



VENTILATION

OPERATING INSTRUCTIONS
FOR THE VASCO X350/X425/X500
VENTILATION UNIT

TABLE OF CONTENTS

1. INTRODUCTION	01
2. SAFETY	01
3. INSTALLATION INSTRUCTIONS FOR INSTALLERS	02
• PACKAGING CONTENTS	02
• DIMENSIONAL DRAWING	04
• REQUIREMENTS FOR THE INSTALLATION	05
• PREPARATION OF ASSEMBLY	06
• ASSEMBLY OF VENTILATION UNIT/ CONDENSATION DRAINAGE	08
• AIR CHANNEL CONNECTIONS	09
• INSTALLATION OF THE SWITCHES	10
• COMMISSIONING AND SETTINGS	14
4. MAINTENANCE	17
5. ELECTRICAL CIRCUIT DIAGRAMS	19
6. TECHNICAL MALFUNCTION	20
7. PARTS LIST	22
8. WARRANTY CONDITIONS	23
PRODUCT DATA SHEET	24-29
9. CONFORMITY DECLARATION	30



1 INTRODUCTION

A healthy indoor climate is provided by the ventilation unit, thanks to its continuous aeration. For this a minimal air flow is required at all times. That is the reason why the equipment does not have an installed ON/OFF switch. The user must make sure that the plug of the unit is always inserted in the socket and that the socket is always provided with electricity.

The Ventilation System D, from Vasco Ventilation Concepts, is a comfort ventilation system with heat recycling, which guarantees a comfortable and healthy indoor climate.

2 SAFETY

ELECTRONIC COMPONENTS

Only professional installation technicians are authorized to open the ventilation unit. The installation technician must use appropriate tools for all works.



The electronic components of the ventilation unit may be live. In case of technical malfunctions, please contact a professional installer and have all repairs carried out exclusively by competent technicians.

SAFETY INSTRUCTIONS

This equipment has not been designed for use by persons (including children) with limited physical, psychic or mental capacities, or by persons without experience or know-how, unless they are supervised by persons who are responsible for their safety and who are able to give them instructions with regard to the use of the equipment. Children must be supervised to make sure they do not play with the equipment.

When the mains cable is damaged, it must be replaced by the manufacturer, by a customer service department or by persons with comparable qualifications, so as to exclude any hazard.

At the end of its service life the user is responsible for a safe disposal of the ventilation equipment in conformity with the laws and regulations that are locally in force.

You may also deliver the unit to a collection point for used electronic equipment.

MAINTENANCE

The ventilation unit must be regularly inspected for contamination. For any inspection process, the ventilation unit must be switched off by removing the plug from the socket. The ventilation unit contains rotating mechanical parts. Whenever you pull the plug from the socket these parts will continue to rotate for several seconds. We therefore recommend that you wait for approximately 20 seconds after switching off the ventilation unit so that all of these parts are actually at a standstill. The user must ensure that the entire ventilation unit is regularly maintained by the installer.



Please make sure that the plug of the unit is not reinserted in the socket by someone else before the works are completed. Only reinsert the plug in the socket after the ventilation unit has been installed and all parts have been assembled.

WARRANTY

Vasco is not liable for damages, which are a consequence of a non-observance of the safety regulations, or of the instructions contained in the user manual. You will find the warranty conditions on page 23 of this user manual.



3 INSTALLATION INSTRUCTIONS FOR INSTALLERS

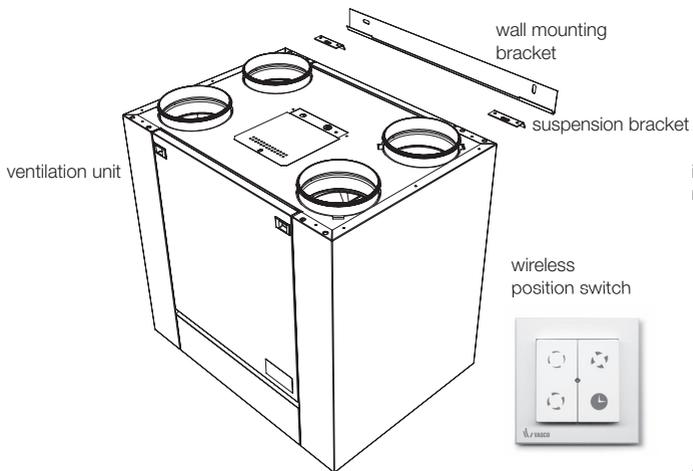
PACKAGING CONTENTS

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

Contents:

- 1 ventilation unit
- 1 wall mounting bracket
- 1 wireless position switch
- 1 instruction manual
- 1 installation manual
- 2 shock dampers
- 2 suspension brackets with screws
- 2 bushings
- 1 dry siphon

The transport and the unpacking of the equipment must be carried out with appropriate care. Please ensure an environmentally friendly disposal of the packaging material.



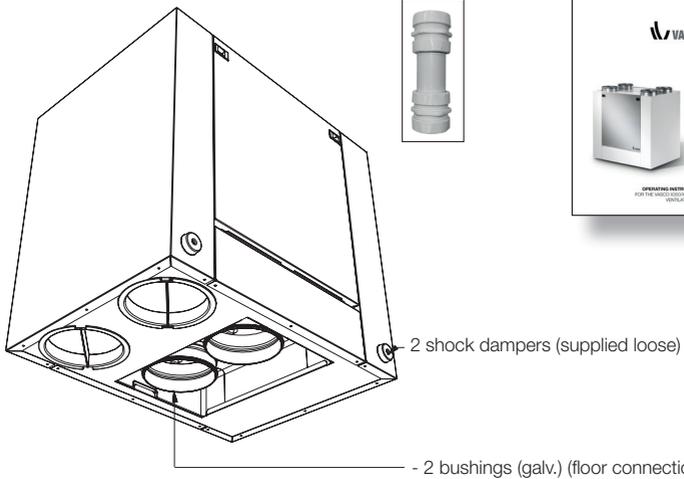
installation manual



instruction manual

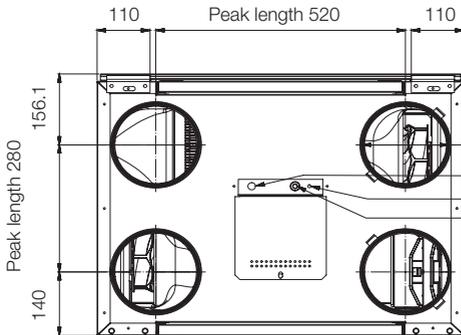
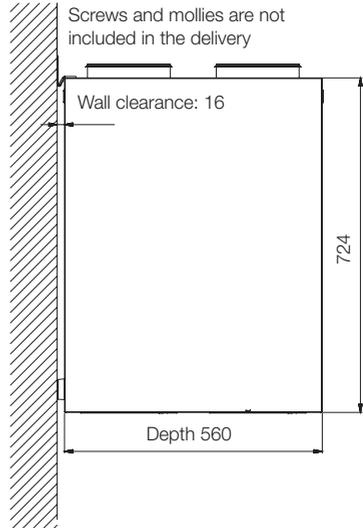
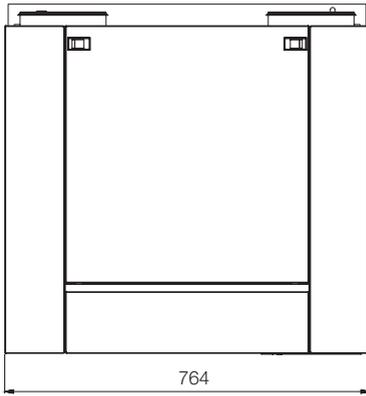
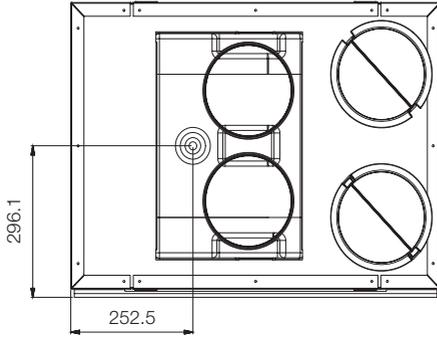


dry siphon



DIMENSIONS

Dimensions are indicated in mm.



