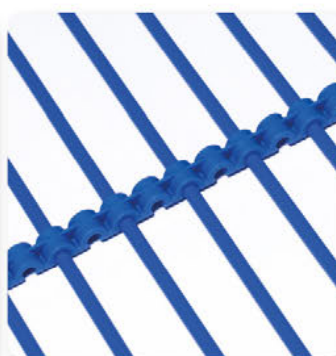
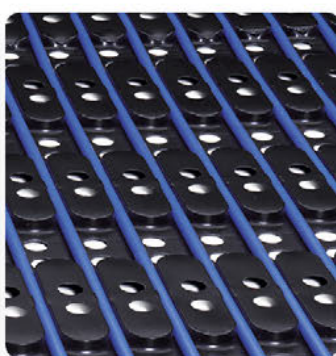
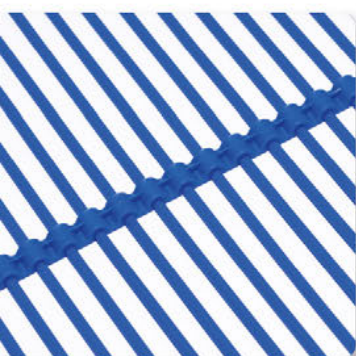




# HEATING & COOLING MATS



HEATING &  
COOLING MATS

PREFABRICATED  
PRODUCTS

TUBES, SUPPLY &  
RETURN LINES

CONNECTION  
COMPONENTS

FITTINGS

MEASUREMENT &  
CONTROL TECHNOLOGY

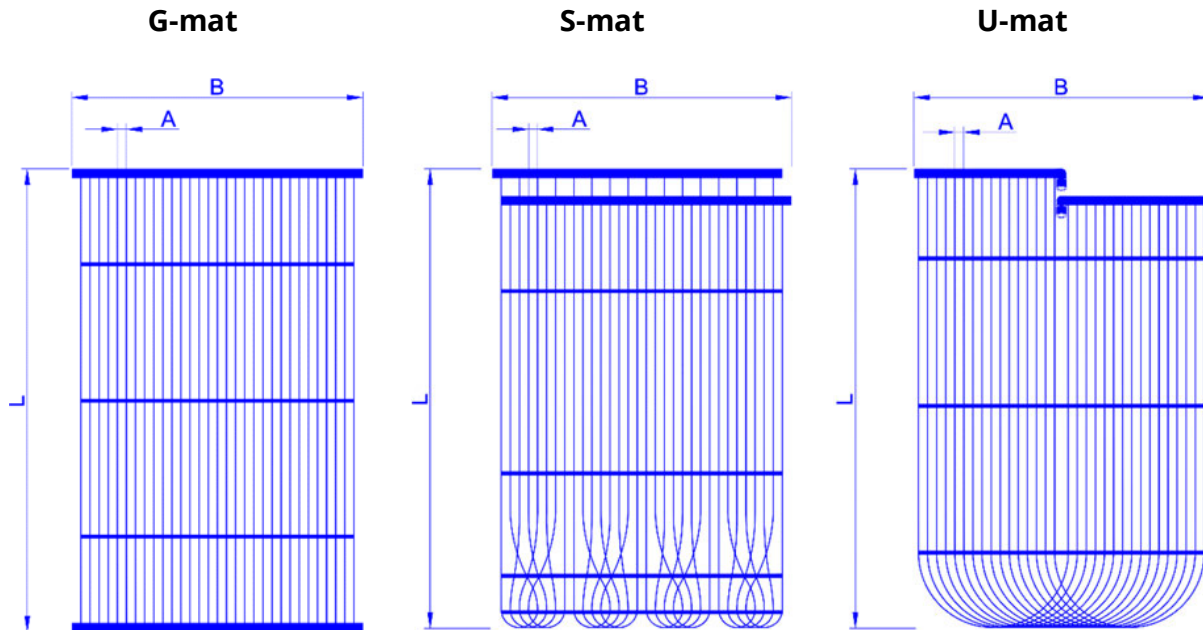
SYSTEM SEPERATION  
PLASTIC MANIFOLD

FIXING  
MATERIAL

TOOLS &  
ASSEMBLY KIT

## 3 Capillary Tube Mats for Heating and Cooling

### 3.1 Basic Types of Clina Mats



#### ORIMAT

**capillary tube 3,4 x 0,55 mm,  
round mat distributor pipe 20 x 2,0 mm**

The classical original Clina Capillary Tube Mat

#### OVAMAT

**capillary tube 3,4 x 0,55 mm,  
oval mat distributor pipe 20 x 12 x 2 mm (B x H x s)**

The ideal capillary tube mat for metal panel and dry wall ceilings with a larger exchange surface and a lower installation height for the connections.

#### OPTIMAT

**capillary tube 4,3 x 0,8 mm,  
round mat distributor pipe 20 x 2,0 mm**

The optimized capillary tube mat for heating and cooling, suitable for all applications by which the capillary tube mat is exposed to high mechanical and /or thermal loads.

Application under plaster, screed or concrete and as ground collector.

For special applications, also available with a larger round (25 x 2,3 mm) mat distributor pipe or a larger oval mat distributor pipe (20 x 12 x 2 mm).

#### FOLIMAT

**capillary tube 4,3 x 0,8 mm,  
round mat distributor pipe 20 x 2 mm**

Prefabricated capillary tube element: Capillary tube mat fixed on a perforated insert foil for application on plane surfaces of floors, walls and ceilings.

## Connection options:

### Push-lock connections

The connection of the Clina mat to the supply lines is made with flexible Clina connecting hoses. The standard angular position of the connections for the **ORIMAT**, **OPTIMAT** and **FOLIMAT** is 60°.

Other angular positions (freely selectable) are also available, but must be **explicitly** specified in the order.

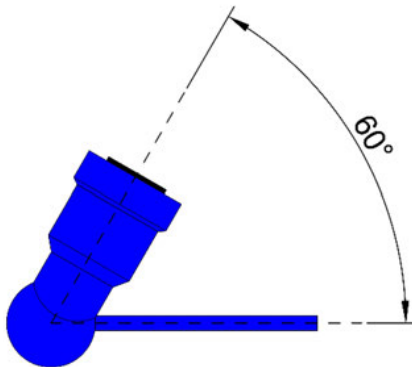


Fig.: side connection

The connections of the **OVAMAT** are available only in angular positions of 0°, 90°, 180° and 270°. The standard angular position of the connections for the **OVAMAT** is 90°.

