

TIKLI.



# PONTTI-WINDOW



ISNTALLATION, LIFT AND MAINTENANCE

## GENERAL

These installation, lifting and maintenance instructions apply to Pontti windows. Pontti windows are designed for panel element construction. Window installation takes place simultaneously with wall panel installation.

Pontti windows are installed as a floating structure in the panel element wall. The windows are not attached to the panel elements. Thermal movement between the panel wall and the window differs due to the materials' different thermal expansion rates.

Pontti windows come with a 3-year warranty, provided all installation and maintenance instructions are strictly followed. The insulating glass units have a 5-year tightness warranty from the glass manufacturer. The warranty does not cover breakage.

## RECEIVING DELIVERY

Check the quality and quantity of the windows immediately upon delivery. Any complaints related to delivery must be made to the seller within 7 days. If there is transport damage, inform the driver and note the damage in the delivery note.

**Note! Defective products may not be installed without the manufacturer's permission.**

## STORAGE

Store window pallets on an even surface and protect them from impact and moisture. Products are delivered in transport packaging, which only provides protection during transportation. If using tarps, ensure moisture can ventilate underneath. If the windows are not installed immediately, store them in a dry and temperature-stable location.

If necessary, support the package to prevent tipping by securing it to other packages or using additional support.

For tall window packages, a marked support board is attached at the factory to the end frame of the package. This is meant to be used on-site for additional support. Remove the board and install it at the bottom of the package to prevent tipping.

Keep the sealing compounds delivered with the shipment protected from freezing.



**The manufacturer is not responsible for damage caused by insufficient protection or improper storage.**

## NOTE!

- Windows are glazed at the factory, handle with special care.
- Gently lift window pallets onto an even ground surface.
- Ensure that window pallets cannot tip over during storage or lifting.
- Windows are protected with plastic for transport.
- If the windows include smoke ventilation units, refer to Tikli smoke vent window installation instructions.

## ACCESSORIES

### INCLUDED IN DELIVERY

- Lifting rods (included in the first shipment from Tikli Group)
- EPDM rubber gasket 5 mm for pre-sealing the window exterior
- Sealing compound suitable for facade joints
- 20 mm thick insulation strip (width according to window frame)
- Drip flashing for post-installation above the window
- Interior trim with mounting screws for post-installed windows

A list of delivered accessories is found in the shipment manifest.

### TO BE SUPPLIED BY THE CUSTOMER

- Lifting equipment
  - Quantity according to lifting points
  - Length based on window width
- Plank 50 x 100 mm between lifting rods (see lifting instructions)
- Lifting beam if the window width exceeds 6 m
- Safety ropes for lifting
- Screws for attaching the drip flashing (e.g. roofing screws)
- Wooden materials and insulation related to plinth installation, if windows are installed directly onto the plinth
- Screws for installing post-installed windows

# LIFTING A PONTTI WINDOW

Windows are lifted using lifting brackets attached to the upper corners of the window and lifting rods installed through the vertical mullion profiles, or by using a suction cup lifter suitable for the weight of the window element.

## Lifting from lifting points

The number and type of lifting points vary depending on the structure of the windows. Use all the lifting points on the window and ensure that the load is evenly distributed across all points. Lifting points are marked on the window with stickers as shown in the accompanying images. In addition to lifting brackets and rods, always use a safety rope during lifting.



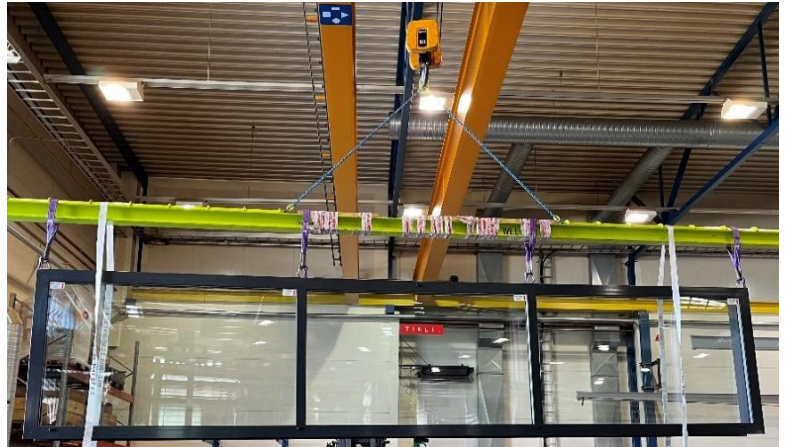
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If lifting rods are required, they are delivered with the windows. The rods are threaded rods with lifting loops at the top. The rod package details can be found in the delivery note.

