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Eurotec®

The fixing technology specialist

OUR FACADE ENGINEERING

FACADES

SYSTEM SCREWS

WOOD & ALUMINUM

FIXING

CONCRETE

www.eurotec.team

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COMPANY PROFILE

ABOUT EUROTEC

We are a medium-sized company specializing in the development, production and distribution of products for the construction sector. We supply products for **timber construction**, **terrace construction** and **concrete reinforcement** to specialist **retailers** across Europe who distribute to in-trade professionals.

Our range features unique products specially designed by our experts to meet even the most extraordinary requirements. Our priority here lies in **upholding the high quality** customers have come to expect from our products. Our range is extensive, extending from straightforward **screws** and **corner connectors** right through to custom-made products for special assignments. Our innovative ideas are what set us aside from the crowd, making us the ideal partner for your company's next big construction project.

MILESTONES

1999
Joint CEOs **Gregor Mamys and Markus Rensburg** found the company **Eurotec GmbH** on May 1st, 1999. The company starts out in a small cellar with adjoining garage, doubling as a warehouse with 50 storage positions.

2003
After several relocations within Hagen, the company decides to move its **premises to Werkzeugstraße**. The warehouse has space for approx. 300 storage positions. But even this warehouse is getting too small. After several extensions the site has reached the limits of its capacity and it's time for a **new building**! After an extensive search, the CEOs find a suitable site in Hagen.

2007
In 2007 the Eurotec Team and its **30 employees** move into new premises at **Unter dem Hofe 5**. The newbuild consists of an **office wing** and an adjoining warehouse with approx. **3,500 storage positions**.

2010
Just three years later the newbuild becomes the old building. The company adds a new warehouse building with 7,500 additional storage positions and **office space** above.

2012
The laying of the foundation stone for the production hall sees the start of the company's **own in-house production**.

2013
January 7th, 2013 sees the company start to produce a selection of its own products in-house in its **own production hall** in Hagen.

2014
We are working hard on further expanding in-house production.

2015
2015 sees manufacturing capacity expanded, allowing us to offer an extensive range of in-house products.

2016
Active construction has been underway since 2016 to relocate the company's machinery to a **new hall**. Additional office space is being created in Hagen due to ongoing growth. The next step is to extend the storage **capacity** in the former machine hall.

2018
The start of 2018 sees the relocation of all machinery following completion of the new production hall. Works started on the **construction of another warehouse building**.

2019
Plastic processing capacity is extended by another two injection molding machines, taking the total to four machines. **Screw production** facilities are expanded too to include another multi-stage press. We now have at our disposal a total of five machines for screw manufacturing.

2021
Our machine park continues to grow. This year the company will add two more plastic machines to its facilities. We're also expanding our website to include our **terrace planner** and the **Eurotec BIM portal.**

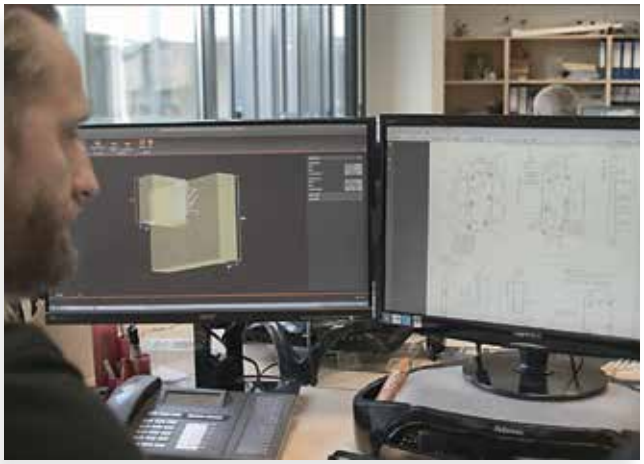
IN-HOUSE PRODUCTION AT SITE IN HAGEN

The **start of production** in 2013 marked an important step in our company's history. Our ongoing growth in production is testament to how successfully we have established ourselves on the market with our products. The advantages of in-house production are obvious: It means our customers' high **quality standards** can be better implemented and constantly monitored. That's in addition to **fast delivery** and the **ability to respond quickly** to the needs of the market.

QUALITY MANAGEMENT

Quality is the basis of everything Eurotec does. Offering our customers **flawless products** and **services** and 100% on-time delivery is our top priority. We expect absolute commitment to quality from all our employees. Training and further development in a customer- and quality-centric way of thinking and approach is always at the forefront of this.

We feel obliged to adhere to the statutory and official requirements within an economic framework while promoting environmentally friendly behavior.



CALCULATIONS AND PLANNING

We can **advise** on your **construction projects**.
Contact our **engineering department** at technik@eurotec.team or use the **free calculation software** in the Service area on our homepage:

www.eurotec.team

We're on hand for all your calculation and planning needs in the field of terrace construction, timber construction, concrete and facades.

SCREW MANUFACTURE

Since production began in 2013, we have constantly expanded our production facilities to supply an ever-growing range of long-shafted cold-formed parts in-house at our location in Hagen. These include various **special-purpose construction screws**, such as the **KonstruX fully threaded screws** or the **Topduo roofing screws**.

At our production plant, we produce **cold-formed parts** with diameters of up to 10 mm and lengths of up to 1,000 mm. One particularly economical feature is that our machine allows us to automate up to **eight machining** processes. Relocating our production facilities to a bigger hall led to the expansion of this area too with additional machinery.

QUALITY FROM GERMANY!
THE SOURCE OF OUR PRIDE.

QUALITY ASSURANCE CERTIFICATION

Offering our customers **flawless products** and**services** and**100% on-time delivery** is our top priority. We expect absolute commitment to quality from all our employees. Customer- and quality-centric staff **training** and **further development** is always at the **forefront** of this for us. We feel duty-bound to adhere to the legal and regulatory **requirements** within the**economic framework** while promoting an environmentally **friendly** approach.

For instance, we are proud of the fact that almost all of our **timber, facade and concrete products** boast **ETA certification**. It goes without saying that our quality assurance department checks all batches produced daily against our **design conformity, functionality and esthetic** standards, and reviews compliance with **customer-specific requirements**. Only by doing so can we keep delivering the **high quality** that our customers have come to expect from us.

PRODUCT FINDER

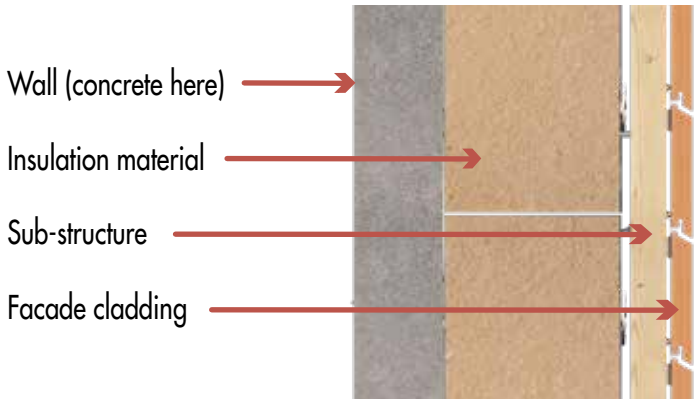
WHERE WILL THE PRODUCT BE USED?

PRODUCTS	Compression-resistant insulation	Non-compression-resistant insulation	Wooden battens	Aluminum profiles	Vertical SS*	Horizontal SS	Page
System screws							
Blue-Power	✓	x	✓	✓	✓	x	21 + 27
EiSYS-Timber	✓	✓	✓	x	✓	x	17
EiSYS-2	✓	✓	✓	x	✓	✓	19
EiSYS-Aluminum	✓	✓	x	✓	✓	x	25
Fixings							
Klimax insulation anchor	✓	✓	-	-	-	-	49
Facade clip	-	-	✓	✓	✓	x	33
Facade clip for rhombus profiles	-	-	✓	✓	✓	✓	37
CoverFix facade rail	-	-	✓	x	✓	✓	41
Colored facade screw	-	-	✓	x	✓	✓	43
Hapatec Heli	-	-	✓	x	✓	✓	45
Other products							
Protectus timber protection tape	-	-	✓	✓	✓	✓	51
EPDM facade tape	-	-	✓	✓	✓	✓	52
Bird screen	-	-	✓	✓	✓	✓	53
Wall connecting bar	✓	x	-	-	-	-	54

***SS = substructure**

✓ Compatible X Incompatible N/A —

BUILDING ENVELOPES EXPLAINED



Facades play an essential role in modern **housebuilding**. As well as having a visually attractive design, it is critical that they meet all the requirements. That's why it's so important that facade **planning** happens before any of the work starts. This is where aspects such as **living climate**, **protecting** the building structure against moisture and choice of **facade cladding** are taken into account. Facades have an impact on **interior climate**: when well thought-out, they can prevent weather conditions from causing major temperature fluctuations. For instance, if the building is located in a warmer region, it may be possible to completely forgo insulation. Another essential function of the facade is **soundproofing**. A well-designed facade can stem the transfer of **environmental noise**, e.g. from vehicles, and background noise within the interior of the building.

The term **building envelope** is defined as the **separation of the interior**, i.e. the space within the building, and **exterior** – the surrounding environment. The essential purpose of the envelope is to separate the interior from **the elements**, **outside air**, **outside temperatures** and **noise**, and to protect the people and furnishings within the interior. It serves as a **barrier** so to speak.
Generally speaking, the building envelope refers to everything found in between the interior and the exterior. That starts with the core elements of the building, like the **walls**, the **ceilings** and the **roof**, and includes all additional elements installed for the protection of the interior, and ends with whatever decorative **facade cladding** you have selected for your house.

Another key element of facade planning is taking into consideration whether the **facade components** are compatible with one another. For instance, not every type insulation or facade cladding is compatible with every sub-structure. In our catalog we show you which combinations of our **products** are both possible and practical.

An effective facade design protects interiors against the environmental influences of the outdoors like wind, rain, cold and heat.

INSULATION

Energy balance plays an essential role in modern housebuilding. Sometimes your heating costs can rise unnecessarily because your home is insufficiently insulated.

WHY DO WE INSULATE BUILDINGS?

The purpose of insulation is to **prevent** the **transfer** of heat energy between the interior and the exterior of the building. Ideally this should be 100% effective and the two areas should not impact one another. But that's an ideal. How well **heat insulation** actually works depends on the insulation materials used. Effectiveness varies depending on the texture of the respective insulation materials and and how these are incorporated in the facade insulation.

Preventing thermal exchange

INSULATION MATERIALS

A variety of materials are used in facade insulation. This is because there is no one "best" insulation material. The choice of insulation material depends on a number of factors such as the condition of the building, the target U-value or the regional climate. The most common materials are **polystyrene hard foam**, **mineral wool** and **ecological insulation materials**.

Most facades are insulated with **polystyrene hard foam**. This material is known to most as "**styrofoam**". It has outstanding insulating properties, is easy to work with and doesn't rot.
Mineral wool is the second most commonly used insulating material in facade insulation. While it isn't as easy to work with as polystyrene hard foam, it has better fire-retardant properties and is always used where a higher level of fire safety requirements is necessary or desirable.
Wood fiber, cork and hemp are the raw materials used in **ecological insulation materials**. The advantage of these is that they are all sustainable materials. However, the insulating properties aren't yet on a par with those of polystyrene or mineral wool, which is why thicker layers of insulation are generally necessary here.

REAR VENTILATED FACADES

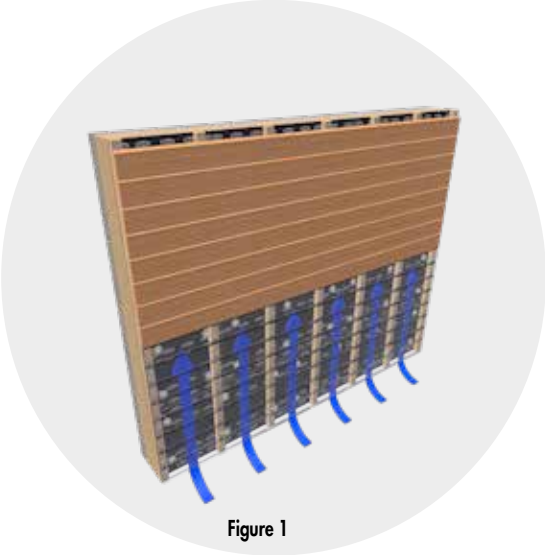


Figure 1

Draft behind the facade cladding

Rear ventilated facades differ considerably from classic plaster facades where plaster is applied directly onto the interior wall, or insulating materials.
Rear ventilated facades are a very versatile type of facade with countless individual design possibilities allowing you to construct your facade exactly as you imaged it.

The main distinguishing feature of a rear ventilated facade is a **sub-structure** affixed to the exterior wall of the building, but not touching the wall or the insulation material directly. The materials used most frequently in the construction of sub-structures are standard**roof battens** and special **aluminum profiles** designed specifically for this. The sub-structure is fixed using **spacer screws** and special**facade screws** which are guided through the insulating material and screwed into the mounting substrate (e.g. the interior wall). This separately mounted element creates **free space** between the facade cladding and the insulation/wall to aid the **rear ventilation** of the facade.

There are certain criteria that must be met in terms of **air circulation** before a facade can be classed as rear ventilated. A cavity behind the facade cladding alone will not suffice. Roughly speaking, air needs to get behind the facade through openings at the top and bottom ends of the facade, and through joints in the cladding. As shown in **Figure 1**, airflow is generated through the openings behind the facade cladding, flowing in from the bottom to the top based on the **chimney effect** and carrying away any **moisture** that has penetrated the **facade**.