- Ø180
- 230 VAC mains cable and radio antenna
- Pass-through bushing for the cable of the wired 3-position switch, or of the 0 - 10 V control cable

(installer makes both cables available)

REQUIREMENTS FOR THE INSTALLATION

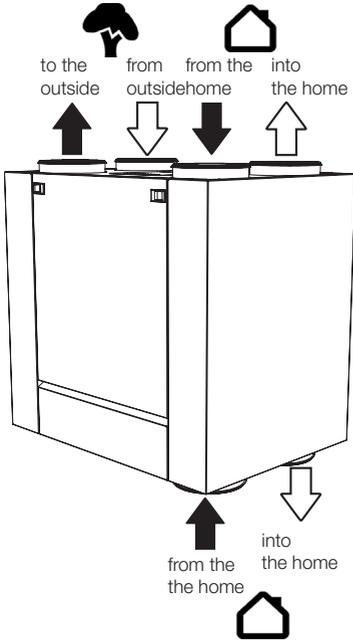
The following aspects must be taken into account, when deciding whether the installation of the ventilation unit is possible in a certain space:

- The space must be frost-free.
- An installation must be carried out in conformity with the general and locally valid safety and installation regulations, for amongst others ventilation, electricity and canalisation, as well as the requirements of the operating instructions.
- The following facilities must be available in the space:
 - Air channel connections
 - 230 V \pm 10 %, single phase, 50 Hz socket.
 - A system for condensation drainage
- It must be ensured that no construction dust can enter the ventilation unit or the air channel system.

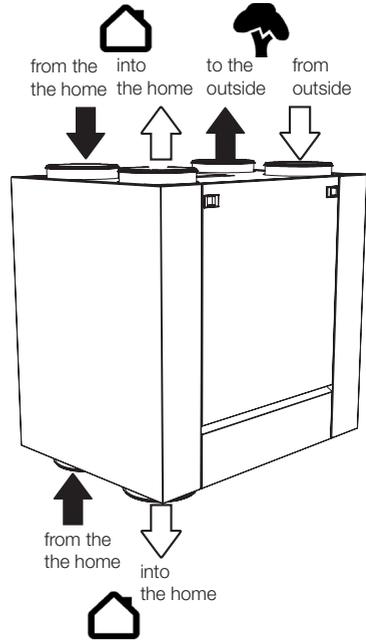
PREPARATIONS FOR ASSEMBLY

The assembly of the ventilation unit can be mirrored in a simple manner, so that the room connections can be located either on the left-hand or the right-hand side.

STANDARD, RIGHT-HAND CONFIGURATION

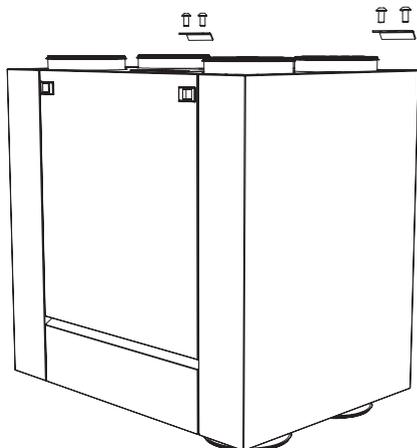


REVERSED, LEFT-HAND CONFIGURATION

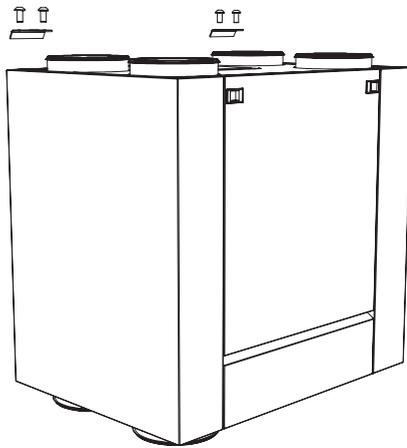


As shown in the following illustrations, you only have to attach the mounting brackets of the ventilation unit on the correct side:

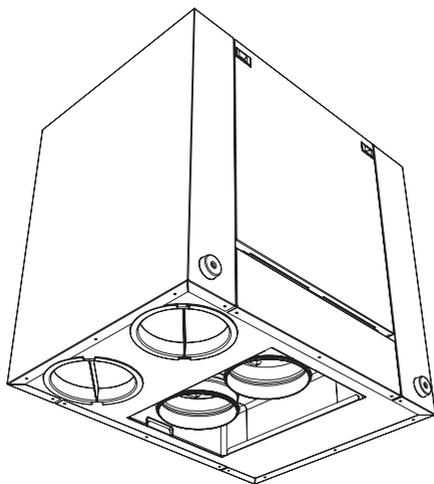
STANDARD, RIGHT-HAND CONFIGURATION



REVERSED, LEFT-HAND CONFIGURATION

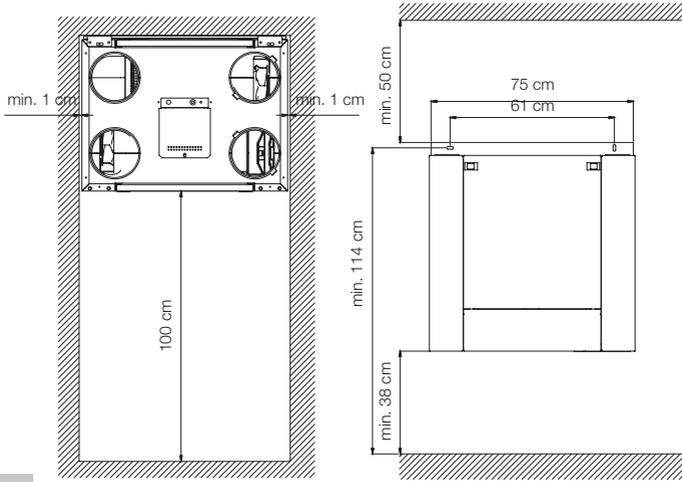


Glue the shock dampers onto the ventilation unit before you attach the ventilation unit to the wall.



ASSEMBLY OF VENTILATION UNIT

The ventilation unit must be mounted on a wall that provides sufficient stability. Screws and mollies are not included in the delivery. With regard to the construction of the wall use appropriate attachment materials.

