

Trench Heating/Cooling

# Katherm HK

Tested acc. to:  
BS EN 16430

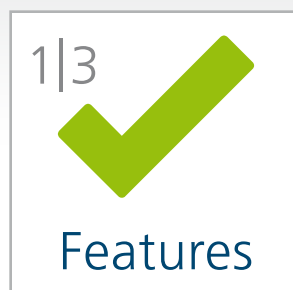
**KAMPMAN**  
Genau mein Klima.

# Improved performance

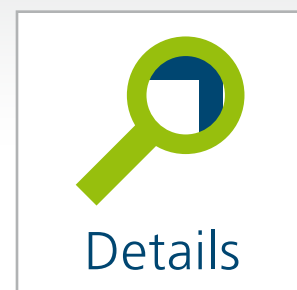
The narrower trench width and shallower trench height of the totally redesigned Katherm HK delivers an optimised output range for on-demand heating and cooling from low level. With its new incremental lengths, the Katherm HK is the solution for the most diverse building requirements.

# Innovative

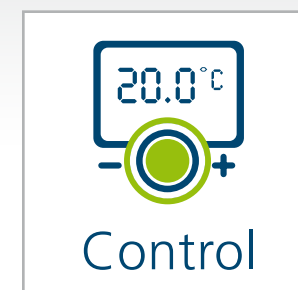
The Katherm HK has been further developed in the Kampmann Research & Development Center. With revised components, like the tangential fan, high-output coil and the modified design chassis, the new Katherm HK provides optimised air flow foreven higher performance.



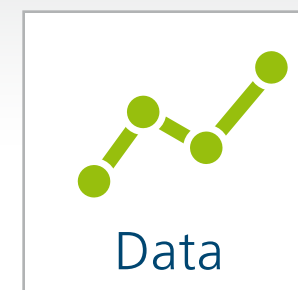
Features



Details



Control



Data



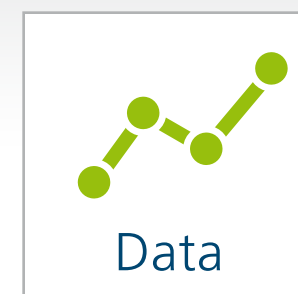
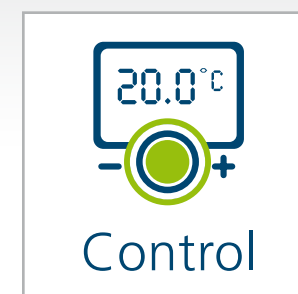
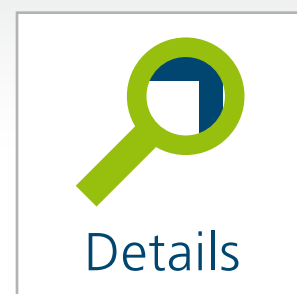
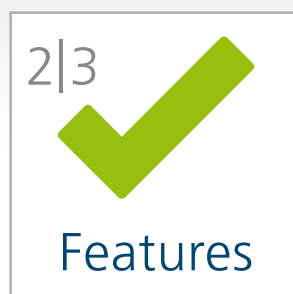
Grilles

# Hygiene-compliant

It's unique! Thanks to improved condensate drainage in cooling mode, coupled with the ease of cleaning of the condensate tray, the Katherm HK is totally hygienic!

# Energy-efficient

State-of-the-art EC tangential fans with low power consumption ensure energy-saving operation combined with low sound levels. The fixing system in the floor trench, perfected over many years, which also incorporates sound decoupling ensures that the unit can be quickly and easily removed for cleaning and maintenance.

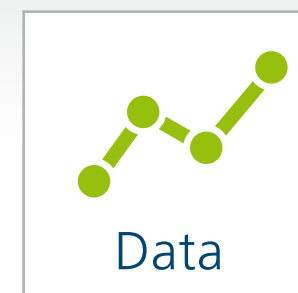
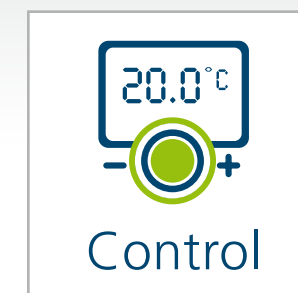
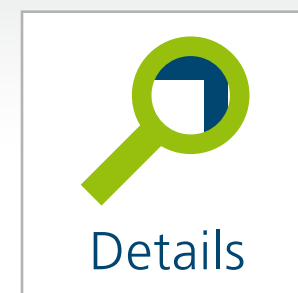
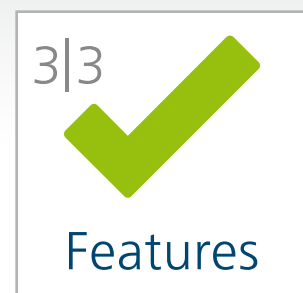


# Perfectly controlled

The unit comes with a factory-fitted BMS interface to allow precise control of the performance.

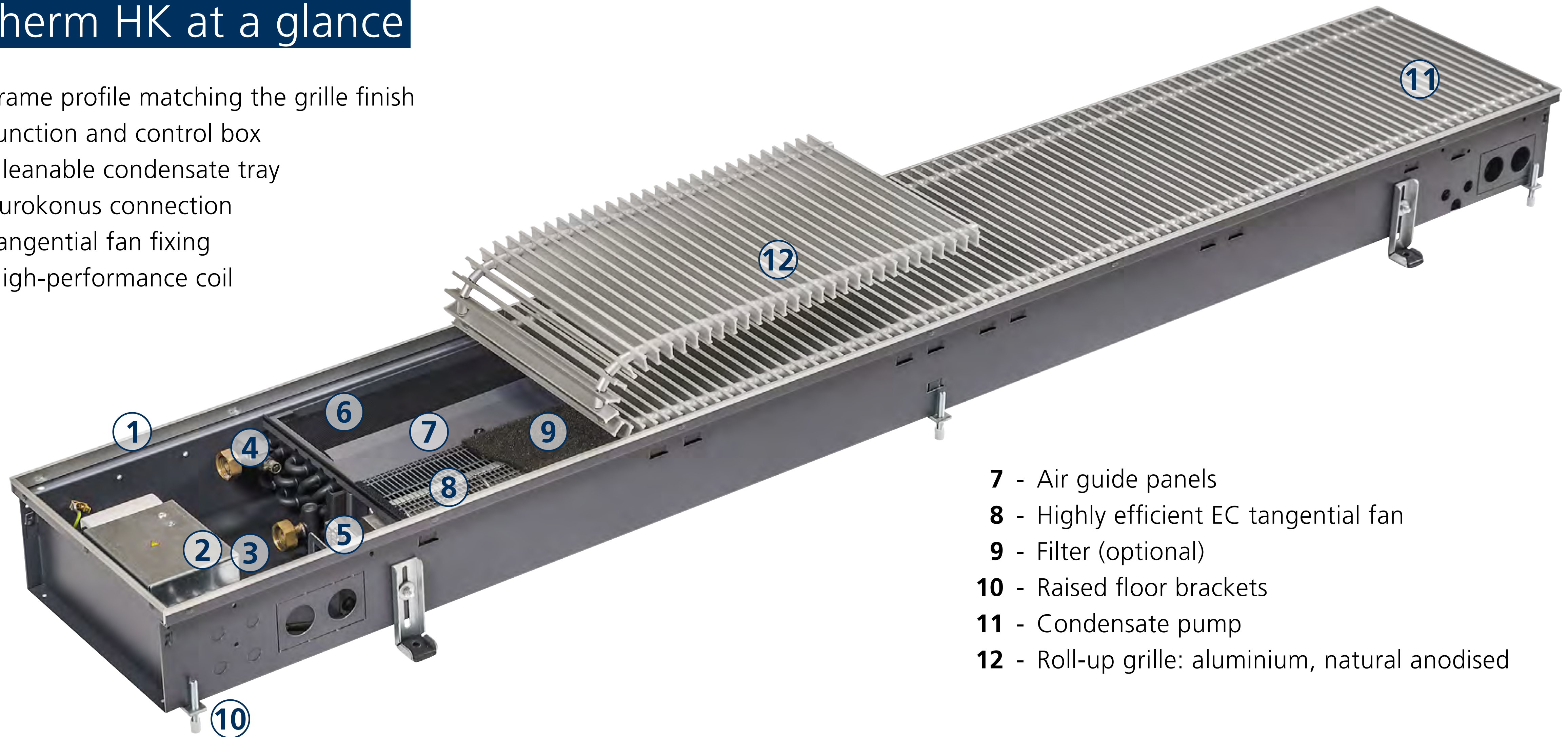
# Air flow-optimised

The arrangement and air guidance have both been optimised on the Katherm HK and guarantee maximum comfort levels in all rooms. The unit is enhanced with air flow-optimised roll-up and linear grilles.

