

WEM Floor Heating Kera 40

Art. 30030 – 30040, 30095

Description The WEM Floor Heating Kera 40 is a dry construction system. It consists of 40 mm thick ceramic panels, the Ø 16 mm WEM multi-layer composite pipe, and profile strips for screwing floorboards.

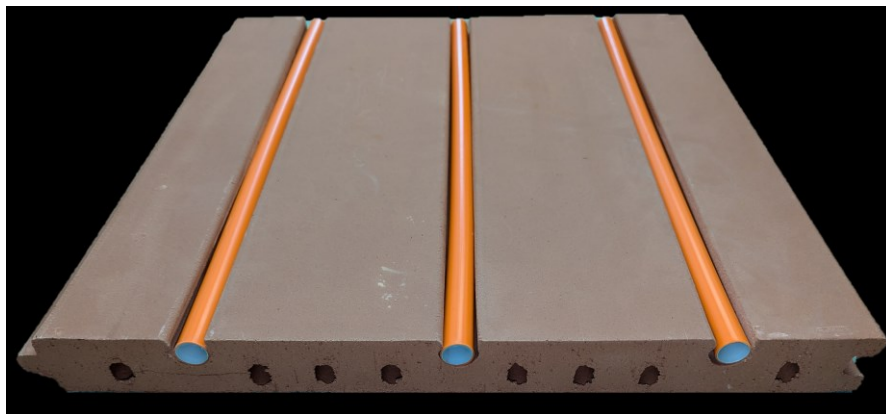
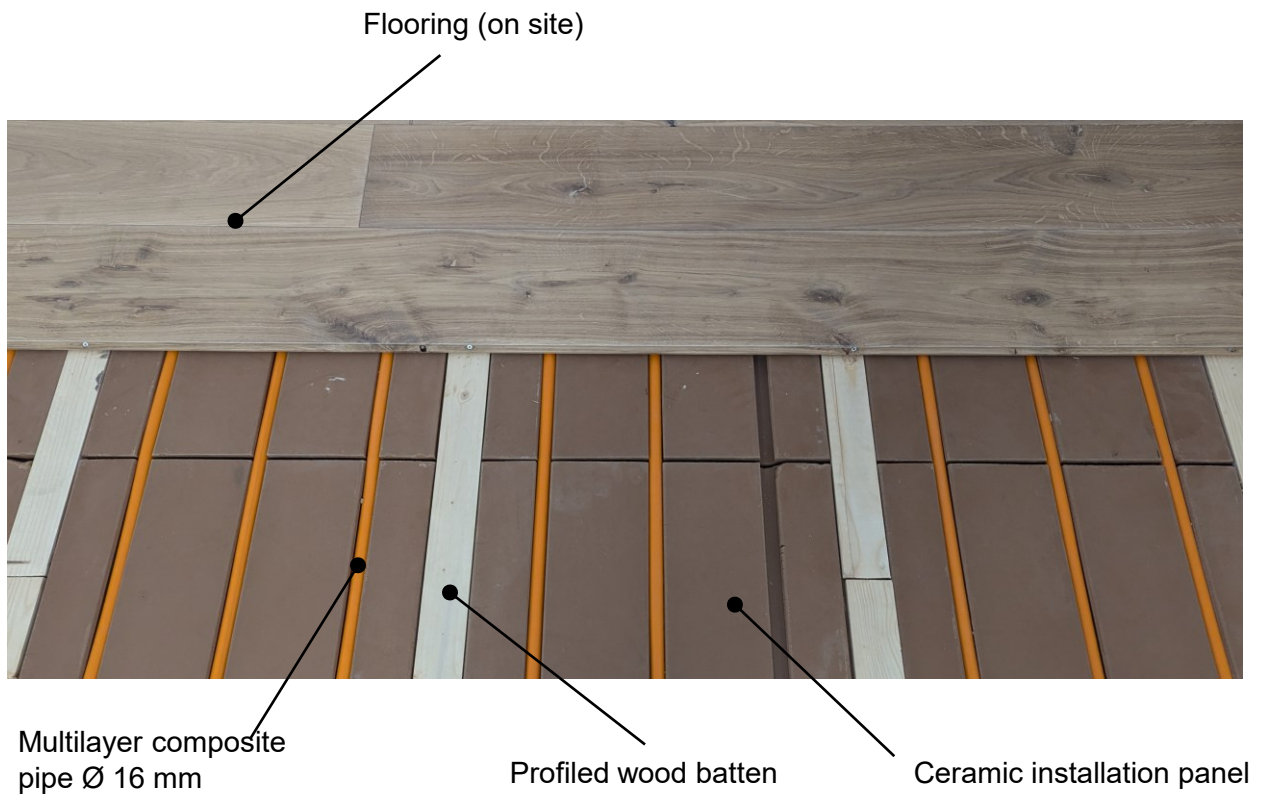


Abb. 1

Application As a low-temperature heating system, the WEM Floor Heating is used to supplement existing heating systems or as the sole heating solution.

