 a) —	1,53 a) —	1,53 a) —	1,53 a) —	--- —
	0,88	0,64 a) —	0,91 a) —	1,03 a) —	1,22 a) —	1,53 a) —	2,17 a) —	2,17 a) —	2,17 a) —	-- —	--- —
	1,00	0,64 a) —	0,91 a) —	1,03 a) —	1,22 a) —	1,53 a) —	2,17 a) —	2,80 a) —	--- —	--- —	--- —
	1,13	0,64 a) —	0,91 a) —	1,03 a) —	1,22 a) —	1,53 a) —	2,17 a) —	--- —	--- —	--- —	--- —
	1,25	0,64 a) —	0,91 a) —	1,03 a) —	1,22 a) —	1,53 a) —	--- —	--- —	--- —	--- —	--- —
	1,50	0,64 a) —	0,91 a) —	--- —	--- —	--- —	--- —	--- —	--- —	--- —	--- —
$N_{R,k}$ für $t_{N,I}$ =	0,40	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,25 a) —	1,25 a) —	1,25 a) —	1,25 a) —	1,25 a) —
	0,50	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,36 a) —	1,64 a) —	1,70 a) —	1,70 a) —	1,70 a) —
	0,55	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,36 a) —	1,64 a) —	1,92 —	1,92 a) —	--- —
	0,63	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,36 a) —	1,64 a) —	1,96 —	2,24 —	--- —
	0,75	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,36 a) —	1,64 a) —	1,96 —	2,27 —	--- —
	0,88	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,36 a) —	1,64 a) —	1,96 —	- —	--- —
	1,00	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,36 a) —	1,64 a) —	--- —	--- —	--- —
	1,13	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	1,36 a) —	--- —	--- —	--- —	--- —
	1,25	0,45 a) —	0,55 a) —	0,66 a) —	0,82 a) —	1,08 a) —	--- —	--- —	--- —	--- —	--- —
	1,50	0,45 a) —	0,55 a) —	--- —	--- —	--- —	--- —	--- —	--- —	--- —	--- —

Application of force in transverse direction
Component I = material thickness 0,75 mm
Component II = material thickness 0,88 mm
= 1,53 char. load capacity in kN
(1kN = 100 kg)

Application of force on extraction
Component I = material thickness 0,40 mm
Component II = material thickness 0,88 mm
= 1,25 char. load capacity in kN
(1kN = 100 kg)

If both components I and II are made of S320GD or S350GD, the values marked with a) may be increased by 8,3%. — Notes

self drilling screw

BiGHTY BIM DSS 4,8 x L, reduced drill bit
with hexagon head or round head with Torx® drive system and seal washer ≥ Ø14 mm — Name and diameter of screw

Annex 4

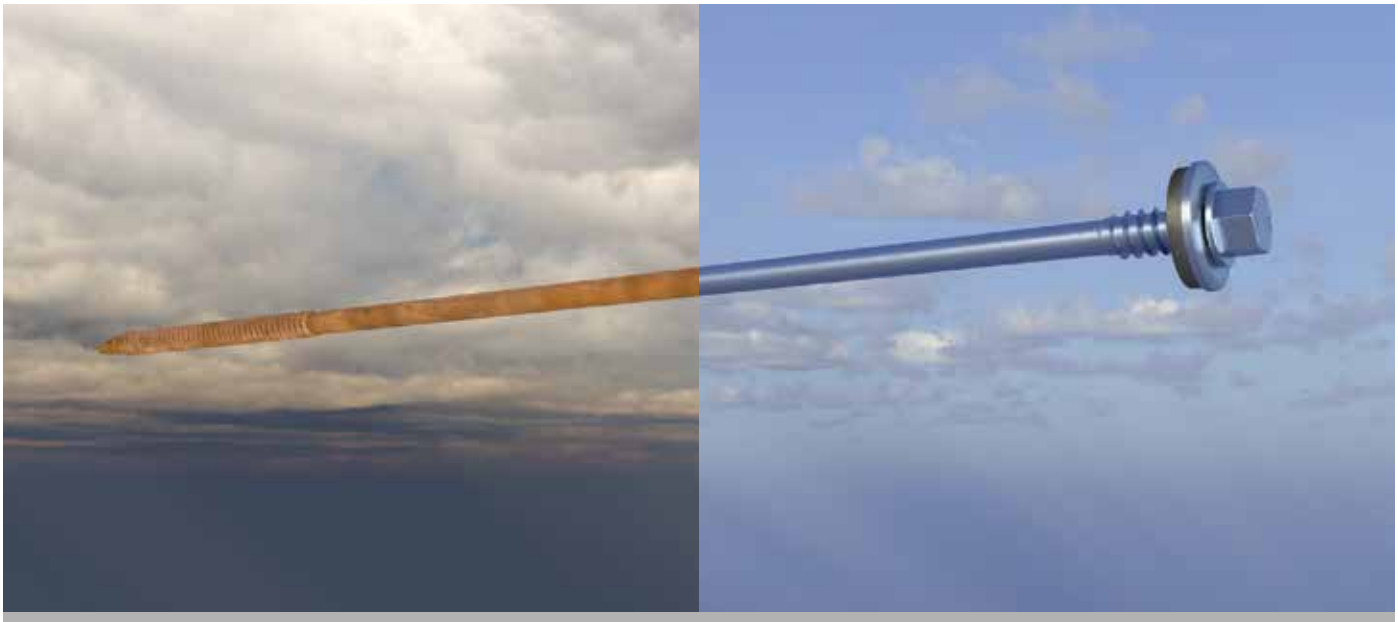
CORROSION PROTECTION? WHAT DOES THAT MEAN?

The selection of the mechanical fastening is dependent on the corrosion load that will be present in an installed state. The various loads are divided up into corrosiveness categories C1–C5M (table 1).

Table 1: *Corrosiveness categories*

Example	Class	Condition
Heated building areas	C1	Insignificant
Rural areas, unheated structures	C2	Low
Urban and industrial areas	C3	Moderate
Industrial and coastal regions	C4	High
Industrial areas with increased pollution levels	C5I	Very high (industry)
Coastal environment and offshore areas	C5M	Very high (sea)

Using zinc electroplating or laminar zinc-aluminium coating effectively protects both the drill tip and the lower part of the thread from corrosion. Both zinc electroplating and the lubricant layers also serve as functional layers that improve installation conditions.



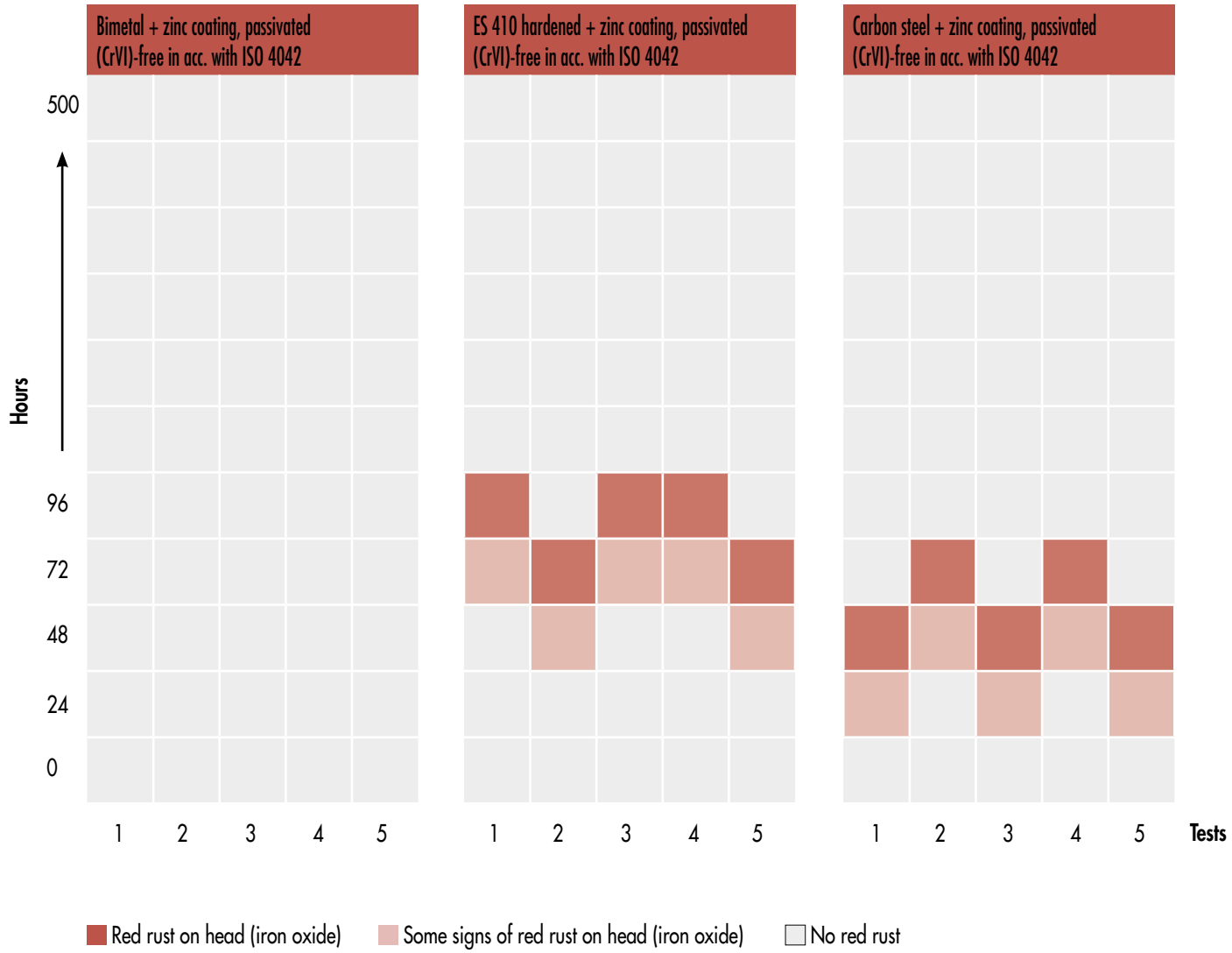
Left: no corrosion protection, right: with corrosion protection

COMPARATIVE SALT SPRAY TEST TO DIN EN ISO 9227

A salt spray test in accordance with the standard DIN EN ISO 9227 can fundamentally be used to determine the corrosion resistance of a material or of a corrosion-protection coating. If the selected coating fails to provide sufficient protection, coated steel will produce iron oxides, also known as red rust, when exposed to a corrosion attack. The test is carried out in an enclosed space with corresponding temperature and continuous application of a low-saline solution with a controlled pH value.

