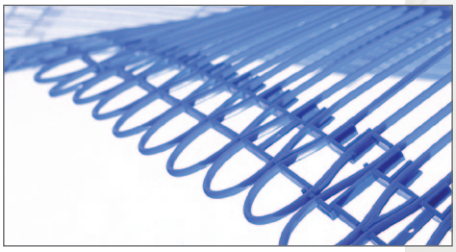
*clima***MINERAL**® *pp acoustic fine*

acoustic plaster cooling ceiling with synthetic capillary tubes
and the finest acoustic plaster finish



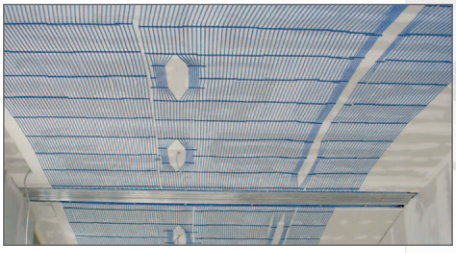


Photo credit: ICS, Christian Günther

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The System

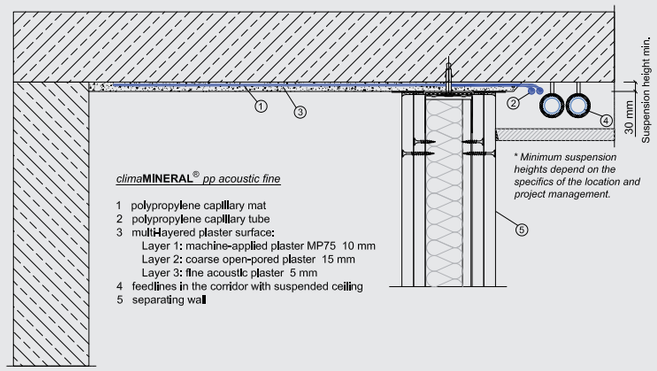
*clima***MINERAL**® *pp acoustic fine* is a cooling ceiling with a closed radiation system and high quality aesthetics. The average sound absorption rate is aw=0.35 (L) in accordance with DIN EN 11654. Heat load removal takes place by means of approximately 70 % radiation and 30 % convection. This ceiling has an acoustic plaster finish.

The cooling system is created by a series of mats made of capillary tubes running parallel to one another. All tubes are integrated into the storage battery and are connected to the flow line and return flow in an alternating pattern. Keeping the individual capillary tubes parallel and at the correct interval is accomplished through the use of spacer bars. Water is supplied by the internal network of tubes, which are welded into place. As part of the plaster surfacing, the flexible mats are laid into the wet plaster (this layer is ca. 8–10mm thick) and then covered for a smooth surface. Supply lines and mat stems are lead into either spaces at the side of the room or into the corridor. The system must be filled and ventilated before plastering the ceiling.

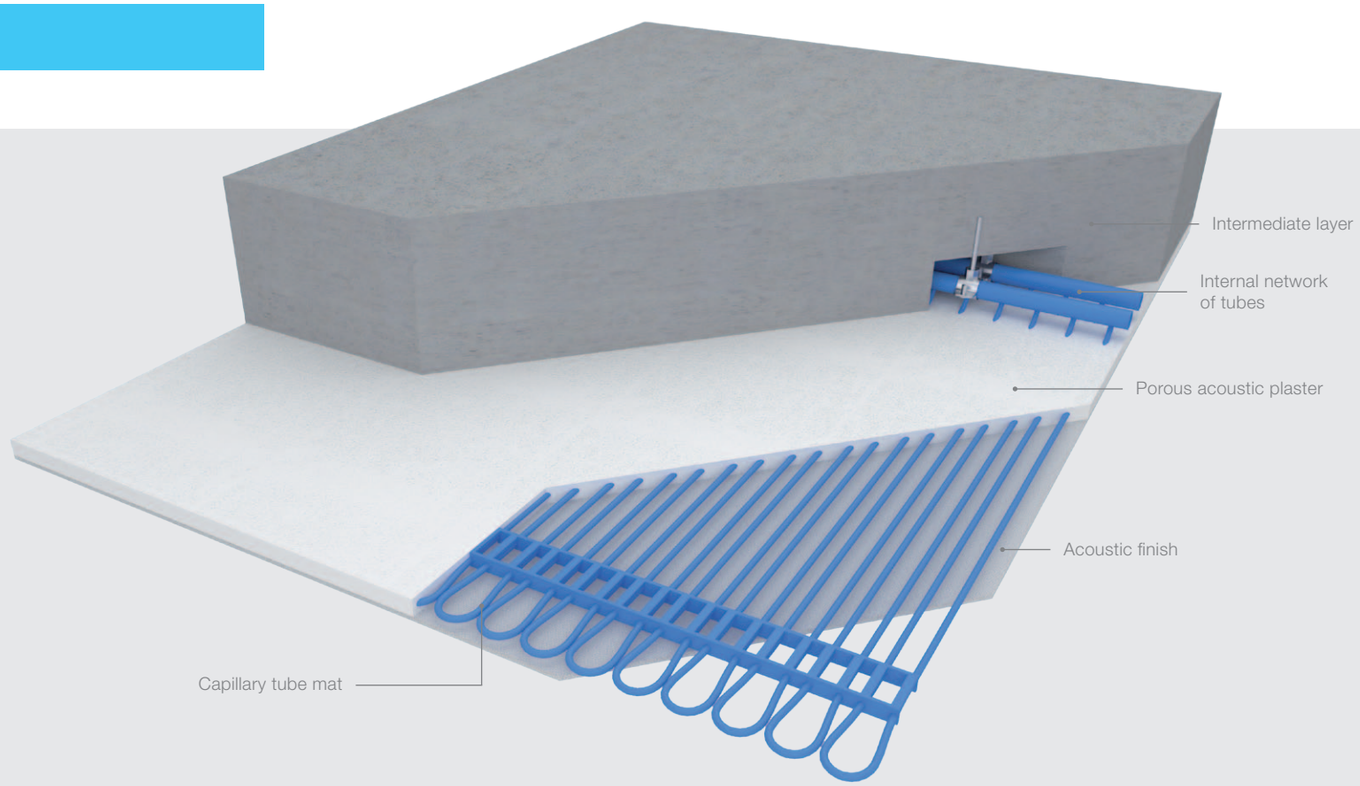
The surface layer consists of an intermediate layer covered by a layer of special porous acoustic plaster. The capillary tube system is embedded in this plaster layer.

