

# VALLOX

## MyVallox

### Model

Vallox TSK Multi 50 MV  
Vallox TSK Multi 50 MV EH  
Vallox TSK Multi 80 MV  
Vallox TSK Multi 80 MV EH  
Vallox TSK Multi 80 MV EHX  
Vallox 90 MV  
Vallox 90K MV  
Vallox 096 MV  
Vallox 110 MV  
Vallox 145 MV  
Vallox 245 MV  
Vallox 245 MV VKL

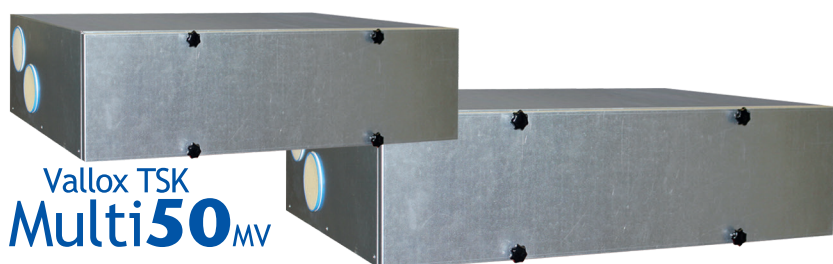
**Document**  
D3768

**Valid from**  
3.2.2015

**Updated**  
6.4.2017

### Manual

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Vallox TSK  
**Multi50<sub>MV</sub>**

Vallox TSK  
**Multi80<sub>MV</sub>**



Vallox  
**90<sub>MV</sub>**

Vallox  
**90K<sub>MV</sub>**



Vallox  
**096<sub>MV</sub>**

Vallox  
**110<sub>MV</sub>**

Vallox  
**145<sub>MV</sub>**

Vallox  
**245<sub>MV</sub>**

Ventilation units

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## NOTE

You can register your Vallox MV ventilation unit with the MyVallox Cloud cloud service and sign in into your MyVallox Cloud account at [www.myvallox.com](http://www.myvallox.com).

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## 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.

This user manual contains all the information necessary for safe operation of the system. All persons who operate and maintain the ventilation system must follow the instructions provided in this manual. Furthermore, all local accident prevention regulations must be observed.

## Installation

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

## GUARANTEE

The guarantee and liability exclude damage resulting from:

- Inappropriate use of the ventilation system or the control unit
- Incorrect or inappropriate installation, setup or use
- Neglect of instructions concerning transportation, mounting, use, or maintenance
- Structural or electronic modifications or changes made to the software

## 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.



### 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.

## 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.



### NOTE

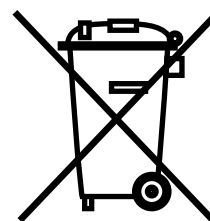
For further information, go to [www.vallox.com](http://www.vallox.com)



### 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.





## DIFFERENCES BETWEEN THE MODELS

- Power
- Size and weight
- Vallox 90 MV, Vallox 90K MV, and Vallox 096 MV do not have an additional heater. Vallox 110 MV and Vallox 145 MV have an additional heater.
- Vallox 245 MV has an electric 1500W post-heating radiator and an electric 1500W additional heating radiator. Vallox 245 MV VKL has a water circulation post-heating radiator and two electric 1500W additional heating radiators.
- In Vallox 096 MV, there is a sealing tape at the bottom of the heat recovery cell. In other models, there is a separate sealing bar under the heat recovery cell.
- Vallox 90K MV has a cooker hood underneath the unit, with a suction hole at the bottom of the unit and in the insulation.



### NOTE

The standard equipment and available accessories vary from country to country.

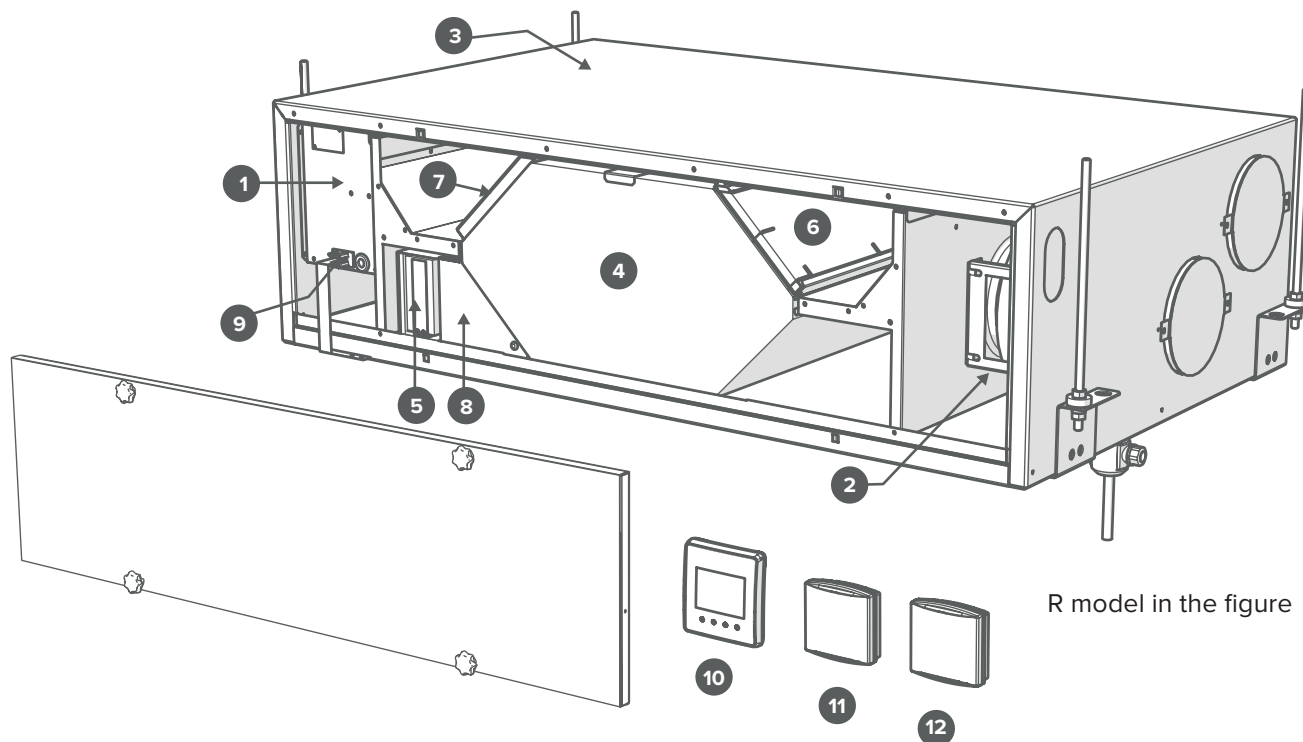
## MOUNTING OPTIONS:

- Vallox 90 MV, Vallox 096 MV, and Vallox 110 MV can be mounted either on the wall or on the ceiling with a mounting plate (optional).
- Vallox 90K MV can only be mounted on the wall.
- Vallox 145 MV can be mounted either on the wall, or on the floor by using a floor rack (optional).
- Vallox 245 MV must always be mounted on the floor by using a floor rack.
- Vallox TSK Multi 50 MV and Vallox TSK Multi 80 MV are designed to be mounted above a false ceiling.

## UNIT TYPE NUMBERS

MODELS	TYPE
Vallox TSK Multi 50 MV	3609-1
Vallox TSK Multi 50 MV EH	3609
Vallox TSK Multi 80 MV	3608-1
Vallox TSK Multi 80 MV EH	3608
Vallox TSK Multi 80 MV EHX	3609-1
	3608-2
(EH = post-heating)	
(EHX= post-heating and additional heating)	
Vallox 90 MV	3527
Vallox 90 K MV	3528
Vallox 096 MV	3722
Vallox 110 MV	3702
Vallox 145 MV	3712
Vallox 245 MV	3732
Vallox 245 MV VKL	3732

## MAIN PARTS

VALLOX TSK MULTI 50 MV AND  
VALLOX TSK MULTI 80 MV

Supply air fan

1



Extract air fan

2



Post-heating radiator

3



Heat recovery cell

4



Supply air filter F7

5



Supply air filter G4

6



Extract air filter G4

7



Bypass flap

8



Safety switch

9



Control panel

10



Carbon dioxide sensor

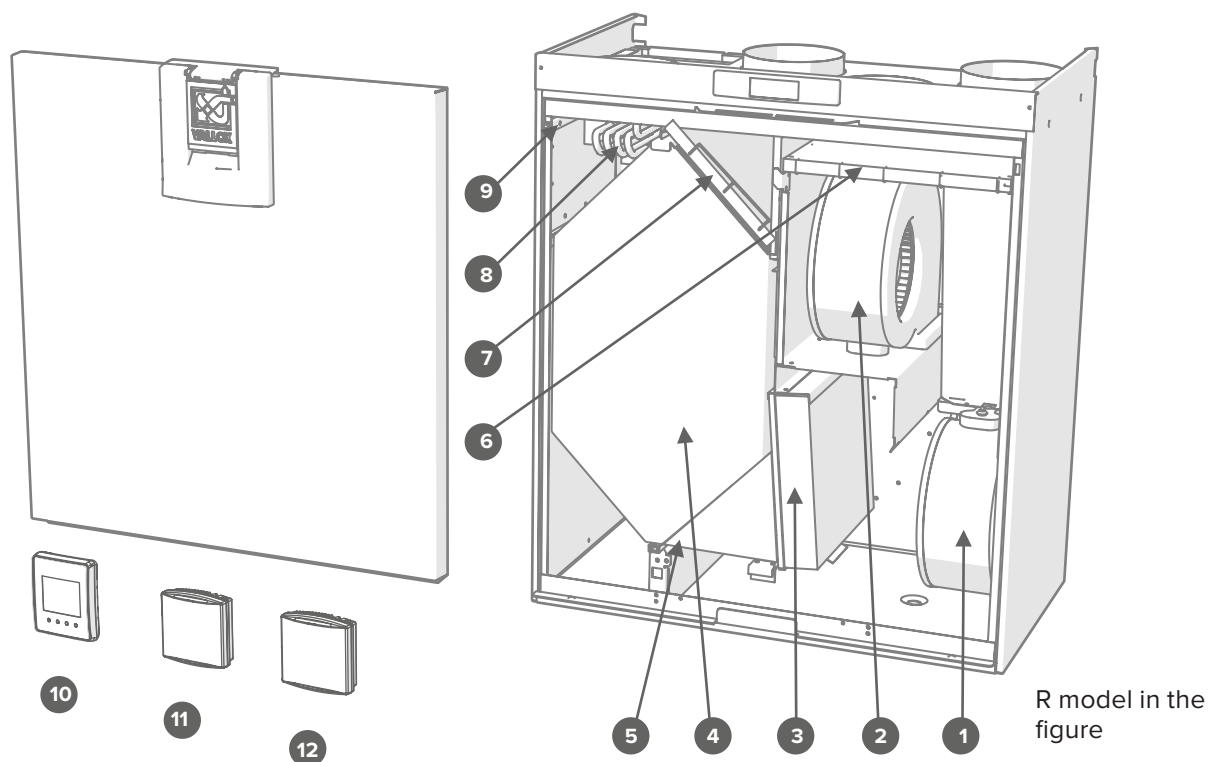
11















Humidity sensor

12

## VALLOX 90 MV

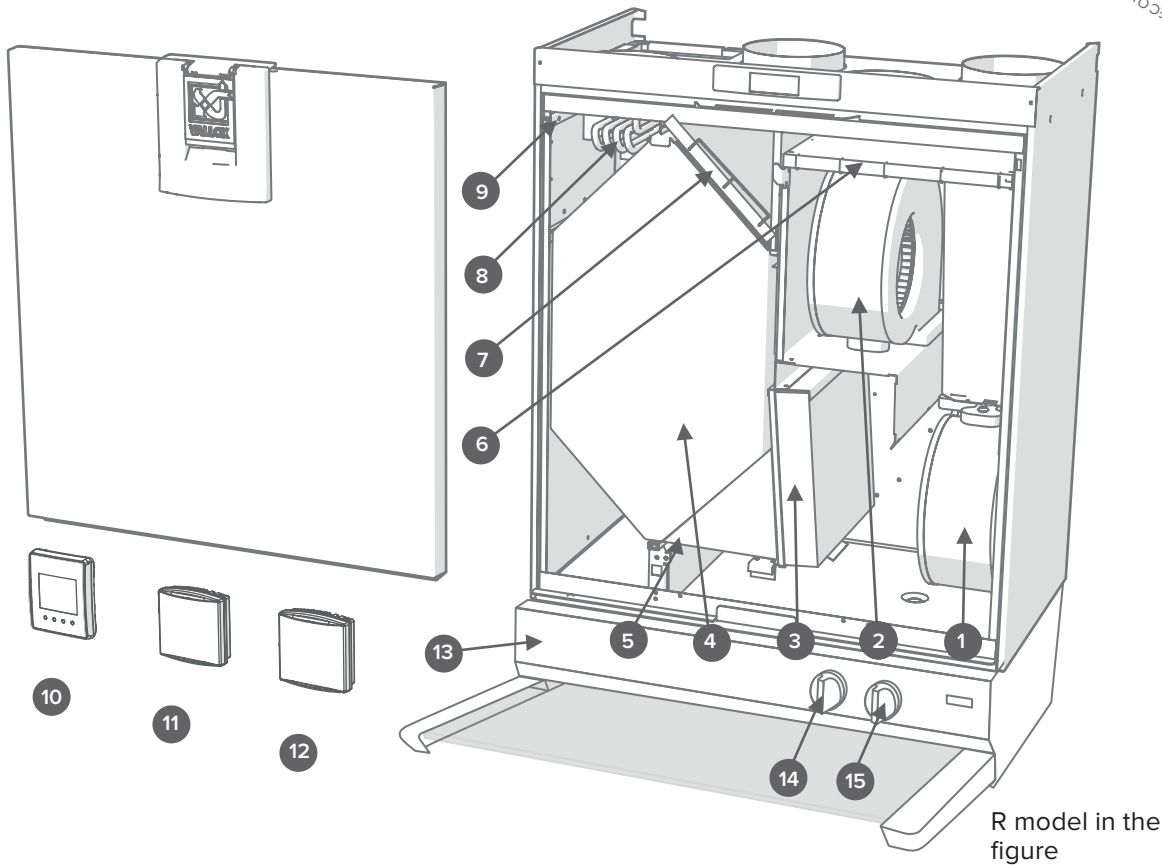


- |   |                                |   |   |                       |    |
|---|--------------------------------|---|---|-----------------------|----|
|  | Extract air fan                | 1 |  | Post-heating radiator | 8  |
|  | Supply air fan                 | 2 |  | Safety switch         | 9  |
|  | Supply air filter F7           | 3 |  | Control panel         | 10 |
|  | Heat recovery cell             | 4 |  | Carbon dioxide sensor | 11 |
|  | Automatic summer/winter damper | 5 |  | Humidity sensor       | 12 |
|  | Supply air filter G4           | 6 |   |                       |    |
|  | Extract air filter G4          | 7 |   |                       |    |
















# MAIN PARTS

Vallox  
90kMV

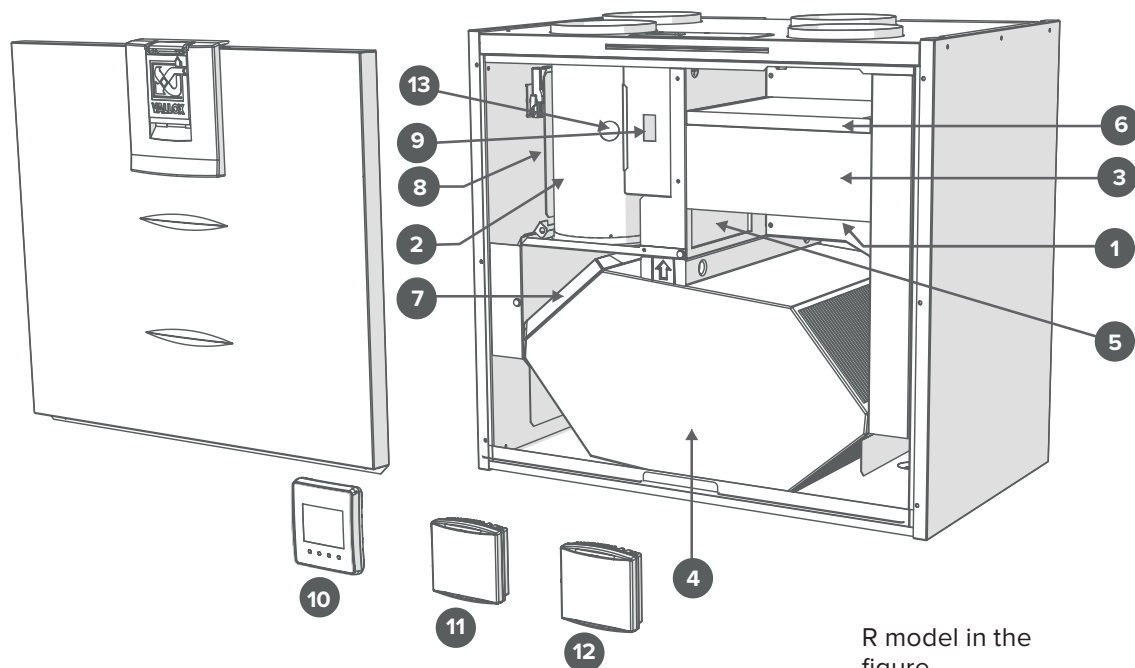
## VALLOX 90K MV
















R model in the figure

- |   |                                |   |                             |
|---|--------------------------------|---|-----------------------------|
|  | Extract air fan                |  | Post-heating radiator       |
|  | Supply air fan                 |  | Safety switch               |
|  | Supply air filter F7           |  | Control panel               |
|  | Heat recovery cell             |  | Carbon dioxide sensor       |
|  | Automatic summer/winter damper |  | Humidity sensor             |
|  | Supply air filter G4           |  | Cooker hood                 |
|  | Extract air filter G4          |  | Cooker hood flap adjustment |
|   |                                |  | Fan speed adjustment        |

## VALLOX 096 MV, VALLOX 110 MV, AND VALLOX 145 MV



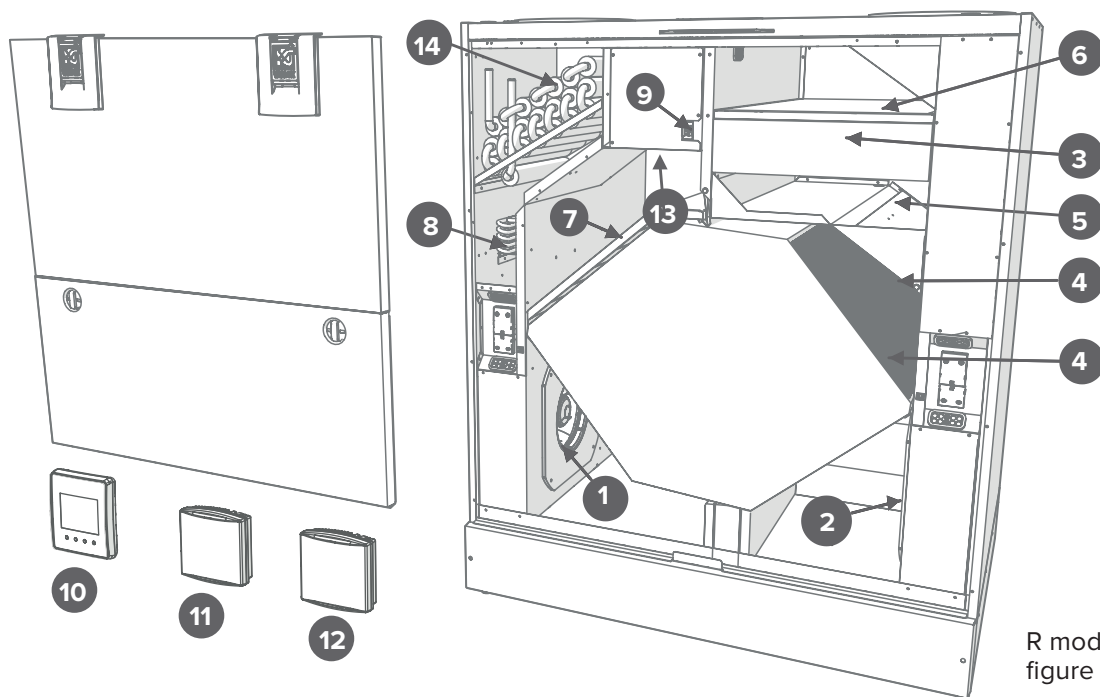
R model in the figure

- |   |   |   |   |   |    |
|---|---|---|---|---|----|
|  | Extract air fan (behind the protective cover) | 1 |  | Post-heating radiator (behind the extract air duct) | 8  |
|  | Supply air fan (behind the extract air duct)  | 2 |  | Safety switch                                       | 9  |
|  | Supply air filter F7                          | 3 |  | Control panel                                       | 10 |
|  | Heat recovery cell                            | 4 |  | Carbon dioxide sensor                               | 11 |
|  | Bypass flap                                   | 5 |  | Humidity sensor                                     | 12 |
|  | Supply air filter G4                          | 6 |  | Internal humidity sensor                            | 13 |
|  | Extract air filter G4                         | 7 |   |   |    |

## MAIN PARTS

Vallox  
**245<sub>MV</sub>**

### VALLOX 245 MV



R model in the figure



Supply air fan

1



Extract air fan

2



Supply air filter F7

3



Heat recovery cell, 2 pcs

4



Bypass flap

5



Supply air filter G4

6



Extract air filter G4

7



Post-heating radiator

8



Safety switch

9



Control panel

10



Carbon dioxide sensor

11



Humidity sensor

12



Internal humidity sensor (behind the electric box)

13



Post-heating liquid radiator

14

## Connecting the ventilation unit to the cloud service

The ventilation unit can be connected to the MyVallox Cloud cloud service. The cloud service allows for controlling ventilation remotely also, using e.g. a smartphone or tablet. Also the unit software is updated automatically through the cloud service. To connect to the cloud service, the ventilation unit must be connected to a computer and registered with the cloud service. At the same time you create a MyVallox Cloud account for yourself. Read more about the service at [www.myvallox.com](http://www.myvallox.com).

## Ventilation unit control options.

Operation of the Vallox ventilation unit can be controlled by the following means:

- Through the control panel installed in the building
- Through the MyVallox Home local area network connection and the MyVallox Home/Cloud user interface.
- Through the MyVallox Cloud cloud service and the MyVallox Home/Cloud user interface.
- Through a remote monitoring service or building automation that uses voltage signals or Modbus messages

In addition to the integrated humidity sensor, ventilation can also be adjusted automatically using the optional carbon dioxide and humidity sensors. When these are used, ventilation remains optimal even when the dwelling is unoccupied.

Each user can use the week clock to adjust the ventilation to fit their individual lifestyle.

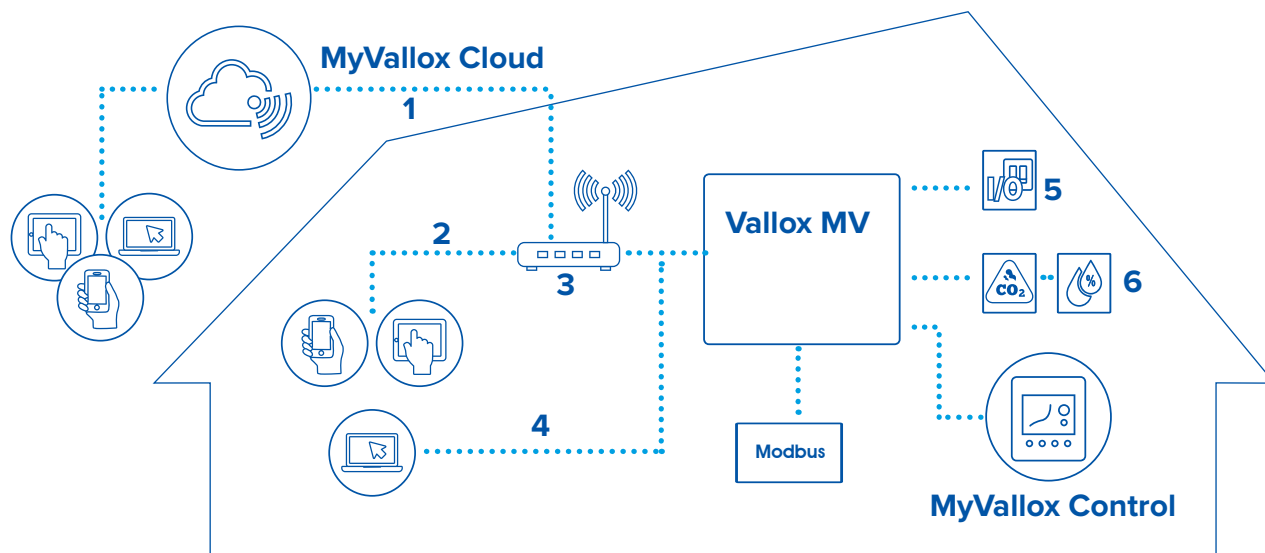


### TIP

The MyVallox Control control panel automatically switches to the sleep mode when the **Sleep time** set in the **Display settings** has elapsed. You can wake up the control panel by pressing any control panel button.




















## SYSTEM DESCRIPTION

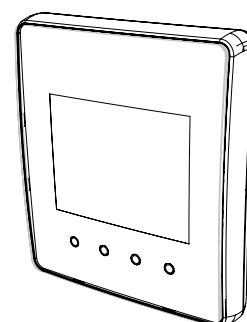


1. Internet
2. WLAN
3. Router
4. WLAN/LAN
5. Additional switch
6. Sensors

## CONTROL PANEL BUTTONS

BUTTON	DESCRIPTION
	<b>The Change profile</b> button changes the ventilation profile or the operating status used.
	<b>The Profile information</b> button allows you to view the currently active profile information.
	<b>The Temperature</b> button displays temperature and sensor information.
	<b>The Settings</b> button opens the settings.
	The <b>Back</b> button takes you backwards in the menu.
	<b>The Left arrow</b> button takes you leftward in the menu.
	<b>The Right arrow</b> button takes you rightward in the menu.
	<b>The OK</b> button accepts the selected option.
	<b>The Select</b> button selects an option from the list.
	<b>The Edit</b> button allows you to edit settings.
	<b>The Plus</b> button allows you to: <ul style="list-style-type: none"> <li>• Increase the value of the selected setting.</li> <li>• Move to the next menu item.</li> <li>• Move from a one-day view to a week view in the temperature, relative humidity of air and carbon dioxide level graphs.</li> </ul>
	<b>The Minus</b> button allows you to: <ul style="list-style-type: none"> <li>• Reduce the value of the selected setting.</li> <li>• Return to the previous menu item.</li> <li>• Move from a week view to a one-day view in the temperature, relative humidity of air and carbon dioxide level graphs.</li> </ul>
	<b>The Up arrow</b> button takes you upward in the menu.
	<b>The Down arrow</b> button takes you downwards in the menu.
	<b>The Statistics</b> button opens the temperature, relative humidity of air and carbon dioxide level graphs (1 day or 1 week).
	These icons indicate the hierarchy level of the settings.
	This icon indicates when the feature is turned off at your user level.

MyVallox  
**Control**



## NOTE

The MyVallox Control control panel contains the buttons described in the following table. You can press the graphical user interface buttons by using the ring-shaped buttons below the control panel. The control panel does not have a touch screen.

## STARTING UP AND SHUTTING DOWN THE UNIT

### Unit software

We recommend that the latest software version be always used. Check and download the latest version at <http://www.vallox.com> or at [cloud.vallox.com](http://cloud.vallox.com) either before or immediately after startup.

The current software version of the ventilation unit is shown on the control panel display when the unit is connected to the mains or factory settings are restored. Alternatively, the current software version can be checked from the Diagnostics display of the Maintenance menu.

Download the software into the unit using the USB Micro-B port of the control panel.

### Starting the unit

If you are starting the ventilation unit for the first time or after a maintenance procedure, first connect it to the mains. This will start the unit. During start-up, the diagnostics display appears for a few seconds. Once the download is complete, a profile display opens showing the latest saved status of the unit.

If the ventilation unit was turned off from the control panel (see Turning the unit off), you can start it by pressing any control panel button.



#### NOTE

The first starting of the unit may take a while, because of the software version check.

### Turning the unit off

To turn the ventilation unit off:

- ≡ 1. Select **Turn unit off** using the arrow buttons.
- 2. Select **OK**.
- 3. Press **OK** to confirm the selection. The ventilation unit has now been turned off.



#### IMPORTANT

It is recommended that the ventilation be kept turned on without disruptions.

## SETUP WIZARD

The following settings will be configured during the setup of the ventilation system:

- user interface language
- time and date
- system administrator lock code
- parental controls, if turned on
- fan settings
- user profile settings, such as the temperature.

The qualified ventilation installer must complete the fan settings in accordance with the ventilation plan. Do not change these settings.

1. Start the Vallox ventilation unit.
2. When the unit is started for the first time, the language menu opens on the control panel display. Select **OK**.
3. The setup wizard is launched.

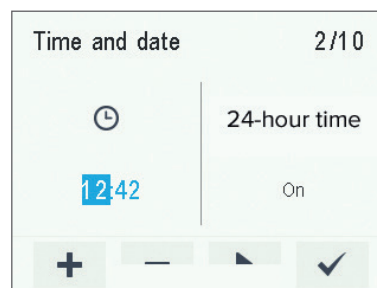
### Select the language

1. Use the arrow buttons to select the language.
2. Select **OK**.
3. The language has now been set, and the control panel will move on to the time settings.



### Set the time

1. Use the **Plus** and **Minus** buttons to set the hours.
2. Select **Right arrow**.
3. Use the **Plus** and **Minus** buttons to set the minutes.
4. The time is now set.
5. Proceed to the next phase by selecting **Right arrow**.

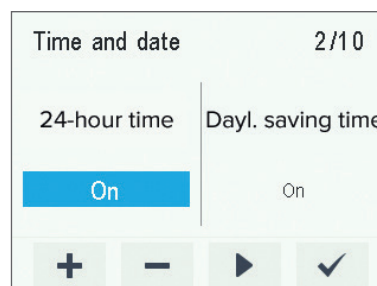


### Set the 24- or 12-hour clock

The 24-hour clock is used by default.

To use the 12-hour clock:

1. Select **Minus**. The **24-Hour time** setting value is changed to **Off**.
2. Proceed to the next phase by selecting **Right arrow**.

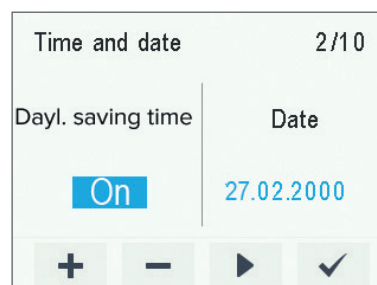


### Set the automatic daylight saving time

By default, the automatic daylight saving time is on.

To use the manual daylight saving time setting:

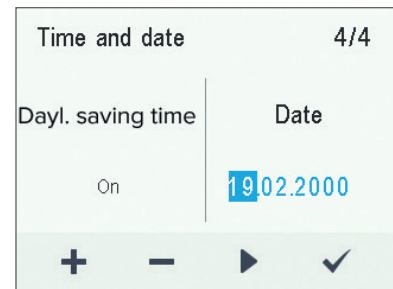
1. Select **Minus**. The **Dayl.saving time** setting value is changed to **Off**.
2. The manual daylight saving time setting is now on.
3. Proceed to the next phase by selecting **Right arrow**.



## BASIC SETTINGS

### Set the date

1. Use the **Plus** and **Minus** buttons to set the date.
2. Select **Right arrow**.
3. Use the **Plus** and **Minus** buttons to set the month.
4. Select **Right arrow**.
5. Use the **Plus** and **Minus** buttons to set the year.
6. Select **OK**.
7. The date is now set.



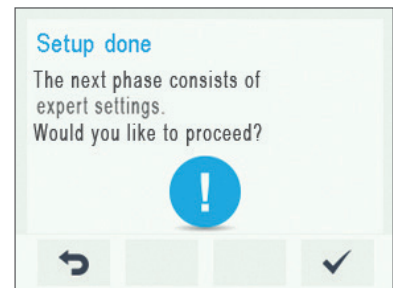
#### TIP

You can browse the **Time and date** settings by using the **Right arrow** button.

### Completing the setup

Once you have completed the basic settings for the setup, select **OK** to proceed to the expert settings of the ventilation unit.

Select **Back** to use the ventilation unit on factory settings and complete the configuration of the expert settings later.



#### NOTE

Expert settings are settings that use e.g. airflow measurement equipment.

## Lock code and access rights



### NOTE

The default lock code is 0000, i.e. the lock code inquiry is turned off.

1. Enter the first digit of the lock code using the **Up arrow** and **Down arrow** buttons. Proceed to the next digit by selecting **Right arrow**.
2. Set the remaining digits of the lock code in the same way.
3. Select **OK**.
4. The lock code is now set.

Password and access rights 3/10

9	9	9	9
0	0	0	0
1	1	1	1

▲ ▼ ▶ ✓

Enter the new access code here:

\_\_\_\_\_

## User level

There are three user levels:

- **Extensive** - At the extensive user level, users can access all ventilation unit settings.
- **Normal** - At the normal user level, access to some menus is restricted.
- **Limited** - At the limited user level, users have access only to the basic functions of the ventilation unit.

For more information on user levels, see Chapter "User level diagrams".

1. Use the **Plus** and **Minus** buttons to set the user level.
2. The user level is now set.
3. Proceed to the next phase by selecting **Right arrow**.

Lock code and access rights 4/10

User level	Parental Controls
Extensive	Off

+ - ▶ ✓

Lock code and access rights 4/10

Parental Controls	Parental Code
Off	1001

+ - ▶ ✓

Parental controls access code:

1 0 0 1

\_\_\_\_\_

## Parental controls

Parental controls lock the control panel so that no damage can be done to the ventilation unit by random pressing of the control panel buttons.

1. By default, the parental controls are turned off. Use the **Plus** and **Minus** buttons to turn the parental controls on.
2. Select **OK**.
3. The parental controls are now set.



### TIP

You can browse the **Lock code and access rights** settings with the **Right arrow** button.



### NOTE

The access code of the parental controls cannot be changed. The access code is always **1001**.

## Basic fan settings



### IMPORTANT

Adjust the air flows according to the values specified in the ventilation plan. It is recommended that the air flows be adjusted without having to choke the air flows at the valves. This is the most energy-efficient set up.

First, set both values as close to the ideal value as possible by looking at the supply and extract air fan curves. If the ratio between the air flows is very high at first, the ventilation unit may have to carry out extra defrosting cycles in sub-zero temperatures, thus making adjustment of the air flows more complicated. Check the air flows by measuring them at the valves, and fine-tune the percentage values as required.



### NOTE

If the outside air is extremely cold (below -10°C on an aluminium cell or below -3°C on a plastic cell), the ventilation unit may have to defrost the heat recovery cell. If this happens, the **Defrosting** icon will be displayed on the control panel. The air flows cannot be adjusted during defrosting.

## Adjusting the supply and extract air flows

1. Use the **Plus** and **Minus** buttons to set the supply air fan ratio as a percentage of the maximum output ratio. The fan speed (l/min) will change accordingly.
2. Measure and adjust the supply air flows from the valves.
3. Press the **Right arrow button**.
4. Use the **Plus** and **Minus** buttons to set the extract air fan ratio as a percentage of the maximum output ratio. The fan speed (l/min) will change accordingly. Measure and adjust the extract air flows from the valves.
5. Select **OK**. Supply and extract air flow settings are now complete.
6. Record the set percentages in the measurement log. Do not change the output ratio between the supply and extract air fans once the settings are complete. The same ratio is also used in the Away and Boost profiles.



### TIP

You can browse the **Basic fan settings** by using the **Right arrow** button.



### NOTE

If the use of the ventilation unit has been started before air flow adjustment, we recommend that the factory settings of the ventilation unit be restored before adjustment is started (see "Save and restore settings"). This ensure that the unit settings are optimal for adjusting the air flows and that any settings made during the adjustment are saved as setup settings. Any later changes will be saved as user settings. Both the setup and user settings can be restored later, even if the settings have been later modified.



### CAUTION

The supply and extract air settings have been completed by a specialist during setup of the ventilation unit. These settings should be changed only when the ventilation unit is reconfigured, and not at any other time. Changing the ventilation settings so that overpressure is created can result in damage to the structures of the building.

### Cell defrost



Defrosting. . .



### Basic fan settings

5/10

#### Supply air

50%

1518<sup>1</sup>/min

#### Extract air

50%

0<sup>1</sup>/min



### Basic fan settings

5/10

#### Supply air

50%

1437<sup>1</sup>/min

#### Extract air

50%

1431<sup>1</sup>/min





## PROFILE SETTINGS



### NOTE

By default, the At home profile uses the higher basic ventilation fan speed. We recommend that this basic ventilation setting be used with the At home profile. Once you have set the fan speed for the At home profile, the fan speed for the Away profile will by default be set to -30% of the At home profile fan speed. We recommend that the default fan speed settings be used. However, the settings can be changed as required.

## At home and Away profiles

To set the ventilation settings of the profiles:

1. Use the **Plus** or **Minus** buttons to set the profile fan speed as a percentage of the maximum output ratio.
2. The fan speed is now set for the profile.
3. Proceed to the next phase by selecting **Right arrow**.
4. Use the **Plus** or **Minus** buttons to set the desired supply air temperature for the profile. You can adjust the temperature in the range +10°C ... +25°C.
5. The profile supply air temperature is now set.
6. Proceed to the next phase by selecting **Right arrow**.
7. Use the **Plus** and **Minus** buttons to turn the automatic fan speed control based on relative humidity of air on or off.
8. The automatic fan speed control, based on the relative humidity of air, is now set.
9. Proceed to the next phase by selecting **Right arrow**.
10. Use the **Plus** and **Minus** buttons to turn the automatic fan speed control based on carbon dioxide content on or off.
11. The automatic fan speed control, based on the carbon dioxide level, is now set.
12. Select **OK**.
13. Proceed to the settings of the next profile by selecting **Right arrow**.



### NOTE

Once you have set the fan speed for the At home profile, the fan speed for the Boost profile will by default be set to +30% of the At home profile fan speed. It is recommended that this fan speed setting be used for the Boost profile. However, the setting can be changed as required.

## Boost profile

The fan speed, supply air temperature, and the automatic fan speed control (based on either relative humidity of air or carbon dioxide level) is set for the Boost profile in the same way as for the At home and Away profiles. The Boost profile also has a timer setting.

