



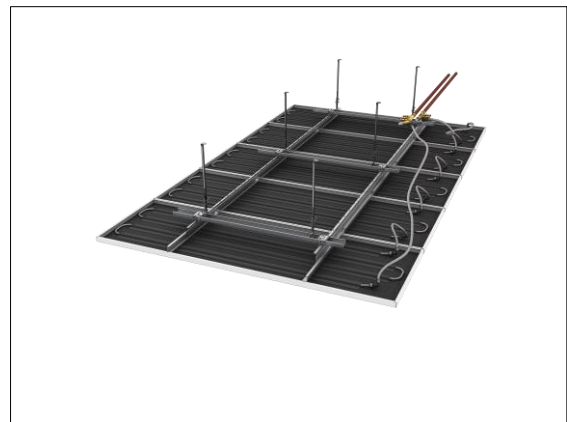
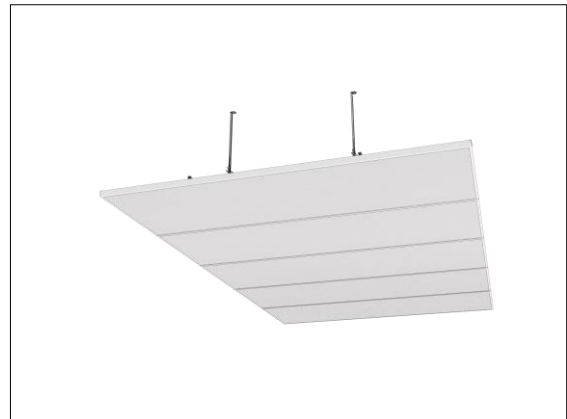
## Plafotherm® DS 312

### Heated and Chilled Canopy Ceiling without frame

#### Product description

The frameless metal canopy ceiling can freely be arranged in your rooms and offers individual design options. Thanks to the open construction, it can easily be installed and impresses with high heating/cooling capacities and sound absorption. This canopy ceiling combines pleasant room climate with impressive acoustics. The ceiling panels can be removed without the need for any tools. With this economic canopy, you can flexibly combine thermally active and passive areas. The exposed concrete between the canopy ceilings can be used for installations.

- heating/cooling by means of radiation and convection creates a pleasant room climate
- flexibility thanks to the combination of thermally active and passive areas
- high heating/cooling capacity and sound absorption due to the open construction
- design freedom thanks to an individual arrangement of canopies and an exposed concrete
- slim, filigree look without circumferential frame
- easy maintenance option due to ceiling panels that can be individually operated without tools
- independent installation of luminaires and fixtures possible between canopy ceilings
- easy and quick installation
- cost-effective canopy ceiling as economic solution
- hygienic and easy to clean




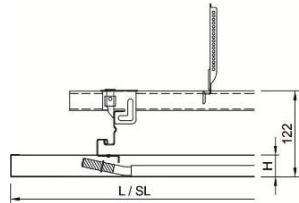
#### Project solutions


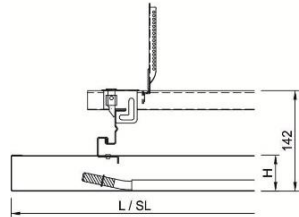
This product data sheet refers to the standard version of the product mentioned above.

We would be happy to work with you to find the right solution for your project. Adapted to your building project, you will receive a perfectly matched system. Project-specific constructions and adaptations can be found in the offer documents.



## Table of types

<b>Plafotherm® DS 312 type 1</b>			
<b>Hook-On</b>			
Length (L)	1,000 - 2,000 mm		
Width (B)	200 - 1,250 mm		
Height (H)	30 mm		
Canopy length (SL)	depending on requirements		
Canopy width (SB)	1,000 - 2,000 mm		

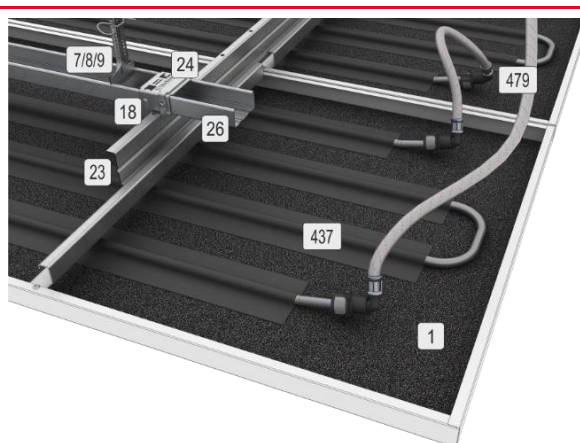
<b>Plafotherm® DS 312 type 2</b>			
<b>Hook-On</b>			
Length (L)	1,000 - 3,000 mm		
Width (B)	200 - 1,250 mm		
Height (H)	50 mm		
Canopy length (SL)	depending on requirements		
Canopy width (SB)	1,000 - 3,000 mm		

