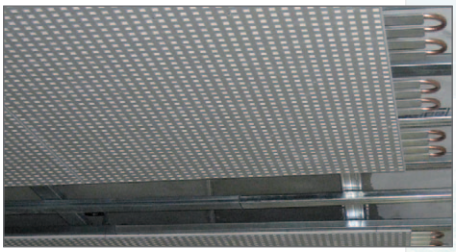
*clima***BOARD®** *cul*

perforated acoustic plaster cooling surface
with copper pipe meanders



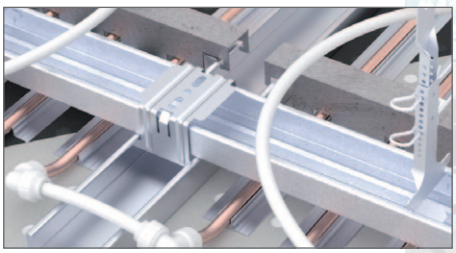


Photo credit: ICS, Thomas Schneider, Stephan Pusch

*clima***BOARD**® *cul*

The System

The product *clima***BOARD**® *cul* is a perforated 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 perforated surface makes a variety of visual effects possible which can be highlighted through the use of individual colour schemes. The surface exhibits a quality level of Q2.

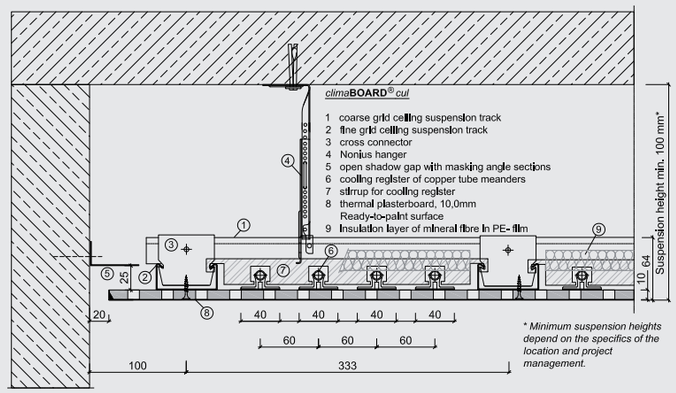
The cooling system is comprised of water-bearing copper tubing (10x0.6mm), made of a single meander-shaped piece. The length and width of the copper tube meander are made to fit the measurements of the covering board. The tube intervals and number of tube rows are selected depending on the cooling capacity and pressure loss requirements. Water for the meanders is supplied by diffused oxygen-tight connecting tubes in an internal network of tubes. Intelligent plug and solder connections at the ends of the calibrated tubes of each meander perfectly secures the connection to the entire system. The use of mounted special spacers maintain a secure connection between the cooling battery and plating. Aluminium heat-conducting profiles (WLP) ensure that temperatures are effectively maintained and distributed throughout the room.

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.

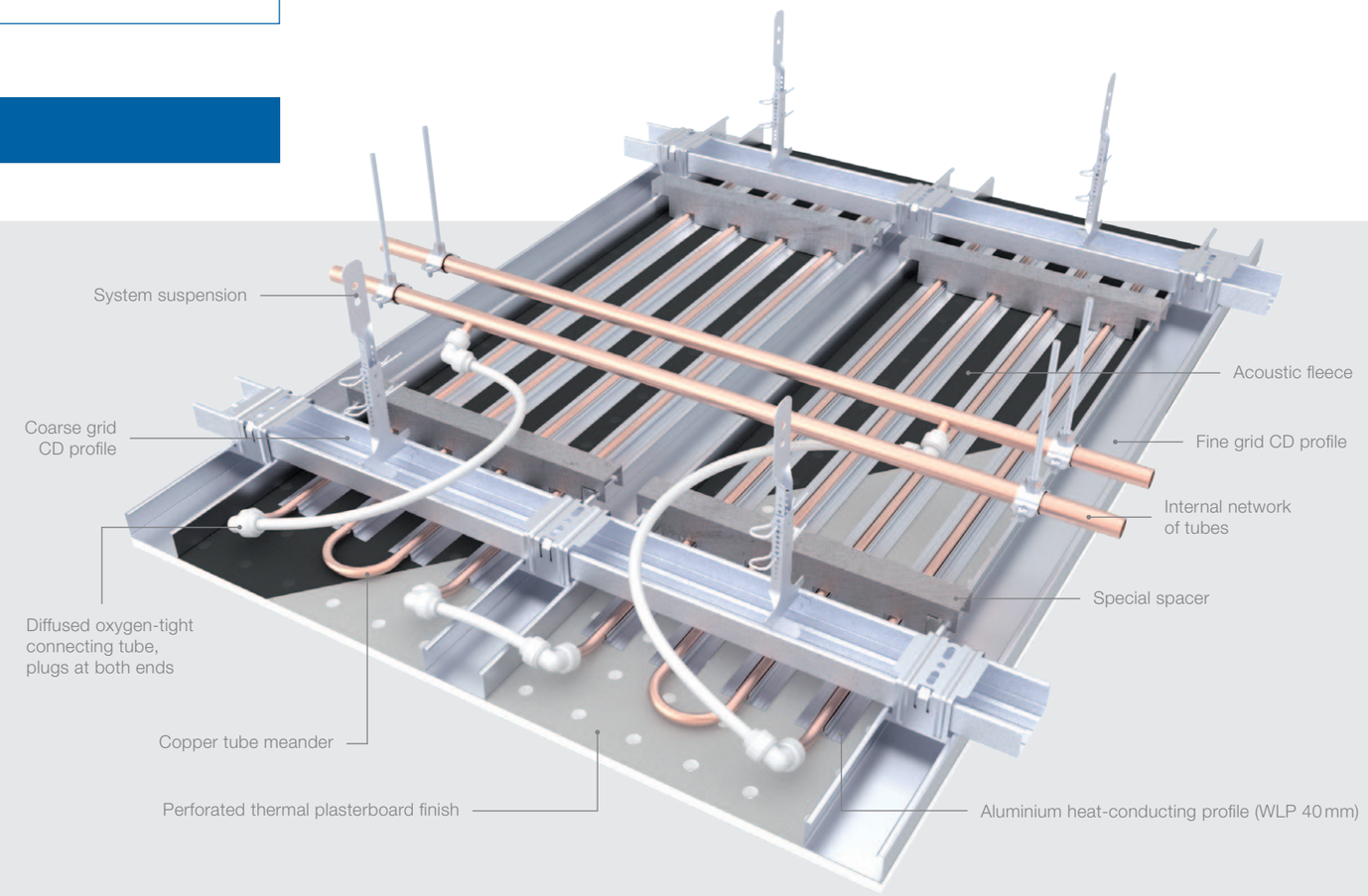
The surface layer consists of perforated thermal plasterboard (10 mm thick) which is specially fastened to the metal substructure in intervals of a maximum of 170 mm. Edges and fasteners are filled and sanded for a seamless appearance. Acoustic insulation is glued to the structure for sound absorption.

