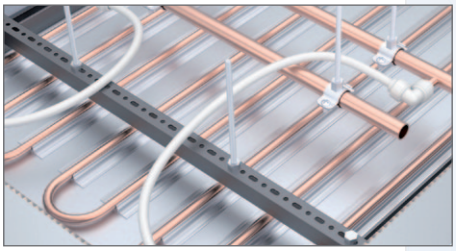
*clima***PLAN**® *Segel*

High performance cooling sails made of aluminium in various forms
(with or without acoustic function)



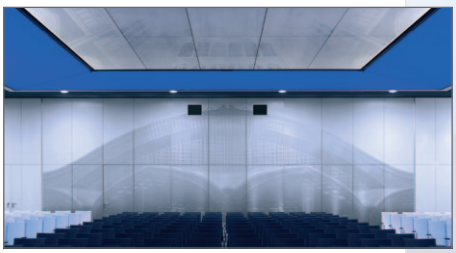


Photo credit: Thomas Schneider, Stephan Pusch

*clima***PLAN**® *Segel*

The System

The *clima***PLAN**® *Segel* is a high performance cooling sail system with a seamless appearance. The cooling sail hangs beneath the actual ceiling and can be placed in specific points. Cooling load removal takes place by means of approximately 40 % radiation and 60 % convection. The surface can be finished according to your individual requirements and can be smooth, with fine grain acoustic plaster, or can be decorated according to your own colour scheme.

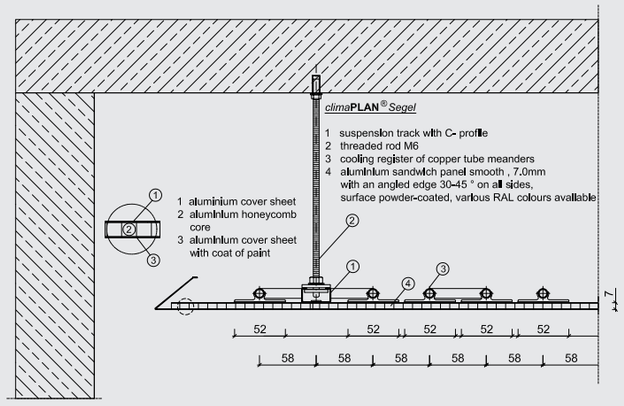
The cooling system is comprised of water-bearing copper tubing (10 x 0.6mm), made of a single meander-shaped piece. The length and width of the copper tube meander are made to fit the measurements of the covering board. The tube intervals and number of tube rows are selected depending on the cooling 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.