## Technical properties

Material ceiling panel	galvanised sheet steel
System weight	approx. 12 - 15 kg/m <sup>2</sup> (without fixtures/installations)
Serviceability	removable without tools

## Component list

1	metal ceiling panel
7/8/9	vernier suspension
18	self-tapping screw trapezoidal head
23	Z-hook-on profile 48
24	cross connector for suspension channel 60 to Z-hook-on profile 48
26	suspension channel 60
437	heating and cooling coil
479	PlafaTube® connecting/connection hose





## Acoustics

### Room acoustics

Equivalent sound absorption area per canopy	EN ISO 354		
Rated sound absorption coefficient	DIN EN ISO 354	$\alpha_w$	up to 1.00
Sound absorption class	DIN EN ISO 11654		up to A
Noise Reduction Coefficient	ASTM C 423	NRC	up to 0.95
Notice	The evaluation of $\alpha_w$ and NRC can only be carried out in dependence and therefore is only an orientation value.		

## Fire protection

### Building material class

Building material class	DIN EN 13501-1	A2 - s1, d0
Building material class	ASTM E 84	Class A

## Durability

Exposure class	DIN EN 13964	A
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## HVAC

### Heating and cooling

Heating and cooling technology	Plafotherm® V2A	Plafotherm® Cu	Plafotherm® Cu Acoustic	Plafotherm® Activation Board
Nominal cooling capacity (10 K) according to EN 14240 in relation to the active area	135 W/m²	139 W/m²	127 W/m²	162 W/m²
Nominal heating capacity (15 K) according to EN 14037:2003 in relation to the active area	163 W/m²	167 W/m²	155 W/m²	199 W/m²

## Sustainability

Product self-declaration	A self-declaration according to ISO 14021 is available. The self-declaration provides extensive information about all environmental effects of the product. It can be used in the planning or tender phase to assess all sustainability-relevant aspects. It serves as a data basis for building certification systems such as LEED, DGNB and BREEAM
EPD (environmental product declaration)	The product has a specific EPD according to the valid standards. (EN 15804/ ISO 14025)
Circular Economy	The product is Cradle to Cradle Certified® Silver. By implementing the Circular Economy ideology we avoid waste, toxic substances and environmental pollution. The aim is to achieve a technical cycle, which ensures the separation and the complete re-use of all materials.



## Surfaces

Powder coatings	<u>COLOURline – Powder coating</u> <u>MOODline – Powder coating, deep matt</u> <u>ARTline – Decorative powder coating</u> <u>GRAPHICline – Digital print</u>
Perforations	<u>BASICline – Standard perforations</u> <u>REGULARline – Further perforations</u> <u>SPREADline – Customised perforations</u>

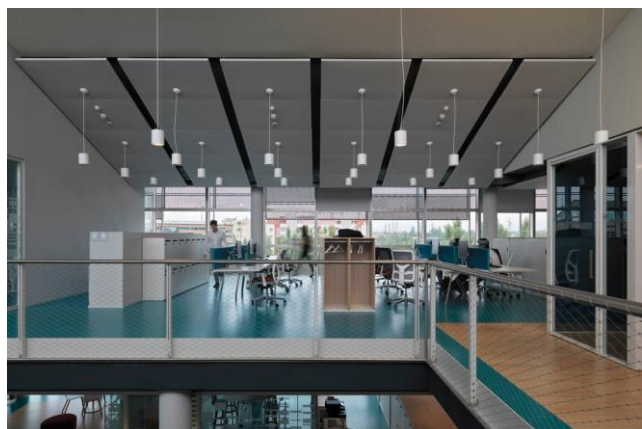
## Certification

CE marking	The ceiling system is a harmonised construction product acc. to regulation (EU) No. 305/2011 (Construction Products Regulation) and EN 13964: Suspended ceilings – Requirements and test methods.
TAIM e. V.	The ceiling system fulfils the requirements of the "Technical Manual Metal Ceilings" (TMMC) of TAIM e. V. (Association of Industrial Metal Ceiling Manufacturers).

## Additional equipment

Acoustic inlays	<u>Acustica – Acoustic fabric inlay</u> <u>Insula – Mineral wool inlay in acoustic foil</u>
Hydraulic components	<u>PlafoTube® MQC – Connecting/Connection hose with MultiQuickConnect</u> <u>Fittings – Distribution system</u>
Luminaires	Lindner luminaires and luminaires from other manufacturers possible <u>IS 17 – Integrated Luminaire for general areas</u> <u>IS 22 – Integrated Luminaire for monitor work stations</u> <u>QZI – Integrated luminaire with cell louvres</u>

## Applications



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