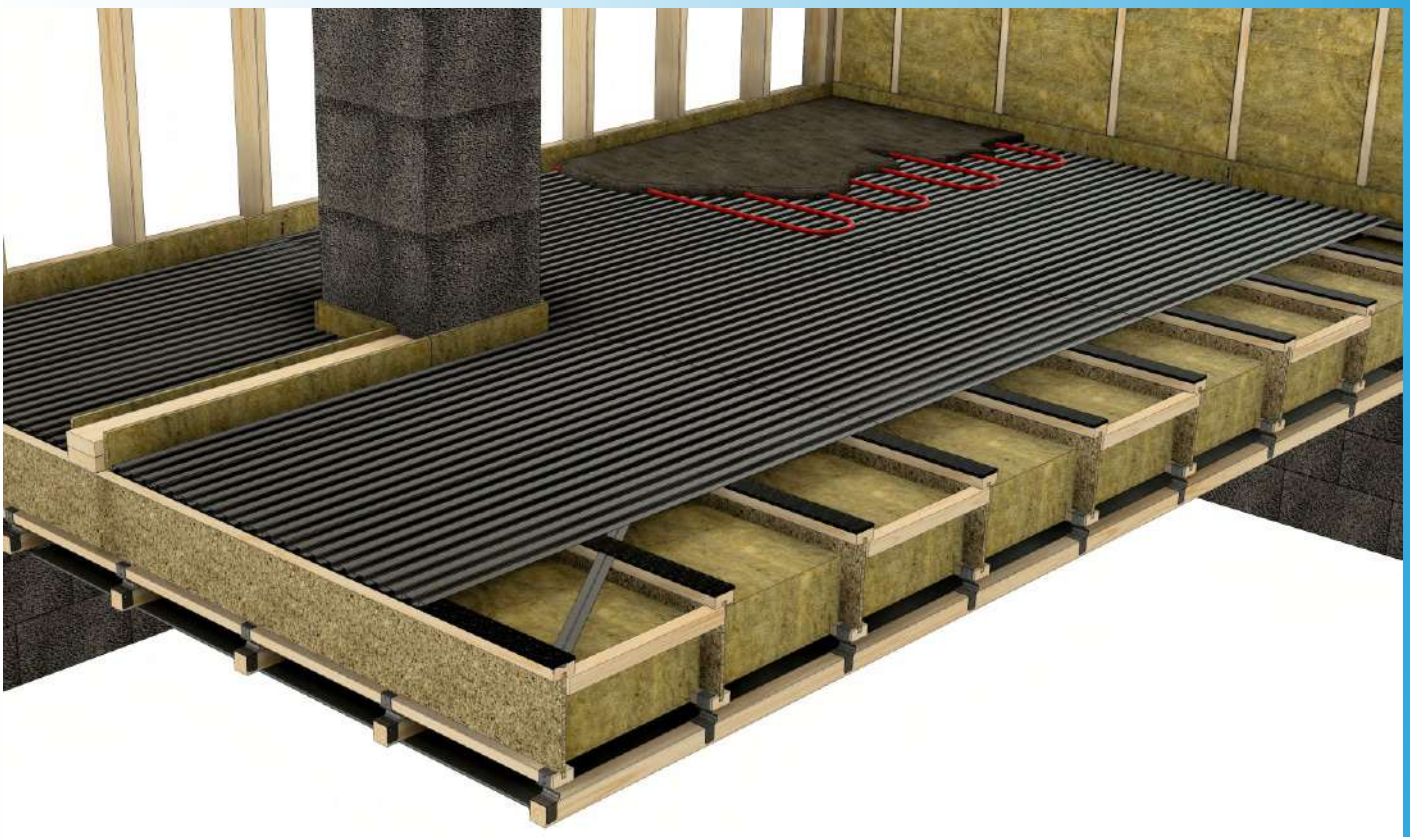
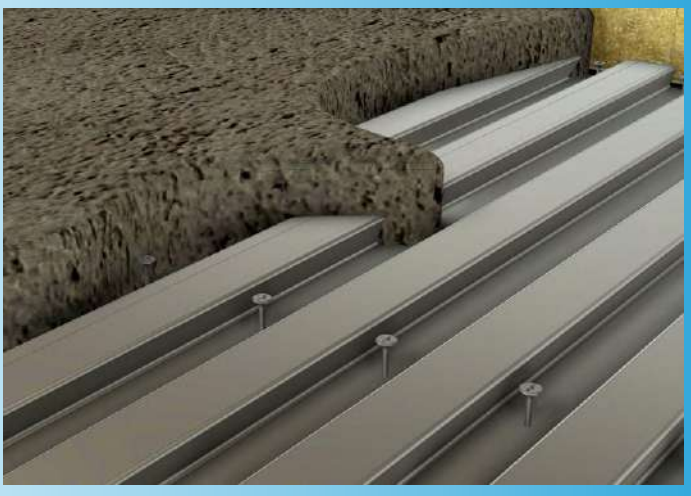
TIL-TAK AS
- innovasjon i praksis ®

