

WEM Underfloor Heating System 30 Article no. 30010-30081

General notes Use only original WEM connection pipes and press fittings, otherwise, you will lose your guarantee for the system. For transitions to other systems, use press-fit screw fittings. WEM Underfloor Heating should not be installed at temperatures below 5 °C.

Storage Store in dry location and protect against weathering.

Components

Head plate system 30



Installation board system 30



Thermally conductive plate



Multi-layer composite pipe



Edge insulating strip



Optional: CERALAN plate for parquet



Optional: screed replacement tile for tiling



Optional: cover plate



Optional: Levelling fill



Scope of application

| Areas of application | Cat.* | Description | Concentrated load [kN] | Area load [kN]/m ² |
|----------------------|-----------|---|------------------------|-------------------------------|
| 1 | A2/ A3 | Residential buildings; hotel rooms incl. associated kitchens and bathrooms | 1.0 | 1.5/2.0 |
| 2 | B1 | Office buildings, medical practices; recreation rooms including their corridors | 2.0 | 2.0 |
| | D1 | Areas of retail spaces up to 50 m ² floor space in residential, office and comparable buildings | 2.0 | 2.0 |
| 3 | B2/ C1 | Corridors in hotels, old people's homes, boarding schools; kitchens; treatment rooms incl. operating rooms without heavy equipment; school rooms, cafés, restaurants, dining rooms, reading rooms and reception rooms | 3.0 | 3.0/4.0 |

* Categories based on DIN EN 1991-1-1/NA:2012-12

The WEM floor heating system 30 is approved for the following areas of application with the following structures/coverings:

| Floor covering: | Class of application | Cat.* |
|---|----------------------|----------|
| Tiles on a dry screed board from 18 mm thickness. The manufacturer's instructions for the dry screed boards are decisive for the tile sizes and installation. | 1 | A2 A3 |
| WEM Ceralan boards 6 mm with glued wood parquet (thickness: from 15 mm up). | 2 | B1 D1 |
| ESB board 15 mm with or without sheet material (2 mm) e.g. linoleum, cork etc. | 2 | B1 D1 |
| WEM Ceralan boards 6 mm with glued click floor (thickness: from 7 mm up). | 2 | B1 D1 |

* Categories based on DIN EN 1991-1-1/NA:2012-12

Substrate

The substrate must be clean, dry and even. Uneven substrates can be levelled with levelling fill and then covered with the Pipe Base cover plate (thickness: 20 mm) as a subbase.

Connection pipes

The laying of the supply lines from the manifold to the individual heating circuits must be well planned in advance. When laying underfloor heating over larger areas or in several rooms, it is advisable to lay the connection pipes in a substructure of fill or insulation board and to route them up to the point where the respective supply and return pipes of the heating circuit are connected. Alternatively, the connection pipes can be laid either on wall surfaces (pipes may have to be covered) or on raw ceiling surfaces (e. g. in the case of suspended ceilings).

Fitting the edge insulating strip

The edge insulating strips are placed against the walls in upright position (III. 1) and fixed to prevent slipping during the installation. The lower part of the insulating strip is self-adhesive.



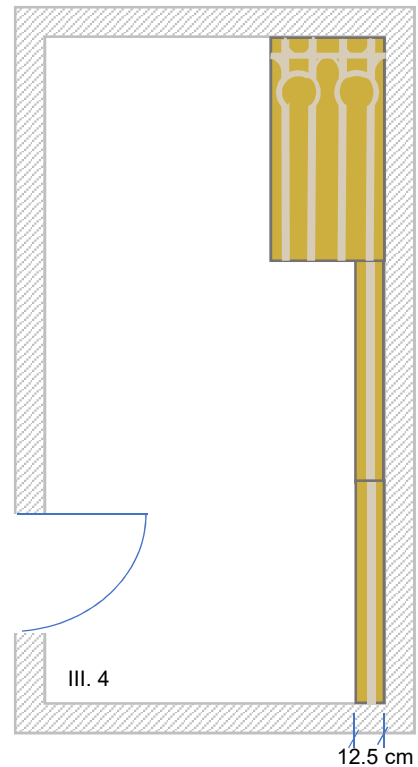
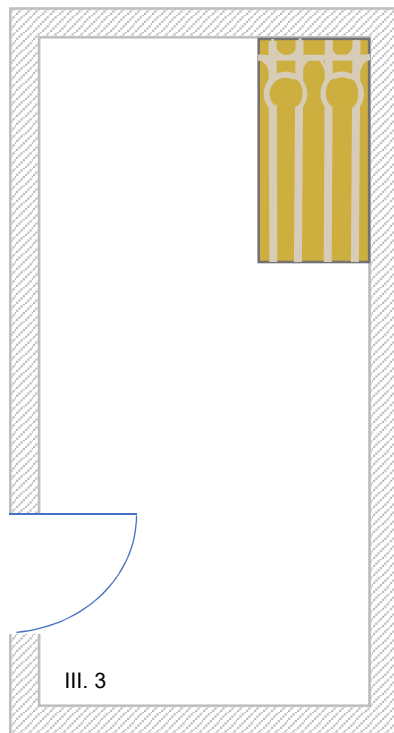
Installation board

