

## HANDLING – DETAIL DRAWINGS

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### INFORMATION ON TRANSPORT, STORAGE AND ASSEMBLY\*

#### GENERAL

composite panels are among the most technologically advanced prefabricated elements for roof and wall cladding. The composite panels protect against the weather and serve as thermal insulation and vapour brake.

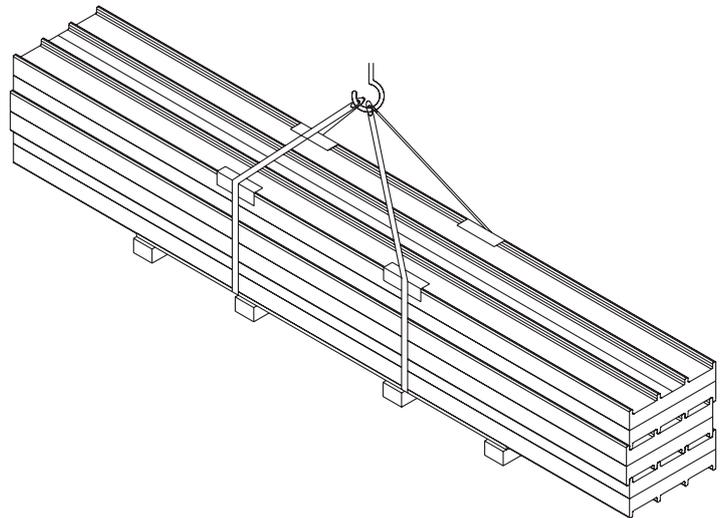
After the panels are positioned and attached and the edging is completed (ridge, verge, eave, plinth, window and door jambs), the roof and wall cladding is complete.

#### PACKAGING AND TRANSPORT

The composite panels are stacked on polystyrene blocks and delivered. They are reinforced at the top and bottom with edge protection to protect the panels during loading, transportation and unloading with lifting straps.

Strapping must always be carefully checked and re-tensioned during transportation to avoid strapping marks.

The package weight of max. 1500 kg should not be exceeded. Larger packaging units available on request only.



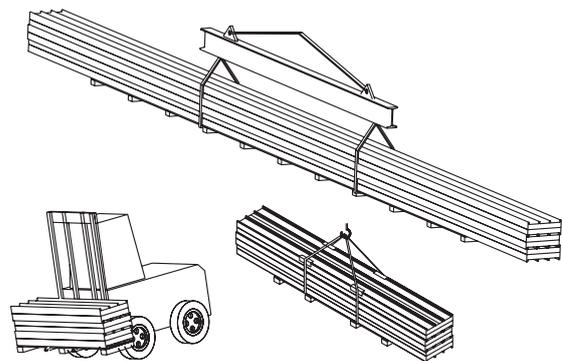
#### DELIVERY

The driver is largely co-responsible for loading the truck and proper transportation. Please check immediately whether the panels have arrived undamaged. Check for completeness and any damage.

Immediately upon receipt, record any complaints on the transport documentation, including the license plate number and the driver's name and including a photo of the relevant goods. Unfortunately we cannot recognise complaints submitted at a later date.

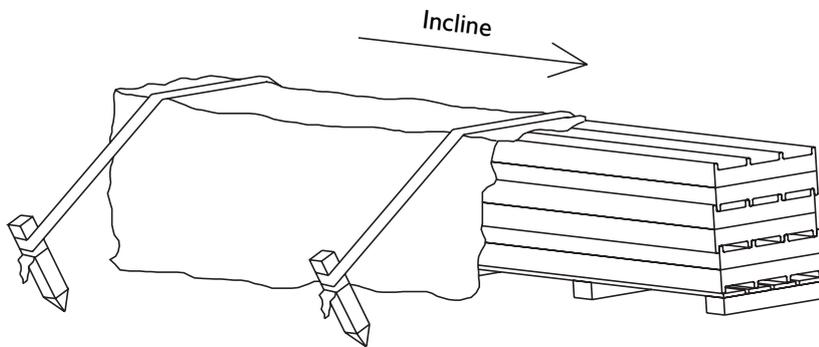
#### UNLOADING

Use only slings for unloading.  
Use the slings only with edge protection.  
For panels longer than 8 m, use a crane jib or a spreader.  
**Never unload two panel stacks at the same time!** Be cautious when using a forklift for unloading. The driver must monitor the unloading procedure carefully. He is responsible for proper hand-over.