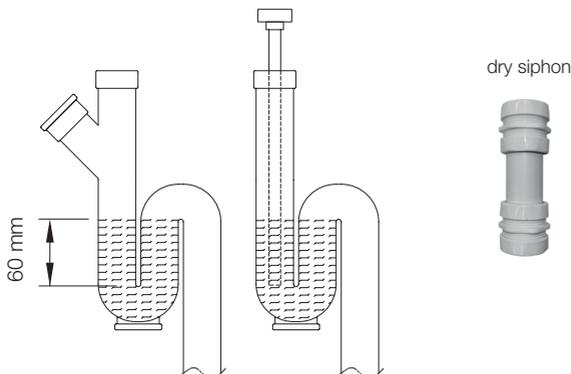


CONDENSATION DRAINAGE



The condensate from the ventilation unit must be discharged correctly. To do this, the ventilation unit must be connected to the indoor sewer system frost-free and airtight. The connection to the ventilation unit is $\varnothing 32\text{mm}$. A siphon is part of the drainage system and is supplied as standard with the ventilation unit. The siphon is of the "dry siphon" type and may be mounted both horizontally and vertically. This "dry siphon" can be connected directly to the condensate discharge of the ventilation unit.

If a "standard siphon" is nevertheless used, it is important that when the condensate drain is connected to the siphon with a hose, the end of the hose ends at least 60 mm below the water level. For a permanent connection, we recommend an additional filling option near the siphon.



AIR CHANNEL CONNECTIONS

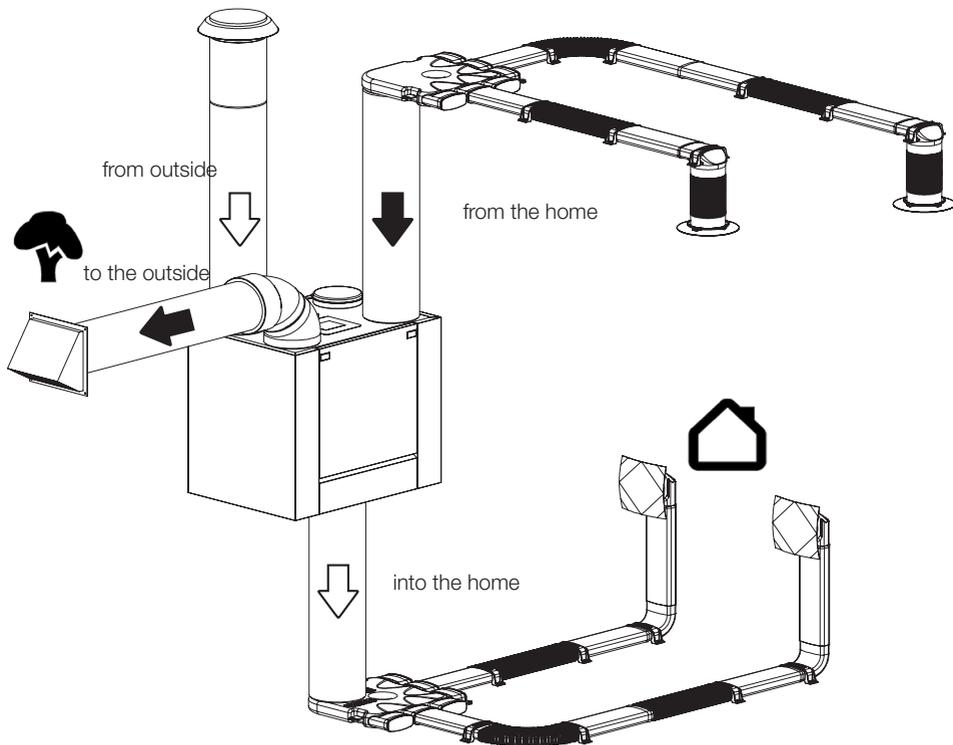
For a low-noise ventilation system, Vasco recommends the use of the parts that are offered by the Vasco Ventilation Concepts product series. Assemble the facility with the lowest possible air resistance and without leaks. The inner diameter of the main air channels must amount to \varnothing 180 mm.

Connection on the room side

Vasco recommends the use of the Vasco Easyflow Air Channel System.

Connection on the outdoor side

The air channels of the outdoor connection must always be insulated, so that No condensation can form on the outer side of the channels.



The above illustration shows a possibility for connection but other connection configurations are possible.

INSTALLATION OF THE SWITCHES



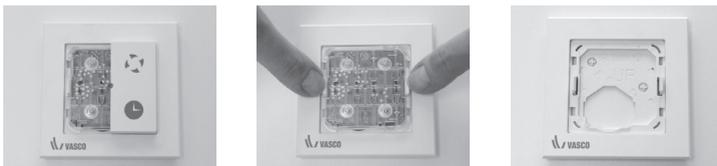
Assembly tips

Always install switches outside of those areas where drops of fluid could form. The wall-mounted transmitter should never be mounted in a metal housing, or in the vicinity of larger metal objects.

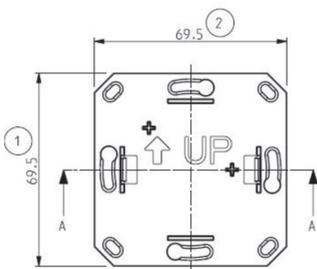
MOUNTING OF THE RADIO SWITCH

Always mount the radio switch in an easily accessible location.

Step 1: Loosen the buttons and the electronic module, so that the base plate can be reached for mounting on the wall.



Step 2: On the wall, mark the position of the screw holes of the baseplate.



Step 3: Use screws to attach the base plate to the wall.

Step 4: Assembly is done in the following order:



1. Sight glass buttons

2. Base 2

3. Electronics and push

INSTALLATION OF THE CO₂ RADIO SWITCH

Always mount the CO₂ radio switch in an easily accessible location in the space whose CO₂ concentration you wish to control. The mains voltage at the switch must always be 230 V.



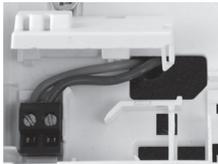
Step 1:
Disassembly of the switch



Step 2:
Attach the base plate to the wall with screws.



Step 3:
Open the flap on the baseplate to expose the electrical connections.



Step 4:
Connect the connectors with the 230 V mains voltage



Step 5: Replace the cover plate on the switch.

INSTALLATION OF THE RADIO SWITCH WITH HUMIDITY MEASUREMENT

Always mount the radio switch in an easily accessible location in the bathroom.



Step 1: Disassembly of the switch
Step 2: On the wall, mark the position of the screw holes of the baseplate



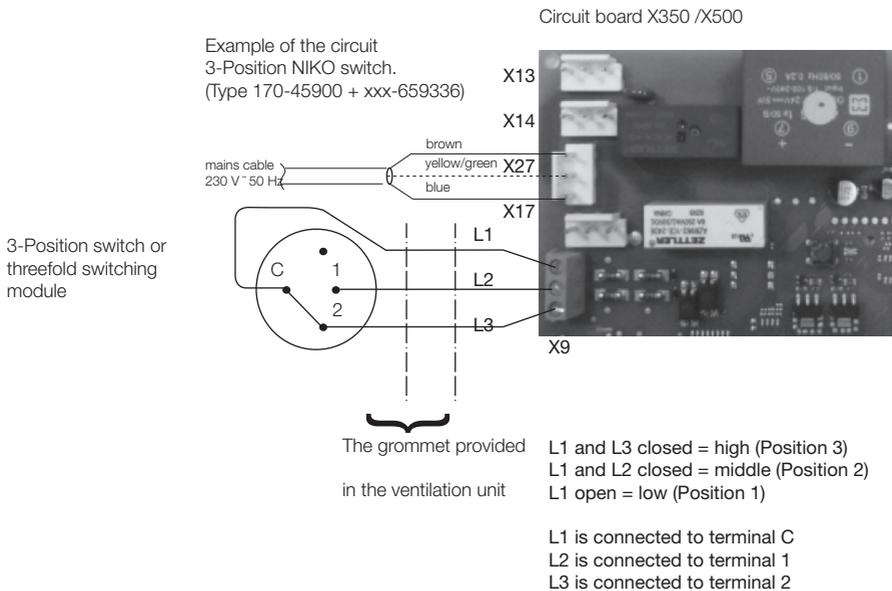
Step 3: Attach the base plate to the wall with screws.