1. Use the **Plus** and **Minus** buttons to turn the profile timer

At home		6/10
Fan Speed	°C	
50%	15°C	
+	-	▶ ✓

At home		6/10
	CO <sub>2</sub>	
Off	Off	
+	-	▶ ✓



### TIP

You can browse the At home profile settings with the Right arrow button.

Boost Profile		8/10
Timer	Duration	
On	30	
+	-	▶ ✓

function on or off. The options are:

- **On** — When the timer is on, the **Boost** profile is used only for the period specified in the timer.
  - **Off** — When the timer is off, the **Boost** profile is used until the profile is changed, either manually or automatically by the week clock.
2. Proceed to the next phase by selecting **Right arrow**.
  3. Use the **Plus** and **Minus** buttons to set the profile timer duration in minutes.
  4. Select **OK**.
  5. Proceed to the settings of the next profile by selecting **Right arrow**.

### Fireplace profile

1. Use the **Plus** and **Minus** buttons to set the Fireplace profile timer duration in minutes.
2. The **Fireplace** profile timer duration is now set.
3. Proceed to the next phase by selecting **Right arrow**.
4. Use the **Plus** and **Minus** buttons to set the **Fireplace** profile's supply air fan speed as a percentage of the maximum output ratio.



**TIP**

It is recommended that a higher supply air fan speed be used in the fireplace profile to create overpressure in the ventilation zone. Reducing the extract air fan speed is not recommended.

5. The supply air fan speed of the **Fireplace** profile is now set.
6. Proceed to the next phase by selecting **Right arrow**.
7. Use the **Plus** and **Minus** buttons to set the extract air fan speed of the **Fireplace** profile as a percentage of the maximum output ratio.
8. The extract air fan speed of the **Fireplace** profile is now set.
9. Proceed to the next phase by selecting **Right arrow**.
10. Use the **Plus** and **Minus** buttons to turn the profile timer function on or off. The options are:
  - **On** — When the timer is on, the **Fireplace** profile is used only for the period specified by the timer.
  - **Off** — When the timer is off, the **Fireplace** profile is used until the profile is changed, either manually or automatically by the Week clock.
11. The profile timer function is now set.
12. Select **OK**.



**IMPORTANT**

Do not turn the timer function off if there is no timer in the external fireplace switch.

### Finishing the setup

Once you have completed all phases of the setup, finish up the setup as follows:

1. To change any of the set values, use the arrow buttons to return to the desired line and then press **OK**.
2. When you are satisfied with the settings, use the arrow buttons to select **Start** and then press **OK**.



**TIP**

You can browse the settings of the Boost or the Fireplace profile by using the Right arrow button.

Fireplace profile 9/10	
Duration	Supply fan
00:15	50%
+	-
▶	✓

Fireplace profile 9/10	
Supply fan	Extract fan
50%	50%
+	-
▶	✓

Fireplace profile 9/10	
Extract fan	Timer
50%	On
+	-
▶	✓

Setup done 10/10	
Start	✓
Language	✓
Time and date	✓
Lock code	✓
Access rights	✓
Start setup	✓
◀	▶
◀	✓

## FOUR VENTILATION UNIT PROFILES



### At home

Use this ventilation profile when the dwelling or the premises are occupied.



### Away

Use this ventilation profile when the dwelling or premises are unoccupied, e.g. during a trip or other long absence.



### Boost

Use this profile to increase the ventilation rate, e.g. when there are more people than usual in the dwelling or elsewhere on the premises.



### Fireplace profile

Use this ventilation profile when, for example, you are making a fire in the fireplace. This profile is primarily used to create momentary overpressure in the apartment.



#### TIP

Using the At home, Away, and Boost profiles according to need helps to save energy.



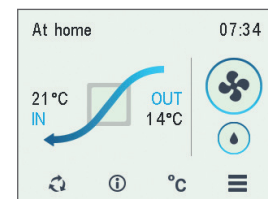
#### CAUTION

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

## Symbols for ventilation profiles

The following symbols are used on the main displays of the profiles:

Table 2. Profile symbols



SYMBOL	DESCRIPTION
	The profile in use is either the At home, Away, or Boost profile. The week clock is turned off.
	The profile in use is either the At home, Away, or Boost profile. The week clock is on.
	The Fireplace profile is used. The week clock might be turned on.
	These symbols indicate the currently active profile. The smallest fan icon indicates that the Away profile is in use, and the largest fan icon indicates that the Boost profile is being used.
	Droplet symbols indicate the relative humidity of air. The symbols are: <ul style="list-style-type: none"> <li>One drop — The humidity sensor has been successfully installed and the relative humidity of air is normal.</li> <li>Two drops — The relative humidity of air is slightly higher than normal. The fan speed will be automatically increased if automatic adjustment is allowed.</li> <li>Three drops — The relative humidity of air is significantly higher than normal. The fan speed will be automatically increased if automatic adjustment is allowed.</li> </ul>
	These symbols indicate the carbon dioxide level in the air. The colour codes are: <ul style="list-style-type: none"> <li>Green — The carbon dioxide sensor has been installed and the carbon dioxide level is normal.</li> <li>Orange — The carbon dioxide level is slightly higher than normal. The fan speed will be automatically increased if automatic adjustment is allowed.</li> <li>Red — The carbon dioxide level is significantly higher than normal. The fan speed will be automatically increased if automatic adjustment is allowed.</li> </ul>

## VENTILATION PROFILES

## CHANGING THE PROFILE

1. Press the **Change profile** button until the desired ventilation profile icon appears on the display.
2. Wait until the main display of the ventilation profile appears.
3. The ventilation profile has now been changed.



## Browsing the information of the At home, Away, and Boost profiles

To view the profile settings:

1. Open the main display of the profile you wish to view.
2. Select **Profile information**.

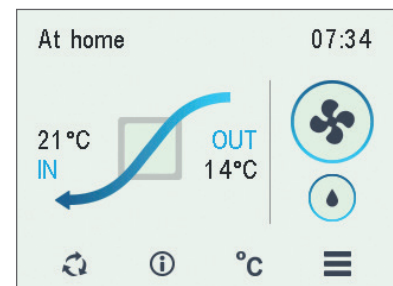
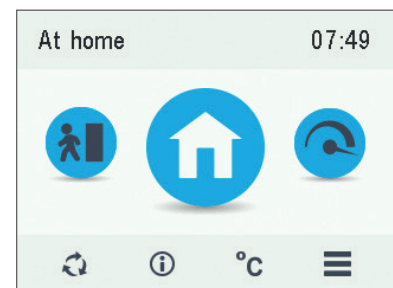
The following information is shown on the first information display of the profile:

- **Supply air** — Indicates the temperature of the air blown into the building and its set value (in brackets), if the supply air is warmer than the set value.
- **Outdoor air** — Indicates the outdoor temperature.
- **Fan speed** — Indicates the fan speed. If the automatic fan speed boost is turned on, the set value is shown in brackets first followed by the actual fan speed.
- **Cell status** — Indicates the status of the ventilation unit heat recovery cell. The status options are:
  - **Heat recovery** — The heat recovery cell heats the air streaming in from outdoors.
  - **Cooling** — The heat recovery cell cools the air streaming in from outdoors.
  - **Cell bypass** — The inflowing air bypasses the heat recovery cell.
  - **Defrosting** — The heat recovery cell is being defrosted.

3. Proceed to the next phase by selecting **Right arrow**.

The next information display of the profile shows the following information:

- **Humidity** — Indicates the highest relative humidity of air measured by the sensors.
- **Carbon dioxide** — Indicates the highest carbon dioxide level measured by the sensors.
- **Replace filters** — Indicates the next recommended filter replacement date.
- **Time in operation** — Indicates how long the device has been running.





At home Info		
	Supply air	(15°C) 21°C
	Outdoor air	14°C
	Fan speed	50%
	Cell status	Heat recovery

At home Info		
	Humidity	39%
	Carbon dioxide	0ppm
	Replace filters	19.05.2000
	Hours in use	30d 0y

## Viewing the Fireplace profile Information

1. Open the main display of the **Fireplace** profile:
2. Select **Profile information**.
3. The information display shows the following information:
  - **Duration** — Indicates the duration of enhanced ventilation when the **Fireplace** profile is activated. The value is expressed in hours and minutes.
  - **Supply fan speed** — Indicates the percentage of the supply air fan speed relative to the maximum speed.
  - **Extract fan speed** — Indicates the percentage of the extract air fan speed relative to the maximum speed.

Fireplace profile	
Fireplace profile	
Duration	00:15
Supply fan speed	50%
Extract fan speed	50%
 	

## Modifying and saving the profile settings



### IMPORTANT

The unit does not automatically save any settings, not even those that are currently in use. Unless saved, settings may be lost during a power cut, for example. To save the settings, select **Expert settings > Save and restore settings**.

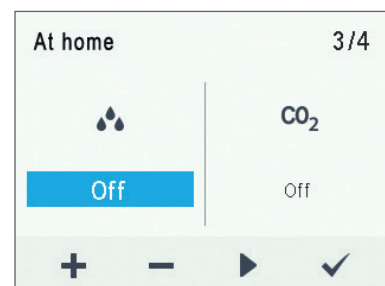
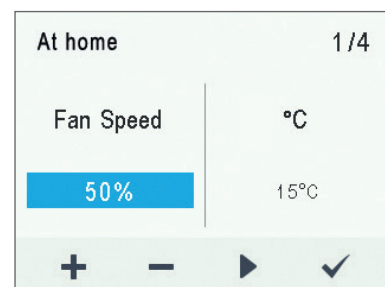
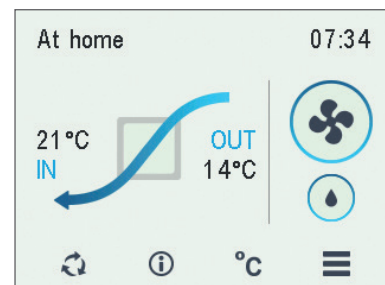
## Modifying profile settings



1. Open the main display of the profile you wish to view.
2. Select **Profile information**.
3. Select **Edit**.
4. Make the desired changes as instructed in the section Setup wizard > Profile settings.

## Timer functions of the Boost and Fireplace profiles

In addition, the timer function can be modified in the Boost and Fireplace profiles. See Setup wizard -> Profile settings.



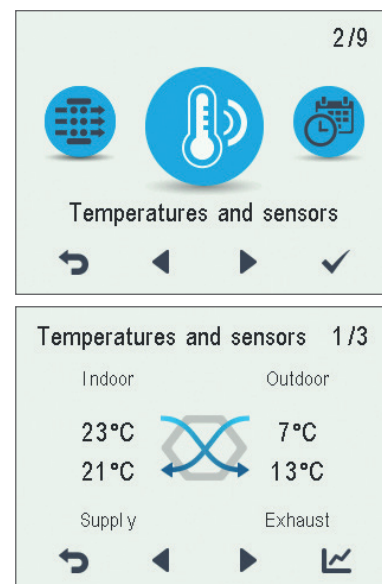
## TEMPERATURES AND SENSORS

### Viewing temperature data

1. Select **Settings** > **Temperatures and sensors**.
2. Select **OK**.

The summary display of temperatures and sensors shows the following information:

- **Indoor** — Indicates the temperature of the air flowing into the unit to be removed from the premises.
- **Outdoor** — Indicates the temperature of the air flowing into the unit from outside.
- **Supply** — Indicates the temperature of the air flowing into the premises from the unit.
- **Exhaust** — Indicates the temperature of the exhaust air flowing outdoors from the unit.

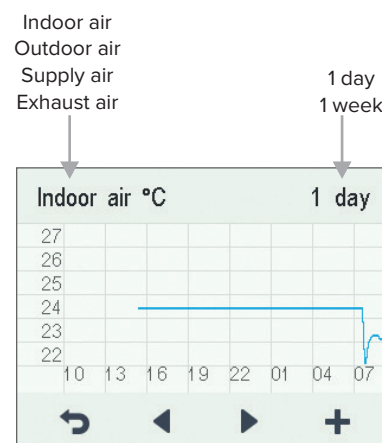


#### TIP

The temperature and sensor data can also be viewed by pressing the temperature button on the profile display.

### Viewing temperature statistics

1. Select **Settings** > **Temperatures and sensors**.
2. Select **OK**.
3. Select **Statistics**.
4. A graph appears on the display showing the indoor air temperature over the past 24 hours.
5. Use the **Plus** and **Minus** buttons to alternate between weekly and daily statistics.
6. Use the **arrow** buttons to view outdoor air, supply air, and exhaust air temperature statistics.
7. On each display, use the **Plus** and **Minus** buttons to alternate between weekly and daily statistics.
8. To exit the menu, press the **Back** button.



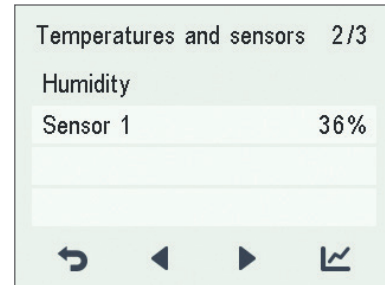
Indoor air temperature graph for the past 24 hours. The outside and supply air values are shown on a similar display. You can view the graph for a week or for a single day.



## Viewing the relative humidity of air and carbon dioxide levels measured by the sensors

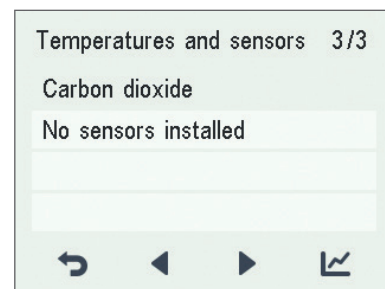
To browse levels measured by individual sensors:

1. Select **Settings** > **Temperatures and sensors**.
2. Select **OK**.
3. Use the arrow buttons to switch from the summary display of **Temperatures and sensors** to view the relative humidity of air and carbon dioxide levels measured by the humidity and carbon dioxide sensors.



To browse statistics for relative humidity of air and carbon dioxide levels:

1. Select **Statistics** next to the sensor group you wish to view.
2. A graph opens on the display showing the relative humidity of air and carbon dioxide levels recorded over the past 24 hours by the sensor with the highest values.
3. Use the **Plus** and **Minus** buttons to alternate between weekly and daily statistics.
4. To exit the menu, press the **Back** button.



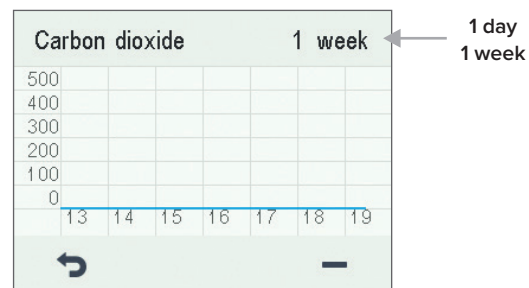
### NOTE

For more detailed instructions, go to [www.vallox.com](http://www.vallox.com)

## Relative humidity of air and carbon dioxide level statistics



Relative humidity of air statistics for the past 24 hours. You can view the graph for a week or for a single day.



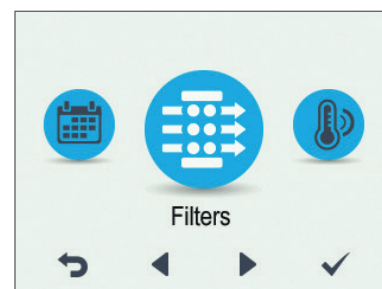
Carbon dioxide level statistics for the past week. You can view the graph for a week or for a single day.



## SETTINGS

### FILTER SETTINGS

1. Select **Settings > Filters**.
2. Select **OK**.
3. The summary display of filter replacement shows the following information:
  - **Filters replaced** — Indicates the date when the filters were last replaced.
  - **Next reminder** — Indicates the date when a reminder to replace the filters will next be shown.
  - **Reminder interval** — Indicates the filter replacement interval in months.

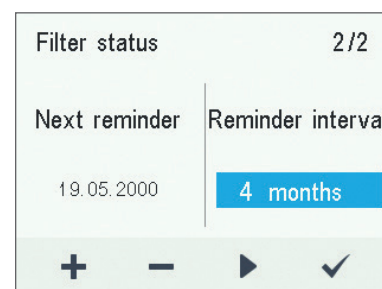
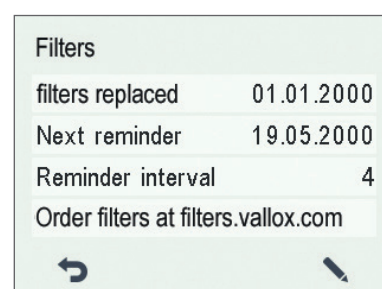
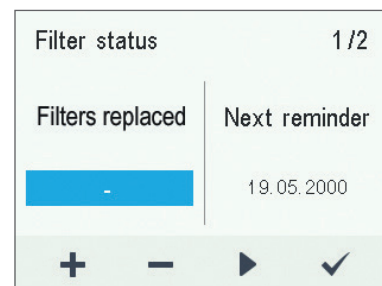


### Setting the date the filters were last replaced

Instructions for replacing the filters are provided in the Maintenance section.

After replacing the filters, enter the replacement date.

1. Select **Settings > Filters**.
2. Select **OK**.
3. Select **Edit**.
4. Select **Plus** on the Filter replacement display. The **Last replaced** field now reads **Today**.
5. Select **OK**.



### Setting the Filter replacement reminder interval

1. Select **Settings > Filters**.
2. Select **OK**.
3. Select **Edit**.
4. Select **Right arrow**.
5. Use the **Plus** and **Minus** buttons to set the desired reminder interval in months in the Reminder interval field. The interval value can be between 1 and 12 months. The default setting is 4 months.
6. Select **OK**.

#### NOTE

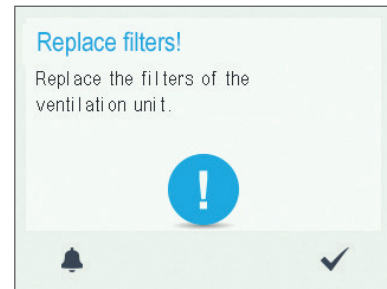
Based on the set reminder interval, the unit will automatically set the service to provide a reminder to replace the filters at the due time.

## Filter maintenance reminder

The maintenance reminder reminds you of the filter replacement with a pop-up window.

The message can be acknowledged by selecting **OK**.

Press the clock button to postpone the reminder for one week.



## DISPLAY SETTINGS

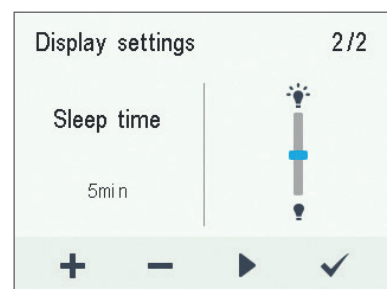
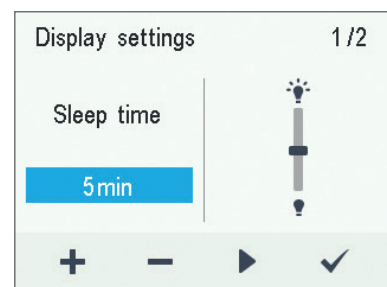
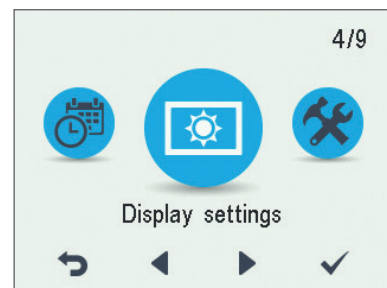
### Setting the sleep time

1. Select **Settings > Display settings**.
2. Select **OK**.
3. Use the **Plus** and **Minus** buttons to set the Sleep time.
4. Select **OK**.



#### TIP

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

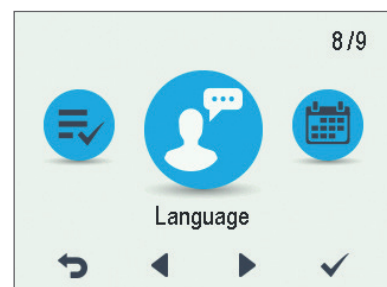


### Adjusting the display brightness

1. Select **Settings > Display settings**.
2. Select **OK**.
3. Select **Right arrow**.
4. Use the **Plus** and **Minus** buttons to set the display brightness.
5. Select **OK**.

### Selecting the user interface language

1. Select **Settings > Language**.
2. Select **OK**.
3. Select your language.
4. Select **OK**.



## SETTINGS

## TIME AND DATE

## Setting the time and date

The available time settings are:

- Time
- 24- or 12-hour clock
- Automatic daylight saving time
- Date



## NOTE

The ventilation unit time will withstand a power cut of a few hours.

## Setting the time

1. Select **Settings > Time and date**.
2. Select **OK**.
3. Use the **Plus** and **Minus** buttons to set the hours.
4. Select **Right arrow**.
5. Use the **Plus** and **Minus** buttons to set the minutes.
6. Select **OK**.

## Selecting the 24- or 12-hour clock

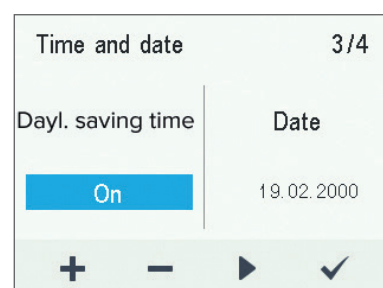
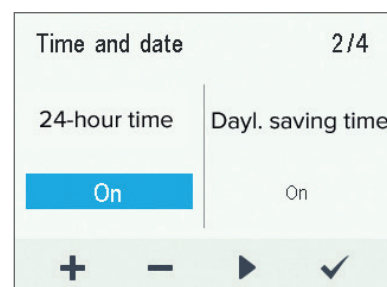
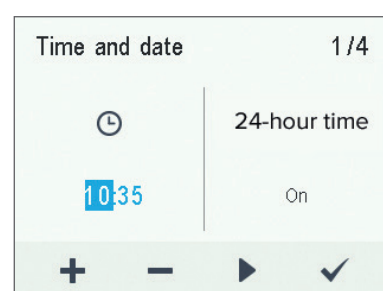
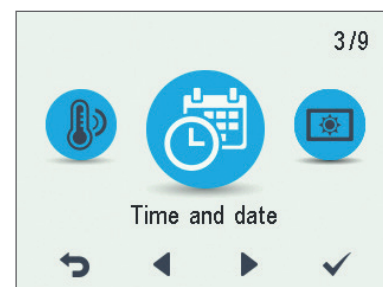
The 24-hour clock is used by default. To use the 12-hour clock:

1. Select **Settings > Time and date**.
2. Select **OK**.
3. Select **Right arrow** until the 2/4 display opens
4. Select **Minus**. The **24-Hour** setting value is changed to **Off**.
5. Select **OK**.

## Automatic daylight saving time

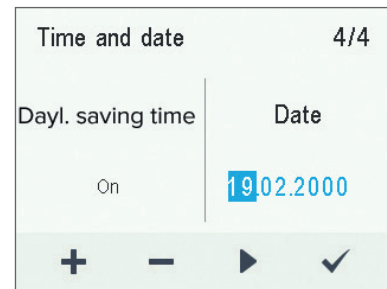
By default, automatic daylight-saving time is turned on. To use the manual daylight saving time setting:

1. Select **Settings > Time and date**.
2. Select **OK**.
3. Select **Right arrow** until the 3/4 display opens.
4. Select **Plus**. The **Dayl.saving time** setting value is changed to **Off**.
5. Select **OK**.



## Setting the date

1. Select **Settings > Time and date**.
2. Select **OK**.
3. Select **Right arrow** until the 4/4 display opens.
4. Use the **Plus** and **Minus** buttons to set the date.
5. Select **Right arrow**.
6. Use the **Plus** and **Minus** buttons to set the month.
7. Select **Right arrow**.
8. Use the **Plus** and **Minus** buttons to set the year.
9. Select **OK**.



## WEEK CLOCK

The week clock allows you to pre-set a weekly ventilation program for the ventilation unit. For each hour of the week, one of the following profiles can be configured:

- **At home** — The **At home** profile is used.
- **Away** — The **Away** profile is used.
- **Boost** — The **Boost** profile is used.
- **Blank** — Do not change the profile.



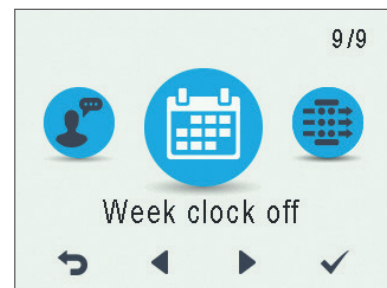
### NOTE

If you change the profile manually when the week clock is on, the selected profile will be active until the week clock switches to the next profile in the program.

If the humidity or carbon dioxide sensors control the ventilation, they will adjust the fan speed, regardless of whether the profile has been manually selected or selected by the week clock.

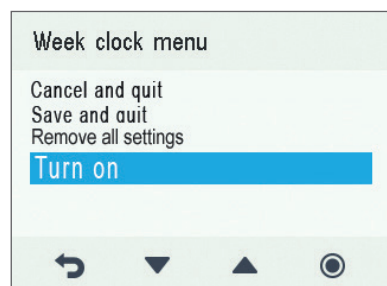
## Turning the week clock on

1. Select **Settings > Week clock off**.
2. Select **OK**.
3. Select **Settings**.
4. Select **Turn on**.
5. Select **Select**.
6. The control panel confirms that the week clock is turned on.






### TIP

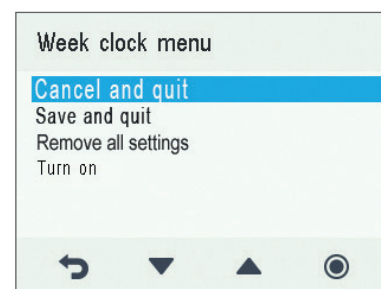
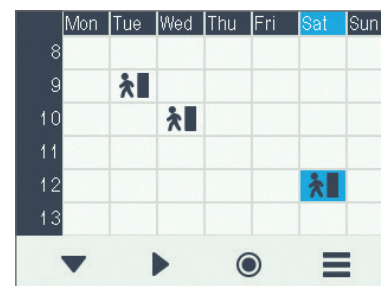
You can turn the week clock on or off by pressing the OK button on the Week clock display for a few seconds.



## SETTINGS

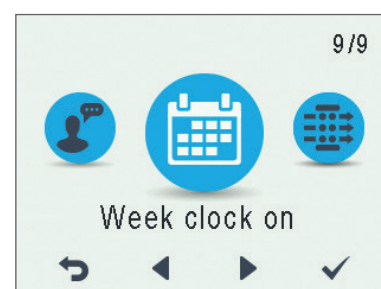
### Setting and editing the weekly program

1. Select **Settings > Week clock on**.
2. Select **OK**.
3. Use the **Right arrow** button to select the desired day.
4. Use the **Down arrow** button to select the desired time.
5. Use the **Select** button to browse and select the ventilation profile that will be turned on at the chosen time. The icons are:
  -  **At home profile**
  -  **Away profile**
  -  **Boost profile**
6. Once you have selected the profiles for the week clock, select **Settings**.
7. Select **Save and quit**, or select **Cancel and quit** to leave without saving the week program or the changes made to it.
8. Once you have saved the week clock program, select **OK** on the **confirmation display**.



### Turning the Week clock off

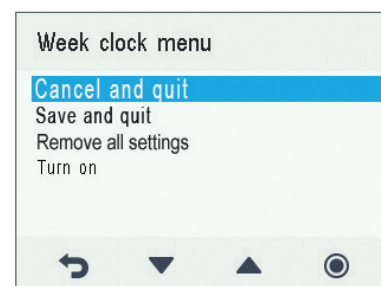
1. Select **Settings > Week clock on**.
2. Select **OK**.
3. Select **Settings**.
4. Select **Turn off**.
5. Select **Select**.
6. The control panel will confirm that the week clock is turned off.
7. The week clock is now turned off. If you have set a weekly program, it will be saved in the unit.



### Removing the week clock settings

To delete the weekly program settings:

1. Select **Settings > Week clock on** or **Week clock off**.
2. Select **OK**.
3. Select **Settings**.
4. Select **Remove all settings**.
5. Select **OK** to accept deletion of the weekly program. The weekly program has now been deleted.



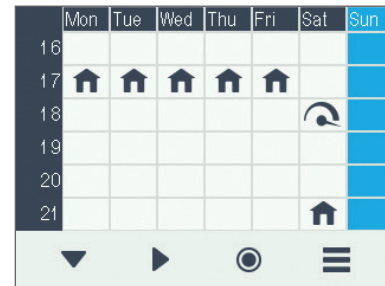
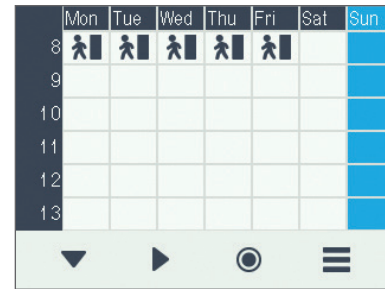
## Example of setting a weekly program

In this example, the following weekly program has been set:

- Mon-Fri 8-17, *Away* .
- Mon-Fri 17-07, *At home*.
- Sat 8-17, *At home*.
- Sat 18-20, *At home* with a ventilation boost needed for cooking, for example.
- Sat 21-Mon 8, *At home*.

To set the week clock, proceed as follows:

1. Open the week clock.
2. Select Monday, and input the following settings:
  - For 08:00, select the **Away** profile.
  - For 17:00, select the **At home** profile.
3. Then input the corresponding settings for the other weekdays.
4. Then select Saturday, and input the following settings:
  - At 18, select the **Boost** profile.
  - At 21, select the **At home** profile.
5. Ensure that the Week clock is turned on.
6. The weekly program has now been set.



The figures above show the aforementioned settings in the week clock.

## TURNING THE UNIT OFF

To turn the ventilation unit off:

1. Select **Settings**> **Turn unit off**.
2. Select **OK**.
3. Accept the command by selecting **OK**.
4. The ventilation unit has now been turned off.



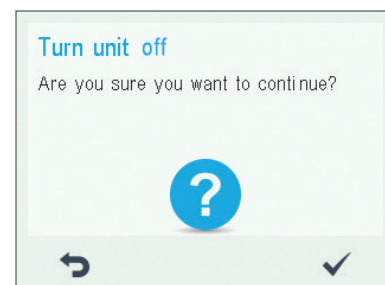
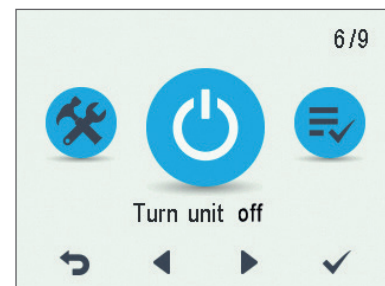
### IMPORTANT

In order to ensure that the indoor air presents no harm to health and remains optimal 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.



### TIP

To re-start the ventilation unit, press any key.



## TROUBLESHOOTING



### NOTE

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

FAULT	CAUSE	MEASURES
Error message: Extract air fan stopped	The extract air fan has stopped.	Make sure that the fan is not running. The fan cabling and operation must be checked, and if necessary the fan must be replaced. Contact the service centre.
Error message: Supply air fan stopped	The supply air fan has stopped.	Make sure that the fan is not running. The fan cabling and operation must be checked, and if necessary the fan must be replaced. Contact the service centre.
Error message: Temperature sensor 1/2/3/4/5	The temperature sensor indicated on the user interface is damaged.	The sensor installation must be checked, and if required the sensor must be replaced. Contact the service centre.
Error message: Bus fault	Problems with the data transfer bus.	Make sure that the Modbus bus is connected correctly, and that the devices connected to it are properly functioning.
The ventilation unit is not working; the control panel is not working.	Power input to the unit is lost or the safety switch catch of the door is not engaged.	Check: <ul style="list-style-type: none"> <li>• Fuse in the fuse box</li> <li>• Fuse in the unit</li> <li>• Press the safety switch all the way down and test if the unit can be turned on. If the unit can be turned on, ensure that the safety switch catch is engaged.</li> </ul>
The ventilation unit is working, but the control panel is not working.	Either the control panel 24 VDC power is lost, there is a problem with data transmission, or the control panel is damaged.	Check the cables from the unit to the control panel. Contact the service centre if necessary.

## 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.

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



### NOTE

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



### WARNING

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



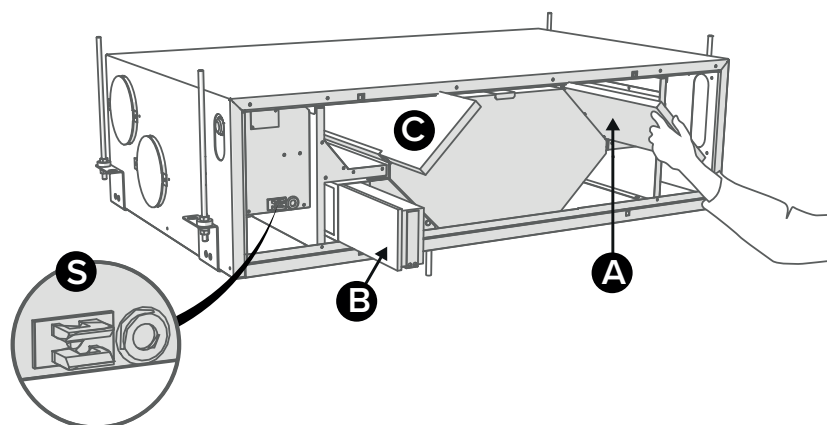
## BEFORE BEGINNING MAINTENANCE WORK

The safety switch (S) automatically turns off the power when the door of the unit is opened.



### WARNING

Always disconnect the power plug before starting the ventilation unit maintenance.



There are two unit models, left- (L) and right-handed (R). In the right handed version, outdoor air blows into the unit from the right side of the centre line as shown in the instructions. In the left handed version, outdoor air blows into the unit from the left side. Also the position of the filters, the bypass flap, and the heating radiator is mirrored in the left-handed model.

## REPLACING THE FILTERS

When the maintenance reminder becomes activated, check the cleanliness of the filters and replace them if required. The ventilation unit has three air filters:

- Class G4 coarse filter (A) filters insects, heavy pollen and other relatively large foreign objects out of the outdoor air.
- Class F7 fine filter (B) filters microscopic pollen and dust particles out of the supply air.
- Class G4 coarse filter (C) filters the extract air and keeps the heat recovery cell clean.

To replace the filters:

1. Disconnect the ventilation unit from the mains electricity supply.
2. Open the door of the unit.
3. Lift the door off.
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, allowing the unit to be turned on.
7. Plug the ventilation unit back into the mains.
8. The filters have now been successfully replaced.



### NOTE

Using original Vallox filters ensures that the ventilation unit remains in top condition, giving the best results. The filter replacement interval depends on the ambient dust concentration. It is recommended that the filters be replaced every spring and autumn, or at the very least once a year.

## CLEANING THE HEAT RECOVERY CELL

Check that the heat recovery cell (D) is clean roughly once a year when the filters are being replaced. Clean by washing as required.

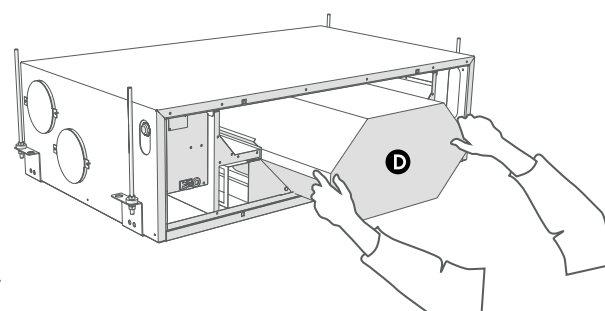
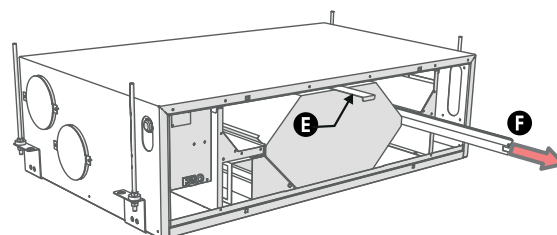


### IMPORTANT

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

To check the heat recovery cell (HR cell):

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.
4. Pull the G4 filters (A, C) and filter supports out of the unit.
5. Remove the sealing strip (E) above the heat recovery cell.
6. Remove the side sealing strip (F).
7. Remove the G7 filter (B).
8. Lift and pull the cell (D) out of the unit.
9. 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.
10. Rinse the cell clean with a water spray. Do not use a high-pressure cleaner.
11. When all the water has drained from between the layers, reassemble the ventilation unit in the reverse order.
12. Close the door. Ensure that the safety switch catch of the door is engaged.
13. Plug the ventilation unit back into the mains.
14. The heat recovery cell has now been checked and cleaned.



### CAUTION

If the unit has an enthalpy cell, it must not be washed. Only aluminium or plastic cells can be washed.

## CLEANING THE FANS

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. Do not remove or move the fan blade balancing weights.



### IMPORTANT

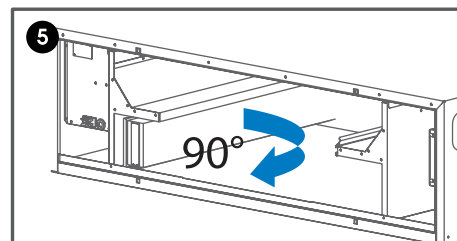
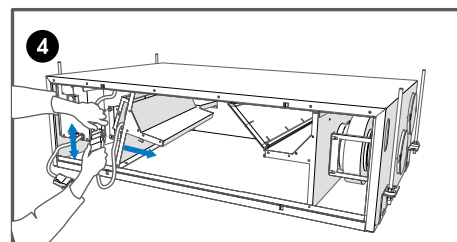
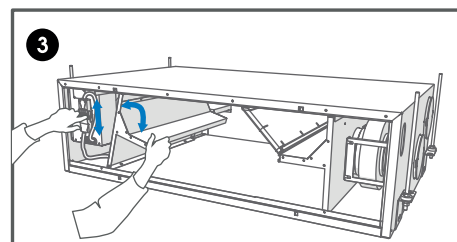
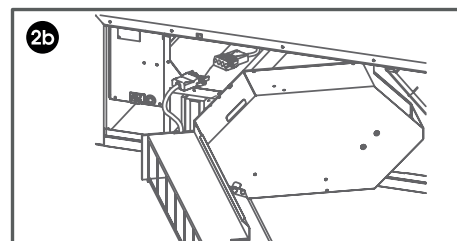
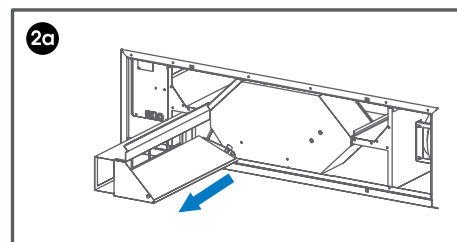
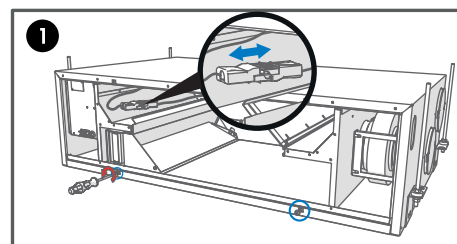
The fans are extremely sensitive to external shocks, and to minimize risk of damage to them it is recommended that the fans be cleaned in place, i.e. without attempting to remove them. Remove the fan beds and the bypass duct carefully in accordance with the below instructions to prevent damage to the unit. The small size of the unit restricts the space available for servicing.

