



▶ **Ultra Allround**  
unit heater

# Ultra Allround

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

▶ **Technical Catalogue**

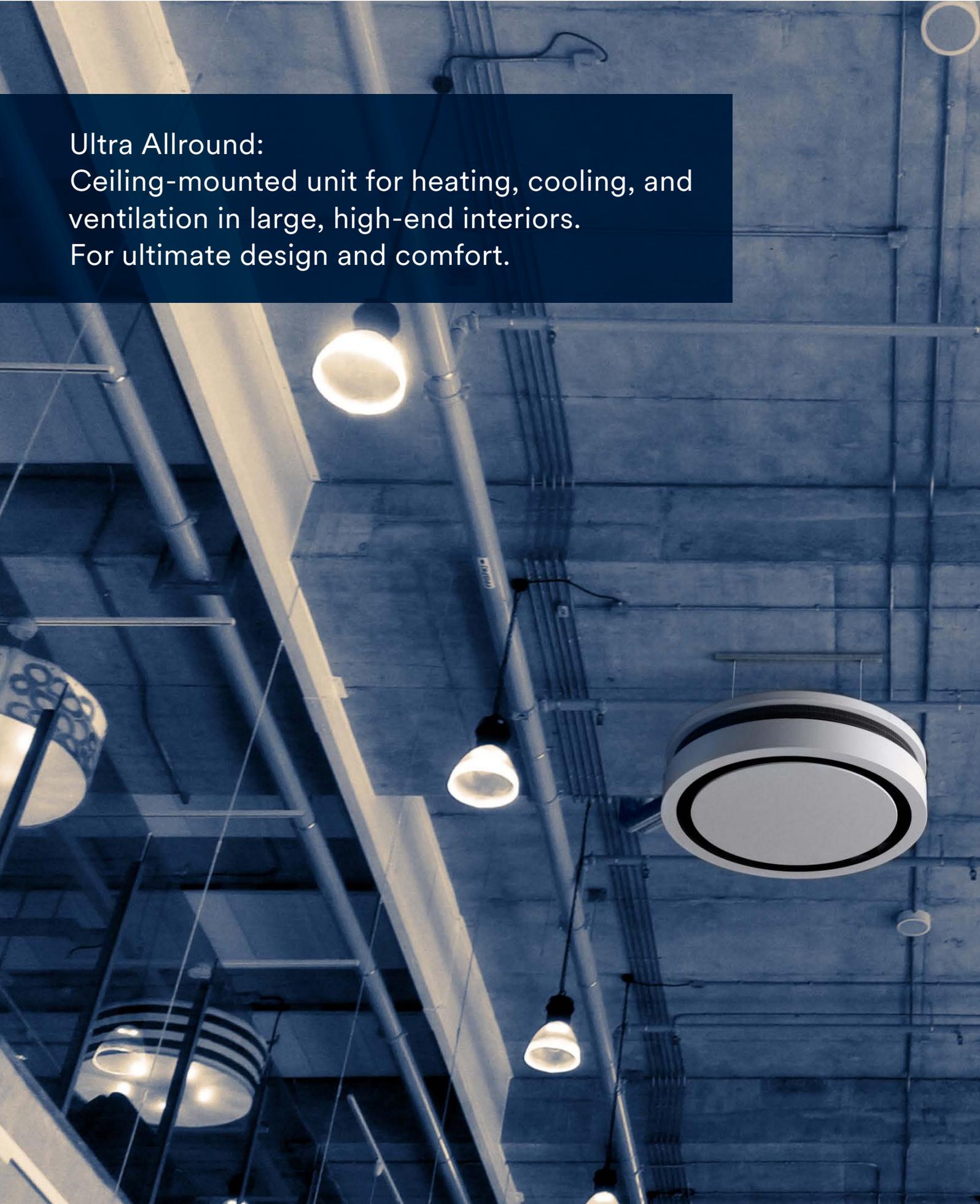
**KAMPMANN**



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Ultra Allround:  
Ceiling-mounted unit for heating, cooling, and  
ventilation in large, high-end interiors.  
For ultimate design and comfort.





# 01 ▶ Product information

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## Ultra Allround – maximum efficiency meets innovative design

For sustainable heating and cooling from a height of seven metres

Innovative technology directs the air stream for heating or cooling to the required locations.

Ultra Allround ceiling units can be configured for heating and/or cooling and are used for air recirculation or primary ventilation in:

- > retail chains
- > exhibition spaces and retail areas
- > entrance vestibules
- > retail outlets
- > industry
- > rooms with a ceiling height of up to seven metres

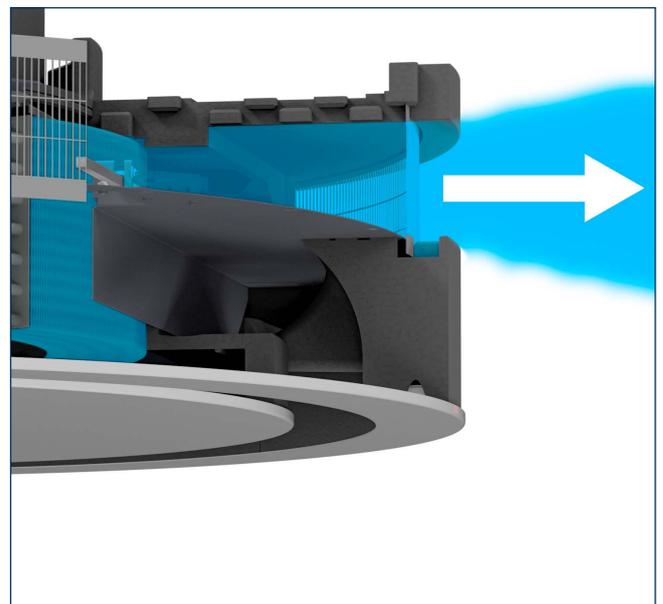
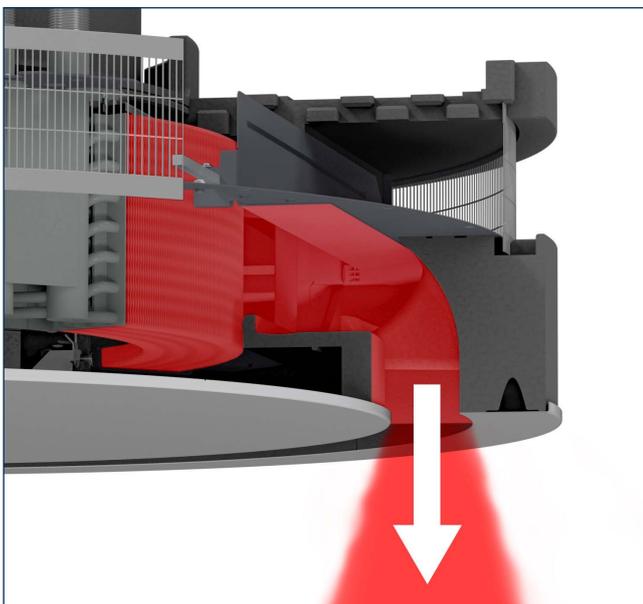
Ultra Allround units are available in two sizes. The overall installation height in both cases is only 515 mm. Different output levels are achieved, depending on the size.

### Operating principle

Air is drawn in via the radial fan and blown through the annular heat exchanger into the room.

In heating mode, warm air is discharged vertically into the room and in cooling mode the air distribution is horizontal.

The heat exchangers are specially designed for low-temperature operation to achieve the maximum output with the greatest energy efficiency.



# Product data



## Product benefits

- ▶ 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.



## Features

- ▶ Installation heights of up to 7.0 m are possible
- ▶ Blends into the interior design, fully or partially encased, as required
- ▶ Energy costs can be saved by minimal temperature stratification
- ▶ For all large spaces with high ceilings and passing traffic
- ▶ Suitable for use with heat pumps

<b>Installation</b>	▶ Ceiling-mounted
<b>Air stream</b>	▶ Recirculating air
<b>Heating</b>	▶ LPHW
<b>Cooling</b>	▶ CHW ▶ Refrigerants (on request)
<b>Hybrid Eco</b>	▶ In conjunction with primary air spigot (optional)
<b>KaControl</b>	▶ Optionally integrated

## Performance data

**Heat output [kW]<sup>1)</sup>** ▶ 9.1 – 51.8

**Sound pressure level, heating** ▶ 6 – 56  
[dB(A)]<sup>2)</sup>

**Sound power level, heating** ▶ 22 – 72  
[dB(A)]

**Cooling output [kW]<sup>3)</sup>** ▶ 4.0 – 22.9

**Sound pressure level, cooling** ▶ 11 – 57  
[dB(A)]<sup>2)</sup>

**Sound power level, cooling** ▶ 27 – 73  
[dB(A)]

<sup>1)</sup> at LPHW 75/65 °C,  $t_{11} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 3 m, a room volume of 2000 m<sup>3</sup> and a reverberation time of 1.0 s (in accordance with VDI 2081).