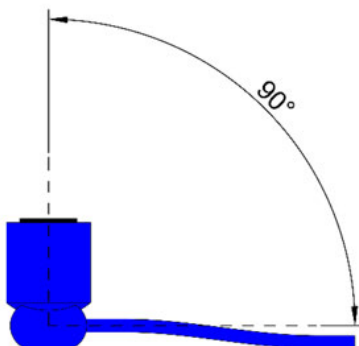


Fig.: oval mat distributor pipe

### Open ends for welding connection

The open ends of the mat distributor pipes 20 x 2,0 mm are welded to the neighbouring mat and/or to the supply lines either by a butt weld or with a socket joint weld connection. The welding equipment required for this purpose is listed in chapter 10 "Tools and Assembly Kit" of the Clina catalogue.

## Width of mats

The **standard - width** of the mat type S and G is **1000 mm**. All other sizes can be configured in the factory as the customer wants.

By reason of delivery the maximum width is  $\leq 1300$  mm.

The available **width** of the mat type "FOLIMAT" is **300 mm or 600 mm**.

## Distance of the mat distributor pipes | standard design



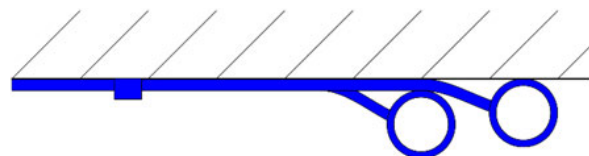
Custom made mats available on request!

## Position of the Omega-ribbons concerning S-mats

Depending on the application and type of the Clina mats (only S-mats), the order must contain specifications as to how the Omega-ribbons have to be fixed to the mat.

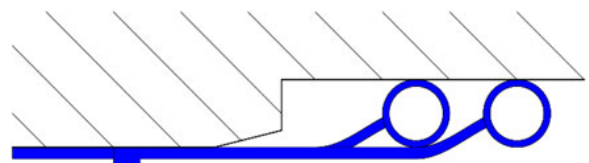
A difference is made between two mounting methods: (Fig. shows capillary tube mat on bare concrete ceiling)

### Omega-ribbons - normal mounting | standard design



If you wish to order the special design (rear mounting) instead of the standard design you have to **explicitly specify** this in your order.

### Omega-ribbons - rear mounting | special design





## PRODUCT GROUP A

Differentiation must be made in the following cases:

SER. NO.	TYPE OF APPLICATION	POSITION OF MAT DISTRIBUTOR PIPES	POSITION OF OMEGA-RIBBONS	SPECIFICATION IN YOUR ORDER
1	metal panel	in suspended ceiling	normal	N
2	plaster ceiling on bare concrete	in ceiling slot	rear	R
3	plaster ceiling on bare concrete	in wall slot, stucco edge / dry plate covering or overhead structure of room wall	normal	N
4	plaster ceiling to gypsum board ceiling	in suspended ceiling	rear	R
5	gypsum board ceiling (placed on top)	in suspended ceiling	normal	N
6	plastered wall	in screed / in suspended ceiling	normal	N
7	plastered wall	in wall slot	rear	R
8	floor heating	in floor blank space / in the insulation	rear	R
9	floor heating	in screed / on the insulation	normal	N

### 3.1.1 Extra charge for individual design – overview

For the following individual, customer made design the indications "right/left" apply for the view on the mat distributor pipes with the Omega-ribbon closed side up / on top (see fig. page 21!)

#### Mat distributor pipe extension

The mat distributor pipes, with an open welding end and a mat distributor pipe measuring 20 x 2,0 mm, can be extended at our factory by welding pipe parts to the mat distributor pipes.

##### DESIGN

with mat distributor pipe extension up to 150 mm

#### Push-lock connections

On demand the mats can be equipped at our factory with push-lock connections.

##### DESIGN

with welded-on straight push-lock connection  
FGAI 20/10 10 mm

with welded-on side connection 90°  
FSAI 20/10 10 mm

with welded-on straight push-lock connection  
FGAS 20/15 15 mm (push-lock connection with retaining ring)

with 2 welded-on push-lock connections 10 mm  
(FGAI 20/10 or FSAI 20/10) and 2 end caps

with 2 welded-on straight push-lock connections  
(FGAS 20/15) 15 mm and 2 end caps

#### Middle end cap

(cap in the middle of the mat distributor pipe)

For the individual design of the G-mat as GM mat type (see chapter 3.2.1) with the connections on one side an extra charge for the necessary middle end caps has to be calculated.

##### DESIGN

with welded-on middle end cap e.g., for GM mat type (1x per mat)

#### Socket, end cap or 90° elbow 20 mm

On demand we can weld at our factory a socket or a 90° elbow to the mat distributor pipe for the connection of further parts or pipe work on site or an end cap for the end fitting of the mat.

##### DESIGN

with welded-on socket\*

with welded-on 90° elbow 20 mm\*

with welded-on end cap 20 mm

\* for technical reasons a leak test in our factory is not possible

#### Adhesive tape, adhesive and protecting foil

##### DESIGN

with double sided adhesive tape for attachment

with double sided adhesive tape "Bullran" for attachment

with adhesive and protecting foil over the whole surface





## 3.2 ORIMAT

capillary tube 3,4 x 0,55 mm – with round mat distributor pipe

FIELD OF APPLICATION/PRODUCT



**Field of application:** gypsum board ceiling | jointless drywall ceiling with capillary tube mat applied on site, heating and cooling function

