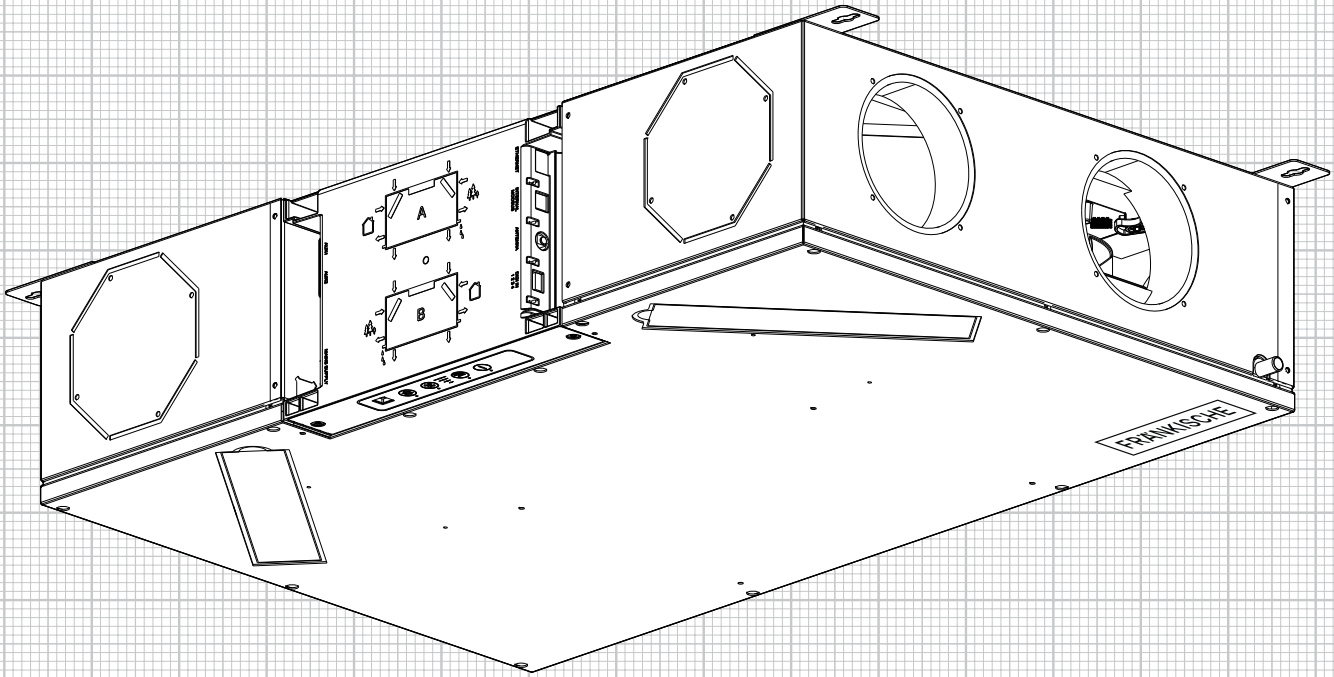
FRÄNKISCHE

Installation and operating instructions

profi-air® 130 flat



Building Technology
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1 General

Ventilation units from the FRÄNKISCHE profi-air product range constitute an important part of a heat recovery ventilation system. They bring the required volume of supply air to and take extract air from rooms. With the help of an integrated plastic cross-flow heat exchanger, these ventilation units provide high heat recovery efficiency. Even if the fresh air temperature is around the freezing point, the supply air is heated virtually to room temperature. All profi-air ventilation units are fitted with fully automatic summer bypass flaps in order to prevent undesired heating of the fresh air during transitional seasons.

1.1 Introduction

These installation and operating instructions are intended to help you install a fully functional profi-air 130 flat ventilation unit and properly operate it. We, therefore, recommend that you read these instructions carefully before start to operate and set the unit. These installation and operating instructions can also serve as a reference for service and maintenance work and guarantee smooth and efficient operation.

1.2 Safety

If used as intended, the unit is safe and reliable to operate. Its construction and design are state of the art and comply with all relevant DIN/VDE regulations and safety provisions. All safety regulations, warnings and notes of these installation and operating instructions have to be observed; non-observance might result in personal injury and/or damage to profi-air 130 flat.

1.2.1 Safety regulations

- Installation, connection, commissioning as well as maintenance of profi-air 130 flat may be performed by authorised and qualified personnel only (with the exception of filter replacement).
- Installation of profi-air 130 flat is to be carried out according to the applicable local construction, safety and installation regulations.
- Non-authorised changes or modifications of profi-air 130 flat are not allowed.
- Instructions regarding regular filter replacement are to be strictly adhered to.
- Keep these installation and operating instructions near the ventilation unit during the entire life of profi-air 130 flat.

1.2.2 Safety equipment and measures

- The profi-air 130 flat unit cannot be opened without tools.
- Make sure that the fans cannot be touched with hands as long as the system is connected to the power grid.
- During maintenance, the device may therefore be opened in the "dead" state only, and profi-air 130 flat may only be operated with the installed duct network.

1.2.3 Symbols used

Risk of personal injury

Risk of:

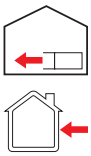
- Damage to equipment
- Errors while operating the device if the instructions are not properly complied
- Other material damage

Additional notes

Reference to other sections and/or guidelines of the manufacturer

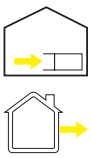
Disposal instructions

1.3 Types of air



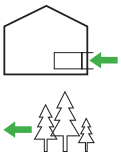
1.3.1 Supply air

Supply air is the air that the ventilation unit feeds to the rooms.



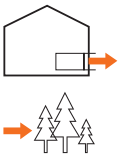
1.3.2 Extract air

Extract air is the air that is fed from the rooms to the ventilation unit.



1.3.3 Fresh air

Fresh air is the air that is fed from outside the building to the ventilation unit.



1.3.4 Exhaust air

Exhaust air is the air that the ventilation unit channels out of the building.

1.4 Intended use

The profi-air 130 flat ventilation unit has been designed and constructed for the use in heat recovery ventilation and is solely intended for this application. When using heat recovery ventilation, stale, moist and smelly air is removed from the bathroom, toilet, kitchen and utility rooms to be replaced with the same amount of fresh air in the living room, bedroom and children's room. Overflow outlets provide sound and well-balanced air circulation in the housing unit.

Please ensure that the overflow outlets are not blocked or covered in order not to impede proper functioning of the system.

Operation of profi-air 130 flat during the building drying stage is inappropriate in terms of its intended use.

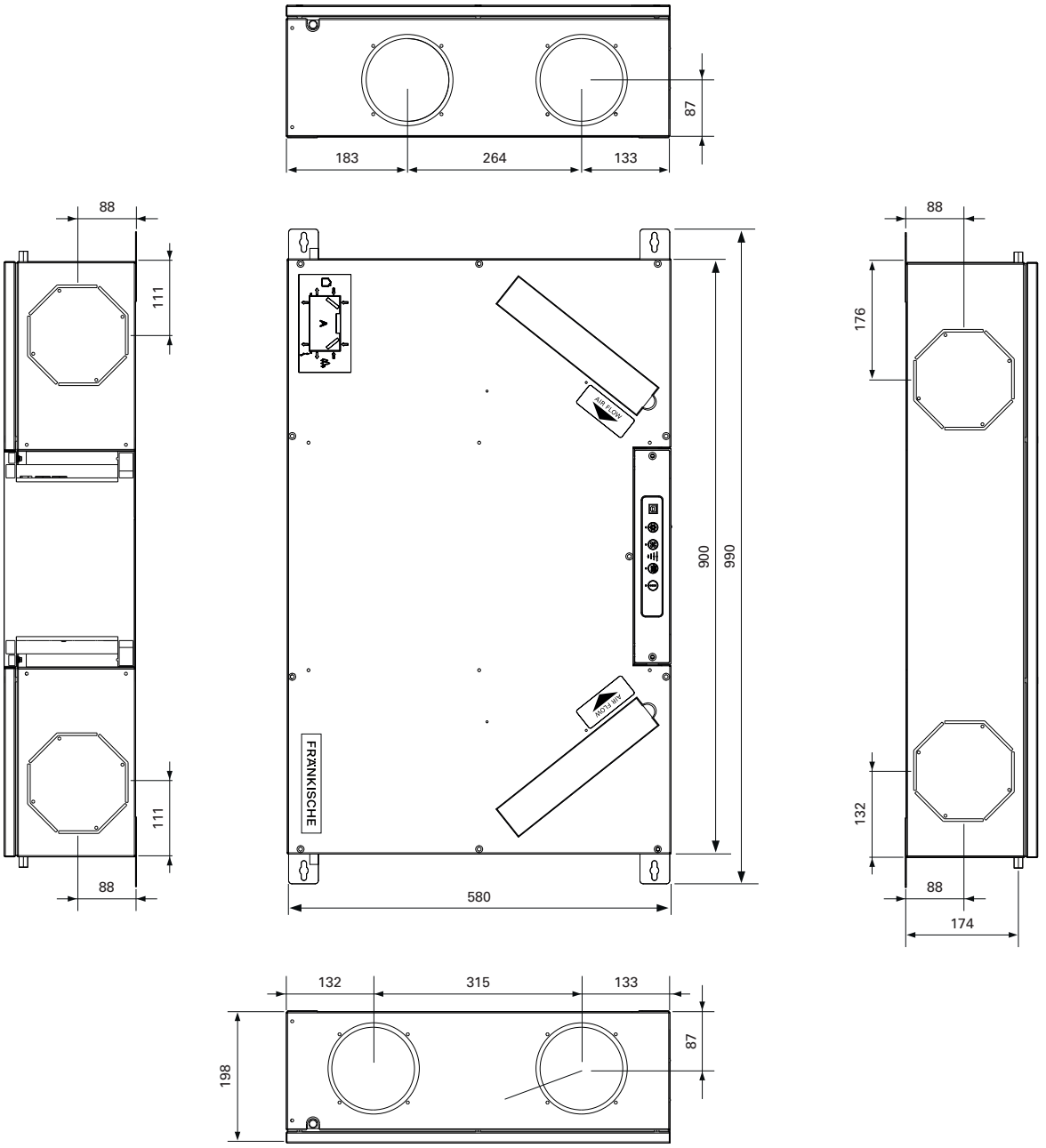
1.5 EC conformity

The profi-air 130 flat ventilation unit bears the CE marking.

See Section 11 for the EC Declaration of Conformity.

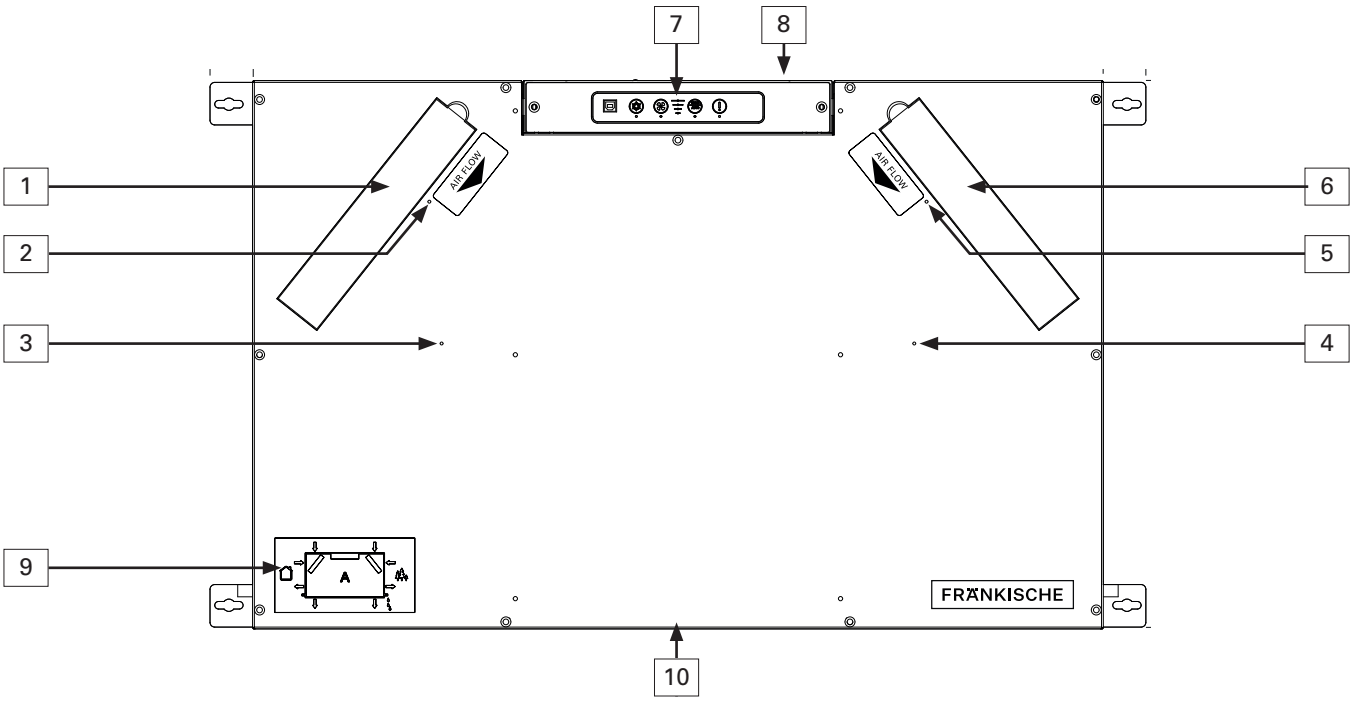
2 Technical design

2.1 Dimensions of the profi-air 130 flat ventilation unit



2.2 Structure and components of the profi-air 130 flat ventilation unit

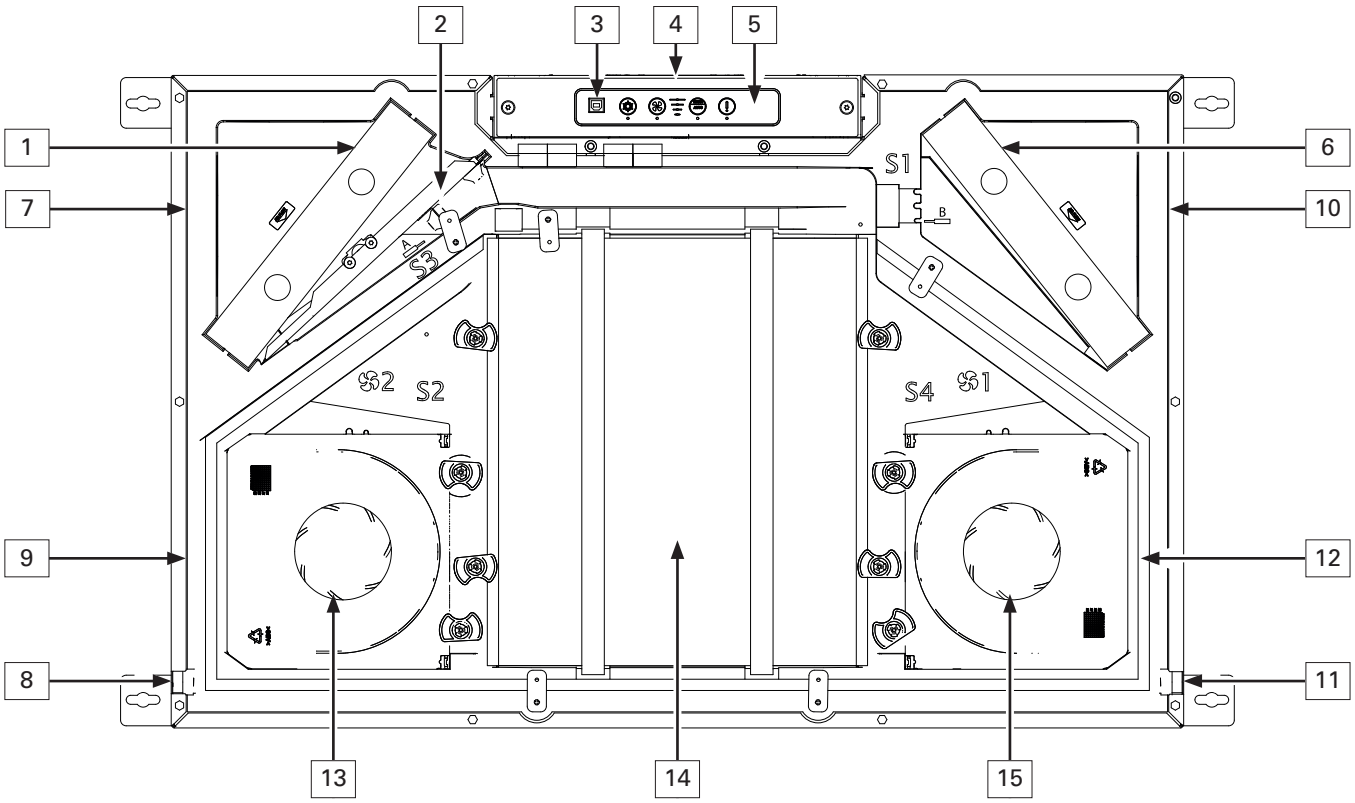
2.2.1 Structure and components, outside



No.	Operating mode A (delivery condition)	Operating mode B
1	Insulated filter cover G4	Insulated filter cover G4 supply air filter (F7 optionally)
2	Differential pressure measuring point P3	Differential pressure measuring point P1
3	Differential pressure measuring point P2	Differential pressure measuring point P4
4	Differential pressure measuring point P4	Differential pressure measuring point P2
5	Differential pressure measuring point P1	Differential pressure measuring point P3
6	Insulated filter cover G4 supply air filter (F7 optionally)	Insulated filter cover G4 extract air filter
7	Integrated control unit	
8	Electric connection options – USB, RJ 45 …	
9	Operating mode label	
10	Type plate	

2.2.2 Structure and components, inside

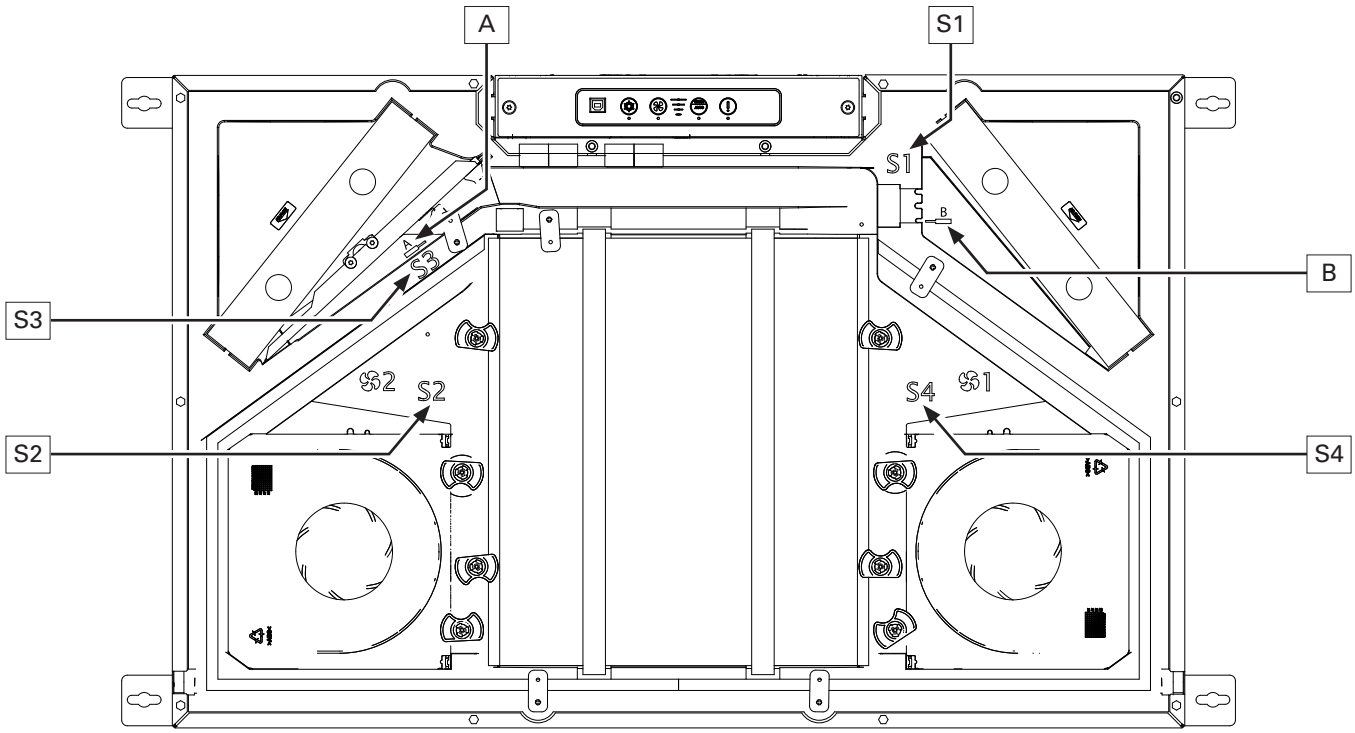
The illustration shows the device without cover and condensate drip tray.



No.	Operating mode A (delivery condition)	Operating mode B
1	G4 extract air filter	G4 supply air filter (F7 optionally)
2	Summer bypass module	
3	USB interface (connection between laptop and VU)	
4	Control board	
5	Integrated control unit	
6	G4 supply air filter (F7 optionally)	G4 extract air filter
7	Extract air connection opening DN 125	Fresh air connection opening DN 125
8	Condensate drain closed	Condensate drain
9	Supply air connection opening DN 125	Exhaust air connection opening DN 125
10	Fresh air connection opening DN 125	Extract air connection opening DN 125
11	Condensate drain	Condensate drain closed
12	Exhaust air connection opening DN 125	Supply air connection opening DN 125
13	Supply air fan	Extract air fan
14	Cross-flow heat exchanger	
15	Extract air fan	Supply air fan

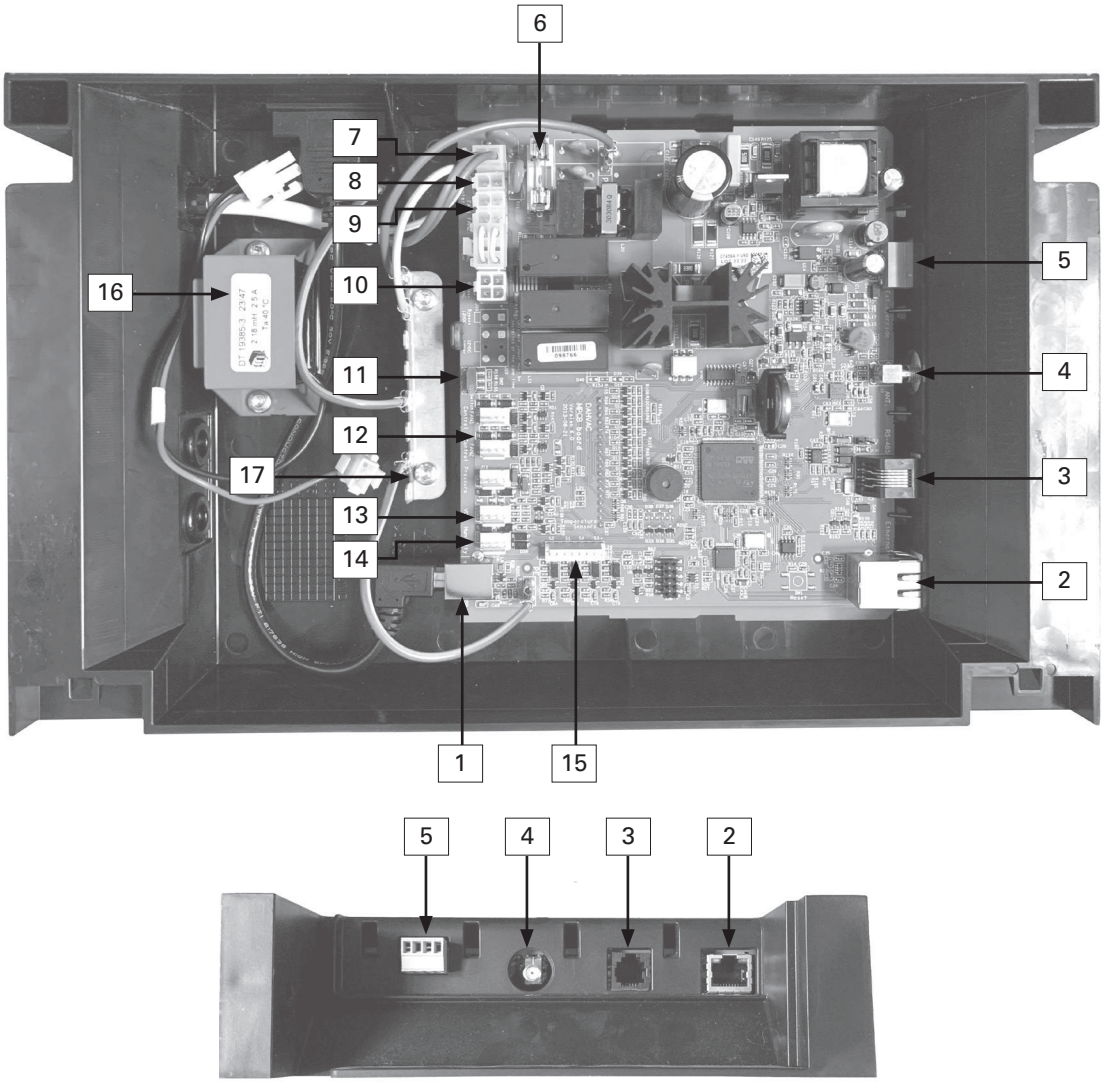
2.2.3 Sensor positions

The illustration shows the exact position of all sensors inside the unit.



No.	Operating mode A (delivery condition)	Operating mode B
S1	Fresh air temperature sensor – T1	Extract air temperature sensor – T3
S2	Supply air temperature sensor – T2	Exhaust air temperature sensor – T4
S3	Extract air temperature sensor – T3	Fresh air temperature sensor – T1
S4	Exhaust air temperature sensor – T4	Supply air temperature sensor – T2
A	Optional humidity and/or VOC sensor	–
B	–	Optional humidity and/or VOC sensor

2.3 profi-air 130 flat control board



No.	Operating mode A (delivery condition)
1	USB interface
2	Ethernet interface
3	Modbus interface (connection for external control panel or profi-air connection box)
4	Radio interface (connection of the antenna included with the profi-air wireless remote control flat/flex)
5	Digital signal input (can be programmed using the profi-air cockpit pro software)
6	Mainboard fuse
7	Connection J2 – power supply
8	Connection J4 – power supply of the defroster heater
9	Connection J6 / J7 – power supply of the fans
10	Connection J8 – power supply of the summer bypass
11	Operating mode switch
12	Connection J16/J17 – signal wiring of fans
13	Connection J23 – internal VOC sensor
14	Connection J5 – humidity sensor
15	Connection J9 – temperature sensors
16	Thermal monitoring control unit
17	PE terminal box

3 Installation of profi-air 130 flat

3.1 Transport and unpacking

Please handle profi-air 130 flat with utmost care during transport and unpacking.

