

## Bamboo flooring over under-floor heating: guidelines and requirements

Installing a bamboo floor (or any other natural material) on top of under-floor heating is likely to cause the floor to dry out more than in normal circumstances, which can lead to more shrinkage than may be otherwise expected. To minimize this, optimal room conditions need to be maintained: a temperature of approximately 18-21 degrees Celsius and 40-65% relative air humidity (use a hygrometer + thermometer to monitor this).

In the installation instructions of your Plantation bamboo flooring you will find whether it is suitable for installation on floor heating or not.

### Pre-conditions:

Please make sure the following conditions are met:

- Bamboo flooring can only be installed on electrical floor heating systems when the capacity is lower than 80 W/m<sup>2</sup>. On top of the electrical heating elements there should be a heat distributing layer of at least 4-6 mm (for example levelling compound).
- Installation is possible on most warm water floor heating systems. This is the preferred underfloor heating method with bamboo flooring, as the direct heat is less concentrated on the flooring.
- The installation can only take place after determining the moisture content of the sub-floor by means of an acceptable concrete moisture test (Calcium-carbide method test). Excessive humidity has a detrimental effect on the flooring. The maximum permitted humidity levels for sub floors are: sand cement 1.8%, chipboard 7-9%, anhydrite floors 0.3%.
- The underfloor heating system should be placed throughout the whole room (at least 95% coverage of floor area), unless there is a break (expansion/contraction break) in the floor, to compartmentalise the heated/non-heated areas.
- The slab should be at least 50mm thick (minimal distance to the tubes 35mm).
- It is recommended to glue the bamboo flooring to the sub-floor. However, Compressed bamboo flooring and bamboo elite flooring may be installed as a "floating floor" over a suitable underlay (appropriate for underfloor heating); ensuring all other installation instructions are carried out – with particular attention to expansion/contraction gaps. Underfloor heating may cause the bamboo flooring to dry and contract more than other heating methods.

- If direct fixing the bamboo flooring: it should be professionally glued to the sub-floor with a glue which is suitable for using on a floor heating system and must be applied according to the manufacturer's instructions.
- Temperature measurement 'probes' should be built-into the floor via a thermostat to ensure that floor temperature can be managed and does not exceed 27°C
- During installation of the flooring the heating system should be turned off and the sub floor should be cooled off.
- For both cooling off and heating up we advise to do so in small steps of approx. 3°C per 48 hours.
- The heating system should not be used until 2 weeks after installation. The system should be warmed up slowly and the temperature of the flooring should never exceed 27°C.
- Bamboo flooring can only be installed on floor cooling systems when they are equipped with an anti-condensation device.

When installing Plantation bamboo flooring over floor heating, it is always possible that seams between the boards and cupping can develop. To minimise this you need to create optimal room conditions: a temperature of approx. 21°C and a 40-65% relative air humidity.

Whilst all due care is taken to ensure the accuracy of these instructions, individual circumstances (location, sub-floor and installation procedures) may vary and are beyond the manufacturer's control.