### Cleaning the supply air fan

The steps are mirrored for the left handed unit.

To remove and 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 ventilation unit.
3. Lift the door off.
4. Remove the extract air filter (C), the cell top bracket (E) and the heat recovery cell (D), as described in sections "Filters" and "Heat recovery cell".
5. Remove the mounting screws of the fan bed (2).
6. Pull the bypass duct/filter stand package out of the unit and turn to the right.
7. Remove the cable connector (black) of the fan and move the supply air fan slightly to the right.
8. Remove the post-heating radiator connector. The post heating radiator connector can be removed once the supply air fan has been moved slightly to the right.
9. Tilt the supply air fan to the right and push the connectors out of the way. Turn the fan 90° and tilt it forward to pull it out of the unit.
10. The fan has now been removed for cleaning.
11. To reassemble the ventilation unit, follow the above steps in reverse order.
12. Close the door. Ensure that the safety switch catch of the door is engaged.
13. Plug the ventilation unit back into the mains.  
The fan has now been checked and cleaned.



### NOTE

The steps are mirrored for the left handed unit.

## Cleaning the extract air fan

To remove and clean the extract air fan:

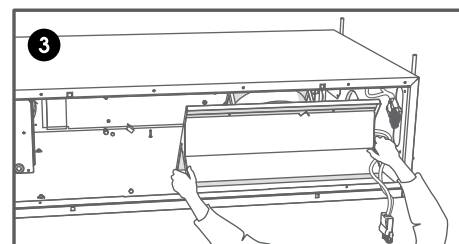
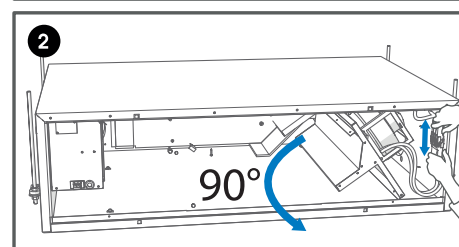
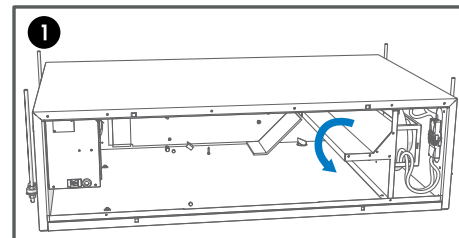
1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the ventilation unit.
3. Lift the door off.
4. Remove the extract air filter (C), the cell top bracket (E) and the heat recovery cell (D), as described in sections “Filters” and “Heat recovery cell”.
5. Remove the fan bed mounting screw (see removing the supply air fan, Figure 1).
6. Remove the connector package from the wall.
7. Separate the connectors from each other.
8. Tilt the fan to the left and turn 90°.
9. Tilt the fan forward to pull it out of the unit.
10. The fan has now been removed for cleaning.
11. To reassemble the ventilation unit, follow the above steps in reverse order.
12. Close the door. Ensure that the safety switch catch of the door is engaged.
13. Plug the ventilation unit back into the mains.

The fan has now been checked and cleaned.



### NOTE

The steps are mirrored for the left handed unit.



### NOTE

Install the fan beds in a reverse order.

## BEFORE BEGINNING MAINTENANCE WORK

The safety switch (S) automatically turns off the power when the door of the unit is opened.



### WARNING

Always disconnect the power plug before starting the ventilation unit maintenance.

There are two unit models, left- (L) and right-handed (R). The figure shows the right-handed model. In the right handed version, outdoor air blows into the unit from the right side of the centre line as shown in the instructions. In the left handed version, outdoor air blows into the unit from the left side. Also the position of the filters, the bypass flap, and the heating radiator is mirrored in the left-handed model.

## REPLACING THE FILTERS

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

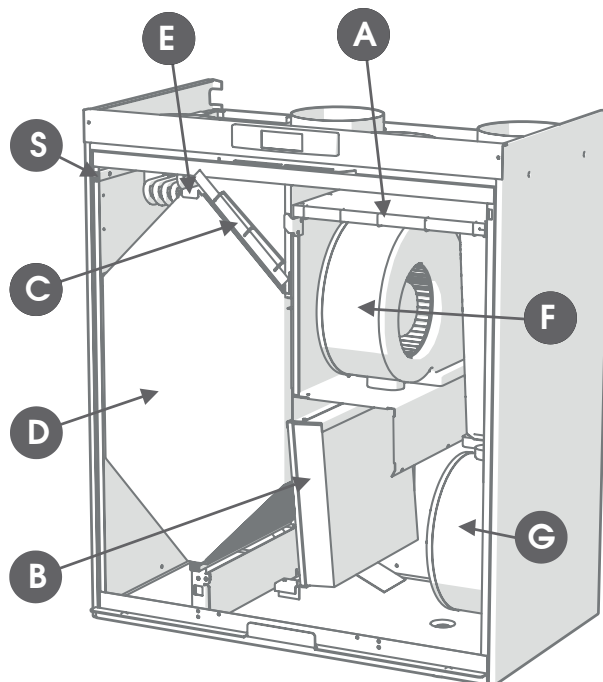
The Vallox ventilation unit has three air filters:

- Class G4 coarse filter filters insects, heavy pollen and other relatively large foreign objects out of the outdoor air.
- Class F7 fine filter filters microscopic pollen and dust particles out of the supply air.
- Class G4 coarse filter filters the extract air and keeps the heat recovery cell clean.

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

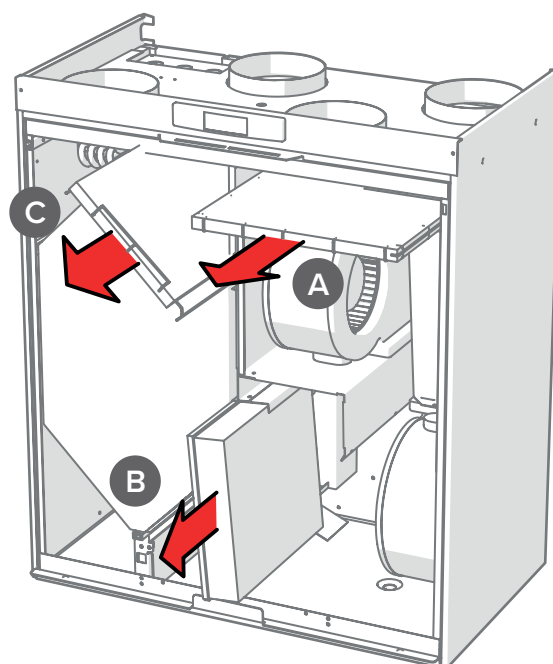
To replace the filters:

1. Disconnect the ventilation unit from the mains electricity supply.
2. Open the upper door of the unit.
3. Remove the old filters (A, B, C) and discard them.
4. Install the new filters (A, B, C).
5. Close the door of the unit. Ensure that the safety switch catch of the door is engaged, allowing the unit to be turned on.
6. Plug the ventilation unit back into the mains.
7. The filters have now been successfully replaced.



### TIP

Using original Vallox filters ensures that the ventilation unit remains in top condition, giving the best results.



## CLEANING THE HEAT RECOVERY CELL

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

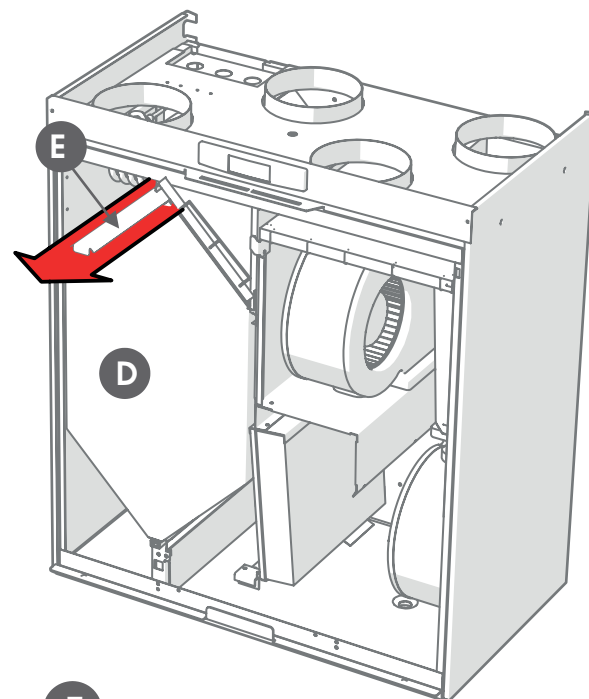


### CAUTION

If the unit has an enthalpy cell, it must not be washed. Only aluminium or plastic cells can be washed.

To check and clean the heat recovery cell:

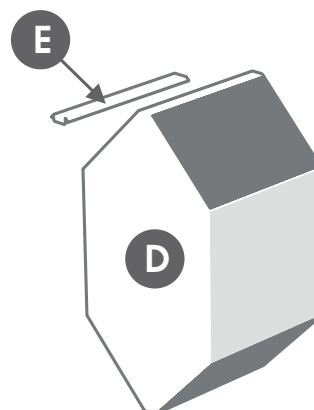
1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the ventilation unit and lift the door off.



### CAUTION

The door is heavy.

3. Remove the filters (A, B, C).
4. Remove the sealing strip (E) above the cell in the direction of the arrow.
5. 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.

6. 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.
7. Rinse the cell clean with a water spray. Do not use a high-pressure cleaner.
8. When all the water has drained from between the layers, reassemble the ventilation unit in the reverse order.
9. Close the door and ensure that the safety switch catch of the door is engaged.
10. Plug the ventilation unit back into the mains. The heat recovery cell has now been checked and cleaned.

## CLEANING THE FANS

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

### Removing and cleaning the supply air fan (A)

To clean the supply air fan:

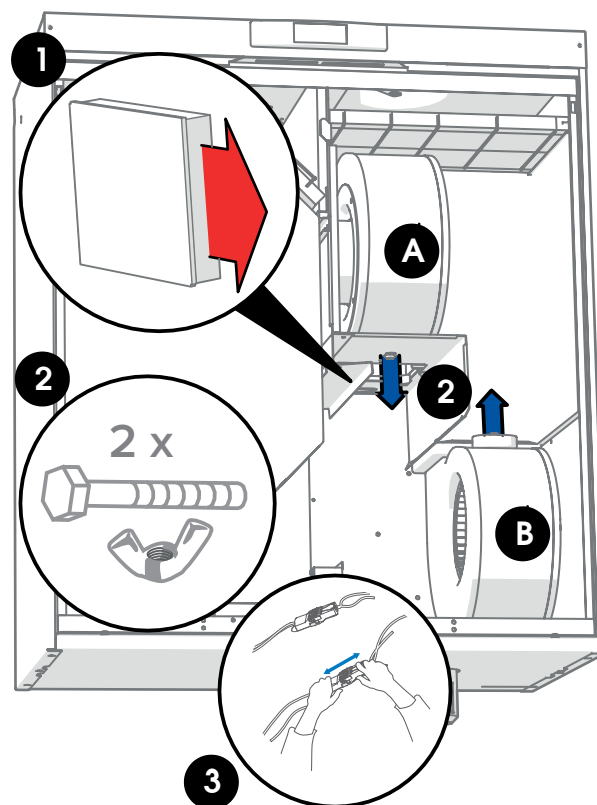
1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the Vallox ventilation unit.
3. Lift the door off.



#### CAUTION

The door is heavy.

4. Remove the fine filter (1). To do so, pull the fine filter out of the unit.
5. The fan has been fastened on the mounting plate with wing bolts (2). Remove the wing bolts and lift the fan out of the unit.
6. Disconnect the quick connector (3) of the fan cable.
7. Clean the fan. The fan blades can be cleaned with compressed air (wear protective goggles) or by brushing them gently. Do not remove or move the fan blade balancing weights.
8. To reassemble the ventilation unit, follow the above steps in reverse order.
9. Close the door. Ensure that the safety switch catch of the door is engaged.
10. Plug the ventilation unit back into the mains.



### Removing and cleaning the extract air fan (B)

To clean the extract air fan:

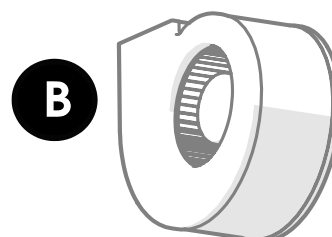
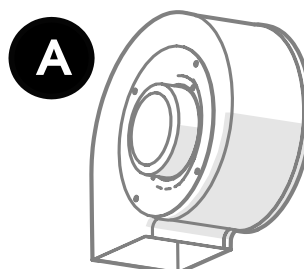
1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the ventilation unit.
3. Lift the door off.



#### CAUTION

The door is heavy.

4. The fan has been fastened on the mounting plate with wing bolts. Remove the wing bolts and lift the fan out of the unit.
5. Disconnect the quick connector of the fan cable.
6. Clean the fan. The fan blades can be cleaned with compressed air (wear protective goggles) or by brushing them gently. Do not remove or move the fan blade balancing weights.
7. To reassemble the ventilation unit, follow the above steps in reverse order.
8. Close the door. Ensure that the safety switch catch of the door is engaged.
9. Plug the ventilation unit back into the mains.



## BEFORE BEGINNING MAINTENANCE WORK

The safety switch automatically turns off the power when the door of the unit is opened.



### WARNING

Always disconnect the power plug before starting the ventilation unit maintenance.

There are two unit models, left- (L) and right-handed (R).

## REPLACING THE FILTERS

See section Vallox 90 MV, Replacing the filters.

## CLEANING THE HEAT RECOVERY CELL

See section Vallox 90 MV, Cleaning the heat recovery cell.

## CLEANING THE FANS

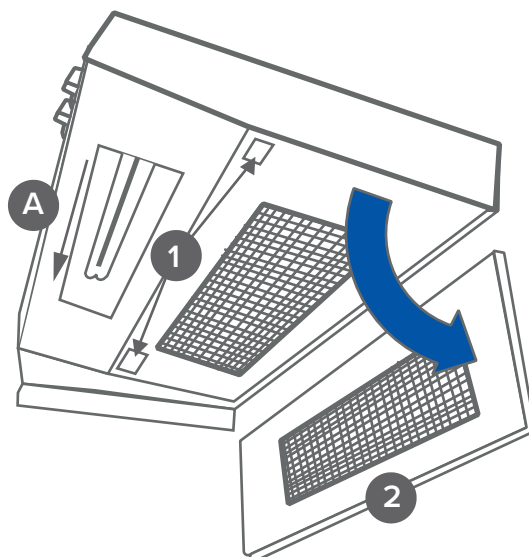
See section Vallox 90 MV, Cleaning the fans.

## CLEANING THE GREASE FILTER OF THE COOKER HOOD.

Clean the grease filter of the cooker hood 1-2 times a month.

To clean the grease filter:

1. Open the quick connectors of the bottom plate of the cooker hood by pressing them.
2. Let the bottom plate move to the down position.
3. Remove the grease filter from its mountings.
4. Clean the grease filter either by washing it with hot water and hand-washing detergent or in a dishwasher.



## REPLACING THE COOKER HOOD LAMP

To replace the cooker hood lamp (type PL 11, 11 W), remove the protective glass of the lamp (A) by pushing it to the left. Once you have replaced the lamp, put the protective glass back in its place.



## BEFORE BEGINNING MAINTENANCE WORK

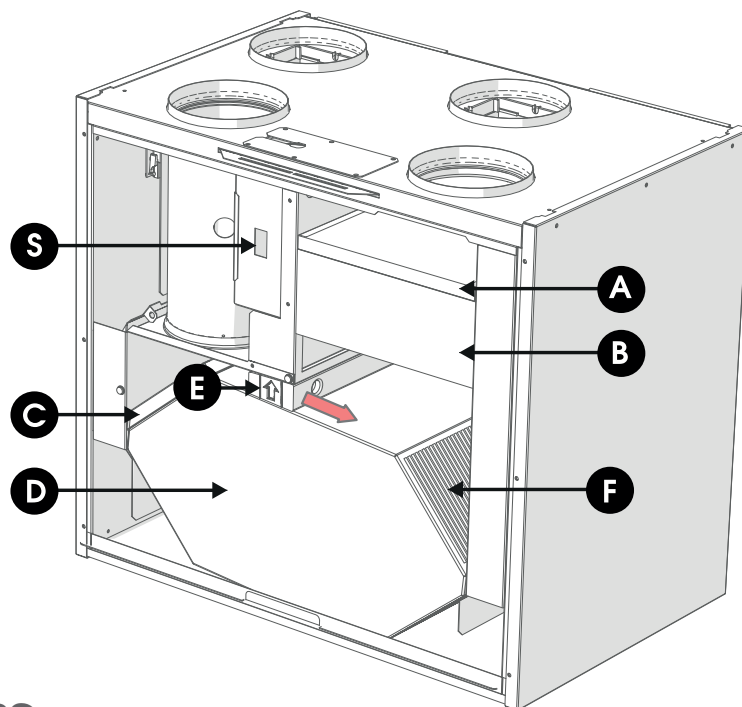
The safety switch (S) automatically turns off the power when the door of the unit is opened.



### WARNING

Always disconnect the power plug before starting the ventilation unit maintenance.

There are two unit models, left- (L) and right-handed (R). The figure shows the right-handed model.



## CLEANING THE FILTERS

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:

- Class G4 coarse filter filters insects, heavy pollen and other relatively large foreign objects out of the outdoor air.
- Class F7 fine filter filters microscopic pollen and dust particles out of the supply air.
- Class G4 coarse filter filters the extract air and keeps the heat recovery cell clean.

The filter replacement interval depends on the ambient dust 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.

To replace the filters:

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 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, allowing the unit to be turned on.
7. Plug the ventilation unit back into the mains.

The filters have now been successfully replaced.

## CLEANING THE HEAT RECOVERY CELL

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 Vallox 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.
  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. When reassembling Vallox 096 MV, check that the sealing strip below the cell is pressed against the bottom of the unit.
  11. Close the door. Ensure that the safety switch catch of the door is engaged.
  12. Plug the ventilation unit back into the mains.
- The heat recovery cell has now been checked and cleaned.



#### CAUTION

If the unit has an enthalpy cell, it must not be washed. Only aluminium or plastic cells can be washed.



#### IMPORTANT

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

## CLEANING THE FANS

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. Do not remove or move the fan blade balancing weights.

### 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

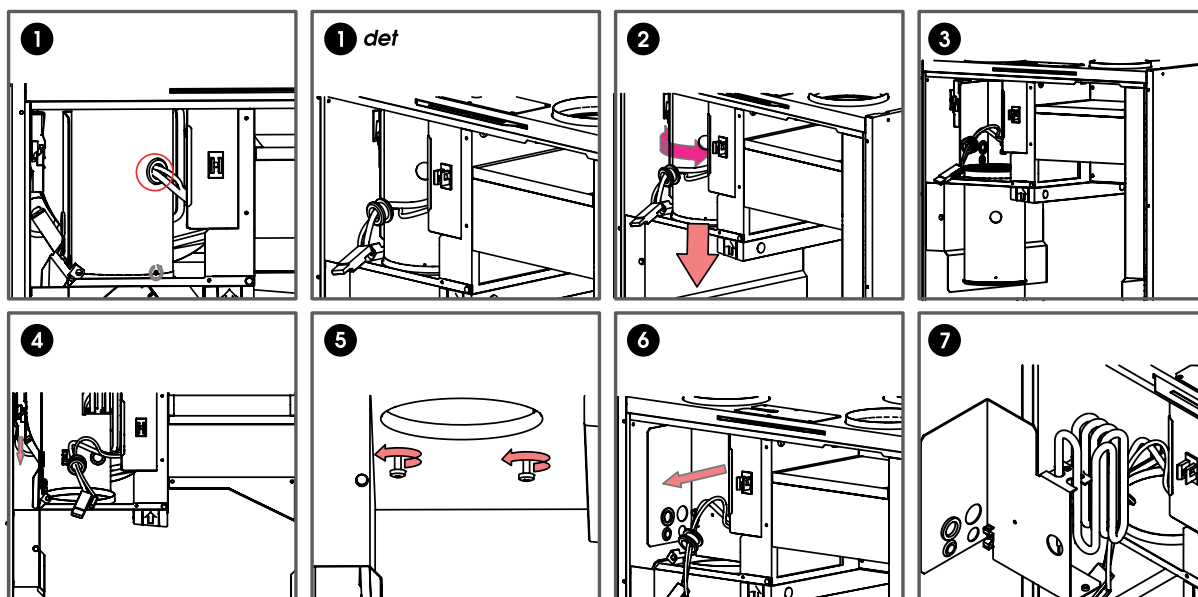
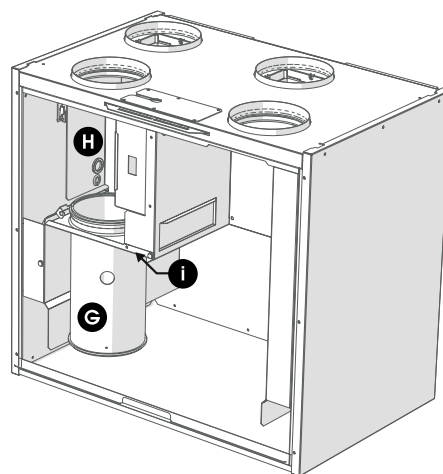
The door is heavy.

4. Remove the extract air filter (C), the cell top bracket (E) and the heat recovery cell (D). See chapters “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 (figure 2).
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 (Vallox 110 MV and Vallox 145 MV) or screws (Vallox 096 MV) 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.



#### IMPORTANT

The fans are extremely sensitive to external shocks, and to minimize risk of damage to them it is recommended that the fans be cleaned in place, i.e. without attempting to remove them.





# CAUTION

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

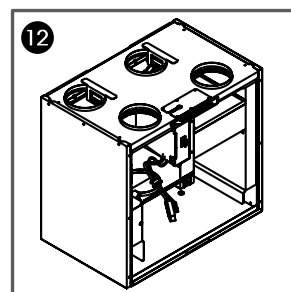
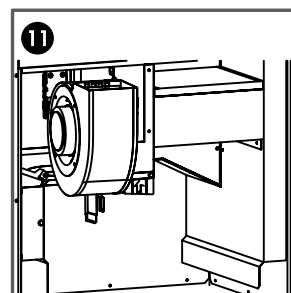
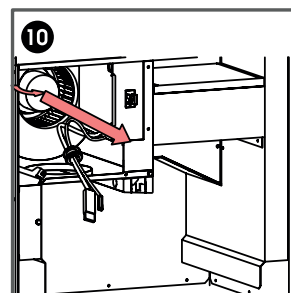
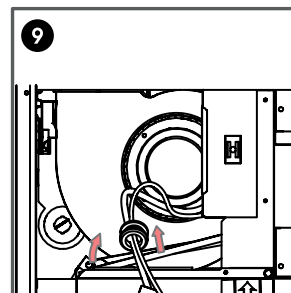
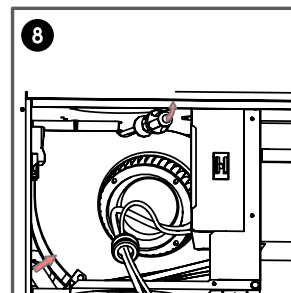
9. The fan can now be cleaned in place. It is recommended that the fan be cleaned in place, i.e. without attempting to remove it.
10. To remove the fan for cleaning:
  - a. If necessary, remove the arm pins. Use pliers to press the pins straight, so that they are easier to install back later.
  - b. Push the fan gently upward (figure 9).
  - c. Pry the plastic lock to the right of the fan 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 fan wire quick connector (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 bypass plate or lean against the radiator frame.

12. Close the door. Ensure that the safety switch catch of the door is engaged.
  13. Plug the ventilation unit back into the mains.
- The fan has now been checked and cleaned.



## Cleaning the extract air fan

To clean the extract air fan, proceed as follows:

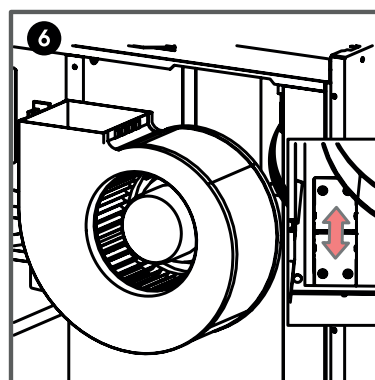
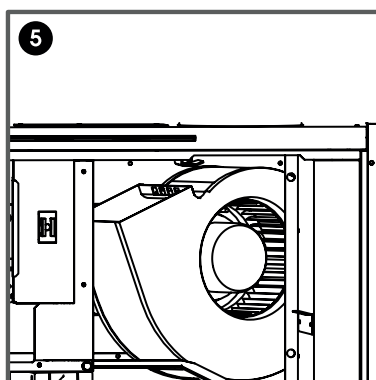
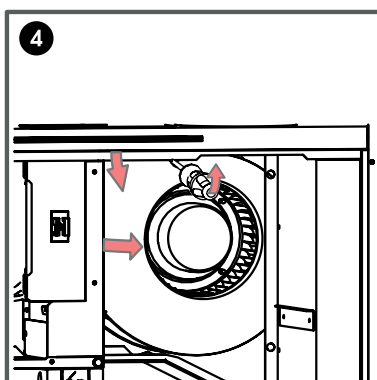
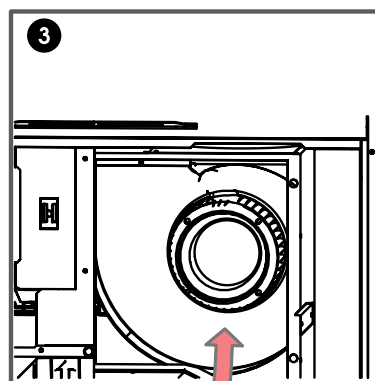
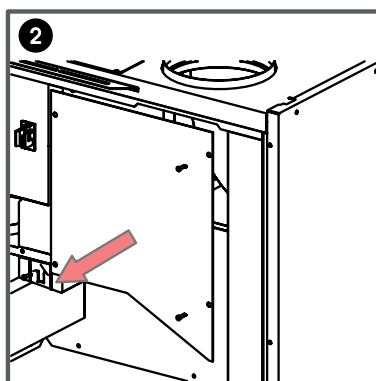
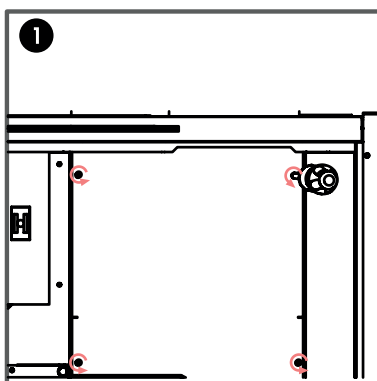
1. Disconnect the ventilation unit from the mains electricity supply.
2. Lift the latch to open the door of the Vallox ventilation unit.
3. Lift the door off.



### CAUTION

The door is heavy.

4. Remove the filters (C), the cell top support (E) and the heat recovery cell (D). See chapters “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). The fan can now be cleaned in place.
6. To remove the fan for cleaning:
  - a. Push the fan gently upward (figure 3).
  - b. Pry the plastic lock to the right of the fan 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 fan wire quick connector (figure 6).
7. Clean the fan.
8. To reassemble the ventilation unit, follow the above steps in reverse order.
9. Close the door and plug the unit back into the mains. The extract air fan has now been checked and cleaned.



## BEFORE BEGINNING MAINTENANCE WORK

The safety switch automatically turns off the power when the upper door of the unit is opened.

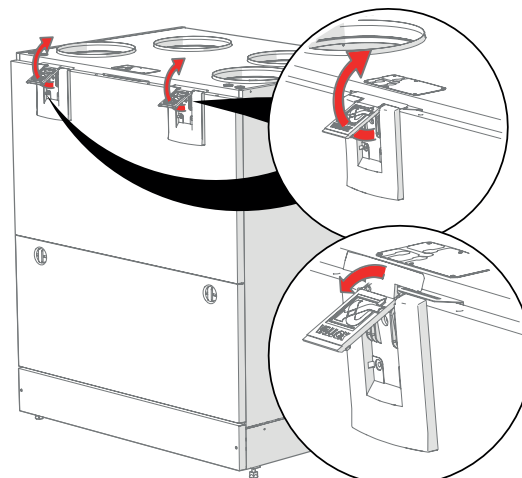


### WARNING

Always disconnect the power plug before starting the ventilation unit maintenance.

### Opening and closing the doors

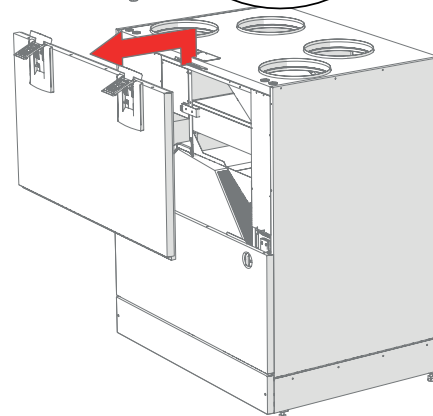
1. Lift the latches to open the upper door of the ventilation unit.
2. Lift the upper door off.



### CAUTION

The door is heavy.

3. Open the lower door of the ventilation unit by undoing the finger screws.
4. Lift the lower door off.
5. Close the doors in reverse order.



There are two unit models, left- (L) and right-handed (R). The figure shows the right-handed model.

## CLEANING THE FILTERS

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:

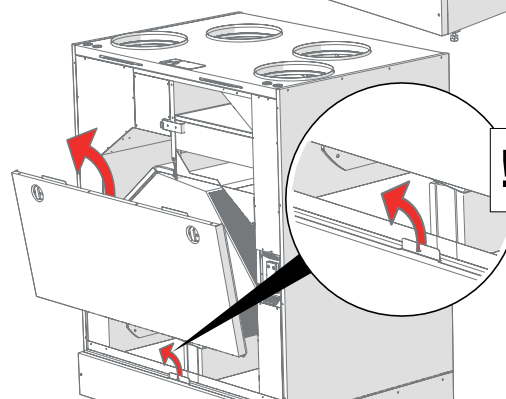
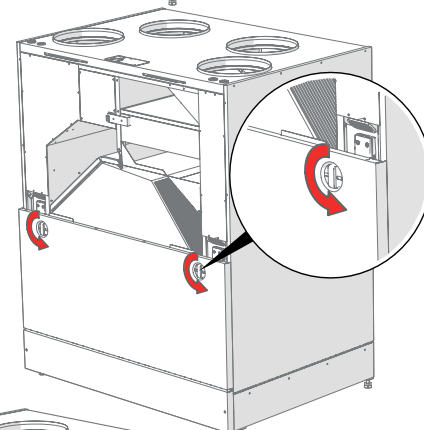
- Class G4 coarse filter filters insects, heavy pollen and other relatively large foreign objects out of the outdoor air.
- Class F7 fine filter filters microscopic pollen and dust particles out of the supply air.
- Class G4 coarse filter filters the extract air and keeps the heat recovery cell clean.

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



### NOTE

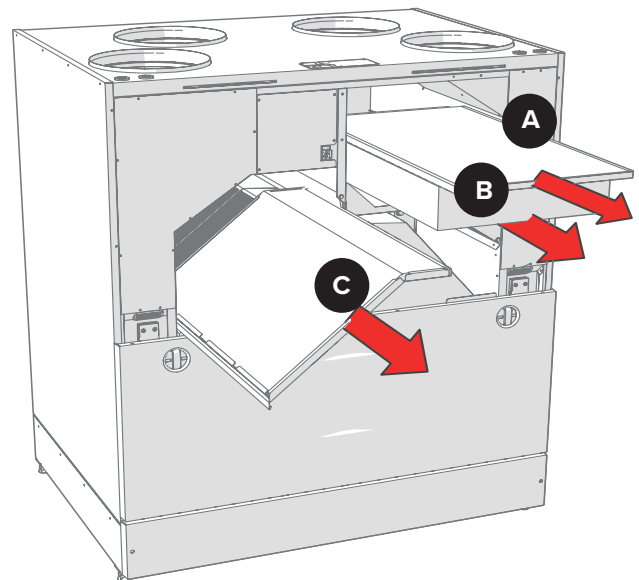
Using original Vallox filters ensures that the ventilation unit remains in top condition, giving the best results.



To replace the filters:

1. Disconnect the ventilation unit from the mains electricity supply.
2. Open the upper door of the unit.
3. Remove the old filters (A, B, C) and discard them.
4. Install the new filters (A, B, C).
5. Close the door of the unit. Ensure that the safety switch catch of the door is engaged, allowing the unit to be turned on.
6. Plug the ventilation unit back into the mains.

The filters have now been successfully replaced.



## CLEANING THE HEAT RECOVERY CELLS

Check that the heat recovery cells are clean roughly once a year when the filters are being changed. Clean by washing as required.

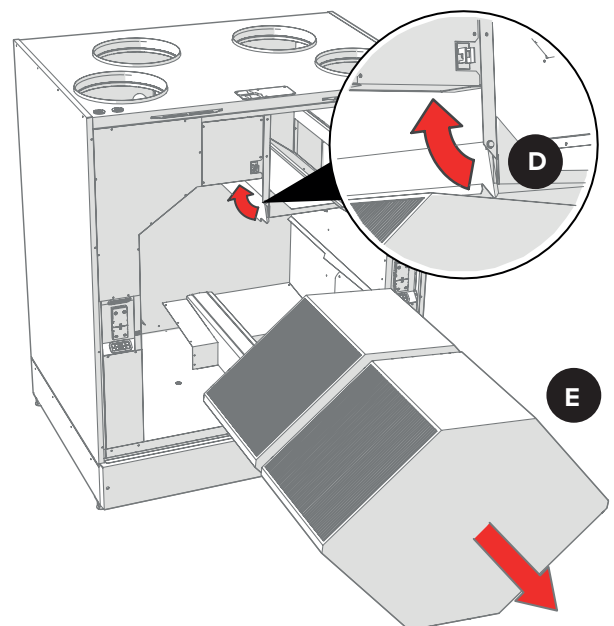


### CAUTION

If the unit has an enthalpy cell, it must not be washed. Only aluminium or plastic cells can be washed.

To check and clean the heat recovery cell:

1. Disconnect the ventilation unit from the mains electricity supply.
  2. Open the doors of the unit.
  3. Remove the filters (A, B, C).
  4. Remove the support grid of the filters.
  5. Disengage the upper support strip (D) of the cell.
  6. Lift and pull the cell (E) out of the unit.
  7. If the cells are dirty, clean them by immersing it in warm water, to which a small amount of a mild detergent has been added.
  8. Rinse the cell clean with 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 doors. Ensure that the safety switch catch of the door is engaged.
  11. Plug the ventilation unit back into the mains.
- The heat recovery cells have now been checked and cleaned.



### IMPORTANT

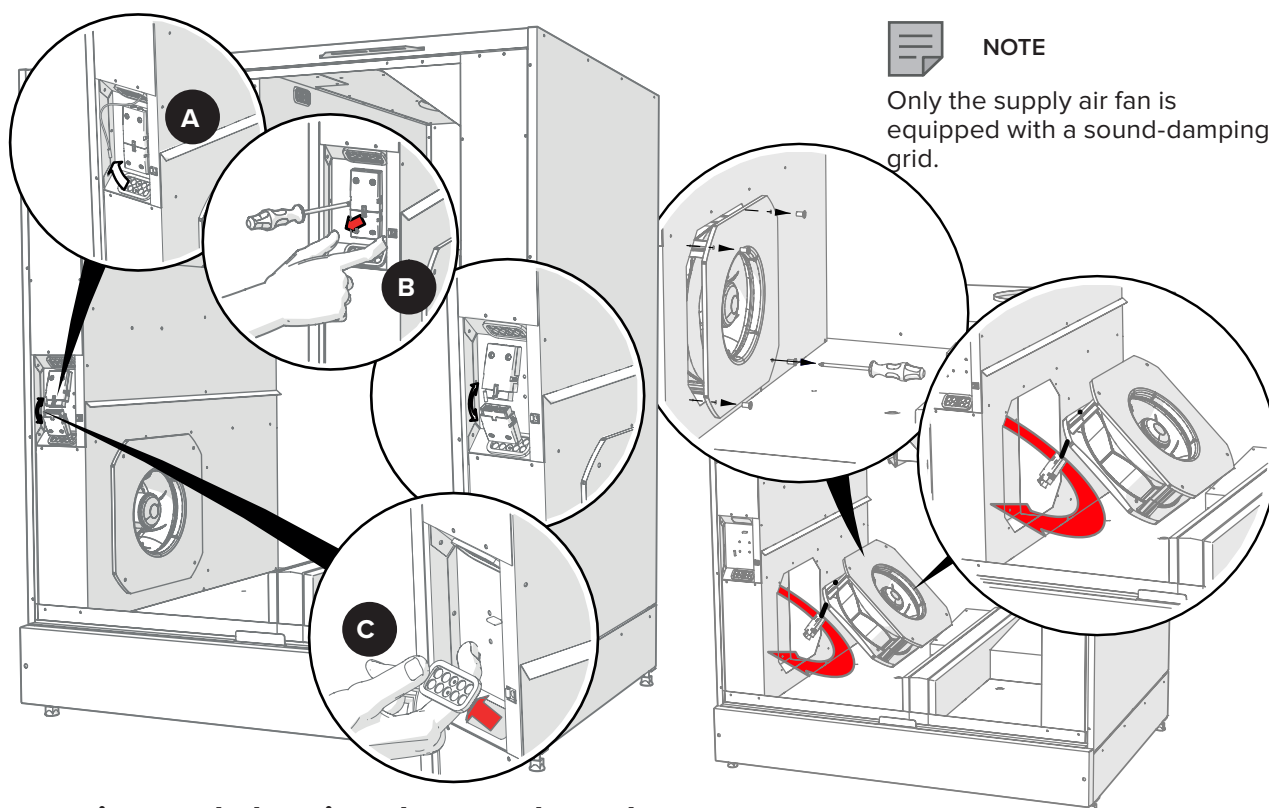
Handle the cells carefully! For example, do not lift the cells by the layers. The cell layers are very thin and easily damaged.