**Product:** ORIMAT S 10

**Reference:** V Tower Prague © PSJ Invest Prague

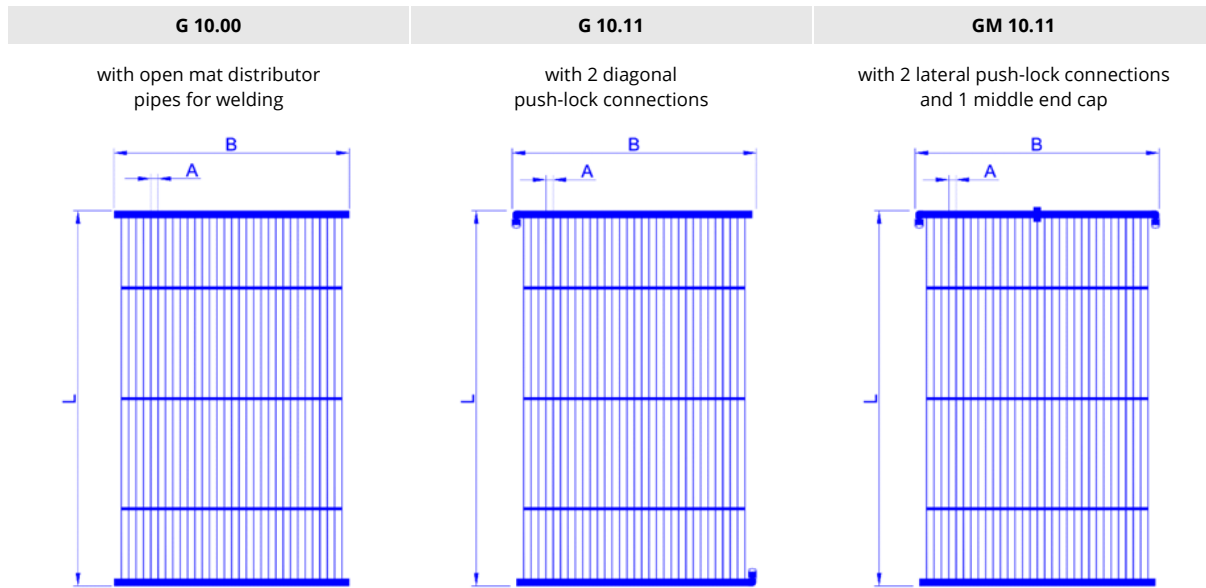


**Field of application:** acoustic plaster ceiling | BASWA Cool, multilayer system with integrated capillary tube mat, heating and cooling function





**Product:** ORIMAT G 10

**Reference:** Rolex Learning Centre Lausanne © Clina Heiz- und Kühlelemente GmbH

### 3.2.1 HEATING AND COOLING MAT ORIMAT G 10.00 | 10.11 | 10.20 | 10.02 | GM 10.11



#### PUSH-LOCK CONNECTIONS

DESIGNATION	G 10.11	GM 10.11	G 10.20	G 10.02
BESCHREIBUNG	with 2 diagonal push-lock connections	with 2 lateral push-lock connections and 1 middle end cap	with 2 push-lock connections on the left	with 2 push-lock connections on the right
PICTOGRAM				

#### FIELD OF APPLICATION

- acoustic plaster ceiling | BASWA Cool
- drywall ceiling | gypsum board panels
- metal ceiling | metal tiles, metal panels
- room or wall element | convector GRAVIMAT

#### TECHNICAL DATA

MATERIAL/COLOUR	Polypropylene (PP-R) recyclable/blue
MAT DISTRIBUTOR PIPE	20 x 2,0 mm, round
CAPILLARY TUBE	<b>3,4 x 0,55 mm</b>
DISTANCE A	10 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	as from 150 mm in 10 mm steps
CONNECTION TYPE	without connections/with 2 push-lock connections 10 mm or 15 mm
SPECIFIC WEIGHT	approx. 370 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,370 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 740 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C



## ORIMAT G 10

Various lengths and widths are available for the capillary tube mat ORIMAT G 10 :

**Length:** 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | 5500 | 6000 mm

**Width:** 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 mm

*Ordering example for Clina capillary tube mat  
type ORIMAT, G 10.00, length 2000 mm, width 500 mm without connections:*

Item No.: type ORIMAT G 10 . 2000 . 0500 . 00

### DESIGN

with 2 push-lock connections 10 mm and 2 end caps

with push-lock connections (straight) 15 mm and 2 end caps

with mat distributor pipe extension up to 150 mm

with welded-on middle end cap for mat type GM 10.11 (1x per mat)

with welded-on socket\*

with welded-on 90°-elbow\* or end cap





\* for technical reasons a leak test in our factory is not possible

## 3.2.2 HEATING AND COOLING MAT ORIMAT S 10.00 | 10.11 | 10.20 | 10.02



schematic representation of loop overlap

## PUSH-LOCK CONNECTIONS

DESIGNATION	S 10.00	S 10.11	S 10.20	S 10.02
DESCRIPTION	with open mat distributor pipes	with 2 diagonal push-lock connections	with 2 push-lock connections on the left	with 2 push-lock connections on the right
PICTOGRAM				

## FIELD OF APPLICATION

- drywall ceiling and wall | gypsum boards
- floating ceiling | floating drywall ceiling
- metal ceiling | metal tiles, metal panels

## TECHNICAL DATA

MATERIAL/COLOUR	Polypropylene (PP-R) recyclable/blue
MAT DISTRIBUTOR PIPE	20 x 2,0 mm, round
CAPILLARY TUBE	<b>3,4 x 0,55 mm</b>
DISTANCE A	10 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	as from 150 mm in 20 mm steps
CONNECTION TYPE	without connections/with 2 push-lock connections 10 mm or 15 mm
SPECIFIC WEIGHT	approx. 370 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,370 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 740 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C

ORIMAT S 10

Various lengths and widths are available for the capillary tube mat ORIMAT S 10 :

**Length:** 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | 5500 | 6000 mm

**Width:** 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 mm

*Ordering example for Clina capillary tube mat*

*type ORIMAT, S 10.00, length 2000 mm, width 500 mm without connections:*

Item No.: type ORIMAT S 10 . 2000 . 0500 . 00

**DESIGN**

with 2 push-lock connections 10 mm and 2 end caps

with push-lock connections (straight) 15 mm and 2 end caps

with mat distributor pipe extension up to 150 mm

with welded-on socket\*

with welded-on 90°-elbow\* or end cap

\* for technical reasons a leak test in our factory is not possible



### 3.3 OPTIMAT

#### capillary 4,3 x 0,8 mm – with round mat distributor pipe

##### FIELD OF APPLICATION/PRODUCT



**Field of application:** plaster ceiling | plaster on concrete with capillary tube mat plastered-in, heating and cooling function

