

CLIP FLOORS WITH UNDERFLOOR HEATING COMMERCIAL/RESIDENTIAL

UNDERFLOOR HEATING INFORMATION

E 4.0	General Information about underfloor heating
E 4.1	Clip floors with underfloor heating

Table 1

INTRODUCTION

These instructions apply to Junckers solid hardwood floorboards installed in commercial and residential areas with clips on concrete or screeded subfloors with built-in underfloor heating.

Following underfloor heating systems are described:

1. Clip floors on subfloor with cast-in heating pipes
2. Clip floors on concrete with electrical heating mat
3. Clip floors on polystyrene boards with heating pipes
4. Clip floors with heating pipes set in heat distribution plates.

Please note that full documentation comprises General information about underfloor heating and this document, see table 1.

See also C 1.0 General information, Junckers solid hardwood floors for commercial and residential areas.

If questions, please contact Junckers Technical Service Department.

1. CLIP FLOORS ON SUBFLOOR WITH CAST-IN HEATING PIPES

Clip floors can be laid on concrete or screeded subfloors with cast-in heating pipes or cables. It is extremely important that the floor heating system is designed to achieve a stable temperature across the surface of the concrete or screed. Following information applies to heating pipes in concrete or screeded floors.

To ensure an even temperature distribution on casting there must be min. 30 mm of concrete or screed above the heating pipes. The pipes should not be spaced more than 300 mm apart, and the cables not more than 150 mm apart.

Before installation the heating system must have been in operation for at least 2 weeks at 2/3 power and 2 days at full power. During this period the room must be ventilated briefly every day. The moisture content of the concrete or screed must not exceed 65 % RH (UK 75 % RH).

For clip floors laid on concrete or screed, with cast-in heating pipes or cables, an intermediate layer of Junckers PolyFoam must be used and beneath it a 0.20 mm PE membrane with a 200 mm overlap, taped at the joints and turned up at the walls.

1.1 FLOOR COMPONENTS, CAST-IN HEATING PIPES

1. **Junckers solid 2-strip or plank floor**
 Wood species, dimensions, grades and finish:
 22x129 mm 2-strip: see B 2.0
 14x129 mm 2-strip: see B 3.0
 20.5x140 mm Planks: see B 5.0
 20.5x185 mm Planks: see B 6.0
 15x129 mm Planks: see B 7.0
2. **Clips**
3. **Intermediate layer**
 Junckers PolyFoam
4. **Extra moisture barrier**
 Junckers Sylvathene, 0.20 mm PE membrane
5. **Concrete or screeded subfloor**
6. **Heating pipes or cables**
7. **Reinforcement**
8. **Insulation**
9. **Concrete deck**

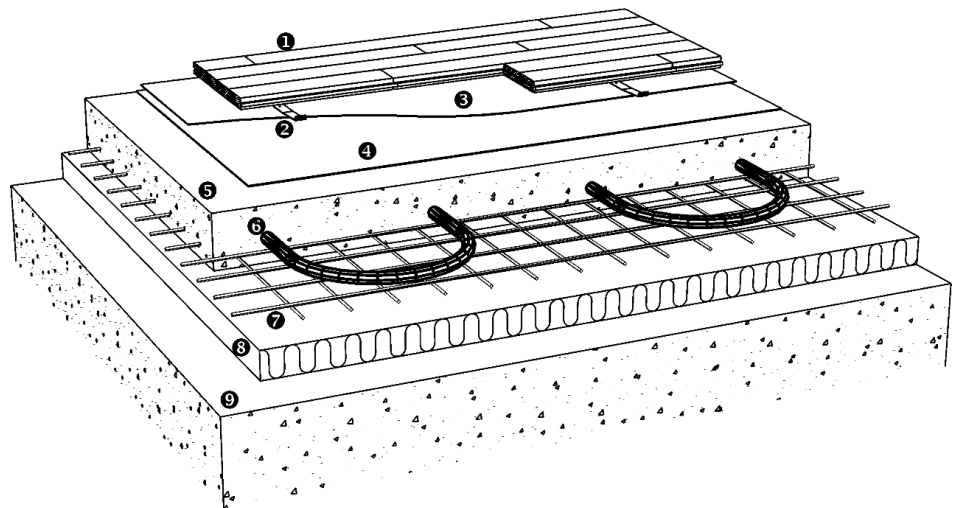


Fig. 1

2. CLIP FLOORS ON CONCRETE WITH ELECTRICAL HEATING MAT

Clip floors can be laid on concrete subfloors with a heating mat installed on the surface.

