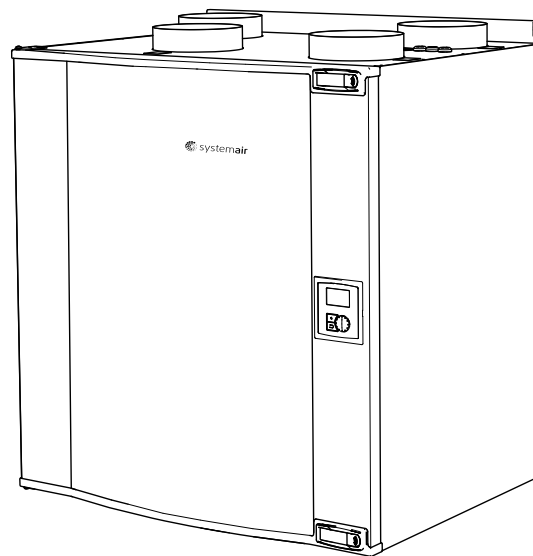


SAVE VTC 300

Heat Recovery Ventilation Unit



GB User Manual

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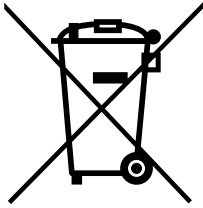
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1 Disposal and recycling



This product are applicable to the WEEE directive. When disposing the unit, follow your local rules and regulations.

This product packing materials are recyclable and can be reused. Do not dispose in household waste.



2 Warnings

The following admonitions will be presented in different sections of the document:

Danger

- Make sure that the mains supply to the unit is disconnected before performing any maintenance or electrical work!
- All electrical connections and maintenance work must be carried out by an authorized installer and in accordance with local rules and regulations.

Warning

- The system should operate continuously, and only be stopped for maintenance/service.
- The installation of the unit and complete ventilation system must be performed by an authorized installer and in accordance with local rules and regulations.
- Beware of sharp edges during mounting and maintenance. Use protective gloves.
- All though the Mains supply to the unit has been disconnected there is still risk for injury due to rotating parts that have not come to a complete standstill.
- Make sure that filters are mounted before starting the unit.
- This product must only be operated by a person which has suitable knowledge or education within this field or carried out with the supervision of a suitably qualified person.

Caution

- Do not connect tumble dryers to the ventilation system.
- Duct connections/duct ends must be covered during storage and installation.

3 Introduction

The SAVE VTC 300 is a heat recovery ventilation unit with a built in counter flow plate heat exchanger. There are two model options, right (R) and left (L) model (figure 1). The different models are recognized by the control panel which is situated on the right side of the unit in an (R) unit and on the left side in an (L) unit.

This manual describes basic information how to operate and perform maintenance on the unit and the system it is connected to.

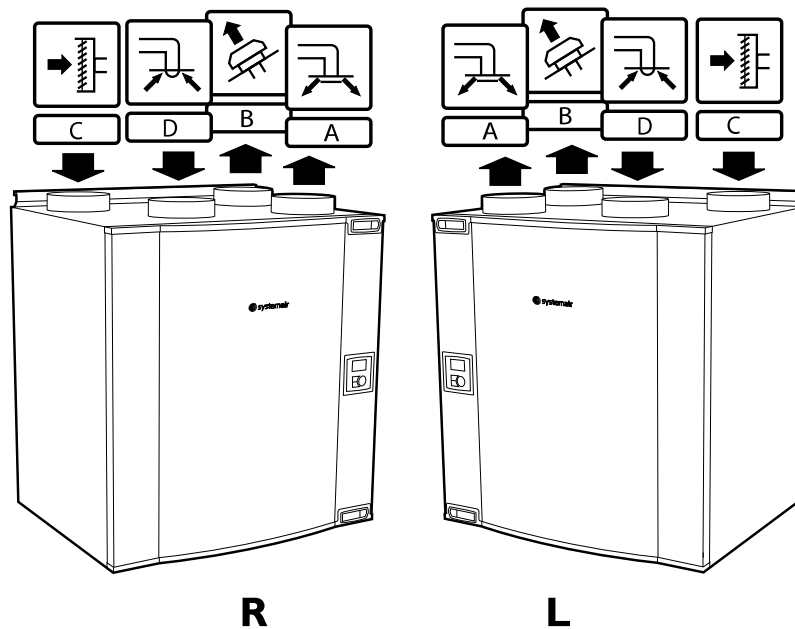






Fig. 1 Right and Left models

Table 1: Symbol description

Symbol		Description
	A	Supply air
	B	Exhaust air
	C	Outdoor air
	D	Extract air

4 Configuration

4.1 Control panel

Connect the unit electrically to the mains with the enclosed plug and check that it starts up correctly.