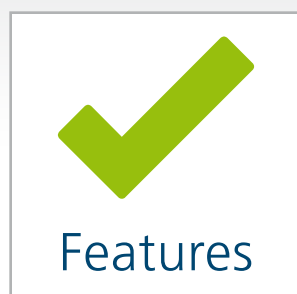


# Katherm HK at a glance

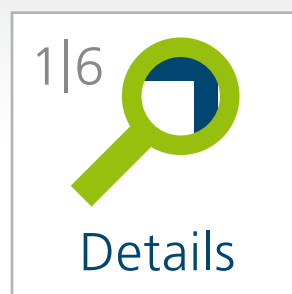
- 1 - Frame profile matching the grille finish
- 2 - Junction and control box
- 3 - Cleanable condensate tray
- 4 - Eurokonus connection
- 5 - Tangential fan fixing
- 6 - High-performance coil



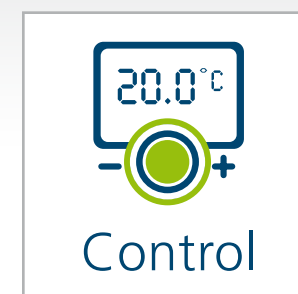
- 7 - Air guide panels
- 8 - Highly efficient EC tangential fan
- 9 - Filter (optional)
- 10 - Raised floor brackets
- 11 - Condensate pump
- 12 - Roll-up grille: aluminium, natural anodised



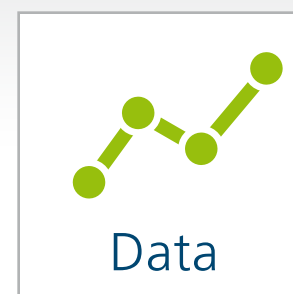
Features



Details



Control

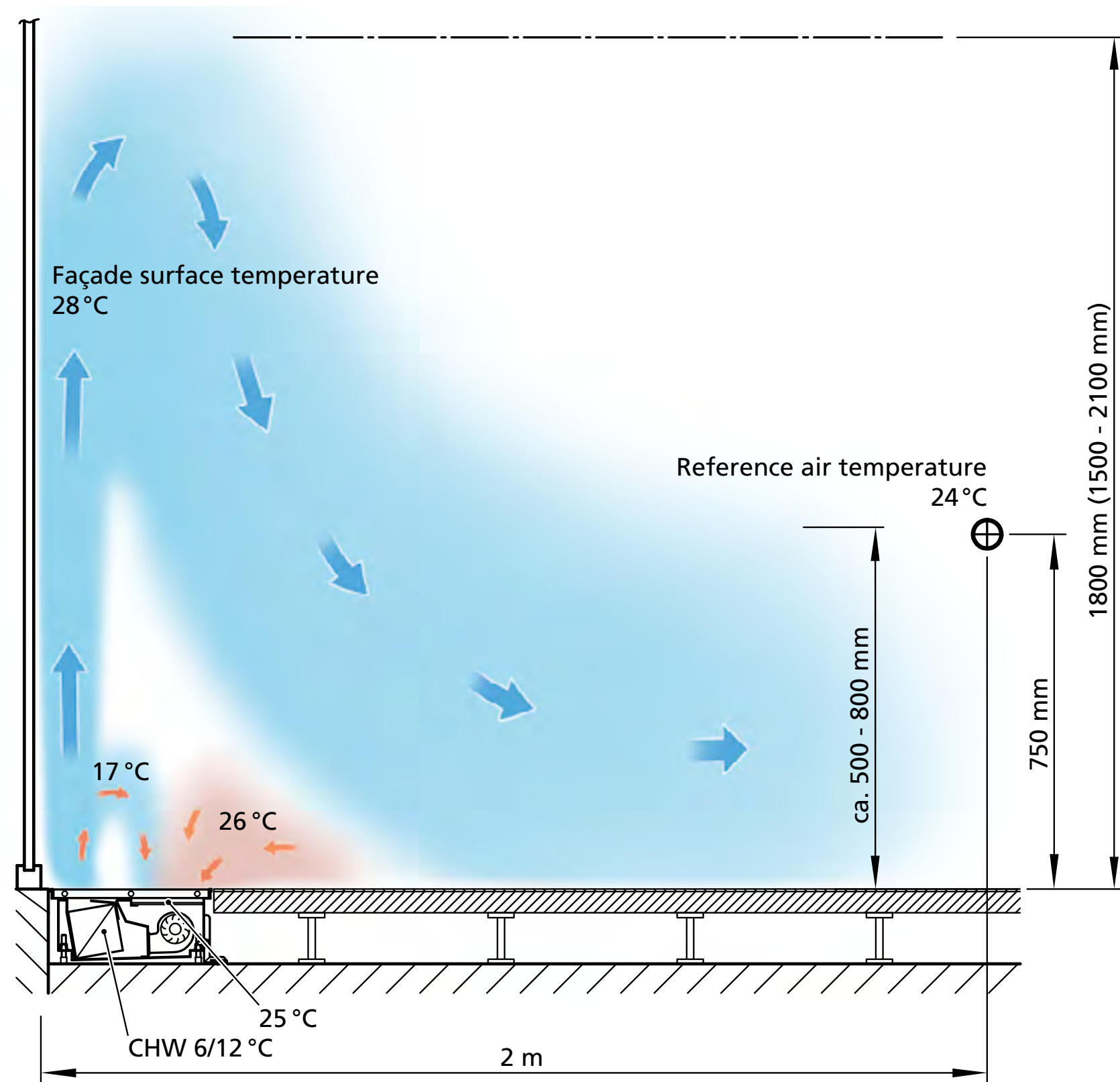


Data



Grilles

# Katherm HK with short-cut optimised air outlet

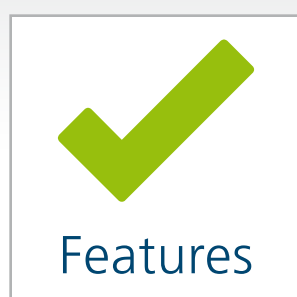


Katherm HK: Short-cut optimised air outlet

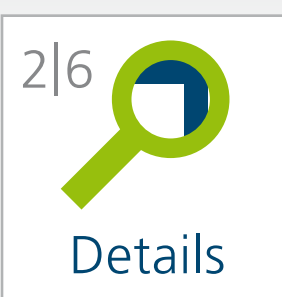
The diagram shows the the air flow of short-cut optimised heating/cooling trenches in cooling mode.

With the short-cut optimised model the air at the façade rises significantly higher, blends and penetrates deeper into the room at a higher temperature. The result is a more even temperature distribution and higher comfort in the occupied zone.

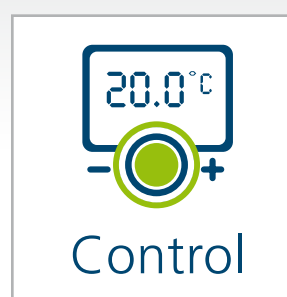
The development and design of the Katherm HK have been optimised to minimise the short-cut as far as technically possible. All performance data refer to the reference air temperature measured at a distance of 2 m from the façade, 0.75 m above floor level.



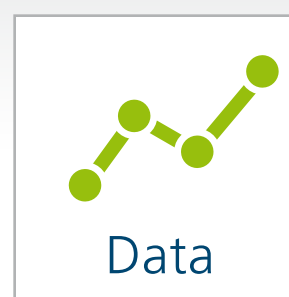
Features



Details



Control



Data



Grilles

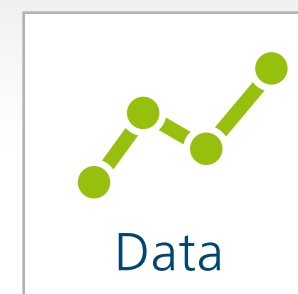
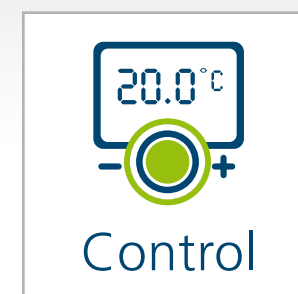
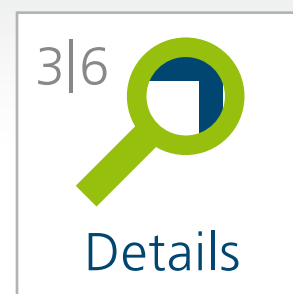
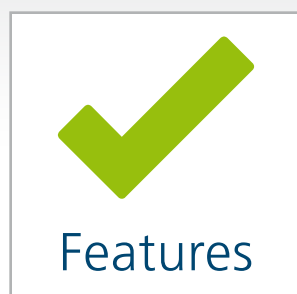
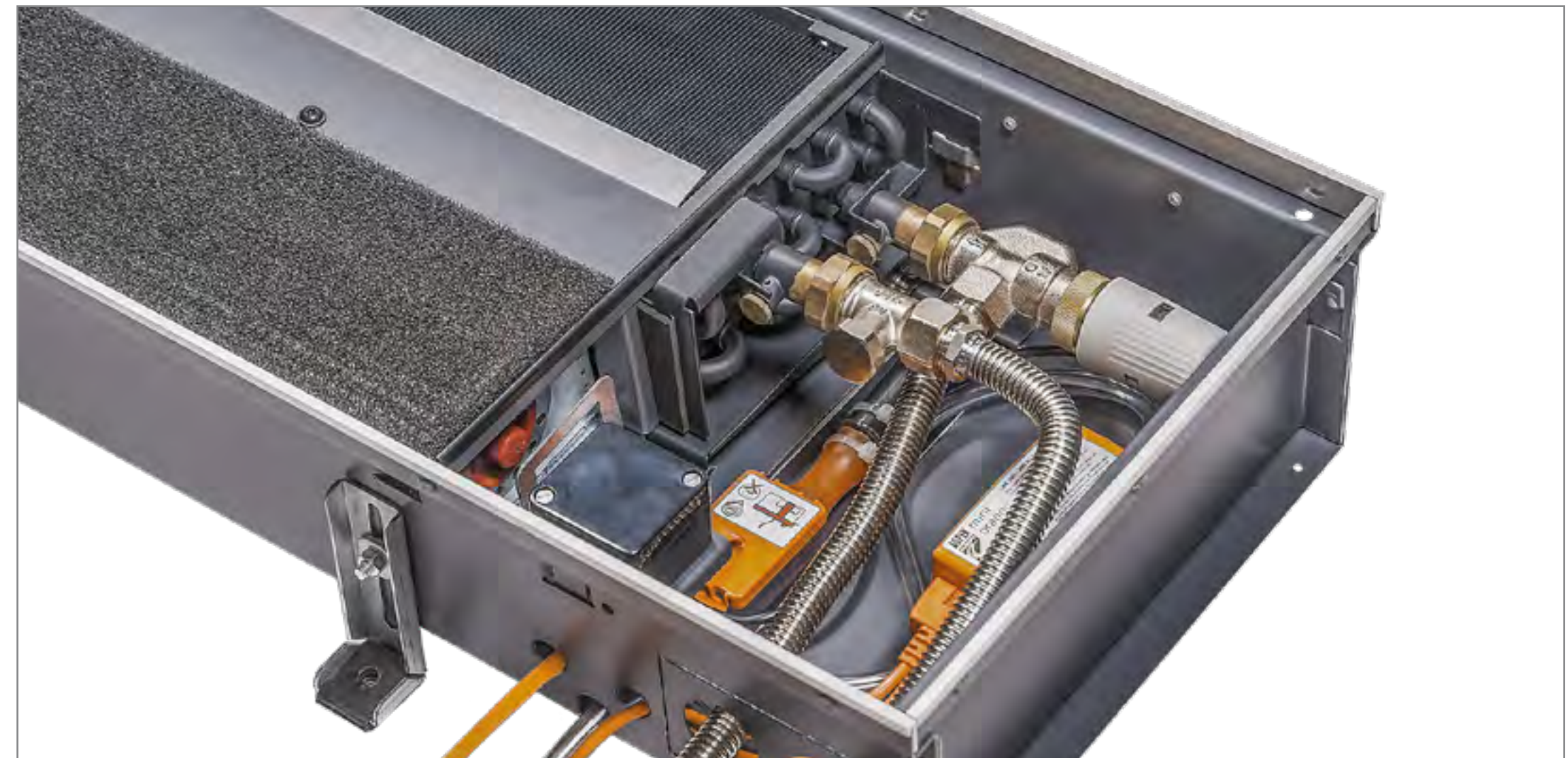
## Junction and control box

