ComfoAir Compact 155 WM

Mechanical Ventilation with Heat Recovery

User / Homeowner Guide



CA155WM-EU

Contents

User / Homeowner Information Page

1.0 Ventilation In Your Home 2

2.0 General Overview 3

3.0 Controls 4

4.0 Servicing and Maintenance 8

5.0 Guarantee 16

1.0 Ventilation In Your Home

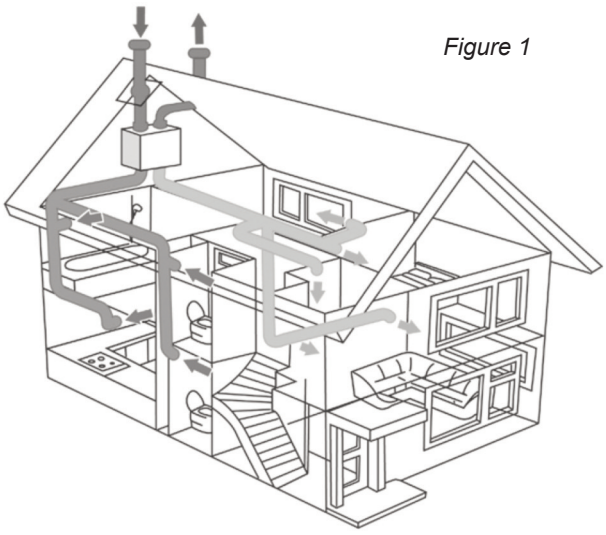
1.1 Your home has a Heat Recovery Ventilation System installed. This consists of a continuously running Supply and Extract System with Heat Recovery that is linked by a network of ducts to extract air on a continual basis from the following areas (referred to as "wet rooms") in residential dwellings:

- Kitchen
- Utility Room
- WC/Cloakroom
- Ensuite Bath/Shower Room

And supply air continually to:

- Living Room
- Dining Room
- Bedroom
- Study

Figure 1



2.0 General Overview

2.1 The product incorporates a Heat Exchanger that recovers the heat energy from the "extract air" that would normally be lost with other ventilation systems. It does this using minimal power consumption as the product uses EC low energy motors.

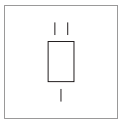
2.1.1 Depending on the way your ComfoAir 155 WM unit has been installed, the specific operation may vary.

The unit has either two or three speeds available:

- Low Speed: Operating on a continual basis
- AUX Speed: Activated manually using either ZGS1, ZGS2 or SA 1-3V switches.
- High Speed: Activated manually using either ZGS1, ZGS2, SA 1-3V switches, via 'switch-live' or via our ZGRC1 boost status controller

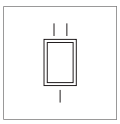
Note: AUX Speed is an additional setting ... for either 'away mode/middle/purge' speeds ... for set-up status contact your installer

ZGS2 switch markings: Low (I) & High (II) operation



ZGS2

ZGS1 switch markings: Low (centre), AUX (I) & High (II) operation



ZGS1

SA 1-3V 3-speed rotation: Low (1), High (2), AUX (3)



SA 1-3V

ZGRC1 boost and system status controller markings:
Low (I) & High (II) operation



ZGRC1

(See section 3.1.9 for system status details)

Note: Other manufacturers switches may show different markings, or your unit may be connected to a Building Management System (BMS).

2.1.2 To maintain good indoor air quality within the dwelling it is important that the ventilation system remains in operation at all times unless powered down periodically for maintenance/repair.

2.1.3 The ComfoAir Compact has been designed and manufactured for use in "Balanced Ventilation Systems" with Zehnder heat recovery. Any other use is considered "improper use" and may cause damage to the ComfoAir Compact or bodily injury for which the manufacturer cannot be held responsible.

The manufacturer is not responsible for damage caused by:

- Failure to comply with the safety, operating and maintenance instructions contained in this manual;
- The installation of parts not supplied or not prescribed by the manufacturer. The installer is fully responsible for the use of such parts;
- Normal wear.

2.1.4 If the supply cord is damaged, it must be replaced by a special cord / assembly available from the manufacturer or its service agent. The replacement must be carried out by a qualified Electrician in accordance with IEE or local regulations.

2.1.5 To disassemble the unit, disconnect from mains supply and use a screwdriver to segregate the electronic components and motors from the plastic housing. Dispose items in accordance with WEEE.

