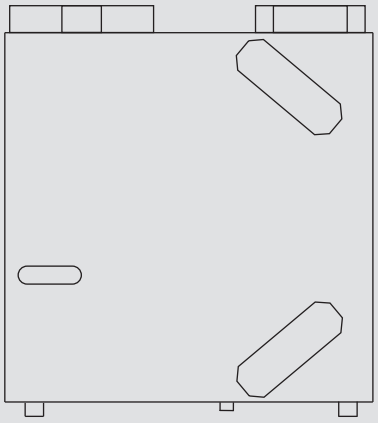
OPERATION AND INSTALLATION

Central ventilation unit with heat recovery

» LWZ 70 E



STIEBEL ELTRON

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GUARANTEE

ENVIRONMENT AND RECYCLING

SPECIAL INFORMATION

- The appliance may be used by children aged 8 and up and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the resulting risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.
- The power cable must only be replaced (for example if damaged) by qualified contractors authorised by the manufacturer.
- Secure the appliance as described in chapter "Installation / Installation".

OPERATION

1. General information

The chapters "Special Information" and "Operation" are intended for both the user and qualified contractors.

The chapter "Installation" is intended for qualified contractors.

Note
Read these instructions carefully before using the appliance and retain them for future reference.
Pass on the instructions to any new user where appropriate.

1.1 Safety instructions

1.1.1 Structure of safety instructions

KEYWORD Type of risk
Here, possible consequences are listed that may result from failure to observe the safety instructions.
► Steps to prevent the risk are listed.

1.1.2 Symbols, type of risk

Symbol	Type of risk
	Injury
	Electrocution
	Burns (burns, scalding)

1.1.3 Keywords

KEYWORD	Meaning
DANGER	Failure to observe this information will result in serious injury or death.
WARNING	Failure to observe this information may result in serious injury or death.
CAUTION	Failure to observe this information may result in non-serious or minor injury.

1.2 Other symbols in this documentation

Note
General information is identified by the adjacent symbol.
► Read these texts carefully.

Symbol	Meaning
	Material losses (appliance damage, consequential losses and environmental pollution)
	Appliance disposal

► This symbol indicates that you have to do something. The action you need to take is described step by step.

1.3 Units of measurement

Note
All measurements are given in mm unless stated otherwise.

1.4 Standardised output data

Explanations to determine and interpret the specified standardised output data

1.4.1 Standard: EN 13141-7

The output data specifically mentioned in text, diagrams and technical datasheets has been determined in line with the test conditions described in the standard shown in the heading of this chapter.

Generally, these standardised test conditions will not fully meet the conditions found at the installation site of the system user. Depending on the chosen test method and the extent to which the selected method deviates from the conditions described in the standard shown in the heading of this chapter, any deviations can have a considerable impact. Further factors that have an influence on the test values are the measuring equipment, the system configuration, the age of the system and the flow rates.

A confirmation of the specified output data can only be obtained if the conditions applicable to the relevant test match those of the standard shown in the heading of this chapter.

2. Safety

2.1 Intended use

The appliance is designed as a mechanical ventilation unit with centralised supply air and extract air routing.

This appliance is intended for domestic use. It can be used safely by untrained persons. The appliance can also be used in a non-domestic environment, e.g. in a small business, as long as it is used in the same way.

Any other use beyond that described shall be deemed inappropriate. Observation of these instructions and of instructions for any accessories used is also part of the correct use of this appliance.

It is deemed inappropriate to:

- Use extract air loaded with grease, explosive gases, dust or adhesive aerosols
- Install the unit outdoors
- Connect cooker hoods and dryer exhausts to the ventilation system.

Never adjust the setting of supply and extract air valves inside the rooms. These have been set up by a qualified contractor during commissioning.

2.2 General safety instructions

WARNING Injury
The appliance may be used by children aged 8 and up and persons with reduced physical, sensory or mental capabilities or a lack of experience and know-how, provided that they are supervised or they have been instructed on how to use the appliance safely and have understood the resulting risks. Children must never play with the appliance. Children must never clean the appliance or perform user maintenance unless they are supervised.

Note
Trouble-free operation of the appliance is only possible with a closed appliance cover.

2.3 Test symbols

See type plate on the appliance.

3. Appliance description

The appliance draws in outdoor air with a fan. A second fan draws in extract air from rooms in the home with odour or humidity loads (kitchen, bathroom and WC). Extract air and outdoor air are routed through separate ducts. Extract air and outdoor air are filtered by separate filters.

Both air streams are routed through a cross-countercurrent heat exchanger. The extract air gives off heat, which is transferred to the outdoor air. This means that the extracted stale indoor air heats the fresh clean outdoor air, saving energy and routing fresh air into the interior.

You can use the user interface to infinitely adjust the air flow rates. The appliance has a filter service indicator, as well as an optional filter service indicator at the stage switch.

The control unit has three fan stages. The air flow rate is preset for each fan stage by the qualified contractor. Constant flow rate control ensures that the air flow rates of the supply air and extract air are achieved irrespective of the duct pressure.

Fan stage	
	Humidity protection ventilation: This fan stage prevents mould formation using the factory-set air flow rate of 50 m³/h. Alternatively, the contractor can set an air flow rate of 0 m³/h when commissioning the appliance. In such a case, no humidity protection is provided.
1	Fan stage 1 should be seen as background ventilation, to be selected when going away for example.
2	Fan stage 2 is recommended for standard ventilation.
3	Fan stage 3 is recommended as intensive ventilation, to temporarily increase the air flow rate for load peaks (e.g. as a party stage).

Frost protection

On account of the high heat recovery level, low outdoor temperatures result in the extract air being cooled down so severely that any condensate that is created in the process may freeze. Frost protection ensures that the extract air side of the heat exchanger cannot freeze. Depending on the outdoor air temperature and the pressure drop at the heat exchanger, the balance between the supply air flow and the extract air flow is disrupted, thus preventing freezing. The supply air fan may also, for short periods, be switched OFF at very low outdoor temperatures. Preheating the outdoor air by using an electric preheating coil or by means of a geothermal heat exchanger, for example, can prevent this imbalance or can prevent the supply air fan shutting down.

Bypass function

The appliance is equipped with a bypass function. If the conditions for the bypass function are met, the ventilation air fan is switched off. This enables warm indoor air to be transported away. Once the conditions for the bypass function are no longer being met, the ventilation air fan is switched back on.

The bypass function can be adjusted in the settings menu using parameters 05, 06 and 07.

	Conditions
Bypass function active	The outside temperature is higher than 10 °C and lower than the room temperature, and the room temperature is higher than the bypass temperature set in parameter 05.
Bypass function inactive	The outside temperature is lower than 10 °C.
	The outside temperature is at least 0.5 °C higher than the room temperature.
	The room temperature is lower than the bypass temperature reduced by the bypass hysteresis. The bypass temperature is set in parameter 05. The bypass hysteresis is set in parameter 06.

4. Settings

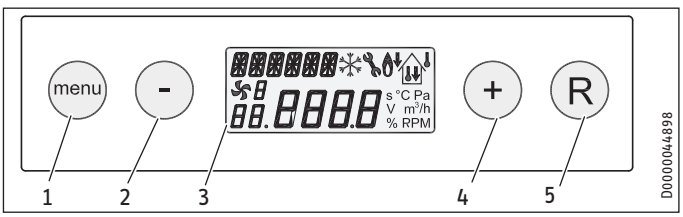
Note
User operations are restricted to switching the appliance ON and OFF. The basic settings are set by your qualified contractor when commissioning the appliance.

4.1 Remote control

Observe the operating and installation instructions for the relevant remote control (see chapter "Appliance description / Required accessories" or "Appliance description / Other accessories").

4.2 User interface on the appliance

The appliance has a user interface with display. This enables air flow rates to be variably adjusted or operating details to be checked.



1 Menu key
2 Minus key
3 LCD
4 Plus key
5 R key

You can access and change settings using the four keys (menu, plus, minus, R).

When the mains power is switched on, all available symbols are displayed for two seconds. The backlight is also switched on for 60 seconds.

If one of the keys is pressed, the display is illuminated for 30 seconds.

If no keys are pressed and/or if no blocking fault occurs, standard mode is displayed.

When the menu key is pressed, you can use the plus or minus key to choose between three different sub-menus:

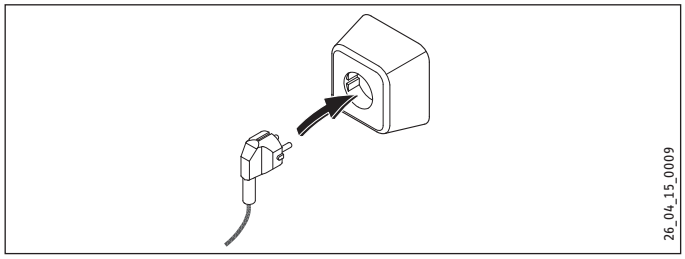
- Settings menu (SET)
- Read-out menu (READ)
- Service menu (SERV)

With the R key, you can exit any selected menu and return to standard mode.

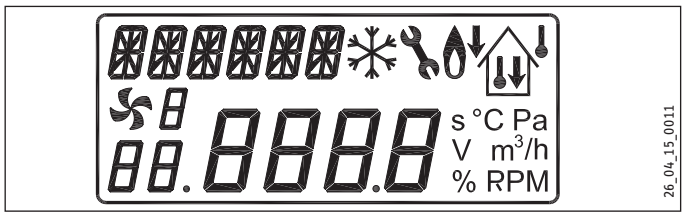
To switch on the display backlight without changing anything in the menu, press the R key briefly (less than 5 seconds).

Button	Key function
Menu	Open menu; open sub-menu; enable parameter for value change; confirm value change
-	Scroll; adjust value; switch appliance on or off from standard mode (press and hold down for 5 seconds)
+	Scroll; adjust value
R	One step back in the menu; reset adjusted value; filter reset (press and hold down for 5 seconds); delete fault history

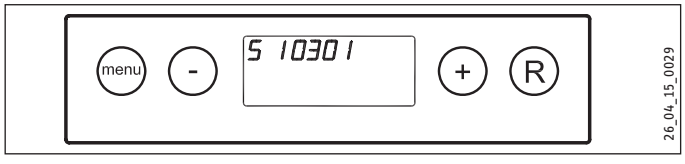
4.3 Switching the appliance on



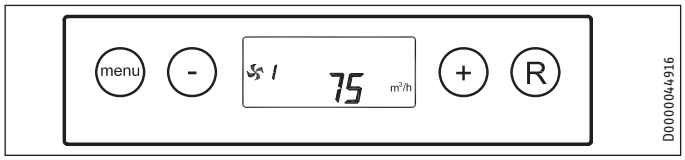
▶ Plug the appliance into a standard socket.



All display symbols are shown for two seconds.