Step 4: Replace the cover plate on the switch.

CONNECTION OF A HARDWIRED 3-STEP SWITCH, OR A 3-STEP SWITCHING MODULE

For the connection of a hardwired 3-step switch, you will have to open the ventilation unit in a correct manner, so as to get access to the circuit board. The corresponding procedure, for opening the ventilation unit, is described in the chapter on the electrical preheating element. After that, lead the correct cable through the recess, which has been provided in the ventilation unit for the cable pass-through, bringing it all the way to the circuit board. Then connect this cable to terminal X9 (connector for the 3-step switch), in conformity with the circuit diagram shown below.



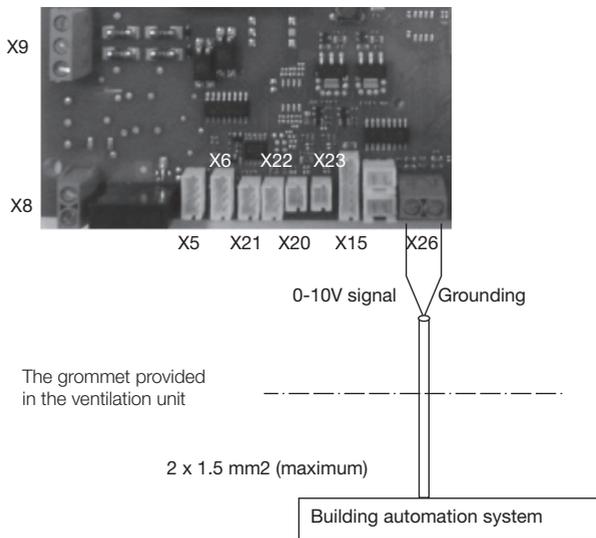
**CONNECTION TO THE 0 - 10 V SIGNAL
(APPLICATION IN A BUILDING AUTOMATION SYSTEM)**

With the 0 - 10 V signal, the air stream can be set in a continuous manner, between a minimal and a maximal flow from the ventilation unit. This corresponds to the following values:

	X350	X425	X500
1 V	40 m ³ /h	50 m ³ /h	60 m ³ /h
1 – 10 V	Linear connection	Linear connection	Linear connection
10 V	350 m ³ /h *	425 m ³ /h *	500 m ³ /h *

For the connection of an analogue signal (0 - 10 V), you must open the cover of the ventilation unit in a correct manner, so as to get access to the circuit board. The corresponding procedure for opening the ventilation unit is described in the chapter on the electrical preheating element. After that, lead the correct cable through the cable pass-through, which is provided in the ventilation unit and all the way to the circuit board. As a final step, connect the control signal to clamp X26 (connection for the building management system), in conformity with the circuit diagram shown below.

Circuit board X350/X425/X500



** the specified air flow rates depend on the total pressure loss of the ventilation system to be overcome*

COMMISSIONING AND SETTINGS

The position switch for the ventilation unit has been preset at the factory.

If all connections for air and electricity have been made then the plug may be inserted in the socket.



After a minute the fans will operate for a short period (approx. 4 seconds). You then have approximately 10 minutes to set the air quantity and connect additional, optional position switches.

Setting the air volume:

Press for at least 3 seconds on the Position 3 button and then release it when the LED in the middle of the button provides light signals. These show the air volume that has been set. Factory settings: the LED lights up orange one.



LED indicator on the switch	X350	X425	X500
1x green	230 m ³ /h	275 m ³ /h	350 m ³ /h
2x green	250 m ³ /h	300 m ³ /h	375 m ³ /h
1x orange (standard)	270 m ³ /h	325 m ³ /h	400 m ³ /h
2x orange (standard)	290 m ³ /h	350 m ³ /h	425 m ³ /h
3x orange (standard)	310 m ³ /h	375 m ³ /h	450 m ³ /h
1x red	330 m ³ /h	400 m ³ /h	475 m ³ /h
2x red	350 m ³ /h	425 m ³ /h	500 m ³ /h



Air volume reduction:

Push the button for Position 1 once. The LED indicator will change according to the table. If you push the button for Position 1 repeatedly, with a 1 second pause between each activation then the air volume will continue to be reduced.



Air volume increase:

Push the button for Position 2 once. The LED indicator will change according to the table.

If you push the button for Position 2 repeatedly, with a 1 second pause between each activation then the air volume will continue to be increased.



Press for at least 3 seconds on the Position 3 button to confirm the change. If the radio switch is not touched for at least one minute, then the changes will automatically be saved.

Registration and deregistration of additional, optional CO2 radio switches:

This switch that is delivered along with the unit has standardly been connected to the ventilation unit at the factory. Up to 20 switches can be connected to the system.

Registration and deregistration of additional, optional radio switches:

Registration:



Pull the plug of the ventilation unit from the socket and then reinsert it once more. Consequently, the ventilation unit will search for new switches for 10 minutes. For at least 3 seconds, push simultaneously on the buttons for Position 2 and the timer. When the registration is successful the LED in the middle will light up green twice.

Note: You can register a switch for 3 units at the most.

Deregistration:



Pull the plug of the ventilation unit from the socket and then reinsert it once more. The ventilation unit can deregister a switch for a 10-minute time period. For at least 3 seconds, push simultaneously on the buttons for Position 1 and 3. The LED of the switch will light up 2 x in an orange colour, indicating that the switches have been deregistered.

Registration and deregistration of additional, optional CO2 radio switches:

Registration:



Pull the plug of the ventilation unit from the socket and then reinsert it once more. Consequently, the ventilation unit will search for new switches for 10 minutes. Then click on the sensor in the baseplate to connect it to voltage again. Touch the operating surface at the bottom right for at least 3 seconds. Release the operating surface when all LEDs are blinking. If the connection process was successful then an LED in the upper left-hand corner will light up green twice. To the right an LED will light up that shows to which of the corresponding positions the CO2 radio switch has been set.

Note: You can register a switch for 3 units at the most.

Deregistration:



Disconnect the switch shortly from power by disengaging it from the baseplate and then reinserting it with a click. The switch can deregister ventilation units for 10 minutes. Touch the operating surface at the bottom right for at least

10 seconds. Let go of the operating surface when all LEDs light up green for a 2nd time. If several ventilation units has been registered, all registered units will herewith be deregistered. The LED of the switch will light up red 4 x to indicate that the units have been deregistered.

Registration and deregistration of additional, optional CO2 radio switches:



Registration:

Pull the plug of the ventilation unit from the socket and then reinsert it once more. Consequently, the ventilation unit will search for new switches for 10 minutes. After that, remove the batteries from the sensor and then reinsert them (see “Replacing batteries in the radio switch with humidity measurement”).

Touch the operating surface at the bottom right for at least 3 seconds. Release the operating surface when all LEDs are blinking. If the connection process was successful then an LED in the upper left-hand corner will light up green twice. To the right an LED will light up that shows to which of the corresponding positions the CO2 radio switch has been set.

Note: You can register a switch for 3 units at the most.



