Windows are eyes of a building. We see the world through a window, and the window lets the light come into our home. Windows can reveal the personality and the attitude of the homeowner towards themselves and the world around them.
Thank you for choosing Arbo Windows!

Our windows and doors are high quality products that require proper care. To ensure window and door durability and visual appeal, please consult and follow the information and tips contained in this manual.

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1. WHAT YOU SHOULD KNOW ABOUT OUR PRODUCTS

1.1. GENERAL DESCRIPTION OF PRODUCTS

The specification of the product you have purchased can be found in the approved order where the product type, type of wood, finishing, glazing specifications, fittings, accessories and additional notes regarding the specific item are shown.

The following products are available for order:

- IV68/ IV78/ IV92 profile inward opening products (Tilt&turn windows, single and double sash balcony doors);
- 76/105, 92/115 profile outward opening products (Side hung, top hung, side swing, top swing, single or double sash balcony doors);
- Hardwood and plywood panel interior doors and front doors;
- Sliding and folding systems;
- Various carpentry products - window sills, frames, box finishing panels, finishing strips etc.

The products are mostly made of glued pine wood layers, sometimes oak, larch or other less common, but more exotic types of wood are also used. When selecting the material, it should be noted that different woods have different properties, hardness, wear resistance, thermal conductivity, visual appearance and tone differences.

Glued material used in the manufacturing of wooden windows and doors reduces the risk of wood deformation, shrinkage, level of expansion, reduces the possibility of formation of gaps and cracks. However, to ensure visual appeal, some elements of the product, for example, thresholds and strips may be manufactured from hardwood.

1.2. FINISH

There are used SIKKENS paints and varnishes to finish the products. Covering finish allows a wide selection of colors from RAL and NCS catalogs, which lets you to precisely match the window and door hues with the rest of the interior of the home. Meanwhile, the transparent system keeps the texture of the wood visible.

When choosing a glaze finish, it must be taken into account that even the wood from the same species may differ in color, based on the age and the climate where the tree is grown. Different frame and/or sash details of the same product may have color differences.

The products are available with and without aluminium fittings. Aluminum fittings ensure additional protection from the external environment conditions. The customer is obliged to warn the manufacturer if there is an increased risk of corrosion (aggressive environment, proximity to the sea, drastic temperature changes etc.), in order to treat the fittings with an additional protective layer.
Although all products have high visual and quality requirements, colour and finish evaluation must be done at least from the distance of 3 meter.

As a result of exposure to the environment and UV rays, changes in colour and varnish shades are normal over time. It’s not considered as a production or material failure.

PLEASE NOTE! In rare situations, there can be resin exposed on wood surface. Some timber species are naturally more resinous than other and presence of resin level is not detectable in a production process so it’s not considered as a production or material failure. If resin has exuded through the coating, please wait when exudation is finished, resin has dried and oxidised, forming a white crystalline powder. Then remove it and if necessary renew the finish coat of paint or varnish. This is only cosmetic issue and it’s not impact overall product functionality and durability.

1.3. PRODUCT OPERATION

One of the prerequisites to ensure sustainable product quality is to ensure adequate microclimate. The wood products may only be stored and used on premises with the relative air humidity 50-65%. In winter the recommended indoor temperature is below +25°C, so that the window and door sashes would remain airtight and to avoid sweating, swelling or other deformation of the product.

The manufacturer recommends to fix the sash only with the mechanisms supplied with the window (sash restraints, wind hooks, child safety mechanisms etc.). Placement of any objects between the sash and the frame to fix the window in a ventilation mode may damage the functionality of the product. Significant damage to the product is also possible if the product is left in a ventilation mode without fixing.

If there are small children or people with special needs present, it is important to select handles equipped with keys or additional safety mechanisms.

To avoid damaging the sashes, parts of the frame and the incorporated fittings, do not support or lift the sashes with additional objects, do not place cables or wires between the sash and the frame. No weights should be hung on the door and window sashes.

Also the window sills or any additional carpentry details must be carefully maintained. No objects that emit moisture or heat or that are too heavy and thus cause damage should be placed on wooden window sills.

If the windows or doors are fitted with additional accessories, carefully follow the instructions supplied concerning individual mechanisms.
1.4. GLAZING

Glazing is an integral part of the window and often also doors, therefore several rules should be followed so that the product would maintain its quality as long as possible.

No heating elements should be turned against the glass parts of the products; they should be in at least 20 cm distance. When starting the room heating, increase the temperature of the heating devices gradually. If the glass is exposed to a difference of temperature of over 25°C, the risk of breakage caused by thermal stress is significantly increased.

The whole glass surface should be lit evenly. The possibility of the glass breakage because of thermal stress is high if place any objects (pillows, toys, furniture etc.) against or very close to glass. The risk factor can be also use of curtains and blinds if placed closer than 15cm and not ensured proper air circulation to keep glass in even temperature.

A thermal stress breakage is usually result of a set of conditions that a glass is exposed to so its not covered by warranty. If you see that there are one or several factors according to building structure, environment, design etc. what might cause thermal stress, we recommend to use tempered glass. Please inform us about such details before make an order.