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### STORAGE

Panels should not be stacked higher than two units.  
Cover the stacks with a canvas for protection against sunlight and rain.  
Cover opened panel stacks.  
Position the panel stacks at a slight incline to allow water to run off.

### PROTECTIVE FILM

The protective film is not UV resistant; please therefore remove the film immediately after installation or no later than 10 weeks after the production date (visible

on the longitudinal joint of the panel).

### CUTTING TO SIZE

Angle grinders may not be used for cutting panels to size. They emit hot sparks which burn into the coating of the sheet surface and are mostly permanent. As a result, the panel surface will be covered with rust spots. Due to their high cutting speed, angle grinders distribute the ground material across a large area.

Use circular hand saws with tungsten carbide saw blades or special chain saws. This cold cutting method assures the cathodic protection effect of the cut edges. Remove the swarf from the surfaces immediately; it rusts with the slightest of moisture and causes the same damage as described above.

### SUPPORT / SUBSTRUCTURE AND ATTACHMENT

The panels can be mounted or screwed directly onto the steel or wood substructures without additional preparation.

Please use our span table to select the correct spacing between supports.

### ROOF PITCH

The minimum roof pitch must be observed:

- roofs without butt joints and roof penetrations at least 3° (5.2 %)
- roofs with butt joints and roof penetrations at least 5° (8.6 %)

In practice, roof pitches are often referred to as percentages, convertible to angular degrees.

But be careful – this is not the same.  
Conversion factor: 1° = 1.73 %

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### LIFTING THE PANELS

If panels cannot be mounted manually, suitable slinging gear must be used, compliant with the required safety measures. Ensure that the sheet steel surfaces are protected. It is very difficult to remedy damages.

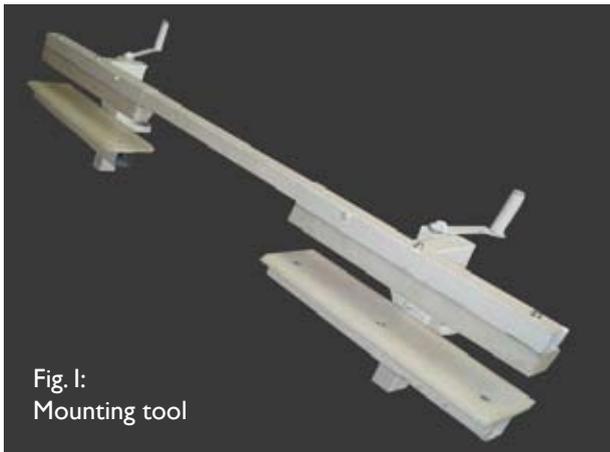


Fig. 1:  
Mounting tool

From an economical point of view, mounting of the roof panels using a mounting tool has proven itself (Fig. 1). The use of commercially available octopuses (Fig. 2) is recommended for mounting large area panels (roof, wall and façade).

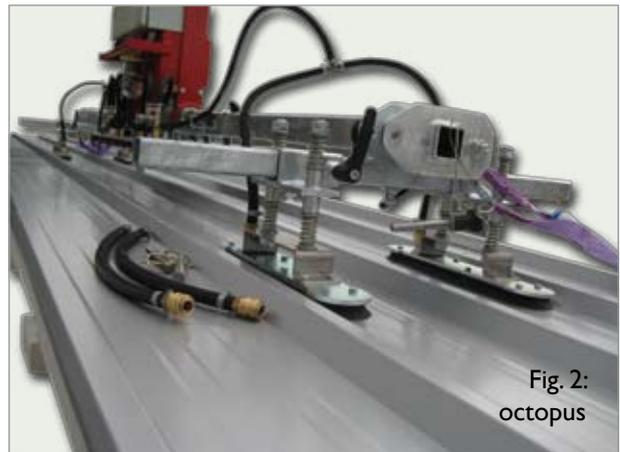


Fig. 2:  
octopus

### ALIGNMENT/MAIN WIND DIRECTION

Before starting to install the panels, square the roof area and use a chalk line to mark control points at the required distances. Check that the substructure built by the preceding contractor is square and perpendicular; if this is not so, severe problems may ensue during installation, due to shifted panels.

