UNDERFLOOR HEATING

INSTALLATION

GENERAL INSTRUCTIONS

All Floover floorings can be used in conjunction with low temperature underfloor heating, provided it is a heating system with heating components (hot water of electric), which are embedded in the floor. The underfloor heating must be installed in accordance with the supplier's instructions and according to the generally accepted norms and rules. The general installation instructions for Floover flooring without underfloor heating also apply of course, unless explicitly mentioned below. The flooring must be laid floating.

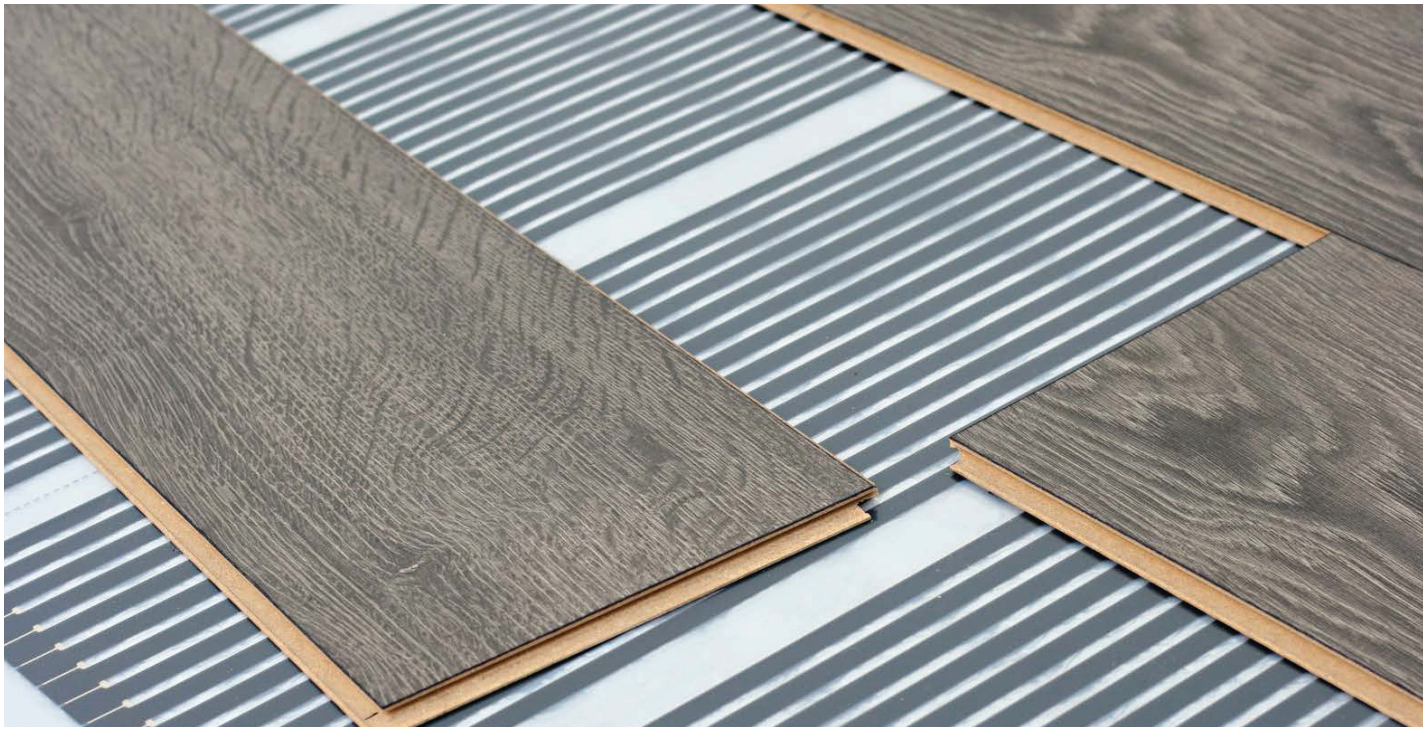
It is recommended to lay an underlay with built-in moisture barrier or begin with a separate plastic film of minimum 2mm thickness. In this case, use a single sheet of plastic foil, or use several sheets but make sure they overlap at least 300 mm and tape them together.

PERFORMANCES

The maximum allowed heat resistance (R) of a floor covering is 0.15 m2KJW (EN 4725), in order to achieve Energy saving rules established by CE organization and specified generally. All Floover products accomplish those requirements, and have the following values for energy saving calculations:

	STANDART HDF CONSTRUCTION	SPLASH2O VERSION
FLOOVER ORIGINAL	0,088 K*m2/W	0,060 K*m2/W
FLOOVER SYNCHRO	0,089 K*m2/W	0,061 K*m2/W
FLOOVER PLUS	0,090 K*m2/W	0,062 K*m2/W

It is important to accomplish limitations of m2 in 1 installation without joints: < 120 m2 for Floover SplasH2O and SplasH2O light / < 150 m2 for HDF and HDF light.



UNDERFLOOR HEATING

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 300 mm. The depth of the elements is determined by the fitter of the underfloor heating. The sub-floor must be sufficiently DRY across its complete thickness when installing the floor covering. This is maximum 1 .5% humidity according to the CM method for cement-bound floors and maximum 0.3% humidity for anhydrite-bound screed.

This can only be guaranteed, when installed in new buildings, by turning on the underfloor heating. Turn up the underfloor heating gradually at least two weeks before laying your FLOOVER flooring, and minimum 21 days AFTER laying the screed (max. 5°C 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.

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 Floover in particular. Not for Floover SplasH2O version, which resist all humidity and water condensation.

The installation instructions for Floover flooring on underfloor heating without cooling also apply here of course. Low temperature will produce condensation in the floor and damage the HDF / Cork layers: warping, distortion, swelling and gapping would be possible consequences."

Floover only recommends SplasH2O and SplasH2O light for cooling systems. An effective control system consists of automatic probes that can detect when the dew point (when condensation starts) is reached under or in the Floover, 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.

lf you do not respect these instructions, the warranty Floover is void.

A heat resistance of less than or equal to 0.09 m2K/W is normally recommended for floor cooling. The heat resistance of Floover is always accomplished with that requirement .

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 can 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 FLOOVER 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.