KoskiTherm
installation instructions

KOSKISEN

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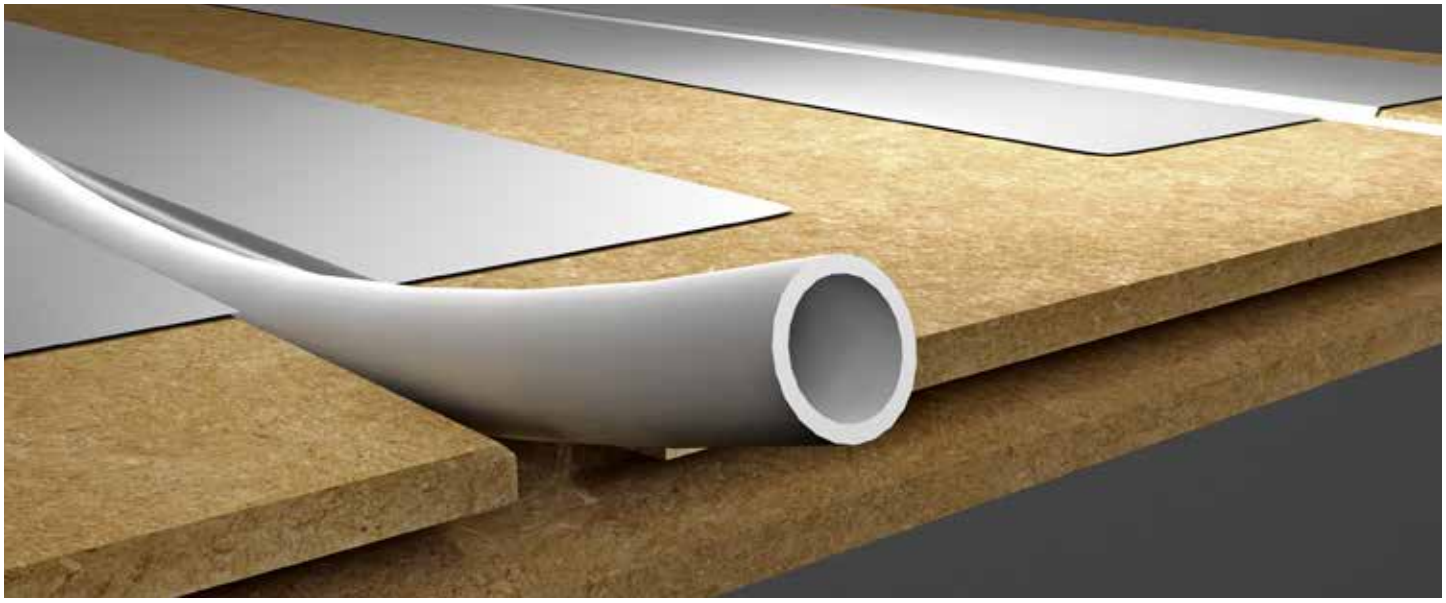


KoskiTherm – underfloor heating panels for water circulation heated floor systems

KoskiTherm underfloor heating chipboard enables the easy installation of water circulation heating systems in wooden ground and intermediate floor structures. The system is based on pre grooved flooring panels for water circulation systems with 20 mm (or alternatively 16-17 mm) pipes.

KoskiTherm underfloor heating panels enable savings both in material costs and installation time. The board is quick and easy to install and uses no extra adhesive substances, meaning no extra drying time is required. The final floor can, depending on the material, be installed directly over the structural board containing the pipework.

The advantages of KoskiTherm panels

- efficient construction
- quick and easy installation
- maximum thermal efficiency with reduced heat loss and lower fuel costs
- ready immediately, the floor requires no drying time
- even heat distribution with consistent and repeatable performance
- substantial savings in material costs
- the final floor can be installed directly on top of the KoskiTherm boards
- quick reaction to temperature regulation

Key parts of assembly

KoskiTherm 22 mm board (30 mm board in brackets)

- board size 22 x 600 x 2400 (30 x 600 x 1800mm) groove for 20mm pipe (16–17mm pipe)
- pipe spacing 22mm c/c 200mm, (30mm c/c 300mm)
- weight 22kgs / piece (23kgs / piece)
- tongue and groove on all four sides
- max. distance between the centers of battens according to national regulations

KoskiTherm 22 mm turn board (30mm turn board in brackets)