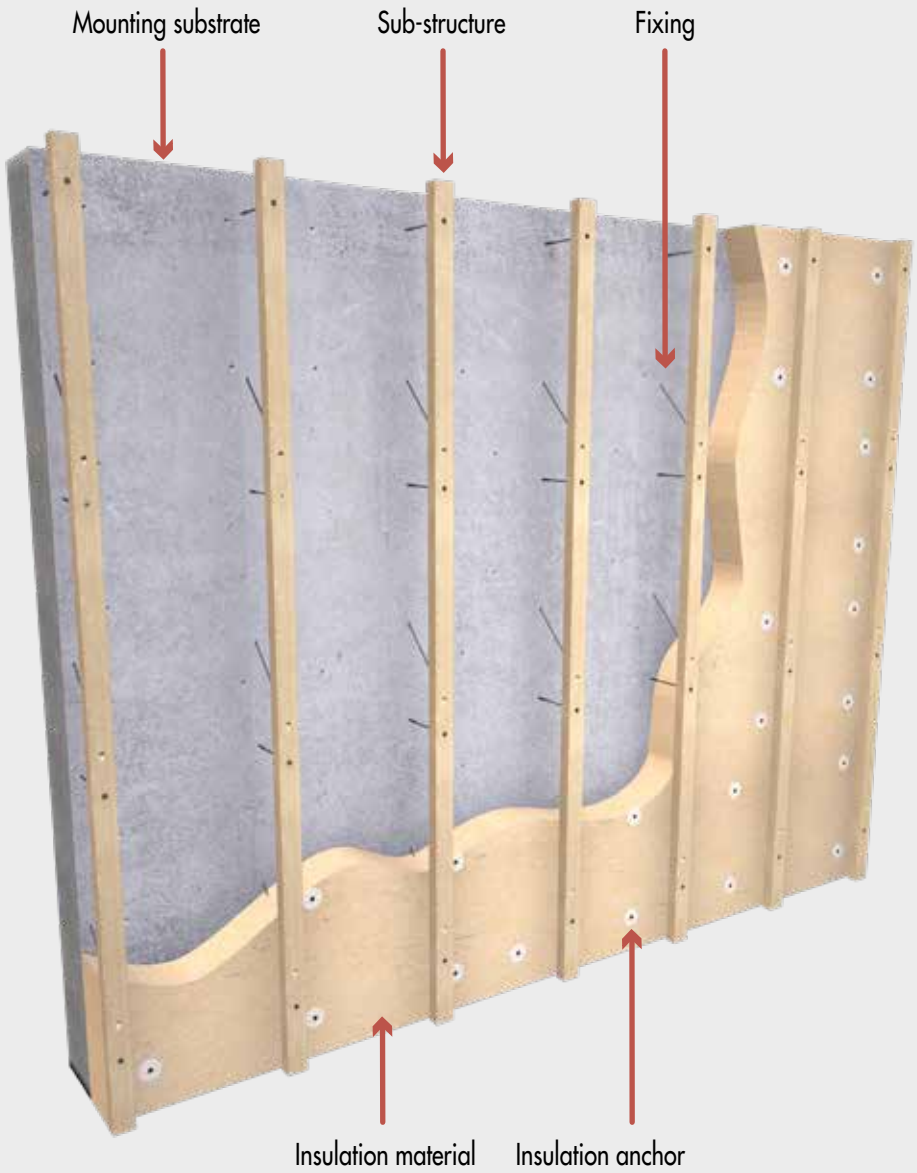
SUB-STRUCTURE

The **sub-structure** is mounted onto the load-bearing external walls of the building, enabling the weight of the entire facade to be transferred to the building. It therefore serves as the connecting piece between the load-bearing external wall and the exterior wall cladding. A load-bearing base material is always one of the **basic prerequisites** for the installation of a **sub-structure** – otherwise the **load-bearing capacity** of the anchoring elements used will be negatively impacted.

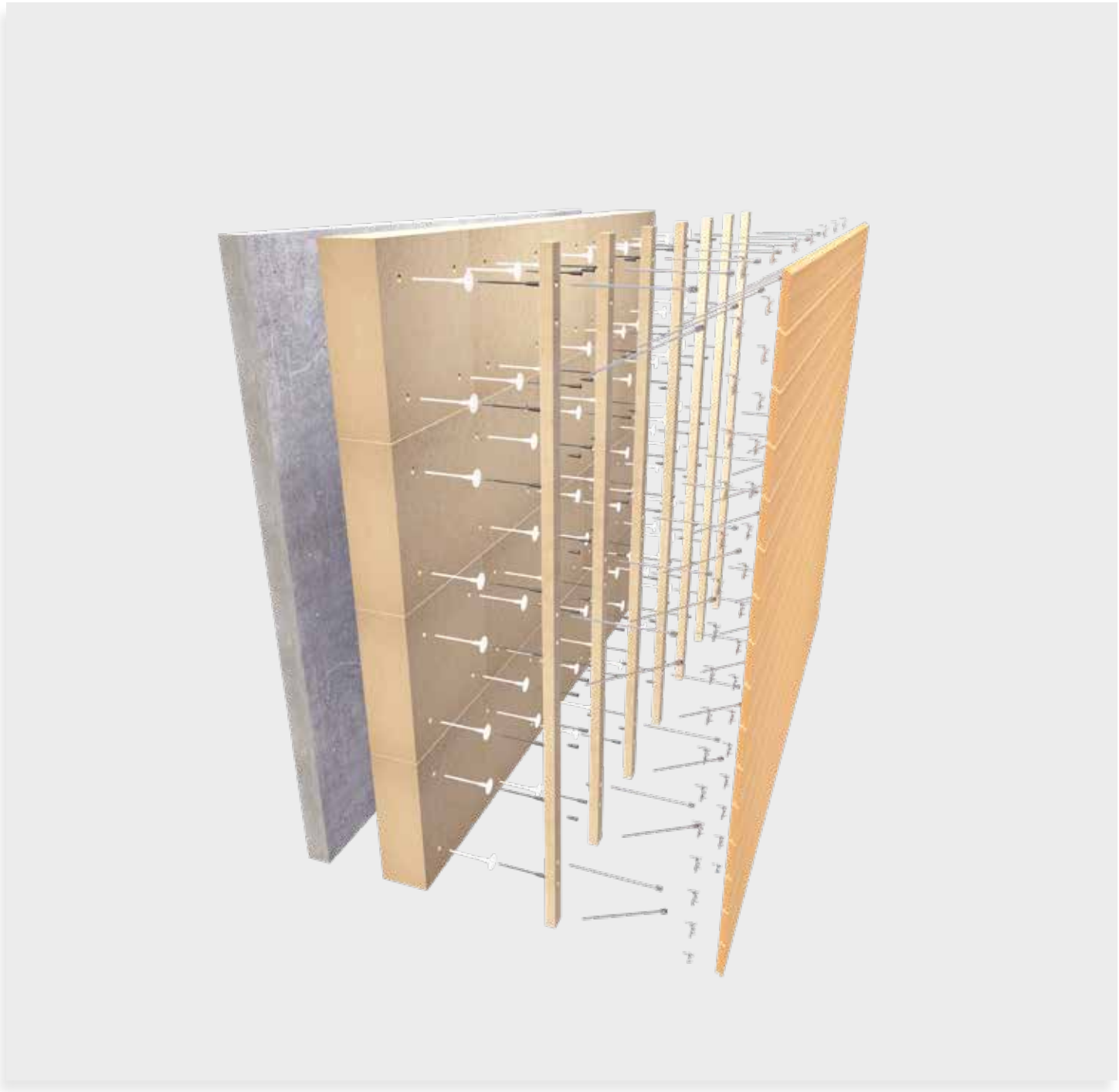
Design of a sub-structure

A variety of different materials are used in the construction of sub-structures: from **timber** right through to**galvanized steel**, **stainless steel** and **aluminum**. However, **timber** and **aluminum** are more prevalent due to weight considerations. The sub-structure always consists of **main battens**, aligned either horizontally or vertically, and optional support battens. The combination of main and support battens is referred to as **counterlathing**. The actual sub-structure design will depend on the choice of facade cladding to be mounted subsequently. For instance, those opting for a horizontally arranged rhombus facade will choose a sub-structure consisting of vertically arranged wooden battens or aluminum profiles without any additional support battens.
Affixing the sub-structure to the mounting substrate requires selecting the right **fasteners**, since not every screw is compatible with every sub-structure or insulation thickness. **EuroTec has the right screw for every scenario.**

ILLUSTRATION OF FACADE ELEMENTS



Before the building can get its facade cladding, it requires an adequate **basic structure**. An insulating layer should be added to the external walls of buildings, particularly in colder regions. The insulation protects the building against **moisture**, **heat**, **cold** and **noise**. But this would be pointless without the **protection against the elements** provided by **facade cladding**. The basic structure also includes an additional sub-structure onto which the cladding is affixed. This serves as a **structural separator** between the insulating layer and the facade cladding and creates a cavity through which **air** can flow. Together, the **facade cladding** and the **basic structure** offer **protection** for the building.



Building facades are complex elements: even if all you can see from outside is the cladding, there's a whole host of important components behind this. These are selected based on the existing **building structures**, **climate conditions**, **technical objectives** and **personal preferences**. **Eurotec** has a **wide range** to choose from when it comes to finding the right products for your construction project. When choosing products, care should be taken to ensure the individual elements are **compatible** with one another and designed **to work together**.
If you have any **questions** our **engineering department** would be happy to assist: **tecknik@eurotec.team**

EXTERIOR WALL CLADDING

The **exterior wall cladding** is attached to the sub-structure and forms the final layer of the facade structure. It determines the visual **appearance** of the building. However, this is not the most important role of cladding. The **functional aspect** is far more important – the facade cladding protects the building from **driving rain**, **splashing water** and **UV radiation**.

CLOSED TIMBER CLADDING

Closed timber cladding is a very popular choice of facade cladding. Since this form of cladding does not feature any openings or vents, openings of adequate size should always be included in the plans at the top and bottom of the facade. These will allow air to be drawn in behind the facade and remove any moisture, protecting the structure of the wood. Facades with this form of cladding are referred to as ventilated facades. This form of facade cladding can be affixed to all standard sub-structures.
The most commonly seen forms of closed cladding include: **clapboard** (right) and **board and batten cladding** which are visibly fixed. The advantage of clapboard is that the angle of the wooden slats creates a **drip edge** which diverts rainwater away from the facade, preventing it from penetrating the facade. With board and batten cladding, the rainwater runs down the facade due to the vertical arrangement of the timber slats, without collecting anywhere. For these kinds of facade cladding we recommend our **Hapatec Heli** (p. 45).

TILE FACADES

A variety of different materials are used in **tile facades** – all of which are easy to clean and resistant to the elements. **High-pressure laminates** and **fiber-cement plates** are often chosen due to their outstanding characteristics.

Decorative high-pressure laminates, or **HPLs**, offer a diverse range of options when it comes to facade color, since these are available in almost every color conceivable, offering **a wide range of design possibilities**. **Fiber-cement plates** are often chosen due to their **resistance to fire,condensation** and
pests.

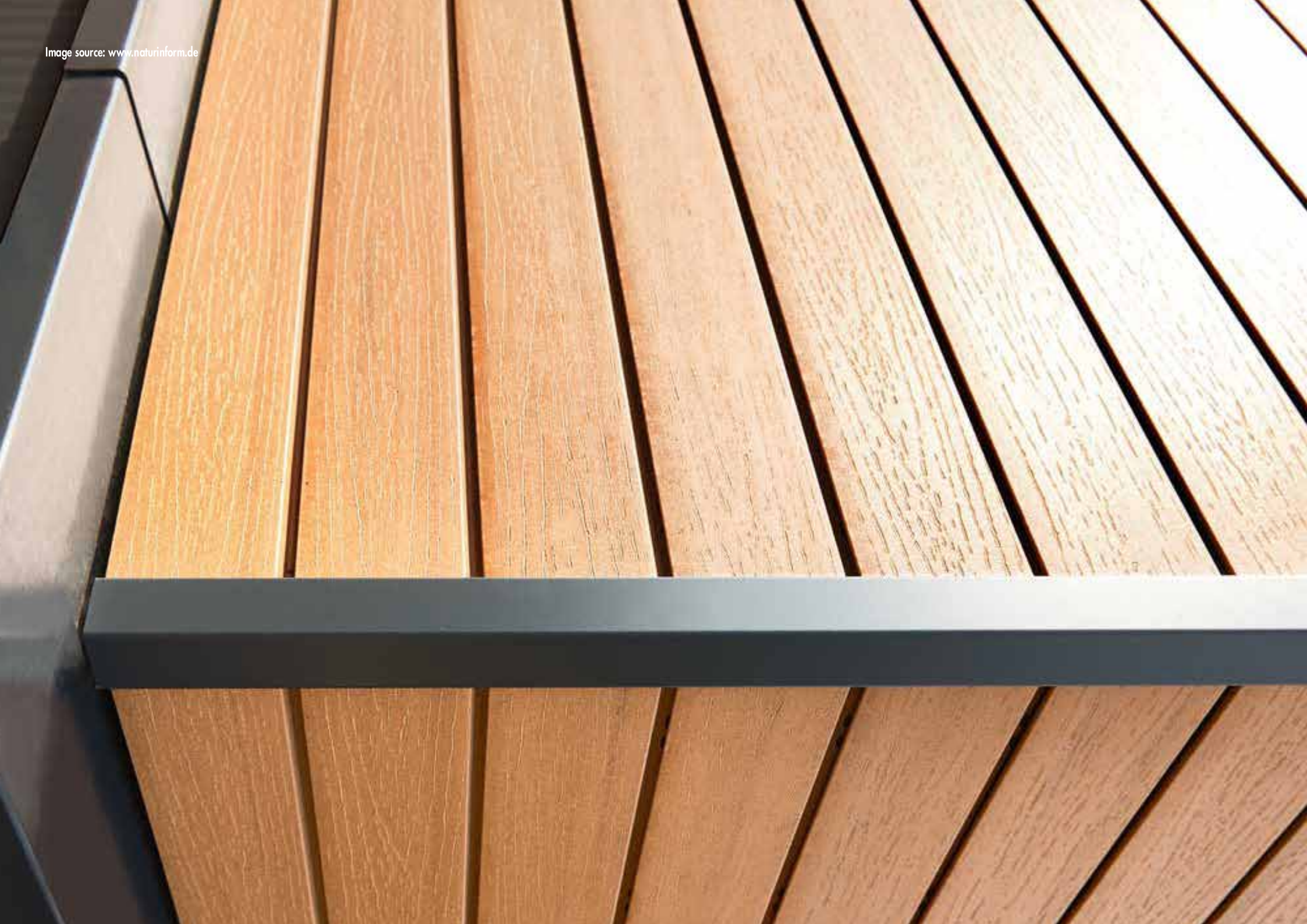
Whatever color you opt for when **designing** your facade, **Eurotec** can supply**screw heads** for **colored facade screws** (p. 43) in **your colors of choice**.

