KaCool W

Design wall-mounted unit for heating and cooling.

Technical Catalogue

KAMPMANN

Kampmanngroup.com/kacool-w

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KaCool W: Design wall-mounted unit for heating and cooling.

The KaCool W is a visually unobtrusive room heating and cooling unit.

01 Product information

KaCool W – Design wall-mounted unit for heating and cooling

Cooling loads are produced in offices with extensive glazing in which large numbers of people work, and these cannot be dissipated without an air conditioning system. The KaCool for heating and cooling is ideal for this application.

Understated aesthetics

Our attractive understated design wall-mounted unit demonstrates that steel and plastic complement each other perfectly. The high-quality flat trim is only 185 mm wide. Only the pleasant effect of the cooled or heated air supplied is felt.

Variable comfort solution

Apart from their versatility, aesthetic appearance and impressive performance, the units are quiet and prevent draughts which greatly enhances comfort.

These aspects are a matter of course at Kampmann and have been for many years, in the KaCool W model, for example. Kampmann's in-house Research and Development Centre was able to incorporate and evolve the company's experience which spans decades into this concept.

Hygiene and maintenance

It is important that air conditioning systems work just as well after years of operation as they do on the day they are commissioned. The internal layout ensures ease of cleaning, which also guarantees hygienic problem-free air conditioning after many years. KaCool W units comply with all hygiene criteria (construction, components, cleanability and maintenance) and are therefore certified to VDI 6022.

All the components are installed in a space-saving manner inside the unit. Simply remove the trim and all components are within reach.

Ease of assembly

Installation could not be simpler, thanks to the drilling template supplied: drill 4 holes, screw in and that's it, the KaCool W is on the wall. It couldn't be any simpler or more precise! And if you don't know what you need in advance: now you know how easy it is to retrofit the KaCool W.

Colour options for the design panel

The white finish of the KaCool W blends well with most interiors. Other colours are also available and the sky is (more or less) the limit.

Product data

Product benefits

- Stylish and unobtrusive design wall-mounted unit
- High-quality and flat visible trim only 185 mm wide
- Continuously variably controlled energy-efficient EC motor
- Low noise emissions
- Hygiene-certified in line with VDI 6022

Features

- Available in a wide range of colours
- Condensate pump (optional)
- High-output copper-aluminium heat exchanger
- Various valve kits available
- Easy installation

Installation	Wall-mounted
Primary air supply	---
Heating	LPHW
Cooling	CHW
KaControl	Optional

Performance data

Cooling output [W][1)]	1312 – 4040
Heat output [W][2)]	3418 – 10166
Air flow [m³/h]	238 – 822
Sound pressure level [dB(A)][3)]	26 – 49

1) at CHW 7/12 °C, t_{L1} = 27 °C, 48% relative humidity
2) at LPHW 75/65 °C, t_{L1} = 20 °C
3) The sound pressure levels were calculated with an assumed room insulation of 8 dB(A).

Operating limits

- Max. operating pressure: 8 bar
- Max. entering water temperature: 75 °C
- Min. entering water temperature: 6 °C
- Max. air inlet temp.: 30 °C
- Min. air inlet temp.:
- Rel. air humidity:
- Max. glycol volume: 50 %

Applications

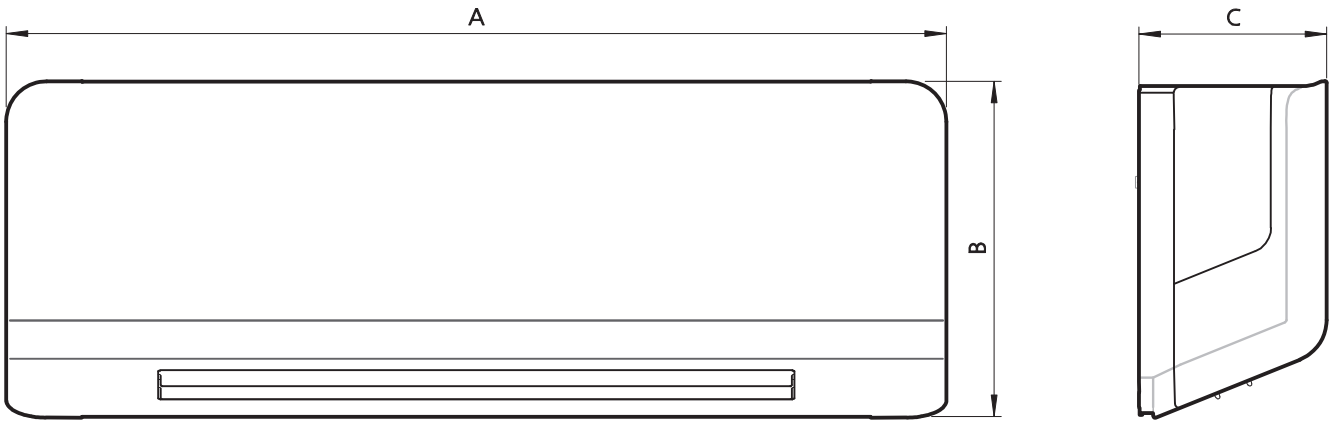
Buildings of all kinds, which require whisper-quiet cooling or heating from a visually discreet design.

Selection guide

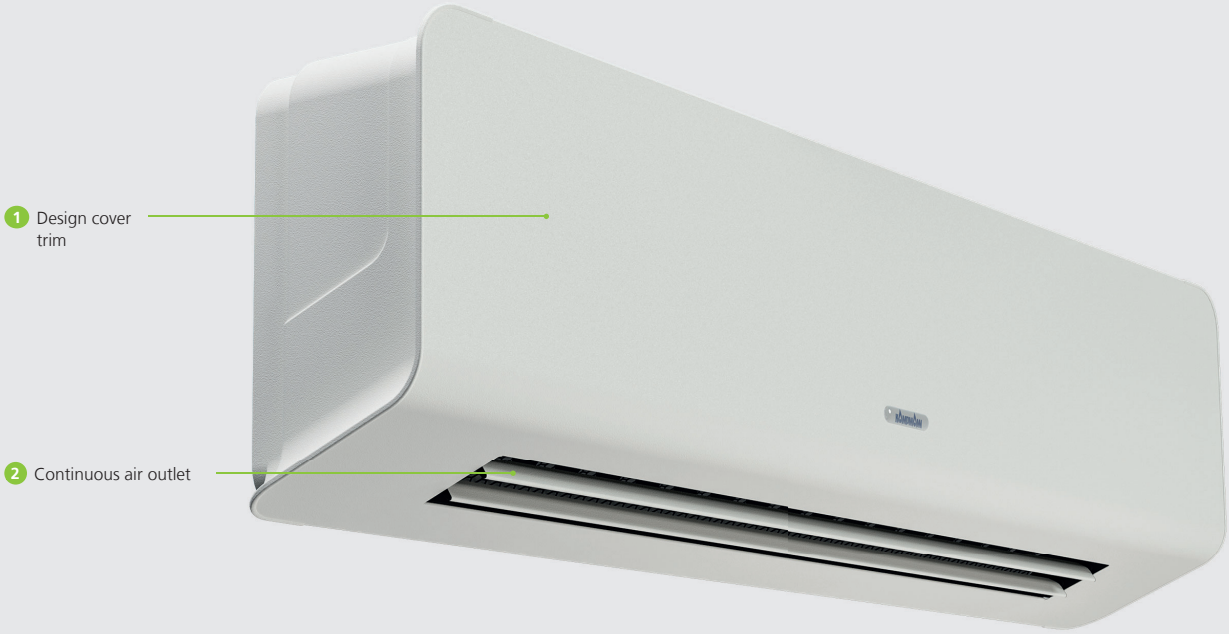
Fan version	Cooling output[1)] [W]	Heat output[2)] [W]	Model size	Dimensions (CxBxA) [mm]
EC fan	1312 – 2288	3418 – 6612	1	185 x 333 x 930
	1523 – 2611	3951 – 6887	2	
	1715 – 3527	4424 – 9944	3	185 x 333 x 1235
	1964 – 4040	4917 – 10166	4	

[1)] at CHW 7/12 °C, t_{L1} = 27 °C, 48% relative humidity
[2)] at LPHW 75/65 °C, t_{L1} = 20 °C

