

OPTI Y

High performance module



QUICK FACTS

- Thermal comfort according to EN ISO 7730
- Very high heating & cooling capacity
- With optional acoustic inlay:
Advanced sound absorption values (class B)
- Powerful and energy efficient
- Can be combined with any ventilation system
- Easy installation: option to pivot modules down
- Visible or concealed installation possible depending on visual requirements
- Anodised profiles available
- Integration of various components
 - Different lighting designs
 - Sprinklers
 - Smoke detectors
 - Supply / extract air elements

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	
αw: up to 0,90 (L)	

Technical description

General

OPTI Y is a high capacity 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.

The high cooling capacity per unit area (mainly convective) and the large open ceiling cross-section are particular features. Sprinklers, smoke detectors, air diffusers, lighting fixtures, etc. can be installed between the fins.

It can be combined with any air ducting system. The OPTI Y high performance module can also cover the heating load.

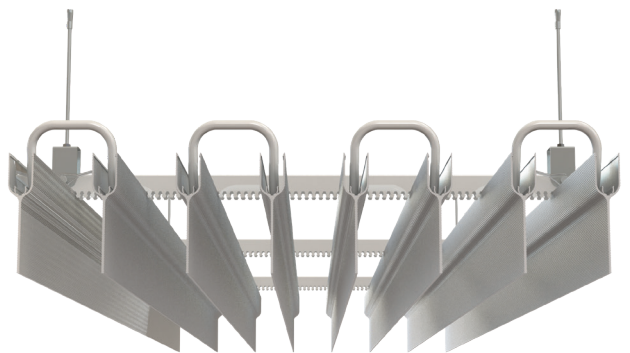
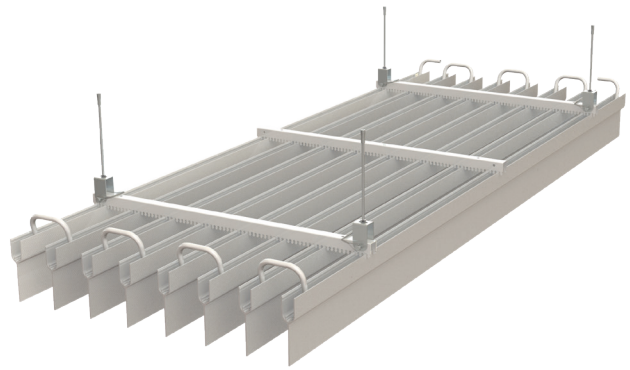
Activation

Water system: The OPTI Y high performance module 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 modules are activated by means of copper tube coils (outside diameter 12 mm) that are press-fitted into the fins.

Functions

The OPTI Y high performance module 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.



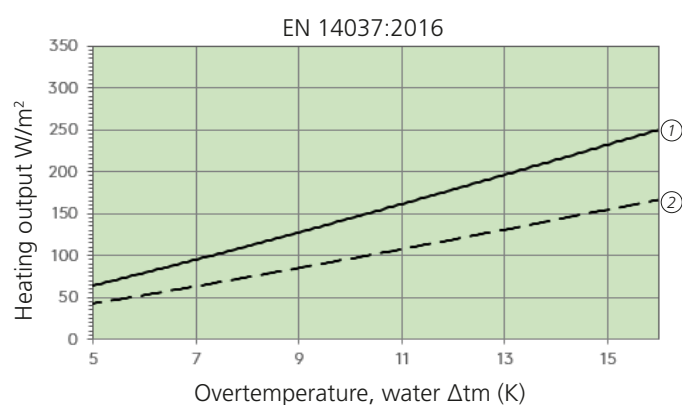
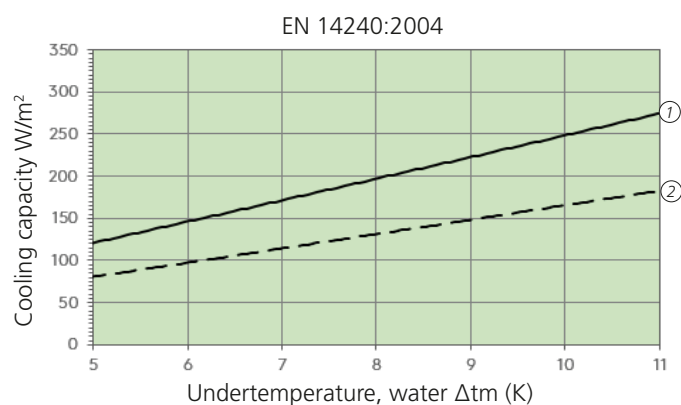
Technical data

Capacity

Initial data is presented below.