2.1.6 **WEEE Statement**

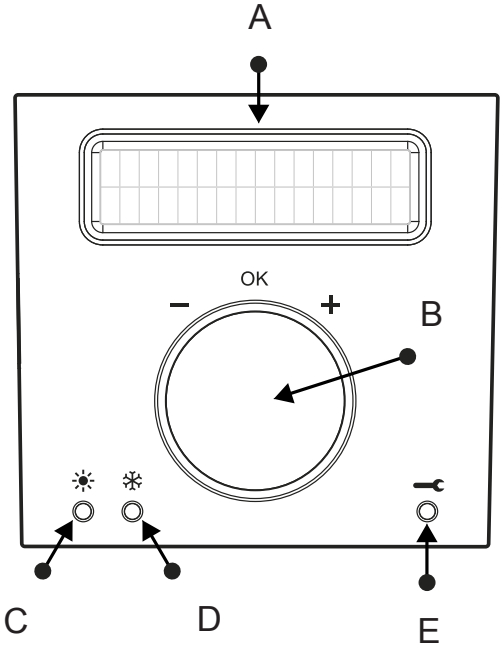


This product may not be treated as household waste. Instead it should be handed to an appropriate collection point for the recycling of electrical and electronic equipment.
For more detailed information about the recycling of this product, please contact your local council office or your household waste disposal service.

3.0 Controls

This section covers how to operate your ComfoAir Compact Heat Recovery unit.

3.1 **Overview of Integral LCD Display**

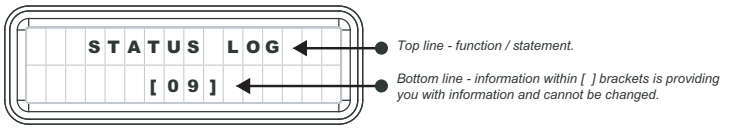


#	Meaning
A	Control Information Panel
B	Control Button
C	Summer ByPass LED
D	Frost Protection LED
E	Service/Fault LED

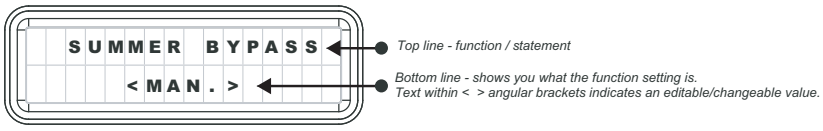
USER / SERVICE / EXAMPLES MENU

Below are views / explanations of what you would see on your control panel.