The panels are cut to size using a jigsaw, circular saw or other woodworking machine (III. 2).

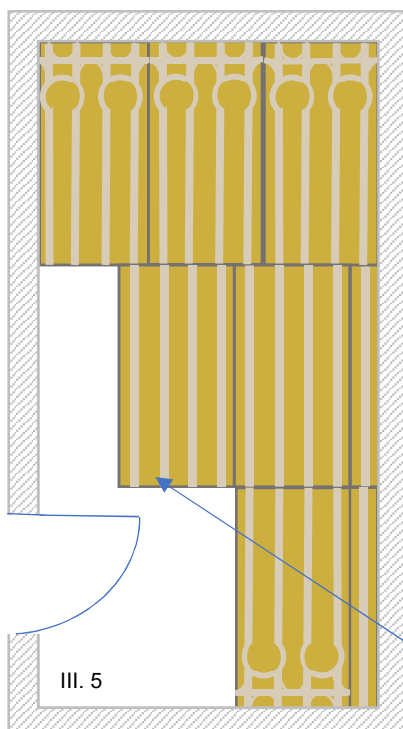


**Step 2:
Laying the
installation
boards**

Laying begins in a corner of the room with a top panel (III. 3). As a connection to the long side, 12.5 cm wide strips are cut from the laying boards and the first row is laid (III. 4). The entire surface is then laid out. The end panels are laid on each of the two transverse sides of the room (III. 5 + III. 6).



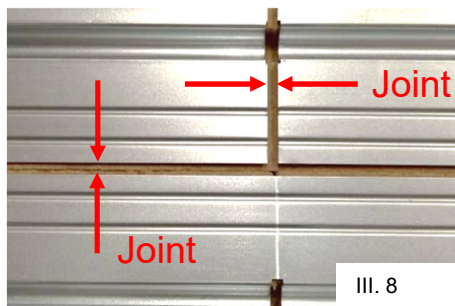
Shortening for the room lengths is ideally done with the last installation panel (III. 7).



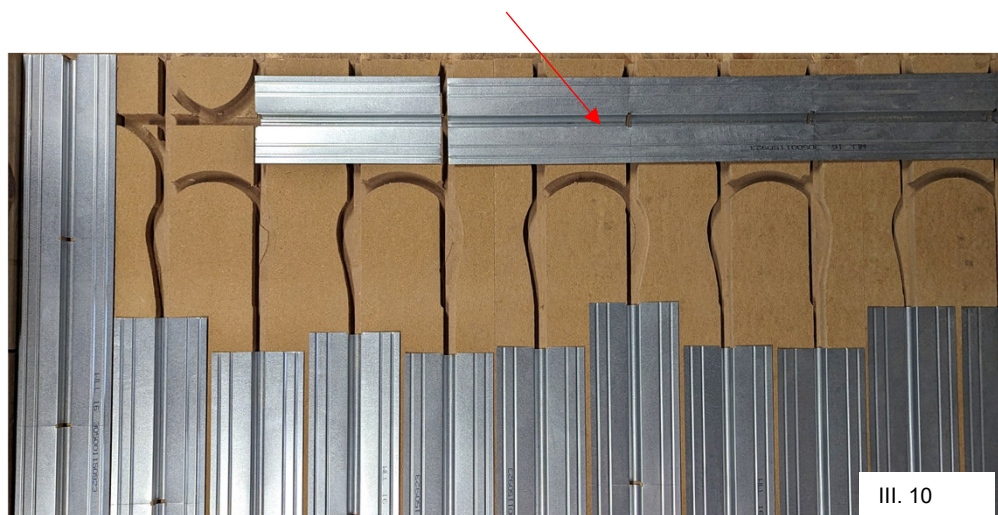
If necessary, shorten the panels to fit the length of the room.

**Step 2:
Laying the
thermally
conductive
plates**

The thermally conductive plates are laid on the installation boards with the grooves fitting in (III. 7). They must not touch or overlap at the joints (III. 8). To support the separation of the plates, a tear seam is provided every 25 cm (III. 9).

