

Installation instructions 10/2025

öko skin

öko skin – application as facade cladding

öko skin concrete slats are installed as wall panels based on the principle of curtain-type, rear-ventilated facades. In order to ensure a sufficient rear ventilation of the complete system, adequate air circulation must be provided behind the cladding. Rear-ventilated

space is required for discharging moisture that comes from inside the building as vapour or has remained inside the structure after precipitation.

Sizes

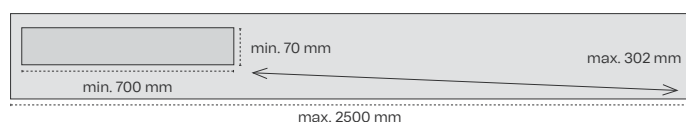
öko skin standard

Format 1800 x 147 x 13 mm | Dead load 7.9 kg/slat
Requirements: 3.6 slats per m² finished surface including 8 mm joint



öko skin custom

Formats within a width from 70 to 302 mm and within a length from 700 to 2500 mm on request. Dead load 26 kg/m²



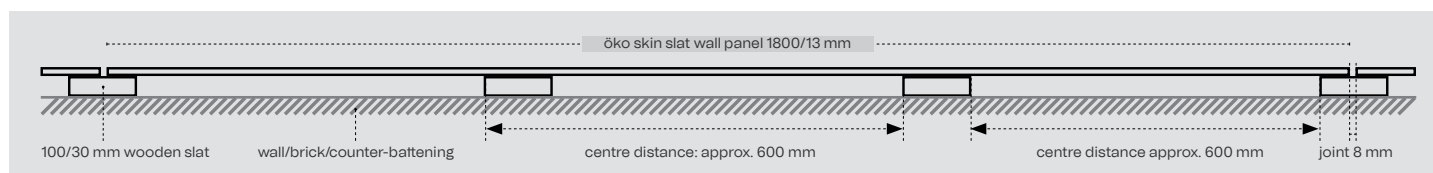
Substructure

The slats must be mounted to a bending-resistant, stable and even substructure. In general öko skin is mounted to a simple or double framework of wooden slats (counter and main battening). Alternatively the substructure can also be made of aluminium or other sheet metal profiles. The substructure must be mounted to a suitable solid base, such as brickwork, concrete or wood. The cross section of the slats and the corresponding fasteners must be suitable and adequately dimensioned for the planned function of the facade.

The substructure must be made of sufficiently dried wood (15% ± 3%) with a cross section of at least 100 x 30 mm. The use of planed wooden slats is recommended, but not compulsory. The wood used must comply with the guidelines for structural tim-

ber according to EN 338. The type of wooden slats used and the distance between slats depend on the desired patterning of the öko skin slat wall panels (patterning see next page). If öko skin slat wall panels are installed vertically on the ground and first floor of a building under average conditions, the distance between wooden slats should not exceed 600 mm. Owing to the advantages of concrete as a building material, öko skin can be mounted down to the floor. To protect the slats against soiling, 300 mm distance from the floor is recommended.

öko skin concrete slats with a length of 1800 mm are suitable for a substructure with approx. 600 mm distance between the wooden slats. Every öko skin slat must be mounted with at least four fasteners.



Installation

öko skin concrete slats should be installed from the left side to the right side and from the bottom upwards. Glassfibre reinforced concrete is a natural material. The raw materials used for its production create a unique surface finish that is characteristic of concrete. This play of colours within a certain colour shade is intentional and enhances the vivid character of concrete as natural building material.

Packaging

The slats are packed on wooden pallets with a protection plate. Opened pallets or individual slats must be protected from weather influences (for more information see "Handling instructions").

1 pallet öko skin 1800 x 147 mm:
18 layers with 8 slats each (144 pieces; 38,1 m²), weight ca. 1143 kg

Packaging and palletising of öko skin custom depend on panel sizes.