OPEN TIMBER CLADDING

Open timber cladding consists of horizontally or vertically placed panels of wood which are fitted into **gaps**. **Rhombus timber panels** are often used here since they protect the structure of the wood with their parallelogram-shaped cross sections more effectively than wood profiles with a rectangular cross section. These are mounted in such a way that the slanted surfaces are positioned facing down the wall, facilitating good water runoff. But it's the gaps between the profiles that really matter with this type of facade. This also allows **air** to flow behind the facade and remove **moisture** from the facade profiles and the sub-structure. This serves as an effective means of preventing **waterlogging**. The profiles can either be fixed **visibly** with **Hapatec Heli screws** (**p.45**), or **seamlessly** with **special fixings** from **Eurotec**. You can find out more about fixings in the chapter **Fixing the facade** from **p.32 onwards.**

MIXED FACADES

Mixed facades are facades that combine **different facade cladding** with one another. Combinations of facade panels, timber battens, plaster and even glass are often used here.
The vast range of design possibilities offered by this type of cladding lends every building its own **unique esthetic**. The **mix of materials** gives your facade a **unique charm** – just as you imagined.
A mixed facade allows you to **accentuate individual areas** too, enabling you to amplify or downplay the visual effect of sections of the building as you please. This method is often used to draw attention to entrance areas, windows and extensions.



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CHAPTER 1

TIMBER SUB-STRUCTURE

Timber sub-structures have a number of advantages. From a technical standpoint the two most important of these are low **thermal conductivity**, since no unnecessary thermal bridges are incorporated into the facade, and **limited expansion**, which prevents the **fixings** from being exposed to any significant additional component distortion. Aside from the technical properties, another plus point worth mentioning is the **ecological aspect**, since wood is a sustainable raw material.

When using **wooden battens** as a **sub-structure** the most common choice are **battens** made from grade S10 (normal load-bearing capacity) **coniferous wood** with a wood moisture content of approx. 15 %.

EISYS-TIMBER

Facade-/adjusting screw for use with a wooden batten sub-structure

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 897 zugelassen

ADVANTAGES

- The distance between the counter batten and insulation material is easy to adjust using the adjusting sleeve
- Fixing in wood, masonry and concrete substrates possible
- Can be used in combination with insulation thicknesses of 60 - 300 mm
- For soft and compression-resistant insulation materials

PROPERTIES

- Very low thermal conductivity
- Suitable for use in DIN EN service classes 1 and 2 1995-Eurocode 5
- Corrosion-resistant
- High mechanical stress resistance
- Not suitable for wood containing tannins

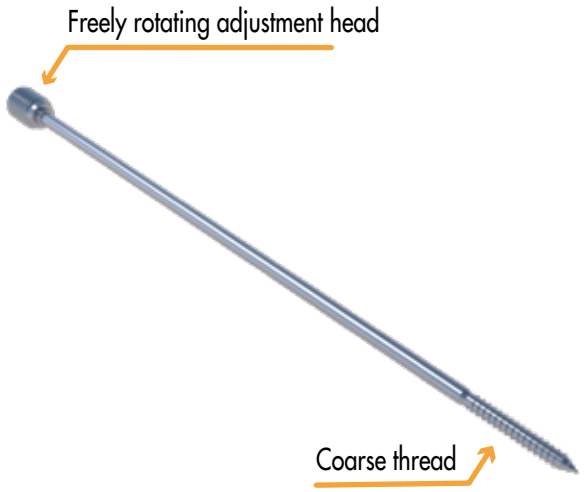
DESCRIPTION

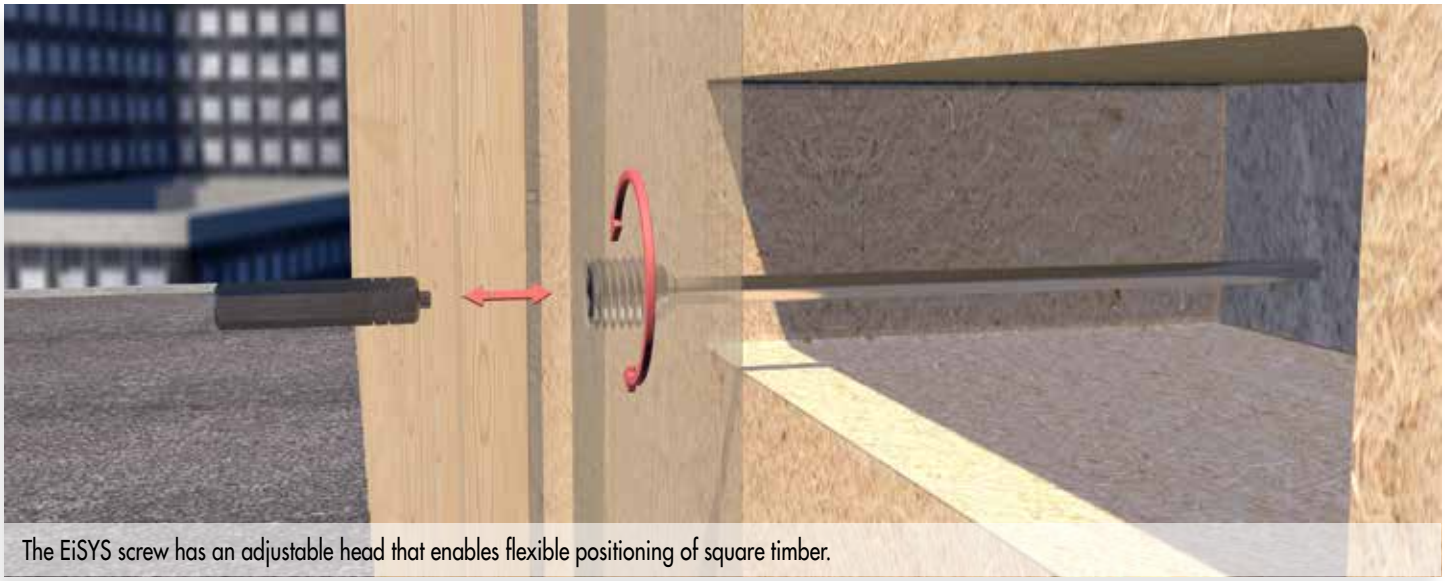
The **EiSYS-Timber facade-/adjusting screw** is an **adjustable screw** for fixing supporting structures for rear ventilated facades. The screw is screwed into the **timber sub-structure**. The second, freely adjustable thread on the head is used to adjust the **distance** between the insulation material and the counter batten.

EISYS-TIMBER

EDELSTAHL® Rost frei

Facade-/adjusting screw, A4 stainless steel

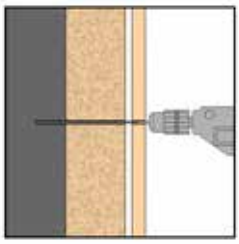




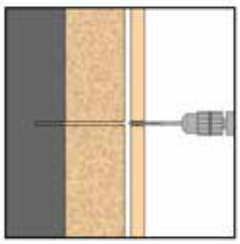
The EiSYS screw has an adjustable head that enables flexible positioning of square timber.

Item no.	Dimension	Material	For insulation thicknesses of up to	PU
946080	7.0 x 198 mm	A4 stainless steel	60 mm	50
946081	7.0 x 218 mm	A4 stainless steel	80 mm	50
946082	7.0 x 238 mm	A4 stainless steel	100 mm	50
946083	7.0 x 258 mm	A4 stainless steel	120 mm	50
946084	7.0 x 278 mm	A4 stainless steel	140 mm	50
946085	7.0 x 298 mm	A4 stainless steel	160 mm	50
946086	7.0 x 318 mm	A4 stainless steel	180 mm	50
946087	7.0 x 338 mm	A4 stainless steel	200 mm	50
946088	7.0 x 358 mm	A4 stainless steel	220 mm	50
946089	7.0 x 378 mm	A4 stainless steel	240 mm	50
946090	7.0 x 398 mm	A4 stainless steel	260 mm	50
946091	7.0 x 418 mm	A4 stainless steel	280 mm	50
946092	7.0 x 438 mm	A4 stainless steel	300 mm	50

FIXING INSTRUCTIONS AND ACCESSORIES

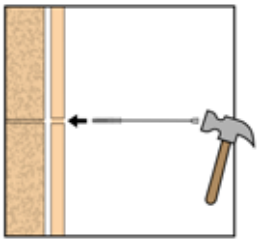


1 Drill a hole **(Ø 10 mm)** and then clean it out.



2 Enlarge the drill hole in the square timber to **Ø 16 mm** for the EiSYS head.

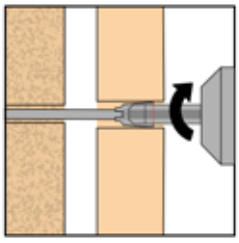
Item no.	Product description	Dimension	Drive	PU
946096	EiSYS-Timber insertion tool	Ø 14 x 70 mm	SW12/TX30•	1
945405	EiSYS screw anchor	Ø 10 x 80 mm	–	50



3 Hammer in the special **screw anchor** together with the EiSYS.

EISYS SCREW ANCHOR

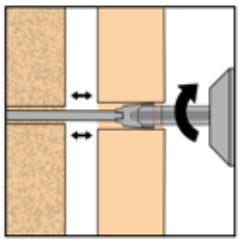
EiSYS-Aluminum and -Timber



4 Insert the **EiSYS insertion tool** into the screw up to the first marking and tighten to anchor the screw in the wall.

INSERTION TOOL

EiSYS-Timber



5 Pull the EiSYS insertion tool out to the second marking to adjust the **head** of the screw, thereby adjusting the position of the squared timber.

Rotatable head on EiSYS screws

EISYS-2

Designed for use with a wooden batten sub-structure

ADVANTAGES

· The distance between the counter batten and insulation material is easy to adjust using the adjusting sleeve
· Can be used in combination with insulation thicknesses of 60-280 mm
· Cost-effective alternative to EiSYS-Timber

MATERIAL

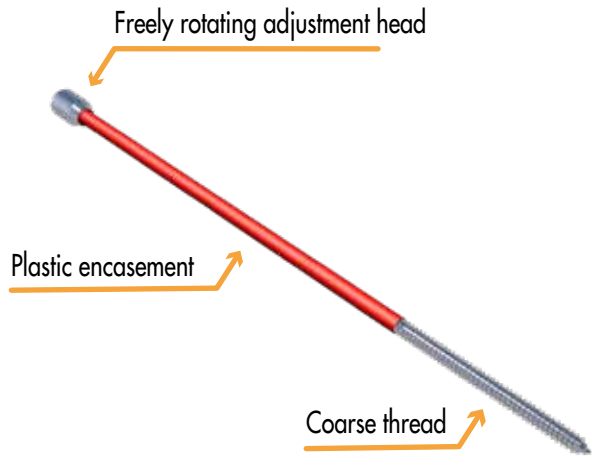
· Tempered carbon steel, blue zinc-plated
· Shaft of the screw encased in additional plastic cover
· Suitable for use in DIN EN service classes 1 and 2 1995-Eurocode 5
· High mechanical stress resistance
· Not suitable for wood containing tannins

PROPERTIES

The **EiSYS-2 facade-/adjusting screw** is an adjustable screw for fixing supporting structures for rear ventilated facades. The second, freely adjustable thread on the head is used to adjust the **distance** between the **insulation** material and the counter batten**.** The screw is screwed into the **timber sub-structure**.

EISYS-2

Facade-/adjusting screw, tempered carbon steel, blue zinc-plated



CALCULATION SOFTWARE
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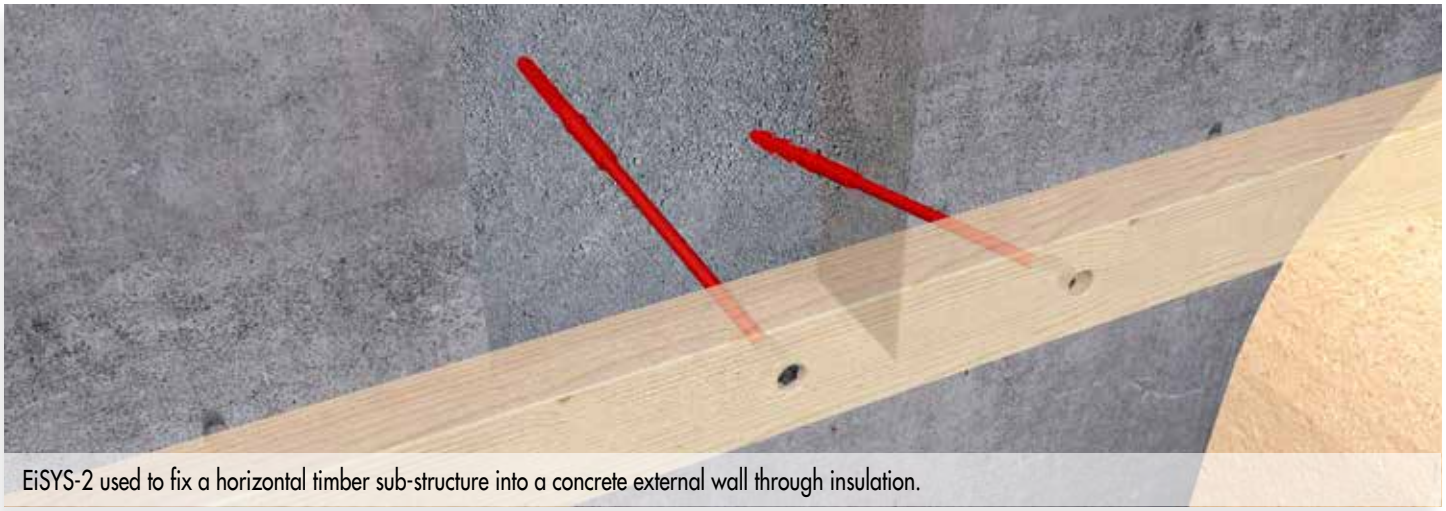


EiSYS-2 used to fix a horizontal timber sub-structure into a concrete external wall through insulation.

