



Lindab Residential Heat Recovery Counterflow Unit

RHR- CF

Quick user guide

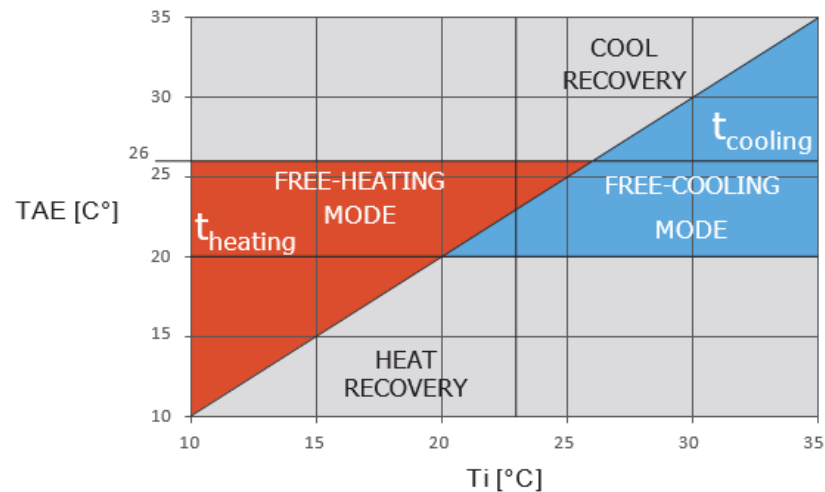
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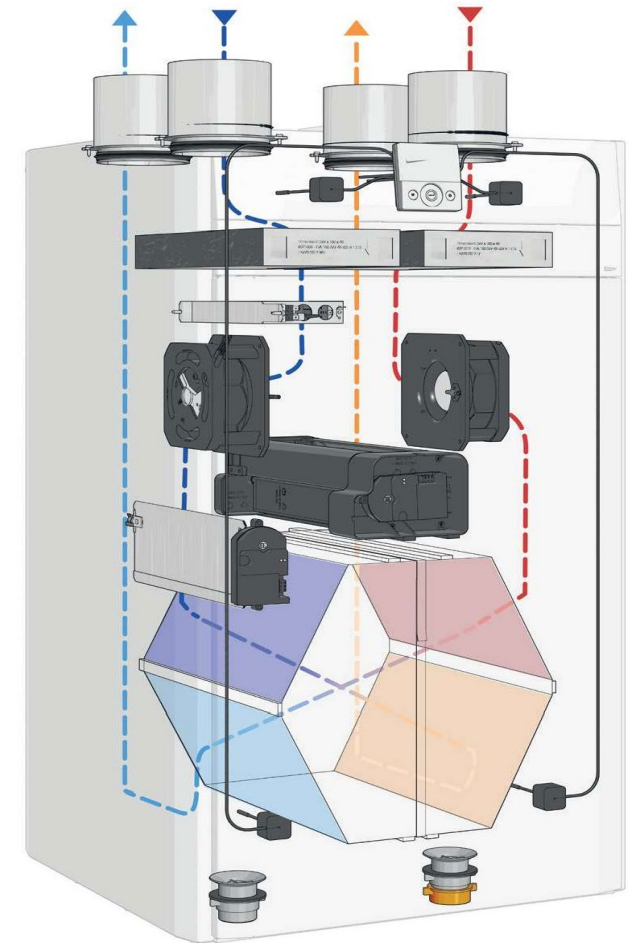
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Benefits of MVHR

A Mechanical Ventilation Heat Recovery (MVHR) unit is designed to extract the humid / stale air from wet rooms in your property- kitchen, WC, bathrooms, utility room etc. The heat from these rooms is used to heat up the heat exchanger within the unit, which in turn heats up the incoming supply air from outside and supplying this back to habitable rooms- living room, bedrooms etc. Providing your property with warm fresh air.



RHR units are equipped with a summer bypass function, for when its beneficial to use the fresh air for comfort cooling. If the supply air coming in to the property is cooler than the extracted air the bypass will activate and create a sensation of cooling within the property.



User modes



Party Mode

A timed function, active for 3 hours after activation, in which the nominal speed is increased by 30%. When this function is active on the main screen, the icon will also be active. The 30% boost is used to offset the increased CO₂ and Humidity levels created by increased occupancy.



Holiday mode

An anti-mould function with the fans at minimum speed. When this function is active on the main screen, the icon will also be active. To be activated during extended periods of time away from the property for example when you're on holiday.