Always lay the panels against the main wind direction. The overlap along the longitudinal joints then protects against the penetration of hard, driving rain.

This rule is part of the guidelines for large area and overlapping roof covering materials.

### MOUNTING

Observe the national regulations on fasteners. We generally recommend the use of stainless steel screws.

### ROOF PANELS

Fasten the panels through the crown only, never in the water bearing level. Always use the original fastening washers supplied by the panel manufacturer or available from specialised dealers, since these distribute the tensioning force of the screw across a larger area, such as the sealing washer.



PIR cap



Fire  
protection cap

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### WALL AND FAÇADE PANELS

Visible mounting – supporting thread screws

Screws with supporting thread are preferably used with wall and façade panels.

Use screw machines with depth stop to avoid dents when turning in the screws.

Ensure that the sealing washers fit firmly to avoid water penetration.



### MOUNTING OF WALL AND FAÇADE PANELS

With horizontal mounting, lay bottom to top. Ensure that the panel joints are arranged such that panels form a water-repelling, downward facing drip nose.

To seal off the joint insulation, the supports are sealed with extra pilaster strips or moulded components on the vertical joints.

This also protects and covers the cut edges.

Do not forget the sealing tape required on the outer edges between the panel and the substructure.

This applies to all the edge zones and additional sealing of panel butt joints at the supports.

Similar to the roof panels, wall and façade panels are placed manually or by crane. To avoid damage to the coating, lift the panels carefully off the stack.

Carry the panels upright to avoid bending.



Joint cover – TOP HAT – horizontal mounting

### SEALING THE PANEL BUTT JOINT

Sealing of the individual terminal butt joints at the ends, i.e. at the connecting edges to the wall, façade and roof requires special attention, since they all demand special sealing. Since the surface sealing tape between panel and support only seals the surface area between, additional sealing is required to the outside at the ends of the long side panel joints.

Different materials are used for sealing, depending on application and situation, e. g. PIR foam or sealing tapes.

All composite construction sealing requires using specially suited sealing tapes, readily available from specialised dealers.

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## HANDLING – DETAIL DRAWINGS

The detail drawings shown here are suggestions for information only. Their correctness and suitability must be checked, based on the particular application.

### BUTT JOINT DESIGN

The top panel must be cleaned to a length of at least 200 mm and the foam fully removed. Affix a suitable sealing tape, as wide as the panel core, to the face of the butt joint.

Place a distance strip (rubber) of at least 4 mm under the panel on the ridge side. This creates a gap to prevent capillary water penetration.

Glue a suitable sealing tape to the inside of the overlap, in two rows, each at least 15 mm wide.

Due to opposing thermal expansion, the covers of the upper and lower roof panel must never be screwed together.

Differences in length would produce leaky slots in the first year already.

The low profiles may also not be screwed together.

Ensure that the sheets do not touch through the applied sealing tapes. The capillary effect would draw water into the gap, where it would not readily dry out, causing corrosion.

To prevent installation problems, adhere to this bottom to top laying sequence. Under no circumstances complete the bottom row parallel to the eave first.

