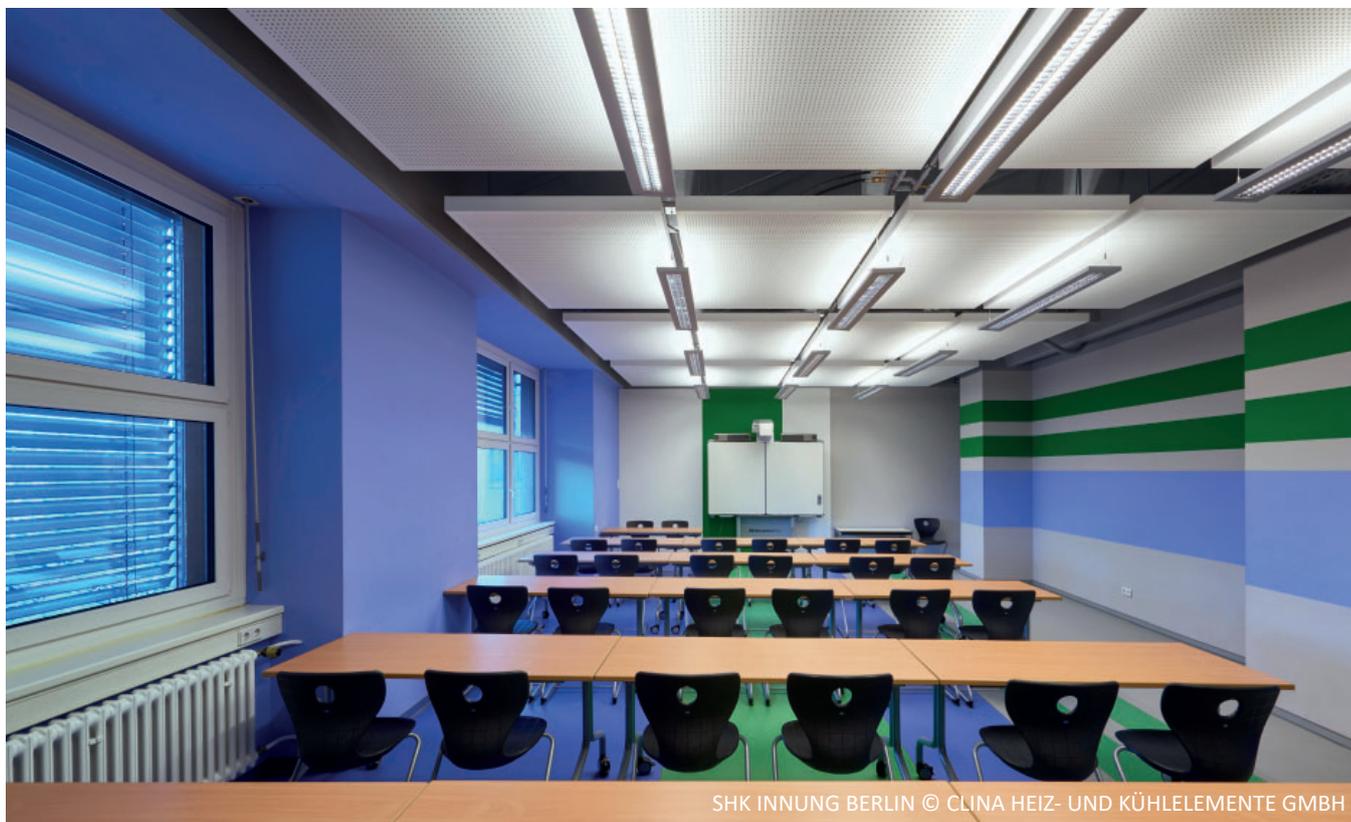


DRYWALL FLOATING CEILING

with integrated capillary tube mat (OPTIPANEL 15/OPTIPANEL 18) or
with capillary tube mat ORIMAT S 10/G 10 applied on site



System description



SHK INNUNG BERLIN © CLINA HEIZ- UND KÜHLELEMENTE GMBH

SYSTEM DESCRIPTION

Design

Clina gypsum board canopies are available in two versions: with **integrated** capillary tube mat or with capillary tube mat **applied on site** on the canopy.

The gypsum board canopies are suspended freely in the room from the ceiling. On the visible side, there are perforated or unperforated gypsum board canopies floating freely in the room, revealing views of the concrete ceiling. The system is used for the dissipation or supply of sensitive heat loads. The water circulates noiselessly in the capillary tube mats and regulates the room temperature largely by radiation, partly by convection.

