

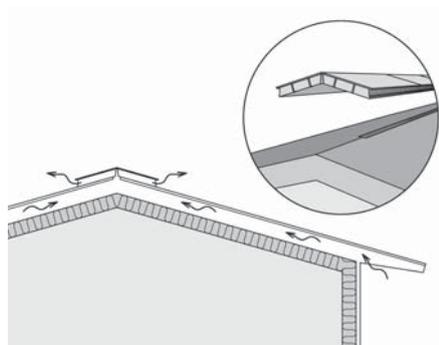
## Installation instructions for joint-seal roofing, Kerabit 3D

### Note before installation

The joint-sealed roofing Kerabit 3D is suitable for roofs with a slope of 1:1 – 1:10. Membrane rolls are stored in the vertical position, protected from rain and sun damage. Before installation, store the rolls at a temperature of +15 °C, or warmer, for at least a day. The membrane rolls are unrolled in advance for them to straighten out. This helps avoid bumps in the finished surface. The time that the straightening out requires depends on the temperature (approximately 1 to 4 hours). When installing a roofing, the temperature must be over +10 °C and the weather rainless (a roofing must not be installed when it is raining).

Suitable bases include rough tongued and grooved boards or moisture proof construction panels (e.g. Kerabit OSB roofing board). The underlay must be non-sagging, even, and dry.

A hook-bladed carpet knife is needed to cut the Kerabit 3D membranes. Kerabit Tiviistysliima sealing adhesive is used for gluing. For nailing, hot-galvanized, broad-headed clout nails are used. The nails must penetrate the wood underlay.



Before starting the installation of the roofing, ensure proper and sufficient roof ventilation. If the roof slope is 1:1 to 1:5, the ventilation of the roof may be enhanced with the Kerabit Ridge Vents. Ridge vents are installed to extend the entire length of the roof ridge. See Ridge Vent Installation Instructions Before installation of the roofing, triangle batten strips are fixed to the base of chimneys and upturns.

Bitumen roofing felts are always installed from the lower eaves upwards to avoid superimposed seams. Note that a roofing is only installed on top of chimneys and large lead-throughs when the lead-through has been completed (see, Chimney and large lead-throughs).

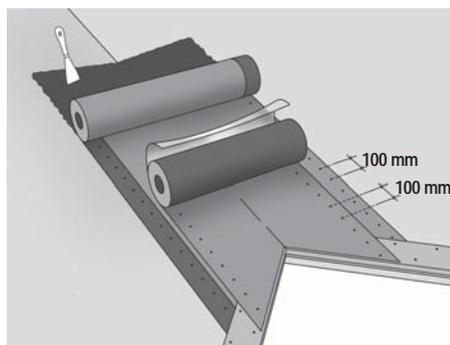
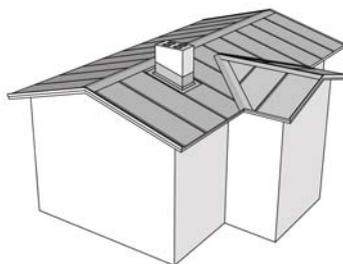
In a roofing that has been installed according to the installation instructions does not have a single nail in view. Ensure proper adhesion of all the seams/overlaps by walking on them, for example. If need be, you can improve the adhesiveness by warming the adhesive surfaces of the membranes carefully with a hot air blower.

### Renovation sites

As a general rule, a joint-sealed roofing may on renovation sites be installed on top of the old bitumen roofing, if the roof ventilation is working and the underlying structures are in order. The new roofing must be installed in parallel with the old roofing so that the longitudinal seams of the roofings do not fall in the same place. Any bumps/pouches must be cut as well as glued and nailed to the underlay before the new roofing is installed.

### Installation direction

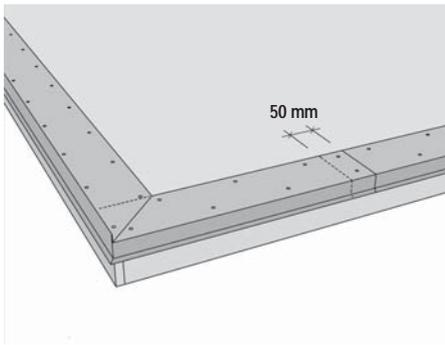
Kerabit 3D joint-seal roofing is recommended to be installed vertically.