The control panel is used to make the necessary adjustments.

An external control panel can be connected on the top of the unit.

The illustration below shows the control panel with a short description.

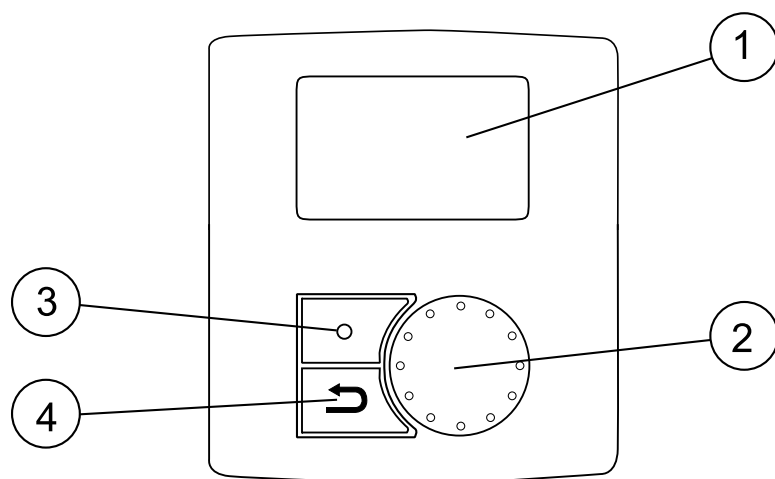
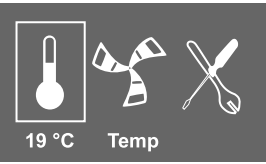
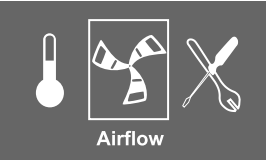






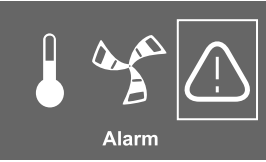


Fig. 2 Control panel

Position	Description	Explanation
1	Display	Shows symbols, menus and settings
2	SELECTION knob	Move through the menu lists or change settings and values by turning the knob left or right
3	ENTER button	ENTER menu choices or settings by pressing the button
4	RETURN button	Step RETURN in the menu levels and to abort an initiated parameter change and restore the original value by pressing the button

4.1.1 Display symbols

Symbol	Description	Explanation
	Temp	<p>Illustrates the current set-point for supply air temperature (from completely empty to filled symbol).</p> <p>Turn the SELECTION knob to choose temperature.</p> <p>Press ENTER to save the setting.</p>
	Airflow	<p>Illustrates the current airflow. The airflow can be set manually in 5 steps: Off, Low, Nom, High and Auto.</p> <p>Turn the SELECTION knob to choose airflow.</p> <p>Press ENTER to save the setting.</p> <div style="display: flex; justify-content: space-around; align-items: center;">      </div> <p style="text-align: center;">A B C D E</p> <p>A. Ventilation off.¹</p> <p>B. Low ventilation: Can be used when leaving the building for a longer period</p> <p>C. Nominal ventilation: Will give required air change under normal conditions.</p> <p>D. Maximum ventilation: To increase the airflow if necessary.</p> <p>E. Auto ventilation: Will regulate after the pre-setting for the demand control settings.</p>
	Service	Press ENTER to access the service menu.
	Alarm	Press ENTER to access the alarm list.

1. The fan can be set to OFF by activating manual fan stop. See service menu description under functions.

Important

It is not recommended to activate manual fan stop (set fan to OFF) in standard households. If manual fan stop is activated, the unit should be provided with dampers in exhaust and fresh air ducts to avoid cold draught and risk of condensation when the unit has been stopped.