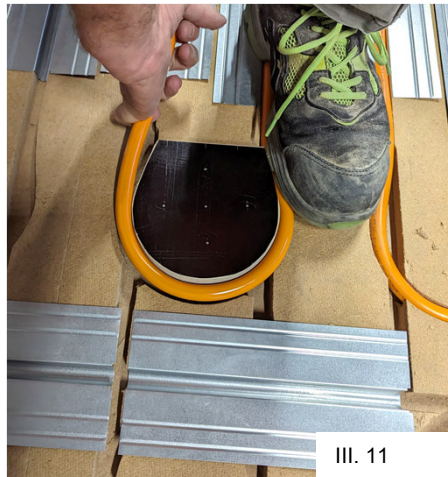


The heat conducting plates are also inserted into the transverse groove at the end of the room (III. 10). The return of the heating pipe can be routed along this.

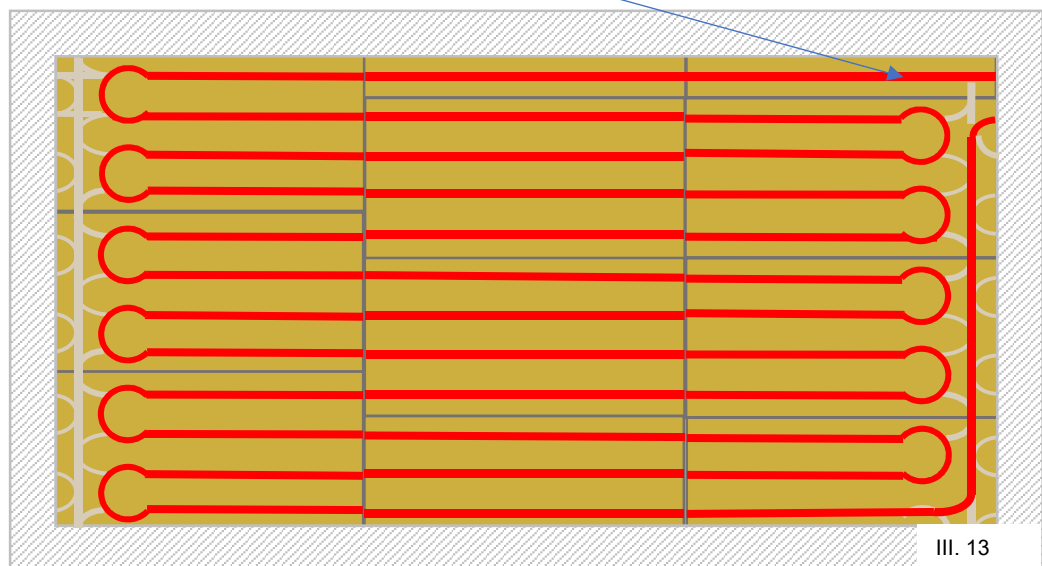


**Step 3:
Laying the
pipe**

The metal composite pipe is laid using the decoiler. The bending aid (III. 11+12) or a bending spring can be used for the pipe bends.



The pipe is laid in a meandering pattern according to the following diagram (III. 13). Ideally, the installation should start at the point where the 12.5 cm strips are cut.

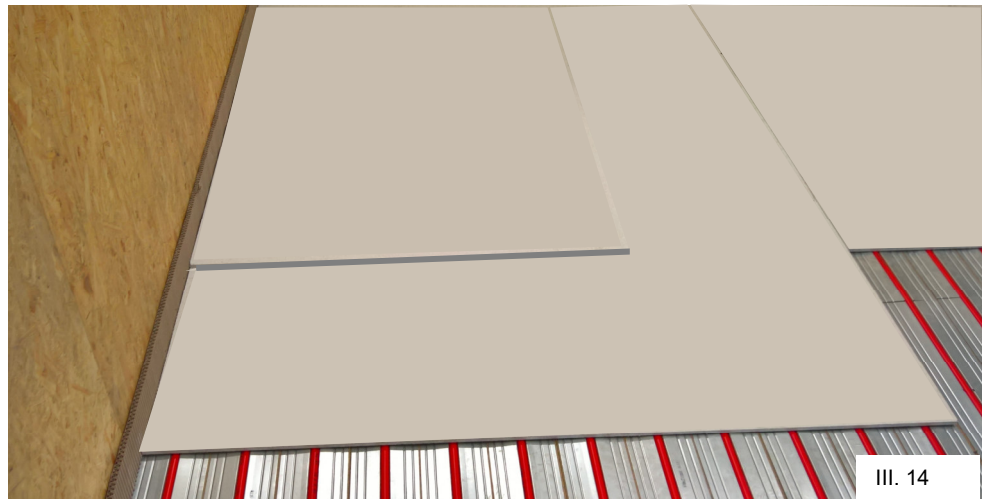


The curved milling of the head plates allows the return to be routed out of the surface at the optimum point.