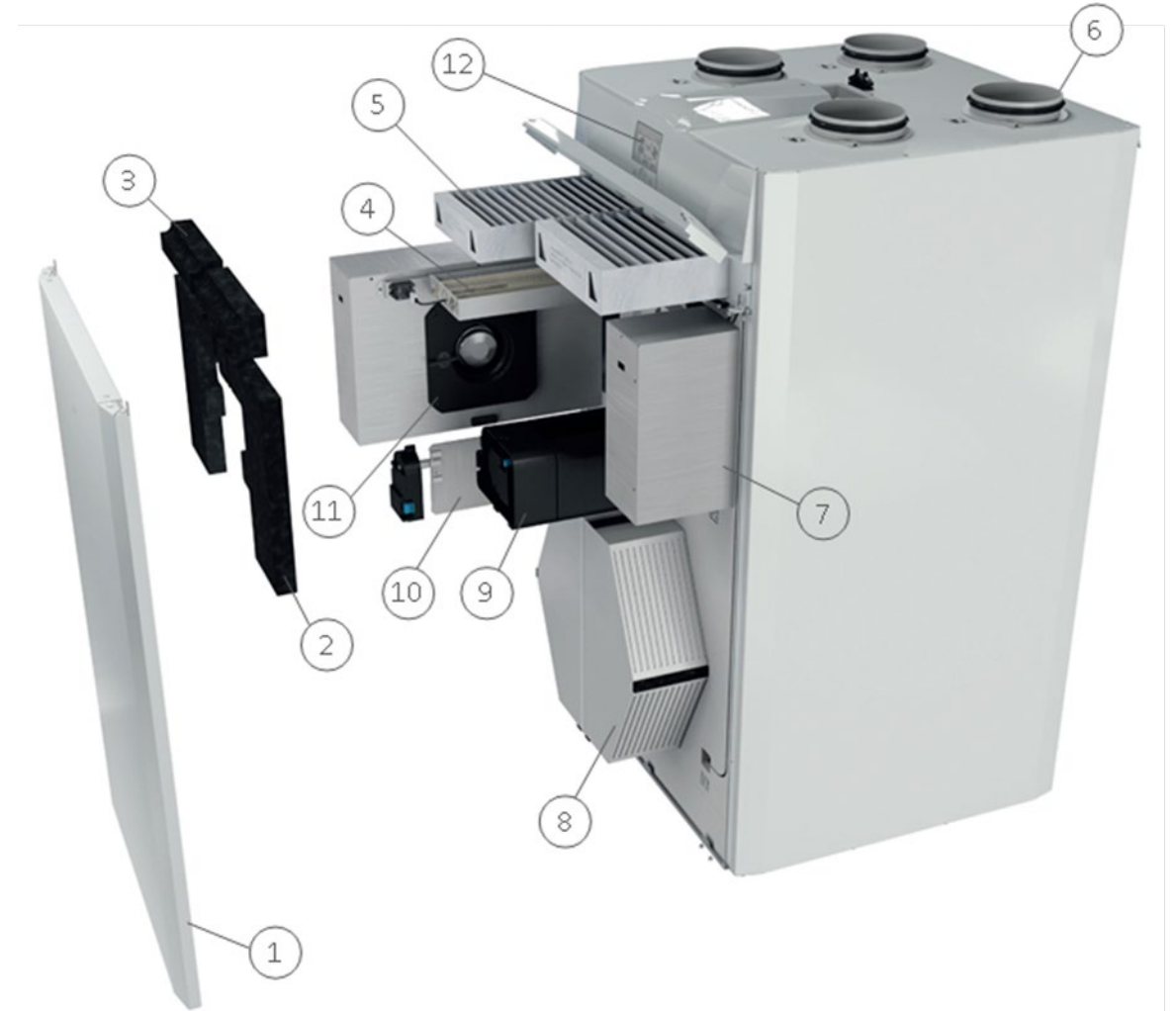
Automatic mode

The fan's speed is controlled by means of an automatic control cycle taking into account any ambient change in humidity and CO₂. This mode is only available for the Pro version or for units equipped with an air quality sensor (humidity by default or CO₂). The RHR should be running on this constantly unless specified otherwise. When this function is active on the main screen, the icon will also be active

