

Installation instructions

SOLITEX WELDANO®

Installation steps on the building site



1a. Fit the flashing

If there are longitudinal joints with the eave flashing, first install SOLITEX WELDANO-S 3000 sealing strips parallel to the eave (lower edge flush with the edge of the sheathing).



1b. Fit the flashing



2a. Install the membrane and overlap

Roll out the membrane parallel to the eave and use clout nails or fastening staples that are at least 10 mm (3/8") wide by 8 mm (5/16") long approximately 2 cm (3/4") away from the edge of the membrane to fasten the membrane in the overlap area in a manner that protects against moisture entry. At the bargeboard, guide the membrane up to the upper edge of the counter batten or the bargeboard itself.



2b. Install the membrane and overlap

Allow for an overlap of at least 10 cm (4") between the membranes. The marking that is printed onto the membrane will serve as a guide here.



3a. Overlap with WELDANO TURGA (HS) solvent welding agent

Use the brush provided in the bottle to apply solvent welding agent inside the overlap at the welded joint. Press the bottle lightly here. The effective joint width (area covered with solvent welding agent) must be at least 5 cm (2") wide and must extend as far as the edge of the overlapping membrane.



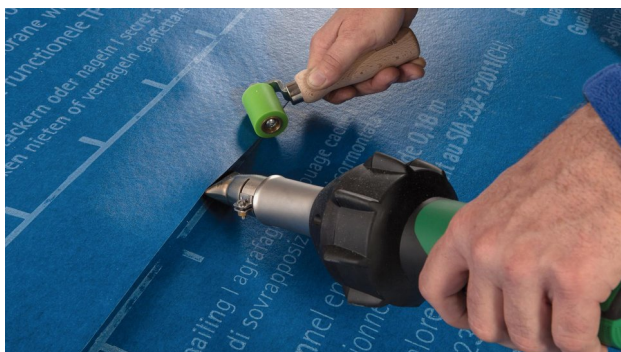
3b. Overlap with WELDANO TURGA (HS) solvent welding agent

The solvent welding agent should flow out slightly from the edge of the welded joint to ensure that the edge is welded too. Remove any other excess solvent welding agent with a cloth.



4. Rub the overlap into place and check it

Place one membrane on top of the other immediately, ensuring there are no folds or creases, and press into place (e.g. using a pro clima ROLLFIX silicone roller).



5b. Alternative: Heat-welding the overlap using a hot air gun

Place one membrane on top of the other immediately, ensuring there are no folds or creases, and press into place (e.g. using a pro clima ROLLFIX silicone roller). The heat-welded joint should be checked subsequently for leaks (e.g. using a nail or the tip of a pencil).



6b. Sealing at eaves

Clean the eave flashing and stick the lower edge of the membrane with ORCON CLASSIC or DUPLEX.

If a PVC-coated eave flashing is used, it may be possible to homogeneously weld the roofing underlay membrane directly to the flashing. This should be checked in advance.



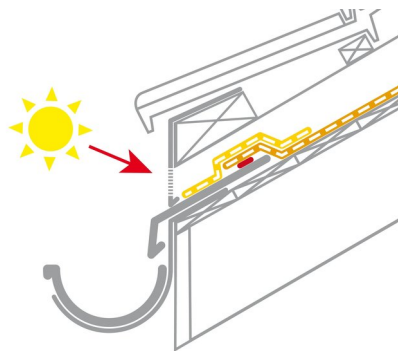
5a. Alternative: Heat-welding the overlap using a hot air gun

Place the hot air nozzle into the overlap of the welded joint and move it along the edge. The effective joint width must be at least 3 cm (1 1/4") wide and must extend as far as the edge of the overlapping membrane.



6a. Sealing at eaves

Install the membrane and weld it above the eave flashing using WELDANO-S 3000.



6c. UV protection for the membrane at the eave

Sealing at eaves: Apply the SOLTEMPA full-surface self-adhesive strip over the eave transition.