This solution forms a fine spray that settles on the tested screws, covering them with a film of salt water that has a corrosive effect.
The duration of the test depends on the expected corrosion resistance of the material. Once the salt spray test has been completed, the screws are rinsed with de-ionised water in order to remove any loosely attached corrosion residue. Electrical and microscopic methods are then used to assess and document the corrosion attack on the test material.

The corrosion resistance of a screw with corrosion protection is assessed on the basis of the test hours. If the tested screws pass the applied test without the base metal corroding (without red rust becoming visibly noticeable), they can be assigned to a corrosiveness category on the basis of how many hours they withstood.



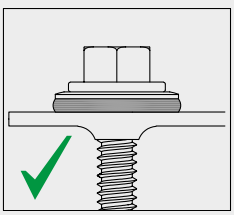
ASSEMBLY NOTES FOR SEALING WASHERS

Using screws with exposed sealing washers in accordance with the specifications of national technical approval (abZ) requires using an electric screwdriver with the depth stop set correctly. Impact drivers should be avoided.

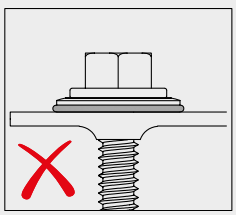
Do not use impact drivers.

EPDM seal compressed by impact driver

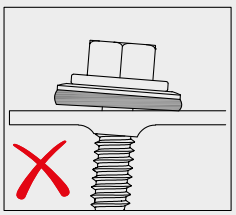
To ensure that a connection is created that is stable and, where applicable, rain-proof, the screws should be driven at a right angle to the component surface.



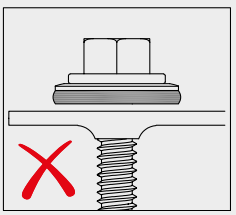
Correct.



Screwed in too deep.



Screwed in at an angle.



Do not leave any space between substructure and washer.

RECOMMENDED WASHER DIAMETERS

Fastening on the rib is realised with a screw and a washer Ø ≥19 mm.

Alternatively, in combination with a calotte, a Ø 16 mm washer can be used.

In the flat, screws with washers Ø ≥19 mm may only be used with steel substructures.

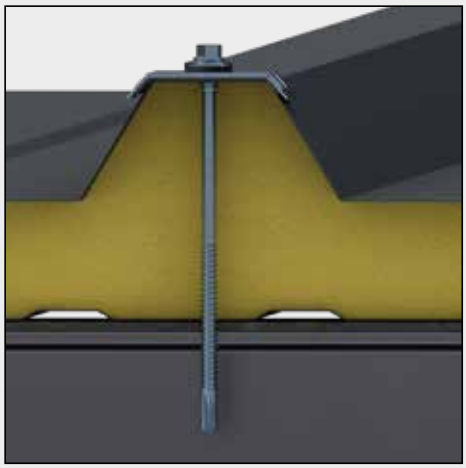
ROOF APPLICATIONS

- ≥Ø 16 mm for fastening on the rib with calotte
- ≥Ø 19 mm for fastening on the rib without calotte
- ≥Ø 19 mm for fastening in drain flat (on steel or steel substructure)

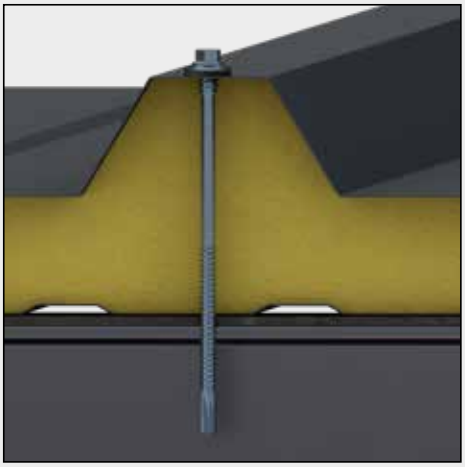
FAÇADE APPLICATIONS

- ≥Ø 16 mm for fastening on the rib profiles
- Select appropriate washer for corrugated profiles in accordance with the profile geometry

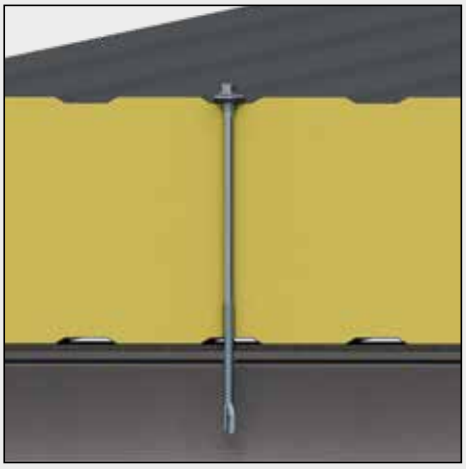
Fastening on the rib with calotte



Fastening on the rib without calotte

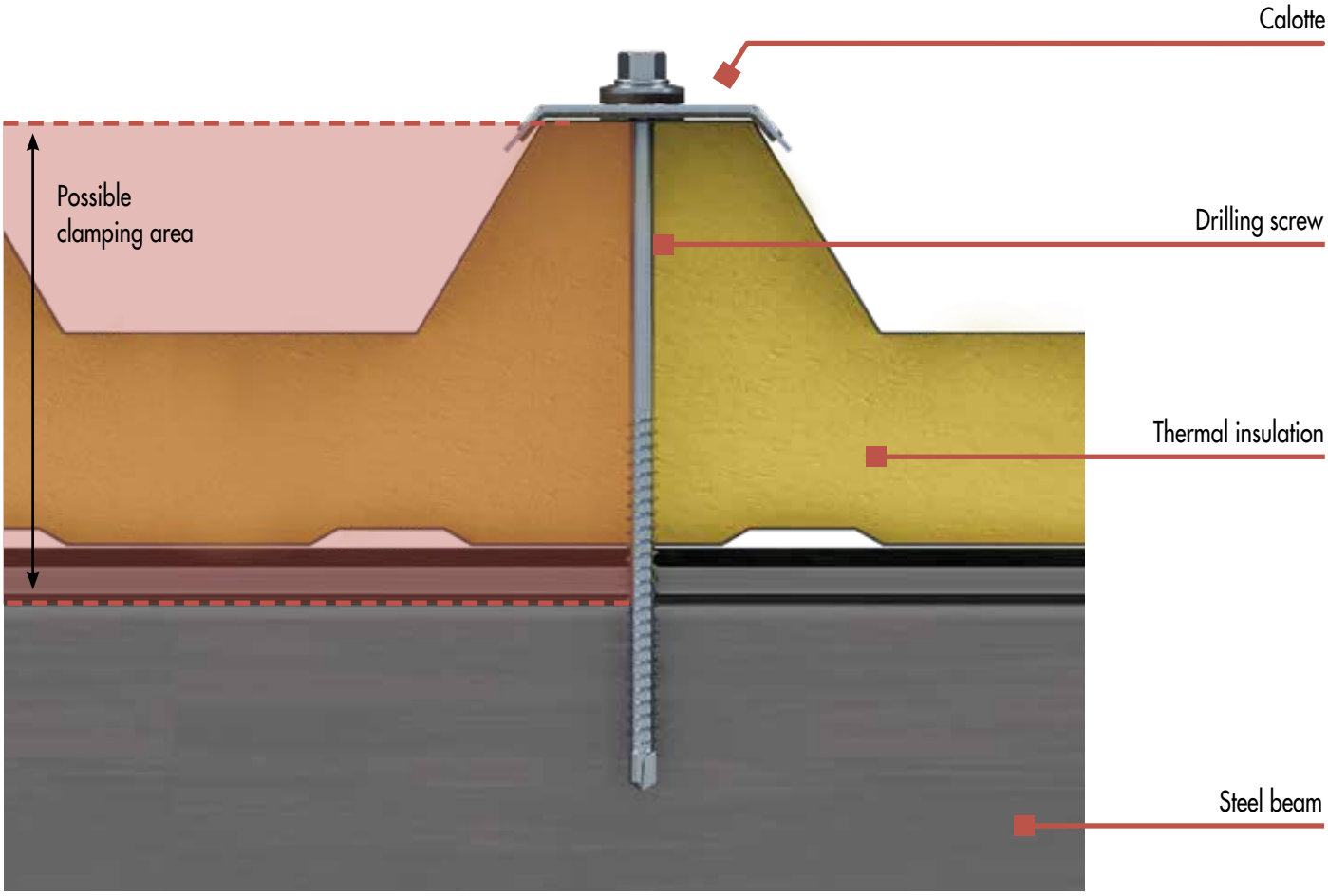


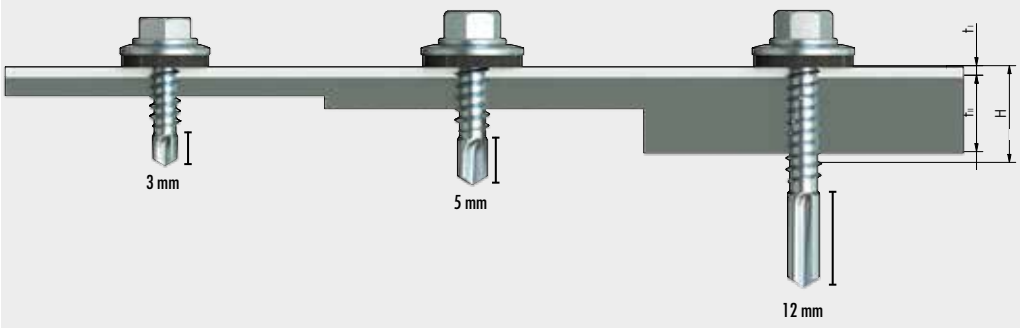
Fastening in the flat



CLAMPING THICKNESS IN LIGHTWEIGHT METAL CONSTRUCTION

The clamping area refers to the area in which the component is fastened to a substructure (wood, steel or aluminium).
It is dependent on the thickness of the component.