## CLEANING THE FANS

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.



### NOTE

Only the supply air fan is equipped with a sound-damping grid.

## Removing and cleaning the supply and extract air fans

To clean the supply air fan:

1. Disconnect the ventilation unit from the mains electricity supply.
  2. Open the doors of the unit.
  3. Pull the temperature sensor out of the rubber feed through (A).
  4. Disconnect the quick connector (B) of the fan cables.
  5. Remove the rubber feed through (C).
  6. Undo the fan's mounting screws.
  7. Pull the fan out of its housing.
  8. Clean the fan.
  9. To reassemble the ventilation unit, follow the above steps in reverse order.
  10. Close the doors. Ensure that the safety switch catch of the door is engaged.
  11. Plug the ventilation unit back into the mains.
- The fan has now been checked and cleaned.



### IMPORTANT

The fans are extremely sensitive to external shocks, and to minimize risk of damage to them It is recommended that the fans be cleaned in place, i.e. without attempting to remove them.



### NOTE

Remember to replace the temperature sensor by feeding it through the rubber feed.

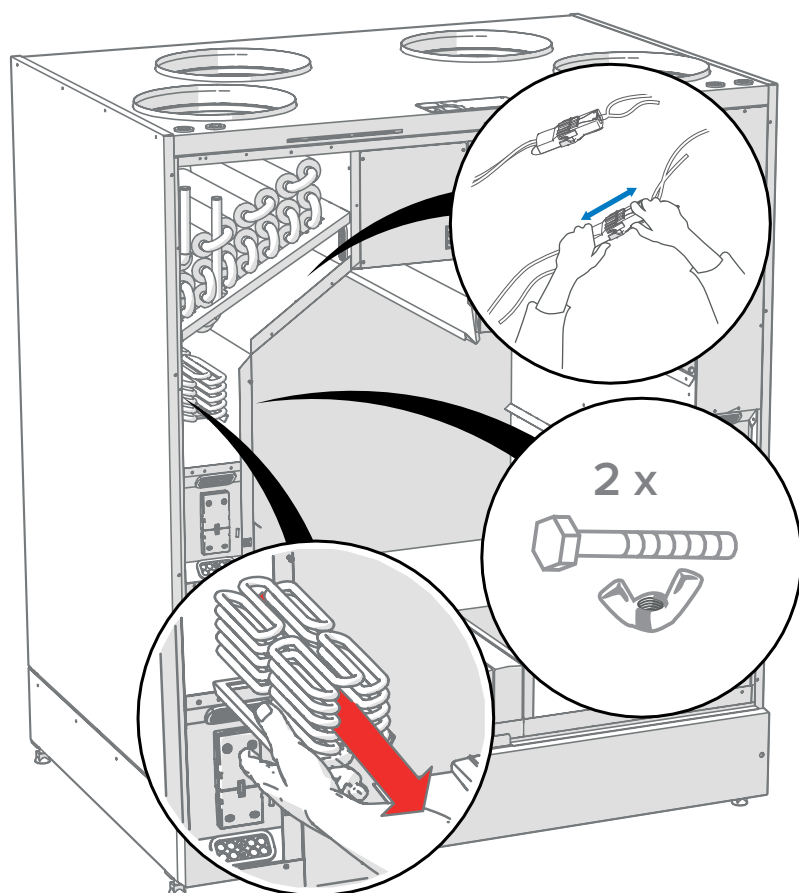
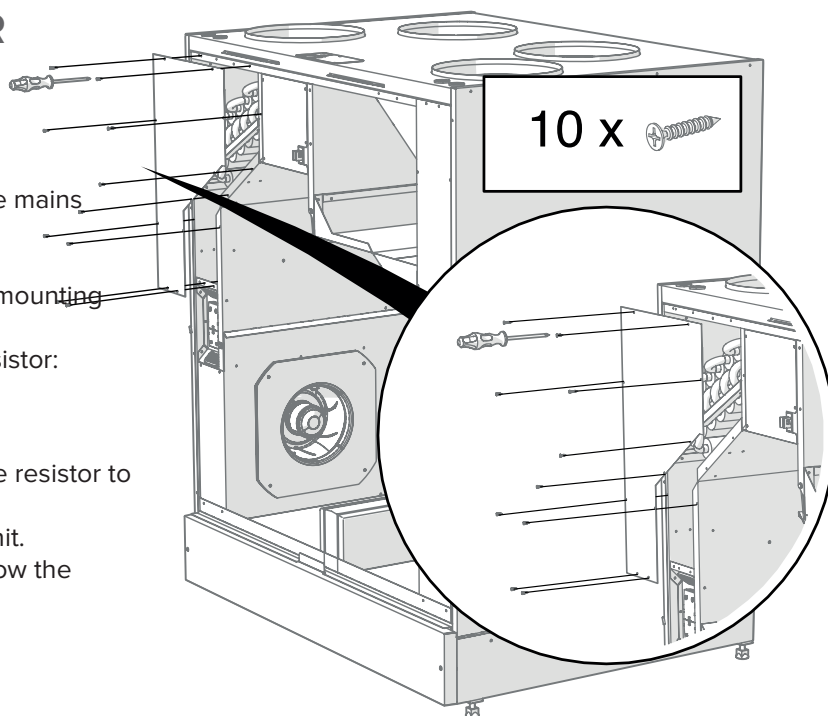
Clean the extract air fan in the same way. The extract air fan is located symmetrically on the opposite side of the unit.



## REMOVING THE RESISTOR

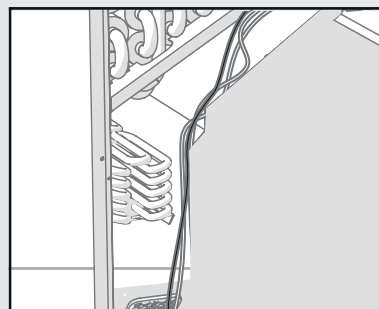
To remove the resistor:

1. Disconnect the ventilation unit from the mains electricity supply.
2. Open the doors of the unit.
3. Open the resistor box by undoing the mounting screws (10 PZ2 screws).
4. Remove the quick connector of the resistor:
  - a. Press down the locking device.
  - b. Pull off the connector.
5. Undo the two wing nuts connecting the resistor to the ventilation unit.
6. Lift the resistor out of the ventilation unit.
7. To reassemble the ventilation unit, follow the above steps in reverse order.



### WARNING

Connect the cables so that they do not touch the resistor.



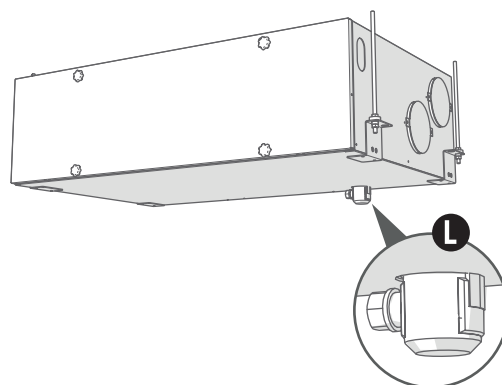
### CAUTION

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

## GENERAL INSTALLATION INSTRUCTIONS

## MOUNTING SITE

The Vallox ventilation unit must be installed in a location where the temperature remains above +10°C. When the unit is installed without a protective enclosure, the location must be chosen so that its noise does not cause any disturbance (e.g. storage premises, technical spaces, and false ceilings).



## CONDENSING WATER

The unit is delivered with a water seal that has an air lock and a more compact elbow. When the elbow is used, an air lock must be installed somewhere else between the extraction pipes (the parts needed are included in the accessory bag). The air lock ensures the removal of condensing water and muffles any noise.

**WARNING**

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

## MOUNTING SITE

Vallox TSK Multi 50 MV and Vallox TSK Multi 80 MV must be mounted on the ceiling. Use the mounting hooks (4 pcs) delivered with the unit to mount the ventilation unit on the ceiling. Observe the weight of the unit (45 kg / 58.5 kg) when mounting.



### IMPORTANT

The unit must be installed straight so that the condensing water that collects in the bottom pool drains through the condensing water outlet.



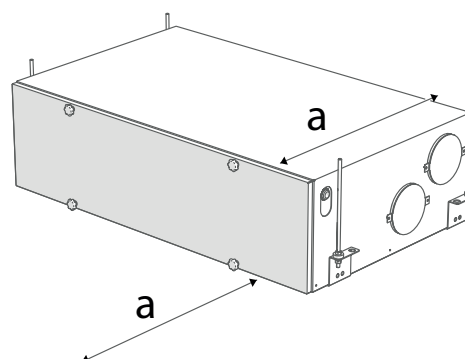
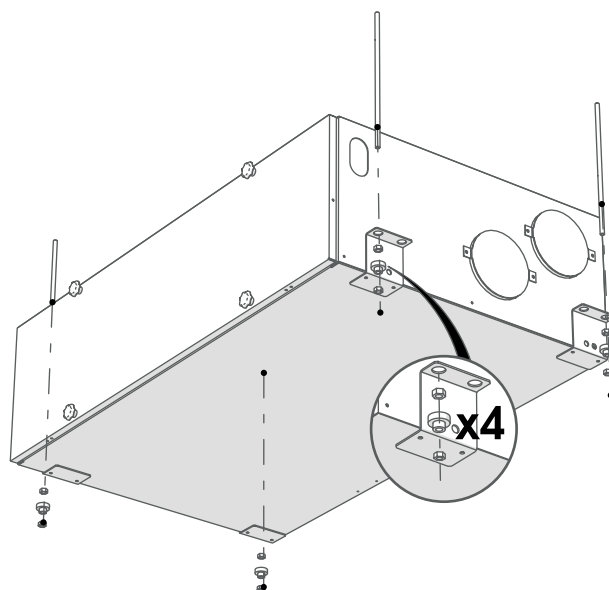
### NOTE

Reserve a space equal to the depth of the unit in front of the unit for servicing purposes.



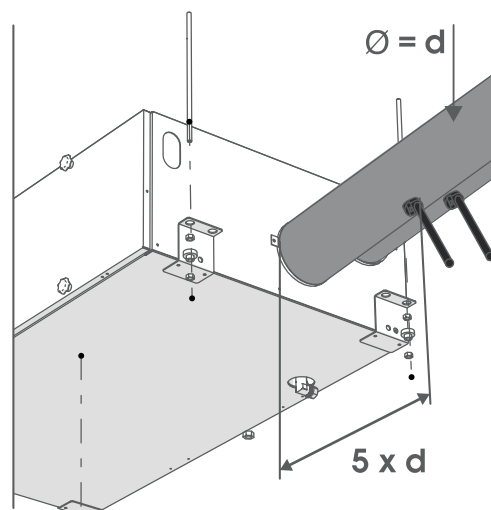
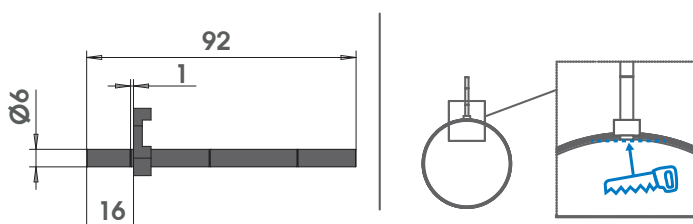
### NOTE

The whole length of the outdoor air duct to the unit and exhaust air duct from the unit must be insulated using closed cell insulation.



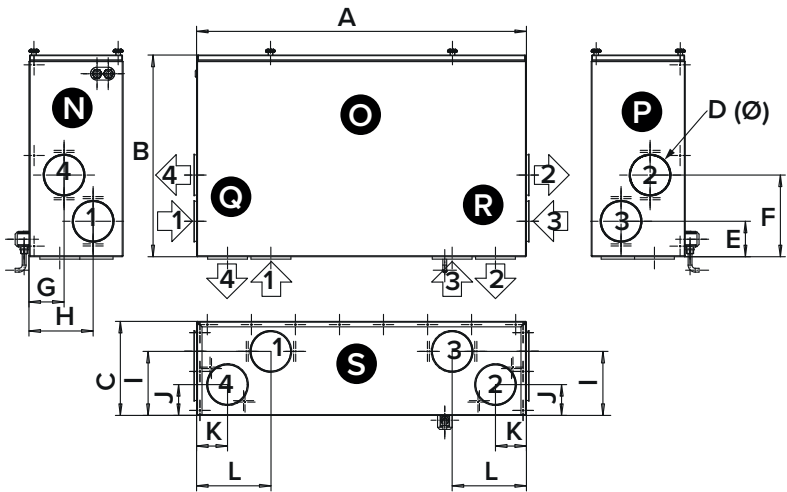
## MEASURING TUBES

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



# DIMENSIONS AND DUCT OUTLETS

UNIT DIMENSIONS		
Dimension	Vallox TSK Multi 50 MV	Vallox TSK Multi 80 MV
A	900	1026
B	547	626
C	236	293
D	100 (female)	125 (female)
E	87	110
F	197	254
G	86	110
H	161	200
I	161	200
J	86	96
K	96	96
L	206	231
M	498	624
N	View from right	
O	View from above	
P	View from left	
Q	Right side	
R	Left side	
S	Seen from behind	



R model:

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

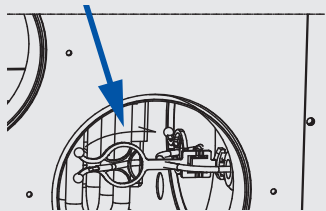
L model:

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

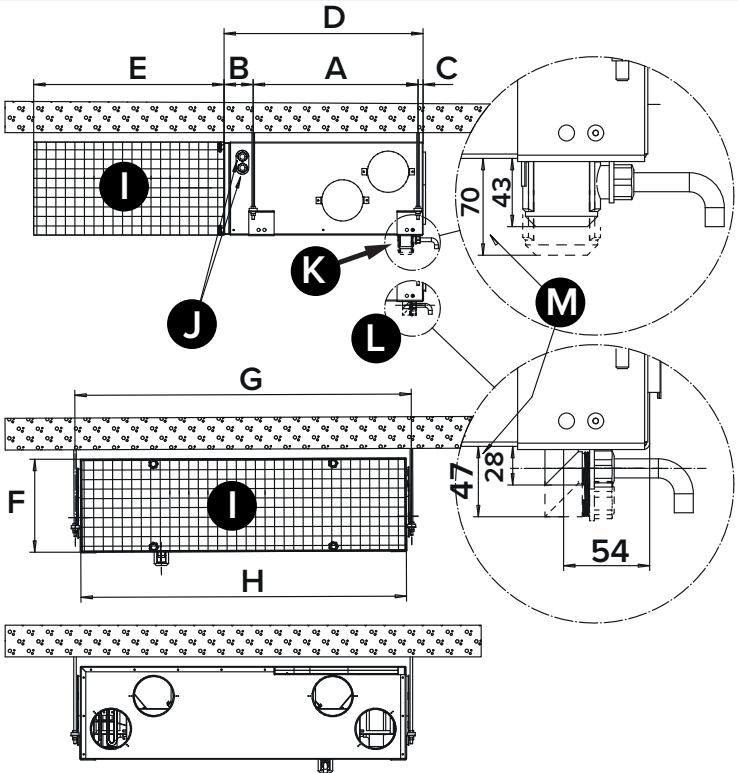


## NOTE

Fold the temperature sensor holder if the supply air duct at the rear of the unit is used. Ensure that the sensor cable is not in contact with the heater.



UNIT DIMENSIONS		
Dimension	Vallox TSK Multi 50 MV	Vallox TSK Multi 80 MV
A	431	519
B	91	91
C	16	16
D	548	626
E	530	600
F	236	293
G	935	1060
H	900	1026
I	Service space	
J	Power plug cord	
K	Water seal	
L	Alternative water seal	
M	Space required for installation	



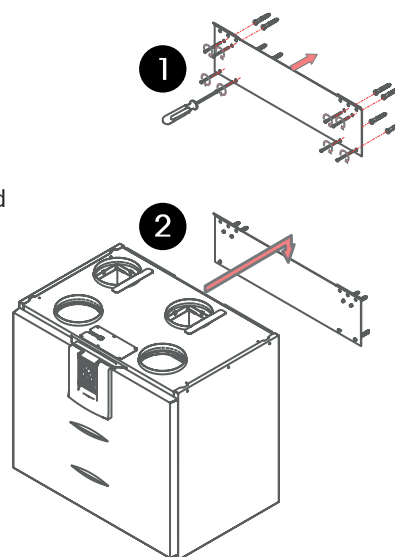
## MOUNTING ON THE WALL



### NOTE

- Avoid mounting the unit on a hollow, echoing partition wall or on a bedroom wall, or prevent the conduction of sound.
- The minimum distance between the top of the unit and the finished ceiling surface is 30 mm. Note that during mounting the unit rises 10 mm higher than the final height.

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



## MOUNTING ON THE CEILING

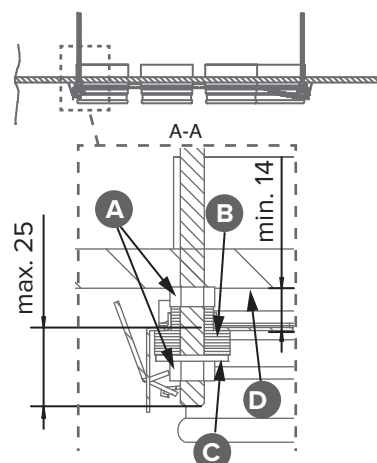
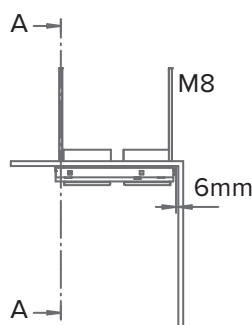
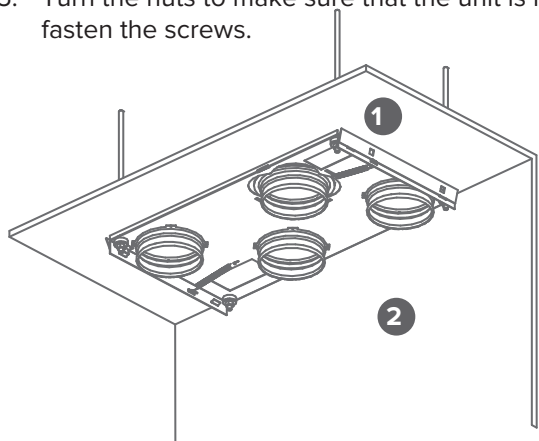
Model Vallox 90 MV can be equipped with an optional ceiling mount plate. To attach the ceiling mounting plate:

- To the ceiling with M8 thread bars so that they stand the weight of the unit.
- Horizontally, because the levelness of the ceiling mounting plate determines the levelness of the unit.
- There is a 6 mm space between the rear edge of the ceiling mounting plate and the wall.
- The minimum distance between the bottom surface of the ceiling mounting plate and the false ceiling is 14 mm. When this minimum distance is used, the distance between the top of the unit mounted on the ceiling mounting plate and the ceiling is around 2 mm.

Insulate the outdoor air and exhaust air duct against condensation also between the unit and the ceiling mounting plate.

### Mounting the ceiling mounting plate

1. Attach the M8 thread bars to the ceiling and turn the nuts (A) to the bars.
2. Shorten the lower ends of the thread bars so that they will be at no more than 25mm from the lower surface of the ceiling mounting plate. Thread bars can be shortened only before the ceiling mounting plate is installed.
3. Lift the ceiling mounting plate in place.
4. Push a rubber damper (B) and a washer (C) onto each thread bar, and ensure that they touch the bottom of the cups of the plate.
5. Turn the nuts to make sure that the unit is horizontally level. Lastly, fasten the screws.



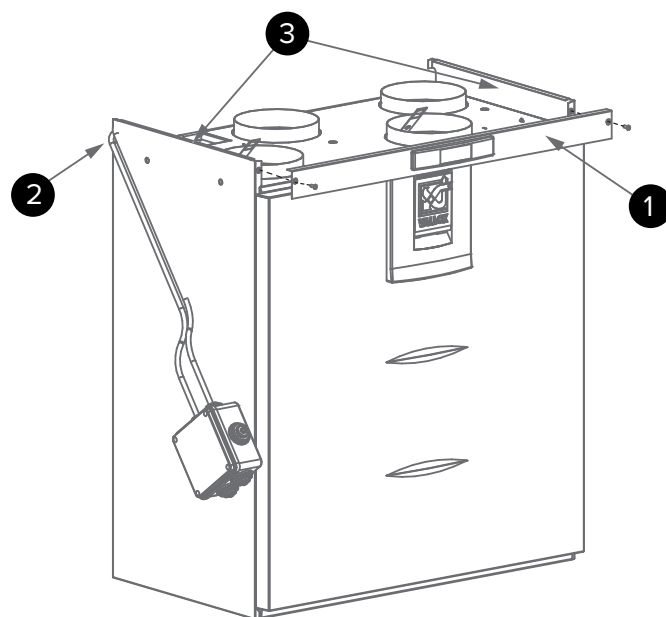
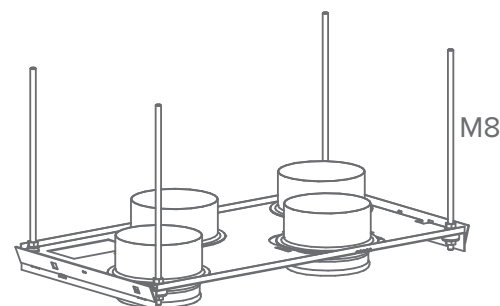
## Mounting the ventilation unit to the ceiling mounting plate



### CAUTION

The ventilation unit is very heavy. Do not perform this procedure alone.

1. Remove the front panel of the top part of the unit (1) (leave it hanging from the air flow measuring tubes).
2. Place the connection box cables into the slot in the top part of the side panel (2) and pull the connection box to the side of the unit so that the cables remain in the slot.
3. Ensure that the condensing water insulation is in place in the duct outlets of the extract air duct and of the duct that comes to the unit from outside.
4. Lift the unit in its place on the ceiling mounting plate until both locking wings (3) lock on the outer edge of the side plate of the unit.
5. Visually check the tightness of the duct outlets and the unobstructed passage of measuring tubes and electric cables.
6. Put the front panel of the top part back in place.



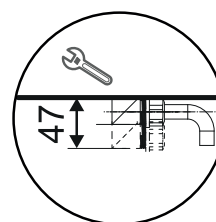
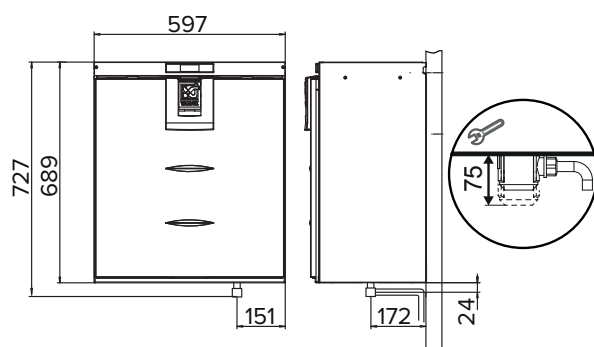
## Attic floor penetration plate

The attic floor penetration plate is optional. When an attic floor penetration plate is used, the tightness of the vapour barrier has to be ensured.

## MEASURING TUBES

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

## DIMENSIONING OF AND SPACE REQUIRED FOR INSTALLATION OF THE VALLOX SILENT KLIK WATER SEAL



### TIP

You can detach the unit from the ceiling mounting plate by pulling the spring-loaded moulding to the direction shown by the arrow (more detailed information provided with the ceiling mounting plate).

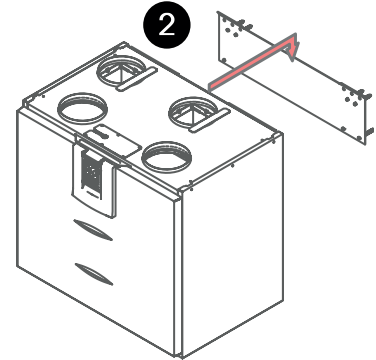
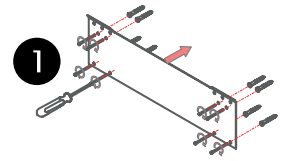
## MOUNTING ON THE WALL



### NOTE

- Avoid mounting the unit on a hollow, echoing partition wall or on a bedroom wall, or prevent the conduction of sound.
- The minimum distance between the top of the unit and the finished ceiling surface is 30 mm. Note that during mounting the unit rises 10 mm higher than the final height.

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



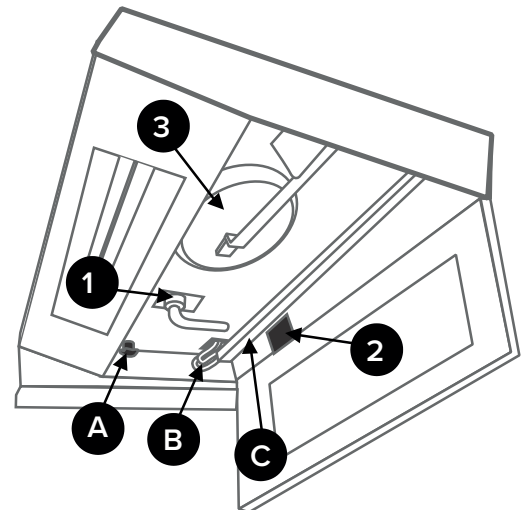
## INSTALLING THE COOKER HOOD

The cooker hood is installed on the bottom of the ventilation unit with finger nuts (A), which are included in the accessory bag.

1. Open the bottom plate of the cooker hood, on which the grease filter is mounted.
2. Lift the cooker hood against the bottom of the ventilation unit. Feed the connection cord (B) at the same time inside the cooker hood.
3. Fasten the cooker hood in place with finger nuts.
4. Pull the connection cord in place. Use line protection (C) where required.

Observe in the figure:

1. Condensing water outlet
2. Exit hole for the condensing water outlet
3. Damper



## MEASURING TUBES

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

## WATER SEAL



### NOTE

The Vallox Silent Klick water seal package is delivered with the unit. Installation instructions for the water seal are enclosed with the packaging, and can also be found online at [www.vallox.com](http://www.vallox.com). When the alternative water seal 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.

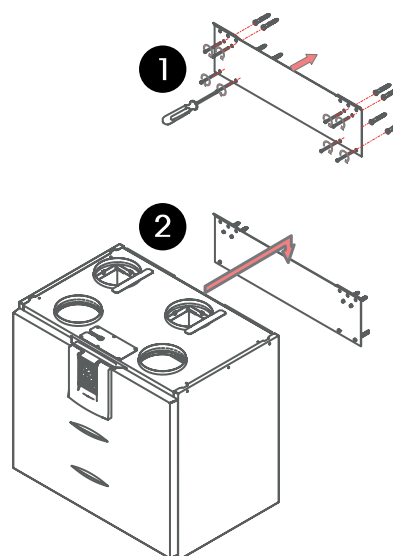
## MOUNTING ON THE WALL



### NOTE

- Avoid mounting the unit on a hollow, echoing partition wall or on a bedroom wall, or prevent the conduction of sound.
- The minimum distance between the top of the unit and the finished ceiling surface is 30 mm. Note that during mounting the unit rises 10 mm higher than the final height.

Mount Vallox 096 MV, 110 MV, and Vallox 145 MV on the wall with a mounting plate, as shown in the adjacent figure. Make sure that the unit is horizontally level after mounting.



## MOUNTING ON THE CEILING

Vallox 096 MV and Vallox 110 MV can be equipped with an optional ceiling mount plate. To attach the ceiling mounting plate:

- On rafter frames or other frame structure with M8 thread bars so that they withstand the weight of the unit.
- Horizontally, because the levelness of the ceiling mounting plate determines the levelness of the unit.

Insulate the outdoor air and exhaust air duct against condensation also between the unit and the ceiling mounting plate.

### Mounting the ceiling mounting plate

1. Fasten the thread bars on the rafter frames or other frame structure, and screw the nuts onto the bars.
2. Lift the ceiling mounting plate in place.
3. Push a rubber damper and a washer onto each thread bar, and ensure that they touch the bottom of the cups of the plate (Vallox 096 MV).
4. Turn the nuts to make sure that the unit is horizontally level.
5. Shorten the lower ends of the thread bars so that they will be at no more than 10 mm from the lower surface of the ceiling mounting plate.



### CAUTION

The ventilation unit is very heavy. Do not perform this procedure alone.





## MOUNTING ON A BASE (VALLOX 145 MV)



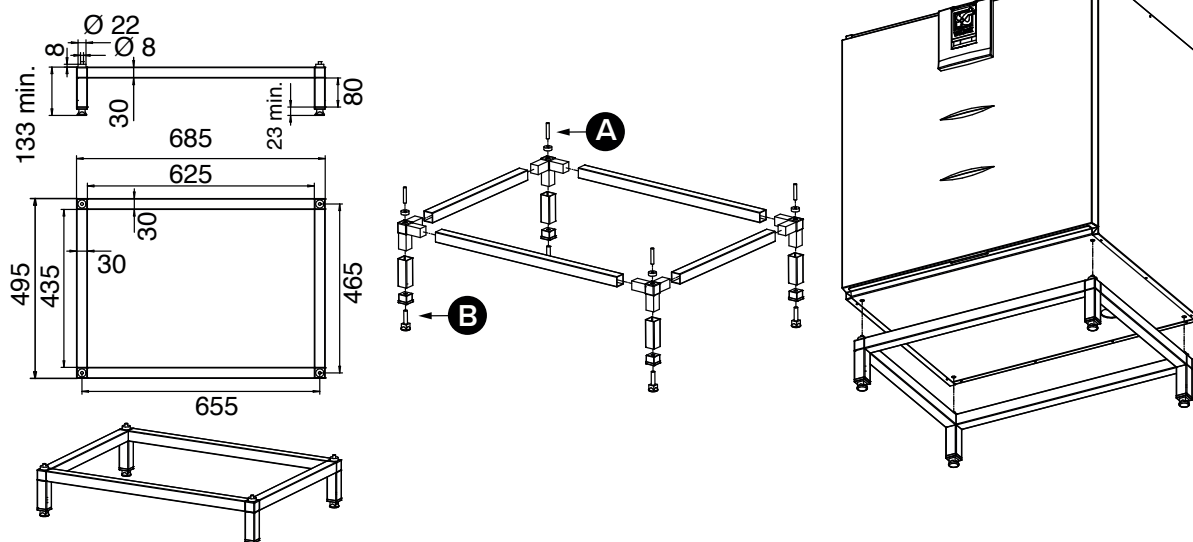
### NOTE

Vallox 145 MV must always be installed on a base on the floor, or on the wall using a mounting plate.

The base is optional. Adjust the base with adjusting legs to level it. Remove the (4) rubber plugs at the bottom of the unit. 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.

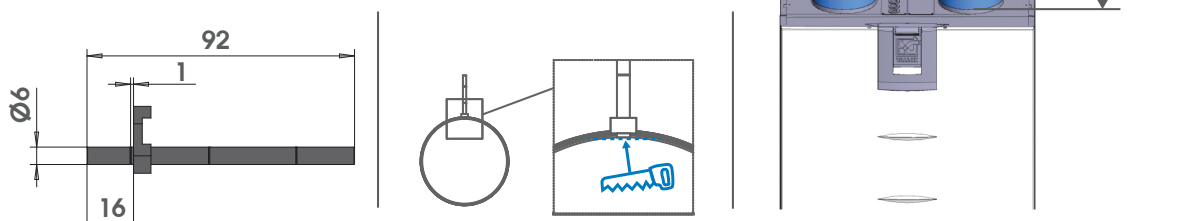
A Thread bar M8 x 35, shorter thread upward

B The length of the adjusting screw is 37mm



## MEASURING TUBES

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



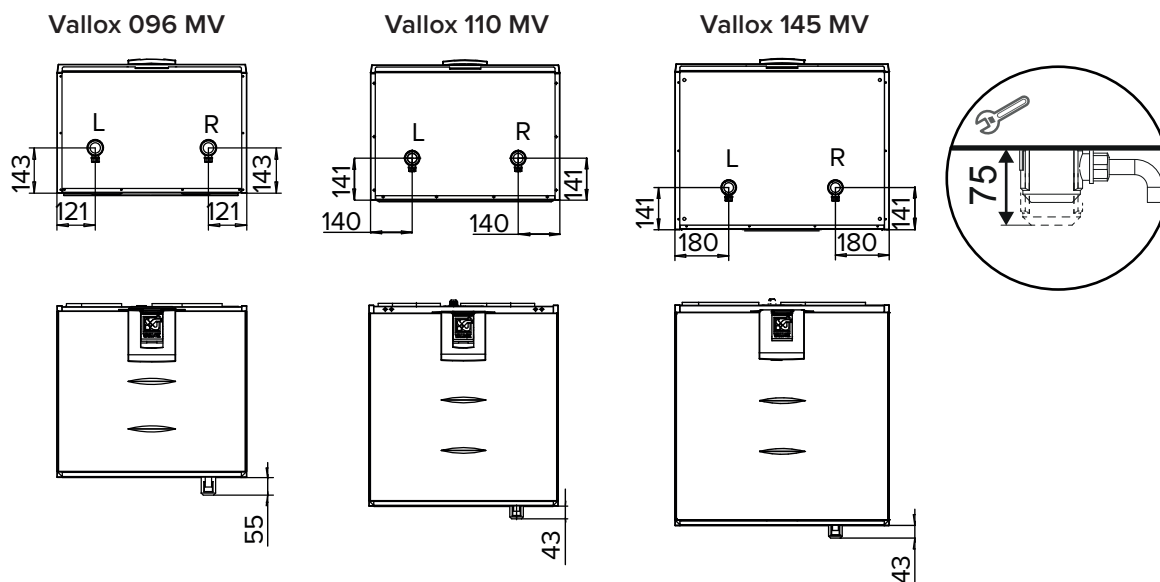
## WATER SEAL



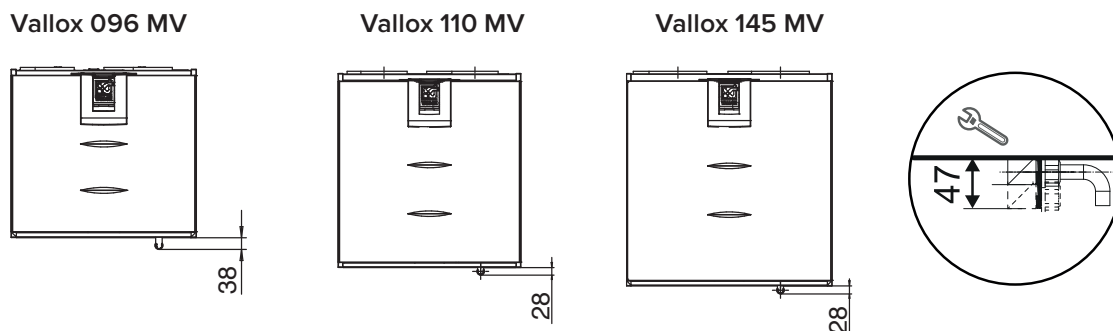
### NOTE

The Vallox Silent Klick water seal package is delivered with the unit. Installation instructions for the water seal are enclosed with the packaging, and can also be found online at [www.vallox.com](http://www.vallox.com). When the alternative water seal 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.

### Dimensioning figure and space required for installation of the Vallox Silent Klick water seal

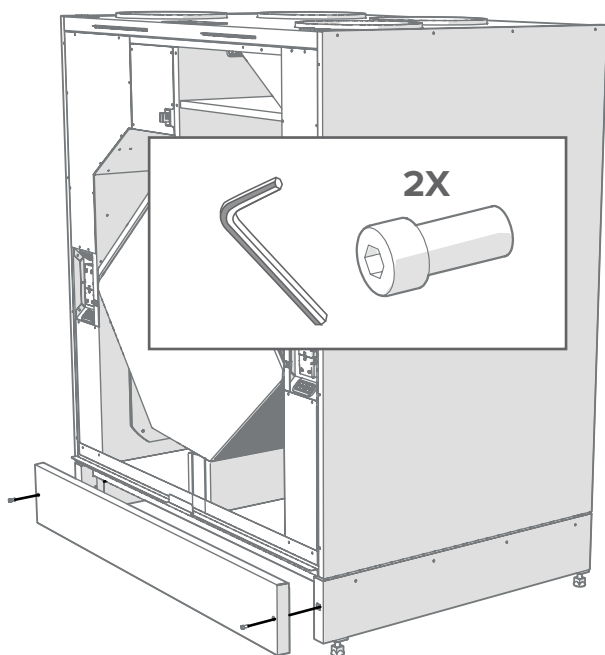


### Space required by the alternative Vallox Silent Klick water seal installation method (elbow)



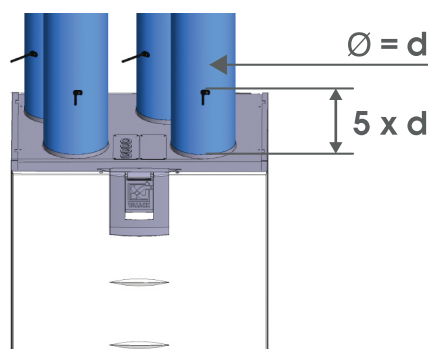
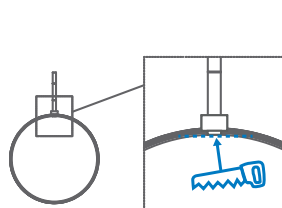
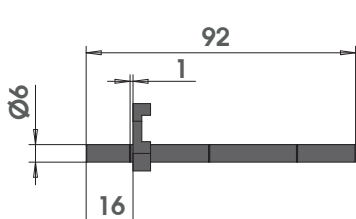
## MOUNTING ON THE FLOOR

Vallox 245 MV is always mounted on the floor. Adjust the adjusting legs so that the unit is level.



## MEASURING TUBES

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



## INSTALLING THE WATER SEALS

The Vallox Silent Klick water seal package is delivered with the unit. Installation instructions for the water seal are enclosed with the packaging, and can also be found online at [www.vallox.com](http://www.vallox.com).

To install the water seal, remove the front panel of the base by undoing the two hexagon screws.



### WARNING

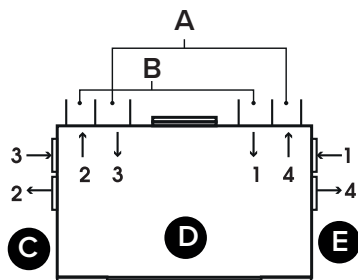
Water must at all times be kept out of the electrical system.

