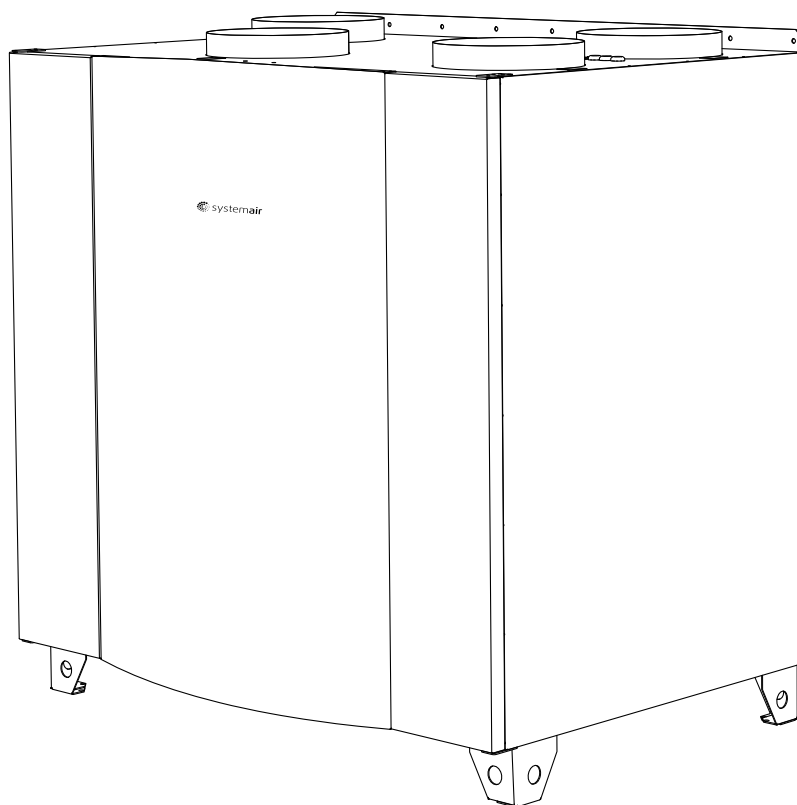


# SAVE VTC 700

## Heat Recovery Ventilation Unit



**GB User Manual**

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# 1 Warnings

The following admonitions will be presented in the 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.
- 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.
- Make sure that filters are mounted before starting the unit.
- This product is not intended to be used by children or people with reduced physical or mental ability or lack of experience and knowledge, if no instruction concerning the use has been given by the person responsible for their safety or that this person is supervising the operation. Children should be supervised so that they can not play with the product.

