

# ARCHISONIC®

Acoustic baffle



## QUICK FACTS

- In combination with A11-S, A11-C, ALBATROS
- High to very high heating & cooling capacity
- Superior sound absorption values (class A)
- Sustainable and high quality acoustic material made from PET
- Quick and easy installation
- Versions: Edge, Straight & Wave
- 28 different colours to choose from
- Integration of various components
  - Different lighting designs
  - Sprinklers
  - Smoke detectors
  - Supply / extract air elements

A11-S output (water)	
Cooling	Heating
Up to 70 W/m <sup>2</sup> (8 K), EN 14240:2004	Up to 90 W/m <sup>2</sup> (15 K), EN 14037:2016
Acoustics	
α <sub>w</sub> : up to 1,00	

A11-C output (water)	
Cooling	Heating
Up to 60 W/m <sup>2</sup> (8 K), EN 14240:2004	Up to 80 W/m <sup>2</sup> (15 K), EN 14037:2016
Acoustics	
α <sub>w</sub> : up to 1,00	

ALBATROS output (water)	
Cooling	Heating
Up to 177 W/m <sup>2</sup> (8 K), EN 14240:2004	Up to 234 W/m <sup>2</sup> (15 K), EN 14037:2016
Acoustics	
α <sub>w</sub> : up to 1,00	

# Technical description

## General

ARCHISONIC® + the A11 radiant metal ceiling system or ALBATROS high performance module are visually and functionally impressive in equal measure. The system satisfies the requirements of a modern radiant ceiling when it comes to both energy efficiency and performance. The combination of the radiant ceiling system with the ARCHISONIC® acoustic baffle from Impact Acoustic® also forms a highly effective sound absorber across the entire frequency spectrum.

Whilst the felt panels (made from recycled PET bottles) primarily absorb sound in the high frequency range, the strength of the A11 radiant metal ceiling system lies in the low frequency range.

The combination solution can be used as an A11-C closed radiant ceiling system, A11-S sail or ALBATROS high performance module. The acoustic baffles are available in a wide range of colours and in the versions Straight, Wave or Edge. They are installed on site on the underside of the metal ceiling using a simple suspension method.

## Activation

Water system: The radiant ceiling is a passive system that in the case of cooling absorbs heat from the room via the ceiling surface, transfers it to the water, which is conducted in activation registers, and dissipates it, respectively emits heat in the case of heating.

The activation of the A11 radiant metal ceiling system consists of meandering copper pipes (outside diameter 12 mm) and aluminum heat-conducting rails (width 80 mm), which are connected by laser spot welding and glued into the ceiling panels.

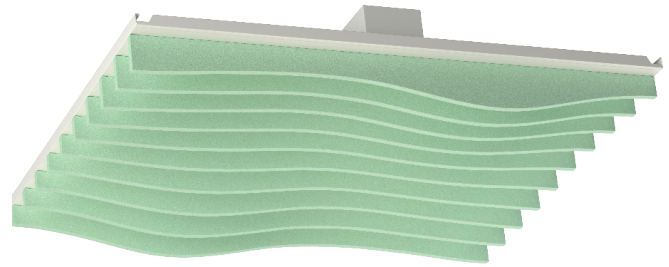
The activation of the ALBATROS High performance module consists of meandering copper pipes (outside diameter 12 mm), which are connected by laser spot welding and glued into the ceiling panels.

## Functions

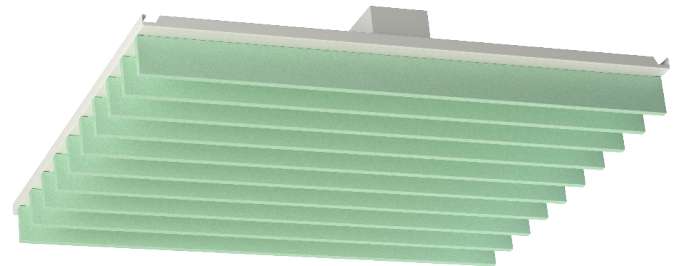
ARCHISONIC® + A11 radiant metal ceiling system resp. the ALBATROS High performance module are multifunctional. In addition to their thermal function – cooling and heating – they can be fitted with additional features, such as acoustic elements, smoke detectors and lighting.