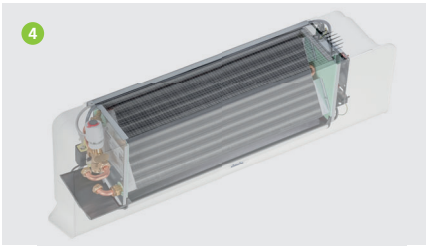
Technical drawing (Dimensions in mm)

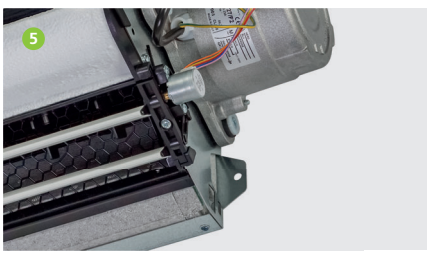


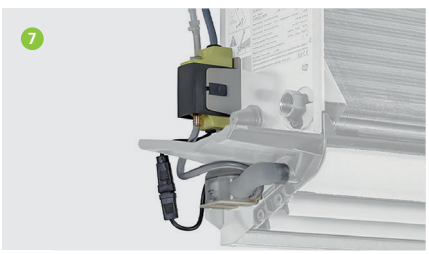
KaCool W at a glance

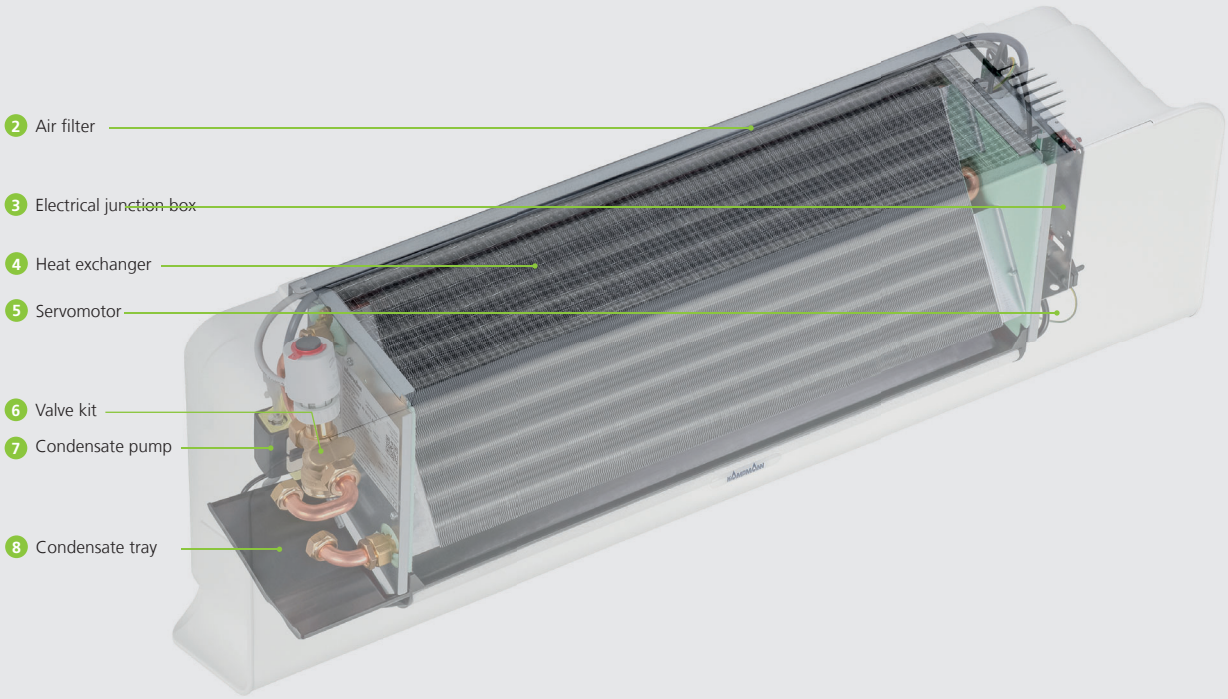


Features









1 Design cover:
- combination of plastic and metal, RAL 9016 matt
- valve kits and condensate pump are mounted inside the design cover and are therefore concealed

2 Air filter
- can be easily removed
- the ISO Coarse air filter can be regenerated simply by vacuuming it

3 Efficient EC technology
- An extremely energy-efficient EC motor is fitted in the KaCool W and, due to its infinitely variable operation, can be precisely adapted to the output requirement. It also has the advantage of being very quiet.

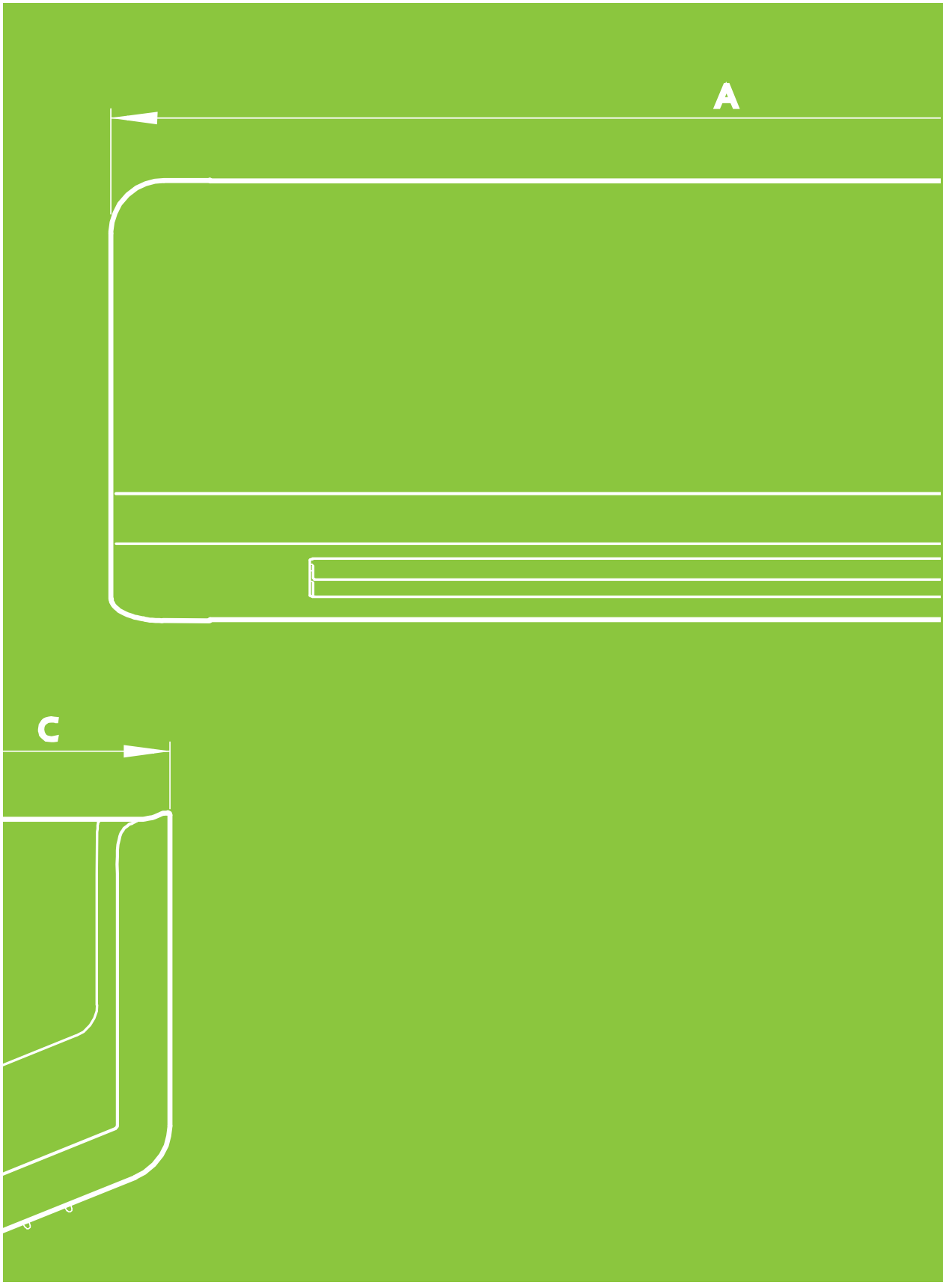
4 Heat exchanger
- high-output copper-aluminium heat exchanger
- with high heat and cooling outputs
- aerodynamically optimised

5 Servomotor
- louvre fins, manually adjustable, motorised adjustment with infra-red remote control version
- for adjustable air distribution and fewer draughts in any space

6 Valves
- different valve kits are available: 2-way, 3-way and differential pressure-independent valves combined with matching pipe connections and actuators

7 Condensate pump
- optionally available for reliable condensate drainage

02 Technical data



Advice on measuring conditions

The cooling and heat outputs have been calculated in line with DIN EN 1397:2015 "Water-air fan coils, test methods for establishing the performance".

