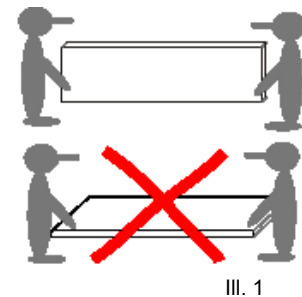


# WEM Dry-Construction System for Electric Heating

**General notices** The most efficient and energy-saving heating performance of the WEM Climate Panels EL (EL= electric) is only achieved in conjunction with a WEM Room Thermostat (Art. No 12615, 12619 or 16410).

**Storage and transport** Protect the panels against moisture! Avoid deflection (transport the panels in upright position, see illustration 1)!



*Installation on a wall:* If thick plaster layers (10 mm and more) are applied, provide for forced drying! *Installation on the ceiling:* Start dry heating immediately after applying the plaster layer (thickness: 5 mm max.) (except for lime plaster)!

**Prerequisites** The WEM Climate Panel EL is suitable for the installation on wall or ceiling surfaces. You can find details concerning substrates and substructures in the installation instructions *100\_Installation DC Wall* and *107\_Installation DC Ceiling*.

The surface area or substructure that will accommodate the heating system must have sufficient strength and stiffness to bear the WEM Climate Panels EL (area weight: at least 55 kg/m<sup>2</sup>). Moreover, the surfaces of walls/ceilings shall to be sufficiently flat and even to prevent distortion of the WEM Climate Panels EL when fixing them. Uneven surfaces can be levelled with levelling plaster or a timber batten frame.

The thermal protection of the building should be checked for compliance with regulations on the energy efficiency of buildings, like the German Gebäudeenergiegesetz (GEG). For reasons of energy conservation, it is not recommended fitting a wall heating to exterior walls with a U-value > 0.5 W/m<sup>2</sup>K without additional thermal insulation measures.

Clay Panels D (addition of dispersion < 1 %) and Climate Panels EL are not suitable for exposure to splash water or for installation underneath tiles.

WEM Climate Panels EL and WEM Clay Panels D should not be installed at temperatures below 5 °C. If there is a high humidity content in the air (e. g. due to screed laying) the WEM Climate Panels EL must be heated. Ensure sufficient ventilation during dry heating. Fit heavy loads to the wall structure or a substructure.

### **Prerequisites**

You must not trim WEM Climate Elements to make them shorter or narrower because there is a risk of damaging the heating pipes. The electrical connection may only be made by an electrically skilled person.

### **Preparation**

You can fit the WEM Climate Panels EL in any installation position. Make sure not to jam or damage the power supply cable when installing the panels. A flush-mounted socket with a diameter of 60 mm is required for the connection of the WEM Flush-Mounted Indoor Thermostat.

### **Mounting the Climate Panels EL**

At least two fitters are needed to install the WEM Climate Panels EL. Fit the panels with screws at the disk fasteners cast in at the factory (III. 2) to an even subsurface or a substructure. The length and type of the screws depend on the substrate.

*Fixing at additional points is not allowed!*

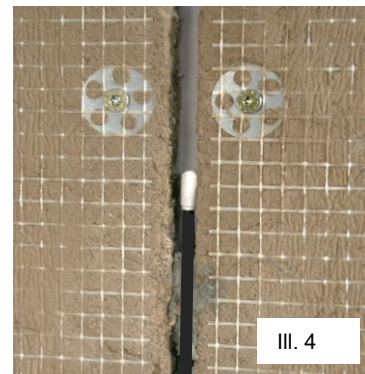


For the subsequent installation of the remote sensor, provide for a gap between two panels (III. 3).

## Electrical Wiring

You can connect a maximum of 2,300 Watts of wall-heating or ceiling-heating surface (8.8 to 10 m<sup>2</sup>) to a controller (indoor thermostat). The connection cables of the climate control elements are wired (connected in parallel configuration\*) to the flush-mounted room thermostat (III. 5.1 or 5.2). The room thermostat should be mounted in a location in the room that allows free access and is free from sunlight or other heat sources. It should not be mounted above an air-conditioning element and, if next to it, at least 30 cm away.

When using a thermostat with remote sensor, insert the sensor into the gap between two climate panels (III. 4) This is the best way to detect also the surface temperature. You can extend the length of the sensor cable up to about 50 m using a twin-wire cable suitable for 230 V. Avoid close parallel routing with power supply cables.



## Note for ceiling heating

When used as ceiling heating in rooms with a height of less than 2.70 m, two climate control elements should always be connected in series to limit the heating power and thus the surface temperature.

## Levelling of the surfaces

Use WEM Clay Panels D to raise the wall surfaces that are not covered with WEM Climate Panels EL to the level of the installed heating surface. Fix them with screws using the WEM disk fasteners. Make sure that you fix each panel at four fixing points at least to walls and at five fixing points at least to ceilings and sloped roofs.

## Cutting to size

You can cut the Clay Panels D to size with a jig saw or a cutting disk. (Make sure that you wear protection glasses and a breathing mask because of the dust emission and ensure good ventilation, if possible). Otherwise, scribe the textile covers on both sides of the panels with a knife and break the panels off at the cutting edges (III. 6 and 7).





Cut-outs in Clay Panels D and smaller pieces can be created best with a jig saw. Hole cutting drill bits are suitable for drilling socket openings (III. 8).



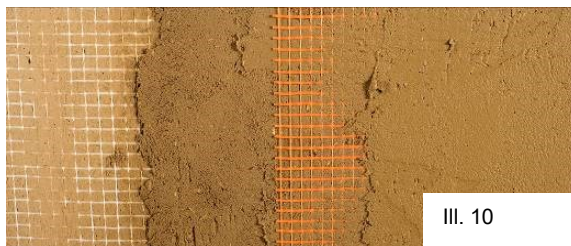
III. 8



III. 7

### Smoothing and reinforcing

Seal the entire wall surface with WEM Universal Clay Plaster, apply a coat of about 5 mm thickness, moisten the wall beforehand. Insert the WEM Reinforcing Fabric into the plaster while it is still in a plastic state. Overlap the fabric layers by at least 10 cm at the joints. After the first layer of plaster has dried completely, apply WEM Fine-Finish Plaster to finish the surface (application thickness approx. 3 mm).



III. 10



III. 9

**Wall:** A single plaster coat must not exceed a thickness of 10 mm!  
**Ceiling:** A single plaster coat must not exceed a thickness of 5 mm!

**Important notice:** Dry heating must be started immediately after the application of each layer of plaster (except for lime plasters). Humidity must be removed, e. g. by airing or using a condensation dryer. If the heating is not yet in operation, other drying measures must be undertaken.

### Finishing

Apply the desired finish over the entire wall surface including heating and raised surfaces. To preserve the beneficial properties of the clay we recommend WEM FarbTon Clay Paint or a coloured Design Clay Plaster for finishing.