

# KOOLAIR

## series

# TFK

## Chilled Ceilings

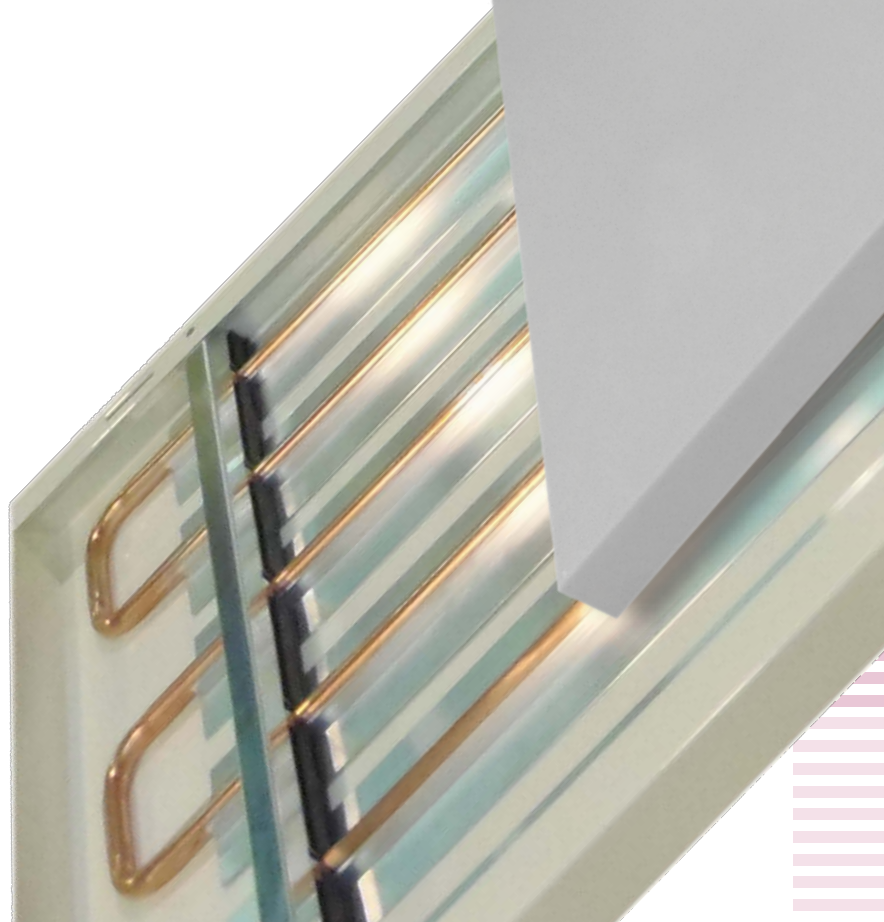
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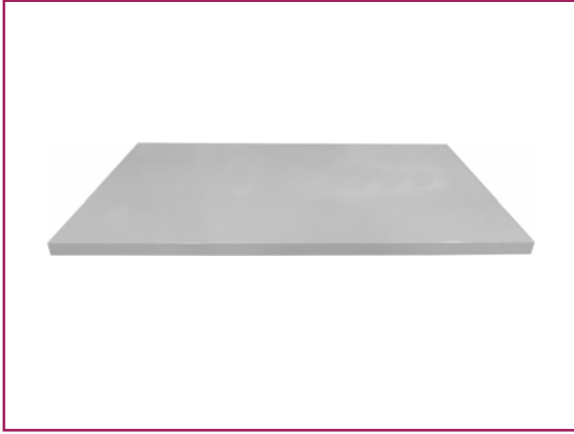
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## Chilled Ceiling

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## Chilled ceiling



### Description

The Koolair TFK Chilled Ceiling modules are developed for use in open or grid ceilings.

The TFK chilled ceilings (without primary air) are radiation systems that use water to carry cooling power to the various rooms, thus saving energy and space compared to air-air systems.

These have the huge advantage of chilling, while avoiding air draughts in the room.

Additional ventilation is required because no primary air flow is available.

When installed in an open grid ceiling, the free surface of the module must be as large as possible to ensure that the chilled ceiling does not lose efficiency.

The water inlet temperature, as in all air-water systems, must be selected such that it is never below the dew point temperature.



### Executions

The TFK Chilled Ceiling is composed of smooth or microperforated steel plates with black fleece to prevent viewing through the panel.

Copper pipes built into the plates are inserted in aluminium sections and, therefore, contact area is high and ensures good thermal transmission between the plate and the pipe.

