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My**VALLOX**
145 MV

User manual



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1. INTRODUCTION

Thank you for choosing a Vallox product. For optimal performance, read the instructions carefully before installation, operation, or maintenance.

1.1. Safety

Safe and appropriate handling requires knowledge of the basic safety regulations, and of the intended use of the ventilation system. Read this manual before operating the ventilation unit. Retain the manual for later reference. If you lose the manual, it can be downloaded from our website.

These instructions contain all the information needed for the safe operation of the unit. All persons who install, operate, and maintain the ventilation unit must follow the provided instructions. Furthermore, all local accident prevention regulations must be observed.

 WARNING:

Installation and setup should only be carried out by a qualified specialist. Electrical installations and connections must only be carried out by an electrician and in compliance with local regulations.

 **NOTE:** For further information, go to <https://www.vallox.com>

1.1.1. Safety signs used in the instructions



DANGER:

Indicates a hazard that will result in death or serious injury if not avoided.



WARNING:

Indicates a hazard that can result in death or serious injury if not avoided.



CAUTION:

Indicates a hazard that can result in minor or moderate injury if not avoided.



IMPORTANT:

Indicates a hazard that can result in damage to property or loss of data if not avoided.



NOTE:

Indicates essential information about the product.

TIP:

Provides additional information about the use of the product and its benefits.

1.2. Intended use

All Vallox ventilation units have been designed to provide appropriate and continuous ventilation so as to present no threat to health and to maintain structures in good condition.

WARNING:

Ensure that the fireplace air intake is sufficient. Operating certain kitchen range hood, central vacuum cleaner and ventilation unit functions can create underpressure in the indoor air. Combustion gases can then be released from the fireplace into the indoor air.

The following can create underpressure indoors:

- Kitchen range hood or central vacuum cleaner are in operation while there is a fire burning in the fireplace
- The supply air fan is stopped during the defrosting function of the ventilation unit
- The boosted defrosting function of the ventilation unit is being used

Underpressure can prevent fireplace air intake, and combustion gases can then be released into the indoor air.

 **IMPORTANT:** In order to ensure that the indoor air presents no harm to health and remains optimal also for the structures of the building, ventilation must be kept on without disruptions. It is recommended that ventilation be left turned on during long holidays also. This keeps the indoor air fresh and prevents humidity from condensing in the ventilation ducts and structures. It also reduces the risk of moisture damage.

IMPORTANT:

Prolonged overpressure can result in damage to the structures of the building.

1.3. Warnings

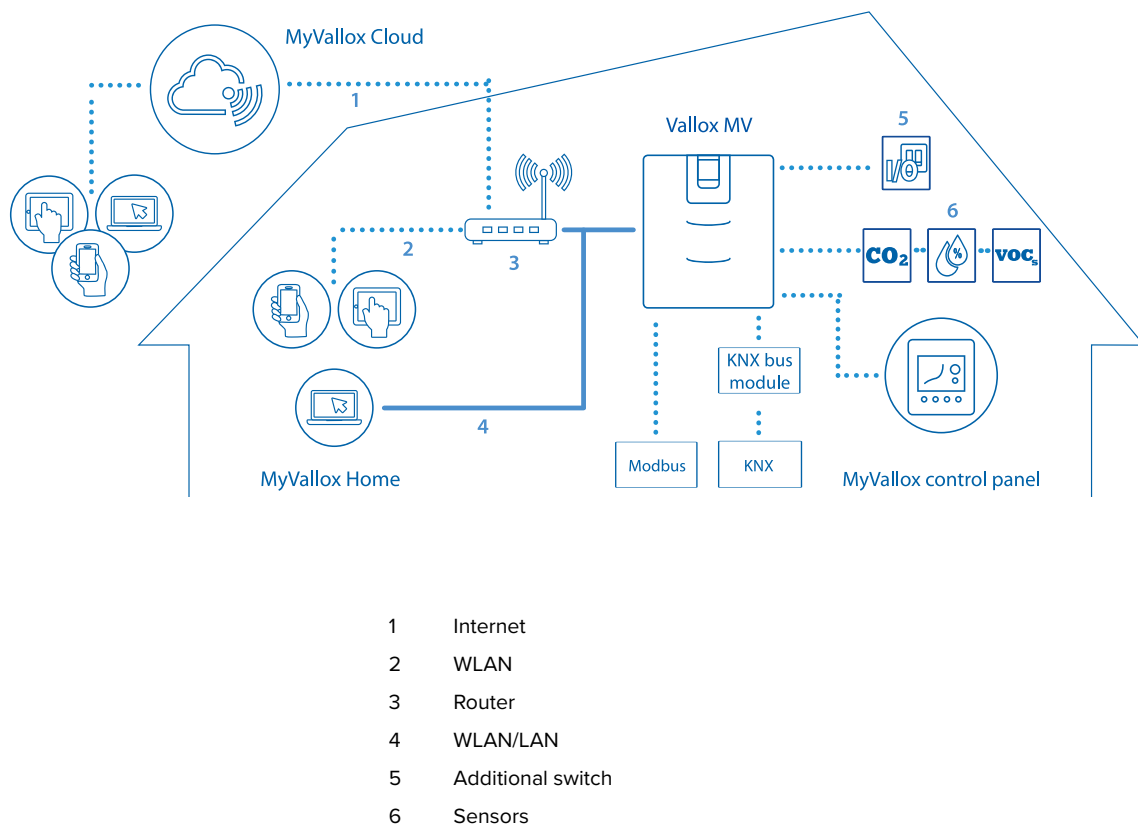
 **WARNING:** The unit is not intended for use by children under 8 or by persons with reduced sensory, physical or mental capabilities, or whose lack of knowledge and experience do not ensure safe operation of the unit. Such persons can use the unit under supervision, or by following the instructions of someone who is responsible for their safety. Children must be supervised and not be allowed to play with the device.

- The ventilation unit is very heavy.
- The door of the ventilation unit is heavy.
- Water must at all times be kept out of the electrical system.
- The timer function of the Custom mode can only be turned off when the external fireplace switch has a timer.
- The fan settings must be completed by a qualified specialist in accordance with the ventilation plan. If you edit the settings, ensure that they comply with the ventilation plan.
- The safety switch automatically turns off the power when the door of the ventilation unit is opened in connection with maintenance measures. **Always disconnect the ventilation**

unit from the mains before starting maintenance.

- If the heating resistor needs to be removed from the unit in connection with maintenance measures, ensure that the relay is not hot before pulling it out of the unit.
- Connect the cables so that they do not touch the resistor.

1.4. System description



1.5. Guarantee

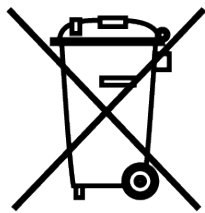
The guarantee and liability exclude damage resulting from:

- Inappropriate use of the ventilation unit or the control panel
- Incorrect or inappropriate installation, setup, or use
- Failure to follow instructions regarding transport, installation, operation, or maintenance
- Structural or electronic modifications or changes made to the software

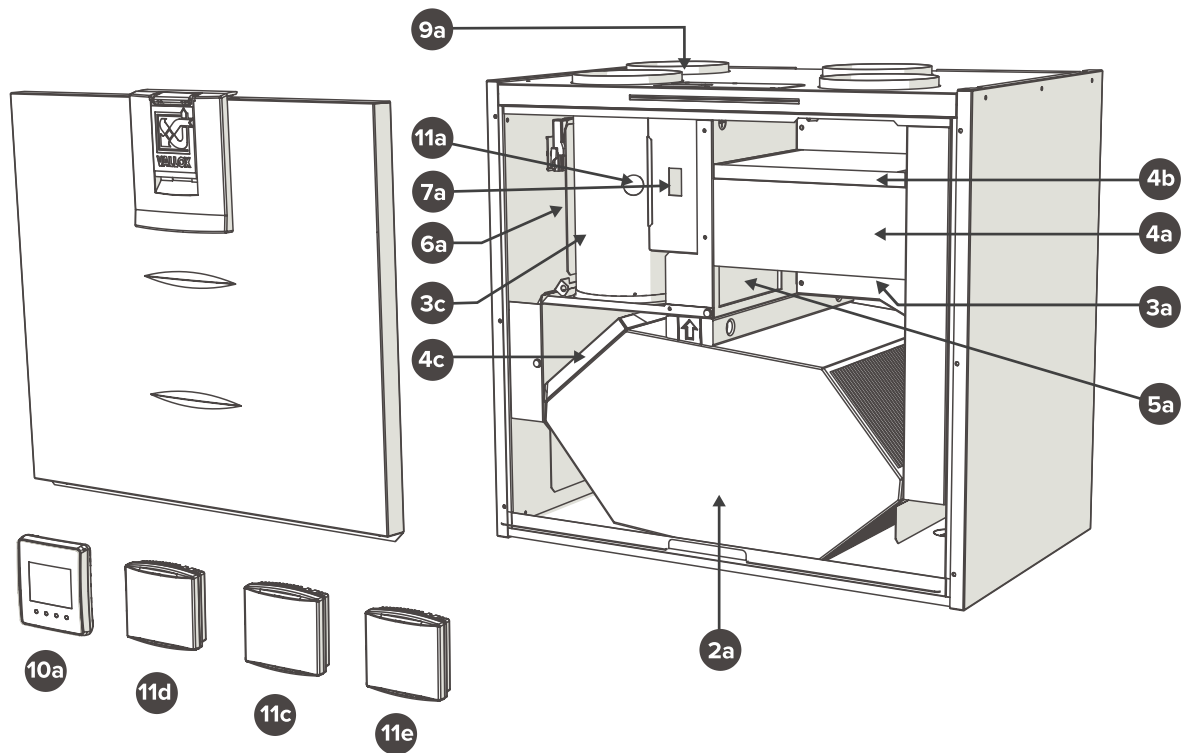
1.6. Disposal of the ventilation unit

Do not dispose of electronic devices with household waste. Follow local laws and regulations on safe and ecological disposal of the product.

See the MyVallox ventilation unit recycling instructions at: https://res.cloudinary.com/vallox/image/upload/v1704800151/FileStock/ValidManuals/Recycling_Instructions_Vallox_Ventilation_units.pdf.



1.7. Main parts



R model in the figure. In the L model, the parts are mirrored.

No.	Part	No.	Part
2a	Heat recovery cell	7a	Safety switch
3a	Extract air fan (behind the protective cover)	9a	Ceiling bushing for electric wires
3c	Supply air fan (behind the protective cover)	10a	Control panel
4a	Fine filter for supply air	11a	Internal carbon dioxide and humidity sensor
4b	Coarse filter for supply air	11c	Carbon dioxide sensor (optional)
4c	Coarse filter for extract air	11d	Humidity sensor (optional)
5a	Bypass damper of the HR cell	11e	VOC sensor (optional)
6a	Post-heating resistor (behind the extract air duct)		

2. INSTALLATION

This chapter describes the installation of the Vallox ventilation unit.

Only a qualified technician is allowed to install and set up the unit. Electrical installation and connection work must be carried out by an electrician in line with local regulations.

Check the package contents before installation and make sure that all parts are in good condition. Store the product in a dry place (indoors).

Check the dimensions and weight of the product from the technical specification of the unit.

The ventilation unit must be installed in a dry place where the temperature does not drop below +10°C. When installed without its enclosure, the unit must be placed in a place where its running noise is not bothersome; for example, a storage room, utility room or a false ceiling.

It is normal for frost and ice to accumulate inside the ventilation unit when it is cold. This does not require any action from the user.

If the relative humidity of the ambient air is high and the outdoor temperature is very low, moisture may condense on the unit surface. This does not require any action from the user. The possibility of condensation should always be taken into account when selecting the furnishings and fixtures to be placed close to the unit.

Avoid mounting the ventilation unit to a hollow partition wall or a bedroom wall, or prevent the conduction of noise through the wall.

! NOTE:

The whole length of the outdoor air duct to the unit and the exhaust air duct from the unit must be insulated using closed-cell insulation. Closed-cell insulation is needed for the duct component that runs through warm spaces.

! NOTE:

The ventilation unit must be installed so that it can be connected to a LAN cable. The LAN cable must be able to be connected to a router.

2.1. Mounting on a wall

! NOTE: Install the ventilation unit in a place where the temperature does not drop below +10°C.