**Product:** OPTIMAT SB 20

**Reference:** © Danubiana Meulensteen Art Museum Bratislava



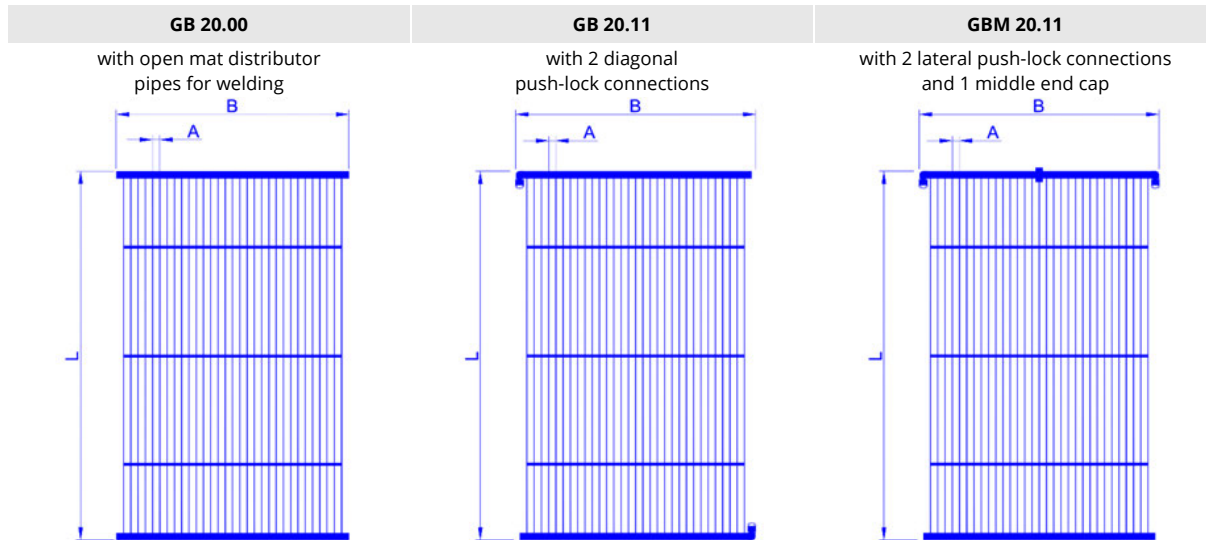
**Field of application:** plaster ceiling | plaster on bare ceiling with capillary tube mat plastered-in, heating and cooling function;

plaster wall | plaster on gypsum board, brickwork, concrete with capillary tube mat plastered-in, heating and cooling function





**Product:** OPTIMAT SB 20

**Reference:** Lecture hall Psychological University Berlin © a-base büro für architektur, Foto: Klaus Romberg

## 3.3.1 HEATING AND COOLING MAT OPTIMAT GB 20.00 | 20.11 | 20.20 | 20.02 | GBM 20.11



## PUSH-LOCK CONNECTIONS

DESIGNATION	GB 20.11	GBM 20.11	GB 20.20	GB 20.02
DESCRIPTION	with 2 diagonal push-lock connections	with 2 lateral push-lock connections and 1 middle end cap	with 2 push-lock connections on the left	with 2 push-lock connections on the right
PICTOGRAM				

## FIELD OF APPLICATION

- concrete ceiling or wall | prefabricated concrete element, in-situ concrete (ceiling)
- plaster ceiling or wall | bare concrete, brick wall, gypsum board
- floor | in screed
- soil | ground collector
- facade | façade absorber

## TECHNICAL DATA

MATERIAL/COLOUR	Polypropylene (PP-R) recyclable/blue
MAT DISTRIBUTOR PIPE	20 x 2,0 mm, round
CAPILLARY TUBE	<b>4,3 x 0,8 mm</b>
DISTANCE A	20 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	as from 150 mm in 20 mm steps
CONNECTION TYPE	without connections/with 2 push-lock connections 10 mm or 15 mm
SPECIFIC WEIGHT	approx. 430 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,320 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 750 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C



OPTIMAT GB 20

Various lengths and widths are available for the capillary tube mat OPTIMAT GB 20 :

**Length:** 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | 5500 | 6000 mm

**Width:** 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 mm

*Ordering example for Clina capillary tube mat  
type OPTIMAT, GB 20.00, length 2500 mm, width 1000 mm without connections:*

Item No.: type OPTIMAT GB 20 . 2500 . 1000 . 00

**DESIGN**

with 2 push-lock connections 10 mm and 2 end caps

with push-lock connections (straight) 15 mm and 2 end caps

with mat distributor pipe extension up to 150 mm

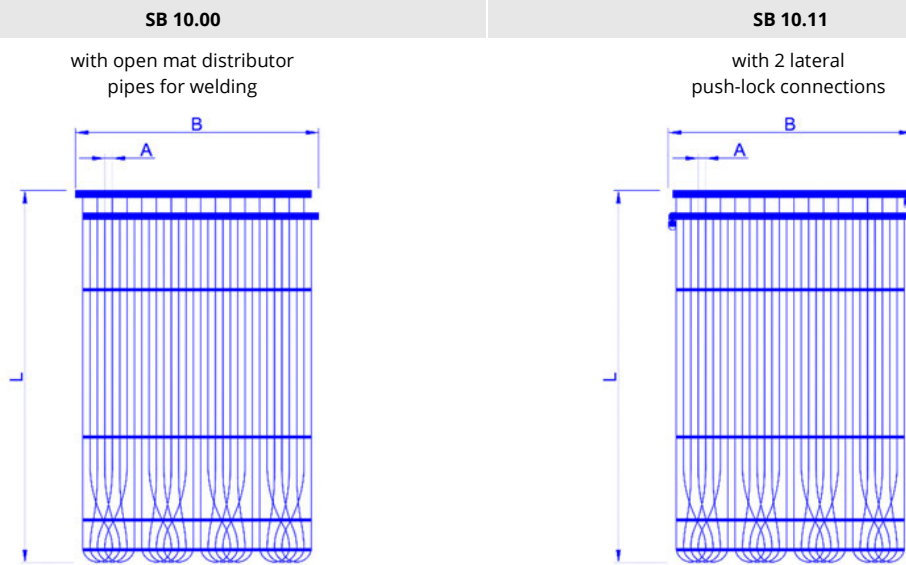
with welded-on middle end cap for mat type GBM 20.11 (1 per mat)

with welded-on socket\*

with welded-on 90°-elbow\* or end cap





\* for technical reasons a leak test in our factory is not possible

## 3.3.2 HEATING AND COOLING MAT OPTIMAT SB 10.00 | 10.11 | 10.20 | 10.02



Schematic representation of loop overlap

## PUSH-LOCK CONNECTIONS

DESIGNATION	SB 10.00	SB 10.11	SB 10.20	SB 10.02
DESCRIPTION	with open mat distributor pipes	with 2 diagonal push-lock connections	with 2 push-lock connections on the left	with 2 push-lock connections on the right
PICTOGRAM				