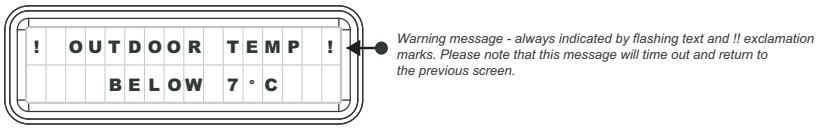
Example 1: Status / Service Log Screeen



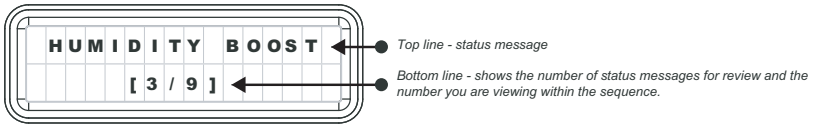
Example 2: Function Selection Screen



Example 3: Warning / Alert Message



Example 4: Status Message

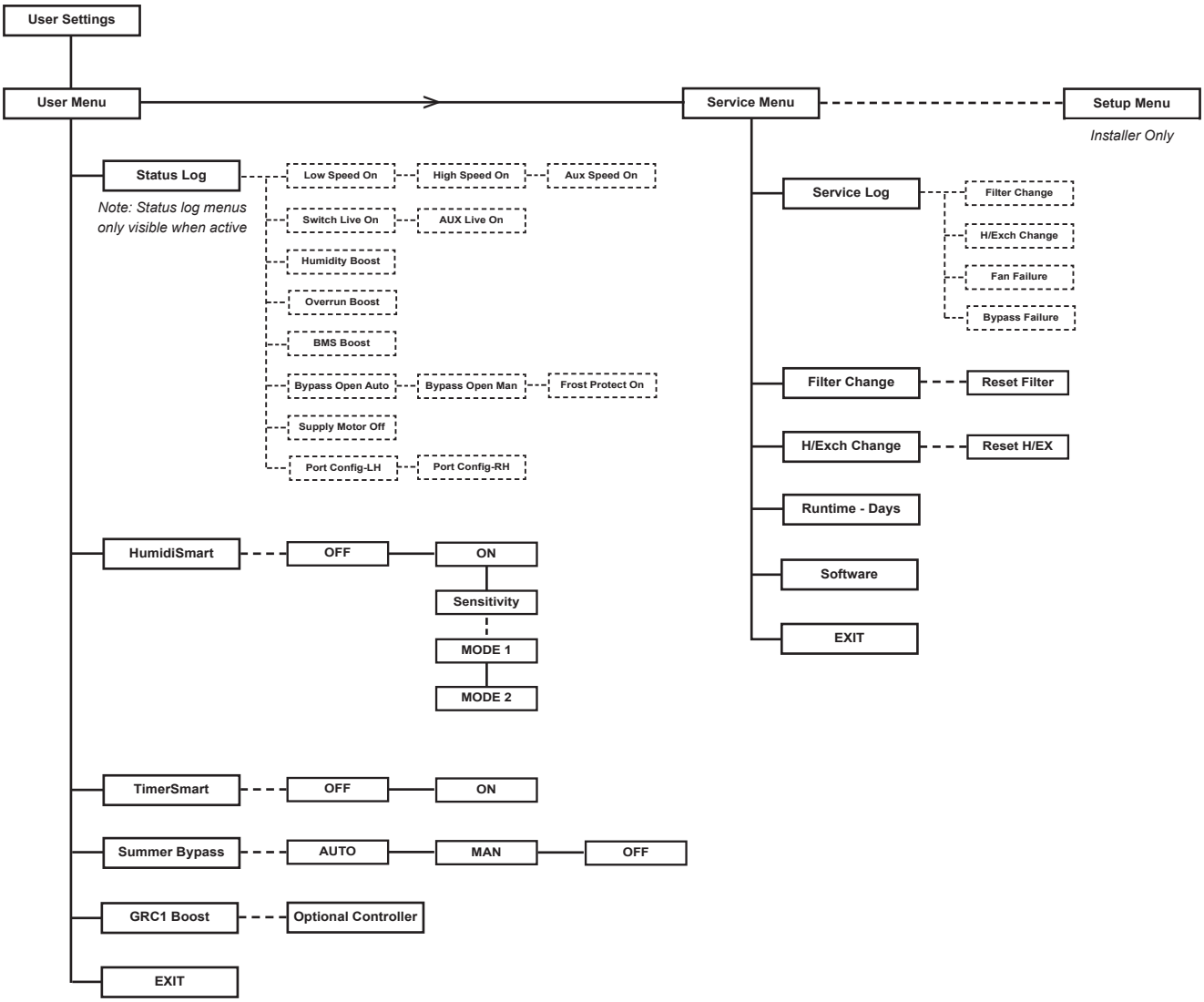


Note: For specific adjustment details, please refer to respective function shown on Pages 6 & 7.

3.1.1 How to navigate through the unit menu

1. Lift cover on front of unit.
2. Press the 'Control Button' to activate the panel.
3. Rotate the button clockwise or anti-clockwise to required setting of either 'User Menu' or 'Service Menu' and press the button.
3. Scroll to the required option and press button.
4. The current setting status will flash.
5. Rotate button to desired outcome.
6. Press button to confirm.
7. Screen will time out after 30 seconds.

Steps of the User Menu

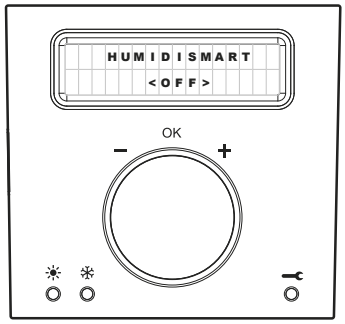


3.1.2

Function	Description
Smart Humidity 	Smart Humidity monitors the ambient humidity within the “wet” room environment and looks for short peaks of humidity made by either showering or bathing. This smart technology ensures that your ComfoAir 155 WM is not on boost for prolonged periods of time. *(See 3.1.3 for adjust function setting On/Off).*
Smart Timer 	Smart Timer monitors the length of time that there has been an occupancy presence detected within a “wet” room (via the Switch Live) and provides a fixed over-run time period to best match the length of time that the Switch Live is active. *(See 3.1.4 for adjust function setting On/Off).*
Smart Summer Bypass 	Smart Summer Bypass monitors the internal and external temperature and automatically identifies when the filtered summer bypass needs to be activated, protecting your home from overheating. *(See 3.1.5 for adjust function setting Auto/Manual/Off).*
Frost Protection 	Frost protection monitors the internal and external temperature and automatically identifies when the frost protection needs to be activated, protecting your unit from freezing.