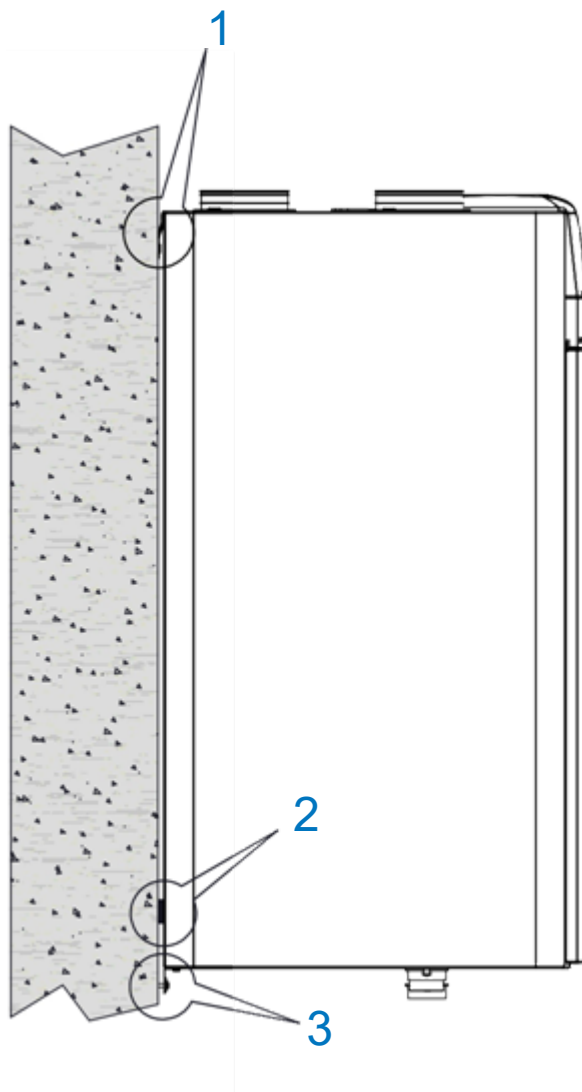


Inside the unit

1. RHR-CF-V PRO external structure made from painted galvanised sheet panels with 25mm thick padding on the side and 30mm thick padding on the front.
2. EPDM fan access closure
3. EPDM filter access closure
4. Electric defrosting pre-heater
5. High efficiency F7 supply, and M5 extract filters
6. Inlet and outlet flow connection
- 7 & 11. Extract and supply fans. EC motor with overheating protection of the motor and electronic components. High efficiency ABS fans with backwards curved blades
8. High efficiency static heat exchanger. PET Counter flow exchange plates allows the reachable efficiency to be higher than 90%, No moving parts guarantee high reliability and safe operation.
9. Main bypass damper
10. Secondary bypass damper
12. T-EP controller



General site installation



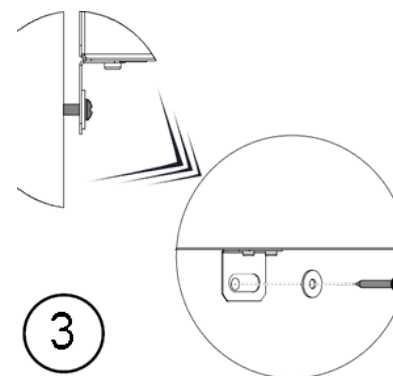
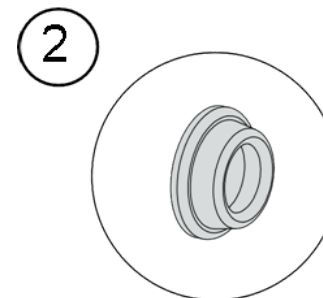
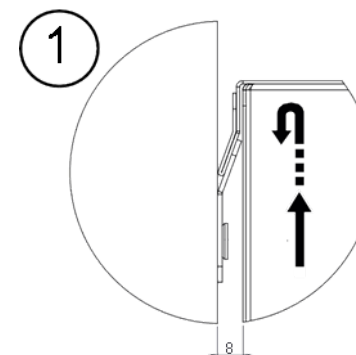
Positioning the appliance

Position the appliance by hooking it to the hanging bracket (1)

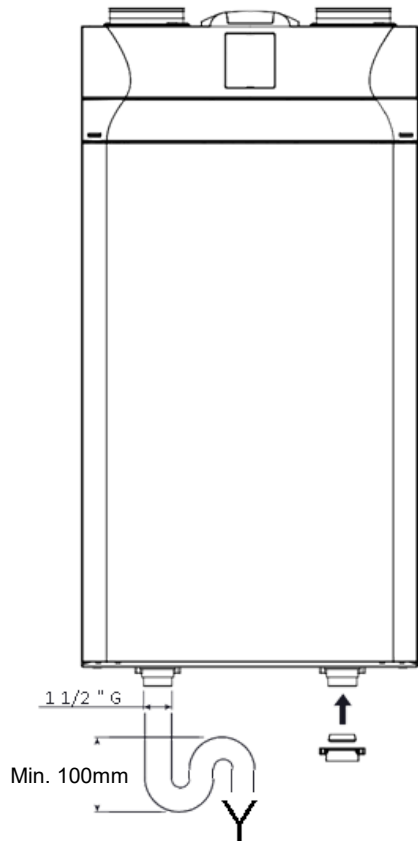
- A. Position the supplied spacer foot (2) to make sure that the appliance is level
- B. Secure the appliance to the wall (3)
- C. Mount the condensate drain to the bottom of the appliance