## FIELD OF APPLICATION

- drywall ceiling or wall | gypsum board panels
- metal ceiling | metal tiles, metal panels

## TECHNICAL DATA

MATERIAL/COLOUR	Polypropylene (PP-R) recyclable/blue
MAT DISTRIBUTOR PIPE	20 x 2,0 mm, round
CAPILLARY TUBE	<b>4,3 x 0,8 mm</b>
DISTANCE A	10 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	as from 150 mm in 20 mm steps
CONNECTION TYPE	without connections/with 2 push-lock connections 10 mm or 15 mm
SPECIFIC WEIGHT	approx. 870 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,570 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 1440 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C

OPTIMAT SB 10

Various lengths and widths are available for the capillary tube mat OPTIMAT SB 10 :

**Length:** 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | 5500 | 6000 mm

**Width:** 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 mm

*Ordering example for Clina capillary tube mat  
type OPTIMAT, SB 10.00, length 2500 mm, width 1000 mm without connections:*

Item No.: type OPTIMAT SB 10 . 2500 . 1000 . 00

**DESIGN**

---

with 2 push-lock connections 10 mm and 2 end caps

---

with push-lock connections (straight) 15 mm and 2 end caps

---

with mat distributor pipe extension up to 150 mm

---

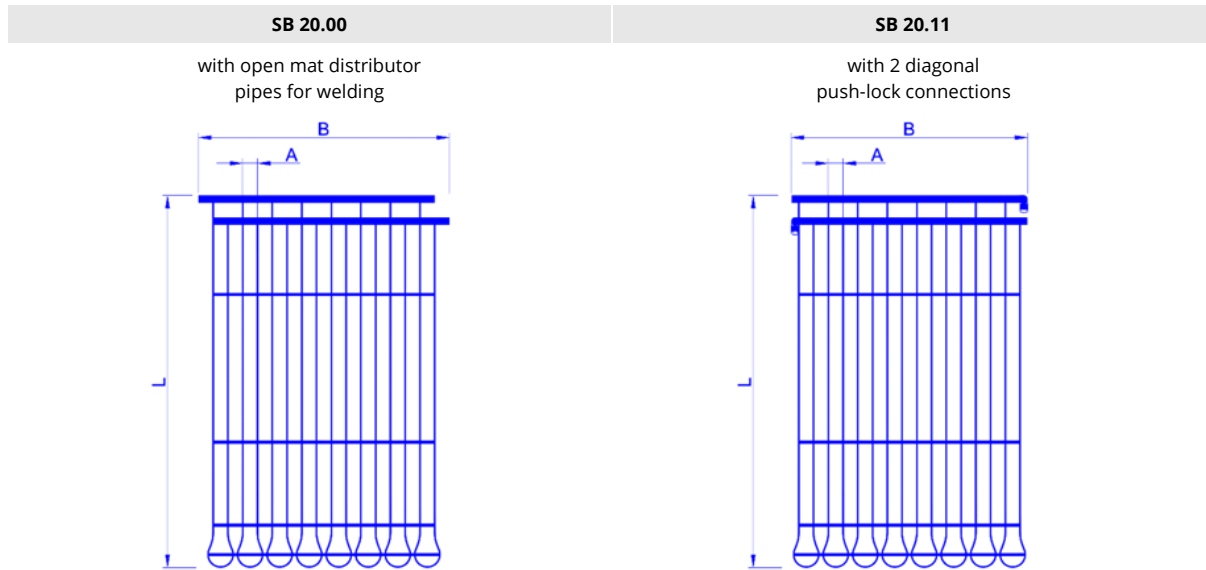
with welded-on socket\*

---





with welded-on 90°-elbow\* or end cap

\* for technical reasons a leak test in our factory is not possible

## 3.3.3 HEATING AND COOLING MAT OPTIMAT SB 20.00 | 20.11 | 20.20 | 20.02



## PUSH-LOCK CONNECTIONS

DESIGNATION	SB 20.00	SB 20.11	SB 20.20	SB 20.02
DESCRIPTION	with open mat distributor pipes	with 2 diagonal push-lock connections	with 2 push-lock connections on the left	with 2 push-lock connections on the right
PICTOGRAM				

## FIELD OF APPLICATION

- concrete ceiling or wall | prefabricated concrete element, in-situ concrete (ceiling)
- plaster ceiling or wall | bare concrete, brick wall, gypsum board
- floor | in screed

## TECHNICAL DATA

MATERIAL/COLOUR	Polypropylene (PP-R) recyclable/blue
MAT DISTRIBUTOR PIPE	20 x 2,0 mm, round
CAPILLARY TUBE	<b>4,3 x 0,8 mm</b>
DISTANCE A	20 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	as from 150 mm in 40 mm steps
CONNECTION TYPE	without connections/with 2 push-lock connections 10 mm or 15 mm
SPECIFIC WEIGHT	approx. 430 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,320 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 750 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C

OPTIMAT SB 20

Various lengths and widths are available for the capillary tube mat OPTIMAT SB 20 :

**Length:** 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | 5500 | 6000 mm

**Width:** 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 mm

*Ordering example for Clina capillary tube mat  
type OPTIMAT, SB 20.00, length 2500 mm, width 1000 mm without connections:*