3.2 Checking the scope of delivery

Please contact the supplier immediately if the delivered profi-air 130 flat unit is damaged or incomplete.

The scope of delivery includes:

- profi-air 130 flat
- Sheathed condensate drain hose 1/2" including 1 clamp connector
- Pre-assembled 230 V connection cable; 1.8 m long with Schuko plug
- Installation and operating instructions
- Additional label for operating mode B
- Additional type plate
- Energy label according to ErP Directive

Check the device type by means of the type plate.

3.3 Requirements for the installation room

3.3.1 General

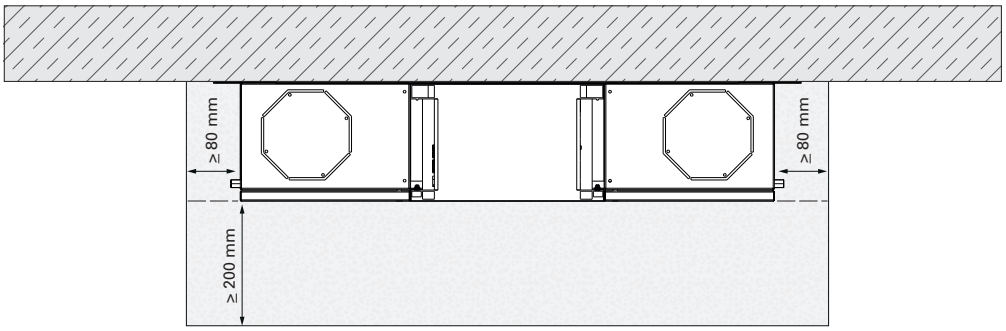
The complete ventilation installation (ventilation unit and pipe system) may only be installed inside the insulated building envelope in frost-free and dry rooms.

- Room temperature in the installation room: +12 to +45 °C
- Do not install the unit openly (without casing) in areas with a higher average humidity
- Sufficient space – e.g., silencers, manifolds, pre-heaters or post-heaters may be installed in addition to the ventilation unit which usually require more space than the unit itself
- Access to the unit must be ensured for maintenance/cleaning
- Connections such as electricity, wastewater and possibly LAN (when using the profi-air cockpit control app) must be available
- Wall outlets are required for fresh and exhaust air which should neither be below ground level nor directly next to rooms where a quiet environment is essential (living room, bedroom)
- Central location of the room reduces routing
- Statically loadable installation surface

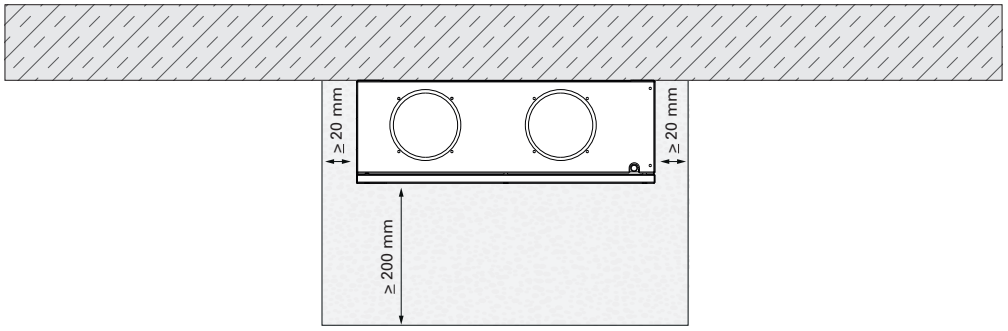
3.3.2 Minimum clearances for maintenance purposes

The side of the unit with the control unit should be at least 20 mm away from the wall/ceiling. This applies to all installation types.

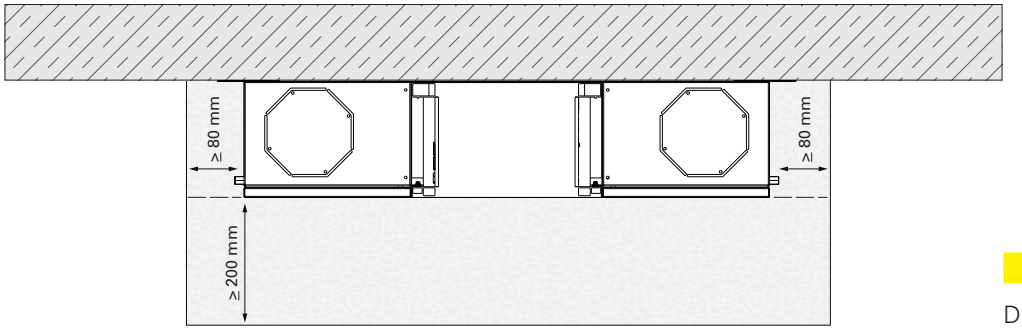
3.3.2.1 Ceiling installation



3.3.2.2 Vertical wall installation



3.3.2.2 Horizontal wall installation



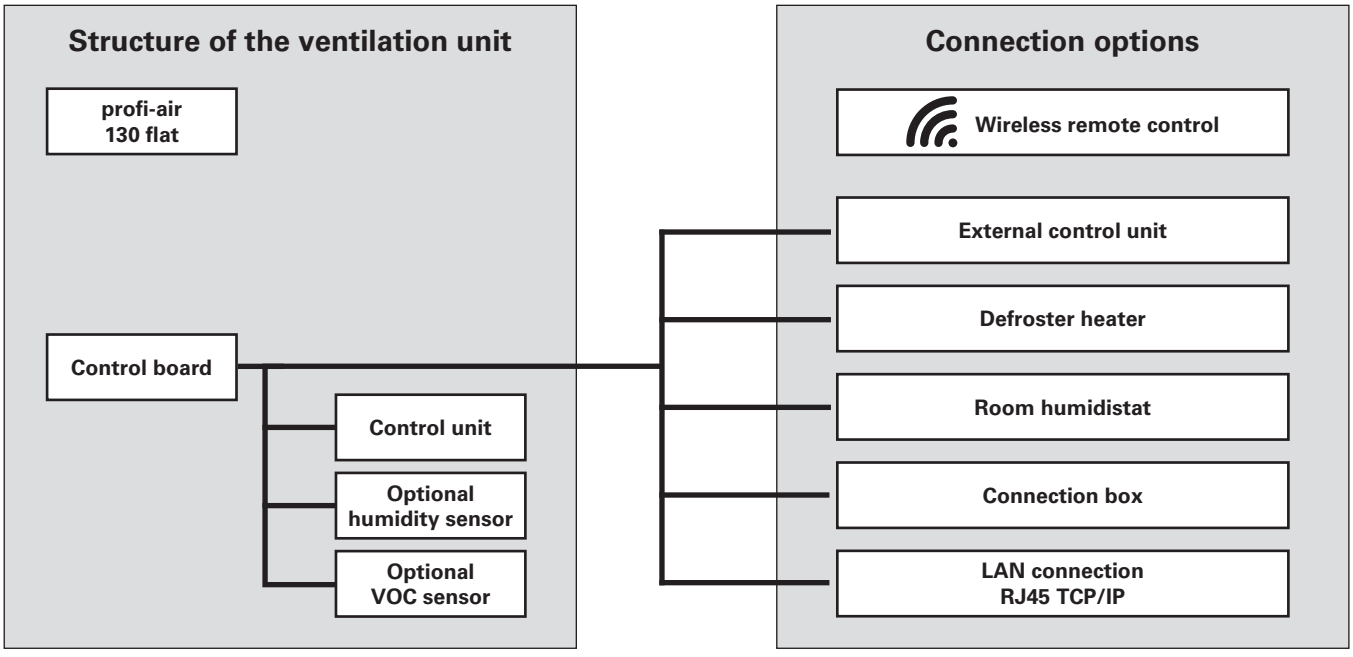
Note

Distance to ceiling min. 20 mm

3.4 Available and/or optional accessories / replacement filters

Cat. no.	Description
78312820	Connection set ISO pipe or spiral duct DN 125
78312850	Silencer DN 125
78300910	External control unit
78300837	Wireless remote control
78312831	Defroster heater DN 125
78300834	Internal VOC sensor
78300835	Internal humidity sensor
78300838	Connection box for additional electric connections
78300841	Room humidistat
78300884	Replacement filter set G4/G4
78300885	Replacement filter set G4/F7

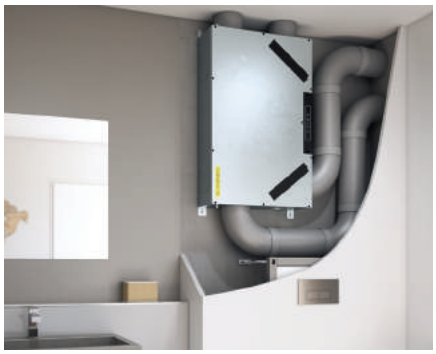
3.5 Electric connection options

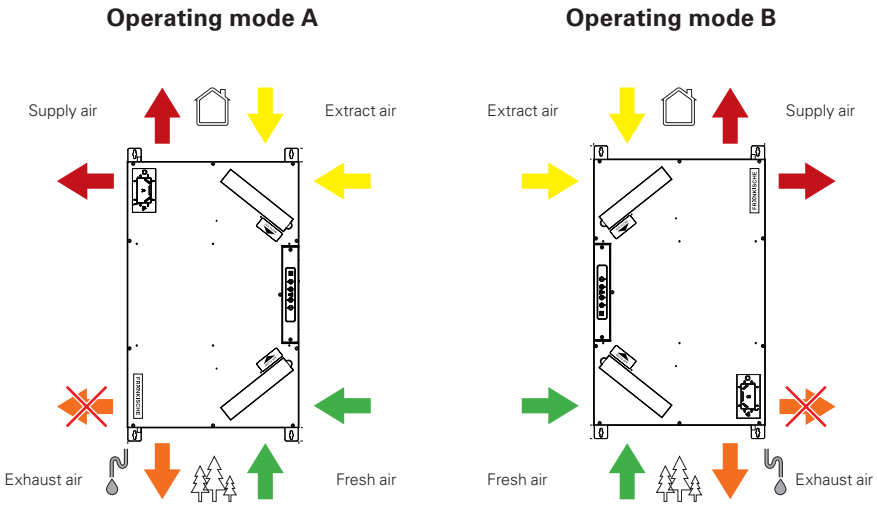


3.6 Installation options and fastening of units

profi-air 130 flat has been designed with flexible installation in mind. profi-air 130 flat can be installed on walls or ceilings. Due to the special design of the condensate drain, the ventilation unit can be mounted vertically and horizontally on the wall. A simple switch (easySWITCH) changes the assignment of the air and condensate connections.

Vertical wall installation and connection example

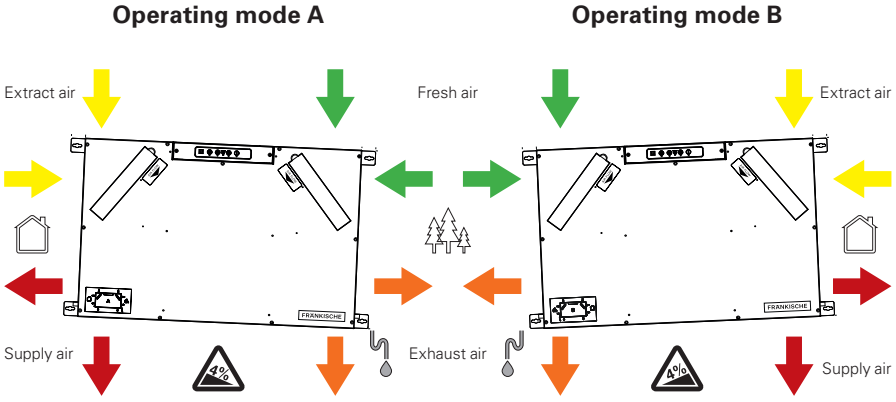




In case of vertical wall installation, the ventilation unit shall always be installed such that the fresh air connector and the exhaust air connector face downwards. This is the only way to ensure appropriate condensate drain.

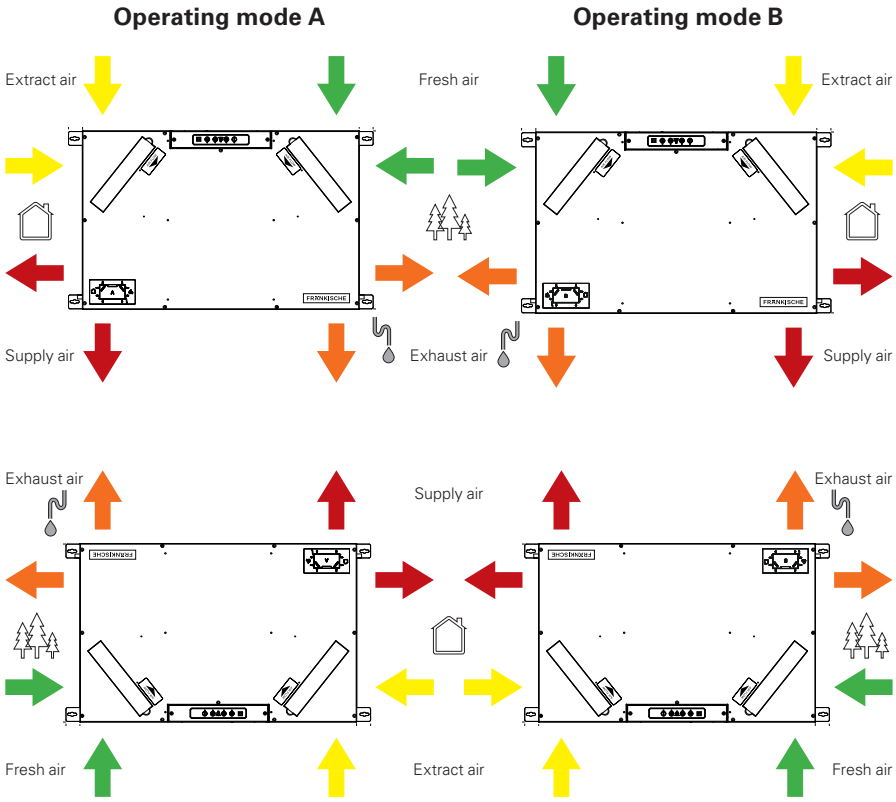
For vertical wall installation, connect the exhaust air at the bottom. The alternative lateral connection is not possible.

Horizontal wall installation and connection example



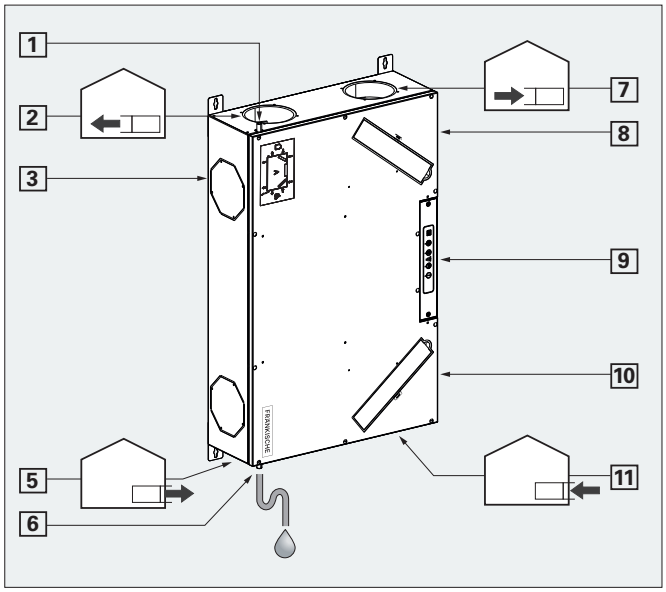
For horizontal wall installation, the unit must be installed with a gradient of 4 % to the condensate drain and with the control panel at the top. This is the only way to ensure appropriate condensate drain.

Ceiling installation and connection example

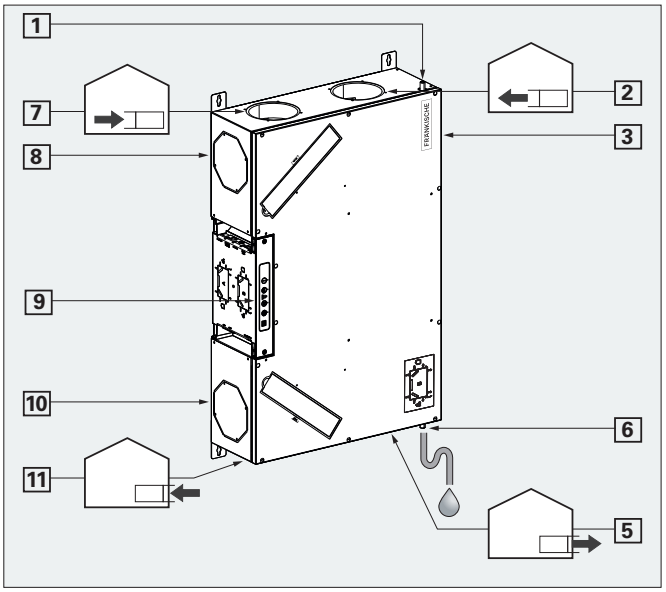


3.6.1 Operating modes / adapting air directions

Schematic diagram of vertical wall installation operating mode A (delivery condition)



Schematic diagram of vertical wall installation operating mode B

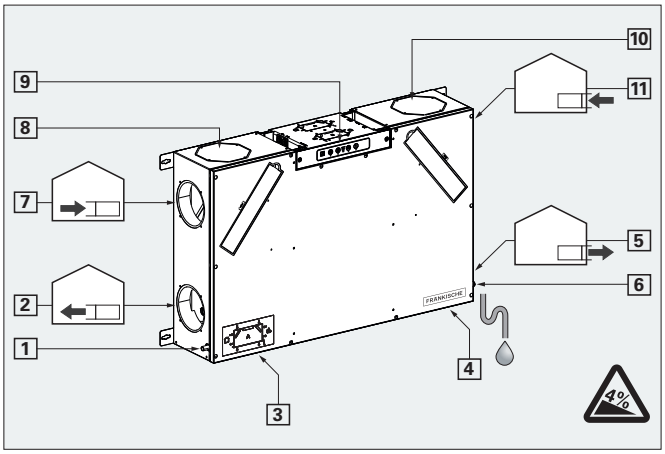


In case of vertical wall installation, the ventilation unit shall always be installed such that the fresh air connector and the exhaust air connector face downwards. This is the only way to ensure appropriate condensate drain.

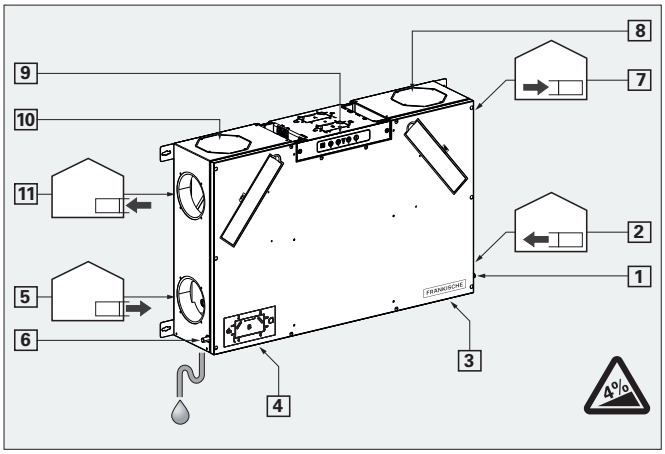
For vertical wall installation, connect the exhaust air at the bottom.
The alternative lateral connection is not possible.

No.	Description
1	Condensate drain closed
2	Supply air connection opening DN 125
3	Alternative supply air connection DN 125
5	Exhaust air connection opening DN 125
6	Condensate drain open
7	Extract air connection opening DN 125
8	Alternative extract air connection DN 125
9	Integrated control unit
10	Alternative fresh air connection DN 125
11	Fresh air connection opening DN 125

Schematic diagram of horizontal wall installation operating mode A (delivery condition)



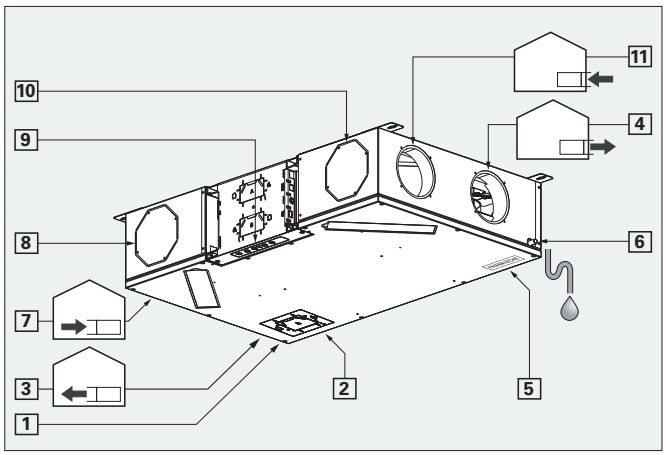
Schematic diagram of horizontal wall installation operating mode B



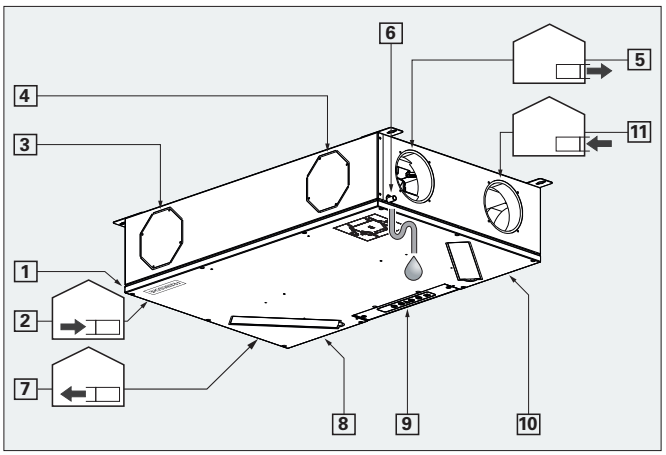
For horizontal wall installation, the unit must be installed with a gradient of 4 % to the condensate drain and with the control panel at the top. This is the only way to ensure appropriate condensate drain.

No.	Description
1	Condensate drain closed
2	Supply air connection opening DN 125
3	Alternative supply air connection DN 125
4	Alternative exhaust air connection DN 125
5	Exhaust air connection opening DN 125
6	Condensate drain open
7	Extract air connection opening DN 125
8	Alternative extract air connection DN 125
9	Integrated control unit
10	Alternative fresh air connection DN 125
11	Fresh air connection opening DN 125

Schematic diagram of ceiling installation operating mode A (delivery condition)



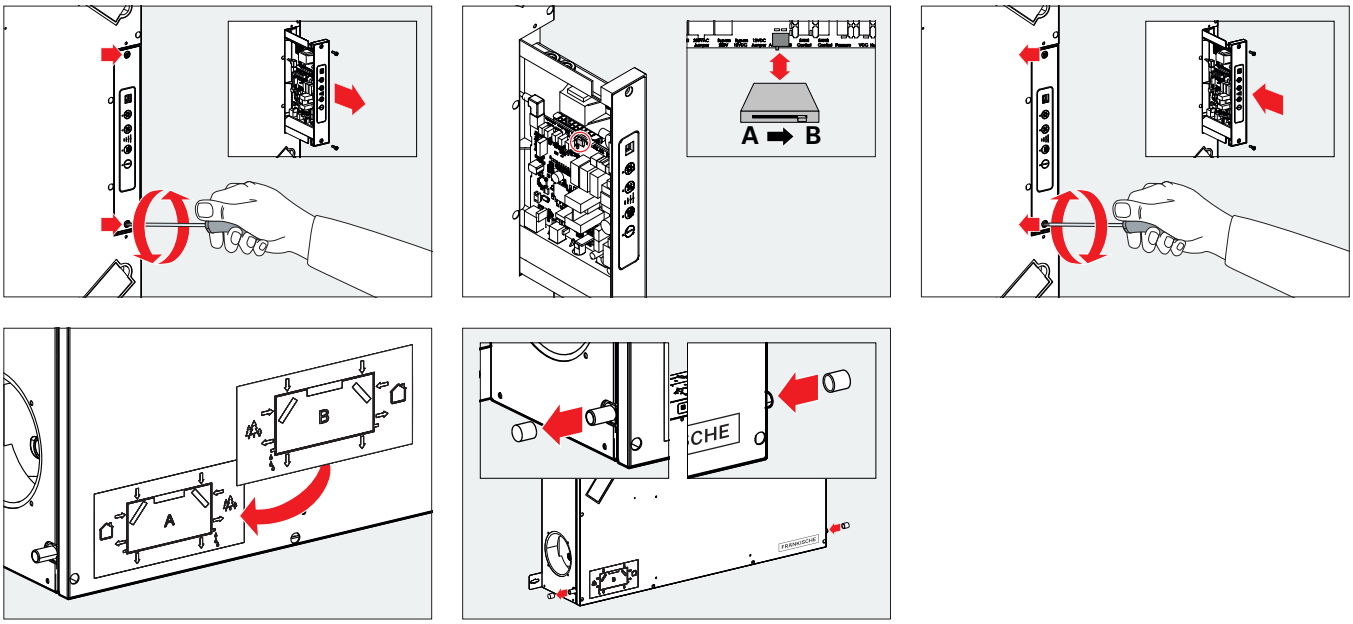
Schematic diagram of ceiling installation operating mode B



No.	Description
1	Condensate drain closed
2	Supply air connection opening DN 125
3	Alternative supply air connection DN 125
4	Alternative exhaust air connection DN 125
5	Exhaust air connection opening DN 125
6	Condensate drain open
7	Extract air connection opening DN 125
8	Alternative extract air connection DN 125
9	Integrated control unit
10	Alternative fresh air connection DN 125
11	Fresh air connection opening DN 125

3.6.2 Switching from operating mode A to B

profi-air 130 flat is delivered in operating mode A. If the installation situation requires operating mode B, this can be done as described in the following.



If required, switch the operating mode before installing profi-air 130 flat.

