



INSTALLATION MANUAL
VENTILATION
UNIT VASCO
T350/T500

SYSTEM D

CONTENTS

1. INTRODUCTION	01
2. SAFETY	01
3. INSTALLERS MANUAL	02
· CONTENTS PACKAGING	02
· DIMENSION	04
· INSTALLATION CONDITIONS	05
· ASSEMBLY PREPARATIONS	05
· ELECTRIC PRE-HEATING ELEMENT T350/T500	07
· MOUNTING THE VENTILATION UNIT/ CONDENSATION DRAIN	08
· AIR DUCT CONNECTIONS	09
· MOUNTING SWITCHES	10
· COMMISSIONING AND ADJUSTMENT	14
4. MAINTENANCE	17
5. ELECTRICAL DIAGRAM	19
6. MALFUNCTION	20
7. PARTS LIST	22
8. WARRANTY CONDITIONS	23

1 INTRODUCTION

The ventilation unit ensures a healthy indoor climate through continuous ventilation. For this purpose, a minimum ventilation flow rate is always required. The unit is therefore not equipped with an on/off switch. The resident must ensure that the unit is always plugged into the wall socket and that the wall socket is live.

The D ventilation system from Vasco Ventilation Concepts is a balance ventilation system with heat recovery that guarantees a comfortable and healthy indoor climate in a controlled way.

2 SAFETY

Only a professional installer is authorised to open the ventilation unit. The fitter must use the appropriate tools for each job.

The electronic components of the ventilation unit may be electrically live.

In the event of a defect, contact a professional installer and have repairs carried out only by qualified personnel.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or instructed in the use of the appliance by a person responsible for their safety.

is for their safety. Children should be supervised to ensure that they do not play with the device.

If the power cord is damaged, it must be replaced by the manufacturer, the after-sales service or persons with similar qualifications in order to avoid danger.

The user is responsible for the safe disposal of the ventilation unit at the end of its service life, in accordance with the locally applicable laws or regulations. You can also dispose of the unit at a collection point for used electrical appliances.

**ELECTRONIC
COMPONENTS**



**SAFETY
INSTRUCTION**

MAINTENANCE

The ventilation unit must be inspected periodically for dirt. For inspection purposes the ventilation unit must be switched off by removing the mains plug from the wall socket. The ventilation unit contains rotating mechanical parts. If you remove the plug from the socket, these parts continue to rotate for a few seconds. Therefore, wait for about 20 seconds after turning off the ventilation unit so that the components come to a standstill.



Make sure that the plug cannot be reinserted into the power socket by another person before you have finished your work. Do not plug the unit into the power socket until the ventilation unit has been installed and all components have been assembled.

GUARANTEE

Vasco is not liable for any damage caused by not observing the safety instructions or not following the instructions in the user manual. You will find the guarantee conditions on page 24 of this manual.



3 INSTALLATION MANUAL FOR THE INSTALLER

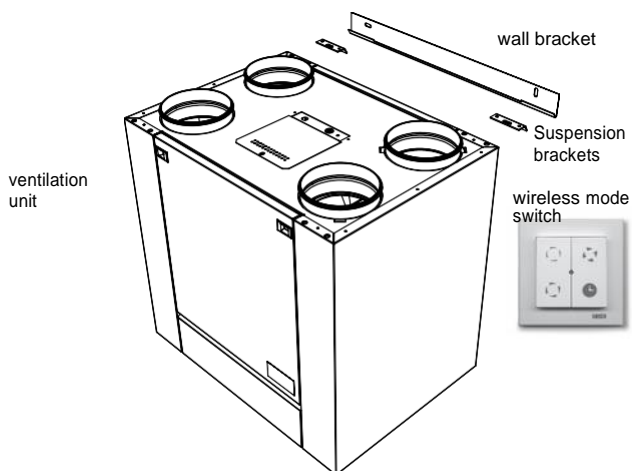
PACKAGING

The ventilation unit is delivered on a pallet and packed in a box. Remove the packaging and check the contents.

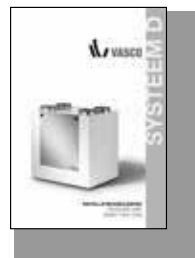
The content consists of:

- 1 ventilation unit
- 1 wall bracket
- 1 wireless mode switch
- 1 user manual
- 1 installation manual
- 2 baffle plates
- 2 suspension brackets with bolts
- 2 galva sleeves

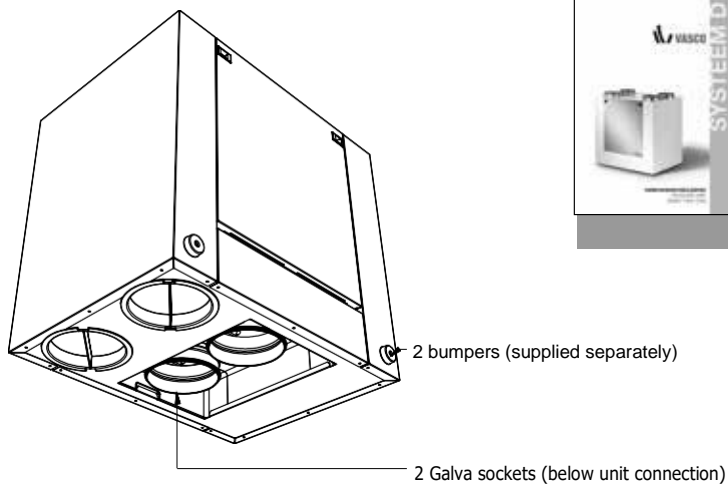
The appliance must be transported and unpacked with due care. Make sure that the packaging materials are disposed of in an environmentally friendly way.



