CHILLED PLASTER CEILING

Extremely versatile

integra®

CLIMATE CEILING SYSTEMS

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EXTREMELY VERSATILE

The Chilled plaster ceiling is visually indistinguishable from a normal plasterboard ceiling. Fixtures, as well as customised ceiling design using 3D elements or custom moulded parts are also well practicable. The activation module can be easily integrated into a standard substructure. Depending on the requirements, a perforated or non-perforated plaster ceiling can be used. The low installation height is ideal for rooms with limited space. The system can also be used as ceiling sail.

- Cooling and heating effect with high degree of radiation
- Low installation height: min. 120 mm
- Simple installation without fixed connections


Object: Studio di architettura CAIROLI & SCHITTONE

CEILING SYSTEM
closed
or as ceiling sail

OPERATING PRINCIPLE
Radiation

AIR SUPPLY
visible

CAPACITY
Cooling: up to 78 w/m² (8 K), EN 14240
Heating: up to 118 w/m² (15 K), EN 14037-3:2003

ACOUSTICS
α_w: up to 0,65
Sound absorption class C, EN ISO 11654

ROOM COMFORT
Thermal comfort according to EN ISO 7730, SIA 382/1

ACTIVATION

- Copper tube meander on a perforated aluminum sheet
- Copper tube: Ø outer 12 mm

FUNCTIONS

Cooling | Acoustics | Supply and exhaust air
Heating | Integral components | Compensation cold air drop

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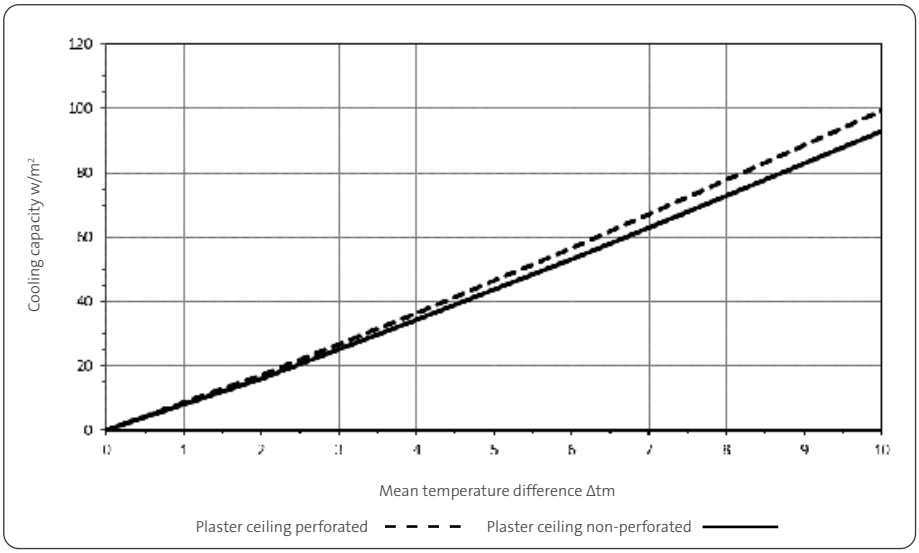
CAPACITY

Initial data

Chilled plaster ceiling closed	Plaster ceiling perforated	Plaster ceiling non-perforated
Activation module typ	260	345
Perforation plaster ceiling panel	R 8/18 - - - -	without ———
Installation height	300 mm	300 mm
Insulation	without	without
Occupancy rate	60 %	60 %

