VASCO



INSTALLATION AND USER MANUAL VENTILATION UNIT D275(EP) II

CONTENTS

1.	INTRODUCTION	01
2.	SAFETY	01
3.	USER MANUAL	02
	OPERATION	02
	· OPERATING POSSIBILITIES	03
	MAINTENANCE	06
	- CLEANING FILTERS	
	- FILTER NOTIFICATION	
	- REPLACING FILTERS/BATTERIES	
4.	INSTALLATION MANUAL FOR THE INSTALLER	07
	· CONTENTS PACKAGING	07
	· DIMENSION	08
	· INSTALLATION CONDITIONS	09
	MONTAGE	09
	· ELECTRIC PREHEATING ELEMENT (OPTIONAL D275EP II)	14
	· AIR DUCT CONNECTIONS	15
	· CONDENSARY FOOD	16
	· COMMISSIONING AND ADJUSTMENT	16
	- Setting the flow rate	
	- activation and deactivation of optional additional position switches	
	 operating mode switch 	
	- Range mode switch	
	 mounting position switch 	
	MAINTENANCE	19
	 Heat exchanger inspection/cleaning 	
	 Inspection/Cleaning of fans 	
5.	ELECTRICAL DIAGRAM	21
6.	MALFUNCTION	22
7.	PART LIST	24
8.	WARRANTY CONDITIONS	25



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 of Vasco Ventilation Concepts is a balanced 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.

ELECTRONIC COMPONENTS The electronic components of the ventilation unit may be electrically live. In case of a defect, contact a professional installer and have repairs carried out only by qualified personnel.

SAFETY INSTRUCTIONS 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 have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children must be supervised to ensure that they do not play with the appliance.

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.

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 power cord into the power socket until the ventilation unit is installed and all components are fitted.

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 25 of this manual.



3 USER MANUAL

OPERATION

This ventilation unit with heat recovery is designed to ventilate homes. learning. Specific features of this ventilation unit are :

- The high-efficiency heat exchanger ensures optimum heat transfer from the warm, contaminated exhaust air to the cooler, fresh air. The two air flows do not come into contact with each other. On the other hand, in warm periods the heat exchanger will cool down the warm outside air to the cooler inside air.
- 2. During the hot summer period, the ventilation unit uses the standard full bypass to apply night cooling. When the bypass is activated at night, the cool air is diverted outside the heat exchanger. As a result, there is no more heat transfer and the cooler outside air is fed into the house. Night cooling offers maximum comfort during the summer months with minimum energy consumption and is not comparable to air conditioning. The system regulates itself automatically.
- 3. In the two air streams, electrostatically charged air filters for which have a dual function. The first function is to filter the fresh air, retaining pollen, coarse and fine dust particles. The second function is to protect the entire ventilation unit and fresh air distribution channels from contamination.

The filters also have an anti-bacteriological effect.

4. The **two energy-efficient direct current fans** supply the living room and bedrooms with fresh air from outside and remove the polluted air from inside.

the kitchen, the bathroom, the toilet(s) and possibly the storage room. The unique Vasco control of the fans ensures that the ventilation unit has a **constant volume control**. This means that the set flow rate is automatically controlled.

5. An **automatic frost protection** ensures that the ventilation unit can operate frost-free to ensure good ventilation during the winter period.

- 6. The ventilation unit can be operated in various ways:
 - In 3 positions using different wireless or mechanical switches;
 - Demand controlled via sensors in the RF switches;
 - Stepless adjustment, which corresponds to a zero to ten volt control that allows the ventilation unit to be controlled by a home automation system or other building management system.



It is not permitted to connect a motorised extractor hood or a dryer to the ventilation system.

CONTROL OPTIONS

RF switch

The ventilation unit can only be operated by a coupled switch. You will find further instructions on how to couple the switch on page

17. The ventilation unit is equipped as standard with a coupled RF switch with LED indication.

position timer fur	position 3 timer function		
Butto	Description		
Press 1x	Device runs in position 1 (low) Vasco recommends using this mode when you are absent.		
Press 1x	Device turns to position 2 (centre) This is the default setting when present.		
Press 1x	Device runs in position 3 (high) This is the recommended position for showers and baths. It can also be used when there is an increased need for ventilation (visitors etc.)		
Press 1x	Device runs for 30 minutes in position 3 After this period, the unit switches back to the previous mode. To exit prematurely, press a position.		
Press for 3 sec.	Appliance running in automatic mode If you combine the ventilation unit with a $_{CO2}$ RF switch, a RH RF switch or a home automation system (0-10V control), the ventilation unit returns to the automatic mode.		
	position timer fut Butto Press 1x Press 1x Press 1x Press 1x Press 1x Press 1x		

In the middle of the switch there is a LED that lights up once green when the requested position has been communicated correctly.

