

MUB Multibox fan AC/EC**MUB-CAV/VAV Multibox fan EC****MUB/T Thermo multibox fan AC/EC****MUB/T ECO Thermo multibox fan AC/EC****MUB/T-S Thermo multibox fan AC/EC****MUB/F Smoke extract fan AC****MUB+Filter Multibox fan AC**

Table of contents

1	Introduction	1	8	Maintenance	13
1.1	Product description	1	8.1	Maintenance schedule	13
1.2	Intended use	1	8.2	To clean the product	13
1.3	Document description	1	8.3	Spare parts	13
1.4	Product overview	2	9	Troubleshooting	14
1.4.1	Product overview MUB/T fans and MUB/T-S fans	2	10	Disposal	16
1.4.2	Product overview MUB fans, MUB-CAV/VAV fans, and MUB/F fans	3	10.1	To disassemble and discard the parts of the product	16
1.5	Name plate	3	11	Warranty	16
1.5.1	Type designation	4	12	Technical data	17
1.6	Product liability	5	12.1	Technical data overview	17
2	Safety	5	12.2	Product dimensions	17
2.1	Safety definitions	5	12.2.1	Product dimensions MUB fans	17
2.2	Safety instructions	6	12.2.2	Product dimensions MUB-CAV/VAV fans	18
2.3	Personal protective equipment	6	12.2.3	Product dimensions MUB/T fans	19
3	Transportation and storage	6	12.2.4	Product dimensions MUB/F fans	20
4	Installation	7	12.2.5	Product dimensions MUB/T-S fans	21
4.1	To do before the installation of the product	7	12.2.6	Product dimensions MUB/T ECO fans	22
4.2	To install the product	7	12.2.7	Product dimensions MUB+Filter fans	23
4.2.1	To change the air discharge direction	7	12.3	Wiring diagrams	23
4.2.2	To install the product	8	12.3.1	Wiring diagrams for AC fans	23
4.2.3	To install cable grommets	8	12.3.2	Wiring diagrams for EC fans	23
4.2.4	To operate the pressure controller	8	12.3.3	Wiring diagrams for speed controller for AC motors	24
4.2.5	To set up the controller for CAV/VAV	9	12.3.4	Wiring diagrams for speed controllers for EC motors	27
4.2.6	To install weather protection	9	12.3.5	Wiring diagrams for ON/OFF controls for EC motors	29
4.2.7	To connect the ducts to the product	10	12.3.6	Wiring diagrams for demand control for EC motors	29
5	Electrical connection	10	13	Accessory overview	33
5.1	To do before the electrical connection	10	13.1	Accessory overview MUB fans, MUB-CAV/VAV fans, MUB/T fans, MUB/T-S, MUB/T ECO and MUB+Filter fans	33
5.2	To connect the product to the power supply	10	13.2	Accessory overview MUB/F fans	34
5.3	Speed controller for AC motors	10	14	EU Declaration of Conformity-Multibox	35
5.4	To install motor protection for AC motors	11	15	EU Declaration of Conformity-Multibox+Filter	36
5.5	Speed controller for EC motors	11	16	EU Declaration of Conformity-Thermo fans	37
5.6	Motor protection for EC motors	11	17	EU Declaration of Conformity-Smoke extract fans	38
6	Commissioning	11	18	UKCA Declaration of Conformity-Multibox	39
6.1	To do before the commissioning	11	19	UKCA Declaration of Conformity-MUB+Filter	40
6.2	To do the commissioning	11			
7	Operation	12			
7.1	To start a product with an EC motor	12			
7.2	To start a product with an AC motor	12			
7.3	To stop the product	12			
7.3.1	To stop the product in an emergency	12			

20	UKCA Declaration of Conformity-Thermo fans	41
21	UKCA Declaration of Conformity-Smoke extract fans	42

1 Introduction

1.1 Product description

The MUB fan is a square multibox fan supplied with an EC or an AC motor, and modular panels for optional air discharge.

The MUB-CAV/VAV fan is a square multibox fan supplied with an EC motor, have modular panels for optional air discharge and an integrated pressure controller device for constant air volume control (CAV). The air volume control (CAV) can be changed to constant pressure control (VAV).

The MUB/T ECO fan is a square multibox fan supplied with an EC or an AC motor, a modular panels for optional airflow discharge and a drain plug in the bottom of the fan casing. The MUB/T ECO fan is suitable for ventilation of air with constant medium-high temperature, 120° C.

The MUB/T-S fan is a square multibox fan supplied with an EC or AC motor, a isolator switch and a drain plug in the bottom of the fan casing. The MUB/T-S fan has an inline airflow and is suitable for ventilation of air with constant medium-high temperatures up to 120° C.

The MUB/T fan is a square multibox fan supplied with an EC or an AC motor, modular panels for optional airflow discharge, isolator device and a drain plug in the bottom of the fan casing. The The MUB/T fan is suitable for ventilation of air with constant medium-high temperature, 120° C.

The MUB/F Smoke Extract fan is a square multibox fan supplied with an AC motor and has an outlet panel which can be changed from straight to top or side discharge direction. The MUB/F fan is suitable for normal ventilation with air temperatures up to 55° C and smoke extraction with temperatures up to 400° C for 2 hours.

The MUB+Filter fan is a square multibox fan supplied with an AC or an EC motor and a built in G4 filter. The product has an inline airflow and is suitable for temperatures between 40-60 °C.

The product is not supplied with an external speed controller or installation equipment, these parts are available as accessories.

1.2 Intended use

The product is intended for installation indoors or outdoors with weather protection.

The MUB-CAV/VAV fan, the MUB fan and the MUB+Filter are suitable for transportation of clean air with a maximum temperature of 40-60 °C.

The MUB/F fan is a smoke extraction fan suitable for transportation of clean air with a maximum airflow temperature of 55 °C in normal working conditions. If there is a fire, the MUB/F fan is suitable for smoke extraction and can withstand a maximum constant airflow temperature of 400 °C for 2 hours. After using the fan for exhaust of smoke gases, the fan must be replaced.

The MUB/T ECO fan, the MUB/T-S fan and the MUB/T fan are suitable for transportation of clean or contaminated air with a constant airflow temperature up to 120° C.

The product is not applicable for transportation of air that contains explosive, flammable, or aggressive media. The product is not applicable for locations where there is a risk of explosion.

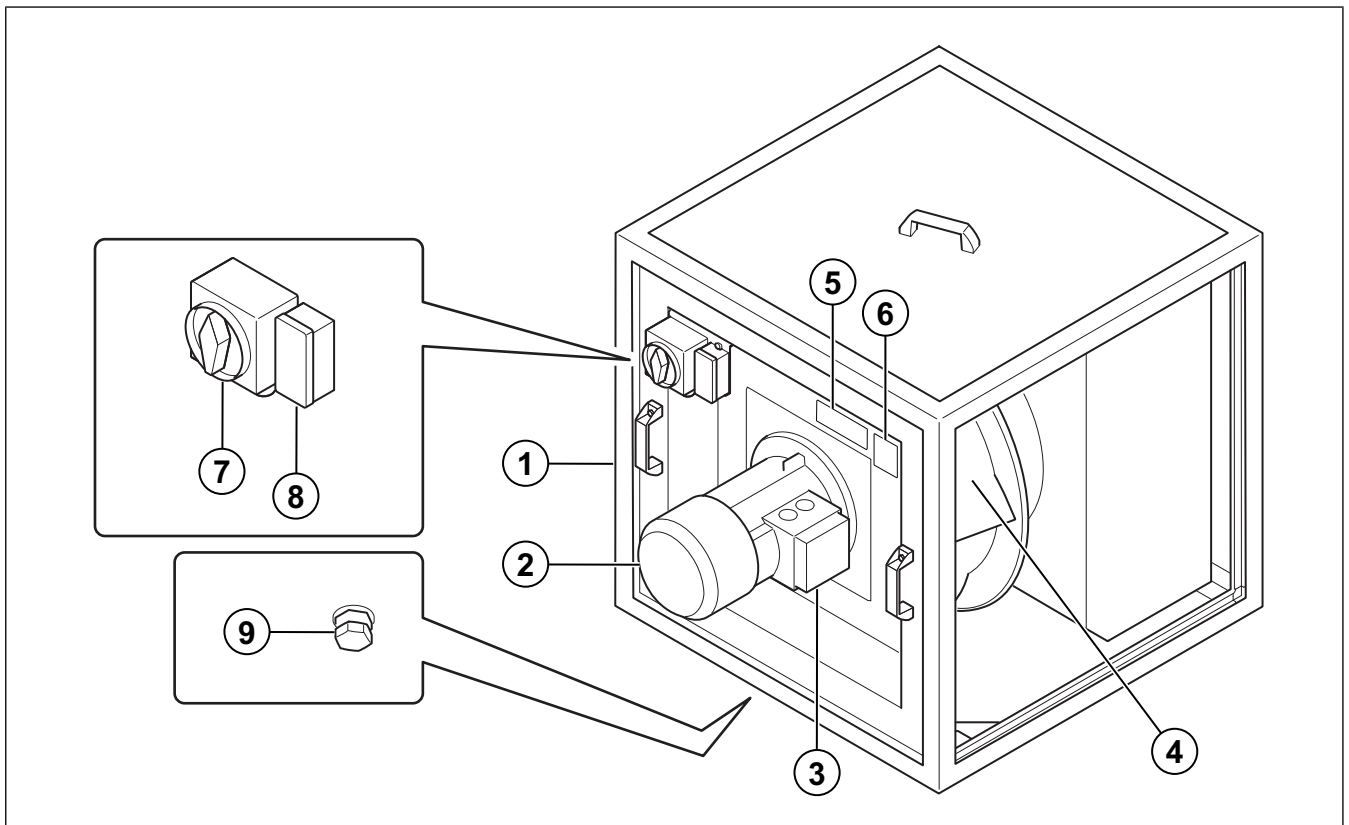
1.3 Document description

This document contains instructions for installation, operation and maintenance of the product. The procedures must be done by approved personnel only.

Speak to Systemair for more information on how to install the product in different installation locations.

1.4 Product overview

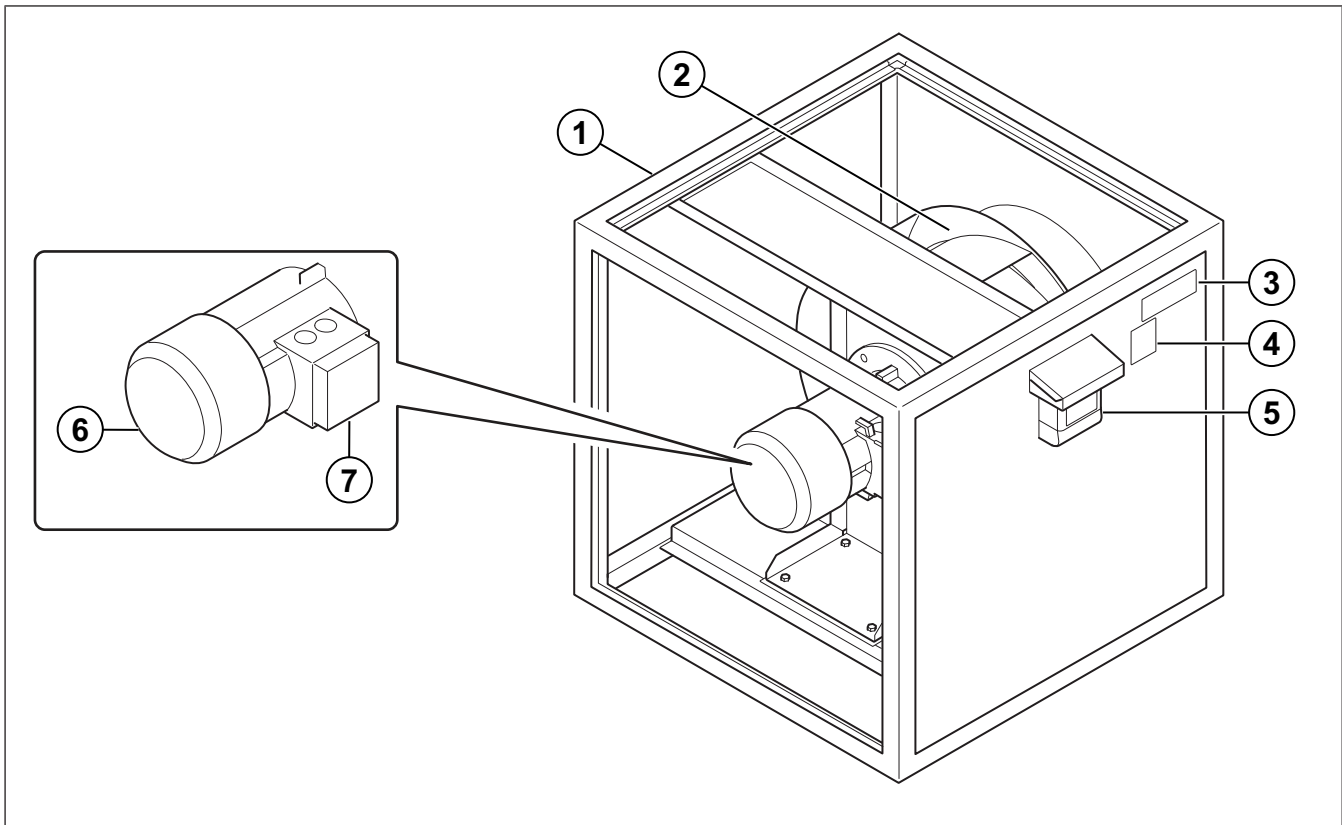
1.4.1 Product overview MUB/T fans and MUB/T-S fans



- | | |
|---|---|
| 1. Casing | 6. Air flow direction arrow |
| 2. Motor (inside casing on MUB/T fans and MUB/T ECO fans) | 7. Safety switch (not applicable for MUB/T ECO fans) |
| 3. Motor connection box | 8. Electrical supply connection (not applicable for MUB/T ECO fans) |
| 4. Fan impeller | 9. Drain plug |
| 5. Name plate | |

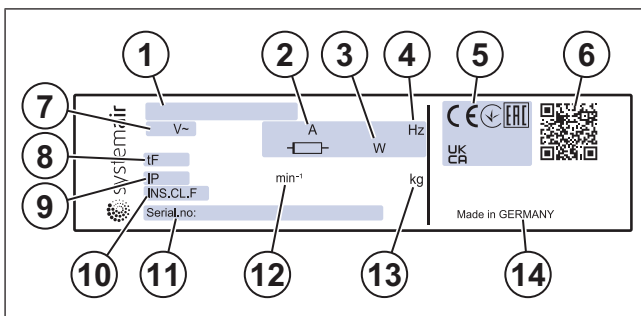
1.4.2

Product overview MUB fans, MUB-CAV/VAV fans, and MUB/F fans



1. Casing
2. Fan impeller
3. Name plate
4. Airflow direction arrow
5. Pressure controller (only on MUB-CAV/VAV)
6. Motor
7. Motor connection box (only on MUB and MUB/F)

1.5 Name plate



Note:

The data on the name plate applies to “standard air” that is specified in the standard ISO5801.