## Combinations

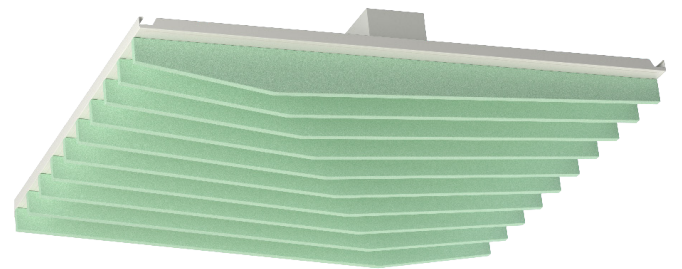
- ARCHISONIC® + A11-S Radiant metal ceiling sail
- ARCHISONIC® + A11-C Radiant metal ceiling
- ARCHISONIC® + ALBATROS High performance module



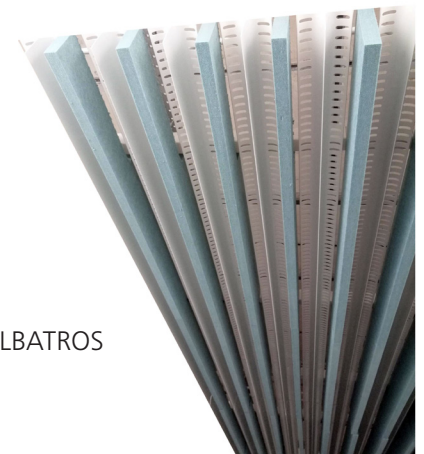
ARCHISONIC® Wave



ARCHISONIC® Straight



ARCHISONIC® Edge



ARCHISONIC® + ALBATROS

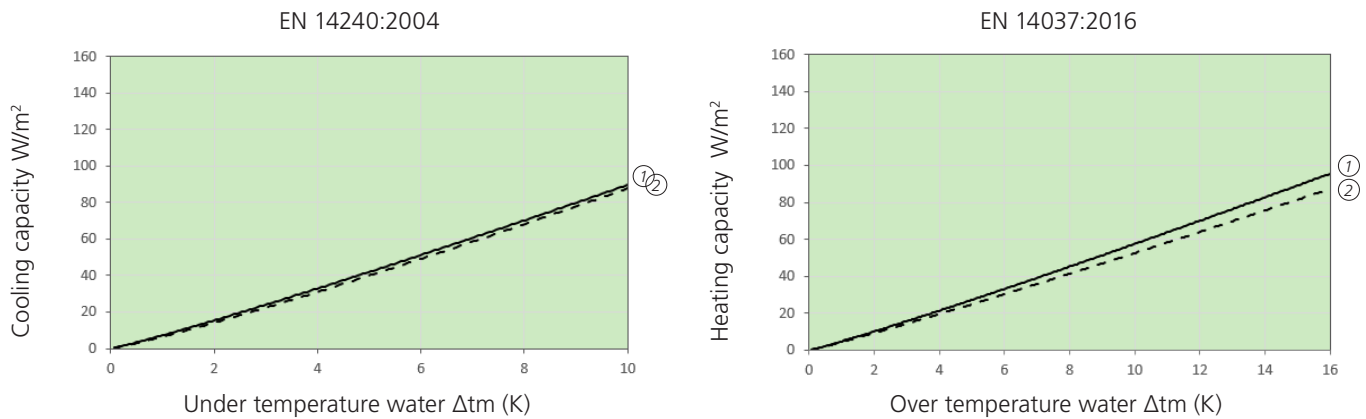
# Technical data

## Capacity

Initial data is presented below A11 climate ceiling system:

Material ceiling panel	Steel
Perforation	Rg 1,5 – 11 %
Distance heat conducting rails (hcr)	150 mm
Activation method	on fleece

