

METAL LINE

Radiant baffle



QUICK FACTS

- Thermal comfort according to EN ISO 7730, SIA 382/1
- Building material class A2-s1, d0 according to EN 13501-1
- Very high heating and cooling capacity
- Acoustically effective (class C)
- Easy to install
- Suitable for retroactive installation
- Available in various colours and surfaces, including wood-look finishes
- Integration of various components
 - Different lighting designs
 - Sprinklers
 - Smoke detectors
 - Supply / extract air elements

Output (water)	
Cooling	Heating
Up to 22 w/lm (8 K), EN 14240:2004	Up to 25 w/lm (15 K), EN 14037:2016
Acoustics	
αw: up to 0,75	

Technical description

General

METAL LINE radiant heating and cooling baffles combine thermal activation with acoustic effectiveness. The vertical arrangement of the metal baffles provides a comparatively large thermally and acoustically effective surface area.

The system is also suitable for retrofitting existing buildings. Thanks to simple installation, the radiant heating and cooling baffles can be integrated into different room situations and combined with various design requirements.

An acoustic fleece is integrated into the baffle for sound absorption. For higher acoustic requirements, an additional insulation insert can be provided.

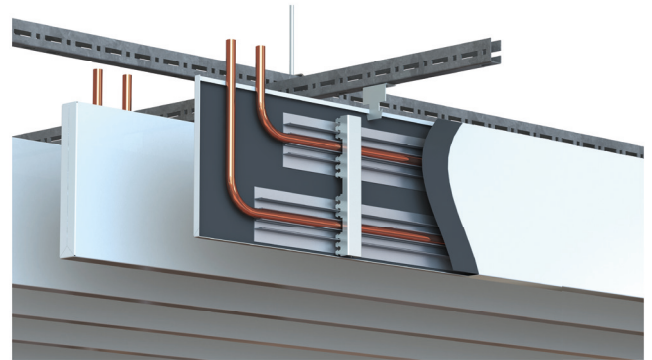
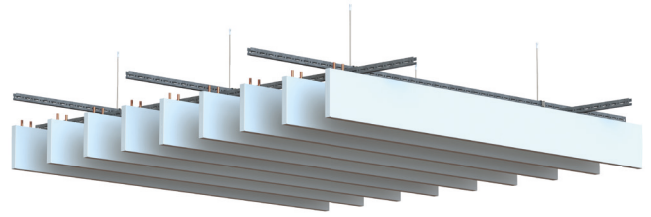
Activation

Water system: The METAL LINE radiant baffle is a passive system that absorbs room heat through the ceiling surface and transfers it to water in activation registers or, when heating is required, emit heat.

The high capacity fins are activated by means of copper tube coils (outside diameter 12 mm) that are press-fitted into the baffles.

Functions

The METAL LINE radiant baffle system is multifunctional. In addition to their thermal function – cooling and heating – they can be fitted with additional features, such as acoustic elements, smoke detectors and lighting.



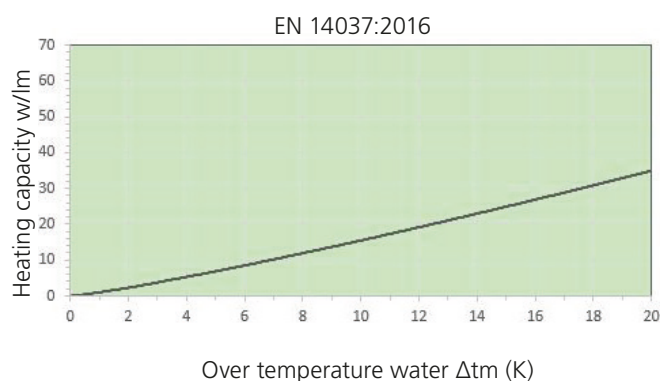
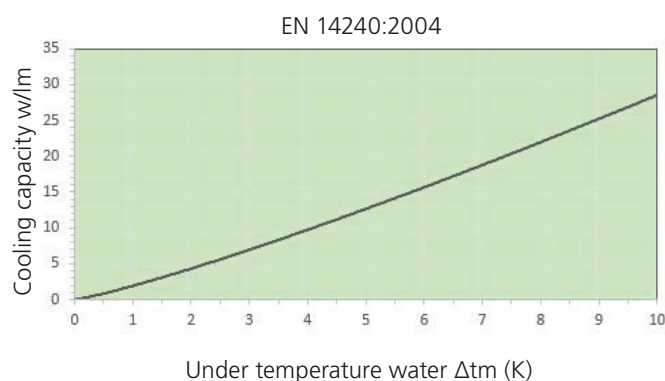
Technical data

Capacity

Initial data is presented below.

Material baffle	Steel
Baffle height	200 mm
Baffle spacing	200 mm
Occupancy rate	45 %
Activation method	on fleece

(Capacity information without project-specific performance-influencing factors.)



Version	Cooling 8 K	Cooling 10 K	Heating 15 K
Steel: Height 200 mm	up to 22 W/lm	up to 27 W/lm	up to 25 W/lm

Notice

- SN EN 14240: The cooling capacity is related to the active area according to SN EN 14240:2004. The active area is calculated according to SN EN 14240 from the number of heat-conducting rails x length of heat conducting rail x distance between heat conducting rails.
- SN EN 14037: The heating capacity is related to the active area according to SN EN 14037:2016. The active area is calculated according to SN EN 14037 from the length of the ceiling panel x the width of the ceiling panel.