1. Type designation: Product name, dimension and motor type. Refer to 1.5.1 Type designation.
2. Current, A
3. Input power, W
4. Frequency, Hz
5. Certifications
6. Scannable code ¹
7. Voltage, V
8. Maximum temperature of transported air, °C
9. IP class, enclosure class
10. Insulation class
11. Serial number: part number/production number/production date
12. Nominal fan speed
13. Weight, kg
14. Country of production

1. Use a mobile device to scan the scannable code and go to the Systemair documentation portal for more documentation and document translations.

1.5.1 Type designation

Product name	MUB	MUB-CAV/ VAV	MUB/T	MUB/T-S	MUB/F	MUB/T ECO	MUB+ Filter
Dimension	200	315	355	315	400	355	315
	315	355	400	355	450	400	355
	355	400	450	400	500	450	400
	400	450	500	450	560	500	450
	450	500	560	500	630	560	500
	500	560	630	560		630	560
	560	630		630			
	630	710					
	710						
Motor type	EV: 4–pole, AC motor, 1–phase, 230 V	EC: Elec- tronically commutated, 1–phase, 230 V	EV: 4–pole, AC motor, 1–phase, 230 V	EV: 4–pole, AC motor, 1–phase, 230 V	D4: 4–pole, AC motor, 3–phase, 400 V	EV: 4–pole, AC motor, 1–phase, 230 V	EV: 4–pole, AC motor, 1–phase
	DV: 4–pole, AC motor, 3–phase, 400 V	EC: Elec- tronically commutated, 3–phase, 400 V	D2: 2–pole, AC motor, 3–phase, 400 V	D2: 2–pole, AC motor, 3–phase, 400 V	D6: 6–pole, AC motor, 3–phase, 400 V	D4: 4–pole, AC motor, 3–phase, 400 V	DV: 4–pole, AC motor, 3–phase
	D4: 4–pole, AC motor, 3–phase, 400 V	EC-K: Elec- tronically commutated, 1–phase, 230 V	D4: 4–pole, AC motor, 3–phase, 400 V	EC: Elec- tronically commutated, 1–phase, 230 V	D4–6: 4–6– pole, AC mo- tor, 3–phase, 400 V	D4–L: 4– pole, AC mo- tor, 3–phase, 400 V	D4: 4-pole, AC motor, 3-phase
	D4–L: 4–pole, AC motor, 3–phase, 400 V		EC: Elec- tronically commutated, 1–phase, 230 V	EC: Elec- tronically commutated, 3–phase, 400 V		EC: Elec- tronically commutated, 1–phase, 230 V	EC: elec- tronically commutated, 1-phase, 230 V
	D6: 6–pole, AC motor, 3–phase, 400 V		EC: Elec- tronically commutated, 3–phase, 400 V	EC-K: Elec- tronically commutated, 1–phase, 230 V		EC: Elec- tronically commutated, 3–phase, 400 V	EC: elec- tronically commutated, 3-phase, 400 V
	D4–6–L: 4–6–pole, AC motor, 3–phase, 400 V		EC-K: Elec- tronically commutated, 1–phase, 230 V	EC-L: Elec- tronically commutated, 1–phase, 400 V		EC-K: Elec- tronically commutated, 1–phase, 230 V	
	EC: Elec- tronically commutated, 1–phase, 230 V						
	EC: Elec- tronically commutated, 3–phase, 400 V						
	EC-K: Elec- tronically commutated, 1–phase, 230 V						

1.6 Product liability

Systemair is not liable for damages that the product causes in these conditions:

- The product is incorrectly installed, operated or maintained.
- The product is repaired with parts that are not original spare parts from Systemair.
- The product is used together with accessories that are not original accessories from Systemair.
- The product is used without motor protection.

2 Safety

2.1 Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.



Warning

If you do not obey these instructions, there is a risk of death or injury.



Caution

If you do not obey these instructions, there is a risk of damage to the product, other materials or the adjacent area.

Note:

Information that is necessary in a given situation.

2.2 Safety instructions



Warning

Read the warning instructions that follow before you do work on the product.

- Read this manual and make sure that you understand the instructions before you do work on the product.
- Obey local conditions and laws.
- The ventilation contractor and the operator are responsible for correct installation and intended use.
- Keep this manual at the location of the product.
- Do not install or operate the product if it is defective.
- Do not remove or disconnect safety devices.
- Make sure that you can read all warning signs and labels on the product when it is installed. Replace labels that have damage.
- Only permit approved personnel to work on the product and to be in the adjacent area during all work on the product.
- Make sure that you know how to stop the product quickly in an emergency.
- Use applicable safety devices and personal protective equipment during all work on the product.
- Before you do work on the product, stop the product and wait until the fan impeller stops. Make sure that there is no voltage on the motor terminals.
- If the maintenance is not correctly and regularly done, there is risk of injury and damage to the product.
- Only do the maintenance as given in this manual. Speak to Systemair technical support if other servicing is necessary.
- Always use spare parts from Systemair.
- Sound levels exceeding 70 dB(A) may occur depending on model and size. Visit www.systemair.com for more detailed information about your product.
- The product is not to be used by persons, including children, with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Do not allow children to play with the device.

2.3 Personal protective equipment

Use personal protective equipment during all work on the product.

- Approved eye protection
- Approved protective helmet
- Approved hearing protection
- Approved protective gloves
- Approved protective shoes
- Approved work clothing

3 Transportation and storage



Warning

Make sure that the product does not become damaged or wet during transportation. A damaged or wet product can cause fire or electric shock.

- Before you move the product to the installation location, examine the packaging for damages.
- Do not move the product by the cables, terminal box, fan impeller, protection grille, inlet cone or silencer.
- If lifting equipment is used, make sure that the lifting equipment can hold the weight of the product. Refer to the name plate for information. Do not lift the product by the packaging.



Warning

Do not walk below a lifted product.

- Keep the correct side of the packaging up during transportation. Refer to the arrows on the packaging.
- Load and unload the product carefully.
- Keep the product in a dry and clean location during storage. Make sure that the ambient temperature during storage is between -10 and $+30$ °C. A stable ambient temperature prevents damage from condensation.
- Keep the product in storage for maximum 1 year.

4 Installation

4.1 To do before the installation of the product

- Make sure that you have the necessary installation accessories:
 - Refer to [13 Accessory overview](#) for an overview of the accessories.
 - If you install the product outdoors, it is necessary to install a weather protection roof.
 - To decrease vibrations transmitted from the product to the duct system, Systemair recommends to install vibration dampers, fast clamps or flexible connections.
 - If you install the product with free suction or free discharge, it is necessary to install a protection grille. Make sure that the safety distance agrees with the standard ISO 12499.
- Use installation material with fire resistance rating for the installation location.
- Examine the packaging for transportation damage and remove the packaging from the product carefully.
- Examine the product and all components for damage.
- Make sure that the motor effect and the fan performance agrees with the expectations at the installation location.
- Make sure that the information on the name plate and the motor name plate agrees with the operation conditions.
- Install the product in a location where there is space for commissioning, troubleshooting and maintenance.
- Make sure that the installation location is clean and dry, for full safety during electrical work.
- Make sure that the installation surface has sufficient capacity to hold the weight of the product.
- Refer to the airflow direction arrows on the name plate or on the product to install the product in the correct position.
- Make sure that all cable glands are tight against the cables to prevent leaks.

4.2 To install the product

4.2.1 To change the air discharge direction

The MUB fan, the MUB/T-S fan and the MUB/F fan are delivered prepared for inline airflow discharge.

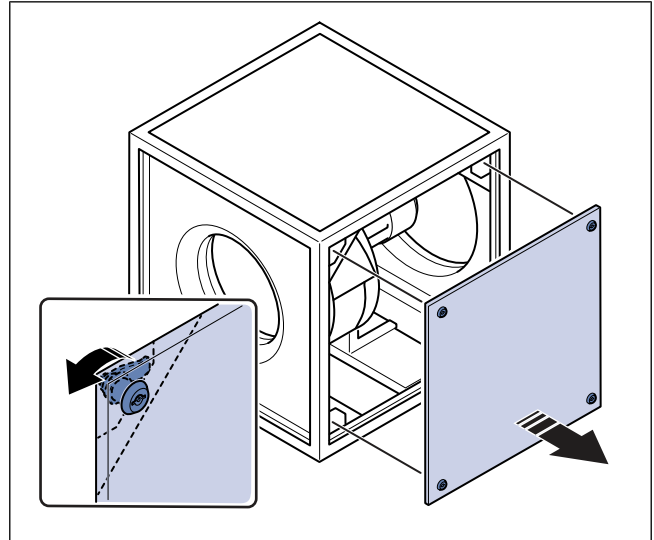
The MUB/T fan and the MUB/T ECO are delivered prepared for upward airflow direction discharge to 90°.

The air discharge direction can be changed on the MUB fans, the MUB-CAV/VAV fans, the MUB/T fans, the MUB/T ECO fans and on the MUB/F fans.

To change the air discharge direction, follow these steps:

- 1 Remove the 4 screws that attach the side panel to the frame and remove the side panel.

The picture shows the MUB/T fan which has the locking system for the panel shown. The MUB fans, the MUB/T fans, the MUB ECO fans and MUB/F fans have no locking system or handle, only screws in the frame.



- 2 Place the side panel on the side of the fan where airflow is to be blocked.
- 3 Attach the side panel to that side frame with the 4 screws.

4.2.2 To install the product

Note:

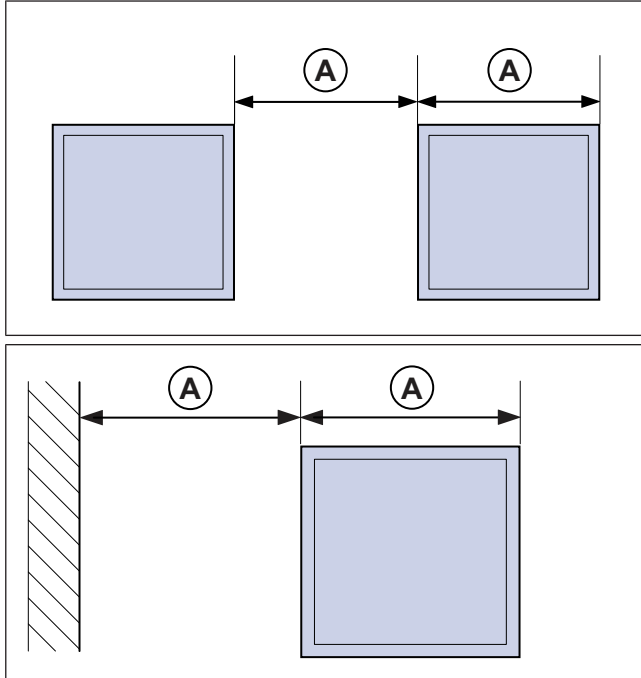
The MUB fan, the MUB CAV/VAV fan and the MUB/F fan can be installed in any angle on the floor, on the wall or in the ceiling.

The MUB/T fan, the MUB/T-S fan and the MUB/T ECO fan have a drain plug at the bottom of the fan casing. Always install the fan with the drain plug down.

- 1 Place the product where it is to be installed.

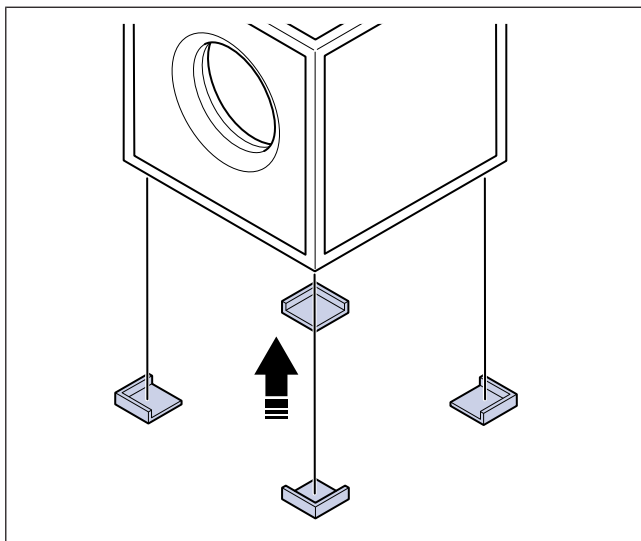
Note:

Make sure the product is installed with a distance of 1x the product width to nearest wall or other product.



- 2 If the installation location is on the floor, Systemair recommends using SD vibration pads to decrease vibrations transmitted from the product.

Place the vibration damper pads under the bottom corners of the frame.



- 3 If the installation location is in the ceiling, the product can be installed using mounting rails. Mounting rails are not supplied by Systemair.

- 4 If necessary, install cable grommets. Refer to [4.2.3 To install cable grommets](#).
- 5 If the product is a MUB-CAV/VAV fan, set up the CAV controller. Refer to [4.2.5 To set up the controller for CAV/VAV](#).
- 6 If the product is installed outside, install weather protection. Systemair recommends installing weather protection roof WSD and weather protection grille WSG. The products are available as accessories. Refer to [4.2.6 To install weather protection](#). To locate correct accessories: see [13 Accessory overview](#) and the online catalogue at www.systemair.com.

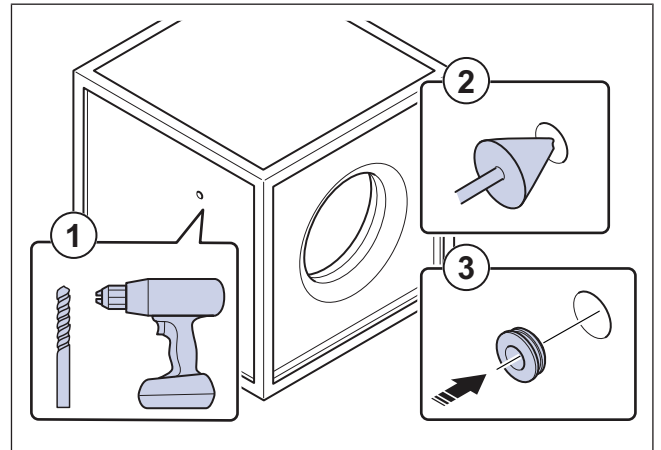
4.2.3 To install cable grommets



Caution

Risk of damage to the cables because of sharp edges. If it is necessary to put a cable through a hole in the side panel, cable grommets must be installed.

- 1 Drill a hole through the side panel (1).



- 2 Use a deburring tool to smooth the edges of the hole on the two sides of the side pane (2).
- 3 Put the cable grommet in the hole (3). Systemair recommends using stepped rubber (Systemair article number 313521) to avoid damage to the cable.

4.2.4 To operate the pressure controller

Pressure controller navigation buttons

P	P = Programming button and select menu.
▼	Arrow Down = Navigate down, decrease value.
▲	Arrow Up = Navigate up, increase value.
▲+▼	Arrow Down + Arrow Up = Leave menu.

Note:

Full instruction manual for PCA-2 1000 D2 controller is available at www.systemair.com.

4.2.5 To set up the controller for CAV/VAV

The fan is delivered with an EC motor and an air flow controller device which is factory set for maximum airflow in CAV (constant air volume control) mode. The CAV controller measures the air volume and adjusts the 0-10 V output signal for the EC motor to keep the air volume constant.