After switching, attach the operating mode B label over operating mode label A.

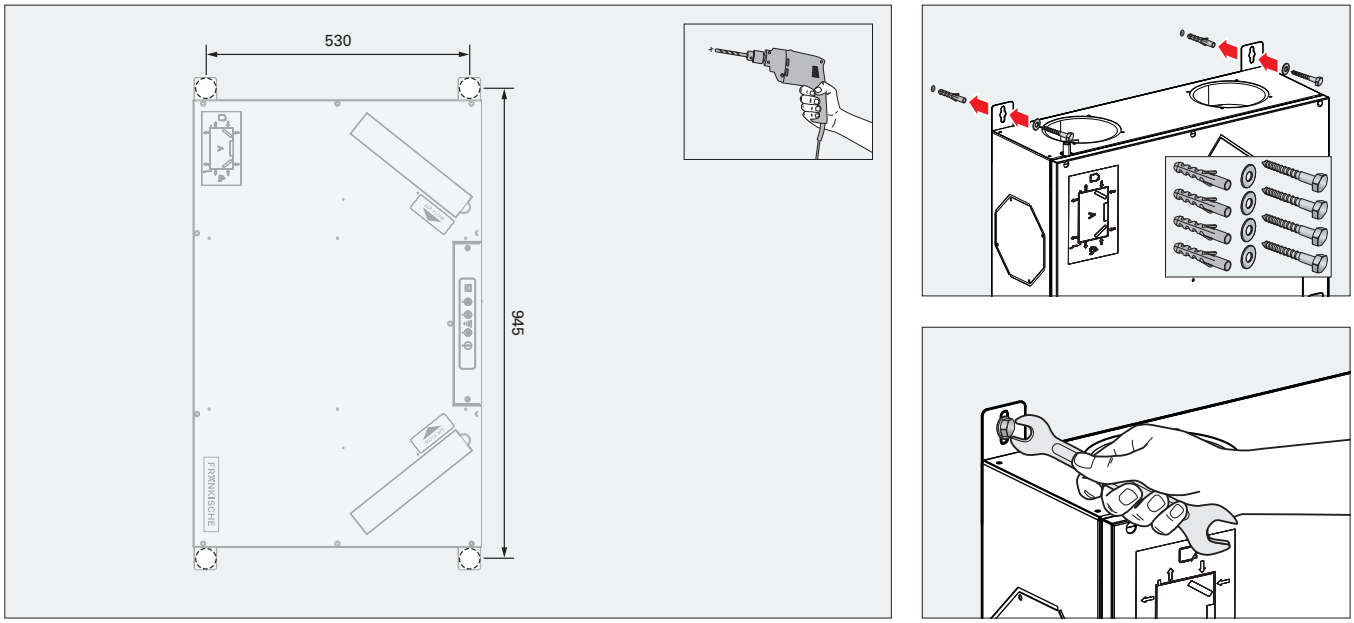
The condensate drain at the profi-air 130 flat unit changes when the operating mode is switched.

Operating modes can be switched in the “dead” state only.

3.6.3 Fastening of units

Attach the ventilation unit directly to the wall or ceiling using the lugs.

Vertical wall installation

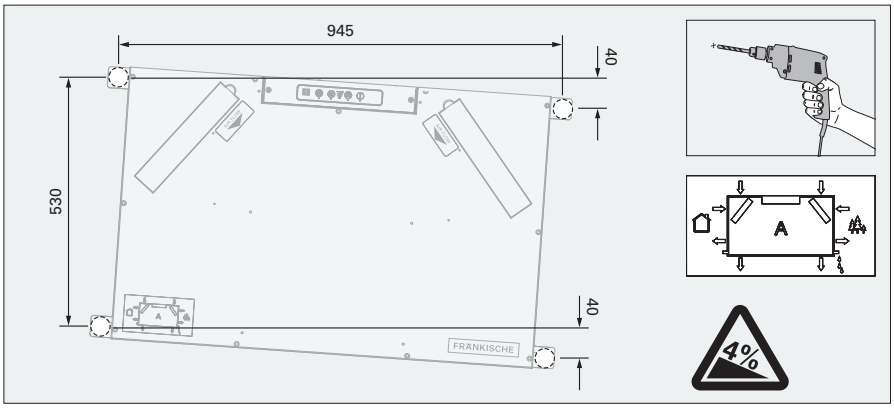


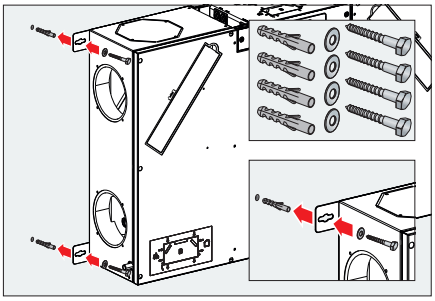
Install profi-air 130 flat in such a way that there is sufficient space for the air pipes and any accessories.

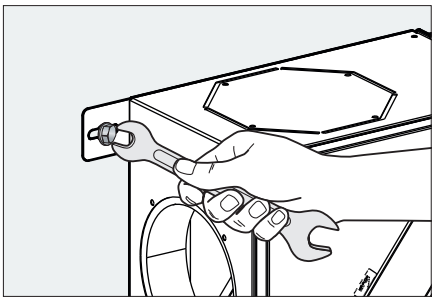
In the case of vertical wall installation, the condensate connection is always at the bottom (exhaust air side).

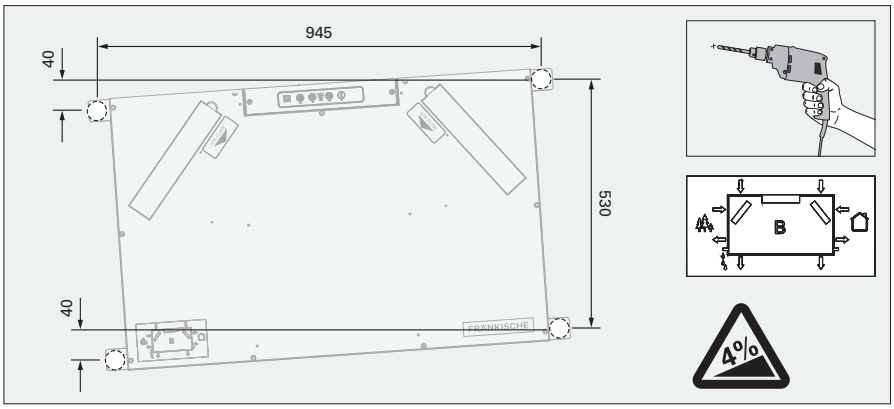
Cover all openings at the ventilation unit to prevent contamination until the air pipes are installed.

Horizontal wall installation









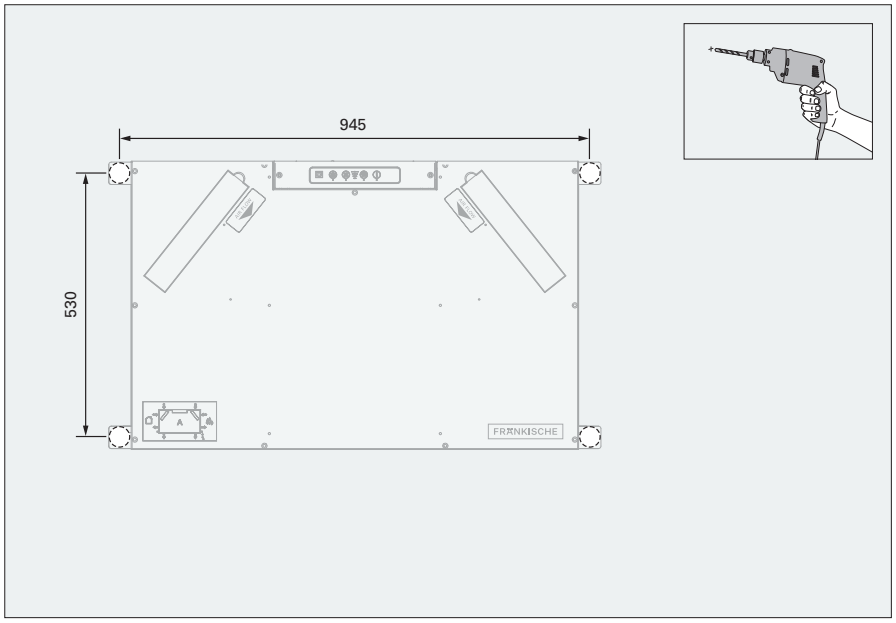
Install profi-air 130 flat in such a way that there is sufficient space for the air pipes and any accessories.

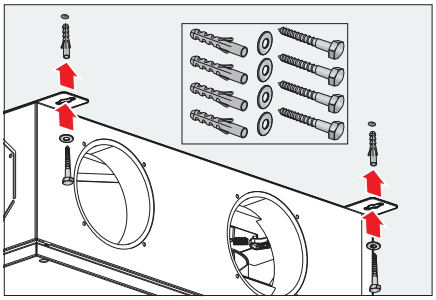
In the case of horizontal wall installation, the condensate connection is always at the bottom (exhaust air side).

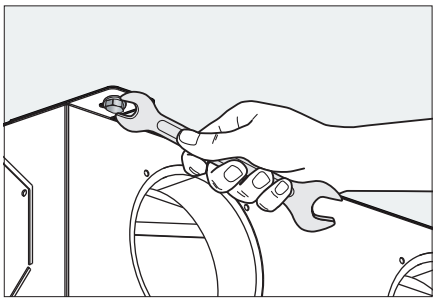
For horizontal wall installation, the unit must be installed with a gradient of 4 % to the condensate drain and with the control panel at the top. This is the only way to ensure appropriate condensate drain.

Cover all openings at the ventilation unit to prevent contamination until the air pipes are installed.

Ceiling installation







Install profi-air 130 flat in such a way that there is sufficient space for the air pipes and any accessories.

The condensate connection for ceiling installation is always on the exhaust air side.

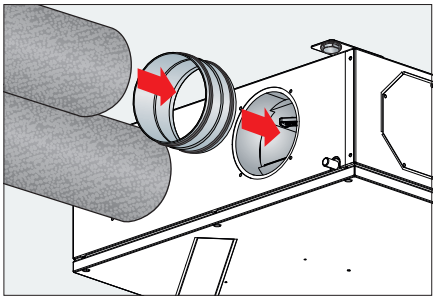
Cover all openings at the ventilation unit to prevent contamination until the air pipes are installed.

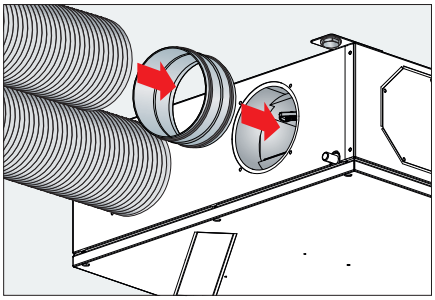
3.7 Air connections

profi-air 130 flat connection set (ISO pipe or spiral duct)

The profi-air flat connection set consists of four double nipples DN 125 incl. lip seal. These double nipples provide the connection between the ventilation unit connecting piece (fresh, exhaust, extract and supply air connection) and the pipe system selected (profi-air ISO plus pipe or spiral duct). The lip seal guarantees airtight connections to the pipe system.

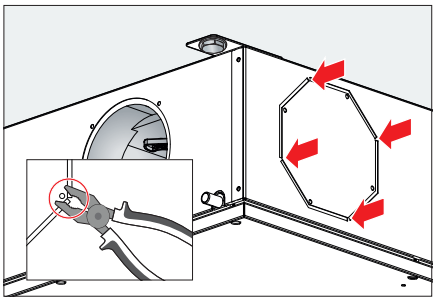
Installation and connection

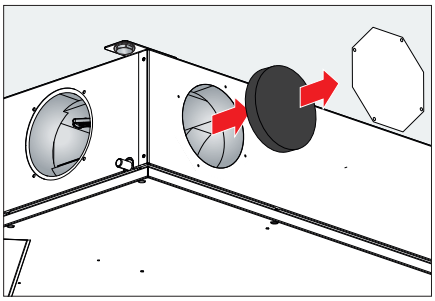


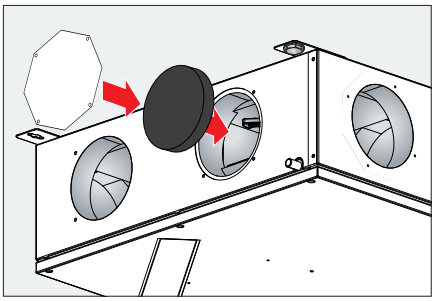


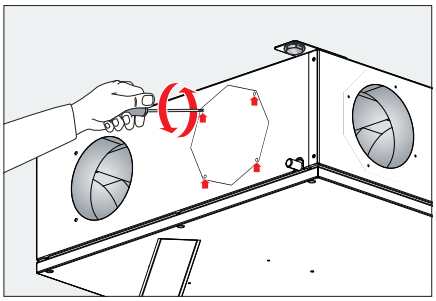
When using spiral ducts, condensation inside as well as outside the pipe must be prevented by means of appropriate insulation.

Alternative air connections









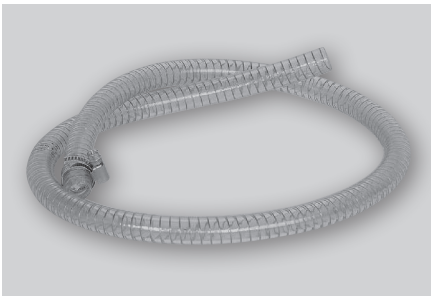
Observe the restrictions for horizontal wall installation (see Section 3.6).

Wear protective gloves when working with sheet metal, as there is a risk of hand injuries due to sharp cutting edges.

Both pipe connections can also be used for one air direction.

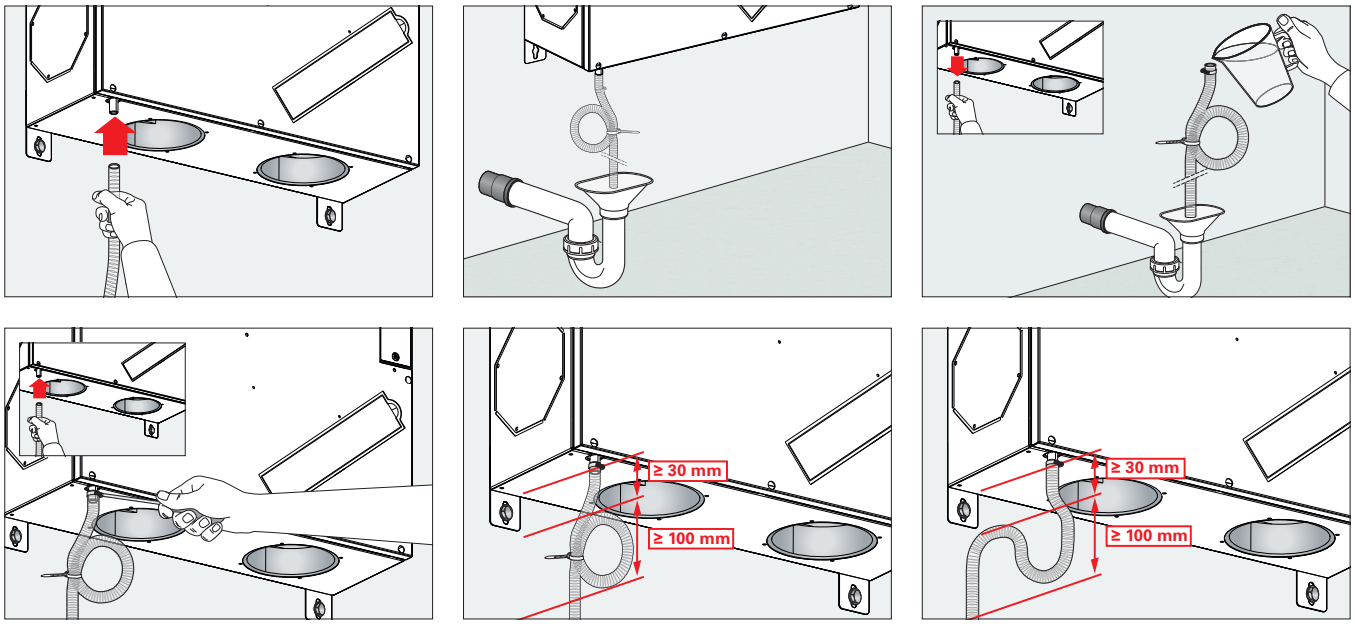
3.8 Condensate drain

Due to heat recovery, condensate accrues in the profi-air 130 flat heat exchanger. The water accumulated is discharged from the unit in a controlled manner via a condensate drain. The condensate drain is always located on the exhaust air side. The condensate hose included with the delivery must be connected on site to the cuff situated there using the clamp connector. The condensate hose shall be routed as in the installation depicted below in order to form a siphon. After installation of the condensate hose has been accomplished, it must be filled with water. This water seal minimizes odour transfer from the sewer and prevents the unit from drawing external air. The discharge of the condensate into the sewer must be carried out by means of free drainage via an additional siphon to be installed on site.



Since this water seal may evaporate, it must be renewed every now and then. As an alternative option to prevent the siphon from drying out, a sealing layer on the water surface can be formed by means of a couple of drops of cooking oil.

Installation and connection of the condensate hose



Connect the condensate line only after installation of profi-air 130 flat has been completed.

Additional condensate lines must be installed with a gradient of at least 2 %.

Keep the condensate line frost-free.

3.9 Electric connection

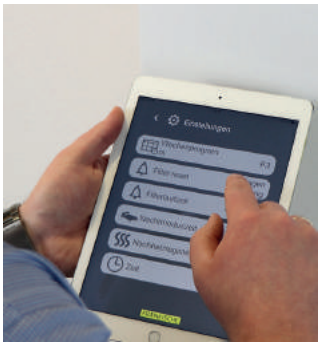
The network connection is established using a pre-installed mains cable, and it is to be secured according to local electric codes.

Electric connection activities are to be carried out by authorised and qualified personnel and in the "dead" state of the device only. In addition, applicable local regulations and safety provisions must be complied with.

3.10 Optional operating options

The profi-air 130 flat ventilation unit can be controlled by means of the control panel incorporated into the front of the housing. Optionally, you can also operate this unit using the profi-air cockpit app, the wireless remote control with display or an external control panel. The following sections will describe how to connect the optional operating possibilities to the unit.

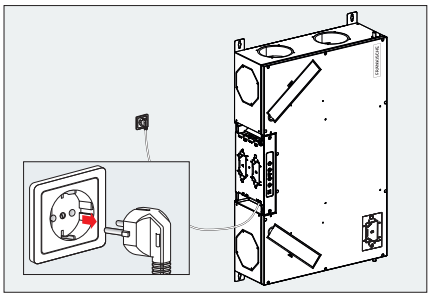
3.10.1 profi-air cockpit app

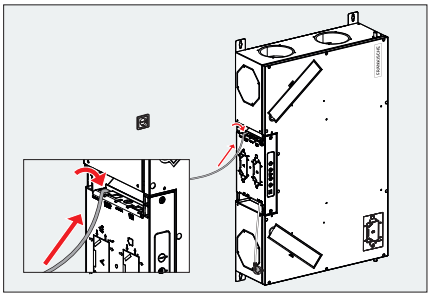
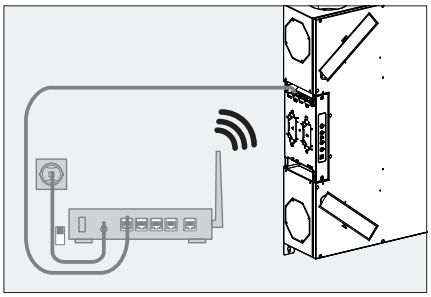
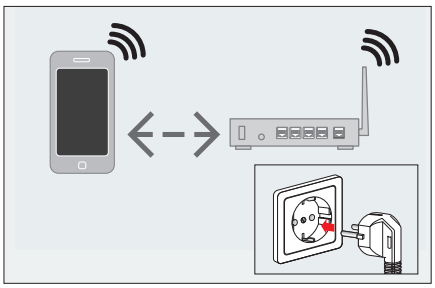
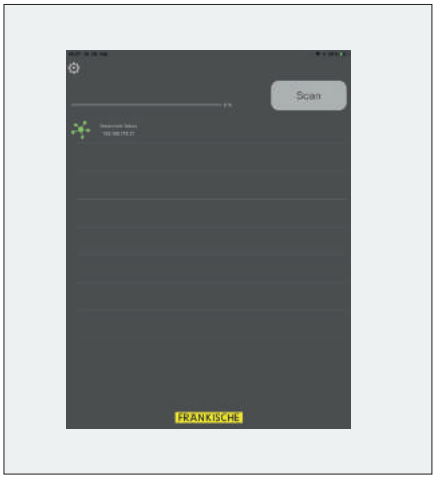


You can download the profi-air cockpit app for free for iOS or Android devices from the respective app stores. Install the app on your terminal device. A standard wireless router and an appropriate network cable (RJ-45) are required to connect the app with the ventilation unit.

The profi-air cockpit app features the following functions / indications:

- Selection of the operating mode (manual / weekly programme / auto)
- Selection of the ventilation mode (0 / 1 / 2 / 3 / 4)
- Selection of the bypass functions (manual / extract air operation only / auto)
- Filter indication
- Indication of temperatures
- Indication of humidity / air quality (only if the respective sensors have been installed)
- Error messages
- Holiday mode
- Night setback operation
- Fireplace mode

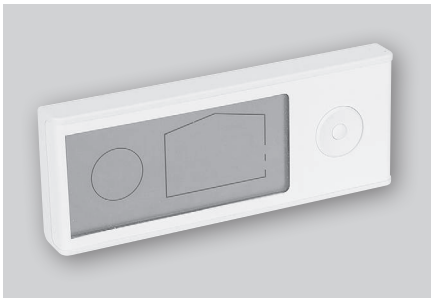
Step	Procedure	
1	Disconnect the ventilation unit from the power grid.	

Step	Procedure	
2	Connect the network cable to the control board.	
3	Install your on-site wireless router according to its operating instructions and put it into operation. Afterwards, connect the network cable to your router.	
4	Download the profi-air cockpit app from the app store appropriate for your terminal device and install the software.	
5	Establish a connection between your terminal device and the router. Then, reestablish power supply of the ventilation unit.	
6	Start the profi-air cockpit app and push the “Scan” button. When the symbol is lit green, there is a connection with the ventilation unit. Afterwards, tap on the displayed device and the app will start. Proceed as follows if you cannot establish a connection or if no terminal device is displayed: ■ Check whether your terminal device is connected to your wireless router. ■ Check the network cable connection between your router and the ventilation unit. ■ Restart the ventilation unit (disconnect and reconnect the power supply). ■ Push the “Scan” button again.	

Please find more information on the operation of this app in Sections 4.1 and 4.3 of these operating instructions.

3.10.2 Optional wireless remote control

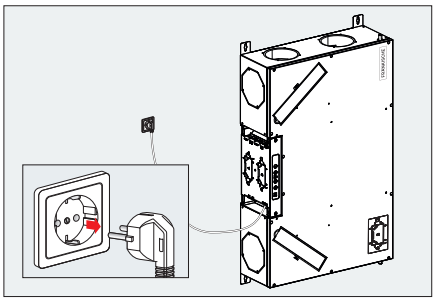
In order to put the wireless remote control into operation, it must be energized (2 x 1.5 V AAA batteries or with a USB cable). Subsequently, the ventilation unit must be energized. The connection between the ventilation unit and the wireless remote control is then established automatically.

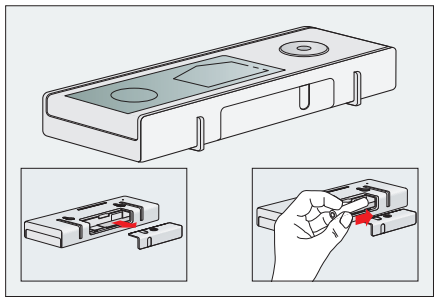


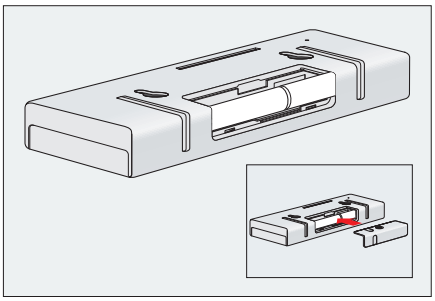
The optional wireless remote control features the following functions:

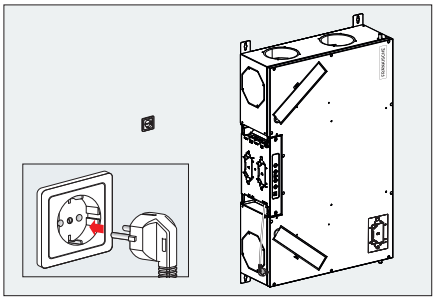
- Selection of the operating mode (manual / weekly programme / auto)
- Selection of the ventilation mode (0 / 1 / 2 / 3 / 4)
- Selection of the bypass functions (manual / extract air operation only / auto)
- Filter replacement indication
- Indication of temperatures
- Indication of humidity / air quality (only if the respective sensors have been installed)
- Error messages
- Holiday mode
- Night setback
- Fireplace mode
- Defroster heater activation / deactivation

Putting the optional wireless remote control into operation





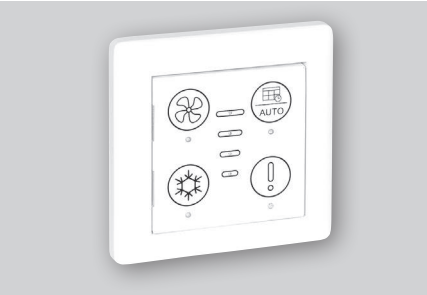




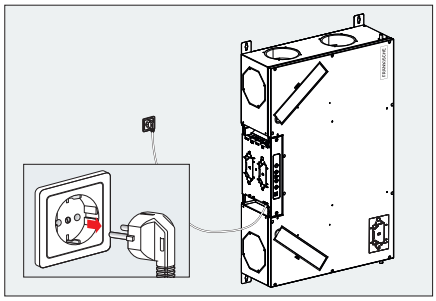
For more information, please see the operating instructions of the profi-air flat / flex wireless remote control.