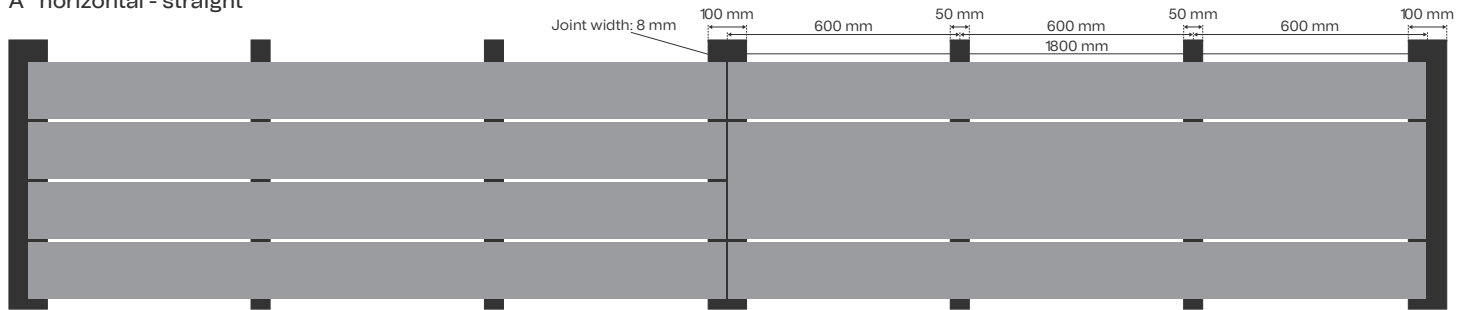
When laying the slats please note that the colour intensity of the individual slats can vary (for more information see "Characteristics"). We recommend the mixing of concrete slats from various pallets and layers for an optimal installation result.

Patterning

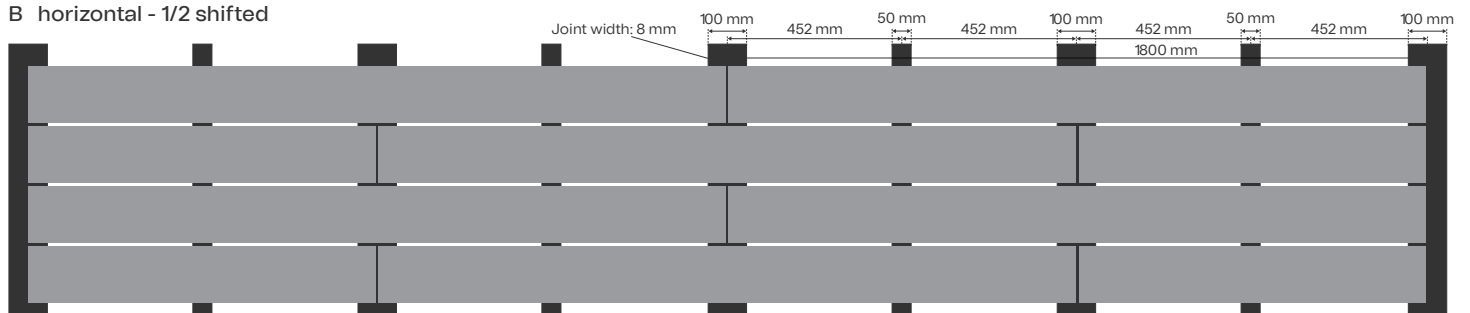
The following patterning for wooden substructures should be understood as sketches. They can be applied vertically and horizontally. öko skin slat wall panels are used as facade cladding and mounted on a substructure. The type of battening required depends on which laying pattern is chosen for the öko skin facade. öko skin slat wall panels can be installed both horizontally and vertically. The type of patterning (e.g. parallel, 1/2

shifted or 1/3 shifted) influences the complexity of substructure and assembly. öko skin slats can be fastened with screws to a wooden substructure or with rivets to an aluminium substructure. öko skin slats with 302 mm width can be alternatively installed as lap siding, where the concrete slats are fastened to the battens at an angle to form an overlapping joint. Please refer to country-specific regulations regarding mounting and installation!