Item no.	Dimension	Material	For insulation thicknesses of up to	PU
945935	7.2 x 198 mm	Tempered carbon steel	60 mm	50
945925	7.2 x 218 mm	Tempered carbon steel	80 mm	50
945926	7.2 x 238 mm	Tempered carbon steel	100 mm	50
945927	7.2 x 258 mm	Tempered carbon steel	120 mm	50
945928	7.2 x 278 mm	Tempered carbon steel	140 mm	50
945929	7.2 x 298 mm	Tempered carbon steel	160 mm	50
945474	7.2 x 318 mm	Tempered carbon steel	180 mm	50
945930	7.2 x 338 mm	Tempered carbon steel	200 mm	50
945931	7.2 x 358 mm	Tempered carbon steel	220 mm	50
945932	7.2 x 378 mm	Tempered carbon steel	240 mm	50
945933	7.2 x 398 mm	Tempered carbon steel	260 mm	50
945934	7.2 x 418 mm	Tempered carbon steel	280 mm	50

EISYS-2 BIT

Specifically for the EiSYS-2

Item no.	Product description	Dimension	Drive	PU
945936	EiSYS-2 Bit	Ø 10 x 50 mm	SW12/TX30•	1

EISYS-2 SCREW ANCHOR

Specifically for the EiSYS-2

Item no.	Product description	Dimension	PU
945404	EiSYS-2 screw anchor	Ø 10 x 130 mm	200

Facade structure with EiSYS-2s, exploded view

BLUE-POWER SYSTEM SCREW

Europäische Norm
EN 14592:2008+A1:2012

For fixing timber sub-structures onto concrete or masonry

ADVANTAGES

- Plug-free mounting
- Suitable for timber and aluminum sub-structures
- Quick fixing

PROPERTIES

- For compression-resistant insulation
- For non-rear ventilated facades
- **Max. load 30kg/m²**
- Plug-free fixing in almost all anchoring substrates
- Absorbs the impact of both tensile and shear loads

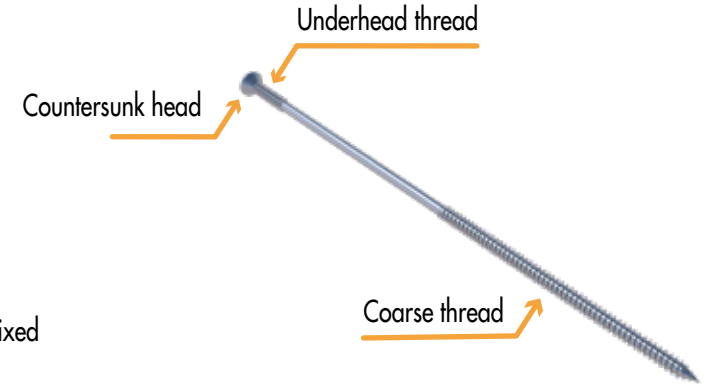
AREA OF APPLICATION

- For facade fixings where **timber or aluminum sub-structures** are to be fixed to **concrete** or **masonry** (see also p. 27)
- Outdoors: facades with facade insulation
- Indoors: e.g. suspended ceilings, wall paneling, etc.

BLUE-POWER SYSTEM SCREW

EDELSTAHL® Rost frei

Countersunk head, special-coated carbon steel



Blue-Power system screw used to fix a timber sub-structure onto insulating layer on a concrete substrate.

Item no.	Dimension	Material	Drive	For insulation thicknesses of up to [a]			PU
				Concrete, bricks & sand-lime brick[a]	Aerated concrete & perforated sand-lime brick[a]	Vertically perforated brick[a]	
110390	7.4 x 180 mm	Carbon steel	TX40	100 mm	80 mm	30 mm	100
110391	7.4 x 200 mm	Carbon steel	TX40	120 mm	100 mm	50 mm	100
110392	7.4 x 220 mm	Carbon steel	TX40	140 mm	120 mm	70 mm	100
110393	7.4 x 240 mm	Carbon steel	TX40	160 mm	140 mm	90 mm	100
110394	7.4 x 260 mm	Carbon steel	TX40	180 mm	160 mm	110 mm	100
110395	7.4 x 280 mm	Carbon steel	TX40	200 mm	180 mm	130 mm	100
110396	7.4 x 300 mm	Carbon steel	TX40	220 mm	200 mm	150 mm	100
110397	7.4 x 320 mm	Carbon steel	TX40	240 mm	220 mm	170 mm	100
110398	7.4 x 340 mm	Carbon steel	TX40	260 mm	240 mm	190 mm	100
110399	7.4 x 360 mm	Carbon steel	TX40	280 mm	260 mm	210 mm	100
110400	7.4 x 380 mm	Carbon steel	TX40	300 mm	280 mm	230 mm	100
110401	7.4 x 400 mm	Carbon steel	TX40	320 mm	300 mm	250 mm	100

a) With a support batten thickness of 30 mm
Screw length ≥ min. embedment depth + insulation thickness + support batten thickness

STATIC VALUES

Substrate	Drill hole Ø substrate	Min. drill hole depth	Min. embedment depth screw	Drill method [a]	Min. Component thickness	Min. edge distance	Min. center distance	Char. tensile resistance NRk [kN] [b]	Char. shear resistance VRk [kN]
C20/25 concrete	Ø 6.0 mm	70 mm	50 mm	H	100 mm	50 mm	100 mm	2.5	0.75
Brick	Ø 6.0 mm	70 mm	50 mm	H	115 mm	50 mm	100 mm	3.5	0.6
Sand-lime brick	Ø 6.0 mm	70 mm	50 mm	H	115 mm	50 mm	100 mm	3.5	0.5
Aerated concrete	Ø 5.0 mm	85 mm	70 mm	R	115 mm	50 mm	100 mm	0.9	0.3
Perforated sand-lime brick	Ø 5.0 mm	85 mm	70 mm	R	115 mm	50 mm	100 mm	2.0	0.6
Vertically perforated brick Wood	Ø 6.5 mm	140 mm	120 mm	R	175 mm	50 mm	100 mm	0.5	0.4
Wood	c)	c)	50 mm	R	60 mm	25 mm	100 mm	d)	d)

a) H = hammer drilling, R = rotary drilling
b) The char. yield strength $F_{ax,head,Rd}$ in the main battens should be taken into account. $F_{ax,head,Rd}$ (ρ_k 350)= 1.45 kN. The main battens should be pre-drilled to 6.5 mm.
c) Wooden substrates do not need to be pre-drilled.
d) Measurements should be performed according to EN 1995-1-1:2010-12.

Note: check the assumptions made. The values given, type and number of fasteners are preliminary calculations. Projects should only be surveyed/measured by authorized individuals under state building regulations. For a paid verification of stability please refer to a structural engineer qualified under state building regulations. We would be happy to supply you with contact details.

Image source: www.naturinform.de

CHAPTER 2

ALUMINUM SUB-STRUCTURE

Aluminum sub-structures are designed much like their wooden equivalents and essentially have the same **function**: creating a connection between the exterior walls of the building and the facade cladding and bearing the associated load.

But aluminum sub-structures are superior to timber sub-structures when it comes to **fire safety**. For instance, metallic sub-structures should always be installed for **building class 4 and 5**-structures to ensure the prescribed fire protection regulations are fulfilled.

Eurotec offers specially designed **systems** for **aluminum profile** building sub-structures – these range from **screws** and **profiles** right through to the **accessories** to match.

EISYS-ALUMINUM

Facade-/adjusting screw for aluminum sub-structures

bauaufsichtlich Zulassungs-Nr. Z - 9.1 - 897 zugelassen

ADVANTAGES

- Long regular thread ensures larger adjustment range
- Even where the distances to the building wall are greater, heavy loads can be transferred away via the framework screw connections (see use example)
- Made from austenitic stainless steel (A4) with outstanding corrosion resistance

PROPERTIES

- Metric regular thread at the head of the screw
- Facade profile can be adjusted using nuts and washers
- Affixed to the building wall with a screw anchor

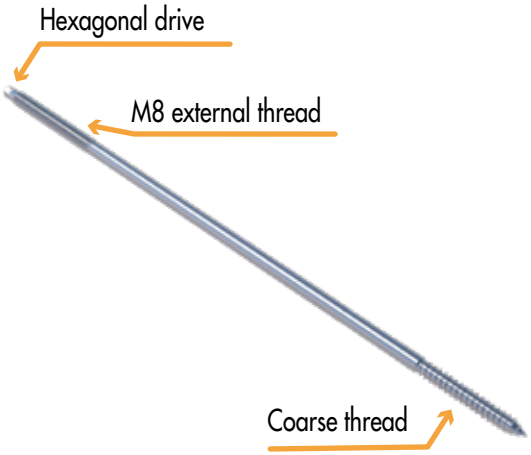
AREA OF APPLICATION

- For use in mounted and rear ventilated facades
- For fixing aluminum sub-structures

EISYS-ALUMINUM

EDELSTAHL® Rost frei

Facade-/adjusting screw, A4 stainless steel



The EiSYS-Aluminum is a special screw for fixing aluminum sub-structures for rear ventilated facades.

Item no.	Dimension	Material	Insulation thickness	PU
946214	Ø 7.0 x 185 mm	A4 stainless steel	60 mm	50
946215	Ø 7.0 x 205 mm	A4 stainless steel	80 mm	50
946216	Ø 7.0 x 225 mm	A4 stainless steel	100 mm	50
946217	Ø 7.0 x 245 mm	A4 stainless steel	120 mm	50
946218	Ø 7.0 x 265 mm	A4 stainless steel	140 mm	50
946219	Ø 7.0 x 285 mm	A4 stainless steel	160 mm	50
946220	Ø 7.0 x 305 mm	A4 stainless steel	180 mm	50
946221	Ø 7.0 x 325 mm	A4 stainless steel	200 mm	50
946222	Ø 7.0 x 345 mm	A4 stainless steel	220 mm	50
946223	Ø 7.0 x 365 mm	A4 stainless steel	240 mm	50
946224	Ø 7.0 x 385 mm	A4 stainless steel	260 mm	50
946225	Ø 7.0 x 405 mm	A4 stainless steel	280 mm	50
946226	Ø 7.0 x 425 mm	A4 stainless steel	300 mm	50

Large adjustment range

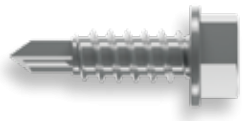
Item no.	Product description	Dimension	Drive	PU
945416	EiSYS-Aluminum insertion tool	Ø 10 x 100 mm	SW5.4/ SW10	1
945405	EiSYS screw anchor	Ø 10 x 80 mm	–	50

EISYS-ALUMINUM INSERTION TOOL

EISYS SCREW ANCHOR

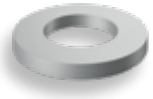
EiSYS-Aluminum and -Timber

EISYS-ALUMINUM ACCESSORIES



SELF-DRILLING SCREW

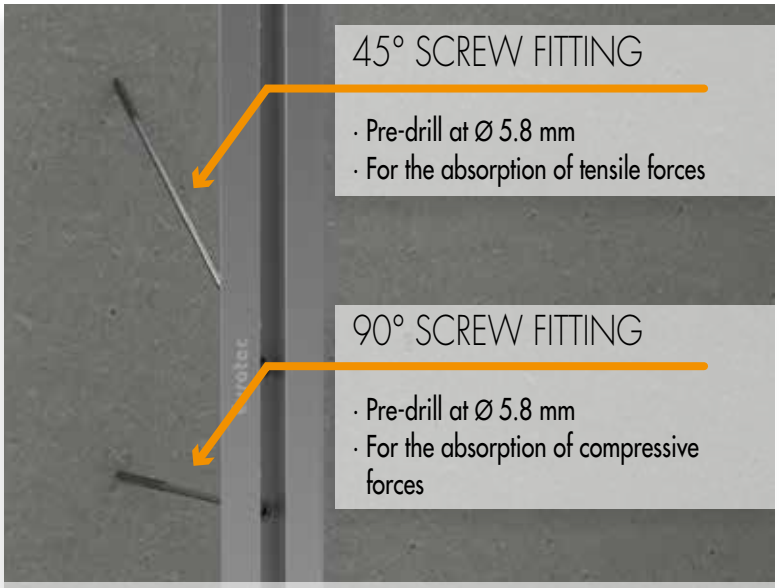
M8 NUT



WASHER

BLUE-POWER FIXING SYSTEM

The Blue-Power fixing system is suitable for facades as well as for indoor use.



Important: when pre-drilling it is essential to adhere to the specified diameters.

ACCESSORIES

· **45° drilling jig**
For fitting screws at an angle
(drill hole Ø 6.5 mm)
· **U system profile**
For building an aluminum sub-structure
· **L system profile**
For supporting insulation material and reinforcing the sub-structure

BLUE-POWER SYSTEM SCREW
(P. 21)

BLUE-POWER 45° DRILLING JIG

For Blue-Power system screw

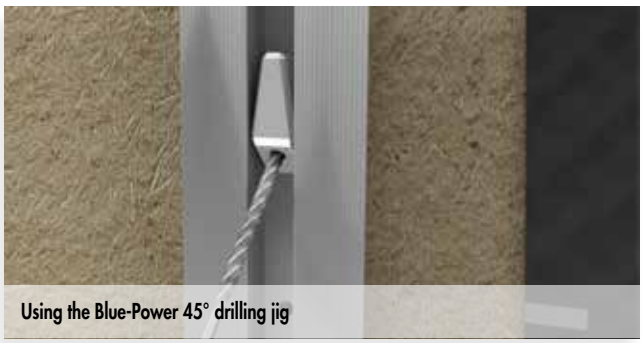
Item no.	Product description	Dimension	Material	PU
800311	45° drilling jig	15 x 49 x 19.5 mm	Aluminum	1

ADVANTAGES

· Facilitates precision pre-drilling
· Reusable
· Fits perfectly in our Blue-Power system profiles

DESCRIPTION

The **guide pin** is inserted into the existing drill hole in the profile. A hole is then drilled through the drilling jig guide, through the profile, the insulation and the wall. The **Blue-Power system screw** can then be inserted into this drill hole.



Using the Blue-Power 45° drilling jig

BLUE-POWER U SYSTEM PROFILE

For Blue-Power system screw

Blue-Power L system profile for cross bracing

ADVANTAGES

· More weather-resistant than timber
· Corrosion-resistant and non-corrosive
· Extremely durable without any compromise on quality

USE

· Outdoors: Rear ventilated facades with facade insulation
· Indoors: e.g. suspended ceilings, wall paneling, etc.

The **U system profile** is the simple solution for fixing aluminum sub-structures onto concrete or masonry. The Blue-Power U system profile absorbs **tensile** and **shear loads**. When used on facade insulation, additional shear load can be absorbed by compression-resistant insulation. It can be used in combination with the **45° drilling jig**.

Item no.	Product description	Dimension a)	Material	PU
975668	Blue-Power U system profile	80 x 20 x 4000 mm	Aluminum	1

a) width x height x length

BLUE-POWER L SYSTEM PROFILE

For Blue-Power system screw

Blue-Power L system profile for cross bracing

ADVANTAGES

· Additional bracing for sub-structure
· Support for compressive insulation materials
· Corrosion-resistant and non-corrosive

USE

Used to fix **compressive insulation materials** and to prevent these from slipping down. The L profile also ensures additional **rigidity** throughout the sub-structure. If the facade is clad with horizontal profiles later, this will ensure sufficient rigidity is already in place, meaning there will be no need for any extra bracing using L profiles.