DUOFOR®

DOVETAILED SHEETS





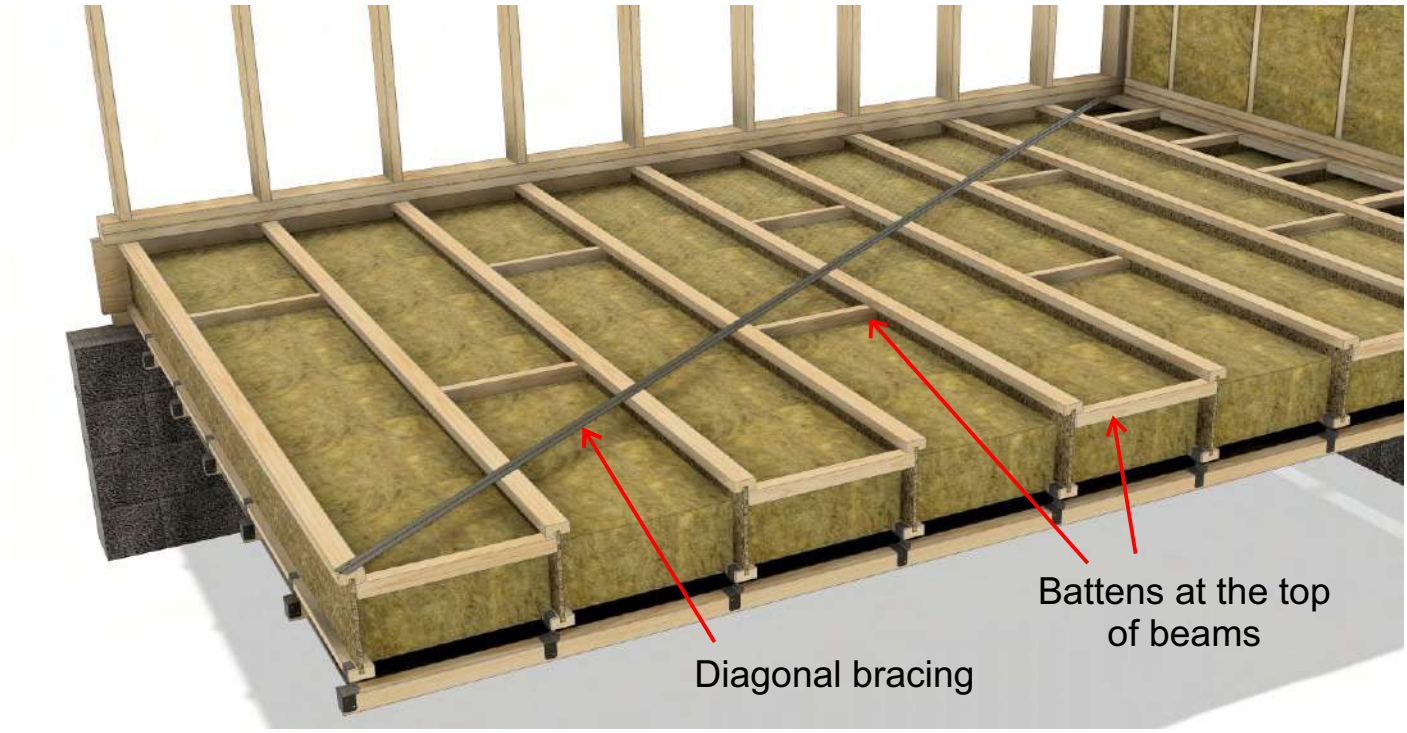
Assembly instructions

www.til-tak.no

BEFORE YOU START

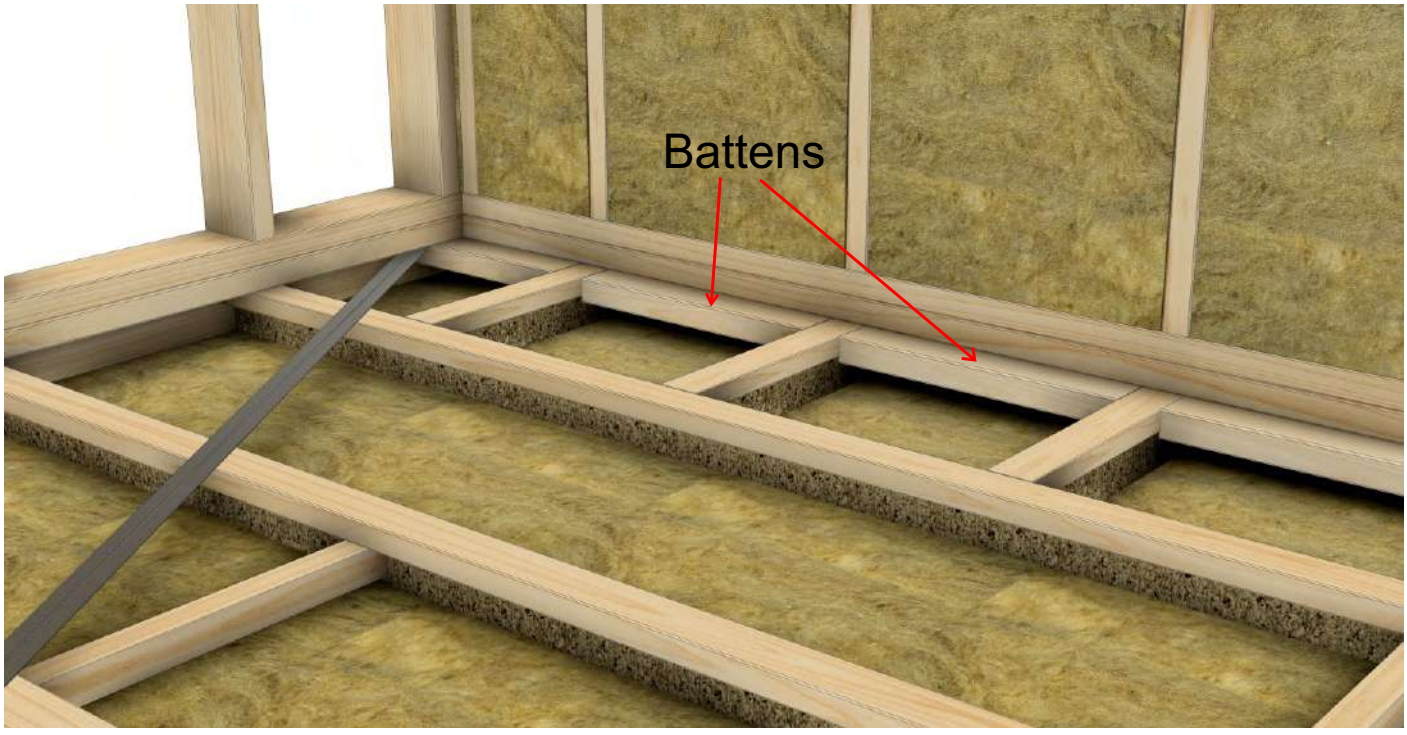
It is important that the joist layer is dimensioned for the extra weight that the dovetail sheets together with the concrete will add. 50mm concrete + slabs make up about 100 kg per m2.
It is also necessary with extra bracing, if the sheets are to be as a floating layer, e.g. in combination with impact sound insulation strips.

Necessary bracing can be done in the following way:



Battens

It is necessary with extra battens against end walls, so that the sheets are supported there as well. (See picture)



Edge-formwork

Rockwool edge insulation is used between wall and dovetail sheets, and form a fireproof and flexible connection to the walls, at the same time as it acts as a seal for the concrete along edges. Any load-bearing walls or chimneys etc. are treated the same way as external walls, with edge insulation surrounding all edges.

Sound-absorbing strips

Strips for attenuation of step sound are placed on all bearing surfaces, also at recesses for e.g. chimneys. Rockwool edge insulation is also used against chimneys (see drawing)

There is no need to attach the sound absorbing strips to the beams.