# VALLOX TSK MULTI 50 MV

Product titles	Vallox TSK Multi 50 MV Vallox TSK Multi 50 MV EH	
Integrated DC fan	Extract air Supply air	0.043kW 0.32A 50dm <sup>3</sup> /s 50Pa 0.043kW 0.32A 40dm <sup>3</sup> /s 50Pa
Electrical connection		230V, 50Hz, ~4.5A
Enclosure protection class		IP34
Post-heating radiator (EH)		900W, 3.9A
Bypass duct heater		—
Heat recovery		Cross-counter flow cell, η>80%
Fans	Supply air Extract air	
Efficiencies	Annual efficiency Supply air efficiency Specific Fan Power (SFP)	75% A+ 81% 1.2kW/(m <sup>3</sup> /s) B
Filters	Supply air Extract air	G4 and F7 G4
Heat recovery bypass		Automatic
Weight		45kg
Dimensions (width x height x depth)		900x236x547mm

## AIR FLOW MEASUREMENT POINTS

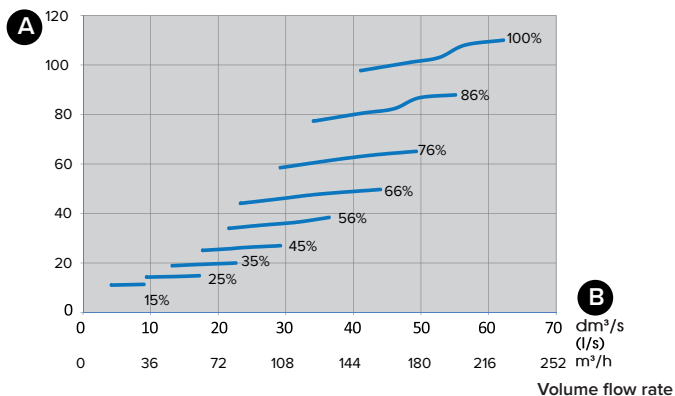
Measurement points after the outlet collar. The fan curves indicate the total pressure accounted for by duct losses.



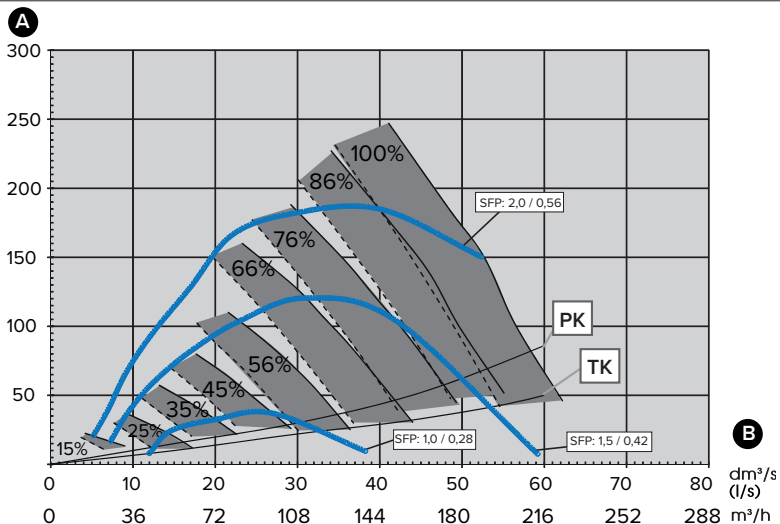
A Supply air  
B Extract air  
C Left side  
D View from above  
E Right side

## FAN INPUT POWER

Power (W)



## AIR VOLUMES VALLOX TSK MULTI 50 MV, SUPPLY AIR (F7+G4), EXTRACT AIR (G4)



**A** Pressure loss in ducts. Total pressure (Pa)

**B** Volume flow rate (dm<sup>3</sup>/s)

— extract air  
- - - supply air

PK and TK are examples of pressure loss in the supply and extract air ducts.

SFP rate (Specific Fan Power)  
recommended value <2.0 (kW m<sup>3</sup>/s)

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

## SOUND VALUES

		Sound power level in the supply air duct (one duct) by octave band L <sub>wp</sub> , dB									Sound power level in the extract air duct (one duct) by octave band L <sub>wp</sub> , dB								
Adjustment position		100%	86%	76%	66%	56%	45%	35%	25%	15%	100%	86%	76%	66%	56%	45%	35%	25%	15%
Air flow dm³/s		54.6	50.4	43.9	38.7	31.3	25.1	18.8	13.8	8.1	62.8	56.9	50.3	45.0	37.9	32.1	26.2	19.1	13.7
Air flow m³/h		196.56	181.44	158.04	139.32	112.68	90.36	67.68	49.68	29.16	226.08	204.84	181.08	162	136.44	115.56	94.32	68.76	49.32
Medium frequency of the octave band Hz	63	57.6	57.4	54.1	52.8	50.2	47.3	44.9	40.7	42.3	51.0	50.0	47.6	45.5	43.4	*38.2	*34.0	*31.6	*30.3
	125	60.4	59.3	57.3	55.6	53.7	50.0	51.1	47.8	40.5	57.8	57.0	54.5	51.9	49.2	48.0	44.7	44.1	40.4
	250	64.0	62.3	61.0	59.9	58.5	55.1	51.2	45.9	34.9	55.3	53.9	52.7	52.1	48.6	47.9	43.5	37.6	28.7
	500	66.2	64.3	61.8	60.8	55.2	50.0	45.5	39.5	30.1	51.0	50.2	48.3	49.4	40.8	36.2	30.8	*25.3	*17.6
	1000	63.2	61.5	59.6	56.6	51.0	47.5	42.3	35.5	*24.0	51.1	49.3	46.5	44.1	39.1	36.1	31.6	*25.4	*16.8
	2000	58.8	56.9	54.3	51.3	47.4	41.9	34.4	*23.9	*17.8	40.1	38.4	36.8	35.3	29.9	*27.7	*21.3	*13.9	*12.2
	4000	53.6	51.4	48.1	43.9	38.0	*29.6	*23.1	*20.6	*18.6	33.0	31.1	29.5	*26.5	*19.9	*18.4	*17.6	*17.6	*17.5
	8000	36.5	33.4	*29.6	*26.5	*24.3	*23.3	*23.1	*23.1	*23.2	*23.5	*23.2	*23.1	*23.2	*22.9	*22.9	*22.9	*22.9	*22.9
L <sub>wp</sub> , dB		70.6	68.9	66.8	65.2	62.0	58.1	55.4	50.9	45.2	61.3	60.2	58.1	56.7	53.0	51.5	47.6	45.3	*41.2
L <sub>wa</sub> , dB(A)		67.5	65.6	63.3	61.1	57.0	52.3	47.6	41.5	32.5	54.1	52.7	50.6	49.7	44.5	42.7	38.0	*33.5	*28.9
Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m² sound absorption)																			
ADJUSTMENT POSITION / AIR FLOWS (supply/extract)																			
Adjustment position		100%	86%	76%	66%	56%	45%	35%	25%	15%									
Air flow dm³/s		54.0/61.4	49.3/55.8	43.9/50.1	38.1/44.0	31.5/37.3	25.1/30.9	19.4/25.1	13.4/18.6	8.0/13.1									
Air flow m³/h		194.4/221.04	177.48/200.88	158.04/180.36	137.16/158.4	113.4/134.28	90.36/111.24	69.84/90.36	48.24/66.96										
L <sub>pa</sub> , dB (A)		49.2	47.7	45.6	42.9	39.3	35.6	32.1	*27.0	*24.4									

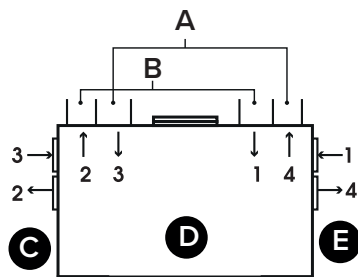
\* The background noise requirement of standard ISO 3741:2010 is not met.

## VALLOX TSK MULTI 80 MV

Product titles	Vallox TSK Multi 80 MV Vallox TSK Multi 80 MV EH Vallox TSK Multi 80 MV EHX	
Air volumes	Extract air Supply air	0.071kW 0.5A 85dm³/s 100Pa 0.071kW 0.5A 70dm³/s 100Pa
Electrical connection		230V, 50Hz, ~8.8A
Enclosure protection class		IP34
Post-heating radiator (EH, EHX)		900W, 3.9A
Bypass duct heater		900W, 3.9A
Heat recovery		Cross-counter flow cell, η>80%
Additional heating radiator (EHX)		900W, 3.9A
Fans	Supply air Extract air	
Efficiencies	Annual efficiency Supply air efficiency Specific Fan Power (SFP)	75% A+ 82% 0.9kW/(m³/s) A
Filters	Supply air Extract air	G4 and F7 G4
Heat recovery bypass		Motorized summer/winter damper
Weight		58.5kg
Dimensions (width x height x depth)		1026x293x626mm

# AIR FLOW MEASUREMENT POINTS

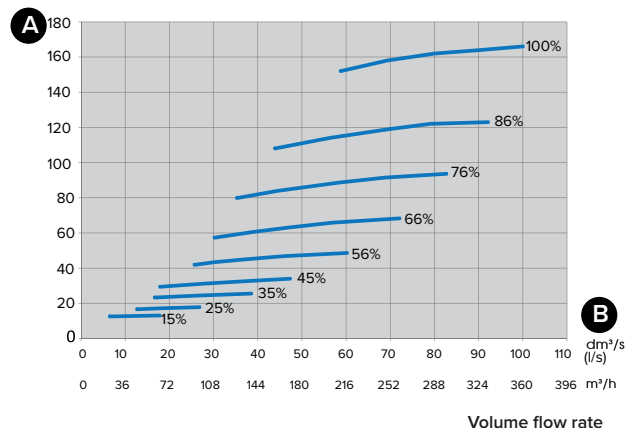
Measurement points after the connection outlet. The fan curves indicate the total pressure accounted for by duct losses.



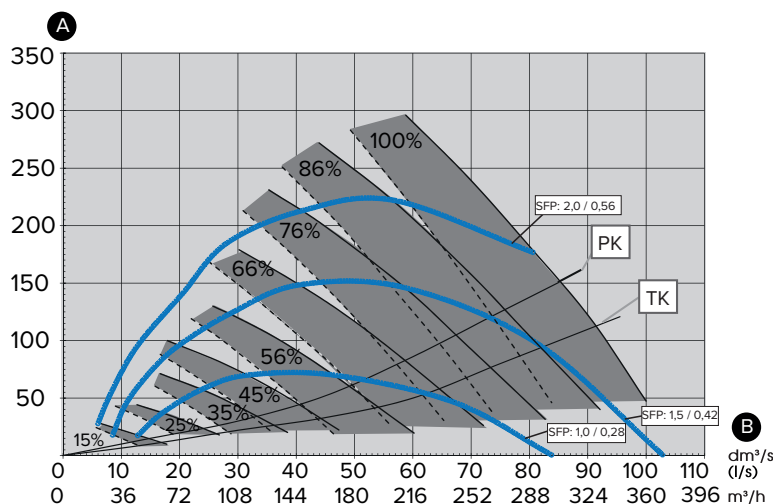
A Supply air  
B Extract air  
C Left side  
D View from above  
E Right side

# FAN INPUT POWER

Power (W)



# AIR VOLUMES VALLOX TSK MULTI 80 MV, SUPPLY AIR (F7+G4), EXTRACT AIR (G4)



A Pressure loss in ducts. Total pressure (Pa)

B Volume flow rate (dm³/s)

— extract air  
- - - supply air

PK and TK are examples of pressure loss in the supply and extract air ducts.

SFP rate (Specific Fan Power)  
recommended value <2.0 (kW  
m³/s)

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

# SOUND VALUES

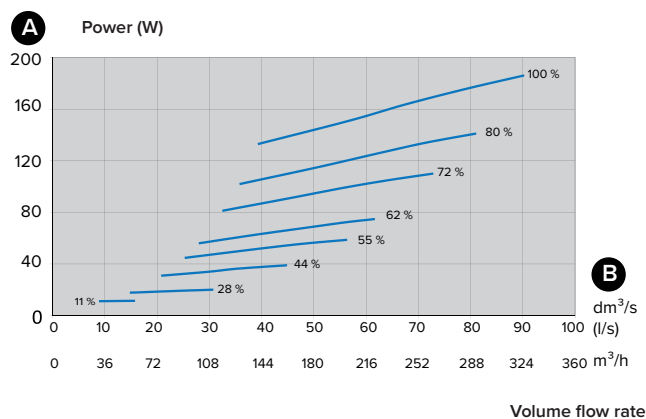
		Sound power level in the supply air duct (one duct) by octave band L <sub>wp</sub> , dB									Sound power level in the extract air duct (one duct) by octave band L <sub>wp</sub> , dB									
Adjustment position		100%	86%	76%	66%	56%	45%	35%	25%	15%	100%	86%	76%	66%	56%	45%	35%	25%	15%	
Air flow dm³/s		83.8	75.2	65.7	57.7	47.9	39.6	31.6	23.1	15.6	101.0	92.2	81.3	71.2	59.3	50.3	43.3	33.1	22.3	
Air flow m³/h		301.68	270.72	236.52	207.72	172.44	142.56	113.76	83.16	56.16	363.6	331.92	292.68	256.32	213.48	181.08	155.88	119.16	80.28	
Medium frequency of the octave band Hz	63	60.4	60.4	57.4	56.0	54.3	52.4	55.8	43.3	43.2	55.6	55.0	57.7	54.5	48.5	47.3	48.4	39.8	*38.9	
	125	64.5	61.9	60.4	58.5	56.9	54.6	52.4	46.1	39.1	60.1	58.3	56.8	53.7	50.9	48.3	48.0	41.6	33.9	
	250	71.9	72.0	69.5	68.0	60.3	56.6	50.9	46.0	38.3	59.1	58.2	56.9	55.3	50.3	46.9	42.9	36.7	30.3	
	500	73.0	66.8	63.2	59.9	56.3	51.8	47.4	40.9	33.1	55.2	52.3	48.9	45.9	42.9	37.5	34.3	27.1	*21.8	
	1000	66.0	62.9	59.7	56.5	51.8	47.1	42.5	36.2	*27.9	53.1	49.9	47.5	44.1	40.0	35.7	32.1	*25.5	*19.8	
	2000	62.0	59.3	56.2	53.0	48.9	43.6	38.3	30.1	*19.7	42.3	39.8	37.0	33.6	29.7	25.8	*22.3	*16.4	*13.9	
	4000	52.5	49.6	46.1	42.2	37.2	31.5	*25.8	*20.0	*17.9	29.4	*26.7	*23.9	*20.7	*18.8	*18.0	*17.8	*17.7	*18.0	
8000	38.5	34.9	30.8	*27.3	*24.4	*23.2	*23.0	*23.0	*22.9	*23.5	*23.2	*23.1	*23.1	*23.0	*23.0	*23.0	*23.0	*23.0		
L <sub>wp</sub> , dB	76.6	74.2	71.5	69.6	64.0	60.6	58.8	50.8	45.9	64.4	62.9	62.3	59.6	55.2	52.6	52.0	44.7	*40.7		
L <sub>wa</sub> , dB(A)	72.2	69.1	66.1	63.2	57.9	53.4	48.8	42.6	*35.0	57.0	54.8	52.7	49.8	45.7	41.6	38.9	*32.7	*28.1		
		Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m² sound absorption)																		
		ADJUSTMENT POSITION / AIR FLOWS (supply/extract)																		
Adjustment position		100%	86%	76%	66%	56%	45%	35%	25%	15%										
Air flow dm³/s		84.0/88.1	74.8/79.2	66.1/70.4	57.0/61.7	47.4/52.1	39.3/43.1	32.3/36.8	23.4/27.8	15.1/19.5										
Air flow m³/h		302.4/317.16	269.28/285.12	237.96/253.44	205.2/222.12	170.64/187.56	141.48/155.16	116.28/132.48	84.24/100.08	54.36/70.2										
L <sub>pa</sub> , dB (A)		53.5	51.2	49.5	45.9	42.0	37.4	34.4	*28.9	*24.7										

\* The background noise requirement of standard ISO 3741:2010 is not met.

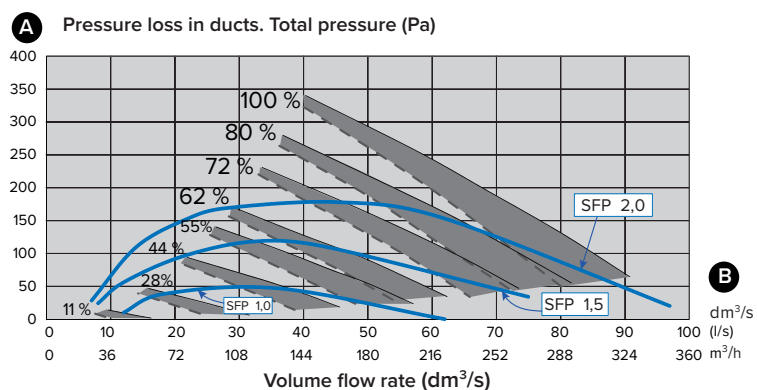
## TECHNICAL SPECIFICATIONS

Product titles Vallox 90 MV R Vallox 90 MV L	Product number 3570600 3570700	HVAC code 7912066 7912067	Fans	Supply air Extract air	0.119kW, 0.9A EC 0.119kW, 0.9A EC
Air volumes	Supply air Extract air	73 l/s, 100Pa 84 l/s, 100Pa	Efficiencies	Annual efficiency Supply air efficiency Specific Fan Power (SFP)	62% B 83% 1.1 (38 l/s) B
Electrical connection		230V, 50Hz, 5.7A power plug	Filters	Supply air Extract air	G4 and F7 G4
Enclosure protection class		IP34			
Post-heating radiator		Electric, 900W	Heat recovery bypass		Automatic
Preheating radiator		-	Weight with packaging		52kg
Additional heating radiator		-	Dimensions (width x height x depth)		597x689x361mm

## FAN INPUT POWER



## SUPPLY/EXTRACT AIR VOLUMES



SFP rate (Specific Fan Power)  
recommended value <2.0 (kW m³/s)

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

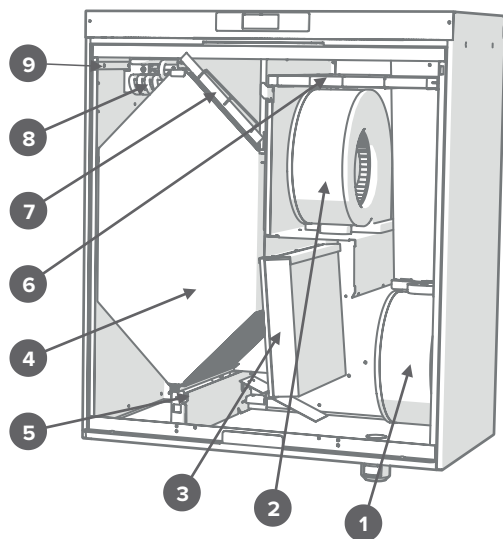
— extract air  
- - - supply air

## SOUND VALUES

		Sound power level in the supply air duct (one duct) by octave band L <sub>w</sub> , dB				Sound power level in the extract air duct (one duct) by octave band L <sub>w</sub> , dB			
		ADJUSTMENT POSITION / AIR FLOW dm³/s				ADJUSTMENT POSITION / AIR FLOW dm³/s			
Adjustment position		2 = 35%	4 = 50%	6 = 65%	8 = 100%	2 = 35%	4 = 50%	6 = 65%	8 = 92%
Air flow dm³/s		16.5	27.2	40.9	65.6	23.8	35.8	51.9	76.7
Medium frequency of the octave band Hz	63	61.7	67.2	73.1	82.1	56.9	63.9	69.6	75.6
	125	46.9	56.2	64.3	73.4	46.4	53.9	60.8	69.1
	250	39.6	47.0	54.4	63.5	39.5	44.6	52.2	61.0
	500	35.1	41.6	48.6	57.3	32.7	38.8	45.6	53.3
	1000	31.1	38.7	45.7	52.4	27.9	35.5	43.2	48.9
	2000	13.0	25.7	34.4	43.5	17.6	24.5	33.6	42.9
	4000		15.6	27.5	35.9		13.3	23.2	33.8
	8000			20.0	22.6				
L <sub>w</sub> , dB		61.8	67.6	73.7	82.7	57.4	64.3	70.2	76.7
L <sub>WA</sub> , dB(A)		38.5	46.1	53.3	61.9	36.4	43.5	50.5	58.2
Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m² sound absorption)									
ADJUSTMENT POSITION / AIR FLOWS (supply/extract)									
Adjustment position		2	4	6	8				
Air flow dm³/s		17/24	29/39	44/56	69/81				
L <sub>pA</sub> , dB (A)		23.9	30.6	38.0	45.3				



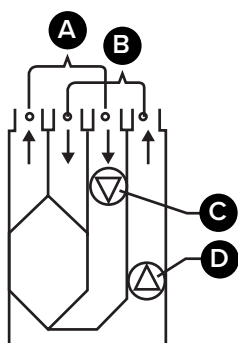
## Main parts



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

- |                        |                         |
|------------------------|-------------------------|
| 1 Extract air fan      | 6 Supply air filter G4  |
| 2 Supply air fan       | 7 Extract air filter G4 |
| 3 Supply air filter F7 | 8 Post-heating radiator |
| 4 Heat recovery cell   | 9 Safety switch         |
| 5 Bypass flap          |                         |

## Air flow measurement points

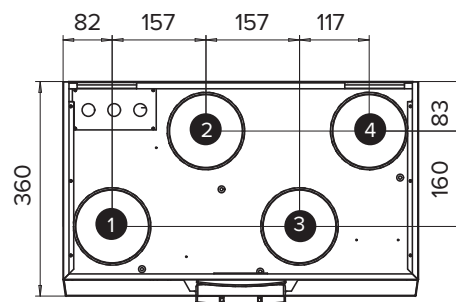


Measurement points after the outlet collar. The fan curves indicate the total pressure accounted for by duct losses.

- A Supply air  
B Extract air  
C Supply  
D Extract

## Dimensions and duct outlets

### R model

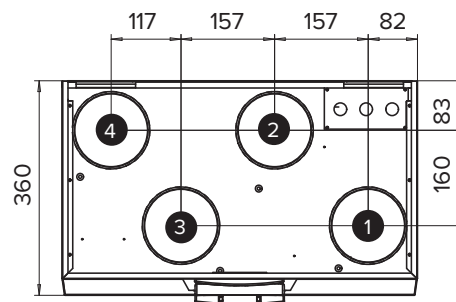


### Duct outlets

Inner diameter of the female collar:  
125mm

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

### L model



## TECHNICAL SPECIFICATIONS

Product titles Vallox 096 MV R Vallox 096 MV L	Product numbers 3474450 3474550	HVAC code 7912030 7912031	Additional heating radiator		—
Air volumes	Supply air Extract air	92 l/s, 331m <sup>3</sup> /h, 100Pa 95 l/s, 342m <sup>3</sup> /h, 100Pa	Fans	Supply air Extract air	0.119kW, 0.9A EC 0.119kW, 0.9A EC
Electrical connection		230V, 50Hz 5.1A (power plug)	Operating efficiencies	Annual efficiency Supply air efficiency Specific Fan Power (SFP)	75% A+ 81% 1.0 (38 l/s) B
Enclosure protection class		IP34	Filters	Supply air Extract air	G4 and F7 G4
Post-heating radiator		Electric, 900W	Heat recovery bypass		Automatic
Preheating radiator		—	Weight		53kg

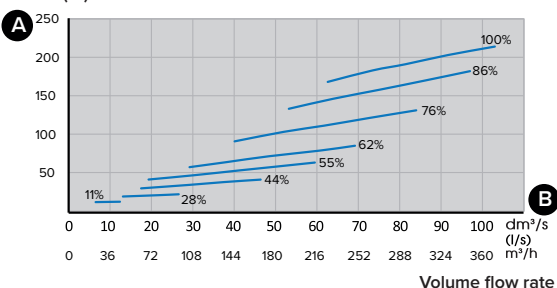
Dimensions (width x height x depth)

600x545x428mm

## FAN INPUT POWER

## SUPPLY/EXTRACT AIR VOLUMES

Power (W)

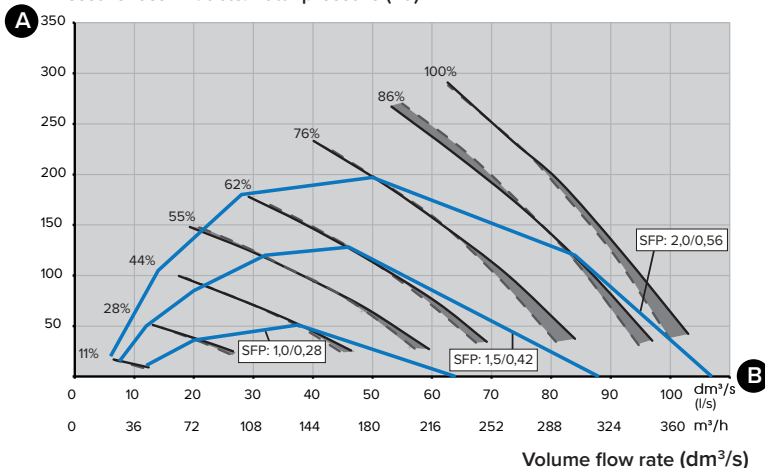


SFP rate (Specific Fan Power)  
recommended value <2.0 (kW m<sup>3</sup>/s)

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

— — — — — extract air  
- - - - - supply air

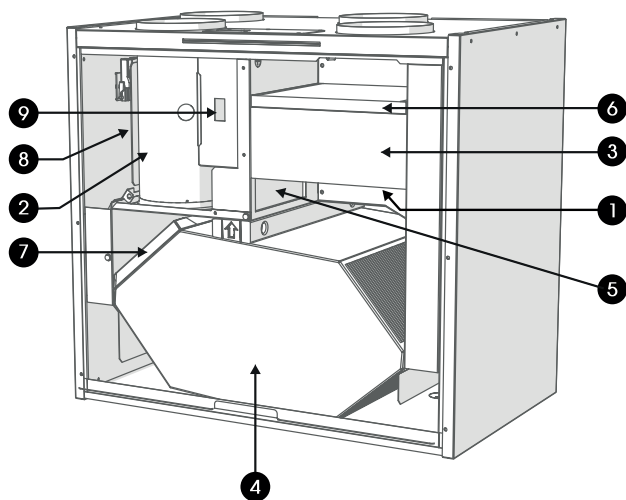
Pressure loss in ducts. Total pressure (Pa)



## SOUND VALUES

		Sound power level in the supply air duct (one duct) by octave band L <sub>WA</sub> , dB								Sound power level in the extract air duct (one duct) by octave band L <sub>WA</sub> , dB							
Adjustment position		11%	28%	44%	55%	62%	76%	86%	100%	11%	28%	44%	55%	62%	76%	86%	100%
Air flow dm <sup>3</sup> /s (l/s)		10.6	25.2	38.1	46.6	53.8	65.6	72.9	76.0	12.0	27.6	36.7	44.2	50.5	61.0	70.4	76.4
Air flow m <sup>3</sup> /h		38.16	90.72	137.16	167.76	193.68	236.16	262.44	273.6	43.2	99.36	132.12	159.12	181.8	219.6	253.44	275.04
Medium frequency of the octave band Hz	63	39	52	61	62	64	71	69	68	26	30	40	44	47	53	54	57
	125	36	45	51	56	58	62	65	66	24	34	40	46	49	53	57	57
	250	41	51	57	60	62	65	67	68	22	33	39	42	45	49	53	54
	500	38	50	54	57	60	63	65	66	28	39	44	47	49	53	55	56
	1000	34	48	54	57	59	62	64	65	23	36	42	45	48	51	54	55
	2000	24	43	50	55	57	61	64	65	13	24	31	35	37	41	43	44
	4000	16	32	42	47	49	54	56	58	16	17	21	24	26	30	33	33
	8000	21	21	27	34	38	44	48	49	21	21	21	21	21	22	23	24
L <sub>WA</sub> , dB		45	57	64	66	69	73	74	74	33	43	49	52	55	59	62	63
L <sub>WA</sub> , dB(A)		39	52	58	61	64	67	69	70	28	39	45	48	51	54	57	57
Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m <sup>2</sup> sound absorption) ADJUSTMENT POSITION / AIR FLOWS (supply/extract)																	
Adjustment position		11%	28%	44%	55%	62%	76%	86%	100%								
Air flow dm <sup>3</sup> /s (l/s)		14/15	31/30	48/44	60/54	68/62	82/74	92/83	98/89								
Air flow m <sup>3</sup> /h		50.4/54	111.6/108	172.8/158.4	216/194.4	244.8/223.2	295.2/266.4	331.2/298.8	352.8/320.4								
L <sub>PA</sub> , dB (A)		23	29	35	38	41	44	46	47								

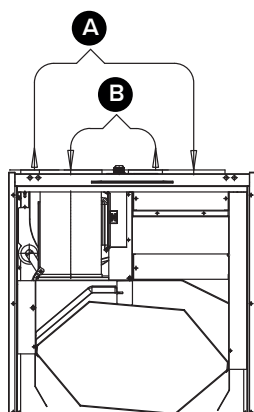
## Main parts



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

- |  |  |
|--|--|
| 1 Extract air fan<br>(behind the protective cover) | 4 Heat recovery cell                                     |
| 2 Supply air fan<br>(behind the extract air duct)  | 5 Bypass flap  |
| 3 Supply air filter F7                             | 6 Supply air filter G4                                   |
|  | 7 Extract air filter G4                                  |
|  | 8 Post-heating radiator<br>(behind the extract air duct) |
|  | 9 Safety switch  |

## Air flow measurement points



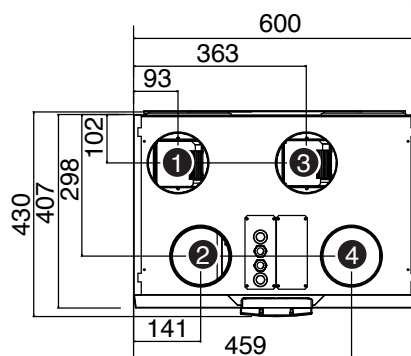
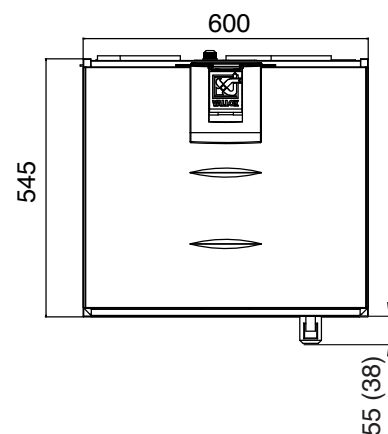
A Supply air

B Extract air

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

## Dimensions and duct outlets

### Dimensions



### Duct outlets

#### R model

Inner diameter of the female collar:  
125mm

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

#### L model

Inner diameter of the female collar:  
125mm

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

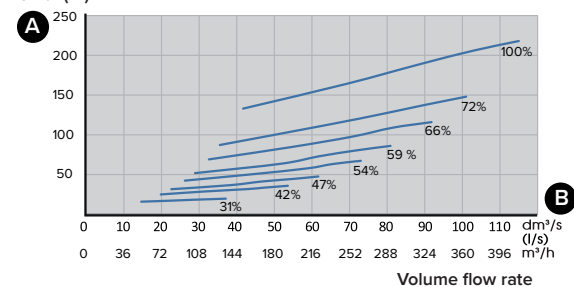
## TECHNICAL SPECIFICATIONS

Product titles Vallox 110 MV R Vallox 110 MV L	Product numbers 3446650 3446750	HVAC codes 7912039 7912040	Additional heating radiator		Power, 900W
Air volumes	Supply air Extract air	107 l/s, 386m³/h, 100Pa 113 l/s, 407m³/h, 100Pa	Fans	Supply air Extract air	0.119kW, 0.9A EC 0.119kW, 0.9A EC
Electrical connection		230V, 50Hz 9.6A (power plug)	Operating efficiencies	Annual efficiency Supply air efficiency Specific Fan Power (SFP)	75% A+ 84% 0.9 (50 l/s) A
Enclosure protection class		IP34	Filters	Supply air Extract air	G4 and F7 G4
Post-heating radiator		Electric, 900W	Heat recovery bypass		Automatic
Preheating radiator		—	Weight		64kg
			Dimensions (width x height x depth)		638x678x472mm

## FAN INPUT POWER

## SUPPLY/EXTRACT AIR VOLUMES

Power (W)

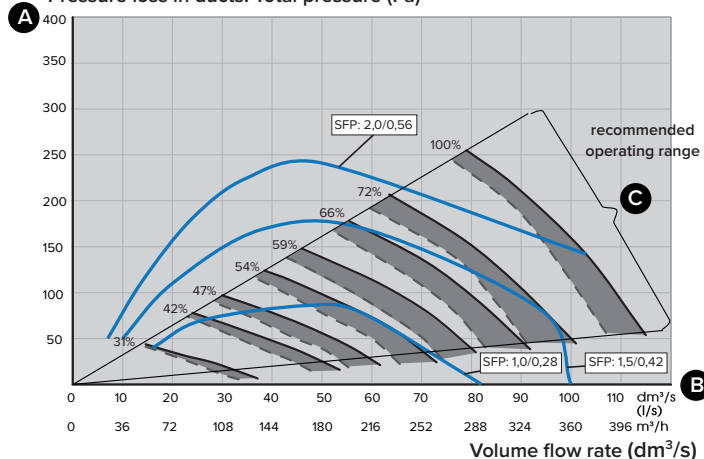


SFP rate (Specific Fan Power)  
recommended value <2.0 (kW m³/s)

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

— — — — — supply air  
————— extract air

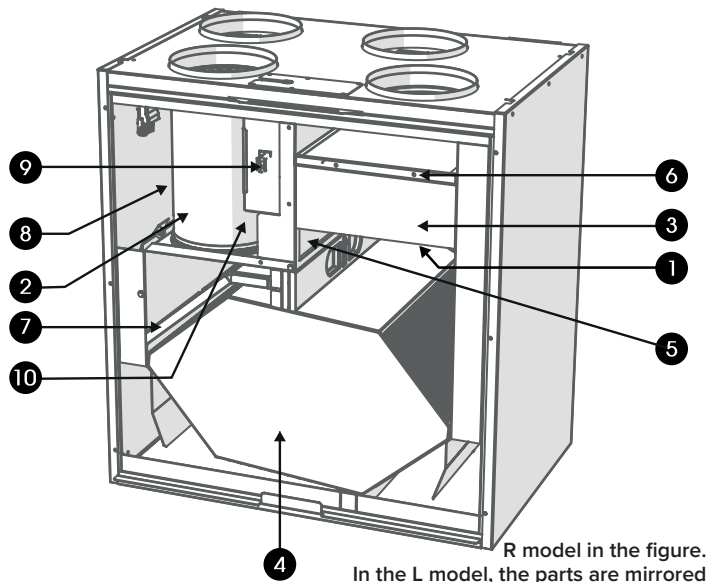
Pressure loss in ducts. Total pressure (Pa)



## SOUND VALUES

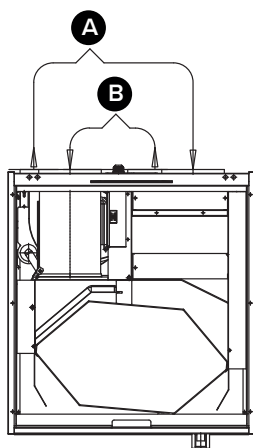
Adjustment position	Sound power level in the supply air duct (one duct) by octave band $L_{w^*}$ dB								Sound power level in the extract air duct (one duct) by octave band $L_{w^*}$ dB							
	31%	42%	47%	54%	59%	66%	72%	100%	31%	42%	47%	54%	59%	66%	72%	100%
Air flow dm³/s (l/s)	25.7	39.3	44.9	51.0	57.5	67.6	76.6	88.9	27.8	43.1	46.7	58.8	61.9	70.8	78.4	88.8
Air flow m³/h	92.52	141.48	161.64	183.6	207	243.36	275.76	320.04	100.08	155.16	168.12	211.68	222.84	254.88	282.24	319.68
Medium frequency of the octave band Hz																
63	60	65	68	69	72	74	75	77	58	62	65	68	72	74	73	76
125	55	63	66	69	71	72	74	78	45	52	56	58	62	64	65	68
250	49	57	60	64	66	68	70	73	32	38	41	45	48	51	53	56
500	49	51	53	56	59	61	63	67	36	45	43	46	48	51	53	56
1000	46	53	55	58	60	62	63	65	31	37	39	42	43	45	47	50
2000	37	46	50	54	57	60	62	65	19	25	28	31	33	36	38	41
4000	27	39	43	47	50	53	56	60	*	*	13	16	21	23	26	30
8000	*	26	32	37	42	46	49	55	*	*	*	*	*	*	*	20
$L_{w^*}$ dB	62	68	71	73	76	77	79	82	58	62	65	68	72	74	74	77
$L_{WA^*}$ dB(A)	50	56	59	62	65	67	69	72	37	44	46	48	51	53	55	58
Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m² sound absorption)																
ADJUSTMENT POSITION / AIR FLOWS (supply/extract)																
Adjustment position	31%		42%		47%		54%		59%		66%		72%		100%	
Air flow dm³/s (l/s)	29/32		45/50		51/59		60/67		67/75		77/84		84/90		98/105	
Air flow m³/h	104.4/115.2		162/180		183.6/212.4		216/241.2		241.2/270		277.2/302.4		302.4/324		352.8/378	
$L_{pA^*}$ dB (A)	24		32		32		35		37		40		42		45	

## Main parts



- |  |   |
|--|---|
| 1 Extract air fan<br>(behind the protective cover) | 4 Heat recovery cell  |
| 2 Supply air fan<br>(behind the extract air duct)  | 5 Bypass flap   |
| 3 Supply air filter F7                             | 6 Supply air filter G4  |
|  | 7 Extract air filter G4   |
|  | 8 Post-heating radiator<br>(behind the extract air duct)        |
|  | 9 Safety switch   |
|  | 10 Additional heating radiator<br>(behind the extract air duct) |