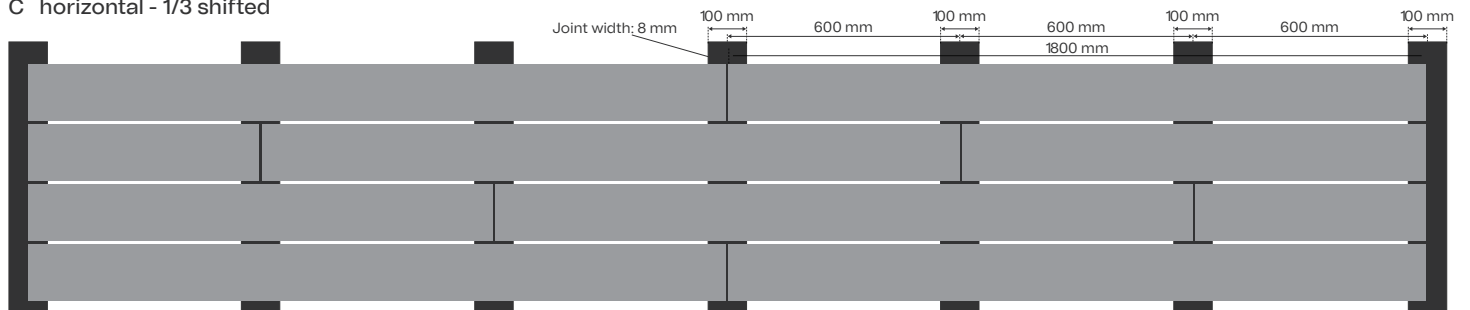
A horizontal - straight



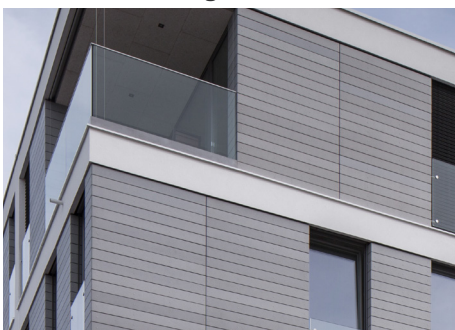
B horizontal - 1/2 shifted



C horizontal - 1/3 shifted



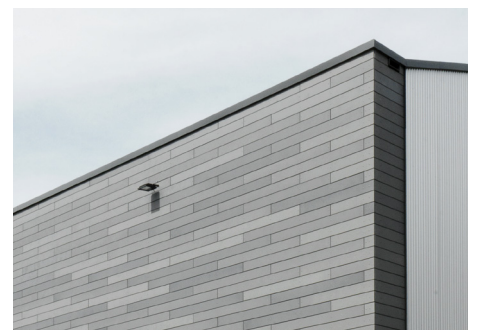
A horizontal - straight



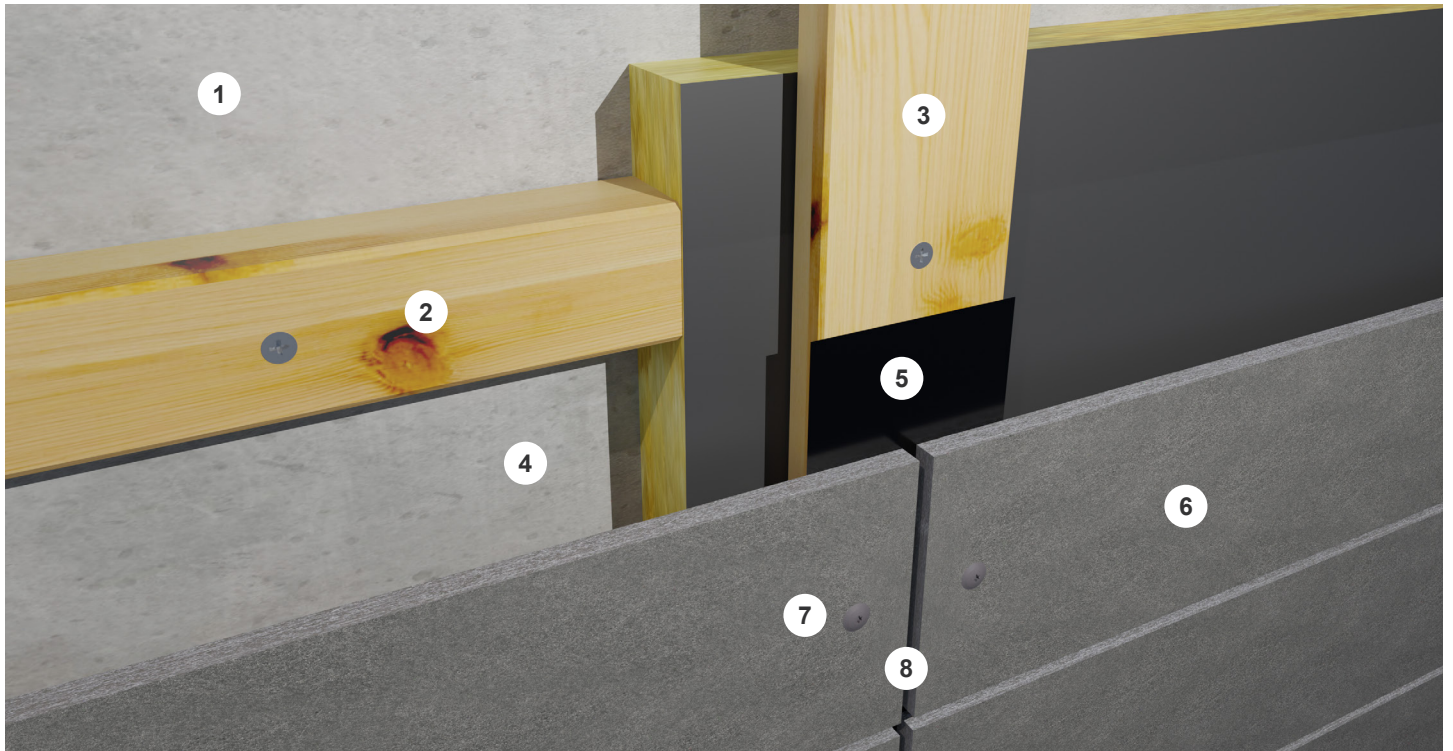
B horizontal - 1/2 shifted



C horizontal - 1/3 shifted



Structural assembly: wooden substructure with screws



Assemblies

- 1 wall / brickwall
- 2 counter-battening (vertical) e.g. wooden slats, optional insulation
- 3 main battening (horizontal) e.g. wooden slats 100/40mm (recommended painted black), distance between slats depending on patterning 450 - 600 mm
- 4 flexible sheets for waterproofing / protective membrane e.g. DuPont™ Tyvek UV Facade