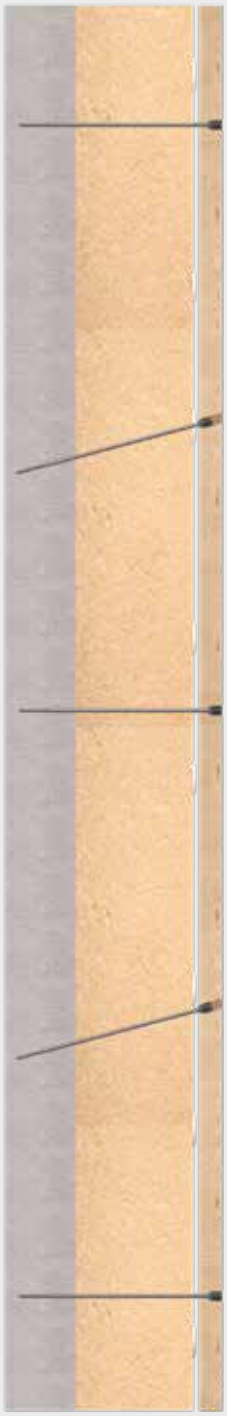
MOUNTING WITH THE DRILLING SCREW (P. 26)

Item no.	Product description	Dimension a)	Material	PU
On request	Blue-Power L system profile	15 x 15 x 6000 mm	Aluminum	1

a) width x height x length

EUROTEC CALCULATION SERVICE

Screw fitting example
Blue-Power system screw



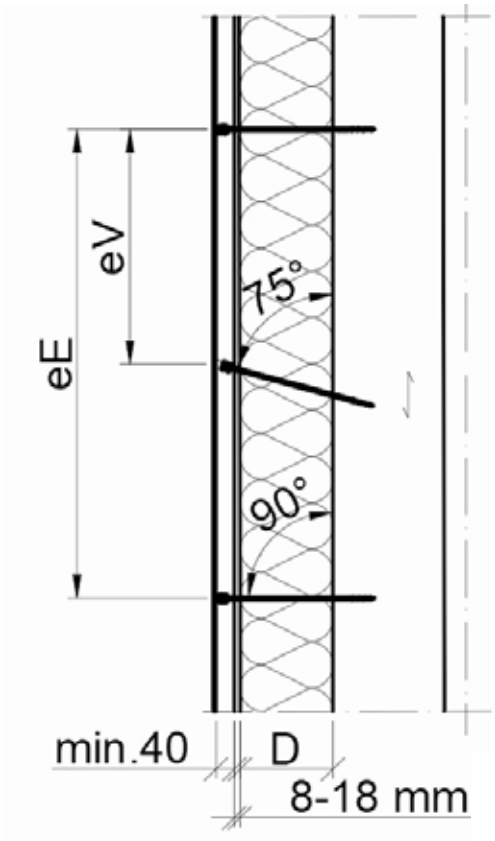
Screw fitting example
EiSYS-Timber

WE CAN ADVISE ON YOUR CONSTRUCTION PROJECTS!

Each and every construction project is **unique** – there is no one-size-fits-all solution. To find the optimum sub-structure for your facade – whether that be timber or aluminum, we take care of all the **preliminary calculations** for you.

GET THE PERFECT SUB-STRUCTURE:

· Fill out the preliminary calculation form (on the right)
→ Fill in all the necessary key data
· Send form to the Eurotec engineering department
→ technik@eurotec.team
· The result:
→ A recommendation for the right screw type
→ The amount of screws required
→ A drawing detailing the best arrangement of the screws for your specific case
→ We can also provide you with a static calculation on request



Drawing example

Eurotec Bemessungsservice

EiSYS Fassaden-Verstellschraube *

* Bemessung für die Befestigung der Konternlattung zur Aufnahme von Wind und Eigenlast. Die Schrauben dienen nicht zur Befestigung der Dämmung selbst.

per Telefon 02331 6245-444 · per Fax an 02331 6245-200 · per Mail an technik@eurotec.team

Kontaktieren Sie unsere Technikabteilung oder nutzen Sie den kostenlosen Bemessungsservice im Bereich Service auf unserer Homepage.

Kontakt

Händler: _____

Ansprechpartner: _____

E-Mail: _____

Bauvorhaben: _____

Ausführender: _____

Ansprechpartner: _____

Telefon: _____

E-Mail: _____

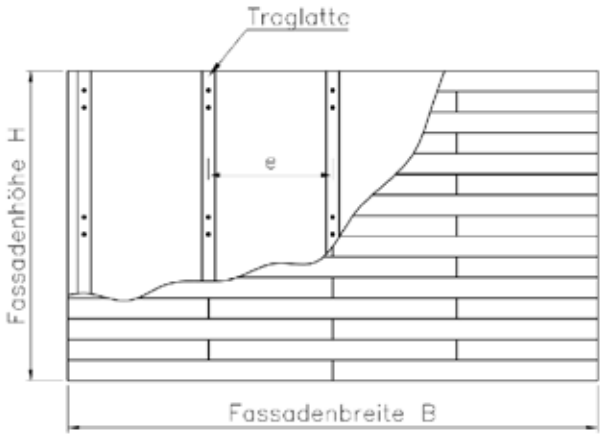
Angaben zum Bauvorhaben

PLZ des BVs: _____

Flächengewicht Fassade: _____ kg/m²
(inkl. Traglattung)

Dämmstärke: _____ mm
(80 mm ≤ D ≤ 280 mm)

Untergrund: _____ m



☐ Holz (mind. C24)
☐ Normalbeton
☐ Leichtbeton (kein Porenbeton)
☐ Mauerziegel
☐ Kalksandstein
☐ Hochlochziegel

Wandstärke Untergrund: _____ mm
(bzw. Querschnitt Holzständer; Massivwanddicke mind. 175 mm; Holzständer mind. 80 mm breit)

Querschnitt Traglattung: _____ mm
(mind. 40x60 mm; mind. C24)

Achsabstand Traglattung e: _____ mm

Länge Traglatte: _____ m
(Länge der tatsächlich verbauten Lattenstücke)

Fassadenfläche
(Fassadenhöhe max. 8,00 m)

Feld 1 H: _____ m B: _____ m

Feld 2 H: _____ m B: _____ m

Feld 3 H: _____ m B: _____ m

Feld 4 H: _____ m B: _____ m

Image source: www.naturinform.de

CHAPTER 3

FIXING OF THE FACADE

There are countless possibilities when it comes to fixing facade cladding. **Eurotec** offers **special products** that meet the given requirements for different approaches. Facade timber can be fixed either **visibly** or **invisibly**. For instance, we offer facade screws that can be tinted if needed and even facade clips that can be placed behind the facade timber and out of sight.

Customers should also note the **direction** in which the **sub-structure** was aligned during fixing, since there are various different **products** available for this too. On the following pages we help you find the right products for your project.

FACADE CLIP

For invisible facade timber fixing

ADVANTAGES

· Invisible screw fixing
· Creates distance between the facade timber and the sub-structure
  → Contributes effectively to structural protection of the wood
· The exposed surface of the facade timber remains undamaged

AREA OF APPLICATION

· For mounting wooden facade profiles on a timber sub-structure

PROPERTIES

· Hole A: the protrusion of the screw head creates distance between the profiles.
· Hole B: The screw head sits flush with the surface of the facade clip thanks to a countersink. This means the customer can determine the distance between the profiles themselves.
· For facade timber with a profile height of 57-95 mm

We offer packages with different **screw lengths** for different **facade timber thicknesses** (see table).

FACADE CLIP

Steel, electrogalvanized (black)

MOUNTING SCREW

2 x in pack per facade clip

FIXING SCREW

1 x in pack per facade clip

Eurotec facade clip					Facade profile dimensions			Required quantity Facade clip per m²	
Description		Dimensions			Min. - max. width	Min. thickness	Mounting screw length L	Min. profile width	Max. profile width
Item no.	**Type**	**H**	**L**	**W**	**Dimension**	**Dimension**	**Dimension**	**Units**	**Units**
946010	F115 x 17	5.5 mm	115 mm	15 mm	57 - 68 mm	19 mm	17 mm	28	24
946012	F115 x 22	5.5 mm	115 mm	15 mm	57 - 68 mm	24 mm	22 mm	28	24
946013	F115 x 28	5.5 mm	115 mm	15 mm	57 - 68 mm	30 mm	28 mm	28	24
946014	F130 x 17	5.5 mm	130 mm	15 mm	68 - 80 mm	19 mm	17 mm	24	20
946015	F130 x 22	5.5 mm	130 mm	15 mm	68 - 80 mm	24 mm	22 mm	24	20
946016	F130 x 28	5.5 mm	130 mm	15 mm	68 - 80 mm	30 mm	28 mm	24	20
946017	F145 x 17	5.5 mm	145 mm	15 mm	80 - 95 mm	19 mm	17 mm	20	18
946018	F145 x 22	5.5 mm	145 mm	15 mm	80 - 95 mm	24 mm	22 mm	20	18
946019	F145 x 28	5.5 mm	145 mm	15 mm	80 - 95 mm	30 mm	28 mm	20	18

Fixing on sub-structure
with fixing screw with 4.5 x 29 mm drill bit

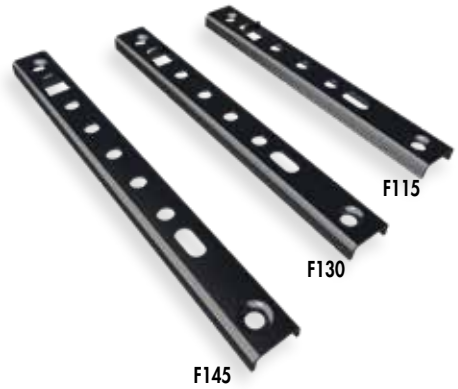
Formula for calculating quantity:
(1000 mm/cover height) · (1000 mm/SS distance) = units/m²

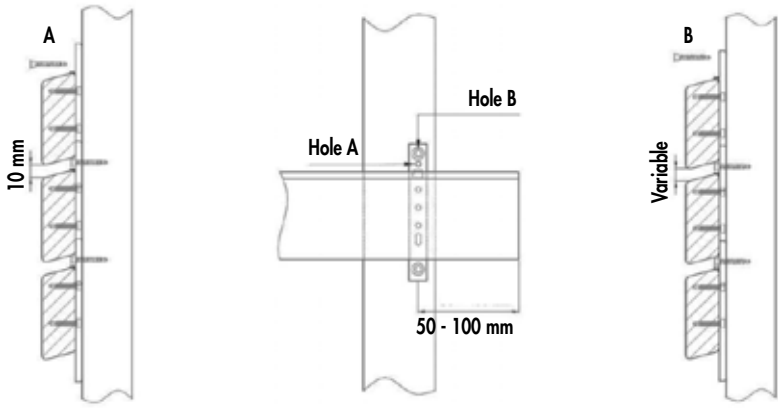
Sub-structure distance 600 mm
Joint distance 10 mm

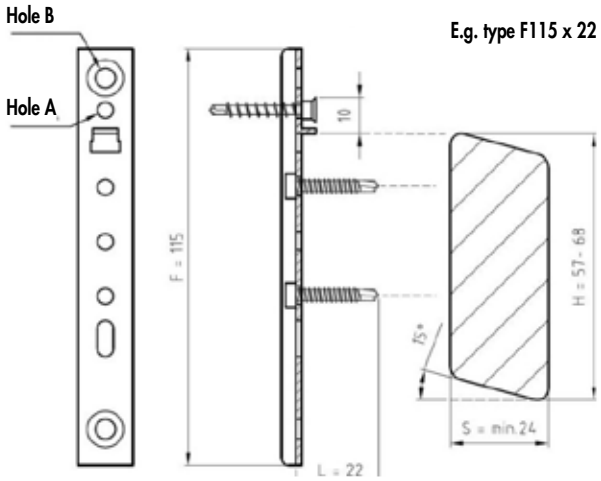
Note: all calculations should be reviewed and approved by the responsible planner before work is carried out.