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

Normative reference

The standard refers to:

- 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 to methods of measuring air flow rate in an air handling duct

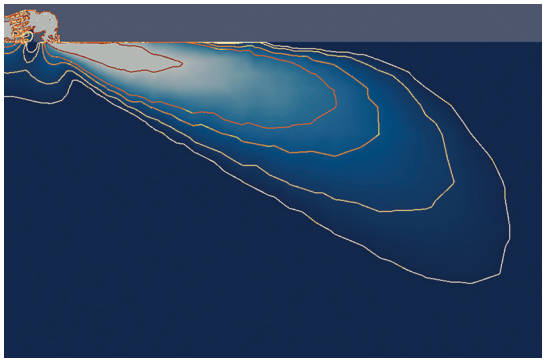
The air intake temperature of the fan coil is selected as the reference/air temperature, and should not be confused with the room temperature.

In practice, fan coils are positioned within a suspended ceiling or as sill units along the façade. 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 have therefore been optimised in terms of sound emissions.

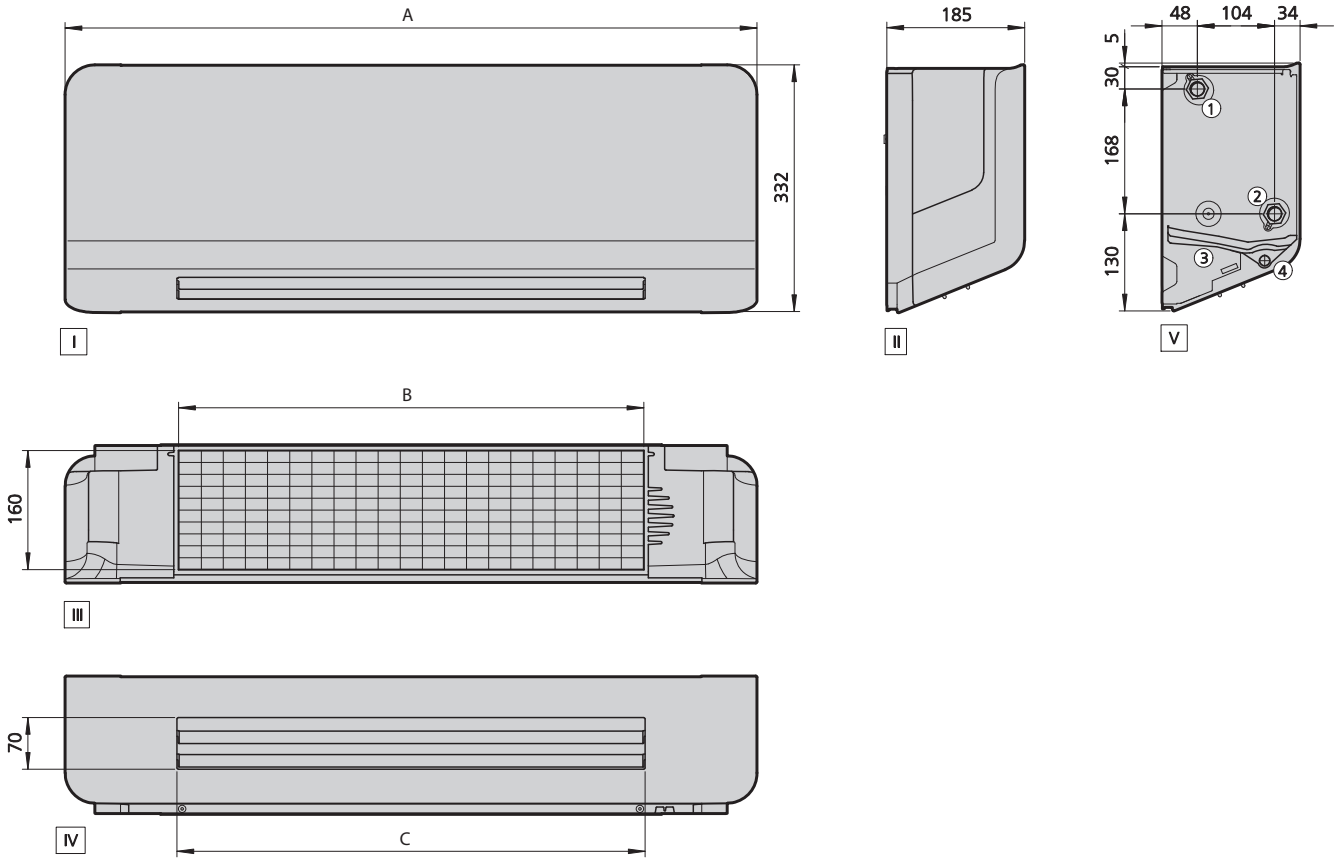
The acoustic data was recorded in accordance with the provisions of DIN EN 16583 by DIN EN ISO 3744 and DIN EN ISO 3741 in the Kampmann GmbH laboratories.



CFD simulation

KaCool W
EC fan
Model size 1

Technical drawing (Dimensions in mm)



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③ Condensate tray
④ condensate drain

Specifications

Model size	Weight [kg]	Water content [l]	Connection	Dimension (A) [mm]	Dimension (B) [mm]	Dimension (C) [mm]
1	13	0.8	1/2“, left	929	625	629

Performance data

System	Control voltage	Air flow	Cooling output, total[1]	Cooling output, sensible	Outlet air temperature	Mass Flow cooling	Pressure loss cooling	Condensation	Heat output[2]	Outlet air temperature	Mass Flow heating	Pressure loss heating	Power consumption	Current consumption	SFP value	Sound pressure level[3]	Sound power level
	[V]	[m³/h]	[W]	[W]	[°C]	[l/h]	[kPa]	[l/h]	[W]	[°C]	[l/h]	[kPa]	[W]	[mA]	[Ws/m³]	[dB(A)]	[dB(A)]
2-pipe	10	608	2288	1824	18.0	394	14.0	0.7	6612	52.5	584	20.5	22	95.0	129	46	54
	8	518	2071	1628	17.6	357	11.8	0.7	5877	53.9	519	16.9	15	65.0	104	44	52
	6	428	1840	1421	17.1	317	9.6	0.7	5107	55.6	451	13.5	10	44.0	84	41	49
	4	338	1590	1202	16.4	274	7.4	0.6	4292	57.9	379	10.1	7	30.0	73	37	45
	2	248	1312	964	15.4	226	5.3	0.6	3418	61.1	302	7.0	6	24.0	81	30	38