Gypsum board panel & Capillary tube mat

For the version with integrated capillary tube mat, OPTIPANEL 15/18 consisting of a 12,5 mm unperforated/ perforated gypsum board panels and the capillary tube mat OPTIMAT GB 15/GB 18 are used.

For the version with the capillary tube mat **applied on site** the ORIMAT S 10 or G 10 is recommended.

Length & Width

The capillary tube mats are custom-made in length and width for each project, the dimensions are 10-20 mm smaller than the inner dimension of the gypsum board canopies.

Hydraulic connection

The connections of the capillary tube mats or canopies to each other as well as the connection to the supply and return lines/ceiling sub-distributors are usually made on site using a proven push-lock system with flexible hoses.

Mounting

In the case of the **applied on site** version, the capillary tube mats manufactured according to the dimensions of the canopy are fixed between the profiles of the substructure of the canopy.

For the **integrated** version, the capillary tube mats are already inserted, see description in chapter „Prefabricated product“ page 2.

Processing

According to the common rules of drywall construction. Active and inactive surfaces can be easily combined. The edge design of both versions is made with drywall mouldings.

Lamps & Ventilation

Lamps can be perfectly integrated.

Regulation

The system can be regulated room-by-room.

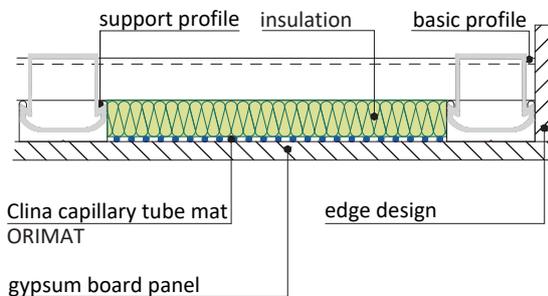
Fields of application

Suitable for modern interior finishing of rooms with special architectural, acoustic and aesthetic requirements, such as office buildings, residential buildings, public buildings, whether new construction or renovation.

DRYWALL FLOATING CEILING

with integrated capillary tube mat (OPTIPANEL 15/OPTIPANEL 18) or with capillary tube mat ORIMAT S 10/G 10 applied on site

STRUCTURE



View of a canopy section:
gypsum board canopy with capillary tube mat **applied on site**

In the case of the **applied on site** version, the capillary tube mats manufactured according to the dimensions of the canopy are fixed between the profiles of the substructure of the canopy. For the **integrated** version, the capillary tube mats are already inserted, see description in chapter „Prefabricated product“.

The edge design of both versions is made with drywall mouldings.

The gypsum board canopies are suspended freely in the room from the ceiling.

The connections of the capillary tube mats or canopies to each other as well as the connection to the supply and return lines/ceiling sub-distributors are usually made on site using a proven push-lock system with flexible hoses.

PREFABRICATED PRODUCT • RECOMMENDED CAPILLARY TUBE MAT

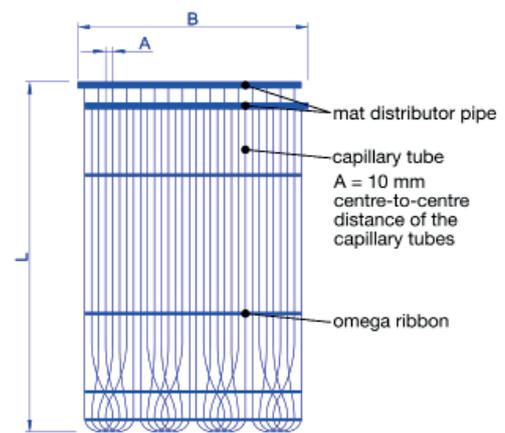
integrated capillary tube mat (OPTIPANEL 15/18)

In an unperforated or perforated 12,5 mm gypsum board panel, parallel slots are milled on the back at a distance of 15/18 mm. The capillaries of the capillary tube mat OPTIPANEL GB 15/18, consisting of a round mat distributor pipe (20 x 2,0 mm) and capillary tubes (4,3 x 0,8 mm), are inserted into these slots. The distance between the capillary tubes (centre-to-centre distance) is 15/18 mm.

capillary tube mat applied on site (ORIMAT S 10)

The ORIMAT S 10 consists of 2 round mat distributor pipes (20 x 2,0 mm) and capillary tubes (3,4 x 0,55 mm).