To set up the controller for CAV

- 1 Press "Down" to go to "Base set-up".
- 2 Press "P" to enter the menu.
- 3 Press "Down" to go to "Mode" and press "P" to choose 5.01 CAV control.
- 4 Press "Down" to go to "Metric units" and press "P" to choose "1: metric unit" (The factory setting, measures in Pa, m3/h, K-factor).
- 5 Press "Down" to go to "Measuring range" and press "P" to set the measuring range:
 - 1 = 0-1000 Pa
 - 2 = 0-500 Pa
 - 3 = 0-300 Pa
 - 4 = 0-200 Pa
- 6 Press "Down" to go to "K-Factor" and set the K-factor depending on product size. See table below.

Table 1 K-factor

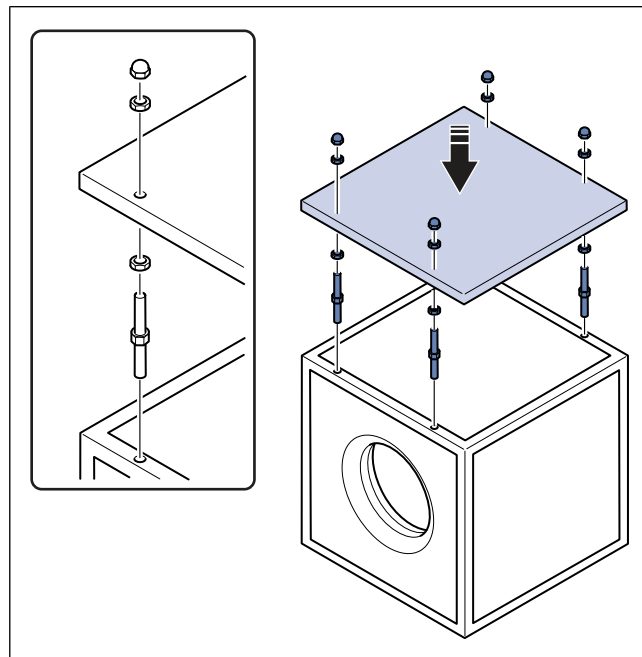
Model	K-factor
MUB-CAV/VAV 025 315 EC	143
MUB-CAV/VAV 025 355 EC	132
MUB-CAV/VAV 042 400 EC	159
MUB-CAV/VAV 042 450 EC	213
MUB-CAV/VAV 042 450 EC-K	223
MUB-CAV/VAV 042 500 EC	266
MUB-CAV/VAV 062 560 EC	302
MUB-CAV/VAV 062 630 EC	411
MUB-CAV/VAV 100 630 EC	456
MUB-CAV/VAV 100 710 EC	550

4.2.6 To install weather protection

If the fan is installed outside, Systemair recommends installing a Weather Protection Roof (WSD) and a Weather Protection Grille (WSG). These are available as accessories. Visit www.systemair.com to locate the correct size for your product.

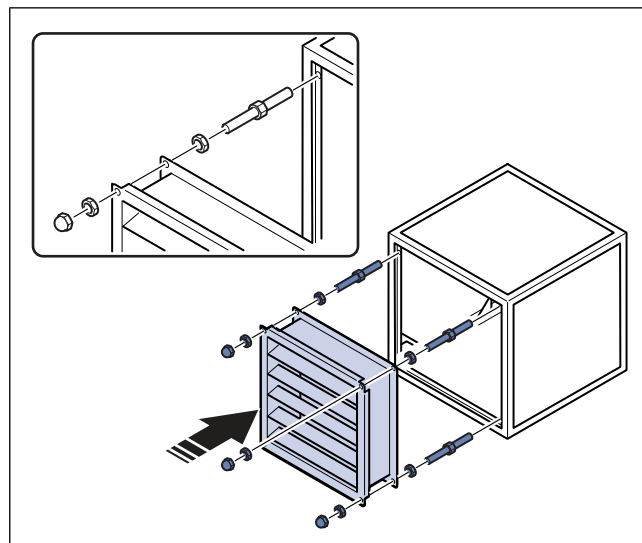
To install the weather protection roof (WSD)

- 1 Attach the WSD weather protection roof to the frame of the fan casing with a cap nut with double washers, a distance bolt and a clinch nut.



To install the weather protection grille (WSG)

- 1 Attach the WSG weather protection grille to the frame of the fan casing with a cap nut with double washers, a distance bolt and a clinch nut.



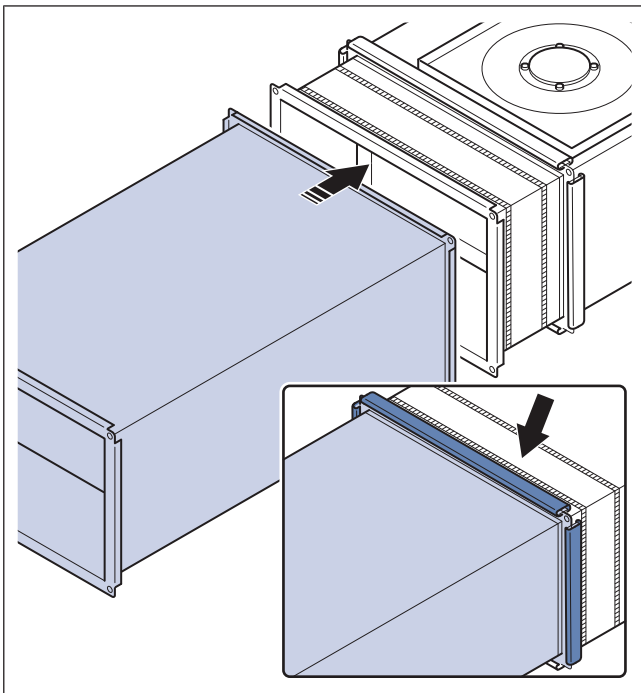
4.2.7 To connect the ducts to the product

To install the product with circular duct systems, Systemair recommends to use CCM or CCMI flanged plate.

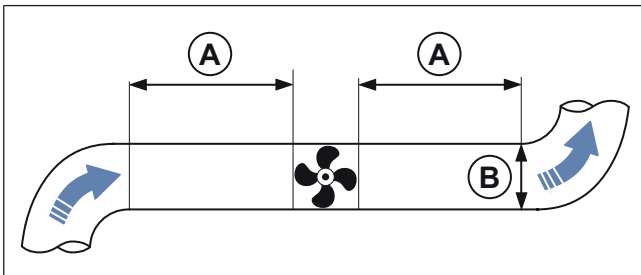
To install the product in rectangular duct systems, Systemair recommends to use the flexible connection FGV.

To install the product in rectangular duct systems, obey the steps below.

- 1 Put flexible connections on each side of the product and use self drilling screws with sealing tape in between to connect the product and the flexible connections. Systemair recommends to use FGV flexible connections to attach the duct to the product. The flexible connections are available as an accessory. Refer to [13 Accessory overview](#).
- 2 Put the ducts on each side of the product with the attached flexible connections.
- 3 To connect the flexible connection, use self drilling screws with sealing tape in between.



- 4 If you install the product near a duct bend, do these steps to prevent vibrations, unwanted noise and decreased air pressure:
 - a. Measure the distance (A) between the product and the duct bend.
 - b. Make sure that the distance (A) is a minimum of 2.5 x the diameter (B) of the duct system. For circular ducts, (B) is the nominal diameter. For rectangular ducts, (B) is the hydraulic diameter.



5 Electrical connection



Warning

The MUB/F fan has no motor protection fitted as standard. Any kind of motor protection and frequency converter must be bypassed in case of fire.

5.1 To do before the electrical connection

- Make sure that the electrical connection agrees with the product specification on the motor name plate.
- Make sure that the environment for electrical connection is clean and dry.
- Make sure that the wiring diagram that is included with the supply of the product agrees with the terminals in the connection box.

5.2 To connect the product to the power supply

- Complete the electrical connection for the motor. Refer to the motor wiring diagram that is included with the product.
- Make sure that the cross section of the protective earthing is equal to or larger than the cross section of the phase conductor.
- Install a circuit breaker in the permanent electrical installation, with a contact opening of a minimum 3 mm at each pole.
- If a residual current device (RCD) is installed, make sure that it is an all-current sensitive RCD. Consider if the product has a frequency converter, uninterruptible power supply (UPS), or an EC motor. EC motors have a leakage current to earth that is ≤ 3.5 mA.

5.3 Speed controller for AC motors

Note:

The speed controller alternatives are different for different motor types. Make sure that your motor is compatible with the speed controller type before you use it.

The speed can be controlled by voltage reduction using a transformer. It is also possible to control the fan speed with frequency converter if the installed frequency converter has built in all-pole sine filter and shielded cables are not needed.

5.4 To install motor protection for AC motors

- If the product has an built in motor protection, reset by disconnecting the product from power for 60 seconds.
- If the motor has temperature monitors such as thermal contacts (TK) or thermistors lead out into the terminal box, these must always be connected in the control circuit using appropriate motor protection.
- Make sure that an overheated motor cannot start again automatically when it becomes cool.
- Install the motor cables and the temperature monitor apart.
- If the motor does not have temperature monitors, install a motor protection switch.

5.5 Speed controller for EC motors

- EC motors are controlled through a stepless 0–10 V signal.
- Do not use power supply for the speed controller.
- Refer to [12.3 Wiring diagrams](#) and the instruction manual for the external speed controller.

5.6 Motor protection for EC motors

EC motors have an integrated motor protection. Reset the motor protection by disconnecting the fan from power supply for 60 seconds.

6 Commissioning



Caution

- If strong vibrations occur during commissioning, immediately increase or decrease the fan speed until the vibrations are decreased. Continuous strong vibrations can cause damage to components.
- Do not increase the fan speed to a higher rpm value than the maximum value that is given on the name plate.

The commissioning report is found at www.systemair.com.

6.1 To do before the commissioning

- Make sure that the installation and electrical connection are correctly done.
- Visually examine the product and accessories for damage.
- Make sure that the safety devices are correctly installed.
- Make sure that there are no blockages in the air inlet and the air outlet.
- Make sure that installation material and unwanted objects are removed from the product and the ducts.

6.2 To do the commissioning

- 1 Set the installed safety switch in the OFF position.
- 2 If it is possible to get access to the fan impeller, do the steps that follows:
 - a. If it is necessary, remove parts of the installation.
 - b. Turn the fan impeller by hand and make sure that it turn easily.
 - c. Record the result in the commissioning report.
- 3 Make sure to turn the product in a direction that agrees with the related arrow on the product.
 - a. Record the result in the commissioning report.
- 4 If you removed parts of the installation to get access to the fan impeller, install the removed parts again.
- 5 Set the installed safety switch in the ON position.
- 6 Start the product.
- 7 Set the minimum operation speed.
- 8 Increase the operation speed gradually to the maximum operation speed.
 - a. Examine the vibrations in the casing and the bearing areas at all speed levels.
 - b. Make sure that the vibrations agree with the specifications in ISO 14694.
 - c. Make sure that none of the speed levels cause unwanted noise in the product.
 - d. Record the result in the commissioning report.
- 9 Record the necessary data in the commissioning report.

7 Operation



Caution

EC motors must be set to ON/OFF via the control input. To stop the product via mains supply decreases the life time of the motor. Systemair recommends to install external speed controller for easy access to control the input signal.

7.1 To start a product with an EC motor

- 1 Make sure that the 0–10 V signal is set to “0” with the speed controller.
- 2 Set the installed safety switch in the ON position and wait 5 seconds.
- 3 Adjust the fan speed with the 0–10 V signal speed controller. If an external speed controller is not installed, adjust the fan speed directly with the integrated potentiometer.

7.2 To start a product with an AC motor

- 1 Set the installed safety switch in the ON position.
- 2 Install the external speed controller. Refer to the instruction manual for the installed speed controller.

7.3 To stop the product

- 1 Set the installed speed controller in the OFF position. Refer to the instruction manual for the installed speed controller.
- 2 Set the installed safety switch in the OFF position.

7.3.1 To stop the product in an emergency

- Set the installed safety switch in the OFF position.

8 Maintenance



Warning

Set the installed safety switch in the OFF position before you do the maintenance unless the instructions tell you differently. Make sure that the safety switch is not accidentally set in the ON position.

8.1 Maintenance schedule

The intervals are calculated from continuous operation of the product.

Maintenance task	Usual operation conditions		Unusual operation conditions. ¹		
	Each 6 months	Each year	Each 3 months	Each 6 months	Each year
Visually examine the product and its components for damage, corrosion and dirt.		X		X	
Examine the fan impeller for damage and imbalance.		X		X	
Clean the product and the ventilation system.	X		X		
Do a check of all fasteners and make sure that they are fully tightened.		X			X
Make sure that the product and its components are correctly operated.	X			X	
Measure the power consumption and compare the result with the information on the name plate.		X		X	
If vibration dampers are installed, make sure that they operate correctly and examine them for damage and corrosion.		X			X
Make sure that the electrical protective equipment and the mechanical protective equipment operates correctly.		X			X
Make sure that you can read the name plates of the product.		X		X	
Examine all cable connections for damage. Make sure that the cable glands are tight against the cables.		X			X
If flexible connections are installed, examine them for damage.	X			X	

1. The unusual operation conditions are classified as follows: If a stable ambient temperature is higher than 30 °C or lower than -10° C, if the temperature changes are large or if very contaminated air is transported.

8.2 To clean the product



Caution

- Do not clean the product with a high-pressure washer.
- Do not clean the product with steel brushes or sharp objects.
- Do not bend the fan impeller blades.
- Be careful not to move the balance weights on the fan impeller.

- Remove dirt from the fan and the duct.
- If access to the fan impeller is possible, clean the fan impeller with a moist cloth or soft brush.

8.3 Spare parts

- When you send an order for spare parts, include the serial number of the product. The serial number is found on the name plate.
- For more information about spare parts, contact technical support.
- Always use spare parts from Systemair.
- To find spare parts, refer to the scannable code on the name plate.

9 Troubleshooting

Note:

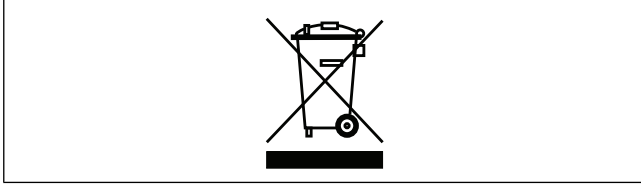
If you cannot find a solution to your problem in this section, speak to Systemair technical support.

Problem	Cause	Solution
The product does not operate smoothly.	The fan impeller is not correctly balanced.	Speak to Systemair technical support.
	There is dirt on the fan impeller.	Clean the fan impeller carefully. Refer to 8.2 To clean the product .
	The fan impeller has damages or deformations because the transported air contains aggressive media.	Speak to Systemair technical support.
	The fan impeller does not turn in the correct direction.	Make sure that the electrical connection is correctly done.
	The fan impeller has deformations because of too high temperatures.	• Replace the fan impeller. • Make sure that the temperature of the transported air is not higher than the value on the name plate.
	There are unusually strong vibrations in the product or the duct system.	Make sure that the product is correctly installed. Do a check of the duct system.
	The product is operated in a resonant frequency range.	Increase or decrease the fan speed until the product operates smoothly. Refer to 6 Commissioning .
The air output is not sufficient.	The fan impeller does not turn in the correct direction.	Make sure that the electrical connection is correctly done.
	The electrical connection is not correctly done.	Make sure that the electrical connection agrees with the wiring diagrams.
	The air pressure is too low because of incorrect installation.	Do the necessary changes in the duct system and installed components to increase the air pressure. Refer to 6 Commissioning .
	The spring return damper on outdoor or exhaust duct is closed or not fully open.	Adjust the spring return damper.
	There is blockage in the air inlet or the duct system.	Remove the blockage.
	The product is not applicable for the installation location.	Make sure that the product is applicable for the installation location.
	The motor power is decreased because of too high temperature in the motor.	• Do a check of the ambient temperature. • Make sure that the space around the motor is sufficient to keep the temperature down.
	Note: This is applicable for EC motors only.	
There is unusual noise when the product starts or operates.	There is strain in the connections of the duct system.	Loosen the connections, align the parts of the duct system correctly and tighten the connections.