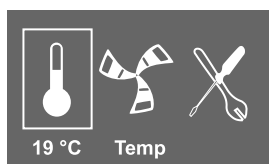
4.2 Setting the temperature

The supply air temperature is set manually in steps of 1 K in the main menu display by choosing the temperature symbol.

If an electrical re-heater is installed the temperature setpoints are: 12-22 °C. For installed water re-heater the setpoints are: 12-40 °C.

If the re-heater is deactivated, the temperature steps are:
15-19 °C. Default value: 15.0 °C.

Each temperature step is illustrated by increasing the filling of the temperature symbol and the temperature is shown in the display

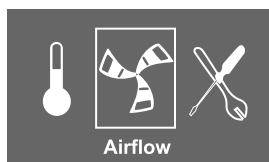


An unfilled temperature symbol will activate manual summer mode. See chapter 4.5

4.3 Manual setting of airflow

It is possible, at any time, to manually set the airflow in the main menu display. By choosing the fan symbol and confirming, it is possible to increase or decrease the airflow in 5 steps: Off, Low, Nom, High and Auto.

By doing so, you override the programmed week schedule for the unit until the end of the present time period in the week program (chapter 4.4).




Warning

It is **not** recommended to activate manual fan stop (set fan to OFF) in standard households. If manual fan stop is activated, the unit should be provided with dampers in exhaust and fresh air ducts to avoid cold draught and risk of condensation when the unit has been stopped.

The fan can be set to OFF by activating manual fan stop. See the Installation and Service manual, chapter Service menu overview: *Manual fan stop*.

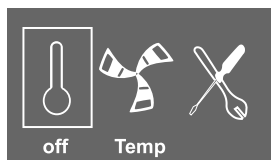
4.4 Programming the Week schedule

Set the week schedule according to below procedure:

<p>1. Go to the service menu by using the SELECTION knob.</p>	
<p>2. Enter the service level by typing the password, default 1111. Use the SELECTION knob for each digit and confirm with the ENTER button after each set digit and choose "NO" for the system not be locked.</p>	<p>Password Password XXXX Locked YES/NO</p>
<p>3. Go to: Week program</p>	<p>Service Week program</p>
<p>4. Choose Week program again.</p>	<p>Week program Airflow</p>
<p>5. Set week day and time you want the unit to be in ON level. Two periods per day can be programmed. The rest of the time the unit will be in OFF level.</p>	<p>Week program Day: MON Per 1: 07:00 16:00 Per 2: 00:00 00:00</p>
<p>6. Go back to the previous dialogue frame with the RETURN button and go down to Airflow.</p>	<p>Week program Airflow</p>
<p>7. Set which airflow the fan is supposed to be running in the ON level, choose between Low, Nom, High or Auto.</p> <p>Set which airflow the fan is supposed to be running in the OFF level, choose between OFF, Low, Nom or High.</p> <hr/> <p>Note:</p> <p>If an electrical re-heater battery is installed and active and the unit is shut down from the control panel, for example by choosing OFF. When the unit is in OFF level in the week program, the fans will continue to run for 3 minutes, to prevent the heater from triggering the over heat protection sensor, before they stop.</p> <hr/>	<p>Airflow On level: low/nom/high/auto Off level: off/low/nom/high</p>
<p>8. Step back with the RETURN button until you reach the main menu display</p>	

4.5 Manual and automatic summer mode

Manual summer mode occurs if no temperature step is selected. The temperature symbol on the main menu is then completely empty.



If the electrical re-heater is activated, it will switch off during manual summer mode. Manual summer mode goes automatically to step 1 (setpoint 12 °C) after two minutes if the supply air temperature is +5 °C or below.

If a water heater battery is installed and activated, the manual summer mode goes automatically to step 1 (setpoint 12 °C) if the outdoor air or supply air temperature is +5 °C or below.

The unit will automatically alternate between winter operation with heat recovery and summer operation without heat recovery.