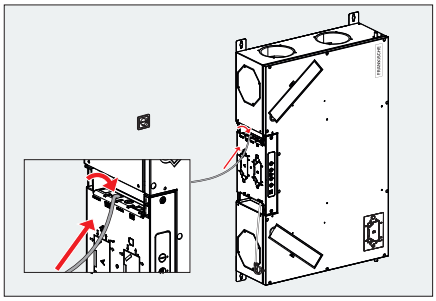
3.10.3 Optional external control panel

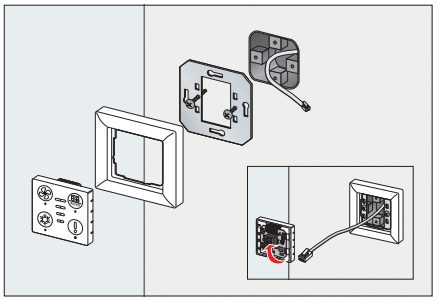
The scope of delivery of the external control panel includes the control panel incl. connection cable, one white cover frame and a metal frame for installation in an on-site concealed or exposed socket. The operation and functions are identical to the control panel installed in the unit.

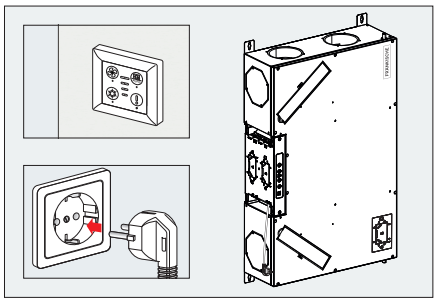


Installation of the external control panel









For more information on operation, see Section 4.

3.11 Central VOC sensor

Fully automatic control for comfort ventilation:

- VOC concentration as an indicator of ambient air pollution
- Saving of energy due to needs-based ventilation

Switching of the ventilation modes with installed central VOC sensor:

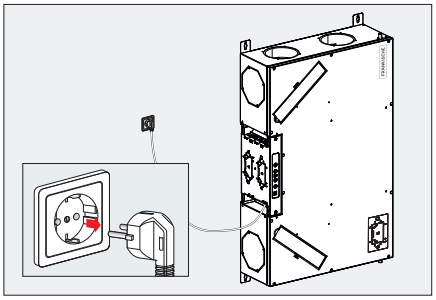
< 1,000 ppm = mode 1
1,000 – 1,500 ppm = mode 2
1,500 – 2,000 ppm = mode 3
> 2,000 ppm = mode 4

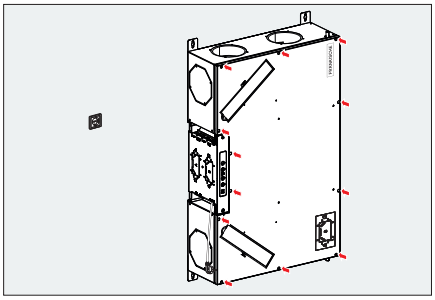
The profi-air cockpit pro software allows you to adjust the sensitivity of the VOC sensor.

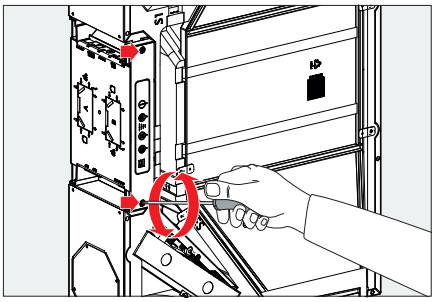
If the sensor is not recognised after installation, check the software version of the ventilation unit. You need the profi-air cockpit pro software for an update.

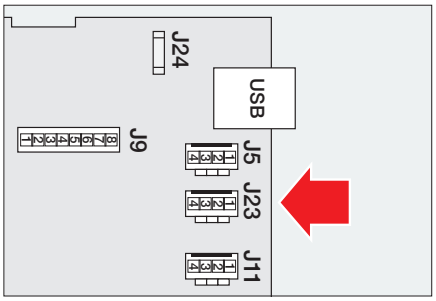
Electric connections must be established by authorised and qualified personnel and in the "dead" state of the ventilation unit only. In addition, applicable local regulations and safety provisions must be complied with.

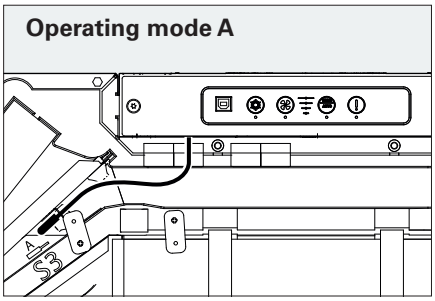
Central VOC sensor installation

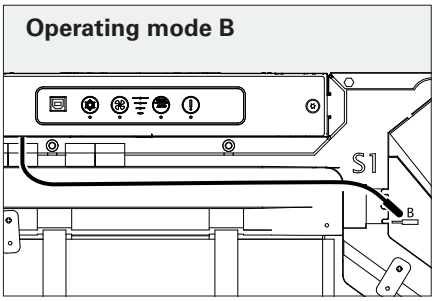


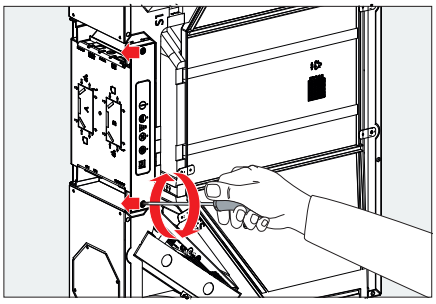


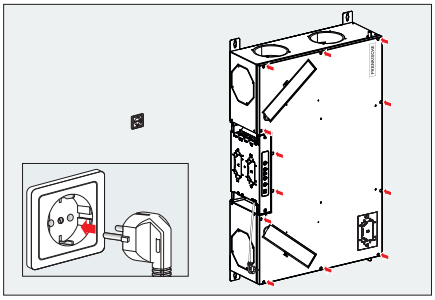












3.12 Central humidity sensor

Fully automatic control for comfort ventilation:

- Water content as an indicator of ambient air pollution
- Saving of energy due to needs-based ventilation

Switching of the ventilation modes with installed central humidity sensor:

The automatic mode regulates the air performance for supply and extract air if the central humidity sensor is installed in the extract air connector of the ventilation unit. The humidity is factory-set to a value of 45 % r.H.

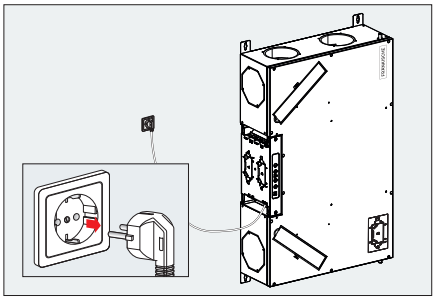
- If the humidity exceeds the set target value, the ventilation unit will continuously operate in ventilation mode 3.
- If the humidity drops below the set target value, the ventilation unit will adjust the airflow rates by gradual reduction.
- If the humidity remains below the set target value over a longer period of time, the ventilation unit will switch to ventilation mode 1.

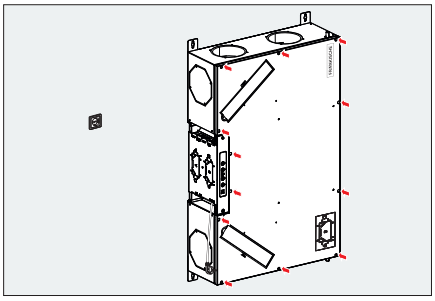
Using the profi-air cockpit pro software or the wireless remote control, you can adjust the factory-set humidity of 45 % r.H.

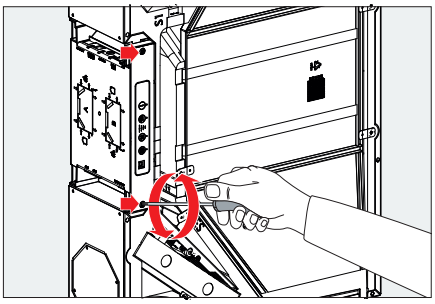
If the sensor is not recognised after installation, check the software version of the ventilation unit. You need the profi-air cockpit pro software for an update.

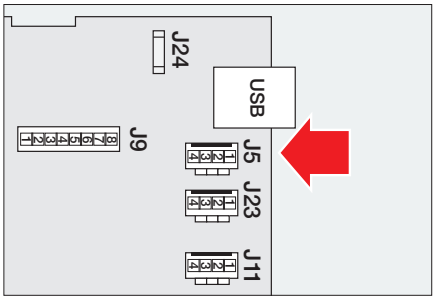
Electric connections must be established by authorised and qualified personnel and in the "dead" state of the ventilation unit only. In addition, applicable local regulations and safety provisions must be complied with.

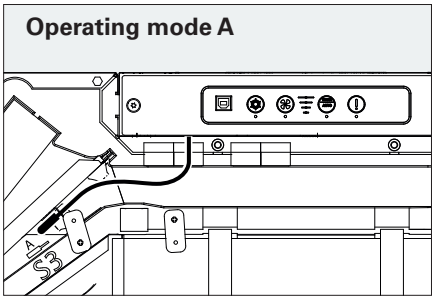
Central humidity sensor installation

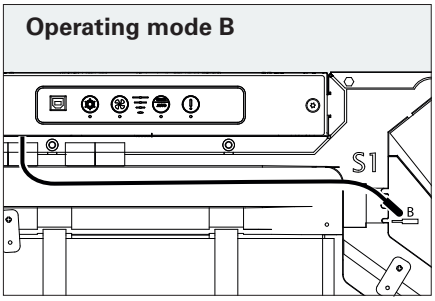


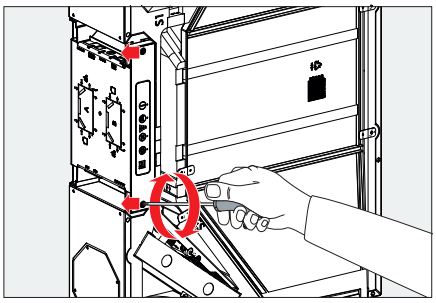


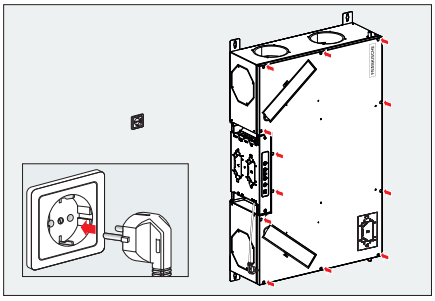








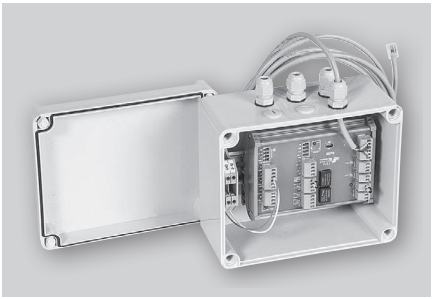




3.13 Connection box

The connection box allows more electric connections at profi-air 130 flat to extend the range of functions. The following additional connections are possible after installation:

- Fire alarm
- Standby switch
- Room humidistat
- External fan activation
- Filter alarm
- Fault alarm



For further information regarding the installation as well as technical data, please refer to the profi-air connection box installation and operating instructions.

3.14 Room humidistat

Fully automatic control for comfort ventilation:

- Water content as an indicator of ambient air pollution
- Saving of energy due to needs-based ventilation

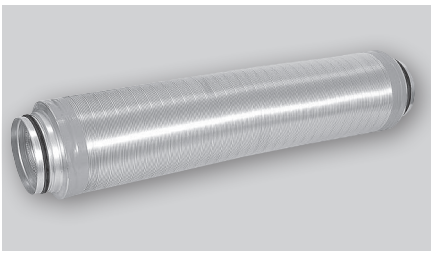
Switching of the ventilation modes with installed room humidistat:

The target value for ambient air humidity can be set at the room humidistat. If this is exceeded, all other control signals for profi-air 130 flat are overwritten and the control unit switches to ventilation mode 3.

- If the humidity exceeds the set target value, the room humidistat overwrites all control signals and increases ventilation to ventilation mode 3.
- If the humidity drops below the set target value, the previous control signals will resume control of the unit again.

3.15 Silencer

The profi-air silencer helps to minimise the air noise generated by the fans installed in the ventilation unit. It consists of two flexible aluminium pipes and a sound-absorbing layer made of resin-bonded mineral wool. Owing to its design, the silencer is very flexible and can be bent by 90°. Lip seals on silencer connections ensure an airtight connection to profi-air ISO pipes and/or spiral ducts. It is recommended to install two silencers for the profi-air flat ventilation unit (1 x supply air, 1 x extract air).



If the fresh air and/or exhaust air grill are/is situated near a room which requires sound protection (e.g. bedroom) or directly at the neighbouring property, it would make sense to install two additional silencers (1 x fresh air, 1 x exhaust air).

profi-air 130 flat ➔ silencer DN 125

DN inside	DN outside Pack of 25	Integral attenuation (dB) in octave bands (Hz) TSD 1,000 mm long						
		125 Hz	250 Hz	500 Hz	1,000 Hz	2,000 Hz	4,000 Hz	8,000 Hz
125	180	5	8	18	35	58	33	27

3.16 cockpit pro connection cable

The profi-air cockpit pro connection cable establishes a connection between the ventilation unit and the commissioning software. You will need this if you want to perform commissioning using this software. The connection cable features the following plug types: USB type A / USB type B.

To establish a connection between profi-air cockpit pro and the ventilation unit, the following steps are necessary (attention: observe the correct order):

- The ventilation unit / laptop are in operation.
- Connect the USB cable to the ventilation unit.
- Connect the USB cable to the laptop.
- Start the profi-air cockpit pro software.
- You may need to press the "Reload" button.

If the ventilation unit is not displayed or the ventilation unit is recognised as a USB drive (function for software update): Disconnect all connections, restart the ventilation unit and repeat the steps described above.

If the sensor is not recognised after installation, check the software version of the ventilation unit. You need the profi-air cockpit pro software for an update.

If the ventilation unit is displayed as a USB drive, do not delete any files on this drive.

3.17 Optional replacement filter set G4 / F7 (ISO Coarse 75 % / ePM1 55 %)

The profi-air 130 flat ventilation unit is delivered with a G4 supply air filter and a G4 extract air filter as a standard feature. Optionally, a filter set F7 supply air filter and G4 extract air filter can be installed. The F7 filter is best suited for people suffering from allergies.

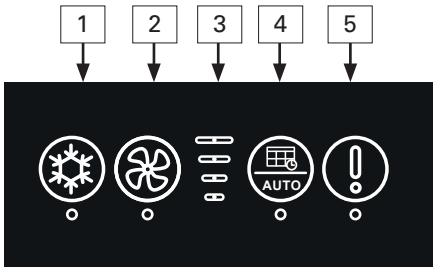
If a retrofit replacement of the G4 filter with the F7 filter takes place, the control of the supply air fans will have to be adjusted due to the higher pressure loss. Please refer to Section 9.3.

4 Commissioning and operation of profi-air 130 flat

The following sections deal with commissioning and operation of the profi-air 130 flat ventilation unit using the internal control panel, the profi-air cockpit app and the profi-air cockpit pro software. Here, you will find all the possible setting parameters as well as notes on individual functions and factory settings.

4.1 Different control options

4.1.1 Structure of the internal control panel

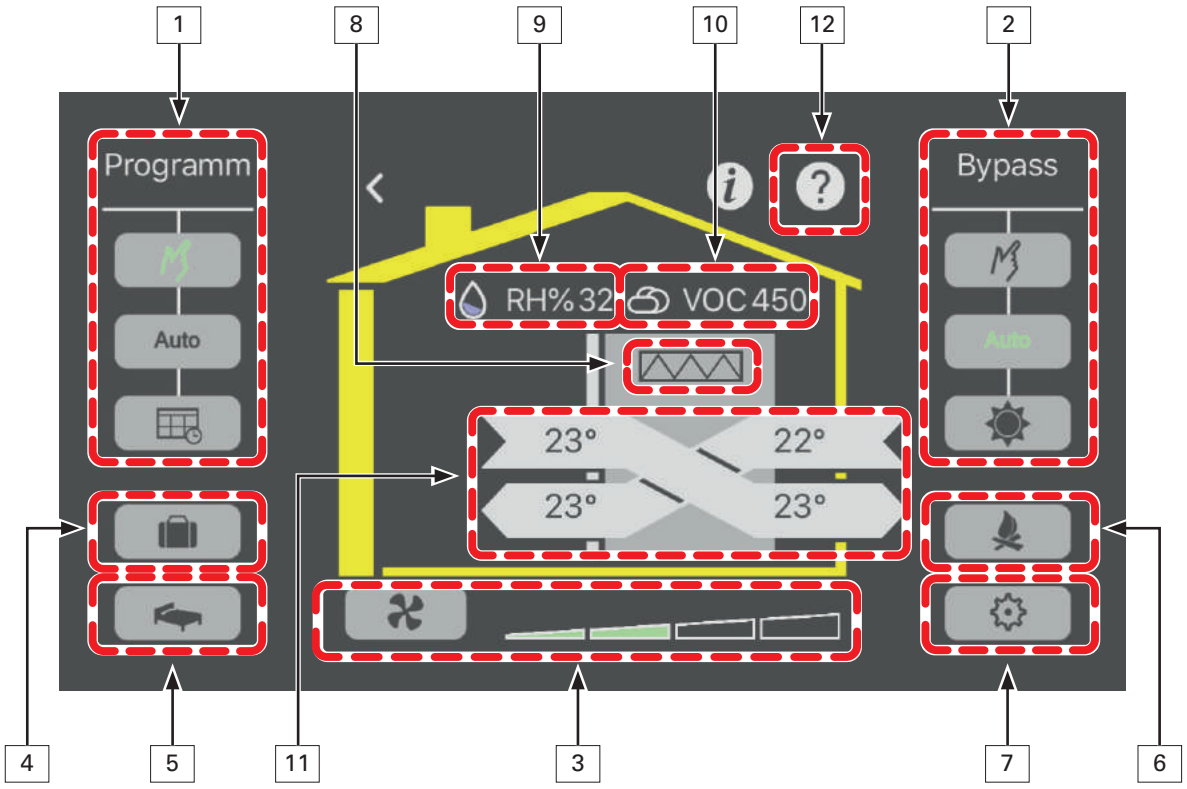


No.	Function
1	Indication and control – summer bypass
2	Control – manual ventilation mode / fireplace mode
3	Indication of ventilation mode 0 to 4
4	Indication and control – weekly programme / automatic mode
5	Indication and resetting – error messages (e.g., filter replacement)

4.1.2 profi-air cockpit app overview

You can download the profi-air cockpit app from the respective app stores and install it on your terminal device.

Please refer to Section 3.10.1 of these operating instructions for more information on how to connect the app with the ventilation unit.

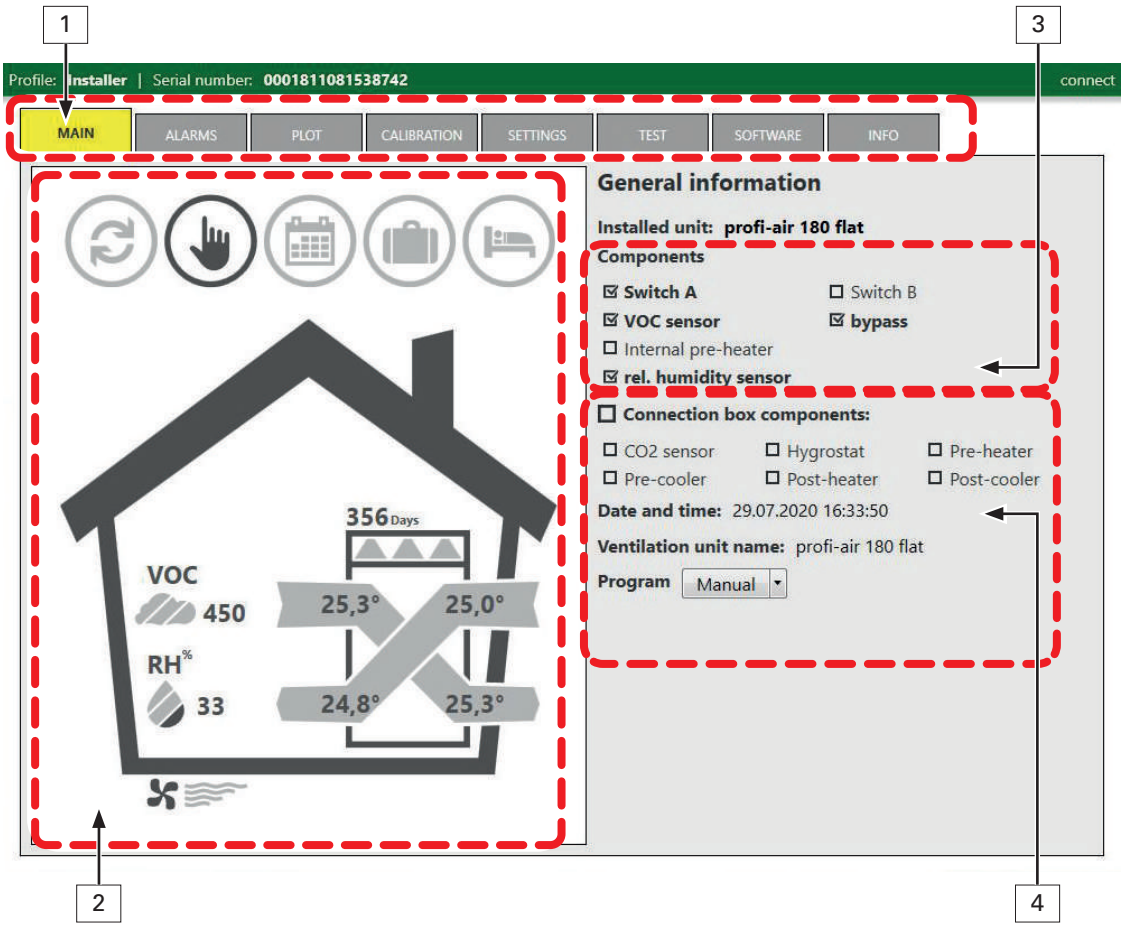


No.	Function
1	Indication / control – operating mode ■ Manual operation ■ Demand control (automatic mode) ■ Weekly programme
2	Indication / control – summer bypass ■ Manual summer bypass ■ Automatic summer bypass ■ Manual summer cooling mode (only possible for operation without fireplace – profi-air cockpit pro settings under “Settings” – “House” – “Fireplace in the house”)
3	Indication / control – ventilation mode
4	Indication / control – holiday mode
5	Indication / control – night mode
6	Indication / control – fireplace mode
7	Settings menu ■ Indication / selection – weekly programme ■ Indication / reset – filter change period ■ Indication / setting – filter change period ■ Indication / setting – night mode ■ Setting – post-heater (not active with profi-air 130 flat) ■ Setting – time / date
8	Indication of the degree of pollution of the filter (filter timer)  0 – 33 %  34 – 66 %  67 – 99 %  100 % (filter replacement is indicated)
9	Indication of extract air humidity (accessory)  very low humidity  low humidity  normal humidity  high humidity
10	Indication of air quality (accessory)  very good air quality  good air quality  slightly polluted air quality  bad air quality
11	Indication of different operating modes / temperatures  Heat recovery active  Summer bypass active  Summer cooling mode active (pure extract air operation)
12	Help

4.1.3 profi-air cockpit pro software overview

You can download the profi-air cockpit pro software from our homepage and install it on your laptop / PC.

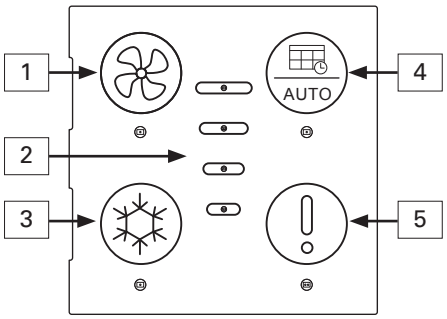
Please refer to Section 3.16 for more information on how to connect the software with the ventilation unit.



No.	Function
1	Register for different programme content
2	Overview with measured values (temperature, VOC and humidity)
3	Internally integrated components
4	External components

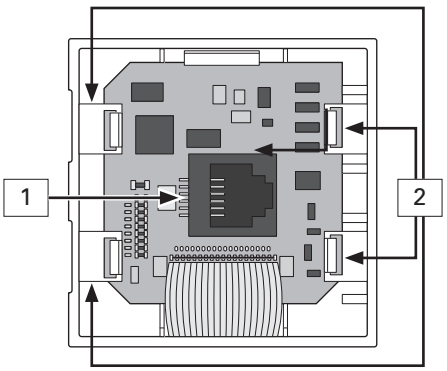
4.1.4 Structure of the external control panel

Operator side



No.	Function
1	Control – manual ventilation mode / fireplace mode
2	Indication of ventilation mode 0 to 4
3	Indication and control – summer bypass
4	Indication and control – weekly programme / automatic mode
5	Indication and resetting – error messages (e.g., filter replacement)

Rear



No.	Function
1	Connection socket to connect the ventilation unit
2	Clamps for snapping in the holding plate

4.2 Commissioning / adjustment of profi-air 130 flat

4.2.1 Basics of commissioning / adjustment

Criteria requiring commissioning / adjustment of the ventilation unit:

- Prior to putting the unit into operation for the first time.
- If the total room area subject to ventilation needs to be adjusted.
- If the air distribution system needs to be adjusted (e.g., retrofit installation of extract air filters).
- If the filter class in the ventilation unit needs to be subsequently adjusted (change from G4 to F7 supply air filter).

The following must be verified prior to commissioning / adjustment:

- The airflow rates for the utilisation unit have been calculated in accordance with national regulations and are available for adjustment.
- The ventilation unit has been installed and connected according to the installation and operating instructions (e.g., power, condensate, air pipes, silencer, etc.).
- The entire air distribution system has been installed.
- Insulation of fresh air and exhaust air pipes is provided.
- All supply air and extract air outlets can be accessed.
- Unit, filter and pipe system are not contaminated.
- Internal finishing works (e.g., drywall installation, paint work) have been completed.
- The intended use according to installation and operating instructions is ensured.

The following materials / tools are required for commissioning / adjustment:

- Cordless screwdriver with bit (cross)
- Differential pressure gauge
- Commissioning set (accessory)
- Impeller anemometer to measure the airflow rates at the valve outlets
- Possibly laptop with profi-air cockpit pro commissioning software and connection cable

! Commissioning / adjustment must be carried out by authorised and qualified personnel only.