Installation manual

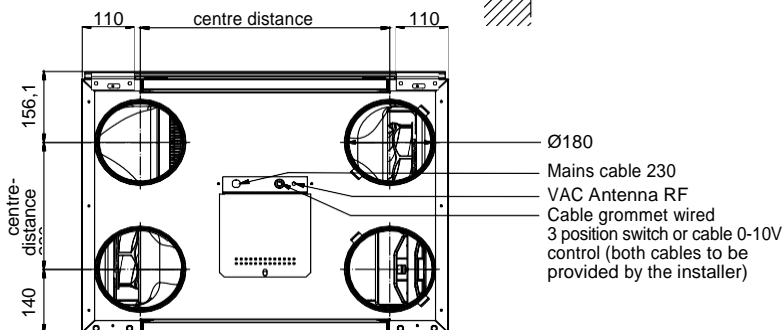
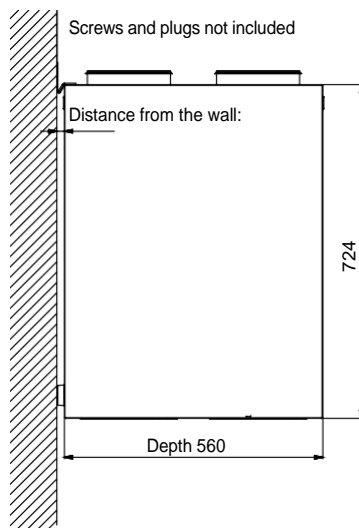
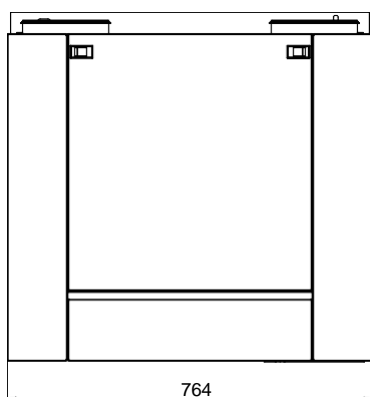
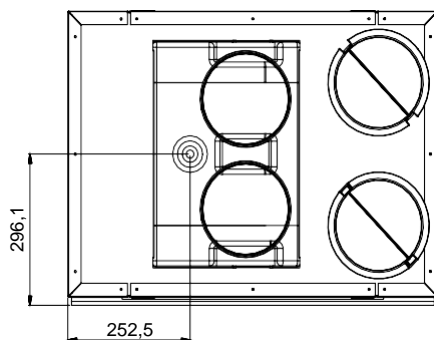


User Manual



DIMENSION

Sizes indicated in mm.



INSTALLATION CONDITIONS

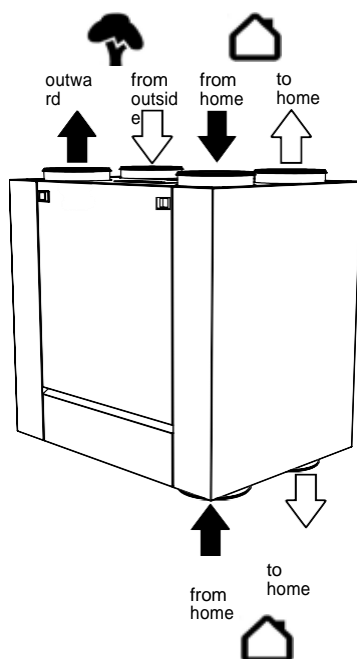
To determine whether the installation of the ventilation unit in a certain room is possible, the following aspects should be taken into account:

- the room must be frost-free
- The installation must be carried out in accordance with the general and locally applicable safety and installation regulations for, among other things, ventilation, electricity and sewerage as well as the regulations in this manual.
- The following facilities must be available in the room:
 - air duct connections
 - 230V \pm 10%, single-phase, 50Hz socket
 - provision for the condensation drain
- no construction dust may enter the ventilation unit or the air duct system

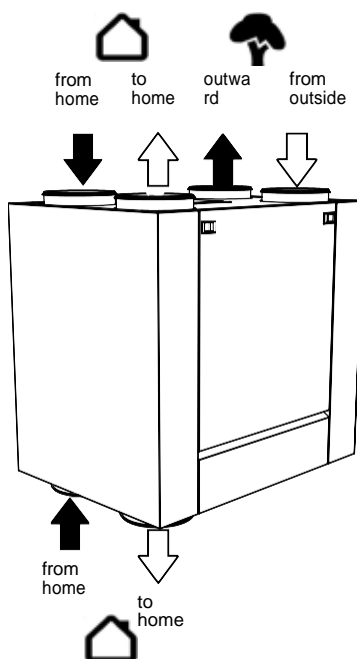
ASSEMBLY PREPARATIONS

The ventilation unit can easily be mirrored so that the house connections can be on the right or left side.

STANDARD CONFIGURATION RIGHT REVERSED

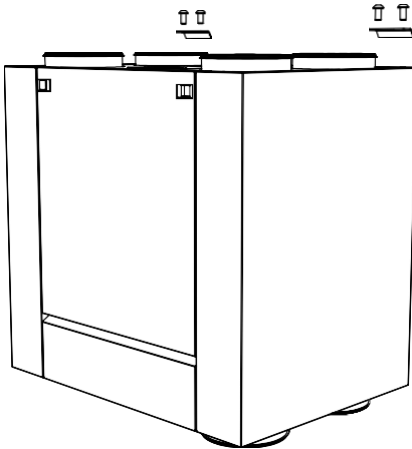


CONFIGURATION LEFT

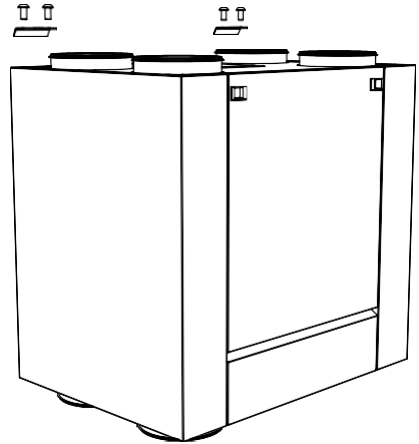


For this, only the mounting brackets of the ventilation unit have to be fixed on the right side as shown in the following figures:

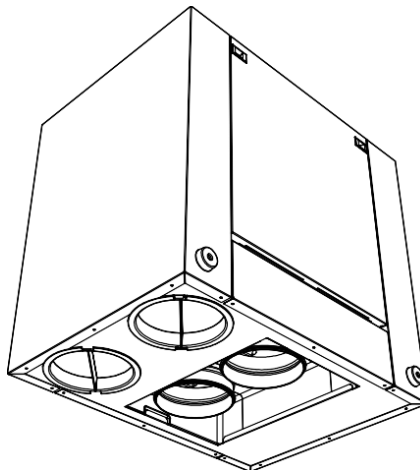
STANDARD CONFIGURATION RIGHT REVERSED



CONFIGURATION LEFT



Stick the protective caps on the ventilation unit before fixing the ventilation unit to the wall.