Attach the rods through the holes at the top of the vertical mullion profiles and screw them into the threads at the bottom of the element. Screw the threaded rod about 10–15 turns to ensure secure attachment.



If the distance between rods is over 2 meters, use a lifting beam or a 50x100 mm wooden beam placed between the rods to avoid bending and uneven load distribution.

## Lifting with a suction cup lifter

Use a suction cup lifter for lifting the window element when it is to be retrofitted, when the window must be rotated vertically, or when an individual glass element weighs more than 250 kg.

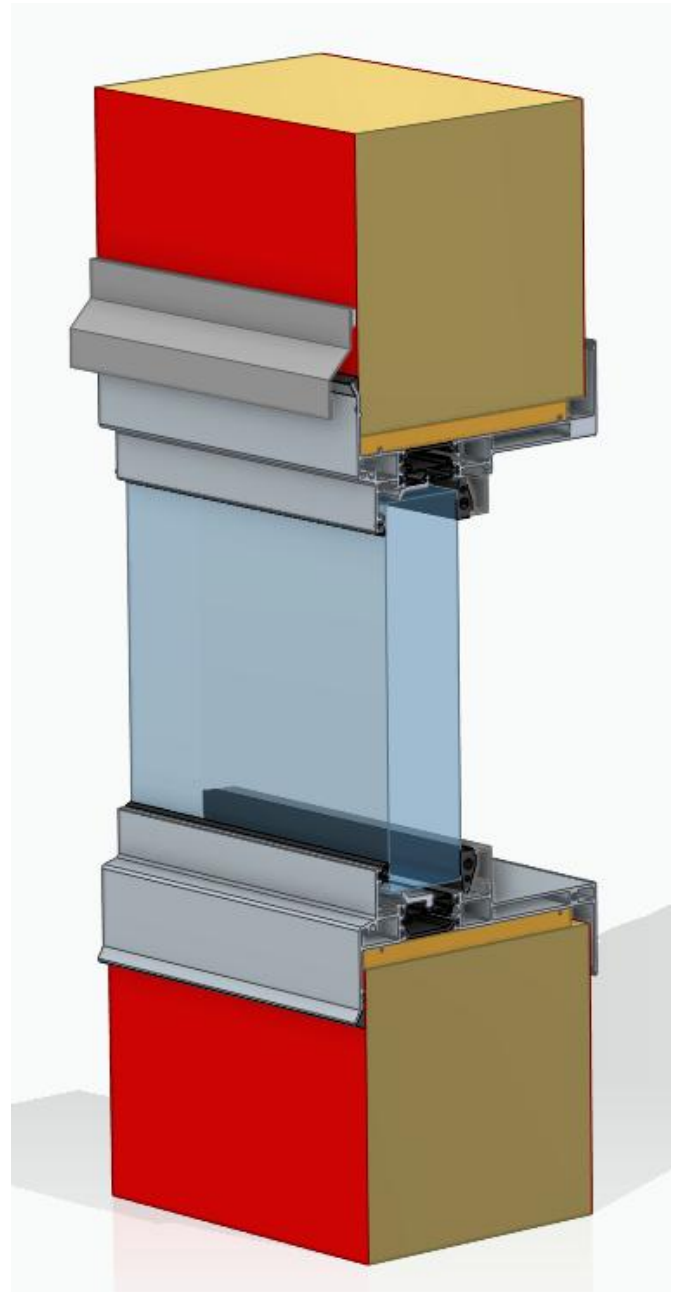
Choose the suction lifter based on the weight and shape of the window elements. For multi-opening elements, attach the suction cup to as many glass elements as possible. Attach a guide rope to the lifter to help control the element and the lifter.

Always use the suction lifter according to the manufacturer's instructions.