3.1.3 **Smart Humidity**

To adjust the Smart Humidity Mode:



Factory set to ON
Options ON / OFF

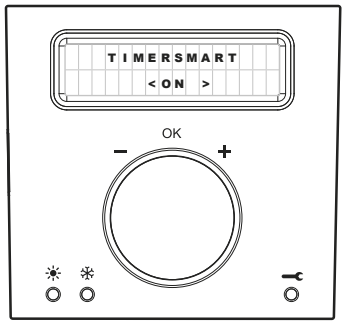
- Press control button to activate panel
- Scroll to “User Menu” option and press button to enter
- Scroll to “HumidiSmart” option and press button
- The current setting status will flash
- Rotate button to desired outcome
- Press to confirm
- Screen will time out after 30 seconds

Note:
You can adjust the sensitivity of your unit when Smart Humidity is ON. To adjust:

- Follow the steps above to 'HumidiSmart' option and select 'ON'
- Scroll right to the 'Sensitivity' option and press button
- The current setting status will flash
- Rotate button to desired outcome:
  Mode 1 for standard setting (default)
  Mode 2 for increased sensitivity
- Press to confirm
- Screen will time out after 30 seconds

3.1.4 **Smart Timer**

To adjust the Smart Timer Mode:

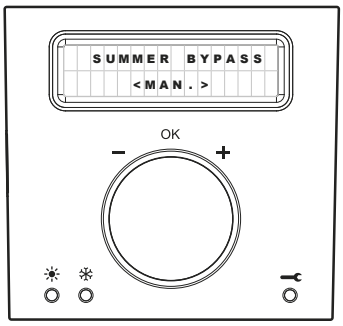


Factory set to ON
Options ON / OFF

- Press control button to activate panel
- Scroll to “User Menu” option and press button to enter
- Scroll to “TimerSmart” option and press button
- The current setting status will flash
- Rotate button to desired outcome
- Press to confirm
- Screen will time out after 30 seconds

3.1.5 **Smart Summer Bypass Manual Override**

To manually override the Smart Summer Bypass Mode:



- Press control button to activate panel
- Scroll to “User Menu” option and press button to enter
- Scroll to “Summer Bypass” option and press button
- The current setting status will flash
- Rotate button to desired outcome
- Press to confirm
- Screen will time out after 30 seconds

Factory set to AUTO
Options AUTO / MAN / OFF

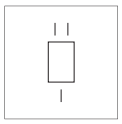
Note:

- If "manual" option selected, the option will be available to "OPEN" or "SHUT" the summer bypass
- Rotate button to desired outcome and press to confirm
- Rotate button to select period of time required (0-96 hours, in 6 hour increments, note: 0 will return unit to auto mode)
- Press to confirm

Note:
Unit will return to “Auto Mode” at the end of the manual time out period.
Unit will not allow the Summer ByPass to be opened at temperature below 7ºC.

3.1.6 **Ventilation Speed Control for ZGS2**

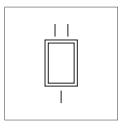
The ZGS2 is a hard wired switch used to switch between Low and High speed



- Press the switch towards the (I) to activate the Low Speed
- Press the switch towards the (II) to activate the High Speed

3.1.7 **Ventilation Speed Control for ZGS1**

The ZGS1 is a hard wired switch used to switch between Low, AUX and High speed



- Press to switch to the 'center' position to activate the Low Speed
- Press the switch towards the (I) to activate the AUX Speed
- Press the switch towards the (II) to active the High Speed

Note: AUX Speed may be set anywhere between 15%-100% airflow capacity. For set-up status please contact your installer for details.

