



## ACOUSTIC THERM FLEX

Ideally combined

Tailor-made solutions for indoor climate



## IDEALLY COMBINED

The Acoustic Therm Flex active 201 is a thermally conductive ceiling system for use in buildings with concrete core activation. The special design enables it to improve room music in areas with reverberative concrete ceilings, without significantly impairing the thermal performance of the tcs/cct (thermoactive component systems/concrete core temperature control). A special heat conducting mass guarantees optimal heat transfer between Acoustic Therm and concrete. The copper tubes integrated in the heating conducting profiles for water supply additional cooling.

- For buildings with concrete core activation
- High acoustic efficiency
- Installation height low and individually adjustable



### CEILING SYSTEM

Sail

### OPERATING PRINCIPLE

Radiation

### AIR SUPPLY

not relevant

### CAPACITY

Type Flex active 201: Cooling capacity up to 29 W/m<sup>2</sup> (8 K), EN 14240

### ACOUSTICS

$\alpha_w$ : up to 1,00  
Sound absorption class A, EN ISO 11654

### ROOM COMFORT

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

## PROPERTIES

- The attachment of the flexible profiles to the concrete ceiling with the heat conducting mass guarantees the thermal conductivity (capacity reduction tcs/cct: 2 – 11%)
- Surfaces of the concrete ceiling are not insulated
- Contact to the steel ceiling via aluminum magnetic profile

## ACTIVATION

- Type Flex active 201: Integrated water system, consisting of an aluminum heat conducting rail with pressed-in copper tube meander, generates an additional cooling capacity near the capacity of tcs/cct.

## FUNCTIONS



Acoustics



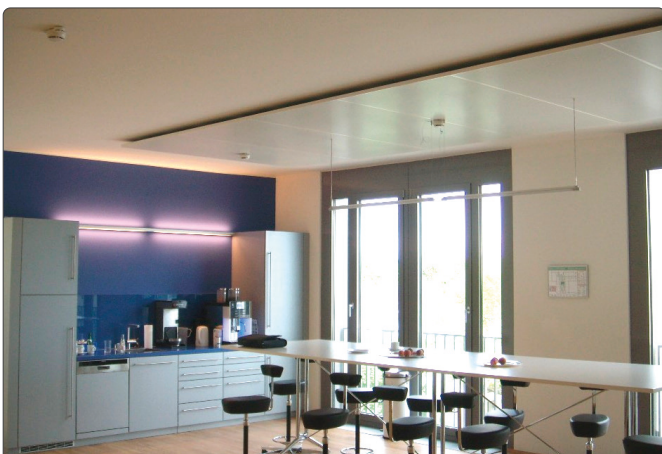
Integral components



Cooling

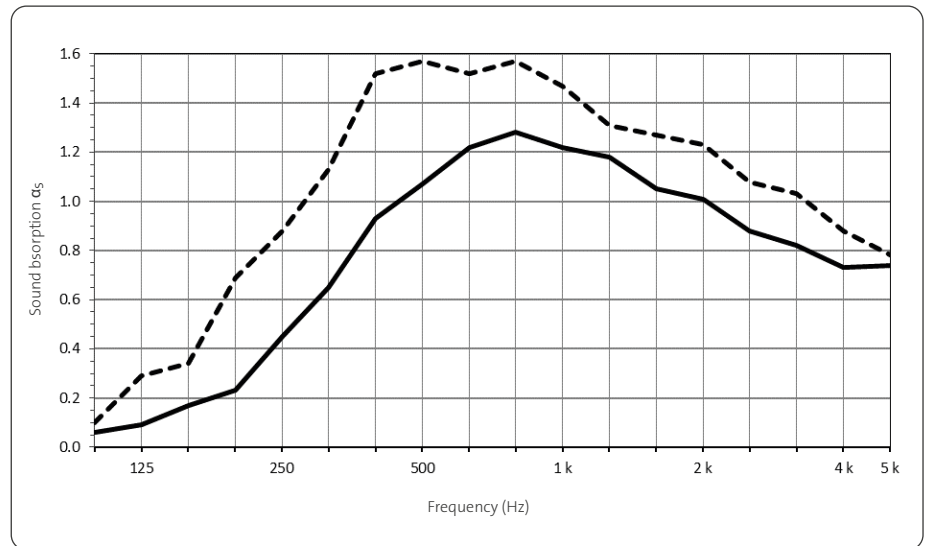
Additionally at type Flex aktiv 201:

## REFERENCES



## ACOUSTICS

Initial data	Flex passive ———	Flex passiv e - - - -
Perforation	Rg 2,5 – 16 %	Rg 1,5 – 22 %
Suspension height	60 mm	70 mm
Sound absorption inlay (mineral wool)	20 mm	40 mm
Sound absorption $\alpha_p$	250: 0,45 500: 1,00 1k: 1,00 2k: 1,00 4k: 0,75	250: 0,90 500: 1,00 1k: 1,00 2k: 1,00 4k: 0,90
Sound absorption $\alpha_w$	$\alpha_w$ : 0,75 (MH)	$\alpha_w$ : 1,00
Sound absorption class (EN ISO 11654)	C	A



## GENERAL DATA

## Construction

- Ceiling systems
  - Square and rectangular panels
- Installation system
  - Hook-on/Magnet system

## Versions

- Surface
  - Powder coating
  - Digital printing on request
- Colours
  - Standard RAL 9010 and 9016
  - other RAL or NCS colours on request
- Perforations
  - z. B. 1,5 – 22 %, 2,5 – 16 %
  - other perforations on request

## Material

- Ceiling panel
  - Steel, 0,7 mm, with black fleece inside
- Sound absorption inlay
  - Mineral wool in black PE-foil (optional)
- Substructure
  - Activation, adapter, magnet profiles: aluminium
  - Safety profiles and front profiles: steel
- Conducting mass
  - Heat conducting mass to ensure a full-area heat transfer from the substructure to the concrete area
- At type Flex active 201: cooling meander
  - copper tube (DN 12)

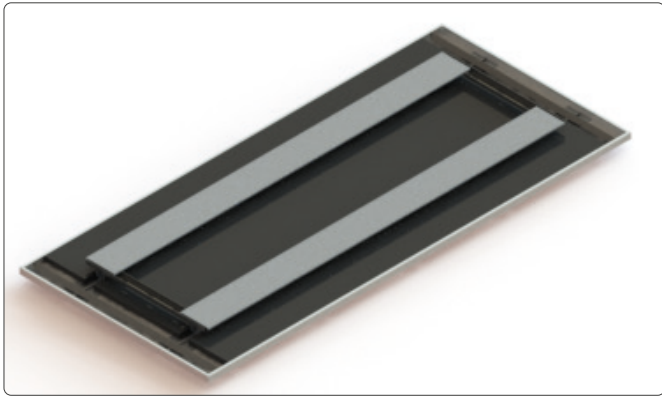
## CERTIFICATION

- ISO 9001

## FIRE PROTECTION

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

TYPE FLEX PASSIVE 101



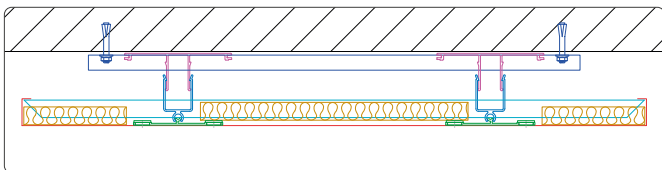
Dimensions

- Installation height: 60 – 120 mm
- Standard dimensions:
  - Length: max. 2500 mm
  - Width: max. 1100 mm
  - height: 50 mm (min. 30 mm)
- Special dimensions on request