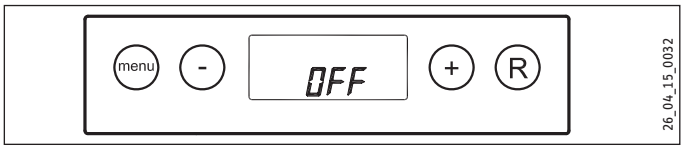


The software version is displayed for two seconds.

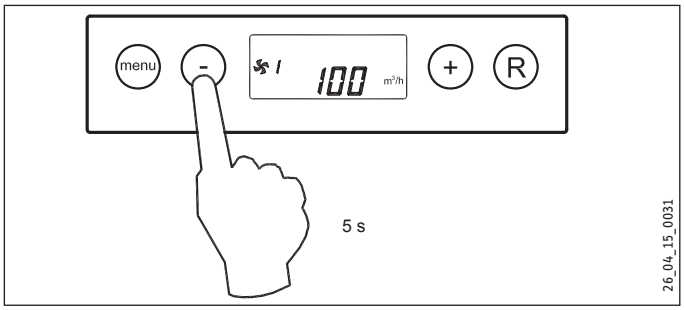


The appliance then runs according to the stage switch setting. If no stage switch is connected, the appliance always runs in fan stage 1.

Switching on via software



If the appliance has been switched off via software, "OFF" is displayed.



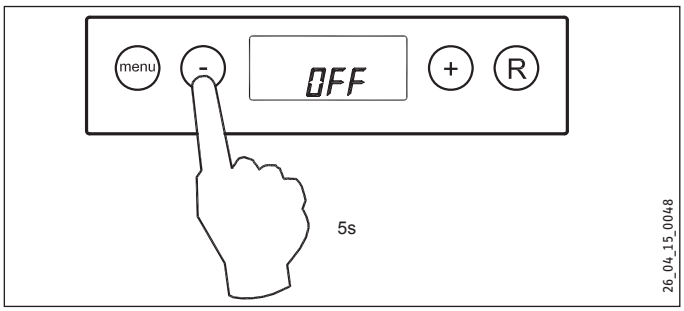
▶ Switch on the appliance by pressing the minusbutton for 5 seconds.

4.4 Switching off the appliance

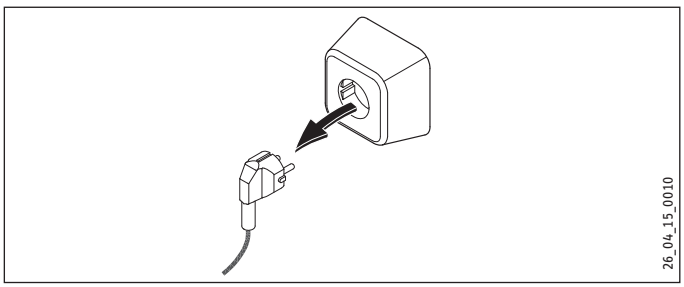
Switching off via software

▶ Press and hold down the minus button for 5 seconds to switch off the appliance.

The display shows "OFF".



Interrupting the power supply

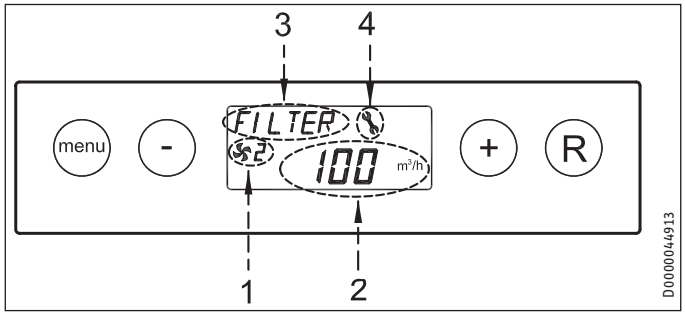


The display is now blank.

WARNING Electrocution
Before working on the appliance, always isolate the appliance from the power supply by first switching the appliance off via the software and then unplugging it from the mains.

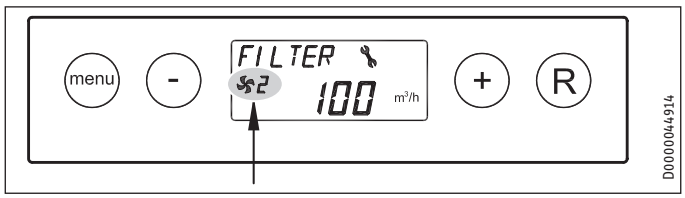
4.5 Standard mode

In standard mode, the display shows up to four different pieces of information (operating modes and values) simultaneously.



1 Indication of the fan stage, indication of connected appliances
2 Indication of the air flow rate
3 Message text, e.g. filter status text, triggering of external switching contact, etc.
4 Fault symbol

4.5.1 Fan stage

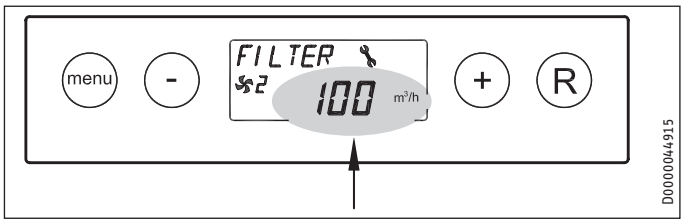


A fan symbol is displayed when the supply air fan and the extract air fan rotate. The fan symbol is not visible when the fans are at a standstill.

The number after the fan symbol indicates the fan stage.

Fan stage indicator	Description
	The supply air and extract air fans generate an air flow rate of 50 m³/h or stop. This depends on the setting of parameter 01. This fan stage cannot be enabled with a 3-stage switch. This fan stage prevents mould formation using the factory-set air flow rate of 50 m³/h.
1	The supply air and extract air fans rotate according to stage 1 of the stage switch. The air flow rate depends on the parameter 02 setting.
2	The supply air and extract air fans rotate according to stage 2 of the stage switch. The air flow rate depends on the parameter 03 setting.
3	The supply air and extract air fans rotate according to stage 3 of the stage switch. The air flow rate depends on the parameter 04 setting.
0	A number of appliances of this type have been connected. The supply air and extract air fans rotate according to the fan stage selected at the master appliance. If the appliance is connected in a cascade, the slave number of the appliance is displayed.

4.5.2 Indication of the air flow rate

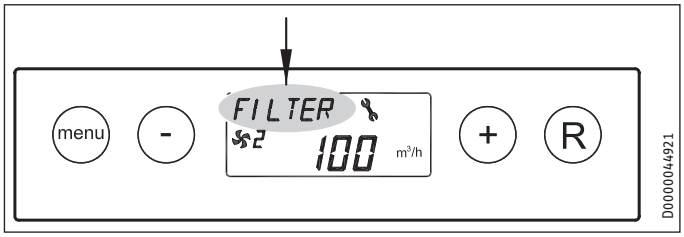


The selected air flow rate of the supply air and extract air fans is displayed.

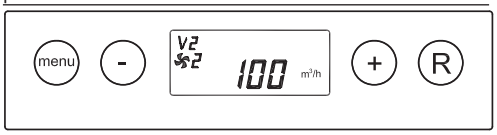
If the air flow rates of the supply air and extract air fans differ, e.g. when an external switching contact is used, the highest air flow rate is always displayed.

If you switch the appliance off using the programming unit, the text "OFF" appears.

4.5.3 Message texts in standard mode



At this point on the display, a message text may appear. The message text "FILTER" always takes priority over other message texts.

Message text	Description
FILTER	 If FILTER is displayed, the filter must be cleaned or replaced.
V1 or V2	 If V1 or V2 is displayed, one of the 0-10 V inputs is enabled.

Only when using connection X1:

Message text	Description
Slave 1, Slave 2, etc.	Master appliance:  Slave appliance:  With connected appliances, the message text indicates which appliance is the "Slave 1" to "Slave 9". The default display for fan operation is indicated on the master appliance.

5. Maintenance, cleaning and care

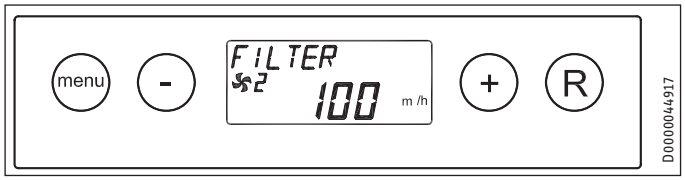
Maintenance by the user is limited to filter cleaning or replacement required at certain intervals.

5.1 Replacement filter

Product name	Part number	Description	Classification in accordance with ISO 16890
FMS LWZ 70	222446	Filter mat G3; 10 pce per packing unit	ISO Coarse > 45 % (G3)
FMS F7-2 70	227660	Fine filter F7; 2 pce per packing unit	ePM_1 ≥ 50% (F7)

5.2 Cleaning filters

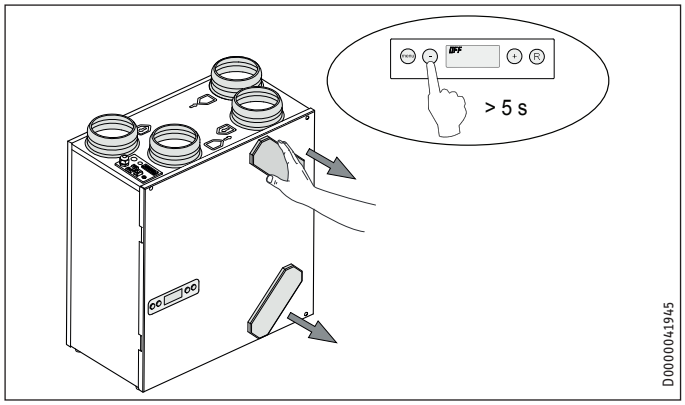
Filters must be cleaned when "FILTER" is displayed.



▶ Replace filters annually.

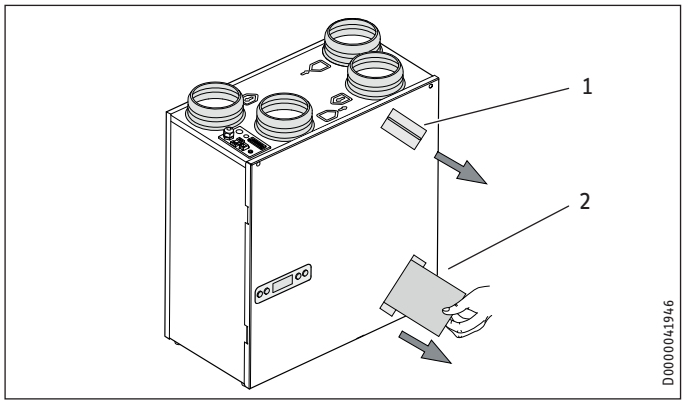
Never operate the appliance without filters.