CO2 RF SWITCH

The ventilation unit is expandable with a $_{CO2}$ RF switch which allows you to choose a fixed flow rate or a flow rate according to your needs. By repeatedly touching the control area at the bottom, you can scroll between the different positions. The LED in the upper right corner indicates the position.



Symbol	Description
0	Appliance running in position 1 (low) Vasco recommends using this mode when you are
<u></u>	Appliance running in position 2 (centre) This is the default setting when present.
	Appliance running in position 3 (high) This is the recommended position for showers and baths. It can also be used when there is an increased need for ventilation (visitors, family
	Appliance running in eco mode In this automatic mode, the ventilation unit adapts the ventilation volume to the number of people in the room where the switch is installed. At this setting a minimum indoor air quality is guaranteed in order to achieve
	maximum energy savings. Vasco recommends using this setting in winter periods. Appliance running in comfort mode In this automatic mode, the ventilation unit adapts the ventilation volume to the number of people in the room. This control guarantees higher indoor air quality. Vasco recommends using this mode in summer periods.

RH RF SWITCH

The ventilation unit is expandable with an RH RF switch that temporarily increases the ventilation flow when, for example, you take a shower. By repeatedly touching the control area at the bottom, you can scroll between the different positions. The LED at the top right indicates the mode.



Symbol	Description
0	Appliance running in position 1 (low) Vasco recommends using this mode when you are absent.
£_1	Appliance running in position 2 (centre) This is the default setting when present.
	Appliance running in position 3 (high) This is the recommended position for showers and baths. It can also be used when there is an increased need for ventilation (visitors, family celebrations, etc.).
	Appliance runs in automatic mode medium At this setting, the air flow rate remains fixed at the flow rate of the last selected ventilation setting. In case of a sudden increase in the relative humidity (showering), the ventilation unit automatically switches to the middle setting.
4 <u>4</u> 1	At this setting, the air flow rate remains fixed at the flow rate of the last ventilation setting selected. In case of a sudden increase in the relative humidity (showering), the ventilation unit automatically switches to the high setting.

CONNECTION OF WIRED 3 POSITION SWITCH

You can also control the ventilation unit by wire. When the switch is operated, the ventilation unit will always adjust the flow rate immediately. It is also possible to combine the wired switch connection with a home automation system or another building management system. You can still switch back to a lower or higher setting with the RF switches. However, both the mechanical switch and the building management system will then no longer indicate the correct setting.

0-10 V CONTROL (BUILDING MANAGEMENT SYSTEM)

You can also have the ventilation unit controlled by a home automation or other building management system. You can still switch back to a lower or higher setting with the RF switches. To let the building management system control the ventilation unit again, you have to press and hold position 1 of the RF position switch for at least 3 seconds. Please consult your installer for this.

MAINTENANCE VENTILATION UNIT MAINTENANCE CLEANING FILTERS

Vasco recommends cleaning the filters 3 times a month.

- 1. Remove the filter caps from the unit.
- 2. Take the filter cartridges out of the unit.
- 3. Remove coarse dust particles with a hoover, only vacuum the top of the filter drawer.
- 4. Carefully slide the filter cassettes into the unit.
- 5. Place the caps back on the unit and press firmly.

FILTER MESSAGE

The ventilation unit is equipped with an automatic filter alarm that indicates when the filters need to be replaced. The filter life is 12 months.

If a replacement is necessary, the LED on the position switch lights up

REPLACING FILTERS

- 1. Remove the filter caps from the unit.
- 2. Take the filter cartridges out of the unit.
- 3. Insert the new filters (for D275EP II, the membrane is on the bottom) into the metal filter cassettes.
- 4. Carefully slide the filter cassettes into the unit.
- 5. Place the caps back on the unit and press firmly.
- 6. Reset the filter notification by pressing the position 1 and timer buttons

simultaneously for at least 4 seconds until the LED lights up green.

