

W O O D

Under 'Wood', are included hardwood, laminate (engineered), and composite (plastic) floorings. There are three installation methods for wood floors: nailed, glued, and floating. Follow manufacturer's recommendation for installation and suitable flooring type for each application. Refer to guidelines from National Wood Flooring Association.

For a wood floor, it is very important to have a low and stable temperature on the whole floor surface. Heating elements should be installed in such a way that they produce even warmth over the entire floor, all the way to the walls, regardless of the temperature setting.

The maximum surface temperature on the wood flooring shall be 79°F to 81°F (26°C to 27°C). For energy efficiency, thermal insulation shall be installed under the heating elements, especially under a wood joist construction.

Radiant heat should not be turned abruptly on and off, as this will subject the wood fibers to be repeatedly traumatized causing stress fractures, gaps and twisting. With STEP WARMFLOOR, the heating level can be lowered to attain the ideal constant temperature by using an electronic voltage regulator.

Be sure that the flooring will not be exposed to high humidity or moisture, an inherent enemy of wood. The subfloor must be completely dry before installing the wood floor. Turn the radiant heating on to a low heat, then raise the supply temperature progressively until it reaches the maximum temperature and maintain it until the ambient relative humidity is stabilized.

Before installation, wood has to be acclimatized to the moisture content on the site, knowing the temperature and humidity conditions that will prevail once the structure is occupied. For the dimensional stability of the wood flooring the equilibrium moisture contents recommended is a relative humidity range of 30% to 50% and a temperature range of 60°F to 80°F (16°C to 27°C).

Hardwood flooring can be installed over a slab that is on-grade or above grade. Below-grade installations are not recommended. Laminate flooring, also called engineered flooring, can be installed in areas with wide humidity variations because it displays far less expansion and contraction with moisture changes. Moisture is still a consideration. To prevent moisture from reaching the finished floor, a proper vapor barrier must be used on top of a concrete slab and over exposed earth.

The heating elements should not be in direct contact with any conductive material, e.g. wire mesh, aluminum foil, etc., or aggressive solvents and acids, e.g. Bostik Best or equivalent.

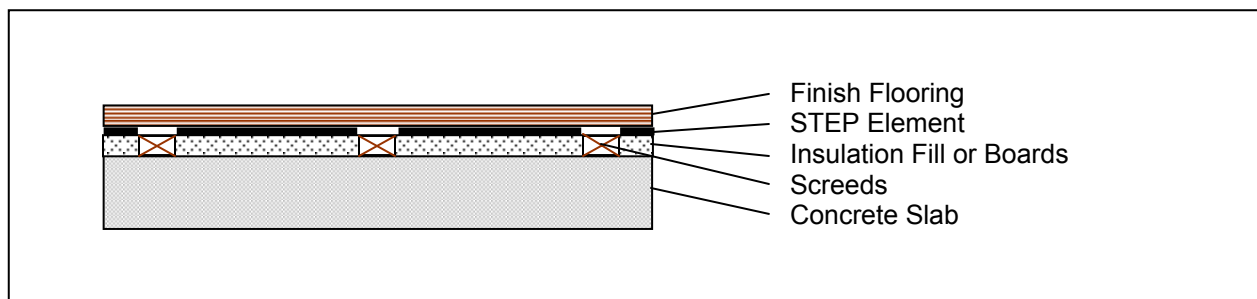
If the heating system is not self-regulating, the hardwood floor should not be covered by rugs, mattresses, or heavy objects, as these will increase the temperature and may damage the floor. STEP WARMFLOOR is self-regulating and cannot overheat.

INSTALLATION GUIDELINES

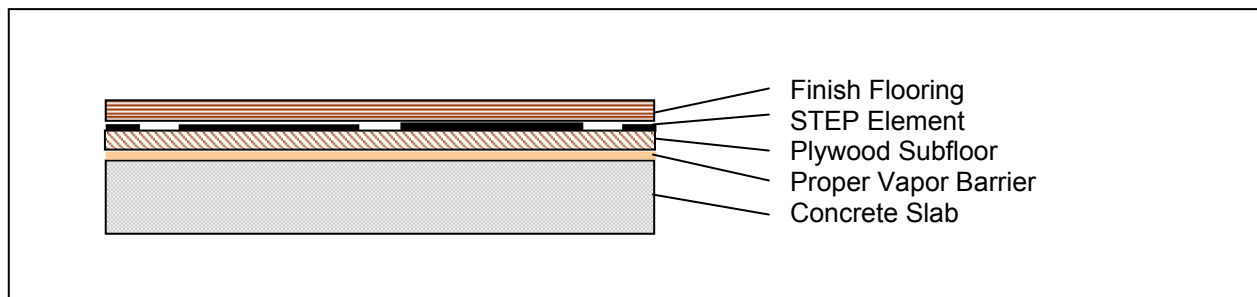
Lay the strips or planks crosswise over the heating elements. When nailing the wood floor to the subfloor, drive the nails between the elements; if it should be necessary to nail in the elements, choose the middle where the voltage and current are zero.

Definitely, avoid penetrating the bus braids running along each side of the elements. When using a screed system, pour masonry insulation fill or lay foam insulation boards between the screeds to avoid air gaps under the elements. For glue-down installations, cover the elements with floor leveler or underlayment boards. **The heating elements should not be in direct contact with aggressive solvents.** Follow flooring and mastic manufacturer's specifications for installation methods.

Application of STEP WARMFLOOR over a screeds system



Application of STEP WARMFLOOR over a plywood-on-slab system



Application of STEP WARMFLOOR over wood joist construction

