

Unit Heaters Ultra Allround

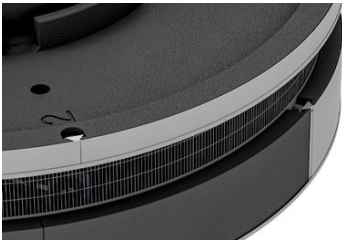
Ceiling unit for heating, cooling, ventilation in large, high-end interiors.



- ▶ Design unit for modern ceiling architecture
- ▶ Motorised changeover between heating and cooling
- ▶ Radial fan with energy-efficient EC technology complies with ErP requirements
- ▶ Identical design of unit for recirculation air, mixed air or primary air mode, whether heating or cooling units
- ▶ EPP housing components with sheet steel casing, thus lighter weight
- ▶ Life Cycle Assessment data published in the form of an EPD according to EN 15804 and available to download from the International EPD System. Registered in the DGNB Navigator construction product platform.

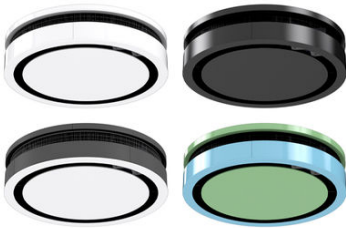
Unit Heaters Ultra Allround

Detailed views



Sheet steel and EPP hybrid housing

- ▶ organic shape for optimum air flow
- ▶ lightweight materials for ease of assembly



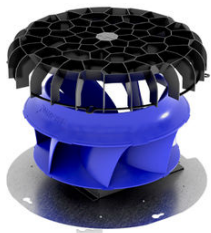
Casing versions

- ▶ The Ultra Allround is available in two casing versions, powder-coated in a colour of your choice:
- ▶ fully cased in a metal housing for a visually striking air conditioning unit
- ▶ partially encased and integrated into modern black ceiling constructions for an unobtrusive but modern industrial look



Heat exchanger performance

- ▶ heating: low-temperature version for operation with very low supply water temperatures
- ▶ cooling: maximum possible cooling output, thanks to large-surface circular heat exchanger



EC fan

- ▶ durable, noise-optimised EC radial fan
- ▶ continuously variable control for optimum control of the air volume
- ▶ easy maintenance through the base of the unit
- ▶ motor protection class IP 54



Removable base cover

- ▶ tool-free access for maintenance of the condensate tray and fan etc.
- ▶ base cover with safety mechanism

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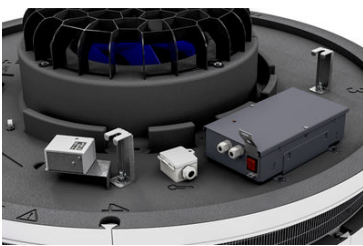
Condensate tray

- ▶ plastic condensate tray
- ▶ disinfectant-resistant
- ▶ can be cleaned from the top of the unit (tool-free access)
- ▶ the condensate tray can be removed from the underside of the unit



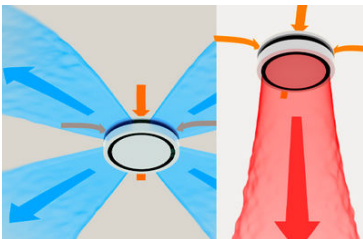
Condensate drain

- ▶ compact design, without separate float, prevents possible leaks at connections
- ▶ extremely quiet pump, lower than 20 dB(A) sound pressure level
- ▶ condensate level determined by a capacitive sensor
- ▶ delivery height up to 20 m
- ▶ alarm contact in the event of a malfunction or too high a water level in the condensate tray
- ▶ accessible from the top of the unit (without tools)



Control

- ▶ Whether simply electromechanical (terminal block), proven via KaControl (KNX, Modbus, BACnet), or with the new Smartboard M: the Ultra Allround can be integrated into any building automation system of your choice.



Heating/cooling changeover

- ▶ the Ultra Allround can be used as a secondary air unit for both heating and cooling
- ▶ The switch-over between the horizontally discharged cooling mode and the vertically discharged heating mode is motorised.

Unit Heaters Ultra Allround

article number: 35400017425800



Product description

Kampmann Ultra Allround unit heater, slimline and circular design, ideal for the heating of high-end interiors with open, high ceilings.

Identical appearance and height of different heating/cooling models.

GWP (phase A1-A3), kg CO₂ Äq. 2,22E+02

Further calculations possible online.