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



Version	Cooling 8 K	Cooling 10 K	Heating 15 K
① ARCHISONIC® + A11-S Radiant ceiling sail	up to 70 W/m <sup>2</sup>	up to 90 W/m <sup>2</sup>	up to 90 W/m <sup>2</sup> (—)
② ARCHISONIC® + A11-C Radiant ceiling	up to 60 W/m <sup>2</sup>	up to 76 W/m <sup>2</sup>	up to 80 W/m <sup>2</sup> (- - -)

### 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.

## Recommendations for operation

### Water

- Temperature
  - Cooling 16 – 18 °C
  - Heating 28 – 37 °C
- Temperature distance Δt (VL-RL): 2 – 3 K
- Pressure drop: 20 – 25 kPa
- Water flow: 80 – 150 l/h
- Max. operating pressure up to 9 bar
- Water quality according to: SWKI BT 102-01, BTGA 3.003, VDI 2035

### Surrounding

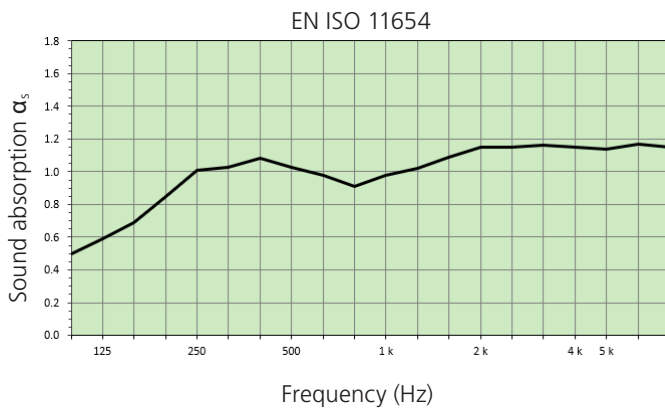
- Ambient temperatures: +5 – 50 °C
- Humidity: up to 90 % relative humidity

**Acoustics**

Initial data is presented below A11 climate ceiling system:

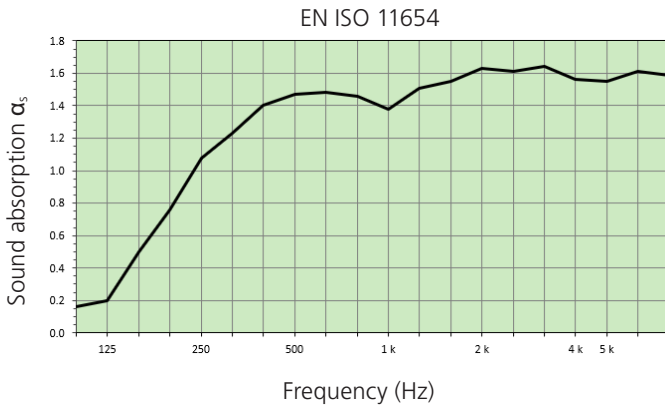
Material ceiling panel	Steel
Perforation	Rg 1,5 – 11 %
Distance heat conducting rails (hcr)	150 mm
Activation method	on fleece
Height ceiling baffles	150 mm
Distance ceiling baffles	150 mm

**Ceiling system closed**



Sound absorption $\alpha_p$	250: 0,95 500: 1,00 1k: 1,00 2k: 1,00 4k: 1,00
Sound absorption $\alpha_w$	$\alpha_w$ : 1,00
Sound absorption class	A

**Ceiling system sail**



Sound absorption $\alpha_p$	250: 1,00 500: 1,00 1k: 1,00 2k: 1,00 4k: 1,00
Sound absorption $\alpha_w$	$\alpha_w$ : 1,00
Sound absorption class	A

# System

## Ceiling system

- Ceiling baffles
  - 28 PET bottles/m<sup>2</sup>
  - Special solutions on request