Item No.: type OPTIMAT SB 20 . 2500 . 1000 . 00

**DESIGN**

with 2 push-lock connections 10 mm and 2 end caps

with push-lock connections (straight) 15 mm and 2 end caps

with mat distributor pipe extension up to 150 mm

with welded-on socket\*

with welded-on 90°-elbow\* or end cap

with double-sided adhesive tape type "Bullran" for attachment

\* for technical reasons a leak test in our factory is not possible

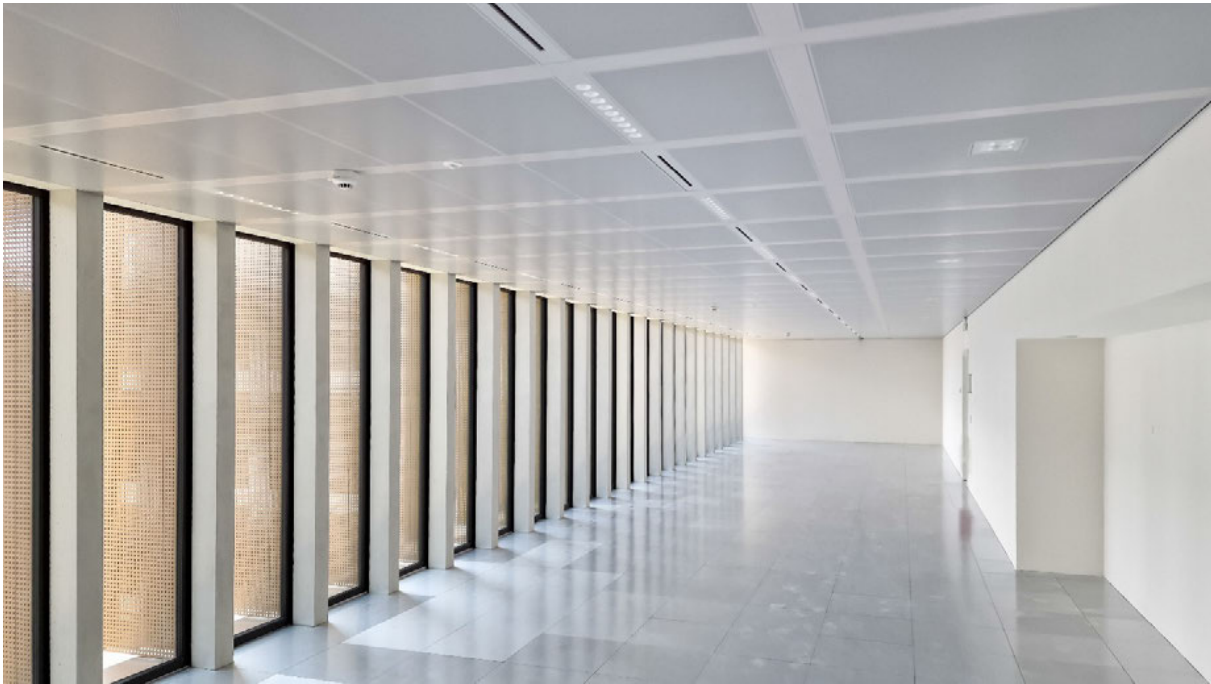




## 3.4 OVAMAT

### capillary 3,4 x 0,55 mm – with oval mat distributor pipe

FIELD OF APPLICATION/PRODUCT



**Field of application:** metal ceiling | metal panel with integrated capillary tube mat OVAMAT, heating and cooling function

**Product:** OVAMAT U 10

**Reference:** New office building in the Cloche d'Or development district in Luxembourg © Clina Heiz- und Kühlelemente GmbH

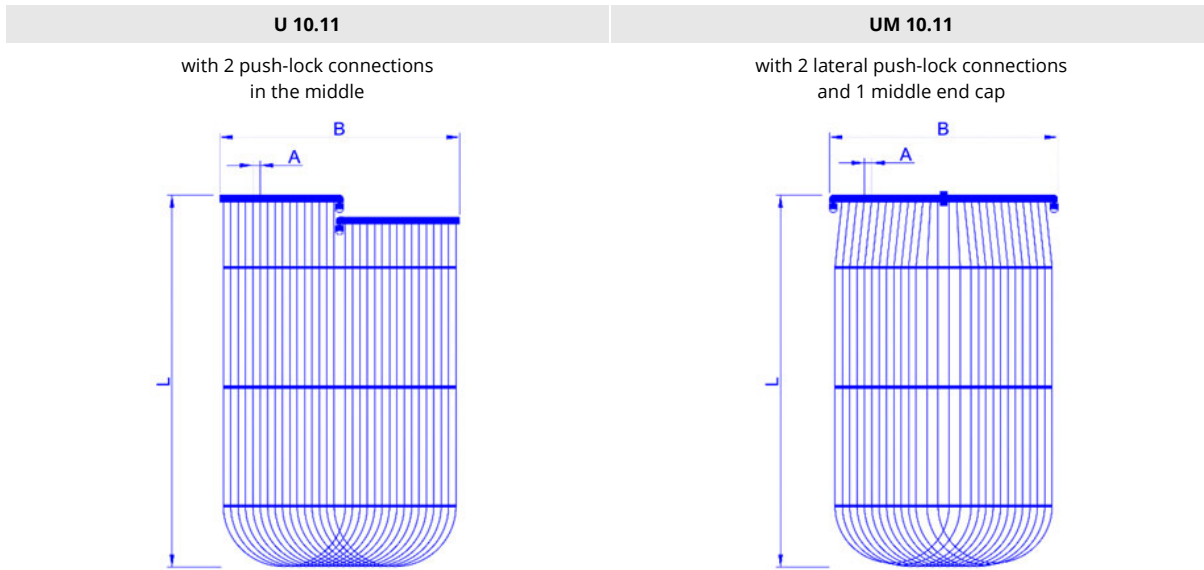


**Field of application:** floating ceiling | metal floating ceiling with capillary tube mat fixed on the inside of the metal canopy, heating and cooling function