PLEASE NOTE: The condensate drain is positioned depending on the configuration of the unit, please check the handing before mounting the condensate drain and cap.

The screws are not supplied with the unit. Use the relevant screws and plugs based on the type of wall.



General site installation



Condensate drain connection

The connection for the condensate drain is located underneath the appliance.

Connect the condensate drain to the domestic sewage system using a duct or pipe (siphoned).

Condensate must be drained from a minimum height of 100mm.

PLEASE NOTE: If your RHR is right-handed, the connection shown on the illustrations must be inverted.

ATTENTION! Make sure that the siphon of the condensate drain is fully connected to the domestic sewer system and is always full of water.

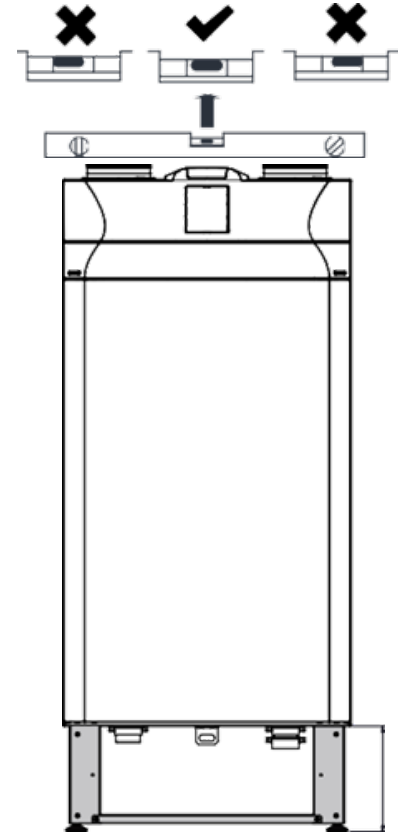
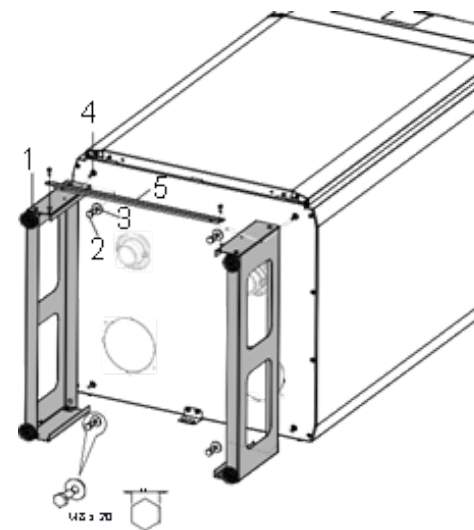
ATTENTION! Make sure that the end of the siphon is at least 100mm below the water level



Floor installation of appliance

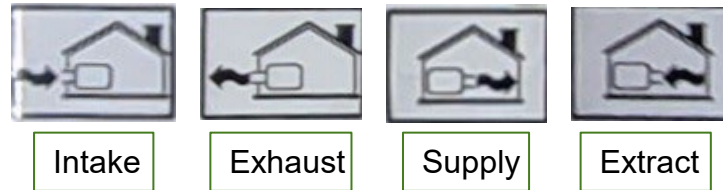
The RHR Can be installed using floor stands accessories.

1. Fix the stands (1) using the screws (2) and washers (3) supplied with the unit feet, at the bottom of the RHR (4). Fasten the crossbar (5) to the support (1).
2. Lift the unit and position it vertically
3. Use the spirit level to check the position of the RHR