Pipe spacing	100 mm — ① 150 mm - - - ②
Supply/extract air (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.)	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/m²	Up to 248 W/m²	Up to 230.7 W/m²
② Aluminium fins 150 mm	Up to 131.7 W/m²	Up to 165.3 W/m²	Up to 153.8 W/m²

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 operation

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

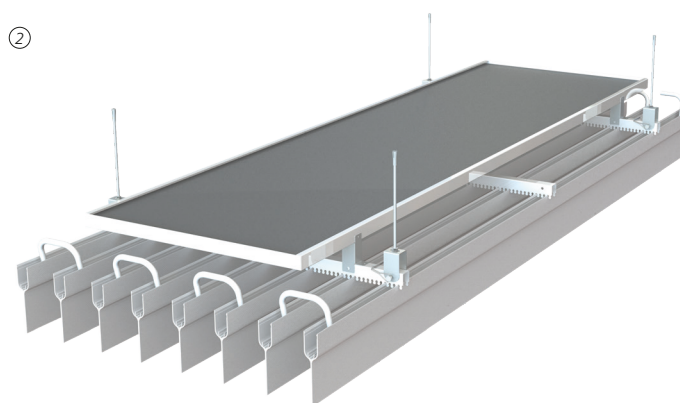
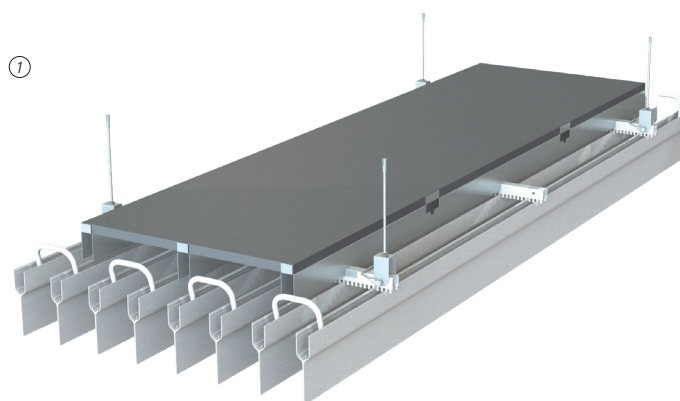
- Ambient temperatures: +5 – 50 °C
- Humidity: up to 90 %

Acoustics

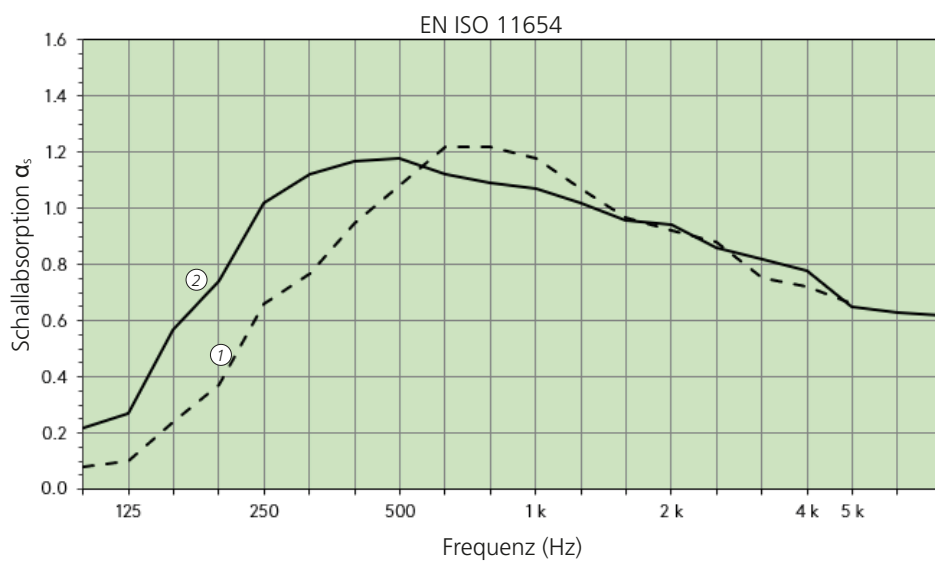
Baseline data, example:

In combination with sound absorber:

- ① Sound absorber structure with acoustic inlay (mineral wool)
- ② Sound absorber structure with ceiling panel and acoustic inlay



- α_w : up to 0,90 (L)
- Sound absorption class A



Fire safety

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

System

Ceiling system

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

Installation 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
- Other RAL / NCS colors on request
- Common anodised colours

Dimensions

Length	Width	Height without acoustic inlay	Pipe rows	Pipe spacing	Profile rail width
1000 – 2500 mm	230 – 1080 mm	216 mm*	3 – 10	100 / 150 mm	30 mm

Special dimensions on request.

*Height with acoustic inlay is project-specific.

Swegon Klimadecken GmbH

Schwarzwaldstrasse 2

64646 Heppenheim

T: +49 6252 7907-0

F: +49 6252 7907-31

vertrieb.klimadecken@swegon.de

swegon.com/de/klimadeckensysteme