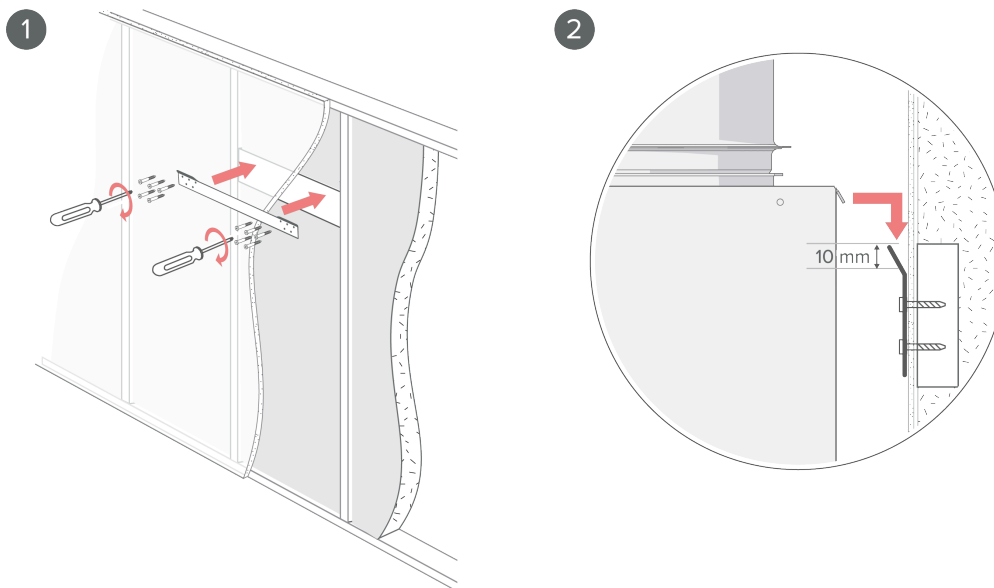
! NOTE:

Avoid mounting the ventilation unit to a hollow partition wall or a bedroom wall, or prevent the conduction of noise through the wall.

The minimum distance between the unit roof and the room ceiling is 30 mm. Please note that the unit sits 10 mm higher than the final height when mounted by using a wall bracket.

! NOTE: A space of at least 550 mm must be reserved in front of the unit for maintenance purposes.

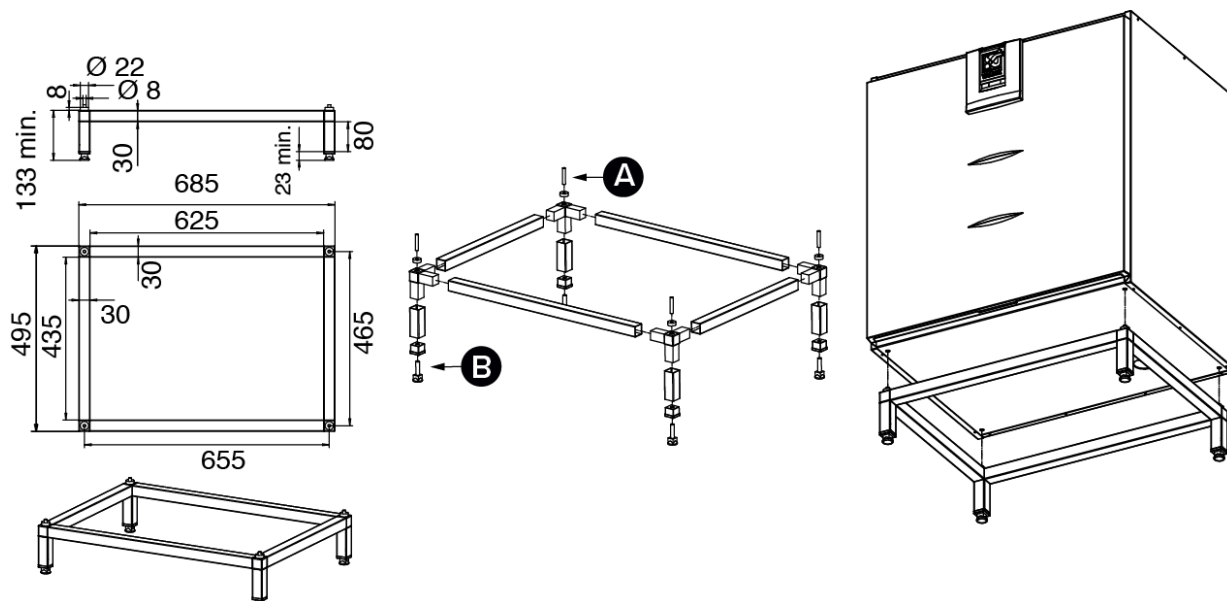
Mount the ventilation unit on the wall with a wall mounting plate, as shown in the figures below. Make sure that the unit is horizontally level after mounting.



2.2. Mounting on a base

! NOTE: Vallox 145 MV must always be installed on a base on the floor, or on the wall by using a mounting plate. The base is optional.

! NOTE: Mount the ventilation unit in a place where the temperature does not fall below +10 °C.



A — Thread bar M8 x 35, shorter thread upwards

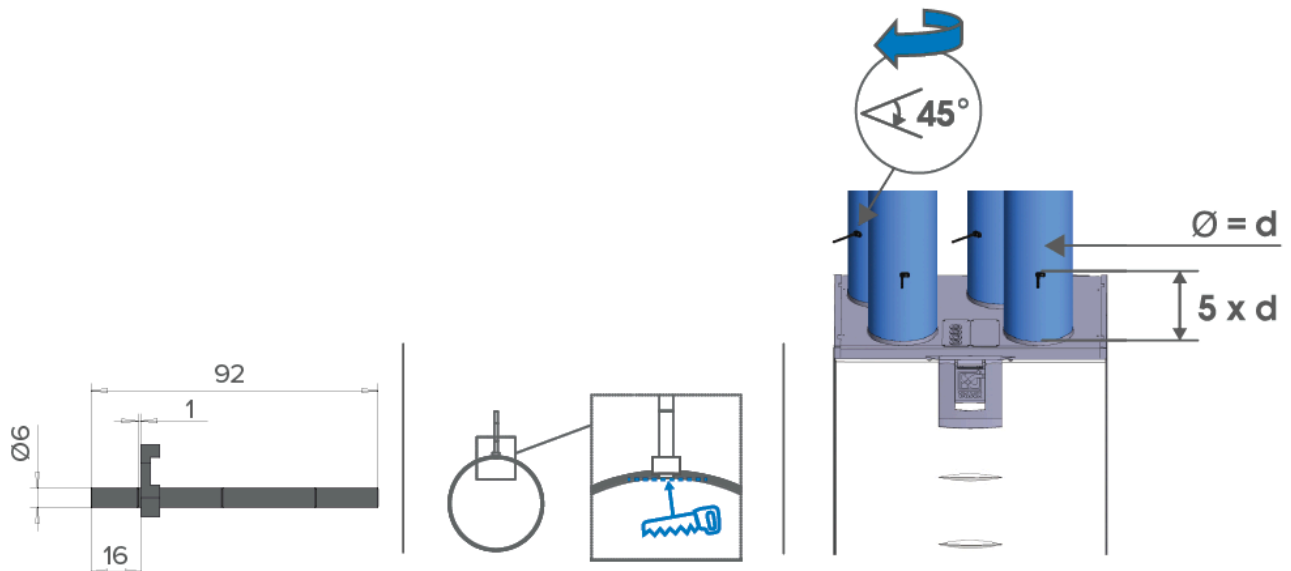
B — The length of the adjusting screw is 37 mm.

1. Adjust the base with adjusting legs to level it.
2. Remove the rubber plugs (4 pcs) at the bottom of the unit.
3. Place the unit on top of the base so that the bars of the base fit in the holes at the bottom of the unit.

Make sure that the unit is horizontally level after mounting.

2.3. Measuring and adjusting the air flows of the ventilation unit

The accessories delivered with the unit include four (4) air flow measuring tubes. These can be inserted in the ducts to allow for easier ventilation adjustment.



2.4. Removal of condensing water

! NOTE: The Vallox Silent Klick siphon package is delivered with the unit. Installation instructions for the siphon are enclosed with the packaging, and can also be found online at <https://www.vallox.com>. When the alternative siphon installation method is used, the ring seal and the locking part must be moved to the pipe connection part that is mounted on the wall.

Figure 1. Dimensions of and the space required by the installation of the Vallox Silent Klick siphon

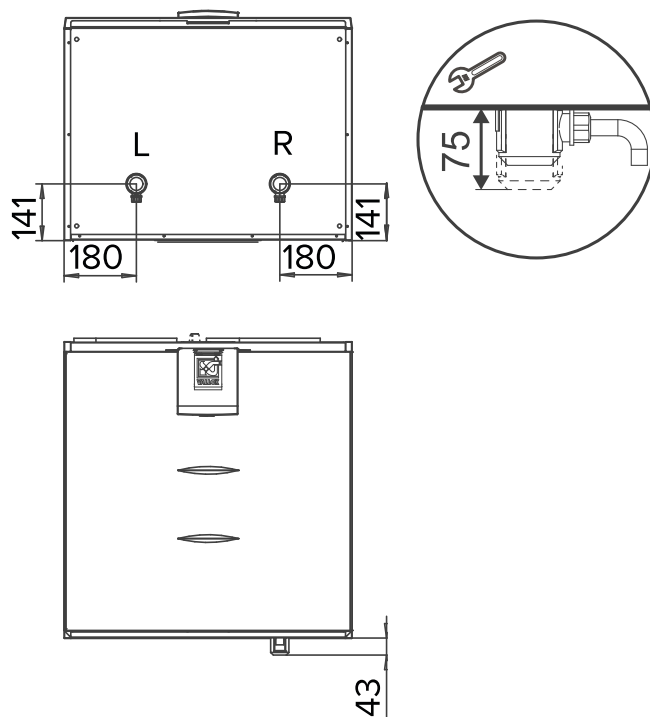
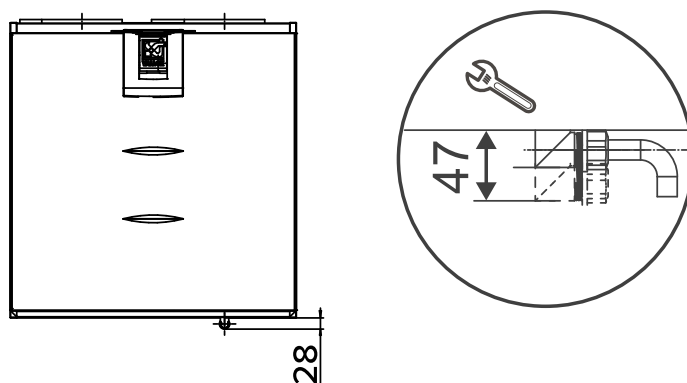


Figure 2. The space required by the alternative Vallox Silent Klick siphon installation method (elbow)



3. VENTILATION UNIT CONTROL OPTIONS

The Vallox ventilation unit can be controlled by the following means:

- Through the MyVallox control panel installed to the building
- Through the MyVallox Home LAN connection and the MyVallox Home/Cloud user interface
- Through the MyVallox Cloud service and the MyVallox Home/Cloud user interface
- Through a Vallox cooker hood
- Through a remote monitoring or building automation system that uses voltage signals or Modbus messages.

The ventilation unit's integrated humidity and carbon dioxide sensors control ventilation automatically, as necessary (the sensors are on by default). Ventilation can also be adjusted automatically by using an optional carbon dioxide, humidity, or VOC (air quality) sensor. When these sensors are used, ventilation remains optimal even when the apartment is unoccupied. The standard equipment and available optional accessories vary from country to country.

The ventilation unit's integrated humidity and carbon dioxide sensors adjust ventilation automatically according to the need. In addition, ventilation can be automated by using optional carbon dioxide, humidity or air quality (VOC) sensors.

TIP:

The MyVallox control panel automatically switches to the sleep mode when the pre-set Sleep time has elapsed. To reactivate the MyVallox control panel, press any button.

3.1. Connecting the ventilation unit to the cloud service

You can connect the ventilation unit to the MyVallox Cloud service. In the cloud service, you can control ventilation remotely with a smartphone or tablet, for example. The unit software is updated automatically through the cloud service. To connect to the cloud service, the ventilation unit must be connected to the internet through LAN and registered for the cloud service. By registering the unit, you create a MyVallox Cloud account for yourself. Read more about the service at <https://cloud.vallox.com>.

To register a Vallox ventilation unit with the MyVallox Cloud service:

1. Connect one end of the network cable to the grey connector of the Vallox ventilation unit and the other end to the router.

2. Open the computer's network settings by selecting **Start** → **My Computer** → **Network**. You can see a computer icon with the text Vallox and a series of numbers. Open the MyVallox Home user interface by double clicking on the icon. The MyVallox Home user interface opens.