4.2.2 Procedure of commissioning / adjustment

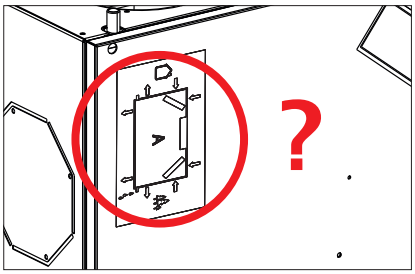
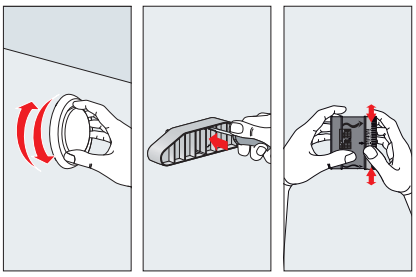
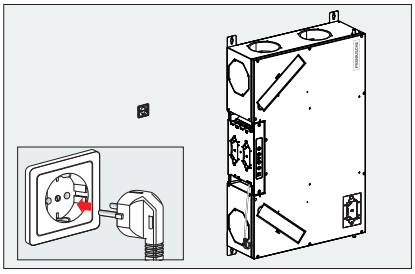
This section describes the individual steps for commissioning / adjustment. You can adjust the unit using the installed control panel or the profi-air cockpit pro commissioning software.

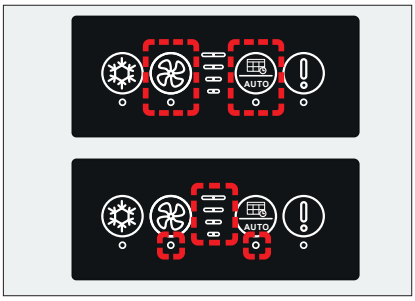
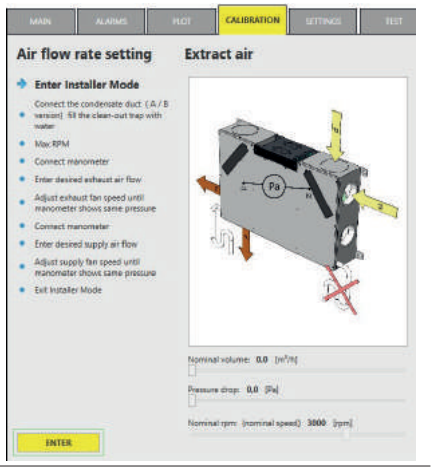
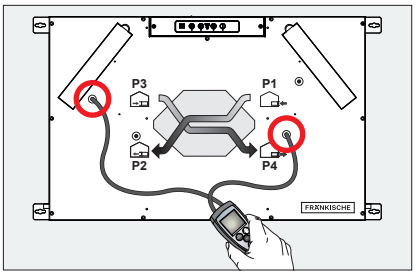
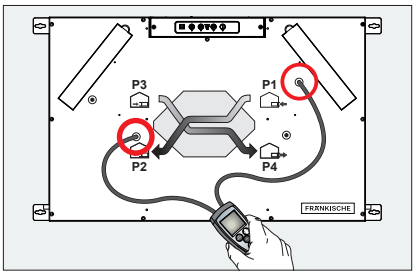
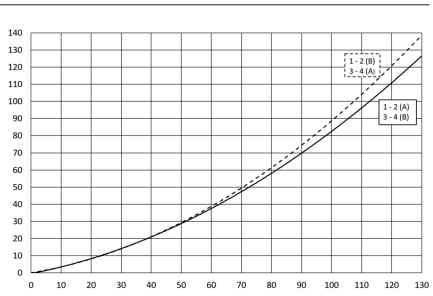
If you want to perform commissioning using the profi-air cockpit pro commissioning software, you will need the profi-air cockpit pro connection cable to establish a connection. You can order the cable as a separate accessory (cat. no. 78300842).

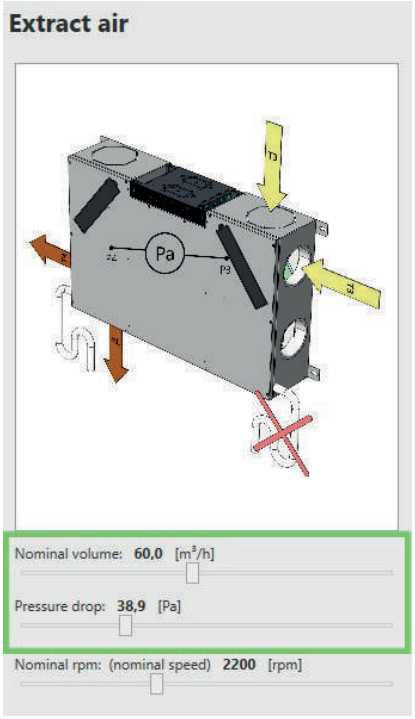
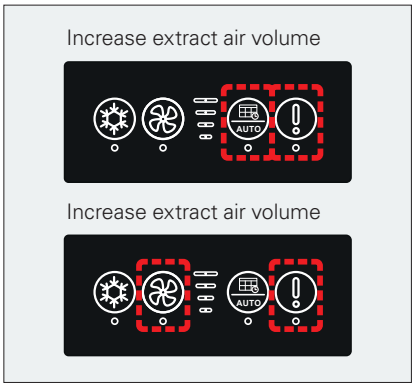
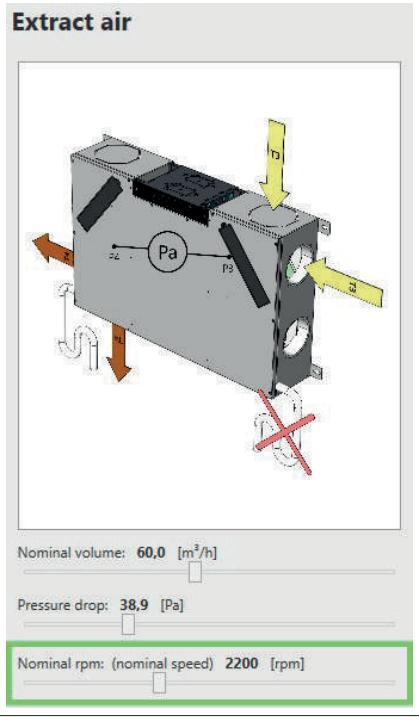
For information regarding establishing a connection between profi-air cockpit pro and the ventilation unit, please refer to Section 3.16.

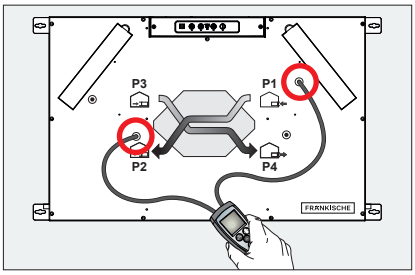
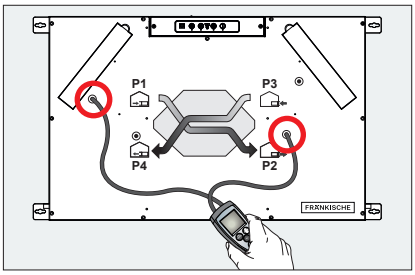
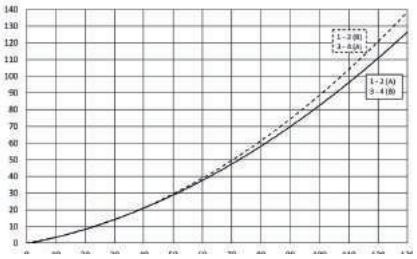
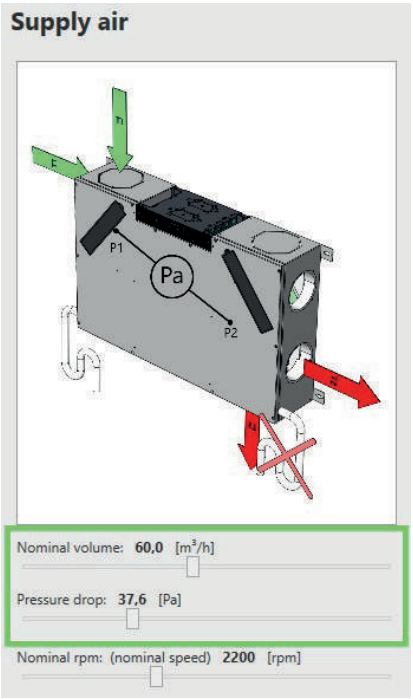
Please note that if the ventilation unit was already in operation prior to commissioning, measuring by means of the pressure taps is only possible if no condensate has accumulated in the heat exchanger. If condensation is present (spring / autumn / winter), the total air volume must be determined by individually measuring the air volume at the supply and extract air outlets.

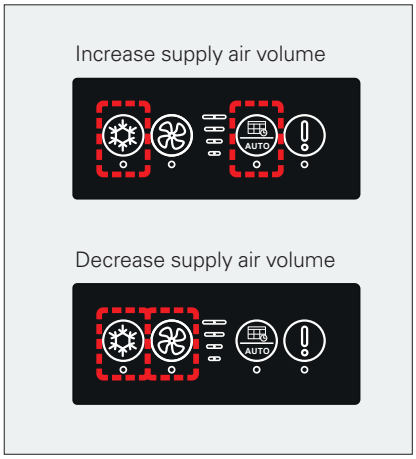
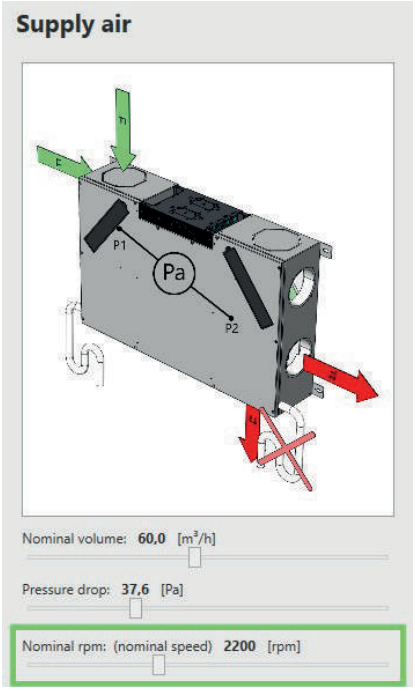
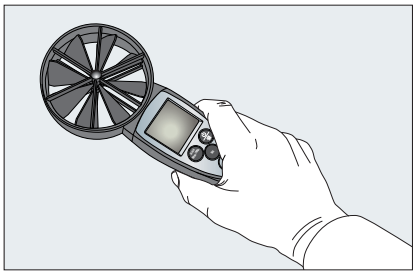
Before commissioning, check which heat exchanger is installed in the device and set this in the profi-air cockpit pro software under "Settings" – "Unit type".

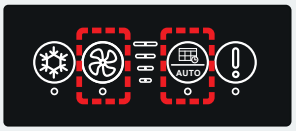
Step	Procedure	
1	Check operating mode A/B according to Section 3.6.1 and make sure that profi-air 130 flat is equipped with the appropriate operating mode label.	
2	Set the defaults for the air outlets by: ■ setting the poppet valves ■ installing and setting the regulating elements ■ installing and setting the constant airflow regulator Defaults are set on the basis of the distance between the manifold and the outlet, as well as the air volume.	
3	Establish power supply.	

Step	Procedure	
4a	Activate the commissioning mode by pushing and holding the “Manual ventilation mode” and the “Automatic mode” buttons at the same time for 5 seconds. If the commissioning mode has been activated, the two green LEDs will start flashing and ventilation mode 3 will be indicated. The commissioning mode remains active for one hour and deactivates functions (e.g., bypass, frost protection) in order to prevent changes in air ducting and/or air volume, and to ensure correct setting of ventilation mode 3.	
4b	Establish a connection between the ventilation unit and the profi-air cockpit pro commissioning software. Start the software (profile: Installer / password: 1234). Select the “Calibration” tab and switch to the commissioning mode by clicking the “ENTER” button. The commissioning mode remains active for one hour and deactivates functions (e.g., bypass, frost protection) in order to prevent changes in air ducting and/or air volume, and to ensure correct setting of ventilation mode 3. **Please make sure to switch the unit type before commissioning if an enthalpy heat exchanger has been installed in the unit. Switch to enthalpy in the “Settings / Unit type” menu.**	
5	Connect a differential pressure gauge to the extract air channel depending on the operating mode. To do so, open the pressure taps at the ventilation unit and connect them to the measuring device. **Note:** P3 ➔ P4 extract air	 Operating mode A  Operating mode B
6a	Determine the pressure loss at the heat exchanger on the basis of the air volume to be set in ventilation mode 3. The required pressure loss can be determined with the help of the diagram on the ventilation unit. **Note:** P1 ➔ P2 supply air P3 ➔ P4 extract air **See Section 4.2.3 for the diagram.**	

Step	Procedure	
6b	Determine the pressure loss at the heat exchanger on the basis of the air volume to be set in ventilation mode 3. To do so, press the “NEXT” button until the “Nominal volume / Pressure drop” setting regulators are displayed with a green frame. The required pressure drop can be obtained from the software after setting the nominal flow rate. Example: Nominal volume: 60 m³/h Pressure drop: 38.9 Pa	
7a	Adjust the required extract air volume. To do so, adjust the performance of the extract air fan using the integrated control panel until the measured pressure drop equals the established pressure drop. Press and hold the “Error message” button and press the “Weekly programme/ automatic mode” button to increase the air volume gradually. Press and hold the “Error message” button and press the “Manual ventilation mode” button to decrease the air volume gradually. Pressing the button generates a short acoustic signal. A long acoustic signal indicates that the upper or lower end of the setting option has been reached. **Note:** After adjusting the fan speed, wait for approx. two minutes until the fan operation becomes stable again.	
7b	Adjust the required extract air volume. To do so, press the “NEXT” button until the “Nominal rpm” setting regulator is displayed with a green frame. To set the extract air volume, adjust the setting regulator until the determined pressure drop equals the measured pressure drop. **Note:** After adjusting the fan speed, wait for approx. two minutes until the fan operation becomes stable again.	

Step	Procedure	
8	Connect a differential pressure gauge to the supply air channel depending on the operating mode. To do so, open the pressure taps at the ventilation unit and connect them to the measuring device. **Note:** P1 ➔ P2 supply air	 Operating mode A  Operating mode B
9a	Determine the pressure loss at the heat exchanger on the basis of the air volume to be set in ventilation mode 3. The required pressure loss can be determined with the help of the diagram on the ventilation unit. **Note:** P1 ➔ P2 supply air P3 ➔ P4 extract air **See Section 4.2.3 for the diagram.**	
9b	Determine the pressure drop at the heat exchanger on the basis of the air volume to be set in ventilation mode 3. To do so, press the “NEXT” button until the “Nominal volume / Pressure drop” setting regulators are displayed with a green frame. The required pressure drop can be obtained from the software after setting the nominal flow rate. Example: Nominal volume: 60 m³/h Pressure drop: 37.6 Pa	

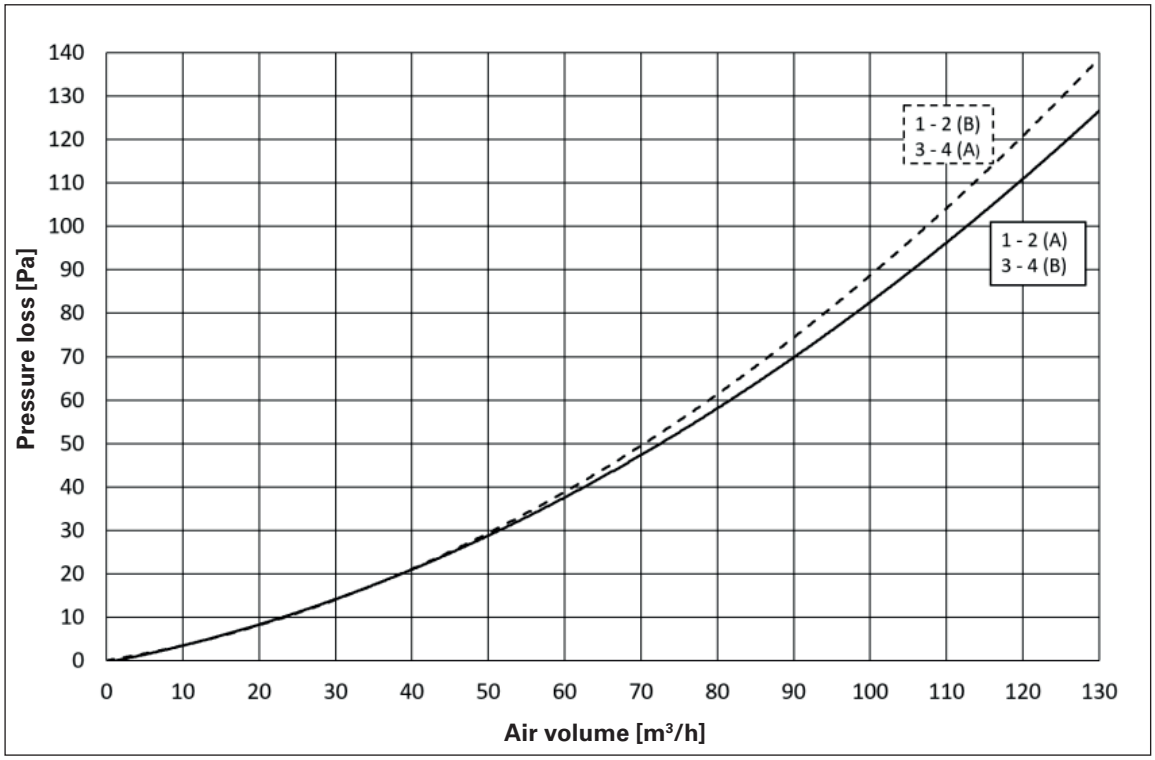
Step	Procedure	
10a	Adjust the required supply air volume. To do so, adjust the performance of the supply air fan using the integrated control panel until the measured pressure drop equals the established pressure drop. Press and hold the “Summer bypass” button and press the “Weekly programme/ Automatic mode” button to increase the air volume gradually. Press and hold the “Summer bypass” button and press the “Manual ventilation mode” button to decrease the air volume gradually. Pressing the button generates a short acoustic signal. A long acoustic signal indicates that the upper or lower end of the setting option has been reached. **Note:** After adjusting the fan speed, wait for approx. two minutes until the fan operation becomes stable again.	
10b	Adjust the required supply air volume. To do so, press the “NEXT” button until the “Nominal rpm” setting regulator is displayed with a green frame. To set the supply air volume, adjust the setting regulator until the determined pressure drop equals the measured pressure drop. **Note:** After adjusting the fan speed, wait for approx. two minutes until the fan operation becomes stable again.	
11	Set the defaults for the air outlets by: ■ setting the poppet valves ■ setting the regulating elements ■ when using constant airflow regulators, no additional settings are required. Measure / check the air volumes per room by means of the impeller anemometer and create an air volume measurement protocol.	

Step	Procedure	
12a	Deactivate the commissioning mode by pushing and holding the “Manual ventilation mode” and the “Automatic mode” buttons at the same time for 5 seconds.	
12b	Push the “NEXT” button and afterwards “CLOSE” to exit the commissioning mode.	 

Following this, you might also have to configure accessory components such as defroster heater, internal humidity sensor, internal VOC sensor, etc.

4.2.3 Pressure loss diagram of the heat exchanger

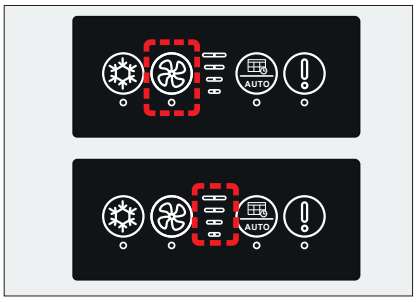
The pressure loss diagrams of the heat exchangers facilitate the setting of the total volume flow rates.
Please refer to the description in the previous Section 4.2.2.



4.3 Operation of profi-air 130 flat with control panel / profi-air cockpit app

The following section deals with operating profi-air flat using the control panel or the profi-air cockpit app.
Here, you will find all possible setting parameters for control as well as notes on individual functions.

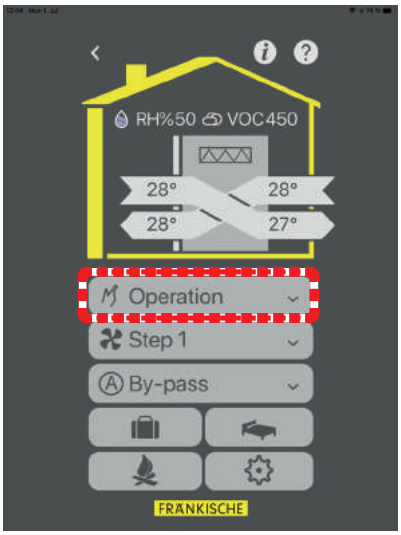
Manual operation / ventilation modes



Manual operation

Control unit

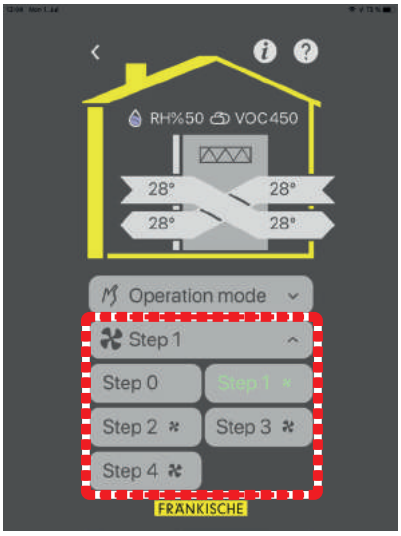
By pushing the button, the manual mode selection is activated. Ventilation modes 0-1-2-3-4 can be set. The activated ventilation mode is displayed on the control unit via the 4 indicator lights.



profi-air cockpit app

You can control the manual mode selection in the “Programme” menu item. Ventilation modes 0-1-2-3-4 can be selected either by switching using a pull-down menu or by pressing the fan icon.

If the system has been switched off over a longer period of time, this causes an increased risk of condensation in the pipes, and/or might lead to moisture damage in the building.



Mode 1 (protection against humidity)

The lowest fan speed protects the building from moisture during times of longer absence of the inhabitants (e.g. holidays).

70 % of the fan speed in mode 2.

Mode 2 (reduced ventilation)

The low fan speed is used for reduced ventilation during times of absence of the inhabitants.

70 % of the set fan speed in mode 3.

Mode 3 (rated ventilation)

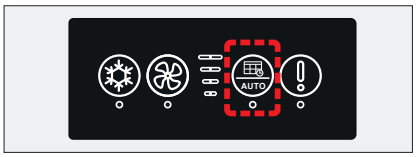
The normal fan speed is used for rated operation of the ventilation unit when the inhabitants are present.

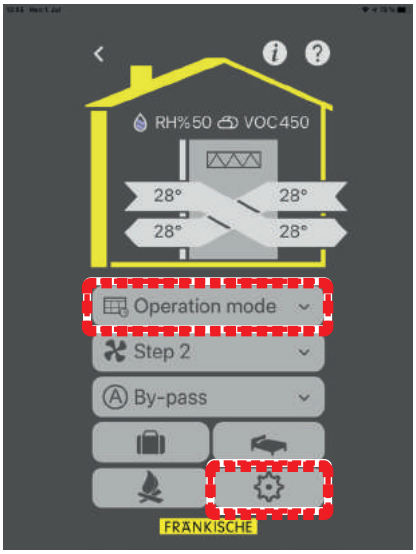
Mode 4 (intensive ventilation)

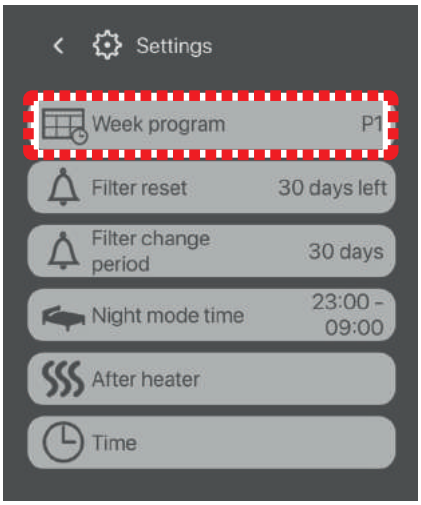
The maximum fan speed is used for intensive ventilation (party mode). After activating speed 4, this will be enabled for 4 hours and switched to speed 3 afterwards.

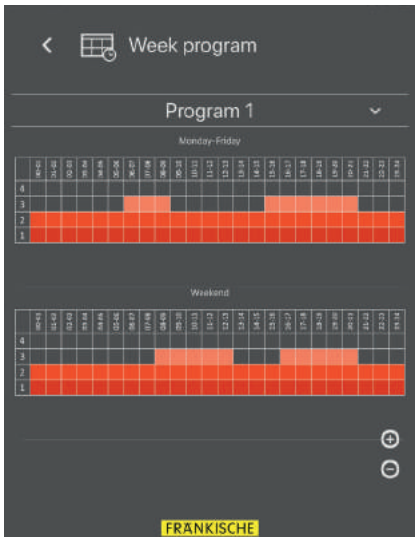
130 % of the set fan speed in mode 3.

Weekly programme









Weekly programme

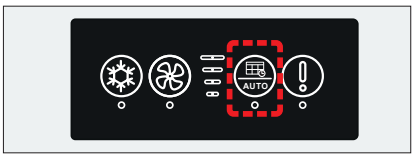
Control unit
Press the button once to control the unit using a weekly programme. The LED will be lit continuously. The weekly programme selected last will be activated.

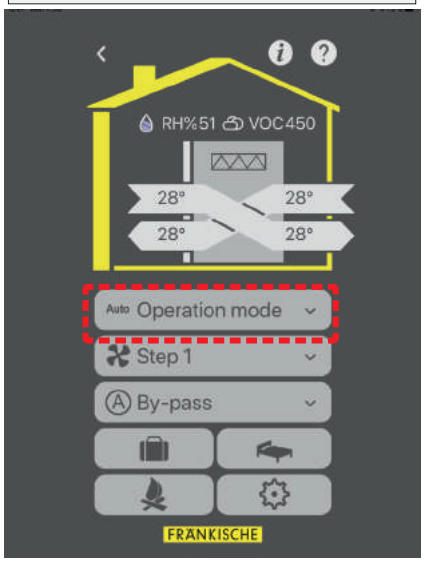
profi-air cockpit app
The app also allows you to select one of the 11 weekly programmes. You can select the weekly programme operating mode via the "Programme" menu item.
The "Settings" menu item features the selection of the weekly programmes.
This is also where you can check how the weekly programmes are programmed.

Weekly programme P1 is activated in the delivery state. The profi-air cockpit app or the wireless remote control is required to switch between the different weekly programmes P1 to P11.