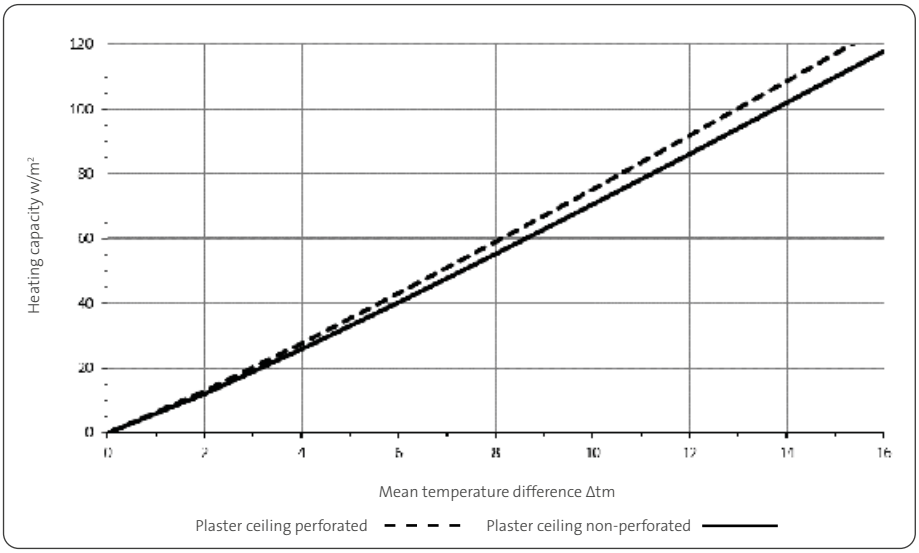
Cooling

- Plaster ceiling perforated: up to 78 w/m² (8 K)
- Plaster ceiling non-perforated: up to 73 w/m² (8 K)



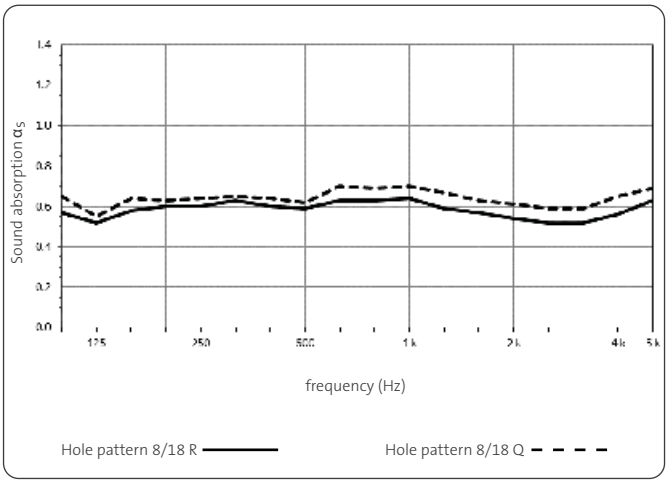
Heating

- Plaster ceiling perforated: up to 118 w/m² (15 K)
- Plaster ceiling non-perforated: up to 111 w/m² (15 K)



ACOUSTICS

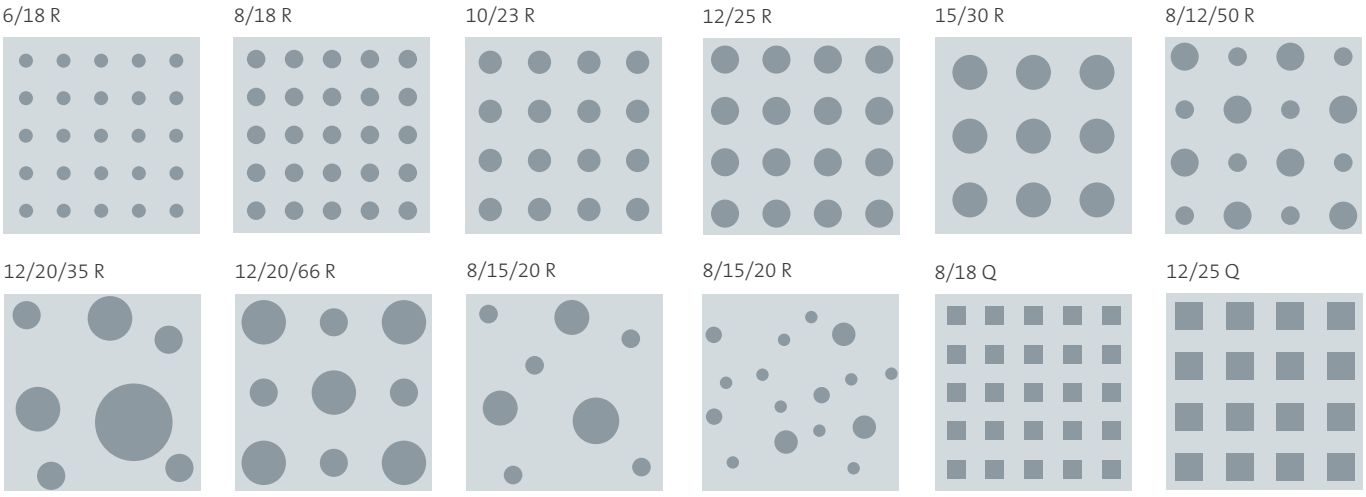
Ceiling appearance	closed	closed
Ceiling panel	VOGL Thermo-tec panel	VOGL Themo-tec panel
Hole pattern	8/18 R ———	8/18 Q – – – –
Sound absorption inlay	fleece	fleece
Occupancy rate	60 %	60 %
Sound absorption α_p	250: 0,70 500: 0,60 1k: 0,60 2k: 0,55 4k: 0,55	250: 0,75 500: 0,65 1k: 0,65 2k: 0,60 4k: 0,60
Sound absorption α_w	α_w: 0,60 (L)	α_w: 0,65 (L)
Sound absorption class	C (EN ISO 11654)	C (EN ISO 11654)