To protect the heating elements and to ensure an even heat distribution, the heating mat must be covered with a cementitious layer min. 6 mm thick. Prime the subfloor with floor primer before laying the heating mat.

In a renovation situation where the heating system is installed on an existing dry subfloor the clip floor can be installed as soon as the cementitious layer is dry to 65 % RH (UK 75 % RH). Follow the manufacturers instructions.

In cases where the heating mats are installed on a new concrete subfloor, the floor can be laid when the temperature and humidity of the building correspond to the expected future climatic conditions of the building when in use, see **General information solid hardwood floors, Commercial & Residential C 1.0.**

The residual moisture of the concrete must not exceed 65 % RH (UK 75% RH). This can e.g. be achieved by turning on the floor heating system as required according to the conditions. During this period the room must be ventilated briefly every day.

An intermediate layer of Junckers PolyFoam is used for clip floors laid on subfloors with heating mats. Under this is laid a 0.20 PE membrane with a 200 mm overlap taped at the joints and turned up at the walls behind skirting boards.

2.1 FLOOR COMPONENTS, ELECTRICAL HEATING MAT

1. **Junckers solid 2-strip or plank floor**
 22x129 mm 2-strip: see B 2.0
 14x129 mm 2-strip: see B 3.0
 20.5x140 mm Planks: see B 5.0
 20.5x185 mm Planks: see B 6.0
 15x129 mm Planks: see B 7.0
2. **Clips**
3. **Intermediate layer**
 Junckers PolyFoam
4. **Extra moisture barrier**
 Junckers Sylvathene, 0.20 mm PE membrane
5. **Cementitious layer**
6. **Heating mat**
7. **Concrete or screeded subfloor**

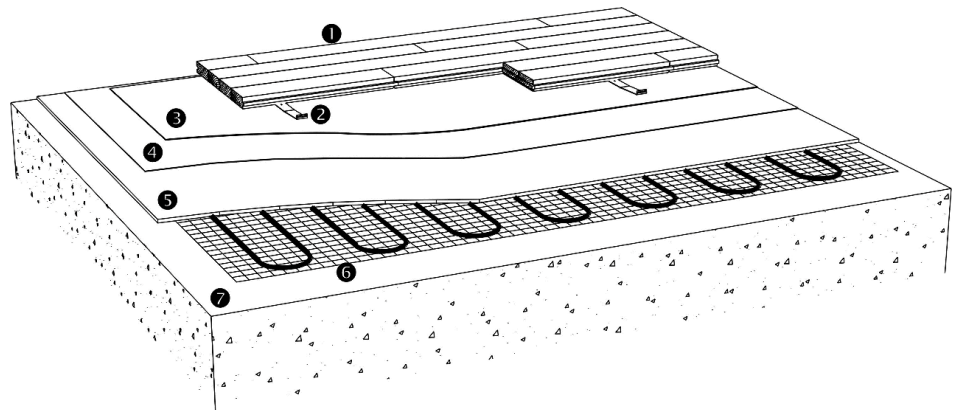


Fig. 2

3. CLIP FLOORS ON POLYSTYRENE BOARDS WITH HEATING PIPES

Clip floors can be laid on an underlay of polystyrene with the heating pipes set in heat-distribution plates. The intermediate layer is floor cardboard, 500 g/m².

To ensure that the floor is sufficiently elastic depending on the board thickness, the load capability and the density of the polystyrene, it may be necessary to incorporate a load-distribution board, e.g. a chipboard, under the clip floor, see section 3, Floor components.

For further information please refer to the Specifier's and Installation instructions C 1.1.

3.1 FLOOR COMPONENTS, POLYSTYRENE BOARDS WITH HEATING PIPES

1. **Junckers solid 2-strip or plank floor**
 22x129 mm 2-strip: see B 2.0
 14x129 mm 2-strip: see B 3.0
 20.5x140 mm Planks: see B 5.0
 20.5x185 mm Planks: see B 6.0
 15x129 mm Planks: see B 7.0
2. **Clips**
3. **Intermediate layer**
 - Floor cardboard, 500 g/m²
 - Load-distribution board*
4. **Heat-distribution plates**
5. **Heating pipes**
6. **Polystyrene boards**
 Density, min. 30 kg/m³
7. **Moisture barrier**
 Junckers Sylvathene, 0.20 mm PE membrane
8. **Concrete subfloor**

