

## WEM Climate Panel EL

Article no. 16401-3

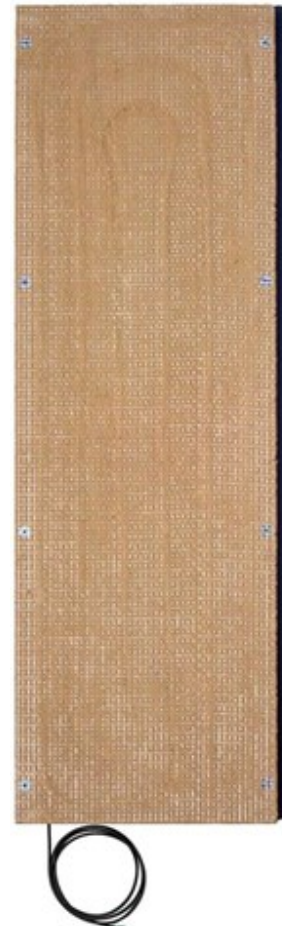
**Description** The WEM Climate Panel EL is a 25-mm-thick clay panel with integrated electrical heating cables. This heating panel is suitable for dry installation on wall and ceiling surfaces.

**Scope of application** Electrical wall heating. The electrical Climate Panels can be used as an exclusive source of heating or to support the existing heating system. As they do not contain water as a heating medium (no risk of freezing), they are particularly suitable for temporarily occupied rooms such as event rooms or holiday cottages.

**Benefits** The Panel is ecological, permeable to vapour and capillary conductive. In addition, it provides good sound protection due to the high bulk density.

The special heat conductors generate only very low alternating electric and magnetic fields, which the Standard of Building Biology Testing Methods (SBM) of the Institute of Building Biology + Sustainability (IBN) classifies as producing "no anomaly" or "slight anomaly".

Due to the dry installation, only little moisture is brought into the building structure in comparison to other methods that require the application of thick plaster coats. This reduces drying times and optimises the progress of work.

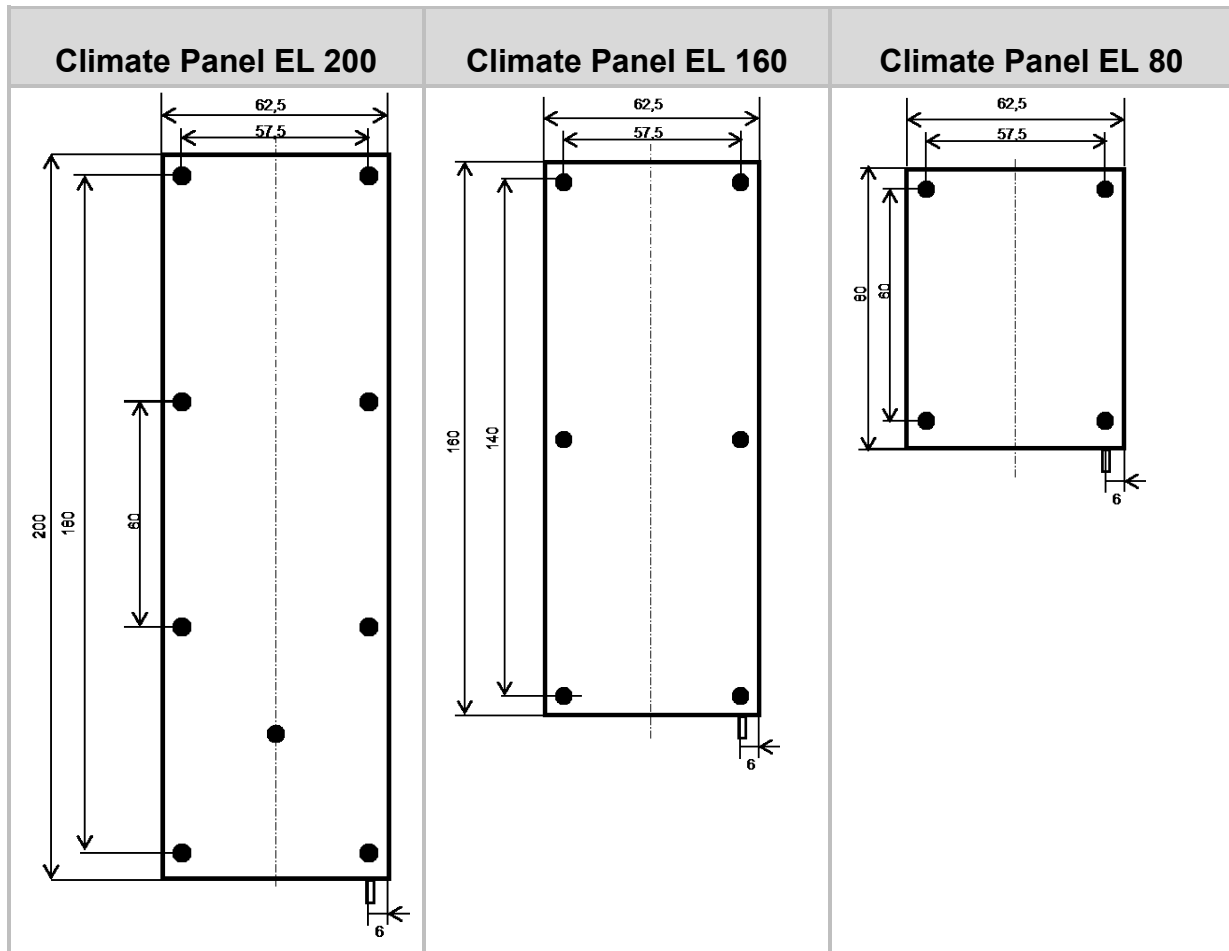


<b>Materials</b>	Panel	Milled construction loam, plant fibres, broken sand, polymer-dispersion <1%
	Reinforcement	Glass-fibre fabric