# WINDOW INSTALLATION ON PANEL ELEMENT

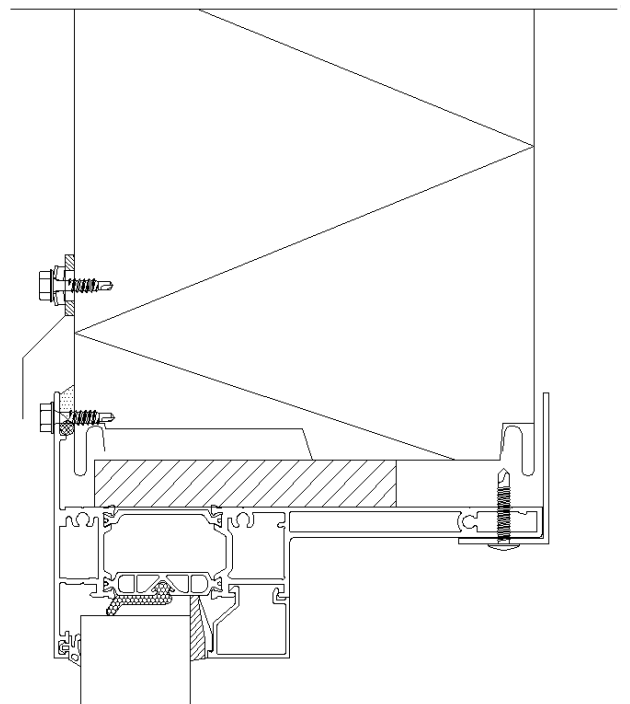
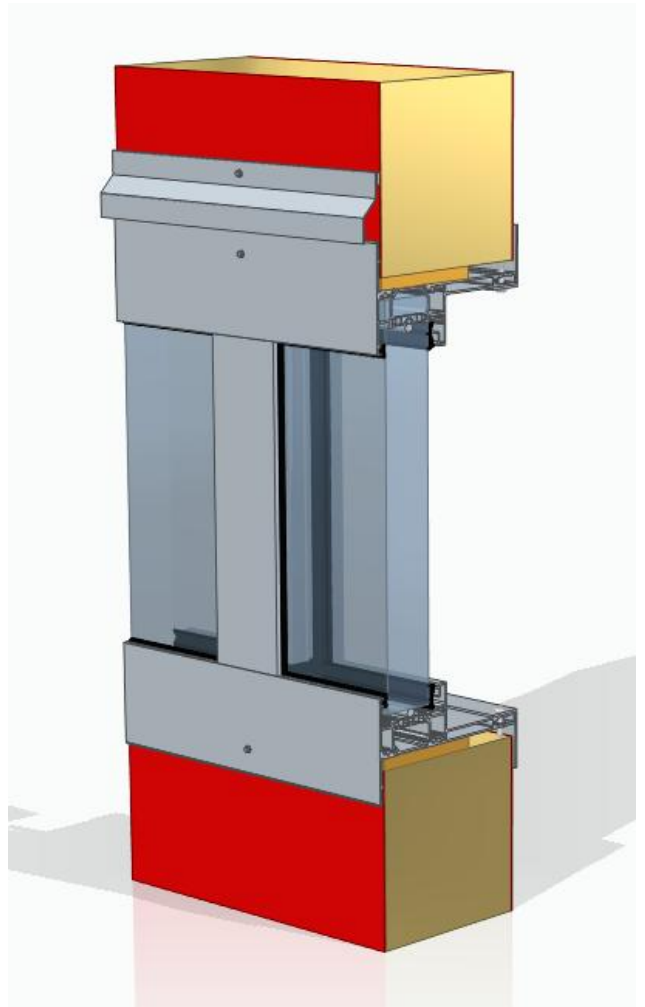
1. Install the panel element below the window and attach it to the building frame according to the element supplier's instructions. Also install the panel element on the other side of the window in place and attach it to the building frame.
2. Seal the outer edge of the tongue of the elements related to the window with elastic sealing compound for about 100 mm during installation. This prevents water from entering the panel joint due to the combined effect of possible storm wind and rain, causing a leakage situation.
3. The window has an installation allowance of about 10 mm on both sides. The thermal insulation of the window is implemented with a wool strip installed in the installation allowance. The width of the wool strip is determined by the thickness of the panel. Install the wool strip on top of the panel element below the window and on the side of the element on the side, for example, by attaching it with 2.5-inch nails. The wool strip is always installed at the thermal break of the window.
4. Attach the lifting equipment to the window. Remove the wooden supports of the window element from the pallet. Ensure the support of other elements to prevent them from falling. If the package can fall, support it with separate support. Carefully lift the window to a height of about 0.5 m. Install a safety rope around the window.
5. Lift the window into place. Remove the safety rope before positioning the window element. Push the window sideways against the adjacent element. Leave a 10 mm gap. Temporarily attach the window element to the adjacent panel element, for example, with a wooden piece installed at the top edge.
6. Attach the board with screws to the top of the window and to the sheet metal of the panel element. Remove the lifting brackets and move them to the next window element to be installed.
7. Install the wool strip on top of the window and on the side. Lift the panel element to be placed on the other side in place against the side of the window. Leave a 10 mm gap. Attach the panel element to the building frame. Remove the temporary attachment. Lift the upper panel and attach it to the building frame.
8. Perform the external sealing of the window and the installation of the drip strip according to the separate instructions provided below.



