

# INSTALLATION GUIDE

## EDELHOLZ INDOOR FLOOR COVERINGS

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## GENERAL REQUIREMENTS FOR INSTALLATION

All working phases causing humidity (such as bricklaying, tiling and painting) must be finished at the construction site before starting the installation of the flooring. Due to increased humidity, wooden floors could absorb moisture. It is necessary to examine whether the subfloor is suitable for installation. The moisture content of the subfloor must be checked. In case of cement screed, the moisture content of the subfloor must be maximum 2 CM%, in case of heated cement screed maximum 1,8 CM%, in case of anhydrite screed maximum 0,5 CM%, in case of heated anhydrite screed maximum 0,3 CM%. EDELHOLZ solid wood floorings are set to 8 +/- 2 %, Duplex and Triplex floorings are set to 7 +/- 2 % moisture content. During the installation, the relative air humidity of the room should be around 40-60% (if the relative air humidity of the room permanently exceeds 60%, the installation cannot be started!), and the temperature must be between 18 and 20°C. Under such conditions the set moisture content of the flooring does not change significantly, and thus, significant changes in size cannot be expected either. Before installation, wooden floorings should become acclimatized at the construction site (depending on the season it takes approx. 2-3 days, in winter 4-7 days). This is necessary so that the wooden floor can adapt to the temperature and humidity conditions of the room. The equilibrium wood moisture value set during transport changes accordingly, which takes more time in winter due to the larger difference between outdoor and indoor temperatures.

The wooden flooring will always adjust to the relative air humidity of the room, in order to reach the wood moisture equilibrium defined by relative air humidity and temperature of the room.

Low air humidity causes the flooring to emit moisture, while high air humidity causes the flooring to absorb moisture. In winter, when the climate is dry, it is worth putting a humidifier on the radiator (depending on the air moisture content of the room) to avoid gaps appearing between the planks. In summer or during the rainy periods of autumn, the relative air humidity can exceed 60% for a longer time. This can lead to warping and deformation of the flooring. To avoid this, it is suggested to use an air conditioner or dehumidifier to bring the air humidity level back to acceptable, between 40 and 60%. When using an air conditioner, please lower the average ventilation time in the room, and close the doors and windows. When using a dehydrator, please do not forget to empty the catchment vessel at least once a day. When using an automatic ventilation system, please time the ventilation to early morning or to late evening. It is necessary, because during the day the relative air humidity is higher outside than inside, and if you let it in, it can cause the warping and deformation of the floor.

In case of extreme weather, when the relative air humidity of the room cannot be reduced by ventilation, the installation of an air conditioner or a dehydrator can be necessary.

**We do not recommend installing our floorings in cellars, bathrooms, or kitchens, around indoor swimming pools and in wet, damp rooms! The high relative air humidity can lead to the deformation, or even the total destroying of the flooring.**

**It is not allowed to install our floorings to electric underfloor heating.**

Besides, the quality and unevenness of the screed should also be checked (see Inspection and preparation of the subfloor).

Packages must be opened right before the installation! Please leave the installation to a specialist, who will check the moisture content, dimensional accuracy and other features of the wooden flooring. Quality objections must be indicated before the flooring is laid. We cannot accept post-appeal after installation! During the installation several packages should be opened, and lay the planks mixed in order to get a uniform image.

### **INSPECTION AND PREPARATION OF THE SUBFLOOR**

The installation is recommended on cement screed (recommended min. C30) or anhydrite screed (recommended min. E300). In case of hot water underfloor heating, the screed should be heated up professionally, and the heating protocol made by the engineer should be shown at the construction site. Please turn off the heating 48 hours before starting the installation! In winter, the temperature of the surface should be lower, but minimum 15-18°C, and it can be raised only 72 hours after the installation. The temperature can be raised by 5 °C by day, up to a maximum water temperature of 40 °C.

**Pay close attention to the fact that the surface of the wooden floor can be a maximum of 28 °C when operating underfloor heating, 25-26 °C is recommended. Failure to adhere to these rules can damage the floor, causing warping, cracking and deformation, and significant increase of the heating cost. Improperly set temperatures can also damage the screed substrate, which also affects the proper functioning of your floor.**

The screed manufacturer must be asked in writing about the amount of residual moisture which is still suitable for the installation. If possible, this value is needed to be reduced with 0,3 CM%. The subfloor must be as dry as it is indicated. In case of cement screed, the moisture content of the subfloor must be maximum 2 CM%, in case of heated cement screed maximum 1,8 CM%, in case of anhydrite screed maximum 0,5 CM%, in case of heated anhydrite screed maximum 0,3 CM%. If the moisture content of the subfloor exceeds these values, the installation cannot be started! Too high moisture content of the subfloor would lead to deformation of the floor in the future. The subfloor must be even: the unevenness can be maximum 2 mm/ 2m. If the subfloor is not even, then later under the flooring cavities can appear, causing unpleasant sounds when stepping on the floor.

There must not be cracks on the surface: if there are any, they must be removed with the help of special synthetic resin. The strength of the subfloor must be minimum 1,5 N/mm<sup>2</sup>. The subfloor must be clean: oil, grease, paint etc. must be removed.