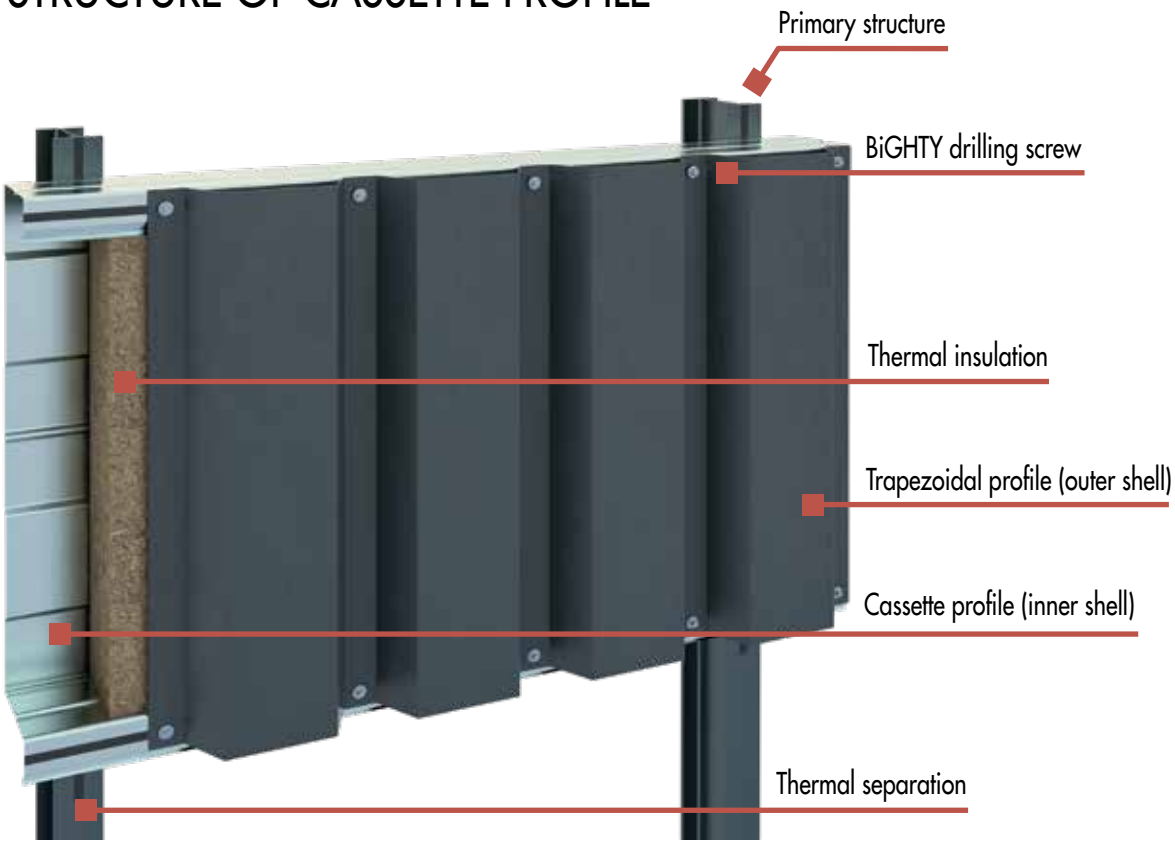


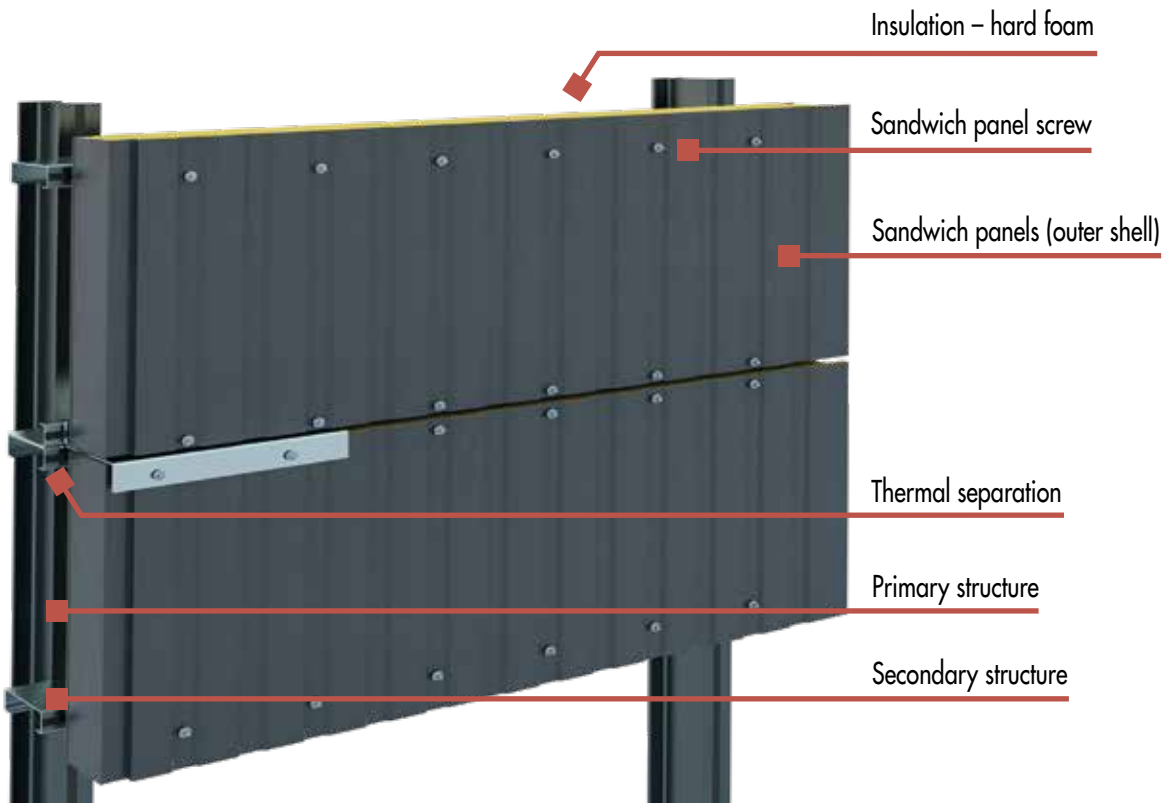
t_I Thickness of component I (connected part)

t_{II} Thickness of fastened component (fastening base)

H Clamp thickness

STRUCTURE OF CASSETTE PROFILE

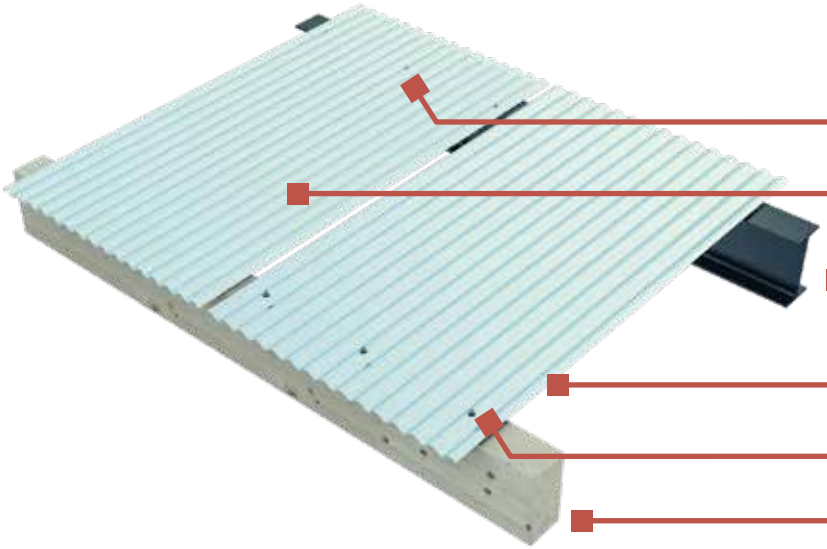




POSSIBLE APPLICATIONS: SUSPENDED FLOOR

SIMPLE PROFILE ROOF

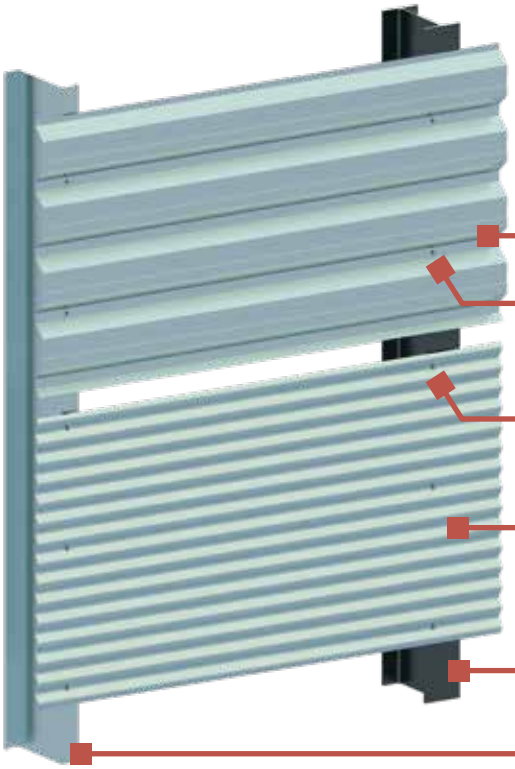
A classic, uninsulated profile roof in trapezoidal or corrugated format is realised with direct fastening to a purlin structure. The fields of application are varied, for example recess shelters, carports and protruding shelters.