Problem	Cause	Solution
Thermal contacts, PTC or resistors are released.	The fan impeller does not turn in the correct direction.	Make sure that the electrical connection is correctly done.
	A phase loss occurred.	If the motor is a 3-phase motor, make sure that no phase is missing. Note: This is not applicable for EC motors.
	The motor is overheated.	- Do a check of the motor cooling impeller. - If it is possible, measure the resistance to do a check of the motor winding.
	The capacitor is not connected or not correctly connected. Note: This is not applicable for EC motors or 3-phase AC motors.	Connect the capacitor correctly. Refer to the included motor wiring diagram.
	There is blockage in the motor.	Speak to Systemair technical support.
The fan speed does not get the nominal value.	Defective motor winding.	If it is possible, measure the resistance to do a check of the motor winding.
	The speed control is not correctly set.	Set the speed control correctly.
	The fan impeller cannot turn freely because of mechanical blockage.	Remove the blockage.
	Phase loss occurs.	If the motor is a 3-phase motor, make sure that no phase is missing.
The motor does not rotate.	A component in the power supply is defective.	Do a check of the power supply. Replace defective components and connect the power supply again.
	The electrical connection is not correctly done.	Make sure that the electrical connection agrees with the wiring diagrams.
	The motor protection is released because the motor is overheated.	Let the motor become cool. Reset the motor protection. Find the cause of the overheated motor.
	A phase loss occurred.	If the motor is a 3-phase motor, make sure that no phase is missing.
The electronic components or the motor is overheated.	The motor is overloaded or the ambient temperature is too high.	Let the motor become cool. Reset the motor protection. Find the cause of the overheated motor.
	The motor is overloaded.	Make sure that the product is applicable for the installation location.
	The ambient temperature is too high.	Make sure that the product is applicable for the installation location.
	The cooling of the product is not sufficient.	Make sure that the space around the motor is sufficient to keep the temperature down.

10 Disposal

The product follows the WEEE directive. This symbol on the product or the packaging of the product shows that this product is not domestic waste. The product must be recycled at an approved disposal location for electrical and electronic equipment.



10.1 To disassemble and discard the parts of the product

- 1 Disconnect and disassemble the product in the opposite sequence of electrical connection and installation.
- 2 Recycle the product parts and the packaging at an applicable disposal location.
- 3 Obey the local and national requirements for disposal.

11 Warranty

For warranty claims, send a written maintenance plan and the commissioning report to Systemair. The warranty is only applicable for these conditions:

- The product is correctly installed and operated.
- Motor protection is used.
- The instructions in the data sheets are obeyed.
- Maintenance instructions are obeyed.
- The product is operated for a minimum of 1 hour each month.

12 Technical data

12.1 Technical data overview

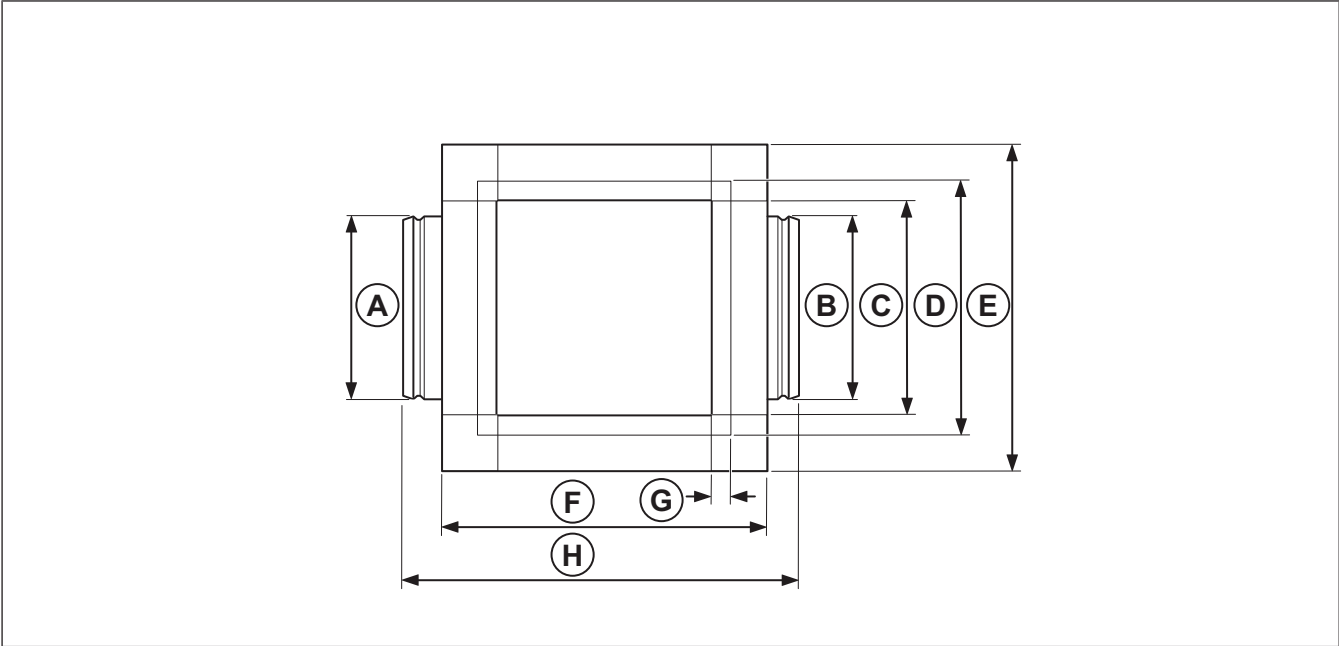
Max. temperature of transported air, °C	Refer to the data sheet in the online catalogue at www.systemair.com .
Max. ambient temperature, °C	
Sound pressure, dB	
IP class	
Voltage, current, frequency, enclosure class, weight	Refer to the name plate. Refer to 1.5 Name plate for more information.
Motor data	Refer to the motor name plate or the technical documentation from the motor manufacturer.

12.2 Product dimensions

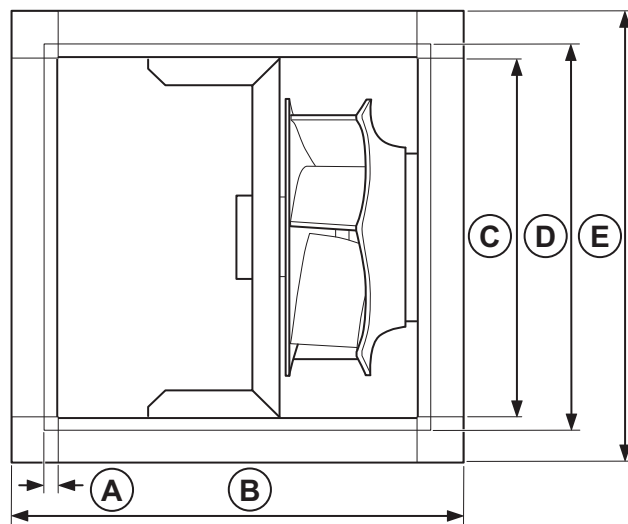
Note:

If the unit of measure is not specified, the dimensions are given in millimetres.

12.2.1 Product dimensions MUB fans

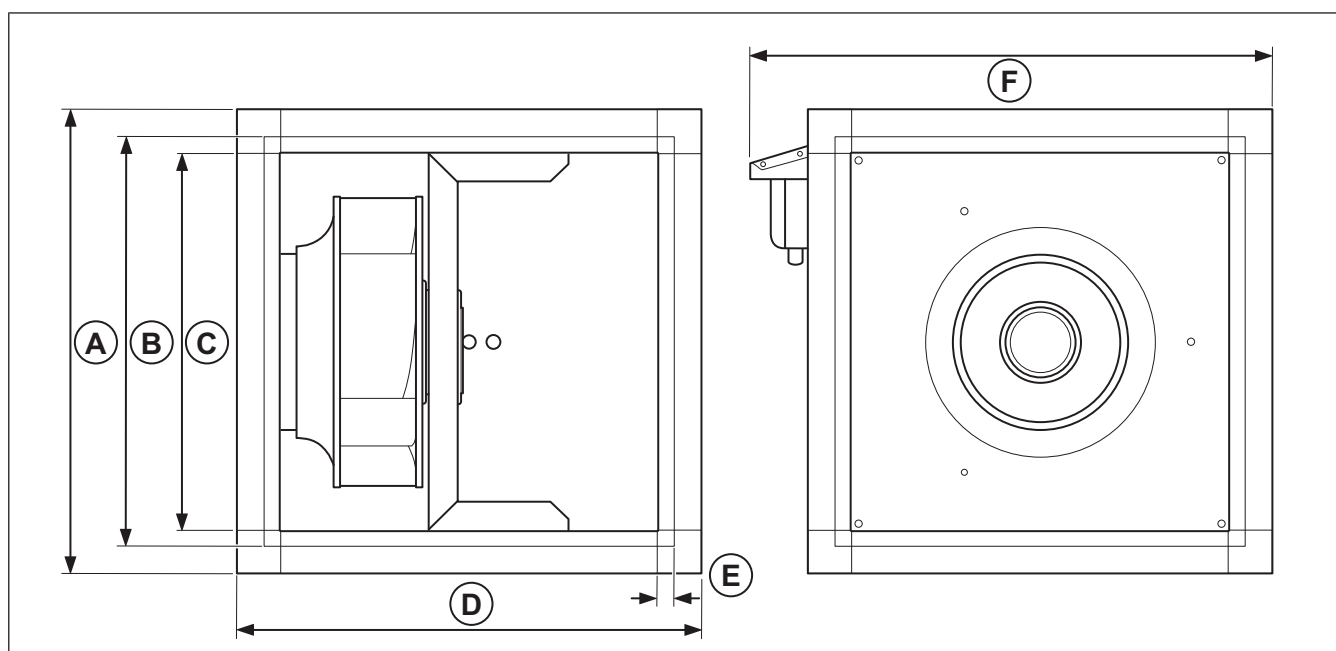


	ØA	ØB	C	D	E	ØF	G	H
MUB 016 200	200	200	236	278	378	378	21	433



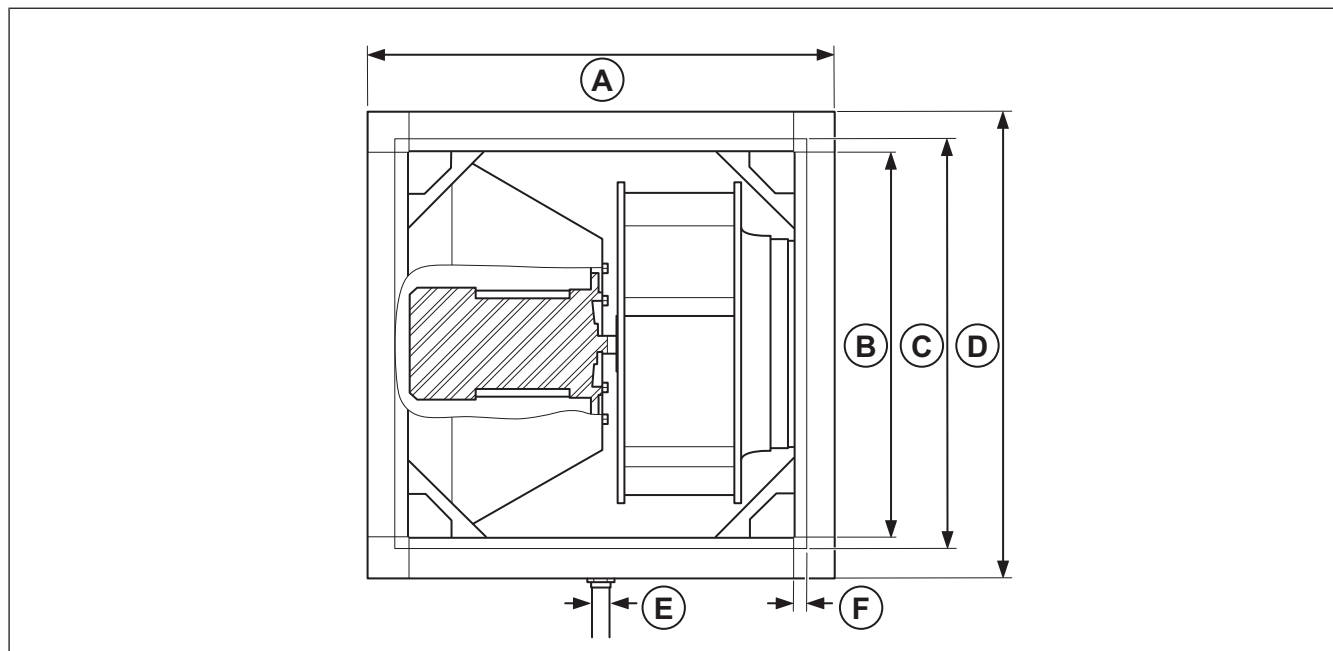
	A	B	C	D	E
MUB 025 315/355	21	520	378	420	520
MUB 042 400/450/500	21	690	548	590	690
MUB 062 560/630	21	820	678	720	820
MUB 100 630/710	21	1020	878	920	1020