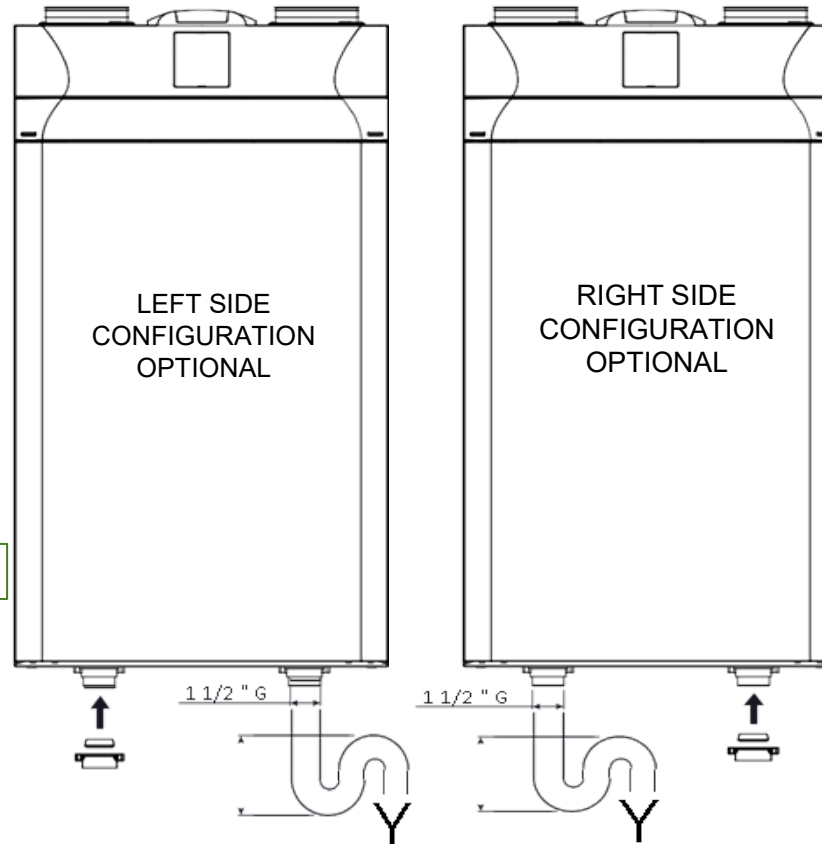
General site installation

Airflow Direction Legend:



PLEASE NOTE:

- Intake and exhaust ducts **MUST** be insulated to atmosphere.
- ALL ducts and distribution boxes in **COLD** spaces **MUST** be insulated – All ducts in **UNHEATED** spaces **MUST** also be insulated.
- Units fitted with preheater cannot be re-configured and handing must be confirmed before order.




Unit maintenance

The following maintenance highlighted in red is recommended to be carried out by the installer or by qualified personnel, If you are not qualified to carry out the following maintenance you risk damaging the unit or it's components:

- Inspect the filters and clean them if necessary
- Inspect the heat exchanger and clean it if necessary
- **Inspect the fans and clean them if necessary***
- **Check the condensate drain once every two years***

Check the filters

Servicing involving the user is limited to periodically replacing the filters. The filters must only be replaced when indicated on the controller display (icon). 



In the meantime it is recommended you check the filters for debris and dust at the intervals by following this procedure:

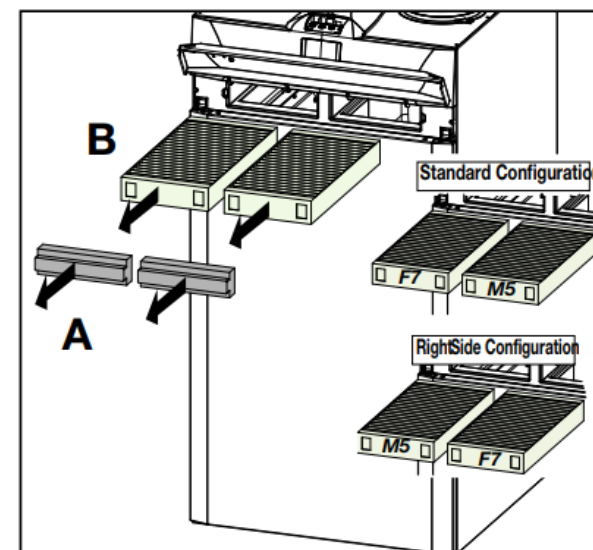
Always disconnect power before accessing the unit. 

- A. Open the front panel
- B. Remove the caps (A)
- C. Extract the filters and replace them (B).
- D. Put all the components back in the opposite order and reconnect power.

PLEASE NOTE: comply with the codes on the filters and the type of unit connection used (standard or right side).


Now it is possible to switch off the icon display

- Go to the User Setting menu, press the 'M' button
- Use the touch pad to select the icon of filter activation 
- Press the confirm button 
- The timer to change the filters has been reset .



Unit maintenance

Check the heat exchanger

Check the heat exchanger once every two years. Always disconnect power before accessing the unit. 