Order of operations

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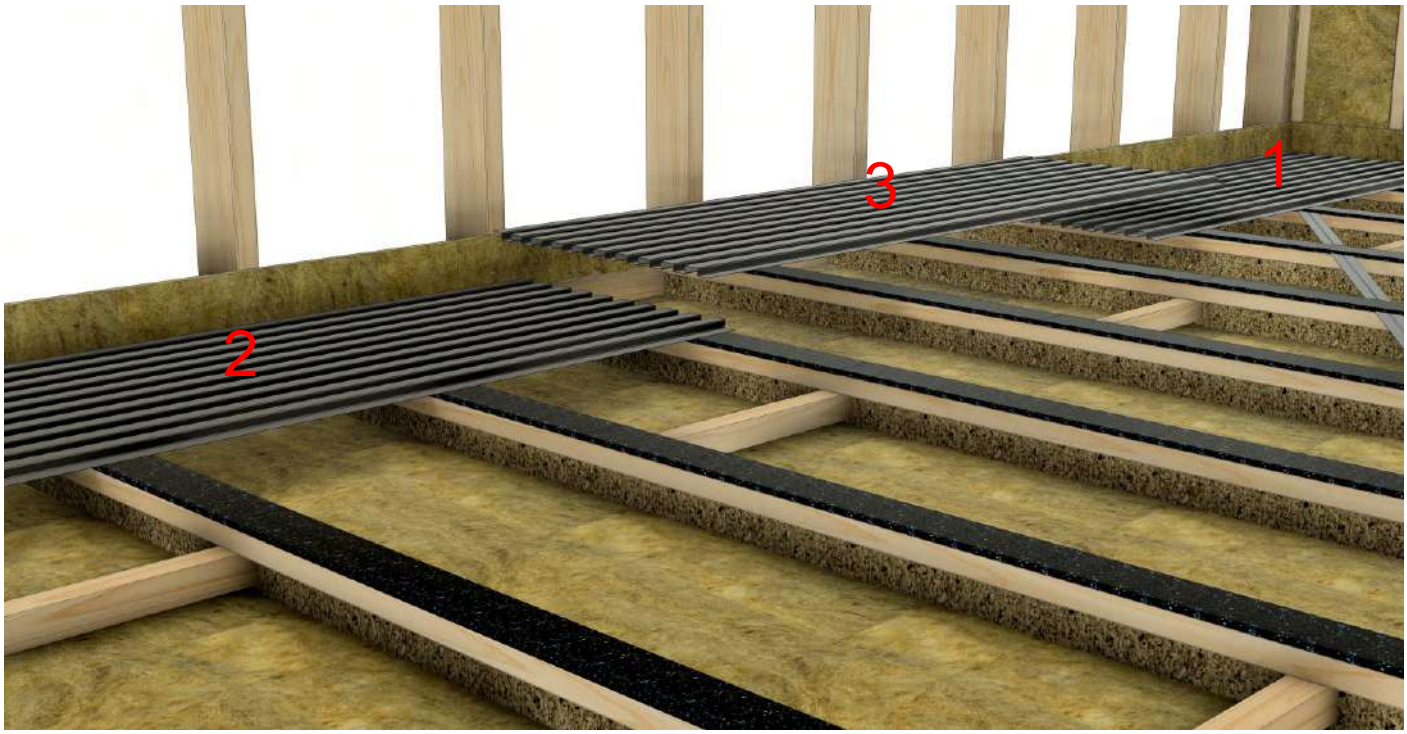
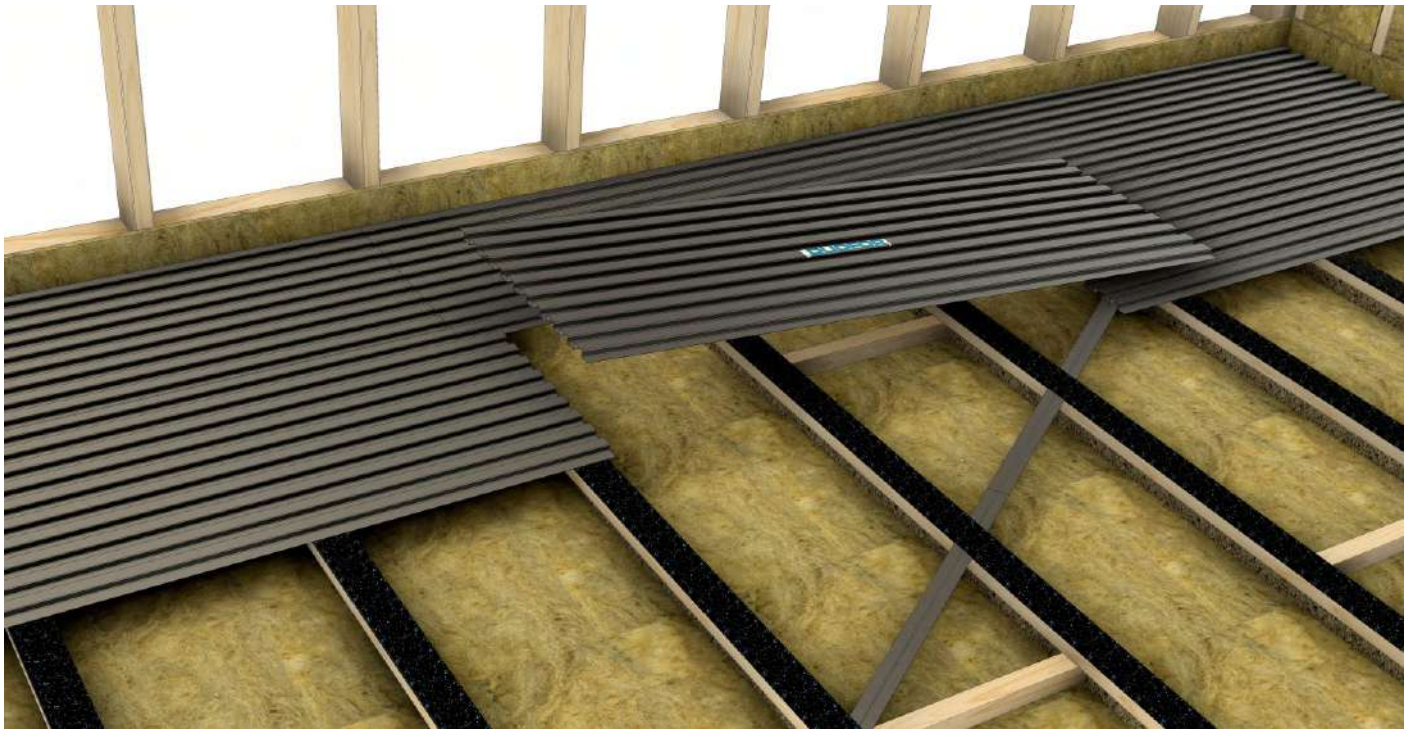