12.2.2 Product dimensions MUB-CAV/VAV fans



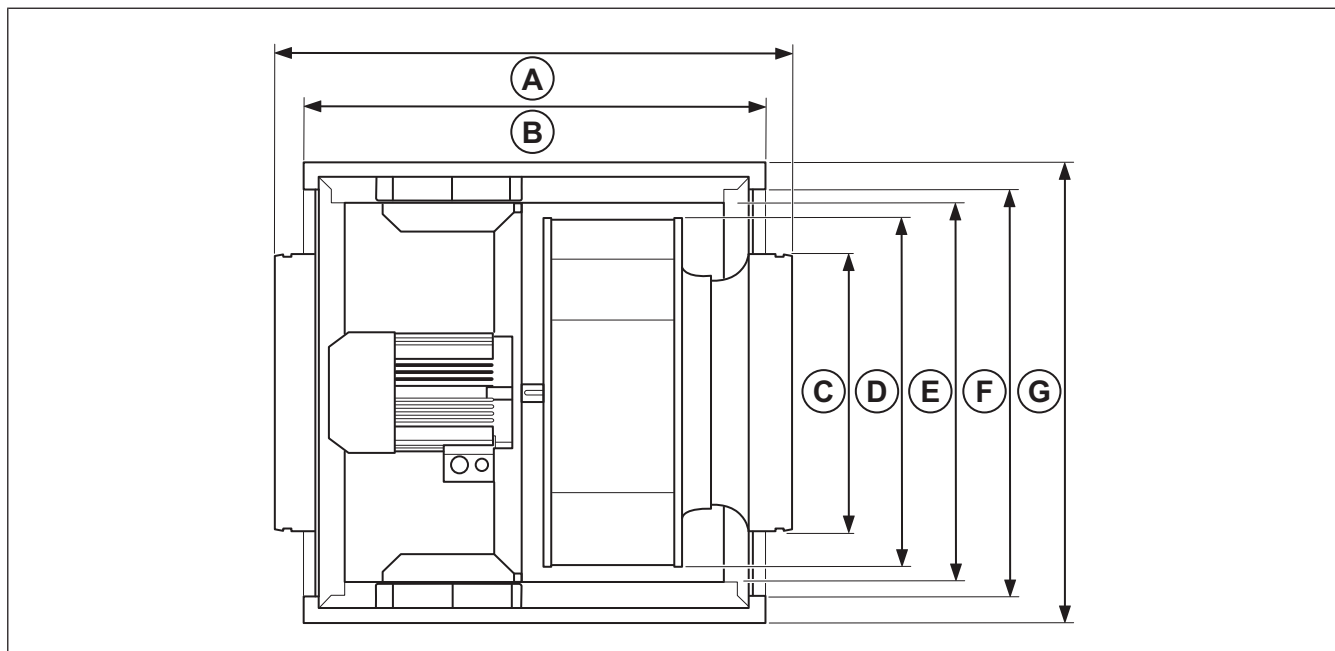
	A	B	C	D	E	F
MUB-CAV/VAV 025 315/355	520	420	378	520	21	606
MUB-CAV/VAV 042 400/450/500	690	590	548	690	21	776
MUB-CAV/VAV 062 560/630	820	720	678	820	21	906
MUB-CAV/VAV 100 630/710	1020	920	878	1020	21	1106

12.2.3 Product dimensions MUB/T fans



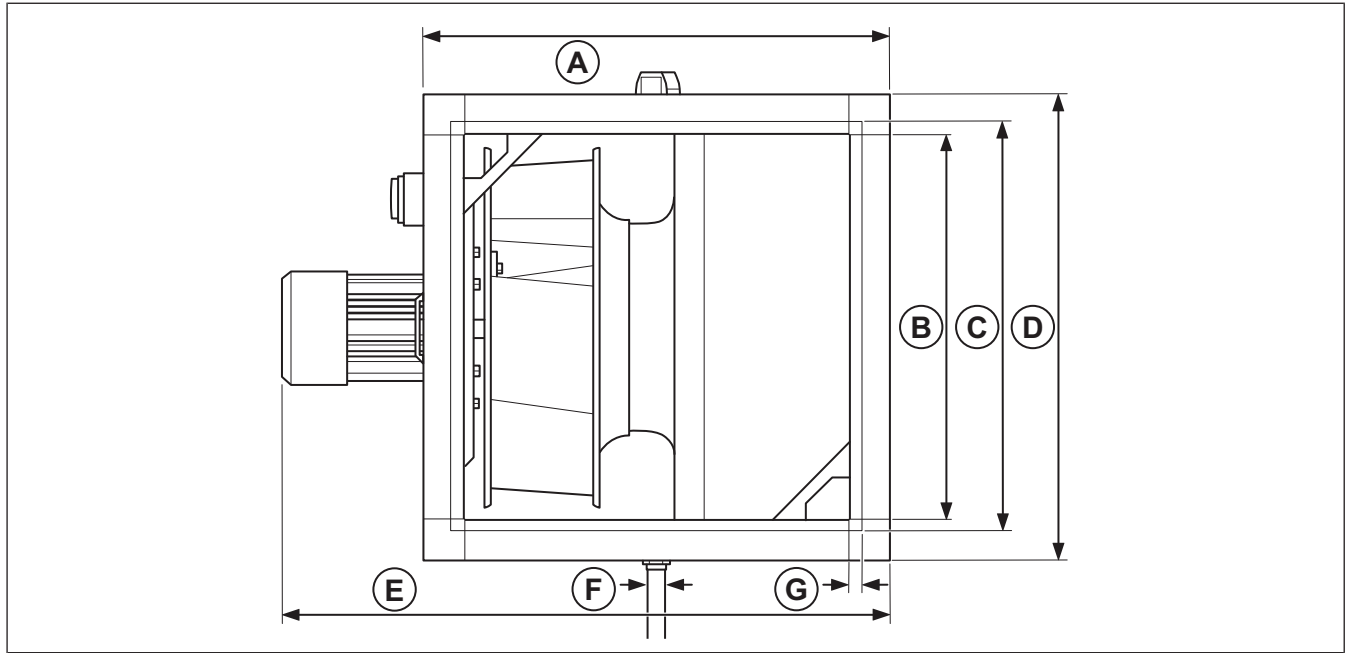
	A	B	C	D	E	F
MUB/T 025 355	520	378	420	520	1" (inch)	21
MUB/T 045 400/450/500	690	548	590	690	1" (inch)	21
MUB/T 062 500/560/630	820	678	720	820	1" (inch)	21
MUB/T 100 630	1020	878	920	1020	1" (inch)	21
MUB/T 100 710 EC	1020	878	920	1020	1" (inch)	21
MUB/T 127 800 EC	1090	1148	1190	1290	1" (inch)	21

12.2.4 Product dimensions MUB/F fans



	A	B	ØC	ØD	ØE	F	G
MUB/F 042 400	783	670	400	410	548	590	670
MUB/F 042 450	783	670	400	454	548	590	670
MUB/F 062 500	915	800	560	520	676	720	800
MUB/F 062 560	915	800	560	570	676	720	800
MUB/F 062 630	915	800	630	650	676	720	800

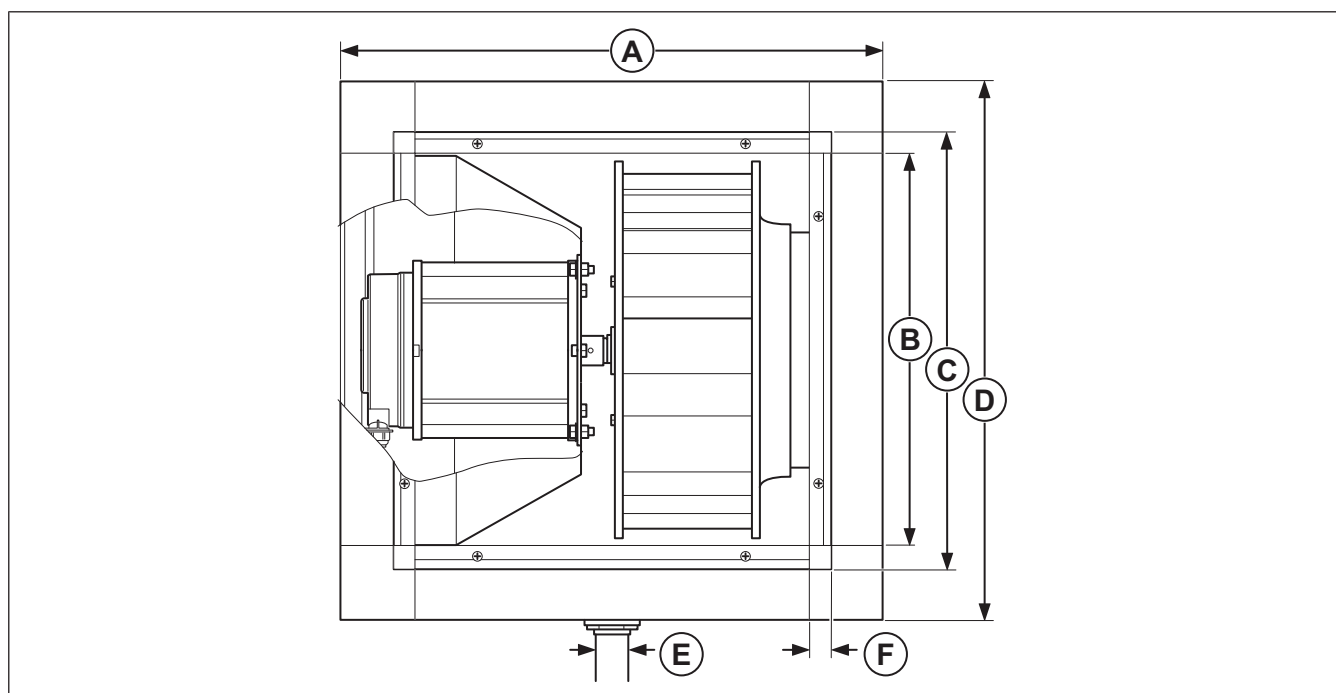
12.2.5 Product dimensions MUB/T-S fans



	A	B	C	D	E	F	G
MUB/T-S 025 315 D2	520	378	420	520	730	1" (inch)	21
MUB/T-S 025 315 D4	520	378	420	520	684	1" (inch)	21
MUB/T-S 025 315 EV	520	378	420	520	699	1" (inch)	21
MUB/T-S 025 315 EC	520	378	420	520	676	1" (inch)	21
MUB/T-S 025 315 EC-L	520	378	420	520	684	1" (inch)	21
MUB/T-S 042 355 D4	690	548	590	690	790	1" (inch)	21
MUB/T-S 042 355 EV	690	548	590	690	805	1" (inch)	21
MUB/T-S 042 400 D4	520	378	420	520	684	1" (inch)	21
MUB/T-S 042 400 EV	690	548	590	690	859	1" (inch)	21
MUB/T-S 042 450 D4	690	548	590	690	882	1" (inch)	21
MUB/T-S 042 450 EV	690	548	590	690	883	1" (inch)	21
MUB/T-S 042 355 EC	690	548	590	690	782	1" (inch)	21
MUB/T-S 042 400 EC	690	548	590	690	846	1" (inch)	21
MUB/T-S 042 450 EC	690	548	590	690	852	1" (inch)	21
MUB/T-S 042 450 EC-K	690	548	590	690	888	1" (inch)	21
MUB/T-S 062 500 D4	820	678	720	820	1034	1" (inch)	21

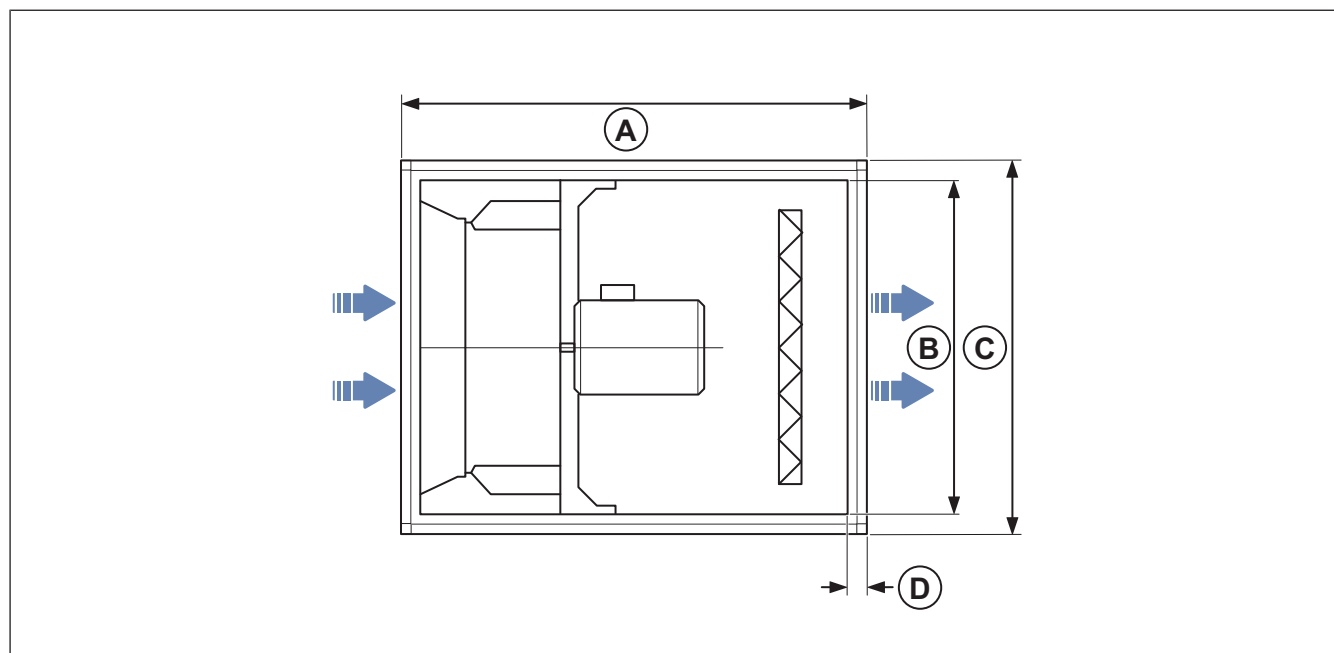
	A	B	C	D	E	F	G
MUB/T-S 062 560 D4	820	678	720	820	1070	1" (inch)	21
MUB/T-S 062 500 EC	820	678	720	820	1012	1" (inch)	21
MUB/T-S 062 560 EC	820	678	720	820	1050	1" (inch)	21
MUB/T-S 100 630 D4	1020	878	920	1020	1201	1" (inch)	21
MUB/T-S 100 630 EC	1020	878	920	1020	1143	1" (inch)	21

12.2.6 Product dimensions MUB/T ECO fans



	A	B	C	D	E	F
MUB/T 355 D4 ECO	520	378	420	520	1" (inch)	21

12.2.7 Product dimensions MUB+Filter fans



	A	B	C	D
MUB + Filter 025 315/355	690	378	520	71
MUB + Filter 042 400/450/500	820	548	690	71
MUB + Filter 062 560/630	1020	678	820	71
MUB + Filter 100 630	1020	878	1020	71

12.3 Wiring diagrams

12.3.1 Wiring diagrams for AC fans

Refer to the wiring diagram documents that are included in the supply of the product.

The wires in the motor cables have these colours:

Wire	Colour
+10 V	Red
0...10 V/PWM	Yellow
GND	Blue

12.3.2 Wiring diagrams for EC fans

Note:

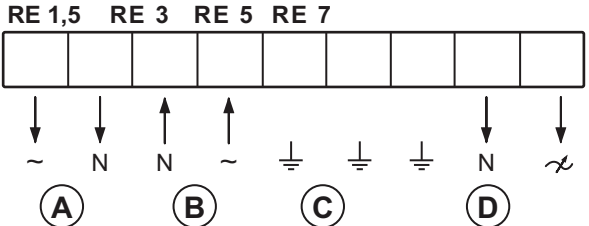
If an internal potentiometer is installed on the terminal block from the factory, remove the internal potentiometer when you use an external speed controller for the EC fan.

Refer to the wiring diagram documents that are included in the supply of the product.