- A. Open the front panel
- B. Unscrew the front panel and remove it.
- C. Pull the band (A) to remove the heat exchanger

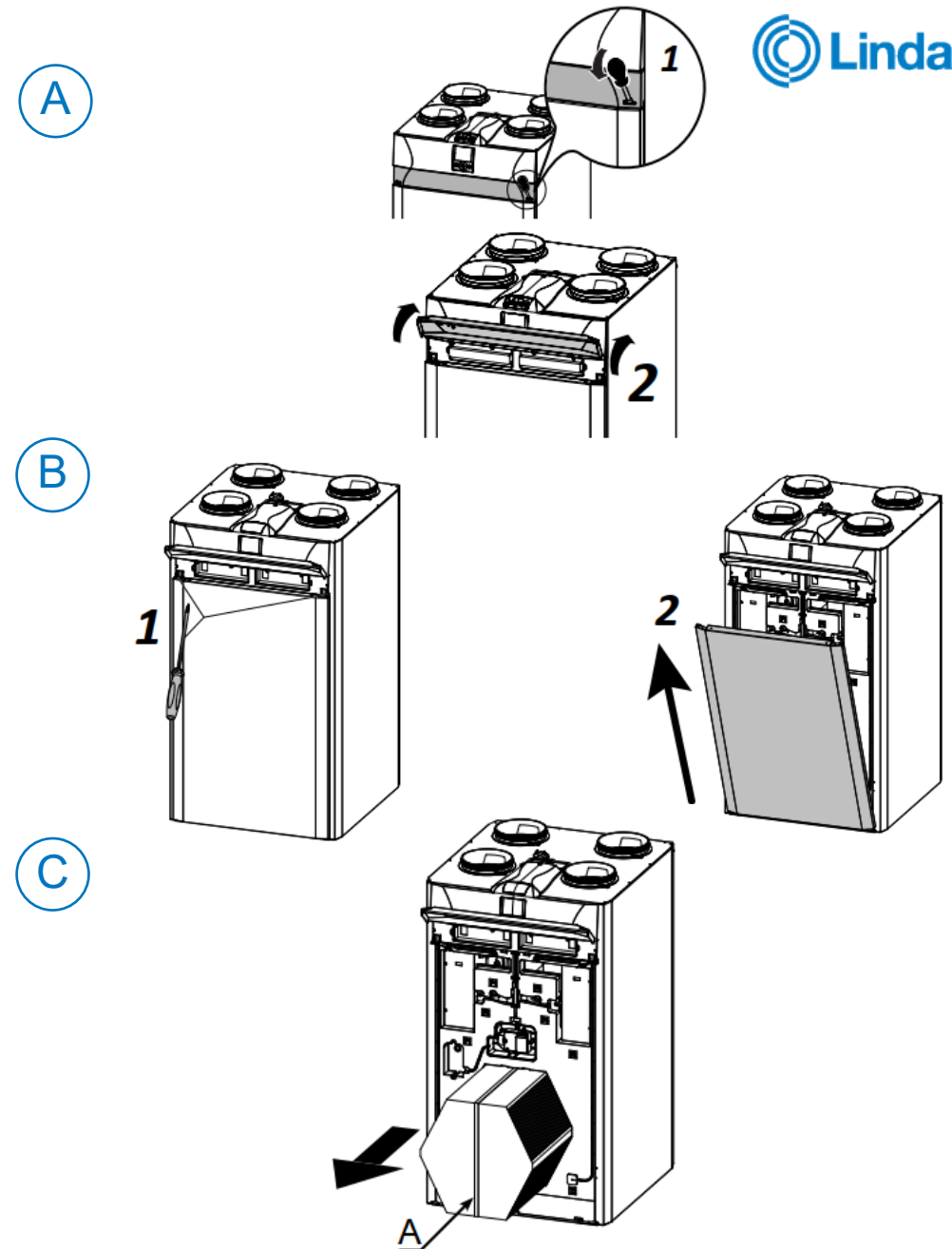
 **ATTENTION!** The heat exchanger may contain residual water.

Inspect the condition of the heat exchanger and clean it if necessary:

- Use a soft brush to clean the fins.
- Use a vacuum cleaner or compressor (not high pressure) to remove filth and dust.










IMPORTANT! Always clean in the opposite direction of the air flow.

- If no more operation is necessary, refit all the components in the opposite order and reconnect power.