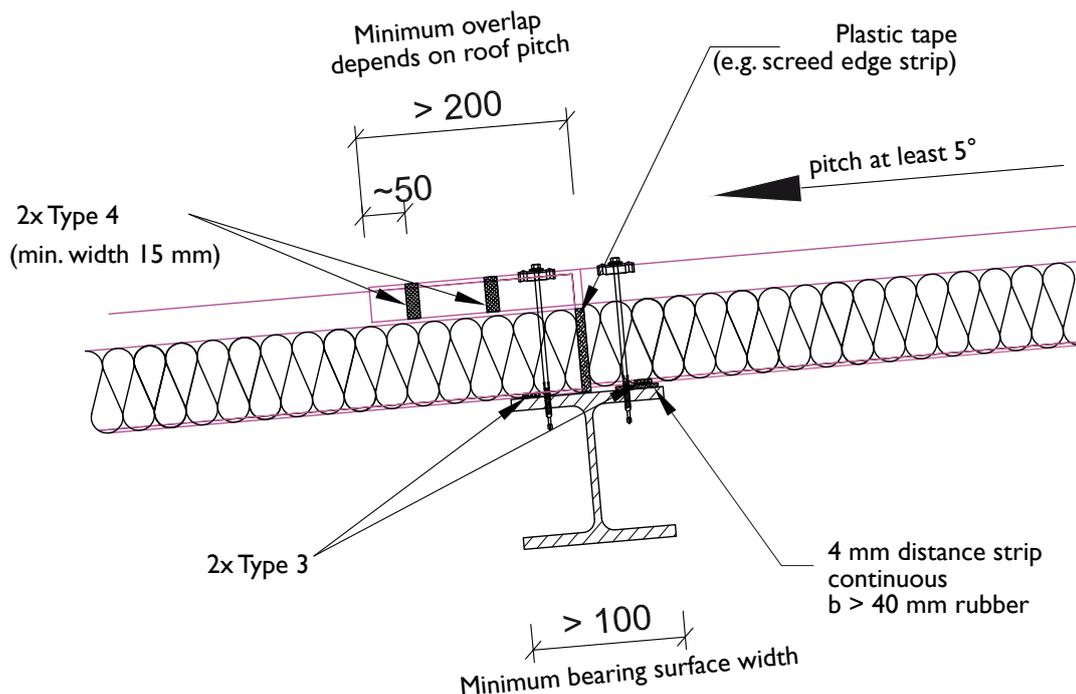
Should this be the case with butt joint overlapping, problems would invariably follow.

To ensure that this area is tight, proper execution of the butt joint is important.

**THE BUTT JOINT MAY ONLY BE MADE OVER A PURLIN !!!**

(see detail drawing below)

### DETAIL – BUTT JOINT CONSTRUCTION



## HANDLING – DETAIL DRAWINGS

### RIDGE CONSTRUCTION

The proper ridge construction is shown in the detail drawing below.

Always raise (tip up) the low profiles of the outer cover of the panel at the edge; use profile fillers and toothed plates.

Without toothed plates the profile filler may be removed in a storm or by birds.

Furthermore, the plate protects the profile filler from UV light.

The joints of the ridge sheets are designed as a batten seam (see sheet metal working methods).

Should sealing be required with elastic sealing compounds, the sealing material must be applied such that it is protected against direct UV radiation.