OR

Select on the MyVallox control panel **Service menu** → **Diagnostics display** → **IP address**. Type in the IP address and press Enter. The MyVallox Home user interface opens.

3. Select Special functions.
4. The MyVallox Cloud area will open and you can see whether you are signed in to the cloud service.
5. Select **Connect**.
6. The registration page of the MyVallox Cloud service opens, **Ventilation unit ID** i.e. the unique identification number of the unit will be automatically generated into the field.
7. Enter the following information in the form:
 - **Ventilation unit name** - Enter the ventilation unit name of your choice in this field.
 - **Language** - Select the desired language from the menu.
 - **Country** - Select the desired country from the menu.
 - **Choose username** - Enter the username of your choice in this field.
 - **Email** - Enter the email address of your choice in this field.
 - **Password** - Enter the password of your choice in this field.
 - **Retype your password** - Retype your password in this field.
8. Select the **I want to receive notifications related to my ventilation unit** box if you wish to receive email notifications related to your ventilation unit.
9. Read the terms and conditions of use of the service and select **I have read and accepted the terms and conditions of use of the MyVallox Cloud cloud service**. The use of the service requires that the user has accepted the terms and conditions.
10. Select **Create MyVallox Cloud account**. The ventilation unit generates a unique identification code and sends it to the service. The service will remember the unit the next time you sign into the cloud service.
11. A confirmation message will be sent to your email address. Click on the link in the message to confirm your email address and to sign in to the cloud service for the first time.
12. Once you have signed in, the MyVallox Cloud service will open and the main page of the MyVallox Cloud account will be displayed in your browser.

3.2. Connecting the ventilation unit to a computer

To use a computer as a second controller alongside the MyVallox control panel, connect the computer directly to the Vallox ventilation unit.

Before starting, ensure that you have:

- A computer with a browser that supports Web Sockets data transmission. Supported

browsers:

- Firefox, version 31 or higher.
 - Internet Explorer, version 10 or higher.
 - Opera, version 25 or higher.
 - Chrome, version 31 or higher.
 - Safari, version 7 or higher.
- An internet connection to the Vallox ventilation unit with a network cable (RJ-45).

To use the Vallox ventilation unit through the MyVallox Home user interface:

1. Start the computer.
2. Connect one end of the network cable to the computer's Ethernet port and the other end to the grey Ethernet port of the Vallox ventilation unit.

! NOTE:

You can also connect the Vallox ventilation unit to a router. In that case, the Vallox ventilation unit can be connected to the MyVallox Cloud service. You can also use a WLAN network by connecting the Vallox ventilation unit to a computer.

3. On the computer, select: **Start** → **My Computer** → **Network**.
4. Please wait until you see a computer icon with the text **Vallox** and a series of numbers. Double-click on the icon to open the MyVallox Home user interface in your browser. The ventilation unit is now connected to the computer.

OR

You can skip steps 3 and 4 and:

- a. Select on the MyVallox control panel **Service menu** → **Unit information** → **IP address**. The MyVallox Home user interface opens in your browser.
- b. Type in the IP address and press **Enter**

3.3. Registering the ventilation unit in the MyVallox Cloud service

This section explains how to register the Vallox ventilation unit in the MyVallox Cloud service.

When the ventilation unit is connected to the MyVallox Cloud service, you can control ventilation remotely with a smartphone or tablet, for example. The unit software is updated automatically through the cloud service. To connect to the cloud service, the ventilation unit must be connected to the internet through LAN and registered for the cloud service. By registering the unit, you create a MyVallox Cloud account for yourself.

To register a Vallox ventilation unit with the MyVallox Cloud service:

1. Connect one end of the network cable to the grey connector of the Vallox ventilation unit and the other end to the router's LAN port (usually numbered 1,2,3,4). The LAN port must not be bridged, i.e. it must share private IP addresses (addresses that begin with 10.x.x.x, 172.x.x.x or 192.168.x.x).

TIP:

If the ventilation unit rejects the IP address and it is not possible to connect the unit to the intranet, go to the router settings and make sure the DHCP server is on and it is sharing private IP addresses (addresses that begin with 10.x.x.x, 172.x.x.x or 192.168.x.x).

2. Open the computer's network settings by selecting **Start>** **My Computer>** **Network**. You can see a computer icon with the text **Vallox** and a series of numbers.

OR

Select on the MyVallox Control control panel **Service menu>** **Unit information>** **IP address**. Type in the IP address and press **Enter**.

3. Open the MyVallox Home user interface by double-clicking on the icon.

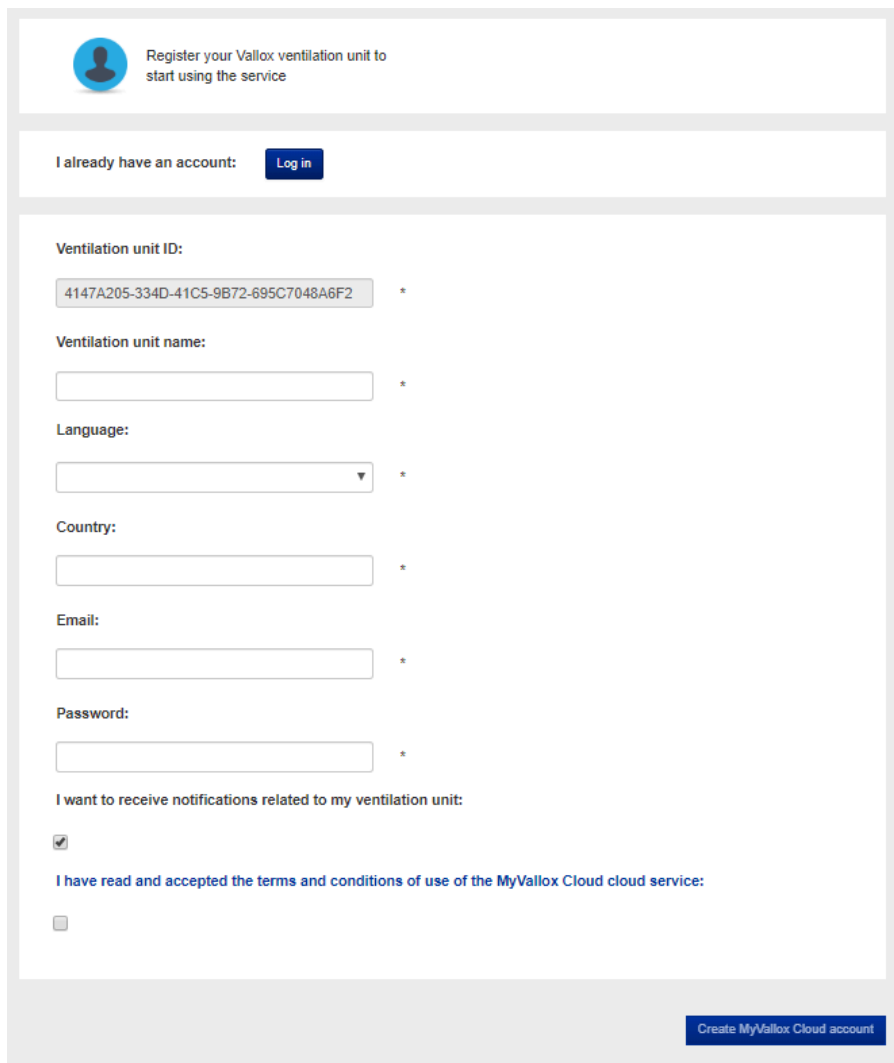
4. Select **Special functions**. 
5. Under **Cloud service**, you can see whether you are signed in to the MyVallox Cloud service.

Cloud service

You are not signed in into the MyVallox Cloud cloud service.

Connect

6. Select **Connect**.
7. The registration page of the MyVallox Cloud service opens. The **Ventilation unit ID**, i.e. the unit's unique identifier, is generated automatically in the field.



The screenshot shows a web form for registering a Vallox ventilation unit. At the top, there is a user icon and the text "Register your Vallox ventilation unit to start using the service". Below this is a section for existing users: "I already have an account:" with a "Log in" button. The main registration section contains the following fields and options:

- Ventilation unit ID:** A text field containing the value "4147A205-334D-41C5-9B72-695C7048A6F2" with an asterisk indicating it is required.
- Ventilation unit name:** A text field with an asterisk.
- Language:** A dropdown menu with an asterisk.
- Country:** A text field with an asterisk.
- Email:** A text field with an asterisk.
- Password:** A text field with an asterisk.
- I want to receive notifications related to my ventilation unit:** A checkbox that is currently checked.
- I have read and accepted the terms and conditions of use of the MyVallox Cloud cloud service:** A checkbox that is currently unchecked.

At the bottom right of the form is a blue button labeled "Create MyVallox Cloud account".

8. Enter the following information in the form:
 - **Ventilation unit name** — Enter the ventilation unit name of your choice in this field.
 - **Language** — Select the desired language.
 - **Country** — Select the desired country.
 - **Email** — Enter your email address in this field. The email address is your username.
 - **Password** — Enter the password of your choice in this field.
9. Select the **I want to receive notifications related to my ventilation unit** box if you wish to receive notifications related to your ventilation unit.
10. Select **I have read and accepted the terms and conditions of use of the MyVallox Cloud cloud service** and read the terms and conditions of use of the service. The use of the service requires that the user has accepted the terms and conditions.
11. Select **Create MyVallox Cloud account**. The ventilation unit generates a unique identification code and sends it to the service. The service will remember the unit the next time you sign into the cloud service.

12. A confirmation message will be sent to your email address. Click on the link in the message to confirm your email address and to sign in to the cloud service for the first time.
13. Once you have signed in, the MyVallox Cloud service will open and the main page of the MyVallox Cloud account will appear in your browser.

My devices

[Demo Machine](#)

Last seen:

--

Device ID:

8853824E-C597-4ECC-BDC0-9C23DCC6344F



4. MAINTENANCE

This section describes the maintenance of the Vallox ventilation unit.

⚠ WARNING: The safety switch automatically turns off the power when the upper door of the Vallox ventilation unit is opened. **Always disconnect** the Vallox ventilation unit from the mains before starting maintenance.

⚠ WARNING:
If you are using water to clean unit parts, be careful that the water does not touch the electrical parts.

! IMPORTANT:
If the power cord is damaged, the manufacturer, its service representative or other person with similar qualifications must replace it to avoid danger.

! NOTE:
Vallox ventilation units are available in two models: a left-handed (L) and a right-handed (R) model. The images below depict the right-handed model.
In the right-handed model, outdoor air enters the unit from the right side of the centre line, as shown in these instructions. In the left-handed model, outdoor air enters the unit from the left. Correspondingly, the placement of the filters, HR cell bypass damper and heating resistor is reversed.

The table below indicates the recommended maintenance intervals for different Vallox ventilation unit parts.

Table 1. Recommended maintenance intervals for Vallox ventilation unit parts

Part	Year 1				Year 2			
	Spring	Summer	Autumn	Winter	Spring	Summer	Autumn	Winter
Filters	x		x		x		x	
Cell							x	
Fans	x		x		x		x	
Siphon			x				x	
General cleaning and visual check			x				x	

4.1. Replacing the filters

⚠ WARNING: The safety switch automatically turns off the power when the upper door of the Vallox ventilation unit is opened. **Always disconnect** the Vallox ventilation unit from the mains before starting maintenance.

When the maintenance reminder becomes activated, check the cleanliness of the filters and replace them if required.

The Vallox ventilation unit has three air filters:

- Coarse filter for supply air filters insects, heavy pollen and other relatively large foreign objects out of the outdoor air.
- Fine filter for supply air filters microscopic pollen and dust particles out of the supply air.
- Coarse filter for extract air filters the extract air and keeps the heat recovery cell clean.

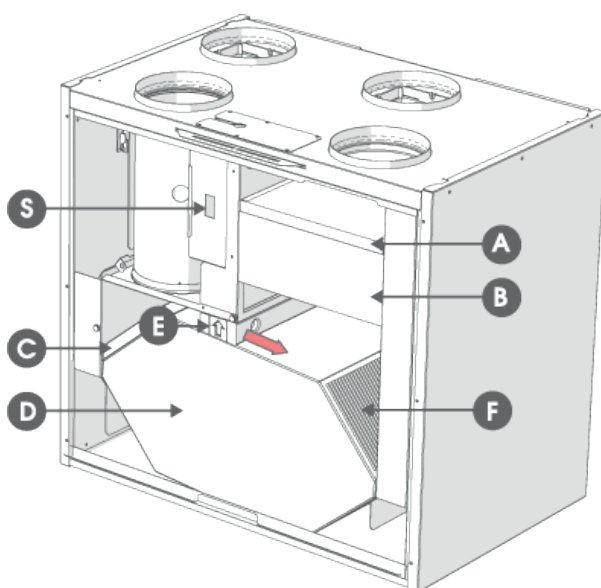
The filter replacement interval depends on the ambient particle concentration. It is recommended that the filters be replaced every spring and autumn, or, at the very least, once a year.