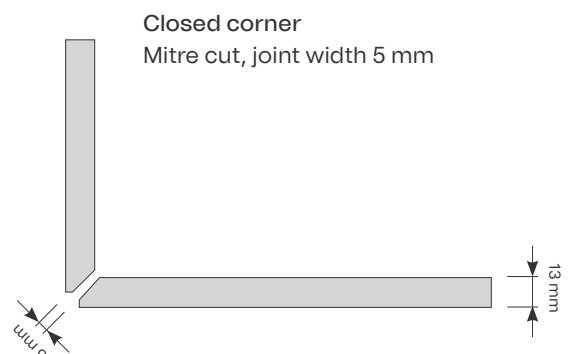
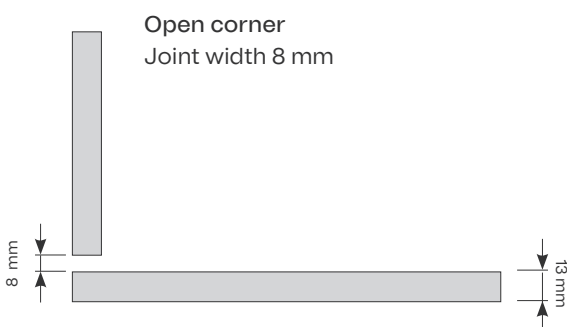
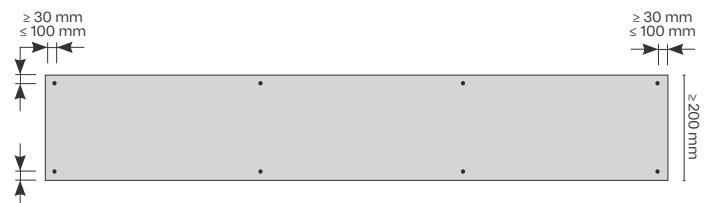
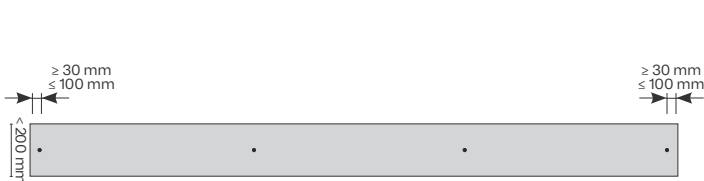
- 5 EPDM joint tape, 110 x 1.3mm, by SFS or equivalent
- 6 öko skin slat wall panels
- 7 screw 4,8/38 mm, coated with colour of slat wall; centrally drilling 6 mm
- 8 joint width 8 mm

System approval: no

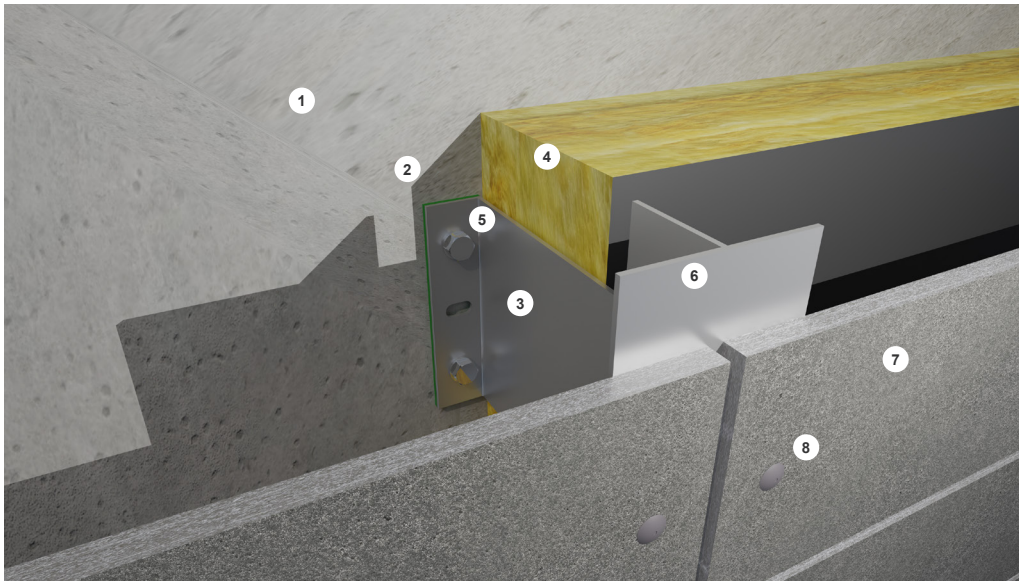
Approval fastener: no

Drilling dimensions

Drill holes must have a minimum distance of 30 mm from the edge to avoid tearout.



