

# LK HeatFloor 22 assembly on Granab Joist Systems

## DESIGN

These instructions describe the procedure for assembly of LK HeatFloor 22 on Granab Joist Systems 3000N, 7000N and 8000W. The instructions are used in combination with applicable parts of LK's instructions *On floor joists with LK HeatFloor 22* and applicable parts of Granab's instructions for the joist system.

## HEATFLOOR 22

LK HeatFloor 22 comprises slotted 22 mm chipboard and associated turning boards. The slotted chipboards replace standard boards and a floor construction. The slots are fitted with aluminium heat distribution plates that transfer and distribute the heat from the underfloor heating pipes to the floor surface. See complete product description/assembly instructions in LK's instructions *On floor joists with LK HeatFloor 22*.

LK HeatFloor 22 is type approved by RISE, has a Norwegian technical approval performed by SINTEF and has Swan ecolabelling.

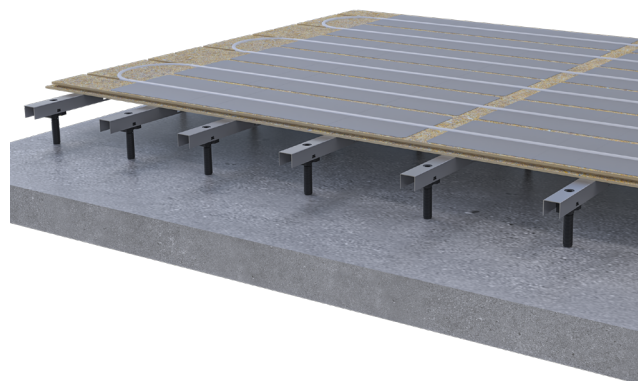
## GRANAB JOIST SYSTEM

Granab Joist Systems are used for homes, office, schools and public premises. The joist systems are made with cushioning for effective step and airborne sound insulation. The systems are patented and meets the requirements of ECS, European Construction Standard The system is type approved by RISE, has a Norwegian technical approval performed by SINTEF with regard to soundproofing properties, dynamic load and durability.

Granab can with different types of cushioning achieve different sound properties depending of which type of floor joists that are used. See more information on Granab's joist system at [www.granab.se](http://www.granab.se)



Granab Joist System 7000N.



Granab Joist System with turning grooves, cut at worksite.



LK HeatFloor 22, Slotted Board.

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## INSTALLING THE GRANAB JOIST SYSTEM

**NOTE!**  
Please note the below maximum c/c distance that applies, as LK HeatFloor 22 is installed on Granab's joist system.

The joist system is installed in accordance with Granab's installation instructions.

For cut turning grooves:

**NOTE!**  
Cut turning grooves must be supported by floor joist.

- From the wall to the first Granab floor joist the distance must be at least 40 mm and no greater than 80 mm.
- The second joist is placed c/c 300 mm from the first joist.
- Subsequent joists are installed with a maximum of c/c 400 mm. (In the event of ceramic surfaces, maximum c/c 300 mm)
- Internal walls fitted above the floor must always be supported by a floor joist. Furthermore, the first floor joist on each side of the internal wall must be installed 80 mm from the finished wall.



*Cut turning grooves must be supported by floor joist.*

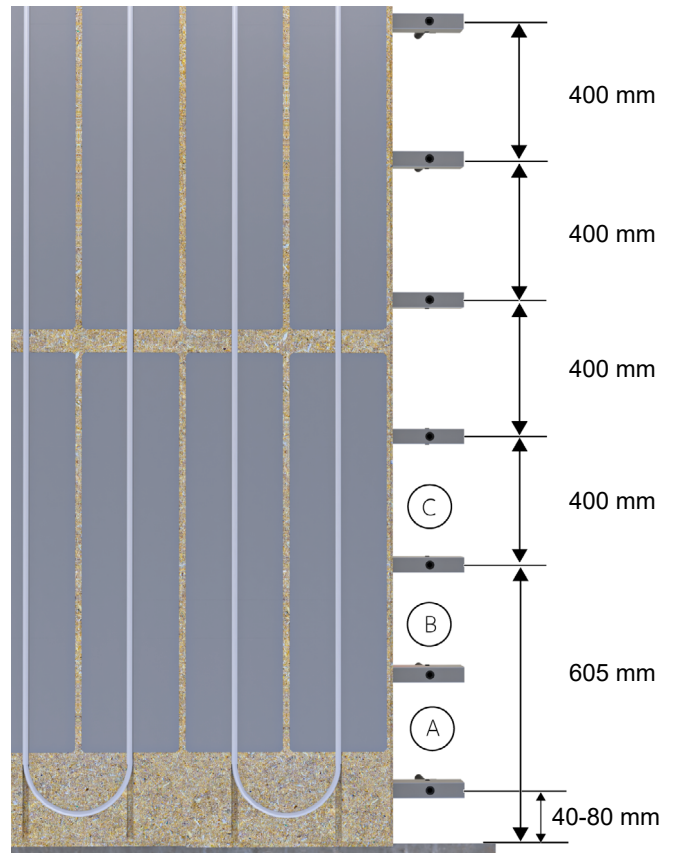
## When using LK Turning Board HF22:

**NOTE!**  
The turning board's turning grooves must always be supported by a floor joist. The turning groove's internal radius must rest on at least 10 mm of the floor joist.

