

METAL LINE

Radiant lamella



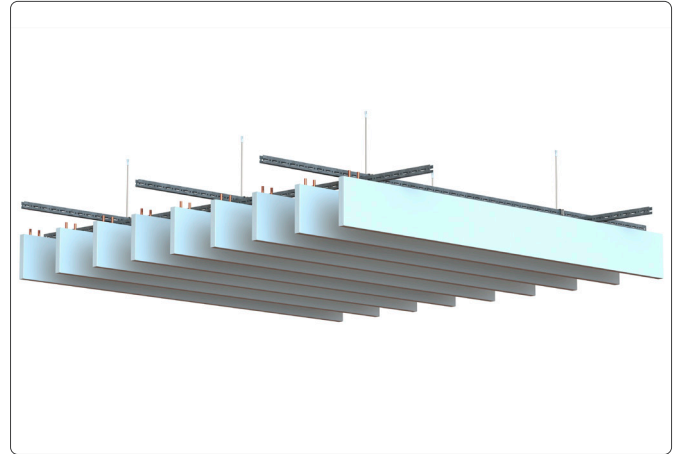
BARCOL-AIR 
by Swegon

zent-frenger 
by Swegon

Obviously linear

The radiant baffle Metal Line is an efficient ceiling system for cooling and heating with a good sound absorption. The arrangement of the vertical slats creates a comparatively high area of coverage with metal baffles that are thermally and acoustically efficient. Thanks to its simple and quick installation, this climate ceiling system is also suitable for retroactive installation.

- Meets high thermal and acoustic requirements
- Quick and easy installation
- Suitable for retroactive installation



Ceiling system
open

Operating principle
Convection

Air supply
visible

Capacity (Water)
Cooling: up to 18 w/lm (8 K), EN 14240:2004
Heating: up to 25 w/lm (15 K), EN 14037:2016

Acoustics
 α_w : up to 0,75
Sound absorption class C, EN ISO 11654

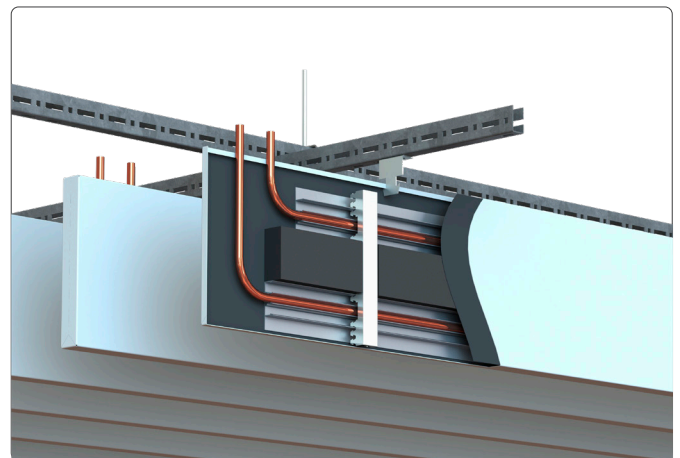
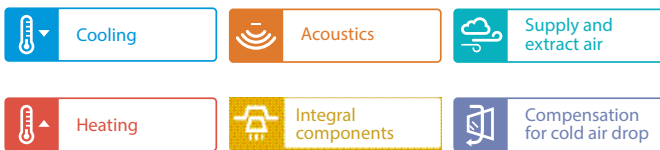
Room comfort
Thermal comfort according
to EN ISO 7730, SIA 382/1

Activation

Water system

- Copper tube meander pressed into the aluminum profile
- Copper tube: \varnothing outside 10 mm

Functions



References



SBB Travel center, Lucern, CH
(Cover picture: Fraisa SA, Bellch, CH)



Raiffeisenbank, St. Niklaus, CH

Capacity

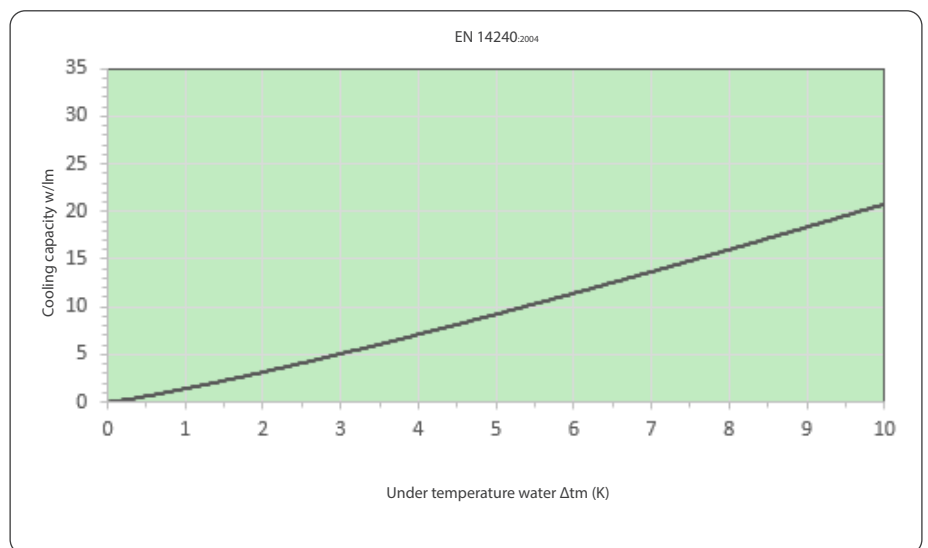
Initial data

Material ceiling panel	Steel
Baffle height	150 - 400 mm
Baffle distance	200 mm
Occupancy rate	45 %
Activation method	on fleece