3.1.8 **Ventilation Speed Control for SA 1-3V**

The SA 1-3V is a hard wired switch used to switch between Low, High and AUX speed

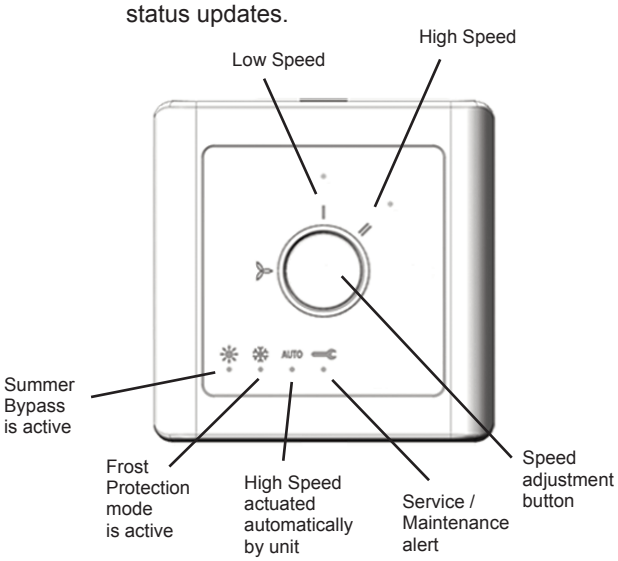


- Position 1 provides continuous Low Speed operation
- Rotate to 'position 2' to activate the High Speed
- Rotate to 'position 3' to activate the AUX speed ... *an additional 'away mode' setting enabling you to reduce your continuous airflow to avoid unnecessary ventilation / energy consumption whilst your home is empty*

Note: AUX Speed may be set anywhere from 15% airflow capacity. For set-up status please contact your installer for details.

3.1.9 **Ventilation Speed Control and System Status for ZGRC1**

The ZGRC1 is a hardwired controller used to switch between low and high speeds as well as provide system status updates.



To change speed setting

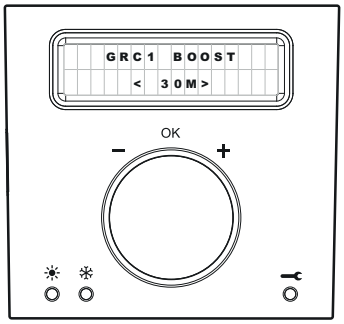
- Press button to identify speed and system status
- Press button again to change speed

Note:

- Unit will automatically return to low speed. See LCD Control on ComfoAir 155 WM for high speed time duration set up.

ZGRC1 System Status Alerts

- Status alerts are for indication only
- If Service / Maintenance is required please return to the ComfoAir 155 WM unit and follow guidelines in Section 4



LCD Control on ComfoAir 155 WM

- Press control button to activate panel
- Scroll to "User Menu" option and press button to enter
- Scroll to "GRC1 Boost" option and press button
- The current 'Boost' setting status will flash
- Rotate button to desired outcome (30, 60, 90 or 120 minutes)
- Press to confirm
- Screen will time out after 30 seconds

Factory default 30 mins. Options 30, 60, 90 or 120 mins

4.0 Servicing & Maintenance

Zehnder recommends a maintenance contract with a specialist ventilation maintenance company. Some installers provide a maintenance contract in which the user maintenance can be integrated. Contact the supplier of the unit for a list of registered installers nearby. The warranty becomes invalid if:

* Parts are used that have not been supplied by the manufacturer.
* The unit is used without filters.

4.1 **Warning: The units must be isolated from the Mains Supply before commencing any service or maintenance work.**

Part of system	Limit	Procedure
Valves	6 months	Clean the valves
Condensation drain	6 months	Fill the condensation drain
Filters	1 year	Replace the filters
Heat Exchanger	5 years	Clean the Heat Exchanger
Motor Impeller	5 years	Clean the Motor Impeller

4.1.1 Your ComfoAir 155 WM unit contains forward curved impellers that require cleaning every 5 years, it is recommended that this is carried out at the same time as the Heat Exchanger cleaning.

Note: The motors have sealed for life bearings, which do not require lubrication.