Consider the gap between the window rebates and the panel element during installation. The window is installed against the inner surface of the panel element. The gap left on the outside is intended for sealing.

## WINDOW RETROFITTING INTO AN OPENING IN A PANEL WALL

1. Seal the outer edge of the tongue of the elements related to the window with elastic sealing compound for about 100 mm during installation. This prevents water from entering the panel joint due to the combined effect of possible storm wind and rain, causing a leakage situation.
2. Install the installation blocks below the window into the installation opening. In multi-opening windows, the blocks must be at the vertical division profiles.
3. Attach the lifting equipment to the window. We recommend using suction cup lifters suitable for the weight of the window element for lifting the window. The lifting points on the window are not suitable for lifting a retrofitted window. The lifting brackets must be removed from the window before lifting the window.
4. Remove the wooden supports of the window element from the pallet. Ensure the support of other windows to prevent them from falling. If the package can fall, support it with separate support.
5. Lift the window into place. Leave a 3 mm gap between the wall and the window rebate for external sealing.
6. Attach the window from the outside at the rebate with stainless roofing screws 4.8x25 mm at the corners of the window and at the vertical division profiles at the bottom and top frame. Screws are not included in the delivery.
7. Remove the lifting equipment and move them to the next window element to be installed.
8. Insulate the installation gap with insulation foam. Allow the insulation foam to harden before proceeding with the next steps. If the use of insulation foam is not possible, the gap can alternatively be insulated with wool.
9. Attach the inner cover strip in place. Press the strip against the profile and screw it in place with 4.2x25 mm self-drilling screws. The screw location should be in the middle of the corner profile and the screw spacing should be a maximum of 600 mm. Screws are included in the delivery.
10. Perform the external sealing of the window and the installation of the drip strip according to the separate instructions provided below.