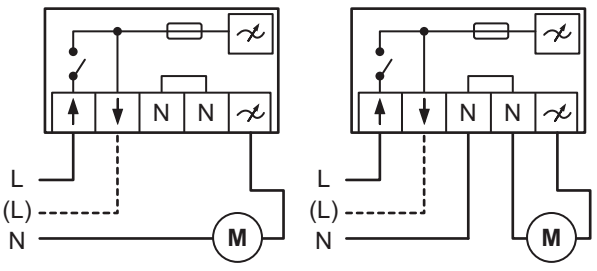
12.3.3 Wiring diagrams for speed controller for AC motors

Note:

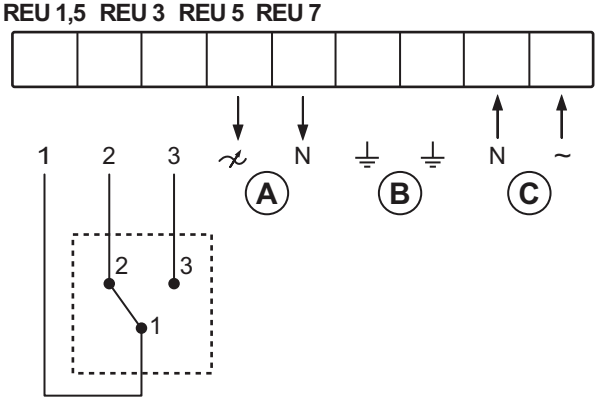
The selection of electrical accessories must be done in line with the technical parameters of the product.

RE	
Manual 5-step transformer.	

- A. Relay connection. There is always 230 V between ~ and N when the transformer knob is in one of the positions 1–5.
- B. Mains supply
- C. Earth
- D. Fan

REE — Thyristor	
REE 1 and REE 2 - Surface mounting or with flush mounting casing included.	
REE 4 - Surface mounting.	
Note: Starting currents must be considered when you select the speed controller type. Products that are used with this speed controller must have a built-in overheating protection and must be designed for thyristor speed control.	

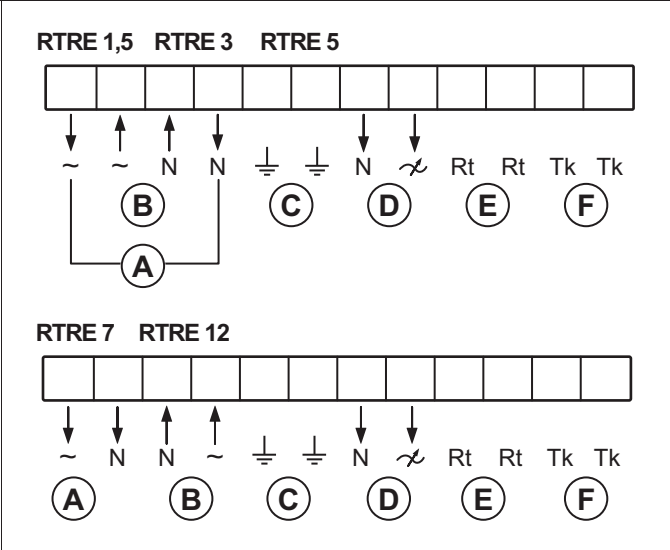
- L: the connection with cutting function on the speed control.
- (L): the connection without cutting function.

REU	
Manual 5-step transformer for high/low speed operation. Used together with a change-over contact, for example a timer or a thermostat.	

- 1. External change-over contact
- 2. Left selector switch
- 3. Right selector switch
- A. Fan
- B. Earth
- C. Mains supply

RTRE	
------	--

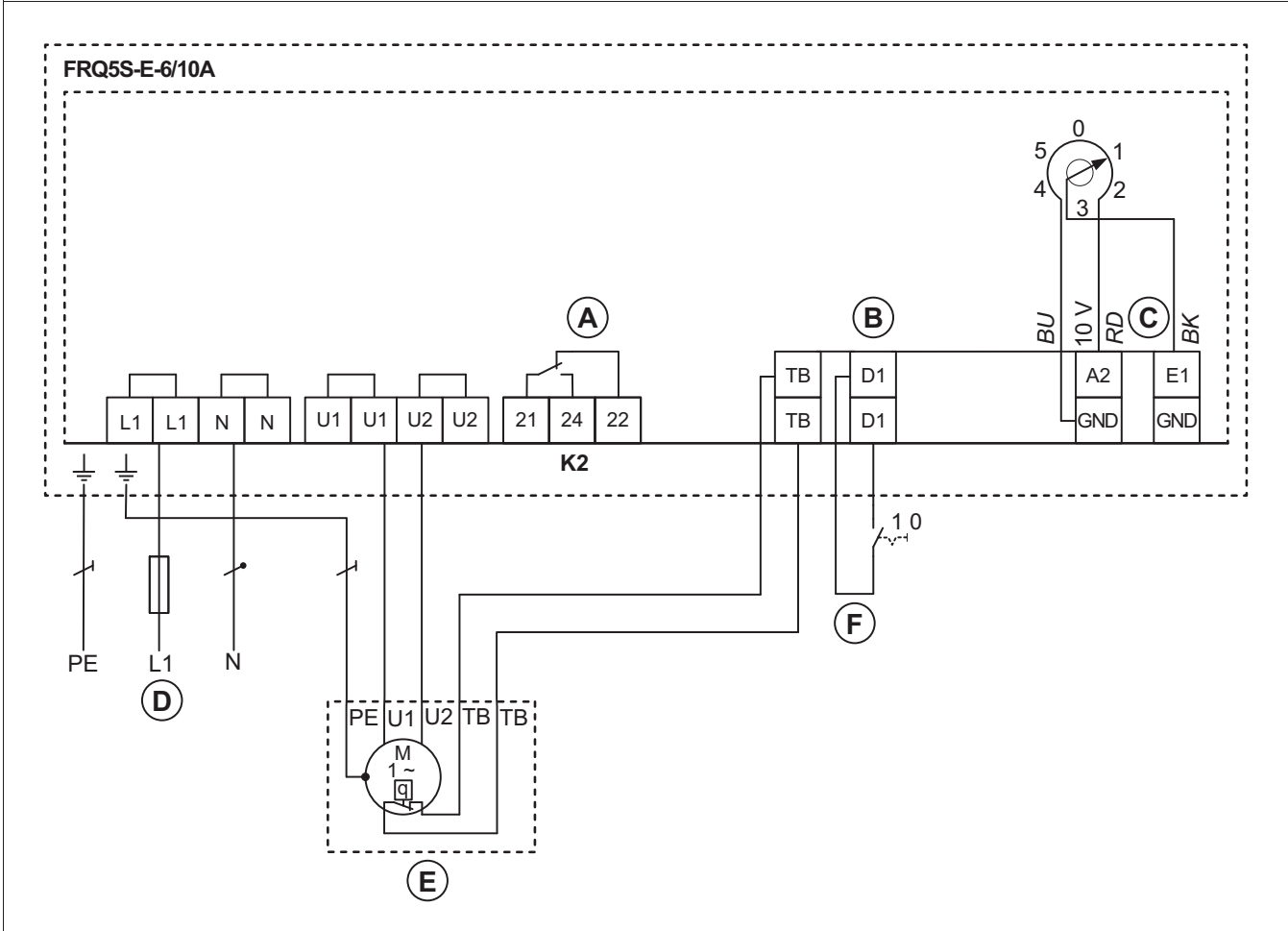
Manual 5-step transformer with motor protection.



- A. Relay connection. There is always 230 V between ~ and N when the transformer knob is in one of the positions 1–5.
- B. Mains supply
- C. Earth
- D. Fan
- E. Thermostat
- F. Motor protection. If the motor protection is not in use, Tk must be looped together.

FRQ5S-E-6A

Frequency converter with built-in all-pole sine filter and 5-step switch.



A. Contact rating, maximum AC 250 V/2 A

B. Digital In 1

C. Analog In 1

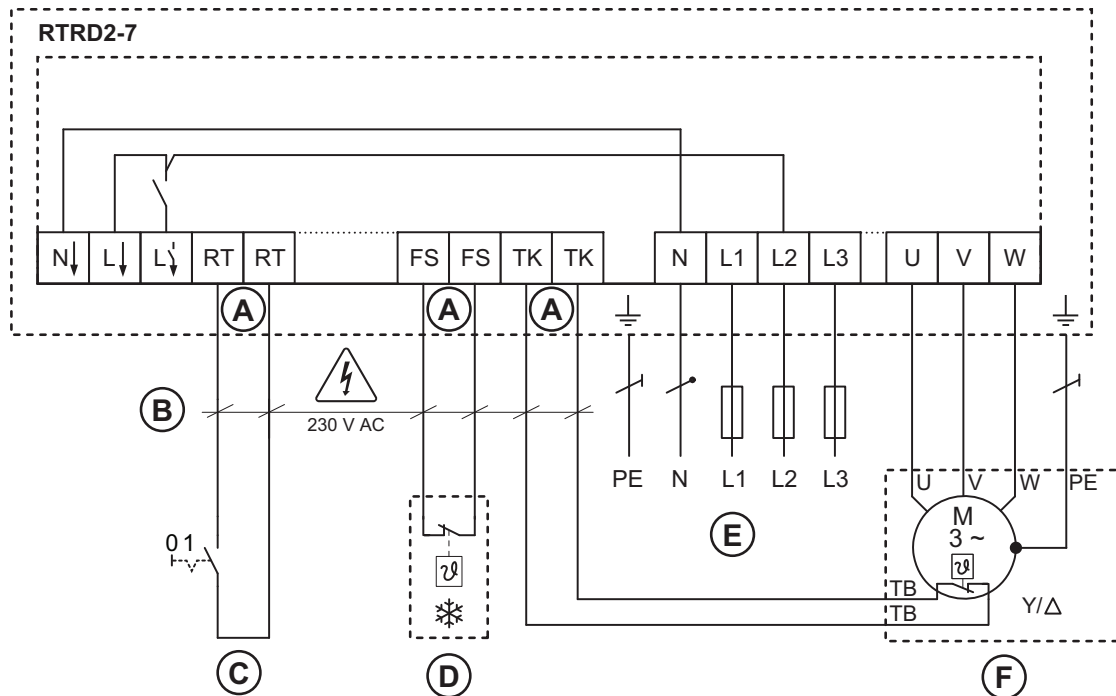
D. Mains supply, 1-phase 208...277 V, 50/60 Hz

E. Motor with internal thermal contacts

F. OFF/ON

RTRD

A 3-phase transformer that controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted by using the control knob on the front of the unit.



A. If the function is not necessary, the terminals must be bridged

B. Contact rating, 230 V AC/maximum 1 A

C. OFF/ON

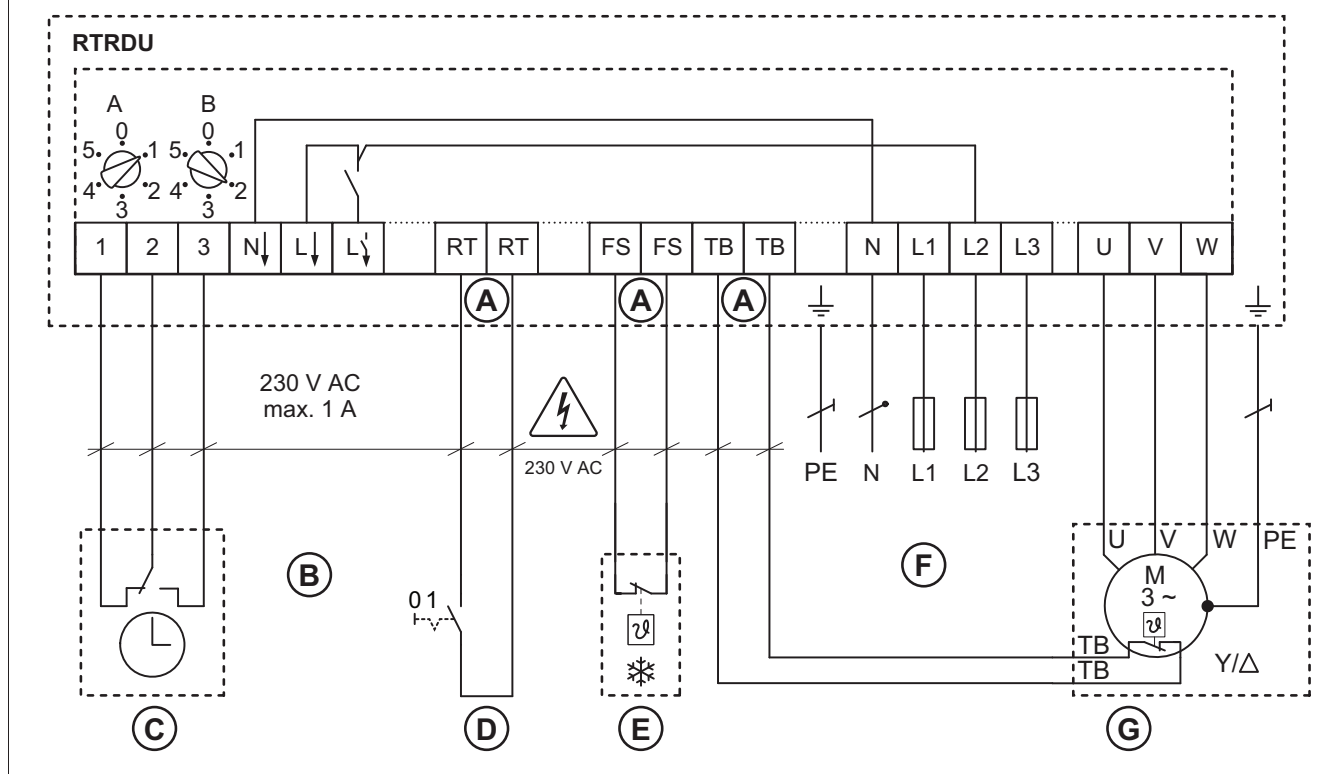
D. OFF/ON (only by reset)

E. Mains supply, 3-phase 400 V 50/60 Hz

F. 3-phase motor with internal thermal contacts

RTRDU

Manual 5-step transformer with motor protection — a 3-phase transformer that controls the fan speed by altering the supply voltage in five fixed steps. The steps are adjusted by using the control knob on the front of the unit.



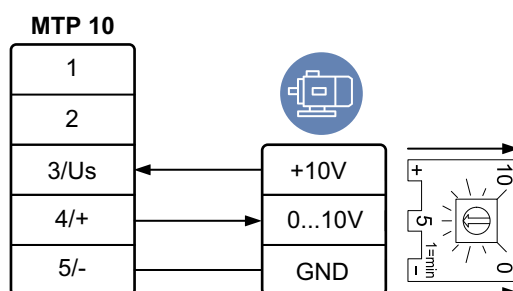
- A. If the function is not necessary, the terminals must be bridged
- B. Contact rating, 230 V AC/maximum 1 A
- C. Time switch
- D. OFF/ON
- E. OFF/ON (only by reset)
- F. Mains supply, 3-phase 400 V 50/60 Hz
- G. 3-phase motor with internal thermal contacts

12.3.4 Wiring diagrams for speed controllers for EC motors

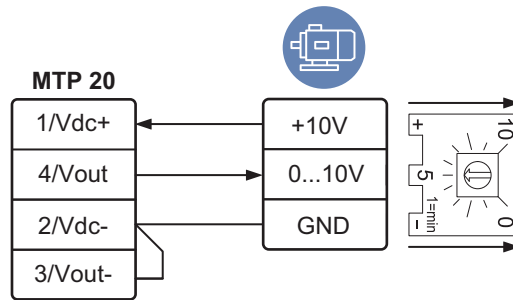
Note:

If an internal potentiometer is installed on the terminal block from the factory, remove the internal potentiometer when you use an external speed controller for the EC fan.