Structure A Preparation for tiling:

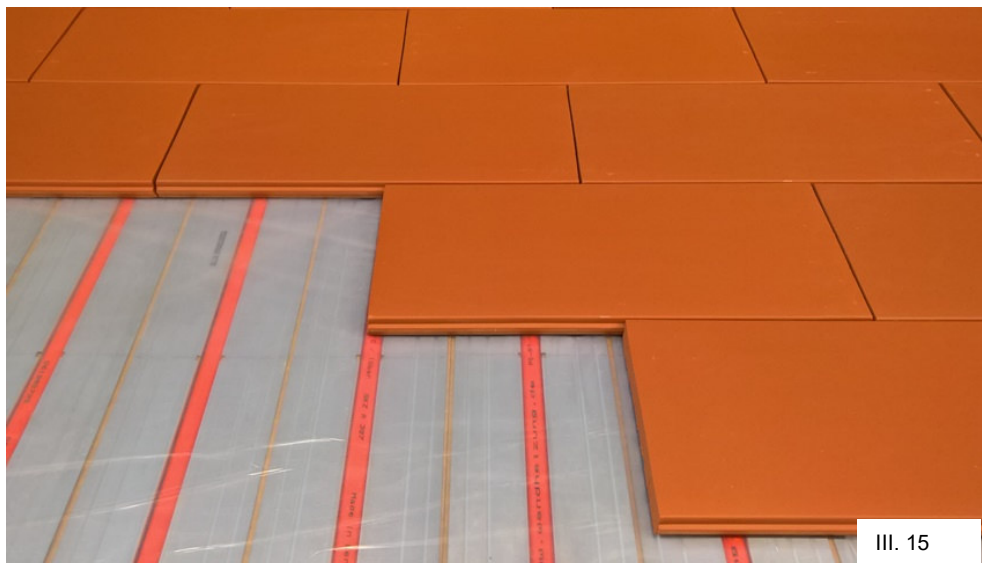
Laying dry screed boards

The WEM flooring system 30 is approved for a maximum tile edge length of 33 cm. A dry screed board can be used as a substrate for gluing the tiles (e. g. KNAUF Brio 23 mm or Fermacell dry screed board 25 mm) (III. 14).



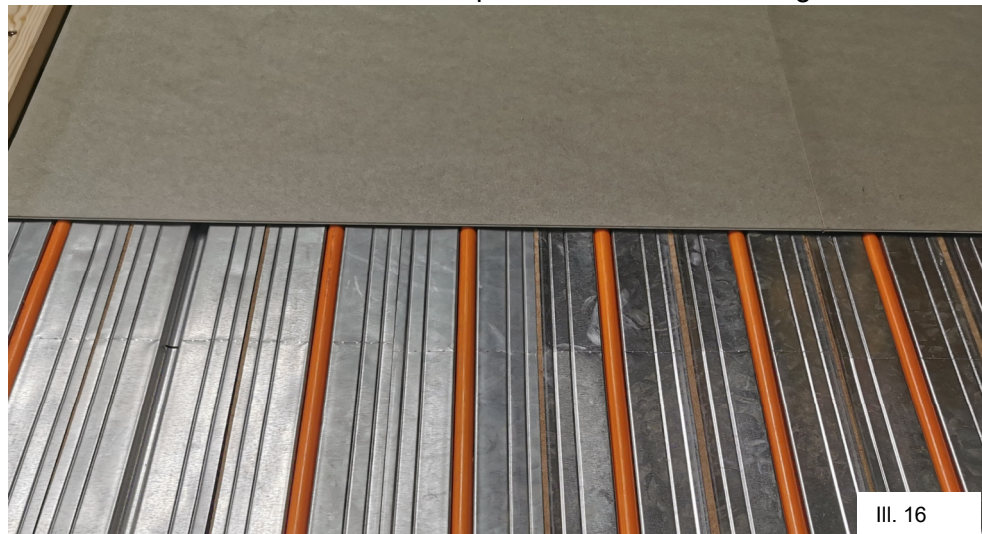
Laying screed replacement tiles

Alternatively you can use screed replacement tiles (III. 15). Like the dry screed boards, the screed replacement tiles are glued together and laid as floating screed.