## Installation systems

- Hook-on system min. 75 mm
  - Hook-on system

# Materials, weight and dimensions

## Materials and weight

System	Material	Gewicht (inkl. Aktivierung, Wasser)	Baustoffklasse
ARCHISONIC®	100 % PET (min. 60 % recycelt)	4,0 kg/m <sup>2</sup> (+/- 10 %)	B-s1, d0, EN 13501-1
A11-S + ARCHISONIC®	Aluminum 1,00 mm + PET	8,0 – 10,0 kg/m <sup>2</sup>	B-s1, d0, EN 13501-1
A11-S + ARCHISONIC®	Steel 0,70 mm + PET	10,0 – 12,5 kg/m <sup>2</sup>	B-s1, d0, EN 13501-1
A11-C + ARCHISONIC®	Aluminum 1,00 mm + PET	7,5 – 10,0 kg/m <sup>2</sup>	B-s1, d0, EN 13501-1
A11-C + ARCHISONIC®	Steel 0,70 mm + PET	10,0 – 12,5 kg/m <sup>2</sup>	B-s1, d0, EN 13501-1
ALBATROS + ARCHISONIC®	Aluminum fins + PET	ca. 20,0 kg/m <sup>2</sup>	B-s1, d0, EN 13501-1

## Baffle dimensions

Length	Width	Thickness
400 – 1800 mm	150 mm	24 mm

Special dimensions on request.

## Surface

### Versions

- PET baffles

### Colours

- 28 different colours to choose from

### Formes

- Wave, Straight, Edge

## Dimensions A11-S, A11C

Panel length	Panel width	Panel height
min. 565 mm	min. 200 mm	min. 30 mm
max. 3200 mm	max. 1200 mm	max. 50 mm

Special dimensions on request.

## Dimensions ALBATROS

Module length	Module width	Module height	Pipe rows	Pipe spacing
600 – 2500 mm	290 – 990 mm	150 mm	3 – 10	100 mm

Special dimensions on request.

## Colours ceiling baffles ARCHISONIC®

### Quiet Neutrals



Snow White  
500



Cloud  
103



Smoke  
442



Ground  
108



Charcoal  
542



Slate  
444



Raven  
550

### Living Greens



Spearmint  
706



Succulent  
712



Moss  
439



Nordic Pine  
311



Grove  
317

### Warm Naturals



Warm Stone  
105



Milk  
404



Shell Pink  
102



Soft Coral  
516



Terracotta  
239



Garnet  
724

### Elemental Blues



Ice Blue  
304



Winter Sky  
410



Marine Blue  
864



Pacific Ocean  
432



Midnight  
810

### Soothing Pastels



Shell Pink  
102



Soft Coral  
516



Ice Blue  
304



Winter Sky  
410



Spearmint  
706



Succulent  
712

### Energetic Brights



Pacific Ocean  
432



Moss  
439



Sunshine  
846



Electric Orange  
464



Hot Pink  
140



Grape  
540

### Elegant Darks



Garnet  
724



Marine Blue  
864



Midnight  
810



Nordic Pine  
311



Raven  
550

### Primary Play



Snow White  
500



Charcoal  
542



Sunshine  
846



Poster Red  
662



Marine Blue  
864

## International

### Barcol-Air Group AG

Wiesenstrasse 5  
8603 Schwerzenbach  
T +41 58 219 40 00  
F +41 58 218 40 01  
info@barcolair.com

## Switzerland



### Barcol-Air AG

Wiesenstrasse 5  
8603 Schwerzenbach  
T +41 58 219 40 00  
F +41 58 218 40 01  
info@barcolair.com

### Barcol-Air AG

Via Bagutti 14  
6900 Lugano  
T +41 58 219 45 00  
F +41 58 219 45 01  
ticino@barcolair.com

## Germany

### Swegon Klimadecken GmbH

Schwarzwaldstrasse 2  
64646 Heppenheim  
T: +49 6252 7907-0  
F: +49 6252 7907-31  
klimadecken@swegon.de  
swegon.de/klimadecken

## France

### Barcol-Air France SAS

Parc Saint Christophe  
10, avenue de l'Entreprise  
95861 Cergy-Pontoise Cedex  
T +33 134 24 35 26  
F +33 134 24 35 21  
france@barcolair.com

## Italy

### Barcol-Air Italia S.r.l.

Via Leone XIII n. 14  
20145 Milano  
T +41 58 219 45 40  
F +41 58 219 45 01  
italia@barcolair.com