! NOTE:

Using original Vallox filters ensures that the ventilation unit remains in top condition, giving the best results. Selection and ordering of filter packages: filters.vallox.com

! IMPORTANT:

If the power cord is damaged, the manufacturer, its service representative or other person with similar qualifications must replace it to avoid danger.



To replace the filters:

1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the ventilation unit.
3. Lift the door off.

⚠ CAUTION: The door is heavy.

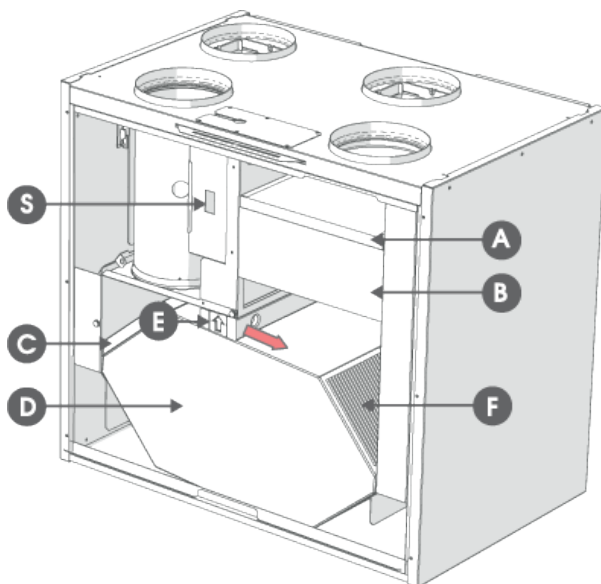
4. Remove the old filters (**A, B, C**) and discard them.
5. Install the new filters (**A, B, C**).
6. Close the door of the unit. Ensure that the safety switch catch of the door is engaged (**S**), allowing the unit to be turned on.
7. Plug the ventilation unit back into the mains.

The filters have now been successfully replaced.

4.2. Cleaning the heat recovery cell

⚠ WARNING: The safety switch automatically turns off the power when the upper door of the Vallox ventilation unit is opened. **Always disconnect** the Vallox ventilation unit from the mains before starting maintenance.

Check that the heat recovery cell is clean roughly once a year, or whenever the filters are being replaced. Clean by washing as required.



To check and clean the heat recovery cell:

1. Disconnect the ventilation unit from the mains electricity supply.
2. Open the ventilation unit door by first lifting the latch fully up and then lowering it back a little way.

3. Lift the door off.

 **CAUTION:** The door is heavy.

4. Remove the filters **(A, B, C)**.
5. Remove the sealing strip **(E)** above the cell in the direction of the arrow.
6. Lift and pull the cell **(D)** out of the unit.

 **IMPORTANT:** Handle the cell carefully! For example, do not lift the cell by the layers. The cell layers are very thin and easily damaged.

7. If the cell is dirty, clean it by immersing it in warm water, to which a small amount of a mild detergent has been added.
8. Rinse the cell clean with a water spray. Do not use a high-pressure cleaner.
9. When all the water has drained from between the layers, reassemble the ventilation unit in the reverse order.
10. Close the door of the unit. Ensure that the safety switch catch of the door is engaged **(S)**, allowing the unit to be turned on.
11. Plug the ventilation unit back into the mains.

The heat recovery cell has now been checked and cleaned.

4.3. Cleaning the fans

 **WARNING:** The safety switch automatically turns off the power when the upper door of the Vallox ventilation unit is opened. **Always disconnect** the Vallox ventilation unit from the mains before starting maintenance.

Check the cleanliness of the fans when servicing the filters and the heat recovery cell. Clean the fans as required.

You can clean the fan blades with compressed air (wear protective goggles) or by brushing them gently.

 IMPORTANT:

The fans are extremely sensitive to external shocks.
Handle the fan blades carefully. Do not remove or move the fan blade balancing weights. It is recommended that the fans be cleaned in place, i.e. without attempting to remove them.

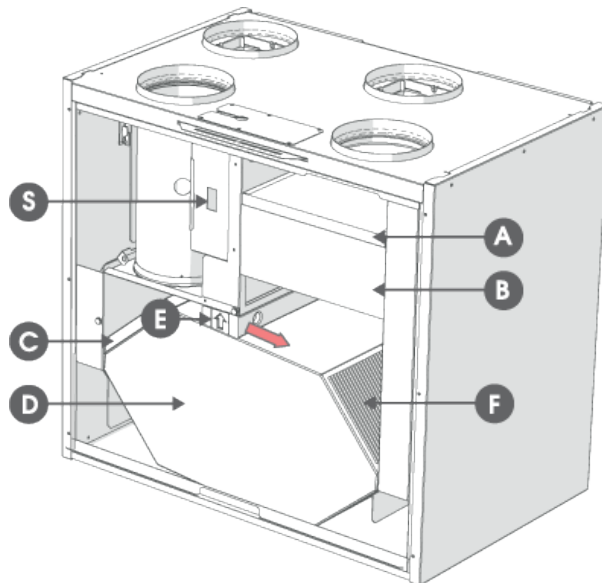
4.3.1. Cleaning the supply air fan

To clean the supply air fan:

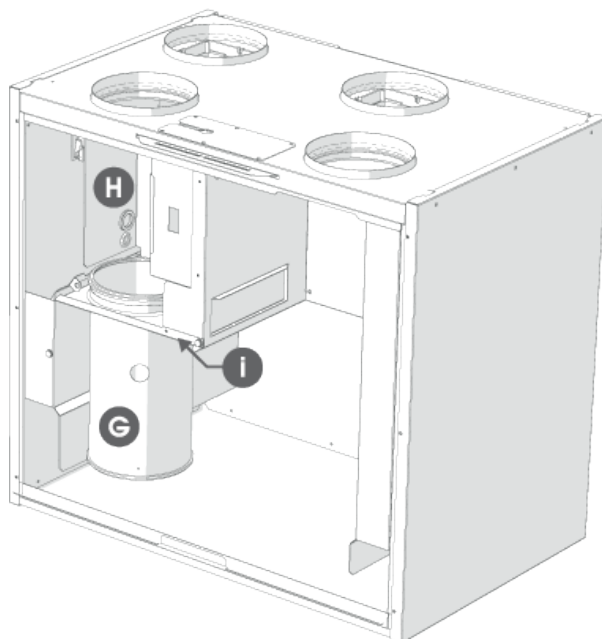
1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the Vallox ventilation unit.
3. Lift the door off.

⚠ CAUTION: The door is heavy.

4. Remove the extract air filter **(C)**, the cell top bracket **(E)** and the heat recovery cell **(D)**. See [Replacing the filters](#) and [Cleaning the heat recovery cell](#).



5. Pull out the temperature sensor **(figure 1)** located at the top of the extract air duct **(G)**. Remove the stopper screw **(I)** at the bottom of the duct. The extract air duct now comes out by turning and pushing it downwards simultaneously **(figures 2 and 3)**.



6. Remove the temperature sensor from the resistance support **(figure 4)**.

7. Remove the additional and post-heating radiator support, which is attached by two wing nuts from below (**figure 5**).
8. Pull the radiator and the support out of the unit (**figures 6 and 7**) and remove the quick connector of the radiator wires.

⚠ WARNING:

Before removing the resistor from the unit, make sure it is not hot.

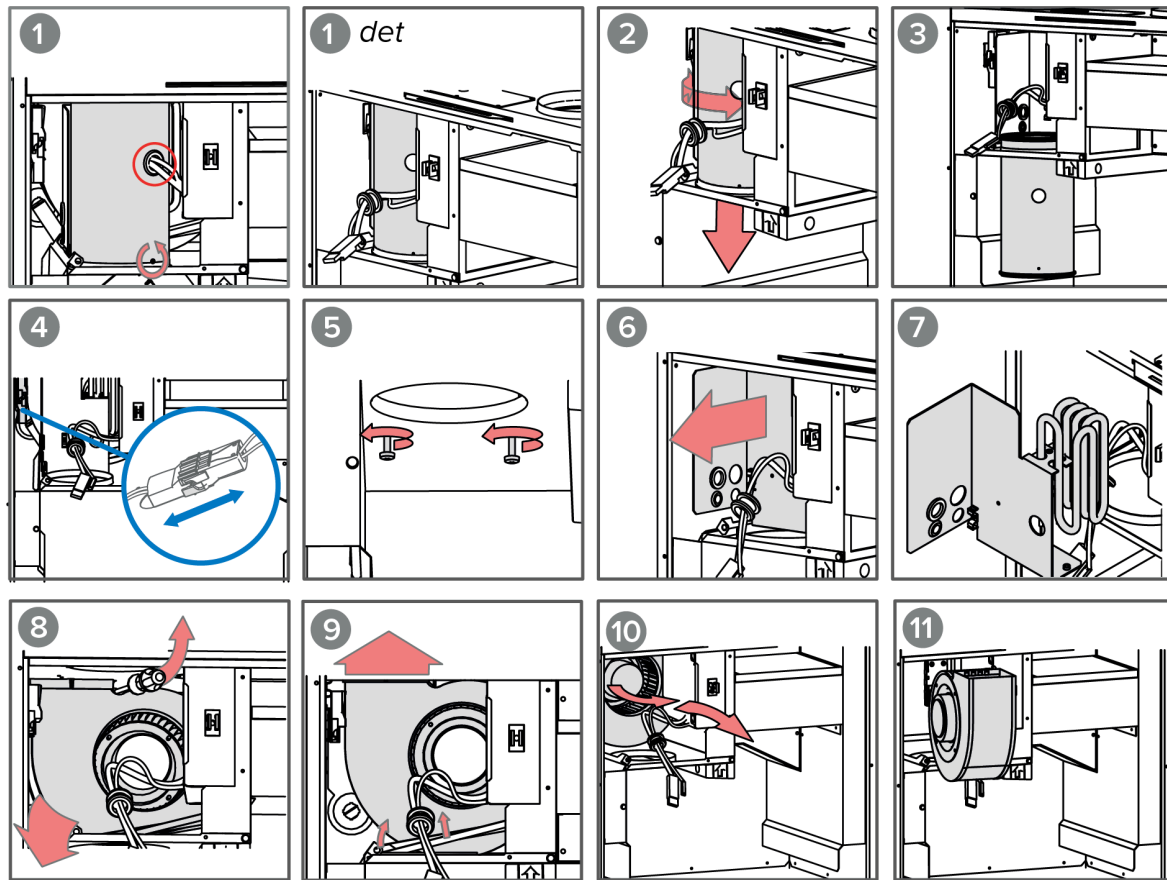
9. The fan can now be cleaned in place. It is recommended that the fan be cleaned in place, i.e. without attempting to remove it.
10. To remove the fan for cleaning:
 - a. If necessary, remove the arm pins. Use pliers to press the pins straight, so that they are easier to install back later.
 - b. Push the fan gently upward (**figure 9**).
 - c. Push the plastic lock of the fan to the right with a screwdriver, for example (**figure 10**).
 - d. The fan falls downwards.
 - e. Pull the fan out of the unit (**figure 11**).
 - f. Disconnect the quick connector of the fan wires (**figure 12**). The fan has now been removed for cleaning.
11. To reassemble the ventilation unit, follow the above steps in reverse order.

TIP:

When you re-install the temperature sensor, position it with the tip upward and pointing at the wall in such a way that it does not get squeezed between the HR cell bypass damper or lean against the radiator frame.

12. Close the door of the unit. Ensure that the safety switch catch of the door is touching the safety switch, allowing the unit to be turned on.
13. Plug the ventilation unit back into the mains.

The fan has now been checked and cleaned.