FILTERTYPES

Item No. 11VE50353 D275 II 25 x 21 cm green

Item No. 11VE50354 D275EPT 25 x 21 cm white





REPLACEMENT BATTERIES RH RF SWITCH

The batteries in the RH RF switch for the bathroom must be replaced periodically. To do this, remove the front cover. The 1.5 V AA batteries are now visible and can be replaced.



Failure to carry out the maintenance work in good time will ultimately result in the unit no longer functioning optimally. New filters for the ventilation unit are available in sets from your Vasco ventilation system supplier and from Vasco Ventilation Concepts (dealer list on www.vasco.eu).

4 INSTALLATION MANUAL FOR THE INSTALLER

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

PACKAGE CONTENT

The content consists of:

- 1 ventilation unit
- 4 sleeves
- 4 mounting screws with roundel
- 1 wireless mode switch
- 1 manual
- 1 sleeve for condensation drain

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

ventilation unit



INSTALLATION MANUAL FOR THE INSTALLER 07



INSTALLATION CONDITIONS

To determine whether the installation of the ventilation unit in a certain room is possible, the following aspects must 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±10%, single-phase, 50Hz socket
 - provision for the condensation drain

no construction material may enter the ventilation unit or the air duct system

MONTAGE

MOUNTING VENTILATION UNIT

The ventilation unit must be mounted on a wall or ceiling of sufficient strength. Screws and roundels are included. For concrete and stone, a dowel of diameter 10 mm is suitable. Use the appropriate Fixing materials in function of the wall or ceiling construction. Always install the ventilation unit in such a way that proper condensation drainage is ensured.

When mounting on a wall, the unit must always be level.

In the case of ceiling mounting, it is advisable to mount the unit at a slight angle in order to improve condensation drainage.





When installing in a false ceiling, ensure that the ventilation unit is accessible via a hatch in order to carry out necessary maintenance work.

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: Detach the knobs and electronics module from the base plate for wall mounting.







Step 2: Draw the screw holes of 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:





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 to the wall.



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



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





Step 5: Place the cover back on the 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 for the base plate onto the wall. Step 3: Screw the base plate onto 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 properly to access the circuit board. Unscrew the 8 screws and remove the front panel.

Next, the correct cable must be led to the PCB via the cut-out with grommet provided for this purpose in the ventilation unit.

This cut-out with grommet is found on the top side of the ventilation unit, along the feed-through of the supply cable.

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 can be steplessly adjusted between the minimum and maximum flow.

maximum flow rate of the ventilation unit.

It corresponds to the following values:

	D275(EP) II	
1 V	40 m³/h	
1 – 10 V	Linear relationship	
10 V	275 m³/h	

To connect the 0-10V signal of a building management system, the ventilation unit must be opened in a proper manner so that the circuit board can be reached. To do this, unscrew the 8 screws and remove the front panel. Next, the correct cable must be led to the PCB through the cut-out with the grommet in the ventilation unit. This cut-out with grommet can be found on the top side of the ventilation unit, along the feed-through of the power cable. Finally, connect the control signal to terminal X26 "Building control system connection" according to the scheme below.

Circuit board D275(EP) II



ELECTRIC PREHEATING ELEMENT D275EP II

For the D275EP II, an electric pre-heating element is available as an option. available:

Electric pre-heating element D275EP II VASCO Article number 11VE44100

MOUNTING AND ELECTRICAL CONNECTION OF THE PRE-HEATING ELEMENT

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

The correct way of mounting is clearly shown on the next page.

The cable of the electric pre-heating element with the stripped wires connect to the black connector on the ventilation unit in this way:



AIR DUCT CONNECTIONS

For a silent ventilation system Vasco recommends the use of the parts from the range offered by Vasco Ventilation Concepts. Install the system with the lowest possible air resistance and free of leaks. The main air ducts should have an internal diameter of Ø150 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.



CONDENSARY FOOD



The condensate from the ventilation unit must be discharged in the correct 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 separately by the installer. The condensate drain of the ventilation unit may not be fixed with a glue joint and must remain removable. For this purpose, fit the sleeve provided with a lubricant to the condensation drain. If the condensation 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.

The connection to the ventilation unit is Ø 32mm.



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, the fans start up briefly (approx. 4 sec.) You then have 10 minutes to set the air volume and to connect additional optional position switches.



SETTING THE FLOW RATE:

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. The factory setting is 1 x orange.



