



**February 9, 2010**

## **Installation of Hardwood Floors with Radiant heating**

Due to a special manufacturing technique, Karelia Hardwood Floors are suitable for installation with radiant heating.

Prior to installation, it has to be decided whether Karelia Hardwood Floors will be laid as a floating floor or glued down to the subfloor. Both methods are from the technical point of view possible, but a glued floor transmits heat better into the room. The capacity of heat transmission varies (see surface temperature diagrams). In order to avoid uneven swelling and shrinking of the floor (flooring material) the total area of the wood flooring must be heated.

Jatoba, Beech and Birch are not recommended for floors with radiant heating due to the higher movement of the wood based on the property wood. Please pay attention to very important points in connection with radiant heating, which are not contained in our standard installation instructions.

### **1. Prior to installation**

Allow two weeks' standing time for concrete to dry out. Switch on the heating starting at minimum and raising the temperature daily by approx. 5°C (41°F) until the heating reaches two-thirds of maximum. This action has to be taken in both summer and winter. Ventilate the room well. Run the heating at maximum during the last few days before installation.

Duration 1 day per 1 cm of "cast form" thickness.

Two days prior to the installation switch off the heating or in cold weather reduce it to 15 - 18°C (59°F - 64°F) surface heat.

### **2. Floating installation**

Check that the surface is level (see installation instructions) Check that the subfloor is sufficiently dry; 80 % of relative moisture, or 3.0 weight-%.

Spread 0.2 mm thick plastic membrane on the subfloor overlapping 200 mm or with taped joints. On top of the membrane, spread a corrugated cardboard or other porous soundproofing material. When using Karelia Underlayment as sound isolation, you will not need any additional humidity insulation. Lay the Karelia according to our installation instructions. Fix the skirting boards in place with screws or nails and screw down the thresholds and apron pieces. When fixing thresholds allow 10 mm gap around fixing screws.

### 3. Installation on to the subfloor by gluing

We recommend that a professional installer should do the gluing.

Switch off the radiant heating system about one day prior to the installation. Check that the subfloor is dry enough, 60 % of relative moisture or 1.5 weight-% of concrete mixture content.

Check that the subfloor is absolutely level, maximum deviation allowed  $\pm 1,0$  mm within the space of 2 meters.

If the surface has to be leveled, make sure that the leveling compound has dried completely. Should the sound requirements for a high rise be needed, then glue down a appropriate cork underlayment and then glue the Karelia onto the surface by using a 5 mm comb spreading spatula and a mastic-based adhesive having a very high dry matter content, min. 73 weight-percent. Suitable glues are PVA, two-component or resin. Glue the boards on tongue and groove according to installation instruction. Maximum glue application 500 gr/m<sup>2</sup>.

To hold the installed hardwood flooring in place while it dries, place weights on the surface. If available, unused packages are ideal for this purpose, but any similar object will suffice. Pay special attention to areas where there is likely to be heavy foot traffic, i.e. entrances and walkways. Remove the weights when the glue has dried. If there are traces of glue stain on the surface, remove immediately with a damp cloth.

### 4. After installation

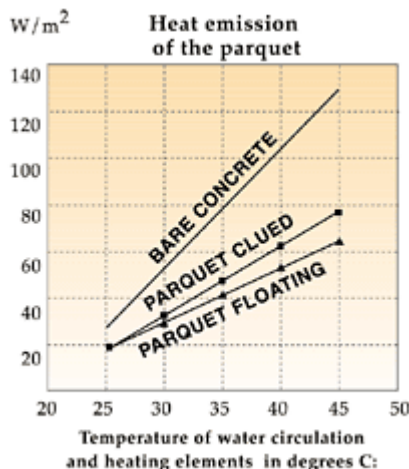
Wait 12 - 24 hours and then switch on the radiant heating. Raise the temperature so that a maximum temperature is achieved within five days. Then adjust the radiant heating so that the wooden floor surface temperature does not exceed + 27 ° C (80°F).

The ambient humidity must be kept at 40 - 60 %. Recommended room temperature is 18°C to 24°C (64°F to 75°F). If these conditions are not observed, abnormal movement may occur. The manufacturer, seller or installer cannot accept any responsibility for such occurrences, nor are they covered by the guarantee.

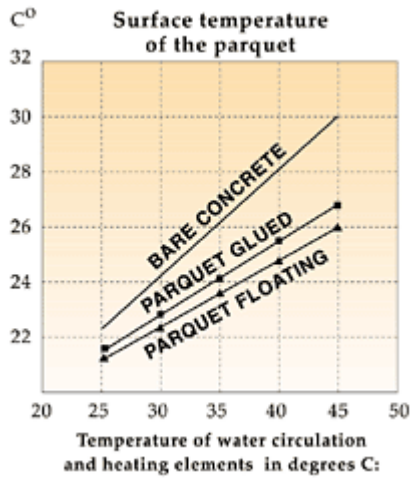
For additional information, contact your retailer.

### 5. Finally

Karelia wood flooring can be installed in conjunction with electrically heated, or Floors with warm water circulation systems. Karelia can be either installed, as a floating floor, or glued down floor.



Heat emission of bare concrete floor, wood flooring glued to the subfloor and floating wood flooring, when the room temperature is + 20 ° C (68°F).



Surface temperature of bare concrete floor, wood flooring glued to the subfloor and floating wood flooring, when the room temperature is + 20°C (68°F)

Should you have any further questions, please call your nearest Karelia Dealer., or go to <http://www.kareliaparketti.com/>

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