<sup>3)</sup> at CHW 7/12 °C,  $t_{11} = 27$  °C, 48% relative humidity

### Operating limits

- ▶ Max. operating pressure: 16 bar
- ▶ Max. entering water temperature: 95 °C
- ▶ Min. entering water temperature heating: 35 °C
- ▶ Min. entering water temperature cooling: 4 °C
- ▶ Max. air inlet temp.: 40 °C
- ▶ Max. glycol volume: 50 %

## Applications

Buildings of all kinds, which are to be ideally heated and ventilated with centralised or decentralised control.



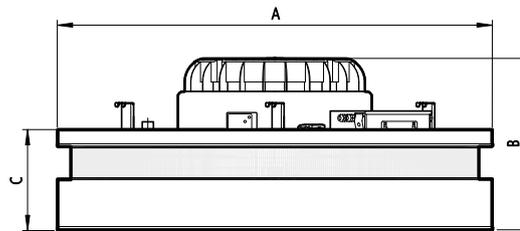
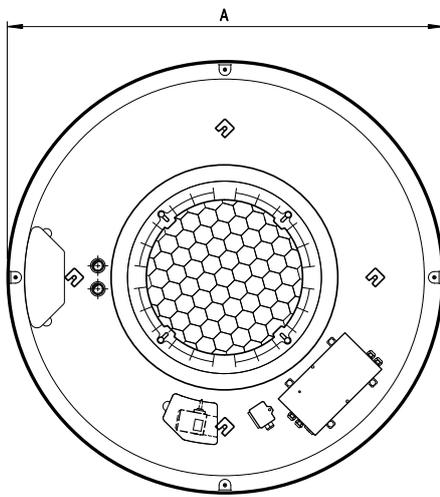
# Selection guide

Model size	Diameter (A) [mm]	Dimensions Height (B) [mm]	Height (C) [mm]	Heat exchanger model copper/aluminium					
				Heat output <sup>1)</sup> [kW]	Air flow, heating [m <sup>3</sup> /h]	Sound power level, heating [dB(A)]	Cooling output <sup>2)</sup> [kW]	Air flow, cooling [m <sup>3</sup> /h]	Sound power level, cooling [dB(A)]
1	1300	516	300	9.1 – 42.2	560 – 3480	22 – 71	4.0 – 18.2	590 – 3670	28 – 71
2			350	10.3 – 51.8	630 – 3880	27 – 72	4.5 – 22.9	670 – 4140	27 – 73

<sup>1)</sup> at LPHW 75/65 °C,  $t_{L1} = 20$  °C

<sup>2)</sup> at CHW 7/12 °C,  $t_{L1} = 27$  °C, 48% relative humidity

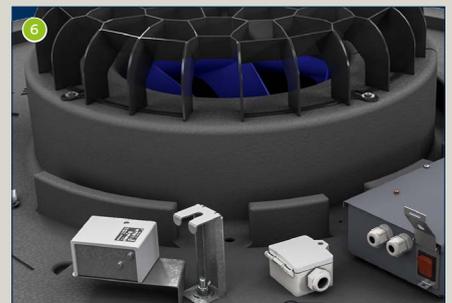
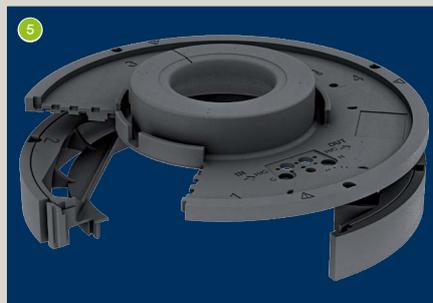
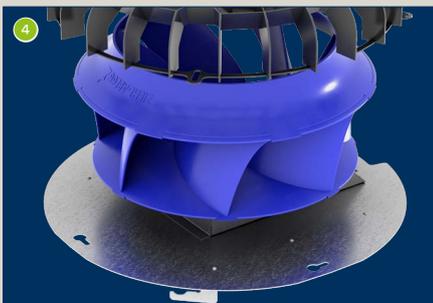
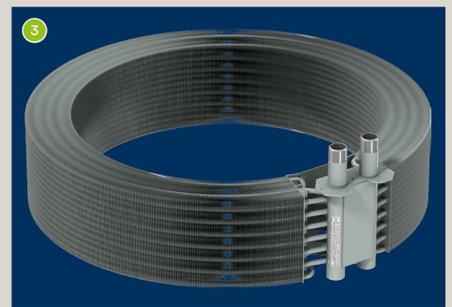
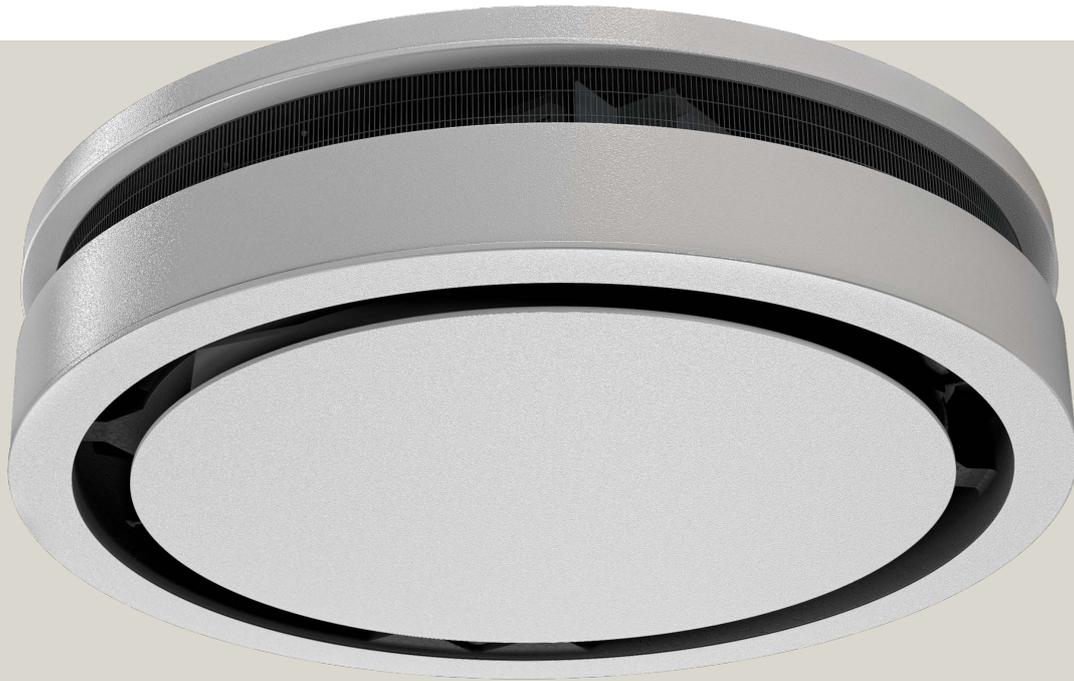
## Technical drawing (Dimensions in mm)



# Ultra Allround at a glance

VDI 6022  
conformity con-  
firmed





#### 1 Base panel

- > can be removed by briefly turning it without the need for a tool, fitted with a fall guard

#### 2 Plastic condensate tray with condensate pump

- > maintenance-friendly, thanks to external pump sump with outlet spigots
- > can be easily removed by means of quick-release mechanism with insertion nut
- > condensate pump and pump sump can be accessed from above through an inspection opening

#### 3 Heat exchanger

- > steel collector and manifold, corrosion-proof, suitable for LPHW up to 90 °C and 16 bar continuous operating pressure
- > connections led out through the top of the unit
- > suitable for low temperature heating systems

#### 4 Radial fan

- > infinitely-variable EC radial fan
- > highly efficient due to aerodynamic vane design
- > motor protection: IP 54

#### 5 EPP housing

- > EPP housing for optimum air routing
- > up to 80 kg lighter
- > air routing with organic shape
- > fully recyclable

#### 6 Inflow nozzle and tamper protection

- > optimised air flow into fan
- > finger guard

## 02 ▶ Technical data



## Advice on measuring conditions

The heat outputs were determined in accordance with DIN EN 16430 "Fan-assisted heaters, convectors and trench convectors" and the cooling outputs in accordance with DIN EN 1397:2022 "Heat exchangers - Hydronic room fan coil units - Test procedures for establishing the

### Heat outputs

DIN EN 16430 describes the performance measurements of fan-assisted heaters and trench convectors in particular under practical operating conditions based on DIN EN 442 "Radiators and convectors".