Due to its high weight with relatively low construction height, it is used in areas where, in addition to the heating function, mass needs to be added to the structure, e.g. in timber and timber frame houses. As a dry construction system, it is suitable for both new buildings and the renovation of existing buildings.

- Advantages**
- Quick and easy installation
 - No drying times
 - High weight (approx. 72 kg/m²)
 - High mass, good sound insulation
 - Low construction height (40 mm)
 - Can be combined with WEM wall or ceiling heating systems



System Components

Ceramic installation panel	Fired clay
Profiled wood batten	Spruce / Fir
Metal composite pipe	WEM multi-layer composite pipe, Ø 16 x 2 mm, (PE-RT/ Aluminium/ PE-RT), DIN DVGW certified
Edge insulation strip	Coated corrugated cardboard
Leveling fill	Mineral-coated wood chips
Cork insulation strip	Pressed cork, DIN ISO 16000-9 and DIN EN 717-1

Ceramic installation panel	
Edge design	Tongue and groove
Material class	A1 non-combustable
Thermal conductivity	1 W/(mK)
Compressive resistance σ_d	50 N/mm ²
Specific thermal capacity C_p	850 kJ/(kgK)
Dimensions (W x L x H)	400 x 380 x 40 mm 400 x 190 x 40 mm
Surface area	0,15 m ²
Area weight	Approx. 72 kg/m ²

Profiled wood batten	
Edge design	Tongue and groove
Material class	D (normally flammable) as per DIN EN 13501-1
Compressive resistance σ_d	40 N/mm ²
Specific thermal capacity C_p	2.72 kJ/kg·K
Vapour diffusion resistance μ	40
Dimensions	2 000 x 50 x 35 mm
Surface area	0.1 m ²
Area weight	Approx. 16.45 kg/m ²

Multi-layer composite pipe	
Max. temperature	95 °C
Max. pressure	10 bars
Material class	D (normally flammable) as per DIN EN 13501-1
Connections	WEM Press-Fit Fittings (press contour U16)
Weight	Approx. 0.12 kg/m
Water content	Approx. 0.11 kg/m

Levelling fill	
Material class	E (normally flammable) as per DIN EN 13501-1
Thermal conductivity	0.06 W/(m·K)
Compressive resistance σ_d	8.2 N/mm ²
Bulk density	Approx. 320 kg/m ³
Filling height	5 to 60 mm
Chip size	1 to 5 mm
Area weight	Approx. 3.2 kg/m ² per cm of filling height

Technical data of the individual components

Edge insulating strip	
Material class (installed state)	D (normally flammable) as per DIN EN 13501-1
Dimensions	10 x 140 mm
Length (reel)	25 m

Cork strip	
Burning behaviour	Euroclass E
Thermal conductivity	0.041 W/(m·K)
Vapour diffusion resistance μ	5 to 10
Compressive strain at 10 % compression (DIN EN 826(2))	0.104 N/mm ²
Dimensions	50 x 5 mm 12 m per reel

Base cover board	
Material class	E (normally flammable) as per DIN EN 13501-1
Thermal conductivity	0.048 W/(m·K)
Compressive strength (kPa)	0,15 N/mm ²
Vapour diffusion resistance μ	5
Dimensions	1350 x 600 x 20 mm
Surface area	0.466 m ²
Area weight	5 kg/m ²

Heating power

The performance of the heating depends on the water temperature, the desired indoor temperature and the installed flooring. The following table provides performance data for the flooring materials that we tested.

Indoor temp. [°C]	Heating medium temp. supply/return [°C]	Heating power [W/m ²]		
		20 mm softwood	20 mm oak	tiles
18 °C	35 / 30	26,3	31,9	57,4
	40 / 35	38,3	45	81,0
	45 / 40	50,6	58,1	104,6
20 °C	35 / 30	22,5	26,3	47,3
	40 / 35	33,8	39,4	70,9
	45 / 40	45	52,5	94,5
22 °C	35 / 30	17,2	20,6	37,1
	40 / 35	28,2	33,8	60,8
	45 / 40	39,4	46,9	84,4
24 °C	35 / 30	13,1	16,9	30,4
	40 / 35	24,4	29,1	52,4
	45 / 40	35,7	41,3	74,3