## **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.

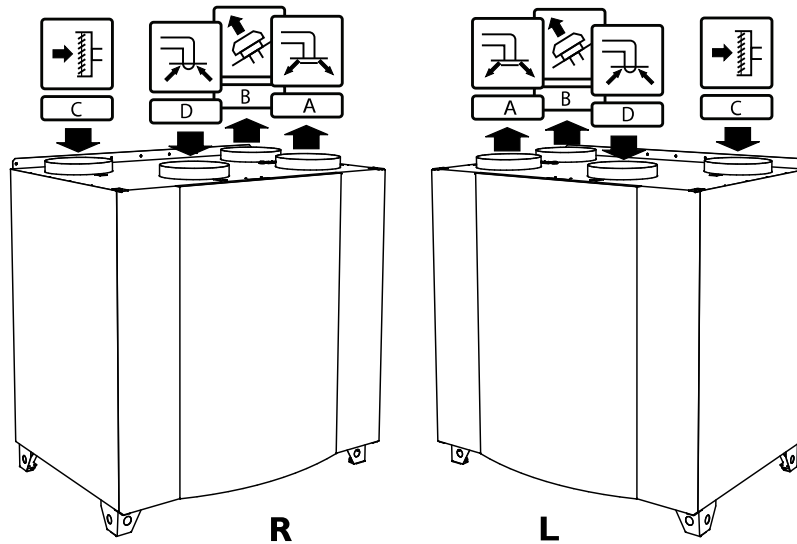


Fig. 1 Right and Left models

Table 1: Symbol description

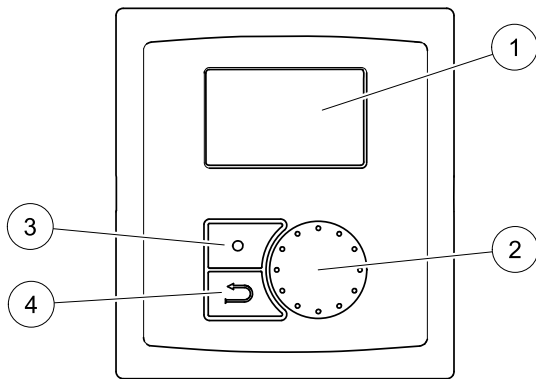
Symbol		Description
	<b>A</b>	Supply air
	<b>B</b>	Exhaust air
	<b>C</b>	Outdoor air
	<b>D</b>	Extract air

## 3 Interface description

### 3.1 Control panel

The control panel is delivered with the unit and has to be connected to the modular jack on top of the VTC 700.






Below illustration shows the control panel with a short description (figure 2)



**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	Confirm button	Confirm menu choices or settings by pressing the button
4	Back button	Step back in the menu levels by pressing the button

## 3.2 Display symbols

Symbol	Description	Explanation
	Fan speed	<p>Illustrates the current set fan speed.</p> <p>The fan speed can be set manually in 3 steps (min, nom and max) by turning the selection knob and confirming with the “confirm button” after completed setting.</p> <div data-bbox="788 512 1056 629">  <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>A</span> <span>B</span> <span>C</span> </div> </div> <ul style="list-style-type: none"> <li>• Low ventilation (A): Can be used when leaving the building for a longer period</li> <li>• Nominal ventilation (B): Will give required air change under normal conditions</li> <li>• High ventilation (C): To increase the airflow if necessary</li> </ul>
	Temp	<p>Illustrates the current set temperature. The temperature setting is done in 5 steps (from completely empty to filled symbol) and can be changed manually by turning the “selection knob”.</p> <p>Confirm the setting with the “confirm button” (chapter 4.1 and chapter 4.3).</p>
	Service	<p>Access to the service menu by pressing the confirmation button</p>
	Alarm	<p>Access to the alarm list by pressing the confirm button</p>

## 4 Menu settings

### 4.1 Setting of temperature

The supply air temperature is set manually in 5 steps in the main menu display by choosing the temperature symbol (figure 3).

If an electrical or water re-heater is installed the temperature steps are 12.0, 14.5, 17.0, 19.5 and 22.0 °C. Default is 12.0 °C.

If the unit is used without any re-heater installed the temperature steps are 15.0, 16.0, 17.0, 18.0 or 19.0 °C. Default is 15.0 °C.

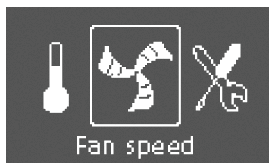
Each step increase is illustrated by increasing the filling of the temperature symbol.



**Fig. 3 Temperature symbol**

### 4.2 Manual setting of fan speed

It's possible at any time to manually set the fan speed in the main menu display. By choosing the fan symbol and confirming (figure 4) it's possible to increase or decrease the fan speed in the 3 steps, Low, Nom and High. By doing so you override the programmed week schedule for the unit until the end of the present time period in the week program.



**Fig. 4 Fan speed symbol**

### 4.3 Manual summer mode

Manual summer mode for VTC 700 occurs if one step lower than 12 °C is selected (temperature symbol on the main menu is completely empty, figure 5). This means that the bypass damper opens. If the re-heater is active, it will switch off during manual summer mode. Manual summer mode aborts automatically after two minutes when the supply air temperature is  $\leq 5$  °C.

If water heater battery is installed and activated the manual summer mode is aborted if the outdoor air or supply air temperature is  $\leq 5$  °C.



**Fig. 5 Symbol for manual summer mode**

## 5 Maintenance

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

### 5.1 Warnings

#### **Danger**

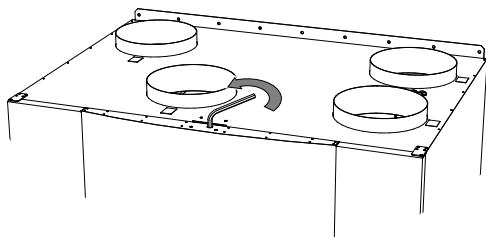
- Make sure that the Mains supply to the unit is disconnected before performing any maintenance or electrical work!
- All electrical maintenance work must be carried out by an authorized installer and in accordance with local rules and regulations.

