

Installation instructions

SOLITEX WELDANO®-S 3000

Installation steps



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 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 3 cm (1 1/4") wide and must extend as far as the edge of the overlapping membrane.



3b. Overlap with WELDANO TURGA 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.



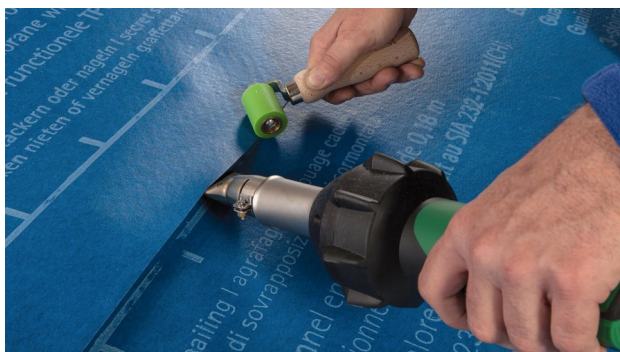
4. Rub the overlap into place and check it

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).



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 2 cm (3/4") wide and must extend as far as the edge of the overlapping membrane.



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).



6a. Sealing at eaves

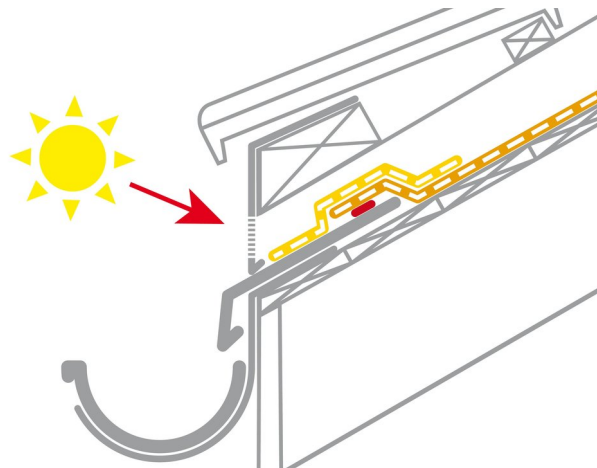
Install the membrane and weld it above the eave flashing using WELDANO-S 3000.



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, this can be directly welded to the roofing underlay membrane in a homogeneous manner in certain cases. This should be checked in advance.



6c. UV protection for the membrane in the eaves area

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



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.



8. Counter battens not covered over

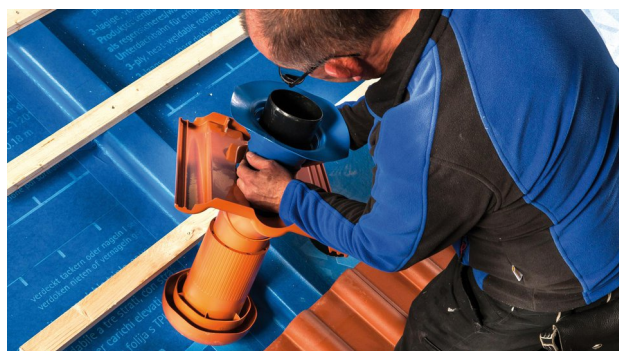
If a counter batten is to be fitted on top of the membrane and/or if the membrane is used as a temporary covering/seal during the construction phase, TESCON NAIDECK mono system nail sealing tape should generally be applied under the counter battens.



9. Counter battens covered over

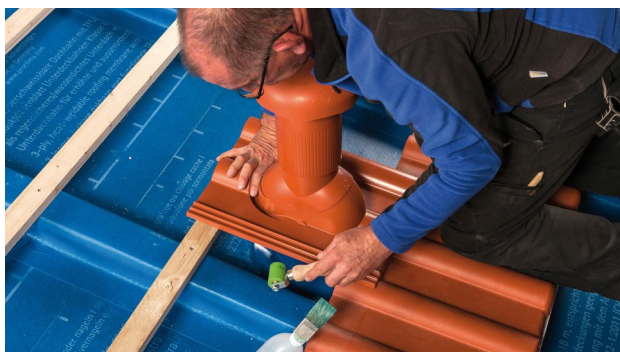
Apply WELDANO-S 3000 sealing strips over the counter battens and weld them to the roofing underlay membrane on both sides. The counter battens must be dry.

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



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

Clean the pipe that is to be sealed. Pull WELDANO ROFLEX over the pipe and ...



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

... weld the seal flange to the roofing underlay membrane (using solvent welding agent or a hot air gun). Press the joint firmly into place and check for leaks.



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

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



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

Tip: For larger roof vents, WELDANO ROFLEX can be enlarged using a piece of membrane.



11a. On steep roofs: Joint at pipe feed-throughs

Weld the grommet around the edges using the WELDANO TURGA solvent welding agent or hot air. The effective joint width (area covered with solvent welding agent) must be at least 3 cm (1 1/4") wide and must extend as far as the edge of WELDANO ROFLEX PLUS. Use a roller to press the grommet in place.



11b. On steep roofs: Joint at pipe feed-throughs

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



11c. On steep roofs: Joint at pipe feed-throughs

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



11d. On steep roofs: Joint at pipe feed-throughs

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



12. On slightly slanted roofs: Joints with protruding building components (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.



12b. On slightly slanted roofs: Joints with protruding building components (e.g. chimneys)

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



13a. On steep roofs: Joints with protruding building components (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).



13. On steep roofs: Joints with protruding building components (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.



14. 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.



15. Sealing at skylights

Seal the skylight all around the window up to the upper edge of the frame using SOLITEX WELDANO 3000. Weld the membrane in the corners using the WELDANO TURGA solvent welding agent.



16. Sealing at skylights

Affix SOLITEX WELDANO 3000 to the frame using pro clima TESCON VANA. You're finished!

Substrates

Before welding is carried out, SOLITEX WELDANO should be wiped clean with a cloth. Welding is not possible on frozen membranes. There must be no water-repellent substances (e.g. grease or silicone) on the membranes. Subsurfaces must be sufficiently dry and stable. It is recommended that spot checks be performed to test the strength of the welded joints.

General conditions

SOLITEX WELDANO 3000 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.

When used to protect building structures during the construction phase, SOLITEX WELDANO 3000 roofing underlay membranes can be subjected to outdoor exposure for up to 6 months in Central and Northern Europe and in Canada and the northern United States, and up to 4 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. The roof pitch must be at least 3°. National regulations should be taken into account here.

Fasteners may 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 system solvent welding agent or a hot air gun. The welding area must be dry and free of frost, dust and grease. If dirt (e.g. oil) is stuck to the surface, moisten a cloth lightly with WELDANO TURGA 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.

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 variant 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 3000 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 3000 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 3000 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.

Additional technical information for Switzerland:

In the case of higher loads (e.g. pitch less than 10°), additional protection of the counter battens – for example, welding to enclose them (using SOLITEX WELDANO 3000 or SOLITEX WELDANO-S 3000 sealing strips) – is necessary.

According to SIA 232/1, a roofing underlay for exceptional loads must always be drained into gutters or onto adjacent roof areas. To protect the roofing underlay membrane from direct sunlight on a permanent basis, the width of the guide board should be selected appropriately depending on the roof pitch and orientation of the building structure. Flat roof membranes should be used in place of SOLITEX WELDANO 3000 in locations with an increased risk of trapped meltwater, ice formation or deposits of fine driven snow.

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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