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 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.

**Climate Panel EL-EMC** With shielded connection cable
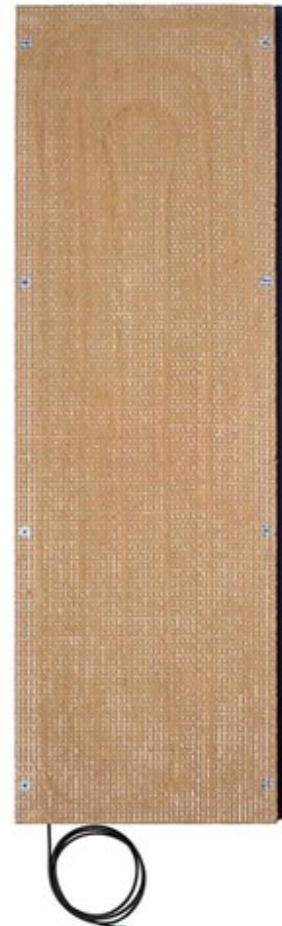
Materials	Panel	Milled construction loam, plant fibres, broken sand, polymer dispersion < 1 %
	Reinforcement	Glass-fibre fabric

Technical data	Bulk density	1 400 kg/m³
	Compressive resistance σ_d	> 2.5 N/mm²
	Thermal conductivity λ	0.59 W/m·K
	Specific thermal capacity C_p	1.0 kJ/kg·K
	Vapour diffusion resistance μ	5 to 10
	Material class	A2 (non-combustible) as per DIN EN 13501-1
	Edge shape	Blunt
	Heating cable	230 V AC
	Connection cable	230 V AC, 3 x 2.5 mm², length = 4 m
	Connection cable (Climate Panel EL-EMC)	230 V AC, 3 x 2.5 mm², shielded, length = 2 m
	Temperature control	Room thermostat
	Fastening	Screws, $\varnothing$ 4.5 to 6 mm, cramps
	To be ensured on site	Protect against moisture, store in dry location, installation temperature ≥ 5°C

Noise protection	Solid structure	Reduction: 2.8 dB
	Solid timber	Reduction: 8.5 dB
	Timber frame	Reduction: 10.6 dB

	Climate Panel EL 200	Climate Panel EL 160	Climate Panel EL 80
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 m²	1.0 m²	0.5 m²
Heating power	275 W	220 W	110 W
Weight	43 kg approx.	approx. 35 kg	approx. 18 kg

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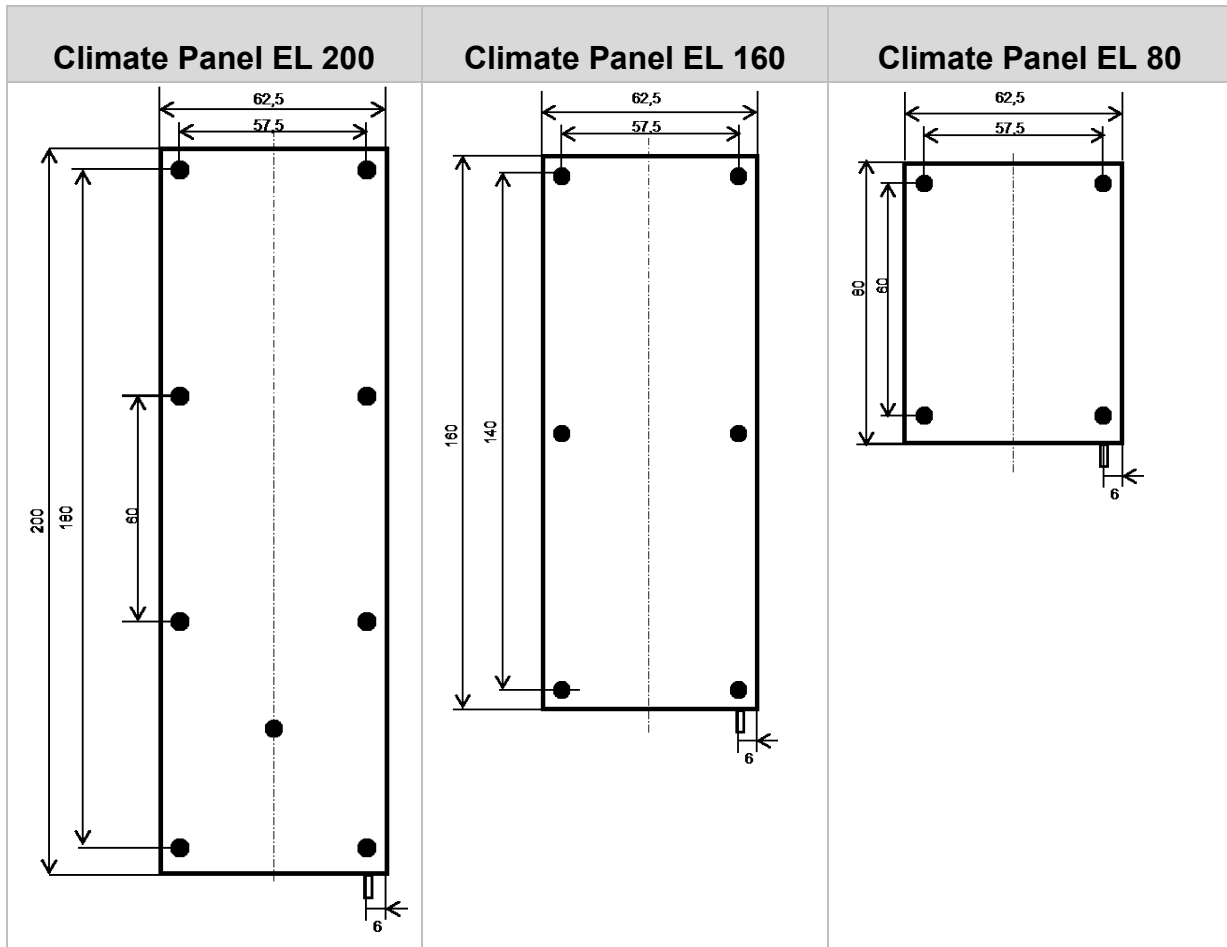
Alternating electric and magnetic fields

1 Climate Panel EL, measured at 50 Hz, vertical distance 1 m

Horizontal distance	Electr. field strength zero potential	Electr. field strength earth potential	Magnetic flux density
cm	V/m	V/m	nT
1	3.0	14.4	15
5	1.5	3.0	5
30	0.7	1.5	5
50	1.1	2.2	5
100	1.3	2.4	5
150	1.0	1.8	5
200	0.6	1.1	5
250	0.4	0.7	5
300	0.3	0.4	5

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 (Wood100)

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

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

Room thermostat   Article no. 12615
Room thermostat – programmable   Article no. 12619

Temperature control	The room temperature is controlled via a room thermostat. The automatic control is based on the indoor temperature measured by the internal sensor. The room thermostat provides an easy switchover between the comfort temperature and the setback temperature. The programmable room thermostat offers settings for switching times according to personal habits.

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 m²) 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 of indoor temperatures	5 °C to 30 °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 AC, 50 Hz, 10 A, max. 2 300 W
	Programming of the programmable room thermostat (Article no. 12619)	Max. 9 switch times per day, holiday feature with date (from - to), energy consumption indication (power-on period x costs), tooltips for self-evident manipulation. Large backlit display, pre-set adjustable time programs, anti-freezing feature.