SANDWICH ROOF ELEMENT

The element is made up of a top and a bottom layer made from metal combined with an insulating layer made from polyurethane foam.
A direct rod-type connection provides long-term resilience to the continuous load and from external influences such as wind, rain and snow.
Sandwich elements are used for buildings that are normally heated when in use. They are also used in industry or in private applications.

POSSIBLE APPLICATIONS: WALL



SINGLE-SHELL PROFILE WALL

Metal trapezoidal or corrugated profiles are fastened horizontally with pin-type connectors in a mullion-transom structure.
The fields of application are varied, for example recess shelters, carports and protruding shelters.

Trapezoidal sheet

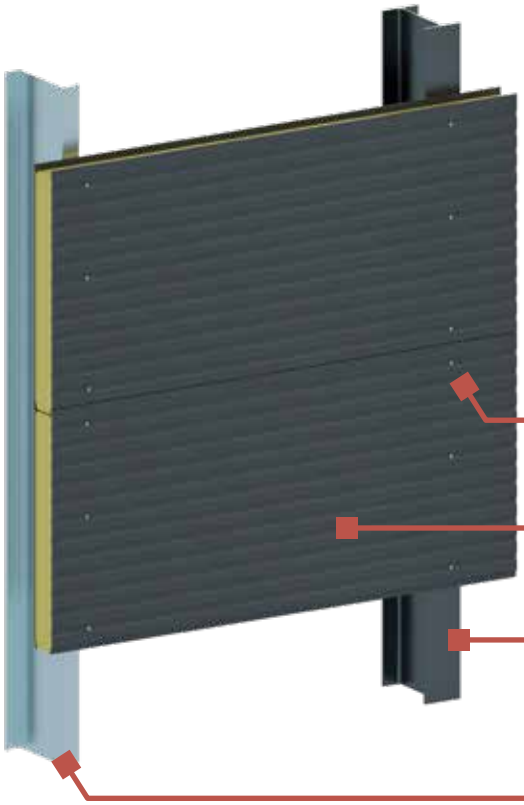
BiGHTY drilling screw

BiGHTY drilling screw sealing washer Ø 14 mm

Corrugated sheet

T-beam

Z- or C-profile



SANDWICH ELEMENT ON WALL STRUCTURE

The elements are made up two metal layers combined with an insulating layer made from polyurethane foam.
A direct rod-type connection provides long-term resilience to the continuous load and from external influences such as wind, rain and snow.
Often used in large-scale industrial applications, as there is an ideal relationship between intrinsic weight and load-bearing capacity.
Generally for any buildings that are heated when in use.

Sandwich panel screw

Sandwich panel element

T-beam

Z- or C-profile

INDIVIDUAL CHOICE OF COLOUR FOR YOUR SCREW

The screw heads can be supplied in RAL colours on request

Painted screw heads do more than just improve appearance. In addition to allowing you to customise your project with an individual design, there are practical advantages to using coloured screw heads. Thanks to the precise colouring in accordance with your specifications, the screws can seamlessly blend into the structure, creating a harmonised overall appearance.

SCREWS IN YOUR CHOICE OF COLOUR

The choice of colour is entirely up to you. Whether you want to create striking contrasts or prefer a more subtle colour scheme, our screws are able to meet your individual needs. As we use RAL colours, you have an extensive range to choose from and can configure the colour to match your project perfectly.

EFFECTIVE CORROSION PROTECTION

Painted screw heads also provide additional corrosion protection. The paint protects the screws from moisture and other environmental influences. This increases their service life and helps to improve the stability and reliability of your structure.

Give your project the perfect finishing touch and use our versatile colour options to give it eye-catching appeal.

MANUFACTURING STEPS FOR COLOURING A SCREW HEAD

1 Suspend screws in a perforated grid

2 Paint screw heads

3 Dry in furnace

4 Finished

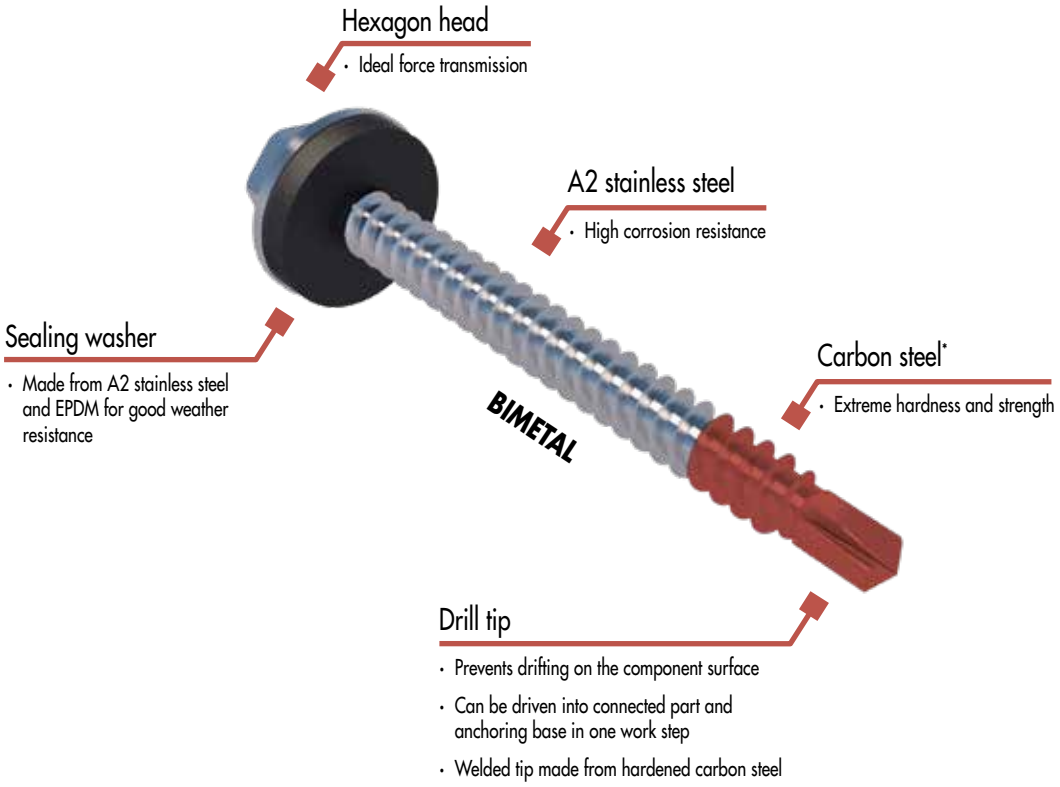

PRO-TEX

BIGHTY DRILLING SCREW

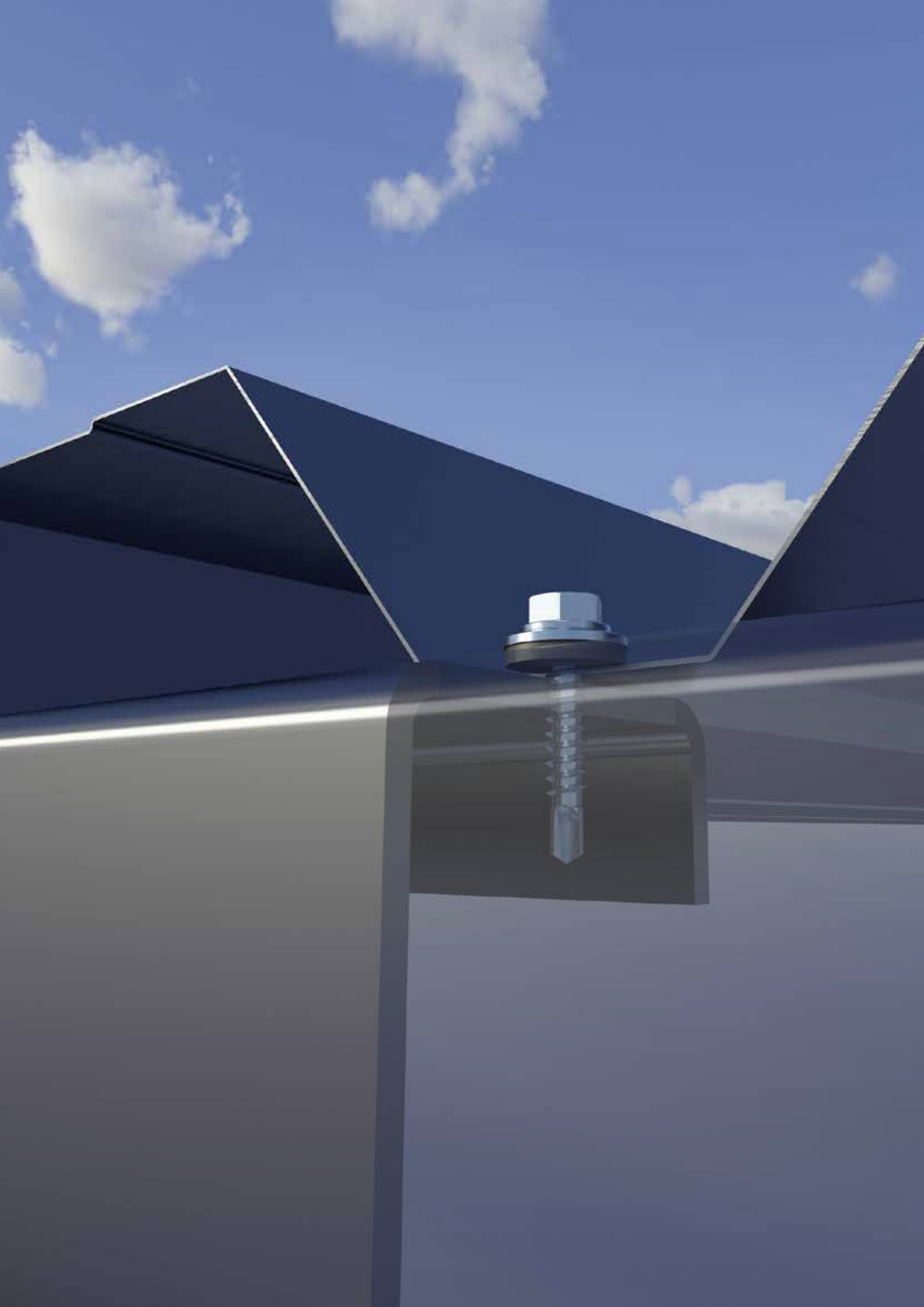
Drilling screws for steel-steel and wood-steel connections