Deregistration:

Briefly disconnect the switch from power by taking the batteries out of the sensor and subsequently reinserting them (see “Replacing batteries in the radio switch with humidity measurement”). The switch can deregister ventilation units for 10 minutes. Touch the operating surface at the bottom right for at least 10 seconds. Let go of the operating surface when all LEDs light up for a 2nd time. If several ventilation units has been registered, all registered units will herewith be deregistered. The LED of the switch will light up red 4 x to indicate that the units have been deregistered.

4 MAINTENANCE

The user must ensure that the technical installer of the entire unit carries out maintenance regularly.

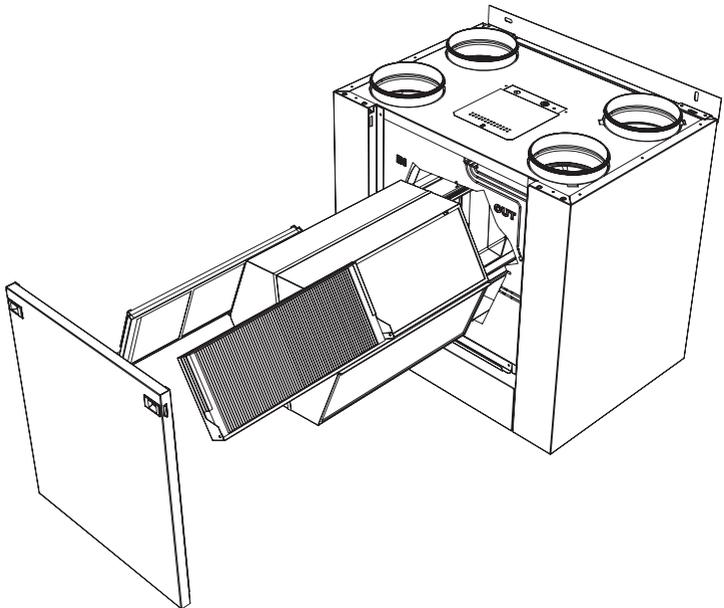


Remove the plug from the socket before starting with maintenance works.

INSPECTION/ CLEANING OF THE HEAT EXCHANGER

Disassemble the door panels

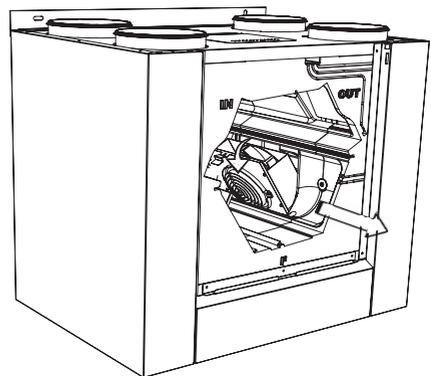
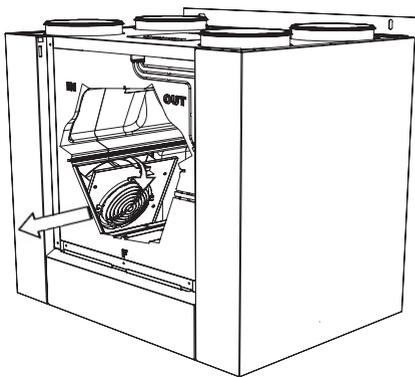
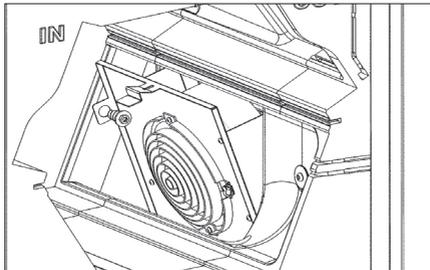
- 1 x every 4 years.
- Pull out the filter trays from the unit. Pull on the strap of the heat exchanger and make sure that this is never removed!
- If necessary clean the four surfaces of the heat exchanger with a damp cloth.
- Do not use any aggressive or dissolving cleaning agents.
- Before sliding the heat exchanger back into its original position check the container of the condensation drainage facility.
- Taking care not to damage the rubber seal, carefully slide the heat exchanger back into the unit.
- Slide the filter trays back into the unit.
- Reassemble the door panels.



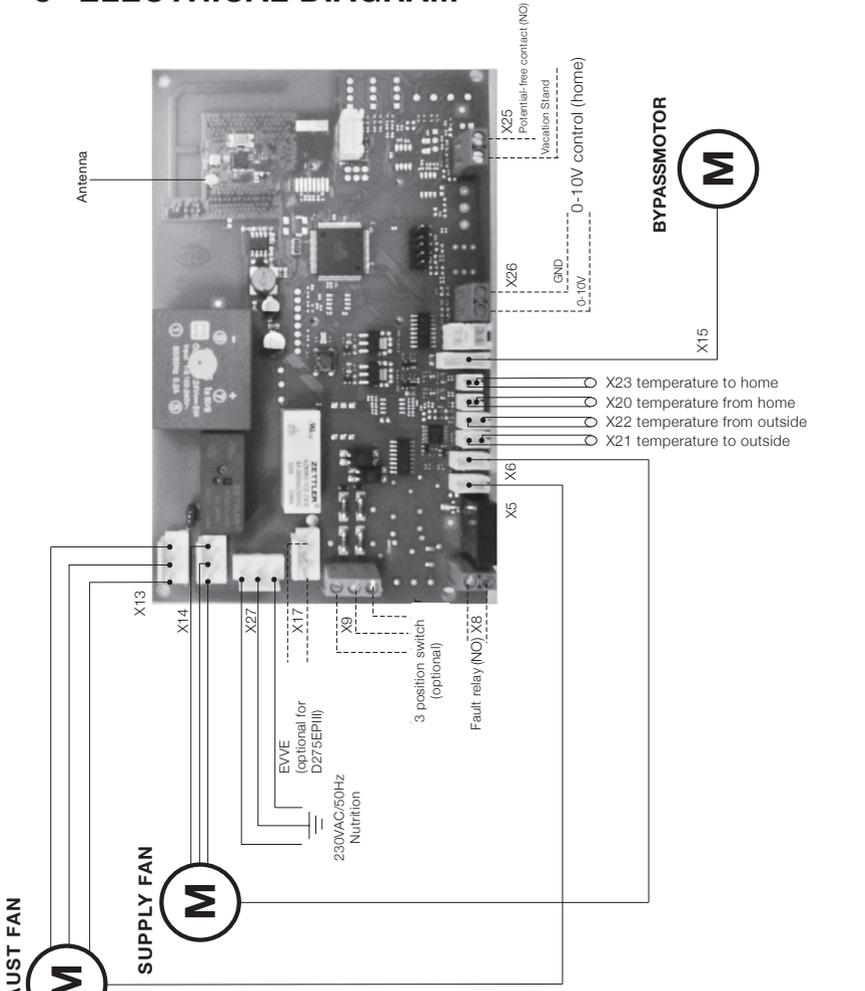
INSPECTION/ CLEANING OF THE VENTILATION UNIT

Disassemble the door panels

- 1 x every 4 years.
- Pull out the filter trays from the unit.
- Pull on the strap of the heat exchanger and make sure that this is never removed!
- Disengage the plug connectors.
- Disengage the temperature sensors.
- Remove the screws from the ventilation unit.
- Pull on the metal tab to tip the ventilation unit.
- Pull out the filter trays from the unit.
- Do this for both ventilation units.
- Clean the fans and sensors with a soft brush and remove any dust with a vacuum cleaner.
- While cleaning please make sure not to damage the fan blades and never remove the balancing weights that are clamped to the fan blades.
- Carry out a reassembly in the reverse order of the disassembly sequence.