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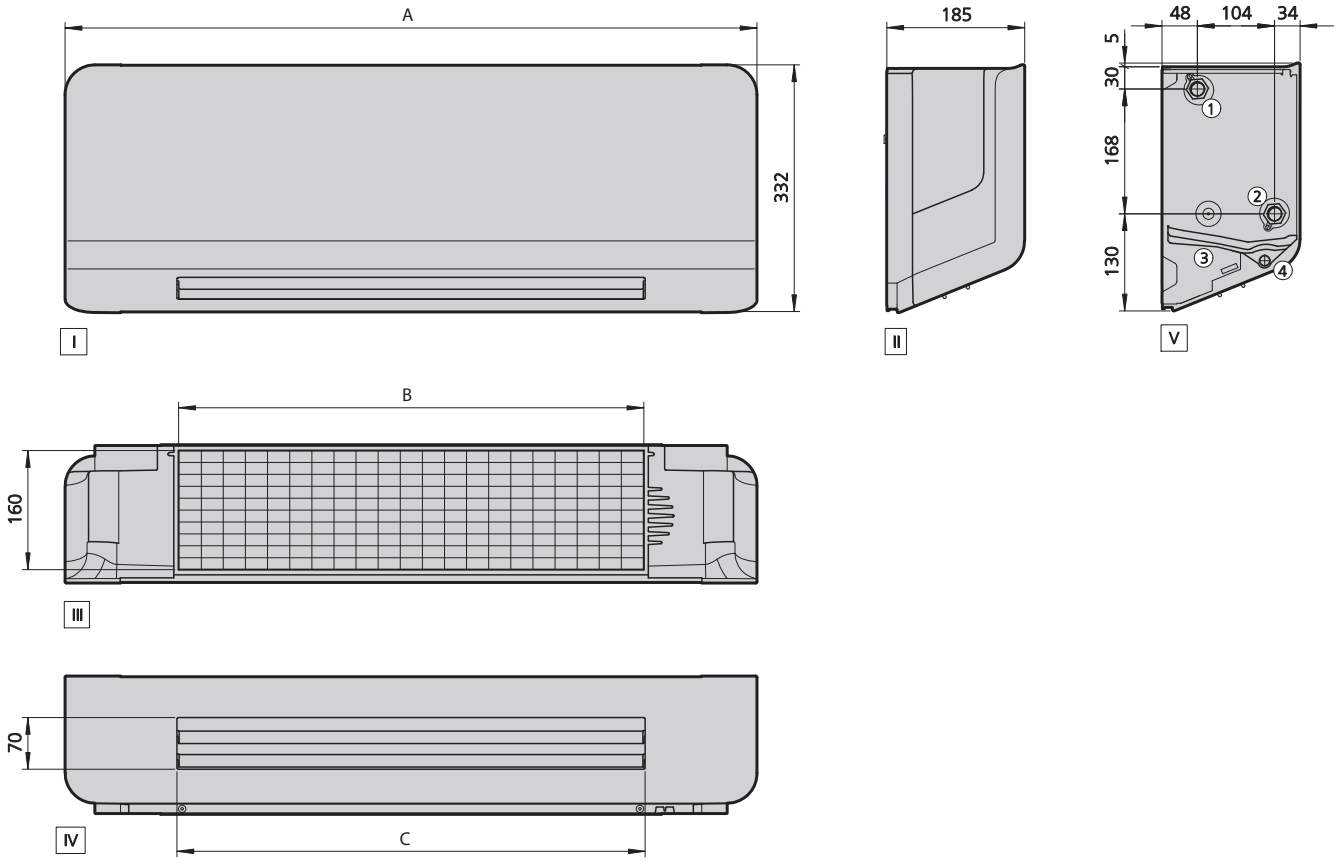
▸ https://www.kampmanngroup.com/hvac/products/fan-coils/kacool-w#Calculate-performance-data

[1] at CHW 7/12 °C, t_{L1} = 27 °C, 48% relative humidity
[2] at LPHW 75/65 °C, t_{L1} = 20 °C
[3] 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 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081)

KaCool W
EC fan
Model size 2

Technical drawing (Dimensions in mm)



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Specifications

Model size	Weight [kg]	Water content [l]	Connection	Dimension (A) [mm]	Dimension (B) [mm]	Dimension (C) [mm]
2	13	1.1	1/2“, left	929	625	629

Performance data

System	Control voltage	Air flow	Cooling output, total[1]	Cooling output, sensible	Outlet air temperature	Mass Flow cooling	Pressure loss cooling	Condensation	Heat output[2]	Outlet air temperature	Mass Flow heating	Pressure loss heating	Power consumption	Current consumption	SFP value	Sound pressure level[3]	Sound power level
	[V]	[m³/h]	[W]	[W]	[°C]	[l/h]	[kPa]	[l/h]	[W]	[°C]	[l/h]	[kPa]	[W]	[mA]	[Ws/m³]	[dB(A)]	[dB(A)]
2-pipe	10	504	2611	2171	14.1	450	31.5	0.7	6887	60.8	608	38.3	21	90.0	148	48	56
	8	438	2360	1900	14.0	407	26.3	0.7	6204	62.3	548	31.9	15	64.0	121	46	54
	6	371	2097	1626	13.9	361	21.3	0.8	5492	64.1	485	25.8	10	45.0	100	43	51
	4	305	1819	1349	13.8	313	16.5	0.8	4744	66.5	419	20.0	8	33.0	90	39	47
	2	238	1523	1068	13.6	262	12.0	0.7	3951	69.5	349	14.5	7	28.0	99	33	41

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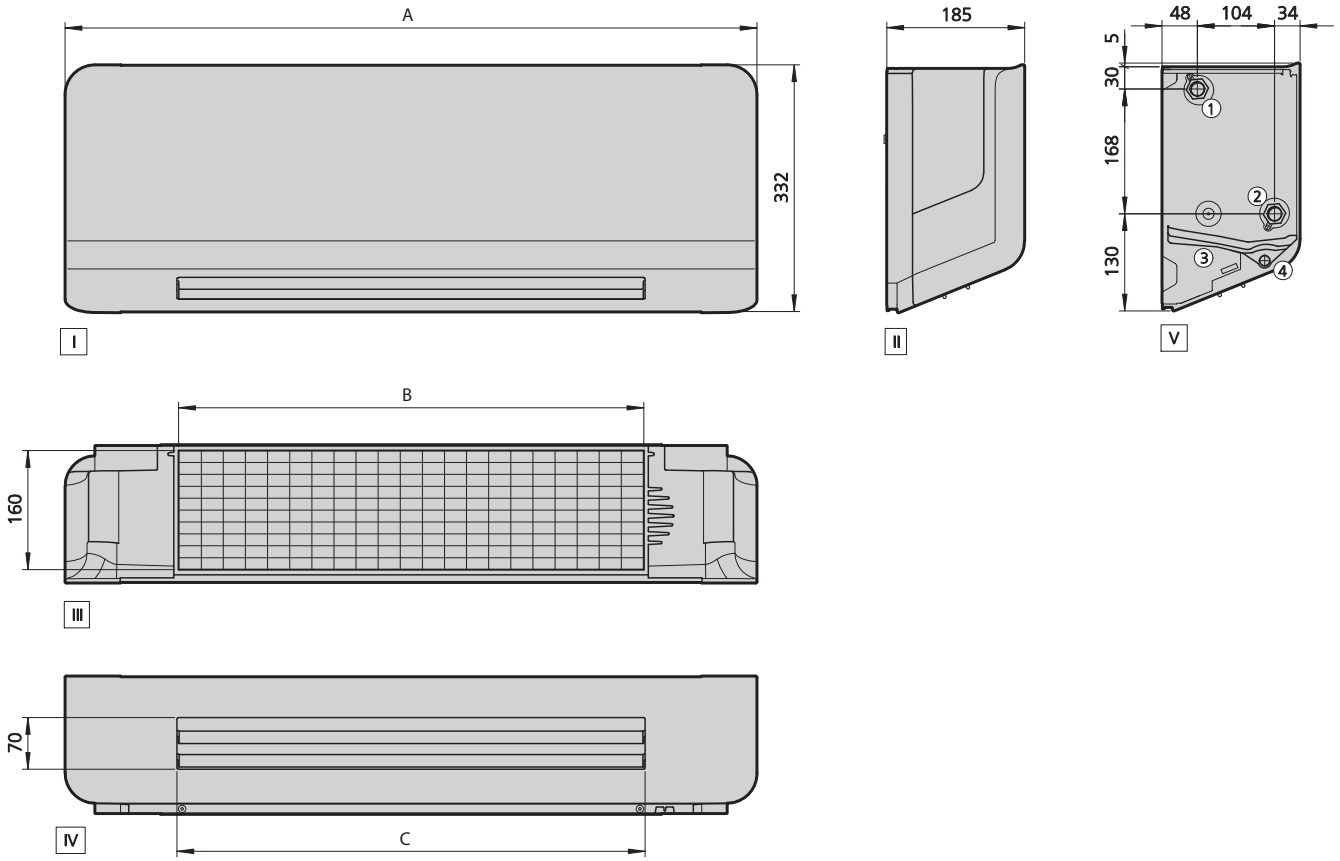
[2] at LPHW 75/65 °C, t_{L1} = 20 °C
[3] The sound pressure levels were calculated with an assumed room insulation of 8 dB(A). This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081)