- > Part 1 "Technical specification and requirements"
- > Part 2 "Test method and performance data"

### Cooling outputs

The specific requirements for cooling mode are taken into account in DIN EN 1397. They are also based on Eurovent certification.

### Normative reference:

- > EN 16583; Determining the sound power levels of noise sources
- > EN 45001; General criteria for the operation of test laboratories
- > ISO 5801; Industrial fans; Performance testing using standardised airways
- > ISO 5221; Air distribution and air diffusion; Rules for methods of measuring air flow rate in an air handling duct

The air intake temperature of the fan coil is selected as the reference/air temperature. This must not be confused with the room temperature. In practice, the units are placed on the façade as window parapet units. Due to the temperature stratification that occurs, the air intake temperature differs from the room air temperature (measured at a height of 1.5 m).

### Acoustics

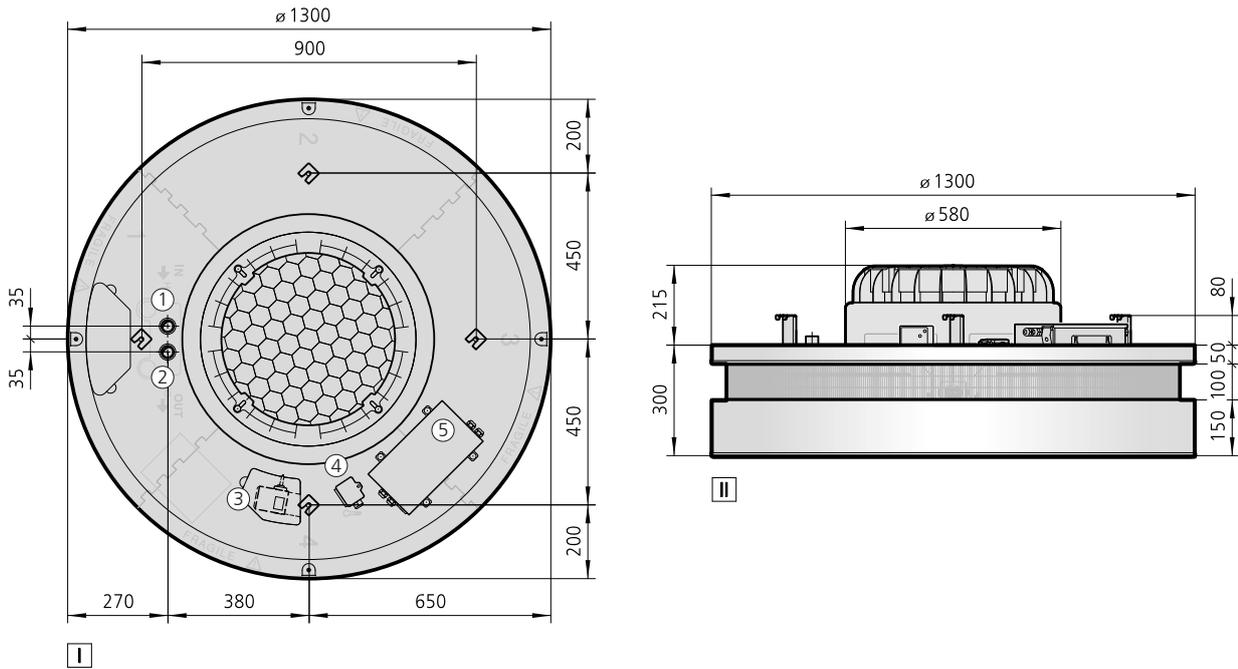
Fan coils are very often used in acoustically sensitive areas. The units are therefore designed to produce as little noise as possible. The acoustic data was recorded according to the provisions of DIN EN 16583 by DIN EN ISO 3744 and DIN EN ISO 3741 in the Kampmann GmbH laboratories. A room attenuation of 8 dB(A) is assumed when specifying the sound pressure level.

# Ultra Allround

## Unit design heating or cooling

### Model size 1

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

Type	Housing	Weight [kg]	Water content [l]	Connection
354000174258**	partially cased	59	3.3	1"
354001174258**	fully cased	75	3.3	1"

**Performance data**

Model size	Control voltage	Heating						Cooling						Nominal fan speed	Power consumption	Current consumption	Throw	Max. mounting height
		Air flow	SFP value	Heat output <sup>1)</sup>	Outlet air temperature	Sound pressure level <sup>2)</sup>	Sound power level	Air flow	SFP value	Cooling output, total <sup>3)</sup>	Outlet air temperature	Sound pressure level <sup>2)</sup>	Sound power level					
	[V]	[m <sup>3</sup> /h]	[Ws/m <sup>3</sup> ]	[kW]	[°C]	[dB(A)]	[dB(A)]	[m <sup>3</sup> /h]	[Ws/m <sup>3</sup> ]	[kW]	[°C]	[dB(A)]	[dB(A)]	[1/min]	[W]	[A]	[m]	[m]
1	10	3480	275	42.2	56.5	55	71	3670	260	18.2	15.5	55	71	956	266	1.2	4.6	8.6
	8	2750	176	35.1	58.5	48	64	2900	167	15.2	14.9	49	65	755	134	0.6	3.6	7.0
	6	2020	106	27.4	60.9	40	56	2130	100	11.9	14.1	41	57	554	59	0.3	2.7	5.4
	4	1290	62	18.9	64.2	29	45	1360	59	8.2	12.9	29	45	353	22	0.2	1.8	3.9
	2	560	65	9.1	69.2	6	22	590	61	4.0	11.2	12	28	152	10	0.1	1.5	2.5

Use our calculation tools on our website to easily calculate heat outputs and other technical data with just a few clicks!

▶ <https://www.kampmanngroup.com/hvac/products/unit-heaters/ultra-allround#Calculate-performance-data>

<sup>1)</sup> at LPHW 75/65 °C,  $t_{r1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m<sup>3</sup> and a reverberation time of 2.0 s (in accordance with VDI 2081).

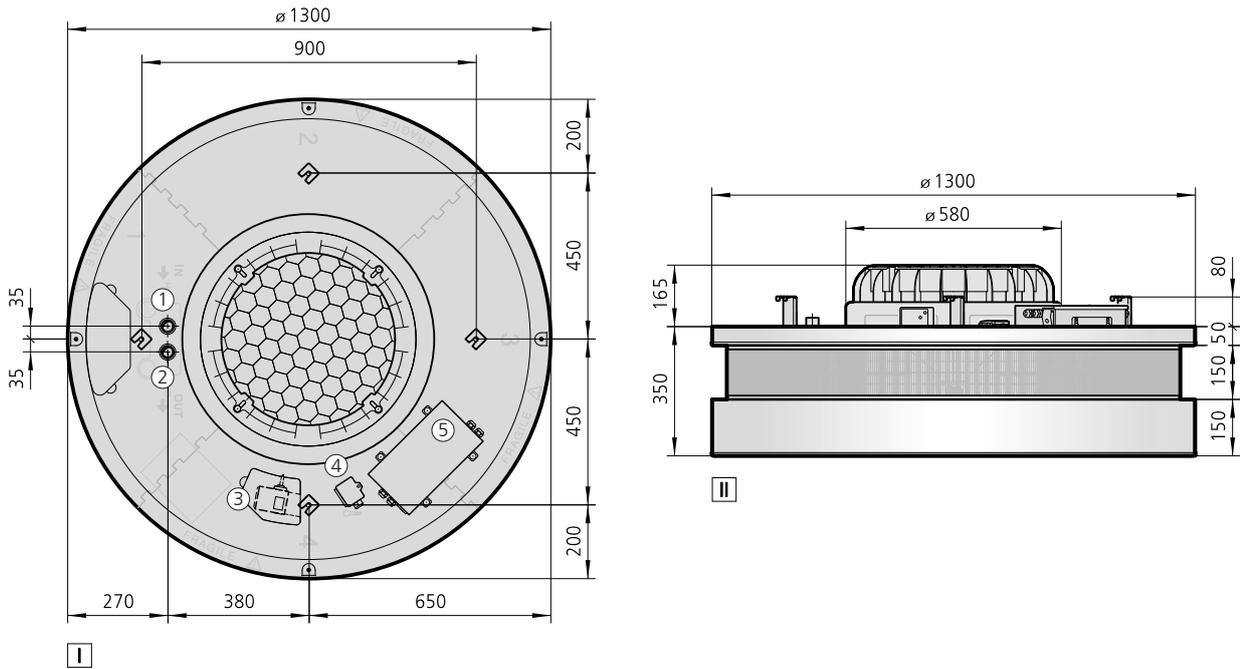
<sup>3)</sup> at CHW 7/12 °C,  $t_{r1} = 27$  °C, 48% relative humidity