## Air flow measurement points

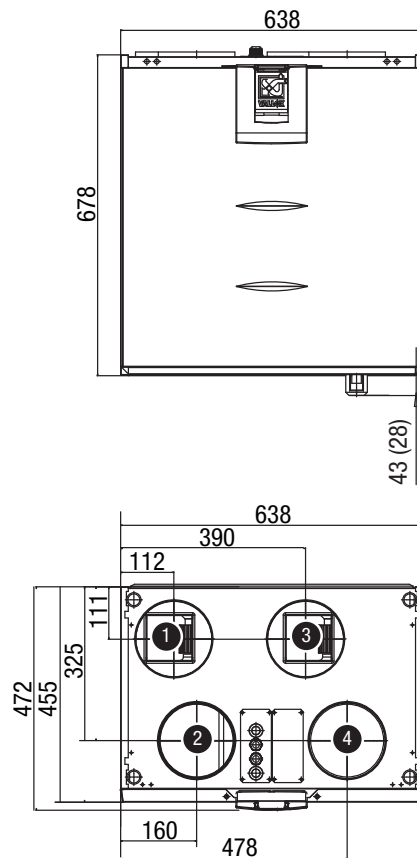


- A Supply air  
B Extract air

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

## Dimensions and duct outlets

### Dimensions



### Duct outlets

#### R model

Inner diameter of the female collar:  
160mm

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

#### L model

Inner diameter of the female collar:  
160mm

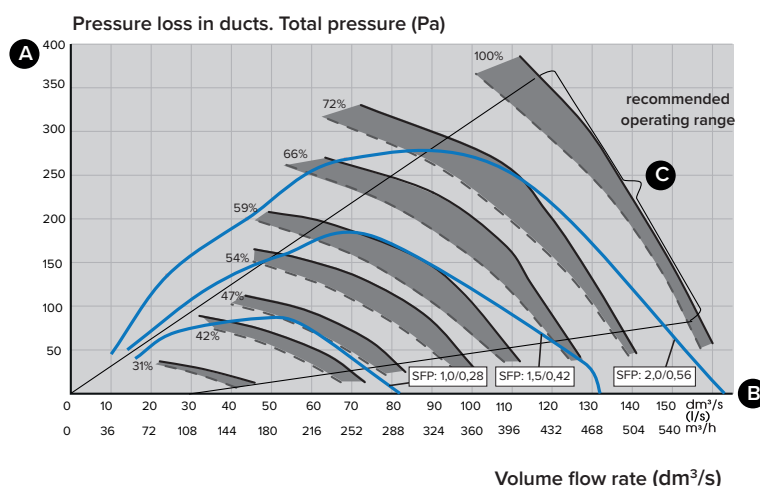
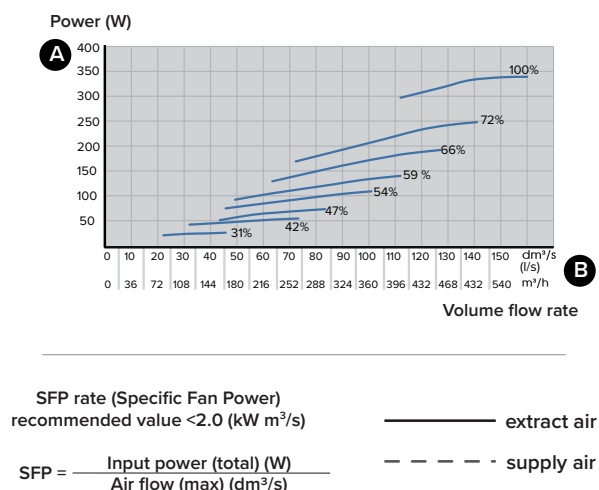
1. Exhaust air flowing outdoors from the unit
2. Outdoor air to the unit
3. Supply air from the unit to the apartment
4. Extract air from the apartment to the unit

## TECHNICAL SPECIFICATIONS

Product titles Vallox 145 MV R Vallox 145 MV L	Product numbers 3475650 3475750	HVAC codes 7912049 7912050	Additional heating radiator	Power, 1500W
Air volumes	Supply air Extract air	150 l/s, 540m <sup>3</sup> /h, 100Pa 155 l/s, 558m <sup>3</sup> /h, 100Pa	Fans	Supply air Extract air
Electrical connection		230V, 50Hz 11.9A (power plug)	Operating efficiencies	Annual efficiency Supply air efficiency Specific Fan Power (SFP)
Enclosure protection class		IP34	Filters	Supply air Extract air
Post-heating radiator		Electric, 900W	Heat recovery bypass	Automatic
Preheating radiator		—	Weight	88.0kg
			Dimensions (width x height x depth)	717x748x578mm

## FAN INPUT POWER

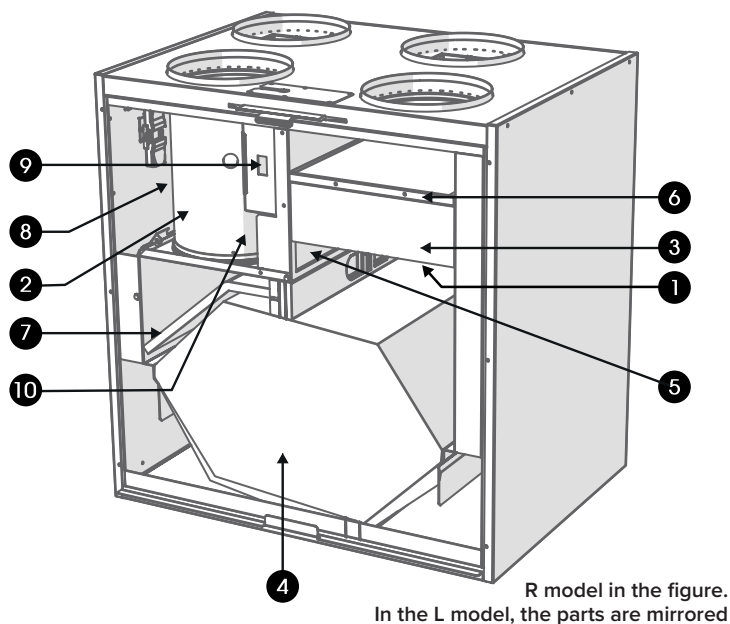
## SUPPLY/EXTRACT AIR VOLUMES



## SOUND VALUES

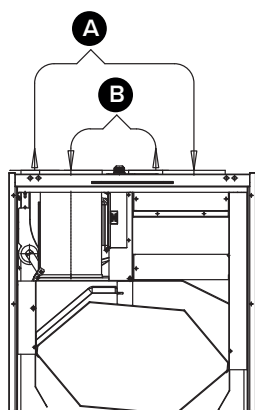
		Sound power level in the supply air duct (one duct) by octave band L <sub>wp</sub> dB								Sound power level in the extract air duct (one duct) by octave band L <sub>wp</sub> dB							
Adjustment position		31%	42%	47%	54%	59%	66%	72%	100%	31%	42%	47%	54%	59%	66%	72%	100%
Air flow dm <sup>3</sup> /s (l/s)		36.2	56.3	67.3	80.7	92.9	105	116	128	40.5	63.8	73.8	87.9	98.8	110	122	136
Air flow m <sup>3</sup> /h		130.32	202.68	242.28	290.52	334.44	378	417.6	460.8	145.8	229.68	265.68	316.44	355.68	396	439.2	489.6
Medium frequency of the octave band Hz	63	41	50	56	58	59	64	67	69	35	45	49	51	51	56	58	58
	125	45	53	56	59	62	65	68	71	33	43	46	49	49	54	56	59
	250	50	54	57	61	63	66	68	70	24	32	37	40	40	45	47	49
	500	48	53	56	59	60	63	65	68	37	43	46	48	48	52	54	56
	1000	45	54	57	60	62	64	66	67	30	36	39	42	42	46	48	50
	2000	35	46	50	55	58	61	64	66	22	32	34	38	38	43	45	48
L <sub>wp</sub> dB	4000	26	41	46	51	54	58	60	63	16	20	22	25	25	31	33	36
	8000	21	32	38	45	49	53	56	59	21	21	21	21	21	24	26	28
L <sub>wa</sub> dB(A)		49	57	60	63	66	68	70	73	36	42	45	48	50	52	54	56
Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m <sup>2</sup> sound absorption)																	
ADJUSTMENT POSITION / AIR FLOWS (supply/extract)																	
Adjustment position		31%		42%		47%		54%		59%		66%		72%		100%	
Air flow dm <sup>3</sup> /s (l/s)		36/39		56/62		68/74		81/89		92/98		105/113		116/126		131/142	
Air flow m <sup>3</sup> /h		129.6/140.4		201.6/223.2		244.8/266.4		291.6/320.4		331.2/352.8		378/406.8		417.6/453.6		471.6/511.2	
L <sub>pa</sub> dB (A)		27		34		37		40		42		45		47		50	

## Main parts



- |   |  |
|---|--|
| 1. Extract air fan<br>(behind the protective cover) | 5. Bypass flap   |
| 2. Supply air fan<br>(behind the extract air duct)  | 6. Supply air filter G4  |
| 3. Supply air filter F7                             | 7. Extract air filter G4   |
| 4. Heat recovery cell                               | 8. Post-heating radiator<br>(behind the extract air duct)        |
|   | 9. Safety switch   |
|   | 10. Additional heating radiator<br>(behind the extract air duct) |

## Air flow measurement points

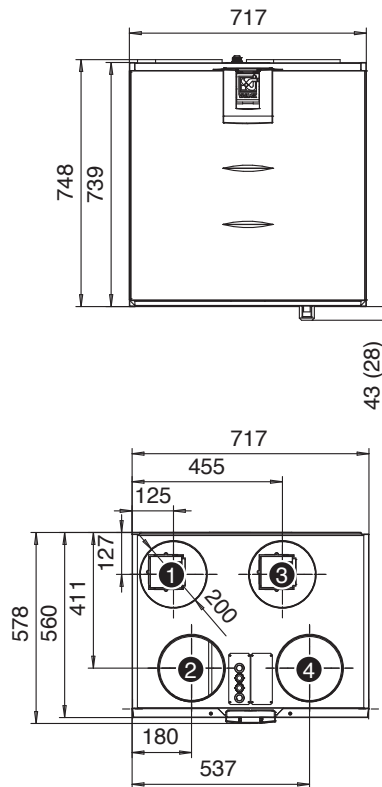


A Supply air  
B Extract air

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

## Dimensions and duct outlets

### Dimensions



### Duct outlets

#### R model

Inner diameter of the female collar:  
200mm

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

#### L model

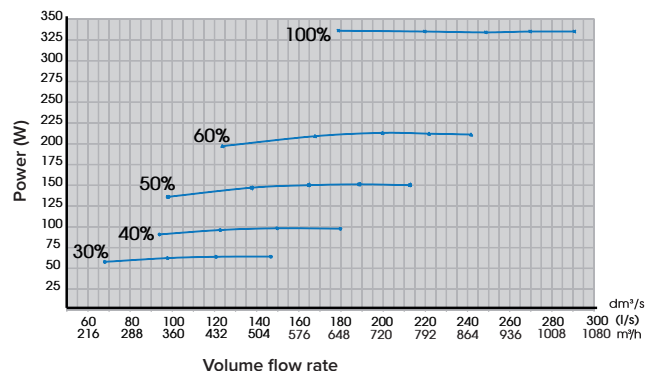
Inner diameter of the female collar:  
200mm

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

## TECHNICAL SPECIFICATIONS

<b>Product titles</b> Vallox 245 MV R Vallox 245 MV L	<b>Product numbers</b> 3513100 3513200	<b>HVAC code</b> 7912051 7912052
<b>Air volumes</b> Supply air Extract air	245dm <sup>3</sup> /s, 100Pa 267dm <sup>3</sup> /s, 100Pa	
<b>Electrical connection</b>	230V, 50Hz 14.5A (power plug)	
<b>Enclosure protection class</b>	IP34	
<b>Post-heating radiator</b>	Power, 1500W	
<b>Preheating radiator</b>	-	
<b>Additional heating radiator</b>	Power, 1500W	
<b>Fans</b> Supply air Extract air	0.17kW 1.25A 0.17kW 1.25A	
<b>Operating efficiencies</b>	Supply air efficiency 85%	
<b>Filters</b>	Supply air G4 and F7	
<b>Heat recovery bypass</b>	Automatic	
<b>Weight</b>	200kg	
<b>Dimensions (width x height x depth)</b>	1038x1241x773mm	

## FAN INPUT POWER



## SUPPLY/EXTRACT AIR VOLUMES

**A** Pressure loss in ducts. Total pressure (Pa)

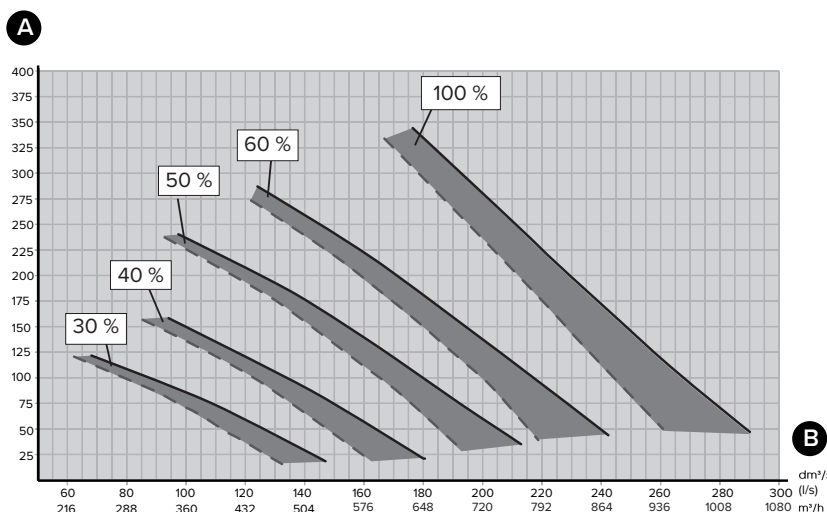
**B** Volume flow rate (dm³/s)

— extract air

- - - - - supply air

SFP rate (Specific Fan Power)  
recommended value <2.0 (kW m³/s)

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

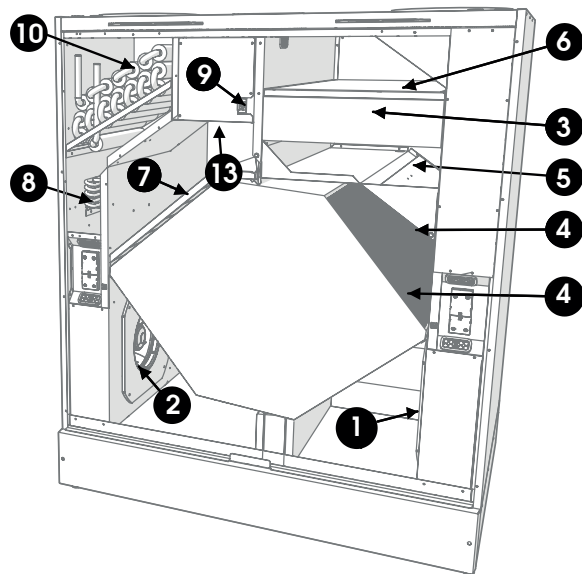


## SOUND VALUES

(one duct) by octave band L <sub>w</sub> , dB						(one duct) by octave band L <sub>w</sub> , dB				
Adjustment position	30%	40%	50%	60%	100%	30%	40%	50%	60%	100%
Air flow dm³/s (l/s)	132	160	190	213	250	143	170	204	230	278
Air flow m³/h	475.2	576	684	766.8	900	514.8	612	734.4	828	1000.8
Medium frequency of the octave band Hz	63	66.1	69.3	72.1	73.8	77.0	53.6	56.7	60.0	62.7
	125	61.8	63.2	66.6	68.8	71.5	54.2	54.1	56.7	59.7
	250	56.0	62.1	63.9	66.6	69.9	50.9	58.4	60.7	64.1
	500	51.3	55.9	59.4	62.8	68.6	38.4	42.2	45.9	47.9
	1000	50.5	54.7	58.1	60.7	64.0	37.4	41.1	44.8	47.5
	2000	49.2	54.0	58.0	60.8	64.4	31.5*	36.2*	40.5	43.4
L <sub>w</sub> , dB	4000	35.6*	42.4	48.0	51.8	56.7	24.7*	28*	30.3*	33.6*
	8000	28.1*	36.3	44.3	48.8	54.2	23.6*	23.8*	24.6*	25.9*
L <sub>wa</sub> , dB(A)	68.0	71.2	74.1	76.1	79.4	58.0	61.6	64.4	67.4	70.0
	56.0	60.4	64.0	66.9	71.1	45.5	50.2	53.4	57.0	59.3
Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m² sound absorption)										
ADJUSTMENT POSITION / AIR FLOWS (supply/extract)										
Adjustment position	30%		40%		50%		60%		100%	
Air flow dm³/s (l/s)	132/148		159/179		192/214		214/243		251/282	
Air flow m³/h	475.2/532.8		572.4/644.4		691.2/770.4		770.4/874.8		903.6/1015.2	
L <sub>pa</sub> , dB (A)	37.1		39.2		42.0		44.5		48.4	



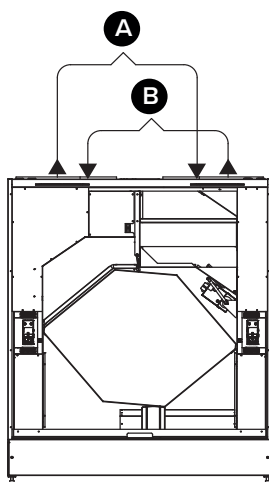
## Main parts



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

- |                        |   |
|------------------------|---|
| 1 Extract air fan      | 6 Supply air filter G4                                  |
| 2 Supply air fan       | 7 Extract air filter G4                                 |
| 3 Supply air filter F7 | 8 Post-heating radiator                                 |
| 4 Heat recovery cell   | 9 Safety switch   |
| 5 Bypass flap          | 10 Post-heating liquid radiator<br>(only in VKL models) |

## Measurement points

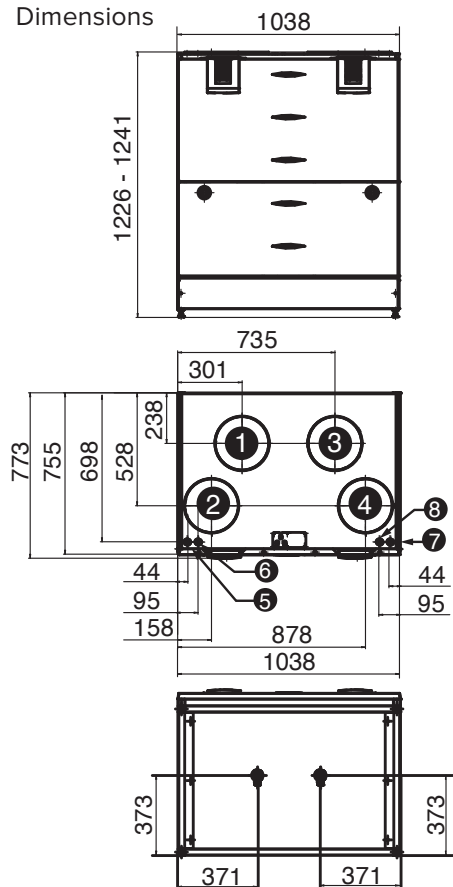


A Supply air  
B Extract air

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

## Dimensions and duct outlets

### Dimensions



### Duct outlets

#### R model

Inner diameter of the female collar: 250mm

1. Extract air from the apartment to the unit
2. Supply air from the unit to the apartment
3. Outdoor air to the unit
4. Exhaust air flowing outdoors from the unit
5. Liquid radiator output (VKL model)
6. Liquid radiator input (VKL model)

#### L model

Inner diameter of the female collar: 250mm

1. Outdoor air to the unit
2. Exhaust air flowing outdoors from the unit
3. Extract air from the apartment to the unit
4. Supply air from the unit to the apartment
7. Liquid radiator output (VKL model)
8. Liquid radiator input (VKL model)

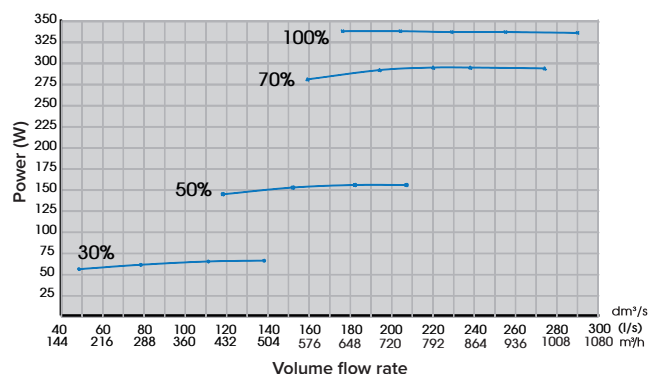
# VALLOX 245 MV VKL

Vallox  
**245**<sub>MV</sub>

## TECHNICAL SPECIFICATIONS

Product titles Vallox 245 MV VKL R Vallox 245 MV VKL L	Product numbers 3513150 3513250	HVAC codes 7912059 7912060
Air volumes Supply air Extract air	219dm <sup>3</sup> /s, 100Pa 267dm <sup>3</sup> /s, 100Pa	
Electrical connection	230V, 50Hz 14.5A (power plug)	
Enclosure protection class	IP34	
Post-heating radiator	Liquid	
Preheating radiator	-	
Additional heating radiator	Electric, 3000W	
Fans Supply air Extract air	0.17kW 1.25A 0.17kW 1.25A	
Operating efficiencies	Supply air efficiency 85%	
Filters	Supply air G4 and F7	
Heat recovery bypass	Automatic	
Weight	210kg	
Dimensions (width x height x depth)	1038x1241x773mm	

## FAN INPUT POWER



## SUPPLY/EXTRACT AIR VOLUMES

**A** Pressure loss in ducts. Total pressure (Pa)

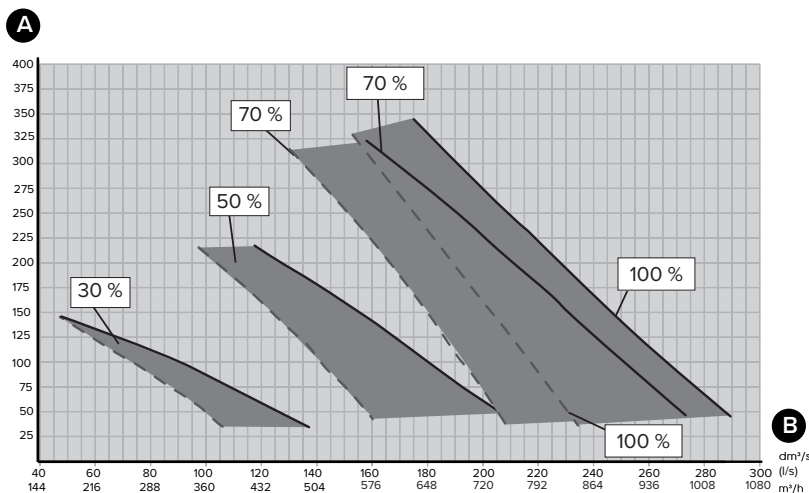
**B** Volume flow rate (dm³/s)

— extract air

- - - - - supply air

SFP rate (Specific Fan Power)  
recommended value <2.0 (kW m³/s)

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



## SOUND VALUES

		Sound power level in the supply air duct (one duct) by octave band L <sub>wp</sub> , dB		Sound power level in the extract air duct (one duct) by octave band L <sub>wp</sub> , dB	
Adjustment position		54%	100%	50%	100%
Air flow dm³/s (l/s)		181	221	204	278
Air flow m³/h		651.6	795.6	734.4	1000.8
Medium frequency of the octave band Hz	63	72.2	76.3	60.0	66.3
	125	66.5	71.1	56.7	62.4
	250	64.7	69.0	60.7	65.5
	500	59.3	65.8	45.9	51.8
	1000	57.3	61.8	44.8	50.7
	2000	56.6	61.6	40.5	47.1
	4000	45.5	52.0	30.3*	38.1
	8000	39.6	47.0	24.6*	28.2*
L <sub>wp</sub> , dB		74.2	78.5	64.4	70.0
L <sub>WA</sub> , dB(A)		63.4	68.7	53.4	59.3
Sound pressure level, in decibels (A) coming through the envelope from the room in which the unit is installed (10m² sound absorption)					
ADJUSTMENT POSITION / AIR FLOWS (supply/extract)					
Adjustment position		supply 54 / extract 44		supply 100 / extract 100	
Air flow dm³/s (l/s)		supply 181 / extract 190		supply 221 / extract 282	
L <sub>pA</sub> , dB (A)		41.5		47.5	

# PRESSURE LOSS MEASUREMENTS OF THE LIQUID SIDE

Water flow dm <sup>3</sup> /s	Pressure loss kPa
0.100	53
0.075	31
0.050	14.5
0.040	9.5
0.025	4.0
0.020	2.7

# INPUT MEASUREMENTS

The measurements were taken using 55°C water. Other values have been derived from these measurements.

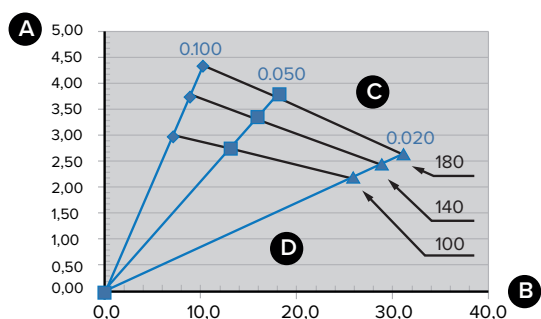
A Thermal input, kW

B Difference in water temperature, °C

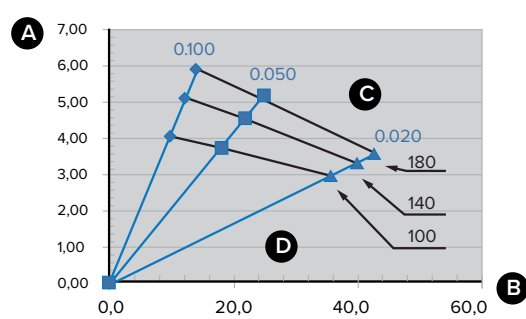
C Water flow dm<sup>3</sup>/s

D Air flow dm<sup>3</sup>/s

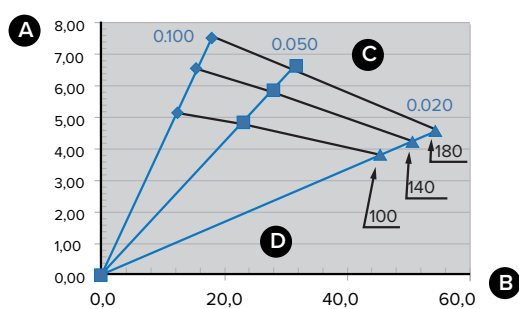
Vallox 245 MV liquid radiator  $t_{a1}=15^{\circ}\text{C}$ ,  $t_{f1}=55^{\circ}\text{C}$



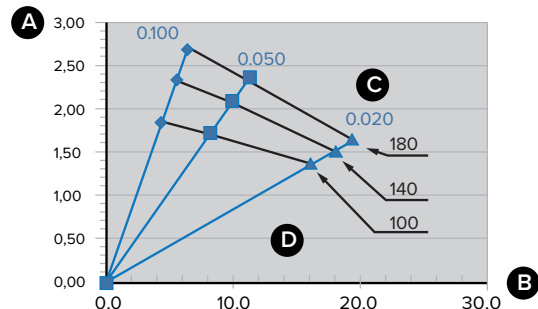
Vallox 245 MV liquid radiator  $t_{a1}=15^{\circ}\text{C}$ ,  $t_{f1}=70^{\circ}\text{C}$



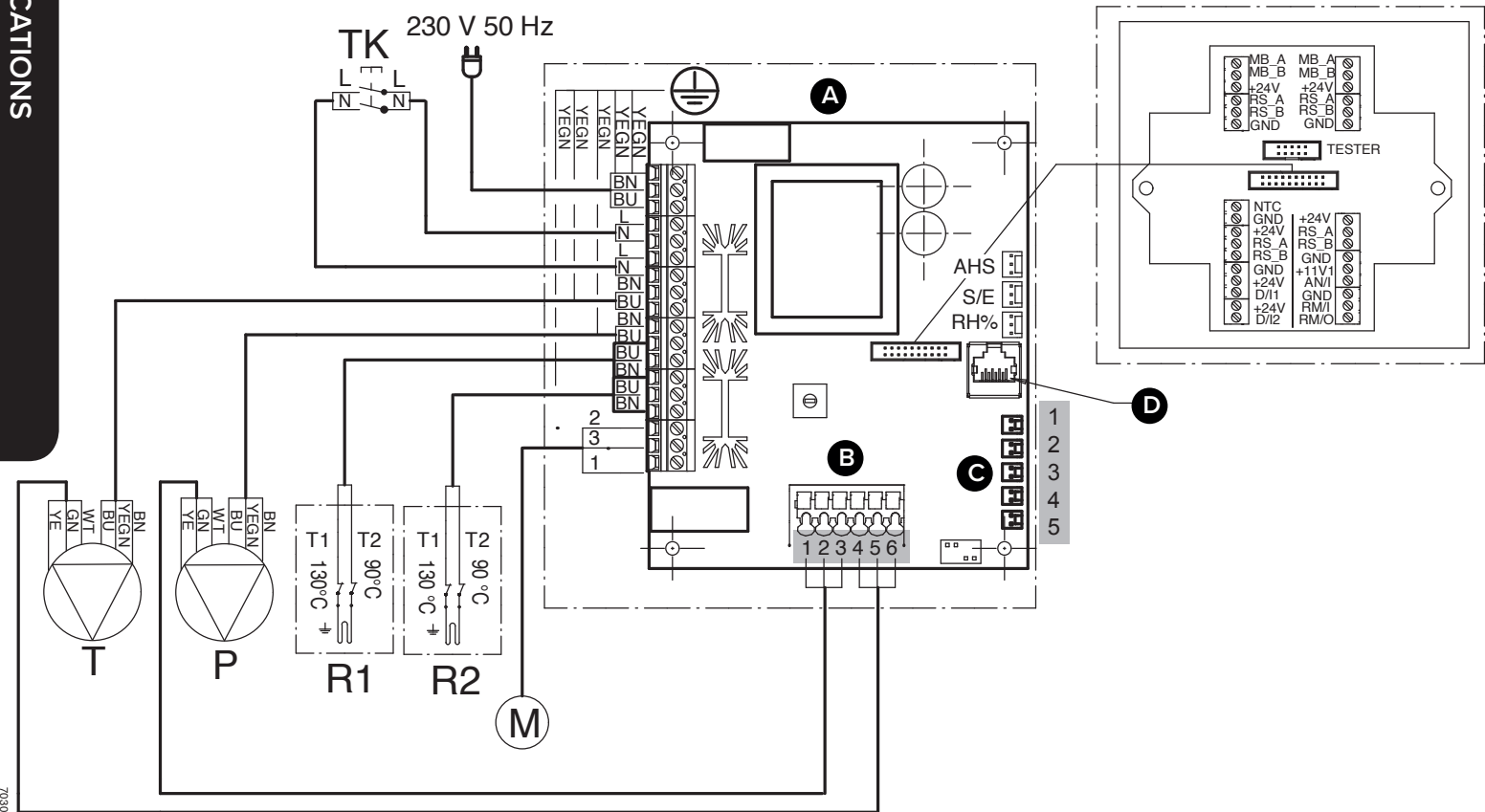
Vallox 245 MV liquid radiator  $t_{a1}=15^{\circ}\text{C}$ ,  $t_{f1}=85^{\circ}\text{C}$



Vallox 245 MV liquid radiator  $t_{a1}=15^{\circ}\text{C}$ ,  $t_{f1}=40^{\circ}\text{C}$



# INTERNAL ELECTRICAL CONNECTION



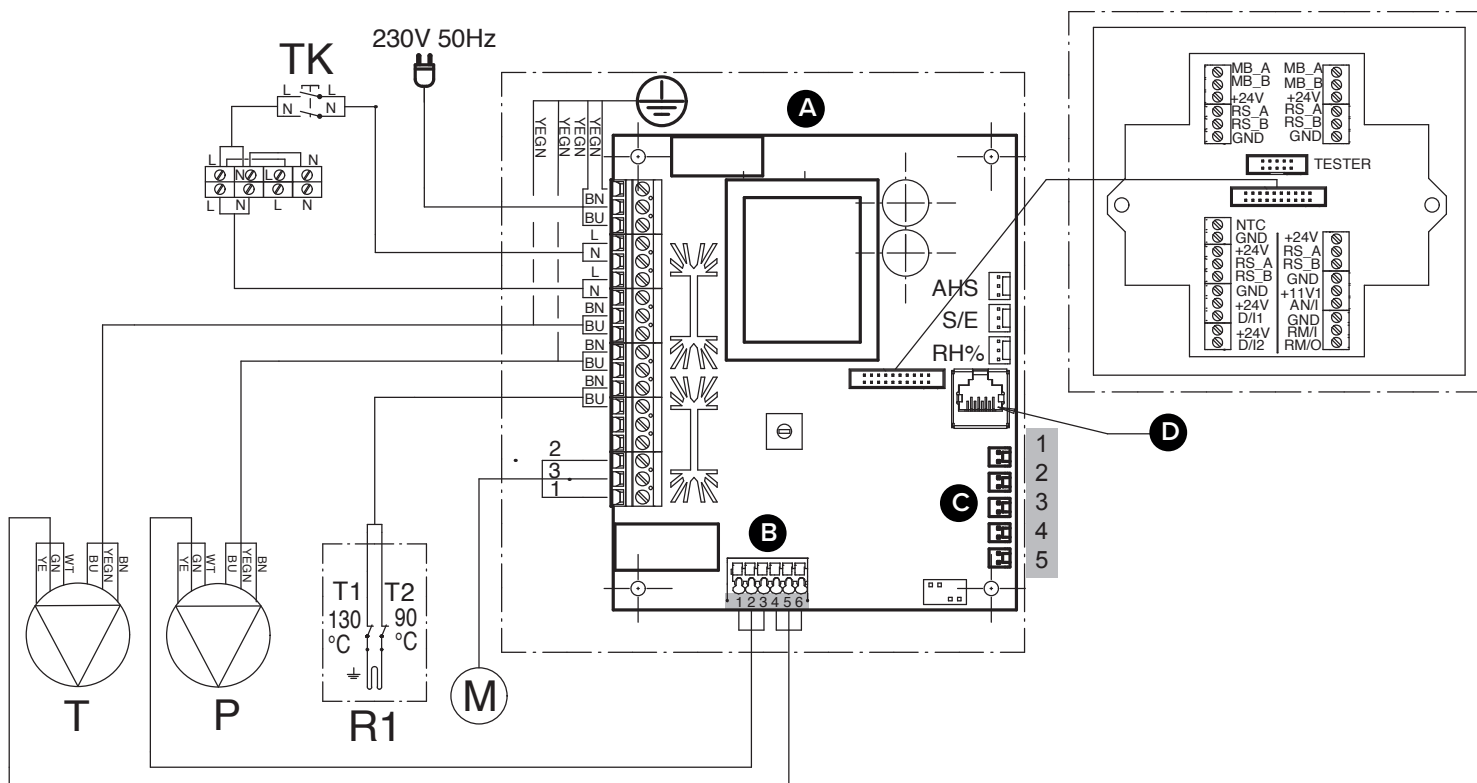
A	Motherboard
B	1. Extract air fan tacho (WT) 2. GND (GN) 3. Extract air fan PWM (YE) 4. Supply air fan tacho (WT) 5. GND (GN) 6. Supply air fan PWM (YE)
C	1. Extract air 2. Outdoor air 3. Supply air 4. Exhaust air 5. Supply air from the cell
D	LAN

## CABLE COLOURS

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

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

S	Supply air fan
P	Extract air fan
M	Damper motor
TK	Safety switch
AHS	Post-heating control
S/E	Fan balance adjustment
RH%	Internal humidity sensor
R1	Post-heating radiator with 90°C and 130°C overheating protection (Vallox TSK Multi 50 MV EH / Vallox TSK Multi 80 MV EH, EHX)
R2	Additional heating radiator with 90°C and 130°C overheating protection (Vallox TSK Multi 80 MV EHX)



A	Motherboard
B	1. Extract air fan tacho (WT) 2. GND (GN) 3. Extract air fan PWM (YE) 4. Supply air fan tacho (WT) 5. GND (GN) 6. Supply air fan PWM (YE)
C	1. Extract air 2. Outdoor air 3. Supply air 4. Exhaust air 5. Supply air from the cell
D	LAN

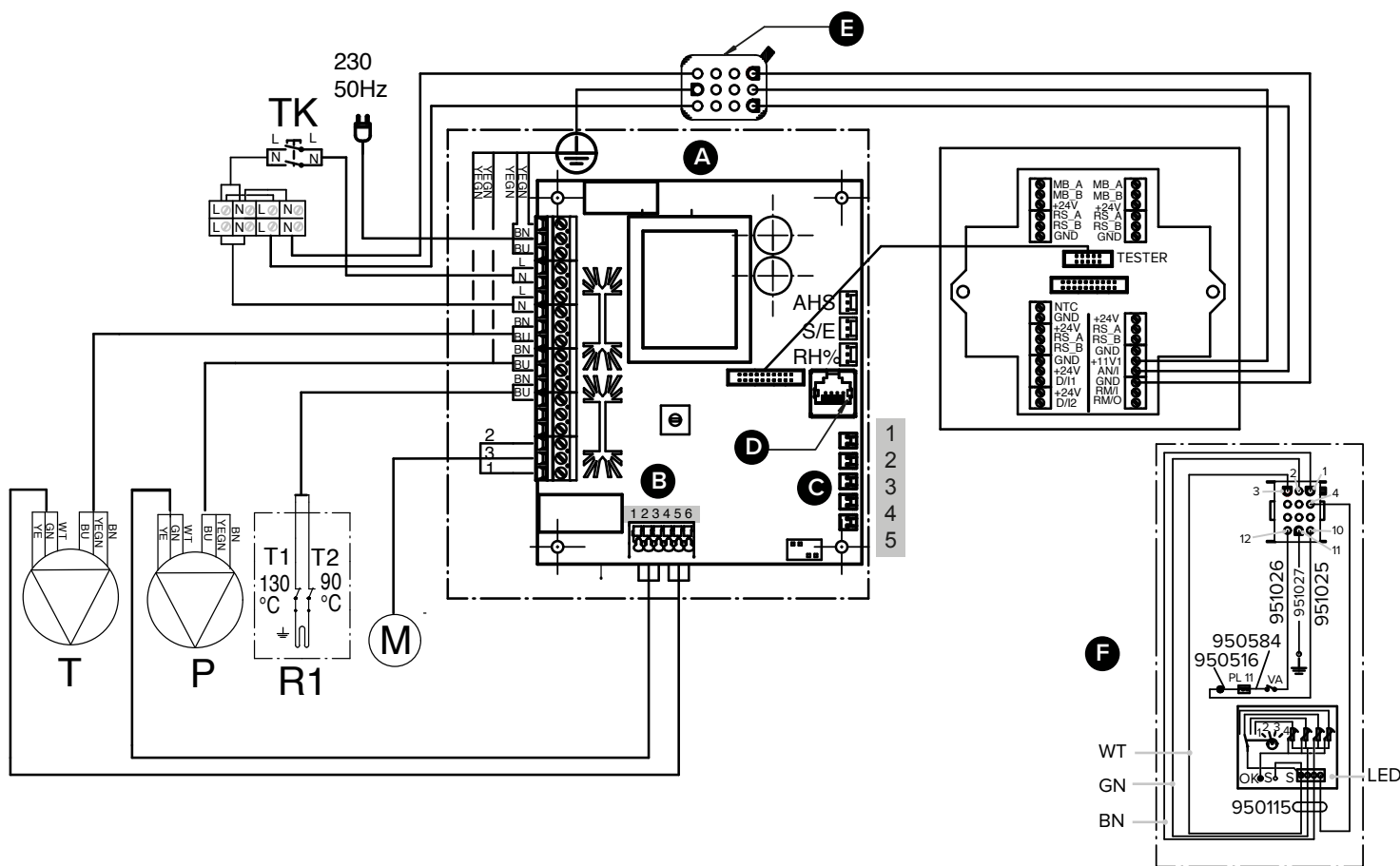
### CABLE COLOURS

BU	Blue
BN	Brown
WT	White
GY	Grey
YE	Yellow
YEGN	Yellow-green

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

S	Supply air fan
P	Extract air fan
M	Damper motor
TK	Safety switch
AHS	Post-heating control
S/E	Fan balance adjustment
RH%	Internal humidity sensor
R1	Post-heating radiator with 90°C and 130°C overheating protection