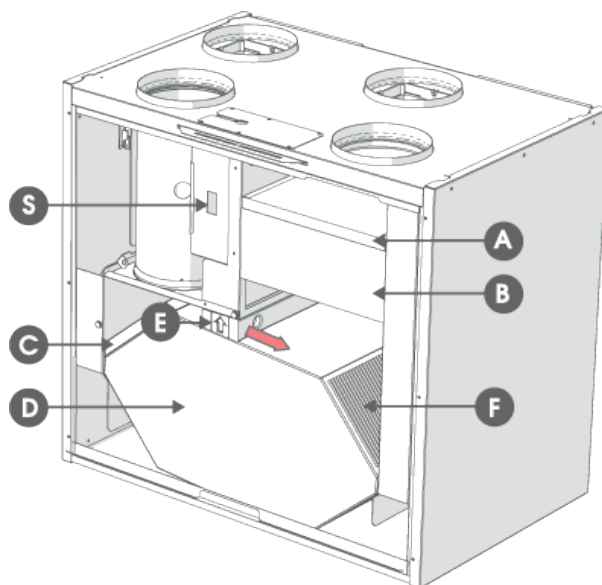
4.3.2. Cleaning the extract air fan

To clean the extract air fan:

1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the ventilation unit.
3. Lift the door off.

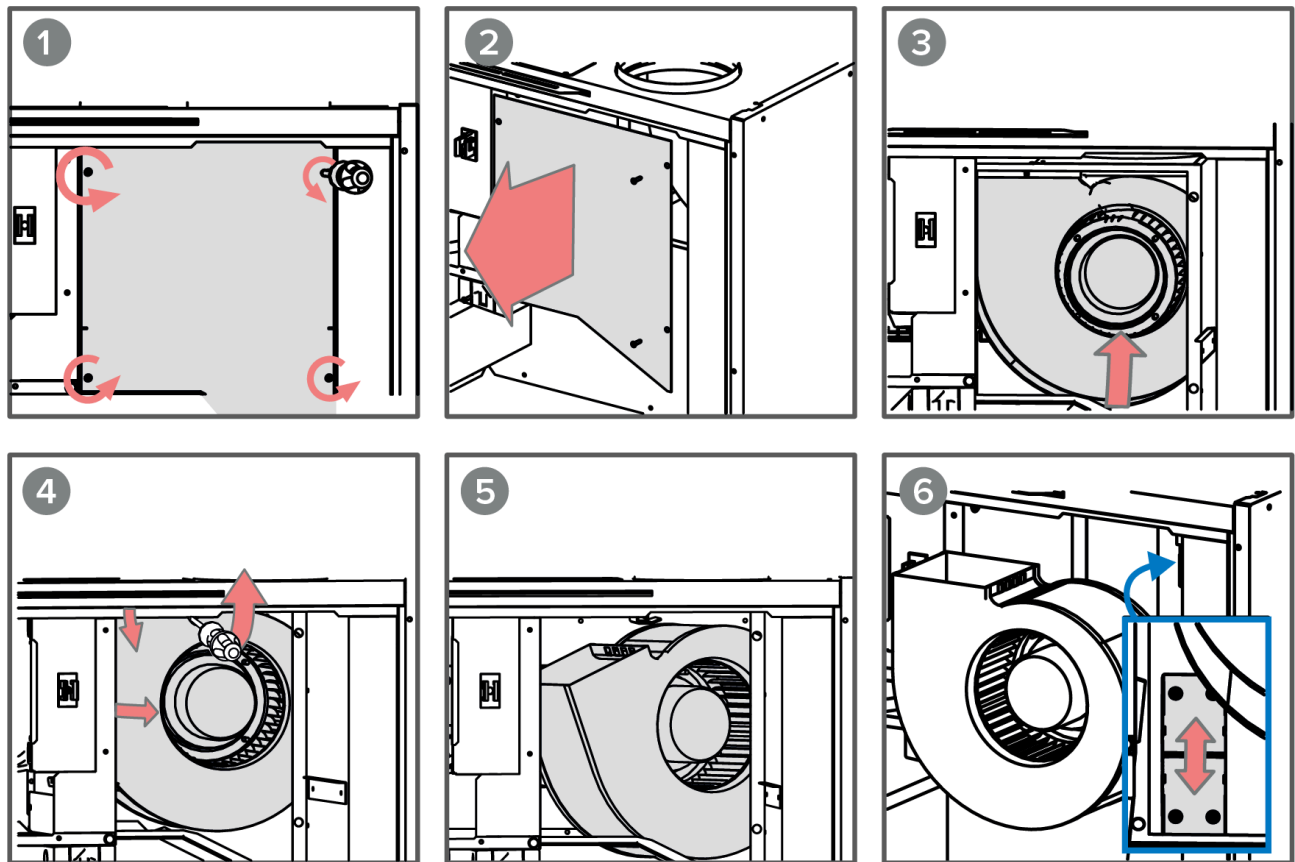
⚠ CAUTION: The door is heavy.

4. Remove the extract air filter (**C**), the cell top bracket (**E**) and the heat recovery cell (**D**). See [Replacing the filters](#) and [Cleaning the heat recovery cell](#).



5. Open the four screws (**figure 1**) on the extract air fan cover and remove the cover (**figure 2**).
6. The fan can now be cleaned in place.
7. To remove the fan for cleaning:
 - a. Push the fan gently upward (**figure 3**).
 - b. Push the plastic lock of the fan to the right with a screwdriver, for example (**figure 4**).
 - c. The fan falls downwards (**figure 5**).
 - d. Pull the fan out of the unit.
 - e. Disconnect the quick connector of the fan wires (**figure 6**).
8. Clean the fan.
9. To reassemble the ventilation unit, follow the above steps in reverse order.
10. Close the door of the unit. Ensure that the safety switch catch of the door is engaged (**S**), allowing the unit to be turned on.
11. Plug the ventilation unit back into the mains.

The extract air fan has now been checked and cleaned.



4.4. Condensing water

In the heating season, the extract air humidity condenses to water. In new buildings, condensation runoff can form rapidly. Condensed water must be able to freely leave the unit.

! NOTE:

Some condensing water may have accumulated in the bottom pool of the unit; this is normal and requires no corrective action.

At some time before the heating season begins (e.g. during autumn maintenance), check that the siphon or the condensing water outlet in the bottom pool are not clogged. To check this, pour some water into the pool. Clean as required.

⚠ WARNING:

Water must at all times be kept out of the electrical system.

4.5. Updating the unit software (MyVallox Control)

To update the ventilation unit software through the MyVallox Control panel:

1. Download the latest update package to your computer from the home page of the MyVallox Cloud service <https://cloud.vallox.com>. You can find the latest update under Latest firmware version.

! NOTE: The name of the update file must always be the same: HSWUPD.BIN. If you have downloaded an older update file to your computer, delete it before downloading the new update to make sure the file name does not change.

2. Connect the computer to the ventilation unit control panel with a USB Micro-B connector.

! NOTE:

- The MyVallox control panel cannot be used when it is connected to the computer. A USB icon is shown on the control panel.
- If the computer is unable to find the ventilation unit, you are probably using a charging cable. Try another USB Micro-B cable.

3. When the ventilation unit is turned on, the control panel appears as an external drive in the computer's resource management.
4. Copy the new update package HSWUPD.BIN and paste it to the control panel, i.e. the root of the external drive.

! IMPORTANT: Do not change the file name.

5. Make sure the update package has been completely transferred to the control panel by selecting Safely Remove USB. This is an OS-specific function.
6. Disconnect the USB cable.
7. The control panel loads the update for a moment (you can see the process on the panel) and starts to transfer the update package to the ventilation unit in the background. This takes approximately 4–5 hours.
8. When the update is complete, the unit launches the new software and restarts itself automatically.

! NOTE: The ventilation unit must stay on throughout the update process. If the ventilation unit's power is cut off during the process, the transfer time of 4–5 hours starts from the beginning.

! NOTE: If a red error screen appears on the control panel, the update must be downloaded again. Go back to step 1.

When the update is complete, the software version shown on the **Unit information** screen should be the same as the version at <https://cloud.vallox.com>.

4.6. Troubleshooting

The table below provides instructions for troubleshooting and repair.

! IMPORTANT:

We recommend you always use the latest software version. You can check the latest version at <https://cloud.vallox.com>.

! NOTE:

Error messages are displayed on the control panel and in the MyVallox Home and MyVallox Cloud services.

Error	Cause	Follow these steps
Error message: Extract air fan	The extract air fan has stopped.	Make sure the fan has really stopped. Check the fan wires and operation. If necessary, the fan must be replaced. Contact the service centre.
Error message: Supply air fan	The supply air fan has stopped.	Make sure the fan has really stopped. Check the fan wires and operation. If necessary, the fan must be replaced. Contact the service centre.
Error message: Temperature sensor 1/2/3/4/5	A temperature sensor indicated by the user interface is damaged.	Check the sensor installation. If necessary, the sensor must be replaced. Contact the service centre.
Error message: High supply air temperature	The supply air temperature is too high.	Check the operation of the post-heating and additional heating resistors. Make sure the resistors are on in the user interface. If necessary, contact the service centre.
Error message: Low supply air temperature	The supply air temperature is too low.	Check the operation of the post-heating and additional heating resistors. Make sure the resistors are on in the user interface. If necessary, contact the service centre.
Error message: Bus error	Problems in data transmission.	Make sure that the control panel and any external sensors are connected and working correctly.
Both the ventilation unit and the control panel do not work.	The unit's power supply has been cut off or the safety switch pusher on the door does not touch the safety switch.	Check: • Fuse on the fuse panel • The unit's glass tube fuse. Contact the service centre. • Push in the safety switch and check does the unit start up. If the unit starts up, make sure the safety switch pusher on the door is pressing on the safety switch.
The ventilation unit works but the control panel does not work.	The control panel's 24 VDC supply has been cut off, there are problems in data transmission or the control panel is damaged.	• Check the cords between the unit and the control panel. • Unplug the unit and restart the unit. • Update the unit software. • Contact the service centre.

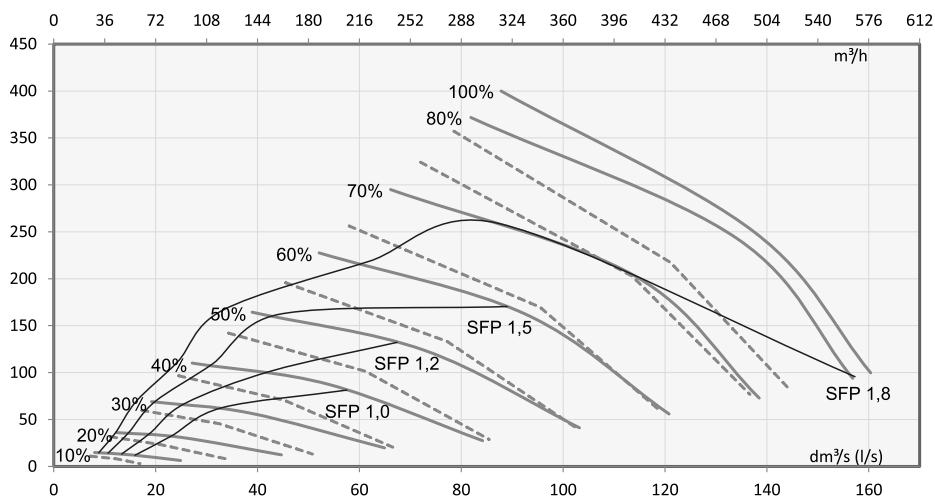
5. TECHNICAL SPECIFICATIONS

Object	Vallox 145 MV
Product titles	Vallox 145 MV R Vallox 145 MV L
Type code	A3712
Electrical connection	230 V, 50 Hz, 11.9 A power plug
Enclosure protection class	IP34
Fans	• Supply air — 0.175 kW 1.25 A EC • Extract air — 0.175 kW 1.25 A EC
Air volumes	• Supply air — 142 dm³/s, 100 Pa • Extract air — 160 dm³/s, 100 Pa
Heat recovery bypass	Automatic
Post-heating	Electrical resistor, 900 W
Pre-heating	-
Additional heating	Electrical resistor, 1500 W
Filters	• Supply air — ISO Coarse > 75% + ISO ePM₁ ≥ 50% • Extract air — ISO Coarse > 75%
Specific energy consumption (SEC)	In a cold climate — A+ In a temperate climate — A
Efficiencies*	• Annual efficiency — 79% • Supply air efficiency — 85% • Specific Fan Power SFP — 1.25 kW/m³/s (100 dm³/s)
Dimensions (w × h × d)	717 × 748 × 578 mm
Weight	80 kg

*Working point defined in the Ecodesign Directive (2009/125/EC), Southern Finland, Helsinki-Vantaa TRY year 2020.