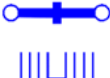
**Product:** OVAMAT G 10

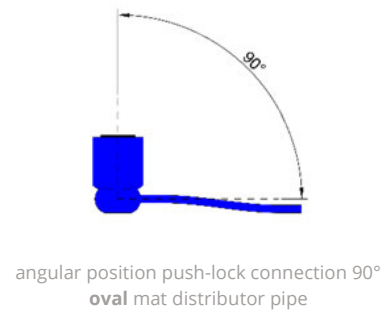
**Reference:** renovation Gustav-Heinemann-Ring Munich © S & L Kühldecken und Heizsysteme GmbH & Co. KG

## 3.4.1 HEATING AND COOLING MAT OVAMAT U 10.11 | UM 10.11



## PUSH-LOCK CONNECTIONS

DESIGNATION	U 10.11	UM 10.11
DESCRIPTION	with 2 push-lock connections in the middle	with 2 lateral push-lock connections and 1 middle end cap
ANGULAR POSITION PUSH-LOCK CONN.	90° (standard) 90°   270° possible	90° (standard) 90°   270° possible
PICTOGRAM		



## FIELD OF APPLICATION

- floating ceiling | floating drywall ceiling
- metal ceiling | metal tiles, metal panels

## TECHNICAL DATA

MATERIAL/COLOUR	Polypropylene (PP-R) recyclable/blue
MAT DISTRIBUTOR PIPE	20 x 12 x 2,0 mm, oval
CAPILLARY TUBE	3,4 x 0,55 mm
DISTANCE A	10 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	as from 150 mm in 20 mm steps
CONNECTION TYPE	with 2 push-lock connections in the middle/ with 2 lateral push-lock connections 10 mm or 15 mm
SPECIFIC WEIGHT	approx. 430 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,430 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 860 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C

OVAMAT U 10.11 | UM 10.11

Various lengths and widths are available for the capillary tube mat OVAMAT U 10.11 and UM 10.11 :

**Length:** 600 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 mm

**Width:** 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 mm

*Ordering example for Clina capillary tube mat*

*type OVAMAT, U 10.11, length 2000 mm, width 500 mm with push-lock connections:*

Item No.: type OVAMAT U 10 . 2000 . 0500 . 11

#### DESIGN

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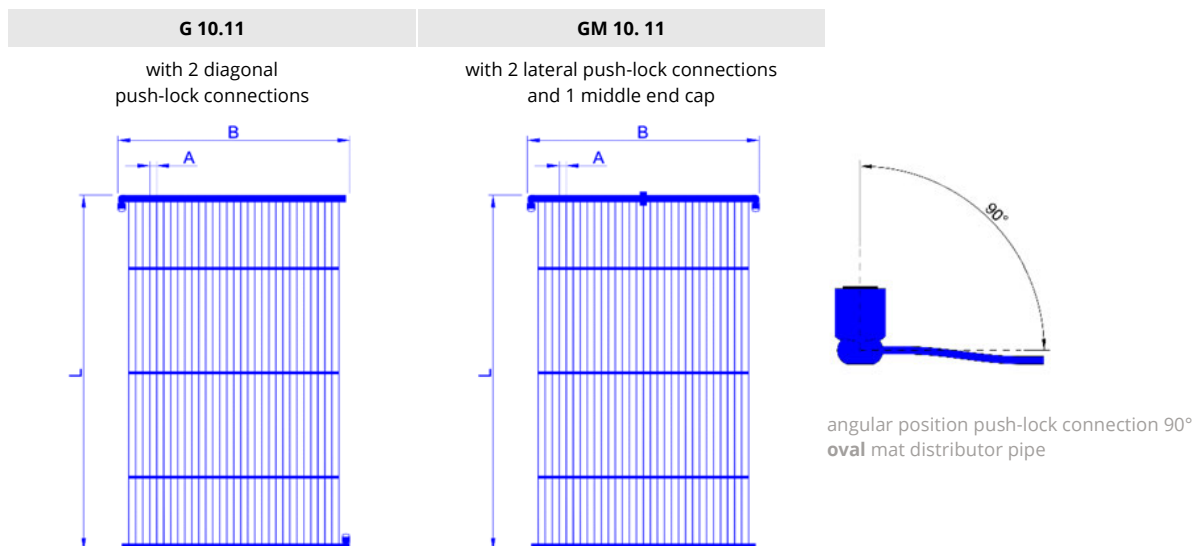
with double-sided adhesive tape for attachment

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with adhesive and protecting foil over the whole surface

In case you need a connection with a different angular position than (90° or 270°) we offer the mat type "ORIMAT" with a **round** mat distributor pipe 20 x 2,0 mm.

## 3.4.2 HEATING AND COOLING MAT OVAMAT G 10.11 | G 10.20 | G 10.02 | GM 10.11



## PUSH-LOCK CONNECTIONS

DESIGNATION	G 10.11	GM 10.11	G 10.20	G 10.02
DESCRIPTION	with 2 diagonal push-lock connections	with 2 lateral push-lock connections and 1 middle end cap	with 2 push-lock connections on the left	with 2 push-lock connections on the right
ANGULAR POSITION	90° (standard) 0°   90°   180°   270°	90° (standard) 0°   90°   180°   270°	90° (standard) 0°   90°   180°   270°	90° (standard) 0°   90°   180°   270°
PUSH-LOCK CONN.				
PICTOGRAM				

## FIELD OF APPLICATION

- floating ceiling | metal floating ceiling
- drywall ceiling | gypsum board panels
- metal ceiling | metal tiles, metal panels
- room or wall element | convector GRAVIMAT

## TECHNICAL DATA

MATERIAL/COLOUR	Polypropylene (PP-R) recyclable/blue
MAT DISTRIBUTOR PIPE	20 x 12 x 2,0 mm, oval
CAPILLARY TUBE	3,4 x 0,55 mm
DISTANCE A	10 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	as from 150 mm in 10 mm steps
CONNECTION TYPE	with 2 diagonal push-lock connections / with 2 push-lock connections 10 mm
SPECIFIC WEIGHT	approx. 370 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,370 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 740 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C

OVAMAT G 10.11 | G 10.20 | G 10.02

Various lengths and widths are available for the capillary tube mat OVAMAT G 10.11 | G 10.20 | G 10.02 :

**Length:** 600 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2250 | 2500 | 2750 | 3000 mm

**Width:** 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 mm

*Ordering example for Clina capillary tube mat*

*type OVAMAT, G 10.11, length 2000 mm, width 500 mm with 2 push-lock connections:*

Item No.: type OVAMAT G 10 . 2000 . 0500 . 11

**DESIGN**

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with welded-on middle end cap for mat type GM 10.11 (1x per mat)

---

with double sided-adhesive tape for attachment

---

with adhesive and protecting foil over the whole surface

In case you need a connection with a different angular position than (0°, 90°, 180° or 270°) we offer the mat type ORIMAT with a **round** mat distributor pipe 20 x 2,0 mm.