- board size 22 x 800 x 600 (30 x 600 x 600mm) weight 7kgs / piece (8kgs / piece)
- curved groove for pipe turn
- tongue and groove on two sides

Water-circulating heating pipe ex. Uponor Comfort Pipe Plus

- good heat transfer
- the pipe is oxygen diffusion sheltered
- max. pressure 6 bar
- operating temperature 70 °C, short-term max. 95 °C
- pipe usage approx. 4m / m^2 (c/c 300mm) or 5-6m / m^2 (c/c 200mm)

Heat transfer plate

- aluminum
- for KoskiTherm 22: size 2000 x 180 x 0,40mm
  - usage approx. 2 pcs / m^2
- for KoskiTherm 30: size 2000 x 280 x 0,45mm
  - usage approx. 1,33pcs / m^2

KoskiTherm installation instructions

Attention, rules and regulations may vary from country to country. Measures and instructions in this info material meets the Finnish regulations. Check the local rules of your country before installing KoskiTherm boards.

The national regulations in Finland allow installation of KoskiTherm 22 the spacing of the battening should be c/c 300mm or less and spaced boarding should always be installed (c/c 150). KoskiTherm 30 perpendicularly onto battening without spaced boarding if the spacing of the battening is c/c 450mm or less. If the spacing is more than c/c 450mm, but at max. c/c 600mm, spaced boarding should be installed on top of the battening (c/c 300mm). After this the KoskiTherm 30 boards are installed perpendicularly to the battening. If KoskiTherm 30 boards are installed the same direction as the battening, the spaced boarding should be installed with spacing c/c 150mm.

Before installation, the moisture content of the KoskiTherm boards should be stabilized close to the conditions of use. The boards should be stabilized for 5–7 days, depending on the initial moisture content. The boards should be separated with battens whilst being stabilized.

It is recommended to start installation at the furthest place from the water manifold to enable easy installation of the transfer pipes between the piping and the manifold.

The boards should always be glued to each other at the tongue and the groove. The boards can also be glued to the base to avoid possible creaking. The glue should be an appropriate PVA wood glue. Application of the glue should be done carefully ensuring that there is a continuous seam of adhesive along the entire length of the tongue and groove. Note however that excessive use of glue might lead to gaps between the boards.

Before installing the boards, check that the base is even and straight. Also make sure, that the edges of any boards next to walls and pillars are supported.

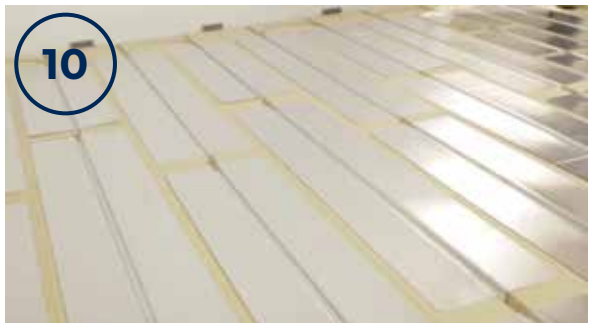
The KoskiTherm boards should be screwed to the base with screws suitable for screwing wood. The screws should be countersunk screws 50–75mm in length. The screws are attached to the middle and the edges of the boards 300–450mm apart.

To allow for the wood's natural movement in service, the boards should be laid so, that a gap of at least 10mm is left between the boards and the walls and between the rooms. If the KoskiTherm boards are installed directly on battening, the extension joint of a turn board should be installed and screwed on the battening. When installing on spaced boarding, the extension joint of a turn plate should not necessarily be on top of the battening.

Before installing the heat transfer plates, the floor and the piping grooves should be cleaned of sawdust and other dirt.

The heat transfer plates are installed by pressing them to the straight sections of KoskiTherm boards. The distance between the heat transfer plates has to be 10–100mm. There is no need to attach the heat transfer plates to the base.

Use the folding points to cut the plates to the correct measure. Straighten any bent corners of the plates before installation.



70-90% of the floor area should be covered by the heat transfer plates. The floor should be cleaned once more before the installation of the pipework.

The installation of the heating pipe is begun by passing it through the floor to the manifold.

The inlets are milled before installation of the boards or directly to the floor surface.

Install the heating pipes into the grooves of the heat transfer plates. Make sure, that the pipe is fully embedded to the groove to avoid it carrying load under the final floor surface.

Both parquet and laminate can be installed directly on the heat transfer plates and footfall sound insulation. In the case of other surface material solutions, construction boards of at least 6mm in thickness should be used.

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