- ▶ control options: KaControl (-C1) or BMS-Interface/electromechanical (-00)
- ▶ incl. factory fitted transformer



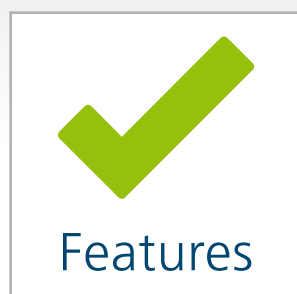
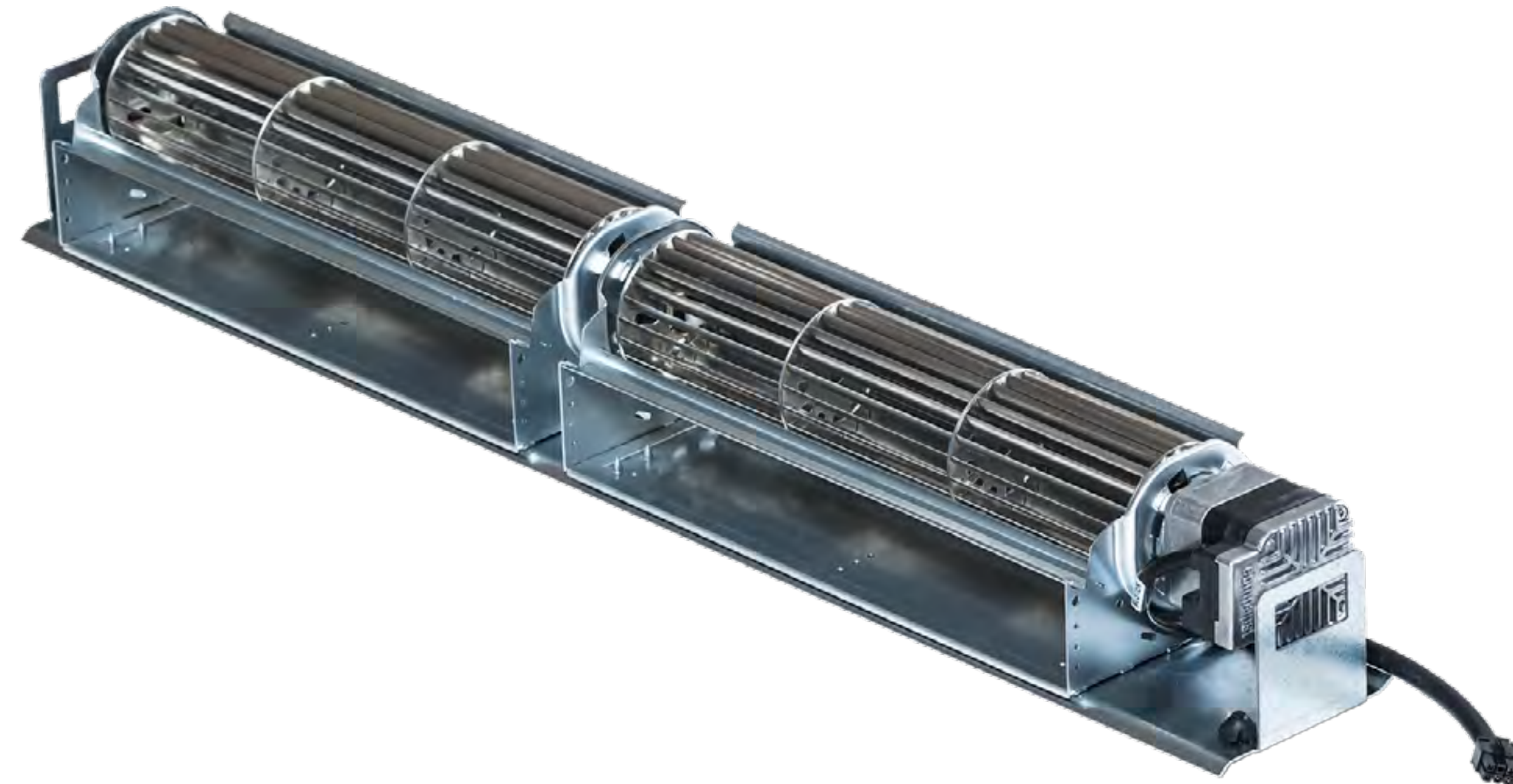
## Condensate tray/pump

- ▶ for safe discharge of the condensate and simultaneous air guidance
- ▶ specifically designed for simple cleaning in line with the hygienic standards
- ▶ can be removed to the room side for ease of cleaning
- ▶ condensate pump (accessory) to drain condensate, if needed

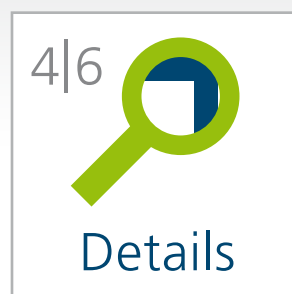


## Highly efficient EC tangential fan

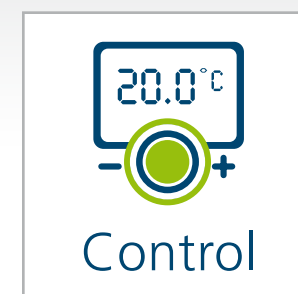
- ▶ energy-saving, with flow-optimised impellers, cascaded arrangement as a continuous fan belt
- ▶ easily removeable, plug & play fan
- ▶ even air flow through convector
- ▶ robust and whisper-quiet motor design
- ▶ continuously variable control via external 0-10 V signal



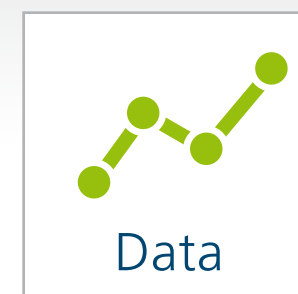
Features



Details



Control



Data



Grilles



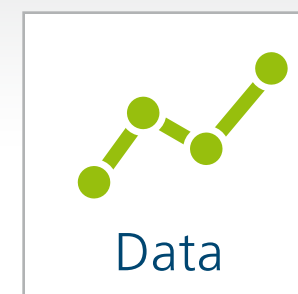
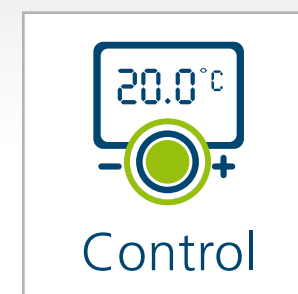
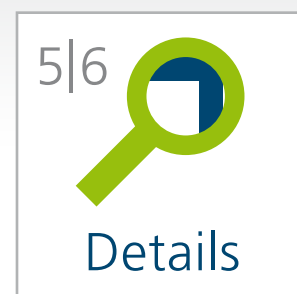
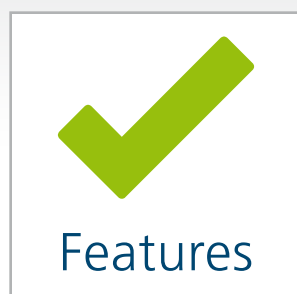
## Tangential fan fixing

- ▶ easy removal of tangential fan without tool
- ▶ novel coupling/cone pin system
- ▶ simultaneous sound decoupling