The housing consists of an insulating and heat-bridge-free EPP (expanded polypropylene) design, which is sound-insulating and simplifies installation on account of its low overall weight. Within the unit, its organic form with no corners and edges enables all surfaces to be cleaned and provides for an optimised, turbulence-free air flow. Key components, such as the condensate pump and damper actuator, are accommodated within the housing and can be easily accessed via the inspection cover for maintenance purposes. The lower sheet steel panel can be simply removed and secured by wire cables. Comes as standard with inlet grille and brackets for quick mounting.

With an inlet structure on the intake side with a hexagonal honeycomb form, with a lightweight construction, for minimum blockage in the air flow and fan intrusion guard. Reduction of the noise level by adjustment of the inlet flow at the fan inlet and improved pressure stability.

Heating or cooling design with LPHW or PCW featuring circular heat exchanger. Motorised adjustment for vertical or horizontal air outlet.

The discharge fins integrated in the housing for horizontal discharge with cooling and vertical discharge with heating are connected by a gearbox and optionally automatically driven by a servomotor.

All visible EPP side surfaces are smooth, matt black. Optionally, a version with a complete sheet steel casing is available in different RAL colours. Partially cased designs are also available as an option.

Colour RAL 9006 white aluminium

EC fan, 230 V, high speed

Energy-saving EC fan with 0-10 V input for continuously variable speed control. All rotating parts have low-noise and maintenance-free bearings. Factory-wired. Overtemperature protection of the fan by active temperature management.

Protection class IP 54

Integrated motor protection.

High-efficiency heat exchanger, consisting of round copper pipe, 4-layer with aluminium fins.

Max. operating pressure bar 16

Max. entering water temperature °C 95

Min. entering water temperature °C 35

Max. air inlet temp. °C 40

Max. glycol volume % 50

With Open/Closed flap servomotor for the automatic switch-over of vertical heating air discharge direction to horizontal cooling air discharge direction.

Condensate tray designed as an independent component that can be easily removed for cleaning and maintenance in accordance with VDI 6022.

Factory-fitted speed-controlled condensate pump with dynamic adaptation of the delivery rate and minimum operating noise within a sound-absorbent EEP insulated housing. Capacitive water level sensor for reduced maintenance. The pump and pump sump are easily accessible through a separate maintenance opening on the top of the unit.

An easily accessible electrical junction box is located inside the basic unit. It includes the following:

repair switch, lockable

control board with power adapter as well as plug-in and screw terminals,

- connection option for a 24 V DC damper actuator

- connection option for a 24 V DC valve actuator,

- connection option for a condensate pump

- active valve shut-off in the event of a condensate alarm

- potential-free contact motor malfunction signal

- potential-free condensate alarm contact

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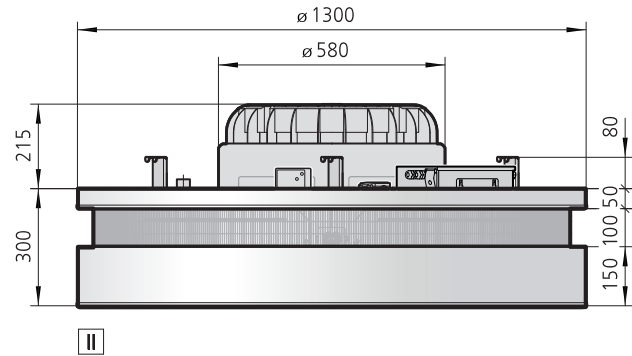
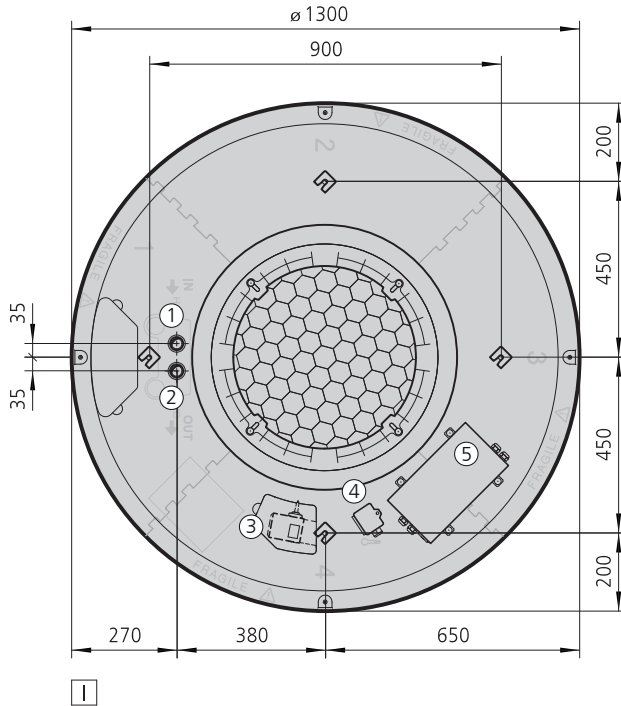
- fan control via 0-10 V DC
- Ext. motor can be controlled via Modbus
- valve control via 24 V DC, alternatively via 230 V AC
- damper switch-over controlled by ext. summer/winter switch-over (heating/cooling switch-over)

Do you require further information, such as installation instructions, wiring diagrams or the Declaration of Conformity?

