AKUSTIKTHERM

For thermal active building systems (TABS)

QUICK FACTS

- Easily retrofitted in properties with thermally active building sytems (TABS)
- Superior acoustic effectiveness (class A)
- Very low influence on the thermally active building system during cooling/heating
- Low installation height
- No maintenance required
- Product components can be recycled
- Integration of various components
  - Different lighting designs
  - Sprinklers
  - Smoke detectors
  - Supply / extract air elements

Acoustics
αw: up to 1,00

Energy transfer TABS
90 - 94 %

BARCOL-AIR
by Swegon

Technical description

General

AKUSTIKTHERM is an acoustically effective and thermally conductive ceiling sail system for use in buildings with component activation (Thermo Active Building Systems, TABS). The sail transfers the energy from the concrete surface into the room and at the same time offers large sound absorption surfaces.

Whether you want to improve the acoustics in an open-plan office, event room or restaurant, AKUSTIKTHERM is the ideal solution for creating a pleasant acoustic environment and increasing the productivity and satisfaction of your employees, customers or guests.

Functions

Installation using threaded rods or cables on the concrete ceiling. The drop height is individually adjustable from 60 to 500 mm (the energy transfer via heat radiation works at any height).

The surface of the concrete ceiling is not insulated.

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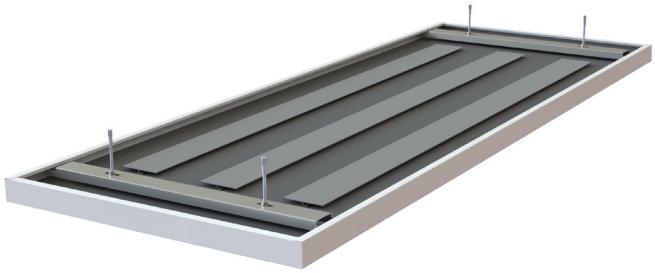

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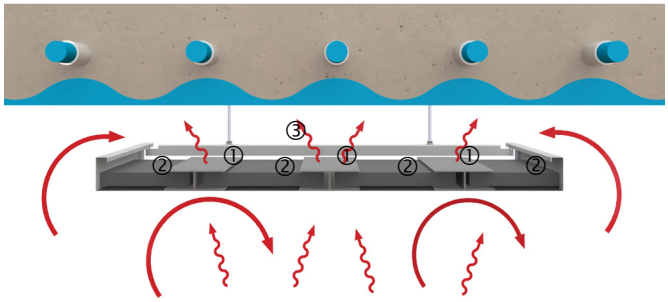
Construction

①Ceiling panel with acoustic fleece (glued on) and threaded rods
②Additional inlay mineral wool panels in PE foil
③Heat exchanger

Energy transfer

The installation of AKUSTIKTHERM sails enables energy to be transferred from the activated concrete ceiling (CCT) into the room. At the same time, the room acoustics are significantly improved.

By using AKUSTIKTHERM sails, between 90 – 94 % of the cooling capacity of the concrete ceiling is transferred into the room with ceiling coverage of 40 – 60 %.



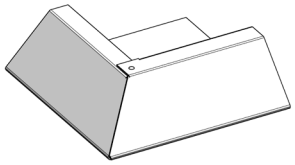
Concrete ceiling

Water pipes (CCT)

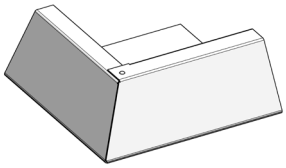
①Aluminium profiles for heat transfer
②Acoustic strips
③Ceiling sails
Radiation
Convection