Cleaning or replacing filters



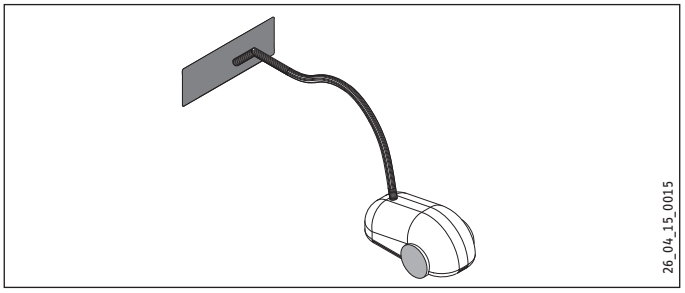
▶ Press and hold down the minus button for 5 seconds to switch off the appliance.

▶ Remove the filter flaps.

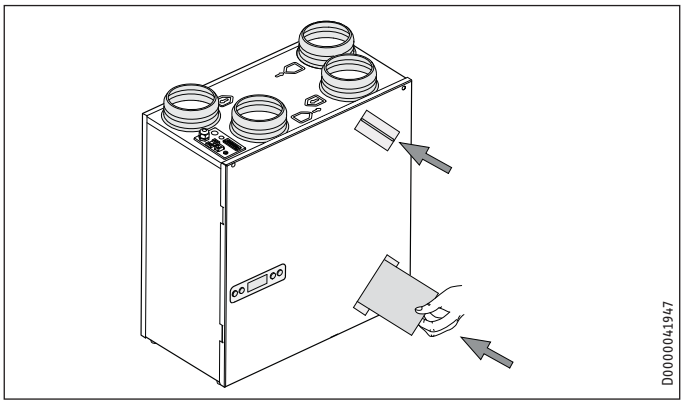


1 Extract air filter
2 Supply air filter

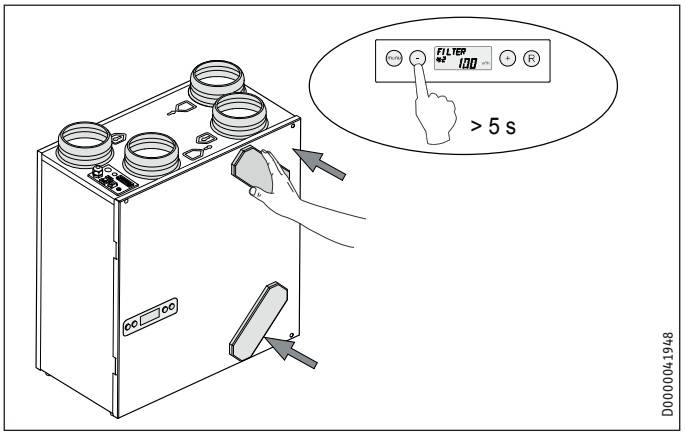
▶ Extract the supply air and extract air filters. Make a note of how the filters were fitted.



▶ Clean the filters, e.g. with a vacuum cleaner.

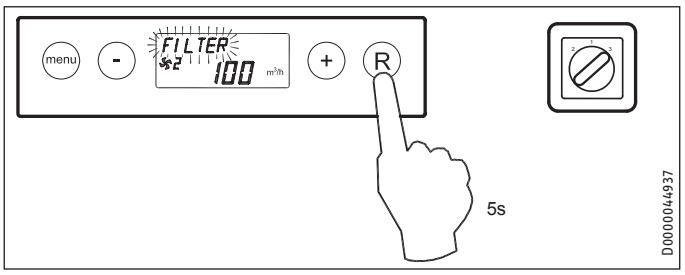


▶ Push the cleaned or new filter into the appliance.



▶ Assemble the two filter flaps.

▶ Switch on the appliance by pressing the minusbutton for 5 seconds.



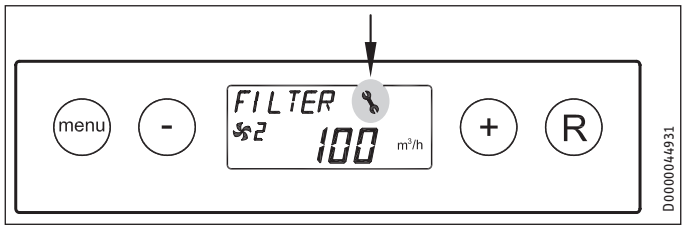
▶ After cleaning or replacing the filters, hold down the R key for 5 seconds to reset the filter display.

To confirm that the filters have been reset, the text "FILTER" will flash briefly. Even if the message "FILTER" has not yet been displayed, you can reset the filter message. The counter is then reset to zero.

Once the filter has been reset, the text "FILTER" disappears and standard mode is displayed again.

6. Troubleshooting

6.1 Fault analysis

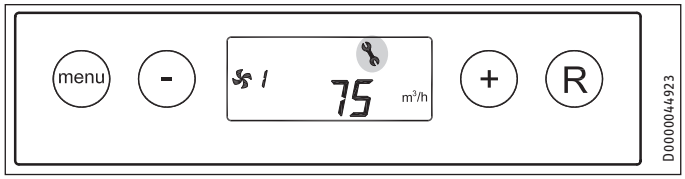


If the appliance detects a fault, a flashing fault symbol (spanner) is displayed, possibly together with a fault code. The appliance differentiates between a fault, where the appliance continues to operate with limited functionality, and a blocking fault, where both fans are stopped. In the event of a blocking fault, the settings and read-out menus are also switched off and access is restricted to the service menu.

The appliance remains in this fault condition until the problem has been resolved. The appliance then resets itself (auto reset) and standard mode is displayed again.

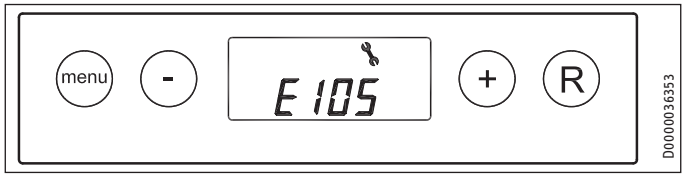
6.2 Fault code

Non-blocking fault



If the appliance detects a non-blocking fault code, it continues to operate with limited functionality. Non-blocking faults are displayed with the fault symbol (spanner).

Blocking fault



If the appliance detects a blocking fault code, it stops. The permanently illuminated display shows the fault symbol (spanner) together with a fault code.

► Notify a qualified contractor, who can correct the fault.

A blocking fault cannot be resolved by briefly disconnecting the appliance from the power supply. The fault itself must first be rectified.

If you cannot remedy the fault, notify your qualified contractor. To facilitate and speed up your request, provide the number from the type plate (000000-0000-000000). The type plate is located on the appliance cover.

INSTALLATION

7. Safety

Only a qualified contractor should carry out installation, commissioning, maintenance and repair of the appliance.

7.1 General safety instructions

We guarantee trouble-free function and operational reliability only if original accessories and spare parts intended for the appliance are used.

7.2 Instructions, standards and regulations

Note
Observe all applicable national and regional regulations and instructions.

WARNING Injury
In connection with the fire prevention regulations concerning the installation of ventilation systems, observe all country-specific regulations and requirements. In Germany, these are particularly the building regulation guideline on fire prevention requirements of ventilation systems in its applicable version.

7.3 Operation of the appliance in buildings with combustion equipment

The term “combustion equipment” used below includes, for example, tiled stoves, fireplaces and equipment with gas combustion.

WARNING Injury
Ventilation units can generate negative pressure in the dwelling. If combustion equipment is operating at the same time, combustion exhaust gases can penetrate the room where the combustion equipment is installed. It is therefore important to observe a number of points for simultaneous operation of a ventilation unit and combustion equipment.

The engineering, installation and operation of the ventilation unit and combustion equipment must be carried out in accordance with national and regional regulations.

7.3.1 Planning safety measures

Together with the relevant authorities, engineers plan the safety measures that are required for simultaneous operation of a ventilation unit and combustion equipment.

Alternate operation

Alternate operation means that, when the combustion equipment is started, the mechanical ventilation system is switched off and/or cannot be started. Alternate operation must be ensured by appropriate measures, e.g. automatically enforced shutdown of the ventilation unit.

Simultaneous operation

For simultaneous operation of combustion equipment and a mechanical ventilation system, we recommend choosing approved room sealed combustion equipment (in Germany, with DIBt approval).

If open flue combustion equipment is operated in the dwelling at the same time as a ventilation unit, combustion exhaust gases must be prevented from penetrating the home as a result of possible negative pressure in the room.

The ventilation unit may only be operated in combination with intrinsically safe combustion equipment. This combustion equipment has, for example, a draught hood or an exhaust gas monitor and is permitted to be operated in conjunction with ventilation units. Alternatively, external, tested safety equipment can be connected to monitor the operation of the combustion equipment. For example, you can install differential pressure monitoring to monitor the chimney draught and to switch off the ventilation unit in the event of a fault.

The equipment for differential pressure monitoring must fulfil the following requirements:

- Monitoring of the differential pressure between the connection piece to the chimney and the room where the combustion equipment is installed
- Possibility of matching the shutdown value for the differential pressure to the minimum draught requirement for the combustion equipment
- Floating contact to switch off ventilation
- Optional connection of a temperature capturing device so that differential pressure monitoring is only enabled when the combustion equipment is in operation and so that unwanted shutdowns due to environmental influences can be avoided

Note
Differential pressure switches that use the pressure differential between the outdoor air pressure and the pressure in the room where the combustion equipment is sited as a response criterion are not suitable.

Note
We recommend installing and regularly maintaining a carbon monoxide detector in accordance with EN 50291 for operation of any combustion equipment.

7.3.2 Commissioning

When commissioning the ventilation unit, it is important to check and document in the commissioning log that combustion exhaust gases are not penetrating the dwelling in a quantity that is harmful to health.

Commissioning in Germany

Acceptance is carried out by the local flue gas inspector.

Commissioning outside Germany

Acceptance must be carried out by a specialist. In case of doubt, you must involve an independent expert in the acceptance procedure.

7.3.3 Maintenance

Regular maintenance of the combustion equipment is prescribed. Maintenance includes checking the exhaust gas extraction system, the free pipe cross-sections and the safety equipment. The relevant qualified contractor responsible must prove that there is a sufficient flow of combustion air.

7.4 Operating the appliance in passive houses

If operating the appliance in a passive house, the factory-fitted outdoor air filter must be replaced. See chapter “Appliance description / Accessories”.

8. Appliance description

8.1 Standard delivery

The following are delivered with the appliance:

- Wall mounting bracket set (2 mounting brackets, 3 protective caps, 1 rubber strip, 2 rubber rings, 1 set of installation instructions)
- PVC condensate drain (1x1.5” threaded plastic nut, 1 sealing ring, 1 PVC glued joint)
- Approx. 90 cm long cable for connecting a remote control

8.2 Required accessories

- Hardwired remote control used to control the air flow rates preset in three stages. Our range of accessories includes remote control units with additional functions.

8.3 Further accessories

- Preheater coil
- You can obtain ventilation pipes, extract air and supply air valves and similar accessories from us.

9. Preparations

9.1 Installation site

The appliance can be mounted on the wall with the wall mounting bracket set supplied.