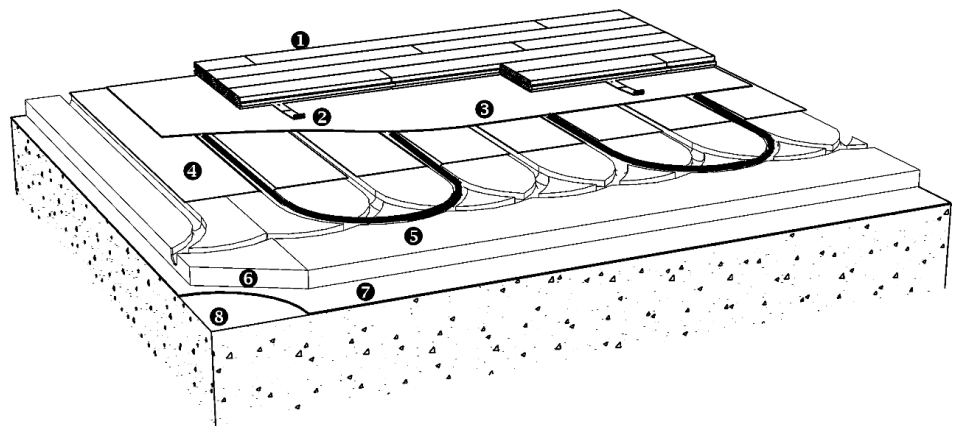


Fig. 3

*** LOAD-DISTRIBUTION BOARD:**

22 and 20.5 mm floorboards in residential: The clip floor is laid directly on the heat-distribution plates.

22 and 20.5 mm floorboards in commercial: The clip floor is laid on a load-distribution board of min. 10 mm chipboard or plywood.

15 mm and 14 mm floorboards in residential and commercial: The clip floor is laid on a load-distribution board of min. 10 mm chipboard or plywood.

The load-distribution board is laid on the heat-distribution plates and under the intermediate layer. Make sure the distribution boards are staggered and taped together.

4. CLIP FLOOR WITH HEATING PIPES SET IN HEAT DISTRIBUTION PLATES

Clip floors can be laid on an underlay of chipboard with the heating pipes set in heat distribution plates. The intermediate layer is Junckers Foam.

For further information please refer to Specifier's and Installation instructions C 1.1.

4.1 FLOOR COMPONENTS, HEATING PIPES SET IN HEAT DISTRIBUTION PLATES

1. **Junckers solid 2-strip or plank floor**
 22x129 mm 2-strip: see B 2.0
 14x129 mm 2-strip: see B 3.0
 20.5x140 mm Planks: see B 5.0
 20.5x185 mm Planks: see B 6.0
2. **Clips**
3. **Intermediate layer**
 Junckers Foam
4. **Heat distribution plate**
5. **Chipboard with heating pipes**
6. **Battens**
7. **Moisture barrier**
 Junckers Sylvathene, 0.20 mm PE membrane
8. **Concrete**

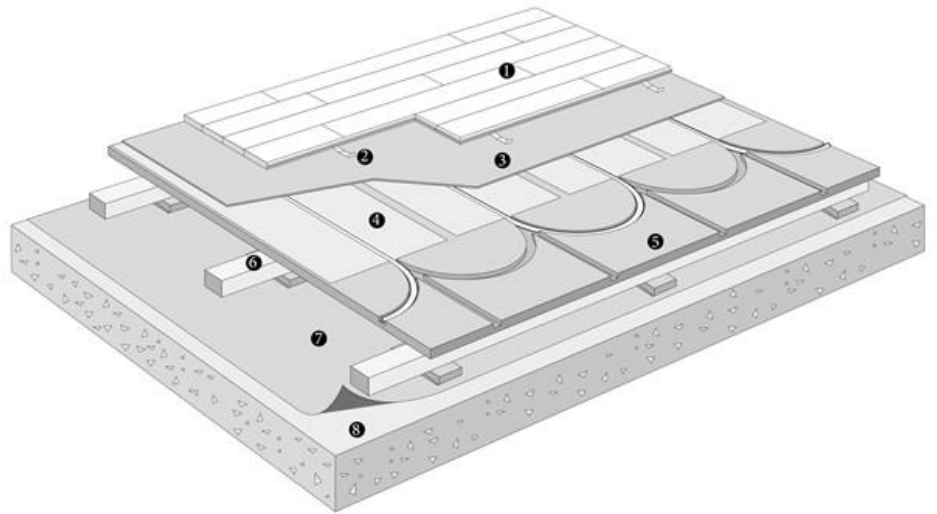


Fig. 4