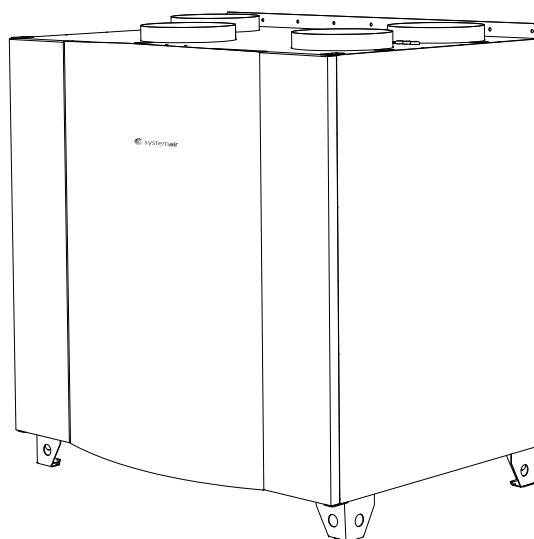


# SAVE VTC 700

## Heat Recovery Ventilation Unit



### **GB** User Manual

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## Contents

1 Warnings.....	1
2 Introduction .....	2
3 Configuration .....	3
3.1 Control panel .....	3
3.1.1 Display symbols.....	4
3.2 Setting the temperature .....	4
3.3 Manual setting of airflow .....	5
3.4 Programming the Week schedule .....	6
3.5 Manual and automatic summer mode .....	7
4 Maintenance of the unit .....	7
4.1 Warnings .....	7
4.2 Removing the front inspection hatch .....	8
4.3 Changing Outdoor/Extract air filters .....	8
4.3.1 Resetting the filter time.....	9
4.4 Checking the heat exchanger .....	9
4.5 Cleaning the fans .....	9
5 Duct system maintenance .....	11
5.1 Cleaning extract louvres and supply air diffusers .....	11
5.2 Checking the outdoor air intake .....	11
5.3 Checking the roof cowl (if fitted).....	11
5.4 Checking and cleaning the duct system .....	12
6 Trouble shooting .....	13
6.1 Alarm list.....	13
6.2 Type label .....	14

# 1 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.

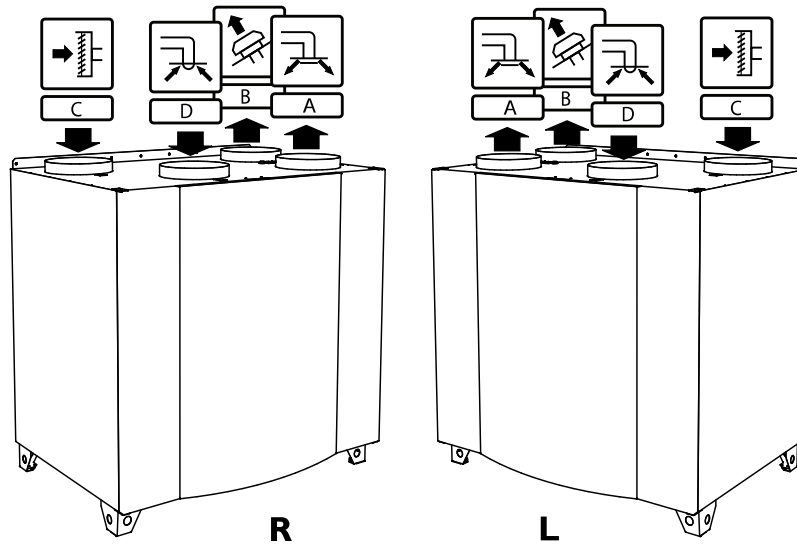
## **Caution**

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

## 2 Introduction





The SAVE VTC 700 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).