5 Maintenance

Maintenance of the SAVE VTC 300 should normally be performed 3 - 4 times a year. Apart from general cleaning the following should be observed:

5.1 Warnings

Danger

- Make sure that the mains supply to the unit is disconnected before performing any maintenance or electrical work!
- All electrical connections and maintenance work must be carried out by an authorized installer and in accordance with local rules and regulations.

Warning

- The system should operate continuously, and only be stopped for maintenance/service
- Although the mains supply to the unit has been disconnected there is still risk for injury due to rotating parts that have not come to a complete standstill
- Beware of sharp edges during maintenance. Use protective gloves
- Make sure that filters are mounted in their place before running the system
- This product must only be operated by a person which has suitable knowledge or education within this field or carried out with the supervision of a suitably qualified person.

5.2 Changing Outdoor/Extract air filters

The filters cannot be cleaned and must be changed as necessary. This is normally done 1–2 times per year depending on the air pollution at the installation site.

When it's time to change the filters an alarm is shown in the control panel display. When this occurs do the following:

1. Change filters as shown in below illustration (figure 3).
2. Reset the filter time as described below (chapter 5.2.1). Depending on the condition of the filter, you might need to change the operation time for the filter.

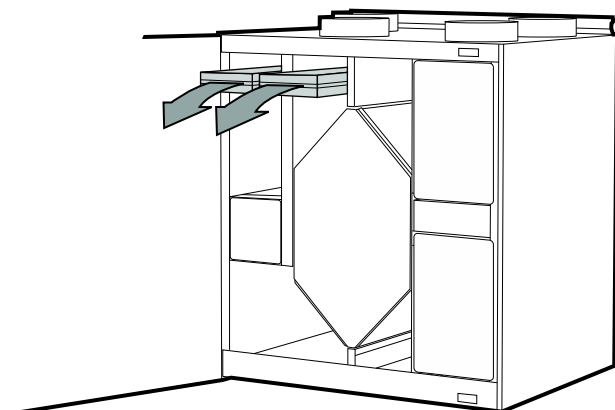
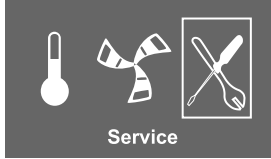


Fig. 3 Changing of filters

5.2.1 Resetting the filter time

<p>1. Go to the service menu by using the selection knob.</p>	
<p>2. Enter the service level by typing the password. Use the SELECTION knob for each digit and confirm with the ENTER button after each set digit and choose "NO" for the system not be locked.</p>	<p>Service ->Password Locked YES/NO</p>
<p>3. Go to: Filter period, press ENTER. Choose: Reset: YES with the SELECTION knob and then ENTER. Change, if necessary, Time to replace X month, to the time of your choice with the SELECTION knob and then press ENTER. Press the RETURN button until you reach the main menu.</p>	<p>Filter period Time to replace: 6/9/12/15 month Reset NO/YES</p>

5.3 Checking the heat exchanger

Even if the required maintenance is carried out (chapter 5.2), dust will build up in the exchanger block. It is therefore of vital importance for the upkeep of a high efficiency that the exchanger block is removed from the unit and cleaned periodically as illustrated below (figure 4). Cleaning the heat exchanger can be done every 3 years.