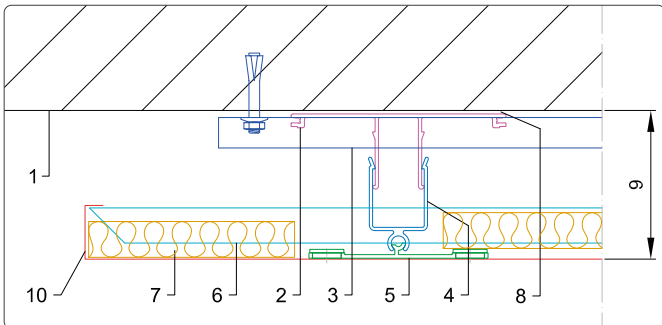
Weight

- ca. 9 kg/m<sup>2</sup>

Construction

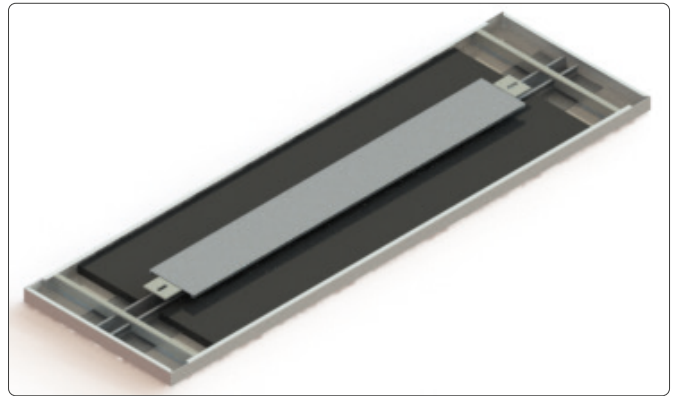


Detail:



- 1 Concrete ceiling
- 2 Activation profile
- 3 Front profile
- 4 Adapter profile
- 5 Magnet profile
- 6 Safety profile
- 7 Sound absorber rock wool mat 20 mm
- 8 Heat conducting mass
- 10 Installation height 60 – 120 mm
- 11 Ceiling panel edge standard 90°, min. 30 mm

TYPE FLEX PASSIVE 102



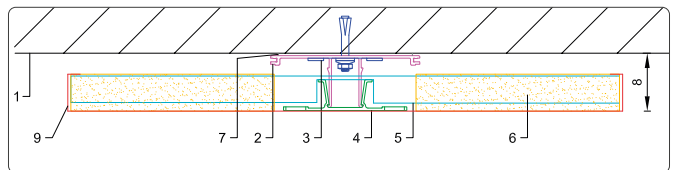
Dimensions

- Installation height: 47 – 85 mm
- Standard dimensions:
  - Length: max. 2500 mm
  - Width: max. 450 mm
  - Height: 50 mm (min. 30 mm)
- Special dimensions on request

Weight

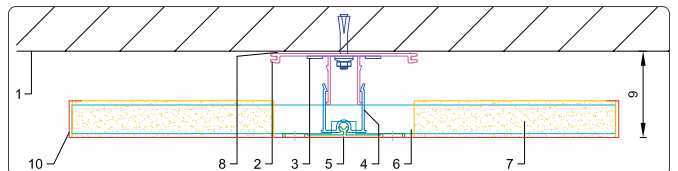
- ca. 9 kg/m<sup>2</sup>

Construction version 1



- 1 Concrete ceiling
- 2 Activation profile
- 3 Retaining claw
- 4 Magnet profile
- 5 Safety profile
- 6 Sound absorber rock wool mat 30 mm
- 7 Heat conducting mass
- 8 Installation height 47 mm
- 9 Ceiling panel edge standard 90°, min. 30 mm

Construction version 2



- 1 Concrete ceiling
- 2 Activation profile
- 3 Retaining claw
- 4 Adapter profile
- 5 Magnet profile
- 6 Safety profile
- 7 Sound absorber rock wool mat 30 mm
- 8 Heat conducting mass
- 10 Installation height 50 – 85 mm
- 11 Ceiling panel edge standard 90°, min. 30 mm

