

# FLOOR HEATING ONTO SCREED

with capillary tube mat FOLIMAT FSB 20.00



System description



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## SYSTEM DESCRIPTION

### Design

The capillary tube mats, in perforated insert foil, are laid in a 8-10 mm thin levelling compound directly on an existing cement screed or floating screed. Mat distributor pipes and supply lines are located in previously made slots in the existing screed floor. The desired floor covering, such as parquet, tiles or carpet, is applied to the finished subfloor. This flooring material should be suitable for floor heating systems.

The small distance between the capillaries (20 mm), ensures a homogeneous heat distribution across the floor. At low excess temperature, the heat is emitted to a large extent via radiation, partly also via convection.

### Capillary tube mat

The Clina capillary tube mat FOLIMAT FSB 20.00 is recommended for this design.

### Length & Width

The capillary tube mats are custom-made in length for each room at Clina. The mat type FOLIMAT is available in widths of 300 and 600 mm. On site, the mat distributor pipes are connected by means of heating element socket welding.

This is a secure, non-detachable connection.

### Hydraulic connection

Mat distributor pipes and supply lines are accommodated in the existing screed. For this purpose, slots are made in the screed and then closed again (with concrete screed or rapid screed). The capillary tube mats, welded together to a hydraulic circuit, are connected to the supply and return lines and to a centrally located manifold.

### Mounting

The capillary tube mats are rolled out on the prepared floor and fixed with tile adhesive.

### Levelling compound

The levelling compound must be suitable for floor heating systems. A layer thickness of 8-10 mm (incl. capillary tube mats) is sufficient.

### Regulation

The system can be regulated room-by-room.

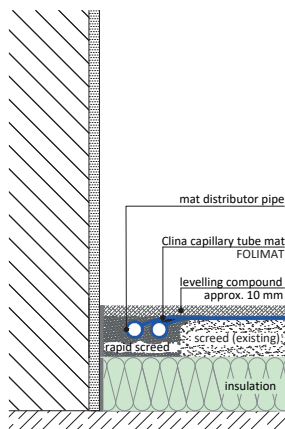
### Fields of application

Suitable for all buildings, such as residential buildings, office buildings, hotels etc., especially for renovation, but also for new buildings.

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## STRUCTURE



View of a floor section: capillary tube mat laid on screed

The capillary tube mats, in perforated insert foil, are laid in a 8-10 mm thin levelling compound directly on an existing cement screed or floating screed.

Mat distributor pipes and supply lines are accommodated in the existing screed.

The capillary tube mats are fixed with tile adhesive on the existing screed.

Levelling compound is applied. A layer thickness of 8-10 mm (incl. capillary tube mats) is sufficient.

The desired floor covering, such as parquet, tiles or carpet, is applied to the finished subfloor. This flooring material should be suitable for floor heating systems.

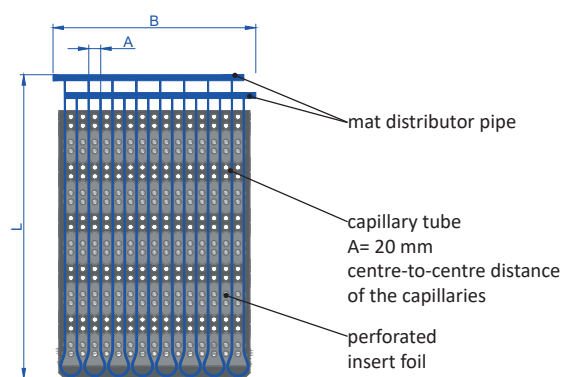
## RECOMMENDED CAPILLARY TUBE MAT

The FOLIMAT FSB 20.00 consists of 2 round mat distributor pipes (20 x 2,0 mm) and capillary tubes (4,3 x 0,8 mm) as well as a perforated insert foil.

The capillaries are clicked into the grooves of the insert foil. The constant distance between the capillary tubes (centre-to-centre distance) is 20 mm.

### Special features

- high mechanical resilience
- low pressure loss
- good venting
- suitable for thin-layer system
- can be easily glued to various substrates



## GENERAL INFORMATION ON CAPILLARY TUBE SYSTEMS

Clina capillary tube mats are used very successfully world-wide for heating and cooling various buildings.

The capillary tube system is extremely **comfortable**:

- low system temperature
- homogeneous heating of the floor (uniform surface temperature across the entire floor)
- suitable for people with asthma or dust allergies, due to the low level of convection no dust is stirred up
- fast reaction, i.e. short warm-up time

**Advantages** compared to classic single-pipe systems:

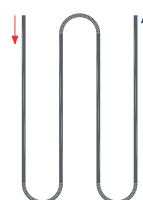
- low pressure loss
- very even temperature distribution and transmission
- larger exchange surface
- ideal for the use of environmental energy due to very small temperature differences between system and room temperature
- in combination with the heat pump, best COP values can be achieved

Capillary tube mats are **safe & durable**

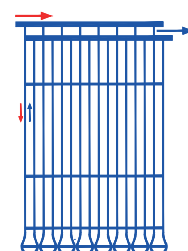
Each individual Clina capillary tube mat is subjected to a leak test before dispatch. The test pressure is 20 bar - which corresponds to approximately 10 times the operating pressure.

A 15-year extended warranty applies to all Clina mats. 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



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## ADVANTAGES

### High performance - high dynamics

Thanks to the small distance of the capillary tubes of 20 mm, the floor is heated homogeneously. As a result of this and due to the position of the capillary tube mats close to the surface a high heat output at low system temperatures can be achieved. This results in extremely short warm-up times. Just a few minutes after switching on the heating, you can feel the warmth on the entire floor.

### Environmentally friendly and energy efficient

Very low system temperatures and extremely short warm-up times save money and protect the environment.

### Low installation height

A layer thickness of 8-10 mm is sufficient. Mat distributor pipes and supply lines are accommodated in the existing screed.

### Ideal for renovations

Thin-layer underfloor heating can be installed directly on an existing screed.

### Short construction times

Due to the short drying time of the levelling compound, the surface can be walked on and is ready for installation after just a few hours.

### Invisible

No bulky radiators, therefore more architectural design options, such as floor-to-ceiling windows. You also have more options when it comes to the interior design.

### Ideal for asthmatics and people with dust allergies

Due to the low level of convection you have no stirring up of dust.

### Smooth, energy-efficient temperature control

Due to the homogeneous heat distribution it is possible to work with a low system temperature. This has a positive impact on the feeling of comfort and reduces heating energy consumption. The perceived temperature is around approx. 2–3 °C higher than the actual room temperature.

## VALUES



### HEATING CAPACITY

**max. 100 W/m<sup>2</sup>**  
according to characteristic curve  
for underfloor heating



### COOLING CAPACITY

**max. 30 W/m<sup>2</sup>** recommended



### ACOUSTICS

depending on floor covering

### INSTALLATION HEIGHT:

**8-10 mm** in levelling compound plus  
floor covering

(mat distributor pipes and supply lines  
in the existing screed)

### SYSTEM WEIGHT (filled with water):

**1020 g/m<sup>2</sup>** plus levelling compound  
and floor covering

### PRESSURE STAGE:

PN 10

## REFERENCES

Please note the following documents for further information::

- Floor heating onto screed with FOLIMAT System data sheet
- FOLIMAT FSB 20 Product data sheet
- Floor heating Performance values
- Floor heating onto screed with FOLIMAT Installation guideline
- Website: [www.clina.de](http://www.clina.de)

## CONTACT

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