7. Installation in roof valleys

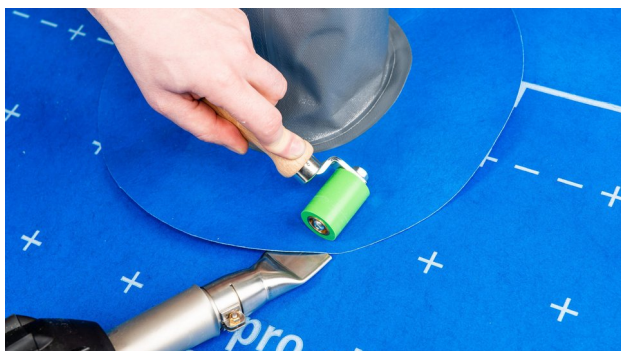
First install a membrane into the valley longitudinally. Then weld the horizontal membranes to the valley membrane in a windtight and waterproof manner, allowing 10 cm (4") of an overlap.



9. Counter battens covered over

Apply WELDANO-S 3000 sealing strips over the counter battens and weld them to the roofing underlay membrane on both sides. The counter battens must be dry.

Alternatively, the roofing underlay membrane can also be installed directly over the counter battens.



10b. Weld the gasket to the membrane

Weld the grommet around the edges using the WELDANO TURGA (HS) solvent welding agent or hot air. The effective joint width (area covered with solvent welding agent) must be at least 5 cm wide and must extend as far as the edge of WELDANO ROFLEX MODI.

Use a roller to secure the welded joints.



8. Counter battens not covered over

If a counter batten is to be fitted on top of the membrane and/or if the membrane is used as a temporary covering/seal during the construction phase, TESCON NAIDECK mono system nail sealing tape should generally be applied under the counter battens.



10a. Joint at pipe feed-throughs

Clean the pipe that is to be sealed.

Guide WELDANO ROFLEX MODI over the pipe..



10c. On slightly slanted roofs: Joint at pipe feed-throughs

Stick the top of the pipe grommet to the pipe using TESCON VANA.



11. On slightly slanted roofs: Joints with protruding building structures (e.g. chimneys)

Clean the subsurface. Weld the component to the roofing underlay membrane using a strip of SOLITEX WELDANO-S 3000 on each side and the WELDANO INVEX system shaped element (using solvent welding agent or a hot air gun) in a waterproof manner, ensuring there are no folds or creases. Press the joint firmly into place and check for leaks.

Form the inner corners in an analogous manner using the WELDANO INCAV system shaped element.



11b. On slightly slanted roofs: Joints with protruding building structures (e.g. chimneys)

Cover to a height of at least 15 cm (6") on the protruding building structure and stick using ORCON CLASSIC.



12a. On pitched roofs: Joints with protruding building structures (e.g. chimneys)

Apply a line of ORCON CLASSIC with a diameter of at least 6 mm (1/4") to the mineral subsurface (more in the case of rough subsurfaces, if necessary).



12b. On pitched roofs: Joints with protruding building structures (e.g. chimneys)

Put the membrane in place on the adhesive bed, leaving slack to allow for expansion. Do not press the adhesive completely flat so as to allow for relative motion between components.



13. Installation of a water deflector

Create a water deflector with a lateral fall above the integrated roof element and stick it to the membrane. Form the water deflector in such a way that moisture is guided through a gap in a counter batten into the next adjacent field that does not have an integrated roof element.



14. Sealing at skylights

For more information, see WELDANO INVEX 3D

Sealing at skylights



1.

Cut SOLITEX WELDANO-S 3000 to shape allowing excess at the sides, cut out holes for the mounting brackets and put in place at the bottom of the skylight.



2.

Cut a length of roof batten so that its ends are at the outer edges of the mounting brackets and the corner areas remain free. Put the roof batten in place to determine the shape/position of the strip of SOLITEX WELDANO-S 3000.



3.

Weld SOLITEX WELDANO-S 3000 at its bottom edge to the flat SOLITEX WELDANO 3000, ensuring there are no folds or creases (using solvent welding agent or a hot air gun).