5 ELECTRICAL DIAGRAM



CONNECTOR

- X5 (BLACK)
- X6 (WHITE)
- X8
- X9
- X13 (BLACK)
- X14 (WHITE)
- X15
- X17
- X20 (BLACK)
- X21 (BLACK)
- X22 (WHITE)
- X23 (WHITE)
- X25
- X26
- X27

FUNTION

- = EXHAUST FAN CONTROL
- = SUPPLY FAN CONTROL
- = FAULT RELAY (NO), CLOSSES WHEN A FAULT OCCURS
- = CONNECTION OF WIRED 3-POSITION SWITCH
- = MAINS VOLTAGE EXHAUST FAN
- = MAINS VOLTAGE SUPPLY FAN
- = CONTROL BYPASS MOTOR
- = CONNECTION ELECTRICAL PREHEATING ELEMENT
- = TEMPERATURE SENSOR FROM HOME
- = TEMPERATURE SENSOR TO OUTSIDE
- = TEMPERATURE SENSOR FROM OUTSIDE
- = TEMPERATURE SENSOR TO HOME
- = CONNECTION VACATION MODE (POTENTIAL-FREE CONTACT NO)
- = CONNECTION 0-10V CONTROL (HOME AUTOMATION)
- = POWER SUPPLY 230 VAC / 50HZ

6. TECHNICAL MALFUNCTION

OBSERVATION	POSSIBLE CAUSE	SOLUTION
The ventilation unit runs at a higher rotating speed than during the first commissioning.	Contaminated filters.	Cleaning the filters (see page 6).
The LED indicator blinks orange twice during operation of the switch.	Contaminated filters.	Exchange the filter and reset the malfunction signal (see page 6).
The ventilation unit begins to rotate at a high speed but the desired air stream is not achieved.	The airflow is blocked. Due to the continuous supervision of the airflow, the rotating speed is automatically adapted whenever hindrances interfere with the airflow.	Check the following: <ul style="list-style-type: none"> - Whether all channels have been connected correctly. - That (during the construction phase) no undesirable parts have been left in the ventilation unit. - That no sharp bends, crushed channels etc. have occurred in the rising pipes
Periodically there is only exhaust and no supply of the air.	The automatic frost protection is active (defrosting cycle of the unit).	This is the normal functioning of the device, whereby the ventilation unit is periodically heated with warm indoor air. If this is not desired, you can ventilate in balance to outdoor temperatures of -15 ° by making use of the electric preheating element.
Odour nuisance near the unit. Gurgling noises near the unit.	The siphon is empty.	Fill the siphon with water.
The supplied fresh air smells unpleasant.	Suction inlet ventilation unit is too close to a used air discharge outlet (range hood, chimney, ventilation system, etc.).	During the installation, make sure that the intake opening for fresh air is located at a sufficient distance from the exhaust opening for contaminated air. If this should not be possible, or if you are unable to control the distribution of unpleasant odours, then you can install an active carbon filter in the fresh air supply channel.
Condensation water is coming out of the unit.	The air channels are not correctly connected.	For a correct functionality, the supply and the removal side may not be exchanged. Check whether the connections correspond to those shown on page XX.
	The condensation drain is not correctly connected.	Make sure that the drain for condensation is correctly connected.
	The unit is not suspended in a horizontal position.	Suspend the ventilation unit in such a way that it is horizontally aligned.

OBSERVATION

POSSIBLE CAUSE

SOLUTION

The unit has been switched off and the following LED indication appears on the circuit board on activation of the function switch: 'RED - RED - ORANGE'.

The unit has been switched off because the temperature of the air being drawn into the living space lies below 5° C.

The unit is reset by pulling the plug out of the socket and by applying power to the unit again. Please make sure that the cause has been removed:

- The living space is too cold (at least 16 °) to guarantee correct functioning.
- The channels have not been connected correctly.
- If the unit switches off again then you must contact your installer.

The mechanical position switch is set to a different position than that in which the unit is running. The unit cannot be switched to this position.

The switch reacts only on the wired position switch when the position is adjusted.

Always switch the position switch to a different position and then switch it back to the desired position.

The LED indicator blinks orange during operation of the switch.

The service life of the battery in the function switch has been reached.

Replace the battery in the switch. (CR2450)

The unit does not react to the switch and the LED indicator lights up red when the switch is operated.

The switch is not connected to the ventilation unit.

Connect the switch to the ventilation unit.

Insufficient cooling during the summer months due to the bypass function.

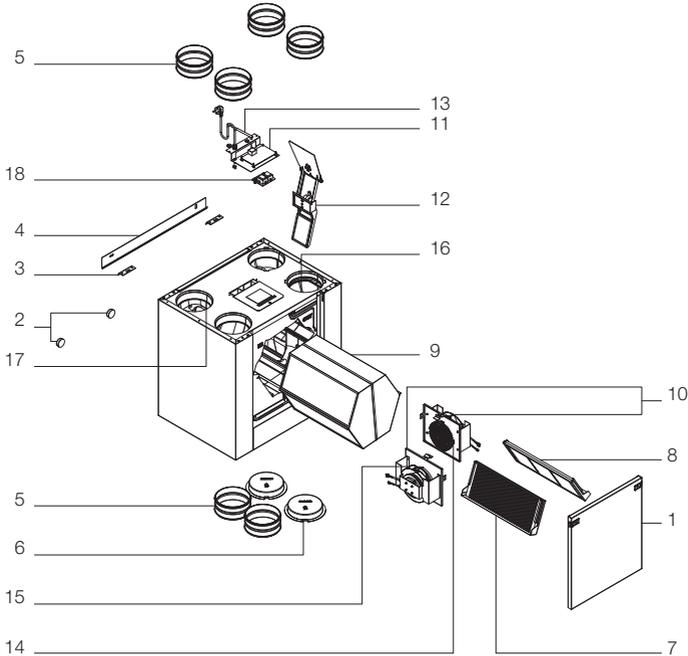
Please note the bypass is not an active cooling operation. In order to make optimal use of the bypass you must, in case of overheating of the home (temperature > 23°C), set the unit in a higher position if there are cool outdoor temperatures.

LED INDICATOR ON CIRCUIT BOARD	ERROR CODE
Red orange	Problem with the exhaust fan.
Red orange orange	Problem with the intake fan.
Red red orange	'Intake temperature too low' - Stop.
Red red orange orange	Problem with the temperature sensor 'from the home'.
Red red orange orange orange	Problem with the temperature sensor 'to the outside'.
Red red orange orange orange orange	Problem with the temperature sensor 'from the outside'.
Red red orange orange orange orange orange	Problem with the temperature sensor 'to the home'.
Red red red orange	Problem with constant flow control of intake air.
Red red red orange orange	Problem with constant flow control of exhaust air.
Green red	Indication 'contaminated filters'.

LED INDICATOR ON RADIO SWITCH	ERROR CODE
Red red	Problem with the ventilation unit.
Green	The desired action was correctly transmitted.
Red	Communication problem.
Green green	Successful linking of the radio switch.
Orange	The service life of the battery in the function switch has been reached.
Orange orange (after operation)	Replace the filters, reset the filter message, see page 6.
Orange orange	Successful unlinking of the radio switch.
Orange orange orange	Access to the settings was refused.