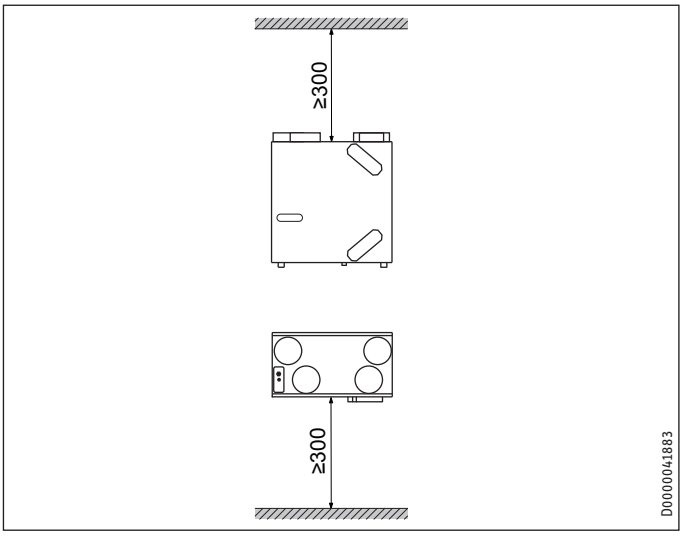
Material losses
For vibration-free mounting, a solid wall with a minimum mass of 200 kg/m² is required. A plaster board or metal framed wall is inadequate. Additional measures such as a double skin or additional supports would be needed in such cases.

Ensure the equipment is level after installation.

The installation site must have an adequate condensate drain with stench trap and a fall for the condensate.

The installation site must be free from the risk of frost.

Minimum clearances

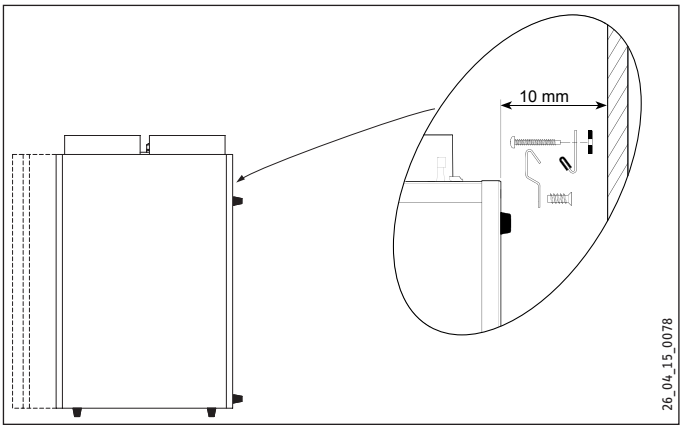


9.2 Transport

To protect the appliance against damage, you should transport it to the installation room inside its original packaging.

10. Installation

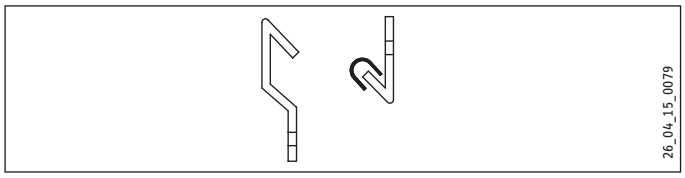
10.1 Mounting the appliance



- ▶ Undo the two top crosshead screws on the back of the appliance.
- ▶ Secure one of the two rails to the appliance with screws.

Material losses
- ▶ Check whether the wall can bear the weight of the appliance.
- ▶ Use appropriate rawl plugs and screws suitable for the wall structure to attach the rail.

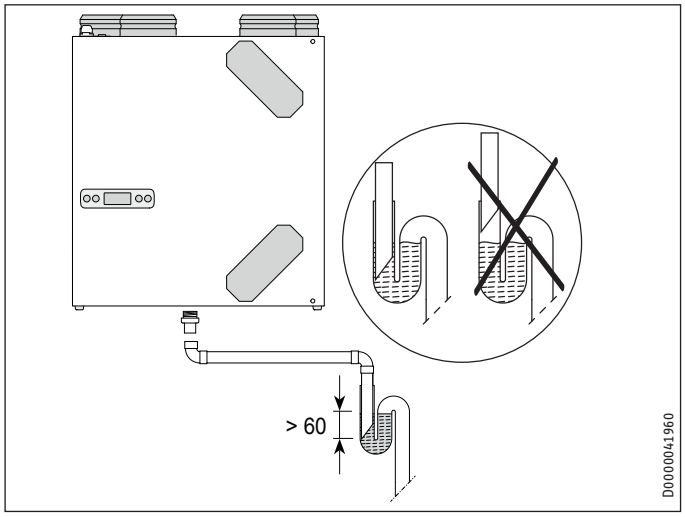
- ▶ Mount the second rail on the wall as a retainer. To avoid sound transmission, place the washers supplied between the wall and the rail.
- ▶ Affix the spacers supplied to the back of the appliance.



- ▶ Place the rubber strips supplied on the rail mounted on the wall. The rubber strip helps provide sound insulation.
- ▶ Fit the appliance so that the two rails interlock.

10.2 Connecting the condensate drain

Material losses
Never kink the hose, to ensure the condensate drains perfectly. The fall must be at least 10 %. Ensure the device is level after installation.



The condensate drain is routed through the floor plate. The condensate must drain away via the domestic sewer system.

- ▶ Secure the condensate drain connector supplied along with the gasket and union nut to the condensate drain located underneath the appliance.

You can fit the condensate drain pipe (bent if required) to this condensate drain connector with a glued joint.

- ▶ Before connecting the condensate drain to the appliance, pour water into the siphon to create a stench trap.

The condensate drain pipe must terminate below the water level in the siphon. The condensate drain pipe must be immersed in the water in the siphon by at least 60 mm.

10.3 Connecting air ducts

During installation, ensure that no metal swarf enters the ductwork. However, should this still occur, you must remove this material, otherwise the fans may be damaged.

External wall ducts

Supply outdoor air from a location where contamination (dust, soot, odours, flue gas, exhaust air) is as low as possible.

When installing external wall ducts, prevent any short circuit between the air intake and the air discharge.

Silencers

Install a silencer in both the supply air and extract air ducts. We recommend installing additional silencers if required to avoid sound transmission.

If a room with a high noise level must be ventilated, install additional silencers upstream of this room to reduce sound transmission to adjacent rooms.

Aspects such as carried voices and impact sound must also be taken into consideration in the case of ducts embedded in concrete. Carried voices should be avoided by designing the duct with separate branches to the extract air and supply air valves. If required, insulate the supply air ducts, e.g. if they are outside the insulated wall panel.

Overflow apertures

In living rooms and bedrooms, air is only blown in. Air is only extracted from rooms where odours and moisture are generated. Ventilation grilles must be installed in internal doors or walls, or the air gap beneath the door must be increased to ≥ 8 mm to ensure an unobstructed air flow.

Insulation against condensation

Material losses
When warm air meets cold surfaces, condensation can result.

- ▶ For outdoor air and exhaust air ducts, use vapour-proof thermally insulated pipes.
- ▶ If you use uninsulated pipes and moulded parts for this pipework, ensure that they are adequately insulated.
- ▶ Insulate the supply air and extract air ducts if they are routed through unheated rooms.

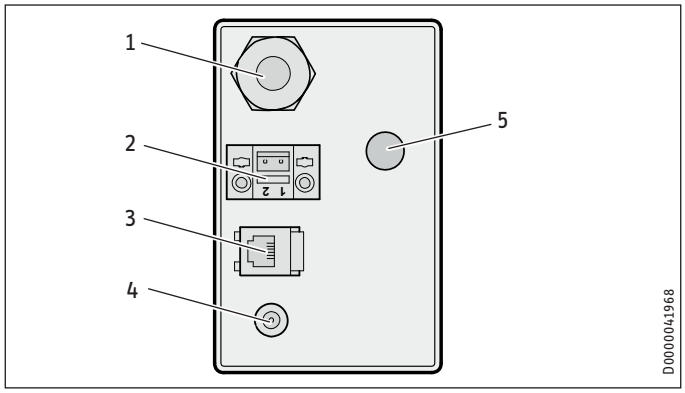
The extract air duct does not require a control valve, because the necessary air flow rates are controlled by the appliance itself.

10.4 Power supply

WARNING Electrocution
Carry out all electrical connection and installation work in accordance with national and regional regulations.

WARNING Electrocution
Before connecting the appliance to the mains power supply, isolate all power cables. Isolation from the mains power supply must be carried out with a contact separation of at least 3 mm, e.g. by means of omnipolar isolators.

You can connect the appliance to a standard socket with the plug fitted to the appliance.



1 Power cable
2 Two-pole screw connection (only suitable for low voltage)
3 Modular plug-in connection (RJ 12, only suitable for low voltage)
4 Service connection
5 Entry electrical cables

Connecting safety equipment for stove/fireplace operation so that the safety equipment can interrupt the power supply

► Connect the safety equipment in accordance with the diagram in chapter "Specification / Standard circuit".

11. Commissioning

WARNING Injury
If the unit is switched on without the air ducts connected and someone reaches through the air connectors into the unit, there is a risk of injury.
Do not commission the unit until the air ducts are firmly connected to it.

11.1 Initial start-up

Setting the air flow rate

Output and energy consumption of the appliance depend on the pressure drop in the duct system and the resistance of the filters.

Fan stage		Air flow rate
	m³/h	0
		50: Moisture protection ventilation This fan stage prevents mould formation using the factory-set air flow rate of 50 m³/h.
1	m³/h	must be lower than for stage 2
2	m³/h	must be lower than for stage 3
3	m³/h	50 - 180

The air flow rate of the higher fan stage is automatically selected if one of the above conditions is not met.

11.2 Shutdown

Even during longer periods away from home, we recommended that the equipment should be allowed, via the remote control, to run at switch position 1. If you nevertheless need to take the appliance out of use for an extended period, switch it off via the user interface and unplug it from the mains to isolate it from the power supply.

► Clean or replace filters.

11.3 Recommissioning

► Check whether filters are fitted in the appliance. Never start the appliance without filters.

► Check whether the condensate drain is damaged or kinked.

12. Settings

12.1 Settings menu

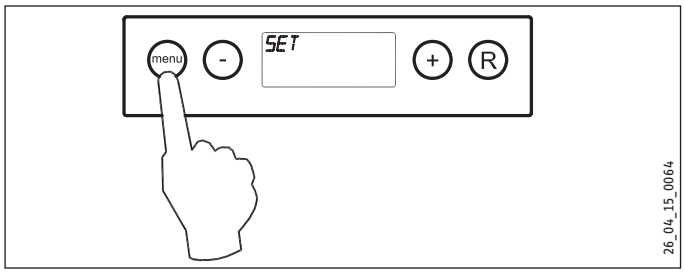
For optimum appliance function, you can change parameters used to adapt the appliance to the actual installation. Some parameter settings such as the air flow rates have been set out in the technical details appertaining your individual building.

Note
Changes to settings not described may only be made by agreement with the manufacturer. Incorrect settings may impair the correct appliance function.