KaCool W
EC fan
Model size 3

Technical drawing (Dimensions in mm)



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④ condensate drain

Specifications

Model size	Weight [kg]	Water content [l]	Connection	Dimension (A) [mm]	Dimension (B) [mm]	Dimension (C) [mm]
3	17	1.3	1/2“, left	1235	930	934

Performance data

System	Control voltage	Air flow	Cooling output, total[1]	Cooling output, sensible	Outlet air temperature	Mass Flow cooling	Pressure loss cooling	Condensation	Heat output[2]	Outlet air temperature	Mass Flow heating	Pressure loss heating	Power consumption	Current consumption	SFP value	Sound pressure level[3]	Sound power level
	[V]	[m³/h]	[W]	[W]	[°C]	[l/h]	[kPa]	[l/h]	[W]	[°C]	[l/h]	[kPa]	[W]	[mA]	[Ws/m³]	[dB(A)]	[dB(A)]
2-pipe	10	822	3527	2758	17.0	608	35.4	1.2	9944	56.1	879	66.6	30	128.0	129	46	54
	8	690	3121	2405	16.6	538	28.7	1.1	8668	57.5	766	51.8	21	91.0	109	42	50
	6	557	2690	2037	16.1	463	22.3	1.0	7336	59.3	648	38.2	14	62.0	91	38	46
	4	425	2227	1648	15.4	384	16.1	0.9	5931	61.7	524	25.9	9	40.0	77	32	40
	2	292	1715	1230	14.4	295	10.3	0.8	4424	65.2	391	15.2	6	25.0	72	26	34

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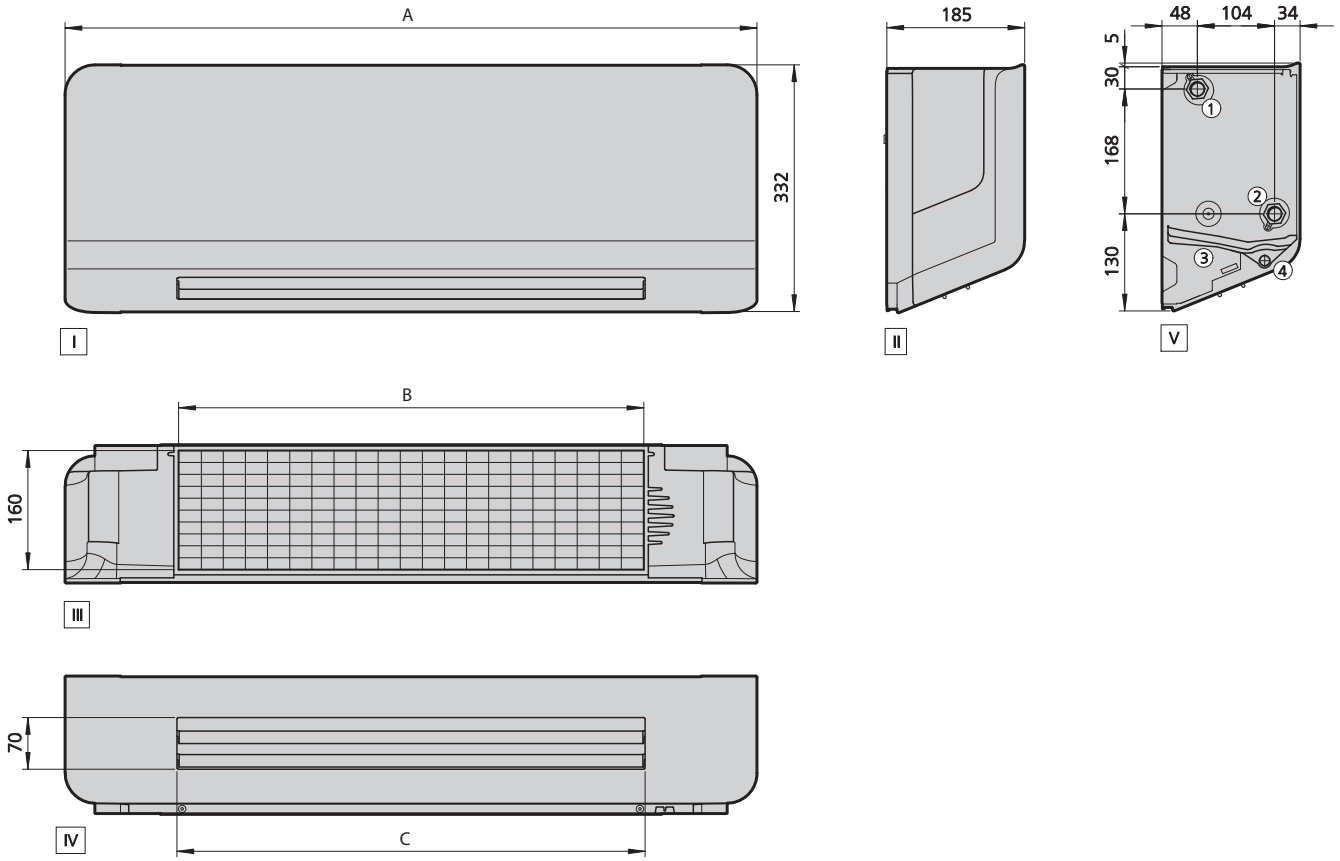
[2] at LPHW 75/65 °C, t_{L1} = 20 °C
[3] The sound pressure levels were calculated with an assumed room insulation of 8 dB(A). This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081)

KaCool W
EC fan
Model size 4

Technical drawing (Dimensions in mm)



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② Flow
③ Condensate tray
④ condensate drain

Specifications

Model size	Weight [kg]	Water content [l]	Connection	Dimension (A) [mm]	Dimension (B) [mm]	Dimension (C) [mm]
4	17	1.6	1/2“, left	1235	930	934

Performance data

System	Control voltage	Air flow	Cooling output, total[1]	Cooling output, sensible	Outlet air temperature	Mass Flow cooling	Pressure loss cooling	Condensation	Heat output[2]	Outlet air temperature	Mass Flow heating	Pressure loss heating	Power consumption	Current consumption	SFP value	Sound pressure level[3]	Sound power level
	[V]	[m³/h]	[W]	[W]	[°C]	[l/h]	[kPa]	[l/h]	[W]	[°C]	[l/h]	[kPa]	[W]	[mA]	[Ws/m³]	[dB(A)]	[dB(A)]
2-pipe	10	778	4040	3120	15.0	696	67.6	1.5	10166	59.0	898	87.5	28	124.0	131	49	57
	8	659	3560	2688	14.8	613	54.1	1.4	8949	60.5	791	70.1	20	87.0	110	44	52
	6	540	3059	2248	14.6	527	41.3	1.3	7681	62.5	679	53.6	14	59.0	90	40	48
	4	421	2530	1798	14.3	436	29.5	1.2	6345	65.0	561	38.4	9	38.0	75	34	42
	2	302	1964	1334	13.8	338	18.9	1.0	4917	68.6	434	24.6	6	25.0	70	27	35

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[2] at LPHW 75/65 °C, t_{L1} = 20 °C
[3] 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 m³ and a reverberation time of 0.5 s (in accordance with VDI 2081)

03 Design information

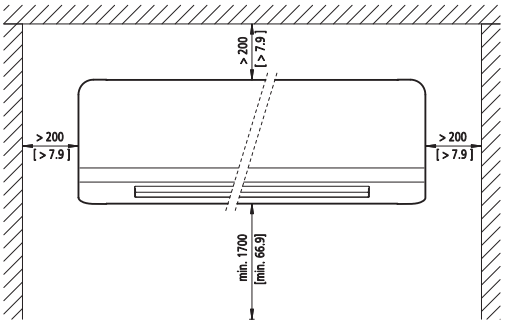
Information on planning and design

The planning and design of KaCool W wall-mounted units depend various factors.