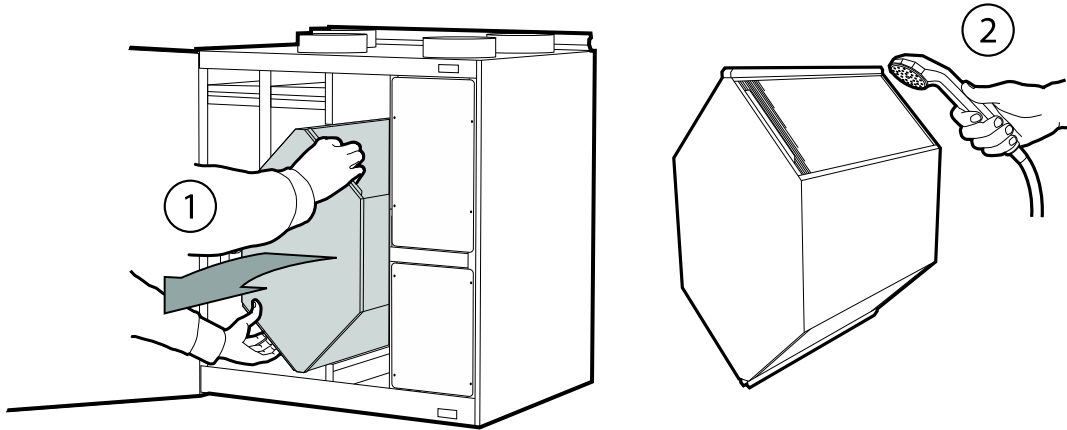


Fig. 4 Removing and cleaning the heat exchanger

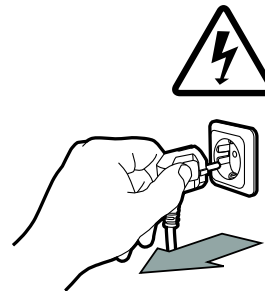
5.4 Cleaning the fans

Even if the required maintenance, such as changing of filters is carried out, dust and grease may slowly build up inside the fans. This will reduce the efficiency.

The fans may be cleaned as illustrated in below procedure.

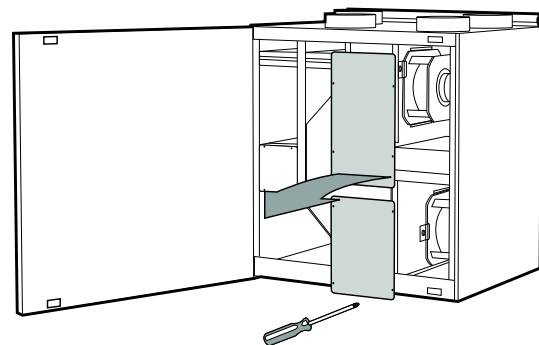
1

Disconnect the unit from the mains by pulling out the wall plug



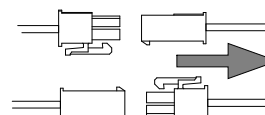
2

Remove the cover plates



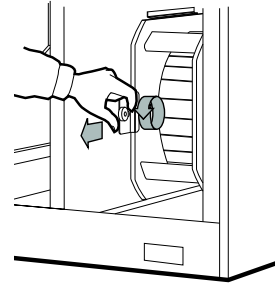
3

Disconnect the fast couplings



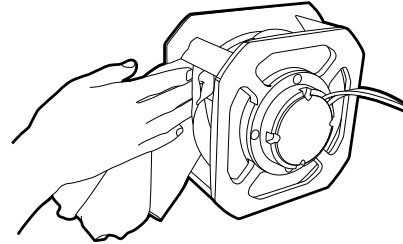
4

Loosen the bracket holding the fan and pull the fan out carefully



5

Clean the fan using a cloth or a soft brush. Do not use water. White spirit can be used to remove obstinate settlements. Allow to dry properly before remounting.

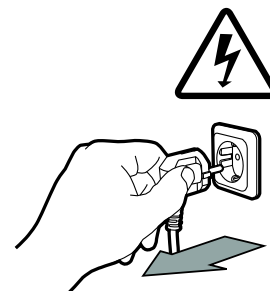


5.5 Removing the Inspection door

In case the unit is installed in a tight space it might be necessary to remove the inspection door to perform cleaning and maintenance. Remove the door according to below procedure.

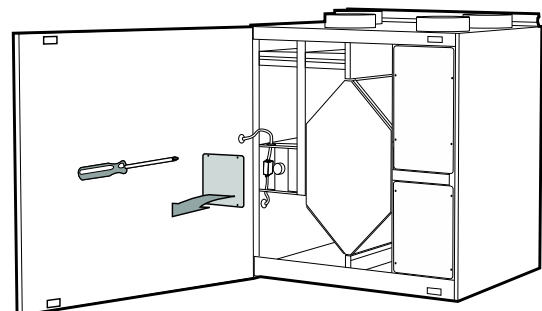
1

Disconnect the unit from the mains by pulling out the wall plug.



