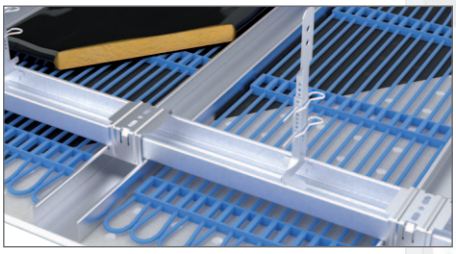
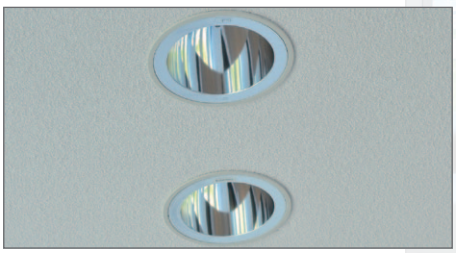
*clima***BOARD**® *pp acoustic fine*

acoustic plasterboard cooling ceiling with
synthetic capillary tubes and finest acoustic plaster finish
(invisible perforation)





Phone credit: Thomas Schneider, Stephan Pusch

*clima***BOARD**® *pp acoustic fine*

The System

The product *clima***BOARD**® *pp acoustic fine* is a closed plasterboard ceiling with a seamless finish. Heat load removal takes place by means of approximately 70 % radiation and 30 % convection. The average sound absorption rate is a = 0.55 (L) in accordance with DIN EN 11654. The surface of this ceiling receives its sound transparent, fine grain acoustic plaster finish on site.

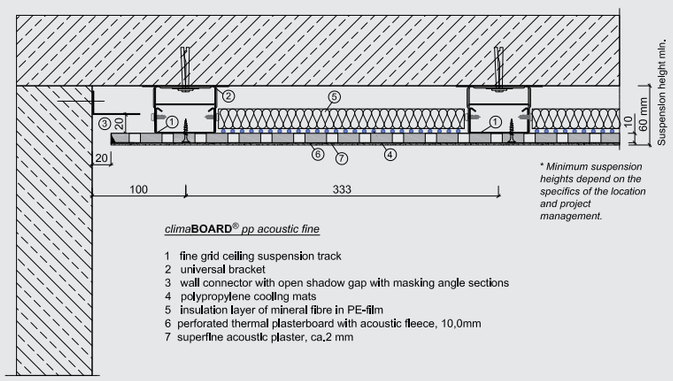
The cooling system is created by a series of mats made of capillary tubes running parallel to one another. All tubes are integrated into the storage battery and are connected to the flow line and return flow in an alternating pattern. Keeping the individual capillary tubes parallel and at the correct interval is accomplished through the use of spacer bars. Water is supplied by the internal network of tubes, which are welded into place. Supply lines and mat stems are laid in the intermediate ceiling. Special distance sleeves ensure the exact fitting of the flexible mats on the grid of the ceiling suspension tracks in order to allow for the use of large mats.
The capillary tube mats must be filled and pressure checked before closing the ceiling. The sound absorption layer is made of mineral fibres and serves a twofold purpose: it not only offers stronger sound absorption, but also improves the contacting to the plasterboard.

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 plasterboard plates can be secured.

The surface layer consists of sound absorbing, perforated thermal plasterboard (10 mm thick) which is specially fastened to the metal substructure in intervals of a maximum of 170 mm. Joints and screws are filled for a seamless appearance. Acoustic insulation is glued to the structure for sound absorption.

To clean and maintain the cooling ceiling, dust that has accumulated can be carefully removed with a vacuum cleaner.