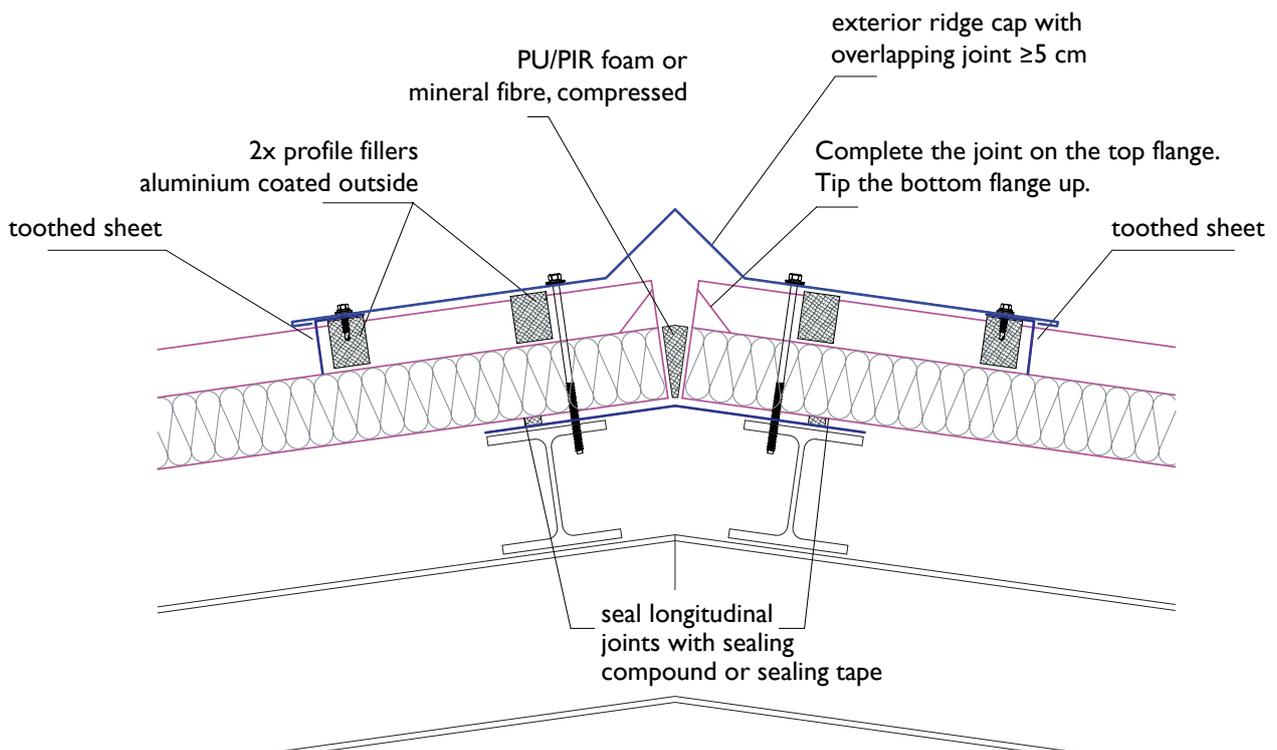
crown filling tape roof PU/PIR **DP** – Z14



crown filling tape roof Fire Protection **DP-F** – Z15



toothed sheet for **DP-F** ridge – Z13a



## HANDLING – DETAIL DRAWINGS

### EAVE CONSTRUCTION

As in the ridge area, these panels must also be sealed towards the interior.

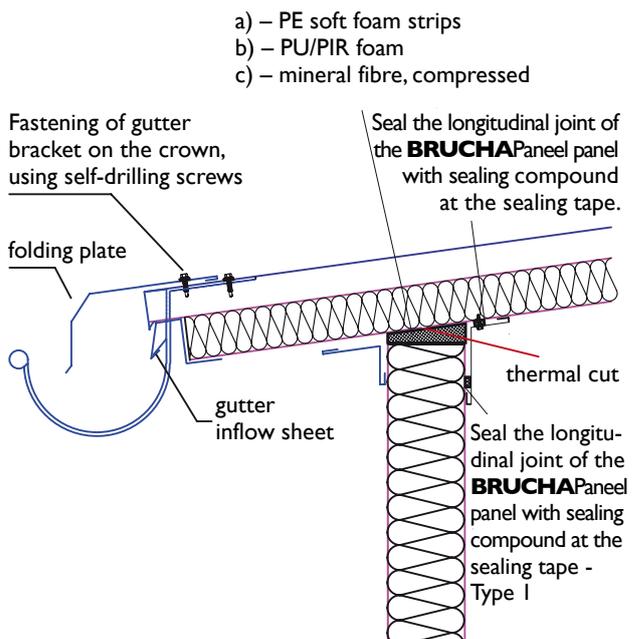
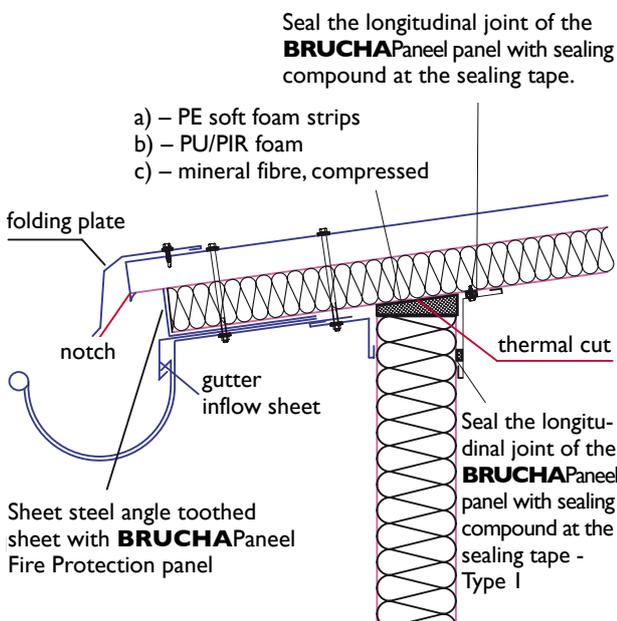
This is relevant to the roof and the façade panel, especially the gaps of the element joints, the eaves flashing, gutter brackets or drainage brackets and the substructure. To ensure that water drains properly even in strong wind and that the cut surfaces of the panels are coated with foam core, mount flashing at the eave's edge.