Design options

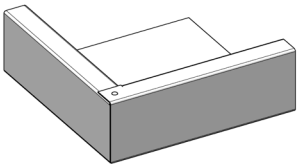
Edge moulds - Edge formations



45°-edging
Corners riveted



60°-edging
Corners riveted



90°-edging
Corners riveted

Installation with threaded rods and cables with flat cross beam

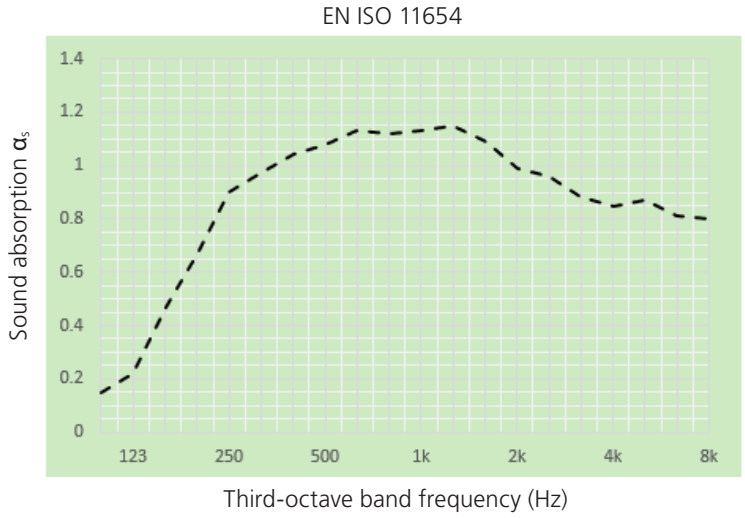
Installation with RYKO ceiling system as a sail array

Acoustics

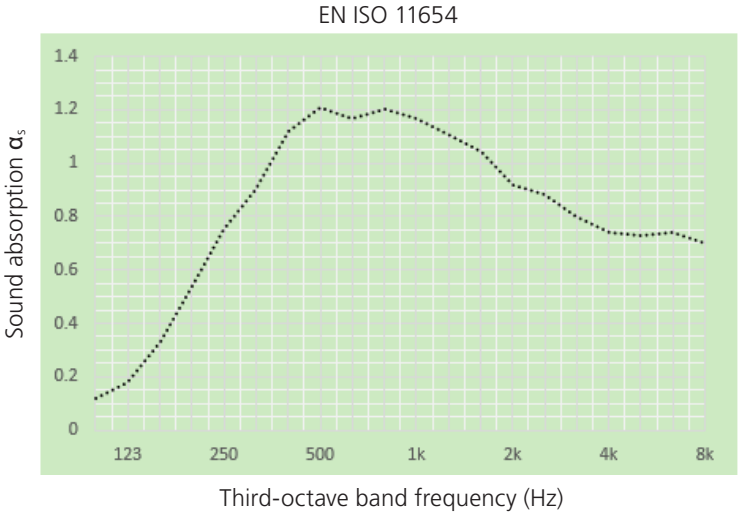
Initial data is presented below.

Suspension height	Suspension height 100 mm - - - - - - - -	Suspension height 200 mm •••••••••••
Material ceiling panel	Steel	Steel
Perforation	Rg 1,5 – 11 %	Rg 1,5 – 11 %
Sound absorption inlay	Fleece	Fleece
Additional inlay mineral wool (80 kg/m³)	30 mm	30 mm
Sound absorption α_p	250: 0,90 500: 1,08 1k: 1,13 2k: 0,99 4k: 0,85	250: 0,75 500: 1,21 1k: 1,17 2k: 0,92 4k: 0,74
Sound absorption α_w	α_w: 0,95	α_w: 1,0
Sound absorption class (EN ISO 11654)	A	A

Suspension height 100 mm



Suspension height 200 mm



System

Ceiling system

- Sail
  - Square and rectangular panels

Installation systems

- Installation high: 60 – 500 mm
  - Hook-on system
  - Threaded rods or ropes

Materials, weight and dimensions

Materials and weight

Material	Weight (incl. activation, water)
Steel 0,70 mm	approx. 18 kg/m²

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

Dimensions

Panel length	Panel width	Panel height
800 – 3000 mm	400 – 1200 mm	30 – 50 mm

Special dimensions on request.