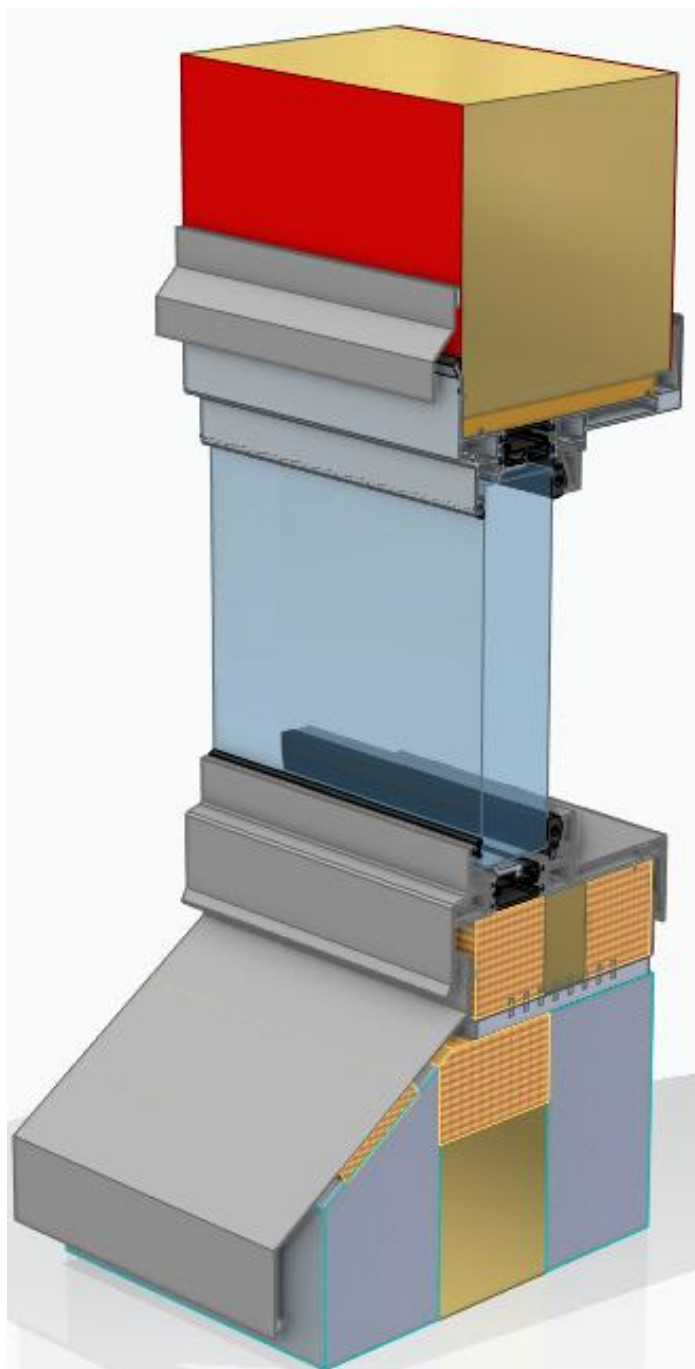


## WINDOW INSTALLATION ON A BASE RAIL

The windows are installed on the base rail provided by the panel supplier so that the window rebate and the bottom edge of the panel are at the same level. This allows the exterior base trim to run uninterrupted under the window.

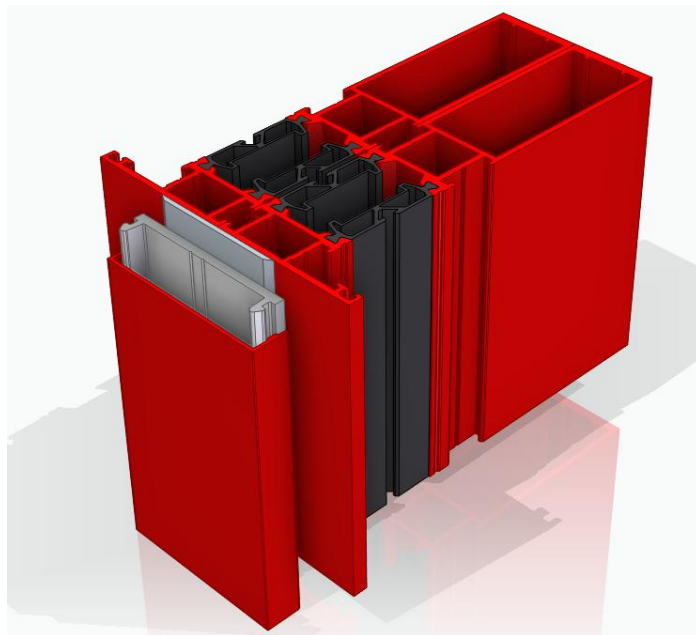
1. Install weather-resistant wooden support blocks inside the base rail at the edges of the window and at the vertical division profiles. Size the blocks so that they fit between the frame and their top surface comes 35 mm above the bottom surface of the panel.
2. Fill the gaps between the support blocks with non-settling insulation.
3. Then install the window as on a panel element.

The wooden materials and insulation related to the base installation are not included in the delivery but are procured and sized on site.



## INSTALLATION OF A MULTI-PART WINDOW

1. Apply sealant to the grooves in the profile as shown in the picture.
2. Install the windows without clearance against each other.
3. If a 140 mm or deep profile is used in the joint, fasten the profiles to each other with a screw.
4. Glue the butyl tape to the seam on the outside.
5. Attach the bottom strip on top of the butyl tape by screwing it to one of the windows.
6. Press the surface strip into place on the bottom strip.



If the window installation deviates from the standard solutions, installation details will be provided separately from the window design to the window purchaser.

## EXTERNAL WINDOW SEALING

5 mm EPDM rubber seal and sealing compound are used for external window sealing. Ventilation holes have been drilled at the factory in the upper and lower profiles of the window for water drainage. However, this does not eliminate the need for sealing, and it must be done with particular care.