The ceiling weight without water is  $9 \text{ kg/m}^2$ . Copper coil,  $\varnothing 12 \text{ mm}$   
The length and width of the chilled ceiling is variable and can be adapted to the unique characteristics of each installation.

Standard finish of white (RAL9010) paint. Special finishes by special order.



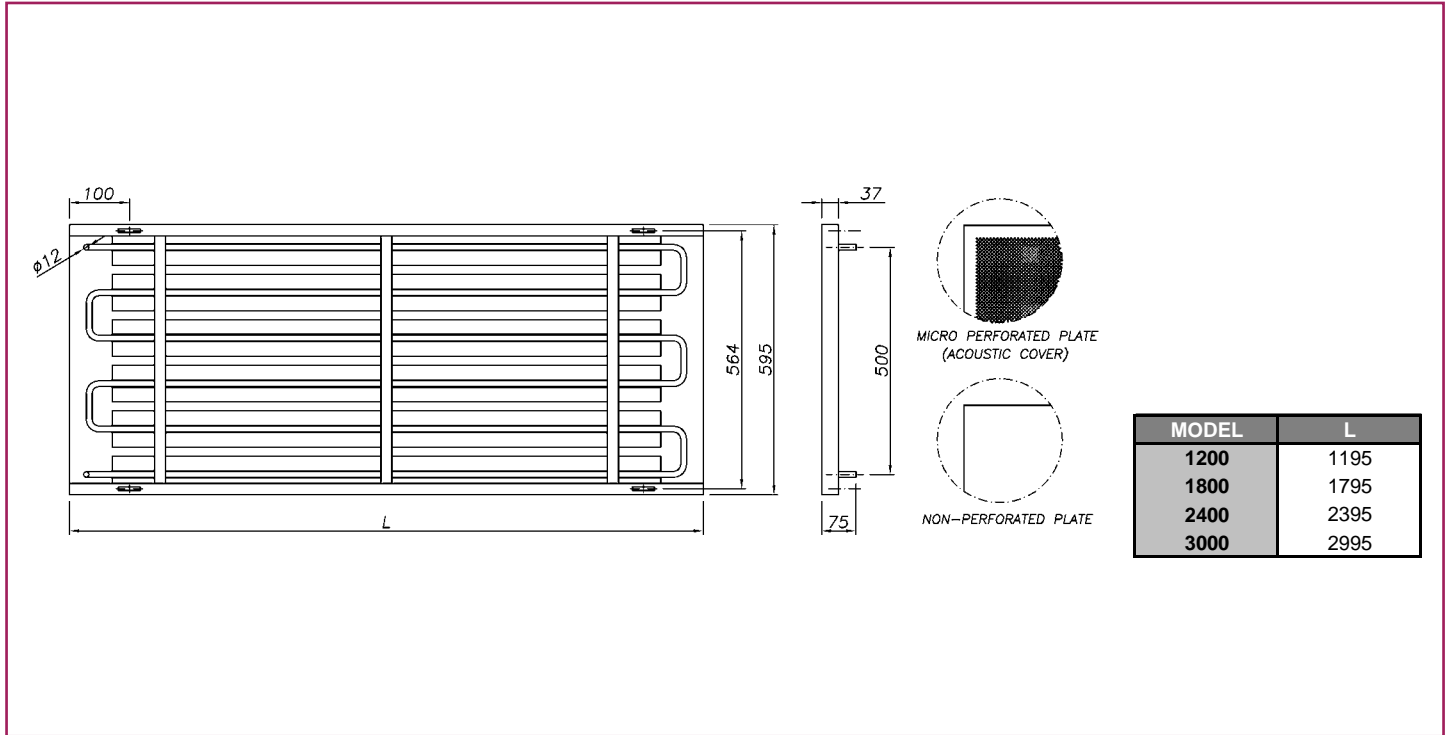
### Assembly and connections

The chilled ceiling components can be connected individually or in groups. The copper pipe ends are curved upward.

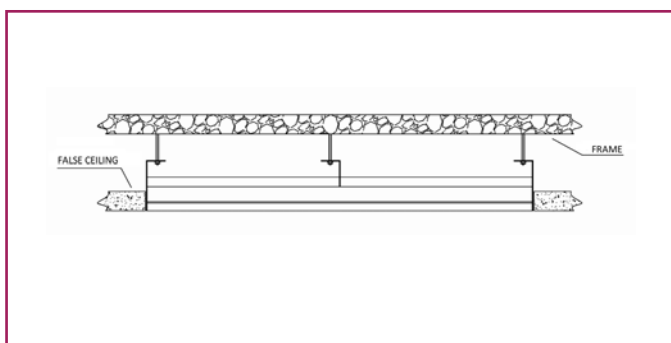
The water connection is simply made through watertight flexible connectors.