12.1.1 How to set parameters

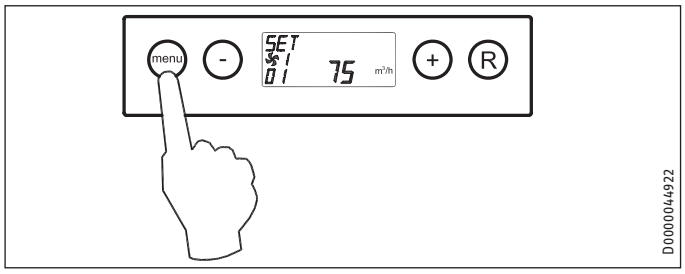
▶ Press menu in standard mode.

The settings menu is displayed ("SET").



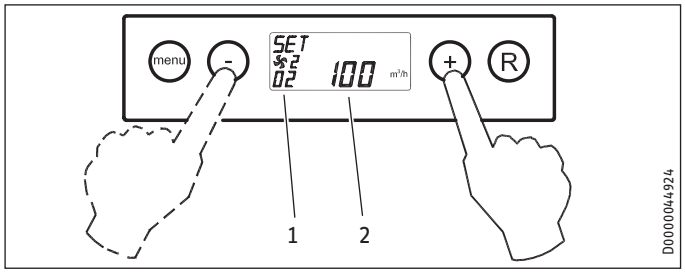
Enabling the settings menu

▶ Press menu again to enable the settings menu.



Selecting parameters

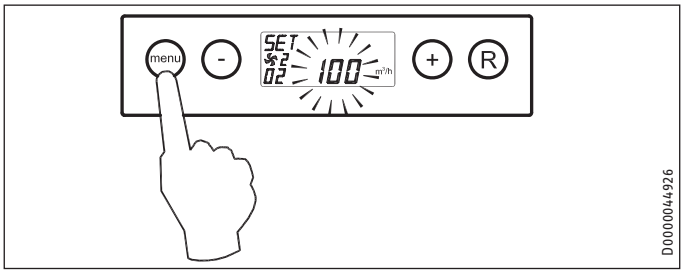
▶ Use the plus or minus key to select the parameter you want to set.



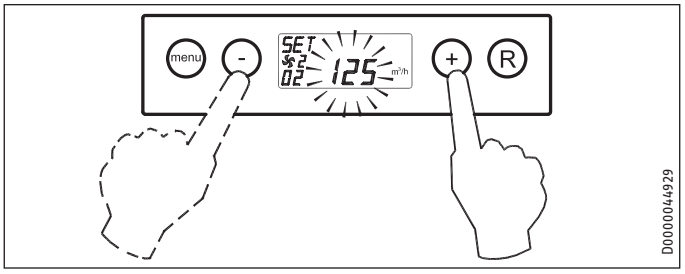
1 Parameter number
2 Parameter value

Parameter change

▶ Press menu.



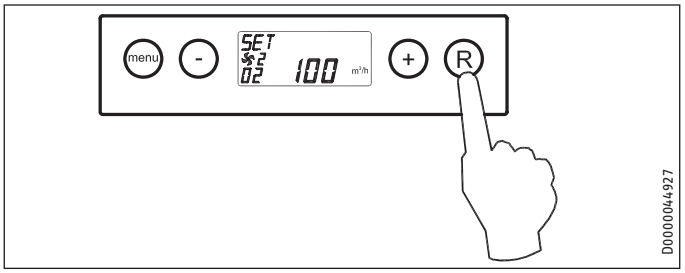
▶ The parameter value starts to flash.



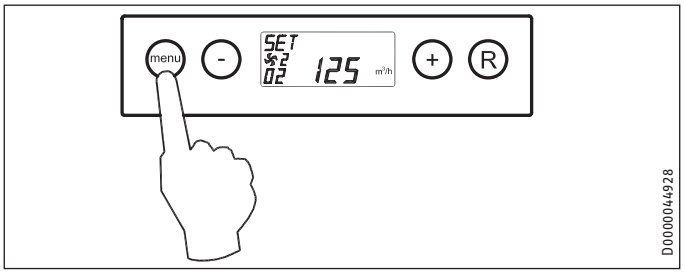
▶ Use plus or minus to change the parameter value.

Discarding a parameter change

▶ If you do not want to save the amended parameter value, press the R key.



Confirm parameter value



▶ If you do want to save the amended parameter value, press the R key.

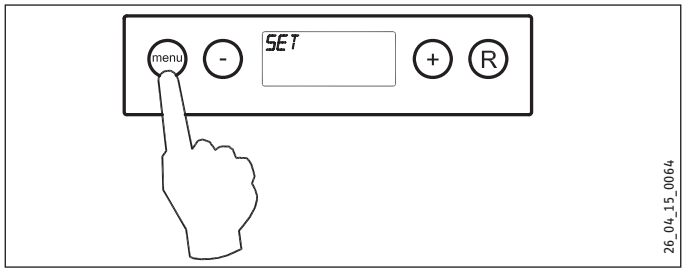
Note
To change other parameters, repeat the steps described from "Selecting parameters". If you do not want to change any more parameters, press R. This brings you back to normal operating mode.

12.1.2 List of parameters in the settings menu

Parameter	Description	Unit	Factory setting	Setting range	Step size	Display text and symbols
01	Air flow rate of stage	m³/h	50	0 50: Moisture protection ventilation		
02	Air flow rate of stage 1	m³/h	75	50 - 180	5	1
03	Air flow rate of stage 2	m³/h	100	50 - 180	5	2
04	Air flow rate of stage 3	m³/h	150	50 -180	5	3
05	Bypass temperature	°C	22	15 - 35	0.5	BYPASS
06	Bypass hysteresis	°C	2	0 - 5	0.5	BY HYS
07	Bypass function		0	0 (Automatic function) 1 (bypass function permanently inactive) 2 (bypass function permanently active)		BYPASS
08	BUS address		0	0 - 9 (0 = master)		BUSADR
09	Introduction of an additional extract air flow.		OFF	This parameter is not relevant for you. As default, this parameter must remain OFF for this appliance.		CV+WTW
10	Pressure imbalance permissible		ON	OFF (Air flow rate for supply/extract air the same) ON (Pressure imbalance permissible)		
11	Fixed pressure imbalance	m³/h	0	-50 - 50	1	
12	Preheating coil connected		OFF	ON (Preheater coil connected) OFF (No preheater coil)		
13 - 29	no function					
30	Humidity sensor		OFF	OFF (Humidity sensor switched off) ON (Humidity sensor switched on)		
31	Humidity sensor sensitivity		0	2 (sensitive) to -2 (least sensitive)		

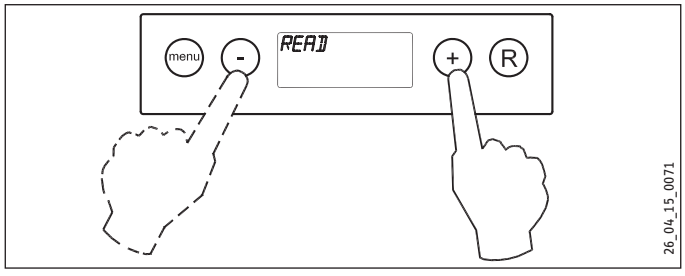
12.2 Read-out menu

With the read-out menu, you can call up some values for more detailed information on the function of the appliance. Values and settings cannot be changed in the read-out menu.

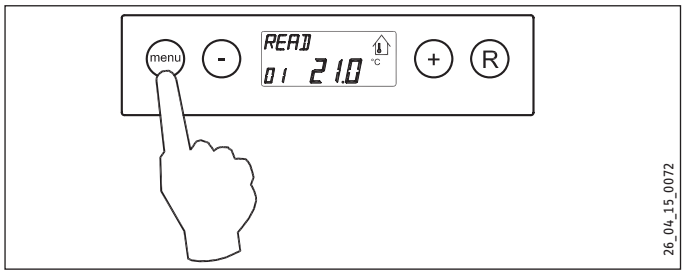


▶ Press menu in standard mode.

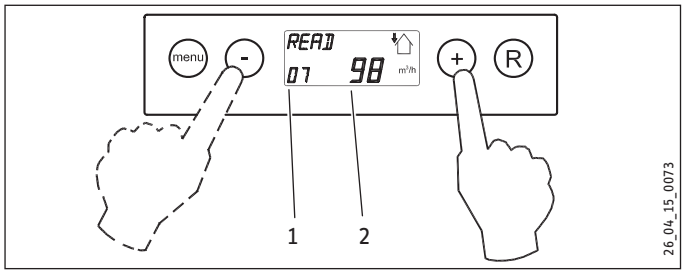
The settings menu is displayed ("SET").



▶ Press plus or minus to switch to the read-out menu.

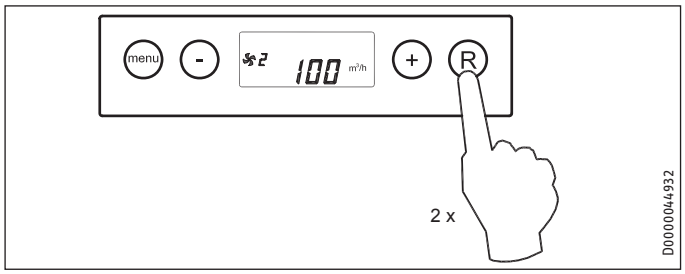


▶ Press Menu to enable the read-out menu.



▶ Use plus or minus in the read-out menu to move to the required parameter.

Read-out menu	Description of the actual value	Unit
01	Room temperature	°C
02	Outside temperature (captured by the outside temperature sensor)	°C
03	Bypass status (ON = Bypass function active, OFF = Bypass function not active)	
04	Frost protection status (ON = Frost protection enabled, OFF = Frost protection disabled)	



▶ Press R twice to return to standard mode.

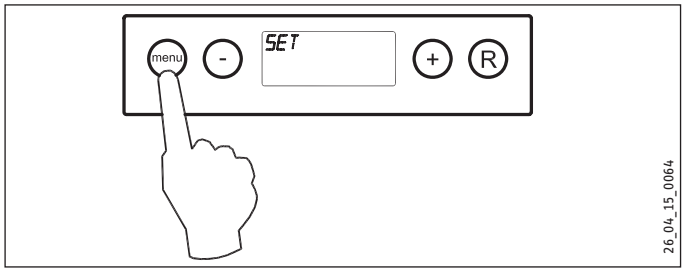
If no key is pressed for 5 minutes, the appliance returns automatically to standard mode.

12.3 Service menu

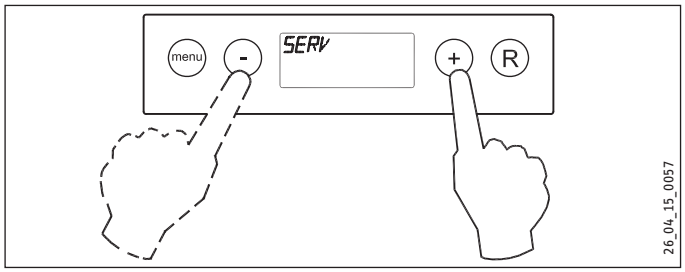
In the service menu, you can view the last 10 fault messages.