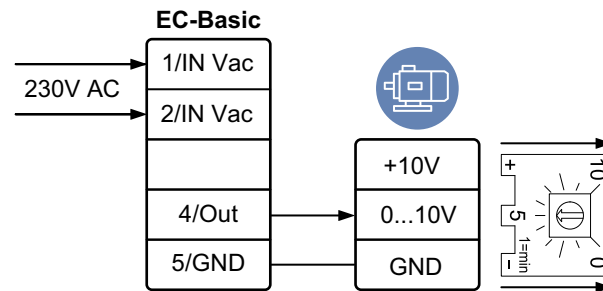
MTP 10



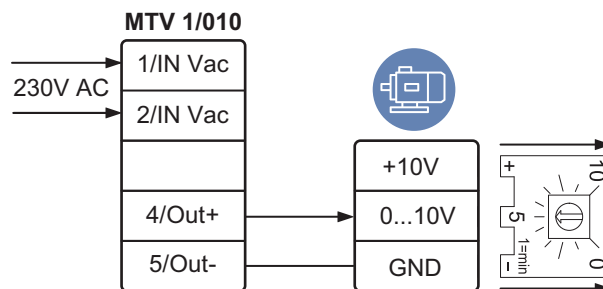
MTP 20



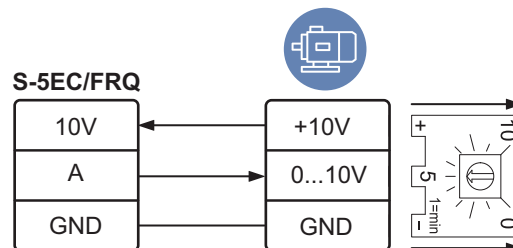
EC-Basic



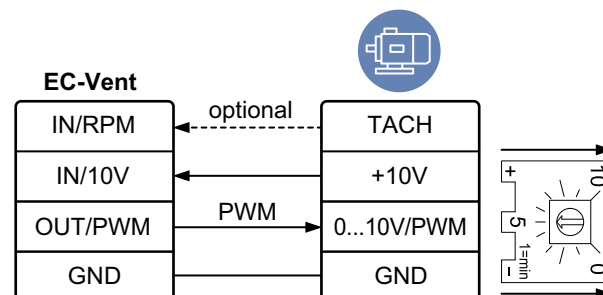
MTV-1/10



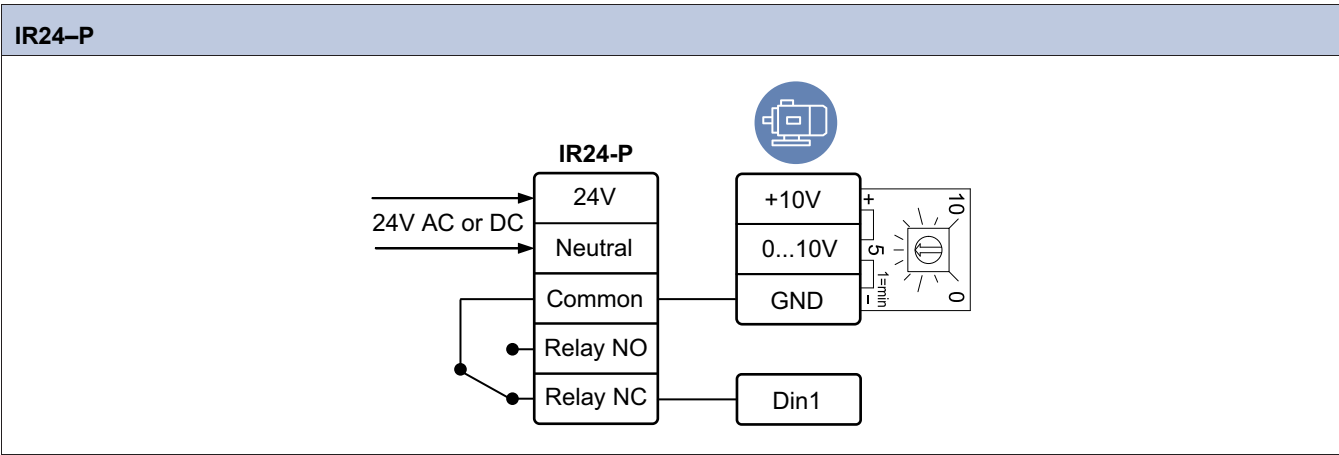
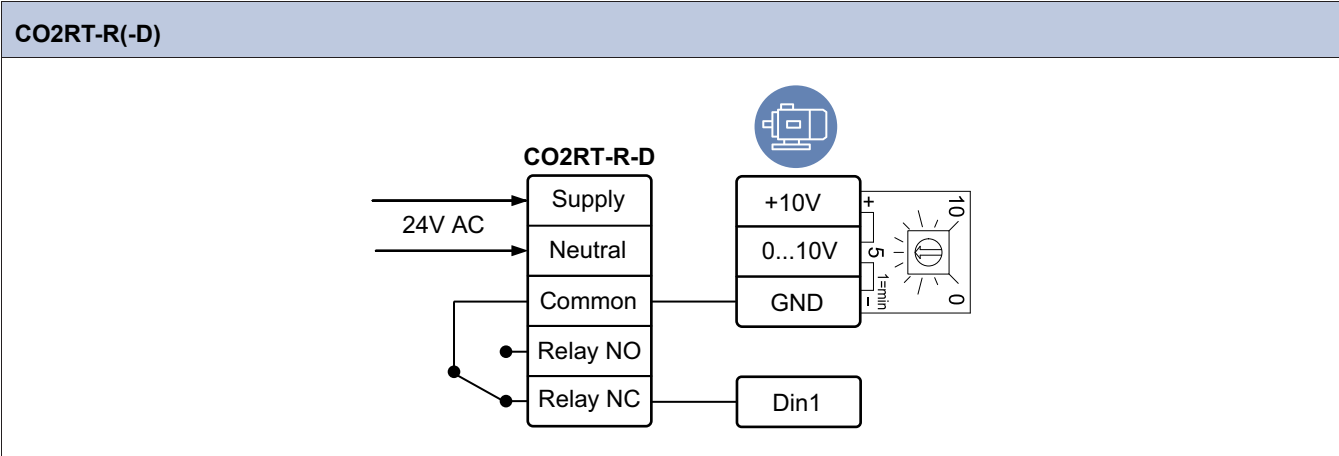
S-5EC/FRQ



EC-Vent



12.3.5 Wiring diagrams for ON/OFF controls for EC motors



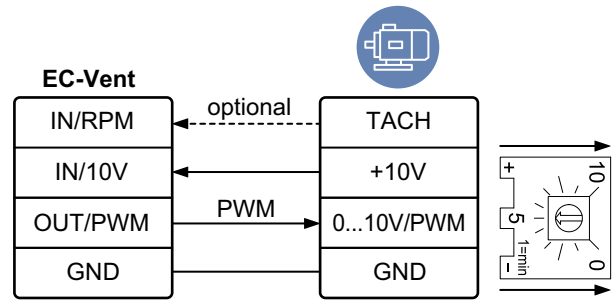
12.3.6 Wiring diagrams for demand control for EC motors

EC Basic	
EC Basic-T for temperature control	EC-Basic 1/IN Vac 2/IN Vac 4/Out 5/GND +10V 0...10V GND
EC Basic-CO2/T for temperature and CO ₂ control	
EC Basic-H for humidity control	
EC Basic-U	
EC Basic-U for universal 0-10 V control	110-240 V~ 50/60Hz L N 1 2 3 4 5 6 7 8 V OUT IN

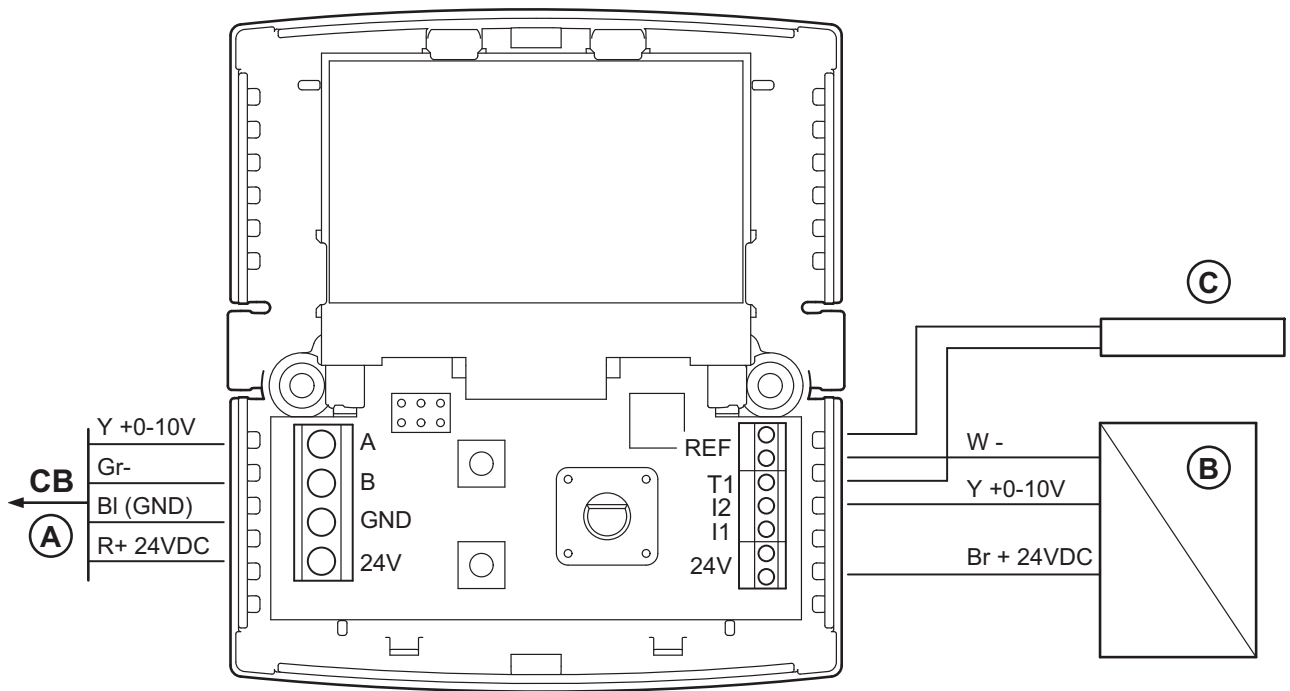
EC-Vent

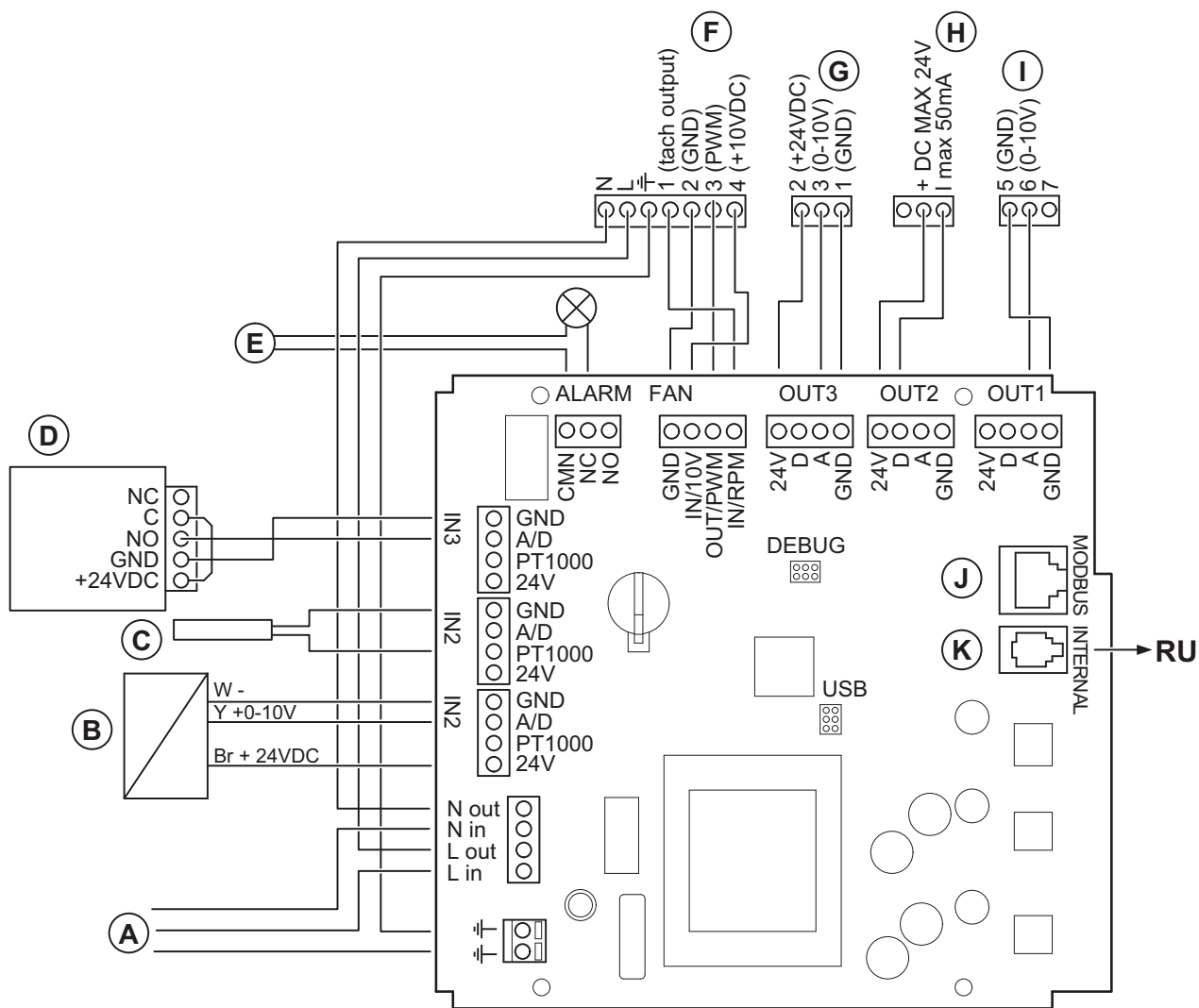
Demand control for up to 5 external sensors, 2 fans, dampers, heaters and coolers.

The EC vent system has 2 units. The control board (CB) and the room unit (RU). Connect the fan to the control board and remove the internal potentiometer.



