

## WEM Climate Grid

Article no. 02501-3

**Description** The WEM Climate Grid is a pre-finished element with pipes fitted on toothed rails. The pipes are made of oxygen proof multi-layer composite material.

**Scope of 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.



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- Benefits**
- Easy and quick installation
  - With low effort
  - Close contact to the wall due to overtensioned elements
  - Combinable with WEM Underfloor Heating

**Technical data**

Max. temperature/pressure	95 °C/10 bars
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	100 W/m <sup>2</sup> at T <sub>o</sub> = 12.5 °C 200 W/m <sup>2</sup> at T <sub>o</sub> = 22.5°C
Automatic control	Room thermostats and motorized actuators in the heating manifold or thermostat valves (WEM Multibox)
Fastening	Screws, ∅ 4.5 to 6 mm, plugs

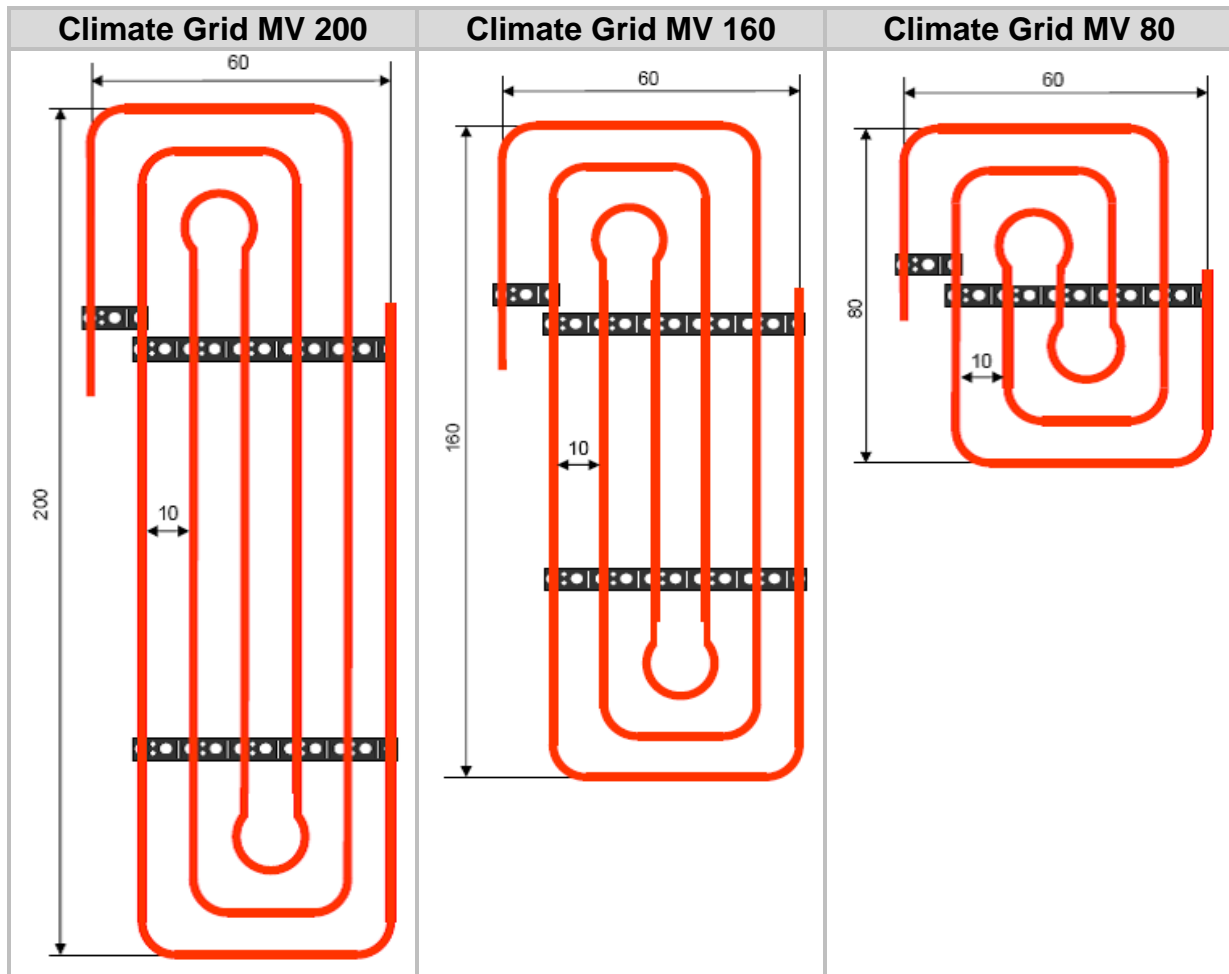
**Materials**

Heating pipe	WEM Multi-Layer Composite Pipe, $\varnothing$ 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

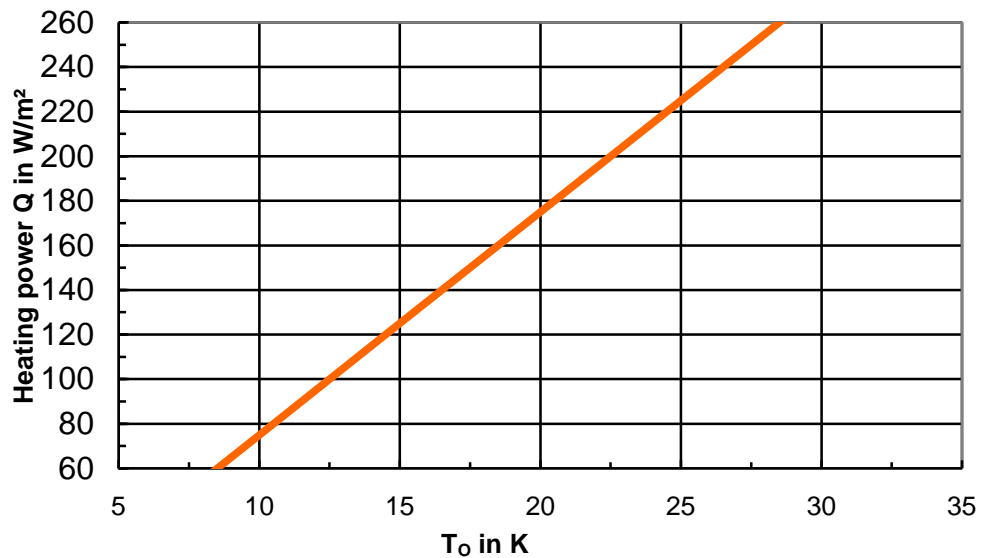
	Climate Grid MV 200	Climate Grid MV 160	Climate Grid MV 80
Dimensions	200 x 60 cm	160 x 60 cm	80 x 60 cm
Heating area	1.25 m <sup>2</sup>	1.0 m <sup>2</sup>	0.5 m <sup>2</sup>
Weight	approx. 1.6 kg	approx. 1.3 kg	approx. 0.7 kg
Water content	approx. 1.4 kg	approx. 1.1 kg	approx. 0.6 kg
Pipe length	13 m	10.5 m	5.5 m
Pressure loss	For information concerning the pressure drop see "Design" on p. 4.		

**Dimensions:**



## 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 power 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 <sub>Supply</sub> [°C]	T <sub>Return</sub> [°C]	Q [Watt/m <sup>2</sup> ]
35	30	100
40	35	150
45	35	175
45	40	200
50	40	225
50	45	250
55	45	275
55	50	300

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

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