# Ultra Allround

## Unit design heating or cooling

### Model size 2

**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**

Type	Housing	Weight [kg]	Water content [l]	Connection
354000274258**	partially cased	59	3.5	1"
354001274258**	fully cased	75	3.5	1"

**Performance data**

Model size	Control voltage	Heating						Cooling						Nominal fan speed	Power consumption	Current consumption	Throw	Max. mounting height
		Air flow	SFP value	Heat output <sup>1)</sup>	Outlet air temperature	Sound pressure level <sup>2)</sup>	Sound power level	Air flow	SFP value	Cooling output, total <sup>3)</sup>	Outlet air temperature	Sound pressure level <sup>2)</sup>	Sound power level					
	[V]	[m <sup>3</sup> /h]	[Ws/m <sup>3</sup> ]	[kW]	[°C]	[dB(A)]	[dB(A)]	[m <sup>3</sup> /h]	[Ws/m <sup>2</sup> ]	[kW]	[°C]	[dB(A)]	[dB(A)]	[1/min]	[W]	[A]	[m]	[m]
2	10	3880	249	51.8	60.1	56	72	4140	233	22.9	14.2	57	73	959	268	1.2	4.9	9.0
	8	3070	159	42.3	61.5	49	65	3270	149	18.7	13.7	50	66	758	136	0.6	3.9	7.3
	6	2250	96	32.5	63.3	40	56	2410	90	14.4	13.2	41	57	557	60	0.3	2.9	5.7
	4	1440	56	21.9	65.7	28	44	1540	53	9.7	12.4	29	45	356	23	0.2	1.9	4.1
	2	630	58	10.3	69.5	11	27	670	54	4.5	11.4	11	27	155	10	0.1	1.5	2.6

Use our calculation tools on our website to easily calculate heat outputs and other technical data with just a few clicks!

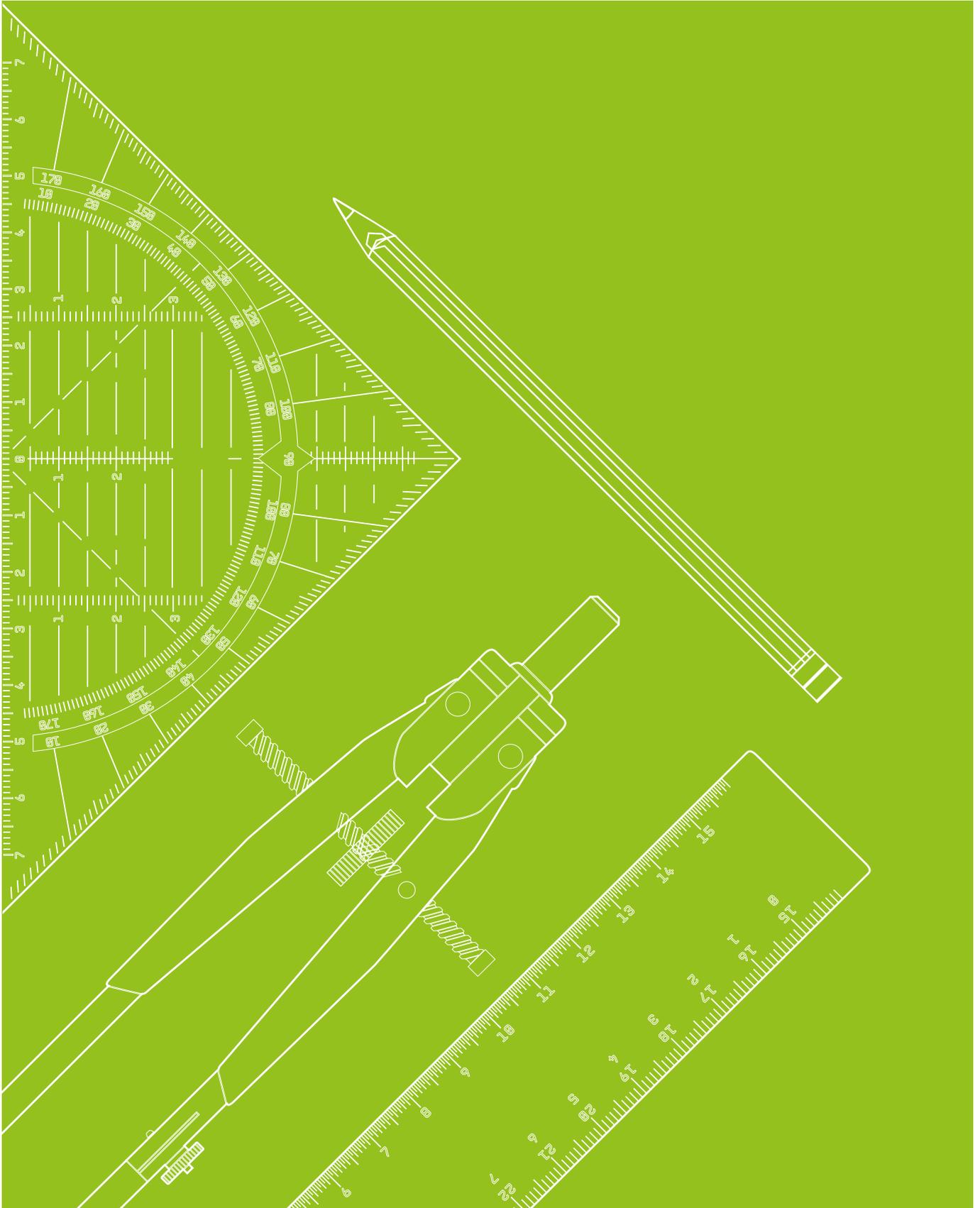
▶ <https://www.kampmanngroup.com/hvac/products/unit-heaters/ultra-allround#Calculate-performance-data>

<sup>1)</sup> at LPHW 75/65 °C,  $t_{r1} = 20$  °C

<sup>2)</sup> The sound pressure levels were calculated with an assumed room insulation of 16 dB(A). This corresponds to a distance of 5 m, a room volume of 3000 m<sup>3</sup> and a reverberation time of 2.0 s (in accordance with VDI 2081).

<sup>3)</sup> at CHW 7/12 °C,  $t_{r1} = 27$  °C, 48% relative humidity

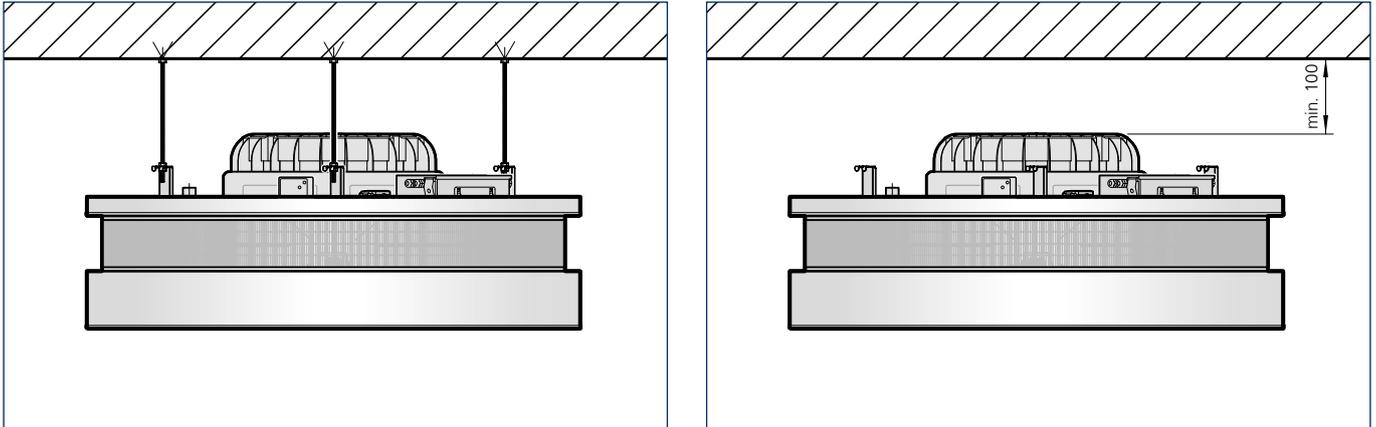
# 03 ▶ Design information



## Installation

The units are installed using threaded rods or wire cables. They need to be suspended at a height of at least 100 mm from the ceiling.

Their packaging can be used to protect the units during the construction phase, and prevent the ingress of dust.



## Unit design

The selection and configuration of the units depends on more than just the heat load calculated. Other factors including the building and acoustic conditions and the specific characteristics of the unit need to be taken into consideration.