The BiGHTY drilling screw represents a **time-saving alternative** to conventional self-tapping screws. It **bores** its **tap hole and the counterthread in the component itself**, enabling **fast pilot drilling.** Thanks to the specially formed drill tip, **drifting** of the screw is also **prevented.** The BiGHTY drilling screw can be driven with any standard spanner or a spanner socket. The BiGHTY bimetal combines the **high corrosion resistance of A2 stainless steel** with the **outstanding mechanical properties of carbon steel.**

The BiGHTY drilling screw from Eurotec is a versatile hexagon head screw, available with bore diameters of 3, 5 and 12 mm.



*Does not actually have a red tip, for illustration purposes only



BIGHTY DRILLING SCREW

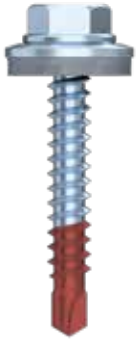
Drilling screws for steel-steel and wood-steel connections

BiGHTY drilling screw

Bimetal, bore diameter 3 mm

3 mm

0–32 mm

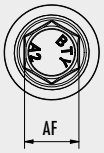


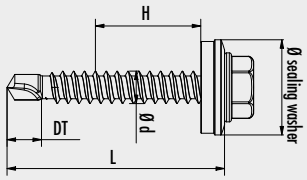
Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 3 mm							
945884	4,8	16	5	AF 8	14	1	500
945885	4,8	19	5	AF 8	14	4	500
945886	4,8	25	6	AF 8	14	9	500
945887	4,8	32	6	AF 8	14	16	500
945888	4,8	38	6	AF 8	14	20	200
945847	4,8	50	6	AF 8	14	32	200

[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

Caution: Does not actually have a red tip, for illustration purposes only

TECHNICAL DATA



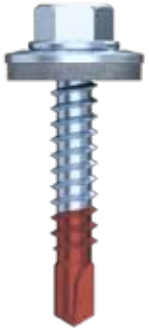


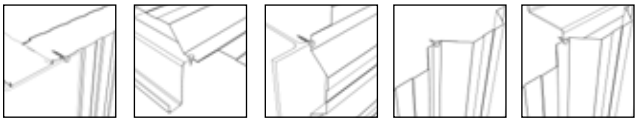
BiGHTY drilling screw

Bimetal, bore diameter 5 mm

5 mm

0–45 mm



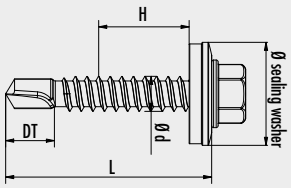


Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 5 mm							
945891	5,5	25	7,5	AF 8	16	7	500
945892	5,5	32	7,5	AF 8	16	14	500
945893	5,5	38	7,5	AF 8	16	20	500
945894	5,5	45	7,5	AF 8	16	27	200
945875	5,5	50	7,5	AF 8	16	32	200
945895	5,5	63	7,5	AF 8	16	45	200

[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

Caution: Does not actually have a red tip, for illustration purposes only

TECHNICAL DATA



BiGHTY drilling screw

Bimetal, bore diameter 5 mm


5 mm


0–62 mm

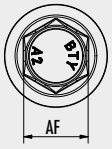
EDELSTAHL Rostfrei

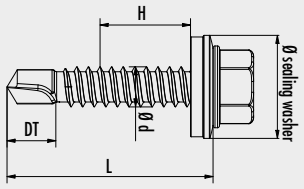
Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 5 mm							
945896	6,3	25	7,5	AF10	16	7	500
945897	6,3	32	7,5	AF10	16	14	200
945898	6,3	38	7,5	AF10	16	20	200
945899	6,3	45	7,5	AF10	16	27	200
945841	6,3	50	7,5	AF10	16	32	200
945900	6,3	63	7,5	AF10	16	45	200
945901	6,3	70	7,5	AF10	16	52	200
945902	6,3	80	7,5	AF10	16	62	200

[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

Caution: Does not actually have a red tip, for illustration purposes only

TECHNICAL DATA



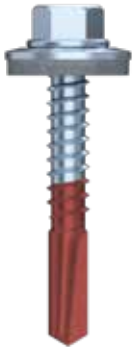


BiGHTY drilling screw

Bimetal, bore diameter 12 mm


12 mm


0–10 mm



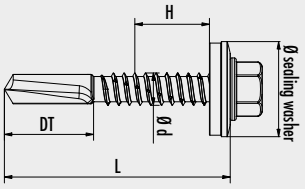
EDELSTAHL Rostfrei

Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 12 mm							
945844	5,5	38	15	AF 8	16	10	500

[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

Caution: Does not actually have a red tip, for illustration purposes only

TECHNICAL DATA



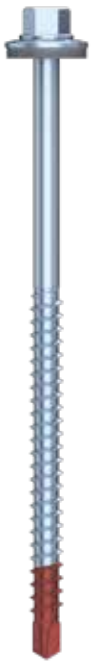
BIGHTY DRILLING SCREW

Drilling screws for steel-steel and wood-steel connections

BiGHTY drilling screw

Bimetal

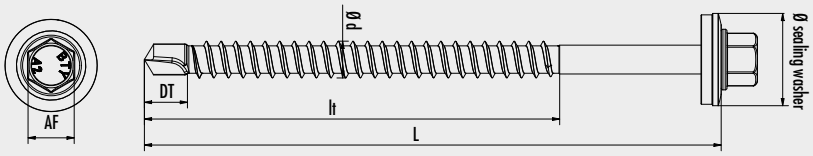
5 mm



Art. no.	Ø d [mm]	L [mm]	lt [mm]	DT [mm]	AF	Ø sealing washer [mm]	PU
Bore diameter 5 mm							
945839	6,5	120	72	7,5	AF 8	16	200
945915	6,5	140	72	7,5	AF 8	16	200
945916	6,5	160	72	7,5	AF 8	16	200
945917	6,5	180	72	7,5	AF 8	16	200
945918	6,5	200	72	7,5	AF 8	16	200
945919	6,5	220	72	7,5	AF 8	16	200

Caution: Does not actually have a red tip, for illustration purposes only

TECHNICAL DATA

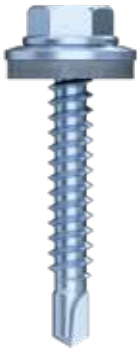


BiGHTY drilling screw

Hardened stainless steel, special coating, bore diameter 3 mm

3 mm

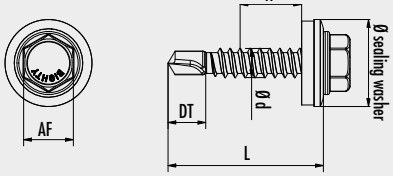
0–35 mm



Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 3 mm							
945660	4,8	19	6	AF 8	14	4	500
945661	4,8	25	6	AF 8	14	10	500
945662	4,8	32	6	AF 8	14	17	500
945663	4,8	38	6	AF 8	14	23	200
945664	4,8	50	6	AF 8	14	35	200

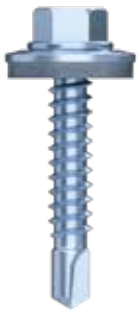
[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

TECHNICAL DATA



BiGHTY drilling screw

Hardened stainless steel, special coating, bore diameter 5 mm

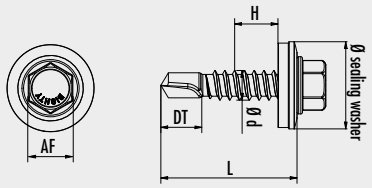


EDELSTAHL Rostfrei

Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 5 mm							
945665	5,5	19	7,5	AF 8	16	2	500
945666	5,5	25	7,5	AF 8	16	8	500
945667	5,5	32	7,5	AF 8	16	15	500
945668	5,5	38	7,5	AF 8	16	21	500
945669	5,5	50	7,5	AF 8	16	33	200
945670	5,5	60	7,5	AF 8	16	43	200

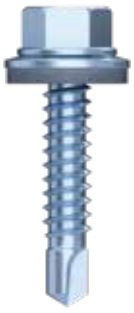
[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

TECHNICAL DATA



BiGHTY drilling screw

Hardened stainless steel, special coating, bore diameter 5 mm

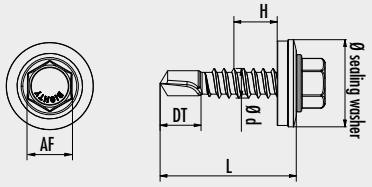


EDELSTAHL Rostfrei

Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 5 mm							
945672	6,3	25	7,5	AF 10	16	8	500
945673	6,3	32	7,5	AF 10	16	15	200
945674	6,3	38	7,5	AF 10	16	21	200
945675	6,3	50	7,5	AF 10	16	33	200
945676	6,3	60	7,5	AF 10	16	43	200