## Air guide panels

- ▶ act as a finger guard for the tangential fan, filter frame, airflow baffle, grille seat and reinforcing stay to strengthen the trench



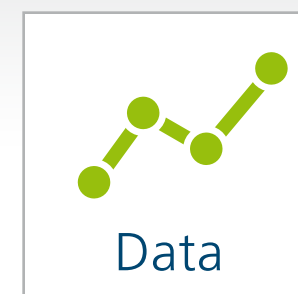
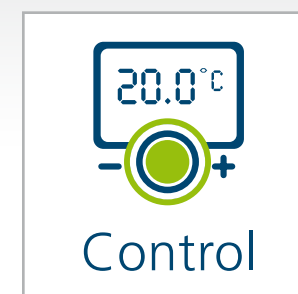
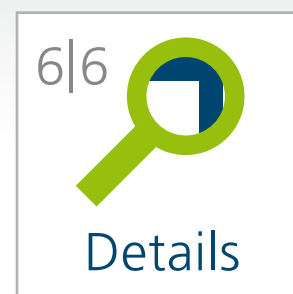
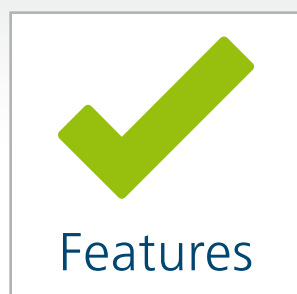
## High-performance coil

- ▶ made of the proven combination of copper/aluminium
- ▶ optimised for air flow and thermal performance
- ▶ Eurokonus valve connection



## Supply air module

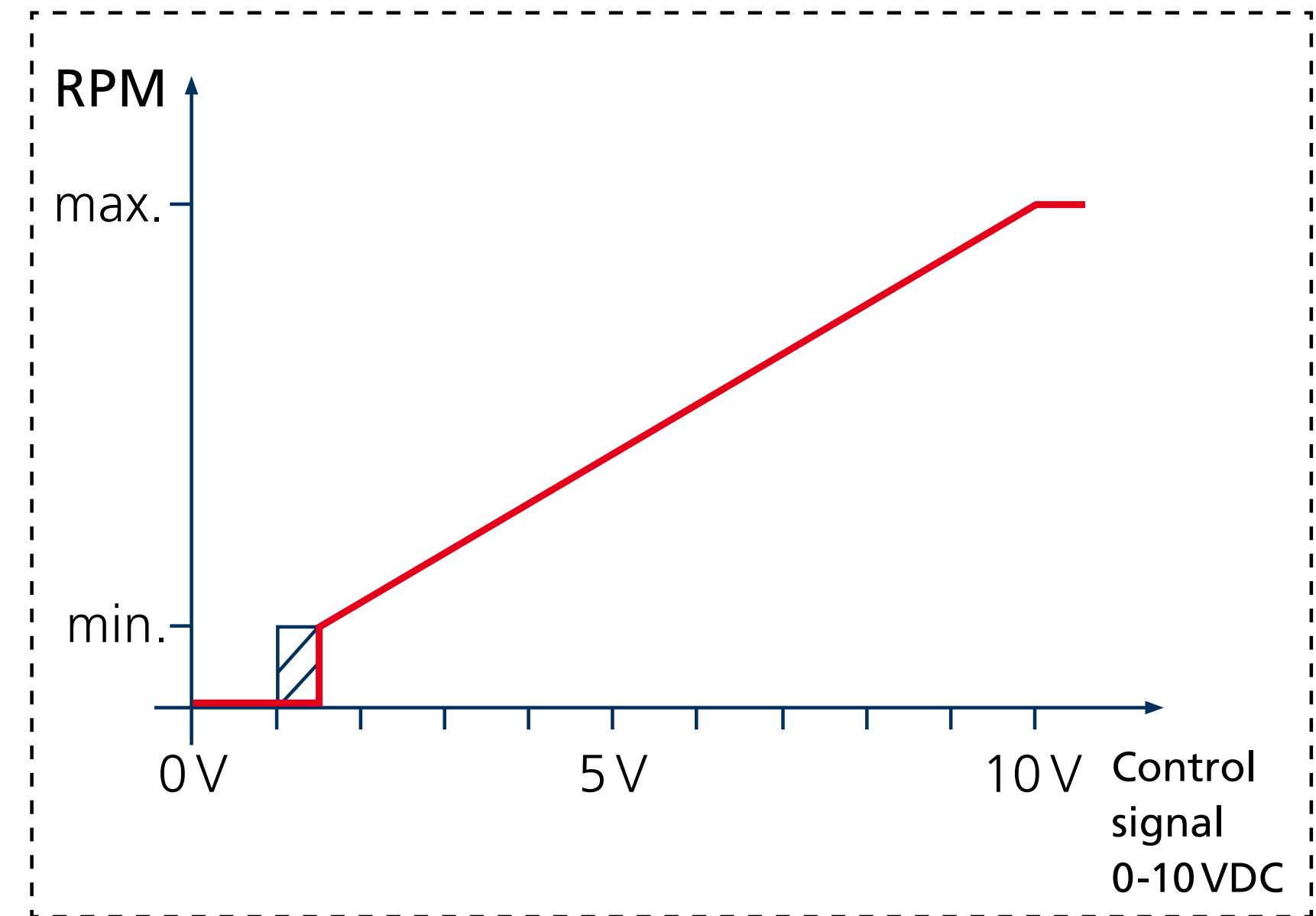
- ▶ for inducing pre-conditioned supply air
- ▶ primary air volume can be adjusted
- ▶ max. air volume per module = 60 m<sup>3</sup>/h
- ▶ amount of modules selectable depending on trench length
- ▶ *change in trench dimensions: trench width + 20 mm; trench height + 35 mm*



# Control options

## KaControl room automation

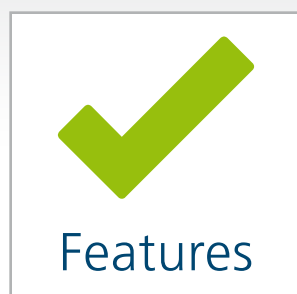
- ▶ KaControl technology factory-integrated for setting up entire networked systems based on the KaControl
- ▶ interfaces for KNX or Modbus building automation as an optional plug-in group
- ▶ 0–10 V analogue input for control of fan and valve via a single data point
- ▶ design room control unit with intuitive user navigation
- ▶ integrated timer program



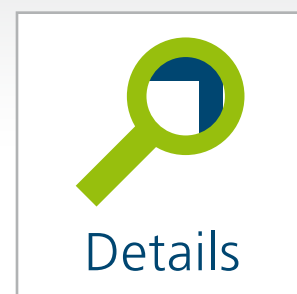
0 – 1.5 V = device OFF  
1.5 – 10 V = fan speed min... 100 %

## BMS-Interface/electromechanical (-00)

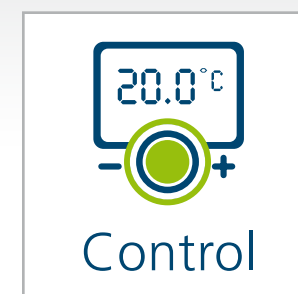
- ▶ power supply: 230 V/50 Hz via factory fitted transformer
- ▶ fan speed control 0–100 % via 0–10 VDC BMS contact
- ▶ valve control, direct by BMS



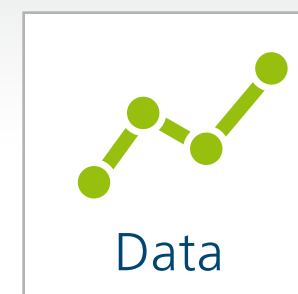
Features



Details



Control



Data



Grilles

# Performance data according to BS EN 16430

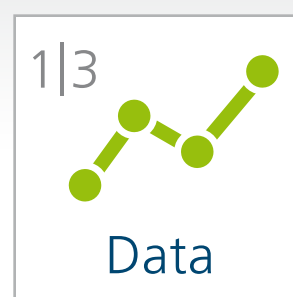
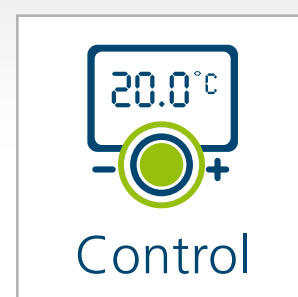
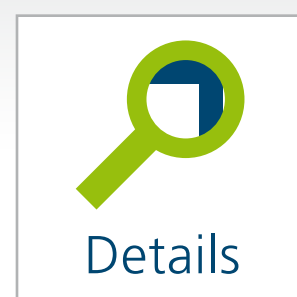
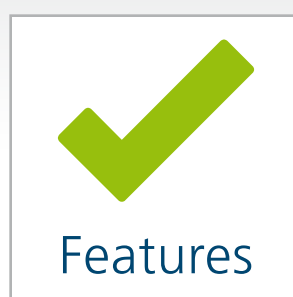
| Unit length | Unit width | Unit height | Heat output <sup>1)</sup> |        | Sensible cooling output <sup>2)</sup> |        | Sound pressure level <sup>3) 4)</sup> | Sound power level <sup>4)</sup> |
|-------------|------------|-------------|---------------------------|--------|---------------------------------------|--------|---------------------------------------|---------------------------------|
| A           | B          | C           | 2-pipe                    | 4-pipe | 2-pipe                                | 4-pipe |                                       |                                 |
| [mm]        | [mm]       | [mm]        | [W]                       | [W]    | [W]                                   | [W]    | [dB(A)]                               | [dB(A)]                         |
| 915         | 320        | 130         | 1442                      | 923    | 286                                   | 287    | 27                                    | 35                              |
| 1200        | 320        | 130         | 2483                      | 1657   | 501                                   | 499    | 29                                    | 37                              |
| 1700        | 320        | 130         | 4523                      | 3054   | 937                                   | 931    | 31                                    | 39                              |
| 2000        | 320        | 130         | 5132                      | 3589   | 1068                                  | 1061   | 32                                    | 40                              |
| 2500        | 320        | 130         | 7177                      | 4996   | 1507                                  | 1495   | 33                                    | 41                              |
| 3000        | 320        | 130         | 9223                      | 6405   | 1948                                  | 1931   | 34                                    | 42                              |
| 950         | 290        | 160         | 1697                      | 1067   | 321                                   | 313    | 24                                    | 32                              |
| 1200        | 290        | 160         | 2830                      | 1837   | 542                                   | 529    | 26                                    | 34                              |
| 1700        | 290        | 160         | 4526                      | 3042   | 863                                   | 842    | 28                                    | 36                              |
| 2000        | 290        | 160         | 5887                      | 3978   | 1130                                  | 1103   | 29                                    | 37                              |
| 2500        | 290        | 160         | 7584                      | 5191   | 1443                                  | 1409   | 30                                    | 38                              |
| 3000        | 290        | 160         | 9854                      | 6758   | 1924                                  | 1878   | 31                                    | 39                              |