# INTERNAL ELECTRICAL CONNECTION



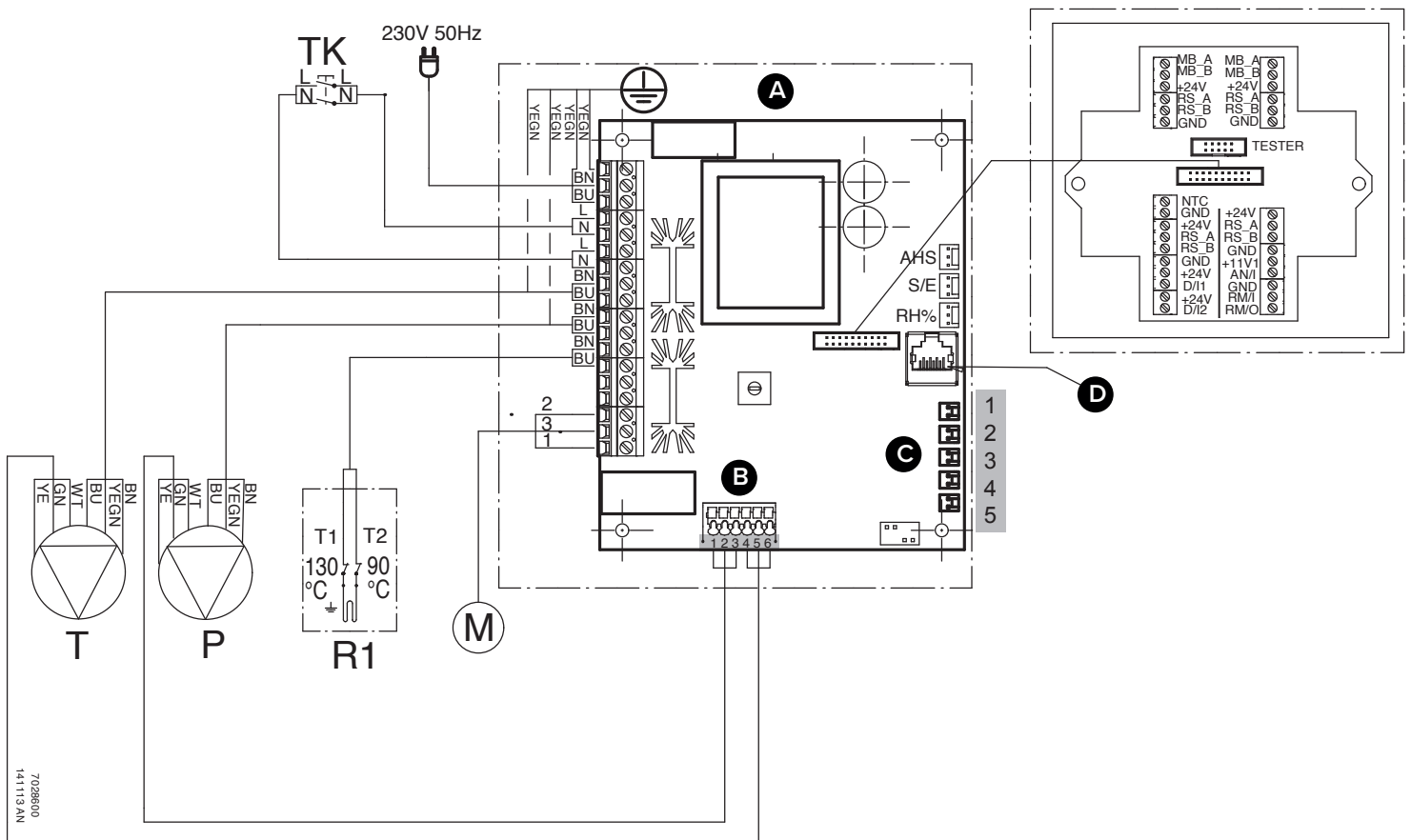
A	Motherboard
B	1. Extract air fan tachometer (WT) 2. GND (GN) 3. Extract air fan PWM (YE) 4. Supply air fan tachometer (WT) 5. GND (GN) 6. Supply air fan PWM (YE)
C	1. Extract air 2. Outdoor air 3. Supply air 4. Exhaust air 5. Supply air from the cell
D	LAN
E	Hood connector
F	Vallox 90 K SC Hood

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

S	Supply air fan
P	Extract air fan
M	Damper motor
TK	Safety switch
AHS	Post-heating control
S/E	Fan balance adjustment
RH%	Internal humidity sensor
R1	Post-heating radiator with 90°C and 130°C overheating protection

## CABLE COLOURS

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



A	Motherboard
B	1. Extract air fan tachometer (WT) 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 2. Outdoor air 3. Supply air 4. Exhaust air 5. Supply air from the cell
D	LAN

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

S	Supply air fan
P	Extract air fan
M	Damper motor
TK	Safety switch
AHS	Post-heating control
S/E	Fan balance adjustment
RH%	Internal humidity sensor
R1	Post-heating radiator with 90°C and 130°C overheating protection

## CABLE COLOURS

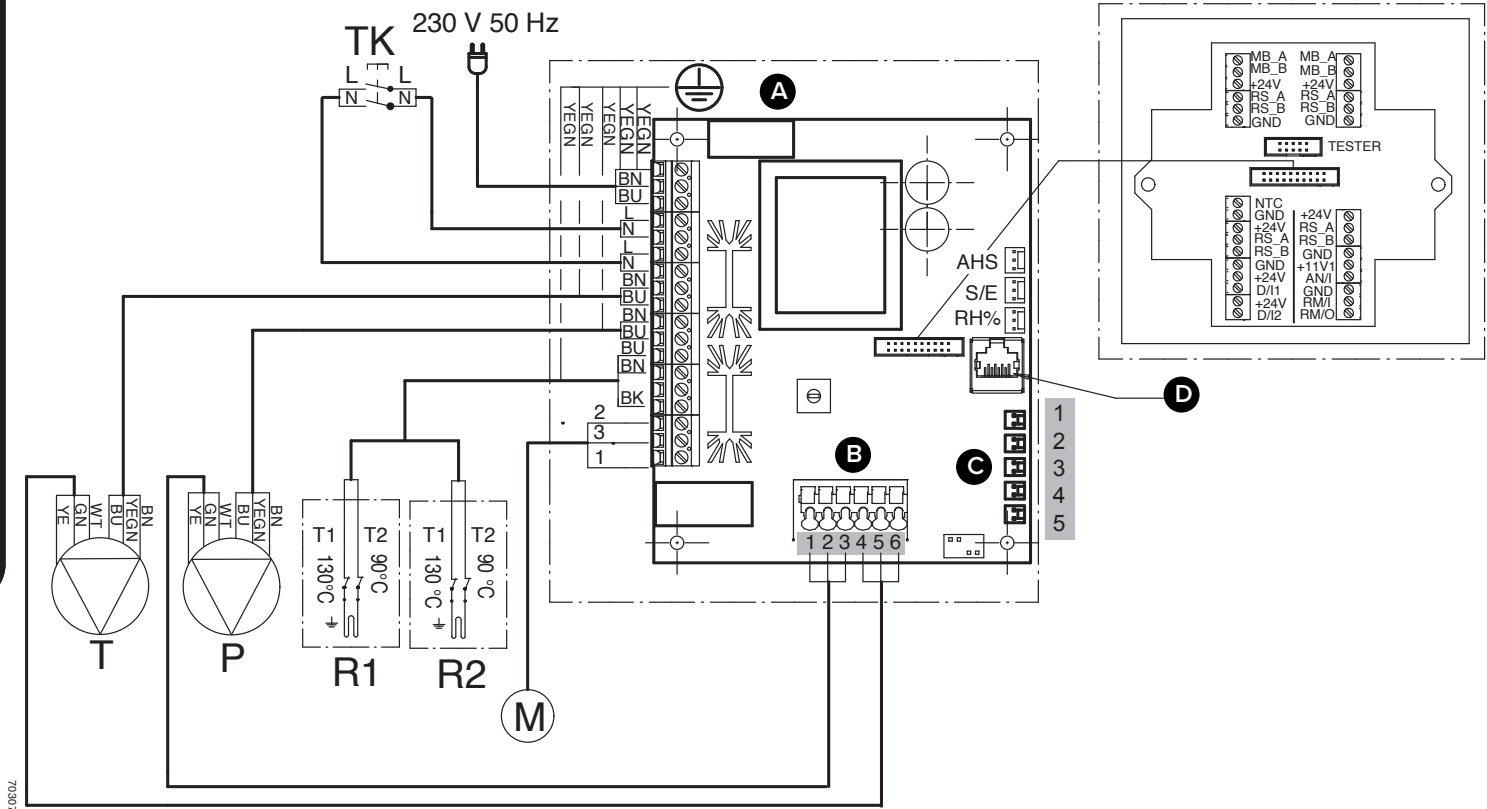
BK	Black
BU	Blue
BN	Brown
WT	White
GY	Grey
YE	Yellow
YEGN	Yellow-green

# INTERNAL ELECTRICAL CONNECTION

Vallox  
**110<sub>MV</sub>**

Vallox  
**145<sub>MV</sub>**

Vallox  
**245<sub>MV</sub>**



7030700-US

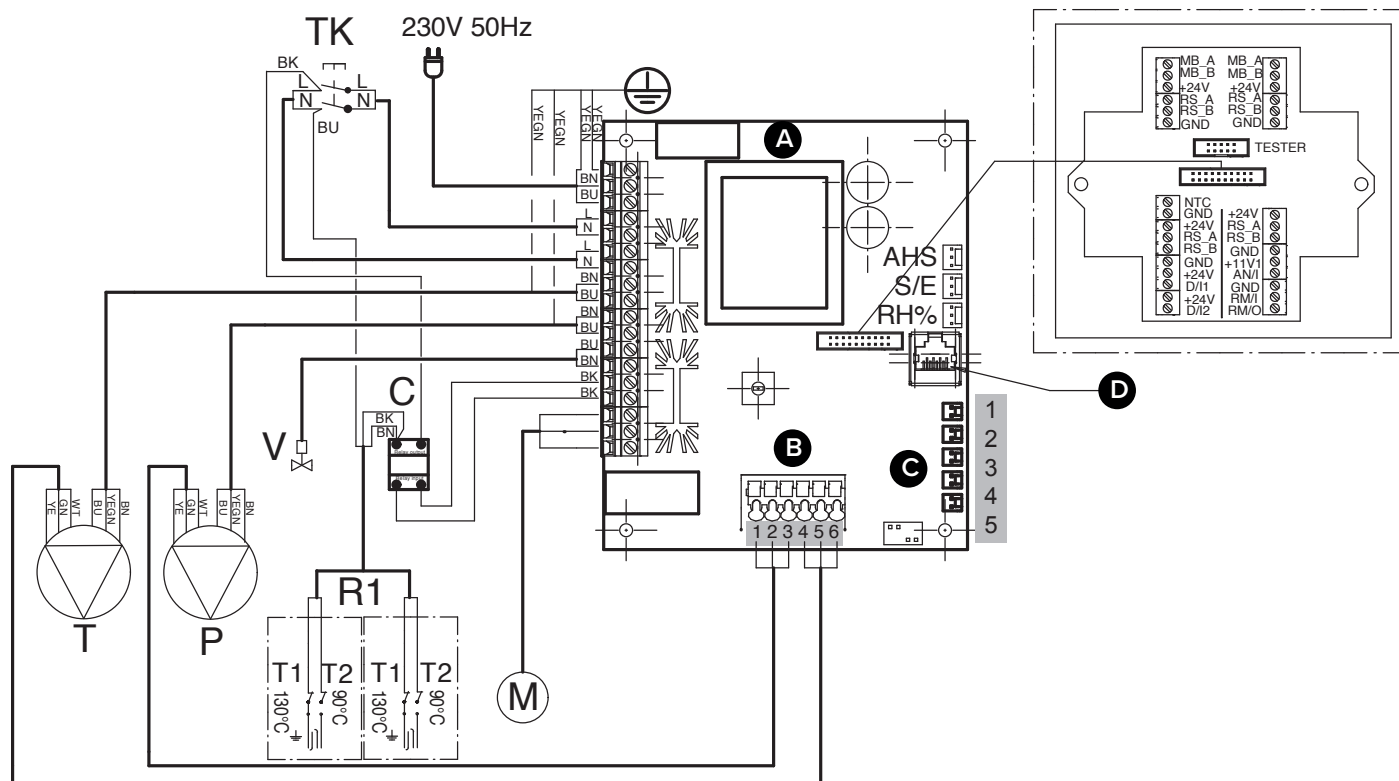
A	Motherboard
B	1. Extract air fan tachometer (WT) 2. GND (GN) 3. Extract air fan PWM (YE) 4. Supply air fan tachometer (WT) 5. GND (GN) 6. Supply air fan PWM (YE)
C	1. Extract air 2. Outdoor air 3. Supply air 4. Exhaust air 5. Supply air from the cell
D	LAN

CABLE COLOURS	
BK	Black
BU	Blue
BN	Brown
WT	White
GY	Grey
YE	Yellow
YEGN	Yellow-green

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

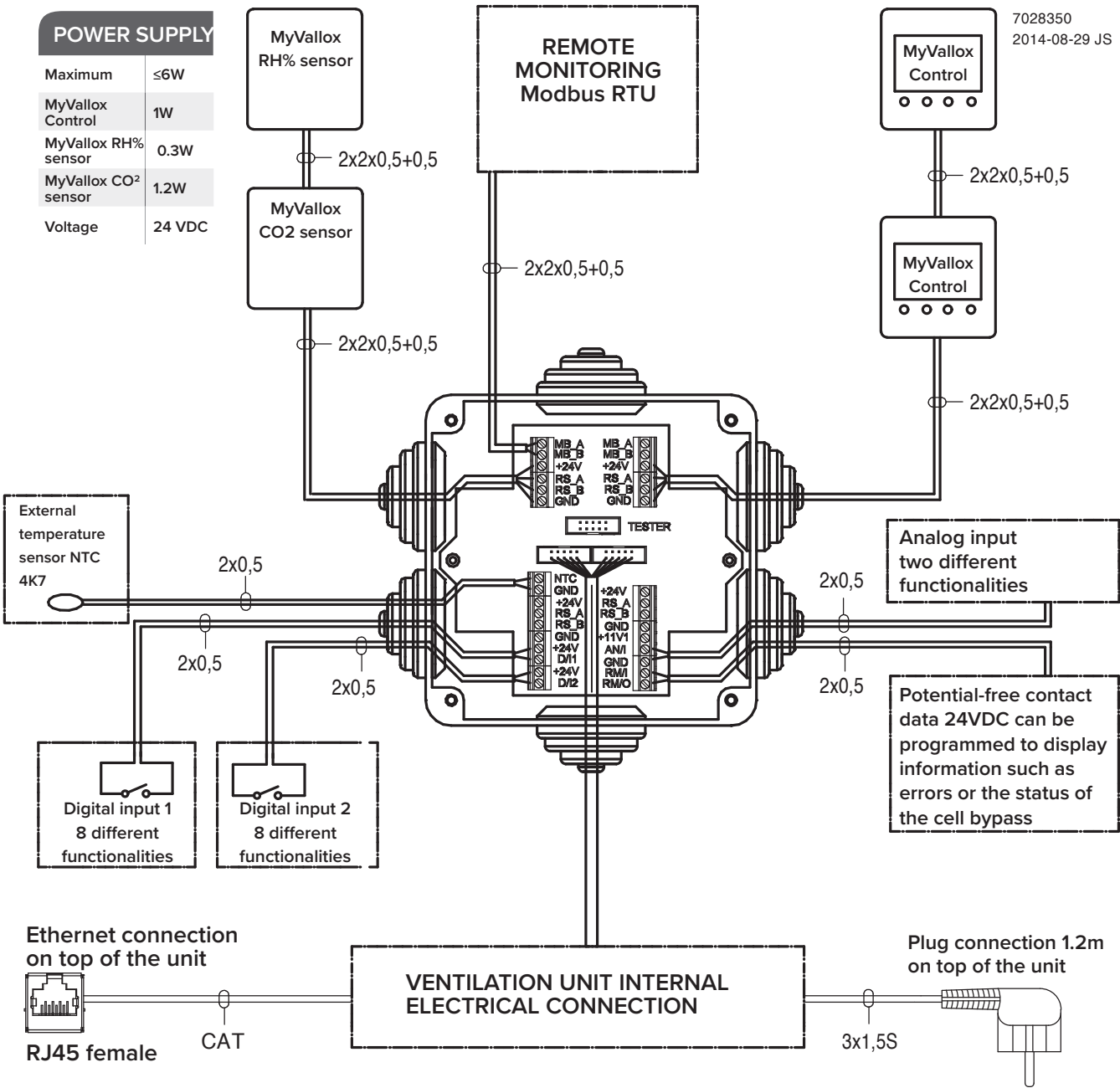
S	Supply air fan
P	Extract air fan
M	Damper motor
TK	Safety switch
AHS	Post-heating control
S/E	Fan balance adjustment
RH%	Internal humidity sensor
R1	Post-heating radiator with 90°C and 130°C overheating protection
R2	Additional heating radiator with 90°C and 130°C overheating protection



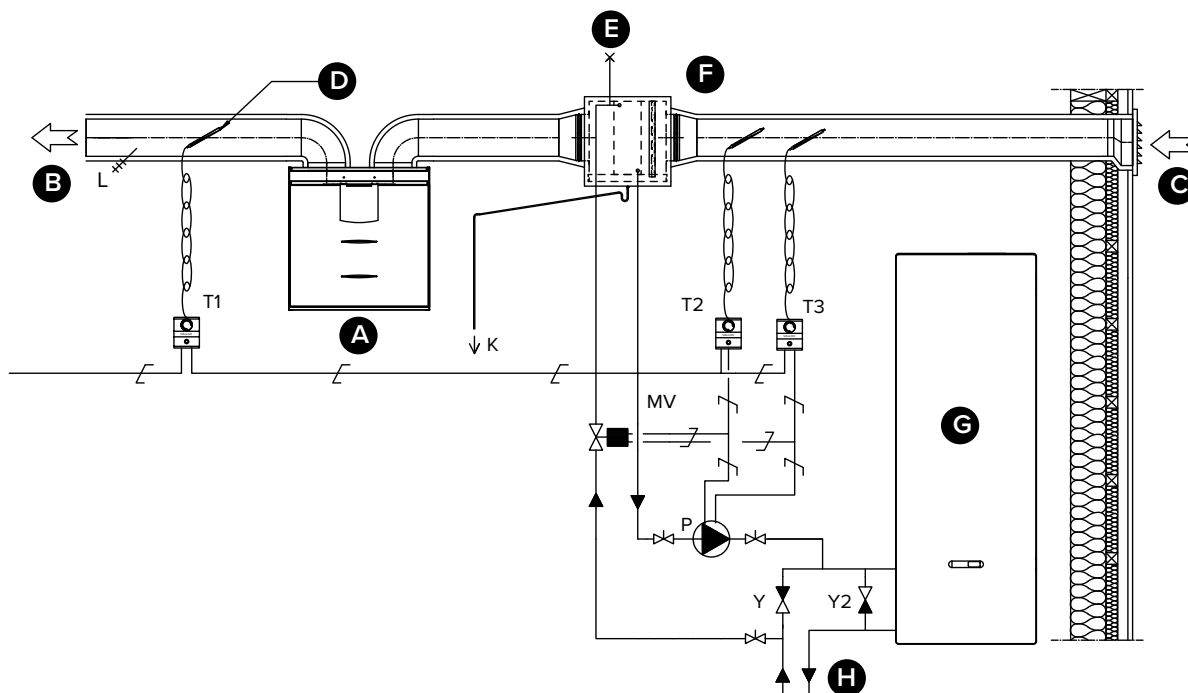


A	Motherboard	MB_A	External Modbus A signal	V	Liquid radiator actuator
B	1. Extract air fan tacho (WT)	MB_B	External Modbus B signal	S	Supply air fan
	2. GND (GN)	+24V	+24V voltage (DC)	P	Extract air fan
	3. Extract air fan PWM (YE)	GND	Digital and analog ground potential	M	Damper motor
	4. Supply air fan tacho (WT)	RS_A	Local hardware Modbus A signal	TK	Safety switch
	5. GND (GN)	RS_B	Local hardware Modbus B signal	C	Heating resistor relay
C	1. Extract air	NTC	External temperature sensor connector	AHS	Post-heating control
	2. Outdoor air	D/I1	Digital input 1	S/E	Fan balance adjustment
	3. Supply air	D/I2	Digital input 2	RH%	Internal humidity sensor
D	4. Exhaust air	11V1	11.1 V operating voltage	R1	Additional heating radiator with 90°C and 130°C overheating protection
	5. Supply air from the cell	AN/I	Analog input 0-10VDC		
		RM/I	24V relay input		
		RM/O	24V relay output		
<div>CABLE COLOURS</div>					
BK	Black				

# EXTERNAL ELECTRICAL CONNECTION



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



## Operation and sample connection

Always follow first and foremost the connection diagram provided by the HVAC designer or heat pump manufacturer. Also read the duct radiator manual.

Enclosed is an example of connecting the duct radiator to the heat collection circuit.

Connect the duct radiator output pipe to the heat collection circuit return pipe. The fluid returning from the duct radiator is directed back to the heat collection circuit return pipe. If the pressure loss inside the heat collection circuit of the heat pump is known to be high, it is recommended that the heat pump be bypassed. When this happens the pressure loss in the one-way bypass valve Y2 must be lower than the pressure loss in the heat pump.

If the duct radiator is used both for preheating and cooling, it must be installed in the outdoor air duct before the ventilation unit. In this case, the pump and the solenoid valve can be controlled using a Vallox MV ventilation unit, and no separate thermostats are needed.

P	Circulation pump. Not included in the delivery. The pump must be compatible with the fluid used in the heat collection circuit, and its capacity must be correct.
MV	Solenoid valve. Not included in the delivery. The valve that is chosen must be compatible with the heat collection circuit fluid.
K	Condensing water tube. Not included in the delivery.
L	Supply air thermometer. Not included in the delivery.
IP	De-aerator. Not included in the delivery.
S	External MV electrical connection box.
C	24 VDC relay/contactor for controlling the pump and the solenoid valve. Not included in the delivery. (For example, ABB CR-P024DC2)
Y	One-way valve. Not included in the delivery.
Y2	One-way valve. Not included in the delivery. The pressure loss must be less than the pressure loss of the heat pump.

A	Ventilation unit
B	Supply air
C	Outdoor air
D	Sensor
E	Air extraction
F	Duct radiator (reverse connection)
G	Heat pump
H	Heat collection circuit



### NOTE: HEATING

The pump starts when the outdoor air temperature drops below the winter limit value set at the factory (-5 °C).



### NOTE: COOLING

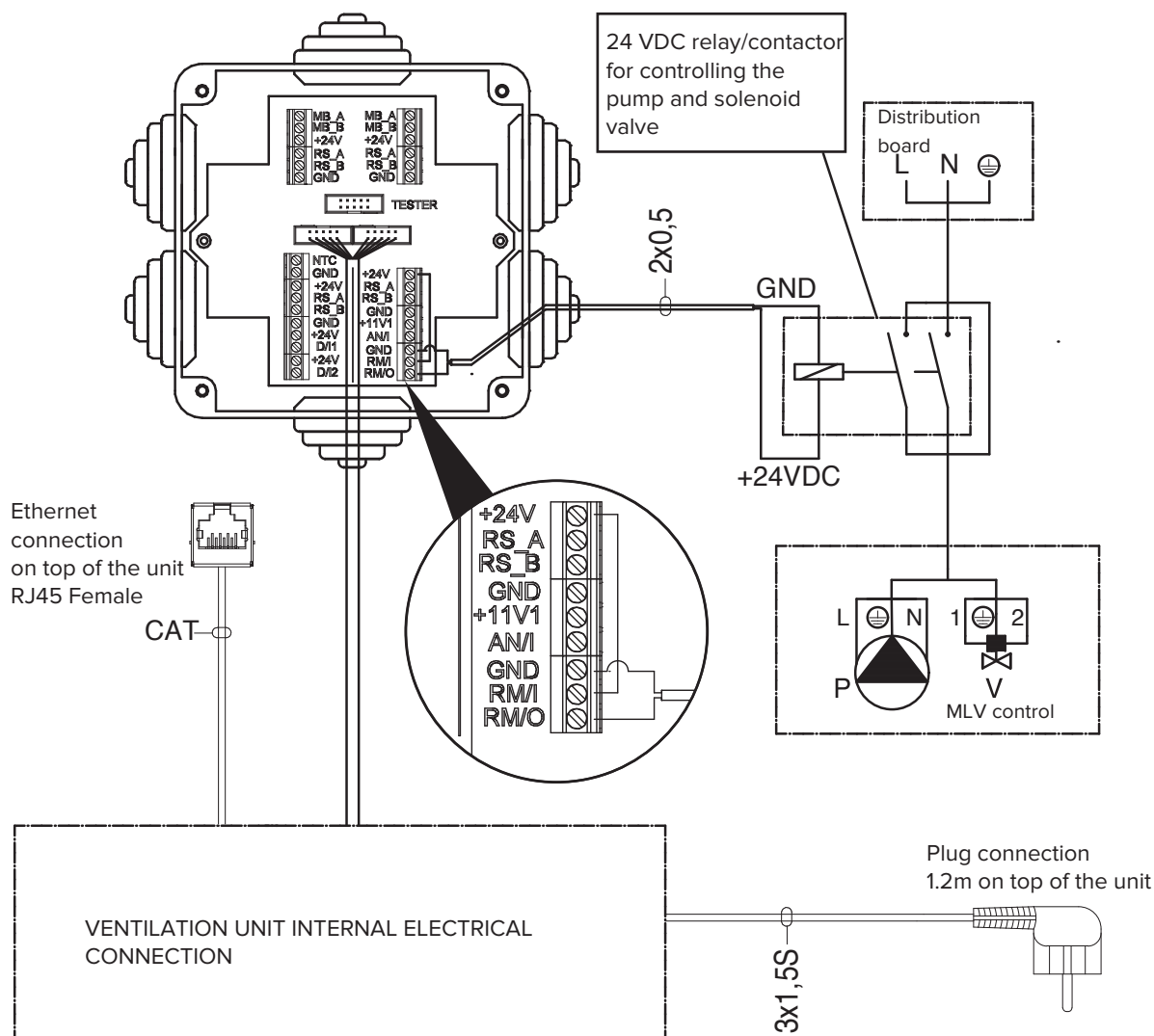
The value set for the supply air temperature of the active profile (e.g. At home) controls the startup of the pump. The pump starts when the supply air setting is below the temperature of the supply air that is blown into the apartment.



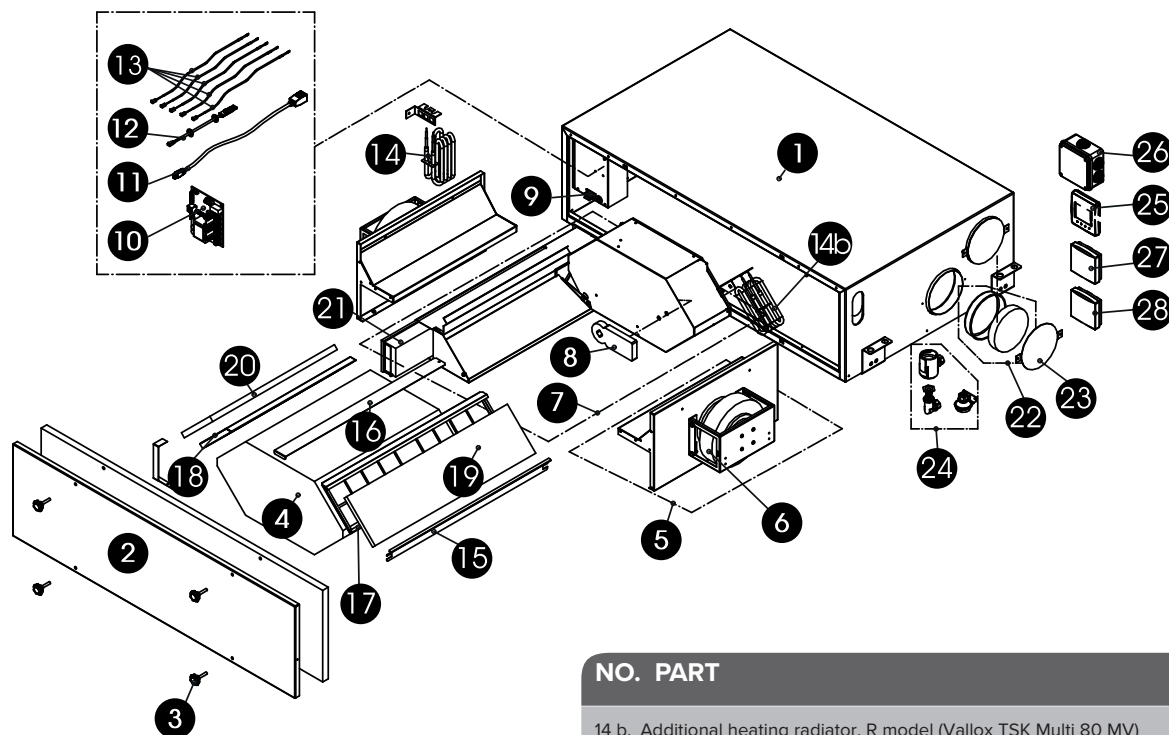
### NOTE

When selecting the relay (C), take account of the maximum allowed combined power supply (6W) of the circuit board in the external MV electrical connection box, if the relay power supply comes from the circuit board's +24V connector.

# EXTERNAL ELECTRICAL CONNECTION FOR CONTROLLING THE MLV MULTI RADIATOR



+24V	+24V voltage (DC)
GND	Digital and analog ground potential
RS_A	Local hardware Modbus A signal
RS_B	Local hardware Modbus B signal
11V1	11.1 V operating voltage
AN/I	Analog input 0-10VDC
RM/I	24V relay input
RM/O	24V relay output
P	Circulation pump
V	Solenoid valve



## NO. PART

## CODE

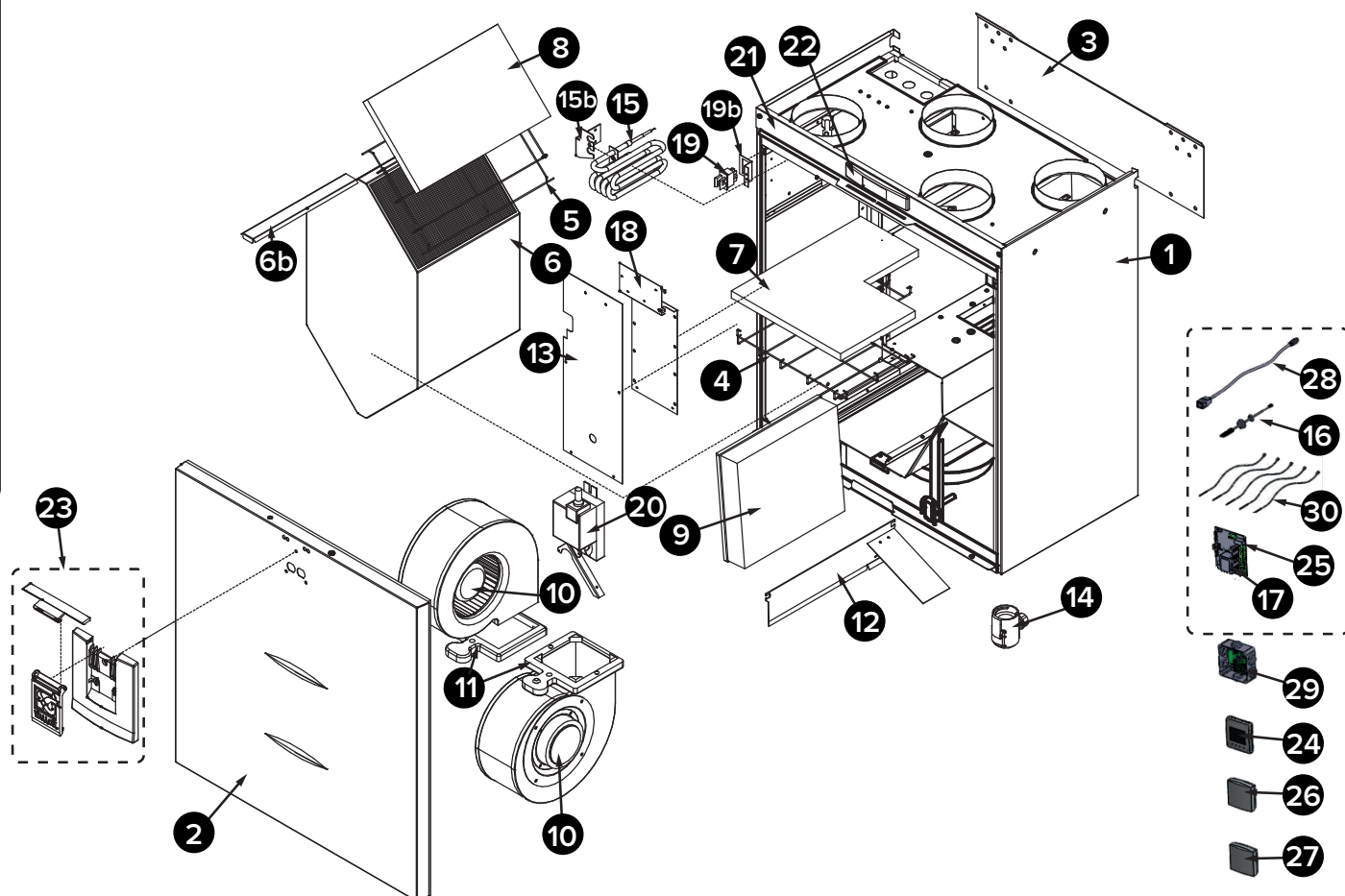
1.	Frame: Vallox TSK Multi 50 MV / 80 MV	
2.	Door (Vallox TSK Multi 50 MV)	3473500
2.	Door (Vallox TSK Multi 80 MV)	3483000
3.	Finger screw for the door	990698
4.	HR cell, plastic (Vallox TSK Multi 50 MV)	933175
4.	HR cell, aluminium (Vallox TSK Multi 50 MV)	933120
4.	HR cell, plastic (Vallox TSK Multi 80 MV)	933195
4.	HR cell, aluminium (Vallox TSK Multi 80 MV)	933130
5.	Fan assembly, R and L models (Vallox TSK Multi 50 MV)	3473400
5.	Fan assembly, R and L models (Vallox TSK Multi 80 MV)	3482900
6.	Fan (Vallox TSK Multi 50 MV)	935385
6.	Fan (Vallox TSK Multi 80 MV)	935375
7.	Bypass duct assembly (Vallox TSK Multi 50 MV R)	3432700
7.	Bypass duct assembly (Vallox TSK Multi 50 MV L)	3551300
7.	Bypass duct assembly (Vallox TSK Multi 80 MV R)	3479500
7.	Bypass duct assembly (Vallox TSK Multi 80 MV L)	3551400
8.	Damper actuator, R model	930621
9.	Safety switch	948370
10.	Motherboard	949032
11.	RJ extension cable	952196
12.	Humidity sensor, integrated	946148-1
13.	NTC sensor kit	3494100
14.	Post-heating radiator, R model	942210
14.	Post-heating radiator, L model	942211