**ELECTRIC
PREHEATING
ELEMENT
T350 /T500**

For the T350 /T500 units, an electric pre-heating element is optionally available. There is one type:

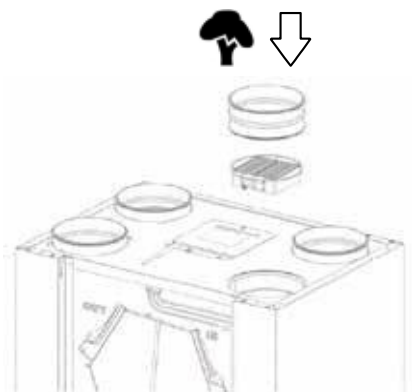
Electric pre-heating element T350 / T500 Article number 11VE 44130

**MOUNTING AND ELECTRICAL CONNECTION
OF THE PRE-HEATING ELEMENT**

Attention: The electric pre-heating element must be in place before the ventilation unit is fixed to the wall.

Attach the door panel to the connection "from outside".

The electric pre-heating element is mounted on the socket **"from outside"**.



The cable of the electric pre-heating element must be led through the provided notches to the PCB and connected to terminal X17.

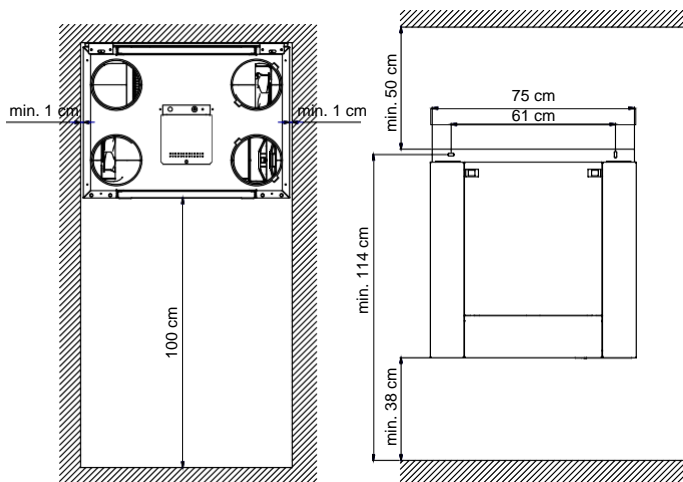


X13
X14
X27
X17



MOUNTING VENTILATION

The ventilation unit must be mounted on a wall of sufficient strength. Wall plugs and screws are not supplied. Use the appropriate fixing materials depending on the wall structure.

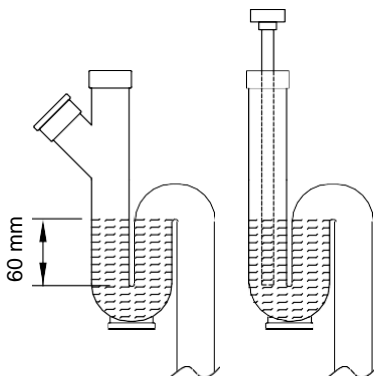


CONDENSARY FOOD



The condensate from the ventilation unit must be discharged in a proper manner. For this purpose, the ventilation unit must be connected to the indoor sewage system in a frost-free and airtight manner.

A siphon is part of this drainage system and must be provided on site separately. We advise to glue the connection to the ventilation unit or to connect it airtight by using a seal. The connection to the ventilation unit is Ø32mm. If the condensate drain is connected to the siphon with a hose, it is important that the end of the hose is at least 60 mm below the water level. For a fixed connection, we recommend an additional filling possibility near the siphon.



AIR DUCT CONNECTIONS

For a low-noise ventilation system, Vasco recommends using the components from the range offered for Vasco.

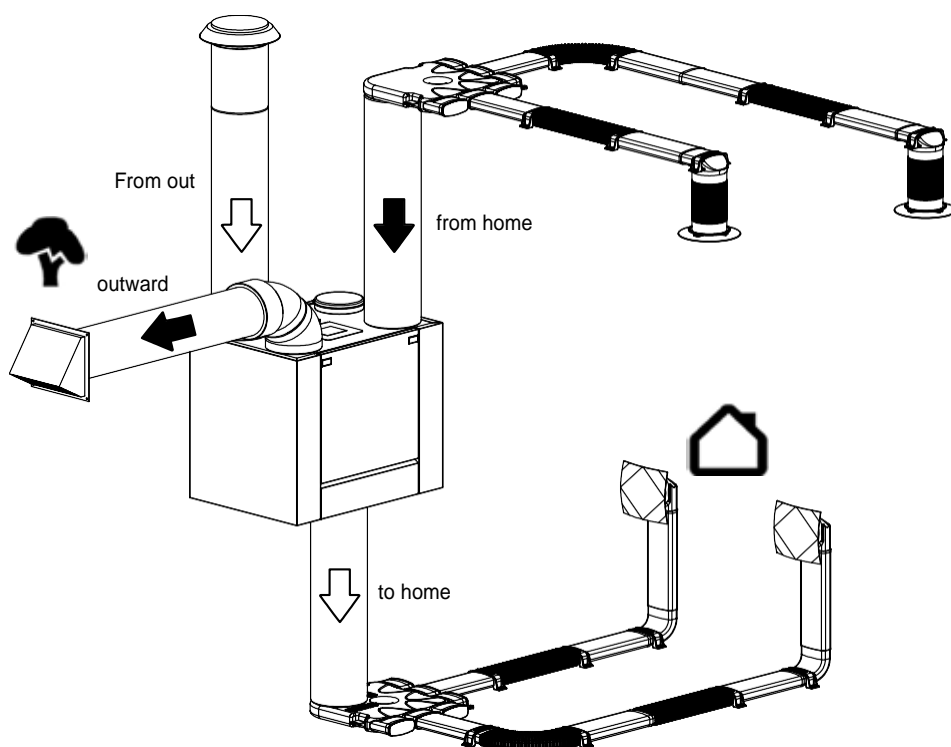
Mount the installation with the lowest possible air resistance and free of leaks. The main air ducts should have an internal diameter of Ø170 mm or Ø180 mm.

