

BAUWERK PARQUET ON TOP OF ELECTRIC HEATING PANELS

Wood does not take as much heat away from the feet as other materials, such as tiles. This results in improved walking and living comfort.

Bauwerk parquet is suitable for installation on top of electric heating panels with moderate heating performance. The maximum acceptable surface temperature is 27 °C, and this may not be exceeded even near the edges. In addition, with electric panel heating, the maximum output of 125 W/m² should not be exceeded for floating installations, or must be between 60 and 110 W/m² for glued-down installations. The accumulation of heat due to carpeting, shelving, athletic matting, futon beds and similar objects must also be avoided, as this can lead to increased joint forming and bulging of the flooring elements.

Choosing wooden flooring

Essentially, all glued-down or floating 2- and 3-layer flooring by Bauwerk is suitable for installation on top of electric heating panels. Flooring with a material thickness of up to 14 mm and thermal resistance of $R \leq 0.15 \text{ m}^2 \text{ K/W}$ is considered suitable without requiring special adjustments. Because of its low heat transfer resistance, full-area bonding is the best installation method. With floating installation, the necessary inclusion of an underlay mat and the often-unavoidable layer of air (e.g. due to unevenness in the floor or heavy furniture) tend to increase heat transfer resistance.

Special considerations for installation on top of electric underfloor heating

- › The floor must be installed following the manufacturer's instructions and must be suitable for the intended application. Requirements apply according to German Construction Contract Procedures (VOB) part C, DIN 18356 for parquet or DIN 18365 for floor covering work, Austrian Standard (ÖNORM) B5236, SIA 251 and 253, as well as the state-of-the-art technology available.
- › The construction recommendations from the manufacturer of the respective adhesive must be observed.
- › In the case of glued-down installation, ensuring professional installation by using jointing compounds from filler / putty manufacturers approved for this purpose is extremely important. In addition, the surface heating elements must be covered with a sufficiently thick layer (at least 3 mm).
- › Heated and unheated partial areas must be separated by movement joints embedded in the top layer. The heating of partial areas within a single room is highly inadvisable.
- › The client or their representative should ensure timely coordination among architects, planners, electrical engineers, building utility engineers and floor installers in order to arrange the overall planning and execution.
- › When underfloor heating is on, the surface temperature must not rise above 27 °C at any location. High temperatures and/or an excessively dry indoor climate have a negative effect on wooden flooring and can lead to joint expansion, deformation or even crack formation.
- › In order to prevent possible damage to the parquet, we strongly recommend equipping the heating system with temperature sensors and thermostats that have a limiter function. We also recommend the installation of a fidbox measurement device in close proximity to the floor, so that the temperature (°C) and relative humidity (%) can be recorded over the service life of the floor. The collection of data over time can help avoid lengthy investigations in the event of damage.
- › With controlled residential ventilation that does not recover moisture, the air circulation rates must be adjusted during the heating period in order to avoid an indoor climate that is too dry.



For types of wood that have a greater tendency to swell or shrink (e.g. beech and maple), larger joints and cupping occur in winter. Humidifying the air and maintaining a healthy indoor climate (20 to 22 °C, with a relative humidity of 35 to 40% during the heating period) can counteract this effect. Measuring the indoor climate conditions is particularly important while operating electric panel heating. In general, constant heating up and cooling down should be avoided, and even heat dissipation should be ensured. Failure to observe this recommendation can lead to damage, such as joints, cracks, cupping or creaking noises in the parquet elements due to rapid heat dissipation from the electric heating panels.

The recommendation made in this document refers to the current state of the art of the products required for the systemic installation of electric heating panels underneath parquet floors. As soon as significant technical changes are made to any of the products described, the recommendation made in this document shall become invalid.