No film should be applied on the glass (especially if the glass is tinted).

If, however, a crack has occurred, we recommend reinforcing the glass with tape to prevent it from falling out and reducing additional health risks. It is suggested to place cardboard or other shock-absorbing material below the cracked glazing to prevent potential damage to the floor or windowsill.

2. PACKAGING, TRANSPORTATION AND STORAGE

Finished products are fixed and transported on pallets in a vertical position.

The products are fixed with suitable screws, which may cause insignificant splitting on the side details of the product that will be covered during assembly. The corners of the products placed at the sides of the pallet are covered by cardboard.

All products on the pallet are covered by packing film. The packing tape secures the film.

Until installing it is recommended to store the products on the manufacturer's pallets in a vertical position. They may not be loaded with weight or supported on one another. Products must be stored indoors or under suitable sheds where they are protected from direct weather conditions. The finished products may not be left in the manufacturer's packaging for longer than 7 days from delivery, while unfinished products may be left unfinished for no longer than 36 hours from delivery.

The pallet must be dismantled carefully, using appropriate tools to avoid damaging the delivered product.
3. HOW TO INSTALL WINDOWS AND DOORS.
TIPS AND RULES

Make sure that during the finishing work and until all materials are fully dry the room is aired regularly. If there is an increased humidity in the room, it will create a risk of mold, it may damage the finish of the product or cause irreversible damage to the functionality of the product.

We recommend to comply with the following assembly procedure:

1. Transport the products on site and make sure they comply with your order and that the product has not been damaged during transportation or unloading.
2. Compare the dimensions of the window box to the construction;
3. Prepare the box for assembly - clean out the debris or foreign objects which may interfere with levelling and hinder sealing of the joints.
4. Place the load supports for fixing the window in the box and transferring the weight (load) to the structure.

REMEMBER! The supports should be made from solid hardwood or polymer material. The placement of the supports depends on the construction of the window and it may not interfere with the thermal expansion of the window block. The load-bearing supports must remain in the assembly joint for bearing long-term loads. The wedges used for the fixation of the window during assembly must be removed before closing the assembly joint. See the placement of the bearing supports in Figure 1.

5. Place the structure in the box. Use level, mounting wedges or Adjufix to level the structure vertically and horizontally. Check if the corner has a 90 degree angle.

REMEMBER! Vertical and horizontal deviation may not exceed 1,5 mm to 1 m, without exceeding 3 mm deviation for the total height of the window.
6. Fix the structure in the box. You may fix the structure by using mounting brackets, Adjufix mounting system or put mounting screws through the box structure. If you use mounting anchors, they must be positioned in a 90° ± 15° angle to the construction. After fixing the structure, remove the mounting wedges. See the placement mounting brackets, Adjufix in Figure 2.

REMEMBER! When creating a joint window blocks, it is important to provide sealed, wind and water tight connections.

7. Use mounting foam, mineral wool, mounting expansion tape and other materials that comply with the necessary operational requirements to fill the mounting joints. Internal connections must be sealed, but the external connections must protect from the climatic conditions. See Figure 3.

REMEMBER! The optimal thickness of the layer of insulation (the distance between the window aisle and window block) is from 10 to 50 mm. It is important to protect the mounting joint sealing material from the external environment and the vapor from the interior. Vapor absorption
reduces the thermal insulation properties of the sealing material. The joints must be protected both from the outside and the inside by using vapor isolation tape on the inside and wind tape on the outside.

8. After filling the assembly joints, you may complete the inner and outer finishing of the window boxes.

Please, follow these recommendations!

• Protect the products with film or paper during finishing work, cosmetic repairs. If you use tape to secure protective materials, we recommend using TESA tapes that are especially suitable for this purpose. For example, TESA 4843 will not cause damage to the finish of the product when removing the tape.

• Wooden structures (windows, doors) may be installed on site only when the relative humidity on the premises is below 60%. This may be monitored by a hydrometer, which is sold in building materials stores.

• When mounting wooden windows and doors, pay particular attention to closing assembly joints. While laying foam, make sure that no air pockets form.

• When mounting wooden-aluminium windows or doors, provide flexible and airtight connection between the external aluminium fitting and the building finish. A flexible connection is necessary to prevent forming of cracks due to thermal expansion / shrinkage of the material and the connections would remain airtight. Also attention must be paid to the compatibility of the used sealant and the wood, water based finishing materials and operation at subzero temperatures.

• In case the product is stained by finishing material, it must be cleaned immediately (before the finishing material dries) to prevent damage to the finish of the wooden window.

• It is not recommended to use screws, nails or to damage the protective coating of the window when using additional fittings for the window box.

• The box should not be closer to the hinges than 5 mm.

3.1. ASSEMBLY OF INNER AND OUTER WINDOWSILLS

• **The internal windowsills** should be fitted at a level or at a ≤ 3º tilt towards the room.