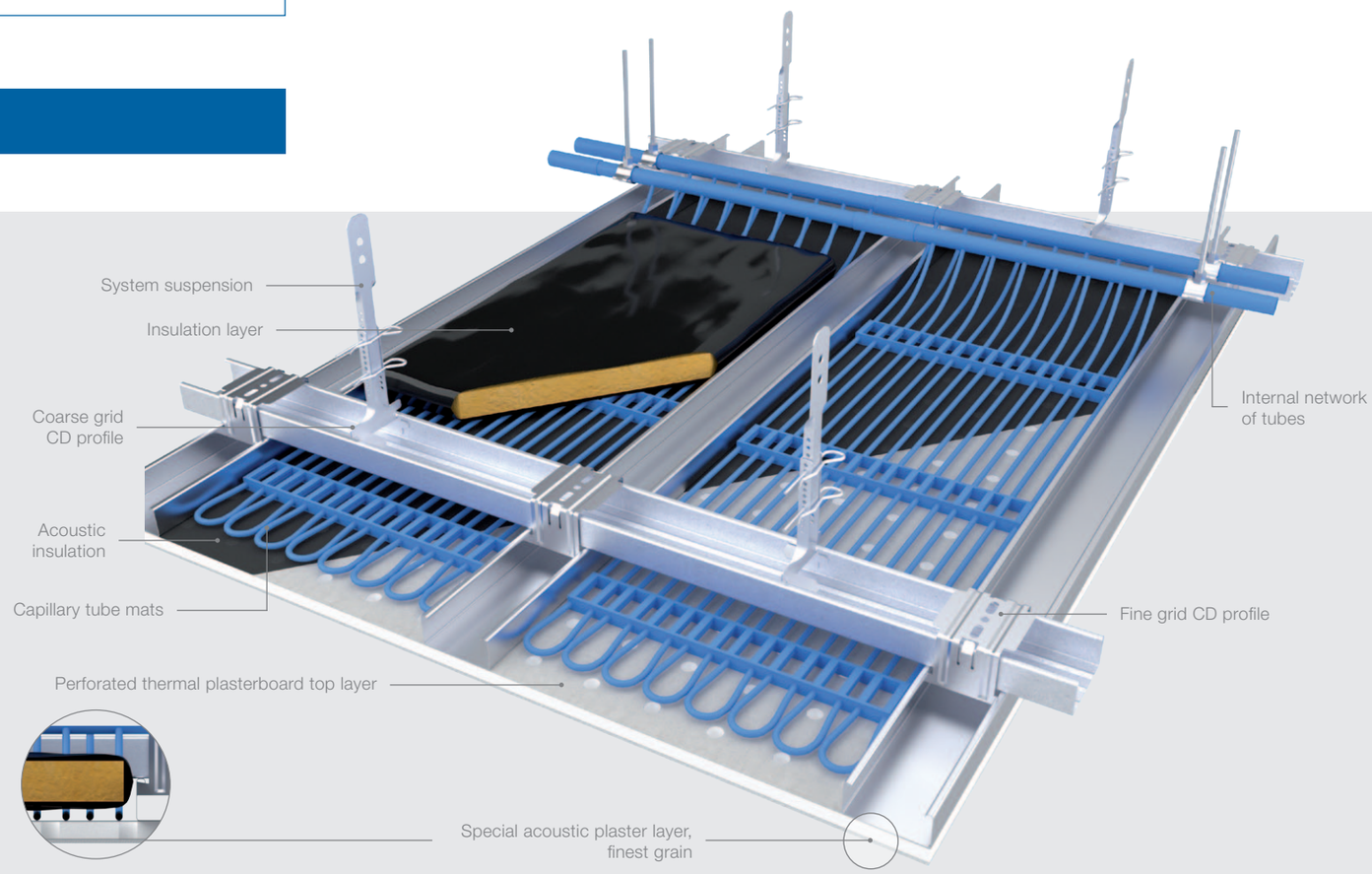
THE SYSTEM



*clima***BOARD**® *pp acoustic fine*

1 fine grid ceiling suspension track
2 universal bracket
3 wall connector with open shadow gap with masking angle sections
4 polypropylene cooling mats
5 insulation layer of mineral fibre in PE-film
6 perforated thermal plasterboard with acoustic fleece, 10,0 mm
7 superfine acoustic plaster, ca.2 mm

THE STRUCTURE



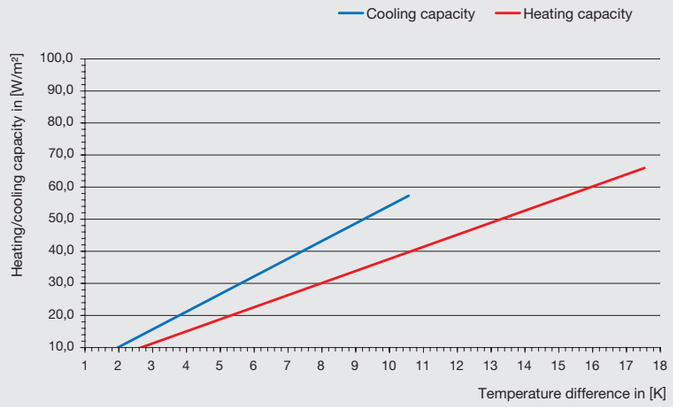
Cooling capacity

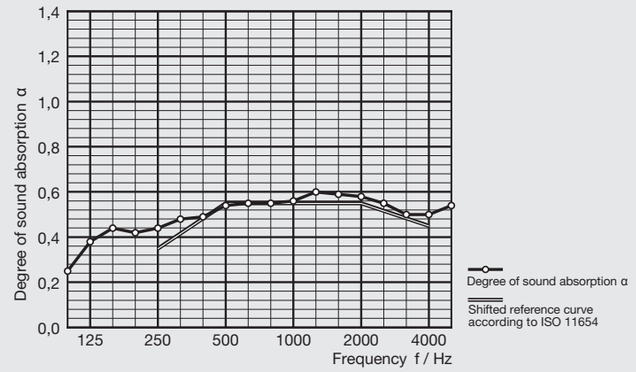
The given cooling and heating capacities have been test certified by accredited institutions in accordance with DIN EN 14240.

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***BOARD**® *pp acoustic fine*
Model:	capillary tube mats
Cooling capacity as per DIN EN 4715*:	54.2 W/m²
Audit report:	KF2002_P1002
Insulation:	30 mm mineral fibre insulation in PE film
Substructure:	construction of CD profiles
Suspension:	minimum 100 mm
Weight:	about 15.6 kg/m²
Sound absorption:	55 %

Surface

Material:	thermal plasterboard (10 mm)
Perforation type:	15/30 R
Free cross-section:	about 30 %

Surface Finish

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

Cooling System

Material:	PP-Random-Copolymer
Modul width:	333 mm
Modul length:	500–6 500 mm
Main tube:	20 × 2.0 mm
Capillary tube:	3.4 × 0.55 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***BOARD**® *pp acoustic fine* in spaces with particular sound absorbtion requirements (open floor offices) and other spaces where much conversation takes place (meeting and conference rooms, call centres, etc). Here a well-defined sound absorption method is essential in order to create a user friendly environment.
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).