Manual for the installation of Pergo laminate on underfloor heating.

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General instructions

All Pergo laminate floors can be used in conjunction with „low temperature" underfloor heating, under following conditions. This is true for underfloor heating systems with heating components - hot water or electric – embedded in the floor.

The underfloor heating must be installed in accordance with the supplier"s instructions and the generally accepted instructions and rules. The general installation instructions for Pergo laminate floor without underfloor heating also apply of course, unless explicitly mentioned below. The laminate floor must be laid FLOATING.

It is recommended to lay a Pergo underlay with built-in moisture barrier or begin with a separate plastic film of minimum 0.2 mm thick. In this case, use a single sheet of plastic foil, or use several sheets but make sure they overlap at least 20 cm and tape them together.

The maximum allowed heat resistance (R) of a floor covering is 0.15 m^2K/W.

The respective values for Pergo are as follows. R is the total heat resistance of the laminate combined with the respective underlay.

	Professional Soundbloc	Underlay Foam	Underlay foam+	Smart underlay	Smart Underlay+	Silent Walk	Moisturbloc Extreme
Thickness (mm)	2	2	2	3	3	2	2,5
in combination with PG laminate: total R-value (m^2K/W)							
Pergo laminate 7 mm	0,104	0,096	0,110	0,140	0,137	0,061	0,099
Pergo laminate 8 mm	0,108	0,100	0,114	0,144	0,141	0,065	0,103
Pergo laminate 9 mm	0,112	0,104	0,118	0,148	0,145	0,069	0,107
Pergo laminate 9,5 mm	0,114	0,106	0,120	0,150	0,147	0,071	0,109

Make sure you have the necessary expansion joints. NEVER lay lengths/widths of more than 13 m

Concrete or screed as sub-floor

The type of screed and the installation method, combined with the underfloor heating, must comply with the instructions of the suppliers of the screed and the underfloor heating system.

To obtain a homogeneous heat distribution across the entire floor, the distance between the heating elements must not be greater than 30 cm. The depth of the elements is determined by the fitter of the underfloor heating (>4 cm).

The sub-floor must be sufficiently DRY across its complete thickness when installing the floor covering. This is maximum 1.5% according to the CM method for cement-bound floors and maximum 0.3% for anhydrite-bound screed. This can only be guaranteed, when installed in new buildings, by starting up the underfloor heating. Start up the underfloor heating gradually at least two weeks before laying your laminate, and minimum 21 days AFTER laying the screed (max. 5° per day).

- at 50% of the capacity for 2 weeks
- 100% for the last two days.

For newly spread screed, follow the guidelines of your installer for the start up period. A heating protocol should be presented; ask for it if necessary.

The heating in general

Switch the heating off completely until the floor temperature is under 18°C.

AFTER laying your floor, you must restart the heating gradually (5°C per day).

The maximum allowed CONTACT temperature is 27°C. The maximum warm water temperature at the boiler output is 50°C (if applicable).

ALWAYS change the temperature GRADUALLY at the start and end of a heating period.

Make sure that the relative air humidity in the rooms is not too dry during the heating season. At 18-22°C, a relative humidity of minimum 50% must be guaranteed. If necessary, use a humidifier. This is the case for ALL types of wooden floor coverings.

Always avoid heat accumulation by carpets or rugs or by leaving insufficient space between furniture and the floor.

Open joints may appear during the heating season.

Floor cooling

More and more systems that combine heating and cooling are being installed in homes. A combination of heating in winter and cooling in summer can for technical and physical reasons be problematic in combination with organic floorings in general and with laminate in particular.

The installation instructions for Pergo laminate on underfloor heating without cooling also apply here of course.
However, it is important that floor cooling systems are equipped with an advanced control and safety system in order to prevent internal condensation (dew point regulation). To avoid damage to the floor, the supply
temperature of the cooling water must not be reduced below a certain temperature, the so-called dew point
temperature. Lower temperatures will produce condensation in the floor and damage the laminate: warping, distortion, swelling and gapping.

An effective control system consists of automatic probes that can detect when the dew point (= when condensation starts) is reached under or in the laminate, and then switch the cooling off. Room thermostats should never be set under 24°C. In addition, thermostats must never be set at a temperature which is 5°C lower than the room temperature. So at a temperature of 32°C, the room thermostat must not be set lower than 27°C.
The cooling circuit must have a control that prevents the temperature of the cooling liquid dropping below 18 to 22°C. This depends on the climate zone where the floor is installed. In zones with a high relative humidity, the minimum is 22°C; at average humidity and temperature levels, it can go as low as 18°C.
If you do not respect these instructions, the warrantee on the Pergo laminate floor is
void.

A heat resistance of less than or equal to 0.09m²K/W is normally recommended for floor cooling. The heat resistance of our Pergo laminate floors combined with our Pergo underlays can be found in the table above. In some cases you need to take into account a certain loss of capacity.

Heating films

Heating films or other “new” systems ON the screed or wooden sub–floor are not always suitable. Further guidelines for these applications can be found below.

An underlay must be used to level the floor, to insulate it and in particular to embed the film elements and electrical connectors. The following structure is usually applied: first the underlay, then the heating film and then the laminate floor.
For these systems the conditions that have to be fulfilled are that the heat must be distributed homogeneously across the entire floor to prevent any cold or warm zones, that the heat radiates up and not down, that the
maximum contact temperature is not more than 27°C, and that the electrical connectors between the panels
are thin enough to be sunk in the underlay mat while maintaining their strength and electrical safety, also in the event of possible condensation or a leak.

A second type of heating systems for renovation is a system with warm water pipes or electrical resistances

embedded in frames. These are usually polystyrene panels which may be combined with metal plates. We consider these systems to be more reliable because they ensure a more homogeneous distribution of heat, provide heat insulation under the underfloor heating, have good contact and provide a stable sub-floor under the laminate floor. The above-mentioned notes still apply but we believe they are easier to fulfil.

All these aspects must be discussed with the distributor/installer of the heating system to ensure that he also takes his responsibility in this matter.

We trust we have provided sufficient information. If you have further questions or problems, please do not hesitate to contact our technical department.

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