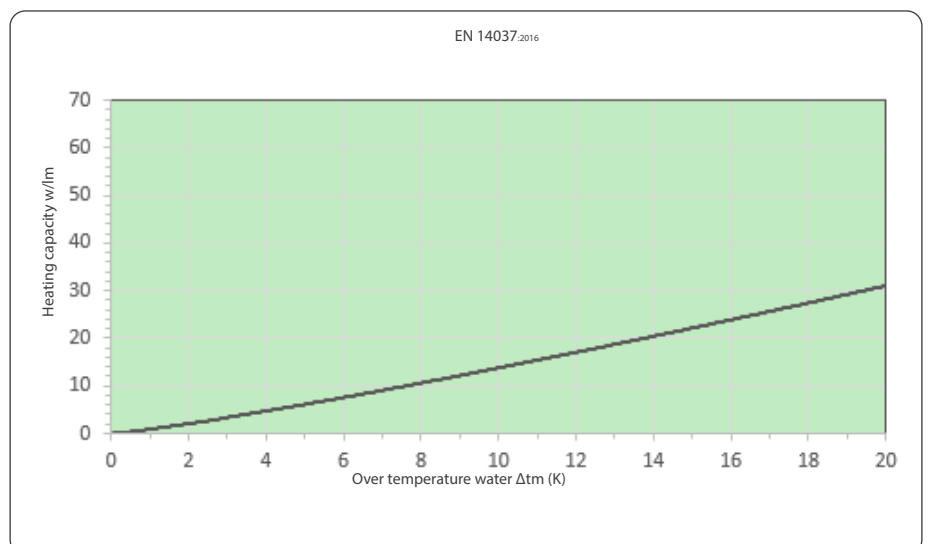
Cooling

- up to 18 w/lm (8 K)



Heating

- up to 25 w/lm (15 K)



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 (32 °C)	4 %	3 %
Warm / cold facade (36 °C)	8 %	5 %
Asymmetric loads	3 %	3 %
Mechanical airflow in the room	5 %	5 %

Calculation factors for other measurements / other activation procedure

Parameters	Calculation factors
Baffle height 250 instead of 200 mm	+ 6 %
Baffle height 300 instead of 200 mm	+ 10 %
Baffle distance 400 instead of 200 mm	+ 4 %
Baffle distance 100 instead of 200 mm	- 2 %
Activation on metal instead of fleece	+ 4 %

Technical Specifications

Dimensions

Baffle length	Baffle height	Baffle width
500 - 2500 mm	150 - 400 mm	¹⁾ 30 ; 40 mm

¹⁾ Special dimensions on request

Materials and weight

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

Versions

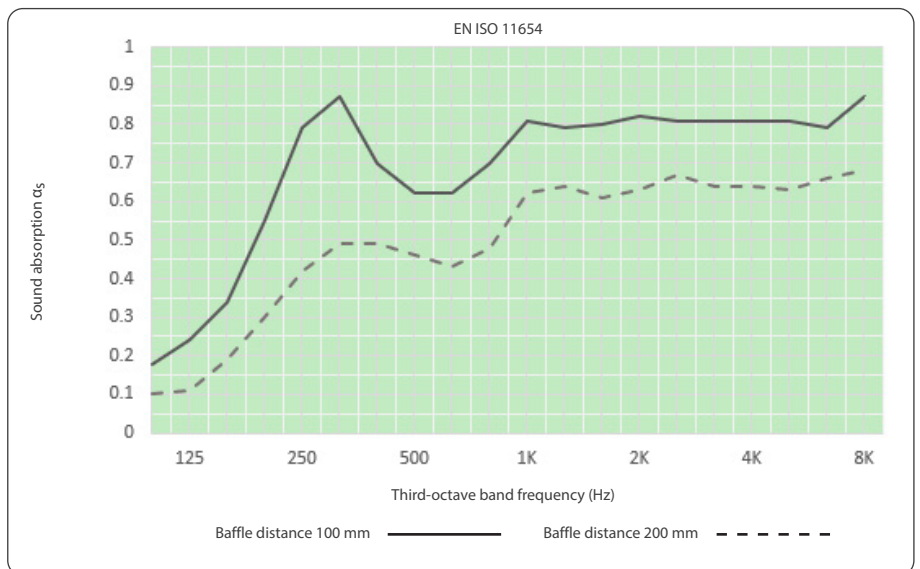
Perforations	Surface	Colours
Rg. 1,5 – 11 % Rg. 1,5 – 22 %	Powder coating	RAL 9010
Various perforation options possible	Digital printing on request	Other RAL / NCS colours on request

Certification

- ISO 9001



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
Sound absorption class	C (EN ISO 11654)	D (EN ISO 11654)



Fire Protection

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

System / Operation

Construction

- Ceiling system
 - Baffles: steel, perforated
 - Substructure: edged steel profile with suspension
 - Installation height: construction min. 260 mm + mounting height 50 mm
- Installation system
 - Hook-in profile with fixed points
 - Baffles movable

Water

Recommended:

- Temperature
 - Cooling 16 – 18 °C
 - Heating 28 – 37 °C
- Temperature distance $\Delta t_{(in-out)}$: 2 – 3 K
- Pressure drop: 20 – 25 kPa
- Water flow: 80 – 150 l/h
- Max. operating pressure: up to 10 bar
- Water quality: SWKI BT 102-01 / BTGA 3.003 / VDI 2035

Surrounding

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

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