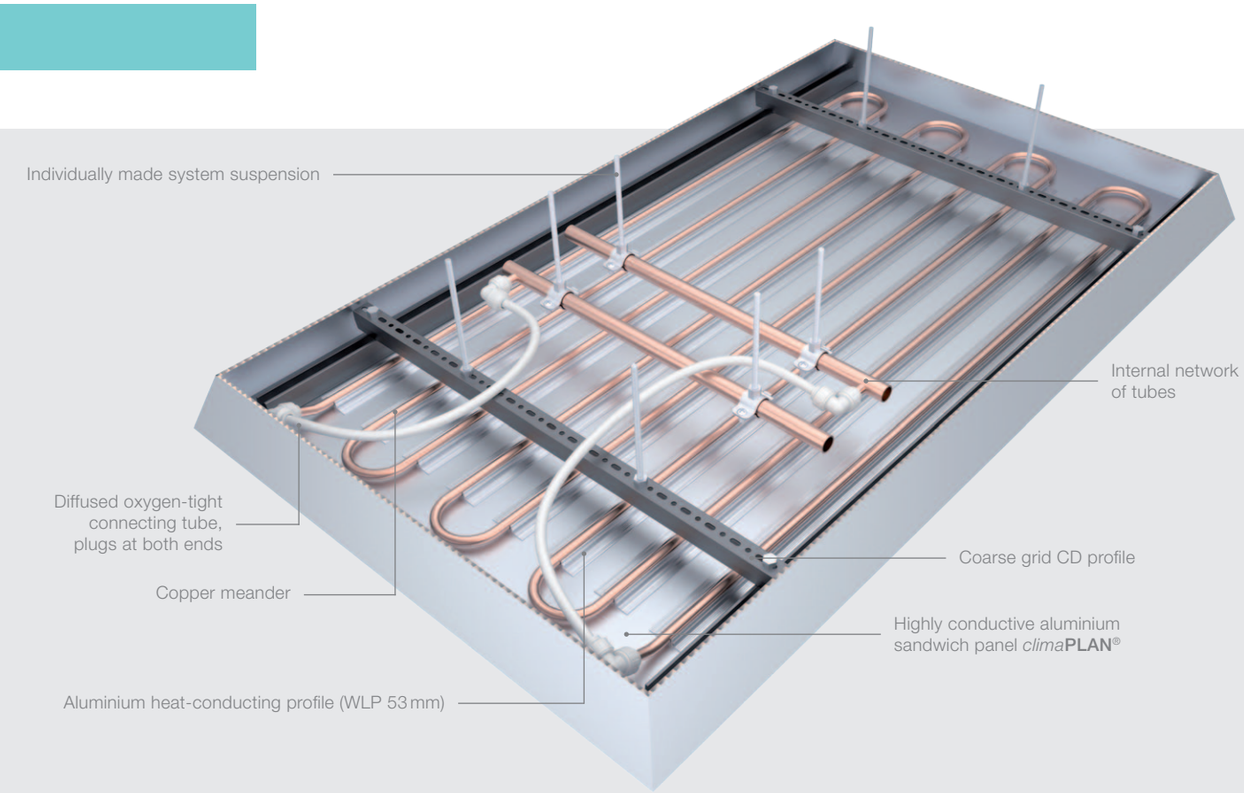
The substructure varies according to the specific requirements of the system. Each substructure is individually selected or developed.

The surface layer consists of highly conductive aluminium sandwich panels with aluminium honeycomb-shaped lattices, which are specially fastened to the metal substructure. Joints and screws are plastered over for a seamless appearance.

The 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





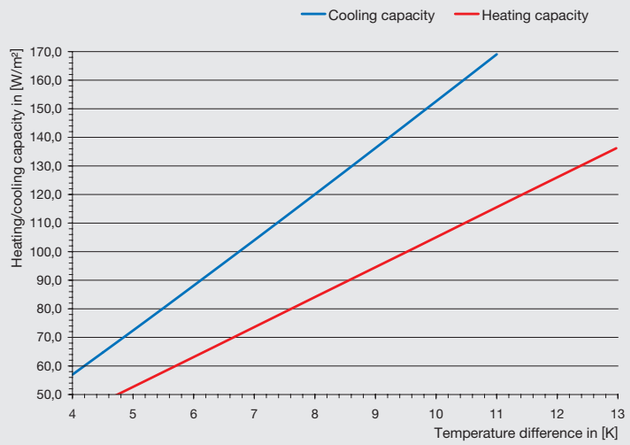
THE STRUCTURE

Cooling capacity

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

Acoustics

The system *clima***PLAN**® *Segel* does not have any sound absorbing properties. Higher sound absorption performance can be accomplished by using a perforated aluminium sandwich panel and using a fine grain acoustic plaster. For individual requirements and specially tailored solutions, ask about other systems such *clima***STYLE**®.



PERFORMANCE

TECHNICAL DETAILS

General

Product:	*clima***PLAN**® *Segel*
Model:	6 tube rows, 53mm heat-conducting profile, 58mm tube interval
Cooling capacity as per DIN EN 14240*:	152.6 W/m²
Audit report:	KF2071
Substructure:	special profile
Suspension:	minimum 100 mm
Weight:	about 14.5 kg/m²
Sound absorption:	0 %

Surface

Material:	aluminium sandwich panel (4–10 mm)
Perforation type:	closed
Free cross-section:	0 %

Surface Finish

Type:	uncoated
Surface grain:	smooth
Surface quality:	Q2, optional Q3–Q4

Cooling System

Material:	copper meanders with aluminium heat-conductiong profile
Modul width:	416 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 advise using *clima***PLAN**® *Segel* anywhere where sporadic cool loads need to be removed.

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.