A choice of different gutter variants is available, but proper installation must always be assured (see detail drawing below).

If necessary, make a thermal separation cut, but ensure that the load bearing capacity of the overhanging panel section remains adequate.



### BRUCHAPaneel folding plate and gutter inflow sheet



## HANDLING – DETAIL DRAWINGS

### VERGE CONSTRUCTION

As noted for both ridge and eave construction, interior sheeting must also be used in the verge to ensure proper sealing.

After mounting and screwing on the interior sheeting, the gaps between panels must be filled with mineral fibre wool or PU/PIR mounting foam.

Usually the outermost verge sheet is placed over the last rib of the roof panel and attached directly to the façade on both sides.

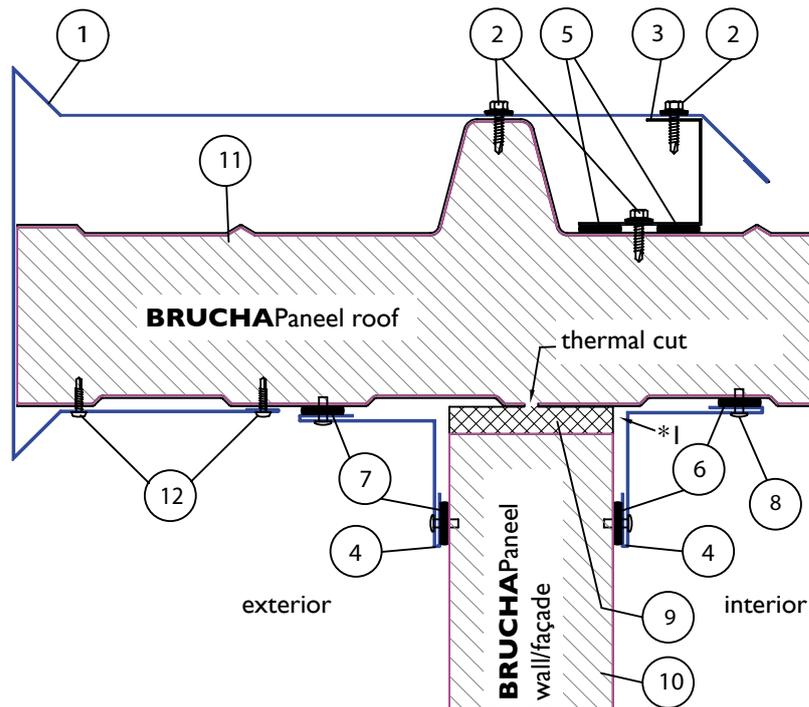
Depending on the design standard, the longitudinal overlaps of the moulded parts are sealed and come with splice plates.

Material expansion, dependent on type and length of the material, must also be considered.

If necessary, make a thermal separating cut here as well; but note that the load bearing capacity of the overhanging panel section is reduced.

Please refer to the relevant OIB [Austrian Building Technology Institute] guidelines.

### VERGE DETAIL:



1. Verge sheet galvanised, coated
2. Self-drilling screw with seal, stainless steel
3. Support profile galvanised, coated full length
4. Edge component, galvanised, coated sheet steel
5. Sealing tape Type I
6. Sealing tape Type I
7. Sealing tape Type 4
8. Coated aluminium multi-purpose rivet (~300–400 mm)
9. PUR verge foam on moist surfaces

10. Globe Wall & Elegant PU/PIR or Fire Protection
11. GlobeRoof PU/PIR or Fire Protection

\*1: One of the sealing tapes 5, 6 or 7 (acc. to installation guidelines) can be placed here.