The required units are defined based on the commonly accepted standards and guidelines.

The required number, size and design stage are calculated based on the:

- > calculated heat requirement
- > maximum mounting height
- > sound levels to be adhered to
- > structural conditions, such as occupied zones, installation points, furnishings and fittings

## Maximum mounting height – Throw

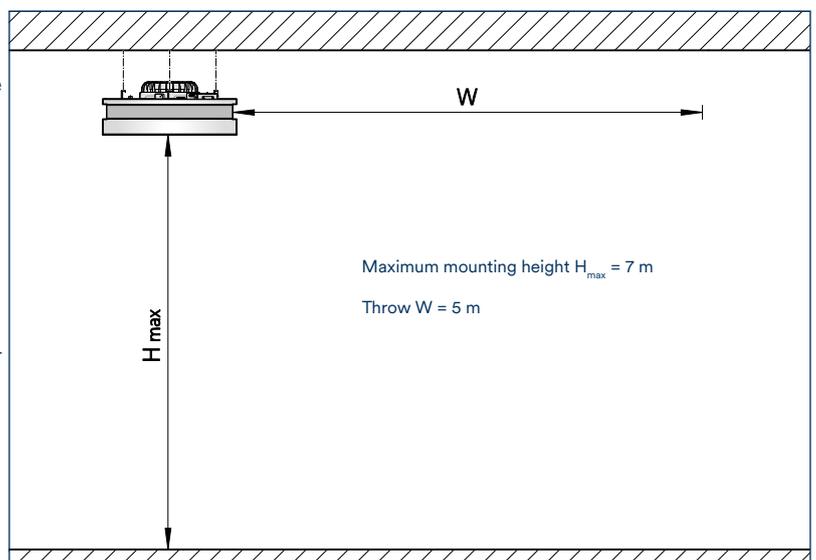
The maximum mounting height and especially the throw are directly dependent on the

- > shape of the room
- > excess temperature of the air volume flow
- > fixtures and furnishings in the space
- > air volume flow

The throw of the Ultra Allround is defined as the maximum horizontal penetration depth of the primary air stream under ideal conditions.

These are guide values only as the throw depends significantly on the shape of the room, fixtures and furnishings, and uplift due to higher discharge air temperatures.

The maximum mounting height  $H_{\max}$  is seven metres.



## Design for cooling mode

This special version is suitable for heating with LPHW and also for cooling with CHW.

A condensate tray is therefore built in below the heat exchanger across the entire underside of the unit. There is a condensate tank in the tray which is located near the connections and is accessible from above.

Only two pipes, the supply and return, are routed to the Ultra Allround (2-pipe system). Depending on the system, a chiller may be required for CHW. Changeover between heating and cooling is triggered centrally.

The settings for the heating (vertical) and cooling (horizontal) air discharge direction are made via the control technology.

All pipework and fittings must be insulated and laid in accordance with the guidelines for refrigerant lines.

In cooling mode, the radial fan can be operated at maximum speed (10 V) even below the dew point.

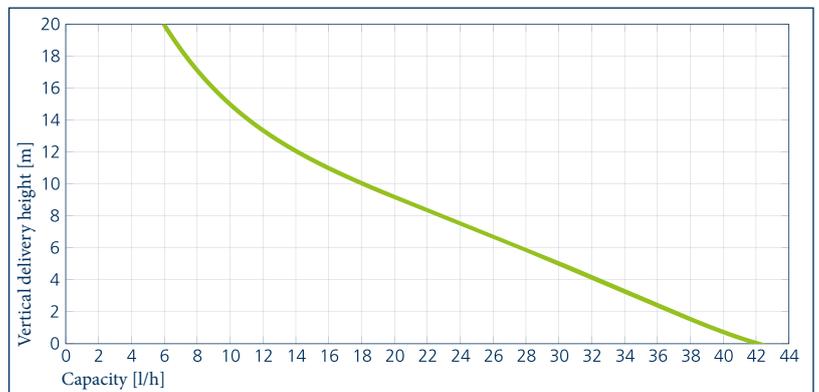
Drips are not anticipated due to the special design of the unit.

### Condensate pump

The self-priming condensate pump is supplied complete with fixings up to the hose connector for the on-site condensate discharge line. The condensate pump is installed directly in the pump sump and can be accessed through an inspection opening on the top of the unit. No tool is needed for this.

The pump can also be accessed from underneath the unit by removing the lower cover, which makes it exceptionally maintenance-friendly.

Maximum delivery height	20 m
Flow rate	42 l/h
Supply voltage	230 V/50 Hz
Power consumption	8 W
Condensate discharge line	6.25 mm inner diameter
Conformity	UK 778



### Sound power level – sound pressure level

The fans are generously sized with low basic fan speeds and are therefore extremely quiet. Nevertheless, the permissible sound pressure level must be taken into account. Noise may be produced especially at higher fan speeds. The design fan speed therefore needs to be specified depending on the type of room.

We recommend checking the building approval regulations governing the maximum permitted sound levels from the outset. Reference is also frequently 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 of the Ultra Allround. 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 noise levels are permitted, we would recommend designing the units so that the required output can be achieved at lower fan speeds.

Information on the A-rated total sound levels and sound pressure levels can be found in the technical data tables. The sound power level needed to determine the differential sound level was calculated using the enveloping surface method as per DIN 45635 employing a comparison method.

The sound pressure level data is based on the measurements of the sound power level in a low-reflection room with average sound absorption at a distance of 3 m from the air outlet and at an angle of less than 45° without a duct connection. The stated values can differ in practice as the actual sound pressure level in the room largely depends on the acoustic properties of the space, reflections, duct connections, etc.

## Hybrid ECO system

### Air exchange separate from temperature control for comfort and efficiency

Large public spaces, workshops and sales rooms are nowadays not only heated and air conditioned by unit heaters, they can also be supplied with outside air. In this configuration, the extract air is discharged out of the building by means of natural overflow in accordance with the ErP Directive (EU) 1253/2014 without previously recovering the heat in the air. This results in high energy costs.

Unlike simple fans that supply outside air to a building, ventilation units with heat recovery offer the benefit of transferring heat recovered from the extract air into the supply air in accordance with the ErP Directive (EU) 1253/2014.

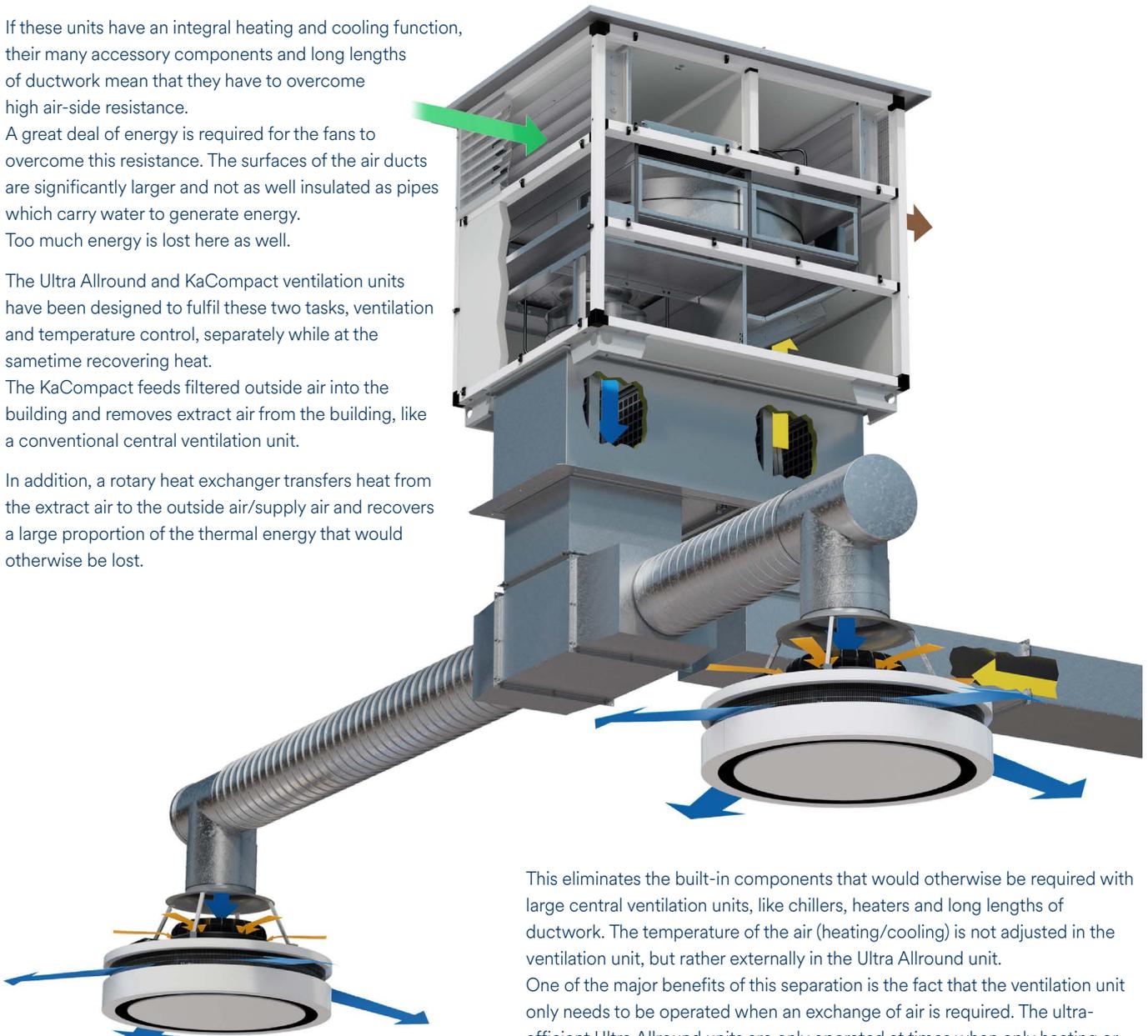
If these units have an integral heating and cooling function, their many accessory components and long lengths of ductwork mean that they have to overcome high air-side resistance.