Room Unit (RU)





- A. Mains supply, 230 V 1~AC (10 A)
- B. Analogue sensor (for example, pressure sensor)
- C. Analogue sensor (for example, pressure sensor type PT1000)
- D. Digital sensor (for example, IR presence detector)
- E. Alarm output (maximum 24 V AC/DC, maximum 500 mA $\cos\phi > 0.95$)
- F. Output to EC fan
- G. Output to analogue actuator with 24 V DC supply
- H. Output to digital signal (DC, maximum 24 V, 1 maximum 50 mA)
- I. Output to analogue actuator (for example, heat regulator)
- J. Connection to Modbus
- K. Connection to room unit (RU)

MM6-24/D output signal selector

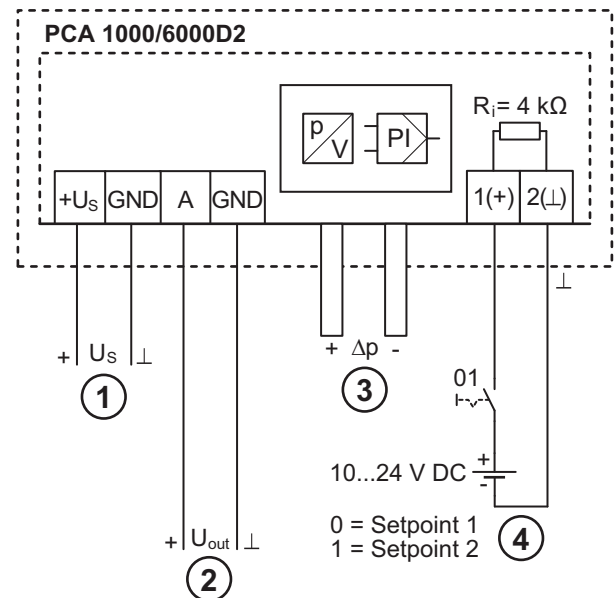
Compares signals from connected inputs and transfers the signal to the control output.

1	Input 1	0...10 V
2	Input 2	0...10 V
3	Input 3	0...10 V
4	Input 4	0...10 V
5	Input 5	0...10 V
6	Input 6	0...10 V

7	System neutral	Mains supply
8	24 V AC	
9	Signal neutral	
10	Signal neutral	
11	Output minimum	0...10V
12	Output maximum	0...10V

PCA 1000D2 Pressure controller

For constant air volume control (CAV) or variable air volume control (VAV).



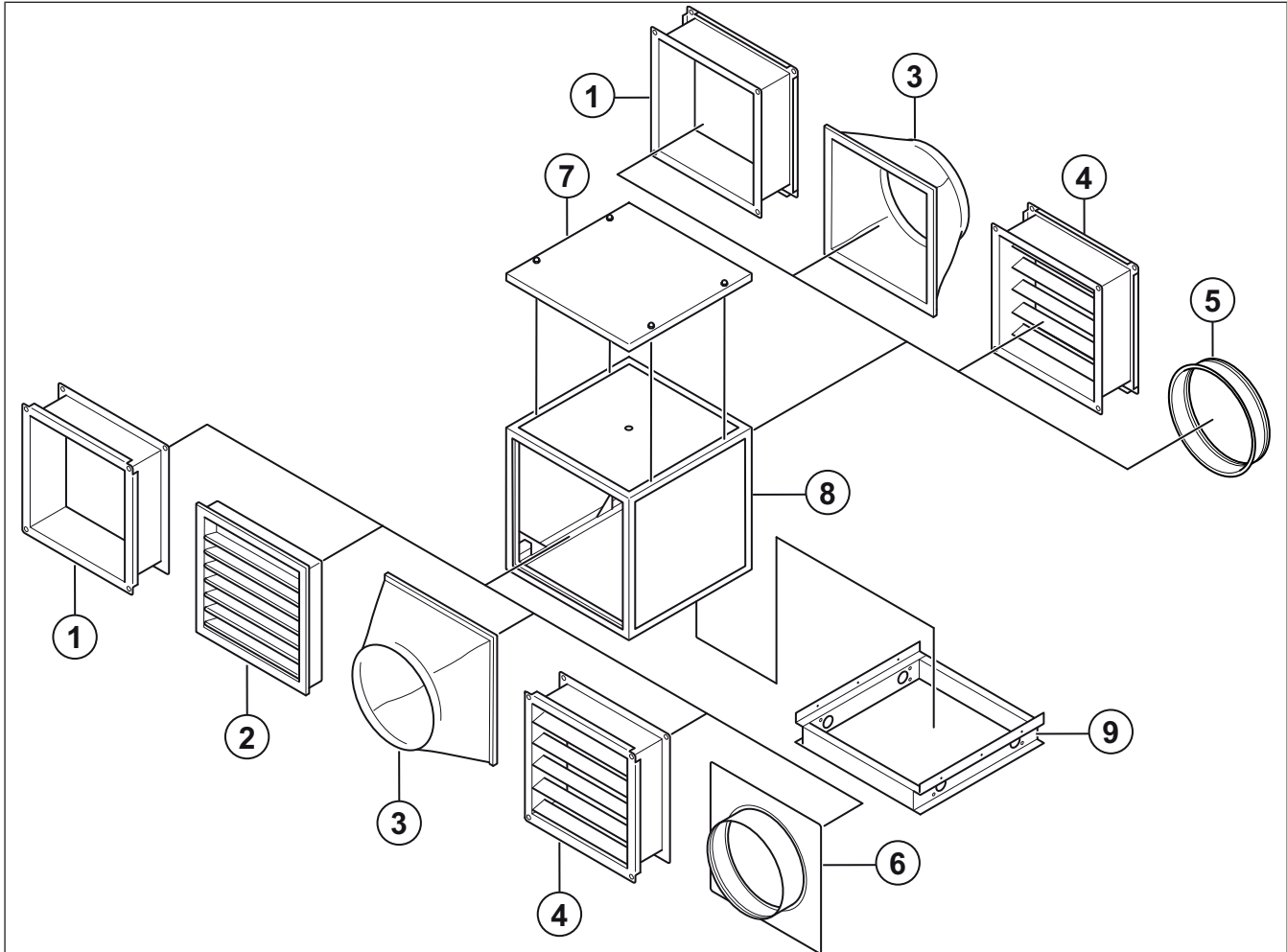
1. Mains supply 10...24 V DC
2. Output 0...10 V
3. Pressure connections
4. Voltage input for switch on Setpoint 1/Setpoint 2

13 Accessory overview

13.1 Accessory overview MUB fans, MUB-CAV/VAV fans, MUB/T fans, MUB/T-S, MUB/T ECO and MUB+Filter fans

Note:

The selection of accessories shown are not supplied with the product. For more information and other available accessories, refer to www.systemair.com or speak to Systemair technical support.

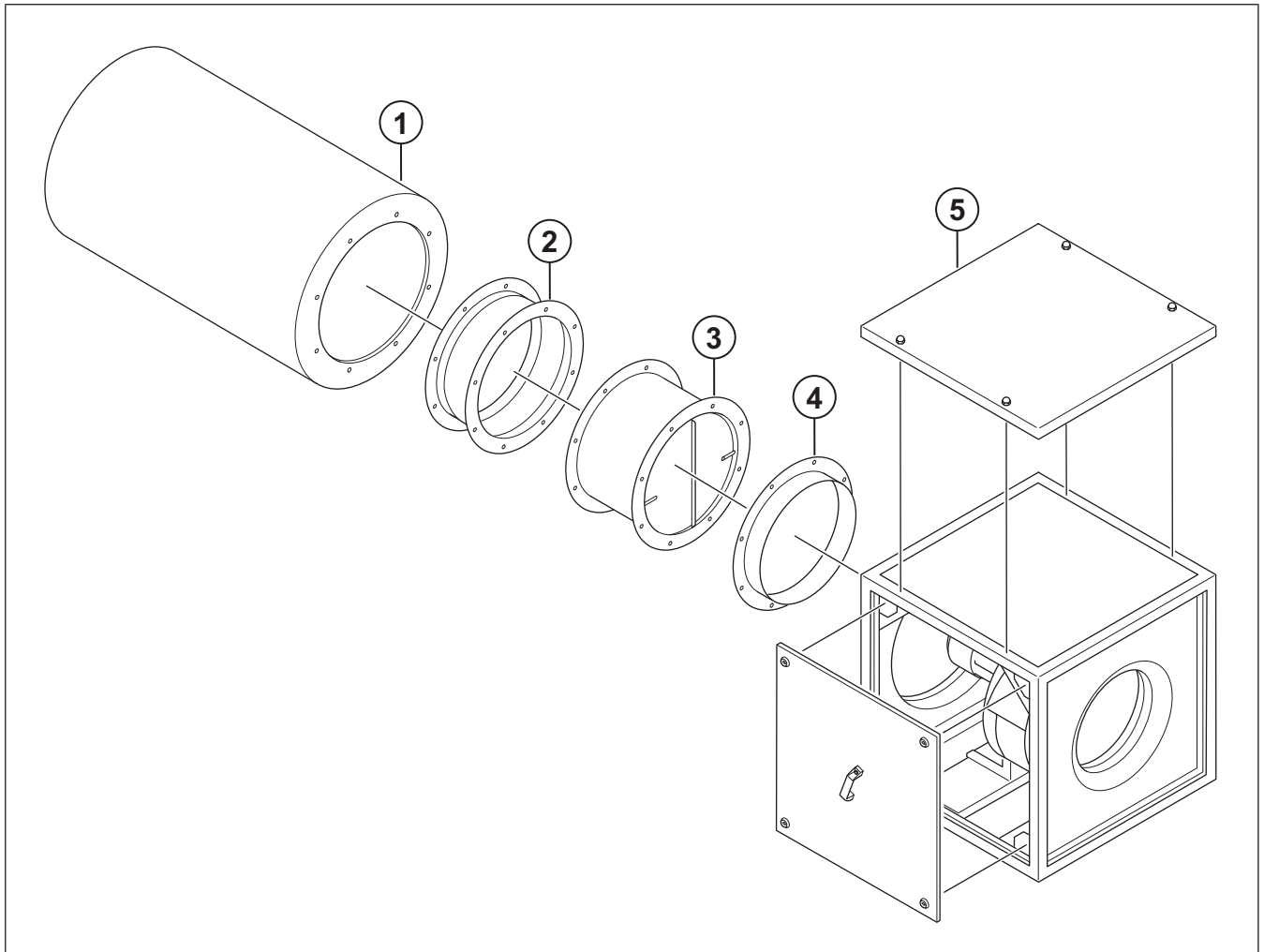


- | | |
|--|---|
| 1. FGV: Flexible connection | 6. CCM outlet: Flanged plate for air handling units |
| 2. WSG: Weather protection grille | 7. MUB: WSD: Weather protection roof |
| 3. UGS: Transition connections, square to round | 8. MUB fan |
| 4. Tune-AHU: Damper | 9. GRU: Base frame |
| 5. CCM inlet: Flanged plate for air handling units | |

13.2 Accessory overview MUB/F fans

Note:

The selection of accessories shown are not supplied with the product. For more information and other available accessories, refer to www.systemair.com or speak to Systemair technical support.



- 1. RSA: Silencer
- 2. EVH: Flexible connection
- 3. LRK: Air-operated damper

- 4. GFL: Counter flange
- 5. WSD: weather protection roof

14 EU Declaration of Conformity-Multibox

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Multibox
Type/Model	MUB, MUB-CAV/VAV
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Machinery Directive	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Directive (EMC)	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
RoHS Directive	2011/65/EU; 2015/863/EU DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
ErP Directive	2009/125/EC 1253/2014/EU Ecodesign requirements for ventilation units

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 03/06/2025



Martin Babyzyk
Managing Director

15 EU Declaration of Conformity-Multibox+Filter

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Multibox+Filter
Type/Model	MUB+Filter, MUB+Filter EC
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Machinery Directive	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Directive (EMC)	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
RoHS Directive	2011/65/EU; 2015/863/EU DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
Other applied standards	DIN EN IEC 63000:2019-05 Air filters for general ventilation - Part 1: Technical specifications, requirements and classification system based upon particulate matter efficiency.

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 03/06/2025



Martin Babyzyk
Managing Director

16 EU Declaration of Conformity-Thermo fans

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Thermo fans
Type/Model	AxZent; KBR; MUB/T; MUB/T-S; DVN; DVNI
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Machinery Directive	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Directive (EMC)	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
RoHS Directive	2011/65/EU; 2015/863/EU DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 03/06/2025



Martin Babyzyk
Managing Director

17 EU Declaration of Conformity-Smoke extract fans

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Smoke extract fans
Type/Model	KBR/F; MUB/F
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Machinery Directive	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Directive (EMC)	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
RoHS Directive	2011/65/EU; 2015/863/EU DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
Construction Products	305/2011/EU DIN EN 12101-3:2015 Smoke and heat control systems, Part 3: Specification for powered smoke and heat exhaust ventilators

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 03/06/2025



Martin Babyzyk
Managing Director

18 UKCA Declaration of Conformity-Multibox

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Multibox
Type/Model	MUB, MUB-CAV/VAV
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Supply of Machinery (Safety) Regulations 2008	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Regulations 2016	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	2011/65/EU; 2015/863/EU DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
ErP guidelines	2009/125/EC 1253/2014/EU Ecodesign requirements for ventilation units

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 03/06/2025



Martin Babyzyk
Managing Director

19 UKCA Declaration of Conformity-MUB+Filter

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Multibox+Filter
Type/Model	MUB+Filter, MUB+Filter EC
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Supply of Machinery (Safety) Regulations 2008	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Regulations 2016	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	2011/65/EU; 2015/863/EU IEC 63000:2016 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
Other applied standards	DIN ISO 16890-1:2016 Air filters for general ventilation - Part 1: Technical specifications, requirements and classification system based upon particulate matter efficiency.

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 04/06/2025



Martin Babyzyk
Managing Director

20 UKCA Declaration of Conformity-Thermo fans

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Thermo fans
Type/Model	AxZent; KBR; MUB/T; MUB/T-S; DVN; DVNI
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Supply of Machinery (Safety) Regulations 2008	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Regulations 2016	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	2011/65/EU; 2015/863/EU DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 04/06/2025



Martin Babyzyk
Managing Director

21 UKCA Declaration of Conformity-Smoke extract fans

We, the manufacturer

Company	Systemair GmbH
Address	Seehöfer Straße 45 97944 Boxberg Germany

declare under our sole responsibility that the product

Product Designation	Smoke extract fans
Type/Model	KBR/F; MUB/F
Identification	Serial numbers dating from 2025 and onwards

fulfils all relevant provisions of the

Supply of Machinery (Safety) Regulations 2008	2006/42/EC DIN EN ISO 12100:2011-03+ AC 2013-08 Safety of machinery - General principles for design Risk assessment and risk reduction DIN EN 60204-1:2019-06 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
Electromagnetic Compatibility Regulations 2016	2014/30/EU DIN EN IEC 61000-6-2:2019-11 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments DIN EN IEC 61000-6-4:2020-09 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	2011/65/EU; 2015/863/EU DIN EN IEC 63000:2019-05 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances
Construction Products	305/2011/EU DIN EN 12101-3:2015 Smoke and heat control systems, Part 3: Specification for powered smoke and heat exhaust ventilators

Person authorized to compile the technical file:



Matthias Hennegriff
CE Compliance Officer

This declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added or operations carried out subsequently by the final user. Boxberg, Germany 04/06/2025



Martin Babyzyk
Managing Director



Systemair GmbH Seehöfer Str. 45
97944 Boxberg
Germany

Tel.: +49 (0)7930/9272-0
Fax: +49 (0)7930/9272-92
info@systemair.de
www.systemair.de

© Copyright Systemair AB
All rights reserved
EOE

Systemair AB reserves the rights to alter their products without notice. This also applies to products already ordered, as long as it does not affect the previously agreed specifications.