Output adjustment

Output adjustment, property-specific parameters

Parameters	Cooling mode	Heating mode
Warm / cold facade (36 °C)	8 %	5 %
Asymmetric loads	3 %	3 %

Calculation factors for other measurements / other activation procedure

Parameters	Calculation factors
Baffle distance 400 instead of 200 mm	+ 4 %
Activation on metal instead of fleece	+ 4 %

Recommendations for operation

Water

- Temperature
 - Cooling: 16 – 18 °C
 - Heating: 28 – 37 °C
- Temperature distance Δt (flow - return): 2 – 3 K
- Pressure drop: 20 – 25 kPa
- Water flow rate: 80 – 150 l/h
- Max. operating pressure: 10 bar
- Water quality according to: SWKI BT 102-01, BTGA 3.003, VDI 2035

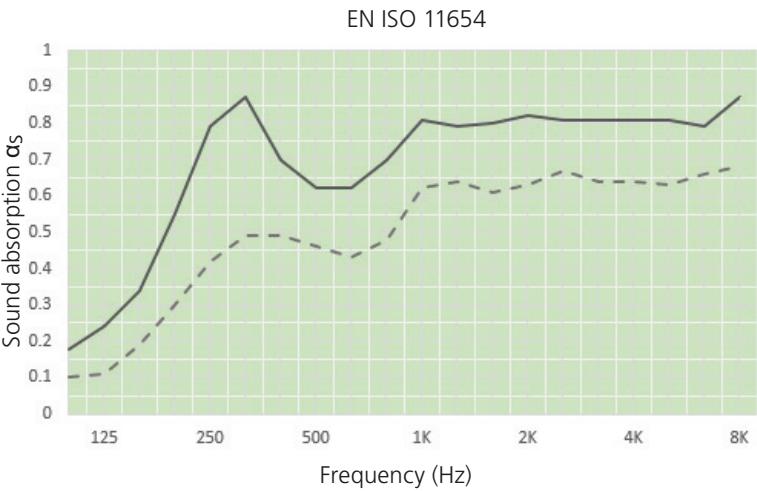
Environment

- Ambient temperatures: +5 – 50 °C
- Humidity: up to 90 %

Acoustics

Baseline data, example:

Perforation	Rg. 1,5 – 11 %	Rg. 1,5 – 11 %
Baffle distance	100 mm —————	200 mm - - - - -
Occupancy rate	45 %	45 %
Sound absorption inlay	fleece	fleece
Additional inlay (mineral wool)	with	with
Sound absorption α_p	250: 0,79 500: 0,62 1k: 0,81 2k: 0,82 4k: 0,81	250: 0,42 500: 0,46 1k: 0,62 2k: 0,63 4k: 0,64
Sound absorption α_w	α_w : 0,75	α_w : 0,55



System

Ceiling system

- Baffle ceiling
 - Baffle: steel, perforated
 - Substructure: edged steel profile with suspension

Installation systems

- Installation height:
 - Construction height min. 260 mm
- Hook-in profile with fixed points
- Baffle movable
- Baffle can be pivoted down (optional)

Materials, weight and dimensions

Materials and weight

Material	Weight (incl. activation, water)
Steel 0,70 mm	4,0 kg/lm

Building material class: A2-s1, d0, EN 13501-1 (depending on the acoustic solution).

Dimensions

Length	Width	Height
500 - 2500 mm	30 / 40 mm	200 mm

Special dimensions on request.

Surface

Finishes

- Powder coated
- Digital printing on request

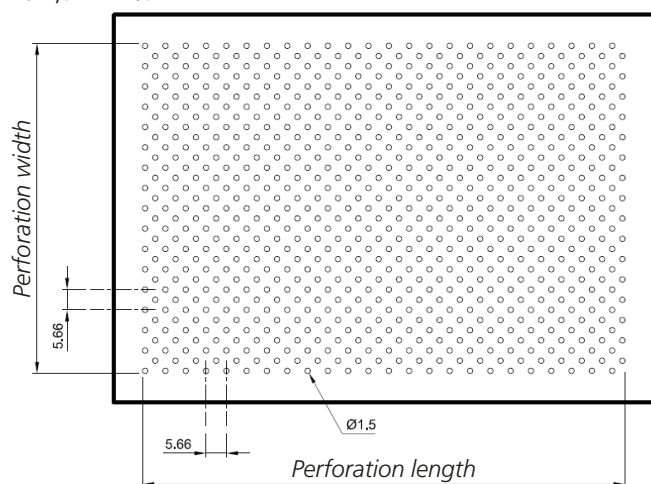
Colours

- Standard: RAL 9010
- Other RAL / NCS colors on request

Perforations

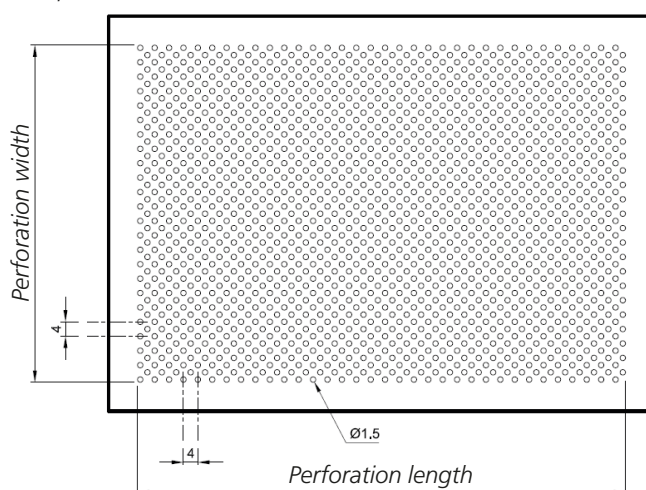
- Rg. 1,5 - 11 %, Rg. 1,5 - 22 %
- Other perforations on request

Rd 1,5 – 11 %



Standard perforations:

Rd 1,5 – 22 %



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