Connection residential side

Vasco recommends using the Vasco Easyflow air duct system.

External connection

The air ducts of the outside connection should always be insulated to prevent condensation on the outside of the air duct.



The above drawing is a connection possibility, other connection configurations are possible.

MOUNTING SWITCHES

Mounting tips

Always place the switch away from places where moisture drops can form.

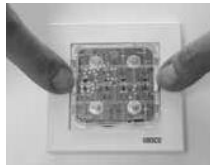


Never place the wall transmitter in a metal housing or near large metal objects.

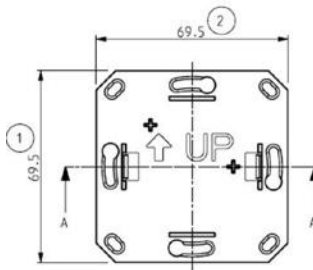
MOUNTING RF SWITCH

Always install the RF position switch in an easily accessible location.

Step 1: Loosen the knobs and the electronics module to free the base plate for wall mounting.



Step 2: Draw screw holes for the base plate on the wall.



Step 3: Mount the base plate to the wall with screws. Step 4:

Mount in the order shown below:



1.

Window 2. Base 23. Electronics and buttons

MOUNTING CO₂ RF SWITCH

Always install the CO₂ RF switch in an easily accessible location in the room in which you wish to monitor the CO₂ concentration. Always provide a 230 V power supply for the switch.



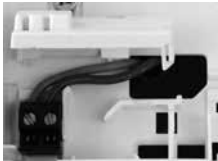
Step 1: Dismantle the switch.



Step 2: Screw the base plate onto the wall.



Step 3: Open the cover on the base plate to reveal the electrical connections.



Step 4: Connect the 230V supply voltage to the connectors.



Step 5: Place the cover back on the switch.

MOUNTING RH RF SWITCH

Always install the RH RF switch in an easily accessible place in the bathroom.



Step 1: Dismantle the switch.

Step 2: Draw the screw holes of the base plate onto the wall.



Step 3: Screw the base plate to the wall.

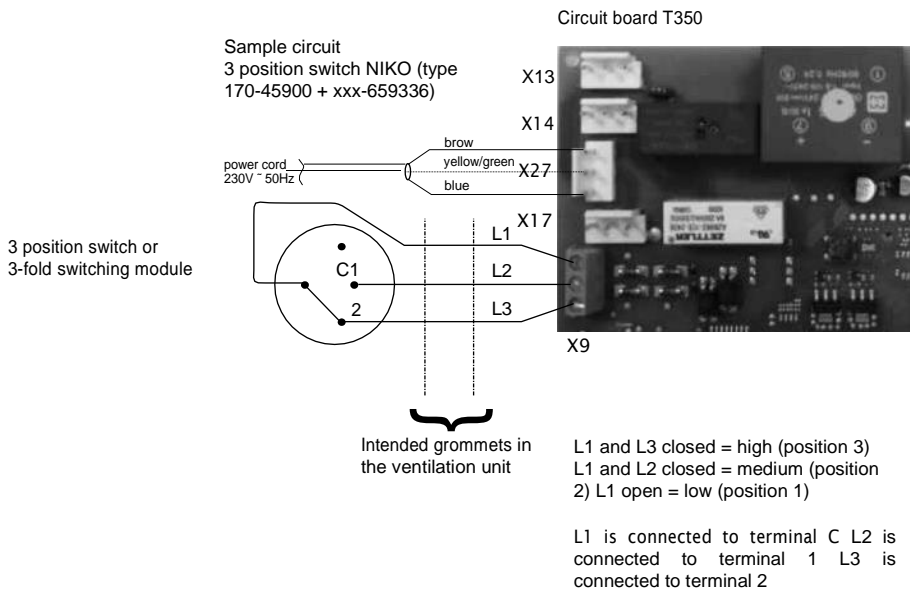


Step 4: Place the cover back on the switch.

CONNECTION TO A WIRED 3 POSITION SWITCH OR A 3GANG SWITCH MODULE

To connect a wired 3-position switch, the ventilation unit must be opened in a correct manner in order to reach the PCB. This method can be found in the chapter of the electric pre-heating element. The correct cable must then be led to the PCB via the cut-out with grommet provided for this purpose in the ventilation unit.

Finally, connect the cable to terminal X9 "Connection 3 position switch" according to the following diagram.



**CONNECTION FOR 0-10 V SIGNAL
(BUILDING MANAGEMENT SYSTEM
APPLICATION)**

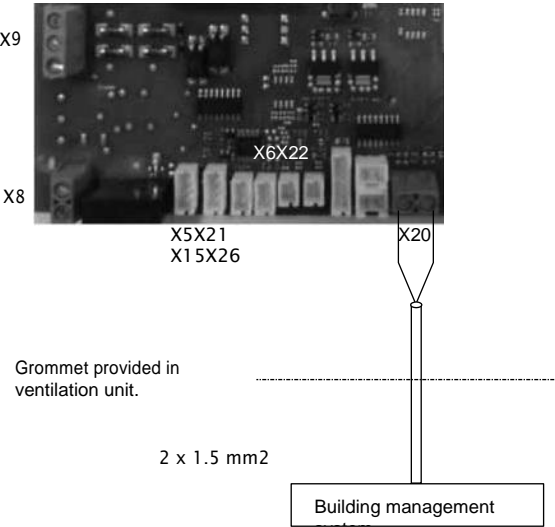
With 0-10 V, the flow rate can be steplessly adjusted between the minimum and maximum flow rate of the ventilation unit. This corresponds to the following values:

	T350	T500
1 V	40 m³/h	60 m³/h
1 – 10 V	Linear relationship	Linear relationship
10 V	350 m³/h	500 m³/h

To connect a 0-10 V signal, the cover on the ventilation unit must be opened in a correct manner so that the circuit board can be reached. This method can be found in the chapter on the electric pre-heating element. Next, a correct cable must be led to the PCB through the grommet in the ventilation unit.