Acoustics:
Noise-optimised EC fans are fitted in the KaCool W units. The respective sound pressure and sound power levels are listed in tables under the technical data. The sound pressure levels were calculated according to VDI 2081 with an assumed room attenuation of 8 dB(A). This corresponds to a distance of 2 m, a room volume of 100 m³ and a reverberation time of 0.5 s. However, because the sound pressure level is not only influenced by the KaCool W itself, but is also highly dependent on the acoustic properties of the room, the value may deviate in practice. We would recommend taking the respective permitted sound pressure level in the room into account when designing KaCool W units.

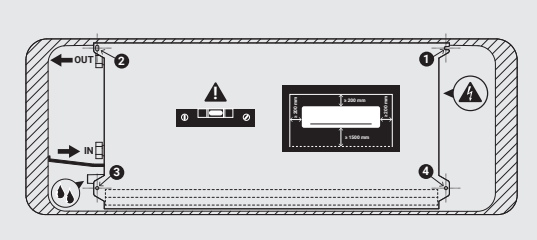
Choice of installation site:
- The following minimum spacings need to be taken into account when choosing the installation site in order to guarantee free circulation of the air flow.

Avoid:
- restricted air circulation due to lamps, furniture or shelves
- obstacles to air distribution and air intake
- electronic appliances below the KaCool W



Automatic hydraulic balancing

Differential pressure-independent valves maximise the volume flow of the heating/cooling medium with reference to the set value. Regardless of the pipe network or available pressure, each heat consumer receives only the volume intended for it.
The system is considered hydraulically balanced as soon as each heat consumer is supplied with sufficient output.

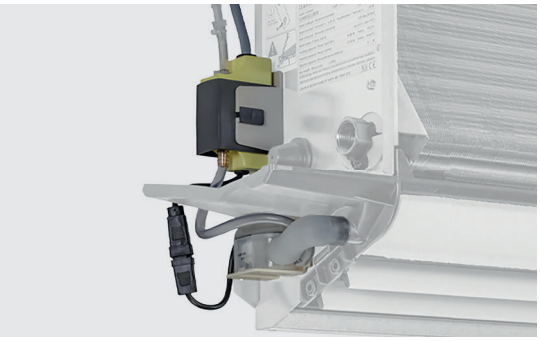


Drilling template

The drilling template supplied simplifies installation of the KaCool W. The preferred position can be determined using the drawing on the drilling template.

Condensate drain

Condensate is produced if the KaCool W is operated at system temperatures below the dew point. The condensate from the heat exchanger drips into the condensate tray underneath. Condensate must be discharged from the condensate tray along a 3% gradient. It must be ensured that condensate is discharged freely into the wastewater system (in accordance with DIN EN 1717).



VDI 6022

Conformity to the Hygiene Directive VDI 6022

As the authoritative guideline for hygiene requirements, VDI 6022 formulates the overall requirements for air conditioning systems and units in occupied zones, such as workplaces, meeting rooms, recreation rooms, living rooms, sports venues and showrooms. Compliant units are configured so that the room air cannot deteriorate due to the use of the unit, e.g. accumulation of 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.

04 Controls

Control of the KaCool W, electromechanical version

Room thermostat type 30155

Room thermostat for 3-stage speed control and on-wall installation in visually understated design

Product features:

- 2- and 4-pipe applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- ABS plastic housing, functional rugged design, pure white, similar to RAL 9010, for surface-mounting on a flush back box or in on-wall 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
- the internal or external room temperature sensor (accessory) can be used
- parallel operation of a maximum of 2 units is possible

Clock thermostat, type 30256

Clock thermostat for on-wall fan speed control with visually understated design

Product features:

- 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 back box, can be integrated into switch product range with grid dimension 50 x 50 mm
- display with adjustable backlight
- operation using 4 sensor keys
- 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
- the internal or external room temperature sensor (accessory) can be used
- parallel operation of a maximum of 2 units is possible

Climate controller type 148941 / type 148942 / type 148943 / type 148944

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

Product features:

- 2- and 4-pipe applications, thermal valve actuators 230 V AC Open/Closed, normally closed
- 2.5" LCD display
- high-quality glass surface with capacitive keys
- LED ring as key feedback
- the value to be displayed (room temperature, setpoint, setpoint offset) can be selected
- automatic LED backlight
- the internal or external room temperature sensor (accessory) can be used
- room temperature control
- programmable room frost protection function ➞ RT < 8 °C = heating valve open, fan stage 1
- programmable unit frost protection function ➞ RT < 4° C = valve(s) open, fan off
- standby mode
- Eco/day switch-over
- manual or automatic mode
- functional display
- alarm display
- timer program with 3 time channels, each with 4 switch-over points
- cleaning mode
- programmable language: German or English
- Modbus RTU slave interface for wiring to higher-level building automation system (BAS) (only with type 148943 and type 148944)
- 3 control inputs with type 148941 and type 148942 or 2 control inputs with type 148943 and type 148944 (programmable functions e.g. window contact, motion detector, heating/cooling switch-over), external room sensor
- password-protected parameter level
- surface-mounted on a flush box
- pure white (type 148941 and type 148943) or black (type 148942 and type 148944)
- parallel operation of a maximum of 2 units is possible

Operation using on-site systems

Control via analogue and digital signals is also possible as an alternative to the Kampmann control units. The following analogue and digital inputs and/or outputs are needed:

- speed control via a 0-10 V DC signal, the fan starts up safely at 1.5 V DC
- control input for the detection of any possible motor malfunction ➞only with electromechanical version with alarm contact (*01M)
- control input for the detection of a possible condensate alarm ➞only with electromechanical version with condensate pump or dew point sensor
- analogue or digital signals to control the fan actuator(s) according to the actuator version

Electrical data for KaDeck, electromechanical version (*00)

Article number	Nominal voltage	Mains frequency	Active power	Nominal current	Analogue input Ri	IP IP class	Protection class
	[V]	[Hz]	[W]	[A]	[kΩ]		
3261xxx11xxx	230	50	16	0.13	100	20	I
3261xxx61xxx	230	50	24	0.20	100	20	I
3261xxx12xxx	230	50	27	0.22	50	20	I
3261xxx62xxx	230	50	35	0.29	50	20	I

Control of KaCool W, 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 KaCool W.
The "face" of the KaControl is the KaController control unit.
A group of up to six units can be created using a KaController control unit without the need for additional addressing.
Optional plug-in interface cards are available for connection to 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. The "intelligent" motor electronics detects possible motor malfunctions and automatically switches off the fan. If a motor in the unit to which the KaController is connected malfunctions, this is displayed on the KaController. A motor malfunction and condensate alarm are also indicated by corresponding LEDs on the PCB. A potential-free contact for motor malfunction signal and/or condensate alarm is provided on the PCB for external evaluation.

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

KaController
Type 3210001

Type 3210002

Type 3210006

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, as much as required", even untrained users can intuitively get to grips with the control options. The displays are language-independent using pictograms.
The basic functions can be easily adjusted using the KaController.

Product features of the KaController

- plastic housing, colour similar to RAL 9010 (type 3210001 and 3210002) or black (type 3210006) for surface-mounting on a flush back box or on-wall frame (accessory)
- high-quality design of room control units, large LCD multifunctional display with energy-saving, automatic LED backlight
- push-turn navigator dial with endless turn/lock function
- side function keys for quick access (only with type 3210002)
- integral temperature sensor
- individually adjustable basic display
- display of fault alarms
- built-in weekly switching program
- password-protected parameter level

KaControl control functions

The programmable KaControl microprocessor control offers a wealth of functions. The following functions of the KaDeck product are necessary and are preset at the factory:

- 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-led fan control in automatic operation or optionally fixed stage selection
- room frost protection function ➞ RT < 8 °C = heating valve open, fan stage 1
- unit frost protection function ➞ RT < 4 °C = valve(s), fan off
- the internal or external room temperature sensor (accessory) can be used
- in the event of a unit alarm being triggered on a device to which the KaController room control unit is connected, e.g. a motor malfunction or condensate alarm is detected by the KaControl, this is indicated on the KaController control unit
- 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
- 24 V DC/max 0.5 A switch output programmable to unit alarm, heat or cooling demand (only with 2-pipe applications)
- sequential control of valve (Open/Closed) and fan speed via one (2-pipe) or two data points 0-10 V DC (4-pipe) ➞ only with control without KaController
- one slot for optional interface cards for connection to a higher-level building automation system ➞ optionally Modbus, KNX, BACnet (accessory)
- password-protected parameter level
- parallel operation of a maximum of 6 units is possible, extendible to a maximum of 30 units using additional CANbus cards type 3260701 (accessory) per unit

Any additional functions required can be parametrised and correspondingly coordinated.

