BRIEFING NOTE FOR LAYING HAIN FLOORING ON CONTROLLED HOT WATER UNDERFLOOR HEATING SYSTEMS WITH COOLING FUNCTION

The entire HAIN flooring range, ecxcept for CASTELLO planks, is suitable for installation over controlled hot water underfloor heating with a cooling function. We recommend a full-surface bonding of the parquet flooring. The future user of the room is responsible for the long-term preservation of value and damage-free use of the parquet floor. No warranty claims can be derived from this information sheet and it does not replace individual planning of the heating/cooling system. On hot days, these systems can make spaces more comfortable, but they are not a replacement for conventional air conditioning systems.

The following measures and instructions must be observed for hot water underfloor heating with cooling function:

- **As a general rule:** The lower the thermal resistance of the flooring system, the better suited the flooring system is for use on a heated subfloor. The thermal resistance for the entire flooring system has to be calculated as the sum of the thermal resistance of all layers (generally: vapour barrier + insulating underlay flooring + floor covering). The maximum thermal resistance of the flooring system is 0.15 m^2K/W.
- For unhindered cooling transfer, floor surfaces should not be covered with carpets or similar items.
- The relative humidity at the surface of the cooled floor must not exceed 75 % in the short term or 65 % in the long term.
- For cooling, the initial temperature must be at least 20 °C and 3 Kelvin above the dew point temperature of the environment in the room in question.
- The maximum surface temperature may not exceed 29 °C.
- Temperature and relative humidity must be monitored with sensors throughout the year in order to ensure that the underfloor heating/cooling system is functioning properly. The sensors should be installed near the flooring, appropriate to the setup of the room. You may need to install more than one sensor, depending on the size of the room.
- HAIN parquet should be completely glued in order to optimise the passage of heat.
- To keep the seasonal differences in relative humidity as low as possible, the relative humidity should also be > 40 % during the heating period. The use of a humidifier to maintain an optimum relative humidity is recommended.
- For checking and controlling the current climatic conditions, the installation of a temperature and humidity data logger (e. g. fidbox®) is recommended.
- A room temperature of approx. 18–22 °C and a relative humidity of approx. 30–65 % are the basis for a healthy room climate.
- The applicable cleaning and care instructions must always be followed.

Potential risks and damage if the above points are not observed:

- Deformation and cupping of the individual planks
- Formation of open joints between the plank rows and in the area of the head joints
- Delamination/detachment of the covering layers
- Dew point/condensation formation and resulting damage to the subfloor (screed)

Any temperature-controlled room requires planning and coordination of the heating/cooling system, the screed and the various coverings, taking into account the type of use, in order to ensure optimum and fault-free functionality over the long term. When these special floor constructions are installed, professional standards are correspondingly important. Supplies and processing steps must comply with the generally recognised rules of technology, the information sheets available from the central association of the German construction trade and the assembly and installation guidelines of the relevant system suppliers and manufacturers. Corresponding information is available from the interface coordination supplied by the German Federal Association of Surface Heating and Surface Cooling e.V. (BVF).

Important note: The above points must be carried out in accordance with the applicable standards and/or certified by specialists (architect, heating specialist etc.). Further information can be found in the standards DIN EN 1264, DIN EN 15377 and DIN EN 12831 as well as in the interface coordination supplied by the German Federal Association of Surface Heating and Surface Cooling e. V. (BVF).

Subject to errors and technical changes.