7. PARTS LIST

No.	Article number	Description
1	11VE50104	Door panel
2	11VE50003	Bumpers (2 p.)
3	11VE50200	Mounting brackets (2 p.)
4	11VE50250	Wall bracket
5	11VE43120	Galvanized sleeve Ø 180mm
6	11VE50004	Plastic cover cap Ø 180mm
7	11VE50306	Filter cassette - X350 / X500
8	11VE50358	Green filter set 495x186x10mm (2) - X350 / X500
	11VE50359	Filter set F7/G4 481x186x20mm (2) - X350 / X500
	11VE50391	Filter set F7/F7 481x186x20mm (2) - X350 / X500
9	11VE50400	Heat exchanger - X350 / X500
10	11VE51101	Fan 85W190 - X350
	11VE51102	Fan 170W190 - X500
11	11VE51221	PCB - X350
	11VE51222	PCB - X500
12	11VE55152	Bypass module
13	11VE51351	Antenna
14	11VE51409	NTC sensor/cable 2p 1250
15	11VE51410	NTC sensor/cable 2p 1500
16	11VE51404	NTC sensor/cable 3p 360
17	11VE51411	NTC sensor/cable 3p 750
18	11VE51236	EMC component X350
	11VE51237	EMC component X425/X500



8. WARRANTY CONDITIONS

Vasco declares that it grants a warranty on the Vasco X350/X425/X500 during a period of 2 years after purchase date. The invoice date of the installation company applies as the proof of purchase date. If no invoice is on hand, the production date applies as the purchase date. The warranty covers only the free delivery by Vasco of a replacement fan and circuit board. No extra warranty period is provided on repairs. The warranty does not cover:

- Assembly and disassembly costs
- Defects that, in our judgement, are the result of improper handling, negligence or accident
- Defects that arose due to handling or repair by third parties without our consent
- Defects that are due to irregular and/or unprofessional maintenance
- Defects that are due to an operation in unsuitable surroundings. Before sending back any defective parts, the installing technician must contact Vasco. At that time, the installer will be provided with a warranty return number. The defective parts must be sent to Vasco under indication of this return number.

7 CONFORMITY DECLARATION

This declaration of conformity is issued under the sole responsibility of
Vasco Group nv,
Kruishoefstraat 50,
B-3650 Dilsen

The product described, Central heat recovery unit X350/X425/X500.

Complies with the following Directives:

- **2014/53/EU (Radio Equipment Directive)**
 - Art. 3.1.a
 - EN 60335-1:2012 + AC:2014 + A11:2014 + A13:2017 + A1:2019 + A2:2019 + A14:2019
 - EN 60335-2-65:2003 +A1:2008 + C1:2004 + A11:2012
 - EN 62233:2008 + AC:2008
 - Art 3.1.b
 - EN 61000-3-2:2014
 - EN 61000-3-3:2013
 - EN 55014-1:2017 + A11:2020
 - EN 55014-2:2015
 - EN 301 489-1 V1.9.2: 2011
 - EN 301 489-3 V2.1.1: 2019
 - Art. 3.2
 - EN 300 220-2 V3.1.1
- **2011/65/EU (RoHS)**
 - EN IEC 63000:2018
- **2009/125/EU (ErP-Directive)**
 - VO (EU)Nr. 1253/2014
 - VO (EU)Nr. 1254/2014

Laboratoria DE NAYER vzw-asbl, Notified Body for RED 2014/53/EU (no2758) generated a certificate according the conformity assessment module B in the EU-Type examination with number: **TCF-LDN 2022.09.002 – Ed.1**
The product is provided with a CE label.

10 January 2024



Peter Ketelslegers

Vasco Group nv,
Kruishoefstraat 50, B-3650 Dilsen



VENTILATION SYSTEM X350

PRODUCT DATA SHEET

Type	Unit	Vasco X350			Vasco X350		
		Cold	Average	Warm	Cold	Average	Warm
Climate zone	Unit						
Specific energy consumption (SEC)	kWh/(m ² a)	-76.64	-38.04	-13.30	-77.66	-38.92	-14.10
SEC class		A+	A	E	A+	A	E
Residential Ventilation Unit (RVU) Non-residential Ventilation Unit (NRVU)	RVU/NRVU	RVU			RVU		
Declared typology ventilation unit		Bidirectional ventilation unit (BVU)			Bidirectional ventilation unit (BVU)		
Type of drive installed		Variable speed			Variable speed		
Type of heat recovery system		Recuperative heat exchanger			Recuperative heat exchanger		
Thermal efficiency of heat recovery	%	91%			91%		
Maximum flow rate	m ³ /h	350			350		
Electrical power input	W	167			167		
Sound power level L _{WA}	dB(A)	47.5			47.5		
Reference flow rate	m ³ /s	0.0681			0.0681		
Reference pressure difference	Pa	50			50		
Specific input power (SPI)	W/m ³ /h	0.239			0.239		
Control typology		Manual Control (no DCV)			Clockcontrol (no DCV)		
Control factor		1			0.95		
Declared maximum internal and external leakage rates	Internal (%)	A1 (1%)			A1 (1%)		
	External (%)	A1 (2,9%)			A1 (2,9%)		
Mixing rate of non-ducted bidirectional ventilation units	%	-					
Position and description of visual filter warning for RVUs		The LED on the included RF switch that lights up orange twice (after operation) when the filters should be replaced. Periodically replacing the air filters is important for the optimal functioning of the ventilation unit. Not replacing the air filter has an impact on the yield and the energy efficiency of the device.					
Internet address for pre-/dis-assembly instructions		www.vasco.eu					
The airflow sensitivity to pressure variations (for non-ducted units only)	%	-					
The indoor/outdoor air tightness (for non-ducted units only)	Indoor: m ³ /h	-					
	Outdoor: m ³ /h	-					
Annual electricity consumption per 100m ² surface (AEC)	kWh electricity/a	882	345	300	852	315	270
Annual saved primary heating energy per 100m ² groundsurface (AHS)	kWh primary energy/a	8995	4598	2079	9024	4613	2086

Vasco X350 + 1 sensor			Vasco X350 + 2 sensors				
Cold	Average	Warm	Cold	Average	Warm	Unit	
-79.60	-40.57	-15.58	-83.03	-43.42	-18.10	kWh/(m²a)	
A+	A	E	A+	A+	E		
RVU			RVU				
Bidirectional ventilation unit (BVU)			Bidirectional ventilation unit (BVU)				
Variable speed			Variable speed				
Recuperative heat exchanger			Recuperative heat exchanger				
91%			91%			%	
350			350			m³/h	
167			167			W	
47.5			47.5			dB(A)	
0.0681			0.0681			m³/s	
50			50			Pa	
0.239			0.239			W/m³/h	
Central demand control			Local demand control				
0.85			0.65				
A1 (1%)			A1 (1%)			Internal (%)	
A1 (2,9%)			A1 (2,9%)			External (%)	
-			-			%	
The LED on the included RF switch that lights up orange twice (after operation) when the filters should be replaced. Periodically replacing the air filters is important for the optimal functioning of the ventilation unit. Not replacing the air filter has an impact on the yield and the energy efficiency of the device.							
www.vasco.eu							
-			-			%	
-			-			Indoor: m³/h	
-			-			Outdoor: m³/h	
798	261	216	709	172	127	kWh electricity/a	
9083	4643	2100	9202	4704	2127	kWh primary energy/a	

