

INSTALLATION

General Information:

- 1) The product must be stocked in a dry place with integral packing. The parquet should be removed only at the moment of installation, if conditions are not correct, it should remain fully wrapped & stored in a dry building.
- 2) The client has the obligation of verifying the product prior to installation. This entails making certain there is no damage caused by transportation, opening the parquet packages and checking the material. The material cannot be contested once it has been installed.
- 3) At the moment of installation the average ambient air humidity must fall between 45% - 60% and the temperature should not be below to 18°C.
- 4) The suitability of the sub-floor must be determined prior to installation, ascertaining that it is clean, compact and of a uniform thickness. In addition, the sub-floor must adhere to the norms designated for the planarity, using a level (straight edge) of 4m ± 2mm. The presence of a vapour barrier must be established. The moisture content should be measured with a carbon hygrometer and should not exceed the values below:

	Without Under Floor Heating	With Under Floor Heating
Concrete Sub-Floor	2,0%	1,7%
Anhydride Sub-Floor	0,5%	0,2%

- 5) The floor fitter should be aware of the colour/tone variations in the hardwood flooring so as to create a homogeneous end result.
- 6) In order to permit the natural stabilization of the wood flooring with regards to the ambient conditions, expansion joints must be left on the perimeter of the room. This can be done using wooden wedges, leaving a space of 5-15mm depending on the size of the room (15mm if it large). The wedges must be removed as soon as the installation has been completed. The resulting spaces around the perimeter of the room will subsequently be covered by skirting boards.

Types of Installation Methods:

1. Floating Installation:

A floating installation can be assimilated to a unique and/or whole wooden surface which is simply rested upon a sub-floor, and therefore completely free to adjust itself should changes in the environment occur. A floating installation is generally recommended only for engineered flooring, which is comprised of a wooden wear layer and a counterbalance for structural stability, as well as, tongue and groove joints and dimensions of relevant proportions.

The installation of these elements takes place directly on the levelled sub-floor surface covered by a thin soundproof mat and vapour barrier. Each of the elements are fixed to one another using a small quantity of vinyl adhesive glue applied in the joints of the elements. Dilation joints should be included in correspondence with door thresholds or rooms with other types of flooring, in order to ensure a smooth transition from one room to the next.

2. Full Spread Glued Installation:

An adequate quantity of adhesive should be applied uniformly and in a semi-circular fashion to the installation surface using a notched spatula applicator and working the glue as needed to promote an adequate contact with the element, while following the instructions of the manufacturer and the yield of the product. The quantity of adhesive applied to the installation surface should be proportional to both the dimensions of the elements to be laid and the conditions of the installation surface, in order to guarantee the complete contact of the hardwood flooring elements with the adhesive applied. It is important to take note that an excessive, or conversely, inadequate quantity of glue may be the cause of post-installation defects. It is recommended to not apply adhesive to extended areas of the installation surface to ensure that the glue retains the necessary 'wetness' required for a correct adhesion with the parquet elements.

The installation of the flooring itself begins with the laying of a first row, followed by successive rows until the perimeter walls of the room in question have been reached. At this point, it is important to keep in mind that an expansion joint ranging between 5-10mm should be left between the last elements and the wall so as not to inhibit the subsequent natural expansion of the wood (Note: Do not leave an expansion joint in proximity of the door threshold).

Important Note: In absolutely no case are the joints of the hardwood flooring elements to be glued to one another as this will most likely induce the appearance of fissures during the possible dilation/retraction of the flooring elements due to a variation in the hygrometric conditions of the latter.

The floor fitter should take particular care during the installation so as to avoid the application of the glue on the top layer of pre-finished products, which cannot later be re-sanded as they have already been oiled or varnished. Should any residues of glue on the top layer become evident, it should be carefully wiped away immediately. Once the installation and the cleaning of the flooring has been completed, the application of a water-repelling product (recommended for Oiled flooring) is highly recommended to prevent eventual water or humidity infiltrations that may be provoked during ordinary cleaning and/or maintenance.

3. Nailed Installation:

This type of installation is recommended only for traditional solid flooring, thus not engineered. In the case of a nailed installation, the wooden lists must be well adhered to the sub-floor, wooden boards or panels. Prior to beginning the installation, it is wise to first choose the most appropriate wall from which to begin. In order to install the flooring correctly, at least 2 nails (35-40mm) should be embedded at a 45° angle on the tongue joint using a suitable awl. The wooden lists should be placed no further than 30-35cm apart to guarantee stability of the flooring.

Underfloor Heating Considerations:

What is a heated sub-floor?

A heated sub-floor consists of a cement base of either hydraulic binder or anhydride, with a system of pipes placed throughout its entire thickness through which a liquid capable of heating a given environment runs through. The under floor heating system is directly connected to the home's universal heating system in order to optimize the heat distribution in relation to the use, placement and exposure of the rooms in question.

Conditions for Installation

1. Tolerated Maximum Moisture Content of the Sub-floor:

- i. Cement Sub-floor / Sub-floor with hydraulic binders – 1.7%
- ii. Anhydride Sub-floor: 0.2%

2. Heating of the Sub-floor:

Turning on the heating system allows for the stabilization of the sub-floor, while discharging any tensions which may be present and establishing a degree of equilibrium and dryness corresponding to the environment conditions. Once the sub-floor is stable, there is no risk of it transmitting moisture to the wood flooring once it has been installed.

3. Presence of a barrier or vapour shield between the layer containing the heating system pipe work and the thermal insulation.

4. Minimum sub-floor thickness of 6cm, of which at least 3cm must be located above the heating pipes.

5. The minimum drying period required prior to turning on the sub-floor heating system:

- i. Cement Sub-floor: 21 days
- ii. Anhydride Sub-floor: 7 days
- iii. Cement Sub-floor with rapid/very rapid drying periods: 3-4 days (depending on the instructions provided by the manufacturer)

6. The heating has been turned on and the heating liquid temperature has been gradually increased in 10°C increments per day, until a maximum of 50°C is reached.

7. The maximum temperature of 50°C was maintained for at least 10 consecutive days, while adequately airing out the various rooms.

8. The cooling process was performed by gradually decreasing the temperature of the heating liquid 10°C per day until the temperature of +20°C is reached.

- 9. The heating system was kept turned off for approximately 5 days prior to the installation of the hardwood floors. However, before laying the flooring, it is important to certify that the surface temperature of the sub-floor lays between 15-20°C with a relative ambient humidity of no more than 60%.**

- 10. The superficial temperature post-installation should not exceed 26°C. The use of thick carpets on your new wood flooring is not advisable as they may limit air circulation. The recommended ambient conditions to be maintained are a temperature between 18-21°C with a relative air moisture content varying between 50 – 60%.**