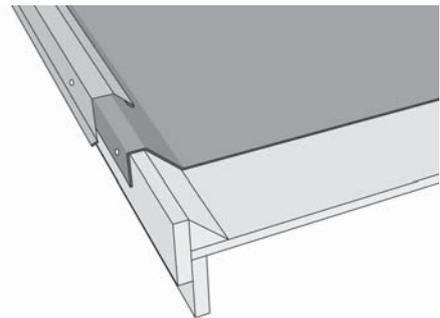
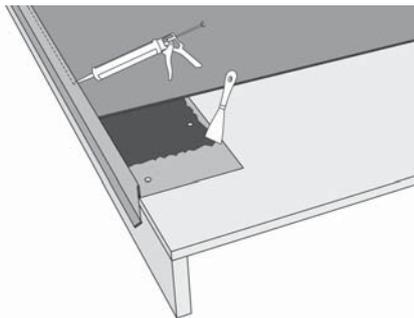
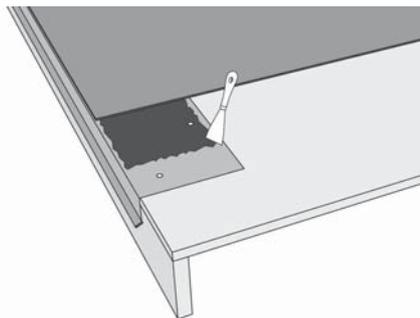
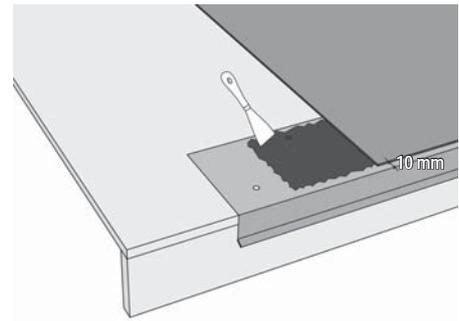
### Valleys i.e. mitre-cuts

Kerabit 2500 UB underlay membrane with a polyester frame is installed at the bottom of the valley, which is glued to the surface throughout its area (a glue layer of approximately 1 mm), and nailed by the edges at intervals of 100 mm. On the lower eaves, an eaves flashing is installed. On top of the underlay membrane, a Kerabit valley underlay of the same colour as the roofing with adhesive on the bottom, which is nailed it at the edges at 100 mm intervals.

## Eaves flashing



**On lower eaves**, Kerabit Eaves Flashings are installed. The extension points of the flashings are overlapped by at least 50 mm and fixed by felt nails or KFR-headed thin sheet screws at intervals of 100 mm in a zig-zag pattern. At extensions, the drip of the topmost flashing is opened and the drip of the lower flashing is installed within the opened one.



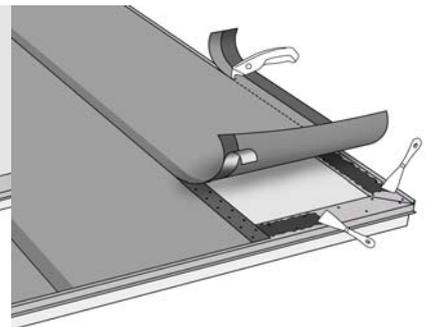
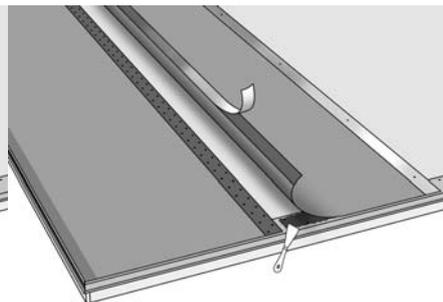
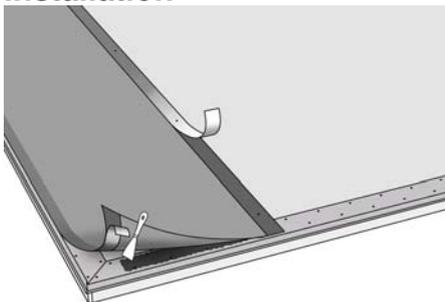
**For verges**, there are three options: Kerabit Eaves flashing, Verge flashing with ridge, and Verge flashing. The first two referred to must be installed before installing the roofing, similarly to the flashings of the lower eaves. The installation of the verge flashings is started at the lower eaves towards the ridge.