Periodic cleaning of the ceiling supply and extract valves should be carried out as required, taking care not to adjust the valves set position, as this may cause an unbalanced system, resulting in either under-ventilation or unnecessary over-ventilation occurring. *(See Section 4.2.1)*

Periodic inspection and/or replacement of filters should be carried out. Frequency greatly depends on geographic location and urban density. The filters trap dirt in the atmosphere and act as protection for both the system and the dwelling. The system's airflow can be reduced if the filters are not replaced, this can affect overall system performance. For this reason, it is important to check the filters regularly and to replace them as often as each year *(See Section 4.1.8).*

Periodic inspection and/or cleaning of the heat exchanger should be carried out. The filters should help to protect the heat exchanger but over time, dirt in the atmosphere can penetrate the filters and gain access to the heat exchanger. The system's airflow can be reduced if the heat exchanger is not cleaned and this can affect overall system performance. For this reason, it is important to check the status of the heat exchanger regarding the time remaining indicated on the display *(See Sections 4.1.9).*

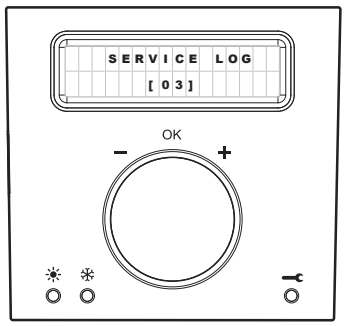
The condensation drain is connected to the domestic waste-water system. To prevent sewer smells from entering your home, the water seal of the domestic waste-water system must always contain water. You can achieve this by pouring a cup of water into the water seal.

4.1.2 **Service Indicator**

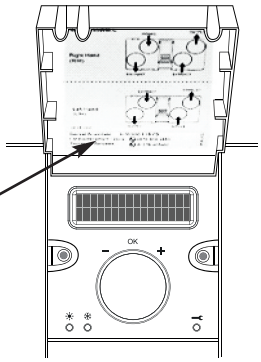
If the filters need replacing or the heat exchanger requires cleaning, the LED with the Service symbol will appear. To establish what needs to be replaced/cleaned, you will need to access the Service Menu and review the Service Log. Complete required actions and note the details on the Service & Maintenance Log located on page 13.

4.1.3 **Service Log**

This enables you to identify what your system requires, to review the Service Log:



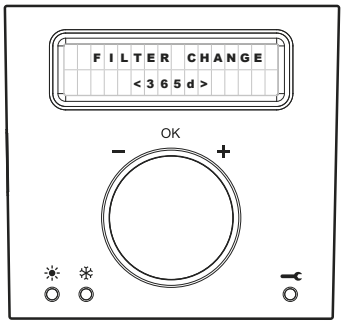
- Press control button to activate panel
- Scroll to "Service Menu" option and press button to enter
- First option is the "Service Log" which indicates the number of logs for review, press button to enter
- Scroll through each log and press button to return back to main options within the Service Menu



NOTE: If "fan failure" log is showing please contact us or your installer and quote your serial number which can be found on the underside of the unit controller cover.

4.1.4 **Filter Status**

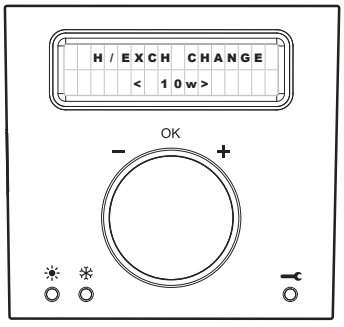
If the Filter status within the "Service Log" is showing as 0 days the filters will need to be replaced *(See Section 4.1.8).*



- Press control button to activate panel
- Scroll to "Service Menu" option and press button to enter
- First option is the "Service Log" which indicates the number of logs for review
- Scroll to "Filter Change" option and press button
- The request to reset timer will flash
- Press to confirm
- Screen will time out after 30 seconds
- Note details on the Service & Maintenance Log on page 13

4.1.5 **Heat Exchanger Status**

If the Heat Exchanger status within the "Service Log" is showing as 0 weeks the heat exchanger will need to be cleaned (See *Section 4.1.9).*



- Press control button to activate panel
- Scroll to "Service Menu" option and press button to enter
- First option is the "Service Log" which indicates the number of logs for review
- Scroll to "H/Exch Change" option and press button
- The request to reset timer will flash
- Press to confirm
- Screen will time out after 30 seconds
- Note details on the Service & Maintenance Log on page 13

4.1.7 **Run Time**

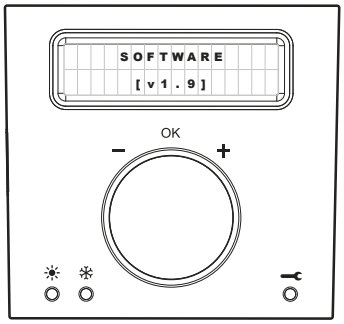
To review the length of time your unit has been in operation:



- Press control button to activate panel
- Scroll to “Service Menu” option and press button to enter
- Scroll to "Runtime - Days" option to review (time shown in days)
- Screen will time out after 30 seconds

4.1.8 **Software Identification**

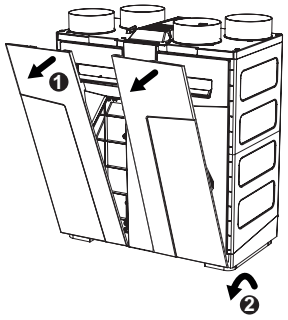
To review what software version is activated on your unit:



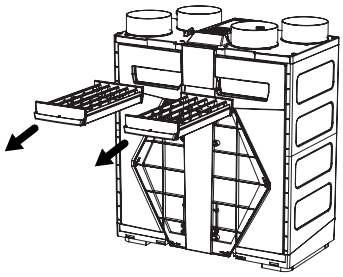
- Press control button to activate panel
- Scroll to “Service Menu” option and press button to enter
- Scroll to “Software” option to review
- Screen will time out after 30 seconds

4.1.9 **To replace the Filters**

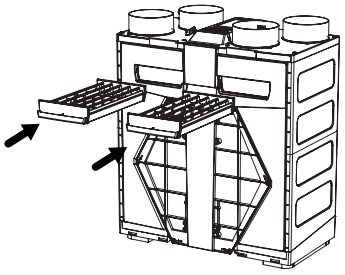
- Replace at approximately 1 year interval.



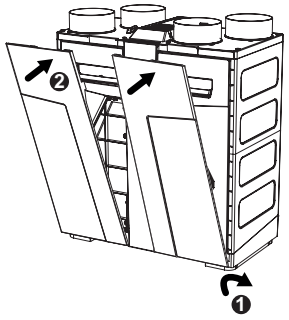
Step 1 Isolate the unit from the Mains Supply. Pull down the top part (❶) of the two front panels and lift out (❷) of locating tabs at the bottom.



Step 2 Remove both filters from the unit by the handles.



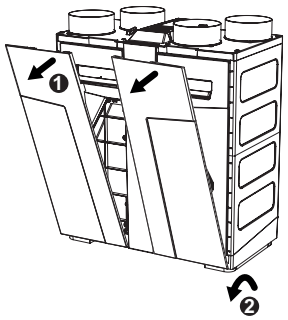
Step 3 Re-insert new filters into the unit.



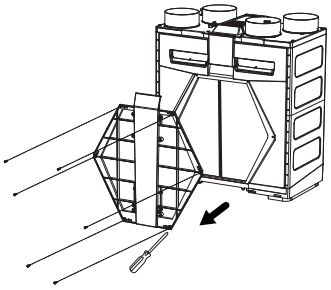
Step 4 Locate the front panels in the bottom tabs (❶) and click them back into place at the top (❷). Turn the Mains Supply back on. Reset Filter Status *(See Section 4.1.4*). Note details on the Service & Maintenance Log on page 13.

4.1.9 **To Clean the Heat Exchanger and Motor Impeller**

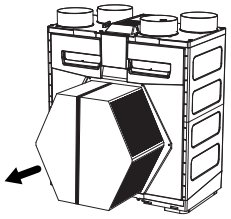
- Clean approximately at five year intervals.



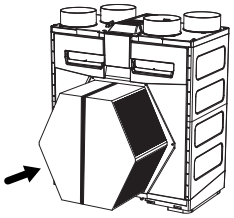
Step 1 Isolate the unit from the Mains Supply. Pull down the top part (❶) of the two front panels and lift out (❷) of locating tabs at the bottom.



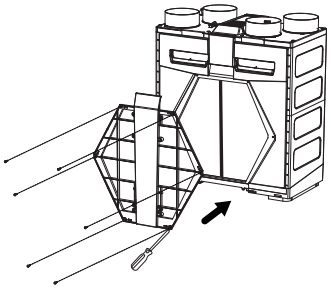
Step 2 Unscrew the six heat exchanger locating screws and remove panel.



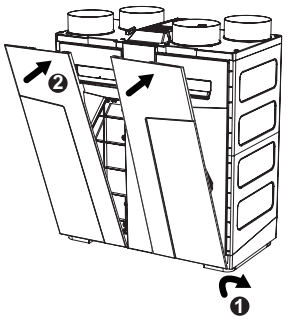
Step 3 Remove the heat exchanger by gently pulling on the nylon strap, taking care not to damage it. Clean each face of the heat exchanger with a vacuum cleaner and wash with warm water. Gently clean the motor impellers on both sides of the unit by using a brush. Ensure heat exchanger is dry before continuing to Step 4.



