*clima***TILE**® *pp acoustic fine*

Acoustic metal cassette cooling ceiling with synthetic capillary tubes and the finest acoustic finish
(invisible perforation)

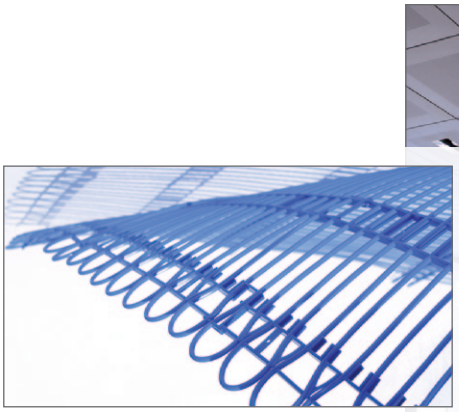

Photo credit: ICS, Thomas Schneider, Stephan Pusch

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The System

The product *clima***TILE**® *pp acoustic fine* is an acoustic cooling ceiling of metal cassettes which removes sensitive heat loads. Heat load removal takes place by means of approximately 70 % radiation and 30 % convection. The average sound absorption rate is aw=0.70 (L) in accordance with DIN EN 11654. The surface of this ceiling is a special acoustic membrane available either in matte or smooth finish with invisible perforation.

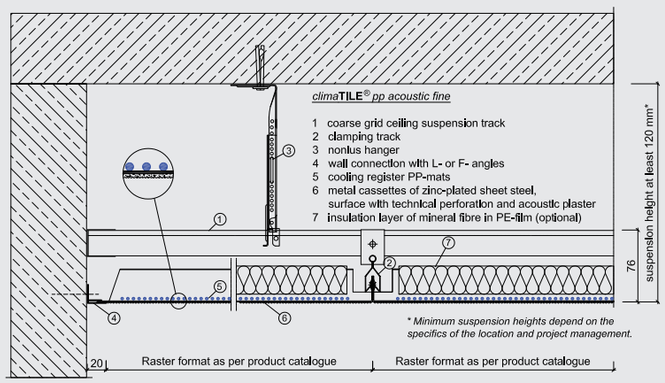
The cooling system is created by a series of mats made of capillary tubes running parallel to one another. All tubes are integrated into the storage battery and are connected to the flow line and return flow in an alternating pattern. Keeping the individual capillary tubes parallel and at the correct interval is accomplished through the use of spacer bars. Water is supplied by the internal network of tubes, which are welded into place. To increase the acoustic function while at the same time stabilising the adhesive used between the capillary tubes and metal cassettes, a layer of insulation made of mineral fibres has been applied to the cooling system.

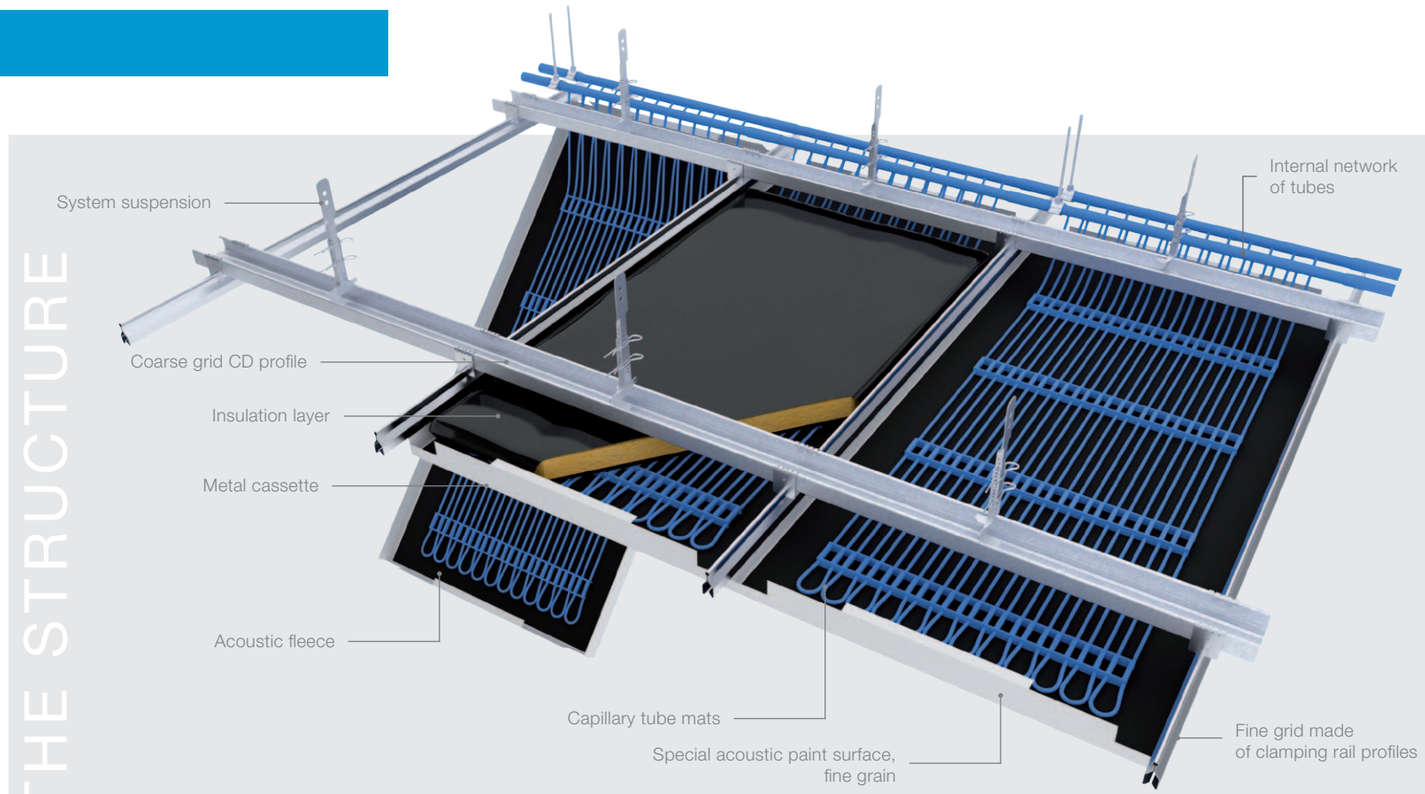
The substructure has a coarse grid with CD profiles (60/27) and from here the system can be suspended onto a raw concrete ceiling. Below that, at a 90° angle, the fine grid is mounted, resulting in a draft and pressure-proof substructure onto which active components and metal cassettes can be secured. The substructure is created based on the requirements specific to the project and therefore may vary in appearance, function, and size.