<https://www.kampmanngroup.com/hvac/35400017425800#Downloads>

Unit Heaters Ultra Allround

Technical drawing* (dimensions in mm)



View

- I** top view
- II** side view

Further information

- ① Flow
- ② Return
- ③ frost protection thermostat (optional)
- ④ supply air temperature sensor
- ⑤ Electrical junction box

Specifications

Housing	partially cased
Weight [kg]	59
Water content [l]	3.3
Connection	1"

*Figure shows basic unit only



Conformity to the Hygiene Directive VDI 6022

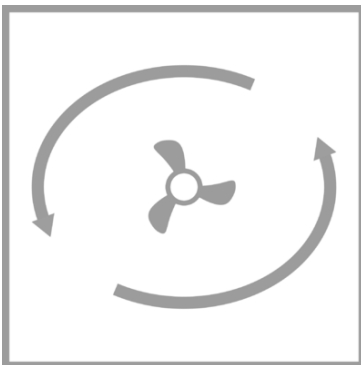
VDI 6022, as the authoritative guideline for hygiene requirements, formulates the integrated requirements for air conditioning systems and units in occupied zones, such as workplaces, meeting rooms, break rooms, living rooms, sports venues and sales rooms. Compliant units ensure a construction that prevents deterioration of the room air due to the use of the unit, e.g. caused by dirt in the interior. VDI 6022-compliant units also provide good access for cleaning and maintenance. The properties and type of components, such as the quality of the air filters, a removable and easy-to-clean condensate tray, inspection openings and accessibility of all air-routing parts, are defined and ensure a healthy supply air.



Information on planning and design

The number and size of the Ultra Allround to be used is based on the heat load or cooling load calculated. Also take into consideration structural factors, such as the fixing and installation points, and the permitted sound level.

If only very slow air velocities are required, we would recommend designing the Ultra Allround so that the required heat or cooling output is produced at low to medium fan speed. In practice, design with a control voltage of 6 V has proved itself with EC fans. This leaves some reserve for heating up after longer interruptions (e.g. at weekends) or cooling output reserves for extreme periods of heat.



Air circulation

Designing unit heaters based on the air circulation has proved to be very practical to obtain a simplified and reliable unit selection and uniform air distribution. The right gaps between unit heaters can be obtained taking into consideration the maximum mounting height without the need for additional calculations.

$$\text{Air circ. [1/h]} = (\text{VL}_{\text{eff}} \times n) / V$$

Air circ. [1/h] = air circulation at the design stage

VL_{eff} [m³/h] = effective air volume of unit heater at the design stage

V [m³] = Room volume

n [-] = number of unit heaters



Noise

The large-sized fans with low basic speeds permit very low noise levels. Nonetheless, take into account the permissible noise level in your design. Troublesome noises can occur specifically at higher fan speeds. Determine the design fan speed depending on the type of room. We recommend checking the building approval regulations governing maximum permitted sound levels before commencing the design. Frequently reference is also made in this respect to other standards and regulations, e.g. DIN EN 15251, DIN EN 13779, Workplace Directive, VDI 2082 etc. The base sound level in a room plays a major role in the subjective perception of the source of the sound or the increased sound level. We would therefore recommend first measuring the base sound level to determine the permitted sound pressure level. If the sound pressure level of the unit lies below the room level, then the overall sound level will change only imperceptibly. However, if only very low sound levels are permitted, we would recommend designing the units so that the required output can be achieved at lower fan speeds.

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Design information



Life Cycle Assessment Data (LCA)

The environmental impact of the product is considered over its entire 'cradle-to-cradle' life cycle. The Life Cycle Assessment (LCA) data is published in the form of an Environmental Product Declaration (EPD) in accordance with EN 15804 and is available to download from the International EPD System. Article number-specific life cycle assessment data is available in the Technical Data. EPDs are considered as evidence in building sustainability certification by DGNB, BREEAM or LEED among others. The product is registered in the DGNB Navigator construction product platform.