5.1. Supply/extract air volumes and input powers

Figure 3. Supply and extract air volumes



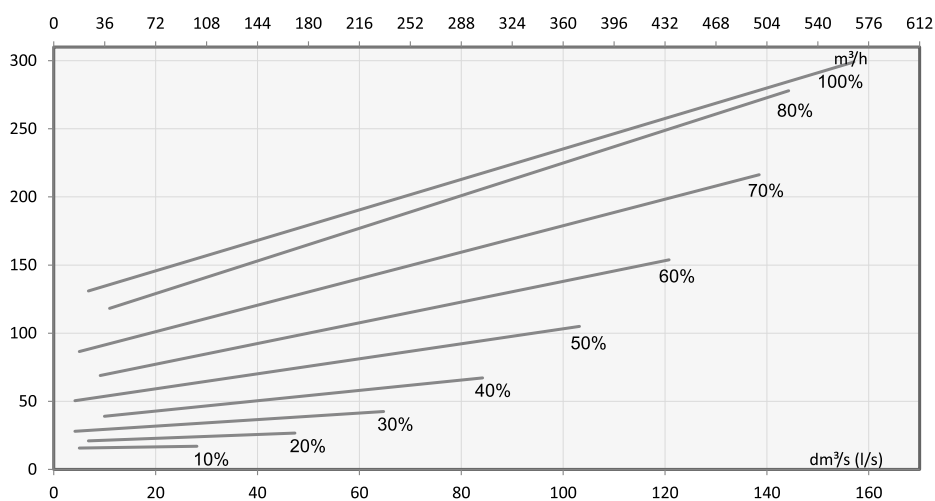
Continuous line (—) Extract air

Broken line (- -) Supply air

$$\text{SFP} = \frac{\text{Input power (total) (W)}}{\text{Air flow (max) (dm}^3/\text{s})^3}$$

SFP rate (Specific Fan Power) recommended value $< 1.8 \text{ (kW/m}^3/\text{s)}$.

Figure 4. Input power



5.2. Sound values

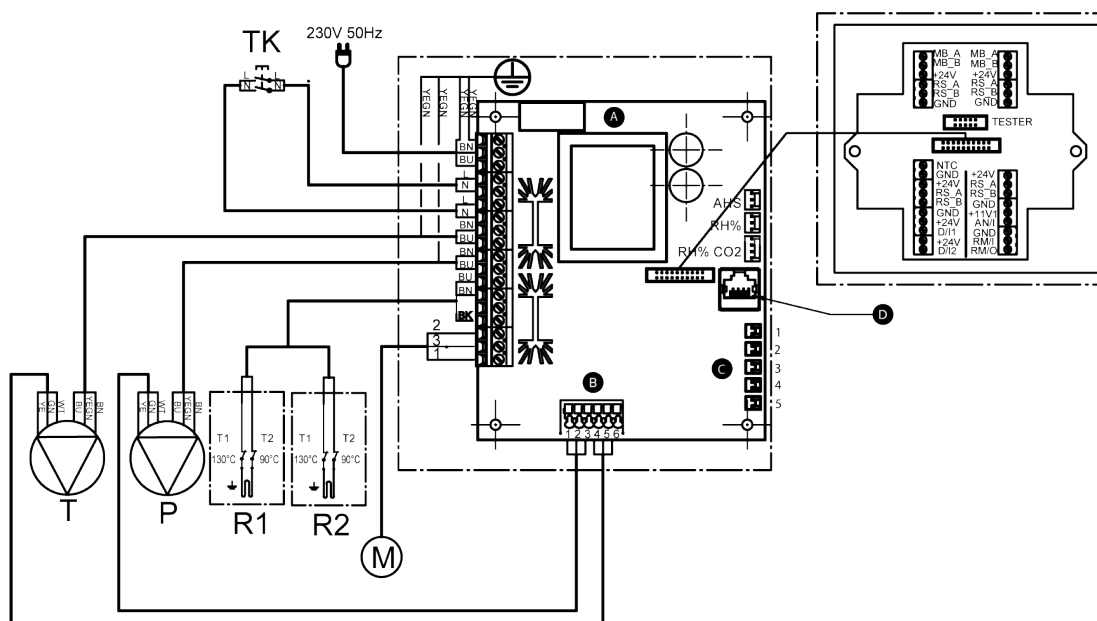
Sound power level in the supply air duct (one duct) by octave band L_W dB										
Adjustment position (%)	10	20	30	40	50	60	70	80	100	
Medium frequency of the octave band Hz	63	55	66	73	76	80	83	85	86	87
	125	50	58	64	68	72	76	79	83	84
	250	52	57	63	65	68	72	74	77	78
	500	41	48	53	57	61	64	67	69	71
	1000	53	47	52	57	60	64	65	67	68
	2000	23	34	43	48	53	58	62	64	66
	4000	18	23	35	44	50	55	59	62	63
	8000	21	22	28	39	47	54	58	62	63
L_W , dB	59	68	74	77	81	84	86	88	89	
L_{WA} , dB(A)	53	52	58	62	66	69	72	75	76	

Sound power level in the extract air duct (one duct) by octave band L_W dB										
Adjustment position (%)	10	20	30	40	50	60	70	80	100	
Medium frequency of the octave band Hz	63	53	58	63	67	73	78	78	79	79
	125	45	50	56	61	65	69	73	75	75
	250	40	39	44	49	54	57	60	63	64
	500	30	37	43	47	50	53	56	58	59
	1000	32	33	36	41	44	48	50	52	53
	2000	14	22	30	34	38	42	45	48	48
	4000	17	17	19	23	27	31	35	38	39
	8000	21	21	21	22	24	28	32	35	36
L_W , dB	54	59	64	68	74	79	79	80	81	
L_{WA} , dB(A)	37	40	45	50	54	58	60	63	63	

Sound pressure level coming through the envelope from the room in which the unit is installed (10 m^2 sound absorption)										
Adjustment position (%)	10	20	30	40	50	60	70	80	100	
L_{pA} , dB(A)	28	27	32	35	39	43	46	48	49	

You can calculate the sound values for each operating point with the *Vallox MySelecta* control panel.

5.3. Internal electrical connection



A Motherboard **11V1** 11.1 V operating voltage

B

1. Extract air fan tachometer (WT)	AN/I	Analog input 0–10 VDC
2. GND (GN)		
3. Extract air fan PWM (YE)		
4. Supply air fan tachometer (WT)		
5. GND (GN)		
6. Supply air fan PWM (YE)		

C

1. Extract air	RM/I	24 V relay input
2. Outdoor air		
3. Supply air		
4. Exhaust air		
5. Supply air from the HR cell		

D LAN **RM/O** 24 V relay output

MB_A External Modbus A signal **T** Supply air fan

MB_B External Modbus B signal **P** Extract air fan

+24V +24V voltage (DC) **M** Damper motor

GND Digital and analog ground potential **TK** Safety switch

RS_A Local hardware Modbus A signal **AHS** Post-heating control

RS_B Local hardware Modbus B signal **%RH** Internal humidity sensor

NTC External temperature sensor connector **%RH CO₂** Internal humidity and carbon dioxide sensor

DI1 Digital input 1 **R1** Post-heating resistor with 90°C and 130°C overheating protection

D/I2 Digital input 2

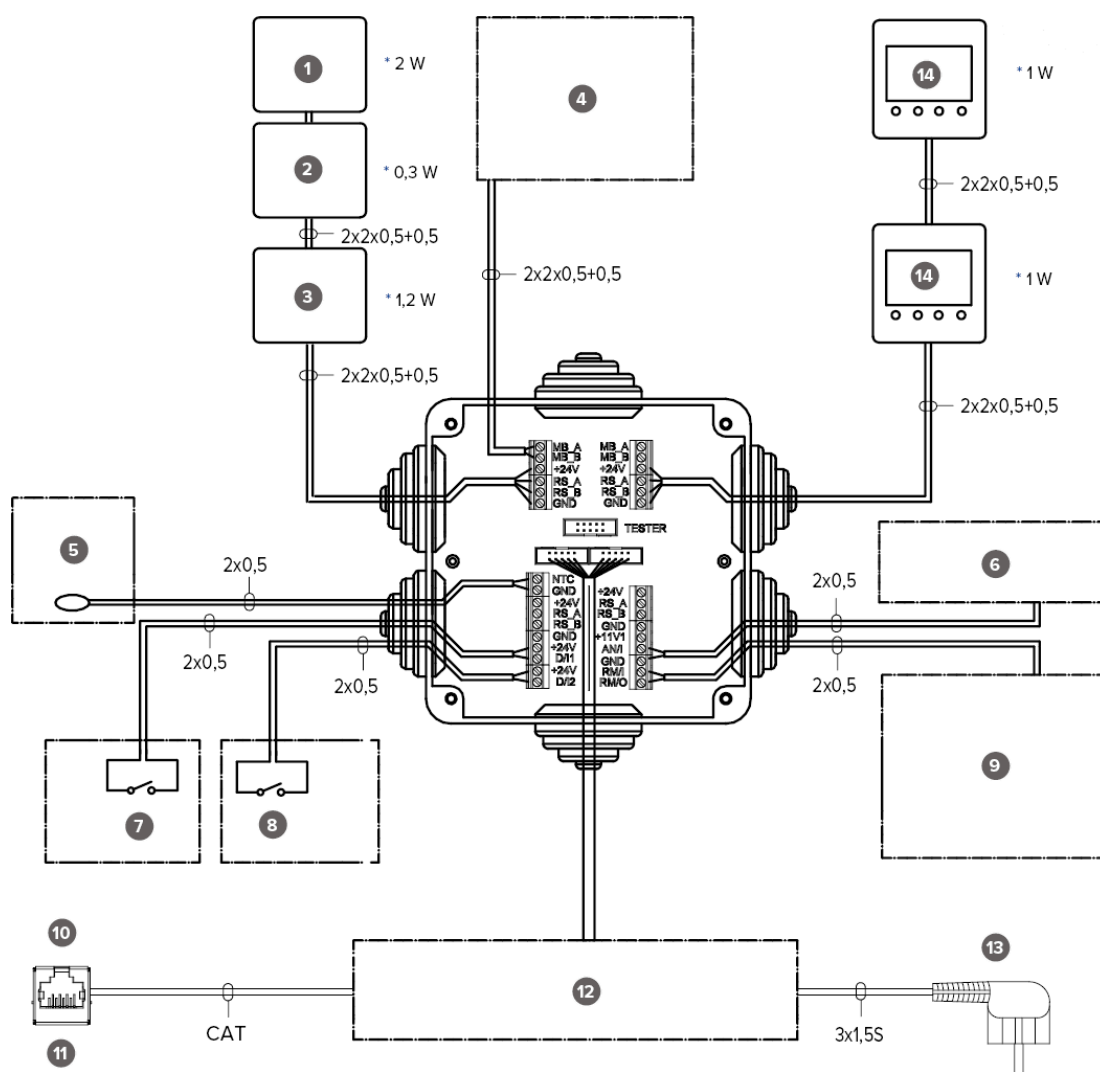
R2

Additional heating resistor with 90°C and 130°C overheating protection

Table 2. Cable colours

Code	Colour	Code	Colour
BK	Black	GY	Grey
BU	Blue	YE	Yellow
BN	Brown	YEGN	Yellow-green
WT	White		

5.4. External electrical connection



* Σ = max. 6 W

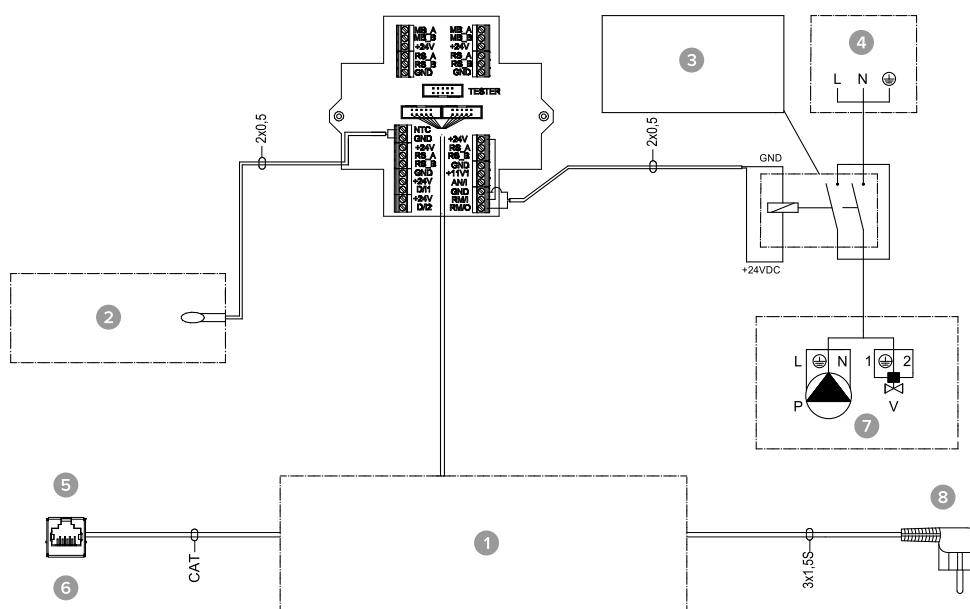
1	MyVallox VOC sensor	8	Digital input 2. 8 different functions.
2	MyVallox %RH sensor	9	Potential-free contact data 24 VDC (max 3 A, 72 W) can be programmed to display information such as errors or to control the valve and pump of the MLV radiator.
3	MyVallox CO ₂ sensor	10	Ethernet connection on top of the unit
4	Remote monitoring Modbus RTU	11	RJ45 female
5	External temperature sensor NTC 47K	12	Internal connection of the ventilation unit
6	Analog input. Two separate functions.	13	Plug connection 1.2 m on top of the unit
7	Digital input 1. 8 different functions.	14	MyVallox control panel