• **The external windowsills** should be tilted at ≥ 5º, facade cover 30 - 40 mm, but not ≤ 20 mm, at the place of contact between the windowsill ends and the wall, the flexion should be ≤15 mm. The windowsill connections to the wall must be isolated to prevent moisture getting under the windowsill.

• **The external sills** should be securely attached to the frame and the wall. Compensation joints should be made every 3000 mm with rain water discharge capabilities.
Wood products require regular care. Doing it with carefully and according to the recommendations the product will last for several decades. The products must be cleaned, treated with protective agents at least twice a year, preferably spring and summer. Use a soft cloth and cleaning agents for wooden surfaces.

We recommend using SIKKENS cleaners for glaze and paint care, which will coat the surface with a transparent protective layer making it more flexible and brighter. Before using any cleaning agents, carefully read the manufacturer’s instructions for use.

If the window or door structure includes closing mechanisms - the moving parts should be greased at least once every 3 months. Sliding guide rails must be regularly cleaned from dust and debris, to prevent damage to the sliding wheels.

Silicone seals must not be cleaned with chemically active and abrasive cleaning products.

It is important to regularly inspect the construction joints and corner connections to detect cracks in a timely manner and fill them with suitable sealant.

## 5. WARRANTIES

Your product warranty is indicated in your agreement.

The product warranty is valid if the products are installed and operated following the recommendations provided by the manufacturer.

Product warranty period depends on the finish and hue of the selected product surface. See the table below. No warranty applies to products without a full finish.

We recommend to evaluate building location and weather impact on products when you choose the finish. To avoid risks and extend lifetime of your windows and doors, very often aluminium claddings from outside are used.

<table>
<thead>
<tr>
<th>Load</th>
<th>Colour shade</th>
<th>Lasur coating</th>
<th>Stain coating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Conifer</td>
<td>Leaf trees</td>
</tr>
<tr>
<td>Indirect weather impact</td>
<td>ALL</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>(product are protected by design conditions against precipitation and direct insolation, however other climate influences act freely on product)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal direct weather impact</td>
<td>LIGHT (for ex. RAL9010/HZH)</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>(normal precipitation loads, direct weathering on product acceptable, except direct sun impact not longer than 3 hours. Buildings up to three floors)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AVERAGE (for ex. RAL5014/MZT)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>DARK (RAL6009/PZE)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Extreme direct weather impact</td>
<td>LIGHT (for ex. RAL9010/HZH)</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>(high weather loads where building design doesn’t provide any protection to windows or doors or it’s located higher than 3rd floor)</td>
<td></td>
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<tr>
<td></td>
<td>AVERAGE (for ex. RAL5014/MZT)</td>
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<td></td>
<td>DARK (RAL6009/PZE)</td>
<td>-</td>
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</tr>
</tbody>
</table>

- Increased risk of timber damages. Stain and lasur coating resistance decreases. Increased UV exposure can contribute resin appearance and affect overall product quality.
- Warranty only if alu clad from outside is used
REMEMBER!

- Defects of wood parts, fittings, aluminium profiles due to aggressive environmental impact - the presence of chemical substances, proximity and direct effect of the sea, saltwater, direct exposure to sunlight of dark hues - is not considered a manufacturing or product defect, unless the product is used with special components suited for these conditions as defined by the manufacturer in the order.

- Products without full factory made finish are not covered by warranty.

- The warranty does not apply to production which is being repaired or modified by the customer’s own initiative (without informing the manufacturer about a warranty event before carrying out repairs). An exception is a mutual written agreement that the Customer undertakes the performance of the repairs.

- The warranty terms provide that a shelter must be installed above the front door to protect them from direct exposure to external conditions. Doors that have boreholes for drainage of excess moisture should be fitted without dampening these drainages.

- No warranty is provided if the cracks in the glazing are caused as a result of thermal stress. Cracks resulting from load shifts are covered by warranty only if the customer has informed about the location of the site and warned about the potential load shifts.

- One of the most common complaints in respect of glazing is the forming of condensation inside and/or outside. Outside condensation is more typical for window with high thermic durability, when the air in the morning warm up faster than the external surface of the glass. It is a temporary phenomenon and does not cause adverse effects. Internal condensation, meanwhile, point to too much moisture in the room and insufficient ventilation. Such characteristics are not considered a warranty event.

- If the customer does not comply with the manufacturer’s recommendations for the transportation and storage of products, any damages or issues are not considered to be a warranty case.

- The adjustment of the windows/doors by the manufacturer is carried out before removing the product from the plant. If we provide installation, the products receive additional adjustment after the completion of installation works. In the mean time the customer is responsible for periodic adjustment of the product and it is not considered to be a warranty event.
• **We recommend to avoid the installation of windows and doors if construction works are in progress. If this is not possible, additional attention must be paid to protecting the surface of the products and mechanisms from dust and chemical agents. If products are damaged during construction works then claims are not covered by warranty.**

• **If there is a warranty claim, it should be submitted in writing by adding as much information as possible about the found defect or fault and information about the specific location of the product. After receiving the warranty claim, the representative of the manufacturer will contact the indicated contact person to agree on the damage prevention.**
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