The sheets are laid alternately turned upside down. On sheet 1 and 2 the sticker is facing down, and on sheet 3 it is facing up. Then continue in the same manner with the next rows of sheets.



Cutting and adjustments can be made both with a jigsaw or a circular saw with hard-metal blade. If the waste is too short to be used, it is better to only shift the plates with a larger overlap.

Temporary attachment

Along the edges, the sheets are temporarily attached with sleeves and screws. Lengthwise on every other beam, Across the end wall, the sheets are attached to each sheet joint.

The screws are removed after the concrete has been sufficiently hardened

Casting

You are now ready for casting. Use concrete quality B20 M90; B20 with D. max 16mm and 50% degree of reduction. Both cable and waterborne heat can of course be cast in. Heating cable is attached with hot melt adhesive or tape, possibly on a thin reinforcing mesh. with strips or similar. Water pipes can be fixed with DuoKlip mounting bracket.

The concrete deck must be covered with membrane hardener immediately after casting. Membrane hardener must be sprayed on the deck while the concrete is still wet. This ensures the least possible dehydration in the critical phase for hardening. With the correct use of membrane hardener, the concrete deck will build up optimal strength and flexibility over the next 2-3 weeks.
It also reduces the risk of cracks in the concrete deck.

Collaborative construction

If there are no requirements for a sound-insulating floor, but rather strength, rigidity and stability are more important, the dovetail sheets can be fixed with screws or cam nails as shown below. This way, you achieve a cast deck, bonded to the joist in a manner that allows strength and rigidity of the overall structure to be increased by up to 30%. The result is a very dead and solid concrete floor, despite the minimal thickness.

The screws / nails are placed in each corrugated bottom along all beams. The top of the screw / nail should align with the top of the sheets. Cast as described on page 4.

Exterior hallway

Powder-coated dovetail sheets are used for external hallways with fire requirements. The sheets can have a free span up to 2.5 meters and needs a temporary support per meter during installation and casting.

Slabs with extra reinforcement mesh and 75 mm construction height give REI 60 on external hallways and balconies.

Temporary support per meter is removed only after the concrete has sufficiently hardened. Free span up to 2.5 meters

Contact us for more info about load capacity
More at **www.til-tak.no**.

6 mm reinforcement mesh and 2.5 m free span, as well construction height of 75 mm gives a load capacity of 3.6 kN and REI 60.

Same structure and span, but with100 mm construction height gives 5.4 kN