MB_A	External Modbus A signal	D/I1	Digital input 1
MB_B	External Modbus B signal	D/I2	Digital input 2
+24V	+24 V voltage (DC)	11V1	11.1 V operating voltage
GND	Digital and analog ground potential	AN/I	Analog input 0-10 VDC
RS_A	Local hardware Modbus A signal	RM/I	24 V relay input
RS_B	Local hardware Modbus B signal	RM/O	24 V relay output
NTC	External temperature sensor connector		

Table 3. Power supply

Object	Feed
Maximum	≤ 6 W
MyVallox Control	1 W
MyVallox Touch	0.5 W
%RH sensor	0.3 W
CO₂ sensor	1.2 W
VOC sensor	2 W
Voltage	24 VDC

5.5. External electrical connection for controlling the MLV duct radiator



No.	Name	No.	Name
1	Internal connection of the ventilation unit	5	Ethernet connection on top of the unit
2	External temperature sensor NTC 4K7	6	RJ45 Female
3	24 VDC relay/contactor for controlling the pump and solenoid valve	7	MLV control
4	Distribution board	8	Plug connection 1.2 m on top of the unit

MB_A	External Modbus A signal	D/I2	Digital input 2
MB_B	External Modbus B signal	11V1	11.1 V operating voltage
+24V	+24 V voltage (DC)	AN/I	Analog input 0-10 VDC
GND	Digital and analog ground potential	RM/I	24 V relay input
RS_A	Local hardware Modbus A signal	RM/O	24 V relay output
RS_B	Local hardware Modbus B signal	P	Circulation pump
NTC	External temperature sensor connector	V	Solenoid valve
D/I1	Digital input 1		

5.6. Duct radiator operation

Always primarily follow the connection plan provided by the HVAC designer or heat pump manufacturer. Remember to also read the duct radiator's instructions for use.

The accompanying figure shows an example of the arrangement for connecting the heating/cooling radiator unit to the heat collection circuit.

! NOTE:

If the duct radiator is used in the supply air duct, it can only be used for cooling.

The output pipe of the radiator unit is connected to the return pipe of the heat collection circuit. The liquid returning from the radiator unit is circulated back to the heat collection circuit's return pipe. If it is known that the pressure losses inside the heat collection circuit's heat pump are too great, bypassing the heat pump is recommended. In that case the liquid is circulated when the heat pump is at rest, and the pressure loss of the bypass' one-way valve Y2 must be smaller than the pressure loss of the heat pump.

Heating: The pump is switched on when the outdoor air temperature drops below the factory-set winter limit (-5°C).

Cooling: The target supply air temperature set for the unit's mode (e.g. At Home mode) determines when the pump is switched on. The pump is switched on when the supply air setting is lower than the temperature of the air supplied.

The duct radiator can be installed in the supply air duct or the outdoor air duct. If the radiator is placed in the outdoor air duct, it can be used for pre-heating and cooling. If the radiator is placed in the supply air duct, it can only be used for heating or cooling.

! NOTE:

To control the outdoor air duct radiator, an external NTC sensor is installed in the outdoor air duct before the radiator. To control the supply air duct radiator, an external NTC sensor is installed after the radiator.

The duct radiator can be set to work automatically or manually.

- **Automatic operation:** In summer, the set supply air temperature is maintained. In winter, the duct radiator is switched on when the outdoor air temperature drops below the winter setting.
- **Manual operation:** In summer, the duct radiator is switched on when the outdoor air temperature rises above the summer setting. In winter, the duct radiator is switched on when the outdoor air temperature drops below the winter setting.

To prevent the risk of condensation in the supply air duct, you can set the adjustment of the supply air limit to automatic or manual.

- Automatic adjustment: The supply air limit is adjusted automatically according to the extract air dew point. When the supply air temperature drops too low, the duct radiator is switched off.
- Manual adjustment: The supply air limit is set manually. When the supply air temperature drops below the set value, the duct radiator is switched off.

If you are using an external sensor, go to the external sensor settings and select either outdoor air duct radiator or supply air duct radiator control. The external sensor's temperature reading is displayed in the maintenance menu: **Menu> > Service menu> > Unit information (page 5)> > External sensor.**

! NOTE:

When choosing the relay (C), take into account the maximum joint power supply of the motherboard of the MV electric box (max. 6 W), if the relay is supplied by the motherboard's +24 V connector.

! NOTE:

Due to the risk of humidity damage, in a duct that has not been insulated for condensation the supply air temperature must not fall below +16 ... 20 °C.

Figure 5. Duct radiator operation chart in the outdoor air duct

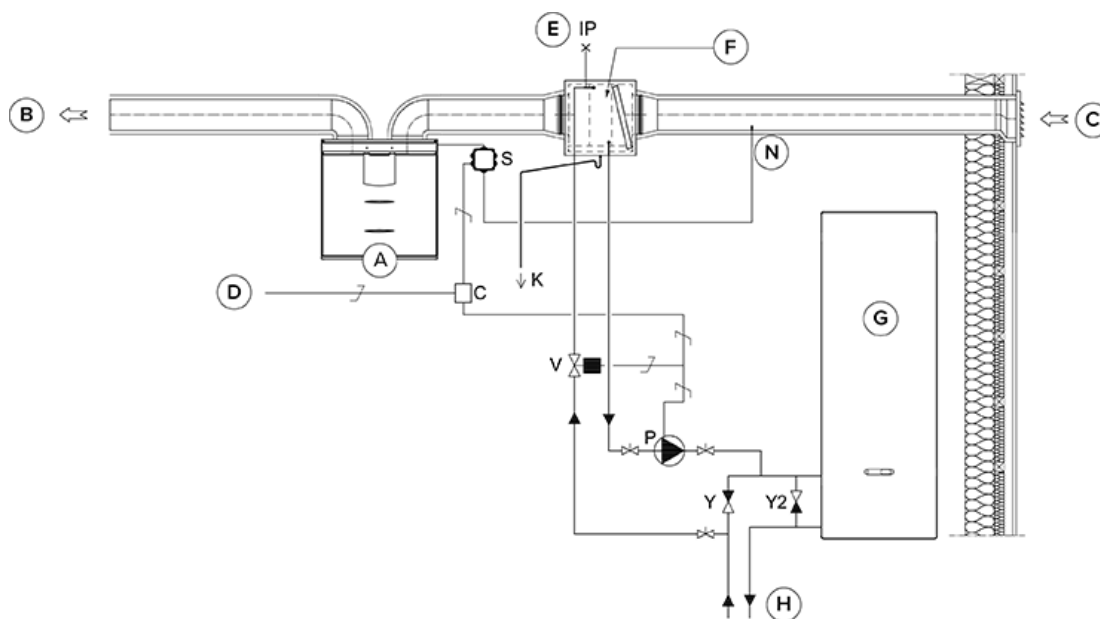
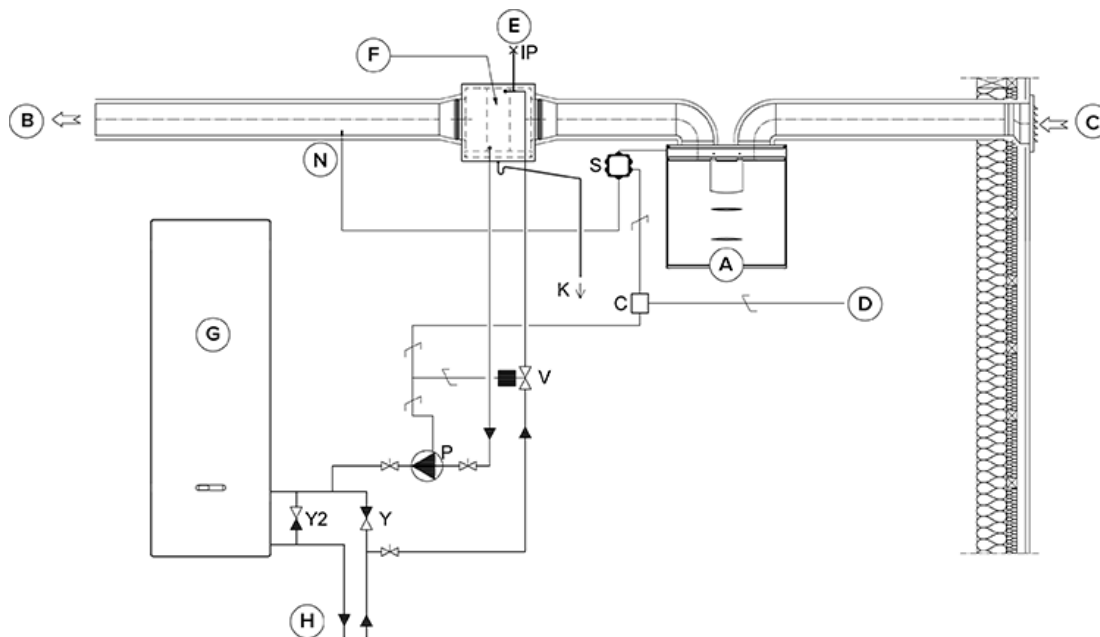


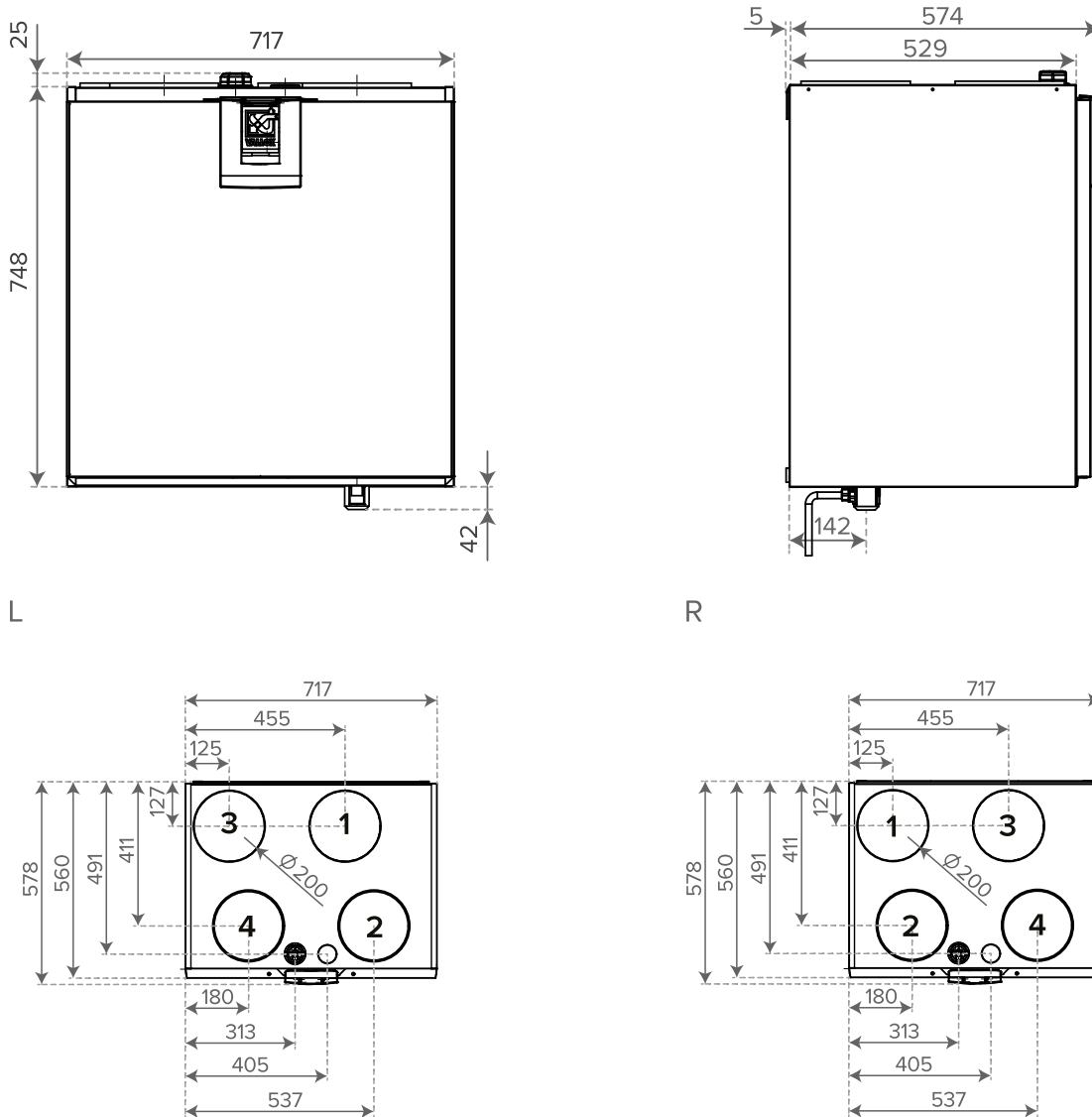
Figure 6. Duct radiator operation chart in the supply air duct