Structural assembly: rivets or screws on metal substructure



Assemblies

- 1 Wall
- 2 Thermal separator
- 3 Wall bracket
- 4 Insulation with sheeting
- 5 Bracket screw
- 6 Vertical profile
- 7 öko skin slat wall panels
- 8 Rivet and sleeve

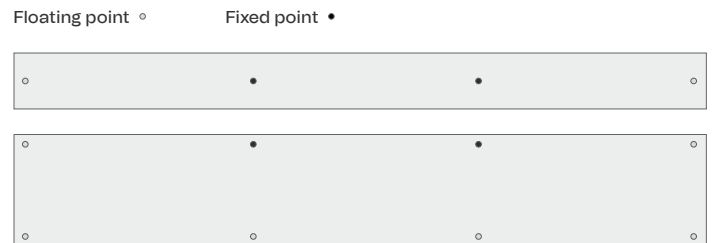
Rivets

Fastening with rivets on vertical aluminum support profiles. Recommended rivets with colors specifically matched to öko skin surfaces are available from Rieder.

Preparation

The öko skin slats must be pre-drilled with a diameter of 8mm. In this case, the fixing points are determined using a sleeve. To attach the öko skin slats, the holes in the substructure must be pre-drilled using a centering sleeve to ensure a concentric alignment of the drill hole. The drill diameter for the substructure is 5.1mm. Two sleeves must be used per slat, which must be positioned at the center of the slats. The sleeves fix the slats and are referred to as fixing points. The rivets must be set using a rivet setting gauge that is sui-

table for the rivets. The rivet setting gauge distributes the load and creates a small gap between the rivet head and the facade slat, allowing for movements in the facade slat to be accommodated.



Rivets	Screws for metal subframe
System approval: Z-31.4-166	System approval: no
Approval fastener: Z-31.4-166	Approval fastener: ETA-22/0793

Screws

Screw fastening with screws on vertical aluminum support profiles. Recommended screws with colors specifically matched to Ökoskin surfaces are available from Rieder.

Preparation

The öko skin slats must be pre-drilled with a diameter of 10mm. In this case, the fixing points are determined using a sleeve. Alternatively, the drilling of the fixing point can be done with a diameter of 6mm. For the sliding point, a centering sleeve is pre-mounted on the screws, which ensures precise positioning of the screws in the center of the hole. For the formation of the fixing point, the screws are used without the centering sleeve. Two sleeves must be used per slat, which must be positioned at the center of the slats. The screws are specifically matched to the material thickness of the öko skin, ensuring the formation of a sliding point when being screwed in. To achieve this, the screw must

be overdriven during installation for the sliding point. We also recommend overdriving the screw for the formation of the fixing point. A description of the screw application can be found here:

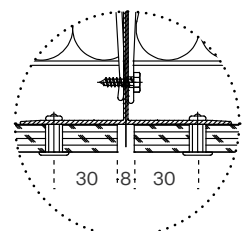
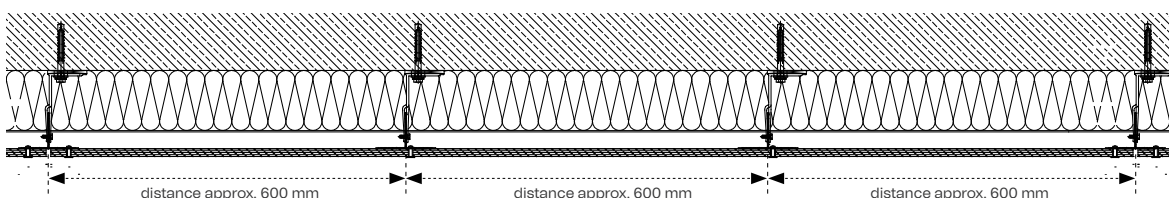
<https://www.youtube.com/watch?v=j5UTOOrBrXc>.

Overdriving the screw ensures a small gap between the screw head and the öko skin slat, allowing for movements in the facade slat to be accommodated.

System Drawings

System drawings for various situations and connections are available for planning in DWG and PDF formats at www.rieder.cc/downloads.