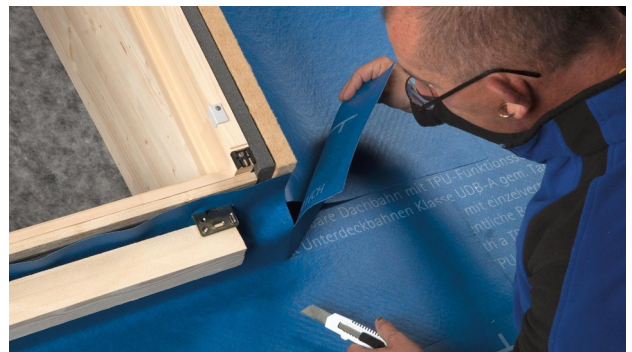
4.

Horizontal cut as far as the outer edge of the window frame/insulation frame.



5.

Vertical cut along the outer edge of the window frame/insulation frame as far as the level of the bottom edge of the roof batten.



6.

Fold the leftover section onto the side of the window frame. Cut into the protruding piece horizontally.



7.

Apply a line of ORCON CLASSIC with a diameter of at least 6 mm (1/4") to the mineral subsurface (more in the case of rough subsurfaces, if necessary) and stick SOLITEX WELDANO-S 3000 to the bottom side of the window frame.



8.

Place SOLITEX WELDANO-S 3000 onto the adhesive bed, leaving slack to allow for expansion. Do not press the adhesive completely flat so as to allow for relative motion between components.



9.

Weld the previously folded corner.



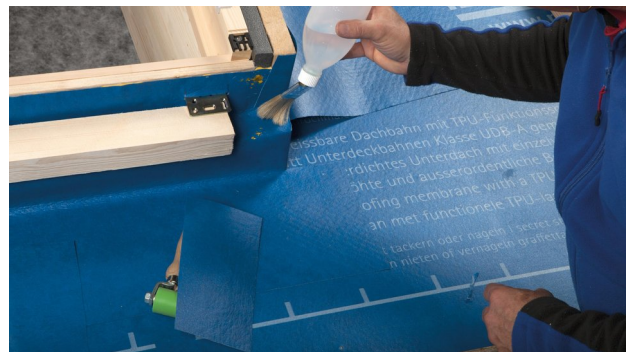
10.

Finished delta detail feature.



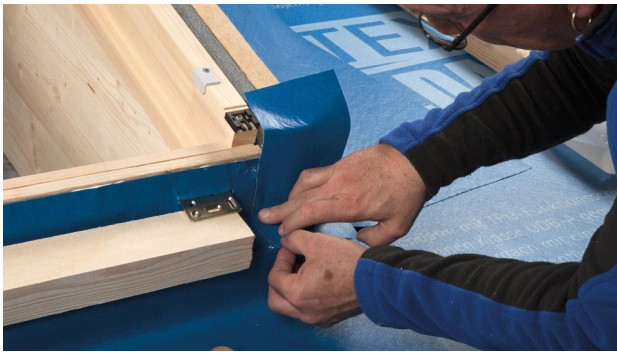
11.

Cut out a fitting piece to cover the cuts in the corner area of the frame. Approx. 15 to 20 cm (6"-8") long and approx. 10 to 12 cm (4"-5") wide.



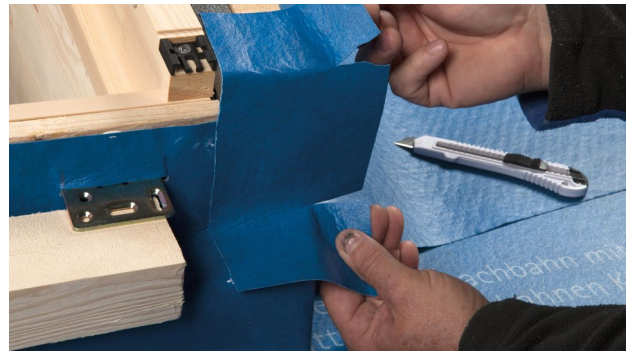
12.

