

On load-bearing floors with LK Slotted Board Silencio 36

DESIGN

The LK Slotted Board Silencio 36, part of LK Under-floor Heating range, is designed for installation in dry rooms, floating on supporting sub floors

The product is pre-grooved for 16 mm under floor heating pipe and heat distribution plates and has excellent impact sound and other acoustic suppression properties.

REQUIREMENTS

LK recommend the use of electronic weather compensation for optimum efficiency of under floor heating temperature control. The system must be properly balanced in line with LK design data supplied. We also recommend the settings are recorded for future reference or adjustment.

The boards should be laid on a load bearing floor structure. As a load-bearing floor structure, we refer to a concrete floor or 22 mm chipboard flooring placed with joint spacing at a maximum c/c distance of 600 mm.

In general the guidelines apply in accordance with local building codes and for selected bespoke design solutions.

CONSTRUCTION OUTLINE

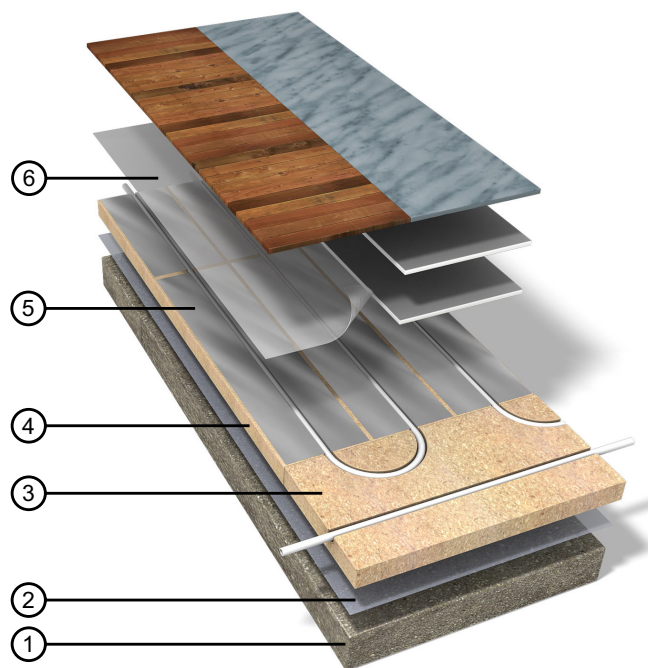
1. Sub Floor
2. Age-resistant plastic sheeting 0.2 mm (when laying on a concrete base)
3. LK Turning Board Silencio 36
4. LK Slotted Board Silencio 36
5. LK Heat Distribution Plate 16/190
6. Rag Board

SURFACE LAYER

All the following installation examples are for installation in a "dry" rooms (i.e not bathroom and showers).

Laminate floors

Laminate floors require a supporting intermediate floor. This may be of 13 mm gypsum board or 16 mm chipboard. The under floor heating installation should be covered with rag board before the intermediate floor is laid. The intermediate floor is installed floating over the underfloor heating installation. The laminate flooring can now be laid according to flooring manufacturer's instructions.



Parquet floors

Parquet floors with a thickness of at least 14 mm can be laid without an intermediate floor. Before the parquet is laid, the under floor heating installation must be covered with a layer of rag board. The parquet floor is installed floating over the under floor heating installation.

The structural characteristics regarding noise reduction can be improved if an intermediate floor of 13 mm plasterboard is laid between the normalised impact sound level board and parquet floor.

Vinyl or linoleum floors

Vinyl or linoleum flooring requires an intermediate floor of 16 mm chipboard. Before the intermediate floor is laid the under floor heating installation must be covered with a layer of rag board. The intermediate floor is installed floating across the under floor heating installation.

Ceramic and natural stone

Ceramic or natural stone requires an intermediate floor of two layers of 13 mm gypsum floorboard. Before the intermediate floor is laid the under floor heating installation should be covered with a rag board. The gypsum board should be placed cross braced and glued together with LK Kiilto Floorfix DF mixed with LK Kiilto Fixbinder and water. Apply the glue with a "putty knife", and then comb it out using a notched trowel (8 mm). Mount the gypsum boards within 10-15 minutes after the glue has been applied.

LK MANIFOLD

LK Manifolds are installed and positioned as per the plans. Please read through the installation instructions supplied with the manifold.

LAYING PROCEDURE, BOARDS AND HEAT DISTRIBUTION PLATES

Make sure that all the interior walls are built and fixed to the sub floor before starting installation. The walls must not be supported by the LK Slotted Board Silencio 36 or the LK Turning Board Silencio 36.