A great deal of energy is required for the fans to overcome this resistance. The surfaces of the air ducts are significantly larger and not as well insulated as pipes which carry water to generate energy. Too much energy is lost here as well.

The Ultra Allround and KaCompact ventilation units have been designed to fulfil these two tasks, ventilation and temperature control, separately while at the same time recovering heat.

The KaCompact feeds filtered outside air into the building and removes extract air from the building, like a conventional central ventilation unit.

In addition, a rotary heat exchanger transfers heat from the extract air to the outside air/supply air and recovers a large proportion of the thermal energy that would otherwise be lost.



This eliminates the built-in components that would otherwise be required with large central ventilation units, like chillers, heaters and long lengths of ductwork. The temperature of the air (heating/cooling) is not adjusted in the ventilation unit, but rather externally in the Ultra Allround unit.

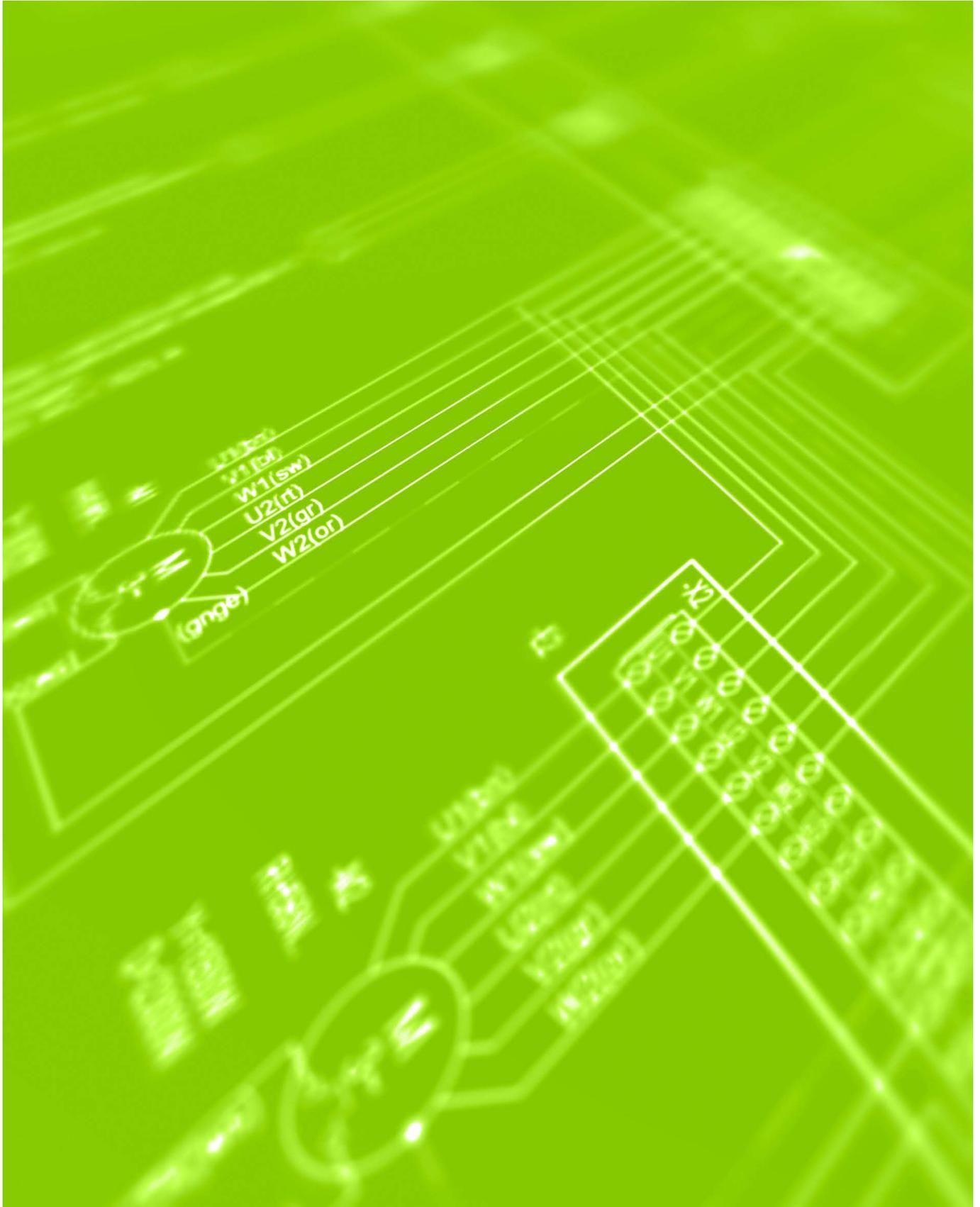
One of the major benefits of this separation is the fact that the ventilation unit only needs to be operated when an exchange of air is required. The ultra-efficient Ultra Allround units are only operated at times when only heating or cooling is needed. The energy-saving principle of the separation of functions is referred to as “Hybrid ECO” at Kampmann and has been used by many customers for years.

These ventilation units are extremely important in this system and are designated as “fresh-air ventilators” if they fulfil the following criteria:

- > heat recovery via a rotary heat exchanger
- > energy-saving infinitely variable EC fans for precise adjustment of the air quantity
- > KaControl OUTS control panel for control of the ventilation units and Ultra Allround units

# 04 ▶ Control technology

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# Description of control Ultra Allround electromechanical version (\*00)

## Product features

In electromechanical versions, all factory-fitted actuators are wired to the terminal on the PCB. Irrespective of the control, 24 V DC valve actuators are required, which also need to be connected to the terminals of the PCB. The valve actuators on the PCB can either be controlled with 230 V AC or 24 V DC. A condensate alarm is accompanied by the forced closing of the cooling valve. The appropriate terminals on the PCB are available for on-site valve actuators or a condensate pump. With the “motorised adjustment” version, the air discharge is controlled vertically/horizontally when the heating/cooling switches over.

## Fans

The speed of the EC fans can be infinitely controlled via a 0–10 V DC signal. “Intelligent” motor electronics detect possible motor malfunctions and automatically switch off the fan. A condensate alarm and cooling switch-over are indicated by the associated LED on the PCB. Motor malfunction and condensate alarm contacts (30 V / 2 A) for external evaluation are also available on the PCB.

## Control units

Various control units are available for operation and control.

### Fan speed controller, type 30510

Infinitely variable fan speed controller for use in conjunction with a thermostat for room temperature-dependent two-point control of heating or cooling units in closed rooms. The fan speed is set manually at the speed controller to between 0-100%. The ventilation units are activated at the pre-set fan speed via thermostats depending on the temperature. It is possible to automatically switch between day and night mode using timer program solutions (type 30056; type 30076).