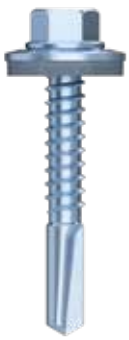
[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

TECHNICAL DATA

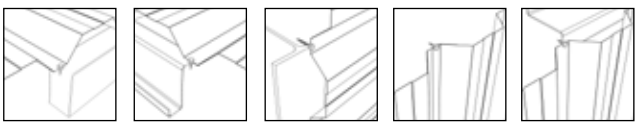


BiGHTY drilling screw

Hardened stainless steel, special coating, bore diameter 12 mm



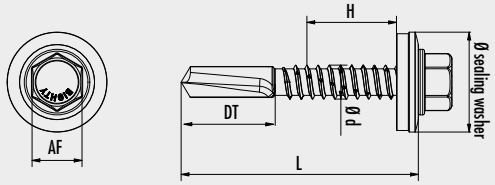
EDELSTAHL Rostfrei



Art. no.	Ø d [mm]	L [mm]	DT [mm]	AF	Ø sealing washer [mm]	H [mm][a)]	PU
Bore diameter 12 mm							
945671	5,5	38	15	AF 8	16	14	500

[a)]H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

TECHNICAL DATA

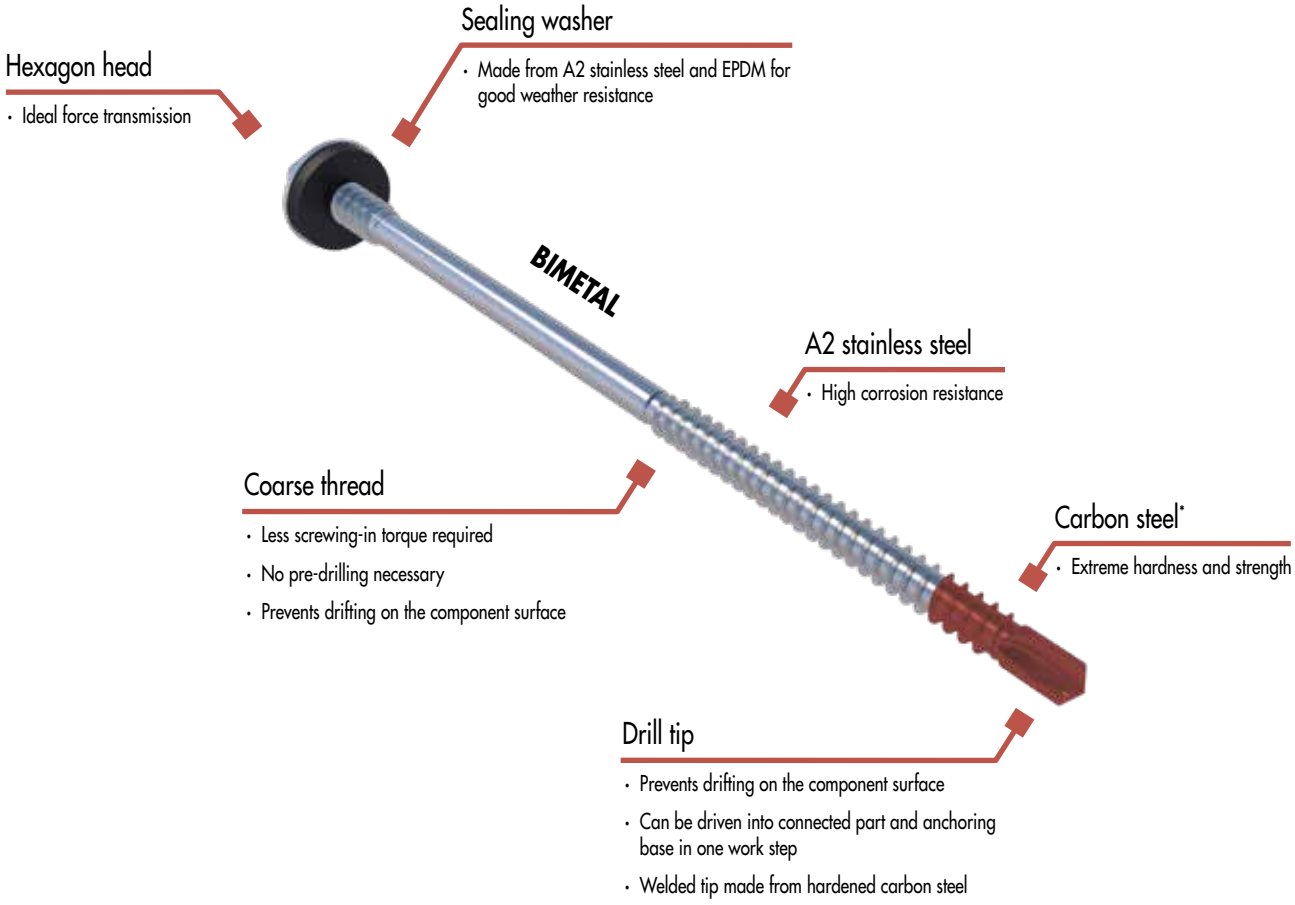


SANDWICH PANEL SCREW

For fastening sandwich panel elements to steel

ETA-21/0318

For the reliable and corrosion-resistant fastening of steel sandwich panel elements to steel structures, our SWPS bimetal is the perfect choice. The bimetal sandwich panel screw features a hexagon drive for ideal force transmission and an A2 sealing washer with EPDM seal.



*Does not actually have a red tip, for illustration purposes only

SANDWICH PANEL SCREW

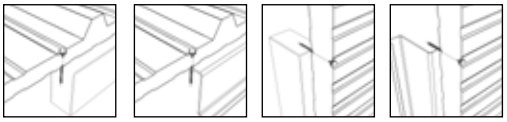
For fastening sandwich panel elements to steel

Sandwich panel screw

Bimetal

5 mm

0–280 mm



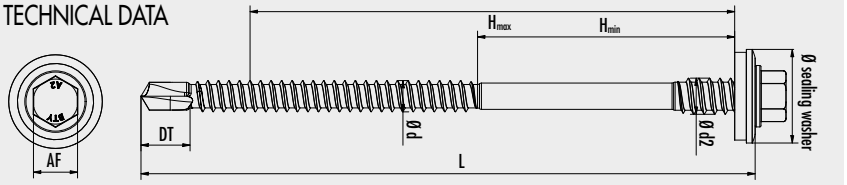
Europ. Techn. Bewertung
European Technical Assessment
ETA-21/0318

Art. no.	Ø d / d2 [mm]	L [mm]	lt[mm]	DT [mm]	AF	Ø sealing washer [mm]	H_{min} [mm]a)	H_{max} [mm]a)	PU
Bore diameter 5 mm									
945903	5,5/6,3	155	70	7.5	AF 8	16	80	135	200
945904	5,5/6,3	175	70	7.5	AF 8	16	100	155	200
945846	5,5/6,3	200	70	7.5	AF 8	16	125	180	200
945905	5,5/6,3	235	70	7.5	AF 8	16	160	215	200
945906	5,5/6,3	250	70	7.5	AF 8	16	175	230	200
945907	5,5/6,3	275	70	7.5	AF 8	16	200	255	200
945908	5,5/6,3	300	70	7.5	AF 8	16	225	280	200

a) H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

Caution: Does not actually have a red tip, for illustration purposes only

TECHNICAL DATA

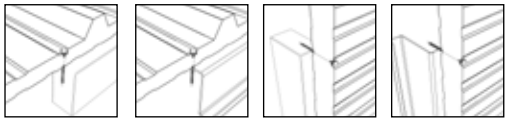


Sandwich panel screw

Bimetal

12 mm

0–275 mm

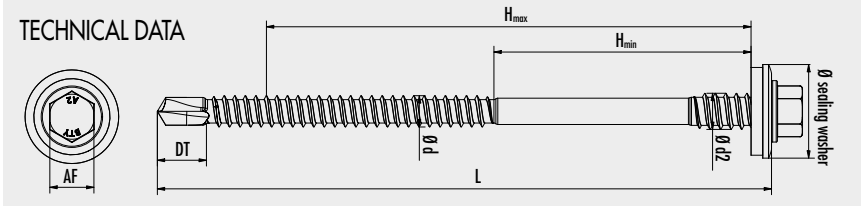


Art. no.	Ø d / d2 [mm]	L [mm]	lt [mm]	DT [mm]	AF	Ø sealing washer [mm]	H_{min} [mm]a)	H_{max} [mm]a)	PU
Bore diameter 12 mm									
945909	5,5/6,3	155	70	15	AF 8	16	75	130	200
945910	5,5/6,3	175	70	15	AF 8	16	95	150	200
945845	5,5/6,3	200	70	15	AF 8	16	120	175	200
945911	5,5/6,3	235	70	15	AF 8	16	155	210	200
945912	5,5/6,3	250	70	15	AF 8	16	170	225	200
945913	5,5/6,3	275	70	15	AF 8	16	195	250	200
945914	5,5/6,3	300	70	15	AF 8	16	220	275	200

a) H= clamp thickness = attached part thickness + sheet thickness t; t_{max} = bore diameter

