*clima***TILE**® *Segel*

metal cassette cooling sail, segmented,
in various forms
(with or without acoustic function)

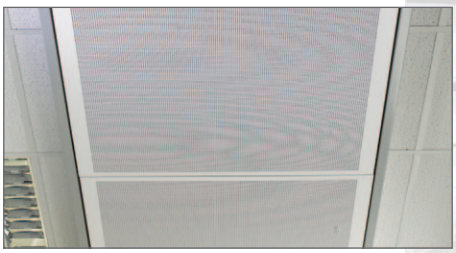


Photo credit: Thomas Schneider, Christian Günther

*clima***TILE**® *Segel*

The System

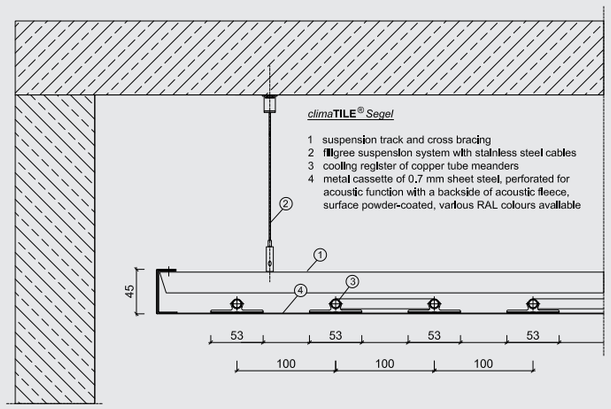
The *clima***TILE**® *Segel* is an acoustic cooling ceiling of metal cassettes which removes sensitive heat loads. The cooling sail hangs beneath the actual ceiling and can be placed in specific points. Cooling load removal takes place by means of approximately 40 % radiation and 60 % convection. The surface of this ceiling is available with either a smooth or perforated finish, depending on your requirements.

The cooling system is comprised of water-bearing copper tubing (10 x 0.6 mm), made of a single meander-shaped piece, and pressed into the aluminium heat-conducting profile (WLP). The length and width of the copper tube meander are made to fit the measurements of the metal cassette. The copper meanders and the contact surfaces of the heat conducting profiles are glued to the metal cassettes using high pressure. The tube intervals and number of rows of tubes are selected depending on the cooling capacity and pressure loss requirements. Intelligent plug and solder connections at the ends of the calibrated tubes of each meander perfectly secures the connection to the entire system. Generally, diffused oxygen-tight connecting tubes with a stainless steel woven sleeve and plug couplings are used here.

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 the 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.

THE SYSTEM



THE STRUCTURE

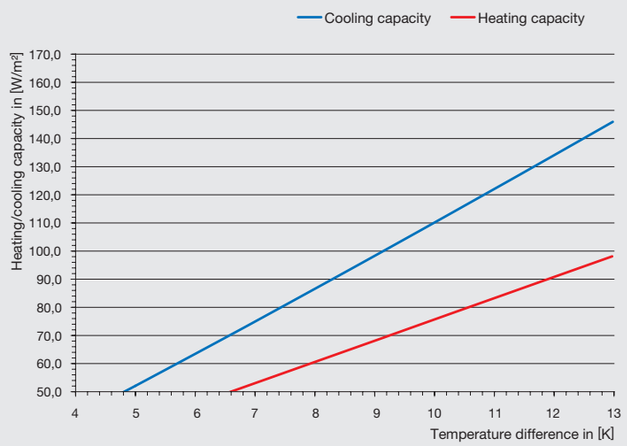
Cooling capacity

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

Acoustics

The *clima***TILE**® *Segel* system with an acoustic function is also available. We can tailor the acoustic performance of *clima***TILE**® *Segel* especially to meet your project's requirements.

PERFORMANCE



TECHNICAL DETAILS

General

Product:	*clima***TILE**® *Segel*
Model:	6 tube rows, 53mm heat-conducting profile, 100mm tube interval
Cooling capacity as per DIN EN 14240*:	110.1 W/m²
Audit report:	KF2059
Substructure:	special profile
Suspension:	minimum 100–140 mm
Weight:	ca. 15.6 kg/m²
Sound absorption:	ca. 65 %

Surface

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

Surface Finish

Type:	powder paint
Surface grain:	smooth or perforated
Colour:	various

Cooling System

Material:	copper meanders with aluminium heat-conducting profile
Modul width:	individually selected according to the cassette and requirements
Modul length:	individually selected according to the cassette and requirements
Tube diameter:	cu DN 8 (10 × 0.6 mm)
Connection:	flexible textile tube and 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***TILE**® *Segel* anywhere where the ceiling is low not allowing for a completely suspended ceiling, or where sporadic cool loads need to be removed.

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.

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).

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.