1. Install the EPDM rubber seal between the outer rebate of the window and the panel element around the window. The rubber seal must be pushed into the nub in the profile to a depth of about 15 mm. If the seal is too shallow, it will push the sealing compound outwards, potentially detaching the compound.
2. Clean the surfaces to be sealed thoroughly. Fill the sealing groove with sealing compound and smooth the surface tightly with your finger or a tool. At the panel joints, also seal the panel joint for 20 cm.

Sealing must be done under the conditions specified by the sealant manufacturer.

## INTERNAL WINDOW SEALING

Sealing compound for internal window sealing is not included in the delivery. Sealing the inside of the window with compound improves the vapor tightness of the connection between the window and the wall. We recommend sealing the inside of the windows.

## DRIP STRIP INSTALLATION

Install drip strips above the windows. The purpose of the strips is to divert water running down the wall away from the window, reducing window soiling. At the same time, the strip protects the sealing joint at the top.

Apply a thin layer of sealing compound behind the drip strip and install the strip above the window on the panel element. Attach the strip to the panel with, for example, self-tapping screws. The appropriate screw spacing is about 500 – 600 mm. If the drip strip is supplied in multiple parts, seal the joints of the drip strip.

## COMMISSIONING

After installation, check the operation of the openable window parts. Windows wider than 700 mm must be supported when opened.

## **SMOKE VENTILATION WINDOW**

If the window includes sashes used for smoke ventilation, the sash chain motor is connected to the smoke ventilation center using a fire-resistant power supply cable according to the building's electrical plan. Electrical work may only be carried out by a qualified electrician. During installation, the chain motor can be operated with an 18-24 V battery to open and close the sash.

The smoke ventilation window must be tested after the installation of the smoke ventilation systems. The window must open to an opening angle of 40° within 60 seconds from the smoke ventilation button.

### **Inspection and maintenance instructions**

Equipment and devices required by the authorities must be kept in working order and properly maintained and inspected, Rescue Act 12 §. The property owner or holder is responsible for ensuring that the smoke ventilation devices are in working order and are maintained and inspected according to regulations.

The use and maintenance of smoke ventilation devices is the responsibility of a designated person with sufficient training and professional skills to maintain the smoke ventilation devices in the property. Annual maintenance and inspections must be carried out by a maintenance company specializing in smoke ventilation technology. It is advisable to attach the contact details of the responsible persons to the smoke ventilation center.

Smoke ventilation devices must be inspected and maintained periodically, at least twice a year. A logbook must be kept of annual inspections. Documents related to smoke ventilation maintenance, repairs, and modifications must be kept in an easily accessible location, such as near the control center.

### **Semi-annual and annual inspection and maintenance of smoke ventilation systems**

Visually inspect the condition of the smoke ventilation window. If you notice any deficiencies, make the necessary repairs.

- Tightness
- Connections
- Corrosion
- Condition of the opening device and tightness of the fastenings

Maintenance and inspection measures related to the smoke ventilation center must be carried out in addition to these measures according to the instructions provided by the center supplier.

## MAINTENANCE AND CLEANING

To ensure that the products function properly, maintain them regularly. Check the proper opening and closing of the movable parts. If problems arise, check depending on the problem:

- hinges: adjustment, attachment, and position
- seals: condition, cleanliness, continuity of glazing seals at corners
- locks and other fittings: operation, screw tightness
- glass shimming
- ventilation holes
- glazing and cover strips
- connection flashing

Adjustment instructions for fittings can be found in the following manufacturer's instructions:

- [2-part door hinge](#)
- [3-part door hinge](#)
- [tube hinge for doors](#)
- [window stay](#)
- [door closer](#)

To keep aluminum surfaces presentable, they should be washed approximately every six months. We recommend cleaning particularly dirty surfaces more often. Normal cleaning is done with water and a sponge. For removing stubborn dirt, you can use, for example, warm water and a detergent with a pH value of 4-8. Finally, rinse the surfaces with clean water. Do not use detergents containing abrasive substances or rough cleaning sponges.

Always check the condition of the sealants used for external sealing during the cleaning of aluminum surfaces. If you notice deficiencies in the condition of the sealants, renew the sealants. During cleaning also check the functionality of any drainage holes in the products and clean the holes if necessary.

**For more information on repair and maintenance procedures, you can contact Tikli Group Oy.**

## Information and sales

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