## NO. PART

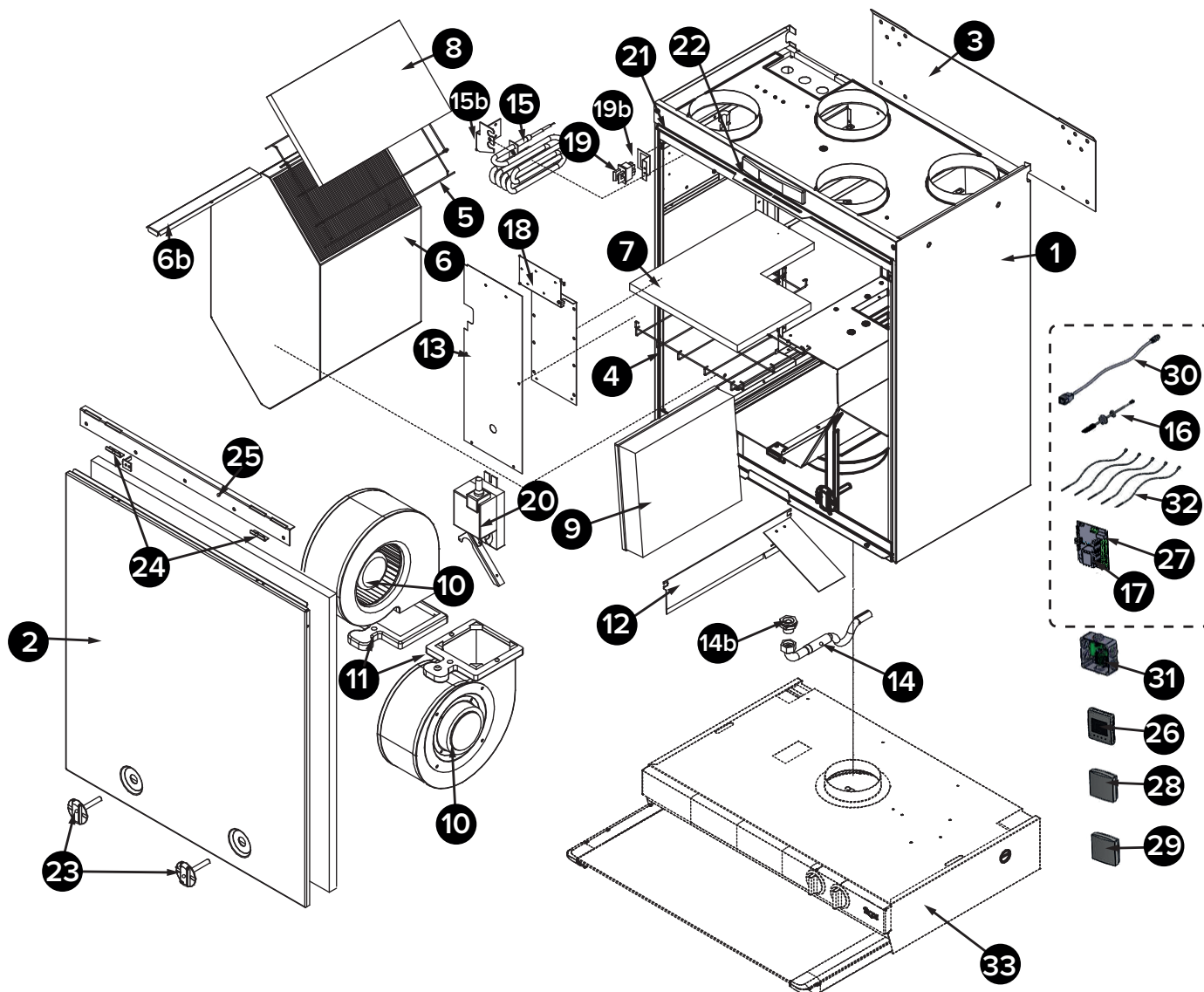
## CODE

14 b.	Additional heating radiator, R model (Vallox TSK Multi 80 MV)	942210
14 b.	Additional heating radiator 900W (Vallox TSK Multi 80 MV EHX L)	942211
15.	Side sealing strip of the heat recovery cell (Vallox TSK Multi 50 MV)	3356300
15.	Side sealing strip of the heat recovery cell (Vallox TSK Multi 80 MV)	3352600
16.	Side sealing strip of the heat recovery cell (Vallox TSK Multi 50 MV)	3356300
16.	Side sealing strip of the heat recovery cell (Vallox TSK Multi 80 MV)	3352600
17.	Filter stand (G4, 500mm, supply, Vallox TSK Multi 50 MV)	3356400
17.	Filter stand (G4, 580mm, supply, Vallox TSK Multi 80 MV)	3352700
18.	Filter stand (G4, 400mm, extract, Vallox TSK Multi 50 MV)	3382800
18.	Filter stand (G4, 450mm, extract, Vallox TSK Multi 80 MV)	3368500
19.	Filter (G4, supply, Vallox TSK Multi 50 MV)	978036
19.	Filter (G4, supply, Vallox TSK Multi 80 MV)	3326700
20.	Filter (G4, extract, Vallox TSK Multi 50 MV)	978035
20.	Filter (G4, extract, Vallox TSK Multi 80 MV)	3379700
21.	Filter (F7, supply, Vallox TSK Multi 50 MV)	978136
21.	Filter (F7, supply, Vallox TSK Multi 80 MV)	978135
22.	Plug (Vallox TSK Multi 50 MV)	990630
22.	Plug (Vallox TSK Multi 80 MV)	990640
23.	Cover panel 100mm (Vallox TSK Multi 50 MV)	3363500
23.	Cover panel 125mm (Vallox TSK Multi 80 MV)	3363600
24.	Water seal Vallox Silent Klick	3494700
25.	MyVallox Control control panel	949033
26.	Connection box assembly	3526700
27.	MyVallox humidity sensor (optional)	946149
28.	MyVallox carbon dioxide sensor (optional)	949111

# EXPLODED VIEW AND PARTS LIST



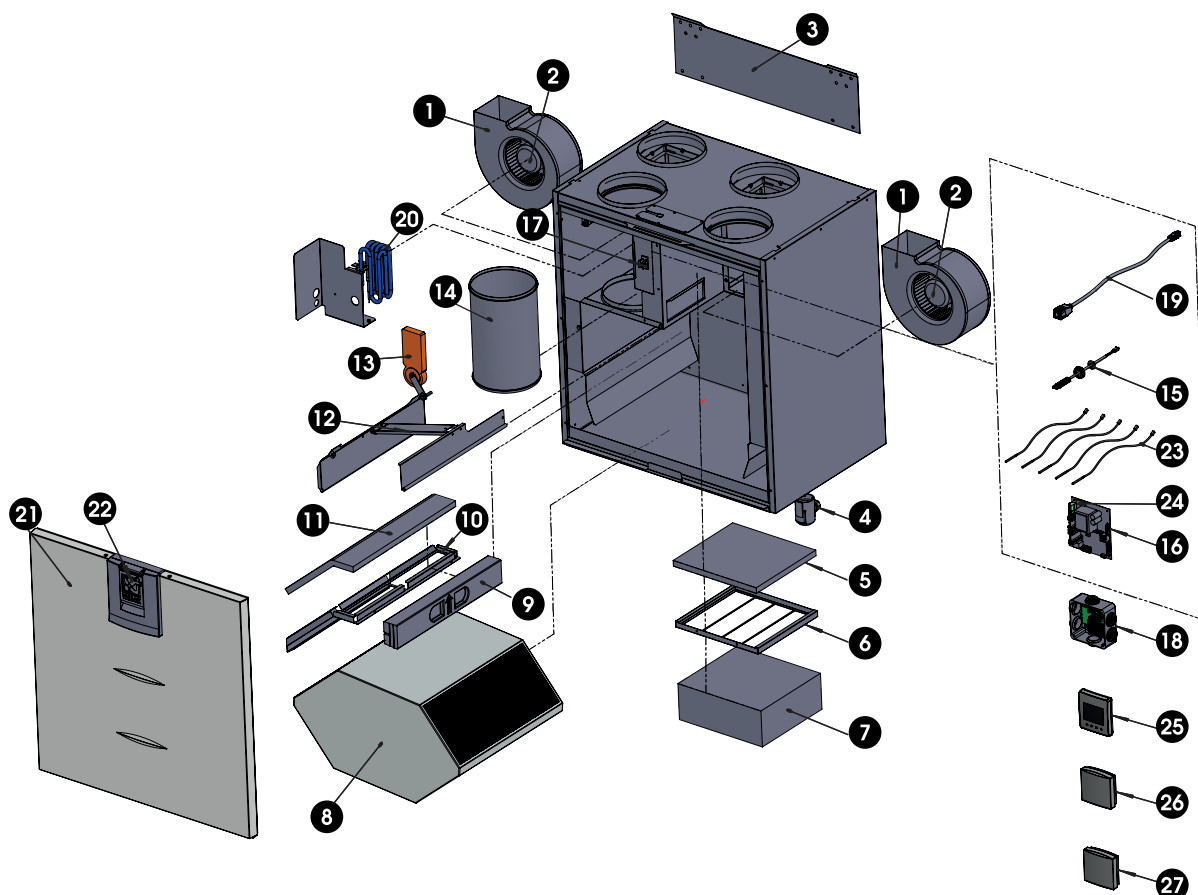
NO. PART	CODE	NO. PART	CODE	NO. PART	CODE
1. Side panel	3239010	13. Lid of the electric box	3456100	25. Glass tube fuse 80mA slow 5x20mm	952488
2. Door	3368800	14. Water seal Vallox Silent Klick	3494701	26. MyVallox humidity sensor (optional)	946149
3. Wall mounting plate	3080700	15. Post-heating resistor	942211	27. MyVallox carbon dioxide sensor (optional)	949111
4. Filter stand (G4, supply)	3491001	16. Internal humidity sensor	946148-1	28. RJ45 extension cable	952197
5. Filter stand (G4, extract)	3490900	17. Motherboard	949032	29. Connection box assembly	3526700
6. HR cell	933070	18. Circuit board mount	3443400	30. NTC sensor kit	946145
6 b. Upper sealing slip of the cell	3241600	19. Safety switch	948370		
7. Filter (G4, supply)	978028	19 b. Safety switch enclosure	3234900		
8. Filter (G4, extract) Until 26.5.2014 Since 27.5.2014	978027 978031	20. Damper motor	3572800		
9. Filter (F7, supply)	978110	21. Front panel of the top part of the unit	3378000		
10. Fan	935360	22. Name plate	990991		
11. Rubber cushion of the fan	975040	23. Door latch	990990		
12. Summer/winter damper assembly (specify whether left- or right-handed in the order)	3372800	24. MyVallox Control control panel	949033		



NO. PART	CODE	NO. PART	CODE	NO. PART	CODE
1. Side panel	3239010	13. Lid of the electric box	3456100	23. Finger screws	990710
2. Door	3259900	14. Water seal Vallox Silent Klick	3086800	24. Cover door mount	3295800
3. Wall mounting plate	3080700	14b. Flange nipple assembly	3420200	25. Cover door mounting strip	3296000
4. Filter stand (G4, supply)	3491001	15. Post-heating resistor	942211	26. MyVallox Control control panel	949033
5. Filter stand (G4, extract)	3490900	15b. Post-heating radiator mount (specify whether left- or right-handed in the order)	3396504	27. Glass tube fuse 80mA slow 5x20mm	952488
6. HR cell	933070	16. Internal humidity sensor	946148-1	28. MyVallox humidity sensor (optional)	946149
6 b. Upper sealing slip of the cell	3241600	17. Motherboard	949032	29. MyVallox carbon dioxide sensor (optional)	949111
7. Filter (G4, supply)	978028	18. Circuit board mount	3443400	30. RJ45 extension cable	952197
8. Filter (G4, extract) Until 26.5.2014 Since 27.5.2014	978027 978031	19. Safety switch	948370	31. Connection box assembly	3526700
9. Filter (F7, supply)	978110	19b. Safety switch enclosure	3234900	32. NTC sensor kit	946145
10. Fan	935360	20. Damper motor	3572800		
11. Rubber cushion of the fan	975040	21. Front panel of the top part of the unit	3378000		
12. Summer/winter damper assembly (specify whether left- or right-handed in the order)	3372800	22. Name plate	990991		

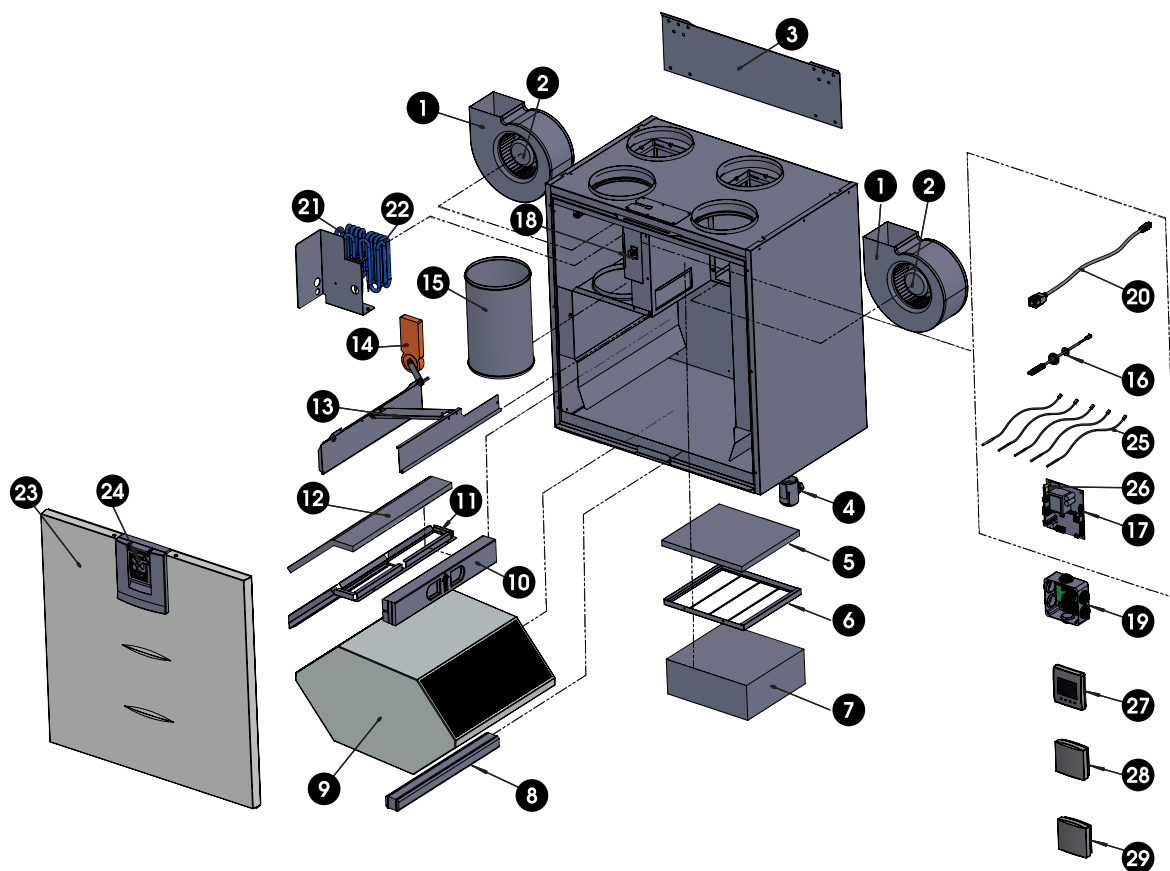


# EXPLODED VIEW AND PARTS LIST



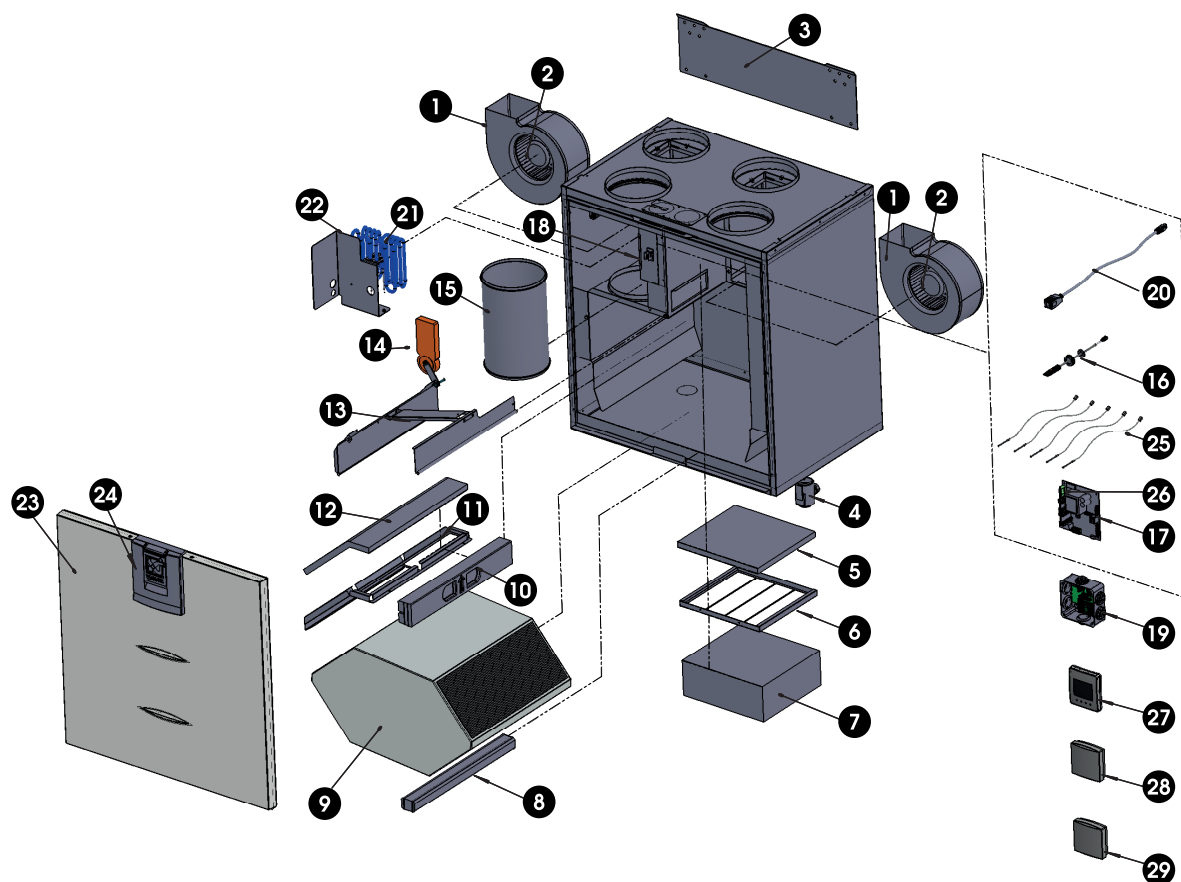
NO.	PART	CODE	NO.	PART	CODE	NO.	PART	CODE
1.	Supply / extract air fan (with a hood)	1108800	12.	Bypass flap assembly		20.	Post-heating resistor 900W	
2.	Fan	935365		R model	3491200		R model	942210
3.	Wall mounting plate	3080700		L model	3491201		L model	942211
4.	Water seal Vallox Silent Klick	3292500	13.	Damper motor	930620	21.	Door	3475200
5.	Filter (G4, supply)	978044	14.	Extract air outlet	985026	22.	Door latch	3355900
6.	Filter stand (G4, supply)	3464400	15.	Internal humidity sensor	946148	23.	NTC sensor kit	3480500
7.	Filter (F7, supply)	978220	16.	Motherboard	949032	24.	Glass tube fuse 80mA slow 5x20mm	952484
8.	HR cell	933260	17.	Safety switch	948377	25.	MyVallox Control control panel	949033
9.	Upper support for HR cell	3467200	18.	Connection box	3526700	26.	MyVallox humidity sensor (optional)	946149
10.	Filter stand (G4, extract)	3464500	19.	RJ45 extension cable	952196	27.	MyVallox carbon dioxide sensor (optional)	949111
11.	Filter (G4, extract)	978045						



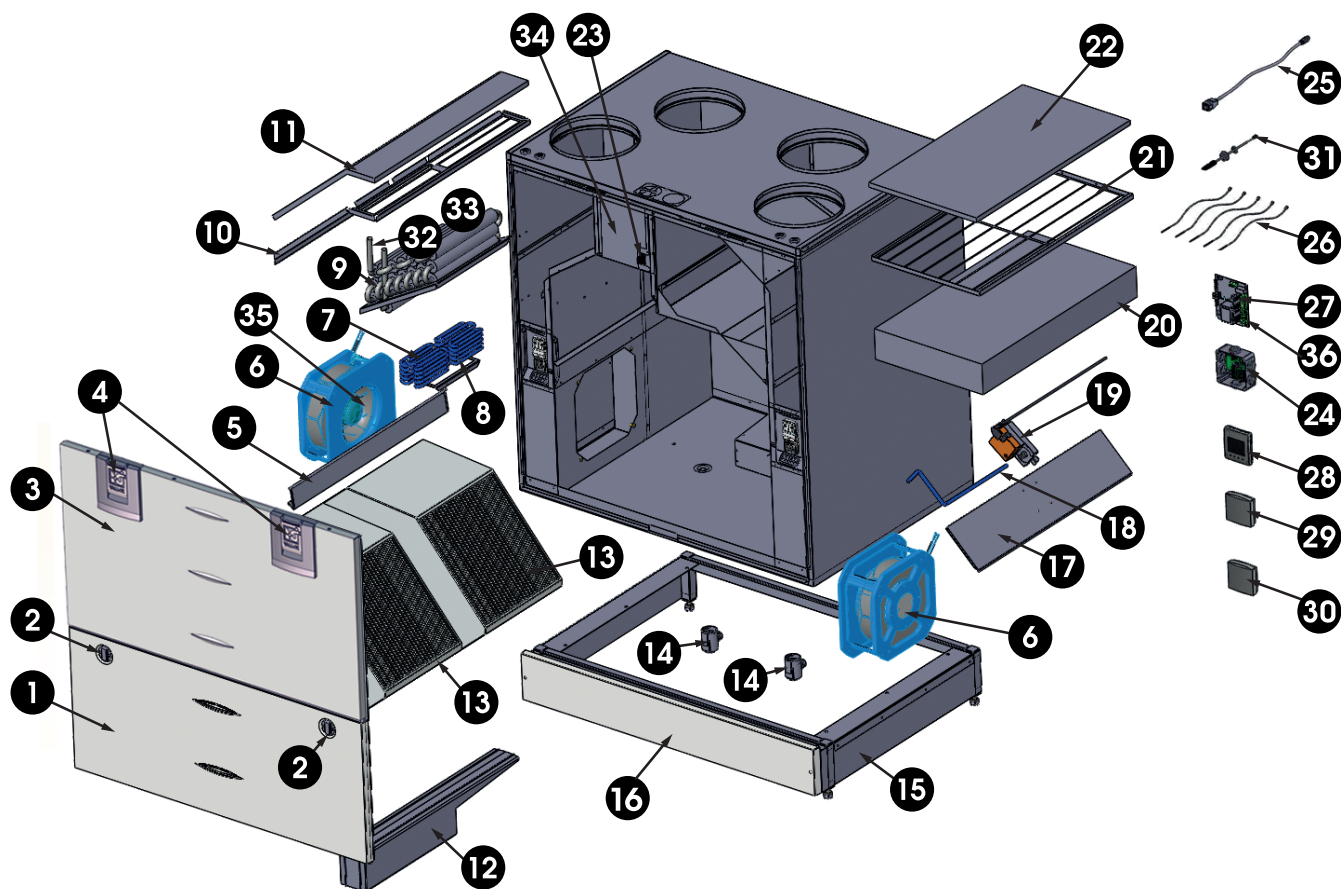


NO.	PART	CODE	NO.	PART	CODE	NO.	PART	CODE
1.	Supply / extract air fan	1108800	13.	Bypass duct assembly		22.	Additional heating resistor 900W	
2.	Fan	935365		R model	3447200		R model	942210
3.	Wall mounting plate	3080700		L model	3447201		L model	942211
4.	Water seal Vallox Silent Klick	3292500	14.	Damper motor	930620	23.	Door	3447300
5.	Filter (G4, supply)	978042	15.	Extract air outlet	985025	24.	Door latch	3355900
6.	Filter stand (G4, supply)	3454000	16.	Internal humidity sensor	946148	25.	NTC sensor kit	3457900
7.	Filter (F7, supply)	978157	17.	Motherboard	949032	26.	Glass tube fuse 80mA slow 5x20mm	952484
8.	Lower support for HR cell	3450100	18.	Safety switch	948377	27.	MyVallox Control control panel	949033
9.	HR cell	933160	19.	Connection box	3526700	28.	MyVallox humidity sensor (optional)	946149
10.	Upper support for HR cell	3426600	20.	RJ45 extension cable	952196	29.	MyVallox carbon dioxide sensor (optional)	949111
11.	Filter stand (G4, extract)	3426800	21.	Post-heating resistor 900W				
12.	Filter (G4, extract)	978043		R model	942211			
				L model	942210			

# EXPLODED VIEW AND PARTS LIST



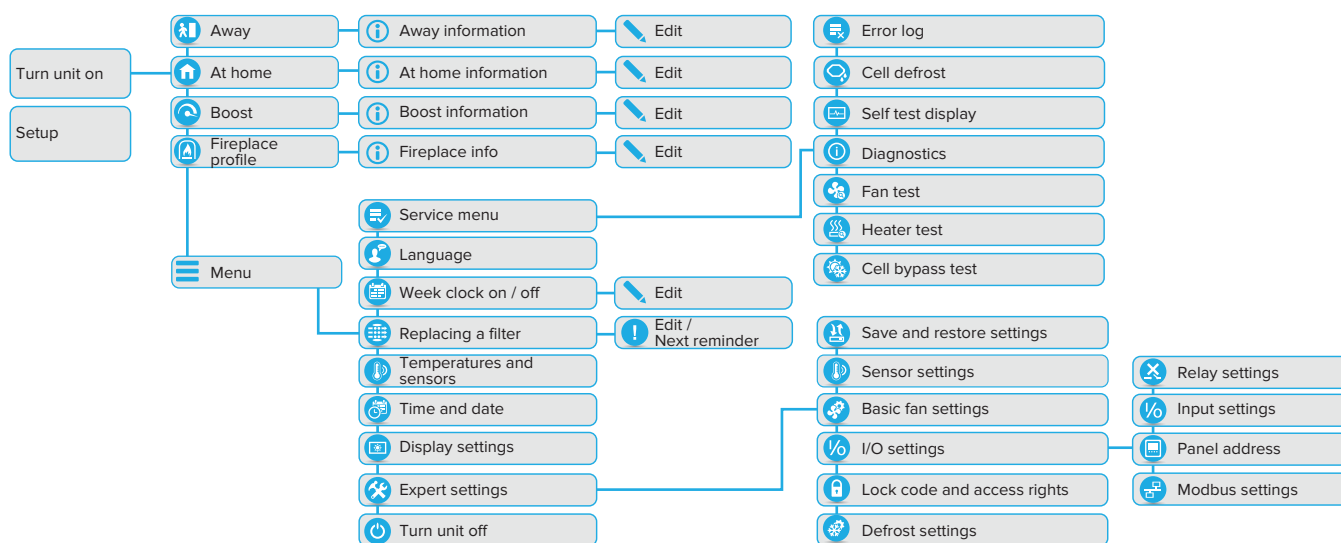
NO. PART	CODE	NO. PART	CODE	NO. PART	CODE
1. Supply / extract air fan (with a hood)	1109200	13. Bypass flap assembly		22. Post-heating resistor 900W	
2. Fan	935285	R model	3475900	R model	942211
3. Wall mounting plate	3482100	L model	3475901	L model	942210
4. Water seal Vallox Silent Klick	3292500	14. Damper motor	930620	23. Door	3476000
5. Filter (G4, supply)	978046	15. Extract air outlet	985035	24. Door latch	3355900
6. Filter stand (G4, supply)	3466600	16. Internal humidity sensor	946148	25. NTC sensor kit	3482300
7. Filter (F7, supply)	978158	17. Motherboard	949032	26. Glass tube fuse 80mA slow 5x20mm	952484
8. Lower support for HR cell	3469000	18. Safety switch	948377		
9. HR cell	933270	19. Connection box	3526700	27. MyVallox Control control panel	949033
10. Upper support for HR cell	3468900	20. RJ45 extension cable	952196	28. MyVallox humidity sensor (optional)	946149
11. Filter stand (G4, extract)	3466500	21. Additional heating resistor 1500W	942220	29. MyVallox carbon dioxide sensor (optional)	949111
12. Filter (G4, extract)	978047				



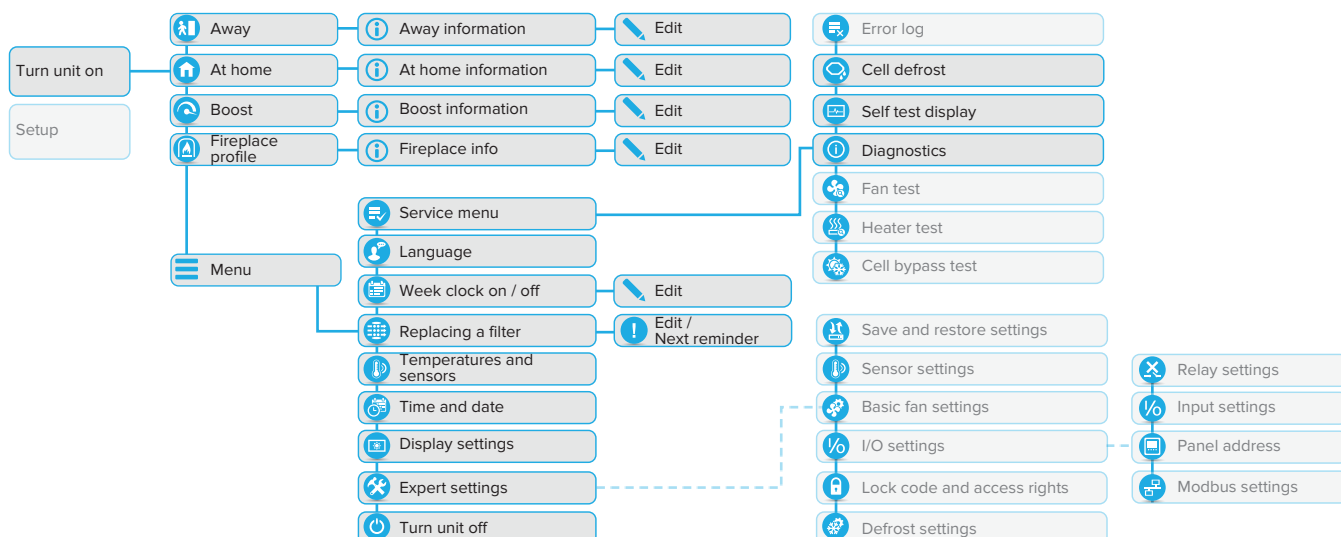
NO.	PART	CODE	NO.	PART	CODE	NO.	PART	CODE
1	Lower door	3539400	14	Water seal Vallox Silent Klick	3494701	27	Glass tube fuse 80mA slow 5x20mm	952488
2	Finger screw for the door	990713	15	Base assembly	3527500	28	MyVallox Control control panel	949033
3	Upper door	3539500	16	Front panel of the base	3527700	29	MyVallox humidity sensor	946149
4	Door latch	3355900	17	Bypass flap	3514200	30	MyVallox carbon dioxide sensor	949111
5	Upper sealing slip of the HR cell	3516000	18	Bypass arm	3508900	31	Internal humidity sensor	946148-1
6	Supply / extract air fan	1115100	19	Damper motor	930618	32	Liquid radiator valve	946300
7	Post-heating resistor	942220	20	Filter (F7, supply)	978159	33	Liquid radiator actuator	946320
8	Additional heating resistor	942220	21	Filter stand (supply)	3514600	34	Liquid radiator control relay	948517
9	Liquid radiator assembly	3555200	22	Filter (G4, supply)	978049	35	Supply air fan attenuation grid	935431
10	Filter stand (G4, extract)	3514700	23	Safety switch	948377	36	Motherboard	949032
11	Filter (G4, extract)	978050	24	Connection box	3526700			
12	Lower support for HR cell	3515800	25	RJ45 extension cable	952196			
13	HR cell	933295	26	NTC sensor kit	3545900			

# USER LEVEL DIAGRAMS

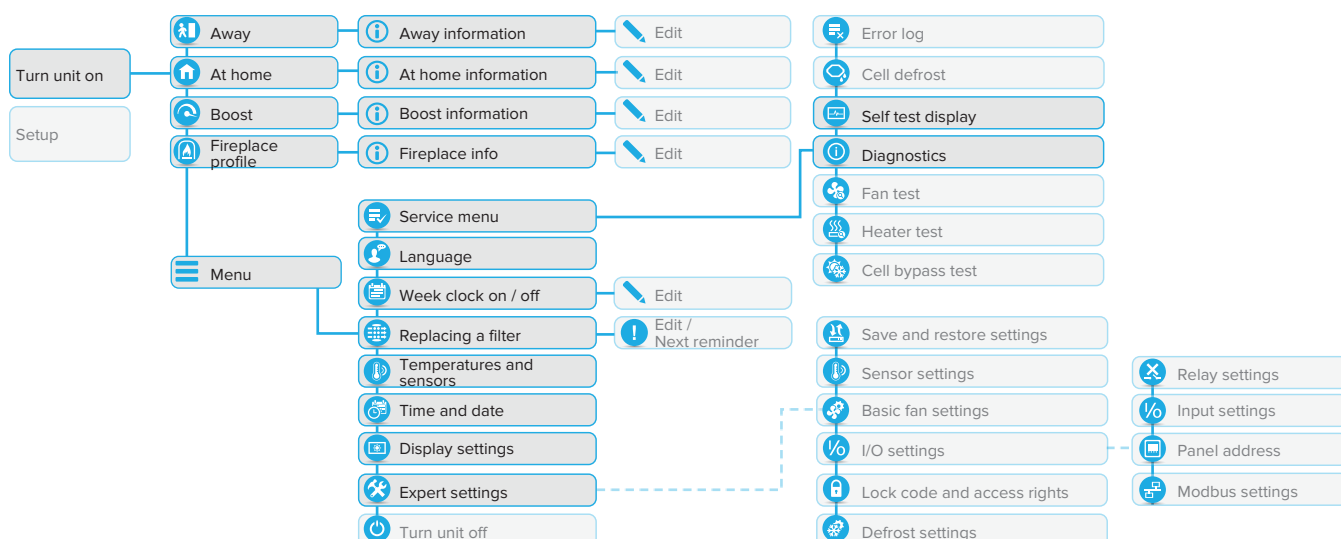
## Extensive



## Normal



## Limited





## DECLARATION OF CONFORMITY


<b>Manufacturer</b>	Vallox Oy
<b>Address</b>	Mylyskyläntie 9-11, FIN-32200 LOIMAA, FINLAND
<b>Telephone number</b>	+358 10 7732 200
<b>Fax</b>	+358 10 7732 201
<b>The person who compiles the technical file</b>	Petri Koivunen Vallox Oy Mylyskyläntie 9-11, FIN-32200 LOIMAA, FINLAND Tel. +358 10 7732 234 Fax +358 10 7732 201 Email <a href="mailto:petri.koivunen@vallox.com">petri.koivunen@vallox.com</a>
<b>Description of unit</b>	Ventilation unit with heat recovery
<b>Model</b>	Vallox TSK Multi 50 SC R, Vallox TSK Multi 50 SC L, Vallox TSK Multi 50 MC R, Vallox TSK Multi 50 MC L, Vallox TSK Multi 50 MV R, Vallox TSK Multi 50 MV L, Vallox TSK Multi 80 SC R, Vallox TSK Multi 80 SC L, Vallox TSK Multi 80 MC R, Vallox TSK Multi 80 MC L, Vallox TSK Multi 80 MV R, Vallox TSK Multi 80 MV L, ValloMulti 200 SC R, ValloMulti 200 SC L, ValloMulti 200 MV R, ValloMulti 200 MV L, ValloMulti 300 SC R, ValloMulti 300 SC L, ValloMulti 300 MV R and ValloMulti 300 MV L

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, EN 62233:2008
2. EMC Directive (2014/30/EU) – EN 61000-6-1:2007, EN 61000-3-2:2006 + A1:2009 + A2:2009, EN 61000-3-3:2008, EN 61000-6-3:2007 + A1:2011
3. Ecodesign Directive (2009/125/EY) – Commission regulation 1253/2014

This is the original Declaration of Conformity

Loimaa, 18<sup>th</sup> October 2016

  
\_\_\_\_\_  
Jukka-Pekka Korja  
Managing Director

## DECLARATION OF CONFORMITY

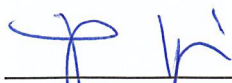
<b>Manufacturer</b>	Vallox Oy
<b>Address</b>	Myllykyläntie 9-11, FIN-32200 LOIMAA, FINLAND
<b>Telephone number</b>	+358 10 7732 200
<b>Fax</b>	+358 10 7732 201
<b>The person who compiles the technical file</b>	Petri Koivunen Vallox Oy Myllykyläntie 9-11, FIN-32200 LOIMAA, FINLAND Tel. +358 10 7732 234 Fax +358 10 7732 201 Email <a href="mailto:petri.koivunen@vallox.com">petri.koivunen@vallox.com</a>
<b>Description of unit</b>	Ventilation unit with heat recovery
<b>Model</b>	Vallox 90 MC R, Vallox 90 MC L, Vallox 90K MC R, Vallox 90K MC L, Vallox 90 MV R, Vallox 90 MV L, Vallox 90K MV R, Vallox 90K MV L, ValloPlus 240 MV R, ValloPlus 240 MV L, ValloPlus 240K MV R, ValloPlus 240K MV L, ValloPlus 240 SC R, ValloPlus 240 SC L, Vallox 096 MC R, Vallox 096 MC L, Vallox 096 MV R, Vallox 096 MV L, ValloPlus 270 SC R, ValloPlus 270 SC L, ValloPlus 270 MV R, ValloPlus 270 MV L, Vallox 110 MV R, Vallox 110 MV L, ValloPlus 350 SC R, ValloPlus 350 SC L, ValloPlus 350 MV R, ValloPlus 350 MV L, Vallox 145 MV R, Vallox 145 MV L, ValloPlus 510 SC R, ValloPlus 510 SC L, ValloPlus 510 MV R, ValloPlus 510 MV L

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, EN 62233:2008
2. EMC Directive (2014/30/EU) – EN 61000-6-1:2007, EN 61000-3-2:2006 + A1:2009 + A2:2009, EN 61000-3-3:2008, EN 61000-6-3:2007 + A1:2011
3. Ecodesign Directive (2009/125/EY) – Commission regulation 1253/2014

This is the original Declaration of Conformity

Loimaa, 10<sup>th</sup> March 2017



Jukka-Pekka Korja  
Managing Director

## DECLARATION OF CONFORMITY

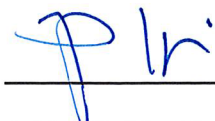
<b>Manufacturer</b>	Vallox Oy
<b>Address</b>	Myllykyläntie 9-11, FIN-32200 LOIMAA, FINLAND
<b>Telephone number</b>	+358 10 7732 200
<b>Fax</b>	+358 10 7732 201
<b>The person who compiles the technical file</b>	Petri Koivunen Vallox Oy Myllykyläntie 9-11, FIN-32200 LOIMAA, FINLAND Tel. +358 10 7732 234 Fax +358 10 7732 201 Email <a href="mailto:petri.koivunen@vallox.com">petri.koivunen@vallox.com</a>
<b>Description of unit</b>	Ventilation unit with heat recovery
<b>Model</b>	Vallox 245 MV R, Vallox 245 MV L, Vallox 245 MV VKL R, Vallox 245 MV VKL L, ValloPlus 850 MV R, ValloPlus 850 MV L, ValloPlus 850 MV WNH R, ValloPlus 850 MV WNH L

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, EN 62233:2008
2. EMC Directive (2014/30/EU) – EN 61000-6-1:2007, EN 61000-3-2:2006 + A1:2009 + A2:2009, EN 61000-3-3:2008, EN 61000-6-3:2007 + A1:2011
3. Ecodesign Directive (2009/125/EY) – Commission regulation 1253/2014

This is the original Declaration of Conformity

Loimaa, 1<sup>st</sup> June 2016



Jukka-Pekka Korja  
Managing Director



# VALLOX

[www.vallox.com](http://www.vallox.com)

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