Finally, connect the control signal to terminal X26 "Building control system connection" according to the following diagram.

Circuit board T350 /T500



COMMISSIONING AND
ADJUSTMENT

The position switch is registered with the ventilation unit at the factory.

If all air and electrical connections have been made, the plug may be inserted into the mains socket.



After 1 minute and 30 seconds, the fans start up briefly (about 4 seconds).

Then you have 10 minutes to set the air volume and to connect additional optional position switches.



Adjusting the air volume:

Press the button for position 3 for at least 3 seconds and release it when the LED in the centre of the switch gives a series of light signals. These indicate the air quantity set. In the factory, the LED lights up orange once.

Indication LED on switch	T350	T500
1x green	230 m³/h	350 m³/h
2x green	250 m³/h	375 m³/h
1x orange (standard)	270 m³/h	400 m³/h
2x orange	290 m³/h	425 m³/h
3x orange	310 m³/h	450 m³/h
1x red	330 m³/h	475 m³/h
2x red	350 m³/h	500 m³/h



Reducing the air volume:

Press the button of position 1 once. The LED indication will change according to the table. By repeatedly pressing the button of position 1 at 1 second intervals, the air volume is further reduced.



Increasing the air volume:

Press the button of position 2 once. The LED indication will change according to the table. By repeatedly pressing the button at 1 second intervals, the of position 2, the air volume is further increased.



Press the button of position 3 for at least 3 sec. to confirm the change. If the RF switch remains untouched for one minute, the changes are automatically saved.

Activating and deactivating additional optional RF switches:

The switch supplied with the unit is factory-coupled to the ventilation unit. In total, up to 20 switches can be connected to the system.

Activating and deactivating additional optional RF switch (11VE20012):

Sign up:

Unplug the ventilation unit and plug it back in. After this, the ventilation unit will search for new switches for 10 minutes. Press the buttons for position 2 and timer simultaneously for at least 3 seconds. If the pairing is successful, the LED in the middle lights up green twice.



Tip: You can link one switch to a maximum of 3 units

Sign off:

Remove the plug from the socket and put it back. The ventilation unit can disconnect switches for 10 minutes. Press the buttons of position 1 and 3 simultaneously for at least 3 seconds. The switch LED lights up orange twice to indicate that the switches have been disconnected.



Activating and deactivating optional CO₂ RF switch (11VE20013):

Sign up:

Unplug the ventilation unit and plug it back in. After this the ventilation unit will search for new switches for 10 minutes. After that, click the sensor onto the bottom plate to put it back on.

Touch the bottom right operating zone for at least 3 seconds. When all LEDs are flashing, release the control zone. If the pairing is successful the LED in the top left-hand corner will light up green twice and a LED will light up on the right-hand side to indicate the respective position of the CO₂ RF switch.

Tip: You can connect one switch to a maximum of 3 units:

Briefly de-energise the switch by clicking it out and back into the base plate. The switch can disconnect ventilation units for 10 minutes. Touch the bottom right operating zone for at least 10 seconds. When all the LEDs light up green for the second time, you must let go of the control zone. If several ventilation units are registered, all registered units are now disconnected. The LED of the switch lights up red four times to indicate that the units have been disconnected.





Activating and deactivating additional optional RH RF switch (11VE20014):

Sign up:

Unplug the ventilation unit and plug it back in. After this, the ventilation unit will search for new switches for 10 minutes. Then take out the batteries and replace them (see RH RF switch battery replacement).

Touch the bottom right operating zone for at least 3 seconds. When all LEDs are flashing, release the operating zone. If the pairing is successful the LED in the upper left corner will light up green twice and a LED will light up on the right indicating the respective position of the RH RF switch is located.

Tip: You can connect one switch to a maximum of 3 units:



Momentarily de-energise the switch by removing the batteries from the sensor and inserting them again (see RH RF switch battery replacement). The switch can disconnect ventilation units for 10 minutes. Touch the lower right control area for at least 10 seconds. When all the LEDs light up for the second time, release the control zone. In case of several registered ventilation units, all registered units are now logged off. The LED of the switch lights up red four times to indicate that the units have been disconnected.

4 MONITORING

The user must ensure that the entire installation is maintained periodically by the installer.

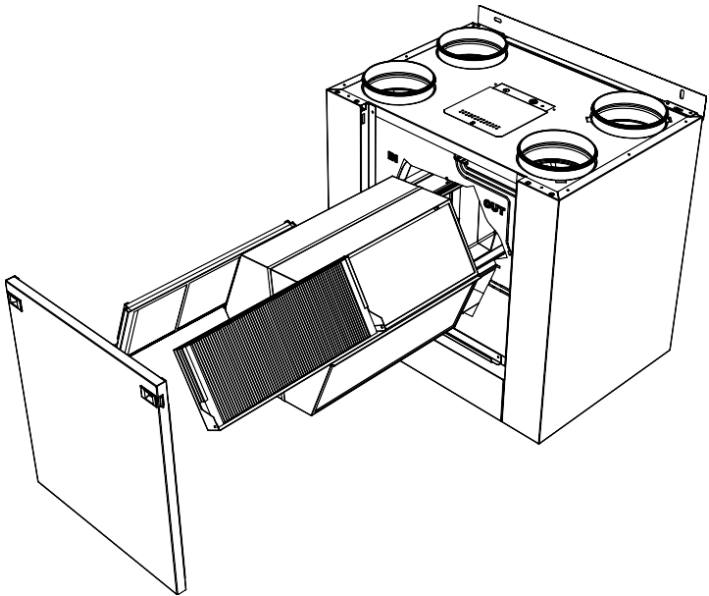


Remove the plug from the mains socket before commencing maintenance work.