Using the profi-air cockpit pro software, you can programme the P11 weekly programme as required.

Automatic mode





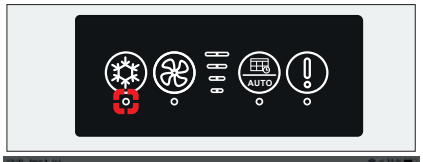
Automatic mode

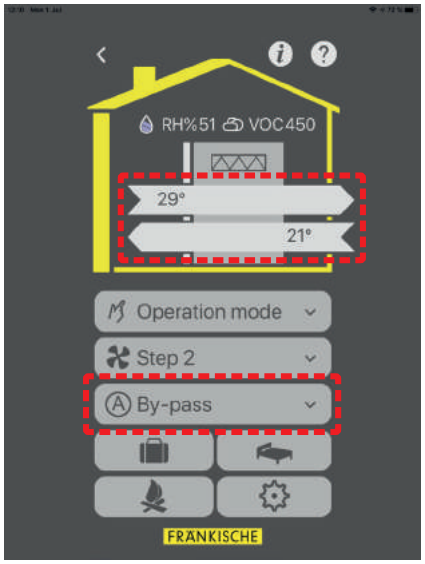
Control unit
Press the button for 5 seconds to control the unit using the automatic mode. The LED starts flashing to indicate activated automatic mode.

profi-air cockpit app
You can select the automatic mode via the "Programme" menu item.

At least 1 optional sensor (humidity / VOC) must be installed to control the ventilation unit in automatic mode.

Summer bypass





Automatic summer bypass

The automatic summer bypass is open under the following conditions:

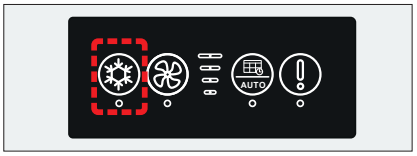
- The fresh air temperature target value has been exceeded (factory setting: 15 °C).
- The extract air temperature target value has been exceeded (factory setting: 24 °C).
- The fresh air temperature is at least 2 °C below the extract air temperature.

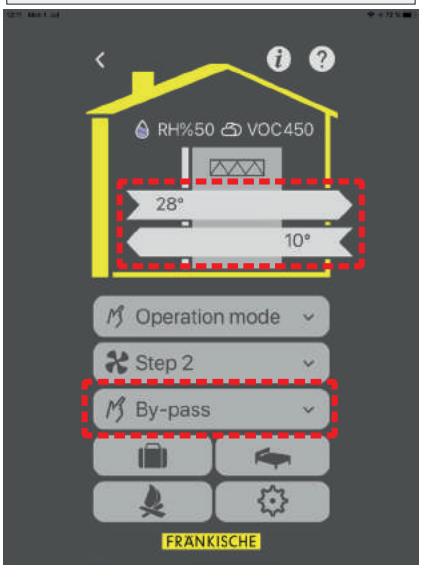
The automatic summer bypass closes again if the target values are fallen short off.

Control unit
The LED is lit continuously when the bypass flap is open.

profi-air cockpit app
If the bypass flap is open, the app will no longer show the airflows crosswise.

You can only change target values with the profi-air cockpit pro software or the wireless remote control.





Manual summer bypass

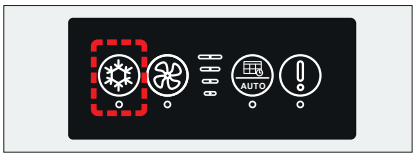
The summer bypass can also be opened manually if the target values for the automatic summer bypass are not yet reached but a cooler supply air temperature is desired.

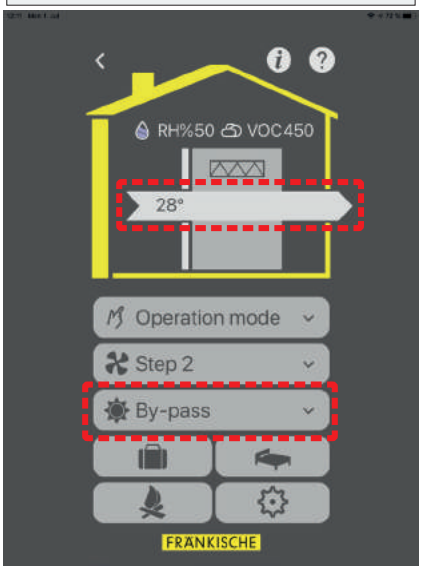
In order to being able to open the summer bypass manually, the fresh air temperature must exceed 9 °C and be below the supply and/or extract air temperature.

The manual summer bypass will then be active for one hour.

Control unit
Push the button to activate the manual summer bypass. The LED will be lit continuously as soon as the summer bypass has opened completely.

profi-air cockpit app
You can activate the manual summer bypass in the “Bypass” menu item. If the bypass flap is open, the app will no longer show the airflows crosswise.





Manual summer cooling mode

In the so-called manual summer cooling mode, the supply air fan is switched off and cooler fresh air flows in through an open window.

The fresh air temperature must be over 14 °C for the manual summer cooling mode to be activated.

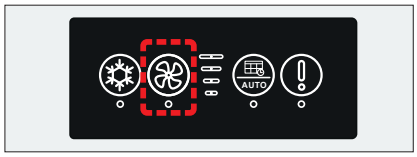
Control unit
Press and hold the button for approx. 5 seconds to activate or deactivate the summer cooling mode. The LED is flashing every 5 seconds in activated summer cooling mode.

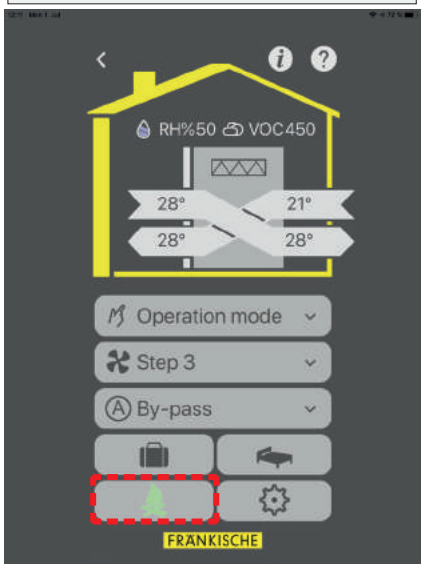
profi-air cockpit app
You can activate the manual summer cooling mode in the “Bypass” menu item. With activated manual summer cooling mode, the app will only show one extract airflow.

This function may only be used if there is no fireplace is present (underpressure!)

This function can be activated only if the setting in the profi-air cockpit pro software under “Settings” - “House” - “Fireplace in the house” is set to “no”.

Fireplace mode





Fireplace mode

When lighting a fireplace it can make sense to produce overpressure to avoid smoke formation in the room.

The ventilation unit is controlled as follows with activated fireplace mode:

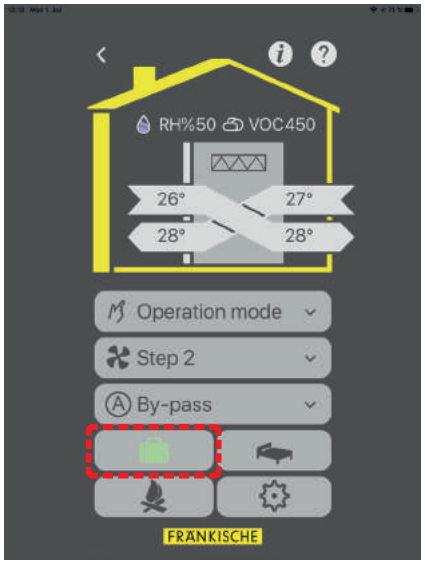
- Supply air is set to ventilation mode 3.
- Extract air is reduced by 50 %.
- The fireplace mode is deactivated automatically if the supply air temperature falls below 9 °C.

Operation will be deactivated automatically after 7 min.

Control unit
To activate the fireplace mode, press and hold the button for approx. 5 seconds.
The LEDs of ventilation modes 1-3 are flashing in switched-on state.

profi-air cockpit app
Push the button to activate the fireplace mode. The button will be highlighted in green as soon as the fireplace mode is active.

Holiday mode



Holiday mode

The holiday mode can be activated for times when the building is not inhabited. The ventilation unit operates with minimal air exchange in this mode (i.e., ventilation mode 1 will be active for 16 h per day and ventilation mode 0 will be active for 8 h per day).

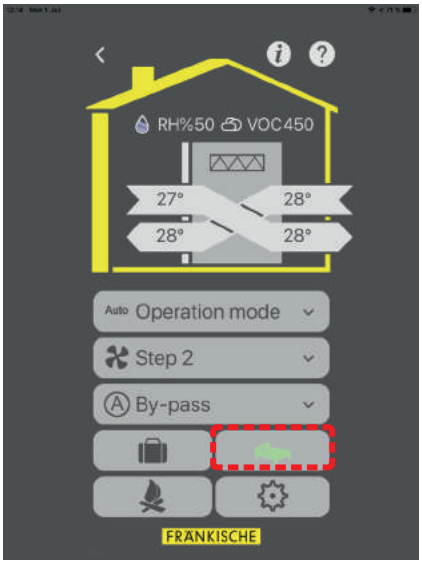
The function can be deactivated by choosing another operating mode, ventilation mode or after 28 days at the latest.

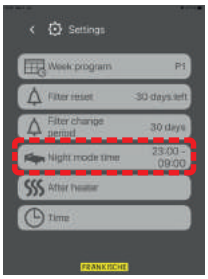
Deactivate the function immediately as soon as the building is inhabited again, since otherwise this causes an increased risk of condensation in the pipes or might lead to moisture damage in the building.

Control unit
This function cannot be set via the control unit.

profi-air cockpit app
Push the button to activate the holiday mode. The button will be highlighted in green as soon as the holiday mode is active.

Night mode





Night mode
The ventilation unit runs in ventilation mode 1 with activated night mode. This function can be used together with the automatic mode, manual operation and activated weekly programme.

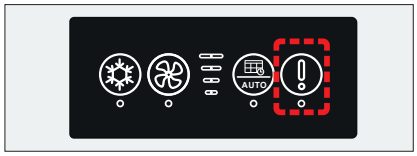
Control unit
This function cannot be set via the control unit.

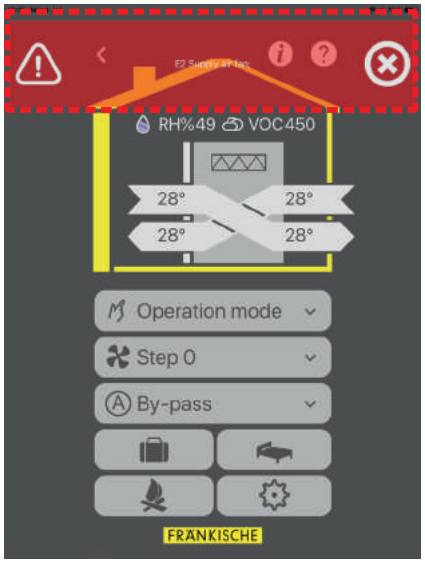
profi-air cockpit app
Push the “Night mode” button to activate the night mode. The button will be highlighted in green as soon as the night mode is active.

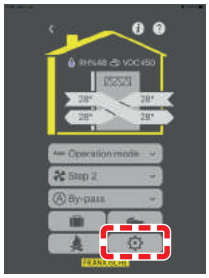
You can make the night setback settings (start / end) in the may be used.
Push the “Settings” button to do so.

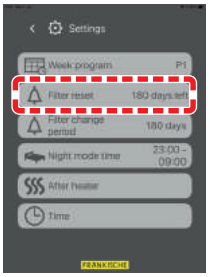
You can then see the set times in the “Night mode” menu item.
Select the “Night mode” menu item to adjust them.

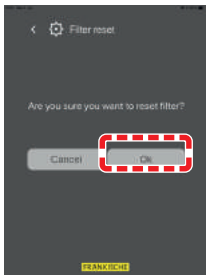
Error messages











Error messages

The summer bypass can also be opened manually if the target values for the automatic summer bypass are not yet reached but a cooler supply air temperature is desired.

For more information on error messages, please see Section 8.

Control unit
The button is used to reset error messages. The LED is used to define the error message:

- Orange – replace filter
- Flashing red – other error message
  (flashing 2 x = error code E2 / flashing 3 x = error code E3, etc.)

Push the button once to reset the error.

To reset the filter interval, press and hold the button for approx. 10 seconds until you hear an acoustic signal. You can do this no matter if there is a filter alarm or not.

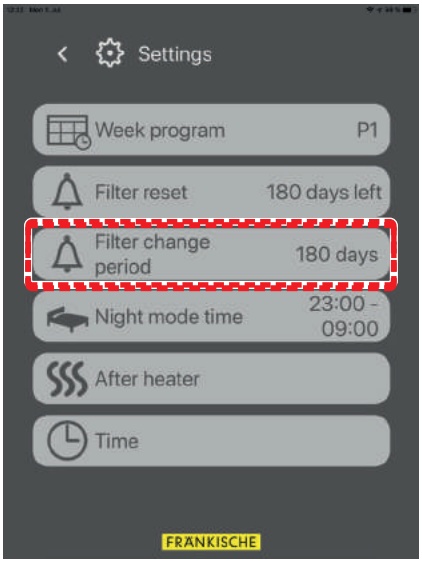
profi-air cockpit app
Error messages are displayed in the app as overlay at the top. The error messages are displayed with an error code and clear text (e.g., E2 supply air fan).

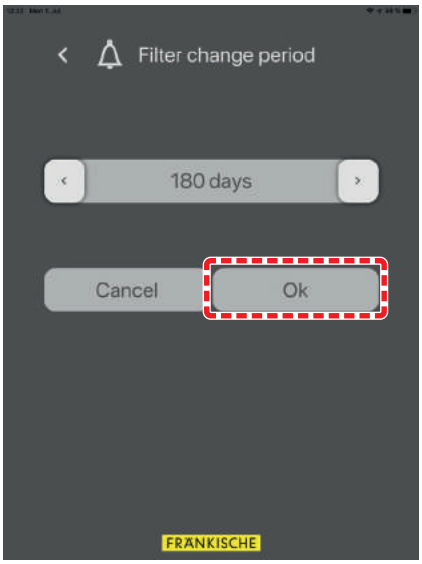
You can reset the error by pushing the “X” button.

Push the “Settings” button and then the “Filter Reset” button to reset the filter interval. You only have to confirm the filter reset now.

You can do this no matter if there is a filter alarm or not.

Filter lifespan





Filter change period
The filter change period specifies how long a filter can be used until the filter replacement indication is displayed by the unit.

Control unit
This function cannot be set via the control unit.

profi-air cockpit app
Push the "Settings" button and then the "Filter change period" button to set the filter lifespan.

You can then set the filter lifespan in 30-day increments between 30 and 360 days.
180 days (approx. 6 months) are the standard.

A subsequent adjustment of the filter change period automatically adjusts the filter reset.

For factory settings and settings, see Section 5.

For the weekly programme, automatic mode and frost protection control strategies, see Section 6.

5 Factory settings and setting ranges of control units

The following section describes the different factory settings of the ventilation unit and the setting options at the control panel, wireless remote control, profi-air cockpit app and profi-air cockpit pro software.

Setpoint	Factory setting	Setting range			
		Control panel	Optional wireless remote control	profi-air cockpit app	profi-air cockpit pro software
Ventilation mode 0	OFF	–	–	–	–
Ventilation mode 1	49 % of mode 3	–	–	–	0 – 100 %
Ventilation mode 2	70 % of mode 3	–	–	–	0 – 100 %
Ventilation mode 3	Supply air: 2800 rpm Extract air: 3000 rpm	Can be set from 1400 – 4000 rpm	–	–	Can be set from 1400 – 4000 rpm
Ventilation mode 4	130 % of mode 3	–	–	–	100 – 225 %
Weekly programme	P1	ON / OFF	OFF / P1 – P11	OFF / P1 – P11	OFF / P1 – P11
Settings weekly programme P11	Mode 3, permanent	–	–	–	Mode 0 to 4 or automatic
Automatic summer bypass Extract air temperature Fresh air temperature	 Tmax – 24 °C Tmin – 15 °C	–	 OFF / 21 – 30 °C 12 – 17 °C	–	 OFF / 21 – 30 °C 12 – 17 °C
Duration of manual bypass	6 h	–	–	–	1 – 8 h
Filter change period	6 months	–	90 – 360 days	30 – 360 days	1 – 12 months
Defroster heater	OFF	–	ON / OFF	–	ON / OFF
Extract air humidity sensor	Winter: 45 % Summer: 50 %	–	35 – 65 %	–	35 – 65 %
VOC extract air sensor	Low sensitivity	–	–	–	Low / medium / high sensitivity
Digital input 1	Ventilation mode 2 constant	–	–	–	Ventilation mode 0 / 1 / 2 / 3 / 4 constant
Digital input 2	Ventilation mode 3 constant	–	–	–	Safety-relevant switch-off High water level Safety-relevant switch-off without alarm Fume hood 1 Fume hood 1

The fan performance must be set by authorised and qualified personnel only in order to ensure sufficient ventilation of the rooms as well as balanced ventilation operation.

6 Control strategies

6.1 Weekly programme

Due to the time profiles stored, the weekly programme mode controls the air performance for supply and extract air.

Weekly programme P1 is factory-set. This can only be adjusted using the profi-air cockpit app, the profi-air cockpit pro software or the optional wireless remote control.

Weekly programme P1

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P2

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P3

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P4

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P5

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P6

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P7

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P8

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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Weekly programme P9

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
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1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
4																								
3																								
2							■	■	■									■	■	■	■			
1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Weekly programme P10

Monday - Friday

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
4																								
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2								■	■				■					■	■	■				
1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Weekend

Time / mode	0-1	1-2	2-3	3–4	4–5	5–6	6–7	7-8	8-9	9–10	10–11	11-12	12-13	13–14	14–15	15–16	16–17	17-18	18–19	19–20	20–21	21-22	22-23	23-24
4																								
3																								
2									■				■					■	■	■				
1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

Weekly programme P11

Using the profi-air cockpit pro software, you can programme the P11 weekly programme completely as required.

6.2 Automatic mode

The automatic mode controls the air performance of supply and extract air based on the humidity and/or VOC sensor which can be installed in the extract air connector of the ventilation unit.

Switching of the ventilation modes with the installed central VOC sensor:

< 1,000 ppm = mode 1
1,000 – 1,500 ppm = mode 2
1,500 – 2,000 ppm = mode 3
> 2,000 ppm = mode 4

The profi-air cockpit pro software allows you to adjust the sensitivity of the VOC sensor.

Switching of the ventilation modes with the installed central humidity sensor:

- If the humidity exceeds the set target value, the ventilation unit will continuously operate in ventilation mode 3.
- If the humidity drops below the set target value, the ventilation unit will adjust the airflow rates by gradual reduction.
- If the humidity remains below the set target value over a longer period of time, the ventilation unit will switch to ventilation mode 1.

Using the profi-air cockpit pro software or the wireless remote control, you can adjust the factory-set humidity of 45 % r.H.

6.3 Automatic summer bypass

With the automatic summer bypass, heat recovery is prevented in order not to additionally heat the cooler fresh air with the extract air. This function is mainly used in transitional seasons as well as during cool summer nights. The bypass operates fully automatically according to the set control temperature.

Control temperatures

- The fresh air temperature is the release temperature – only after the set temperature has been exceeded, the control releases the summer bypass open function.
- The extract air temperature is the control temperature – only after the set temperature has been exceeded and the fresh air temperature is lower than the extract air temperature, the bypass opens.

6.4 Frost protection of the heat exchanger

6.4.1 Frost protection of the heat exchanger without defroster heater

A frost protection strategy is integrated into the control in order to prevent ice formation in the heat exchanger. The following measures will be taken if the fresh air temperature (T1) falls below -4 °C and the exhaust air temperature (T4) is below 8 °C:

- The speed of the supply air fan decreases by 3 rev./second until the minimum speed is reached.
- After 10 seconds in minimum speed, the supply air fan stops completely while the exhaust air fan feeds warm air into the heat exchanger to defrost potential icing.
- When the exhaust air temperature (T4) increases to above 8 °C again, the supply air fan increases its speed by 3 rev./second until the original value is reached.
- If the exhaust air temperature (T4) falls below 2 °C, the supply air fan will again reduce its speed.
- If the fresh air temperature (T1) falls below –13 °C for more than 5 minutes, even in case of activated defrosting mode, the device will stop operation for 30 minutes. This sleep mode will be deactivated if an electric defroster heater is used.

If the profi-air 130 flat ventilation unit and a fireplace are operated at the same time, this frost protection strategy cannot be selected, since negative pressure may occur in the installation room in the event of frost protection.

If the profi-air 130 flat ventilation unit and a room air-dependent fireplace are operated at the same time, it is recommended to use a defroster heater. In addition, the profi-air cockpit pro software should be used to set operation with the fireplace.

If the profi-air 130 flat ventilation unit and a fireplace are operated at the same time, the district master chimney sweep should always be contacted in advance in order to decide if safety pressure monitoring must be installed. This system is then connected to the network supply line of the ventilation unit.

6.4.2 Frost protection of the heat exchanger with defroster heater

If a profi-air defroster heater has been installed, it adds electric heat to the inflowing fresh air (T1) to ensure frost protection and increase the supply air temperature (T2). The defroster heater is controlled as follows:

- If the fresh air temperature (T1) is below –3 °C or the supply air is below 16.5 °C, the ventilation unit will engage the defroster heater with 10 % performance.
- This increases or decreases by 10 % every 60 seconds depending on the fresh air (T1) and supply air temperature (T2).

The defroster heater must be activated using the profi-air cockpit pro software or the wireless remote control since the ventilation unit otherwise remains in frost protection mode without defroster heater.

If the profi-air 130 flat ventilation unit and a room air-dependent fireplace are operated at the same time, it is recommended to use a defroster heater. In addition, the profi-air cockpit pro software should be used to set operation with the fireplace.

If the profi-air 130 flat ventilation unit and a fireplace are operated at the same time, the district master chimney sweep should always be contacted in advance in order to decide if safety pressure monitoring must be installed. This system is then connected to the network supply line of the ventilation unit.

7 Servicing and maintenance

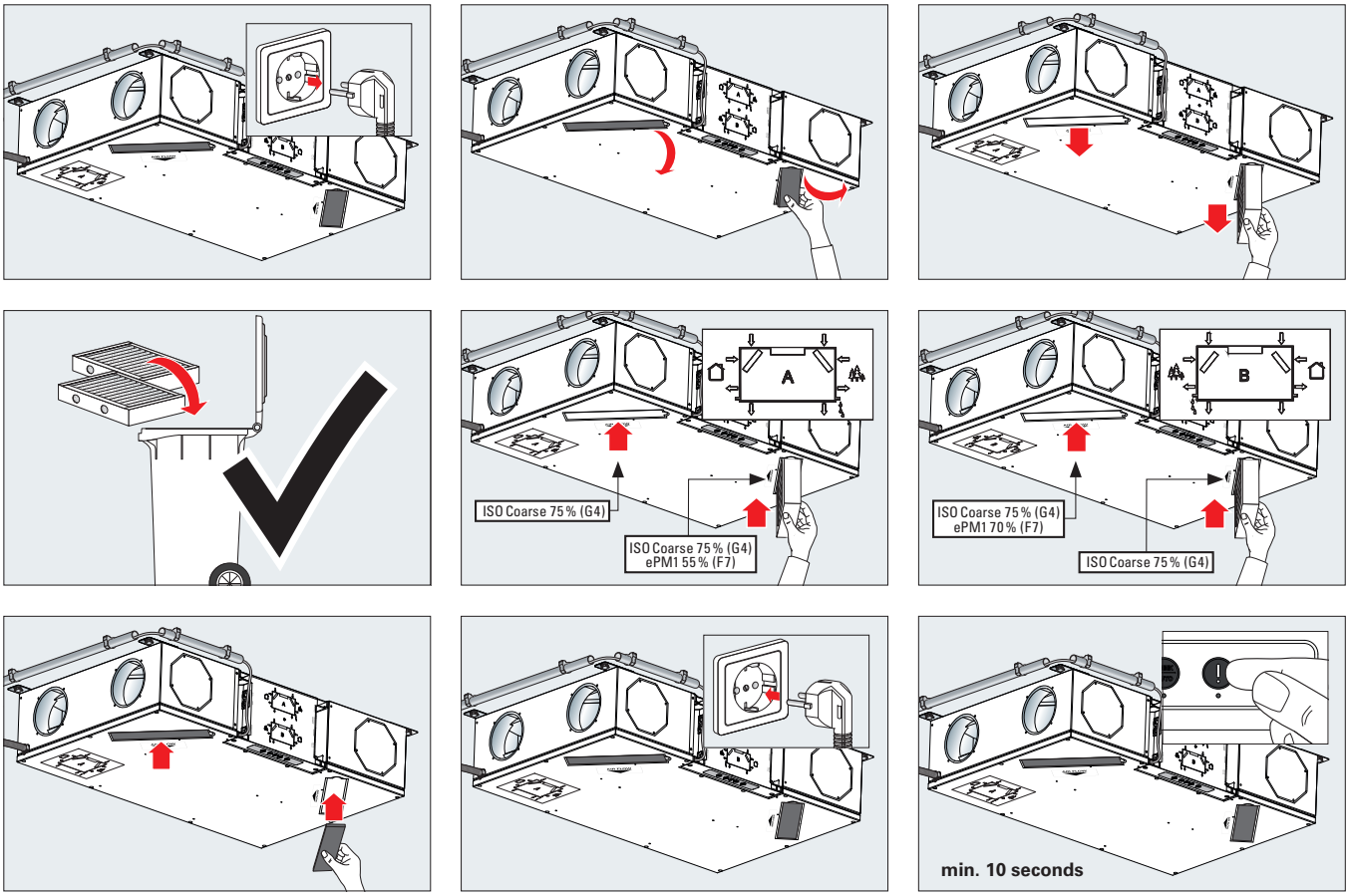
To permanently ensure a hygienic heat recovery ventilation system, it is particularly important to maintain and service the system at regular intervals. For this reason, we recommend signing a maintenance contract with a fitter for maintaining and cleaning the system. According to DIN 1946-6, the parts listed below should be inspected regularly and replaced or cleaned if necessary.