Name		Name	
A	Ventilation unit	P	Circulation pump. Not included in delivery. Due to a risk of condensation, use a pump that is suitable for pumping liquid colder than the environment (e.g. Grundfos Magna 1 25-80).
B	Supply air	V	Solenoid valve. Not included in delivery. The valve should be suitable for heat collection circuit liquid (e.g. Danfoss 032U161431, HVAC code 4122110).
C	Outdoor air	K	Condensing water tube. Not included in delivery.
D	Feed from the distribution board	IP	De-aerator. Not included in delivery.
E	Air extraction	S	External electrical junction box for the MV
F	Duct radiator (reverse connection)	C	24 VDC Relay/contactors for controlling the pump and solenoid valve. Not included in delivery. (e.g. ABB CR-P024DC2).
G	Heat pump	Y	One-way valve. Not included in delivery.
H	Heat collection circuit	Y2	One-way valve. Not included in delivery. The pressure loss must be smaller than the pressure loss of the heat pump.
N	External NTC sensor		

5.7. Dimensions and duct outlets

Figure 7. Dimensions and duct outlets



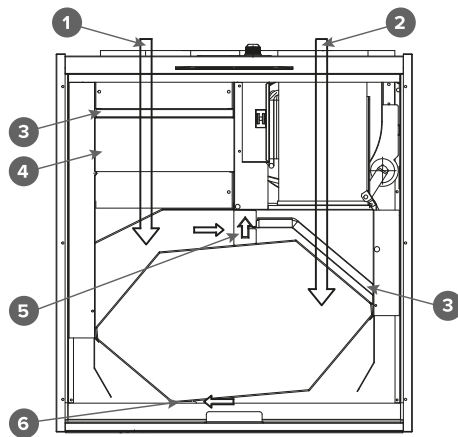
Inner diameter of the outlet collar $\varnothing 200$ mm.

Duct outlets

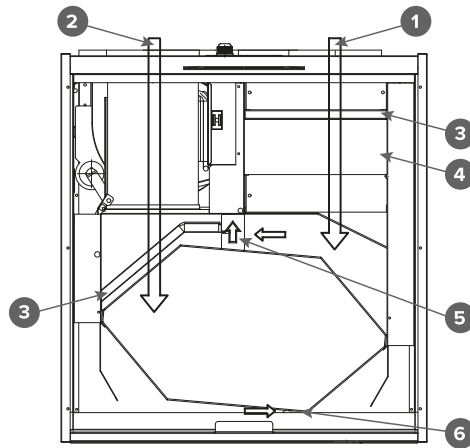
1. Supply air from the unit to the apartment
2. Extract air from the apartment to the unit
3. Exhaust air flowing outdoors from the unit
4. Outdoor air to the unit

HR cell support locations

L

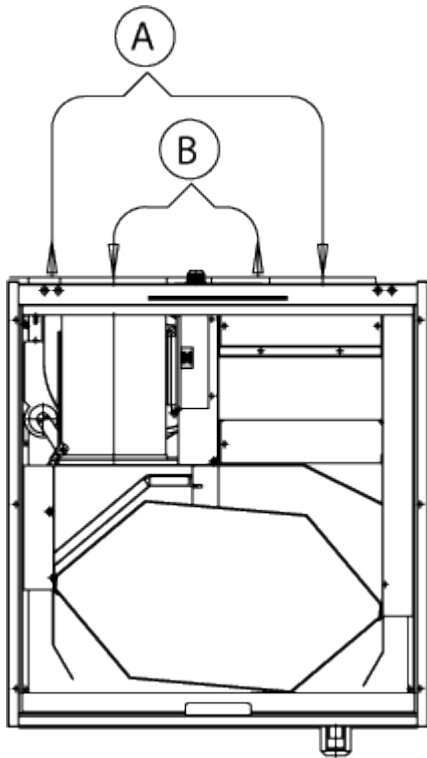


R



1. Supply air
2. Extract air
3. Coarse filter
4. Fine filter
5. Upper support of the cell
6. Lower support for the HR cell

5.8. Air flow measurement points

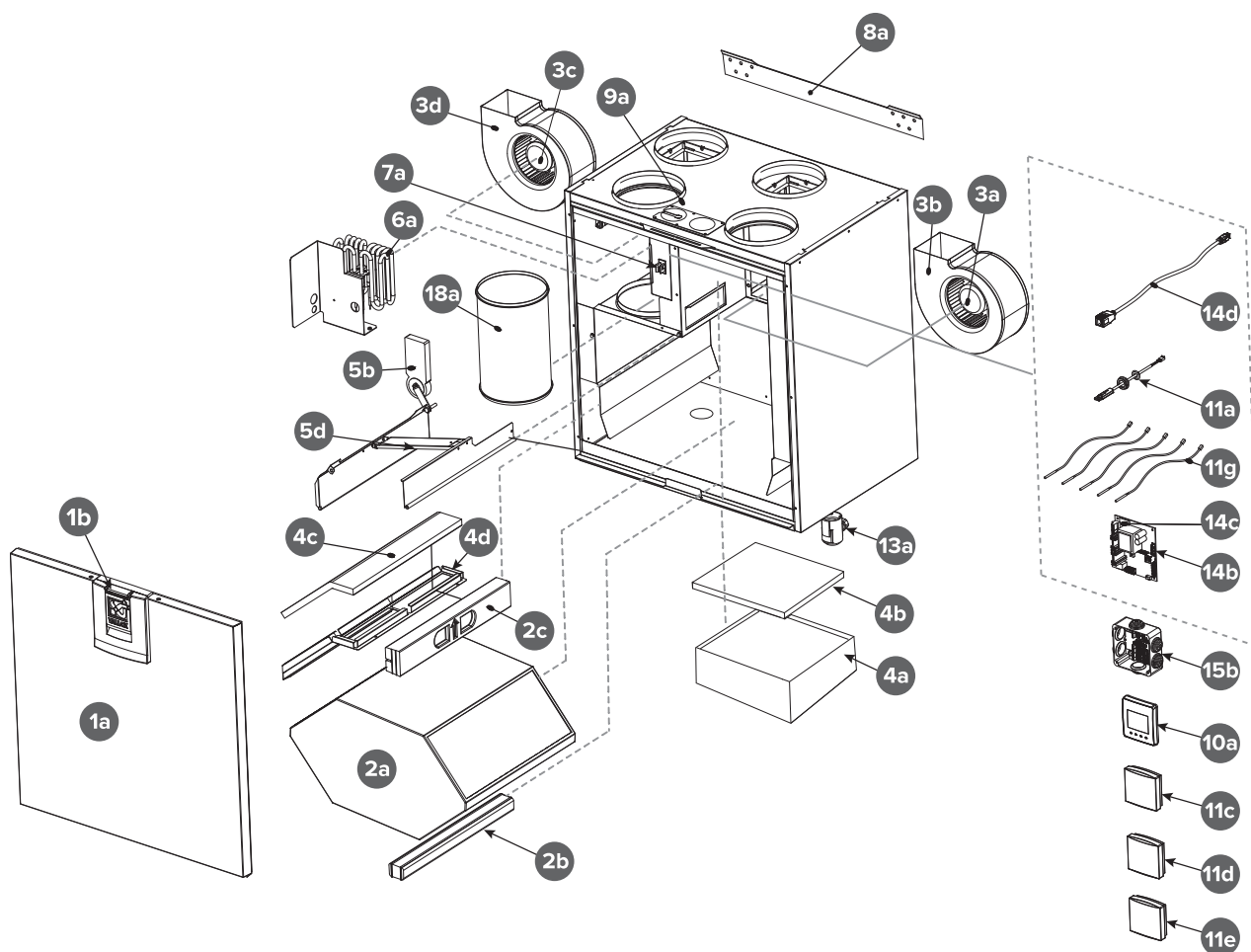


A — Supply air

B — Extract air

Measurement points after the outlet collar. The fan curves indicate the total pressure accounted for by duct losses.

6. EXPLODED VIEW AND LIST OF SPARE PARTS



No.	Part	No.	Part
1a	Door	6b	Additional heating resistor 1500 W
1b	Door latch	7a	Safety switch
2a	HR cell	8a	Wall mounting plate
2b	Lower support for HR cell	9a	Ceiling bushing Ceiling feed-through seal
2c	Upper support for HR cell	10a	Control panel
3a	Extract air fan	11a	Internal humidity and carbon dioxide sensor
3c	Supply air fan	11c	MyVallox carbon dioxide sensor (optional)
3b	Extract air fan with a hood	11d	MyVallox humidity sensor (optional)
3d	Supply air fan with a hood	11e	MyVallox VOC sensor (optional)
4a	Fine filter for supply air	11g	NTC sensor kit
4b	Coarse filter for supply air	13a	Siphon Vallox Silent Klick

No.	Part	No.	Part
4c	Coarse filter for extract air	14b	Motherboard
4d	Filter stand	14c	Glass tube fuse 63mA slow 5x20mm
5b	Bypass damper motor	14d	RJ45 extension cable
5d	Bypass damper assembly of the HR cell	15b	Connection box
6a	Post-heating resistor 900 W	18a	Extract air outlet

7. DECLARATION OF CONFORMITY



DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

Manufacturer Vallox Oy
Address Myllykyläntie 9-11, FIN-32200 LOIMAA, FINLAND
Telephone number +358 10 7732 200
The person who compiles the technical file Petri Koivunen
 Vallox Oy
 Myllykyläntie 9-11, FIN-32200 LOIMAA, FINLAND
 Tel. +358 10 7732 200
 Email info@vallox.com
Description of unit Ventilation unit with heat recovery

Model MyVallox 51/51K/99/119/125/149/245/ 245 VKL CFI
 Vallox 51/51K SC/MV,
 Vallox 99/125/096/110/145/245/245 VKL MV,
 Vallox 99 MV CF,
 Vallox TSK Multi 50/80 MV,
 ValloPlus 180/180K/270/370/510/520/850 MV,
 ValloPlus 180/270 SC,
 ValloMulti 200 SC/MV, ValloMulti 300 MV

Declares that the ventilation unit for supply and extract air, equipped with heat recovery and operating as part of a ventilation system has been designed and manufactured to the following specifications:

1. Low Voltage Directive (2014/35/EU) – EN 60335-1:2012 + A11:2014, A13:2017 + A1:2019 + A14:2019 + A2:2019; EN 62233:2008
2. EMC Directive (2014/30/EU) – EN 61000-6-1:2007, EN 61000-3-2:2014 + A1:2009 + A2:2009, EN 61000-3-3:2013, EN 61000-6-3:2007 + A1:2011
3. Ecodesign Directive (2009/125/EY) – Commission regulation 1253/2014 – EN 13141-7 Annex B, EN 308, EN 13141-7, ISO 3741, ISO 5135
4. RoHS Directive (2011/65/EU, 2015/863/EU)

This is the original Declaration of Conformity

Loimaa, 22nd September 2025

Jukka-Pekka Korja
Managing Director

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