Fastening distances



Processing

The slats can be cut to size and through-holes can be drilled directly on site; no special tools are required. öko skin concrete slats must be processed with care.

Cutting

The slats can be cut to size at the building site using a hand-held circular saw equipped with a side bar (e.g. Festool plunge-cut saw TS 55 EBQ-Plus-FS, 5200 rpm). The visible side of the slats must face upwards. öko skin concrete slats can also be cut to size with a bench saw and a diamond saw blade.

Saw blade

A slightly toothed, diamond circular saw blade is recommended for standard cuts, e.g. Focus "Profi Sprint" or similar, Ø 150 mm, hole diameter 22.5 mm, spacing ring for 20 mm.

A diamond circular saw blade with diamond impregnation, e.g. Focus Profi Ceramic Ø 150 mm or Focus Profi Carmina Turbo or a diamond keyhole saw blade are recommended for very fine cuts, e.g. mitres. Closed diamond impregnation reduces the cutting capacity by approx. 25 %.

Drilling

The standard diameter for through-holes of facade screws 4.8 x 38 mm is 6 mm. We recommend standard stone drills, e.g. a Bosch „Blue Granite“ Ø 6 mm, l = 100 mm drill, for through-holes. The visible side of the slats must face upwards during drilling. For drilling through-holes, a wooden block must be placed underneath the to prevent tearout on the bottom side. We recommend using a cordless screwdriver or a standard drilling machine (not in percussion mode).

Screws for wood

Facade screw e.g. A2, ISR T20, head 12 mm, 4.8 x 38 mm. Screw heads are painted to match öko skin colour shades. Requirement per m² of finished surface (for öko skin 1800 x 147 mm): approx. 16 pc., Packing unit: 250 pc. Torx insert bit T20 to avoid damaging the powder coating. We recommend the use of screws with partial thread.

Screws for metal subframe with head coating adjusted to the eco skin color, powder-coated. For the aluminum substructure, we recommend the SDA4-5.8x33, and for the steel substructure, the SX4-5.8x33. For the execution of the glide point, the screw with centering sleeve (center point sleeve) should be used, and for the fixed points, the screw without the centering sleeve. The execution of the fixed point can be done with a 6.0mm hole in the plate or alternatively with a fixed point sleeve.

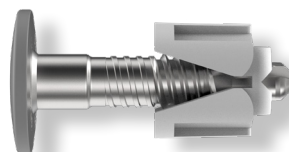
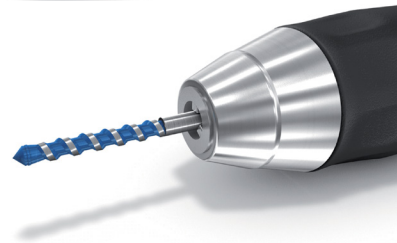
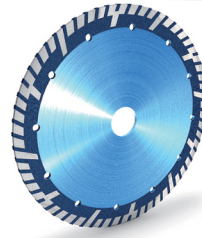
Rivets

Aluminium/Niro with head varnish, dimension 5 x 23 mm
Head diameter 14 mm, Clamping range 14.0 – 17.5 mm
Drill hole substructure 5.1 mm, bore hole öko skin slat 8 mm
Appropriate sleeves for the rivet: distance sleeve aluminium
Dimension 7.7 x 5.1 x 12 mm. The metal substructure must be decoupled as per EN 18516. Z-314-166.

IMPORTANT NOTE!