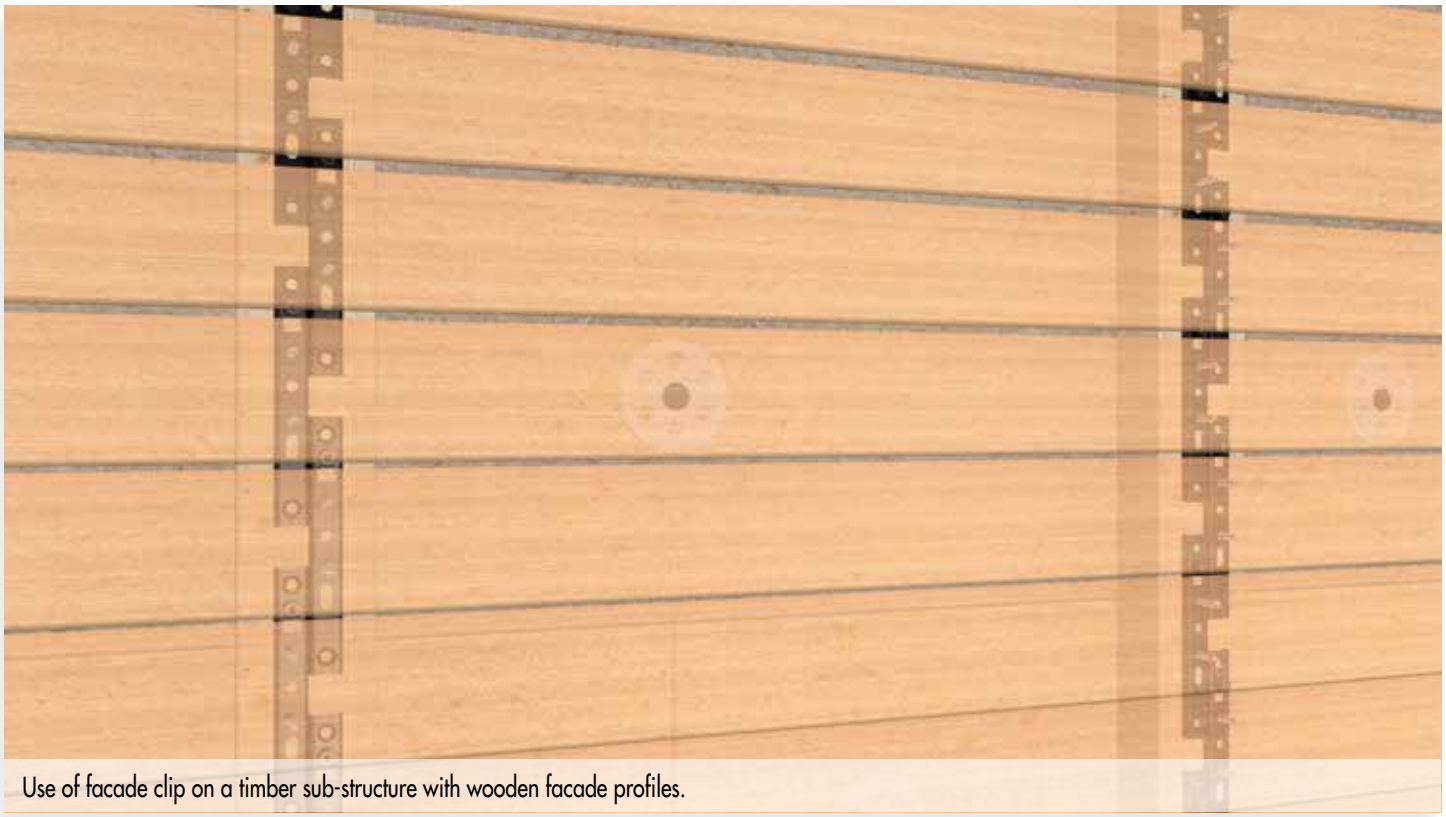
CONFIGURATIONS AND TECHNICAL DRAWING

Facade clip with screws



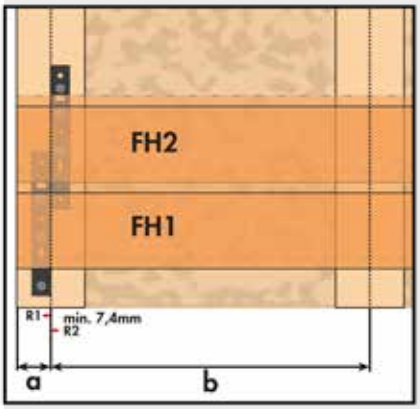




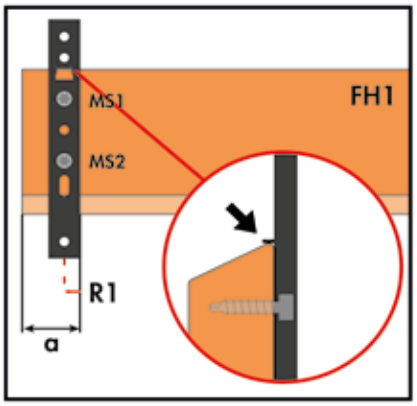


Use of facade clip on a timber sub-structure with wooden facade profiles.

FIXING INSTRUCTIONS



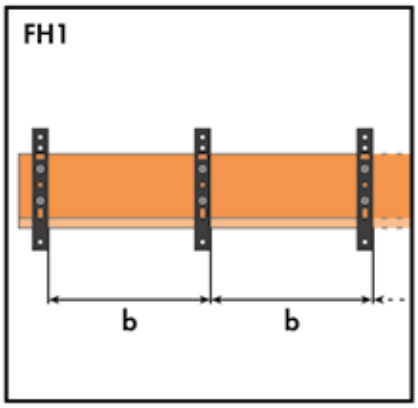
Variables a and b should be measured to fit your working material:
a = left edge of the squared timber to the middle of the squared timber
b = middle of 1st squared timber to middle of 2nd squared timber. **Decide** how far apart you want to **place** your **squared timber**.
R1 and R2 = offset
FH1 and FH2 = facade timber 1 and 2
Fix1 and Fix2 = fixing screws 1 and 2
MS1 and MS2 = mounting screws 1 and 2



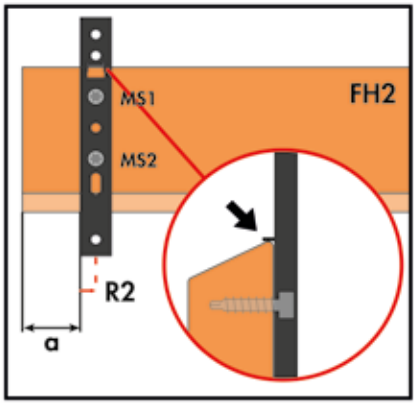
1 Place the first facade clip on the reverse side of the first facade timber plank (FH1) at **distance a** from **the right edge** of the facade timber plank (the plank of facade timber should be cut to fit beforehand). The **facade clip** should abut the **top edge of FH1**. Ensure that you have moved the facade clip **at least 7.4 mm** in direction **R1** in order to prevent it from **clashing** with the FH2 clips **later** (see picture).

Then fix the facade clip with the **mounting screws** (MS1 and MS2).

Tip: mark **distance a**, position the facade clip **lengthwise along the line** and screw it into place.
This way you can **save** yourself the trouble of**measuring** 7.4 mm!

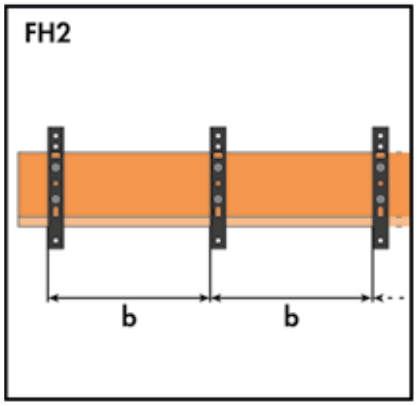


2 Fit additional **facade clips onto FH1** spaced **distance b** apart as shown. When doing so, again pay **attention to the distance in direction R1** that you defined in the previous step.

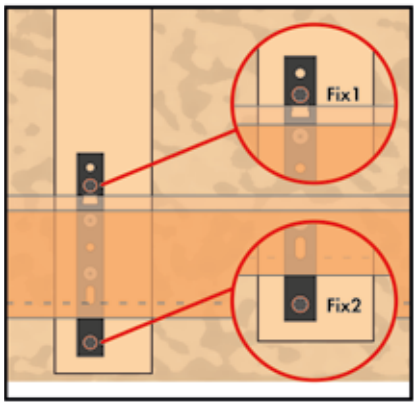


3 Place the facade clip on the reverse of the next plank of facade timber (**FH2**) at **distance a** from the **right edge** of the facade timber. Again, ensure that the **end** of the facade clip is abutting the **top edge of FH2**. **Move** the facade clip **by the distance you defined previously**, this time in **direction R2**, but by **at least 7.4 mm again.**

Then fix the facade clip with the **mounting screws** (MS1 and MS2).

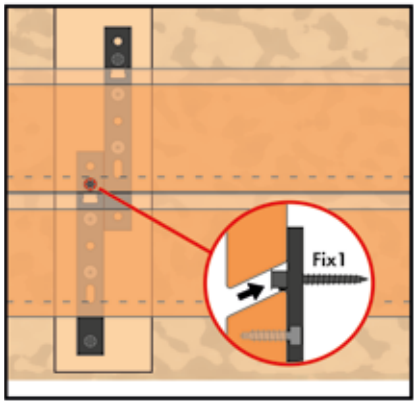


4 **Fit additional facade clips onto FH2 spaced distance b** apart as shown. Again, ensure the distancing in **direction R2**.

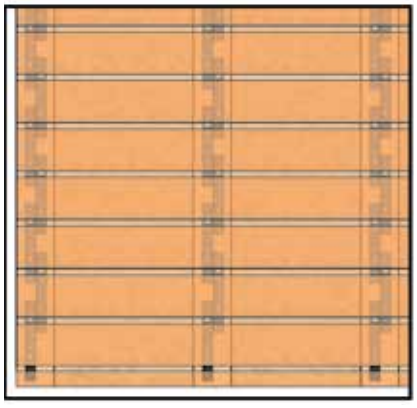


5 Fix **FH1** at the desired height on the **sub-structure** using **fixing screws Fix1 and Fix2**.

NOTE: you only need **the Fix2 screw for the very first row of facade timber**, since the following planks of facade timber will be **inserted** behind the facade timber that has already been mounted. **Remember to add these fixing screws to your order**, as these will not be included as standard.



6 Place **FH2** on the **sub-structure** and push down until the **bottom edge of FH2** is sitting on the **fixing screws (Fix1) of FH1**.
Fix the facade clips **to the sub-structure** again using the Fix1 **fixing screws.**



7 **Repeat** the **steps** until the entire wall is clad.
Again, ensure that the facade clips are mounted**alternating in directions R1 and R2**.

NOTE: this will result **in a small surface at the very bottom edge of the wall** that **is** not covered by facade timber. You should affix a custom-sized **panel here** to finish the facade.

FACADE CLIP FOR RHOMBUS PROFILES

System consisting of a facade clip for rhombus starter profiles and a facade clip for rhombus profiles

ADVANTAGES

· Creates distance between the rhombus profile and the sub-structure
  → Contributes effectively to structural protection of the wood.
· Invisible fixing

PROPERTIES

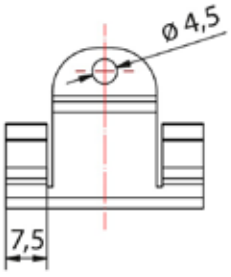
Using the clip generates a joint dimension of 6 mm. The clip has been designed in such a way that it does not lie flat on the sub-structure (= SS), but remains at a distance of 4 mm from the SS. The **structural wood preservation** guarantees rear ventilation of the facade which is not found in any other comparable products on the market. The rear ventilation ensures better **drying** during **rain,** allowing water to run off between the clip and sub-structure. These structural measures increase the **lifespan** of the **facade**. The clip can be used to form **sliding points** as well as **fixed points**.

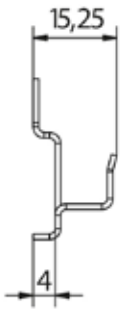
INSTRUCTIONS FOR USE

A **screw** measuring **Ø 4.2 x 25 mm** is supplied for **fixing on the SS**. A screw measuring **Ø 4.2 x 16 mm** is used to form **fixed points**.

Item no.	Description	Dimension[a)]	Material	PU*
944917-50	Rhombus facade clip	15.20 x 54.5 x 29.5 mm	Steel, galvanized	50
944917-200	Rhombus facade clip	15.20 x 54.5 x 29.5 mm	Steel, galvanized	200
944918	Rhombus starter facade clip	15.25 x 29.5 x 36.0 mm	Steel, galvanized	25

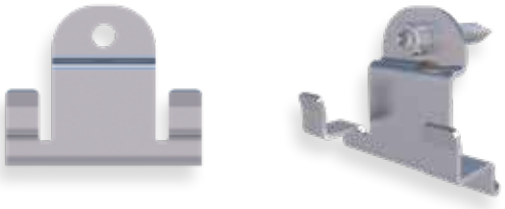
a) height x length x width
*incl. screws





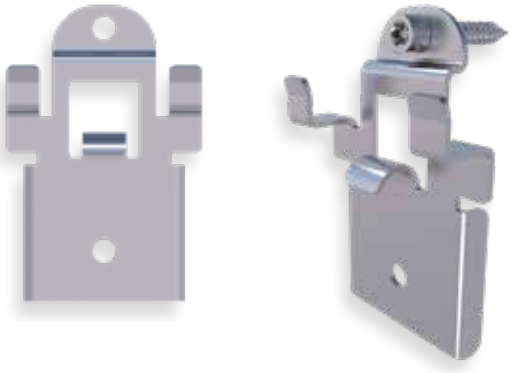
FACADE CLIP FOR RHOMBUS STARTER PROFILES

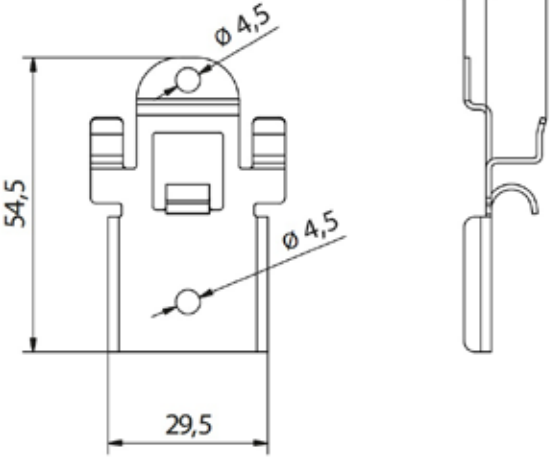
Connector for the first or very bottom rhombus profile



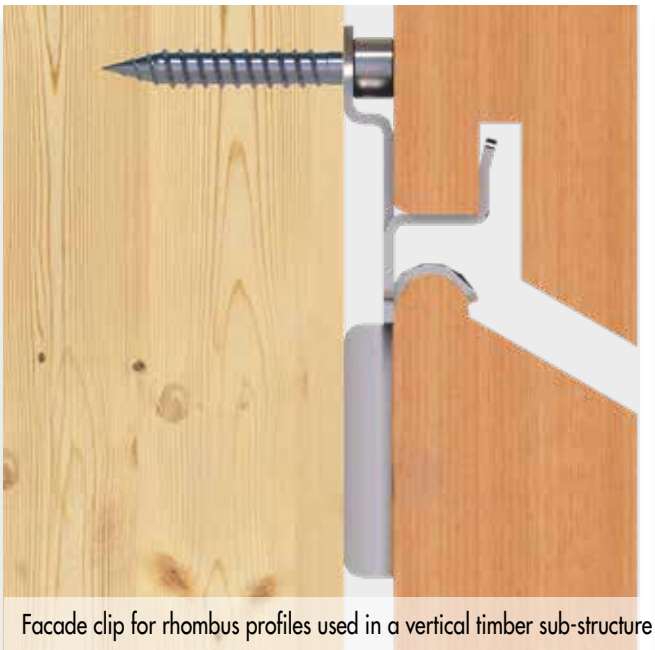
FACADE CLIP FOR RHOMBUS PROFILES

Connector for affixing rhombus profiles



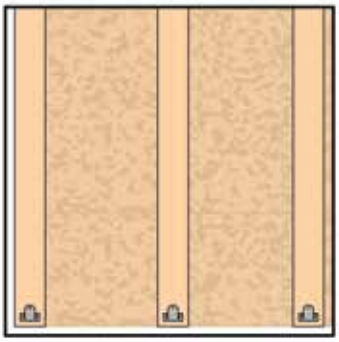


Facade clip for rhombus starter profiles used in a vertical timber sub-structure

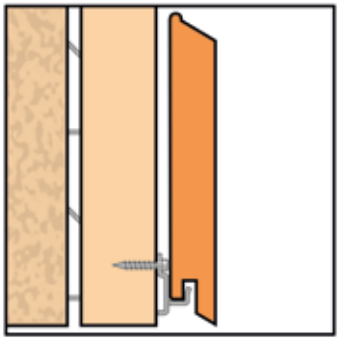


Facade clip for rhombus profiles used in a vertical timber sub-structure

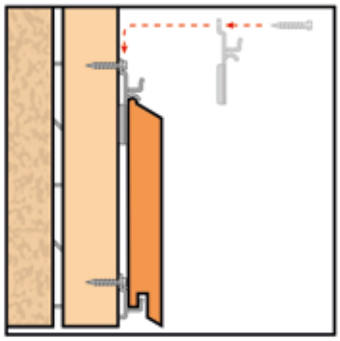
FIXING INSTRUCTIONS



1 The **facade clip for rhombus starter** profiles **is positioned** at the bottom edge of the facade and fixed with the screw supplied. This happens across the **entire length** of the facade.