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
	<b>A</b>	Supply air
	<b>B</b>	Exhaust air
	<b>C</b>	Outdoor air
	<b>D</b>	Extract air

## 3 Configuration

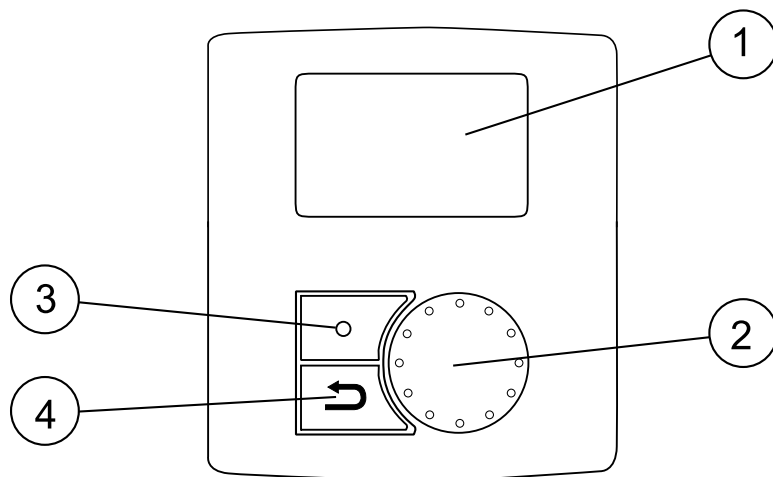
### 3.1 Control panel

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.

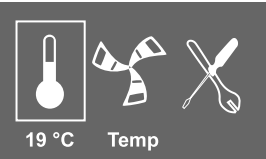






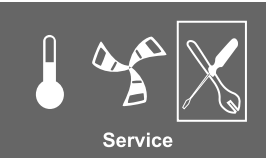
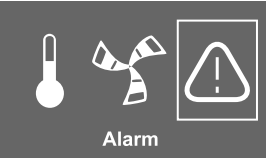
The illustration below shows the control panel with a short description.



**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

## 3.1.1 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> <div style="display: flex; justify-content: space-around; align-items: center;"> <span>A</span> <span>B</span> <span>C</span> <span>D</span> <span>E</span> </div> <p>A. Ventilation off.<sup>1</sup></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. When demand control is activated, fans should go to "auto mode" and regulate after the pre-setting for the demand control settings.</p>
	Service	<p>Press ENTER to access the service menu.</p>
	Alarm	<p>Press ENTER to access the alarm list.</p>

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



### 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.

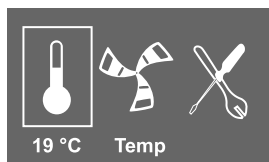
## 3.2 Setting the temperature

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

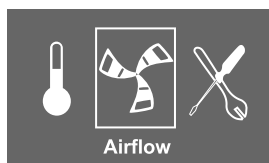


An unfilled temperature symbol will activate manual summer mode. See chapter 3.5

### 3.3 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 3.4).




#### 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*.

## 3.4 Programming the Week schedule

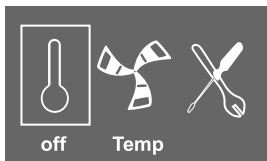
Set the week schedule according to below procedure:

1. Go to the service menu by using the SELECTION knob.	
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.	<b>Password</b> Password XXXX Locked YES/NO
3. Go to: Week program	<b>Service</b> Week program
4. Choose Week program again.	<b>Week program</b> Airflow
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.	<b>Week program</b> Day: MON Per 1: 07:00 16:00 Per 2: 00:00 00:00
6. Go back to the previous dialogue frame with the RETURN button and go down to Airflow.	<b>Week program</b> Airflow
7. Set which airflow the fan is supposed to be running in the ON level, choose between Low, Nom, High or Auto.  Set which airflow the fan is supposed to be running in the OFF level, choose between OFF, Low, Nom or High.  <b>Note:</b> 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.	<b>Airflow</b> On level: low/nom/high/auto Off level: off/low/nom/high
8. Step back with the RETURN button until you reach the main menu display	



## 3.5 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.

## 4 Maintenance of the unit

Maintenance of the SAVE VTC 700 should normally be performed 3 - 4 times a year. Apart from general cleaning the following should be observed:

### 4.1 Warnings

#### **Danger**

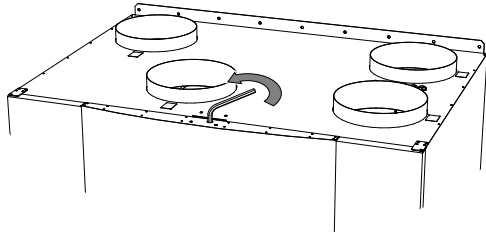
- Make sure that the mains supply to the unit is disconnected before performing any maintenance or electrical work!
- All electrical connections and maintenance work must be carried out by an authorized installer and in accordance with local rules and regulations.

#### **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.

## 4.2 Removing the front inspection hatch

Remove the front hatch by the use of an 8 mm Allen key, after which the hatch is tilted back and lifted off completely.



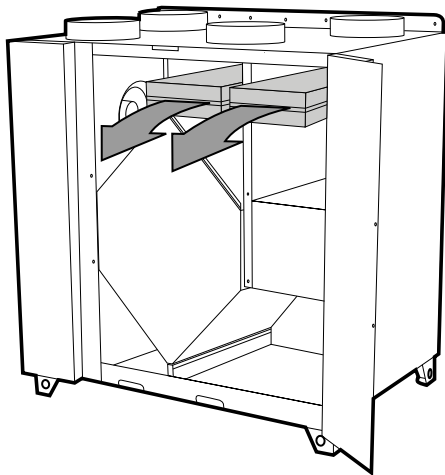
**Fig. 3 Opening the front hatch**

## 4.3 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 4).
2. Reset the filter time as described below (chapter 4.3.1). Depending on the condition of the filter, you might need to change the operation time for the filter.



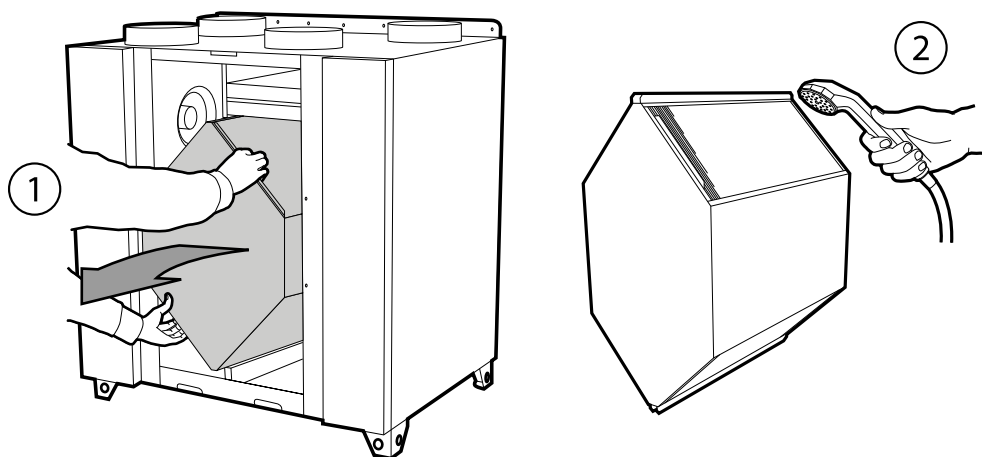
**Fig. 4 Changing of filters**

### 4.3.1 Resetting the filter time

<p>1. Go to the service menu by using the selection knob.</p>	 <p>Service</p>
<p>2. Enter the service level by typing the password.</p> <p>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><b>Service</b></p> <p>-&gt;Password</p> <p>Locked YES/NO</p>
<p>3. Go to: Filter period, press ENTER.</p> <p>Choose: Reset: YES with the SELECTION knob and then ENTER.</p> <p>Change, if necessary, Time to replace X month, to the time of your choice with the SELECTION knob and then press ENTER.</p> <p>Press the RETURN button until you reach the main menu.</p>	<p><b>Filter period</b></p> <p>Time to replace: 6/9/12/15 month</p> <p>Reset NO/YES</p>

## 4.4 Checking the heat exchanger

Even if the required maintenance is carried out (chapter 4.3), 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 5). Cleaning the heat exchanger should be done when needed, but preferably once a year.