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

THE SYSTEM



THE STRUCTURE



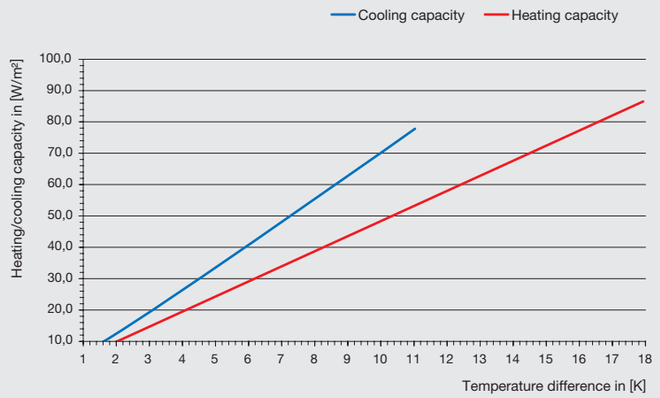
Cooling capacity

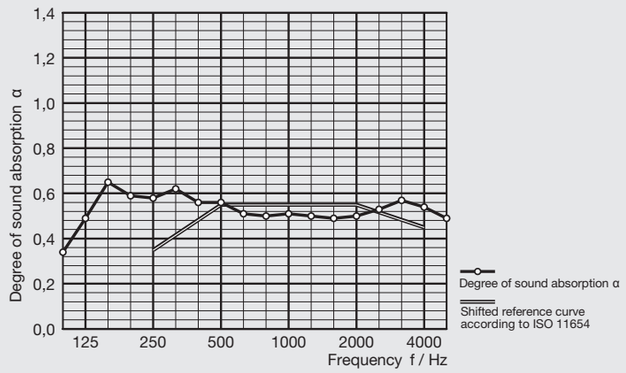
The given cooling and heating capacities have been test certified by accredited institutions in accordance with DIN EN 14240.

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**® *cul*
Model:	4 tube rows, 40 mm heat-conducting profile, 60 mm tube interval
Cooling capacity as per DIN EN 14240*:	70 W/m²
Audit report:	KF2063
Insulation:	30 mm mineral fibre insulation in PE film
Substructure:	construction of CD profiles
Suspension:	minimum 100 mm
Weight:	about 18.5 kg/m²
Sound absorption:	55 %

Surface

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

Surface Finish

Type:	uncoated
Surface:	Smooth with perforation
Surface quality:	Q2

Cooling System

Material:	Copper meanders with aluminium heat-conducting profiles
Modul width:	333 mm
Modul length:	500–4 100 mm
Tube diameter:	cu DN 8 (10 × 0.6 mm)
Connection:	PEX tube with plug coupling
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 strongly recommend using *clima***BOARD**® *cul* where a perforated and seamless appearance is desired. *clima***BOARD**® *cul* is versatile and can be used in rooms with unusual shapes such as tight corners, curves, sloped ceilings or protrusions. This item is also ideal for spaces with individualized colour schemes.

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.

As the cooling capacity may vary based on installation conditions, we advise receiving a quotation specific to your project. We will then recommend the most feasible solution. We also offer reference and test measuring services under DIN conditions in our own testing and development laboratory.