Weld the fitting piece in the corner area to the bottom edge of the window frame/insulation frame.



13.

Ensure that the fitting piece fits well into the corners.



14.

Cut into the fitting piece horizontally at the two edges. Do not cut right up to the frame, but instead leave a few millimetres of material in place to seal the corner.



15.

Fold the excess pieces and weld them to the lower membrane. Pay particular attention to ensuring the corners are sealed tight.



16.

Finished bottom corner seal.



17.

Guide the membrane from the main surface onto the side of the wedge-shaped frame. Alternatively, cut a new strip of SOLITEX WELDANO 3000, guide it up along the wedge-shaped frame and weld it at the bottom to the flat membrane.



18.

Cut to size parallel with the window frame. An auxiliary batten can be used to help affix the lower edge without folds or creases.



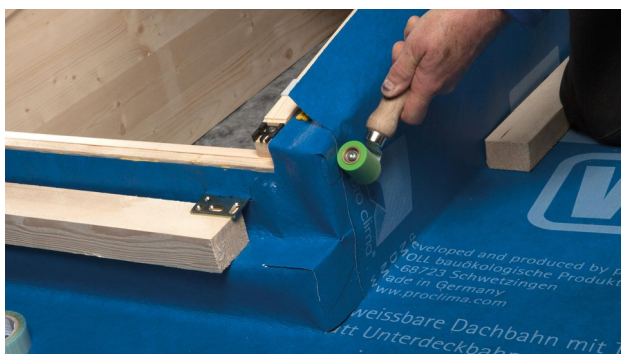
19.

Apply a line of ORCON CLASSIC with a diameter of 6 mm (1/4") to the frame.



20.

Weld the lower corner area.



21.

Press down on the welded bond (e.g. using a pro clima ROLLFIX silicone roller).



22.

Stick SOLITEX WELDANO 3000 onto the edge of the frame. Put the membrane in place on the adhesive bed, leaving slack to allow for expansion. Do not press the adhesive completely flat so as to allow for relative motion between components.



23.

Use TESCO VANA for practical fastening of the installation.



24.

Stick the main sheet of SOLITEX WELDANO 3000 to the top of the window frame using ORCON CLASSIC.



25.

Weld the layers of SOLITEX WELDANO 3000 to one another on the sides.



26.

Use TESCO VANA for practical fastening of the installation.



27.

To cover the cut edges in the corner area, cut out a small strip of SOLITEX WELDANO 3000 and put it in place.



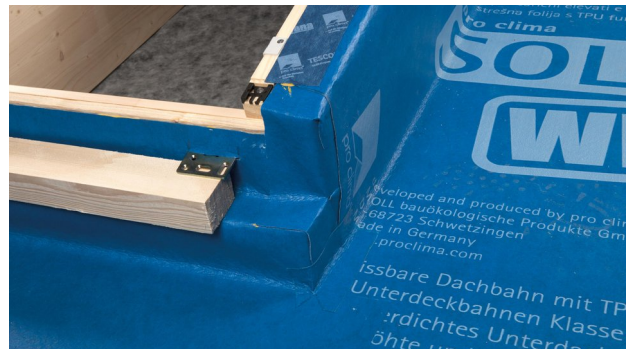
28.

Ensure that the overlap is waterproof.



29.

Weld the strip of SOLITEX WELDANO 3000.



30.

The corner is finished!



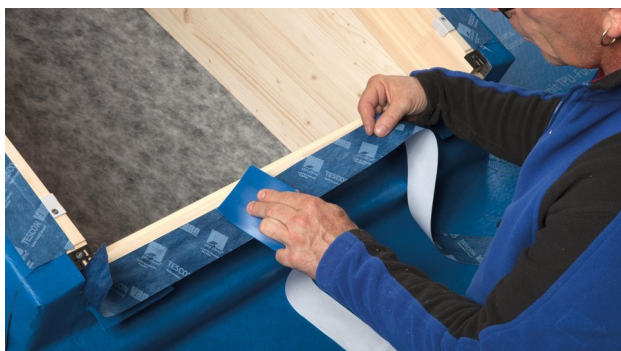
31.