Electrical data for KaDeck, KaControl version (*C1)

Article number	Nominal voltage	Mains frequency	Active power	Nominal current	Analogue input Ri	IP IP class	Protection class
	[V]	[Hz]	[W]	[A]	[kΩ]		
3261xxx11xxxC1	230	50	18	0.15	20	20	I
3261xxx61xxxC1	230	50	26	0.22	20	20	I
3261xxx12xxxC1	230	50	29	0.24	20	20	I
3261xxx62xxxC1	230	50	37	0.31	20	20	I

KaControl – Integration into intelligent building networks (IoT)

KaControl offers a wealth of options for integration into established communication networks. Various building automation strategies can be configured using different options.

Individual switching of units

Units with KaControl configuration can be directly integrated into on-site networks using optional communication interfaces. Control and monitoring is provided via fixed data points. The units can be operated by the KaController or by corresponding control units in the network.

Connection of groups

Up to six units with KaControl configuration can be operated in a single group. Groups of units can be directly integrated into on-site networks using optional communication interfaces. Control and monitoring is provided via fixed data points. A group is operated by the KaController or by corresponding control units in the network.

Communication interfaces

The following communication interfaces can be supplied separately or factory-fitted.

- modbus RTU
- KNX
- BACnet IP

Note:

More information on integration into intelligent building networks and the associated communication interfaces is available on request!

KaControl system controller

The optional modbus interface allows units with KaControl configuration to be interconnected individually or in groups with factory-programmed higher-level Kampmann system controllers.

KaControl SEL4.0 control panel

- for the monitoring and control of up to 60 Kampmann secondary air units, split into a maximum of 25 groups (zones), maximum 6 units per group
- central and zone-wide heating/cooling switch-over
- own timer program per zone/room
- integrated web server
- optional BACnet licence is available

KaControl AUL outside air control panel

- one Kampmann ventilation system
- up to 60 secondary air units or door air curtains split into a maximum of 10 groups (zones), identical units required within a group, up to 6 units per group
- optional: KaController control unit for each group
- central heating (winter)/cooling (summer) switch-over of secondary air units or heating (winter)/ventilation (summer)
- 5 timer programs can be assigned to groups
- optional: BACnet IP gateway for connection to higher-level control systems for the units/zones

KaControl visualisation

- up to 100/300 units
- optional: KaController control unit for each group
- central heating (winter)/cooling (summer) switch-over of secondary air units or heating (winter)/ventilation (summer) of door air curtains
- central timer programs
- visualisation of Kampmann secondary air units, door air curtains and ventilation systems

Note:
More information on KaControl system controllers is available on request!

Wiring diagram for KaControl control panel SEL 4.0

KaControl SEL4.0 control panel

Ethernet

Outdoor temperature sensor
Return air temperature sensor
Chiller
Heat generator
Heating pump Heating/cooling
Heating/cooling switch-over valves
Faults
....