INSPECTION / CLEANING OF HEAT

1x per four years

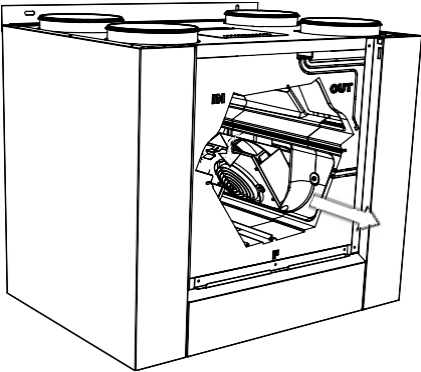
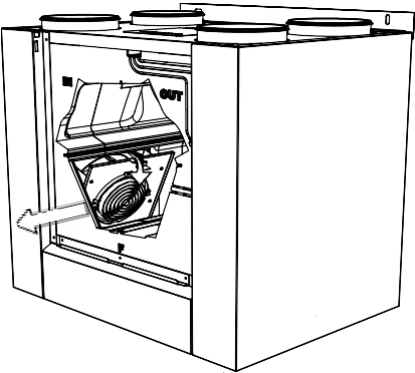
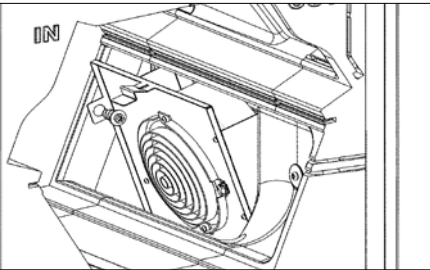
- Dismantle the door panel.
- Remove the filter trays from the unit.
- Pull the strap of the heat exchanger, never remove it!
- If necessary, clean the heat exchanger by wiping the four surfaces with a damp cloth.
- Do not use aggressive or solvent cleaning agents.
- Before pushing back the heat exchanger, check the tray of the condensation drain.
- Carefully slide the exchanger back into the device without damaging the sealing rubbers.
- Slide the filter trays back into the unit.
- Mount the door panel.



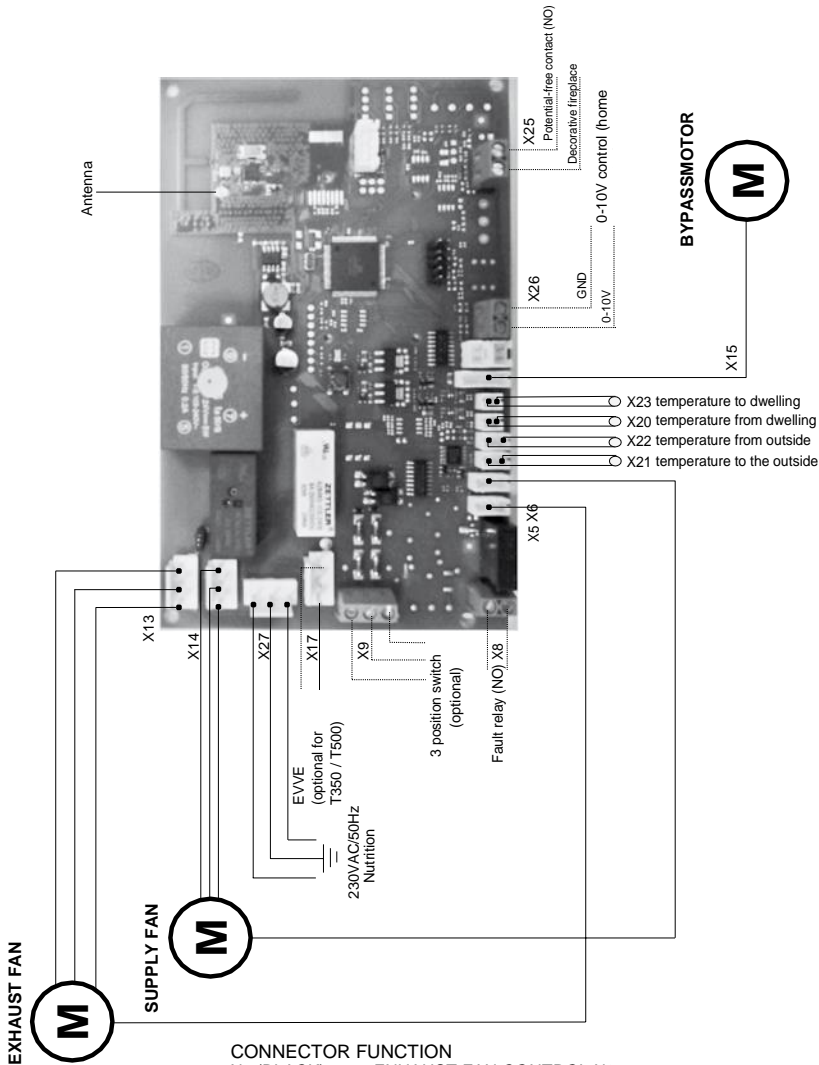
INSPECTION / CLEANING VENTILATORS

1x per four years

- Dismantle the door panel.
- Remove the filter trays from the appliance.
- Pull the strap of the heat exchanger, never remove it!
- Disconnect the connectors.
- Disconnect the temperature sensors.
- Loosen the screw on the fan module.
- Tilt the fan module by pulling the metal tab.
- Pull the fan module out of the unit.
- Do this for both fan modules.
- Use a soft brush to clean the fans and sensors and a Hoover to remove the dust
- Attention, do not damage the paddles when cleaning and certainly do not remove the clips on the paddles, these are used for balancing the wheel
- Reinstall everything in reverse order.



5 ELECTRICAL DIAGRAM



CONNECTOR FUNCTION

- X5 (BLACK) = EXHAUST FAN CONTROL X6
- (WHITE) = SUPPLY FAN CONTROL
- X8 = FAULT RELAY (NO), CLOSSES WHEN FAULT OCCURS
- X9 = WIRED 3 POSITION SWITCH CONNECTION
- X13 (BLACK) = EXHAUST FAN POWER SUPPLY
- X14 (WHITE) = SUPPLY FAN POWER
- X15 = BYPASS MOTOR CONTROL
- X17 = ELECTRIC PRE-HEATING ELEMENT CONNECTION
- X20 (BLACK) = TEMPERATURE SENSOR OF THE HOUSE
- X21 (BLACK) = TEMPERATURE SENSOR TO OUTSIDE
- X22 (WHITE) = TEMPERATURE SENSOR FROM OUTSIDE
- X23 (WHITE) = TEMPERATURE SENSOR TO THE HOUSE
- X25 = DECORATIVE FIREPLACE CONNECTION (POTENTIAL-FREE CONTACT NO)
- X26 = CONNECTION 0-10V CONTROL (HOME AUTOMATION)
- X27 = POWER SUPPLY 230 VAC / 50HZ