Remove the auxiliary roof batten and cut out fitting pieces for sticking over the mounting brackets.



32.

Enclose the mounting brackets by means of welded bonds.



33.

Use TESCO VANA for practical fastening of the installation.



34.

Install the counter battens and horizontal roof battens, and screw the mounting brackets into place. You're finished!

Installation steps: Pipe feed-throughs



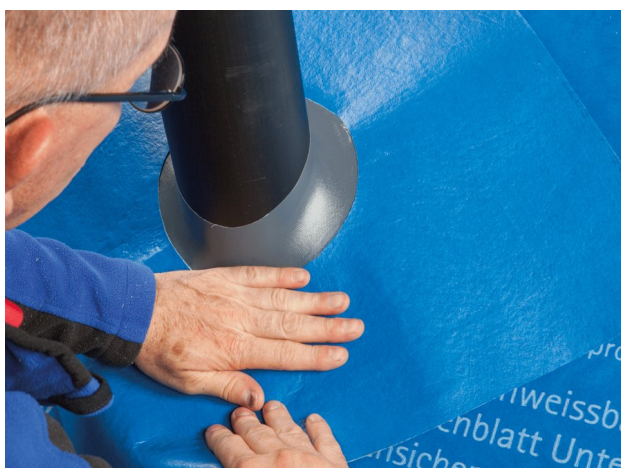
1. Preparation

Remove dirt from SOLITEX WELDANO 3000 using a cloth, for example. Adhesion to frozen membranes is not possible. There must be no water-repellent substances (e.g. grease or silicone) on the membranes. Subsurfaces must be sufficiently dry and stable.



2. Create the bond

Guide WELDANO ROFLEX PLUS over the pipe.



3. Guide onto the subsurface

To carry out sealing to SOLITEX WELDANO 3000, place the grommet onto the subsurface, ensuring that there are no folds in the grommet. The resulting flange must point upwards.



4. Weld the grommet to the membrane

Weld the grommet around the edges using the WELDANO TURGA (HS) solvent welding agent or hot air. The effective joint width (area covered with solvent welding agent) must be at least 5 cm (2") wide and must extend as far as the edge of WELDANO ROFLEX PLUS. Use a roller to secure the welded joints.



5. Extend the flange

Prepare a SOLITEX WELDANO-S 3000 sealing strip to suit the roof pitch and pipe diameter.



6. Attach the flange extension

Attach the SOLITEX WELDANO-S 3000 sealing strip to the pipe with a suitable adhesive tape.



7. Weld the flange extension in place

Guide the sealing strip around the pipe and weld to one another and to the sealing flange of the grommet using WELDANO TURGA (HS). Use a roller to press the bond in place.



8. Secure the flange extension

In addition, stick the SOLITEX WELDANO-S 3000 sealing strip to the pipe and in the overlap area of the sealing strip using pro clima TESCON VANA.

SOLITEX WELDANO® cutting and welding service

Seal your roofs tight even more quickly and easily

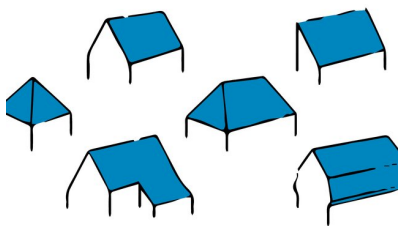
Do you have a roof structure that is to be installed with a roofing underlay membrane that is homogeneously welded together? If so, you no longer need to worry about the joining and cutting of the individual membranes.

For roof areas of 50 m² and greater, pro clima will prepare your SOLITEX WELDANO 3000 roofing underlay membrane for you: in an automated, highly effective manner with reliable seal tightness and at a fair price. This saves valuable installation time on site and makes you less dependent on weather conditions.