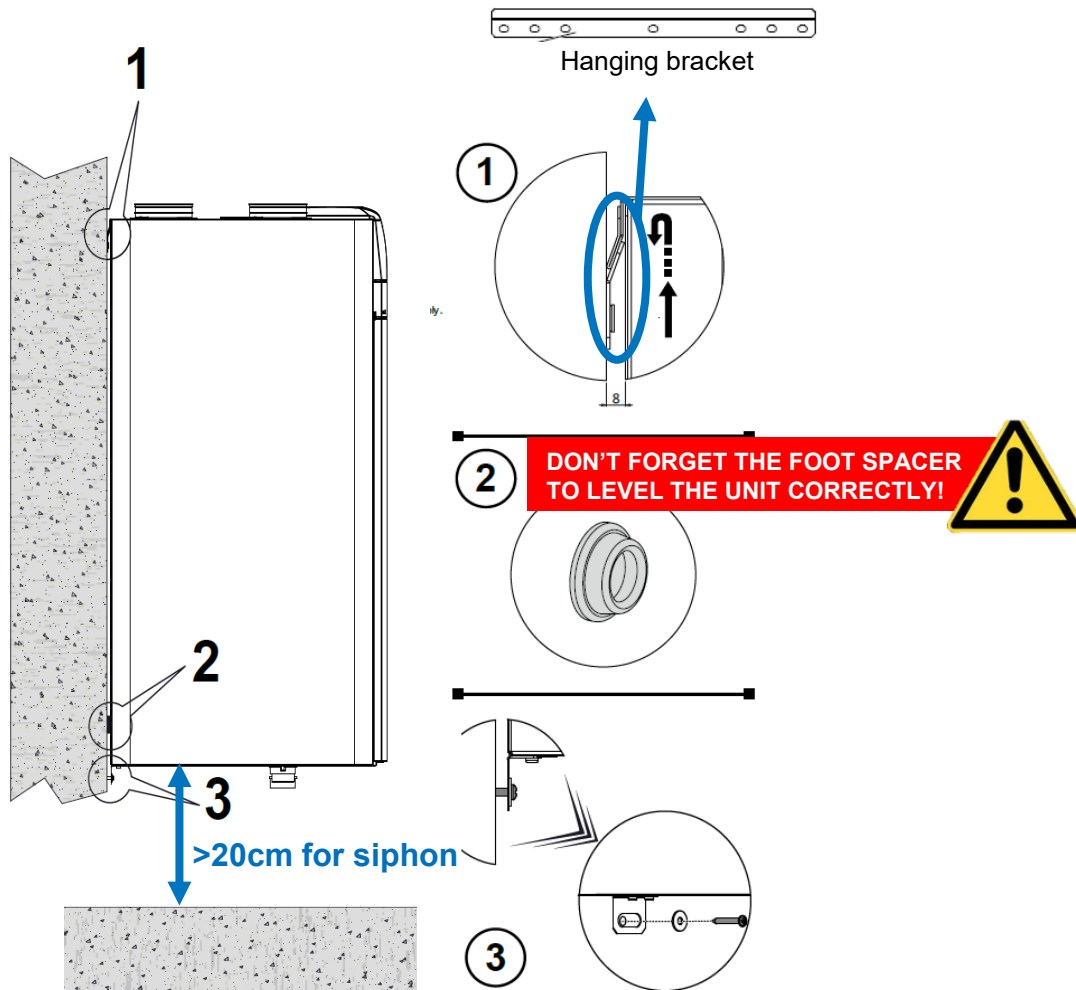
Unit alarms

- Alarms can be found on the T-EP controller, they are silent but will flash continuously on the controller screen till they have been addressed
- Alarms should be reported to the MVHR servicer as to be addressed properly this is with the exception of the filter replacement alarm, as detailed previously.
- All the details needed to report the alarm should be indicated on the controller, or you can identify it yourself via this table