The type of hanging depends on the ceiling system selected; the plates are scored in the wing for easier installation.

## Models and dimensions



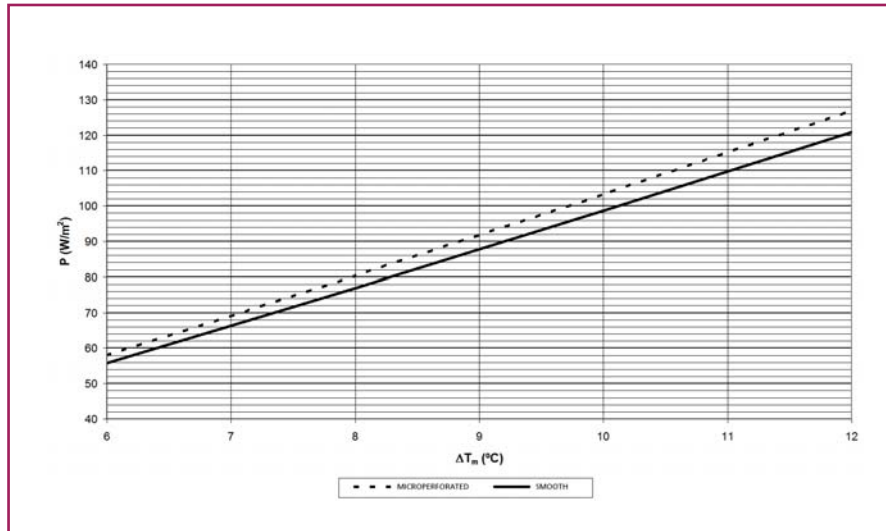
## Assembly



Based on the various ceiling possibilities, an example of an assembly adaptable to the construction requirements is shown.

# Technical data. Selection chart

Cooling chart

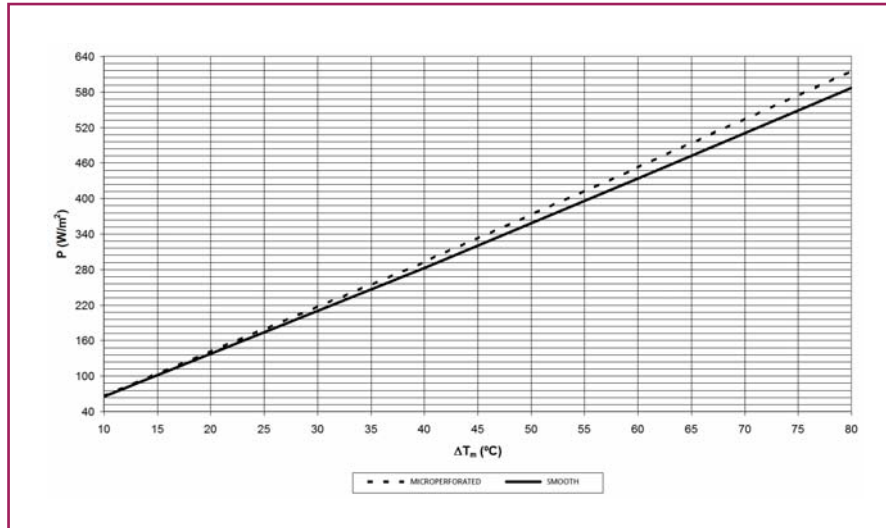


**Symbols**

P (W/m<sup>2</sup>): Cooling power

$$\Delta T_m = T_{amb} - \left( \frac{T_{agua\_in} + T_{agua\_out}}{2} \right)$$

Heating chart



**Symbols**

P (W/m<sup>2</sup>): Heating power

$$\Delta T_m = T_{amb} - \left( \frac{T_{agua\_in} + T_{agua\_out}}{2} \right)$$

## Product codes

TFK	Smooth plate
TFK-P	Microperforated plate

LxH	Dimensions: length x height in mm
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RAL-9010	Standard finish in RAL-9010 white
RAL ...	RAL finish to be defined

Example:

**TFK-1000x1025-RAL-9010**

Chilled ceiling of smooth plate, dimensions 1000 x 1025 painted in RAL-9010 white.





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