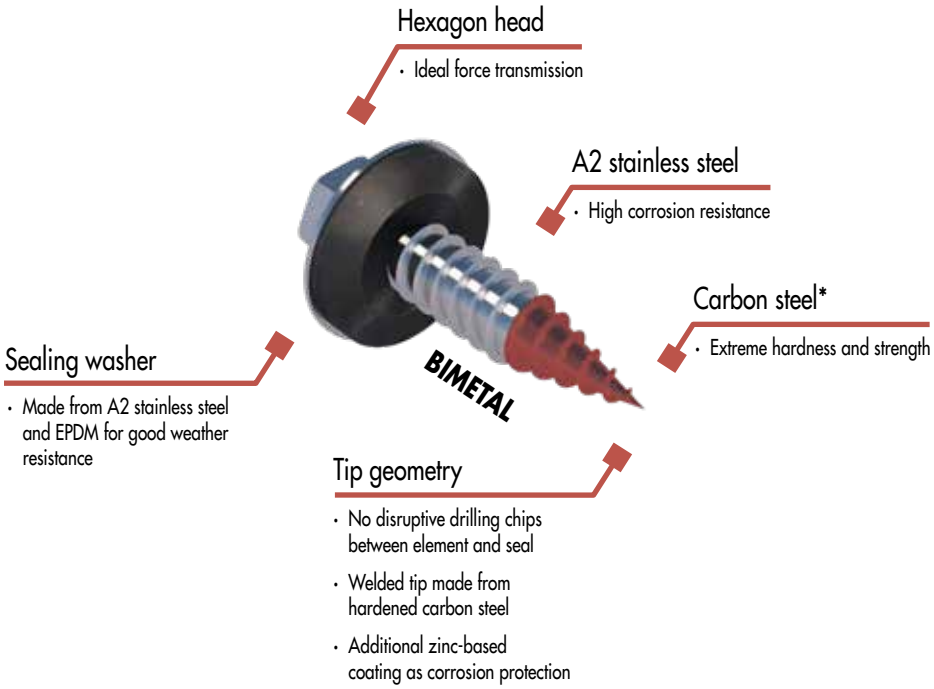
Caution: Does not actually have a red tip, for illustration purposes only

TECHNICAL DATA



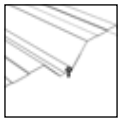
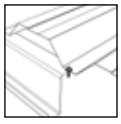
BIGHTY BIMETAL DBS

The BiGHTY bimetal DBS from Eurotec is used primarily in factory building construction, in the solar industry and in companies specialising in the installation of trapezoidal sheet / sandwich panels in roof and façade applications. The specially designed thin-sheet screw is made up of a combination of A2 stainless steel with a welded tip made from hardened carbon steel. The hardened carbon steel tip presses a sort of collar during the fluid screwing process, giving the threads a perfect fit. This means that chips do not jeopardise or disrupt the leaktight EPDM connection.



*Does not actually have a red tip, for illustration purposes only.

BiGHTY bimetal DBS


Art. no.	Ø d [mm]	L [mm]	AF	Ø sealing washer [mm]	Clamp thickness [mm]	PU
SOL100548	4,5	25	AF 8	14	1,00–8,00	200
SOL100550	6,0	25	AF 8	16	1,00–8,00	200
SOL100553	6,0	38	AF 8	16	1,00–20,00	200

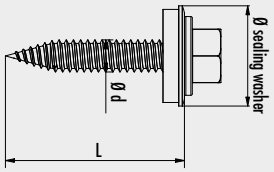
Caution: Does not actually have a red tip, for illustration purposes only

ADVANTAGES / SPECIFICATIONS

- Bimetal screw
- Chip-free application of the seal
- High corrosion resistance of screw
- Stainless steel according to DIN 10088
- No disruptive drilling chips between element and seal
- Maximum bore diameter:
  - → Aluminium up to 1,2 mm
  - → Sheet metal up to 1,25 mm
- High clamp thicknesses

Collar formation with BiGHTY bimetal DBS

TECHNICAL DATA



BiGHTY bimetal thin-sheet screws are perfect for the direct fastening of steel sheets.

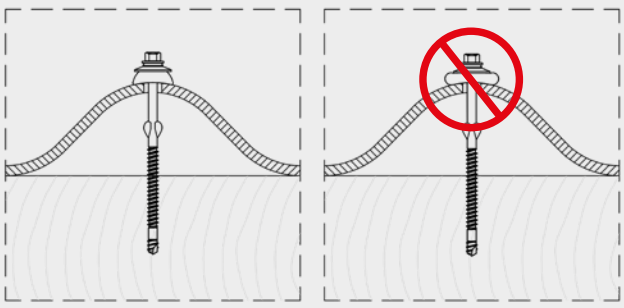
FIBRE CEMENT SCREWS

For the fastening of corrugated fibre cement sheets to wooden substructures

The fibre cement screw is a specific screw for fastening corrugated fibre cement sheets onto wooden substructures.
The pre-assembled mushroom seal provides a leaktight connection in the area around the screw head in a downwards direction and prevents air or moisture from entering through the bore holes. The fibre cement screw is available in hardened carbon steel (special coated) and in A2 stainless steel, making it perfectly resistant to weather damage.

ASSEMBLY NOTE

To ensure the durability of the mushroom seal, and therefore its protection against rain, the seal must not be pressed too forcefully against the corrugated sheet.



FIBRE CEMENT SCREWS

For the fastening of corrugated fibre cement sheets to wooden substructures

Fibre cement screw

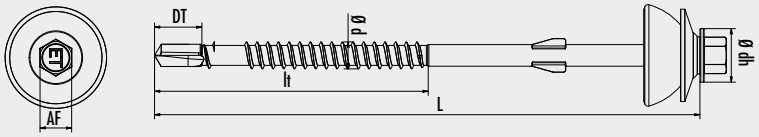
Steel, special coating

Art. no.	Ø d [mm]	L [mm]	lt [mm]	DT [mm]	Head diameter dh [mm]	Drive	PU
111353	6,5	130	65	11	12,75	AF 8	100

MATERIAL

- With laminar zinc-aluminium coating
- High cathodic corrosion protection
- High thermal resistance
- Barrier effect thanks to overlapping zinc-aluminium ribs
- Resistant to organic solvents
- Reduced friction

TECHNICAL DATA



Fibre cement screw A2

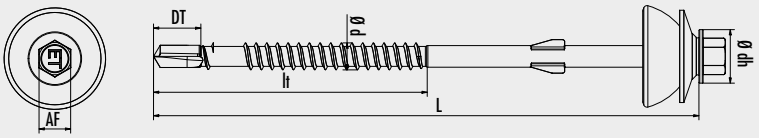
A2 stainless steel

Art. no.	Ø d [mm]	L [mm]	lt [mm]	DT [mm]	Head diameter dh [mm]	Drive	PU
111356	6,5	130	65	11	12.75	AF 8	100

MATERIAL

- Suitable for saline atmospheres to a limited extent
- Acid-resistant to a limited extent
- Not suitable for chlorinated atmospheres
- Can be used in service classes 1, 2 and 3
- Not suitable for woods containing a large amount of tannins such as cumarú, oak, merbau and robinia etc.

TECHNICAL DATA



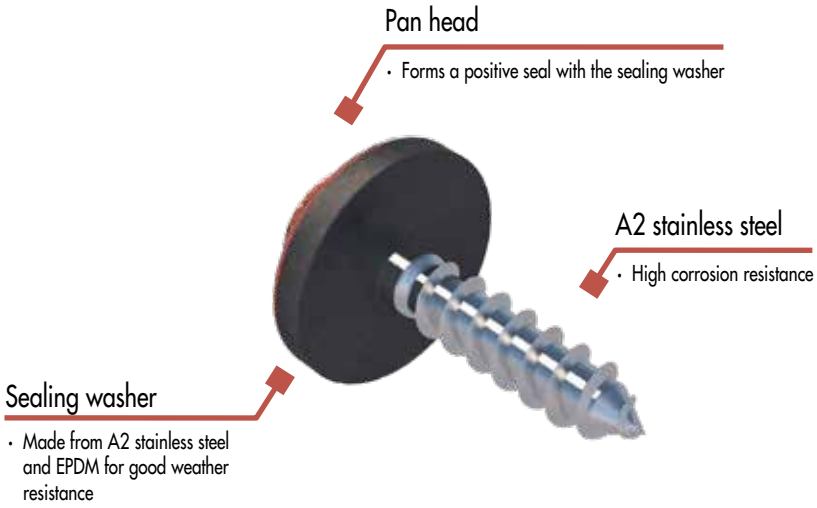
Instructions for use

Corrugated fibre cement sheets are fastened with fibre cement screws, which have a pre-assembled mushroom seal. Corrugated fibre cement sheets may, depending on the manufacturer, require the drilling of pilot holes. The fibre cement screws should be screwed in perpendicular to the surface of the panel. It is imperative to check that the seating and seal of the screw are correct during mounting. Excessive tightening of the screw can deform the seal, causing the seal to lose its function. Please ensure that you follow the instructions for use for the sheeting provided by the manufacturer.

WASHERED SCREW

For fastening elements to a building wall

The wood screws of A2 grade stainless steel are suitable for both interiors and exteriors. They are used, for example, for the permanent tight fastening of wall installation profiles, wall copings and domed rooflights as well as roof mountings and chimney flashing. The heads can generally be coated in any RAL colour*, so their colour can be adapted to the most diverse of mounting elements.



*Carmine red, black-grey and white are standard colours in the range.

Washered screw

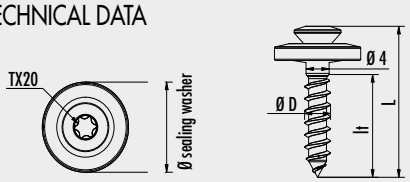
A2 stainless steel, 2-part with sealing washer

Art. no.	Ø d [mm]	L [mm]	lt [mm]	Ø sealing washer [mm]	Drive	PU
111550	4,5	20	12	15	TX20	200
111551	4,5	25	17	15	TX20	500
111552	4,5	35	24	15	TX20	200
111553	4,5	45	34	15	TX20	200
111557	4,5	65	45	15	TX20	200
111558	4,5	80	60	15	TX20	200
111559	4,5	100	80	15	TX20	200
111560	4,5	120	98,5	15	TX20	200
111561	4,5	150	128,5	15	TX20	200

Carmine red, black-grey and white are standard colours in the range.