<sup>1)</sup> Heat output per Katherm HK, with an average speed setting 60 %, at LPHW 75/65 °C, room air temperature 20 °C

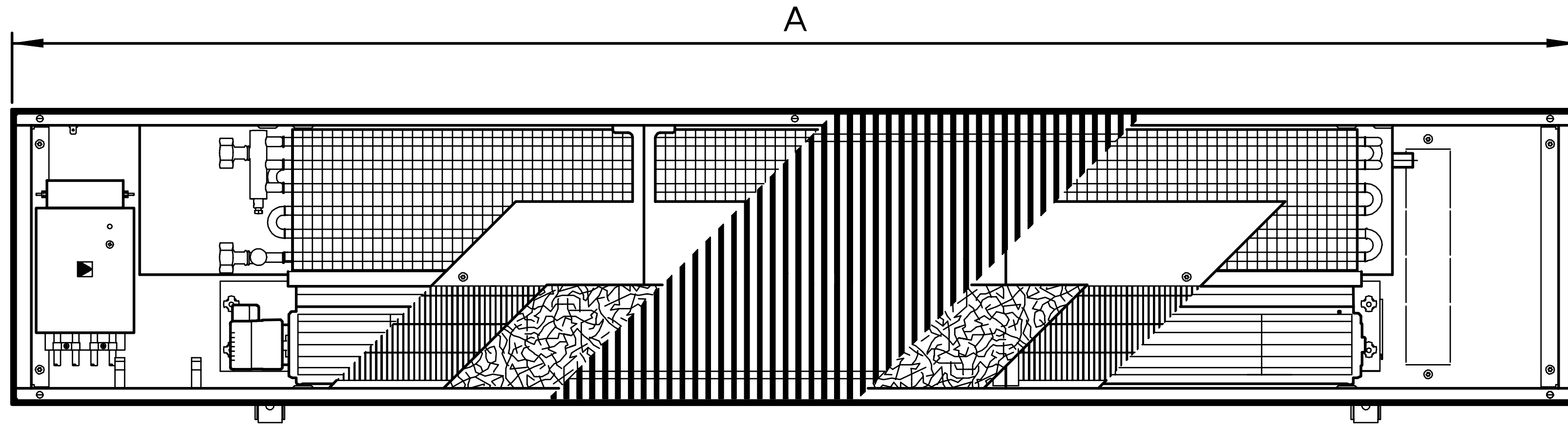
<sup>2)</sup> Cooling output per Katherm HK, with an average speed setting 60 %, at CHW 6/12 °C, room air temperature 24 °C, 50 % relative humidity

<sup>3)</sup> The sound pressure levels were calculated with an assumed room insulation of 8 dB(A). This corresponds to a distance of 2 m, a room volume of 100 m<sup>3</sup> and a reverberation time of 0.5 s, at 60 % fan speed.

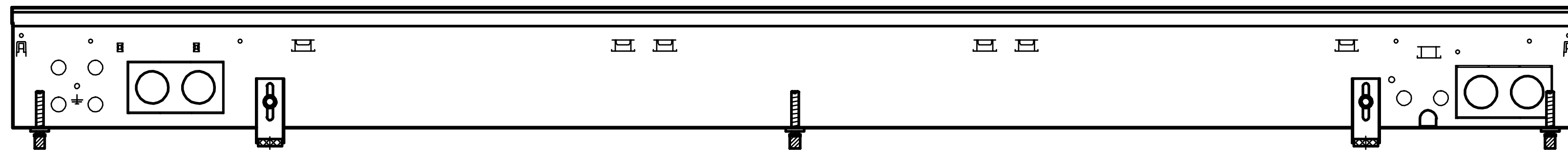
<sup>4)</sup> Sound pressure level < 20 dB (A) and sound power level < 28 dB (A) outside the usual measuring and audible range.



# Dimensions

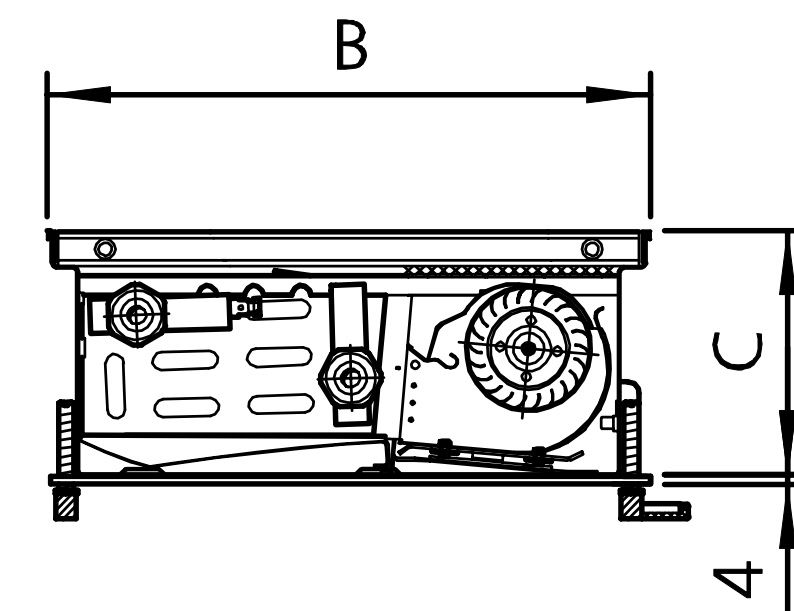


Top view

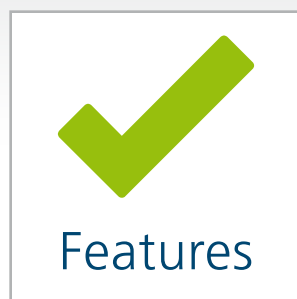


Frontview

| Unit length | Unit width | Unit height |
|-------------|------------|-------------|
| A           | B          | C           |
| [mm]        | [mm]       | [mm]        |
| 915         | 320        | 130         |
| 1200        | 320        | 130         |
| 1700        | 320        | 130         |
| 2000        | 320        | 130         |
| 2500        | 320        | 130         |
| 3000        | 320        | 130         |
| 950         | 290        | 160         |
| 1200        | 290        | 160         |
| 1700        | 290        | 160         |
| 2000        | 290        | 160         |
| 2500        | 290        | 160         |
| 3000        | 290        | 160         |