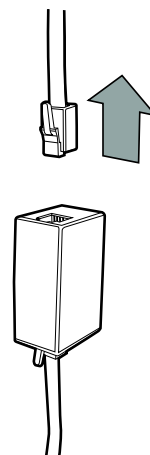
2

Remove the cover plate of the bypass damper motor.



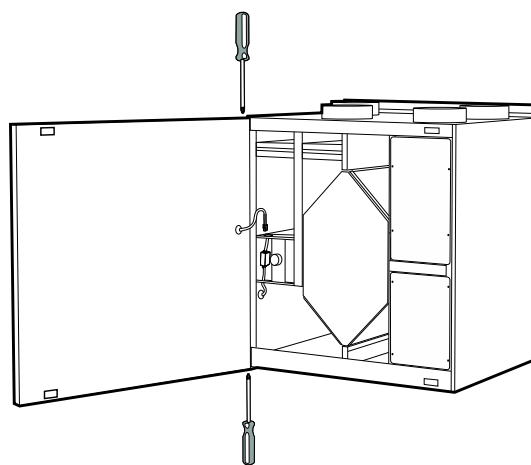
3

Disconnect the modular plug from the modular jack situated behind the bypass damper cover plate.



4

Unscrew the door from the hinges.



6 Duct system maintenance

6.1 Cleaning extract louvres and supply air diffusers

The system supplies fresh air to your home and extracts the used indoor air via the duct system and diffusers/louvres. Diffusers and louvres are mounted in ceilings/walls in bedrooms, living room, wet rooms, WC etc. Remove diffusers and louvres and wash in hot soapy water as required (diffusers/louvres must not be exchanged). Cleaning of diffusers/louvres can be done as necessary.

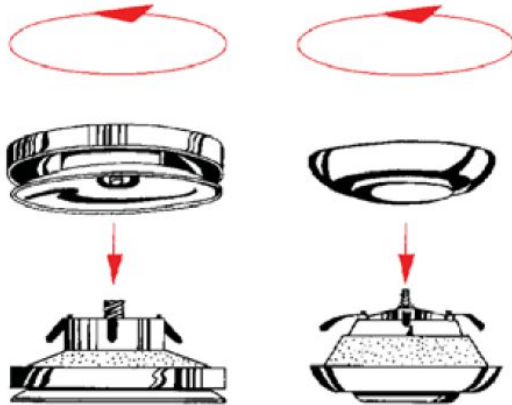


Fig. 5 Diffusers and louvres

6.2 Checking the outdoor air intake

Leaves and pollution could plug up the air intake grille and reduce the capacity. Check the air intake grille, and clean as necessary. It is recommended to do this at least twice a year.

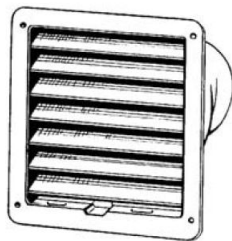


Fig. 6 Intake grill

6.3 Checking the roof cowl (if fitted)

The roof cowl (if fitted) connected to the exhaust air duct needs to be checked at least twice a year and cleaned if necessary.

6.4 Checking and cleaning the duct system

Dust and grease deposits may build up in the duct system, even if required maintenance such as changing of filters is being carried out. This will reduce the efficiency of the installation.

The duct runs should therefore be cleaned/changed when necessary. Steel ducts can be cleaned by pulling a brush soaked in hot soapy water through the duct via diffuser/louvre openings or special inspection hatches in the duct system (if fitted).

It is recommended to do this every 5 years and is normally carried out by authorized companies specialized in this area.