LED display	D275(EP) II
1x green	185 m³/h
2x green	200 m³/h
1x orange (standard)	215 m³/h
2x orange	230 m³/h
3x orange	245 m³/h
1x red	260 m³/h
2x red	275 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 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 replace it.

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 are disconnected.

ACTIVATION AND DEACTIVATION OF 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 corner will light up green twice and a LED will light up on the right indicating the respective position of the $_{CO2}$ RF switch.

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

Sign off:



Briefly de-energise the switch by clicking it out and back into the base plate. The switch can de-energise ventilation units for 10 minutes. Touch the lower right control area for at least 10 seconds. When all the LEDs light up green for the second time, the control zone must be released. If several ventilation units are registered, all registered units are now logged off. The LED of the switch lights red four times to indicate that the units are disconnected.

ACTIVATING AND DEACTIVATING 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 control area. If the pairing is successful, the LED in the top left corner will light green twice and a LED on the right will illuminate indicating the relevant position of the RH RF switch.



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

Sign off:

De-energise the switch briefly by removing the batteries from the sensor

and put them back in. (See RH RF Switch Battery Replacement) The switch can disconnect ventilation units for 10 minutes. Touch the bottom right operating zone for at least 10 seconds. When all 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.

MAINTENANCE

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 EXCHANGER

1x per four years

- dismantle the front panel by loosening the 8 screws
- Remove the condensate drain pan
- remove the 3 screws from the plate holding the exchanger
- tilt the exchanger slightly and remove it from the unit
- if necessary, clean the heat exchanger by wiping the four surfaces with a damp cloth
- do not use aggressive or solvent cleaning agents
- Carefully place the exchanger back into the unit without damaging the sealing strips.



MAINTENANCE 19

INSPECTION / CLEANING OF FANS

1x per four years

- dismantle the front panel by loosening 8 screws
- remove the fan filter
- remove the partition
- Disconnect the CTL fan connector, the temperature sensor connector on the fan module and the 230 V power supply fan connector from the PCB.
- remove the 4 screws holding the fan to remove the fan cartridge from the unit
- Use a soft brush to clean the fans and sensors and a hoover to remove the dust. Be careful not to damage the blades when cleaning and certainly do not remove the clips on the blades, these are used for balancing the wheel.
- Assemble everything in reverse order



5 ELECTRICAL DIAGRAM



ELECTRICAL DIAGRAM 21

6 MALFUNCTION

OBSERVATION CAUSE SOLUTION



OBSERVATION CAUSE SOLUTION



7-PARTS LIST

No

Article number Description

1	11VE50303 11VE50304	Filter drawer (incl. filter) - green 215x250mm (2) - D275 II Filter drawer (incl. filter) - white 215x250mm (2) - D275EP II
2	11VE50353 11VE50354	Filter set green 215x 250mm (2) - D275 II Filter set white 215x 250mm (2) - D275EP II
3	11VE50402 11VE50403	Heat exchanger - D275 II Heat exchanger with aluminium mesh - D275EP II
4	11VE51101	Fan 85W190 - D300E II/D275II
5	11VE51214	Circuit board D275(EP) II
6	11VE55150	By-pass module D275(EP) II (also compatible with D275)
7	11VE43121	Galva sleeve for duct D150
8	11VE51351	Antenna D II
9	11VE51405	NTC sensor/cable 3p 1180
10	11VE51402	NTC sensor/cable 2p 360
	11VE51213	D275 - D275 II conversion kit (incl. circuit board, reduction board, 4 NTC sensors, antenna, RF position switch and manual)



8 GUARANTEE CONDITIONS

Vasco declares that it will give a two-year guarantee on the Vasco D275(EP) II from the date of purchase. The installation company's invoice date will be used as proof of purchase. If there is no invoice, the production date will be used as the date of purchase. The guarantee only covers the supply by Vasco, free of charge, of a replacement fan and electronic board. There is no extra guarantee period on repairs.

The guarantee 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.

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MANUFACTURER'S DECLARATION

EU Declaration of Conformity (Low Voltage Directive 2006/95/EC). This ventilation unit, type D275(EP) II, 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 D275(EP) II unit to which this declaration refers complies with the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC and the ROHS Directive.

Vasco Group nv Dilsen, Belgium, April 2014



P. Nijs, CEO

CALCULATION SHEET VENTILATION

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

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