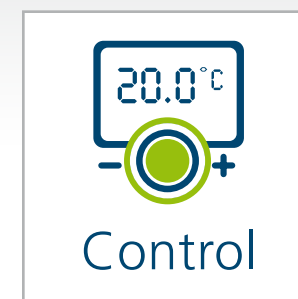
Sectional view



Features



Details



Control

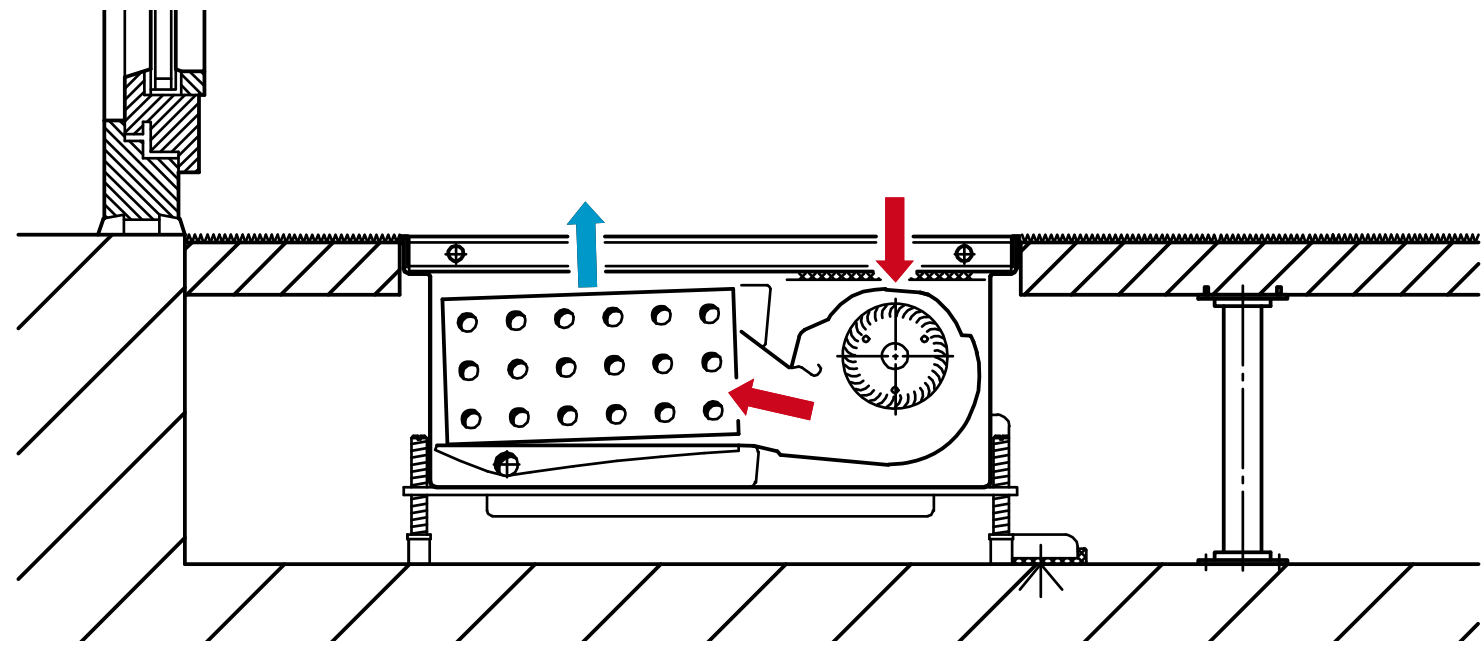


Data

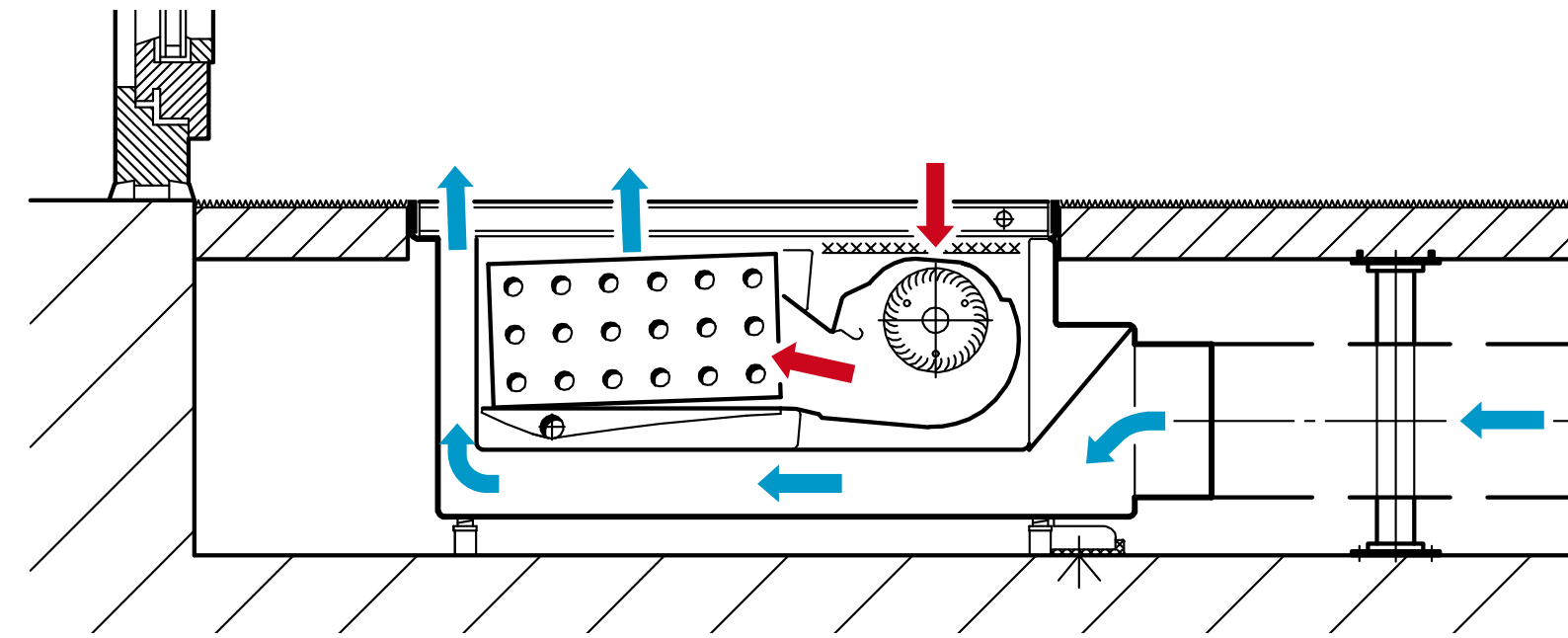


Grilles

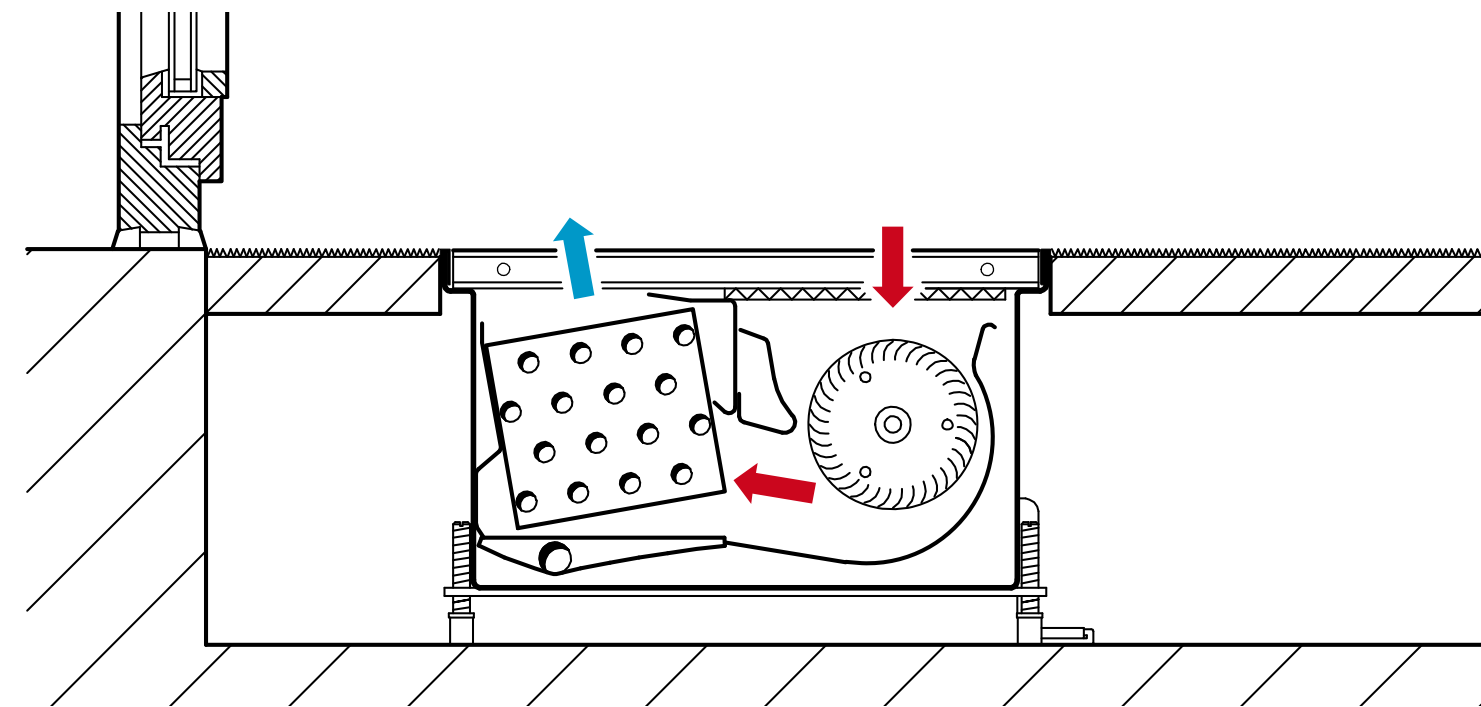
# Cross sections



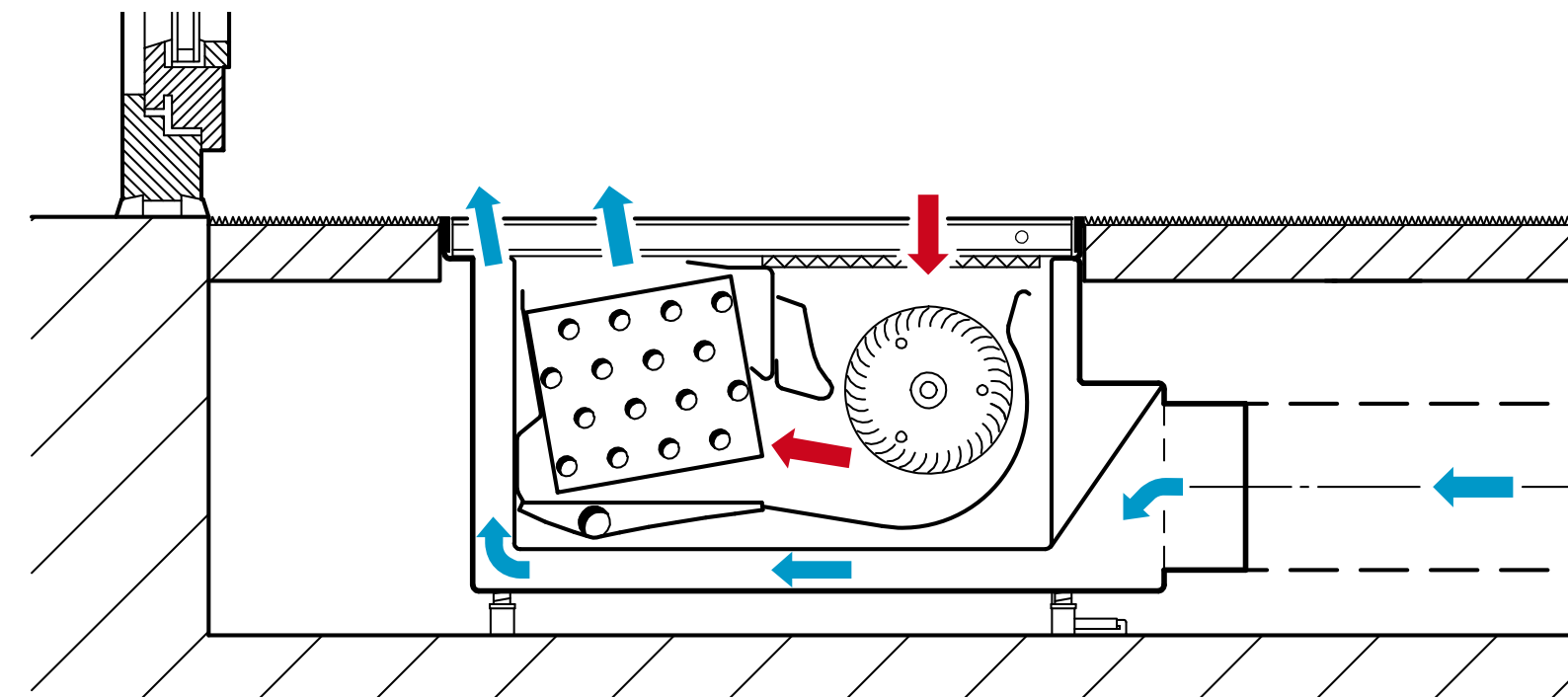
Katherm HK 320, 4-pipe



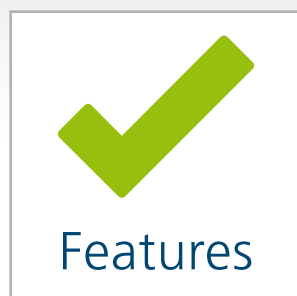
Katherm HKZ 320, 4-pipe,  
with supply air connections



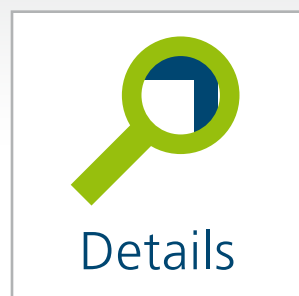
Katherm HK 290, 4-pipe



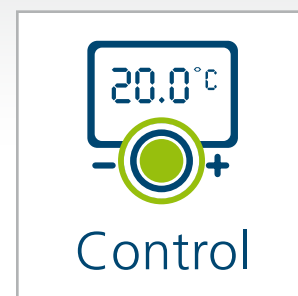
Katherm HKZ 290, 4-pipe,  
with supply air connections