#### **Warning**

- The system should operate continuously, and only be stopped for maintenance/service
- Beware of sharp edges during maintenance. Use protective gloves.
- Make sure that filters are mounted before starting the unit

### 5.2 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. 6 Opening the front hatch**



## 5.3 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 7).
2. Reset the filter time as described below (chapter 5.3.1). Depending on the condition of the filter, you might need to change the operation time for the filter.

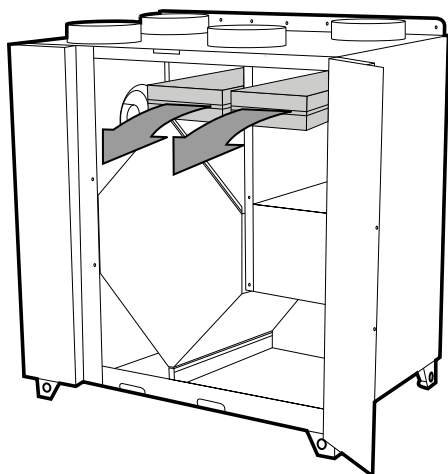


Fig. 7 Changing of filters

### 5.3.1 Resetting the filter time

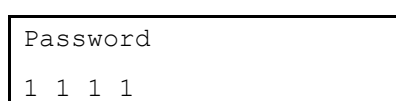
1

Go to the service menu by the use of the selection knob



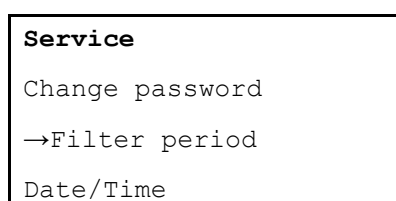
2

Enter the service level by typing the password. Use the selection knob for each digit and confirm with the "confirm button" after each set digit.



3

Go down to `Filter period`, confirm



#### 4

Choose **Reset:** YES with the “selection knob”, confirm.

Change **Time to replace 9 month** if necessary to the time of your choice with the “selection knob”, confirm.

Step back until you reach the main menu display by pressing the “back button”.

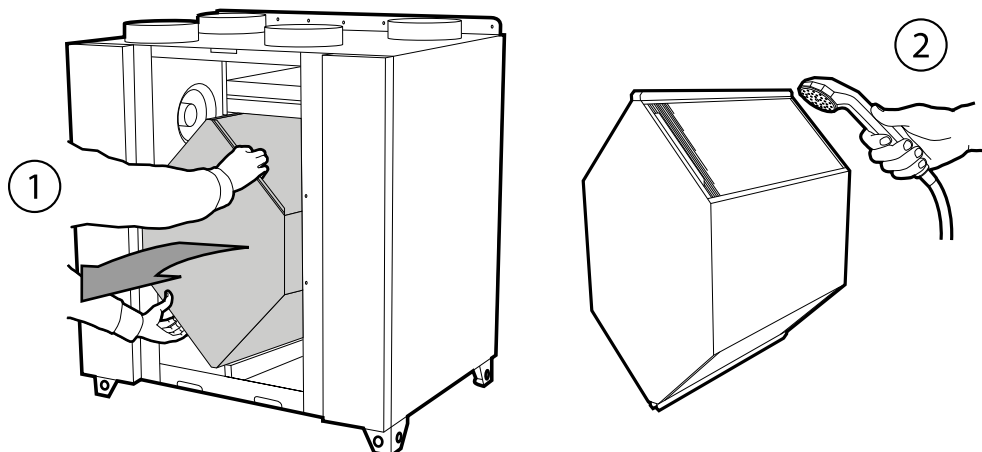
#### **Filter period**

**Reset:** NO

**Time to replace 9 month**

## 5.4 Checking the heat exchanger

Even if the required maintenance is carried out (chapter 5.3), 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 8). Cleaning the heat exchanger should be done when needed, but preferably once a year.