## 3.5 FOLIMAT

### capillary 4,3 x 0,8 mm – with round mat distributor pipe

FIELD OF APPLICATION/PRODUCT



**Field of application:** floor | floor heating with capillary tube mat FOLIMAT placed onto screed, heating function

**Product:** OPTIMAT FSB 20

**Reference:** Refurbishment former Kaiserin-Augusta-Hospital Berlin © Felix Aries / Photography Hans Fonk

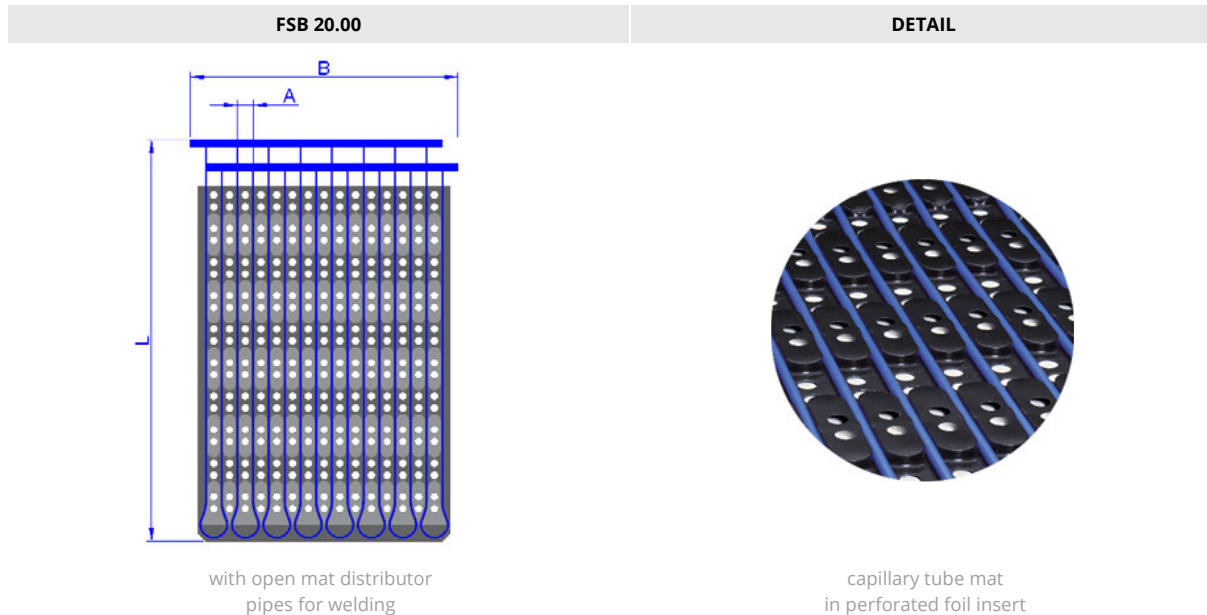


**Field of application:** floor | floor heating with capillary tube mat FOLIMAT placed onto wooden or drywall subfloor, heating function





**Product:** FOLIMAT FSB 20

**Reference:** Refurbishment former Kaiserin-Augusta-Hospital Berlin © Karl Storz Se & Co. KG

## 3.5.1 HEATING AND COOLING MAT FOLIMAT FSB 20.00 | 20.11 | 20.20 | 20.02



## PUSH-LOCK CONNECTIONS

DESIGNATION	FSB 20.00	FSB 20.11	FSB 20.20	FSB 20.02
DESCRIPTION	with open mat distributor pipes	with 2 diagonal push-lock connections	with 2 push-lock connections on the left	with 2 push-lock connections on the right
PICTOGRAM				

## FIELD OF APPLICATION

- floor | **onto** cement screed or floating screed
- floor | **onto** subfloors made of wood or dry construction elements
- ceiling and wall | for gluing and afterwards filling on stable subsurfaces

## TECHNICAL DATA

MATERIAL/COLOUR	mat distributor pipe and capillary tube mat: Polypropylene (PP-R) recyclable/blue; insert foil: Polystyrene/black
MAT DISTRIBUTOR PIPE	20 x 2,0 mm, round
CAPILLARY TUBESB 20	<b>4,3 x 0,8 mm</b>
DISTANCE A	20 mm
LENGTH L	600-6000 mm in 10 mm steps
WIDTH W	300/600 mm
CONNECTION TYPE	without connections/with 2 push-lock connections 10 mm or 15 mm
SPECIFIC WEIGHT	approx. 700 g/m <sup>2</sup> capillary tube surface
SPECIFIC VOLUME OF WATER	0,320 l/m <sup>2</sup> capillary tube surface
SPECIFIC TOTAL WEIGHT	approx. 1020 g/m <sup>2</sup> capillary tube surface
PRESSURE STAGE	PN 10
MAX. RECOMMENDED OPERAT. PRESSURE	4 bar
MAX. ALLOWED HEATING TEMPERATURE	60 °C

#### FOLIMAT FSB 20

Various lengths and widths are available for the capillary tube mat FOLIMAT FSB 20 :

**Length:** 1000 | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 | 5500 | 6000 mm

**Width:** 300 | 600

*Ordering example for Clina capillary tube mat*

*type FOLIMAT, FSB 20.00, length 2500 mm, width 600 mm without push-lock connections:*

Item No.: type FOLIMAT FSB 20 . 2500 . 0600 . 00

#### DESIGN

with 2 push-lock connections 10 mm and 2 end caps

with 2 push-lock connections 15 mm (straight) and 2 end caps

with mat distributor pipe extension up to 150 mm

with welded-on socket\*

with welded-on 90°-elbow\* or end cap

\* for technical reasons a leak test in our factory is not possible

**Before ordering FOLIMAT please contact Clina for the position of the mat distributor pipes!**

