



Chapter 2

Climate ceilings

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Metal climate ceiling system

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Closed climate ceilings

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Synthetic activation

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Synthetic activation

Climate-ceiling islands

 **KESA** 5
Modular climate-ceiling island

 **HESA** 5
Hybrid climate-ceiling island

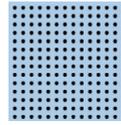
 **MESA** 5
Metal climate ceiling
Copper activation

Metal climate-ceiling systems

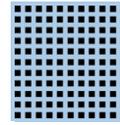
When you choose a metal climate ceiling, you choose an energy-efficient system for cooling and heating, which looks good and produces an extremely comfortable indoor climate - comfort class A based on EN 7730. Solid Air produces many different types and versions of metal climate ceilings. The following overview is intended to help you select the system that is best suited to your project. It goes without saying that we would be delighted to provide you personally with more details about all the options.

The standard finish for metal climate ceilings is a powder coating in RAL 9010 (white), but they can be supplied in almost any colour of your choice. Images and prints are possible too. The panels can be completely flat (blind) or perforated, and there is a wide choice of perforation types.

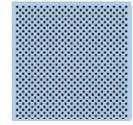
To get an idea, the following is a small selection of the available types of perforation. If required, we would be pleased to provide samples so you have a real impression of the look of the ceiling.



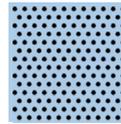
Rg 2,5-16 % vd



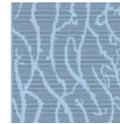
Qg 4,0-33 %



Rd 1,5-22 % vd



Rv 3,0-20 % vd



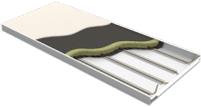
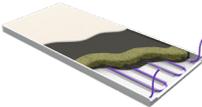
Special
(client requirement)

	T-bar system	Bandrasters	Blind fitting
Description	The most familiar and commonly used ceiling system, where metal climate-ceiling elements are laid in a grid.	Metal climate-ceiling elements are hung flat between blind strips (bandrasters).	The elements are hooked to a grid above and form a flat, beautiful climate ceiling.
Advantages	Economical, particularly when an existing suspended ceiling can be used in full or in part.	Bandrasters provide room for light fittings and are 'separate' from the climate ceiling.	Ceiling system with calm, repeating look and with panels that are relatively easy to remove.
Dimensions	Available in dimensions 600 x 600 mm, 600 x 1,200 mm and 600 x 1,800 mm.	The distance between the bandrasters is generally between 1,600 and 2,500 mm; an element width between 500 and 700 mm is the optimum size.	The dimensions of the blind fitting system are comparable to the bandraster system, so the elements are a maximum of 700 x 2,500 mm.
Activation	Copper or synthetic pipes with a distance in-between of 80 to 150 mm centre to centre	Copper or synthetic pipes with a distance in-between of 80 to 150 mm centre to centre	Copper or synthetic pipes with a distance in-between of 80 to 150 mm centre to centre

Closed climate ceilings

The combination of optimum comfort (comfort class A based on EN 7730) and energy-efficient operation makes climate ceilings extremely attractive systems for heating and cooling. An aesthetically beautiful look and the option to integrate various other systems, such as lighting, ventilation and sensors, complete the picture. Depending on the required capacity and the extra options, it is possible to opt for one of the metal ceiling systems or for a plasterboard ceiling. The overview below lists the most important characteristics of the available Solid Air models. As climate ceilings are always customised, we would be pleased to provide you personally with more details about the options and any possible limitations.

Perforated climate ceilings provide good sound absorption, reducing reverberation in a room and creating pleasant acoustic comfort.

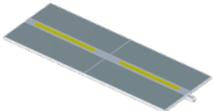
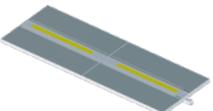
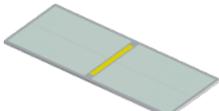
	OKLD	OKLH	GKP
			
Description	Metal climate ceiling with copper-pipe activation, perforated or blind.	Metal climate ceiling with synthetic-pipe activation, perforated or blind.	Plasterboard ceiling with synthetic pipe activation, blind (closed).
Characteristics	Cooling and heating, panels can be removable (also depends on the system, see page 31).	Cooling and heating, panels can be removable (also depends on the system, see page 31).	Cooling and heating, space above the ceiling is only accessible with hatches.
Colour & finish	Powder coating in RAL 9010 (white), other colours and prints are optional.	Powder coating in RAL 9010 (white), other colours and prints are optional.	Ready for painting, ceiling can be finished in the colour of your choice.
Systems	T-bar (lowered), C and D bandrasters, blind fitting.	T-bar (lowered), C and D bandrasters, blind fitting.	Fixed attachment to an underlying wood frame or metal stud.
Cooling capacity in accordance with NEN EN 14240:2004 (at $\Delta T = 9K$)	79 W/m ²	61 W/m ²	57 W/m ²
Heating capacity at $T_{\text{water}} = 45-40\text{ °C}$ and $T_{\text{room}} = 20\text{ °C}$	114 W/m ²	102 W/m ²	76 W/m ²

Climate-ceiling islands

When you need optimum comfort for a room, climate-ceiling islands are a good choice with a comfort class A based on EN 7730. With high-temperature cooling and low-temperature heating, the Solid Air climate-ceiling islands are energy-efficient and extremely suitable for use in combination with heat-pump and TES systems. Besides sustainable heating and cooling, a climate-ceiling island also provides good sound absorption which prevents irritating reverberation in the room and produces comfortable acoustics. Climate-ceiling islands can also provide room for ventilation (supply), lighting, speakers, sensors, et cetera. In short, they combine many functions in one practical module. Due to the compact structure, they require little clearance, and that makes climate-ceiling island particularly suitable for renovation projects and/or flexible room layouts. As it is relatively quick and simple to fit our KESA or HESA, it is possible to achieve short lead times on the building site.

Depending on the room in which climate-ceiling islands are used, you can choose from various models. The overview below lists the most important characteristics of the available Solid Air models as well as their differences.

All climate-ceiling islands consist of metal, perforated panels, with sound absorption provided by mineral wool, sealed airtight in black, flame-retardant PE film. The standard coating for the islands is a powder coating in RAL 9010 (off-white); other colours and/or prints are optional.

	KESA	HESA	MESA
			
Description	Modular climate-ceiling island	Modular hybrid climate-ceiling island	Customised climate-ceiling island
Characteristics	Cooling and heating, ventilation with double-sided inflow duct, lighting and other options in a central technical strip.	High-capacity cooling and heating, induction ventilation, lighting and other options in a central technical strip.	Cooling and heating, grid system, to be composed on the basis of the client's specification.
Dimensions	Width 1.3 m, length = 2 to 4 m in increments of 500 mm.	Width 1.3 m, length = 2 to 4 m in increments of 500 mm.	Dimensions based on the client's requirements, they are assembled on site.
Minimum island height	145 mm	160 mm	150 mm
Cooling capacity in accordance with NEN EN 14240:2004 (at $\Delta T = 9K$)	181 to 363 W per island	240 - 480 W per island	79 W/m ²
Heating capacity at $T_{\text{water}} = 45-40\text{ }^{\circ}\text{C}$ and $T_{\text{room}} = 20\text{ }^{\circ}\text{C}$	403 - 805 W per island	510 - 1,020 W per island	114 W/m ²