### Room thermostat, type 30155 (heating and cooling)

- > 2- and 4-pipe applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- > ABS plastic housing, functional and rugged design in pure white similar to RAL 9010 for surface-mounting on a flush box or on the wall using a surface-mounted frame (accessory)
- > simple operation using a large rotary dial for temperature setting with mechanical range limitation of the temperature setpoint, operating mode selector switch standby, manual fan, automatic fan, 3-stage switch for pre-selecting the fan speed when the operating mode selector switch is in the “Manual fan” position
- > control input for heating/cooling switch-over with 2-pipe systems
- > control input can either be set to Comfort/ECO or ON/OFF switch-over
- > room frost protection function < 5 °C heating valve open, fan stage 3
- > optional use of the internal or external room temperature sensor (accessory)
- > up to five units can be operated in parallel



### Clock thermostat, type 30256

Clock thermostat to control fan speed for wall-mounted installation with unobtrusive design

- > 2- and 4-pipe applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- > ABS plastic housing, rugged design, pure white, similar to RAL 9010, for surface-mounting on a flush box, can be integrated in switch product range with dimensions 50 x 50 mm
- > display with adjustable backlight
- > operated via four sensor buttons
- > timer with automatic summer/winter switch-over
- > control input for heating/cooling switch-over with 2-pipe systems
- > control input can either be set to Comfort/ECO or ON/OFF switch-over
- > unit frost protection function < 5 °C valve(s) open, optional use of the internal or external room temperature sensor (accessory)
- > up to five units can be operated in parallel



### Climate controller type 148941, type 148942, type 148943, type 148944

The climate controller is a control unit with a high-quality glass surface

- > 2- and 4-pipe applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- > 2.5" LCD display
- > high-quality glass surface finish with capacitive keys
- > LED ring acts as key feedback
- > selection of the value to be displayed (room temperature, setpoint, setpoint offset)
- > automatic LED backlight
- > optional use of the internal or external room temperature sensor (accessory)
- > room temperature control
- > programmable room frost protection function  $RT < 8\text{ }^{\circ}\text{C}$  = heating valve open, fan stage 1
- > programmable unit frost protection function  $RT < 4\text{ }^{\circ}\text{C}$  = valve(s) open, fan off
- > standby mode
- > Eco/Day switch-over
- > manual or automatic mode
- > functions are indicated in the display
- > alarms are indicated in the display
- > timer program with three time channels, each with four switching points
- > cleaning mode
- > programmable language: German or English
- > Modbus RTU slave interface for connection to higher-level building automation system (only with type 148943 and type 148944)
- > three control inputs with type 148941 and type 148942, and two control inputs with type 148943 and type 148944 (programmable functions, e.g. window contact, occupancy detection, heating/cooling switch-over), external room sensor
- > password-protected parameter settings level
- > surface-mounted on flush box
- > pure white (type 148941 and type 148943) or black (type 148942 and type 148944)
- > up to five units can be operated in parallel



### Electronic fan speed controller, type 30515

The infinitely variable electronic compact controller is designed for the operation of up to 10 recirculating air units (2-pipe heating/cooling) with EC fans to heat or cool rooms. The controller has a temperature control, which operates in combination with a fan and shut-off valve. The temperature setpoint can be set for day and night mode. A digital timer, including day, night and week program, is also included. The enclosed room sensor is mounted separately. A mean value can be obtained from two or four room sensors as an option. The fan speed can also be manually adjusted in addition to the infinitely variable control. Other features of the control unit include the frost protection function, external enable and potential-free operating and collective fault message. If required, the fan can also be used exclusively for air circulation without heating or cooling mode.



### Operation using on-site systems

Analogue and digital signals can be used for actuation instead of Kampmann control units.

The following analogue and digital inputs and/or outputs are needed:

- > fan speed control via a 0-10 V VDC signal, the fan starts up safely at 1.5 V VDC
- > control input to detect any possible motor malfunction
  - > *only required with electro-mechanical version*
- > control input to detect any pending condensate alarm
  - > *only with electro-mechanical version with condensate pump*
- > analogue or digital signals (24 V DC or 230 V AC) to control the valve actuator depending on the drive design
- > digital signals (potential-free) for heating/cooling switch-over and associated vertical/horizontal air deflection
  - > *air deflection is only possible with the version with motorised adjustment*

# Description of Ultra control – KaControl version

## The all-inclusive solution!

### Product features

Units configured for operation with KaControl are fully wired and fitted with all electrical components ready for connection (with the exception of optional accessories). The integrated powerful programmable KaControl microprocessor control covers all the necessary functions of the Ultra Allround.

The KaController control unit is the “face” of KaControl. A group of up to two units can be formed using a KaController control unit without the additional effort required to assign addresses. Optional interface cards can be plugged in order to interface with higher-level control systems.

### Fans

The speed of the EC fans used in the units is controlled by a 0-10 V DC signal from the KaControl. “Intelligent” motor electronics detect possible motor malfunctions and automatically switch off the fan. If a motor in the unit to which the KaController is connected malfunctions, this is displayed on the KaController.

### Control unit

Different versions of the KaController control unit are available for operation and control.

### KaController

The KaController offers maximum operating convenience with a large-format display, one-touch operation and optional side function keys for quick access.

Based on the principle of “as little as possible and no more than is necessary”, even untrained users can intuitively get to grips with the control options.

Language-independent pictograms are displayed. The basic functions can easily be adjusted at the KaController.

### Product features

- > plastic housing, colour similar to RAL 9010 (type 196003210001 and 196003210002) or black (type 196003210006) for surface-mounting on a flush box or surface-mounted frame (accessory)
- > high-quality design of room control units, with large-format LCD multifunctional display with energy-saving, automatically switching LED backlight
- > push-turn navigator dial with endless turn/latching function
- > side function keys for quick access (only with type 196003210002)
- > individually adjustable basic display
- > display of fault alarms
- > integrated weekly switching program
- > password-protected parameter settings level
- > integrated temperature sensor

*Important! A separate room temperature sensor is always required for the version supplied in an industrial housing.*

### KaControl control functions

The programmable KaControl microprocessor control offers a wealth of functions. The following factory settings are used for the Ultra Allround product:

- > 2- and 4-pipe applications, thermal valve actuators 24 V DC Open/Closed, normally closed
- > room temperature control with 2-point valve control and demand-based fan control in automatic mode or optional fixed stage selection
- > room frost protection function  $RT < 8\text{ °C}$  = heating valve open, fan stage 1, unit frost protection function  $RT < 4\text{ °C}$  = valve(s) open, fan off
- > optional use of the internal or external room temperature sensor (accessory)
- > an alarm from the unit (e.g. motor malfunction or condensate alarm) is detected by the KaControl control and issued via the KaController
- > control input for heating/cooling switch-over with 2-pipe applications



Type 196003210001



Type 196003210002



Type 196003210006



Type 196003214002

# 05 ▶ Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
	KaController	with one-button operation, 24 V wall-mounted room control unit, with integral room temperature sensor, Protection class IP 30, Temperature setting range 8 - 35 °C, Colour similar to RAL 9010 pure white, made of resistant PVC, Type 3210001	86 x 52 x 86	all units with control option KaControl -C1	<b>196003210001</b>
	KaController	with one-button operation, 24 V wall-mounted room control unit, with integral room temperature sensor, Protection class IP 30, Temperature setting range 8 - 35 °C, Colour similar to RAL 9017 traffic black, made of resistant PVC, Type 3210006	86 x 52 x 86	all units with control option KaControl -C1	<b>196003210006</b>
	KaController	with side operating keys, 24 V wall-mounted room control unit, with integral room temperature sensor, Protection class IP 30, Temperature setting range 8 - 35 °C, Colour similar to RAL 9010 pure white, made of resistant PVC, Type 3210002	86 x 52 x 86	all units with control option KaControl -C1	<b>196003210002</b>
	Industry KaController	industrial housing with hinged transparent cover, lockable, with side operating keys, Surface-mounted, Protection class IP 65, Colour grey, made of plastic, Type 3214002	200 x 110 x 195	all units with control option KaControl -C1	<b>196003214002</b>
	Room temperature sensor	Wall-mounted, Surface-mounted, Protection class IP 30, Colour similar to RAL 9010 pure white, made of plastic, Type 3250110 Is the KaController installation site suitable for a temperature measurement? - If it is not suitable, e.g. behind a curtain, then a KaControl room temperature sensor should be chosen for each group!	101 x 110 x 23	all units with KaControl -C1 and climate controller art. no. 19600014894*	<b>196003250110</b>
	Outside temperature sensor/industrial temperature sensor	Surface-mounted, Protection class IP 65, Colour similar to RAL 9010 pure white, Type 3250112	63 x 68 x 57	all units with control option KaControl -C1	<b>196003250112</b>
	Clip-on pipe sensor	to detect the medium temperature, Protection class IP 67, Temperature setting range -20 - 70 °C, Colour black, Type 3250115 Is there a risk of frost, e.g. due to the ingress of cold air - if so, then a KaControl clip-on pipe sensor should be chosen for each unit! heating/cooling changeover function only in conjunction with 3-way valve!	5 x 6 x 3000	all units with KaControl -C1 and climate controller art. no. 19600014894*	<b>196003250115</b>