6 MALFUNCTION

OBSERVATION POSSIBLE	CAUSE SOLUTION
Ventilation unit runs at a higher speed than when it was first put into operation.	<div>Filters dirty.</div> <div>Clean filters (see page 6).</div>
LED display lights up "2 x orange" when the switch is operated.	<div>Filter life reached.</div> <div>Change filters and reset error signal (see page 6).</div>
Ventilation unit switches to high speed - the desired flow rate is not achieved.	<div>Air flow blocked. The constant flow control ensures automatic adjustment of the speed if obstructions restrict the airflow.</div> <div> Check: <ul style="list-style-type: none"> - whether all channels are connected correctly. - that no unwanted parts have entered the ventilation unit (during the construction phase). - there are no sharp bends, crushed channels, etc. in the risers. </div>
Periodically, there is only an exhaust and no supply of air.	<div>Automatic frost protection is active (defrosting cycle of the unit).</div> <div>This is the normal operation of the unit whereby the ventilation unit is periodically heated with warm indoor air. If this is not desirable, you can balance ventilation up to outside temperatures of 15°C by using the EVVE.</div>
Odour nuisance near the device. Bubbling noises near the unit.	<div>Siphon is dry.</div> <div>Fill the siphon with water.</div>
Undesirable odours from fresh supply air.	<div>Intake opening of the ventilation unit is too close to a contaminated air outlet (cooker hood, chimney, ventilation unit intake opening,).</div> <div> During installation, always ensure that the fresh air intake opening is sufficiently distant from contaminated air outlets. If this is not possible, or if you cannot control the spread of unwanted odours, you can place an active carbon filter in the fresh air supply duct. </div>
Condensation water comes out of the unit	<div>The air ducts are not properly connected.</div> <div>To ensure correct operation, the supply and return sides must not be confused. Check that the connections correspond to the connections on.</div> <div>The condensate drain is not properly connected.</div> <div>Make sure that the condensation drain is properly connected.</div> <div>The unit is not level.</div> <div>Hang the unit level.</div>

OBSERVATION POSSIBLE

CAUSE SOLUTION

The unit is switched off and when the RF switch is pressed the following LED indication appears on the circuit board "RED - RED - ORANGE".

The unit is switched off because the temperature of the air to the house is below 5°C.

Reset the unit by removing the plug from the wall socket and putting the unit back on power.

Make sure that the cause is removed:

- House not heated enough (at least 16°C) to ensure correct operation. connected correctly (see page 9).
- Channels connected correctly.
- If the unit switches off again, please contact your installer.

The mechanical position switch has a different setting to that on which the unit runs. I cannot switch the unit to this position.

The switch only reacts to the wired position switch when the position is changed.

Always switch the position switch to another position and then switch back to the desired position.

The LED on the RF switch lights "ORANGE" when the unit is operated.

The battery life in the switch has been reached.

Replace the battery in the switch. (CR2450)

The unit does not react to the switch, the LED lights "RED" when the switch is operated.

The switch is not connected to the ventilation unit.

Connect the switch to the unit

Insufficient cooling in summer due to by-pass operation.

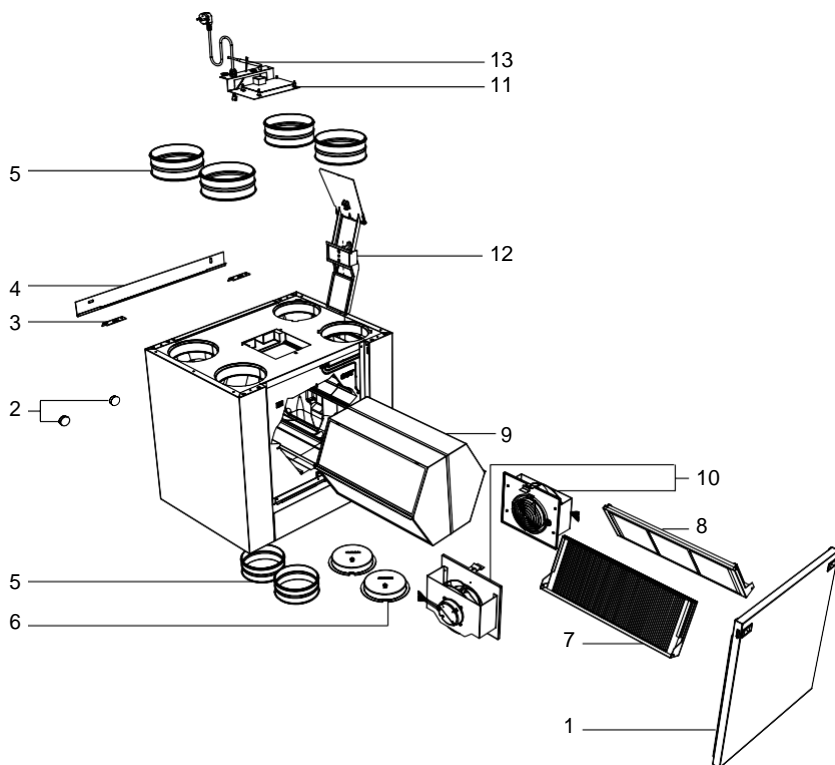
Please note that by-pass is not active cooling.
To make the best use of the by-pass, you should set the unit to a high setting if the house is overheated (temperature > 23°C) and the outside temperature is cool.

LED INDICATION CIRCUIT BOARD	FOUND CODE
Red-orange	Problem with the exhaust fan.
Red Orange	Problem with the supply fan.
Red Red Orange	"Supply temperature too low" - stop.
Red Red Orange	Problem temperature sensor "of house".
Red red orange orange	Problem temperature sensor "outside".
Red red orange orange	Problem temperature sensor "from outside".
Red red orange orange	Problem temperature sensor "to house".
Red red orange	Problem with constant flow control supply.
Red Red Orange	Problem with constant flow control drainage.

LED INDICATION RF SWITCH	FOUND CODE
Red Red	Problem with the ventilation unit.
Green	The requested action was correctly communicated.
Red	Problem with communication.
Green Green	Successful coupling of the RF switch.
Orange	Battery life RF switch has been reached.
Orange orange (after operation)	Change filter, reset filter message, see p. 6
Orange Orange	Successful disconnection of the RF switch.
Orange orange orange	Access to settings denied.