Please simply send us your roof drawing/description by e-mail when submitting your enquiry. Alongside standard roof shapes such as L-shapes and rectangles, we can also carry out pre-welding for special roof shapes such as those with roof features involving valleys.

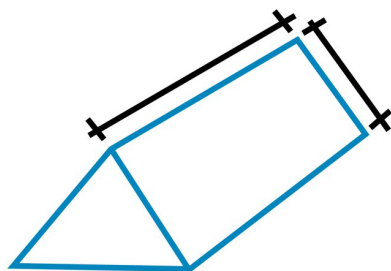
Advantages

- Faster installation thanks to time savings on the building site
- Sheets that are cut, welded and delivered specifically for your project
- Reliable, uniform quality of work thanks to machine-welded seams
- Less dependency on building site conditions: no welding in the wet, faster protection against weathering
- Available for roof areas of 50 m² and greater



1. Your roof design

What type of roof is involved? Gable roof, pitch roof, tented roof, etc. Please specify the type of roof and provide an outline sketch of the roof with the actual lengths and surface areas. Please also take into account special structures such as adjacent valleys, etc.

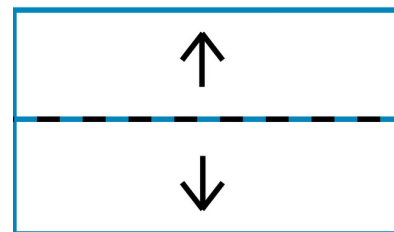


2. Specification of eave length and bargeboard length

Please specify in your drawing the dimensions of the bargeboards and eaves and all dimensions – e.g. valley lengths – to be taken into account in determining the surface area.

3. Specification of ridge position and water run-off direction

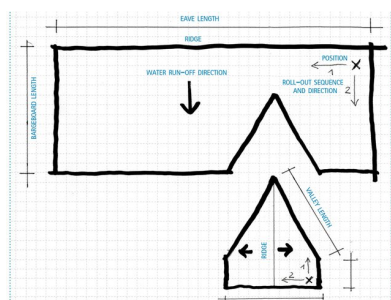
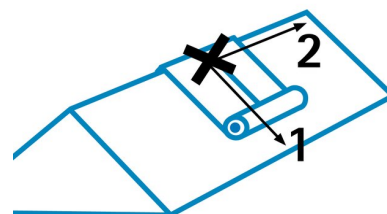
Please indicate on your drawing the position of the ridge with a line and the water run-off direction with a direction arrow.



4. Specification of positioning and roll-out direction (longitudinal and perpendicular)

The pre-fabricated sheeting is generally delivered to your building site as a package that is rolled in two directions.

Have you planned a specific roll-out position, direction and sequence? If so, please mark the positioning point with a cross. Ideally, you should indicate the sequence of roll-out directions with arrows and sequential numbering (1, 2).



This example will serve as a guide.

Order and inquiry form:

This form is available here: Downloads [https://proclima.com/products/external-sealing/solite-weldano-3000/downloads#sub_navigation]

Substrates

Suitable for installation on firm substrates that provide sufficient pressure resistance when using a roller to press down on the welding bond, e.g. timber sheathing, wood-based panels and wood-fibre underlay panels. The subsurface must be dry, free of frost, clean and free of any sharp-edged or pointed objects. There must be no water-repellent substances (e.g. grease or silicone) on the membranes. Before welding is carried out, SOLITEX WELDANO should be wiped clean with a cloth. It is recommended that spot checks be performed to test the strength of the welded joints.

General conditions

SOLITEX WELDANO is to be installed horizontally (parallel to the eave). Unhindered drainage of water must be ensured. Cross joints are to be avoided. If membrane joints are necessary, they should be offset with respect to each other.

To protect the building structure during the construction phase, SOLITEX WELDANO roofing underlay membranes can be subjected to outdoor exposure for up to 4 months in Central and Northern Europe and in Canada and the northern United States, and up to 3 months in Southern Europe, the rest of the United States and the rest of the world, e.g. as a temporary covering in accordance with the German ZVDH regulations ('Zentralverband des Deutschen Dachdeckerhandwerks' - National Association of the German Roofing Trade). The roof pitch must be at least 3° (0.6:12). National regulations should be taken into account here.