CONTINUED ▶

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
	Serial KNX card	for integration into a KNX/EIB network, interface PCOS00KXN0, Type 3260702 The communication card slots into the free interface on the PCB.	35 x 20 x 80	all units with control option KaControl -C1	<b>196003260702</b>
	Serial CANbus card	to increase the number of units in a single-circuit system from 7 to a maximum of 30 units, one required per unit, Extension of the cable length from the first to the last unit from 30 m to 500 m, Can only be used with the KaControl -C1 control version!The room temperature cannot be recorded by a room sensor when using CanBus cards., Type 3260301	35 x 30 x 60	all units with control option KaControl -C1	<b>196003260301</b>
	Serial Modbus card	Type 3260101 Required for each device for connection to KaControl panels or on-site Modbus networks. The communication card slots into the free interface on the PCB.	31 x 12 x 61	all units with control option KaControl -C1	<b>196003260101</b>

CONTINUED ▶

Article	Article	Properties	Dimensions [mm]	Suitable for	Article no.
	Room thermostat	Heating/Cooling, 2- and 4-pipe, 3-stage. Only in conjunction with valves/valve kits with actuator, with OFF/Manual/Automatic fan switchover, 230 V AC, Open/Closed, Surface-mounted, Protection class II, Protection class IP 30, Temperature setting range 5 - 30 °C, Colour similar to RAL 9010 pure white, Type 30155 optional connectible, remote sensor art. no. 196000148921 can optionally be connected, clip-on sensor art. no. 196000148922	110 x 111 x 26	EC units electromechanical, 5 Katherm HK Trench Technology, 5 TOP, Ultra or Ultra Allround Unit Heaters, 5 Venkon or PowerKon LT Fan Coils, 5 KaCool D AF, KaCool W or KaDeck Fan Coils	<b>196000030155</b>
	Clock thermostat	Heating/Cooling, 2- and 4-pipe, continuously variable, with LCD operating menu and integrated timer program, 230 V AC, 1 W, flush-mounted, Protection class II, Protection class IP 30, Colour similar to RAL 9010 pure white, Type 30256 optional connectible, remote sensor art. no. 196000148921 can optionally be connected, clip-on sensor art. no. 196000148922	85 x 46 x 81	EC units electromechanical, 5 TOP, Ultra or Ultra Allround Unit Heaters, 5 Venkon Fan Coils, 5 KaCool D AF, KaCool W or KaDeck Fan Coils	<b>196000030256</b>
	Speed controller	continuously variable fan operation, 0-100% presettable, On/Off via room thermostat, surface-mounted protection class IP 54, flush-mounted protection class IP 44, 230 V AC, 0-100%, Surface-mounted, Protection class IP 54, Colour similar to RAL 9010 pure white, made of plastic, Type 30510	82 x 82 x 68	EC units electromechanical, 2 ProtecTor Door Air Curtains, 5 UniLine or Tandem Door Air Curtains, 10 TOP or Ultra Unit Heaters, 10 Venkon Fan Coils, 2 KaCool D AF or KaCool W AC Fan Coils	<b>196000030510</b>
	Electronic speed controller	microprocessor-controlled control with integrated digital timer, with day, night, week programme, continuously variable fan operation 0 to 100 %, manual or automatic, 0-10 VDC, recirculation air, 230 V AC, Protection class I, Protection class IP 40, including sensor IP 66, Type 30515	262 x 277 x 153	EC units electromechanical, 10 TIP, TOP or Ultra Unit Heaters, 10 Venkon Fan Coils, 5 KaCool D AF or KaCool W Fan Coils	<b>196000030515</b>
	Climate Controller	Heating/Cooling, 2- and 4-pipe, Without Modbus, only with valves/valve kits, continuously variable, with LCD operating menu and integrated timer program, 230 V AC, Open/Closed, Surface-mounted, Protection class IP 30, Temperature setting range 0 - 50 °C, Colour similar to RAL 9010 pure white, Type 148941	78 x 140 x 15	EC units electromechanical, 4 Katherm HK Trench Technology, 4 KaCool D AF, KaCool W, Venkon or KaDeck Fan Coils, 4 Ultra Allround Unit Heaters	<b>196000148941</b>

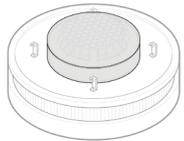
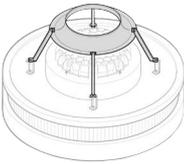
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Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
	Climate Controller	Heating/Cooling, 2- and 4-pipe, Without Modbus, only with valves/valve kits, continuously variable, with LCD operating menu and integrated timer program, 230 V AC, Open/Closed, Surface-mounted, Protection class IP 30, Temperature setting range 0 - 50 °C, Colour similar to RAL 9004 signal black, Type 148942	78 x 140 x 15	EC units electromechanical, 4 Kathern HK Trench Technology, 4 KaCool D AF, KaCool W, Venkon or KaDeck Fan Coils, 4 Ultra Allround Unit Heaters	<b>196000148942</b>
	Climate Controller	Heating/Cooling, 2- and 4-pipe, with Modbus, only with valves/valve kits, continuously variable, with LCD operating menu and integrated timer program, 230 V AC, Open/Closed, Surface-mounted, Protection class IP 30, Temperature setting range 0 - 50 °C, Colour similar to RAL 9010 pure white, Type 148943	78 x 140 x 15	EC units electromechanical, 4 Kathern HK Trench Technology, 4 KaCool D AF, KaCool W, Venkon or KaDeck Fan Coils, 4 Ultra Allround Unit Heaters	<b>196000148943</b>
	Climate Controller	Heating/Cooling, 2- and 4-pipe, with Modbus, only with valves/valve kits, continuously variable, with LCD operating menu and integrated timer program, 230 V AC, Open/Closed, Surface-mounted, Protection class IP 30, Temperature setting range 0 - 50 °C, Colour similar to RAL 9004 signal black, Type 148944	78 x 140 x 15	EC units electromechanical, 4 Kathern HK Trench Technology, 4 KaCool D AF, KaCool W, Venkon or KaDeck Fan Coils, 4 Ultra Allround Unit Heaters	<b>196000148944</b>

#### Thermostats

	Industrial thermostat	with setpoint adjustment by tool, with setpoint adjustment by tool, Protection class I, Protection class IP 54, Temperature setting range 5 - 30 °C, Type 30058	113 x 71 x 158		<b>196000030058</b>
	Industrial thermostat	with setpoint adjustment using a dial, with setpoint adjustment using a dial, Protection class I, Protection class IP 54, Temperature setting range 40 °C, Type 30059	113 x 71 x 158		<b>196000030059</b>

CONTINUED ▶

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
<b>Valves</b>					
	Thermoelectric shut-off valve	as a straight valve body with thermoelectric actuator 24 V AC/DC, 24 V AC/DC, Connection 1", kvs value 3.3 m³/h, Max. operating pressure 10 bar, Type 30931 Only in conjunction with a KaControl controller!	200 x 50 x 300		<b>196000030931</b>
	Control shut-off valve	24 V AC/DC, for automatic flow and temperature control, Connection 1", kvs value 3.1 m³/h, Max. operating pressure 25 bar, Type 30980	140 x 120 x 140	Model size 4 - 5, Flow volume Cooling (min./max.) 250 - 1800 l/h, DN 20	<b>196000030980</b>
		24 V AC/DC, for automatic flow and temperature control, Connection 1", kvs value 4.1 m³/h, Max. operating pressure 25 bar, Type 30981	140 x 120 x 140	Model size 4 - 6, Flow volume Cooling (min./max.) 400 - 2500 l/h, DN 25	<b>196000030981</b>
<b>Filter</b>					
	Recirculating air filter element	for direct mounting on the unit inlet with recirculation air units, ISO Coarse 45% (G3) filter	600 x 165 x 600	Model size 1 - 2	<b>354000070003</b>
<b>Galvanised steel components</b>					
	Primary air-pipe connector	round, for the suction-side connection of the Ultra All-round to a round primary air pipe, sendzimir galvanised		Model size 1 - 2, Number of connecting pieces 0 piece(s)	<b>354000070004</b>
<b>Additional colours</b>					
	surcharge for RAL standard colour	Price per unit.		partially cased	<b>354007010011</b>
				fully cased	<b>354007010012</b>
	surcharge for RAL colour of your choice	Minimum quantity = 7 units per order and colour, The number of units below the minimum quantity must be requested and calculated separately. Price per unit.		partially cased	<b>354007010021</b>
				fully cased	<b>354007010022</b>
	surcharge for change of colour	of the powder-coating to the colour version quoted., The surcharge includes the conversion and cleaning of the powder-coating to the requested colour and will be charged once per project and call-off order.			<b>354007010010</b>



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