- **Joist 1 (A)** Installed with a distance from the wall of at least 40 mm and no more than 80 mm.
- **Joist 2 (B)** Installed at half the distance between joist 1 (A) and joist 3 (C).
- **Joist 3 (C)** Installed 605 mm from the wall such that the joint between the slotted board and turning board is supported. LK's turning board is 595 mm in length and must be installed at a distance from the wall of 10 mm.

**NOTE!**  
The joint between the slotted board and turning board should be on the middle of the floor joist.

- Then subsequent floor joists c/c 400 mm (In the even of ceramic surfaces, maximum c/c 300 mm).



*Positioning of Granab floor joists when using LK Heat-Floor 22 turning board.*



## INSTALLING LK HEATFLOOR 22

### Preparation

- Check that the floor joists have the appropriate centre distance depending on the selected floor construction, see assembly instruction *On floor joists with LK HeatFloor 22*.
- Ceramic floor surfaces require e.g. a maximum distance of c/c 300 mm between the joists.



**NOTE!**

The level of the floor joists must be checked to ensure they comply with Building Regulations HUS-AMA, table 43.DC/-1, class A after completed assembly of slotted boards and turning boards, i.e. the floor's surface level must be  $\pm 3$  mm at a distance of two metres and  $\pm 1.2$  mm at 0.25 metres.

- All feed pipes to the respective floor heating circuits must be drawn under the slotted boards. Use LK Conduit.  $\varnothing 25$  or greater.
- Plan drawing of conduits using LK's under-floor heating guide.
- Avoid sharp bends as they complicate the drawing of underfloor heating pipes. Fix the conduit in the sub-floor.
- Make sure that the empty pipes do not touch the studs.



LK Conduit and the joist.



Drilled hole in HeatFloor 22. LK Conduit pulled up through the hole.

### Assembly

Slotted boards and turning boards are installed in accordance with LK's instructions *On floor joists with LK HeatFloor 22*, but with the following exceptions:

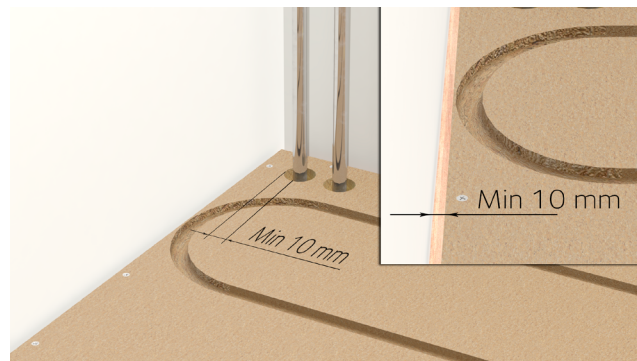
- The first row of boards is glued and screwed to the floor joist system. Use 1 screw per floor joist pass.
- Other rows of boards are glued to the floor joists except the board closest to the wall that is both glued and screwed with 1 screw.
- Ensure that joist and board are in contact before glueing. Reinforce with screw where needed to ensure contact.

See table for recommended screw and glue make. It is possible to use other makes of screws and glue if they have properties corresponding to the recommended ones.



**NOTE!**

Leave 10 mm for expansion gaps between floorboards and walls (and other fixed obstacles)



The image shows the 10 mm expansion gaps between floorboards and walls.

### SURFACE LAYER

If another direction of lay is required, the parquet can be pre-laid according to two methods:

- to lay a parquet floor of at least 14 mm thickness floating, 90 degrees to the direction of the pipe grooves.
- to place a parquet floor floating in the same direction as the floor joists.

For detailed information on laying surface layer, see LK's assembly instruction *On floor joists with LK HeatFloor 22*.



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## RECOMMENDED SCREWS AND GLUE

Screw	Glue for floor joist systems	Glue for grooves/tongues
Hilti WBW 3.8 x 41	Kiiltoflex N20	Cascol Indoor 3304 for boards of quality class P6 (at temperatures above +10°C)
-	Casco Superset	Cascol Winter 3303 for boards of quality class P6 (at temperatures below +10°C)
-		Cascol Outdoor 3337 for boards of quality class P6.

## PRODUCT SUMMARY, TOOLS & ACCESSORIES

Article no.	Product name	Application
241 98 74	LK Router template HF22	for cutting of pipe bends in LK HeatFloor 22
241 98 73	LK Router Bit HF22	together with LK Router template HF22 for cutting of pipe bends in LK HeatFloor 22
187 06 65	LK Conduit, dim. 25	for drawing of feed pipes to respective underfloor heating circuit

