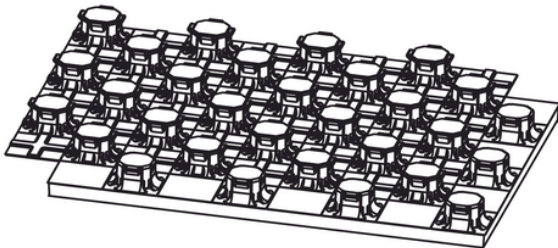
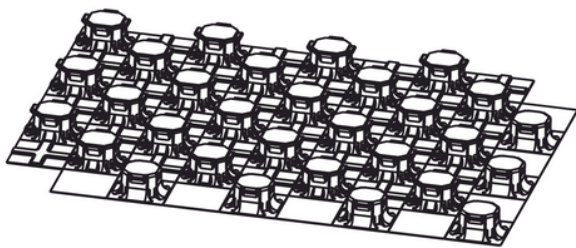


Dimensions: 1450 x 950 x 50 mm  
Improved impact sound insulation:  $\Delta LW,R(VMR) = 28$  dB  
Thermal resistance:  $R\lambda, INS = 0,75$  m<sup>2</sup> K/W  
Maximum traffic load: 5 kN/m<sup>2</sup>  
Installation distances (mm): 50/100/150/200/250/300  
Effective installation area: 1,26 m<sup>2</sup>  
Building material class: B2  
Colour of cover film: black  
Packing unit: 8 panels



Dimensions: 1450 x 950 x 30 mm  
Thermal resistance:  $R\lambda, INS = 0,35$  m<sup>2</sup> K/W  
Maximum traffic load: 75 kN/m<sup>2</sup>  
Installation distances (mm): 50/100/150/200/250/300  
Effective installation area: 1,26 m<sup>2</sup>  
Building material class: B2  
Colour of cover film: black  
Packing unit: 13 panels



Dimensions: 1450 x 950 x 20 mm  
Installation distances (mm): 50/100/150/200/250/300  
Effective installation area: 1,26 m<sup>2</sup>  
Building material class: B2  
Colour of cover film: black  
Packing unit: 16 panels

### INSTALLATION REQUIREMENTS

- The supporting subsurface must satisfy the static requirements for bearing the flooring construction and the intended traffic load.
- The height and evenness of the surface of the supporting subsurface as regards the limits and the evenness tolerances must correspond to the requirements in DIN 18202 "Tolerances in building construction" Table 3 Line 2.

- Uneven areas or pipes installed on the unfinished covering are compensated by installing a levelling insulation, laying a levelling screed, or a levelling compound in accordance with DIN 18560 in order to produce a horizontal and even surface to accommodate the system insulation.
- The rooms must be closed, and the interior plasterwork finished.
- The supporting subsurface must be dry and clean-swept before installing the panel.
- Construction joints from the supporting subsurface must be adopted in the flooring design.
- In the case of flooring areas touching the ground, or areas where rising damp is anticipated, seals against ground moisture and non-pressurised water in accordance with DIN 18195 are provided. The construction planner's specifications apply here. If seals made of PVC or bitumen are laid on the unfinished floor, these shall be covered with a PE film.
- Furthermore, the requirements of DIN EN 1264 for surface embedded heating and cooling systems, and the applicable directives of EnEV and the requirements of DIN 4109 on impact sound insulation must be observed.
- The optimum installation temperature for panels and pipes is  $> 10\text{ }^{\circ}\text{C}$ .
- For improved installation, pipes and system panels should be stored in the rooms to prevent large temperature differences.

## **INSTALLATION**

The edge insulation strip (160 mm) is attached all the way around to all rising components, walls, frames, supports, and steps. In the case of two-layer installation, the edge insulation strip can only be attached after installing the bottom layer. Care must be taken here that the PE film attached to the edge insulation strip is placed over the panel to prevent water and screed from penetrating and the possible formation of sound bridges. The PE film is fixed in place in the panel area by the System Pipes or the PE round profile.

- When installing the system panels, work is always started at the narrow side of the areas from right to left (Figure 1).
- The panels can be cut in a 5 cm grid.
- Particular care is required when using tile screeds: it must be ensured here that the insulating layer cover including the edge connections is watertight.
- When installing on an additional insulation layer, the top layer is installed with offset joints to the bottom layer.
- Moisture measurement points are part of an underfloor heating system and must be provided by the heating engineer. Fitting: at least 1 per accommodation unit and/ or 3 per 200 m<sup>2</sup>.

## PIPE INSTALLATION

- The permitted, smallest bending radius of 5x outer diameter must be observed. The System Pipes must not be installed on subsurfaces with sharp edges. The system pipes should therefore be secured with the PE sheath, e.g., when passing through wall and ceiling areas.
- Heating circuits should be made out of one pipe section. Connections in the screen must be categorically avoided. In case of repair, care should be taken that the brass coupling is only fitted in a straight section of pipe. The couplings are protected from direct contact with the screed by a PE film or similar measures. The position of the brass fitting is measured and recorded in a diagram.
- The heating circuits are designed so that no expansion joints are crossed if possible. Connecting pipes that cross expansion joints are covered with a PE sheath in such a way that the System Pipes are covered at least 30 cm on each side of the joint.
- Expansion joints on top of construction joints must not be crossed by connecting pipes.
- Starting with the connection of the heating circuit flow to the heating circuit manifold, the System Pipes are laid in the snail-shaped arrangement recommended.
- The calculated installation distance is then achieved by installing the heating circuit return.
- When connecting the System Pipes to the heating circuit manifold, pipe guide bends are used to protect the pipes in the deflection area.