7 PARTS LIST

No.	Article number	Description
1	11VE 50104	Door panel
2	11VE 50003	Baffle plates (2 pcs)
3	11VE 50200	Mounting brackets (2 pcs)
4	11VE 50250	Suspension bracket
5	11VE 43120	Galva sleeve Ø 180mm
6	11VE 50004	Plastic plug Ø 180mm
	11VE 50306	Filter drawer - T350/T500
811VE	50358	Filter setgreen 495x186x10mm (2 pcs) - T350/T500
	11VE 50359	Filter set F7/G4 481x186x20mm - T350/T500
911VE	50400	Heat exchanger-T350/T500
1011VE	51101	Fan 85W190 - T350
	11VE 51102	Fan 170W190 - T500
11	11VE 51219	Print plate T350
	11VE 51220	Print plate T500
12	11VE 55152	Bypass module
13	11VE 51351	Antenna
14	11VE 51409	NTC Sensor/cable 2p 1250
15	11VE 51410	NTC Sensor/cable 2p 1500
16	11VE 51404	NTC Sensor/cable 3p 360
17	11VE 51411	NTC Sensor/cable 3p 750



8 GUARANTEE CONDITIONS

Vasco declares that it will give a two year guarantee on the Vasco T350 /T500 from the date of purchase. The installation company's invoice date will be used as proof of purchase. If no invoice is available the production date will be used as the date of purchase. The guarantee covers only that which is supplied by Vasco.

free supply of a replacement fan and electronics board. No additional warranty period is provided for repairs. The warranty does not cover:

- Dismantling and assembly costs
- Defects which, in our opinion, are the result of improper handling, negligence or accident
- Defects caused by treatment or repair by third parties without our consent
- Defects resulting from non-regular and/or non-professional maintenance

• Defects resulting from use in an unsuitable environment No warranty will be given if the ventilation unit is used in these conditions. For the return shipment of the defective parts the installer must contact Vasco. The installer will then receive a guarantee return number. The defective parts must be sent to Vasco, quoting this return number.

Kruishoefstraat 50
B-3650 Dilsen
T. +32 (0)89 79 04 11
F. +32 (0)89 79 05 00
info@vasco.eu
u
www.vasco.eu

MANUFACTURER'S DECLARATION

EU Declaration of Conformity (Low Voltage Directive 2006/95/EC). This ventilation unit, type T350 /T500, has been produced by Vasco, Kruishoefstraat 50, B -3650 Dilsen, Belgium, and bears the CE label.

We hereby declare under our own responsibility that

The Vasco T350 /T500 unit to which this declaration refers is in compliance with the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the ROHS Directive and Directive 2009/125/EC.

Vasco Group nv
Dilsen, Belgium, January 2017

P. Nijs, CEO



VENTILATION SYSTEM D

Type designation	T350	T350 + 1 sensor	T350 + 2 sensors	T500	T500 + 1 sensor	T500 + 2 sensors	
Specific energy consumption (SEC)	-37,85	-40,34	-43,18	-35,56	-38,64	-42,14	[kWh/(m ² .a)].
Residential ventilation unit (RVE) Non-residential ventilation unit (NRVE)	RVE	RVE	RVE	RVE	RVE	RVE	RVE/NRVE
One-way ventilation unit (EVE) Two-way ventilation unit (TVE)	TVE	TVE	TVE	TVE	TVE	TVE	EVE/TVE
Type of drive	Variable	Variable	Variable	Variable	Variable	Variable	Variable/Different speed
Type of heat recovery system	Recuperative	Recuperative	Recuperative	Recuperative	Recuperative	Recuperative	Recuperative/Regenerative
Thermal efficiency heat recovery	88%	88%	88%	87%	87%	87%	%
Maximum flow rate	350	350	350	500	500	500	m ³ /h]
Electric input power	165	165	165	333	333	333	[W]
Sound power level	48	48	48	51	51	51	dB(A)]
Reference flow rate	0,068	0,068	0,068	0,097	0,097	0,097	m ³ /s]
Reference differential pressure	50	50	50	50	50	50	Pa]
Specific input power (SPI)	0,223	0,223	0,223	0,285	0,285	0,285	W/(m ³ /h)]
Control factor	1	0,85	0,65	1	0,85	0,65	1 / 0,95 / 0,85 / 0,65
Maximum percentages of internal leakage	0,65	0,65	0,65	0,45	0,45	0,45	[%]
Maximum percentages of external leakage	0,74	0,74	0,74	0,52	0,52	0,52	[%]
Location and description of the visual warning signal for the regulated changing the filters	LED on the supplied RF switch that lights up orange twice (after actuation) when the filters need to be replaced. The periodical replacement of the air filters is important for the optimal functioning of the ventilation unit. Not replacing the air filter has a negative impact on the unit's efficiency and energy efficiency.						
Instructions for installing controlled suction grilles in facade for natural air supply	N/A						
Internet address for disassembly instructions	www.vasco.eu						
Annual electricity consumption (AEC)	324	247	163	402	303	196	kWhelek/a]
Annual Saved Heating (AHS) "moderate climate"	4528	4584	4658	4493	4554	4635	kWhpe/a]
Annual Saved Heating (AHS) "warm climate"	2047	2073	2106	2032	2059	2096	kWhpe/a]
Annual Saved Heating (AHS) "cold climate"	8857	8967	9113	8789	8909	9068	kWhpe/a]

CALCULATION SHEET
VENTILATION

		AIR DEBATE			
local	valve n°	supply		drain	
		design m³/h	measure d m³/h	design m³/h	measure d m³/h
living room					
living room					
office					
Bedroom 1					
Bedroom 2					
Bedroom 3					
Bedroom 4					
.....					
.....					
kitchen					
kitchen					
toilet					
washing station					
bathroom					
.....					
.....					
.....					
TOTAL					



Kruishoefstraat 50
B-3650 Dilsen
T. +32 (0)89 79 04 11
F. +32 (0)89 79 05 00
info@vasco.e
u
www.vasco.eu