

OPTI Y

High performance module



FEATURES

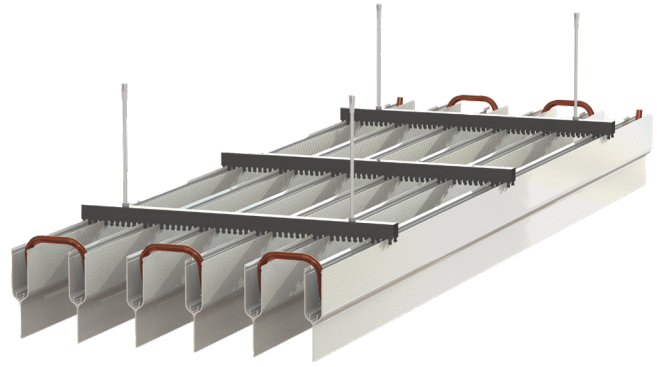
- Thermal comfort according to EN ISO 7730
- Very high heating and cooling capacity
- Simple installation, optional moveable modules
- Functions
 - Cooling
 - Heating
 - Acoustics (with silencer)
 - Fixtures

Output (water)	
Cooling	Heating
Up to 198 W/m ² (8 K), EN 14240:2004	Up to 230 W/m ² (15 K), EN 14037:2016
Acoustics	
α _w : up to 0.85	

Technical description

General

OPTI Y is a high capacity finned cooling system with an open design for cooling rooms, predominantly through free convection and radiation. Equipped with a fine corrugated surface, the finned cooling elements are suitable for rooms of all types and can be used as individually suspended ceiling modules, a flat finned ceiling or in a concealed installation above a grid ceiling. Ceiling cooling provides comfortable room temperatures and improves the wellbeing of the people in the room. It can be combined with any air ducting system. The aluminium finned ceiling can also cover the heating load.



Activation

Water system: The radiant heating/chilled ceiling 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 fins.

Functions

The OPTI Y high capacity fins 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.



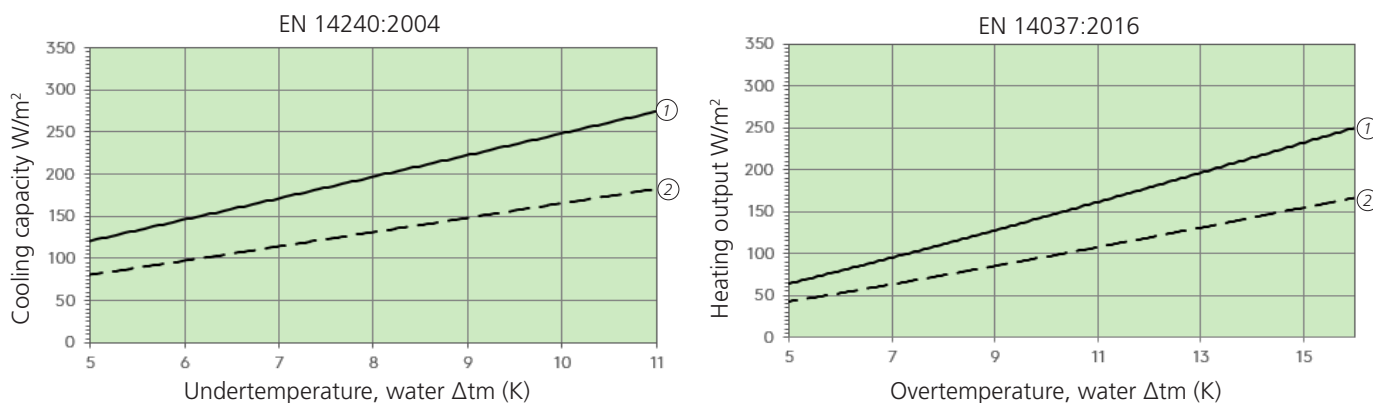
Specification

Output

Baseline data, example:

Pipe spacing	100 mm — ① 150 mm - - - ②
Supply/extract air <small>(Combination options with ventilation system on request. With supply air, the rating increases by +5 % in office spaces and by up to +30 % in industrial environments.)</small>	Without

(Output details without property-specific factors that affect output.)