**Fig. 5 Removing and cleaning the heat exchanger**

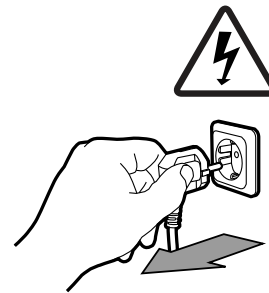
## 4.5 Cleaning the fans

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.

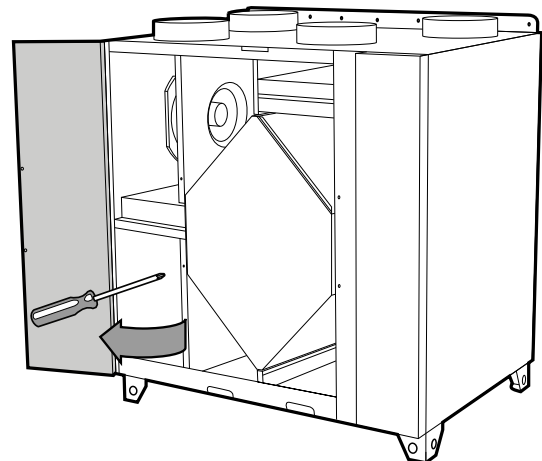
**1**

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



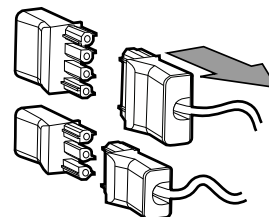
**2**

Open the side panel by removing 4 screws



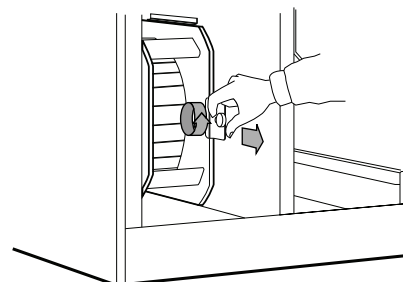
**3**

Disconnect the fast couplings



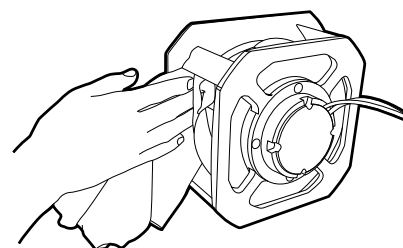
**4**

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 Duct system maintenance

### 5.1 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.

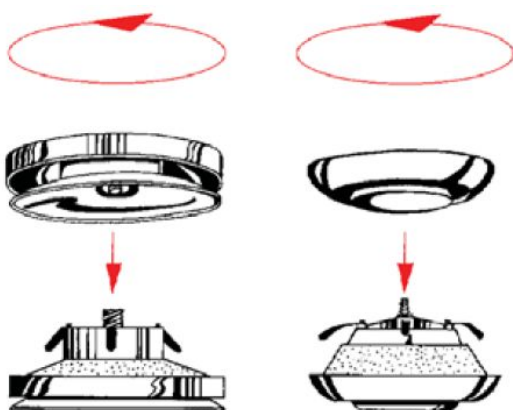


Fig. 6 Diffusers and louvres

### 5.2 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.

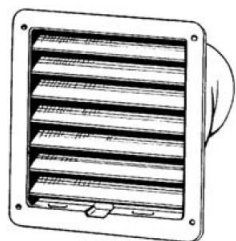


Fig. 7 Intake grill

### 5.3 Checking the roof cowl (if fitted)

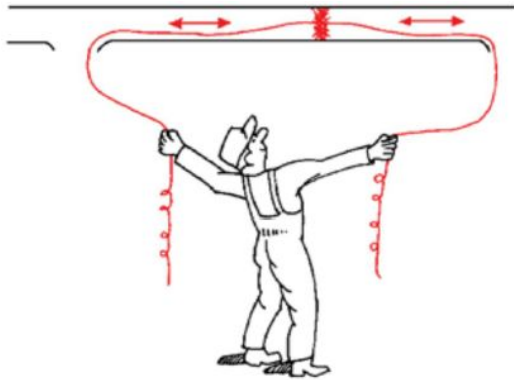
The roof cowl (if fitted) connected to the exhaust air duct needs to be checked at least twice a year and cleaned if necessary.

