Technical Product Information

WEM Climate Pipe System

Article no. 02501-3

Description

The WEM Climate Pipe System comprises well-matched components for the creation of a radiant wall heating. It consists of multi-ply composite pipes and toothed rails.

Ill. 1

Application

The WEM Climate Grid is fitted to the wall surface. It is suitable for heating and cooling purposes. The low-temperature heating can be used as an exclusive source of heating or to support the existing heating system. It is suitable for new construction as well as for renovation and refurbishment of old buildings.

Benefits

- Freely selectable installation and layout
- Suitable for smallest surfaces

Materials

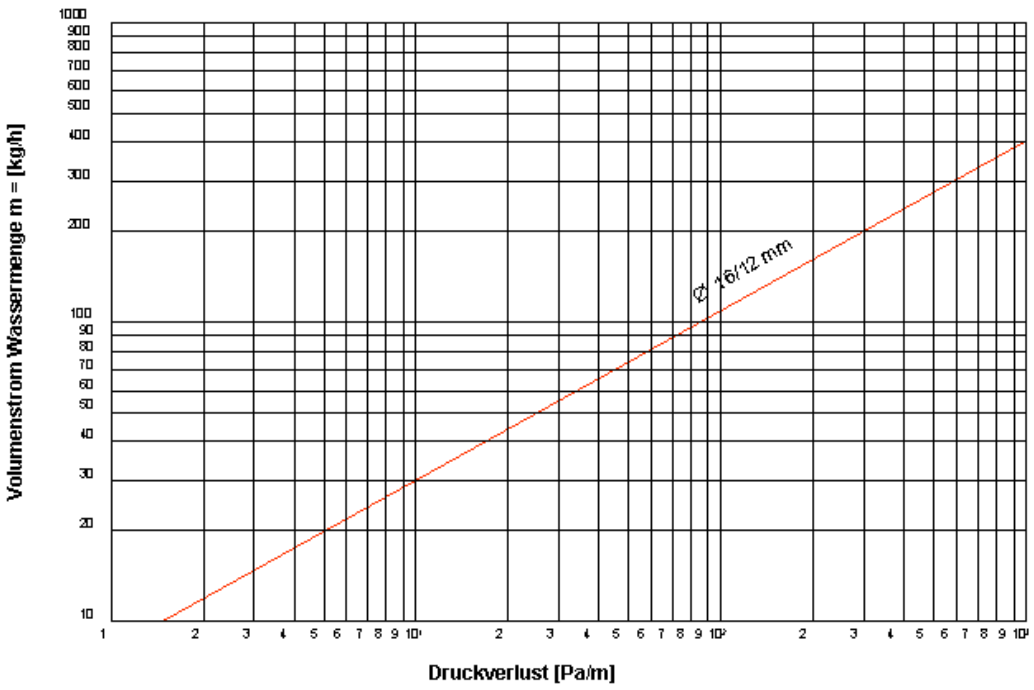
Heating pipe	WEM Multi-Ply Composite Pipe, ∅ 16 x 2 mm (PE-RT/aluminium/PE-RT), tested as per DIN DVGW*
Toothed rail	PVC regranulate

*DVGW = German Technical and Scientific Association for Gas and Water

Technical Data

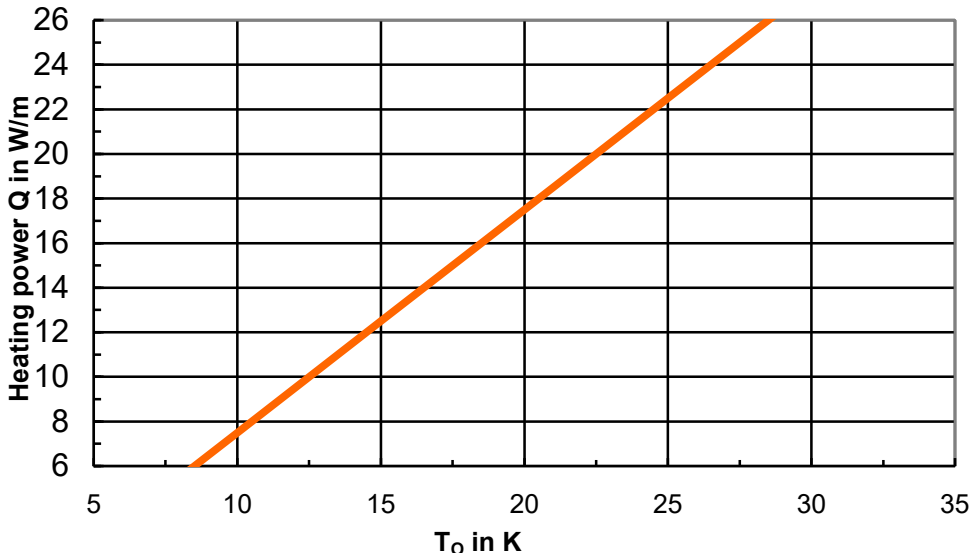
Max. temperature/pressure	max. 95 °C/10 bar
Material class	D (normally flammable) as per DIN EN 13501-1
Connections	WEM Press-Fit Fittings (press contour U16)
Supply temperature	35°C to 45°C
Heating power (with clay plaster)* **see page 3*	10 W/m² at T_O = 12.5 °C 20 W/m² at T_O = 22.5°C
Automatic control system	Room thermostats and motorized actuators in the heating manifold or thermostat valves (WEM Multibox)
Fastening	Screws, ∅ 4.5 to 6 mm, plugs
Weight	Approx. 0.12 kg/m
Water content	Approx. 0.11 kg/m

Pressure drop



Heating power

The heating power depends on the supply and return temperatures of the heating medium and the desired indoor temperature. The characteristic represents the heating output at different temperatures.



$$T_O = \frac{T_S + T_R}{2} - T_I$$

T_O = Mean overtemperature
T_S Supply temperature
T_R Return temperature
T_I Indoor temperature (20 °C in the example)

The table below gives an overview of typical temperature conditions and the associated heating power

T_{Supply} [°C]	T_{Return} [°C]	Q [Watt/m]
35	30	10
40	35	15
45	35	17.5
45	40	20
50	40	22.5
50	45	25
55	45	27.5
55	50	30

The specified values only apply if WEM Clay Plaster was used and the plaster layer thickness above the pipes does not exceed 1 cm.

Characteristic taken from the test report in accordance with DIN EN 442; testing institute: HLK Stuttgart, 02/2004