<b>Technical data</b>	Bulk density	1 400 kg/m <sup>3</sup>
	Compressive resistance $\sigma_d$	> 2.5 N/mm <sup>2</sup>
	Thermal conductivity $\lambda$	0.59 W/m·K
	Specific thermal capacity $C_p$	1.0 kJ/kg·K
	Vapour diffusion resistance $\mu$	5 to 10
	Material class	A2 (non-combustible) as per DIN EN 13501-1
	Edge shape	Blunt
	Heating cable	230 V a.c.
	Connection cable	230 V a.c., 3 x 2.5 mm <sup>2</sup> , length = 4 m
	Automatic control	Room thermostat/ alternatively room thermostat with external wall sensors (overheating protection)
	Fastening	Screws, $\varnothing$ 4.5 to 6 mm, cramps
To be ensured on site	Protect against moisture, store in dry location, installation temperature $\geq 5^\circ\text{C}$	

<b>Noise protection</b>	Solid structure	Reduction: 2.8 dB
	Solid timber	Reduction: 8.5 dB
	Timber frame	Reduction: 10.6 dB

	<b>Climate Panel EL 200</b>	<b>Climate Panel EL 160</b>	<b>Climate Panel EL 80</b>
Dimensions	200 x 62.5 x 2.5 cm	160 x 62.5 x 2.5 cm	80 x 62.5 x 2.5 cm
Heating area	1.25 m <sup>2</sup>	1.0 m <sup>2</sup>	0.5 m <sup>2</sup>
Heating power	275 W	220 W	110 W
Weight	approx. 43 kg	approx. 35 kg	approx. 18 kg



**Alternating magnetic and electric fields**

Distance to heating surface	30 cm	100 cm
Alternating magnetic fields, low frequency (SBM A 2)	2 to 4 nT	1 to 3 nT
Alternating electric fields, low frequency (SBM A 1)	30 cm	100 cm
Zero potential	1.2 V/m	0.8 V/m
Earth potential	1 to 3 V/m	0 to 0.2 V/m
Measurement in accordance with TCO standard against the earth	5 V/m	
Body voltage test person "insulated"		110 mV

**Noise protection** A master thesis at the University of Koblenz examined the influence of WEM Clay Panels (LP) 25 mm and Climate Panels on three typical wall structures:

Solid structure: 175 mm lime-sand bricks with a cement plaster coat of 10 mm thickness

Solid timber: 170 mm solid construction timber (Holz 100)

Timber frame: Timber studs 6/12 cm, with 12 cm wood fibres, planked on both sides with diagonal boarding (2.5 cm)

	<b>Solid structure</b>	<b>Solid timber</b>	<b>Timber frame</b>
Without planking	55.0 dB	39.3 dB	35.0 dB
1 x Clay Panel + 8 mm clay finish coat	57.8 dB <i>Reduction: 2.8 dB</i>	47.8 dB <i>Reduction: 8.5 dB</i>	45.6 dB <i>Reduction: 10.6 dB</i>
2 x Clay Panel + 16 mm clay finish coat	58.5 dB <i>Reduction: 3.5 dB</i>	56.9 dB <i>Reduction: 17.2 dB</i>	47.7 dB <i>Reduction: 10.6 dB</i>
80 mm wood fibres + Clay Panel + 8 mm clay finish coat	64.2 dB <i>Reduction: 9.2 dB</i>	60.2 dB <i>Reduction: 20.9 dB</i>	58.9 dB <i>Reduction: 23.9 dB</i>

**Room thermostat**  
**Room thermostat programmable**  
**Flush-mounting Room Thermostat EL programmable**

Article no. 12615

Article no. 1

Article no. 16410

**Automatic control system**

The heating is controlled via a room thermostat or alternatively a programmable room thermostat EL with external wall sensors (overheating protection). In addition to controlling the indoor temperature, the device allows the setting of limit temperatures for the heating surface. This is done via an external sensor that is integrated in the heating surface. A max. temperature (overheating protection) and a min. temperature (protection against excessive heat loss) can be set. The programming of the limit temperatures as well as of the daily and weekly programmes is simple and can be handled via four keys and the display at the front of the controller.



A wall heating surface with an output of max. 2.300 W (8.8 to 10 m<sup>2</sup>) can be connected to a single controller. If this should be insufficient for very large spaces, either install multiple controllers (temperature zones) or interconnect a relay.

**Technical data**

Adjustment indoor temp.	5 °C to 30 °C, increments of 0.5 °C
Adjustment surface temp. (only for room thermostat EL with external wall sensors)	10 °C to 40 °C, increments of 0.5 °C
Dimensions	80.5 x 80.5 x 25 mm
Installation	Flush-mounting box, diam. 60 mm
Electrical data	230 V a.c., 50 Hz, 10 A, max. 2.300 W

<p><b>Remote sensor</b> (only for room thermostat EL with external wall sensors)</p>	<p>PVC cable, diam. 7.8 mm, length 4 m, extensible to 50 m</p>
<p>Program options for programmable room thermostats Art. No. 12619 and 16410</p>	<p>Max. 9 switch times per day, holiday feature with date (from, to), energy consumption indication (power-on period x costs), tool tips for self-evident manipulation. Large backlit display, pre-set adjustable time programs, anti-freezing feature.</p>