Components	Maintenance / inspection intervals
Air filter Inspection of all air filters (also in the ventilation unit, in extract air valves, prefilters, such as earth-air heat exchangers or preheaters if any) for contamination and replacement if necessary.	every six months
Ventilation unit Inspection and, if necessary, cleaning of the heat exchanger and/or fans. Inspection of condensate drain and siphon.	every 2 years
Air distribution Inspection and cleaning, if necessary, of the ventilation ducts, manifolds and ventilation valves.	every 2 years

If the profi-air 130 flat unit is not subjected to any maintenance, the functionality of the entire ventilation system can be affected.

7.1 Filter replacement

We recommend inspecting the air filters after three months of operation and replacing them according to the degree of pollution. Orange flashing incl. an acoustic signal of the fault report indicator on the external control panel and/or flashing of the filter indicator on the remote control and the profi-air cockpit app will remind you of filter replacement after the set interval has expired.



Please use only undamaged original filters in the profi-air 130 flat ventilation unit.

Do not clean filters with liquids (e.g., water).

To ensure best possible operation, replace all filters after six months at the latest.

Reset the filter timer after each filter replacement as shown in the illustration sequence.

Dispose of dirty filters according to the locally applicable disposal regulations.

7.2 Maintenance information for specialists

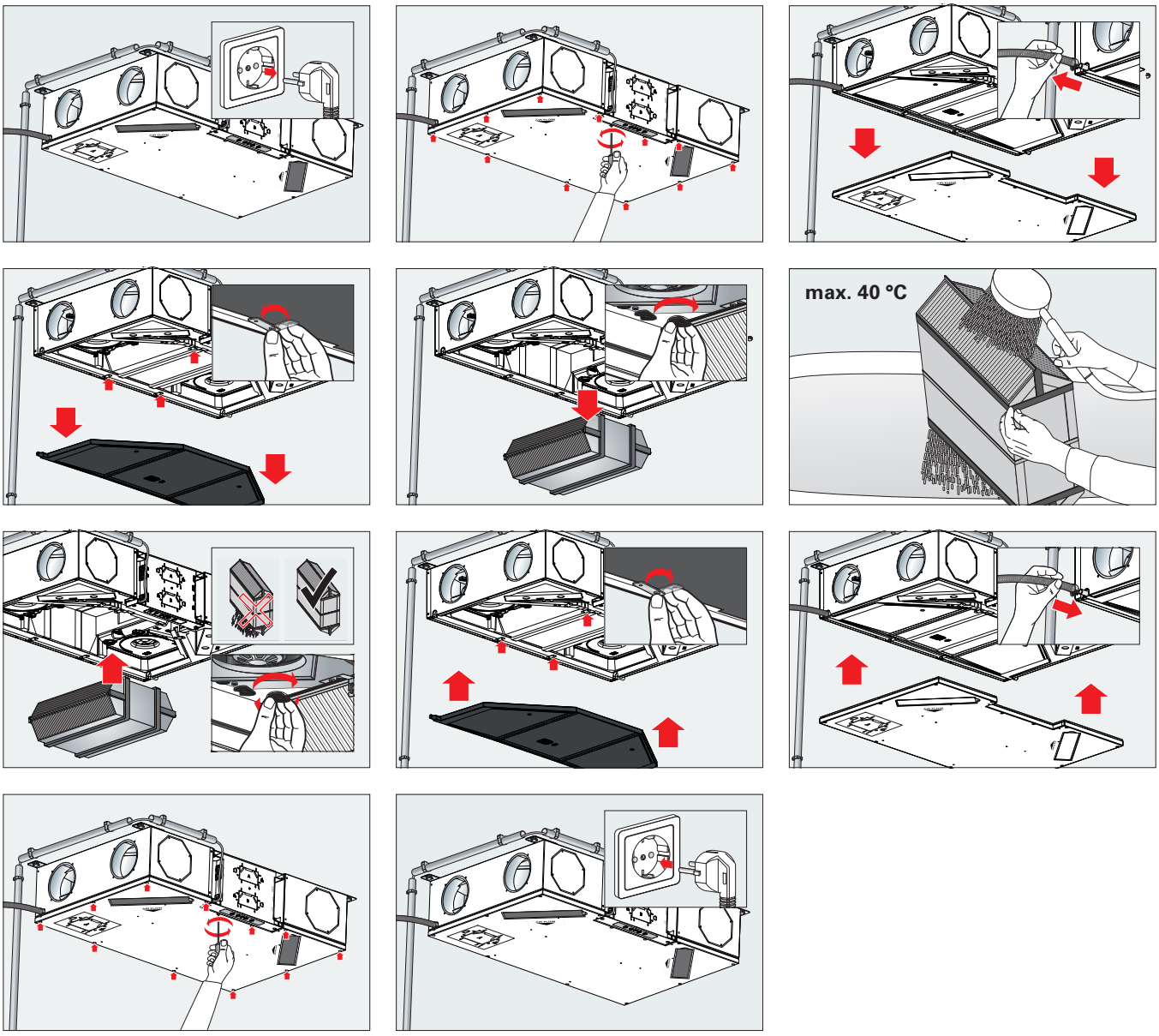
Ventilation units should be maintained by a specialist every 24 months. The following work steps are to be performed:

- Visual inspection of the unit for damage and corrosion
- Inspection and, if necessary, replacement of unit filters
- Inspection and, if necessary, replacement of filter outlets
- Cleaning of outlets
- Inspection of external wall grills for contamination and, if necessary, cleaning
- Removal and, if necessary, cleaning of the heat exchanger
- Inspection and, if necessary, cleaning of fans
- Inspection of condensate siphon for functionality and tightness
- Inspection and, if necessary, adjustment of the airflow rates
- Inspection of the electric system

When executing any type of maintenance work, please disconnect the ventilation unit from the power grid to make sure that the fans are out of operation. In addition, applicable local regulations and safety provisions must be complied with.

If the profi-air 130 flat unit is not subjected to any maintenance, the functionality of the entire ventilation system can be affected.

7.2.1 Inspection and cleaning of the heat exchanger



Exercise caution when dismantling the heat exchanger as it may contain condensate water.

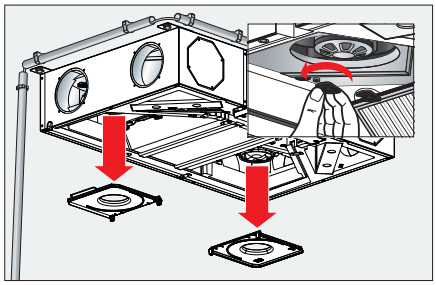
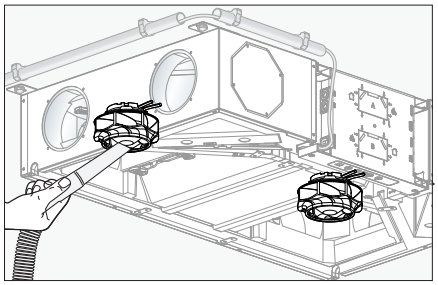
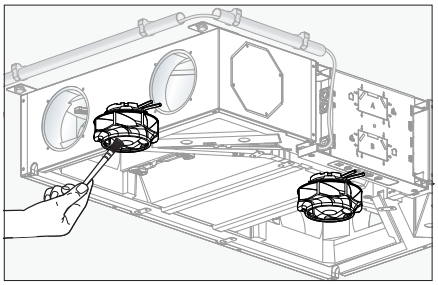
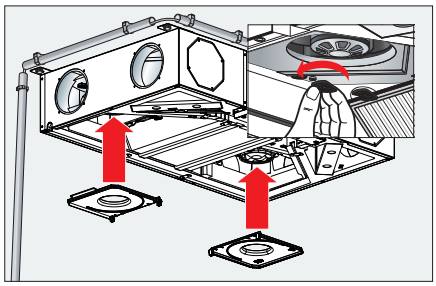
Dry the rinsed heat exchanger prior to installation.

After inspection and cleaning of the heat exchanger, do not re-install the condensate drip tray at once if other components, such as fans, still have to undergo inspection.

Do not clean the heat exchanger with aggressive substances or cleaning agents containing solvents.

7.2.2 Inspection and cleaning of the fans

Open the device and remove the condensate drip tray as described in Section 7.2.1.

Install the condensate drip tray and device cover as described in Section 7.2.1.

Do not clean the fan with liquids, aggressive substances or cleaning agents containing solvents.

Do not damage fan blades, and do not shift or remove balance weights.

8 Faults

If a fault occurs, please write down the flashing code displayed on the internal control panel or the error code displayed in the profi-air cockpit app or on the optional wireless remote control and contact your specialist technician.

In case a fault is present in the profi-air flat ventilation unit or the voltage supply has been interrupted, no sufficient air exchange is provided. This can cause humidity- and mould-related problems. Please contact your specialist technician in this case.

A fault in the profi-air flat ventilation unit is displayed as follows:

- Via the fault report indicator on the integrated control panel
- As an error code in the profi-air cockpit app
- As an error code on the optional wireless remote control

In the following sections, the different errors as well as faults (or problems) without a message will be described in more detail.

Troubleshooting activities must be carried out by authorised and qualified personnel and in the "dead" state of the device only, unless otherwise expressly described. In addition, applicable local regulations and safety provisions must be complied with.

8.1 Fault reports

This section lists the individual fault reports.

Fault report integrated control panel	Fault report profi-air cockpit app or wireless remote control	Possible cause	Control response
Flashing orange LED and acoustic signal on the ventilation unit	Flashing filter replacement indication	Filter replacement interval has expired.	The unit keeps working as usual, however, the power consumption is higher and noise pollution may occur.
Flashing red LED and acoustic signal on the ventilation unit Flashes once Flashes two times	E1 / extract air fan E2 / supply air fan	Fans are improperly connected or defective.	Unit stops operation completely.
Flashing red LED and acoustic signal on the ventilation unit Flashes three times	E3 / summer bypass	If the fault occurs during the cold season, the air volume balance between the supply and extract air is not correct.	The unit keeps working as usual, however, the summer bypass remains in the last position. As a result, the supply air temperatures can be too low in winter and too high in summer.
		Summer bypass flap has got stuck.	
		Motor of the summer bypass flap is defective.	
Flashing red LED and acoustic signal on the ventilation unit Flashes four times Flashes five times	E4 / fresh air sensor (T1) E5 / supply air sensor (T2)	Temperature sensors (T1 and/ or T2) improperly connected or defective.	The unit keeps on working, yet in a fail-safe state (fail-safe mode 1), corresponding to the normal operation but without bypass function.

Fault report integrated control panel	Fault report profi-air cockpit app or wireless remote control	Possible cause	Control response
Flashing red LED and acoustic signal on the ventilation unit Flashes six times Flashes seven times	E6 / extract air sensor (T3) E7 / exhaust air sensor (T4)	Temperature sensors (T3 and/ or T4) improperly connected or defective.	The unit keeps working, yet in a fail-safe state (fail-safe mode 2) - very low fan speed.
Flashing red LED and acoustic signal on the ventilation unit Flashes nine times	E9 / optional internal extract air sensor	Optional internal extract air sensor (humidity / VOC) improperly connected or defective.	The unit keeps working, yet in a fail-safe state (fail-safe mode 2) - very low fan speed.
Flashing red LED and acoustic signal on the ventilation unit Flashes ten times	E 10 / fresh air temperature < –13 °C	Very cold outside temperature.	The unit is in frost protection mode, see Section 6.4.
Flashing red LED and acoustic signal on the ventilation unit Flashes eleven times	E11 / supply air temperature < 5 °C	Supply air sensor has measured a temperature below 5 °C – freezing danger. Fresh air pipes improperly insulated. The outside temperature is too low. The building is not heated. The unit has not been set properly (supply airflow / extract airflow correlation).	The unit operation will be shut down completely, since this error type constitutes a safety hazard.
Flashing red LED and acoustic signal on the ventilation unit Flashes twelve times	E12 / fire protection temperature at one sensor > 70 °C	A temperature sensor has measured a critical temperature of over 70 °C. Fire hazard!	The unit operation will be shut down completely, since this error type constitutes a safety hazard.
Flashing red LED and acoustic signal (60/min) on the ventilation unit	E14 / fire protection	The fire alarm connected to the optional connection box has been activated.	The unit operation will be shut down and can only be reset manually.
Flashing red LED and acoustic signal on the ventilation unit Flashes 15 times	E 15 / high condensate level	Bridge at the digital input removed.	The unit operation will be shut down completely, since this error type might lead to water damage.
		Condensate line clogged.	
		Condensate pump is improperly connected or defective.	
No error indication	E 8 / room air sensor	Room air sensor in the optional wireless remote control is defective.	The unit keeps working as usual, however, the room temperature can no longer be displayed on the wireless remote control.
No error indication	E 13 / communication error	The remote control has already been connected to another ventilation unit.	The unit keeps working as usual, however, control commands can no longer be issued via the wireless remote control.
		Ventilation unit is disabled.	Unit is disabled.

8.2 Fault clearance

In this section, you will find support for cause determination and clearance of individual fault reports.

In the event of fault reports, you should generally reset the error first, since some errors may occur due to temporary voltage loss. If the fault report is displayed again after a short period of time (max. 5 minutes), please follow the instructions on fault clearance.

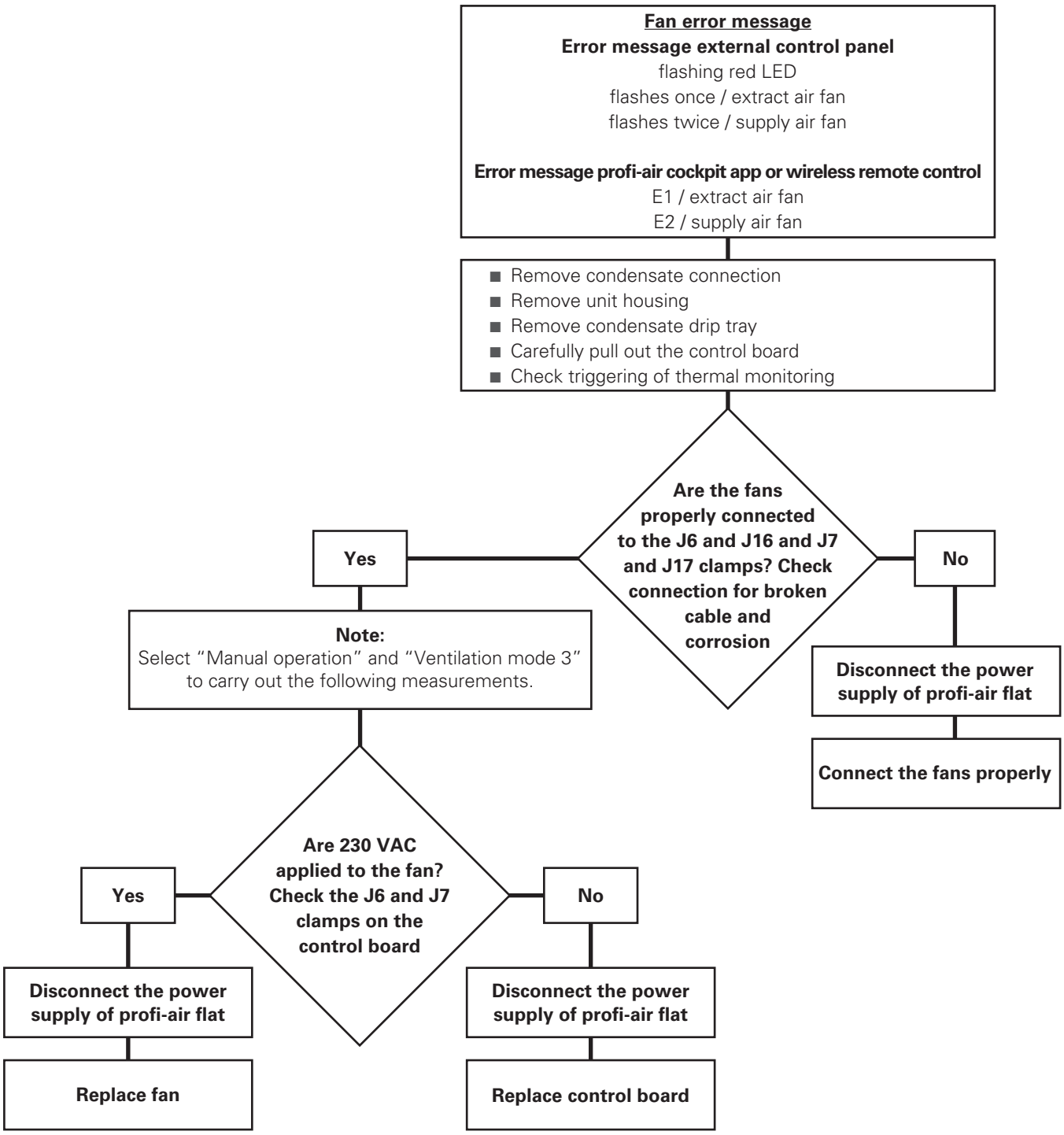
In order to reset an error, press and hold the “Error message” button on the external control panel or de-energize the ventilation unit for approx. 30 seconds.

Generally, only original spare parts matching the type of unit must be installed.

8.2.1 Fault clearance filter replacement

Please refer to Section 7.1 for filter replacement.

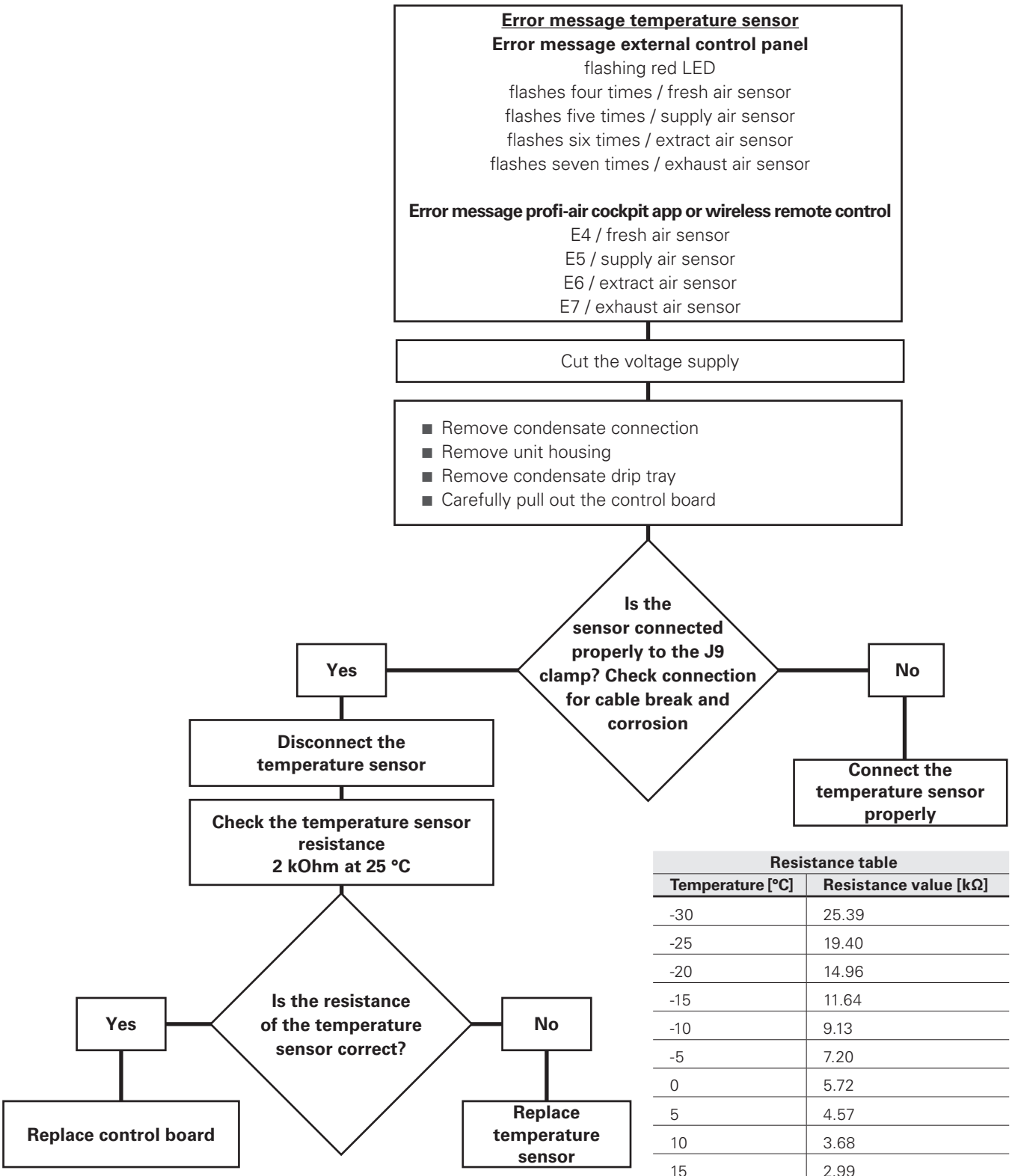
8.2.2 Fault clearance E1 to E2 fans



To correct the fault, profi-air flat has to be opened in a "live" state which may be done by authorised and qualified personnel only. In addition, applicable local regulations and safety provisions must be complied with.

Replacement of the control board and/or fans is to be carried out by authorised and qualified personnel and in the "dead" state of the device only. In addition, applicable local regulations and safety provisions must be complied with.

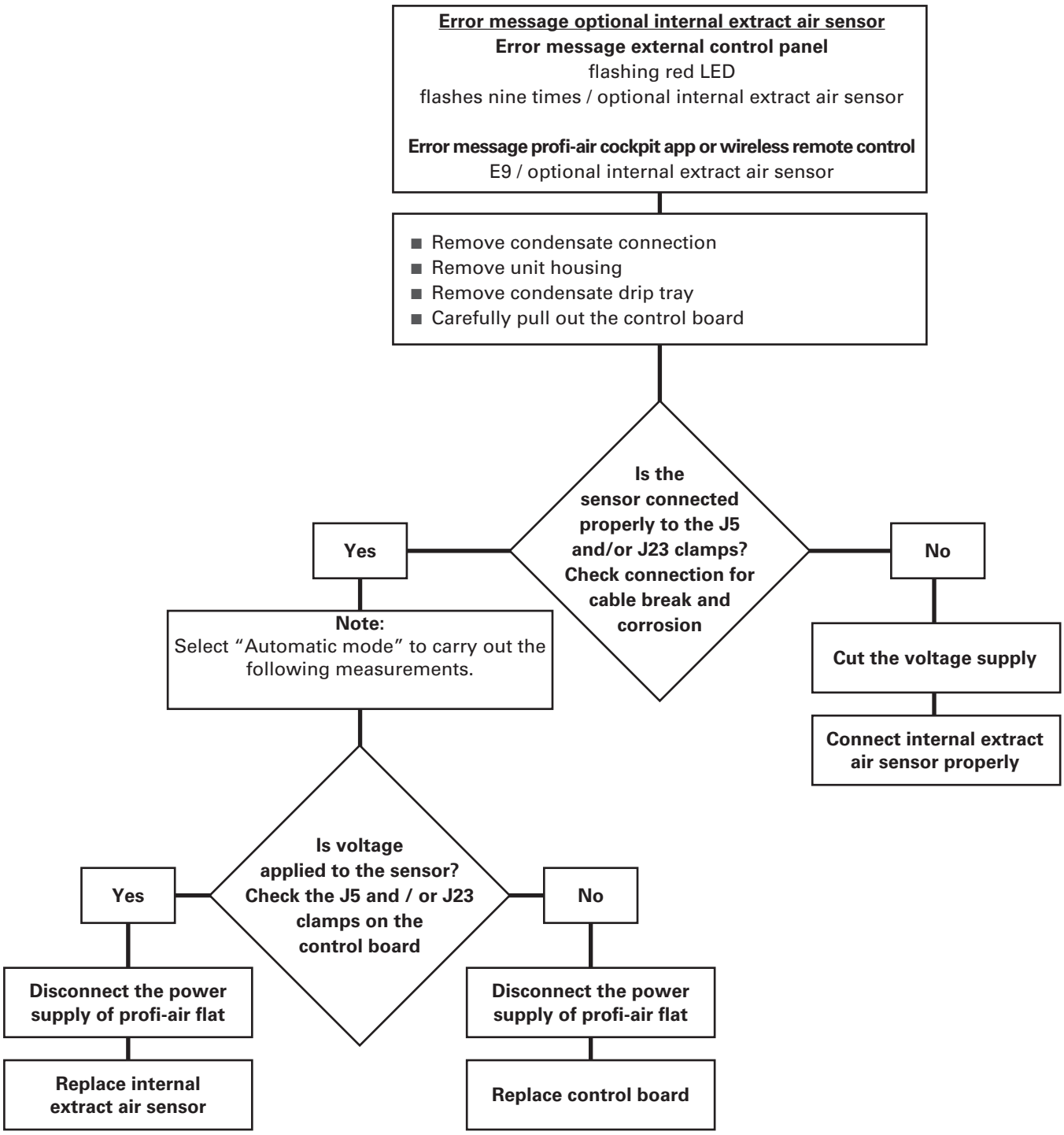
8.2.3 Fault clearance E4 to E7 temperature sensors



Resistance table	
Temperature [°C]	**Resistance value [kΩ]**
-30	25.39
-25	19.40
-20	14.96
-15	11.64
-10	9.13
-5	7.20
0	5.72
5	4.57
10	3.68
15	2.99
20	2.44
25	2.00
30	1.65

Troubleshooting activities must be carried out by authorised and qualified personnel and in the “dead” state of the device only. In addition, applicable local regulations and safety provisions must be complied with.

8.2.4 Fault clearance E9 / optional internal extract air sensor



To correct the fault, profi-air flat has to be opened in a "live" state which may be done by authorised and qualified personnel only. In addition, applicable local regulations and safety provisions must be complied with.

Replacement of the control board and/or internal extract air sensor is to be carried out by authorised and qualified personnel and in the "dead" state of the device only. In addition, applicable local regulations and safety provisions must be complied with.