In case of gluing technology, the flooring must be fine-sanded, and the dust should be removed with vacuum cleaner. If you would like to glue the flooring on plaster (calcium-sulphate) or anhydrite screed, we recommend to use primer coating. Professional use of primer coating leads to the improvement of adhesion values. Moisture-closing blocks the moisture coming afterwards from the subfloor, e.g. in case of rooms without basement. The primer, the levelling component and other materials must be compatible with the adhesive. If the screed doesn't meet the requirements of using gluing technology (adhesive force, etc.), the subfloor and the flooring should be separated with a foil (floating installation). This way the pulling and shearing forces could be ceased maximally. Professional construction work is a fundamental condition for the successful installation of EDELHOLZ wooden floorings. If gluing is carried out on non-cement or plaster (calcium-sulphate), but on dry screed, chipboard or other type of subfloor, please, consult before the installation with the manufacturer and the construction company about the suitability of the subfloor.

It is important to leave a dilation gap in the place of installation around the walls and the other building structures.

## INSTALLATION ON UNDERFLOOR HEATING

EDELHOLZ Triplex and Duplex floorings are suitable for installation on hot water based underfloor heating.

It is also not permitted to lay our floors directly on electric underfloor heating!

The minimum thickness of screed above heating pipes is 45 mm. 60 mm is recommended.

Installation is not allowed on underfloor heating systems with cooling function (cold water in summer). In the case of underfloor heating, do not use carpets, as this may reduce the efficiency and heating capacity of the underfloor heating!

**Pay close attention to the fact that the surface of the wooden floor and wooden parquet can be a maximum of 28 °C when operating underfloor heating, 25-26 °C is recommended. Failure to adhere to these values can damage the floor and can cause warping, cracking and deformation of the planks, and significantly increases the cost of heating. Improperly set temperatures can also damage the screed substrate, which also affects the proper functioning of your floor.**

For more information about hot water underfloor heating, see the previous paragraph!

## INSTALLATION TYPES

### GLUING ON SCREED

For underfloor heating, gluing technology is recommended for optimum thermal conductivity. We recommend flexible adhesive for fastening 1-layer solid, 2-layer solid DUPLEX and 3-layer solid TRIPLEX floorings. It is advisable to consult the adhesive manufacturer in any case for proper application of the adhesive. The glued area should be weighted if necessary, and avoid stepping on the freshly glued area. Only in this case can the adhesive and the screed bond optimally together.

Installing solid wood planks over 8 m width and over 13 m length is not recommended. For larger areas, dilatation gap should be formed, and the already existing dilatation gaps need to be considered. Keep at least 15 mm gap from walls, heating tubes and other fixed points!

When installing the floor, the first 2-3 rows of planks must be laid dry, the technical dilatations along the walls must be adjusted with wedges, the 3 rows set in this way must be marked on the substrate with a pencil. After retrieving the rows, apply the adhesive to the marked mark and lay the floor in an adhesive bed.

### FLOATING INSTALLATION

Elastilon is a worldwide patented material that provides an excellent solution for the installation of EDELHOLZ 1-layer solid and 3-layer TRIPLEX floorings. Floating installation is possible with Elastilon even in case of underfloor heating. Elastilon can be used regardless of the thickness of the flooring and the type of the underfloor. Elastilon is suitable for installation on already existing, old subfloor as well. Elastilon Strong is elastic, its thermal and acoustic properties are also great. When using Elastilon, the steps on the floor become less noisy, the noise can be reduced by 20-22 dB. Elastilon is good for the environment, as its emission results are excellent, and it does not contain CFCs or formaldehyde.

**Laying method of Elastilon:**

1. For proper installation the subfloor must be dry and even (see in paragraph Inspection and preparation of the subfloor).
2. Place the Elastilon on the subfloor with the protective film facing up. It is important to place Elastilon side by side without overlapping. Always lay the floor crosswise to run the Elastilon!
3. When laying, the protective film is folded back (pulled off) twice the width of the floor. The adhesive surface is now visible and tactile.
4. Apply an additional film to the first row, which is folded back and placed on the adhesive surface of the Elastilon so that after laying the first row it can be pulled out towards you (the fold is on the wall side). The first row of floors is laid on the subfloor, glued to the grooves and tongues at the ends of the planks. Leave a dilation gap between the wall and the floor of 25-30 mm for solid wood floors and 15-18 mm for Triplex floors. This gap will be covered by the skirting attached to the wall after the installation. To maintain this distance during the installation, place wedges next to the wall to remove when the laying is finished! The same distance must be maintained during installation from other built-in fixed elements (at the junction of other coverings, heating pipes, balcony doors, etc.). It should also be noted that this 25-30 mm gap should be left in a circle along the wall and not just longitudinally!
5. Lay the second row of planks to the first row, if necessary, knock the planks together with the help of a beam, so that they fit seamlessly. Then the protective film is pulled out again to the floor edge of the 2 rows. The other planks are laid out one by one, repeating this operation.

If you are working with Elastilon for the first time, let Elastilon run 30 cm longer on the wall when starting the work, then you can start working with the first and second rows as described above by folding the film back from this extra material to the width of the first row.

If there are heavy objects in the room to be covered, such as a kitchen island, bar counter, the wooden floor must be glued down.

**INSTALLATION ON WOODEN SUBFLOOR, ON WOODEN JOINTS (SECRET NAILING)**

Wooden floorings manufactured by EDELHOLZ are suitable for installation on wooden subfloor. About the right way of layering ask your designer.

**SKIRTING**

Skirting can be applied on the wall by screwing or gluing.

This is a general installation guide. Before installation always turn to a specialist, in order to achieve the desired look!