Fasteners should not be applied on flat surface areas or in areas where water run-off is collected (e.g. in roof valleys). We recommend the use of corrosion-resistant fasteners.

The membrane edges are to be welded using the WELDANO TURGA (HS) system solvent welding agent or a hot air gun. The welding area must be dry and free of frost, dust and grease. If there is dirt (e.g. oil) on the surface, moisten a cloth lightly with WELDANO TURGA (HS) system solvent welding agent and use it to clean off this dirt. Both sides of the membrane can be welded and are suitable as upper layers.

Welding with a solvent welding agent can be carried out at temperatures above 0 °C / 32 °F. Please observe the hazard notices on the container.

If a hot air gun is being used, we recommend a temperature of around 220 to 280 °C (430 to 530 °F) depending on the ambient temperature and wind conditions. Test this setting by carrying out a test weld on a sample piece of membrane. A 40 mm (1.6") nozzle width has been found to be suitable in practice for welded joints between surface membranes. A 20 mm (3/4") nozzle may be more suitable in certain cases for more intricate joints.

Note: If membranes that have been subjected to 2 months of outdoor exposure are to be welded, the exposed membrane surface must be gently roughened using sandpaper (150 - 250 grade) to remove a film depth of around 2-3 µm (0.08-0.12 mil) so that a reactive surface is accessible again. This applies both for hot-air welding and for solvent welding using WELDANO TURGA (HS).

The WELDANO ROFLEX pipe grommet is suitable for pipe diameters of 90 mm to 125 mm (3.5"-5") for roof pitches between 3° and 25°. The WELDANO ROFLEX PLUS pipe grommet is suitable for roof pitches up to 50°.

As an alternative to the use of the WELDANO ROFLEX, WELDANO INVEX or WELDANO INCAV system shaped elements, these elements can also be made by cutting appropriate shapes out of SOLITEX WELDANO membranes.

Important: The enclosed counter battens on the waterproof roofing underlay must be dry and chamfered on their upper side (≥ 3 mm; 120 mils) when they are installed. Ideally, structural timber should be used.

Additional technical information for Germany:

Depending on the requirements demanded of the roofing underlay when used as an additional measure, the roofing underlay can be installed to be rainproof or watertight (in accordance with ZVDH). Rainproof roofing underlay: The counter battens are installed over the roofing underlay membrane. Waterproof roofing underlay: The counter battens are integrated into the sealing layer. The roofing underlay membrane is installed over the counter battens here or else SOLITEX WELDANO-S sealing strips are fitted over the counter battens and welded to the roofing underlay membrane on both sides.

Ridge ventilation is permitted in the case of a rainproof roofing underlay. The roofing underlay membrane should then stop 30 mm (1.2") before the apex of the ridge. Cover the ventilation opening with a membrane strip over the counter batten along the ridge axis. Ridge ventilation is not permitted in the case of a waterproof roofing underlay.

The SOLITEX WELDANO roofing underlay membrane is to be sealed in a windproof and waterproof manner at the eave flashing. The eave flashing can be installed as a drip board under the gutter or as a guide board that guides water into the gutters. To protect the roofing underlay membrane from direct sunlight on a permanent basis, the width of the eave flashing should be selected appropriately depending on the roof pitch and the orientation of the building structure or else it should be installed with an eave membrane to provide UV protection, e.g. SOLTEMPA.

The information provided here is based on practical experience and the current state of knowledge. We reserve the right to make changes to the recommended designs and processing or to make alterations due to technical developments and associated improvements in the quality of our products. We would be happy to inform you of the current technical state of the art at the time you use our products.

Further information about installation and design details is available in the pro clima planning documentation. If you have any questions, please contact [pro clima Technical Support](https://proclima.com/service/technical-support).

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