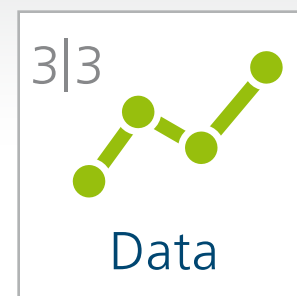
Features



Details



Control

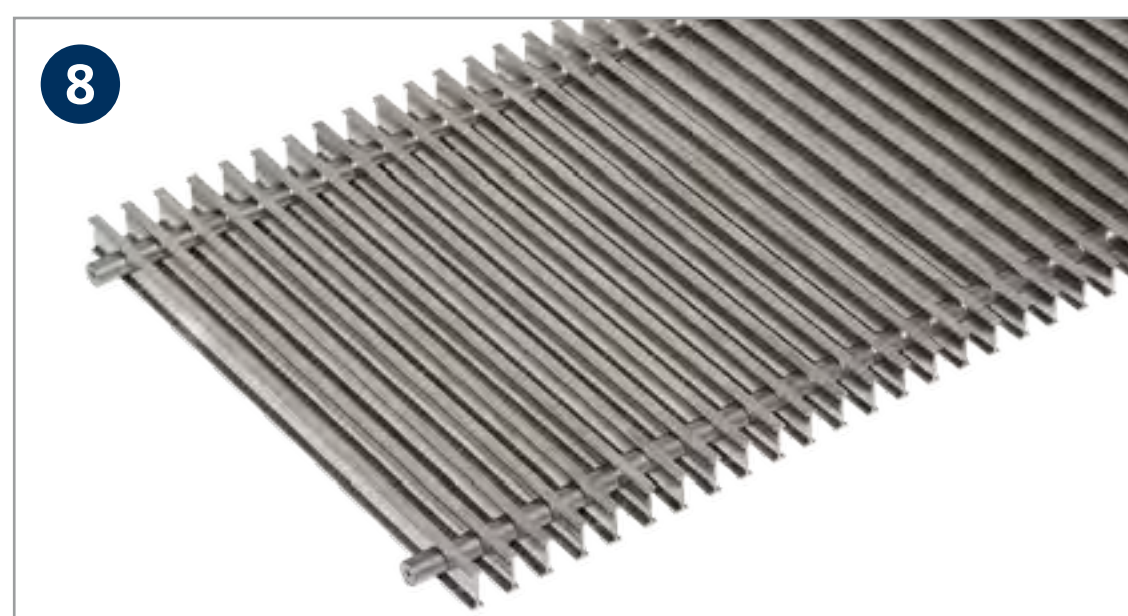
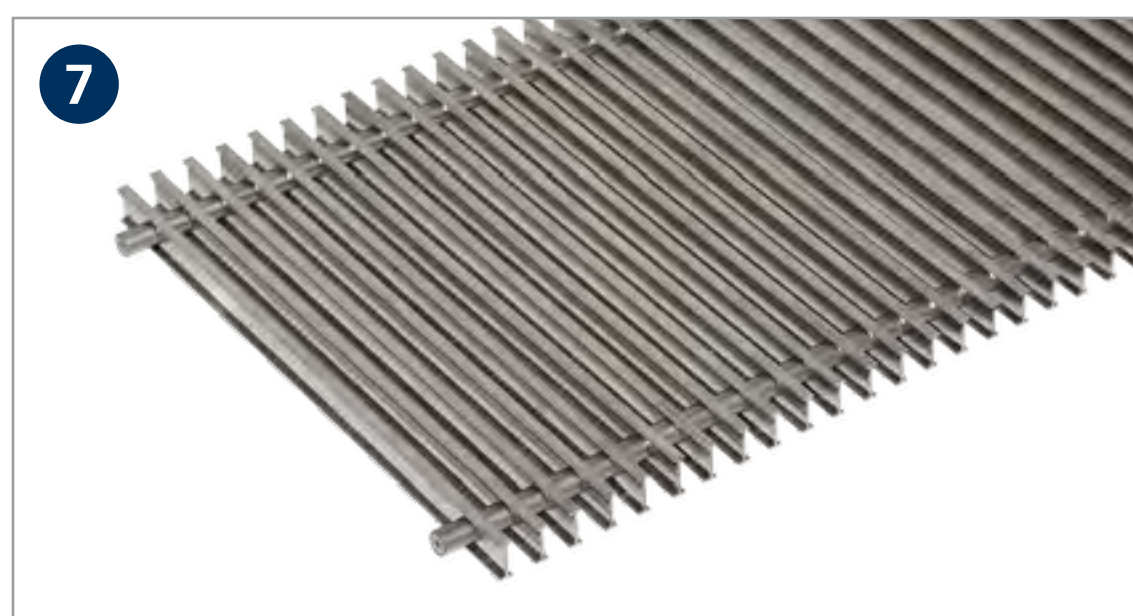
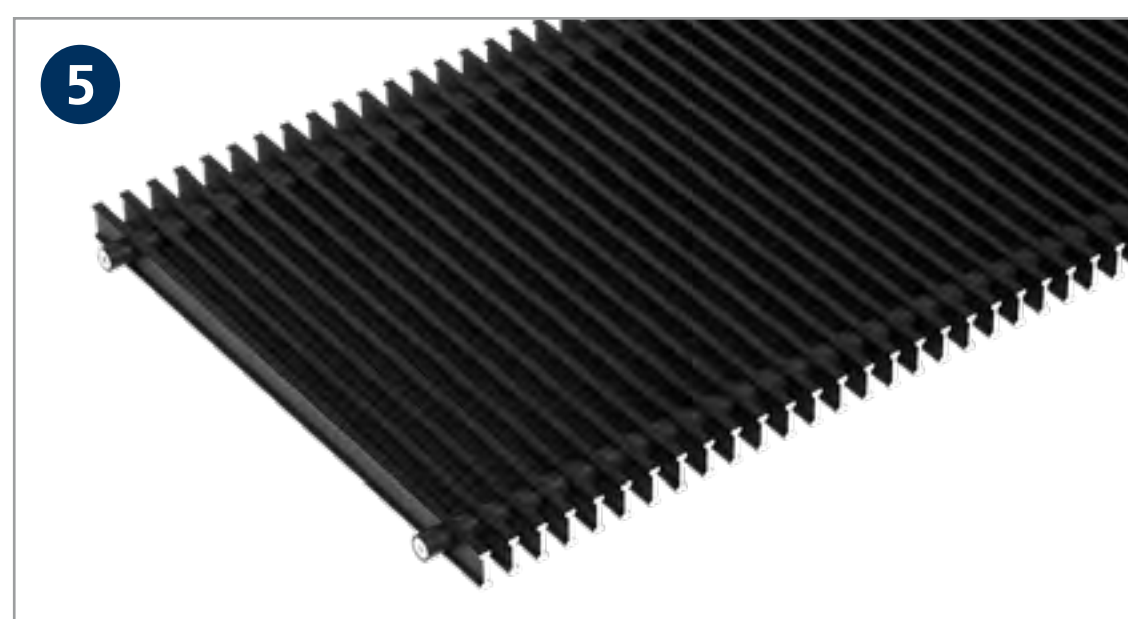
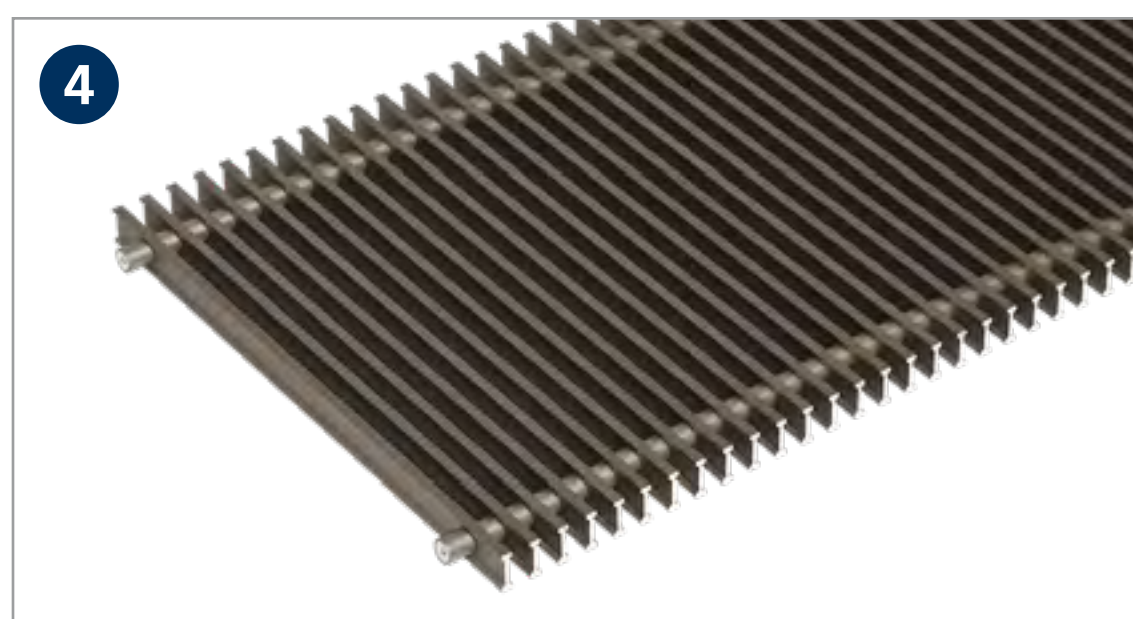
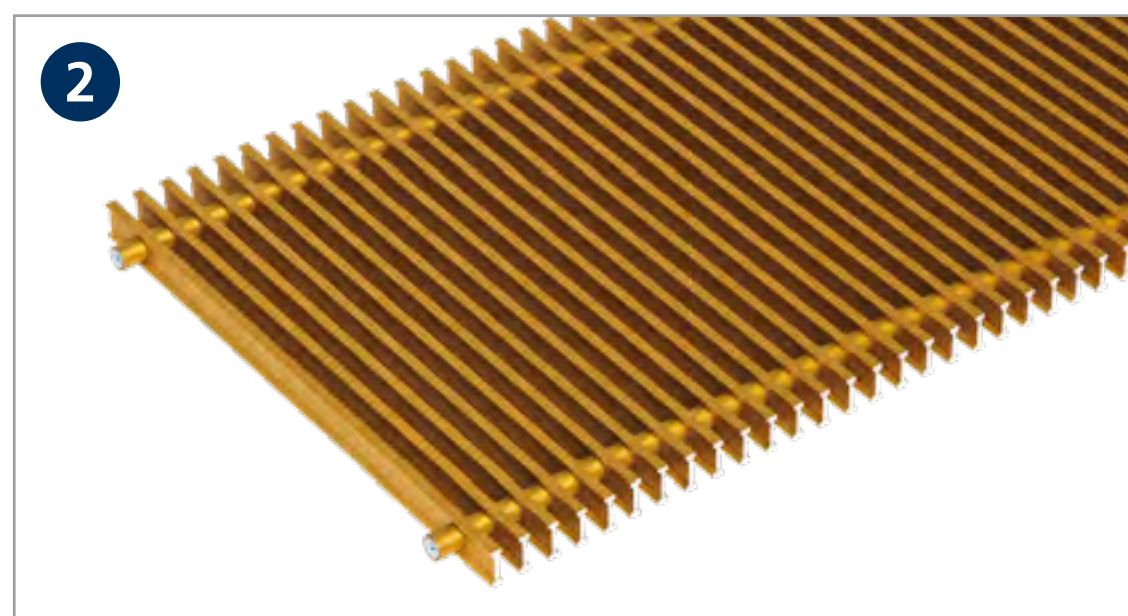
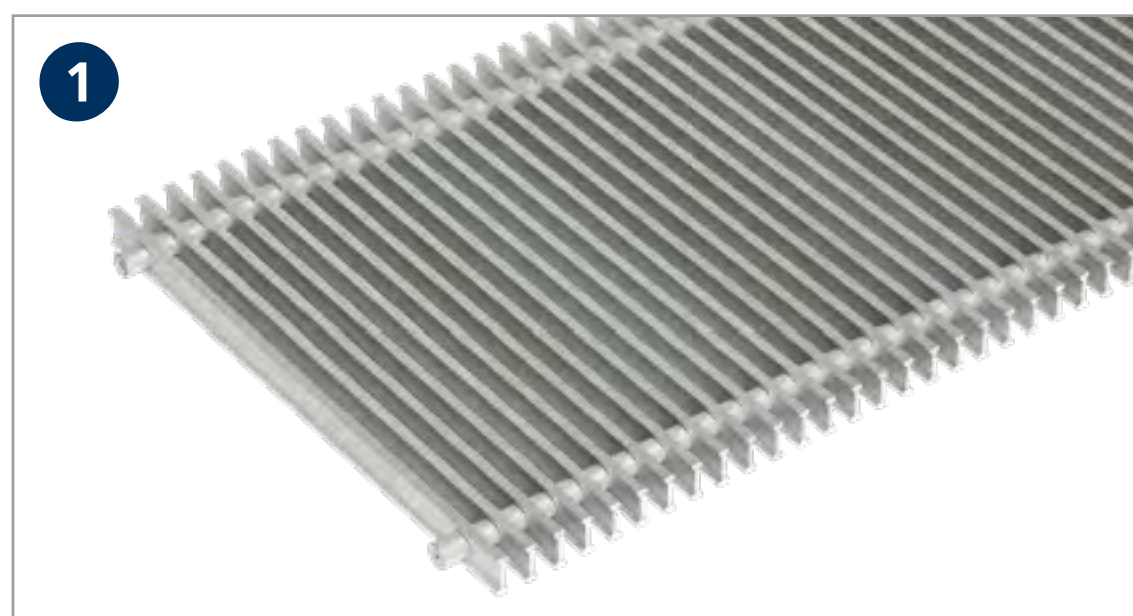


Data



Grilles

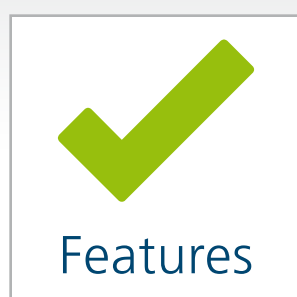
# Choice of grilles



- 1 Aluminium, natural anodised
- 2 Aluminium, brass anodised
- 3 Aluminium, bronze anodised
- 4 Aluminium, bronze finish
- 5 Aluminium, black anodised
- 6 Aluminium, basalt grey painted DB 703
- 7 Stainless steel
- 8 Stainless steel, polished
- 9 Brass, natural

## Aluminium roll-up grille, natural anodised:

- ▶ double T-profile roll-up grille
- ▶ bar dimension 18 x 5 mm (stainless steel 18 x 6 mm)
- ▶ bar spacing 9 mm (stainless steel 10.5 mm)
- ▶ connections made of corrosion-proof steel springs with spacers in a matching colour
- ▶ 65 % free area



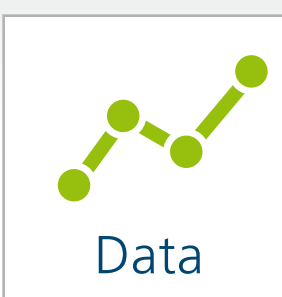
Features



Details



Control



Data



Grilles

# Benefits for you!

Kampmann offers you the following service benefits:

- ▶ on-site consultation
- ▶ design support
- ▶ system solutions
- ▶ site-surveys
- ▶ After Sales Service

Find your contact person here:

**[Kampmann.co.uk/contact](https://www.kampmann.co.uk/contact)**