VENTILATION SYSTEM X425

PRODUCT DATA SHEET

Type	Unit	Vasco X425			Vasco X425		
		Cold	Average	Warm	Cold	Average	Warm
Climate zone	Unit	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC)	kWh/(m ² a)	-76,64	-38,04	-13,30	-77,66	-38,92	-14,10
SEC class		A+	A	E	A+	A	E
Residential Ventilation Unit (RVU) Non-residential Ventilation Unit (NRVU)	RVU/NRVU	RVU			RVU		
Declared typology ventilation unit		Bidirectional ventilation unit (BVU)			Bidirectional ventilation unit (BVU)		
Type of drive installed		Variable speed			Variable speed		
Type of heat recovery system		Recuperative heat exchanger			Recuperative heat exchanger		
Thermal efficiency of heat recovery	%	90%			90%		
Maximum flow rate	m ³ /h	425			425		
Electrical power input	W	235			235		
Sound power level L _{WA}	dB(A)	49			49		
Reference flow rate	m ³ /s	0.0826			0.0826		
Reference pressure difference	Pa	50			50		
Specific input power (SPI)	W/m ³ /h	0.273			0.273		
Control typology		Manual Control (no DCV)			Clockcontrol (no DCV)		
Control factor		1			0.95		
Declared maximum internal and external leakage rates	Internal (%)	A1 (1%)			A1 (1%)		
	External (%)	A1 (2,9%)			A1 (2,9%)		
Mixing rate of non-ducted bidirectional ventilation units	%	-					
Position and description of visual filter warning for RVUs		The LED on the included RF switch that lights up orange twice (after operation) when the filters should be replaced. Periodically replacing the air filters is important for the optimal functioning of the ventilation unit. Not replacing the air filter has an impact on the yield and the energy efficiency of the device.					
Internet address for pre-/dis-assembly instructions		www.vasco.eu					
The airflow sensitivity to pressure variations (for non-ducted units only)	%	-					
The indoor/outdoor air tightness (for non-ducted units only)	Indoor: m ³ /h	-					
	Outdoor: m ³ /h	-					
Annual electricity consumption per 100m ² surface (AEC)	kWh electricity/a	924	387	342	891	354	309
Annual saved primary heating energy per 100m ² groundsurface (AHS)	kWh primary energy/a	8932	4566	2065	8965	4583	2072

Vasco X425 + 1 sensor			Vasco X425 + 2 sensors				
Cold	Average	Warm	Cold	Average	Warm	Unit	
-79,60	-40,57	-15,58	-83,03	-43,42	-18,10	kWh/(m²a)	
A+	A	E	A+	A+	E		
RVU			RVU				
Bidirectional ventilation unit (BVU)			Bidirectional ventilation unit (BVU)				
Variable speed			Variable speed				
Recuperative heat exchanger			Recuperative heat exchanger				
90%			90%			%	
425			425			m³/h	
235			235			W	
49			49			dB(A)	
0.0826			0.0826			m³/s	
50			50			Pa	
0.273			0.273			W/m³/h	
Central demand control			Local demand control				
0.85			0.65				
A1 (1%)			A1 (1%)			Internal (%)	
A1 (2,9%)			A1 (2,9%)			External (%)	
-			-			%	
The LED on the included RF switch that lights up orange twice (after operation) when the filters should be replaced. Periodically replacing the air filters is important for the optimal functioning of the ventilation unit. Not replacing the air filter has an impact on the yield and the energy efficiency of the device.							
www.vasco.eu							
-			-			%	
-			-			Indoor: m³/h	
-			-			Outdoor: m³/h	
829	292	247	726	189	144	kWh electricity/a	
9030	4616	2087	9161	4683	2118	kWh primary energy/a	

VENTILATION SYSTEM X500

PRODUCT DATA SHEET

Type	Unit	Vasco X500			Vasco X500		
		Cold	Average	Warm	Cold	Average	Warm
Climate zone	Unit	Cold	Average	Warm	Cold	Average	Warm
Specific energy consumption (SEC)	kWh/(m ² a)	-72.07	-34.30	-10.03	-73.46	-35.50	-11.13
SEC class		A+	A	E	A+	A	E
Residential Ventilation Unit (RVU) Non-residential Ventilation Unit (NRVU)	RVU/NRVU	RVU			RVU		
Declared typology ventilation unit		Bidirectional ventilation unit (BVU)			Bidirectional ventilation unit (BVU)		
Type of drive installed		Variable speed			Variable speed		
Type of heat recovery system		Recuperative heat exchanger			Recuperative heat exchanger		
Thermal efficiency of heat recovery	%	88%			88%		
Maximum flow rate	m ³ /h	500			500		
Electrical power input	W	333			333		
Sound power level L _{WA}	dB(A)	50.5			50.5		
Reference flow rate	m ³ /s	0.0972			0.0972		
Reference pressure difference	Pa	50			50		
Specific input power (SPI)	W/m ³ /h	0.331			0.331		
Control typology		Manual Control (no DCV)			Clockcontrol (no DCV)		
Control factor		1			0.95		
Declared maximum internal and external leakage rates	Internal (%)	A1 (1%)			A1 (1%)		
	External (%)	A1 (2,9%)			A1 (2,9%)		
Mixing rate of non-ducted bidirectional ventilation units	%	-					
Position and description of visual filter warning for RVUs		The LED on the included RF switch that lights up orange twice (after operation) when the filters should be replaced. Periodically replacing the air filters is important for the optimal functioning of the ventilation unit. Not replacing the air filter has an impact on the yield and the energy efficiency of the device.					
Internet address for pre-/dis-assembly instructions		www.vasco.eu					
The airflow sensitivity to pressure variations (for non-ducted units only)	%	-					
The indoor/outdoor air tightness (for non-ducted units only)	Indoor: m ³ /h	-					
	Outdoor: m ³ /h	-					
Annual electricity consumption per 100m ² surface (AEC)	kWh electricity/a	997	460	415	956	419	374
Annual saved primary heating energy per 100m ² groundsurface (AHS)	kWh primary energy/a	8826	4512	2040	8864	4531	2049

Vasco X500 + 1 sensor			Vasco X500 + 2 sensors				
Cold	Average	Warm	Cold	Average	Warm	Unit	
-76.09	-37.76	-13.17	-80.72	-41.65	-16.64	kWh/(m ² a)	
A+	A	E	A+	A	E		
RVU			RVU				
Bidirectional ventilation unit (BVU)			Bidirectional ventilation unit (BVU)				
Variable speed			Variable speed				
Recuperative heat exchanger			Recuperative heat exchanger				
88%			88%			%	
500			500			m ³ /h	
333			333			W	
50.5			50.5			dB(A)	
0.0972			0.0972			m ³ /s	
50			50			Pa	
0.331			0.331			W/m ³ /h	
Central demand control			Local demand control				
0.85			0.65				
A1 (1%)			A1 (1%)			Internal (%)	
A1 (2,9%)			A1 (2,9%)			External (%)	
-			-			%	
The LED on the included RF switch that lights up orange twice (after operation) when the filters should be replaced. Periodically replacing the air filters is important for the optimal functioning of the ventilation unit. Not replacing the air filter has an impact on the yield and the energy efficiency of the device.							
www.vasco.eu							
-			-			%	
-			-			Indoor: m ³ /h	
-			-			Outdoor: m ³ /h	
882	345	300	757	220	175	kWh electricity/a	
8940	4570	2067	9092	4648	2102	kWh primary energy/a	



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