In the case of blocking faults, the settings menu and the read-out menu are blocked and only the service menu can be accessed. Pressing menu opens the service menu.

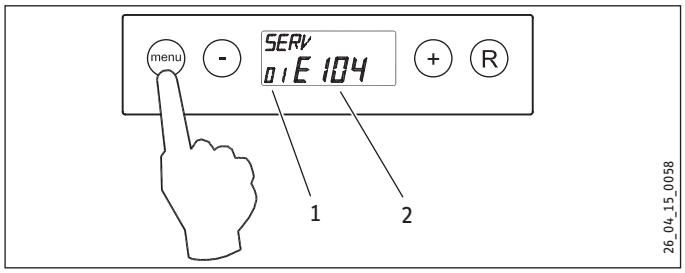
Viewing the service menu



▶ Press menu in standard mode. The settings menu is displayed.



▶ Press plus or minus to switch to the read-out menu.

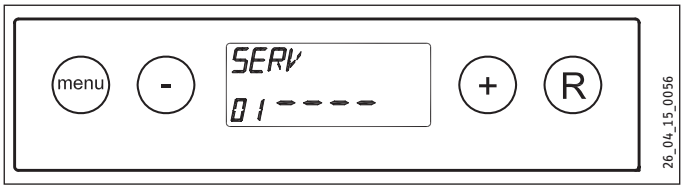


1 Fault message number
2 Fault code

▶ Press the menu button to enable the service menu.

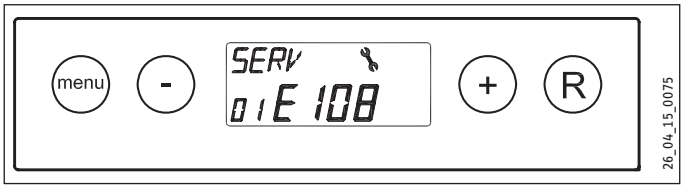
You can use plus and minus to scroll through the read-out menu.

Indication "No fault message"



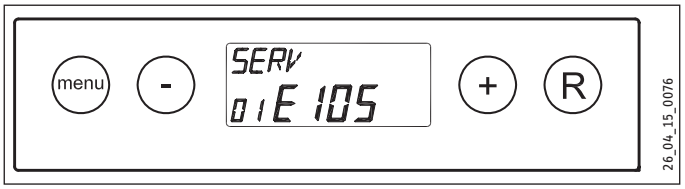
Current fault message (fault symbol on the display)

For fault messages with a cause that has not yet been eliminated, the fault symbol (spanner) appears.

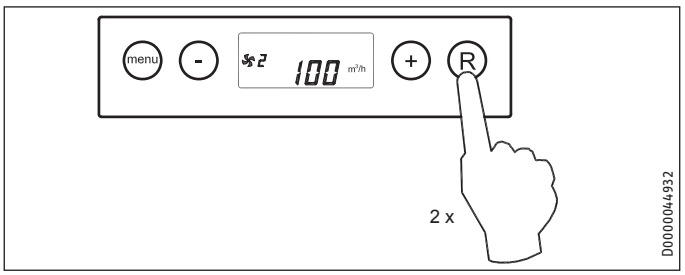


Resolved fault message (no fault symbol on the display)

For fault messages with a caused that has been eliminated, the fault symbol (spanner) does not appear.



Back to standard mode



▶ Press R twice to return to standard mode.

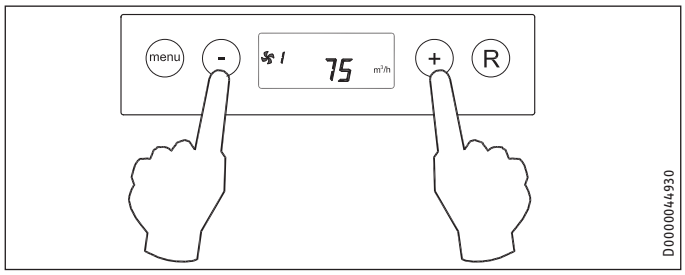
Deleting fault messages

You can delete all fault messages by holding down R for five seconds. This is only possible if there are no active faults.

12.4 Restoring factory settings

It is possible to reset all changed settings simultaneously to factory settings.

All changed settings revert back to their factory default settings; all message/fault codes are also deleted from the service menu.



▶ Press plus and minus simultaneously and hold down for 10 seconds.

All display symbols light up for three seconds. The appliance is then in standard mode.

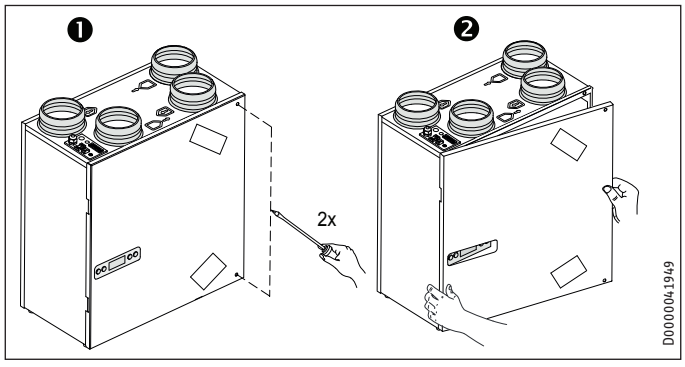
13. Maintenance

WARNING Electrocution
In the event of damage to the power cable this must always be replaced by a qualified contractor authorised by the manufacturer, using original spare parts.

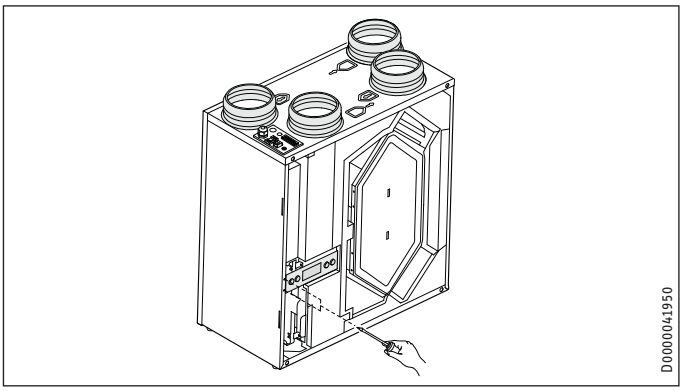
Maintenance by the qualified contractor includes the cleaning of the cross-countercurrent heat exchanger and the fans.

Subject to runtime, this maintenance work should be carried out every 3 years.

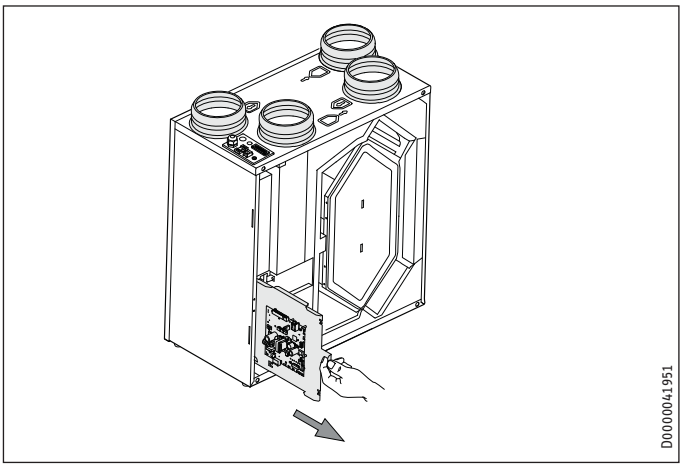
▶ Switch off the appliance by pressing the minus key for 5 seconds.
▶ Disconnect the power supply.
▶ Remove the filter flaps.
▶ Extract the filters. Make a note of how the filters were fitted.



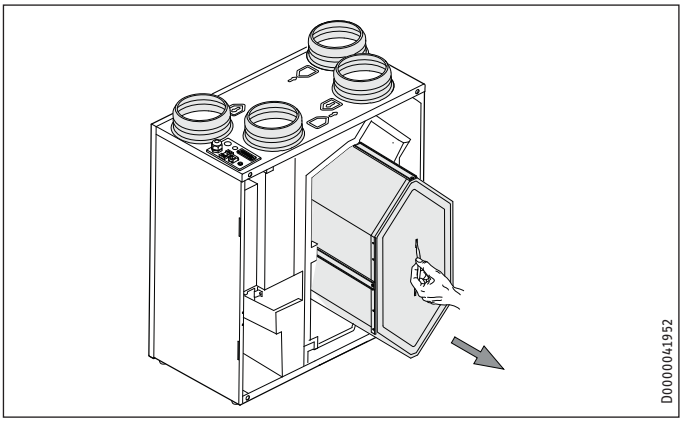
▶ Remove the front cover.



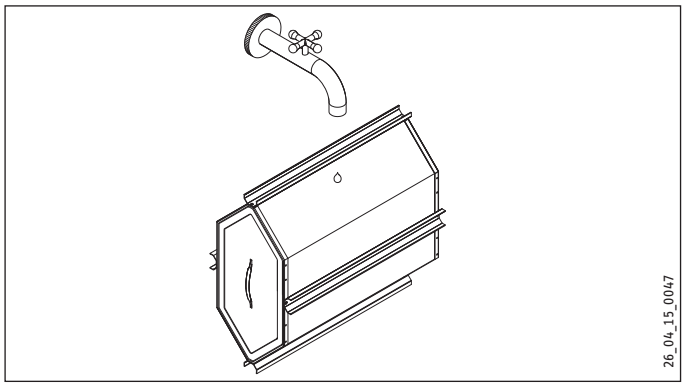
▶ Remove the display.



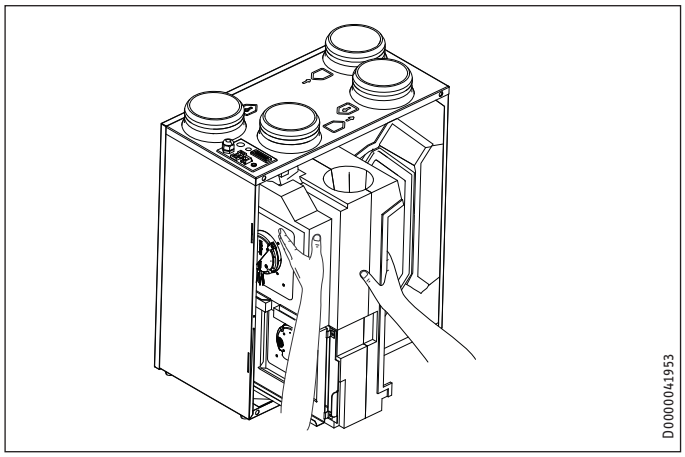
▶ Pull the insert on which the control PCB is fitted out of the appliance.
▶ Disconnect all plugs on the control PCB that are connected to plug-in connections at the top of the appliance.
▶ Remove the earth wire from the appliance body.