Note! When using Kerabit verge flashing with ridge, sealing adhesive is finally added to the seam of the membrane and flashing. When using Kerabit verge flashing, triangle batten strips of 50 x 50 mm are first attached, and facing boards to their sides. The membrane is folded over the facing board and fixed to the facing board. Finally, the verge flashings are fixed to the facing board, see image at top right.

**For sheet metal plating of top eaves**, Kerabit Verge flashing with ridge or Verge flashing is used.

See installation instructions of Kerabit eaves flashings.

## Installation



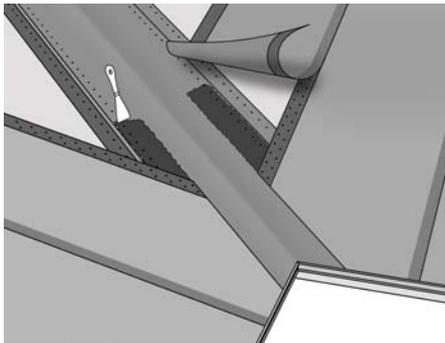
Measure the roof and plan the striping on the pane so that the stripes fall symmetrically on the roof. If required, make the outermost membranes narrower.

Exception: For reasons of appearance, it is possible to first install on the lower eaves a horizontal strip (for example, Kerabit ridge vent with adhesive or a strip cut from Kerabit 3D). The strip is glued to the lower eaves flashing and the bottom ends of the membranes are overlapped, and glued 150 mm on top of it.

Align the Kerabit 3D membrane to be parallel with the verge, the lower edge approximately 10 mm above the fold of the flashing. Nail the top edge at every 100 mm (start the nailing from about 200 mm of the edge that has an adhesive strip on the bottom side). Pre-nail the membrane at approximately every 1 m through the protective plastic cover of the adhesive strip on the surface side. Remove the protective plastic cover of the adhesive strip on the bottom side and press the membrane tightly onto the flashing of the verge. If you nar-

rowed down the outermost membranes, glue the edge to the flashing of the verge. Glue the lower edge of a membrane length by sealing adhesive to the lower eaves flashing. Align the subsequent membrane and nail the top edge as in the above. Pre-nail the membrane at approximately every 1 m through the protective plastic cover of the adhesive strip on the surface side. Turn aside the membrane edge on the side of the eaves from the top of the first membrane. Remove the protective plastic cover from the surface side adhesive edge of the first membrane and nail the membrane onto the underlay in a zigzag pattern with 100 mm spacing. Note! The distance of the nails from the edges of the adhesive strip must be no less than 15 mm.

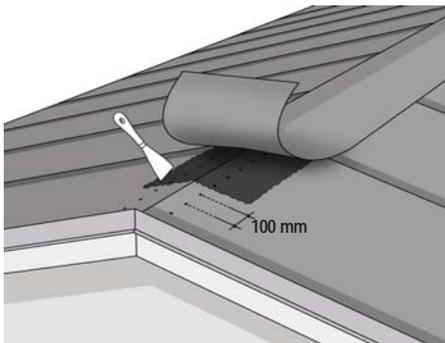
Remove the protective plastic cover from the underside adhesive edge of the second membrane, and press the adhesive edges against each other (so that the zigzag nailing of the first membrane is covered). Finish the fixing of the top edge by nailing at the seam.



Repeat the same steps until the pane is finished. The membrane must be glued to the verge flashing opposite the pane with sealing adhesive.

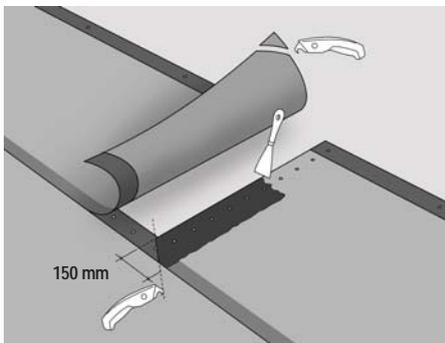
If the roof has a valley, install Kerabit 3D membranes 200 mm on top of the valley membrane. Cut the ends of the membranes to the line of the valley with the help of a measuring board, and fix carefully on the entire length the overlap with sealing adhesive. Do not nail!