Mains 50 Hz

Room / temperature zone 1

KaController

maximum length of bus connection: 30 m

maximum length of bus connection: 30 m

alt./opt.: Room temperature sensor

Ext. pot.-free contacts

Master unit
Secondary air unit

modbus RTU

Slave unit 6
Secondary air unit

modbus RTU

tLAN

Mains 50 Hz

modbus RTU

Room / temperature zone 25

KaController

maximum length of bus connection: 30 m

maximum length of bus connection: 30 m

alt./opt.: Room temperature sensor

Ext. pot.-free contacts

Master unit
Secondary air unit

modbus RTU

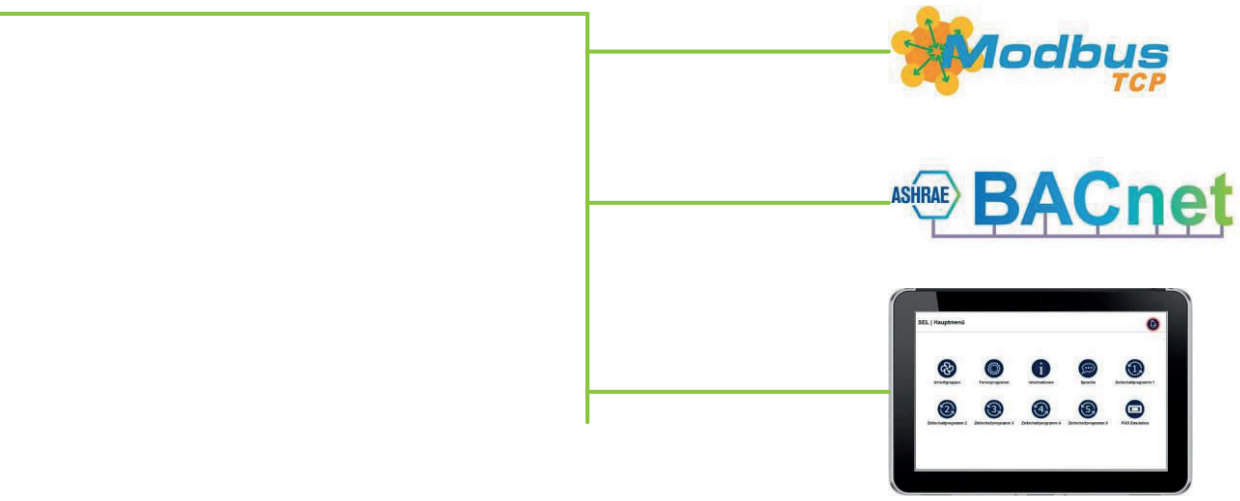
Slave unit 6
Secondary air unit

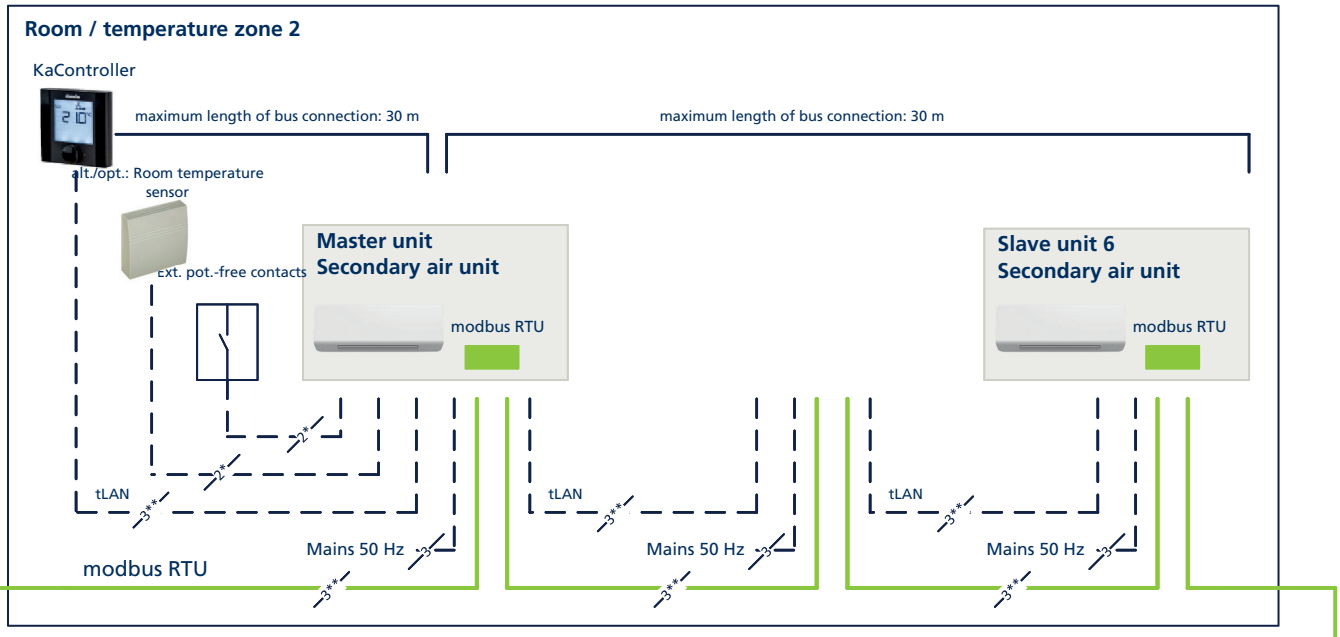
modbus RTU

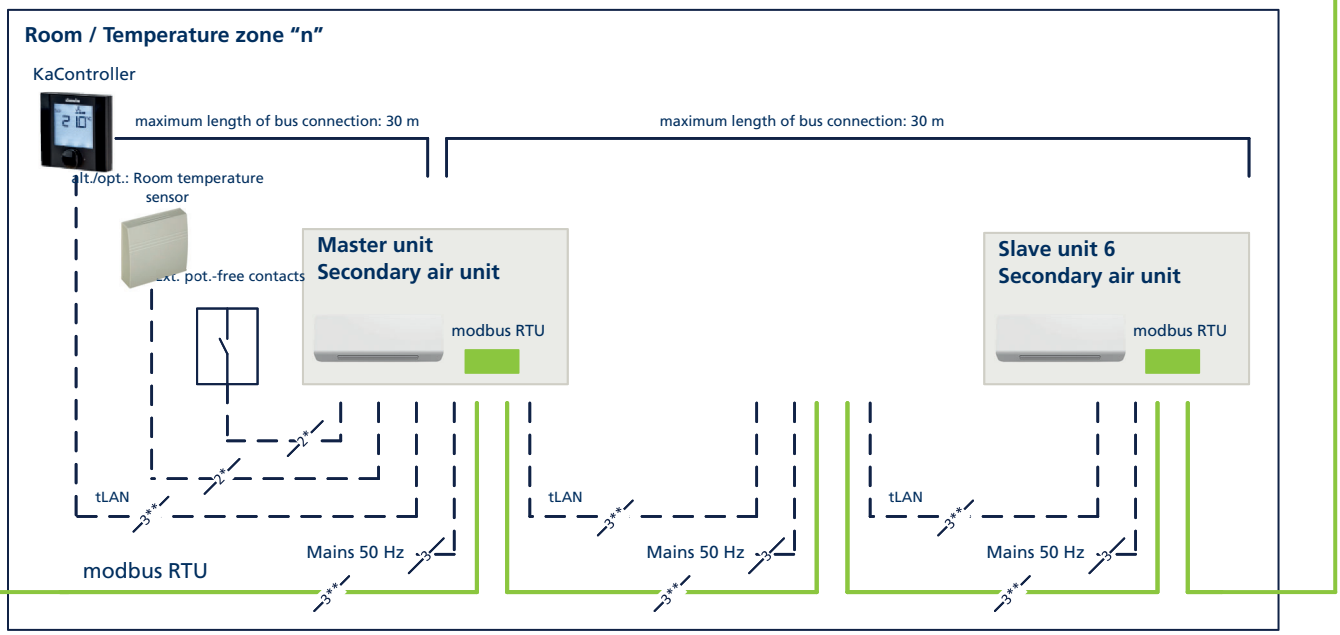
tLAN

Mains 50 Hz

modbus RTU


Modbus TCP
ASHRAE BACnet


Room / temperature zone 2
KaController
maximum length of bus connection: 30 m
maximum length of bus connection: 30 m
alt./opt.: Room temperature sensor
ext. pot.-free contacts
Master unit
Secondary air unit
modbus RTU
Slave unit 6
Secondary air unit
modbus RTU
tLAN
tLAN
tLAN
Mains 50 Hz
Mains 50 Hz
Mains 50 Hz
modbus RTU


Room / Temperature zone "n"
KaController
maximum length of bus connection: 30 m
maximum length of bus connection: 30 m
alt./opt.: Room temperature sensor
ext. pot.-free contacts
Master unit
Secondary air unit
modbus RTU
Slave unit 6
Secondary air unit
modbus RTU
tLAN
tLAN
tLAN
Mains 50 Hz
Mains 50 Hz
Mains 50 Hz
modbus RTU

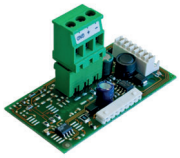
05 Ordering information

Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
Control accessories KaControl					
	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	**196003210001**
	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	**196003210006**
	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	**196003210002**
	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*	**196003250110**
	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*	**196003250115**
	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	**196003260702**

CONTINUED

Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
	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	**196003260301**
	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	**196003260101**

CONTINUED

Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
Control accessories electromechanical 230 V					
	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	**196000030155**
	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	**196000030256**
	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	**196000148941**
	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 Katherm HK Trench Technology, 4 KaCool D AF, KaCool W, Venkon or KaDeck Fan Coils, 4 Ultra Allround Unit Heaters	**196000148942**

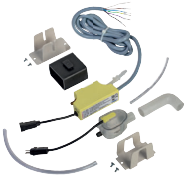
CONTINUED

Accessories

Article	Article	Properties	Dimensions [mm]	Suitable for	Article no.
	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 Katherm HK Trench Technology, 4 KaCool D AF, KaCool W, Venkon or KaDeck Fan Coils, 4 Ultra Allround Unit Heaters	**196000148943**
	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 Katherm HK Trench Technology, 4 KaCool D AF, KaCool W, Venkon or KaDeck Fan Coils, 4 Ultra Allround Unit Heaters	**196000148944**
Valve kits					
	Differential pressure-independent valve kit	2-pipe, 230 V 2-point actuator 230 V Open/Close, 50 Hz, Connection 1/2", Max. operating pressure 16 bar, supplied separately Valve kit for Kampmann KaCool W wall units for on-site assembly.	157 x 111 x 200	Model size 1 - 4, Flow volume Cooling (min./max.) 65 - 650 l/h, DN 15	**324002012130**
		2-pipe, 24 V 2-point actuator, 50 Hz, Connection 1/2", Max. operating pressure 16 bar, supplied separately Valve kit for Kampmann KaCool W wall units for on-site assembly.	157 x 111 x 200	Model size 1 - 4, Flow volume Cooling (min./max.) 65 - 650 l/h, DN 15	**324002012132**
	2-way valve kit	2-pipe, 1 St. 230 V 2-point actuator 230 V Open/Close, 50 Hz, Connection 1/2", kvs value 1.7 m³/h, Max. operating pressure 16 bar, supplied separately Valve kit for Kampmann KaCool W wall units for on-site assembly.	157 x 111 x 200	Model size 1 - 4, DN 15	**324002012110**
		2-pipe, 1 St. 24 V 2-point actuator, 50 Hz, Connection 1/2", kvs value 1.7 m³/h, Max. operating pressure 16 bar, supplied separately Valve kit for Kampmann KaCool W wall units for on-site assembly.	157 x 111 x 200	Model size 1 - 4, DN 15	**324002012112**

CONTINUED

Accessories

Article	Article	Properties	Dimensions	Suitable for	Article no.
			[mm]		
	3-way valve kit	2-pipe, 1 St. 230 V 2-point actuator 230 V Open/Close, 50 Hz, Connection 1/2", kvs value 1.7 m³/h, Max. operating pressure 16 bar, supplied separately Valve kit for Kampmann KaCool W wall units for on-site assembly.	157 x 111 x 200	Model size 1 - 4, DN 15	**324002012120**
		2-pipe, 1 St. 24 V 2-point actuator, 50 Hz, Connection 1/2", kvs value 1.7 m³/h, Max. operating pressure 16 bar, supplied separately Valve kit for Kampmann KaCool W wall units for on-site assembly.	157 x 111 x 200	Model size 1 - 4, DN 15	**324002012122**
Condensate tray/pump					
	Condensate pump	alternative to a free drain, 230 V 50 Hz, 19 W, supplied separately	107 x 155 x 200	KaCool W AC Fan Coils	**324002000410**
Additional colours					
	surcharge for RAL colour of your choice	Price per unit.		Model size 1 - 2, KaCool W AC Fan Coils	**324002000101**
				Model size 3 - 4, KaCool W AC Fan Coils	**324002000102**

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