If the boards are to be installed on a concrete floor, a 0,2 mm damp proof membrane with 200 mm overlap must be laid before the boards are installed.

Before installation of the boards the sub floor should be inspected for flatness. The maximum surface [ir]regularity is +/- 2 mm per 2 metres length and +/- 1,2 mm per 0,25 metres length. The sub-floor should also be vacuumed clean of dirt and dust.

1. LK Turning Board Silencio 36

Turning Boards are installed as per the plans for where pipe turns are to be placed. A 5-10 mm tolerance for movement should be used next to walls and other fixed objects; spacing blocks are useful here. The first board may require adjustment (possibly shortening) to make the pipe turns conform to the pipe work plans.

2. LK Slotted Board Silencio 36

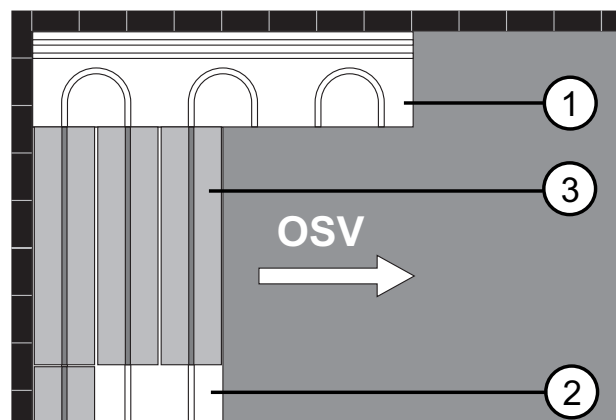
The grooved boards are then installed between the turning boards. A 5-10 mm tolerance for movement should be used next to walls and fixed objects;

spacing blocks are useful here. If the room is longer or wider than 6 metres, the tolerance is increased to 10 mm. The boards should be staggered so that the board joints do not end up in line. Any adjustment of the length can be easily carried out with a saw.

3. LK Heat Distribution Plate 16/190

LK Heat Distribution Plates should be installed in position edge to edge with the slotted boards. The joints between the slotted boards should be covered with the plates.

For easy adjustment the plates can be placed 10 – 100 mm apart and then pressed down into the track. The plates can easily be trimmed for length using the "breaks" on the plates, The grooves should be cleaned before the plates are put in place.



LAYING THE PIPE

Pipe installation is carried out according to the prepared installation drawings.

LK Pipe Decoiler can be used to assist with pipe installation. Be sure to take into consideration the direction of flow in the loop so that the flow pipe is nearest to external walls. Mark the loops with the number and name from the plans. Before installing the pipes make sure all grooves are clean.

A pipe cutter designed for PE-X pipe must be used to cut the pipe.

In the immediate area in front of the manifold, it may be necessary to cut away the insulation board to make space for the flow and return pipes. We recommend the use of cement infill around the

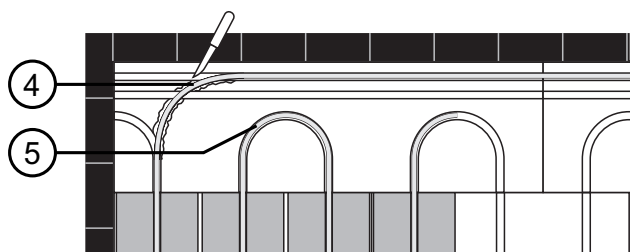
pipes to support the surface flooring. This will affect sound insulation in the immediate area.

4. Pipe Installation on Turning Boards

It is sometimes necessary to add pipe tracks to the turning. A track can be simply cut with a routing tool using a 20 mm cutter.

5. Pipe installation plan

The pipes are pressed (trodden) down into the grooves of the plates. After placement the pipes should sit snugly in the grooves and under no circumstances touch the surface layer above.



PRODUCT SUMMARY, ADHESIVE & PRIMER

The following brands/products have been tested to be used for gluing of intermediate floor plates.

LK art. no.	Product name	Usage	Notes	Consumption	Drying time
33525	Kiilto Floorfix DF, 20 kg	Gluing of intermediate floor plates	Mix 5 litres Fixbinder with 2 litres water and 20 kg Floorfix DF	3,5 kg/m ²	16-32 hours
33522	Kiilto Fixbinder, 5 litres	Gluing of intermediate floor plates	Mix 5 litres Fixbinder with 2 litres water and 20 kg Floorfix DF	5 l /20 kg Floorfix DF (+ 2 l water)	Not applicable