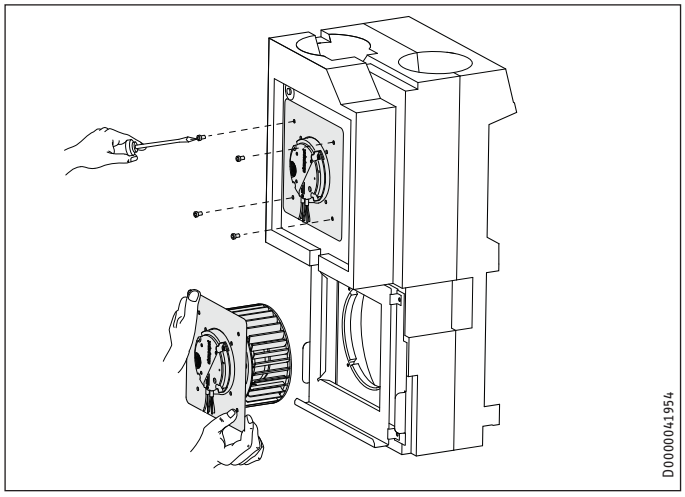
▶ Remove the heat exchanger from the appliance. Avoid damaging the foam parts in the appliance.



- ▶ Use a commercially available vacuum cleaner to remove dust and other loose dirt particles from the intake and discharge surfaces.
- ▶ If required, clean the heat exchanger with warm water (max. 55 °C) and a commercially available detergent. Never use solvents.
- ▶ Afterwards flush the heat exchanger with water.



- ▶ Extract the fan unit from the appliance.



- ▶ Remove the fans.
- ▶ Clean the fans with a soft brush.
- ▶ Do not move the pressure compensation weights.
- ▶ Reinstall the fans.
- ▶ Push the complete fan unit back into the appliance.
- ▶ Reconnect the fan cables to the PCB. Observe the label in the appliance to establish the correct position for the plug-in connections.
- ▶ Slide the insert with the control PCB into the appliance.
- ▶ Install the display.
- ▶ Reconnect all cables disconnected before cleaning, to their original position.
- ▶ Slide the heat exchanger back into the appliance.
- ▶ Fit the front cover.
- ▶ Insert the filters, respectively with their clean sides facing towards the heat exchanger.
- ▶ Assemble the filter flaps.
- ▶ Switch on the power supply.
- ▶ Switch on the appliance using the user interface by holding down minus for 5 seconds.
- ▶ After cleaning the filter or installing a new filter, reset the filter status indicator by holding down R for 5 seconds.

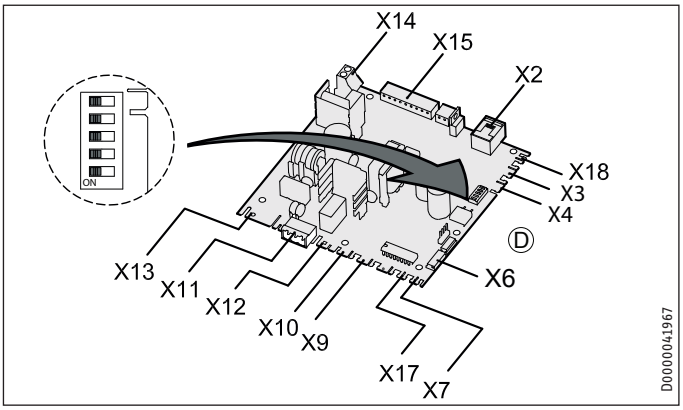
Cleaning the air ducts

Air ducts should be checked and possibly cleaned at regular intervals. Releasing the air ducts from the appliance or over the extract air and supply air valves enables inspection and cleaning.

14. Troubleshooting

Fault code	Blocking fault	Cause	Appliance behaviour	Measure
E104	yes	The extract air fan is faulty.	Both fans are switched off. The preheating coil, if present, is switched off. Restarting occurs every 5 minutes.	Isolate the appliance from the power supply. Replace the extract air fan. Switch on the power supply to the appliance again. The fault is reset automatically. Check the cabling.
E105	yes	The supply air fan is faulty.	Both fans are switched off. The preheating coil, if present, is switched off. The reheater coil, if present, is switched off. Restarting occurs every 5 minutes.	Isolate the appliance from the power supply. Replace the supply air fan. Switch on the power supply to the appliance again. The fault is reset automatically. Check the cabling.
E106	yes	The temperature sensor for capturing the outside temperature is faulty.	Both fans are switched off. The preheating coil, if present, is switched off.	Isolate the appliance from the power supply. Replace the outside temperature sensor. Switch on the power supply to the appliance again. The fault is reset automatically.
E107	no	The temperature sensor for capturing the extract air temperature is faulty.	The bypass function is switched off.	Isolate the appliance from the power supply. Replace the room temperature sensor.
E108	no	If installed: The temperature sensor in the external reheater coil is faulty.	The reheater coil, if present, is switched off. The geothermal heat exchanger, if present, is switched off.	Replace the temperature sensor for the outside temperature.
E111	no	The humidity sensor is faulty.	The appliance is still operating.	Isolate the appliance from the power supply. Replace the humidity sensor.
E999	yes	The microswitches on the control PCB are not set correctly.	The appliance does not operate; the red fault LEDs at the stage switch are also off.	Adjust the microswitches correctly.

Correct microswitch setting



▶ Check whether the microswitches on the control PCB are set correctly (see diagram). If message E999 is nevertheless displayed, replace the control PCB with a PCB of the correct type.

Stage switch modular connector

If stage 2 on a stage switch does not work, the modular connector of the stage switch is not connected correctly.

▶ Disconnect one of the RJ plug-in connections to the stage switch. Fit a new plug-in connection in the opposite direction.

15. Disposal

Removal

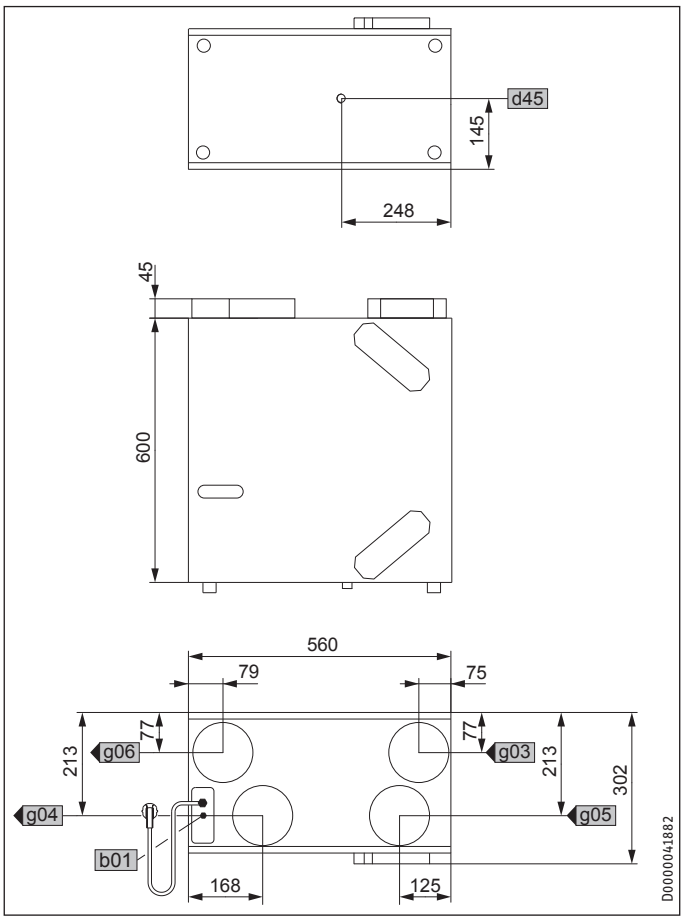
WARNING Electrocution
Disconnect the appliance from the power supply.

The following tools are required for disassembly and material separation prior to disposal:

- Personal protective equipment
- Set of screwdrivers
- Set of spanners
- Combi pliers
- Stanley knife