Structure 2 B: Laying of Ceralan boards and preparing the gluing of parquet:

Application: The WEM floor system with Ceralan boards is suitable for use with prefinished parquet flooring of a minimum thickness of 14 mm. The prefinished parquet is glued on over the entire surface and, in combination with the Ceralan board, forms a compression-resistant flooring.



Step 2.1 B: Preparation

Prior to the installation, the Ceralan boards must be conditioned in the installation room stacked flat on a pallet for approx. 48 hours at a temperature of 20 to 22 °C and a relative humidity of 50 to 60 %. These temperature and humidity conditions must also be respected during and after the installation.

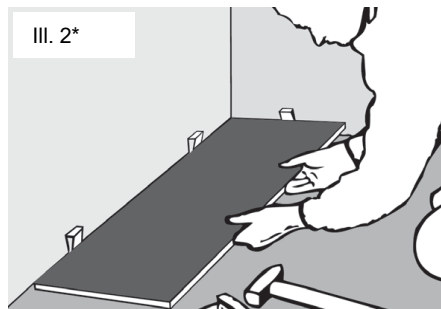
You can cut the Ceralan boards with conventional woodworking machines (saw blade e.g. MP.5 3125 or Bosch T141 HM).

Step 2.2 B: Laying

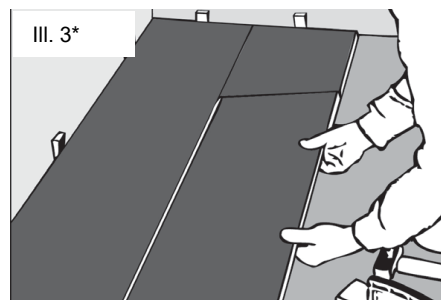
Start laying the boards on the right side in a room corner. Due to the dimensional stability of the Ceralan board, an edge distance of 3 to 4 mm to all fixed components is sufficient when laying the boards. Existing structural expansion joints must be retained.



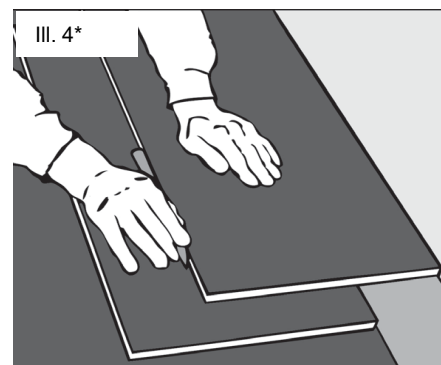
For the first row, cut the grooved sides of the boards so that the lower groove cheek, which protrudes above the upper cheek, is cut off (III. 1*).



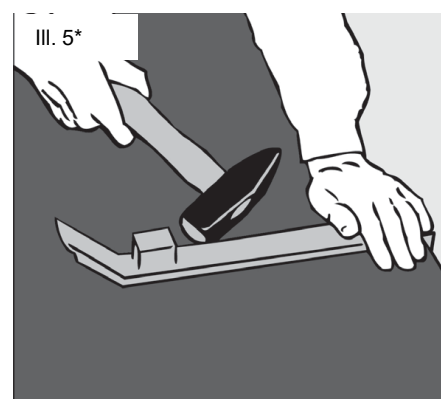
Place the first board so that the sides with the cut grooves (III: 2*) face the wall. The boards of the first row can be click-joined at the face side by aligning them at an angle or by tapping them with a hammer and tapping block.



After the first row has been precisely aligned using a setting batten, start laying the second row with the remaining piece of the last board of the first row. Offset of the board joints by at least 15 cm. Place the first panel at a slight angle (III. 3*) and click-fasten it using a tapping block and hammer. Proceed in the same way with the second board and drive the face joint of this board into the first board using a tapping block etc.



Fitting in the last row: Place the board to be cut exactly on the previous row. Then draw the longitudinal section with the help of another Ceralan board (III. 4*). This way of marking ensures enough distance to the wall to fit the last row by aligning the boards at an angle and inserting them using a pull bar.



The last row of boards is driven together lengthwise with the pull bar and endwise with the tapping block.

* Source of illustrations:
ZIPSE GmbH & Co. KG, Kenzingen

**Step 2.3 B:
Gluing the
parquet**

For gluing the parquet flooring, we recommend using a silane-based parquet adhesive (e. g. Bona Quantum or WAKOL MS 230). Before gluing, the surface must be dusted. The parquet is glued according to the manufacturer's instructions (III. 17).