Other RAL colours are available on request.

TECHNICAL DATA



THE SCREW HEADS CAN BE SUPPLIED IN RAL COLOURS ON REQUEST.

Fastening a wall connecting bar to a building wall with a washered screw.

WALL CONNECTING BAR

Designed for professional finishing on roofs and façades

The Eurotec wall connecting bar (sealing profile) is made from extruded aluminium and is used for **professional finishing on roofs and façades**. It acts as the **connecting bar between the roof area and the vertical structural element** while providing protection against rainwater. The bar, which can be put to universal use, is also suitable for many roof claddings and ensures a **visually appealing finish**.

Wall connecting bar

Aluminium, extruded

Art. no.	Dimensions [mm][a)]	Round hole [mm]	Material	PU
954197	60 x 12.4 x 3000	Ø 8	Aluminium	1

[a)]Height x width x length

ADVANTAGES / SPECIFICATIONS

- Quick and easy installation
- Pre-drilled fastening holes
- Resistant to weather damage
- Universal application

APPLICATION

- Pitched roof
- Flat roof
- Façade

TECHNICAL DATA

ASSEMBLY NOTES

The wall connecting bar is screwed down into the brickwork using a **washered screw**, including seal ring and plug. The Eurotec **insulating stud anchor** can also be used as an alternative for direct anchoring in **polystyrene, rigid foam panels and other soft construction materials**. The required round holes (Ø 8 mm) for fixing are already present in the profile spaced at intervals of 200 mm. The bar is then sealed with a sealing compound so that it is rainproof. Can be combined with the following Eurotec products:

- Sealing plug
- Insulating stud anchor
- Washered screw with seal ring and EMD multi plug

The wall connecting bar provides a clean transition between roof and façade as the roofing felt is fastened to the adjacent wall to create a seamless connection.

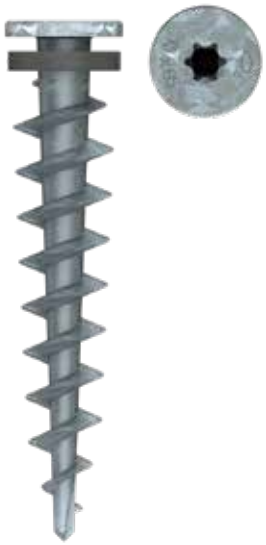
INSULATING STUD ANCHOR

Suitable for fastening the wall connecting bar

The Eurotec stud anchor is suitable for **direct anchoring in polystyrene, rigid foam panels and other soft construction materials.** The conical shape of the anchor ensures that the material is compacted in the area of the screw-in point, holding the anchor firmly in place.

Insulating stud anchor

Zinc die-cast



Art. no.	Dimensions [mm]	Thread length [mm]	Drive	PU
200036	13 x 65	65	TX30 •	100

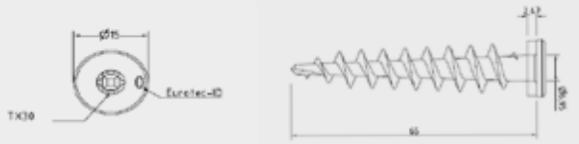
ADVANTAGES

- No pilot drilling for soft materials
- Direct assembly without any need for a separate stud anchors
- Includes sealing washer
- Assembly without thermal bridges
- High torque transmission thanks to TX drive

SUITABLE BUILDING MATERIALS

- Thermal insulation system
- Polystyrene panels (EPS, XPS)
- Hard foam panels
- Foamed polystyrene panels

TECHNICAL DATA



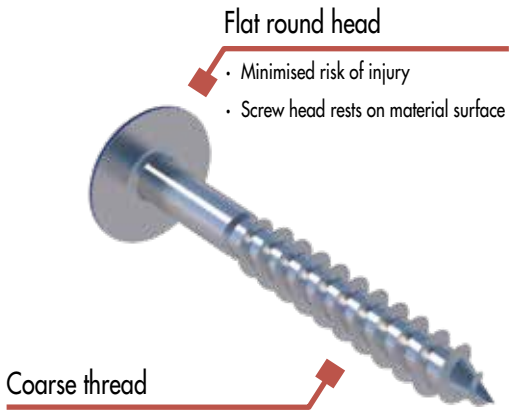
Insulating stud anchor for direct anchoring in polystyrene

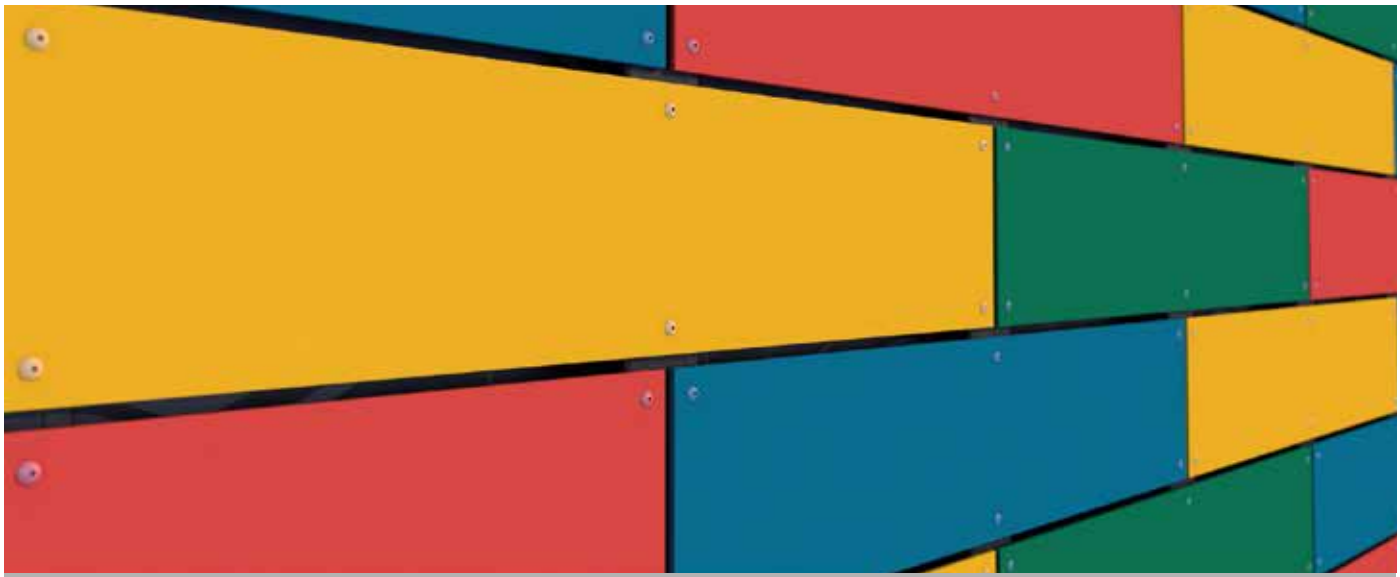
COLOURED FAÇADE SCREW

Screw specially designed for façade construction

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

The coloured façade screw is suitable for fastening a wide variety of façade elements to wooden substructures. As the name suggests, coloured façade screws have **coloured, UV-resistant screw heads.** The coloured façade screws are used **to fasten coloured façade panels.** Thanks to the coloured screw head, the screw connections of the panels are barely visible.

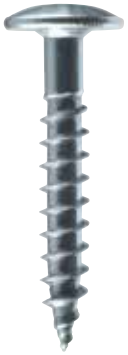




High-pressure laminate (HPL) panels fastened with coloured façade screws in the appropriate colours.

Coloured façade screw

A2 and A4 stainless steel



Art. no.	Ø d [mm]	L [mm]	Colour	Material	Drive	PU
A2 stainless steel						
904670	4,8	25	Uncoated	A2	TX20	250
904671	4,8	32	Uncoated	A2	TX20	250
904672	4,8	38	Uncoated	A2	TX20	250
904675	4,8	60	Uncoated	A2	TX20	250
W904670	4,8	25	White / RAL 9010	A2	TX20	250
W904671	4,8	32	White / RAL 9010	A2	TX20	250
W904672	4,8	38	White / RAL 9010	A2	TX20	250
W904675	4,8	60	White / RAL 9010	A2	TX20	250
G904670	4,8	25	Anthracite / RAL 7016	A2	TX20	250
G904671	4,8	32	Anthracite / RAL 7016	A2	TX20	250
G904672	4,8	38	Anthracite / RAL 7016	A2	TX20	250
G904675	4,8	60	Anthracite / RAL 7016	A2	TX20	250
A4 stainless steel						
900437*	5,3	25	Uncoated	A4	TX20	100
900429	5,3	35	Uncoated	A4	TX20	100
900442	5,3	45	Uncoated	A4	TX20	100
900447	5,3	55	Uncoated	A4	TX20	100
900452	5,3	65	Uncoated	A4	TX20	100
900439*	5,3	25	White / RAL 9010	A4	TX20	100
900431	5,3	35	White / RAL 9010	A4	TX20	100
900444	5,3	45	White / RAL 9010	A4	TX20	100
900449	5,3	55	White / RAL 9010	A4	TX20	100
900454	5,3	65	White / RAL 9010	A4	TX20	100
900441*	5,3	25	Anthracite / RAL 7016	A4	TX20	100
900432	5,3	35	Anthracite / RAL 7016	A4	TX20	100
900446	5,3	45	Anthracite / RAL 7016	A4	TX20	100
900451	5,3	55	Anthracite / RAL 7016	A4	TX20	100
900456	5,3	65	Anthracite / RAL 7016	A4	TX20	100

*Screws not regulated according to ETA-11/0024

THE SCREW HEADS CAN BE SUPPLIED IN RAL COLOURS ON REQUEST.

Eurotec®

The specialist for fastening technology

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