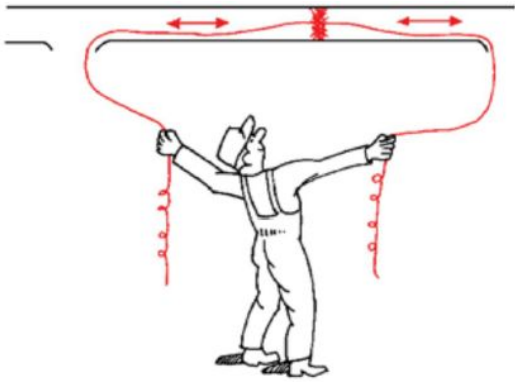


Fig. 7 Cleaning duct system

7 Trouble shooting

7.1 Alarm list

Error is warned with text and warning triangle in the display. Turn the selection knob to the warning triangle and press 2x confirm

Alarm	Explanation	Result
Fan	Indicates error on either supply or extract air fan.	The alarm is displayed in the control panel May result in triggered over heat protection if an electrical re-heater battery is installed and active when the malfunction occurs.
EMT/Frost	Indicates triggered emergency thermostat (in case of installed electric re-heater battery) or frost protection (in case of installed water re-heater or cooling battery).	A triggered frost protection alarm results in the following: <ul style="list-style-type: none"> • Both fans stop • Outdoor and exhaust air dampers close • Water valve opens completely (10 V signal goes out to the actuator) The unit will restart once the water temperature reaches +5K over set frost protection temperature. A triggered emergency thermostat alarm gives an alarm in the control panel. Reset by pushing the red button on the front of the heater.
Bypass	Indicates malfunction in bypass damper	The alarm is displayed in the control panel. Disconnect the mains supply for 10 sec to reset control function. Power up the unit, an automatic bypass damper test will be performed. If the alarm occurs again after approximate 2 min., contact your installation company or a place of purchase.
Pb Fail	Error in connection with relay card for electrical re-heater or re-heater disconnected	The alarm is displayed in the control panel. The electrical re-heater will not be activated.
Temp	Malfunction in one or more of the temperature sensors.	The alarm is displayed in the control panel. Check analogue inputs to verify which sensor is malfunctioning.
Filter	Time for filter change.	The alarm is displayed in the control panel. Change filter according to instructions in the "User Manual".
Low SS	Indicates low supply air temperature	The alarm is displayed in the control panel. If water reheater is configured and frost protection have failed, then an extra security function is triggered when supply air temperature is lower than 5 °C and outdoor air temperature is below 0 °C.

Alarm	Explanation	Result
Defrost	Indicates unacceptable pre-heater temperature. "Stop defrosting" level is not allowed.	The alarm is displayed in the control panel. Pre-heater is triggered or malfunction of pre-heater have occurred.
RH	Indicates malfunction of internal relative humidity sensor.	The alarm is displayed in the control panel.

7.2 Type label

Before calling your service representative, make a note of the specification and production number from the type label, which can be found on the side of the units, next to the external connections.

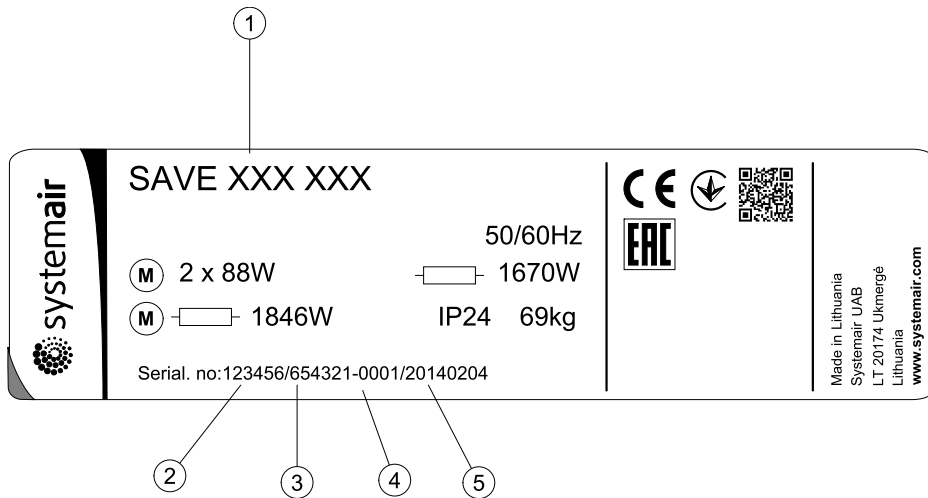


Fig. 8 Type label

Position	Description
1	Product code (product specification)
2	Product item number
3	Production order number
4	Serial number
5	Production date (YY.MM.DD)

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