## 5.4 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. 8 Cleaning duct system**

## 6 Trouble shooting

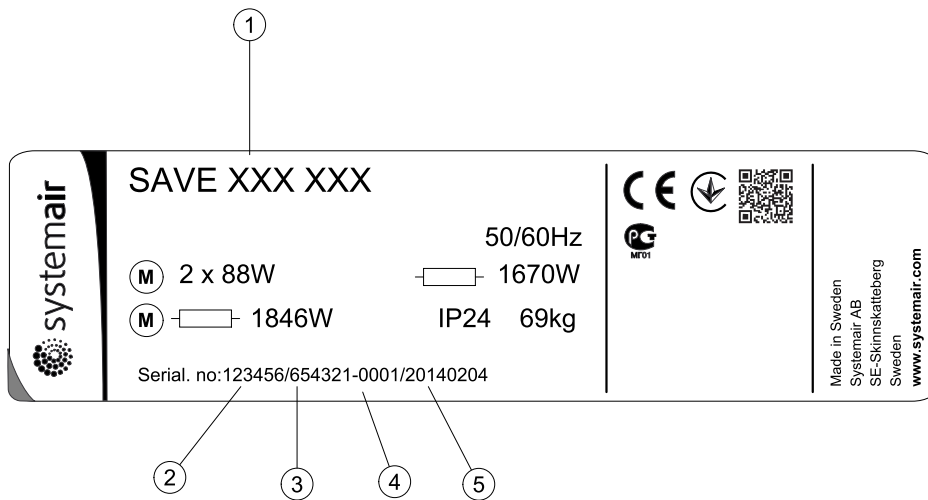
### 6.1 Alarm list

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

Alarm	Explanation	Do the following
Fan	Indicates error on either supply or extract air fan.	The alarm is displayed in the control panel. Contact your installation company or place of purchase.
EMT/Frost	Indicates triggered overheat protection (in case of installed electric re-heater battery) or frost protection (in case of installed water heating— or cooling battery).	A triggered frost protection alarm results in the following: <ul style="list-style-type: none"> <li>• Both fans stop.</li> <li>• Outdoor and exhaust air dampers close.</li> <li>• Water valve opens completely (10 V signal goes out to the actuator).</li> </ul> The unit will restart once the water temperature reaches +5K over set frost protection temperature. A triggered over heat protection gives an alarm in the control panel. Reset by pushing the red button on the front of the heater. If the problem continues contact your installation company or place of purchase.
DAMP	Indicates malfunction in bypass damper.	The alarm is displayed in the control panel The unit will not be able to use the bypass damper for defrosting, i.e. stop defrosting will be initiated if a re-heater is installed and activated. Contact your installation company or place of purchase
Pb Fail	Error in connection with relay card for the electrical re-heater (if installed and activated).	The alarm is displayed in the control panel. The heater will not be activated. Contact your installation company or place of purchase.
Temp	Malfunction in one or more of the temperature sensors.	The alarm is displayed in the control panel. Contact your installation company or place of purchase.
Filter	Time for filter change.	The alarm is displayed in the control panel. Change filter according to instructions (chapter 4.3 and chapter 4.3.1).

## 6.2 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. 9 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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Systemair AB  
Industrivägen 3  
SE-739 30 Skinnkatteberg, Sweden

Phone +46 222 440 00

Fax +46 222 440 99

[www.systemair.com](http://www.systemair.com)