The constant distance between the capillary tubes (centre-to-centre distance) is 10 mm and is guaranteed by the omega ribbons.



ORIMAT S 10 with open mat distributor pipes

GENERAL INFORMATION ON CAPILLARY TUBE SYSTEMS

Clina capillary tube mats are used very successfully worldwide for heating and cooling various buildings.

The capillary tube system impresses with its exceptionally high level of **comfort**:

- noiseless tempering
- draught-free
- high thermal comfort, because even in heating mode the surface temperature of the ceiling is always below the body temperature of the user
- prompt response

Advantages over classic single-pipe systems:

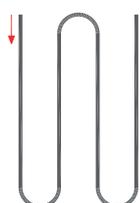
- low pressure loss
- very even temperature distribution & transmission
- larger exchange surface
- ideal for the use of environmental energy due to very small temperature differences between system and room temperature
- best COP values can be achieved in combination with the heat pump

Capillary tube mats are **safe & durable**

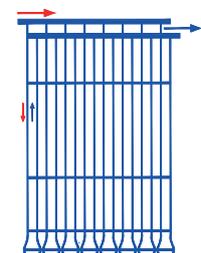
Each individual Clina capillary tube mat is subjected to a leak test before dispatch. The test pressure is 20 bar - which corresponds to approximately 10 times the operating pressure.

All Clina mats are covered by a 15-year extended warranty. The expected service life is more than 50 years under normal conditions of use. All Clina capillary tube mats are produced with high-tech machines & equipment in our manufacturing plant in Berlin-Brandenburg.

Single-pipe system



Capillary tube system



DRYWALL FLOATING CEILING

with integrated capillary tube mat (OPTIPANEL 15/OPTIPANEL 18) or with capillary tube mat ORIMAT S 10/G 10 applied on site

ADVANTAGES

Cooling and heating with one system

In most buildings, the heat requirement to be covered is so low due to the well-insulated building envelope that capillary tube mats invisibly integrated into drywall canopies not only provide excellent cooling in summer, but can also heat very comfortably and energy-efficiently in the cold season.

High degree of prefabrication

Factory prefabrication ensures quality, function and thermal performance.

Good acoustics - perforated version

The capillary tube mat does not require any heat-conducting profiles that would cover the perforation and thus reflect the sound. The open construction helps to improve the acoustics in the room. The sound absorption values of the drywall canopies specified by the manufacturers are maintained without restriction.

High performance

The open design allows more convection.

Optimized room comfort

Gypsum board canopies noticeably and efficiently improve room comfort both thermally and acoustically.

Free design possibility

The application with gypsum board canopies is an excellent solution for spaces with special architectural requirements, such as conference rooms, cinemas or open-plan offices. The metal canopies can be freely adapted in shape and colour as well as in the arrangement according to the requirements.

Easy retrofitting

Clina capillary tube mats turn any drywall floating ceiling into a heating and cooling floating ceiling, quickly and economically.

Individual room control

The temperature can be regulated room-by-room.

Maximum degree of activation

The dimensions of the capillary tube mat are individually adapted to the size of the canopies.

VALUES



HEATING CAPACITY

according to DIN EN 14037/5

depending on the design



COOLING CAPACITY

according to DIN EN 14240

depending on the design



ACOUSTICS

(applies only to perforated version)

weighted sound absorption coefficient as specified by the manufacturer of the drywall canopies

INSTALLATION HEIGHT:

capillary tube mat **applied on site**
depending on the kind of drywall canopy and the substructure

integrated capillary tube mat
depending on the kind of substructure
plus **12,5 mm** OPTIPANEL 15

plus **12,5 mm** OPTIPANEL 18

SYSTEM WEIGHT (filled with water):

capillary tube mat **applied on site**
1 kg/m² plus drywall canopy

integrated capillary tube mat

11 kg/m² OPTIPANEL 15
plus substructure + insulation

9 kg/m² OPTIPANEL 18
plus substructure + insulation

PRESSURE STAGE:

PN 10

PN 10

REFERENCES

Please note the following documents for further information:

- System data sheet: drywall floating ceiling, OPTIPANEL 15, OPTIPANEL 18
- Product data sheet: ORIMAT S 10, OPTIPANEL 15, OPTIPANEL 18
- Website: www.clina.de

CONTACT

Clina Heiz- und Kühlelemente GmbH
Eichhorster Weg 80 | 13435 Berlin

Fon: + 49 30 402054 – 0
Fax: + 49 30 402054 – 19

www.clina.de
info@clina.de