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### PLINTH CONSTRUCTION

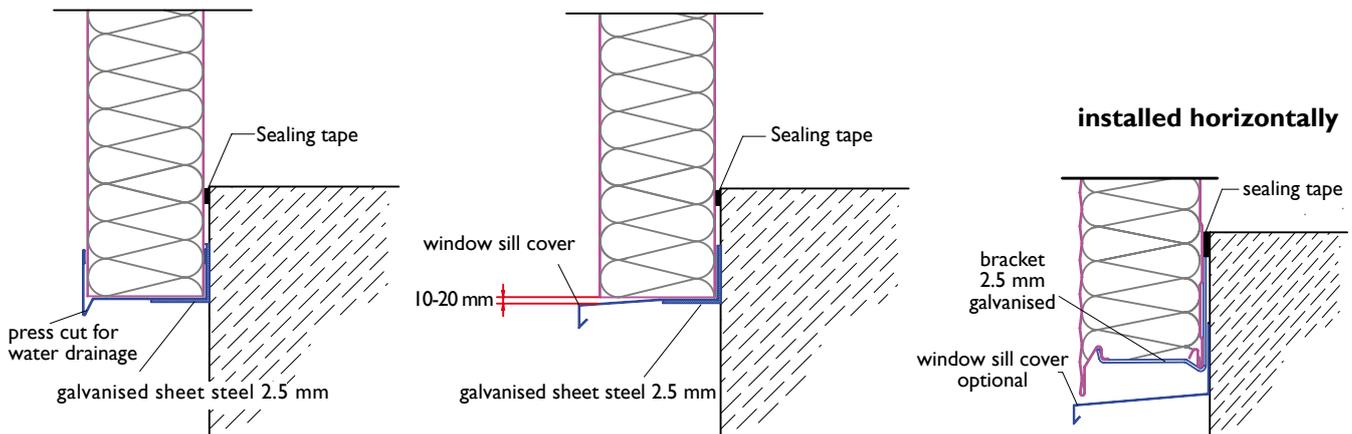
Many different connection types are available between plinth and composite panels (see detail drawings below).

They depend on the type of installation (horizontal or vertical) and on the construction type, of course.

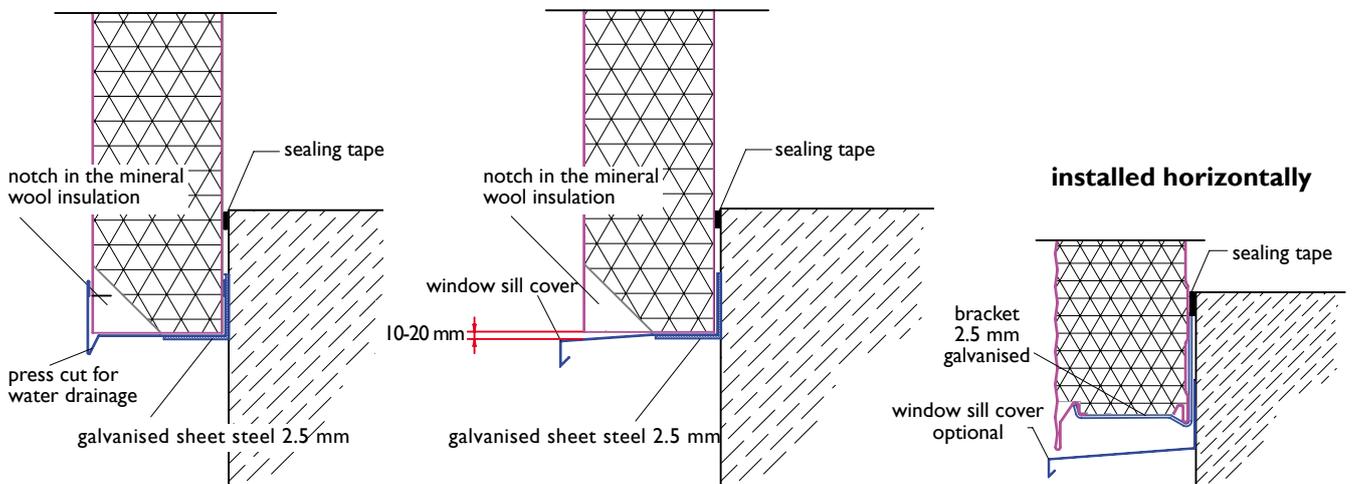
When designing the detail, ensure that penetrating rain water can run off freely.