The surface layer consists of steel sheet cassettes, electrolytically plated with zinc, that have been powder-coated in the colour of your choice. For acoustic and aesthetic purposes, the metal cassettes are perforated. Depending on the type of perforation, both appearance and acoustic properties can be changed. A layer of acoustic fleece pressed into place blocks the view of the raw ceiling. The cassettes can have a length of 300 to 1800 mm and a width ranging from 300 to 625 mm. Further sizes are available on request. The metal cassettes can be hinged in an alternating pattern in the pre-assembly phase prior to delivery.

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





Picture display *clima***TILE**® *pp acoustic fine* clamp system

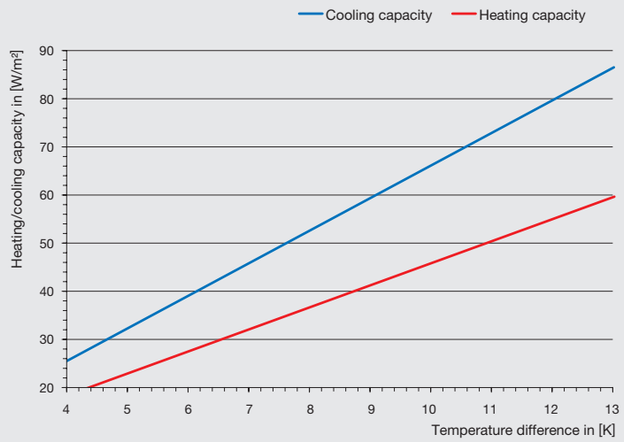
Cooling capacity

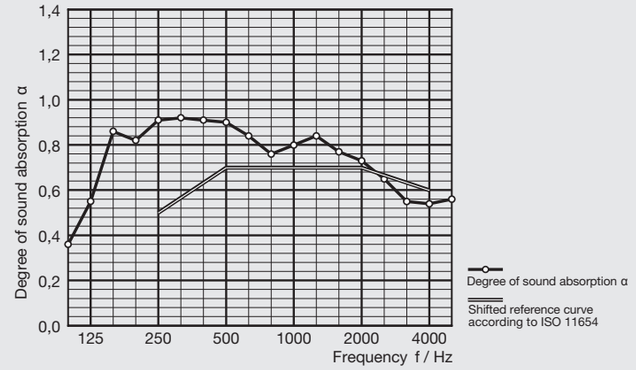
The given cooling and heating capacities have been test certified by accredited institutions in accordance with DIN EN 14240.

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***TILE**® *pp acoustic fine*
Model:	capillary tube mats
Cooling capacity:	65.9 W/m²
Audit report:	interpolated value
Insulation:	30 mm mineral fibre insulation in PE film
Substructure:	construction of CD profiles and clamping rail
Suspension:	minimum 100-140 mm
Weight:	ca. 11.8 kg
Sound absorption:	ca. 70 %

Surface

Material:	steel sheet (0.6–1.0 mm)
Perforation type:	various
Free cross-section:	ca. 16 %

Surface Finish

Type:	acoustic fine acoustic plaster
Surface:	very fine (grain: 0.5–0.7 mm)
Surface thickness:	ca. 1.5 mm
Colour:	natural white (standard), RAL colours also available

Cooling System

Material:	PP Random Coplymer
Modul width:	individually selected according to the cassette and requirements
Modul length:	individually selected according to the cassette and requirements
Main tube:	20 × 2,0 mm
Capillary tube:	4,3 × 0,8 mm
Capillary tube interval:	10 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***TILE**® *pp acoustic fine* in spaces with high-level sound absorbtion requirements (open plan offices, meeting and conference rooms, call cantres, etc.) as well as high-performance cooling requirements. This ceiling is highly versatile and can be tailored to suit nearly any space.

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).