To clean and maintain the cooling ceiling, dust that has accumulated can be carefully removed with a soft brush. Depending on how wipe resistant the finish is, dust and dirt can be washed off.

THE SYSTEM



THE STRUCTURE



Picture display *clima***MINERAL**® *pp acoustic fine* under a cement ceiling

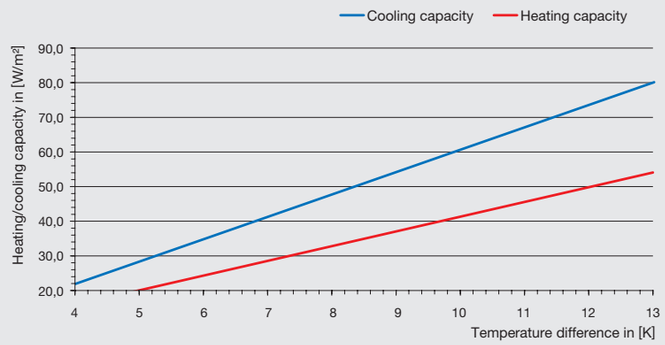
Cooling capacity

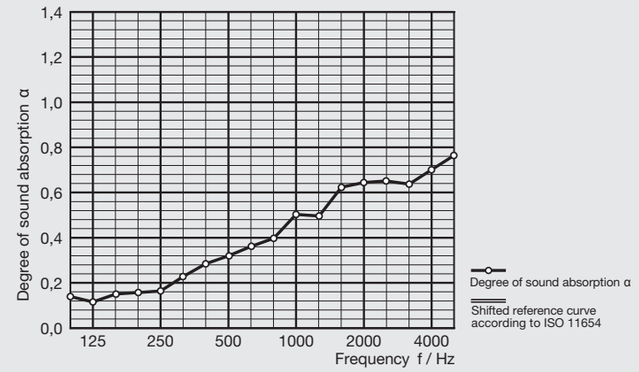
The given cooling and heating capacities have been test certified by accredited institutions in accordance with DIN EN 14240.

Acoustics

The given sound absorption values have been determined using active ceiling elements (including cooling batteries) and have been test certified by accredited institutions in accordance with DIN EN 11654.

PERFORMANCE





TECHNICAL DETAILS

General

Product:	*clima***MINERAL**® *pp acoustic fine*
Model:	capillary tube mats
Cooling capacity as per DIN 4715*:	60.4 W/m²
Audit report:	FTZ_2002_KF1018
Suspension:	minimum 30 mm
Sound absorption:	up to 35 %

Surface

Material:	machine-applied plaster
Perforation type:	closed

Surface Finish

Type:	acoustic fine acoustic plaster
Surface:	multiple layers of plaster with a very fine surface layer (grain: 0.5–0.7 mm)
Surface thickness:	ca. 30 mm
Colour:	natural white

Cooling System

Material:	PP Random Copolymer
Modul width:	tailored to meet your requirements
Modul length:	up to 6500 mm
Main tube:	20 × 2.0 mm
Capillary tube:	4,3 × 0.8 mm
Capillary tube interval:	20 mm
Test pressure:	10 bar

* Details regarding the cooling capacity are based on system temperatures with a flow line at 15° C, return flow at 17° C, and an operating room temperature of 26° C

Recommended Uses: We recommend using *clima***MINERAL**® *pp acoustic fine* in spaces with average sound absorption requirements, as a supplementary component in a larger sound absorption system, or spaces that allow for a narrow mounting height.
As the assessment of both the cooling capacity and acoustics depends on a number of factors and is likely to vary, we advise receiving a quotation specific to your project. We collaborate with a building physicist to determine the most feasible solution for your project's acoustic requirements. In addition, we are able to perform an assessment of your individual acoustic needs in cooperation with our partner MÜLLER BBM in Planegg/ Munich. We also offer reference and test measuring services under DIN conditions in our own testing and development laboratory.

Service and maintenance of the cooling ceiling and its components should take place once a year according to the general maintenance guidelines. Renovation or repair of damage to the system may only be performed by trained specialists (see Technical Requirements and FAQ for further information).