SYSTEM / OPERATION

Construction

- Installation system (Substructure)
  - Nonius suspension from raw ceiling
  - Basic profile e.g. CD 60 x 27 mm
  - Mounting bracket
  - Supporting profile CD 60 x 27/62 x 27/50 x 25 mm
- Ceiling system (Plaster ceiling perforated / non-perforated)
  - VOGL Thermotec panel
  - VOGL Thermotec panel PLUS
  - Rigips Climafit
  - Knauf Thermo panel K713
- Hole pattern plaster ceiling (examples)



Water

Recommended:

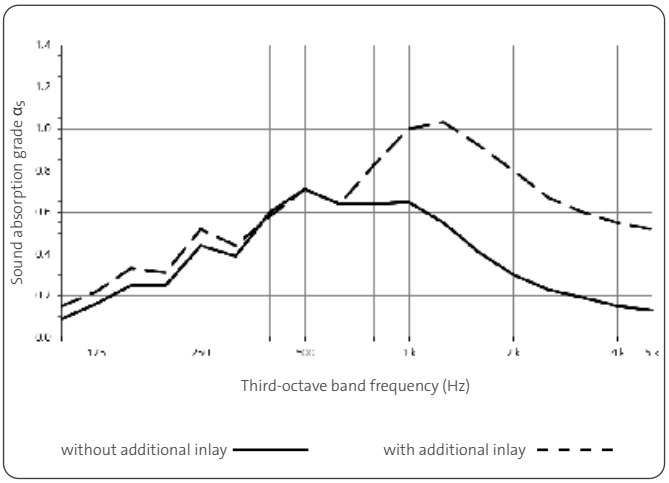
- Temperature: cooling 16 – 18 °C, heating 28 – 37 °C
- Temperatur difference $\Delta t_{|in\text{-}out|}$: 2 – 3 K
- Pressure drop: 20 – 25 kPa
- Water flow: 80 – 150 l/h
- Max. operating pressure: up to 9 bar
- Water quality: SWKI BT 102-01 / BTGA 3.003 / VDI 2035

Surrounding

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

ACOUSTICS

Perforation	Rg 15 – 11 %	Rg 15 – 11 %
Occupancy rate	35 %	35 %
Sound absorption inlay	fleece	fleece
Additional inlay (mineral wool)	without ——	with - - -
Sound absorption α_p	250: 0,35 500: 0,65 1k: 0,60 2k: 0,30 4k: 0,15	250: 0,40 500: 0,65 1k: 0,95 2k: 0,80 4k: 0,55
Sound absorption α_w	α_w: 0,30 (LM)	α_w: 0,65 (M)
Sound absorption class	D (EN ISO 11654)	C (EN ISO 11654)



TECHNICAL SPECIFICATIONS

Dimensions

Baffle length	Baffle height	Baffle width
min. 510 mm	min. 200 mm	min. 30 mm
max. 3200 mm	max. 500 mm	max. 80 mm

Materials and weight

Material	Baffle height 300 mm	Baffle height 500 mm
Aluminium 1,00 mm	2,5 kg/lm	3,1 kg/lm
Steel 0,70 mm	5,6 kg/lm	7,3 kg/lm

Versions

Perforations	Surface	Colour shade
Standard Rg. 1,5 – 11 %, Rg. 1,5 – 22 %	Powder coating	Standard RAL 9010 and 9016
Various perforation options possible	Digital printing on request	Other RAL / NCS colours on request

FIRE PROTECTION

- Building material class A2-s1, d0, EN 13501-1

CERTIFICATION

- ISO 9001

SYSTEM / OPERATION

Construction

- Ceiling system
  - Baffles: aluminum or steel, perforated, single or two-part
  - Substructure: edged steel profile with suspension
  - Installation height: construction min. 260 mm + mounting height 50 mm
- Installation system
  - Hook-in profile with fixed points
  - Baffles movable

Water

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