8.2.5 Fault clearance other messages

Fault report External control panel	Fault report profi-air cockpit app or wireless remote control	Possible cause	Check / measure
Flashing red LED and acoustic signal on the ventilation unit Flashes three times	E3 / summer bypass	If the fault occurs during the cold season, the air volume balance between the supply and extract air is not correct.	Has the unit been adjusted?
			Check the settings using the commissioning log.
			Check the filter contamination and replace the filters if necessary.
		Summer bypass flap has got stuck.	Examine the summer bypass module and make the flap movable again.
		Motor of the summer bypass flap is defective.	Replace summer bypass motor.
Flashing red LED and acoustic signal on the ventilation unit Flashes ten times	E 10 / fresh air temperature < –13 °C	Very cold outside temperature.	No defect. The unit operates in frost protection mode. See Section 6.4
			Wait for warmer outside temperature.
			Check the installed defroster heater.
			No defroster heater available - install if necessary
Flashing red LED and acoustic signal on the ventilation unit Flashes eleven times	E11 / supply air temperature < 5 °C	Fresh air pipes improperly insulated.	Retrofit fresh air pipes with insulating material.
		The outside temperature is too low.	Wait for warmer outside temperature.
			Check the installed defroster heater.
			No defroster heater available - install if necessary
		The building is not heated.	Increase the room temperatures in the building.
		No or false adjustment of the unit.	Has the unit been adjusted?
			Check the log for air volume calculation
Flashing red LED and acoustic signal on the ventilation unit Flashes twelve times	E12 / fire protection temperature at one sensor > 70 °C	On-site heat sources heating the air temperature to above 70 °C.	Check on-site heat sources and ensure lower air temperatures in the system.
Flashing red LED and acoustic signal (60/min) on the ventilation unit	E14 / fire protection	The fire alarm connected to the optional connection box has been activated.	Check the contact in the optional connection box. Contact bypassed - no error message. Contact not bypassed - error message.

Fault report External control panel	Fault report profi-air cockpit app or wireless remote control	Possible cause	Check / measure
Flashing red LED and acoustic signal on the ventilation unit Flashes 15 times	E 15 / high condensate level	Bridge at the digital input removed.	Connect the bridge at the digital input on the control board (only if no condensate pump is available)
		Condensate line clogged.	Check and clean the condensate line.
		Condensate pump is improperly connected or defective.	Connect condensate pump properly or replace it.
No error message	E 8 / room air sensor	Room air sensor in the optional wireless remote control is defective.	Replace wireless remote control.
No error message	E 13 / communication error	The remote control has already been connected to another ventilation unit.	Reset the wireless remote control and connect it with the ventilation unit. See wireless remote control operating instructions.
		Ventilation unit is disabled.	Put the ventilation unit back into operation.

8.3 Faults (or problems) without reports

In this section, you will find support for faults or problems without a fault report being displayed.

Fault / problem	Possible causes	Check / measure
The ventilation unit keeps working, however, there is no indication on the external control panel or the optional wireless remote control.	The external control panel/the optional wireless remote control is in power saving mode.	Push any button on the external control panel/the optional wireless remote control to leave the power saving mode.
	External control panel is improperly connected.	Check cables and cable connections.
	External control panel is defective.	Exchange the defective external control panel.
	No voltage supply of the optional wireless remote control.	Voltage supply with batteries: exchange batteries.
		Voltage supply with USB cable: check cables and cable connection.
	Optional wireless remote control is defective.	Exchange the defective optional wireless remote control.
The ventilation unit is out of operation and there is no indication on the integrated control panel.	No power supply applied.	Mains plug connected.
		Check fuses on the control board: replace defective fuses.
		Verify output voltages on the control board: exchange defective control board.
High supply air temperature in summer.	Automatic summer bypass remains closed.	Temperatures are beyond the set limits: ■ To adjust the summer bypass settings (only possible with the optional wireless remote control), see Section 5 or 6.3 and the operating instructions for the optional wireless remote control. ■ Enable the manual summer bypass which will then remain active for one hour.
	Summer bypass flap has got stuck.	Examine the summer bypass module and make the flap movable again.
	Motor of the summer bypass flap is not working.	Check cables and cable connections.
		Replace summer bypass motor.

Fault / problem	Possible causes	Check / measure
Low supply air temperature in winter.	Automatic summer bypass remains open.	Temperatures are still within the set limits: adjustment of the summer bypass settings, see Section 5.
	Summer bypass flap has got stuck.	Examine the summer bypass module and make the flap movable again.
	Motor of the summer bypass flap is not working.	Check cables and cable connections.
		Replace summer bypass motor.
No or low air volume.	No or false adjustment.	See Section 4.2 for adjusting the unit.
	Filter dirty.	Filter replacement (unit, valves, etc.).
	Valves / grills clogged.	Clean valves / grills.
	Heat exchanger clogged.	See Section 7.2.1 for cleaning the heat exchanger.
	Heat exchanger frozen-up.	Defrost the heat exchanger.
	The unit operates in frost protection mode.	No unit error. The unit operates in frost protection mode. See Section 6.4
		Wait for warmer outside temperature.
		Check the installed defroster heater.
		No defroster heater available: retrofit on site if required.
Noise level too high	Absence of silencer.	Install silencer.
	No or false adjustment.	See Section 4.2 for adjusting the unit.
	Whistling noise from an air gap.	Seal the air gap
	Flow noise	Properly insert the valve into the connection piece.
	■ Valves are not flush with the pipe system. ■ Valves not sufficiently open.	Re-adjust the valve (ensure the air gap is as large as possible).
Condensate leakage	Condensate drain is clogged.	Clean condensate drain.
	Condensate drain leaking.	Connection and condensate flow verification.
	Optional condensate pump control is defective.	Replace condensate pump.
Room air very dry	Too high air volume flow rate is provided in relation to the size and usage of the rooms. Due to missing or false adjustment or too high ventilation mode.	See Section 4.2 for adjusting the unit.
		Adjusting the ventilation mode.
		Switch the unit from manual to automatic mode (only possible if internal humidity and/or VOC sensor is installed).

9 Technical data

9.1 Data sheet

Unit type	profi-air 130 flat
Weight	approx. 17 kg
Dimensions (WxHxL)	580 x 198 x 900 mm

Heat exchanger	
Type	Cross-counterflow plate heat exchanger, water-resistant, frost-proof
Material	Plastic
Heat recovery level (EN 13141-7)	up to 86 %

Fans	
Type	2 x EC fans
Power supply	230 V / ~50 Hz

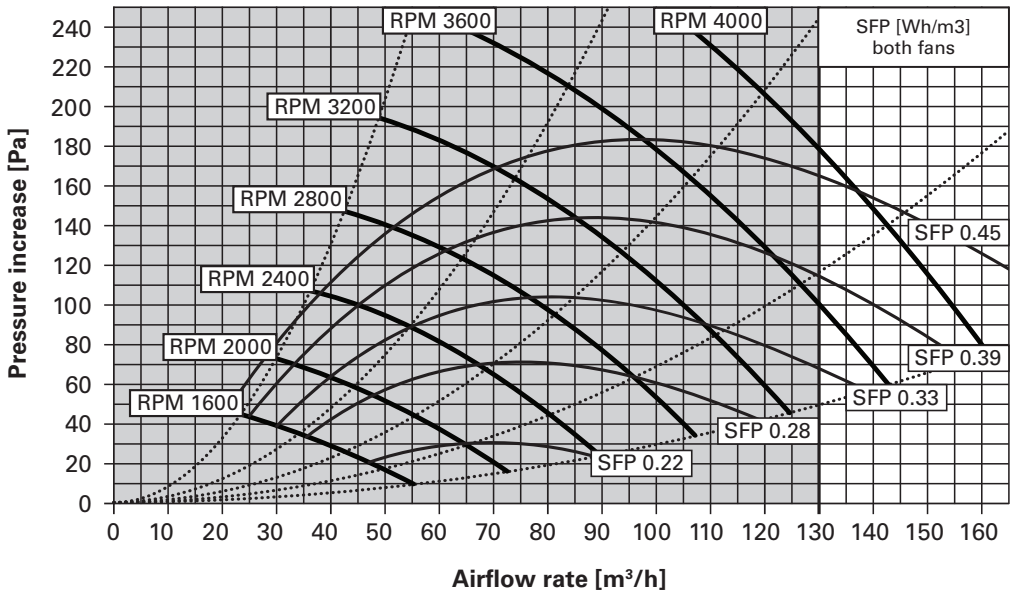
Performance	
Recommended application	40 to 130 m³/h
Max. power input (without / with preheating element)	173 W / 1,073 W
Fuse protection (on site)	16.0 A delay fuse (cable 3 x 1.5 mm²)

Filter		
	Supply air	Extract air
Filter class	ISO Coarse 75 % (G4), optional ePM1 55 % (F7)	ISO Coarse 75 % (G4)

Connection	
Air connection	Ø 125 mm

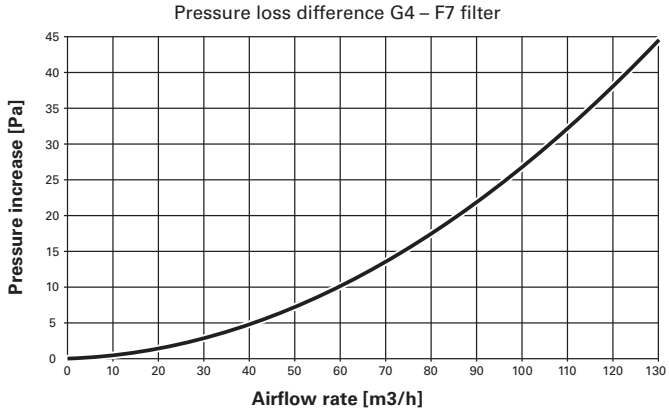
Tests and approvals	
	■ DIBt (General building authority approval) ■ EN 13141-7 ■ SAP App. Q ■ Passive house certificate

9.2 Airflow performance diagram



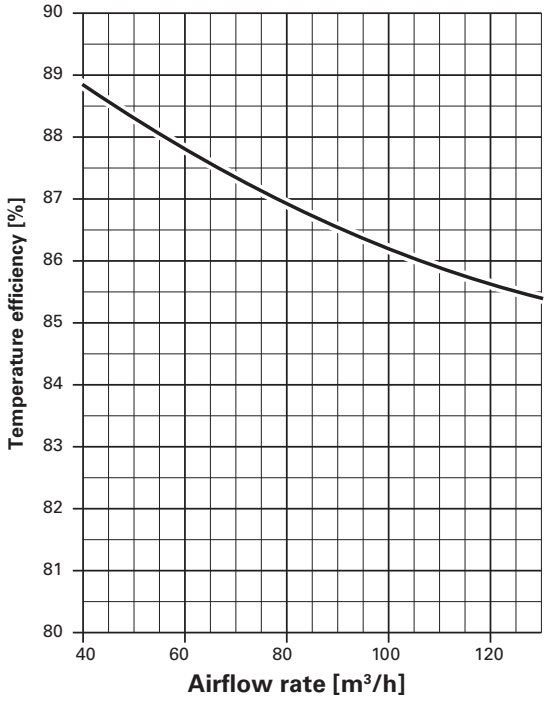
9.3 Pressure loss increase filter ePM1 55 % (F7)

If the profi-air flat ventilation unit is furnished with an F7 filter (pollen filter), the pressure loss of the entire unit will increase. This increase in pressure loss can be determined with the help of the following diagram.



9.4 Temperature efficiency performance diagram

– – Temperature efficiency acc. to EN13141-7 (dry)
Extract air = 20° C / 37 % RH
Fresh air = 7° C / 8 5% RH
Balanced airflow



9.5 Sound data of profi-air 130 flat

9.5.1 Sound, equipment emission

Speed / RPM	Sound pressure level at a distance of 1 m in a standard room* Lp dB(A)
1600	29.6
2000	33.3
2400	37.2
2800	40.6
3200	43.5
3600	47.1

* Standard room = room approx. 10 m², 2.4 m room height and average absorption 0.2

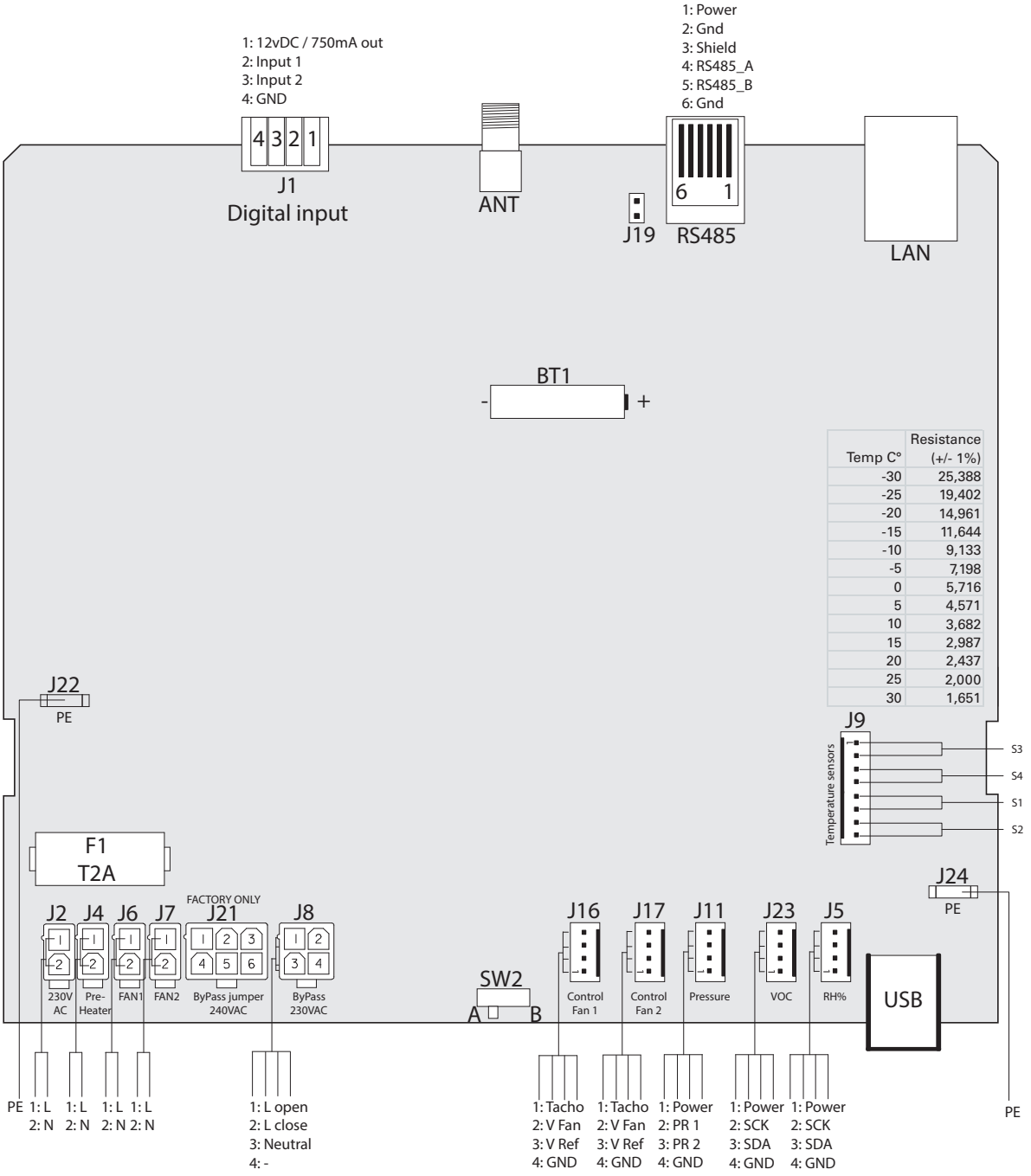
9.5.2 Sound, supply air/exhaust air connector

Speed / RPM	Sound power level Lw dB(A)								
	63 Hz	125 Hz	250 Hz	500 Hz	1,000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
1600	23.8	41.4	44.5	41.8	37.0	28.7	22.8	-	48.0
2000	28.0	43.4	52.3	46.5	41.8	35.9	30.7	-	54.1
2400	31.4	45.4	57.2	49.5	47.6	42.7	38.5	20.6	58.6
2800	34.7	47.9	60.7	55.2	51.4	45.9	43.3	22.7	62.5
3200	38.9	49.9	60.7	68.4	54.6	49.6	47.0	27.5	69.4
3600	39.7	51.9	60.7	71.0	58.0	52.8	50.8	31.9	71.7

9.5.3 Sound, extract air/exhaust air connector

Speed / RPM	Sound power level Lw dB(A)								
	63 Hz	125 Hz	250 Hz	500 Hz	1,000 Hz	2000 Hz	4000 Hz	8000 Hz	Total
1600	18.3	33.5	33.6	29.4	20.6	12.5	12.7	-	37.9
2000	22.6	34.5	38.8	33.4	24.6	15.0	14.6	-	41.4
2400	26.2	35.4	44.8	37.0	27.8	20.2	16.0	-	46.0
2800	29.7	38.7	50.8	43.6	31.7	25.4	16.5	-	51.9
3200	32.8	41.9	50.9	56.4	39.8	29.2	20.7	-	57.7
3600	37.4	43.5	51.0	58.5	41.2	32.6	24.9	-	59.4

9.6 Terminal diagram profi-air 130 flat



S1

No.	Connection description	No.	Value
J1	Digital input	2	Input 1 can be programmed using the profi-air cockpit pro software. For factory settings and setting options, see Section 5.
		4	
		3	Input 2 can be programmed using the profi-air cockpit pro software. For factory settings and setting options, see Section 5.
		4	
J2	AC mains inlet	1	L – 230 VAC
		2	N – 230 VAC
J4	Defroster heater network connection	1	L – 230 VAC
		2	N – 230 VAC
J5	Connection for internal humidity sensor	1	Power
		2	SCK
		3	SDA
		4	GND
J6	Fan 1 network connection	1	L – 230 VAC
		2	N – 230 VAC
J7	Fan 2 network connection	1	L – 230 VAC
		2	N – 230 VAC
J8	Summer bypass flap connection	1	L / open – 230 VAC
		2	L / closed – 230 VAC
		3	Neutral
		4	–
J9	Connection for internal temperature sensors	1 / 2	S3
		3 / 4	S4
		5 / 6	S1
		7 / 8	S2
J16	Fan 1 signal wiring	1	Tachometer
		2	V Fan 0 – 10 V
		3	V Ref 10 V
		4	GND
J17	Fan 2 signal wiring	1	Tachometer
		2	V Fan 0 – 10 V
		3	V Ref 10 V
		4	GND
J23	Connection for internal VOC sensor	1	Power
		2	SCK
		3	SDA
		4	GND
RS485	Modbus connection for external control panel or connection box	1	Power
		2	GND
		3	Shield
		4	RS485_A
		5	RS485_B
		6	GND
F1	Mainboard fuse	6	250 V / 2A fast-acting / 5 x 20 mm
J22 / J24	Protective conductor (PE)		
ANT	Connection for wireless remote control antenna		
S1	Thermal monitoring control (integrated into the power supply of a fan)		

10 Product data sheets according to the ErP Directive

Manufacturer		FRÄNKISCHE Rohrwerke Gebr. Kirchner GmbH & Co. KG Hellinger Straße 1, 97486 Königsberg/Germany		
Type of product		**profi-air 130 flat**		
Catalogue number		78305713		
Additional equipment		none		
Specific energy consumption	SEC	cold	-73.3	[kWh/(m² a)]
		average	-35.8	
		warm	-11.8	
Energy efficiency grade		A		
Type		RVU / BVU		
Type of drive		VSD		
Type of heat recovery		recuperation		
Thermal efficiency	η_t	86		[%]
Highest airflow rate		130		[m³/h]
Electric power input		127		[W]
Sound power level	L_{WA}	46		[dB[A]]
Reference airflow rate		0.025 91		[m³/s] [m³/h]
Reference pressure difference		50		[Pa]
Specific power input	SPI	0.3		[W/(m³/h)]
Control typology		time control (no demand control)		
Control factor		0.95		
Highest internal air leakage rate		< 2		[%]
Highest external air leakage rate		< 2		[%]
Location and description of filter warning indicator		fault report indicator on the external control panel (visual)		
Website		www.fraenkische.com		
Annual energy consumption	AEC	cold	9.21	[kWh/(m² a)]
		average	3.84	
		warm	3.39	
Annual heating energy savings	AHS	cold	87.6	[kWh/(m² a)]
		average	44.8	
		warm	20.2	

11 EC Declaration of Conformity

FRÄNKISCHE

EC Declaration of Conformity

CE

Manufacturer:	**FRÄNKISCHE Rohrwerke Gebr. Kirchner GmbH & Co. KG Hellinger Str. 1 97486 Königsberg/Germany Phone: +49 9525 88-0 Internet: www.fraenkische.com**
Product description:	**Ventilation unit with heat recovery and summer bypass**
Type:	**profi-air 130 flat, profi-air 180 flat, profi-air 250 flex, profi-air 360 flex**
Application:	**Ventilation of apartments and residential buildings**

The product complies with the regulations, particularly the protection requirements, of the following EC directives:

Low Voltage Directive	**2014/35/EU**
EMC Directive	**2014/30/EU**
ErP Directive	**2009/125/EU incl. Regulation (EU) 1253/2014**
RoHS Directive	**2011/65/EU**
REACH Regulation	**1907/2006/EC**

The conformity of the specified product in terms of compliance with these directives has been proven.

If unauthorised modifications are made to the product, this declaration may become invalid.

Königsberg, 01 April 2024

Michael Hümpfner
Division Head, Building Technology Division

Willi Mattolat
Head of Product Management

FRÄNKISCHE

UKCA – Declaration of Conformity

UK CA

Manufacturer:

FRÄNKISCHE Rohrwerke
Gebr. Kirchner GmbH & Co. KG
Hellinger Str. 1
97486 Königsberg/Germany
Phone: +49 9525 88-0
Internet: www.fraenkische.com

Product description: **Ventilation unit with heat recovery and summer bypass**

Type: **profi-air 130 flat, profi-air 180 flat, profi-air 250 flex, profi-air 360 flex**

Application: **Ventilation of apartments and residential buildings**

The product complies with the regulations, particularly the protection requirements, of the following directives:

UK SI 2016 No. 1101	**Electrical Equipment (Safety) Regulations 2016**
UK SI 2016 No. 1091	**Electromagnetic Compatibility Regulations 2016**
UK SI 2019 No. 539	**The Eco-design for Energy-Related Products and Energy Information (Amendment) (EU Exit) Regulations 2019**
UK SI 2012 No. 3032	**The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012**
UK REACH	**The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019**

The conformity of the specified product in terms of compliance with these directives has been proven.

If unauthorised modifications are made to the product, this declaration may become invalid.

Königsberg, 01 April 2024

Michael Hümpfner
Division Head, Building Technology Division

Willi Mattolat
Head of Product Management

12 Warranty and liability

12.1 Warranty

Deviating from the applicable GTCs, the manufacturer grants a warranty of 24 months from the time of completion of the installation for the profi-air 130 flat ventilation unit, but not more than 30 months from the date of manufacture of the installed profi-air 130 flat ventilation unit. Warranty claims can only be asserted for material and/or construction defects occurring within the warranty period. In case of a warranty claim, the profi-air flat ventilation unit may not be removed without prior written consent of the manufacturer.

Warranty expires if

- the warranty period ends;
- the unit is operated without a filter;
- parts not provided by the manufacturer are installed;
- unauthorised changes or modifications are made to the unit.

12.2 Liability

The profi-air 130 flat ventilation unit has been developed and produced for applications in so-called comfort ventilation systems. Any other application is considered "improper" and can lead to damage to the ventilation unit or personal injury which the manufacturer cannot be held liable for.

The manufacturer is not liable for damage attributed to the following causes:

- Failure to comply with the safety, operating and maintenance instructions stated herein.
- Installation of spare parts not provided or stipulated by the manufacturer.
  The responsibility for the use of such spare parts rests solely with the installer.
- Normal wear.

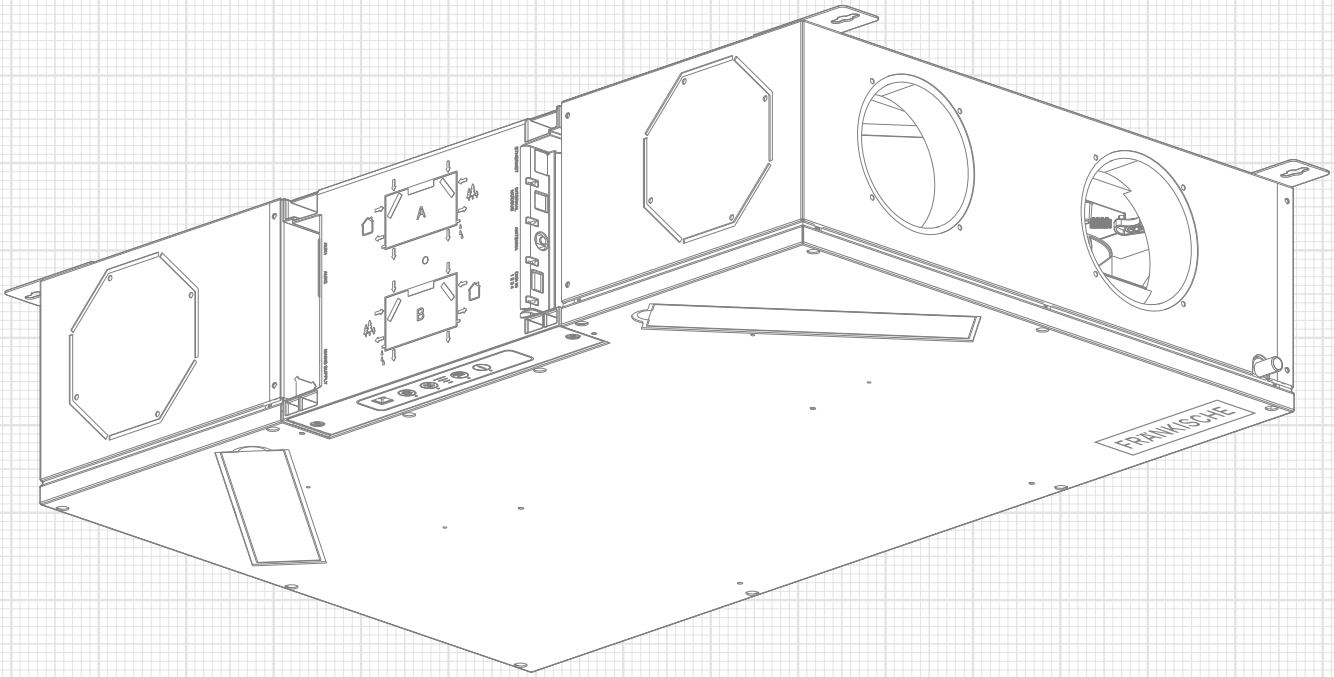
Our "General Terms and Conditions" (please see www.fraenkische.com) apply additionally in their currently valid form.

13 Disposal

Please do not dispose of profi-air 130 flat with the normal household waste; please ask your municipal waste consulting authority about collection points and recycling possibilities.

Unit filters can be disposed of with the household waste.

Notes



FRÄNKISCHE

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