**Fig. 8 Removing and cleaning the heat exchanger**

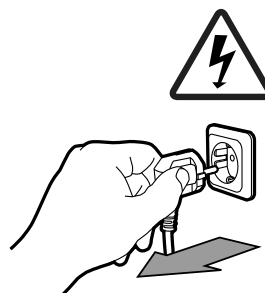
## 5.5 Cleaning the fans

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.

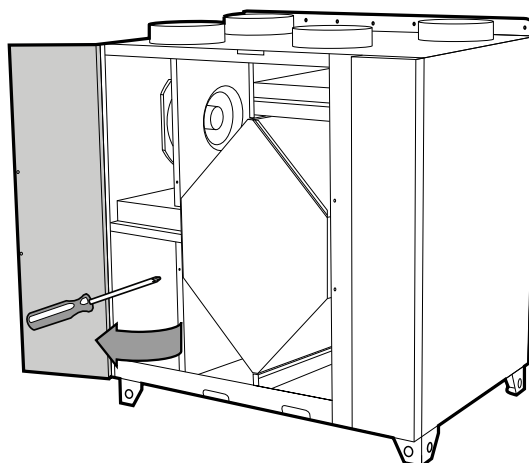
**1**

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



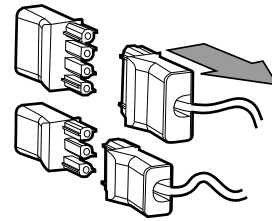
**2**

Open the side panel by removing 4 screws



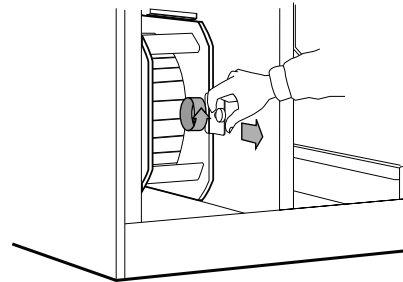
3

Disconnect the fast couplings



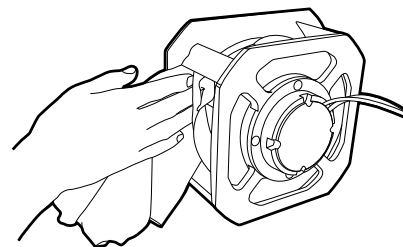
4

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.



## 5.6 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 (figure 9) and wash in hot soapy water as required (diffusers/louvres must not be exchanged). Cleaning of diffusers/louvres can be done as necessary.

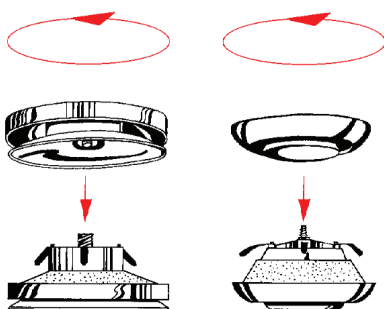
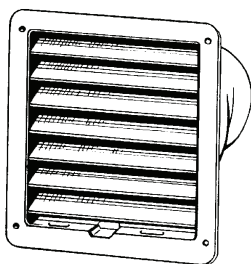


Fig. 9 Removing diffusers and extract louvres

## 5.7 Checking the outdoor air intake

Leaves and pollution could plug up the air intake grille (figure 10) and reduce the capacity. Check the air intake grille, and clean as necessary. It is recommended to do this at least twice a year.



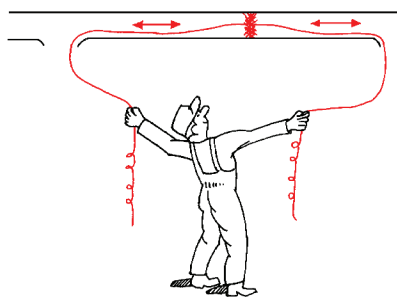
**Fig. 10 Outdoor air intake grill**

## 5.8 Check roof cowl

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

## 5.9 Checking the duct system

Dust and grease settlements 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. 11 Cleaning the 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 5.3 and chapter 5.3.1).



Systemair AB reserves the right to make changes and improvements to the contents of this manual without prior notice.



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