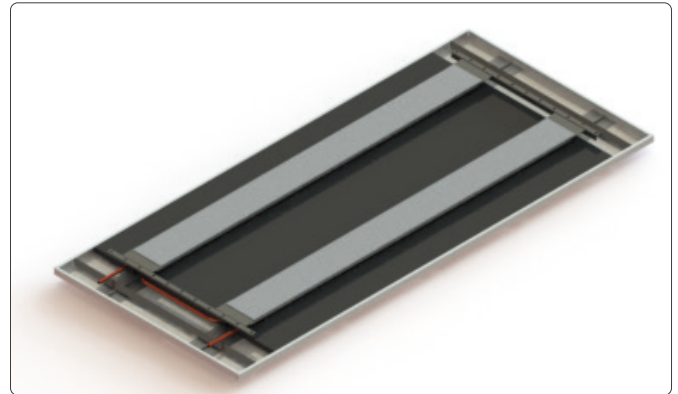
## TYPE FLEX ACTIVE 201

### Dimensions

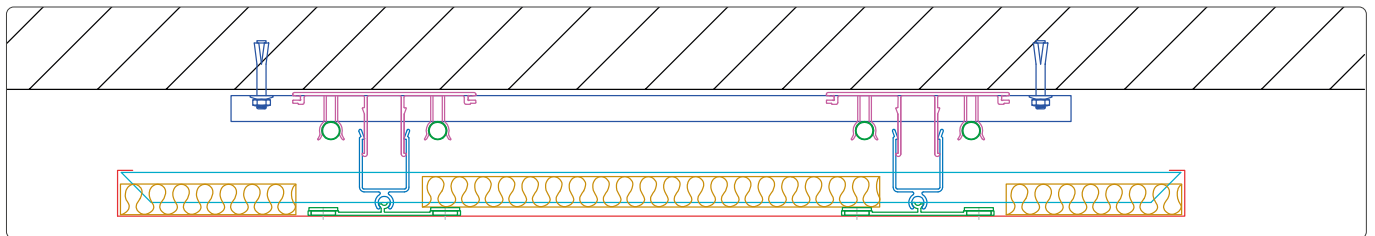
- Installation height: 60 – 90 mm / 90 – 120 mm
- Standard dimensions:
  - Length: max. 2500 mm
  - Width: 800 – 1100 mm
  - Height: 50 mm (min. 30 mm)
- Special dimensions on request

### Weight

- ca. 10 kg/m<sup>2</sup> (incl. water)

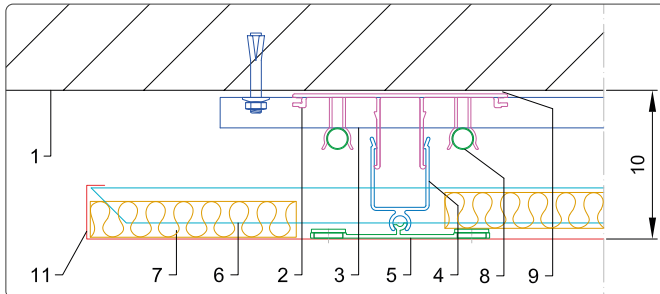


### Construction



The transfer area between substructure and concrete must correspond to min. 20 % of the ceiling panel area.

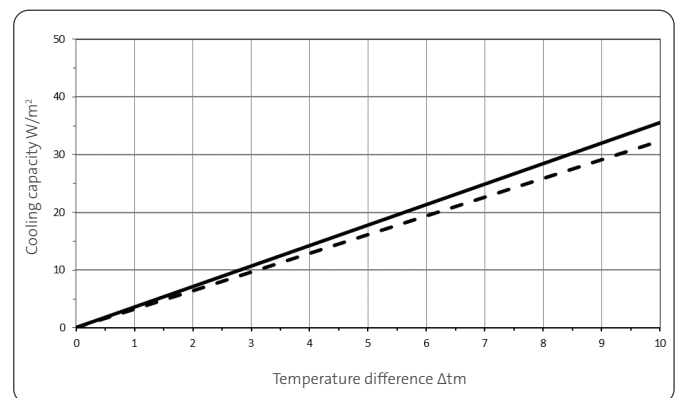
### Detail:



- 1 Concrete ceiling
- 2 Activation profile
- 3 Front profile
- 4 Adapter profile
- 5 Magnet profile
- 6 Safety profile
- 7 Schallabsorber Steinwollmatte 20 mm
- 8 Copper tube
- 9 Heat conducting mass
- 10 Installation height 60 – 120 mm
- 11 Ceiling panel edge standard 90°, min. 30 mm

### Additional cooling capacity through integrated water system

Initial data	Flex active 201 —————	Flex active 201 - - - - -
Perforation	Rg 1,5 – 11 %	Rg 1,5 – 11 %
Installation height	60 mm	120 mm
Acoustic inlay (Fleece)	with	with
Flow temperature	16 °C	16 °C
Return temperature	19 °C	19 °C
Room temperature	26 °C	26 °C
Cooling capacity (EN 14240)	26 W/m <sup>2</sup> (8 K)	29 W/m <sup>2</sup> (8 K)



### Water:

- Recommended temperature: 16 – 18 °C
- Recommended temperature distance (in-out): 2 – 3 K
- Recommended pressure drop: 20 – 25 kPa
- Recommended water flow: 80 – 150 l/h

- Max. operating pressure: up to 9 bar
- Water quality according to: SWKI BT 102-01, BTGA 3.003, VDI 2035

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