Step 4 Re-insert the cleaned heat exchanger, taking care not to cause damage.



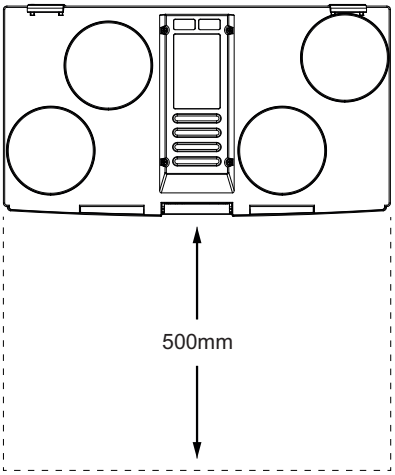
Step 5 Reposition the panel and secure with the six locating screws.



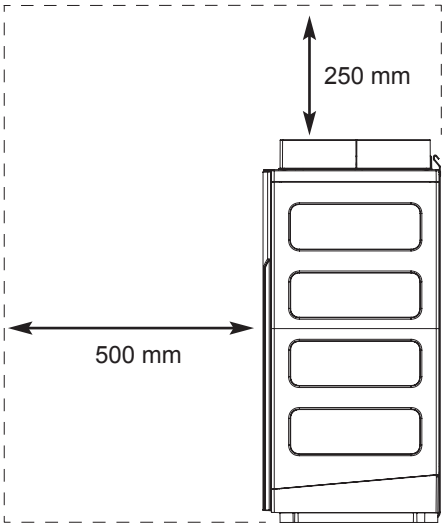
Step 6 Locate the front panels in the bottom tabs (❶) and click them back into place at the top (❷). Turn the Mains Supply back on. Reset Heat Exchanger Status *(See Section 4.1.5).* Note details on the Service & Maintenance Log on page 13.

Important Note: Do not attempt to clean the heat exchanger with detergent.

4.2.0 **Access for Maintenance**



TopView



Side View

4.2.2 **Service & Maintenance log**

6 months after installation

Activity	Y1	Y2	Y3	Y4	Y5
Clean the valves					
Fill the condensation drain of the domestic waste-water system					

12 months after installation

Activity	Y1	Y2	Y3	Y4	Y5
Clean the valves					
Fill the condensation drain of the domestic waste-water system					
Replace the filters *(note filter serial number within activity section)*					
Clean the heat exchanger	n/a	n/a	n/a	n/a	
Clean the motor impellers	n/a	n/a	n/a	n/a	

Date	Activity	Initials
Example: dd/mm/yy	*Filters replaced (filter serial number xxxxxxxxxx)*	

6 months after installation

Activity	Y6	Y7	Y8	Y9	Y10
Clean the valves					
Fill the condensation drain of the domestic waste-water system					

12 months after installation

Activity	Y6	Y7	Y8	Y9	Y10
Clean the valves					
Fill the condensation drain of the domestic waste-water system					
Replace the filters *(note filter serial number within activity section)*					
Clean the heat exchanger	n/a	n/a	n/a	n/a	
Clean the motor impellers	n/a	n/a	n/a	n/a	

Date	Activity	Initials

5.0 The Guarantee Period

5.1 This Zehnder ComfoAir Compact 155 WM has a 3 Year Guarantee.

5.1.1 This does not affect your statutory rights.

5.1.2 Full details available on request.

All information is believed correct at time of going to press. E&OE.

All goods are sold according to Zehnder's Standard Conditions of Sale which are available on request.

All dimensions referred to are in millimetres unless otherwise stated.

Zehnder Group International Sales reserves the right to change specifications and prices without prior notice.

© Copyright Zehnder Group 2022

Zehnder Group Belgium • Blarenberglaan 3C/001 • 2800 Mechelen • België
T +32 15 28 05 10 • F +32 15 28 05 11
info@zehnder.be • www.zehnder.be

Zehnder Group International Sales • Almweg 34 • 77933 Lahr • Germany
T +49 7821 586-392 • F +49 7821 586-406
international.sales@zehndergroup.com • www.zehnder-systems.com

CE

January 2022