## Ridge



Cut off the adhesive edge and dark strip on the surface side from Kerabit 3D membrane. Alternatively, you can use the Kerabit Ridge Vent strip. Glue the strip onto the ridge over its entire area. The ridge strip must not be nailed. Overlap the extensions by 150 mm, nail the end of a previous membrane at every 100 mm to the underlay and glue the topmost membrane by the width of the overlap to the lower one.

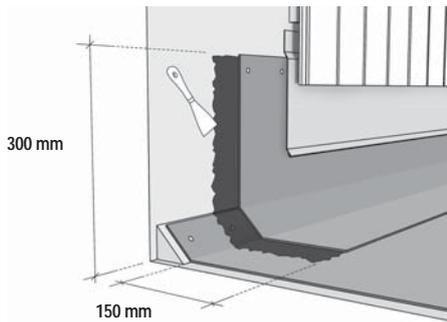
## Details



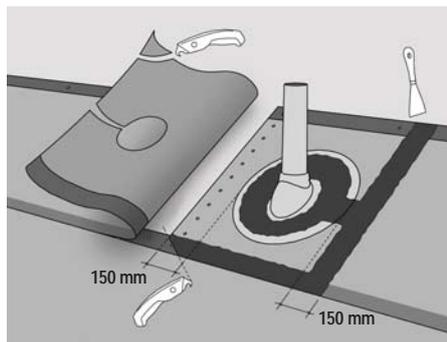
### Extensions

Overlap the membranes by 150 mm. Cut off piece from the corners of the membrane as illustrated in the attached drawing. Nail the end of the lower membrane to the membrane every 100 mm. Glue the topmost membrane by the width of the overlap to the lower one. You can achieve a finished-off seam by using masking tape as a protection.

## Upturns



Cut the membrane strips needed for an upturn, which extend by at least 300 mm to the vertical surface and by at least 150 mm. Glue the strips throughout and ensure the mechanical fixing of the upturn by nailing. Protect the upturn with sheet metal plating so that water cannot get between the membrane and the vertical surface.

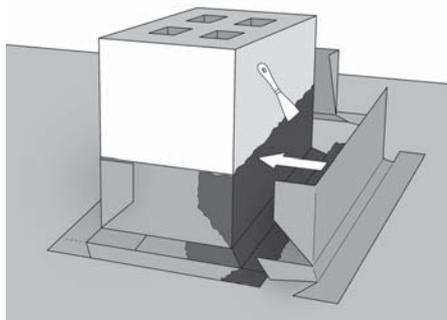


### Round lead-throughs

Seal round lead-throughs with lead-through gaskets. Dimension the membranes so that a joint falls at a lead-through. Install the membranes on top of each other over the distance of the collar diameter + 300 mm. First install the membrane that goes under the collar. Measure the starting point: put the sealing collar in place for a while and mark 150 mm outward from the collar edge. Cut a hole the size of the lead-through in the membrane, and seal the membrane to the base. Install the lead-through gasket, glue and nail the collar to the base. Cut a hole the size of the base of the lead-through gasket in the membrane to be placed over the lead-through, and place the membrane over the collar. Glue the membrane to the collar and to the membrane below with sealing adhesive. Finish the base of lead-through by applying sealing adhesive.

## Chimneys and other large lead-throughs

Before installation of the roofing, install a triangle batten strip to the base of a chimney or another large lead-through to round-out the angle. Install Kerabit 3D below the lead-through, and on the sides on the top edge of the triangular fillet. Only install the membrane above the lead-through after you have completed the chimney upturns.



Cut upturn pieces according to the attached image from Kerabit Valley membrane or Kerabit 3D. Glue the pieces throughout to the chimney and the underlay in the numerical order of the image. Mechanically anchor the pieces by their top edge.

Below and on the sides of the chimney, the pieces overlap over the roofing, on top of the chimney below the roofing. Carefully

glue the membrane on top of the chimney to the upturn piece. Cover the chimney with sheet-metal plating.

Note! Chimneys in log buildings Make a plywood collar at least 400 mm in height around the chimney (leave a gap to the chimney) and attach it to the roof structure using a triangle batten strip. Continue as in the above.

## Subsequent measures

If through mountings must be installed on the roof afterwards, ensure their waterproofing. Check the condition of the roof at least twice every year and clean it, if necessary.

12.4.2018