Surface

Versions

- Powder coating
- Digital printing on request

Colors

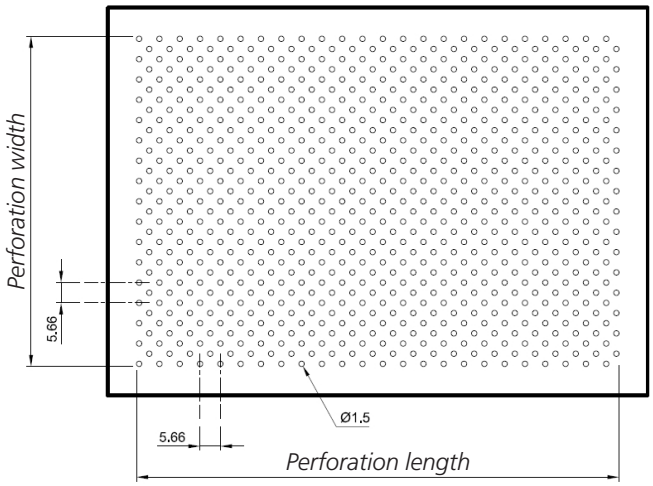
- Standard RAL 9010
- Other RAL / NCS colors on request

Perforations

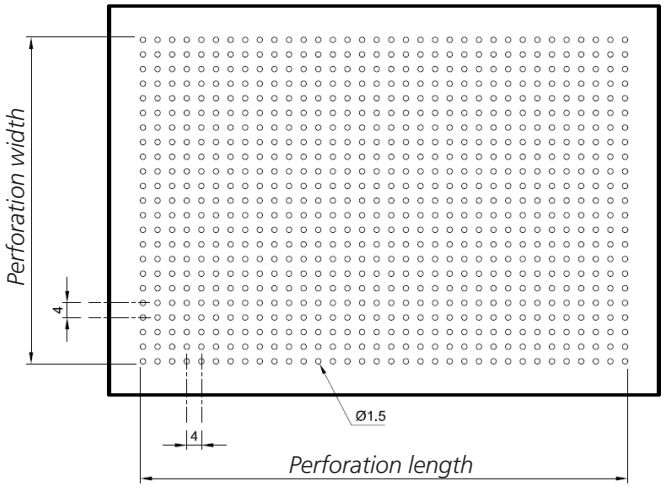
- Standard perforations
- Other perforations on request

Standard perforations:

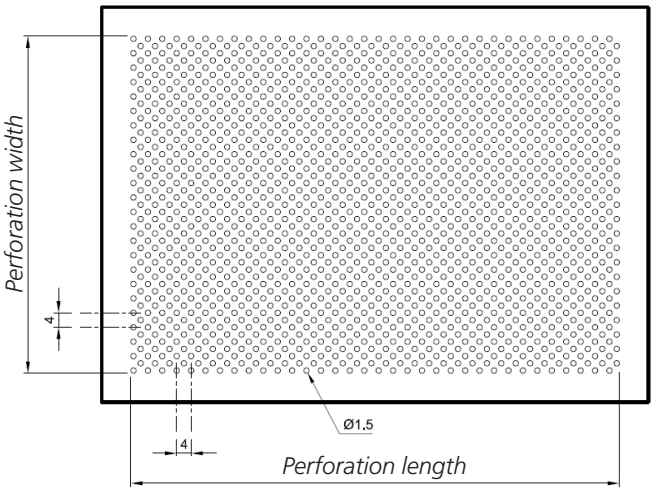
Rd 1,5 – 11 %



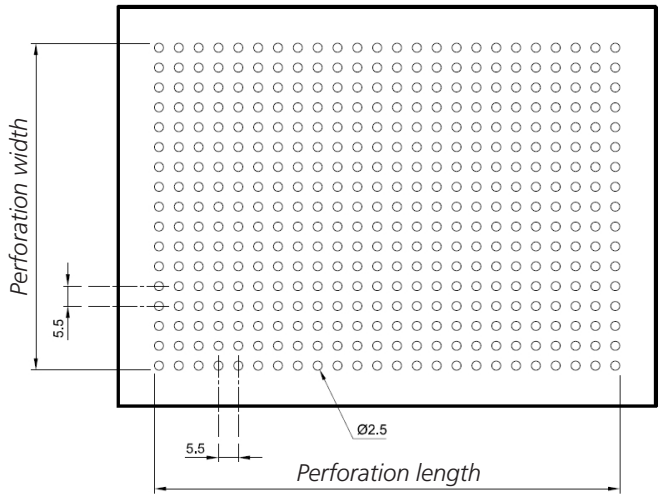
Rg 1,5 – 11 %



Rd 1,5 – 22 %



Rg 2,5 – 16 %



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