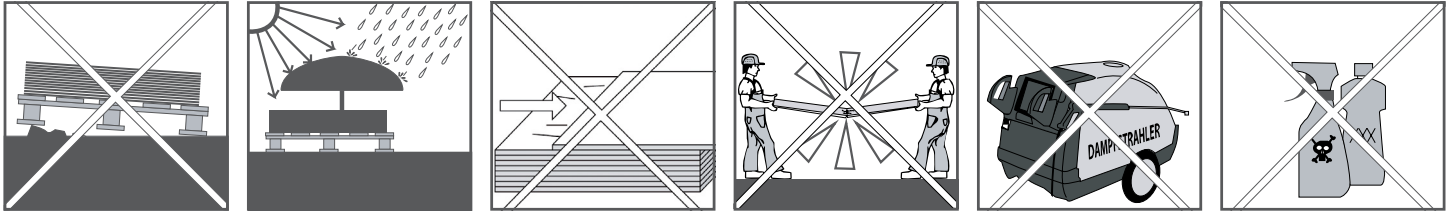
Drilling and cutting dust has to be removed immediately and before installation thoroughly to prevent it from damaging or soiling the surface.

Safety goggles and a fine dust mask are required for all drilling and cutting work. The use of a vacuum cleaner or compressed air equipment is recommended.



Handling instructions

Instructions for the correct handling of öko skin slats to avoid damage. These handling guidelines have to be complied by all persons and companies involved in the transport and installation of öko skin slats.



Storage space

Suitable storage space (dry and level) for öko skin concrete slats must be provided already during project planning, e.g. underground car park, warehouse etc. The slats must be placed on an even surface! Pallets must not be stacked upon each other at the building site.

No leaning

Avoid swinging und deflection. Do not place slats on edges or corners without adequate protection (e.g. styrofoam or styrodur).

Protection when stacking slats on top of each other

No stacking of slats without adequate protection between the individual layers. No glassfibre concrete or wood elements may be placed between layers of öko skin slats. Use only full-size intermediate layers. To adequately protect the slats from damage caused by friction, foam sheets must be placed on each slat.

Protection against the elements

öko skin slat panels must be well protected indoors or under a roof until just prior to installation. A suitable protection against moisture must be guaranteed. The slats may only be removed from the packaging immediately before assembly. For short-term outdoor storage the pallet packaging should be opened in order to avoid condensation. The öko skin packaging foil is no adequate weather protection, the slats must be covered with a construction foil.

Carefully twist slats – do not pull

Do not push or pull öko skin slats from the stack. Always turn the slats before lifting them. Eliminate friction between the slats.

Correct carrying

Concrete slats must be manually handled in upright position! Use clean and white protective gloves and wear adequate personal protective equipment (PPE). Avoid swinging and deflection.

Cleaning of slats before installation

If the slats are cut or drilled on site, cutting and drilling dust has to be removed immediately from the surface to prevent permanent dirt on the slats. Remove the cutting and drilling dust with a hand broom or vacuum cleaner. Make sure that the dust is not spread out over the entire surface. In most cases it should be sufficient to blow off the slats with compressed air to remove the remaining dust. Alternatively use the MC-Duroprop B cleaner and wipe the surface with a non-abrasive brush, sponge or microfiber cloth. Then rinse thoroughly with clean water. If the slats are not installed immediately after cleaning ensure that they are not stacked while wet. Position the slats at an angle during cleaning. For more details, refer to the "Cleaning instructions".

Cleaning systems

Do not use chemicals, stream-jet or high-pressure cleaning systems. Water jets with excessive pressure cause stripes on the concrete surface. For normal soiling the cleaning system MC Duroprop B manufactured by MC-Bauchemie (www.mc-bauchemie.de) or equivalent products are recommended.

Rieder

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Important note: All information provided in these instructions is based on the experience of Rieder Smart Elements GmbH & Co KG and complies with the current state of technology. The scope of supply of Rieder Smart Elements GmbH & Co KG includes öko skin concrete slats and facade screws, but explicitly excludes any assembly materials and sub-constructions. The applications described are examples and do not take into account specific site requirements. Specifications and suitability of the material for the intended purpose must be examined and verified individually for every project. Although we carefully examine the contents we cannot assume any liability for the accuracy, completeness and topicality of the information provided. The same applies to printing errors and subsequent alterations and amendments of technical specifications.