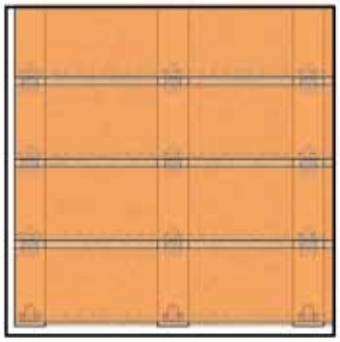


2 The first **rhombus profile** can now be affixed to the **facade clips** for rhombus starter **profiles** already mounted.



3 The **facade clip for rhombus profiles** is **then** inserted **behind** the profile from **above** and **screwed** onto the **sub-structure**. This will see the clip clasp the **curved part** at the **top** edge of the **rhombus** profile. The profile should now be sit firmly between the **two clips**. It is recommended that the first facade clip for rhombus profiles be installed in the **center** of the first profile. This will ensure that the first profile sits more **securely**.

4 The remaining **facade clips for rhombus profiles** can be mounted along the profile. These are always **pushed behind** the profile in the **areas** where the **SS** is located, and **fixed** with the screw supplied.



5 Affix one clip after the other in **combination** with the **respective rhombus profile** until the facade is fully clad.

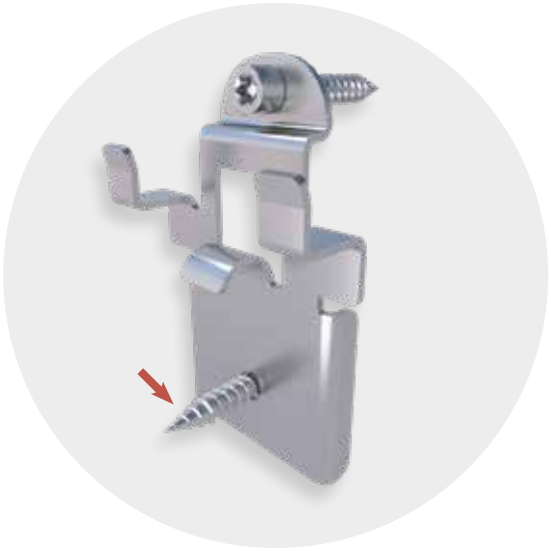
FORMING FIXED POINTS

The holes in the facade clip for rhombus profiles enable fixed points to be formed for areas where **windows, doors, plank joints** or the **end of the facade** are located. To do so, the clip is first screwed onto the **reverse side** of the profile with an **additional screw**. The clip can then be affixed to the sub-structure as usual.

The additional screw prevents both the **horizontal movement** of the profile, e.g. to the left and right of the windows and doors, and the **vertical movement** that occurs if nothing else is done under the respective profile and there's **no temporary clip** to contribute to the **reinforcement** of the overlying profile.

This additional screw should be used next to window and door openings.

NOTE: a screw measuring **Ø 4.2 x 16 mm** is used to form **fixed points**.



Additional screw

Facade profiles directly above windows and doors should also be fixed with an additional screw.

COVERFIX FACADE RAIL

For invisible facade timber fixing

ADVANTAGES

· Invisible fixing points
· Ideal for structural wood preservation
· Contributes to a better ventilation of the facade
· No damage to front thanks to reverse side screw fixing
· Can also be used for horizontally aligned sub-structures

To **protect** the sub-structure we recommend our **Protectus timber protection tape** (p. 51)

COVERFIX FACADE RAIL

Aluminum, black anodized

Item no.	Dimension[a)]	Material	PU
975672	20 x 8 x 8000 mm	Aluminum, black anodized	1

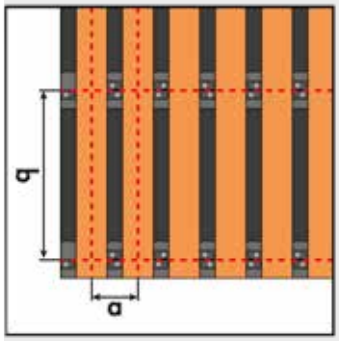
a) width x depth x length

With screws

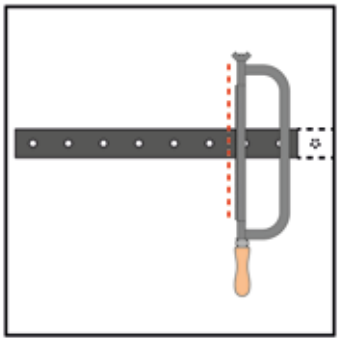
Profile shape

Use of a CoverFix facade rail on a horizontal sub-structure with an open timber facade.

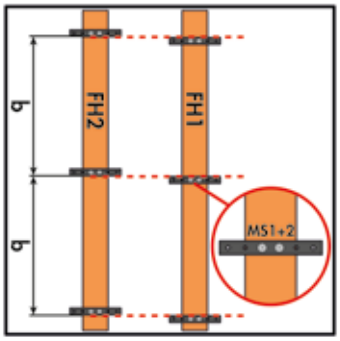
FIXING INSTRUCTIONS



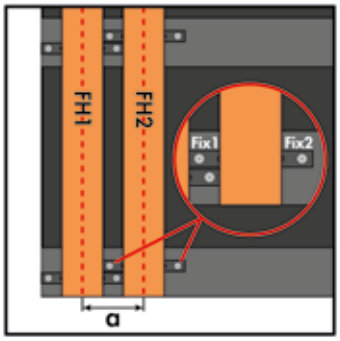
a Distance between the center of the facade timber planks
b Distance between the main battens
FH1/FH2 = facade timber 1 and 2
MS1/MS2 = mounting screws 1 and 2
Fix1/Fix2 = fixing screws 1 and 2



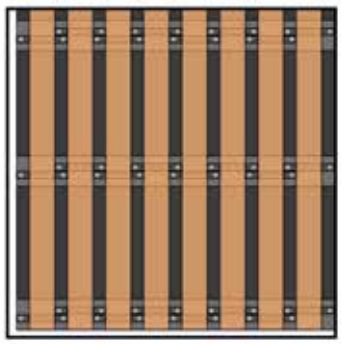
1 **CoverFix facade rails** are made to **measure**. They should be **at least** long enough that they protrude over the facade timber **by one hole** on either side.



2 The **CoverFix facade rail** is then screwed onto the **reverse side** of the **facade timber** using the **MS1** and **MS2** mounting screws. These are **positioned** staggered **in height** to prevent the **CoverFix facade rails** from **hitting one another**.



3 The planks of **facade timber** are then screwed onto the **sub-structure** at distance a from one another through the **external holes** of the **CoverFix facade rail** using the fixing screws **Fix1** and **Fix2**.



4 **Repeat** until the facade **is fully clad**.

COLORED FACADE SCREW

Screw developed specially for facade construction

ADVANTAGES

· Heads can be coated in any RAL color
→ Color can be matched to facade elements
· For fixing various facade elements onto a timber sub-structure
· Available uncoated or coated with UV-resistant paint

APPROVAL

· European Technical Assessment ETA-11/0024 Self-drilling screws as wood fasteners

MATERIAL

A2 stainless steel
· Limited suitability for saline atmospheres
· Limited acid resistance
· Not suitable for chlorinated atmospheres
· Suitable for service classes 1, 2 and 3
· Limited suitability for wood with high tannin content like cumaru, oak, merbau, robinia, etc.

A4 stainless steel
· Suitable for wood containing tannins like cumaru, oak, merbau, robinia, etc.
· Suitable for saline atmospheres
· Limited acid resistance
· Suitable for service classes 1, 2 and 3
· Not suitable for chlorinated atmospheres

Selected terrace- and facade screw heads can now be tinted **in all RAL and NCS colors! Ask us.**

COLORED FACADE SCREW

A2 and A4 stainless steel

Colored facade screw, fillister head						
A2 stainless steel						
Item no.	Dimension	Thread length lg	Head diameter	Drive	Color	PU
904670	Ø 4.8 x 25 mm	18 mm	Ø 12.0 mm	TX20	Blank	250
904671	Ø 4.8 x 32 mm	23 mm	Ø 12.0 mm	TX20	Blank	250
904672	Ø 4.8 x 38 mm	27 mm	Ø 12.0 mm	TX20	Blank	250
904675	Ø 4.8 x 60 mm	48 mm	Ø 12.0 mm	TX20	Blank	250
W 904670	Ø 4.8 x 25 mm	18 mm	Ø 12.0 mm	TX20	White/RAL 9010	250
W 904671	Ø 4.8 x 32 mm	23 mm	Ø 12.0 mm	TX20	White/RAL 9010	250
W 904672	Ø 4.8 x 38 mm	27 mm	Ø 12.0 mm	TX20	White/RAL 9010	250
W 904675	Ø 4.8 x 60 mm	48 mm	Ø 12.0 mm	TX20	White/RAL 9010	250
G 904670	Ø 4.8 x 25 mm	18 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	250
G 904671	Ø 4.8 x 32 mm	23 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	250
G 904672	Ø 4.8 x 38 mm	27 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	250
G 904675	Ø 4.8 x 60 mm	48 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	250
A4 stainless steel						
900437*	Ø 5.3 x 25 mm	18 mm	Ø 12.0 mm	TX20	Blank	100
900429	Ø 5.3 x 35 mm	23 mm	Ø 12.0 mm	TX20	Blank	100
900442	Ø 5.3 x 45 mm	30 mm	Ø 12.0 mm	TX20	Blank	100
900447	Ø 5.3 x 55 mm	40 mm	Ø 12.0 mm	TX20	Blank	100
900452	Ø 5.3 x 65 mm	50 mm	Ø 12.0 mm	TX20	Blank	100
900439*	Ø 5.3 x 25 mm	18 mm	Ø 12.0 mm	TX20	White/RAL 9010	100
900431	Ø 5.3 x 35 mm	23 mm	Ø 12.0 mm	TX20	White/RAL 9010	100
900444	Ø 5.3 x 45 mm	30 mm	Ø 12.0 mm	TX20	White/RAL 9010	100
900449	Ø 5.3 x 55 mm	40 mm	Ø 12.0 mm	TX20	White/RAL 9010	100
900454	Ø 5.3 x 65 mm	50 mm	Ø 12.0 mm	TX20	White/RAL 9010	100
900441*	Ø 5.3 x 25 mm	18 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	100
900432	Ø 5.3 x 35 mm	23 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	100
900446	Ø 5.3 x 45 mm	30 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	100
900451	Ø 5.3 x 55 mm	40 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	100
900456	Ø 5.3 x 65 mm	50 mm	Ø 12.0 mm	TX20	Anthracite/RAL 7016	100

Other colors are available on request.

*Not regulated under ETA.

High-pressure laminates (HPL) fixed using colored facade screws in respective matching colors.

HAPATEC HELI

Special screw for fixing panels

ADVANTAGES

· Special screw geometry reduces screw-in torque
· No screw wobble when screwing with TX drive

APPROVALS

· European Technical Assessment ETA-11/0024 Self-drilling screws as wood fasteners

MATERIAL

A2 stainless steel
· Limited suitability for saline atmospheres
· Corrosion-resistant and acid-resistant to a limited extent
· Not suitable for chlorinated atmospheres
· Suitable for service classes 1, 2 and 3
· Limited suitability for wood with high tannin content like cumaru, oak, merbau, robinia, etc.

A4 stainless steel
· Suitable for wood containing tannins like cumaru, oak, merbau, robinia, etc.
· Suitable for saline atmospheres
· Limited acid resistance
· Suitable for service classes 1, 2 and 3
· Not suitable for chlorinated atmospheres

The special screw geometry reduces the **screw-in torque** required. This reduces the risk of breaking the screw.

Selected terrace- and facade screw heads can now be tinted **in all RAL and NCS colors! Ask us.**

HAPATEC HELI

A2 and A4 stainless steel, decorative head

COMPATIBLE WITH OUR EPDM FACADE TAPE (P. 52)

Hapatec Heli - decorative head					
A2 stainless steel					
Item no.	Dimension	Thread length lg	Head diameter	Drive	PU
100060	Ø 5 x 50 mm	30 mm	Ø 7.5 mm	TX25	200
100060-BUCKET	Ø 5 x 50 mm	30 mm	Ø 7.5 mm	TX25	500
100062	Ø 5 x 60 mm	36 mm	Ø 7.5 mm	TX25	200
100062-BUCKET	Ø 5 x 60 mm	36 mm	Ø 7.5 mm	TX25	500
A4 stainless steel					
100059	Ø 4.5 x 50 mm	30 mm	Ø 7.0 mm	TX20	200
100055	Ø 4.5 x 60 mm	36 mm	Ø 7.0 mm	TX20	200
100056	Ø 4.5 x 70 mm	42 mm	Ø 7.0 mm	TX20	200
100057	Ø 4.5 x 80 mm	48 mm	Ø 7.0 mm	TX20	200
100051	Ø 5.0 x 50 mm	30 mm	Ø 7.5 mm	TX25	200
100051-BUCKET	Ø 5.0 x 50 mm	30 mm	Ø 7.5 mm	TX25	500
100052	Ø 5.0 x 60 mm	36 mm	Ø 7.5 mm	TX25	200
100052-BUCKET	Ø 5.0 x 60 mm	36 mm	Ø 7.5 mm	TX25	500
100053	Ø 5.0 x 70 mm	42 mm	Ø 7.5 mm	TX25	200
100053-BUCKET	Ø 5.0 x 70 mm	42 mm	Ø 7.5 mm	TX25	500
100054	Ø 5.0 x 80 mm	48 mm	Ø 7.5 mm	TX25	200
100054-BUCKET	Ø 5.0 x 80 mm	48 mm	Ø 7.5 mm	TX25	500
100058	Ø 5.0 x 100 mm	60 mm	Ø 7.5 mm	TX25	200

Example illustrating use of Hapatec Heli in a timber facade (board and batten cladding). Screw heads can be tinted on request.

Image source: www.naturinform.de

CHAPTER 4

OTHER PRODUCTS

Depending on the configuration of your facade, various other measures can be taken in addition to structural wood preservation to guarantee the **durability** of the facade. **For instance, Eurotec** offers **products** that improve **protection** against **damp**, **pests** and **dirt**.