Especially in the case of panels with **mineral wool insulation**, the insulation may **not come into contact with water!**

### globe Panels PU/PIR plinth design – vertical installation



### Globe Panels Fire Protection plinth design - vertical installation



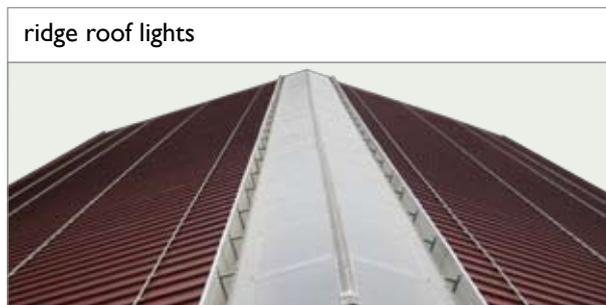
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### ROOF LIGHTS

To avoid extra installation work later, plan carefully for openings for ventilation, lighting and extractors.

The easiest is to use commercially available ridge roof



lights and to arrange these on the ridge continuously or at right angles (from ridge to eave).

Since these roof lights have proven themselves in commercial construction for many years, installation is easy.



### INSTALLING DOME LIGHTS

#### REPLACING / DOME LIGHTS:

Exchanging to accommodate feedthroughs is possible. It must be ensured, however, that the heat insulation is restored to its original state and that no thermal bridges are created.

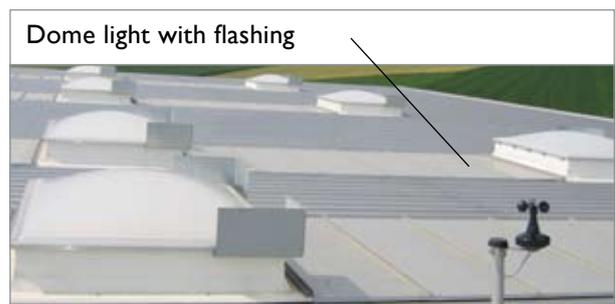
The frames must be meticulously made by hand.

Must be raised at least 150 mm (at least 300 mm in areas with heavy snowfall) above the water flow level.

It must be checked whether the roof panels should be supported with wooden or steel exchange frames.

With conventional crowns, the flashing on the ridge side is inserted to under the ridge sheet.

Ensure correct crown height.



### FITTING FLASHINGS

Open gaps in the ridge area of the Globe Roof panel FM and air ventilated flashings may cause con-densation.

Suitable measures (e.g. closing gaps, filling cavities be-neath flashing with thermal insulating material, inserting

profile filler) must be taken to prevent condensation or condensate run-off beneath the flashing.

Before installing the flashings, apply a suitable sealing tape (on crown) and screw the flashing to each crown, using self-sealing screws.

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### PIPE FEED-THROUGH

It is best to use prefabricated collars.

Note, in such cases, that continuous metal pipes are thermal bridges and that the penetrating pipe may need to be insulated in addition.

Please observe this especially with mineral fibre wool panels, to avert any type of condensate from the start. If necessary, exercise your duty to warn and notify!



DEKTITE roof penetration bezel

### ROOF PENETRATIONS

To ensure tightness, roof penetrations should be located close to the ridge.

They must always be properly fitted and sealed with state of the art sheet metal working methods.

Larger roof penetrations must be replaced individually, using jigs for larger sizes and, depending on demands need their own 2-part interior and exterior CROWN with the associated insulation and covering.

To avoid any leakage, additional moulded sheets should guide the water from behind the flashing to the high, lateral trapezoidal ribs that run across the length.



Roof penetration bezel

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