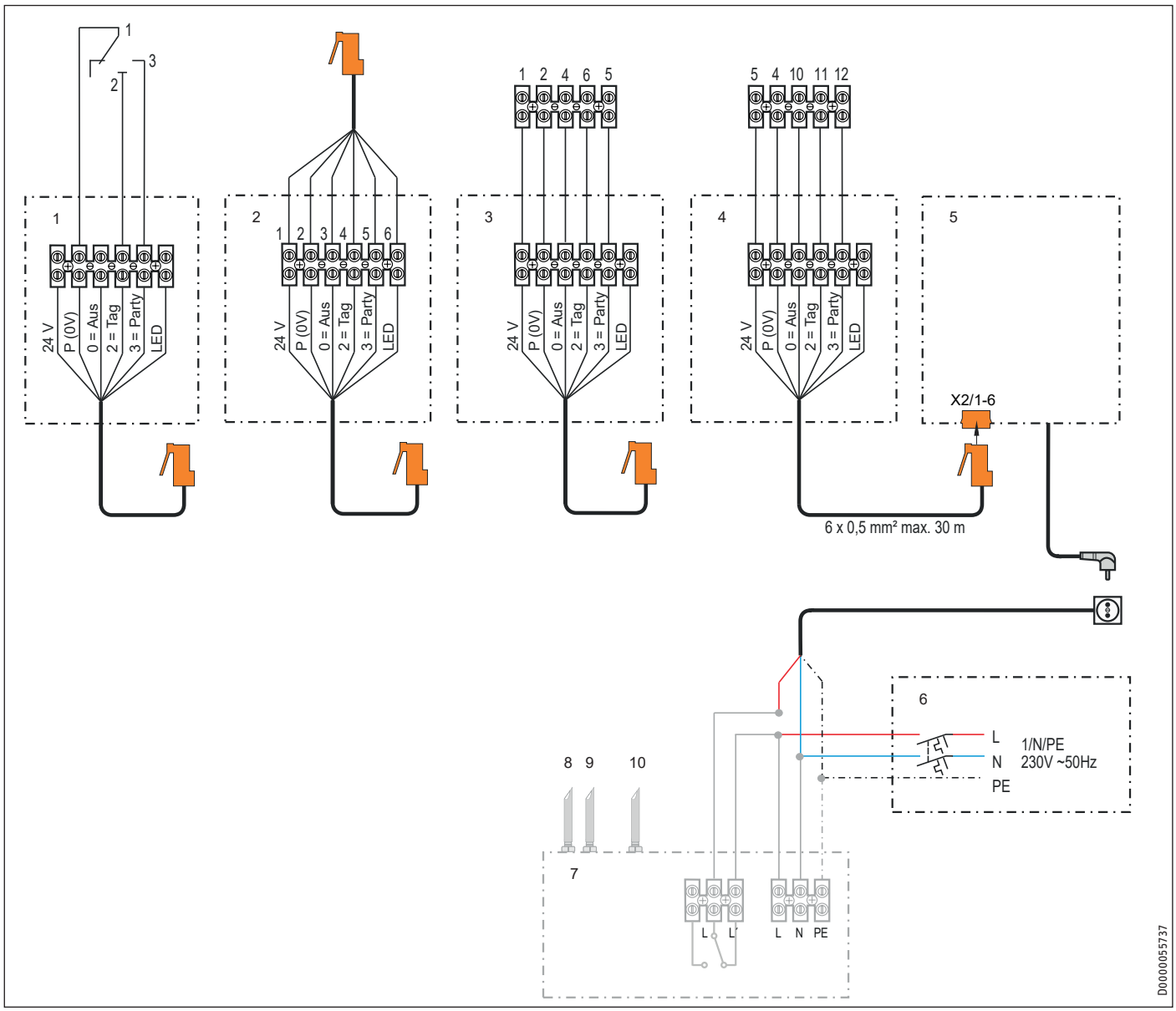
16. Specification

16.1 Dimensions and connections



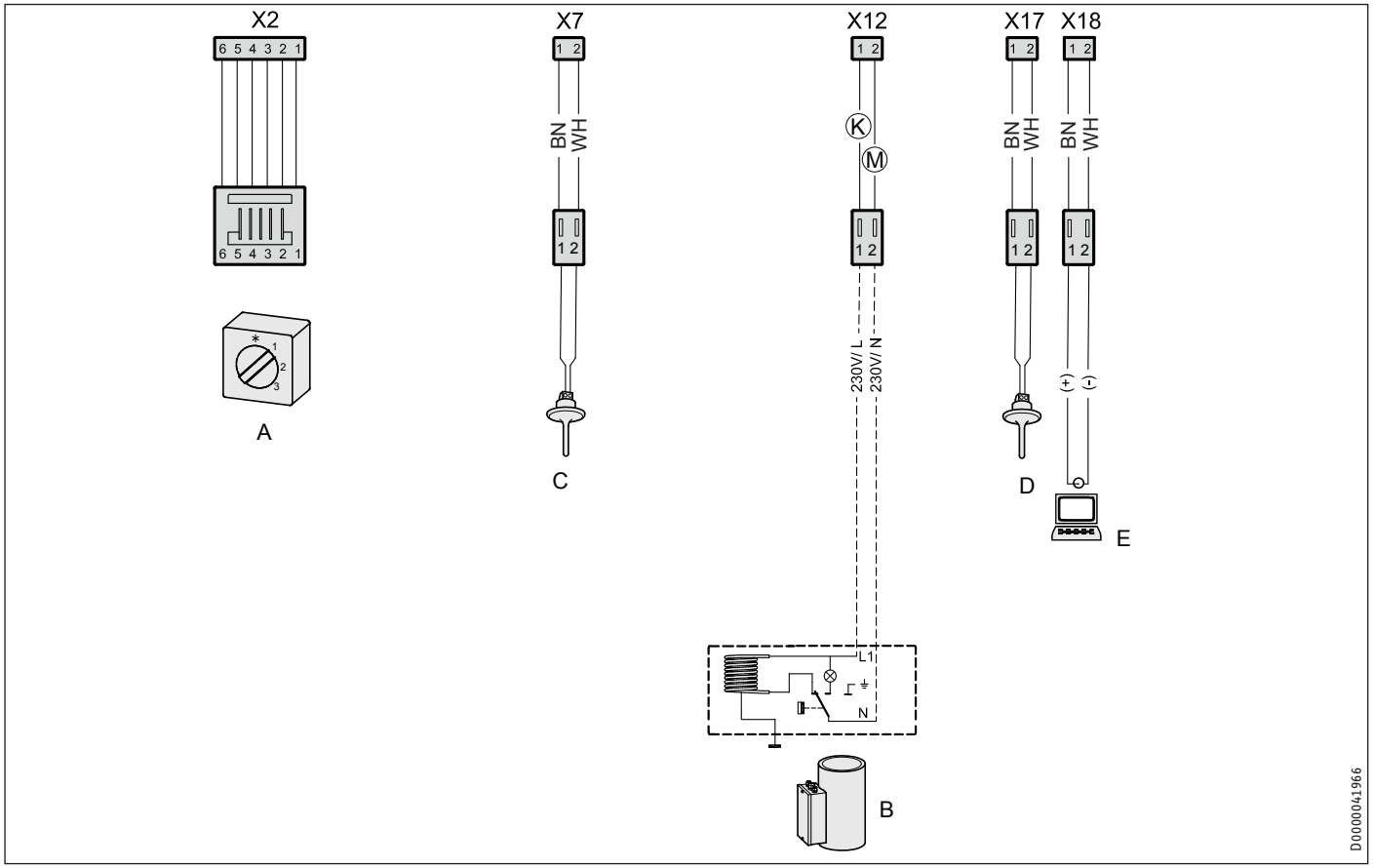
					LWZ 70 E
b01	Entry electrical cables				
d45	Condensate drain		Diameter	mm	13
g03	Outdoor air		Nominal diameter		DN 125
g04	Exhaust air		Nominal diameter		DN 125
g05	Extract air		Nominal diameter		DN 125
g06	inrushing air		Nominal diameter		DN 125

16.2 Standard circuit



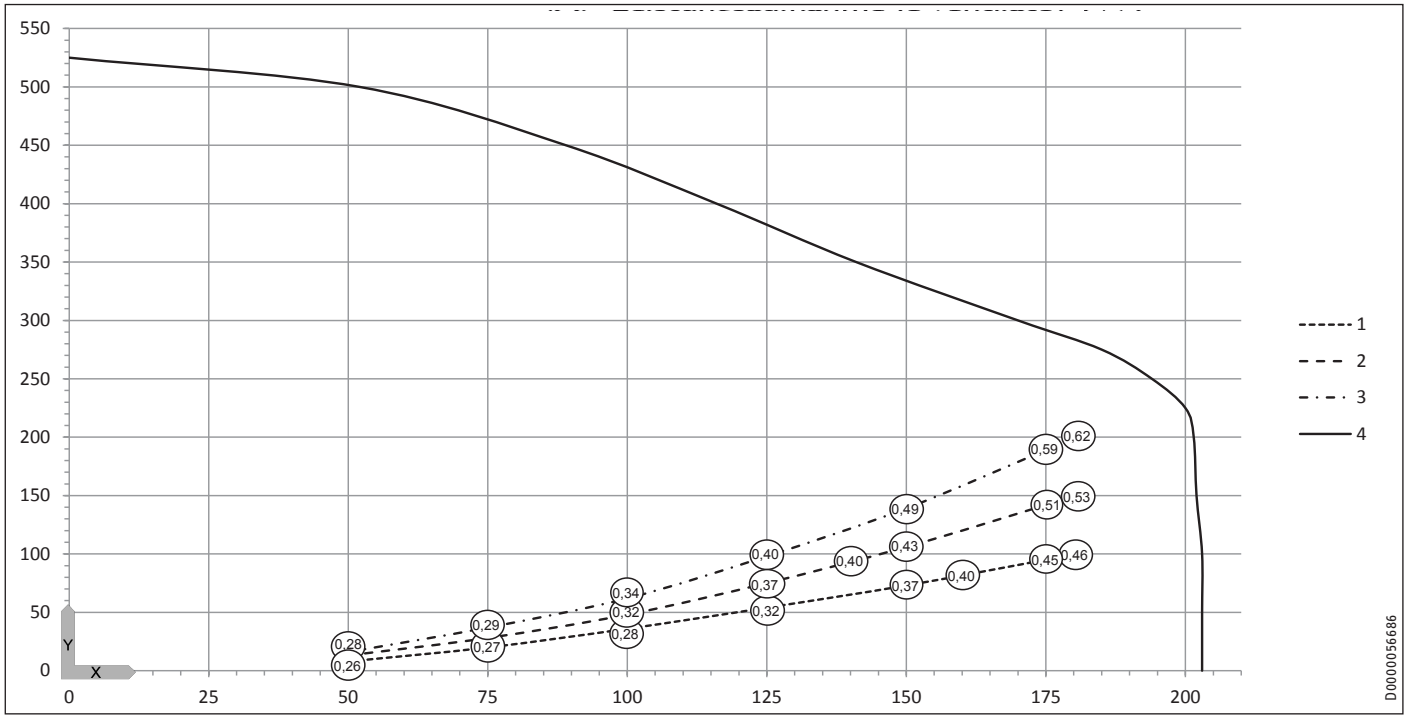
1 3-stage switch
2 4-stage switch
3 Air quality sensor FEQ
4 Remote control FEZ
5 Ventilation unit
6 Power supply, domestic electricity meter
7 Differential pressure switch, combustion equipment
8 Pressure connection “stove”
9 Pressure connection “room”
10 Flue gas temperature sensor

16.3 Wiring diagram



A 3-stage switch, 4-stage switch, air quality sensor FEQ or remote control FEZ (see chapter "Specification / Standard circuit")
B External preheating coil (optional)
C Outside temperature sensor
D Room temperature sensor
E Service connection
K Wire no. 1
M Wire no. 2

16.4 Fan diagram



X Air flow rate [m³/h]
Y Average value, static pressure [Pa]
1 Example: system curve with low pressure drop
2 Example: system curve with average pressure drop
3 Example: system curve with higher pressure drop
Ⓧ Specific power consumption of both fans [Wh/m³]

16.5 Data table

		LWZ 70 E
		233851
Sound emissions		
Sound power level Lwa	dB(A)	42
Energy data		
Energy efficiency class in average climates, manual control		A
Electrical data		
Rated voltage	V	230
Max. current consumption	A	1.48
Power consumption excl. preheating coil	A	1.48
Phases		1/N/PE
Frequency	Hz	50
Power consumption	W	13-112
Power consumption excl. preheating coil	W	136
Versions		
IP rating		IP 30
Filter class		ISO Coarse > 45 % (G3)
Dimensions		
Height	mm	600
Width	mm	560
Depth	mm	290
Weights		
Weight	kg	25
Connections		
Air connector diameter	mm	125
Condensate connection	mm	13
Values		
Air flow rate	m³/h	50-180
Heat recovery level up to	%	90
Application range, extract air	°C	15 - 30
Max. ambient temperature	°C	60
Available external pressure, ventilation	Pa	160

Further details

		LWZ 70 E
		233851
Maximum altitude for installation	m	2000

Guarantee

The guarantee conditions of our German companies do not apply to appliances acquired outside of Germany. In countries where our subsidiaries sell our products a guarantee can only be issued by those subsidiaries. Such guarantee is only granted if the subsidiary has issued its own terms of guarantee. No other guarantee will be granted.

We shall not provide any guarantee for appliances acquired in countries where we have no subsidiary to sell our products. This will not affect warranties issued by any importers.

Environment and recycling

We would ask you to help protect the environment. After use, dispose of the various materials in accordance with national regulations.

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