KLIMAX INSULATION ANCHOR

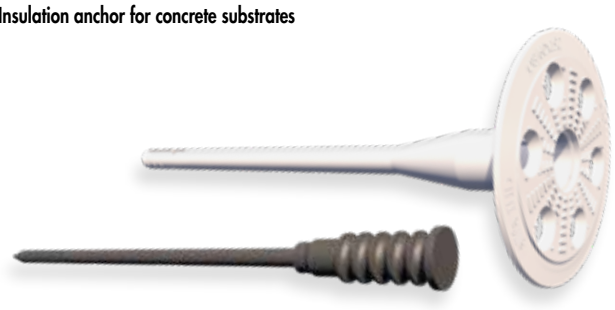
For fixing thermal insulation systems to concrete walls

ADVANTAGES

- Push-through installation of anchor
- Designed for universal use with countless insulation materials and substrates
- Quick and easy hammer assembly of mandrel

KLIMAX INSULATION ANCHOR

Insulation anchor for concrete substrates



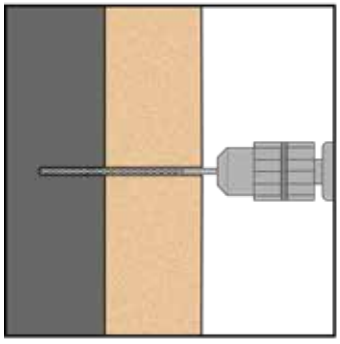
INSTALLATION PARAMETERS

- Nominal drill diameter: 8 mm
- Depth of the drill hole to the deepest point: 40 mm
- Effective anchoring depth: 30 mm

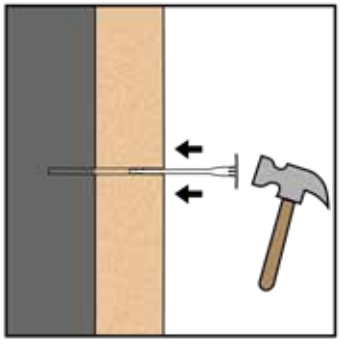
Item no.	Dimension	Plate diameter	Insulation thickness	PU
200027	Ø 8.0 x 90 mm	Ø 60 mm	40-60 mm	250
200028	Ø 8.0 x 110 mm	Ø 60 mm	80 mm	250
200029	Ø 8.0 x 130 mm	Ø 60 mm	100 mm	200
200030	Ø 8.0 x 150 mm	Ø 60 mm	120 mm	150
200031	Ø 8.0 x 170 mm	Ø 60 mm	140 mm	150
200032	Ø 8.0 x 190 mm	Ø 60 mm	160 mm	100
200033	Ø 8.0 x 210 mm	Ø 60 mm	180 mm	100
200034	Ø 8.0 x 240 mm	Ø 60 mm	210 mm	100

Klimax insulation anchor for fixing insulation panels to an external concrete wall

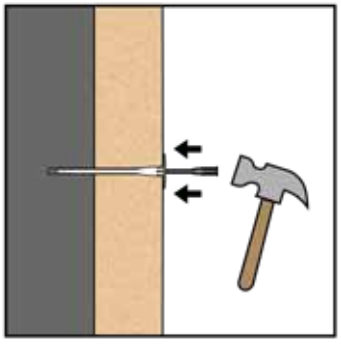
FIXING INSTRUCTIONS



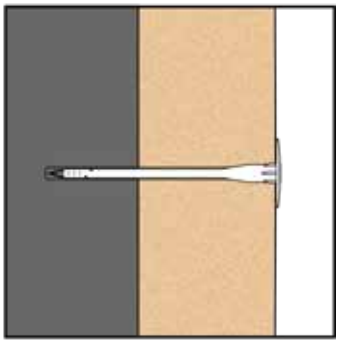
1 **Drill** a hole (Ø 8 mm) and then clean it out.



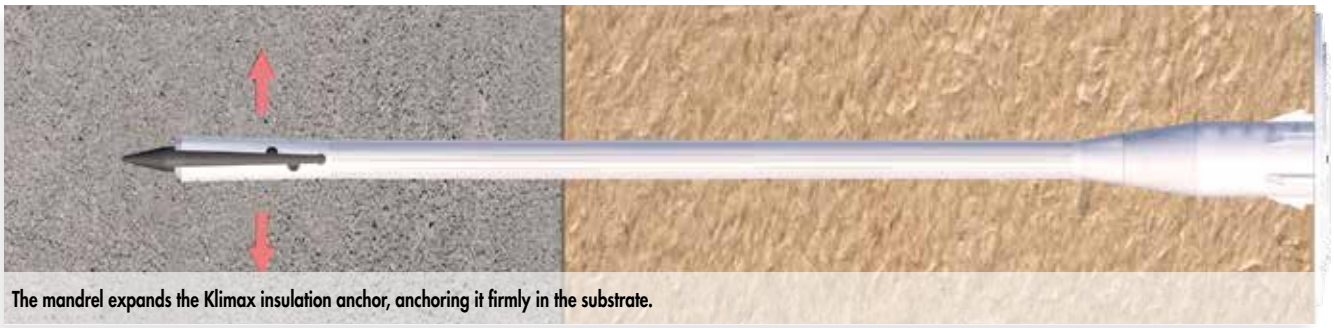
2 Hammer **Klimax insulation anchor** into the drill hole.



3 Hammer the **mandrel** into the Klimax insulation anchor.

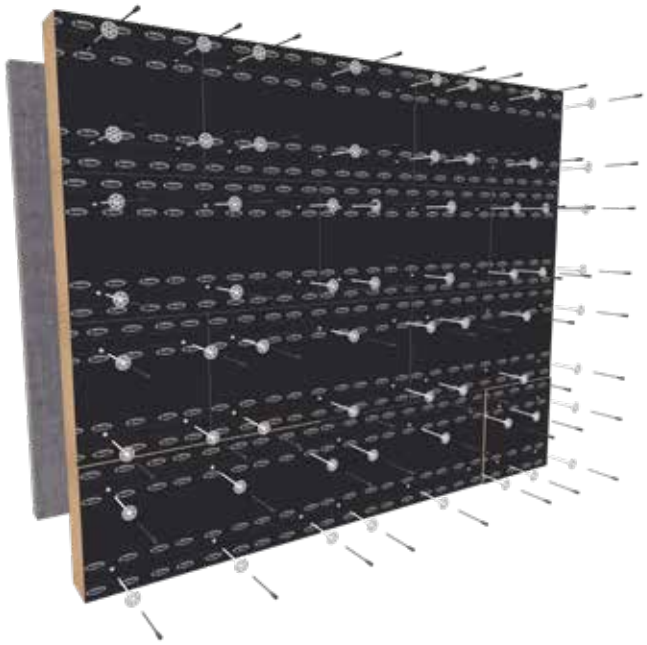


4 Done!



The mandrel expands the Klimax insulation anchor, anchoring it firmly in the substrate.

Individual insulation panels with Klimax insulation anchors



Exploded view of an insulated wall, including Klimax insulation anchors

PROTECTUS, TIMBER PROTECTION TAPE

provides timber sub-structures with permanent protection against damp, e.g. from the rain.

ADVANTAGES

· Structural wood preservation
· Easy fixing thanks to adhesive film
· Optimum fit thanks to minimal material thickness
· Tear-resistant and long-lasting durability
· Screws can simply be screwed through it
· Can be cut to size

MATERIAL

Black butyl rubber, with butyl rubber glue with a high adhesive strength of ≥100 N/25 mm on one side.
· High durability
· High electrical insulating capacity
· Good resistance to acids and bases
· Very low resistance to oils and grease
· Temperature stability from -30 °C to +80 °C

INSTRUCTIONS FOR USE

· Apply at temperatures of between +5 °C to +40°C
· Sticking surfaces must be free from grease, oil, surfactants, dirt and dust
· Not resistant against oils and organic solvents (e.g. petrol)
· Store dry and protected from UV at between +5°C and +25 °C

DESCRIPTION

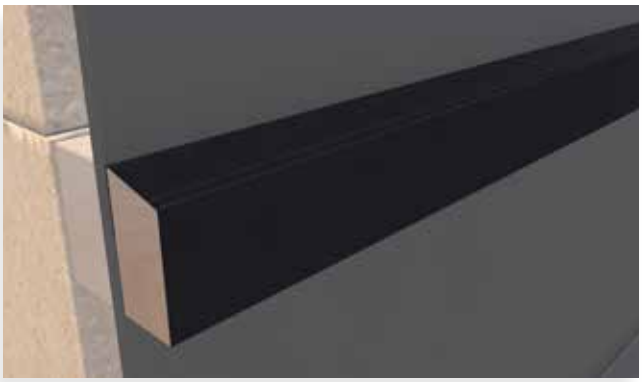
Protectus timber protection tape offers versatile structural wood preservation. The timber protection tape provides your timber sub-structure with permanent protection against **condensation** and **rain** and can therefore **increase** the **lifespan** of the sub-structure considerably. **Protectus timber protection tape** can also be used as a **separating layer** between aluminum profiles and galvanized steel beams due to its **electrical insulating capacity**.

PROTECTUS

timber protection tape

Item no.	Dimension[a)]	Material	PU
94615	75 x 0.5 x 20000 mm	PE butyl rubber	1

a) width x depth x length



Our Protectus timber protection tape protects exposed timber against damp. Its strong adhesive rubber glue layer allows it to bond itself to wood.

EPDM FACADE TAPE

Facade tape for protecting sub-structures against damp.

ADVANTAGES

· Protects the sub-structure against damp
· Tear-resistant
· Long-lasting durability
· Easy fixing thanks to adhesive film
· Comes on a roll, can be cut to size

DESCRIPTION

EPDM facade tape protects your facade sub-structure timber against **damp** and aids **structural wood preservation**. It is **tear-resistant**, **long-lasting** and easy to fix thanks to an adhesive film. The facade tape comes on a roll and can be cut to size individually.

The tapes is placed directly on the sub-structure, **behind** the **facade cladding**.

A **gap** is created between the sub-structure and the facade cladding, **minimizing**narrow gaps between **contact surface**. This prevents the formation of **condensation**, in turn preventing rot in facade elements.

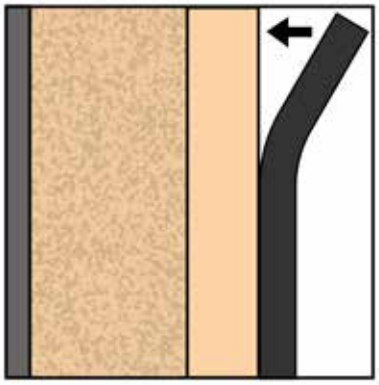
EPDM FACADE TAPE

Facade protection tape

Item no.	Dimension[a]	Material	PU
954041	10 x 8 x 9750 mm	EPDM	10

a) width x depth x length

WORKS PARTICULARLY WELL WITH HAPATEC HELI (P. 45)



Once the protective film of the facade tape has been removed, it can be stuck directly to the sub-structure thanks to its self-adhesive reverse side.

EPDM facade tape contributes to structural wood preservation by creating distance between the facade cladding and the SS.

BIRD SCREEN

For securing ventilation openings on building facades and in the eaves area of ventilated roofs

ADVANTAGES

· Guarantees a solution for the protection against leaves and other dirt
· Resistant to UV radiation
· Suitable for all roof types
· Guarantees proper ventilation and air circulation in facade and roof area

USE

· For securing ventilation openings on building facades and protecting the eaves area of ventilated roofs from birds, rodents and insects

INSTALLATION

· The bird screen is installed underneath the facade structure, and fixed to the squared timber of the sub-structure using a screw (we recommend Paneltwistec TK AG Ø 4.0 x 30).
· The bird screen is also inserted a little way between the insulation material and perimeter insulation panel.

BIRD SCREEN

Grid, polymer, mesh: 10 x 3mm

Item no.	Description	Dimension[a)]	Material	PU
954214	Bird screen 100 white	100 x 5000 mm	Polymer	24
954216	Bird screen 80 black	80 x 5000 mm	Polymer	24
954217	Bird screen 100 black	100 x 5000 mm	Polymer	24
954218	Bird screen 150 black	150 x 5000 mm	Polymer	24

a) width x length

The bird screen protects the facade against dirt and animals, without compromising air circulation.

WALL CONNECTING BAR

Designed for professional finishing on roofs and facades

ADVANTAGES

· Quick and easy installation
· Pre-drilled fixing holes
· Resistant to the elements
· Universal use

DESCRIPTION

The **Eurotec wall connecting bar** (sealing profile) is made of extruded aluminum and is used for professional finishing on roofs and facades. It functions as a **connecting bar** between the **roof area** and the **vertical structural element** and at the same time it protects against **rainwater**. Furthermore it can be used universally and it is suitable for many roof claddings and ensures a visually appealing finish.

USE

· Pitched roofs
· Flat roofs
· Facades

The wall connecting bar is screwed into the masonry using a **plumbing screw** including a sealing washer and screw anchor. The Eurotec **insulation anchor** can be used as an alternative when it comes to direct anchoring in **styrofoam**, **hard foam sheets** and other **soft construction materials**. The **circular holes** (Ø 8 mm) required for fixing are already present in the profile at 200 mm intervals. The bar is then sealed against the rain with a **sealing compound**. Compatible with the following Eurotec products:

· Sealing plug
· Insulation anchor
· Plumbing screw with sealing washer and EMD multi plug

For more **information** about the products in this catalog visit our **website!**
www.eurotec.team

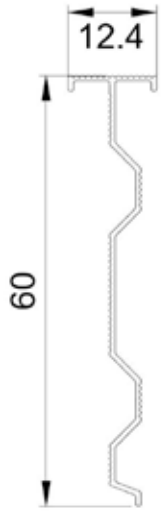
WALL CONNECTING BAR

Aluminum, extruded

Item no.	Dimension[a)]	Material	Circular hole	PU
954197	60 x 12.4 x 3000 mm	Aluminum	Ø 8 mm	1

a) height x width x length

The wall connecting bar ensures a clean transition between roof and facade by fixing the roofing felt to the adjoining wall and thereby creating a seamless connection.



Wall connecting bar profile drawing

Eurotec®
The fixing technology specialist

AND HOW CAN WE HELP YOU?

IMAGEFILM

Our new facade catalog! Find everything from sub-structures and fixings right through to protection for your facade.

E.u.r.o.Tec GmbH
Unter dem Hofe 5 - D-58099 Hagen
Tel. +49 2331 62 45-0
Fax +49 2331 62 45-200
Email info@eurotec.team
www.eurotec.team

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