Version	Cooling 8 K	Cooling 10 K	Heating 15 K
① Aluminium fins 100 mm	Up to 197.5 W/m ²	Up to 248 W/m ²	Up to 230.7 W/m ²
② Aluminium fins 150 mm	Up to 131.7 W/m ²	Up to 165.3 W/m ²	Up to 153.8 W/m ²

Note

- 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 use

Water

- Temperature
 - Cooling: 16 – 18 °C
 - Heating: 28 – 37 °C
- Temperature distance Δt (flow - return)
 - Cooling: 2 – 3 K
 - Heating: 3 – 5 K
- Pressure drop: 20 – 25 kPa
- Water flow rate: 90 – 200 l/h
- Max. operating pressure: 9 bar
- Water quality according to: SWKI BT 102-01, BTGA 3.003, VDI 2035

Environment

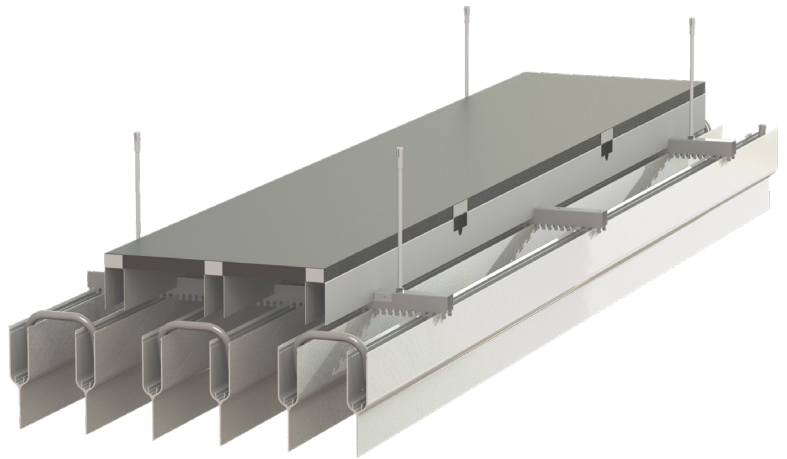
- Ambient temperatures: +5 – 50 °C
- Humidity: up to 90 %

Acoustics

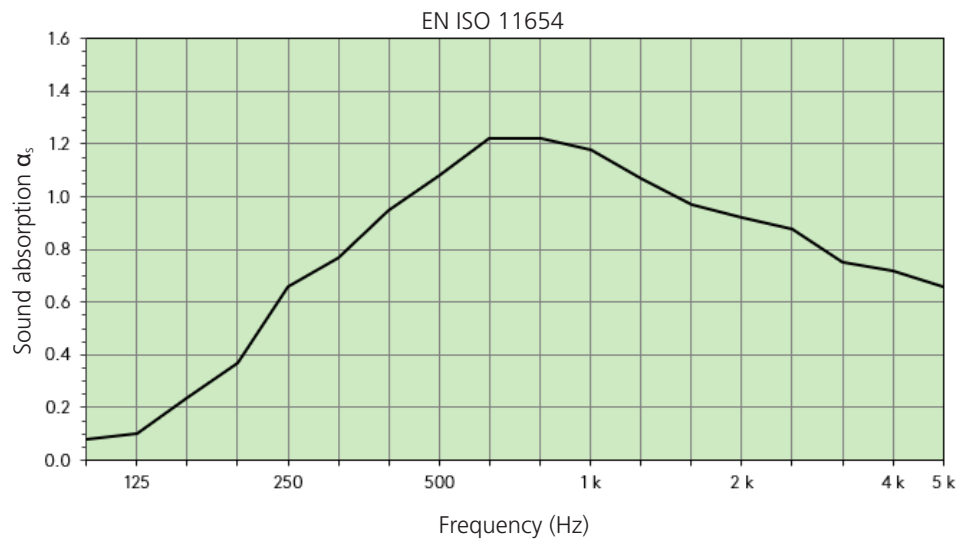
Baseline data, example:

In combination with silencer:

- Sound-absorbing element with acoustic mat (mineral wool)



- α_w : up to 0.85
- Sound absorption class B



Fire safety

- Building material class A2-s1, d0, EN 13501-1 (without silencer)

System

Ceiling system

- High capacity fins as a module
 - Ceiling element, Y-shaped profile made of aluminium with textured surface.

Mounting systems

- Installation height: min. 250 mm
 - Threaded rods / cords
 - Z-hook profile and suspension hooks

Material, weight and dimensions

Material and weight

Material	Weight (incl. activation, water)
Aluminium fins	approx. 19 kg/m ² (at 100 mm pipe spacing)
	approx. 14 kg/m ² (at 150 mm pipe spacing)

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

Surface

Finishes

- Powder coated
- Anodised

Colours

- Standard: RAL 9010
- For other RAL/NCS colours, please enquire
- Common anodised colours

Dimensions

Profile rail length	Pipe rows	Pipe spacing
min. 600 mm	3 – 10	100 mm
max. 2500 mm	3 – 8	150 mm

Custom dimensions on request.

Swegon Klimadecken GmbH
Scharzwaldstrasse 2
64646 Heppenheim

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