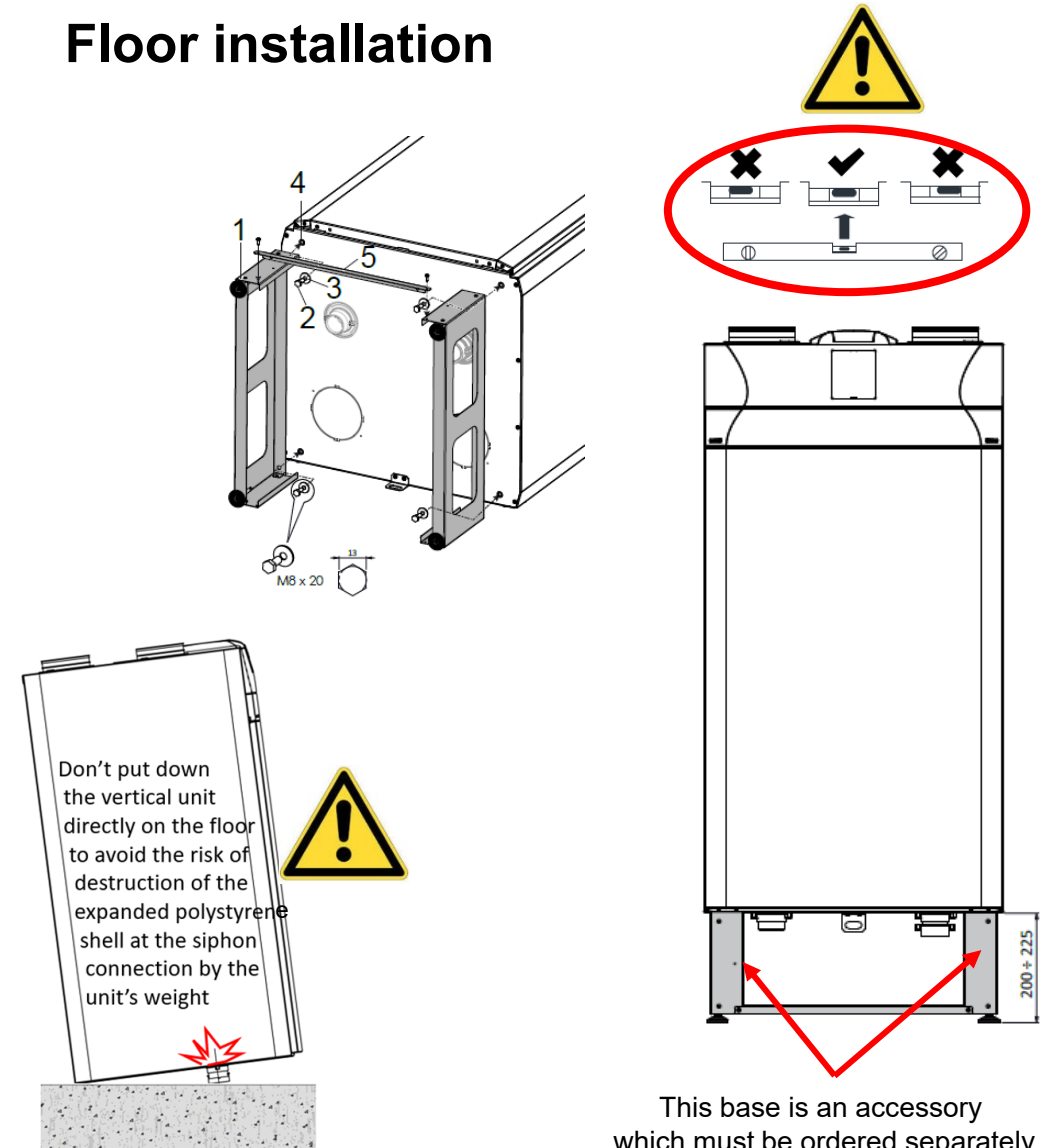
| Type of Signal | Description of Fault | Notes/Solution | DL3 Blinking LED |
|--|---|---|------------------|
|  | General Alarm. | Present in case of any fault | - |
|  | FAN voltage/speed limits exceeded. | It is recommended to enter the Read Menu to check the FAN operating parameters and identify which FAN is not working | 4 |
|  | Faulty temperature probe | The faulty probe code appears next to the "thermometer" icon. In the Read Menu the faulty sensor no longer provides any reading. | 2 |
|  | Faulty humidity/CO2 probe | It is recommended to enter the Read Menu to check the probe data and identify which probe is faulty. | 6 |
|  | Filter replacement. | Replace the filters of the unit. | 1 |
|  | Electric defrost resistance fault | Check the resistance reset thermostat; Check the electrical connections; It is recommended to enter the Read Menu to check the probe data and identify which probe is faulty | 3 |
| FROST | Antifreeze Alarm | REFER TO ANTIFREEZE PROTECTIVE CIRCUIT TABLE The FROST alarm is reset automatically. In order to report the failure, the FROST string continues to flash in the hours field until technical support is provided. | / |
|  | T-EP Controller Error | Check the electrical connections between the controller and the power board of the machine. | 7 |
|  | Problem with the differential pressure transmitter module | - | 5 |
|  | Timekeeper Alarm | Buffer coil dead: the unit may have lost its starting configurations. Contact Support | - |

1. Installation of the unit

Wall installation



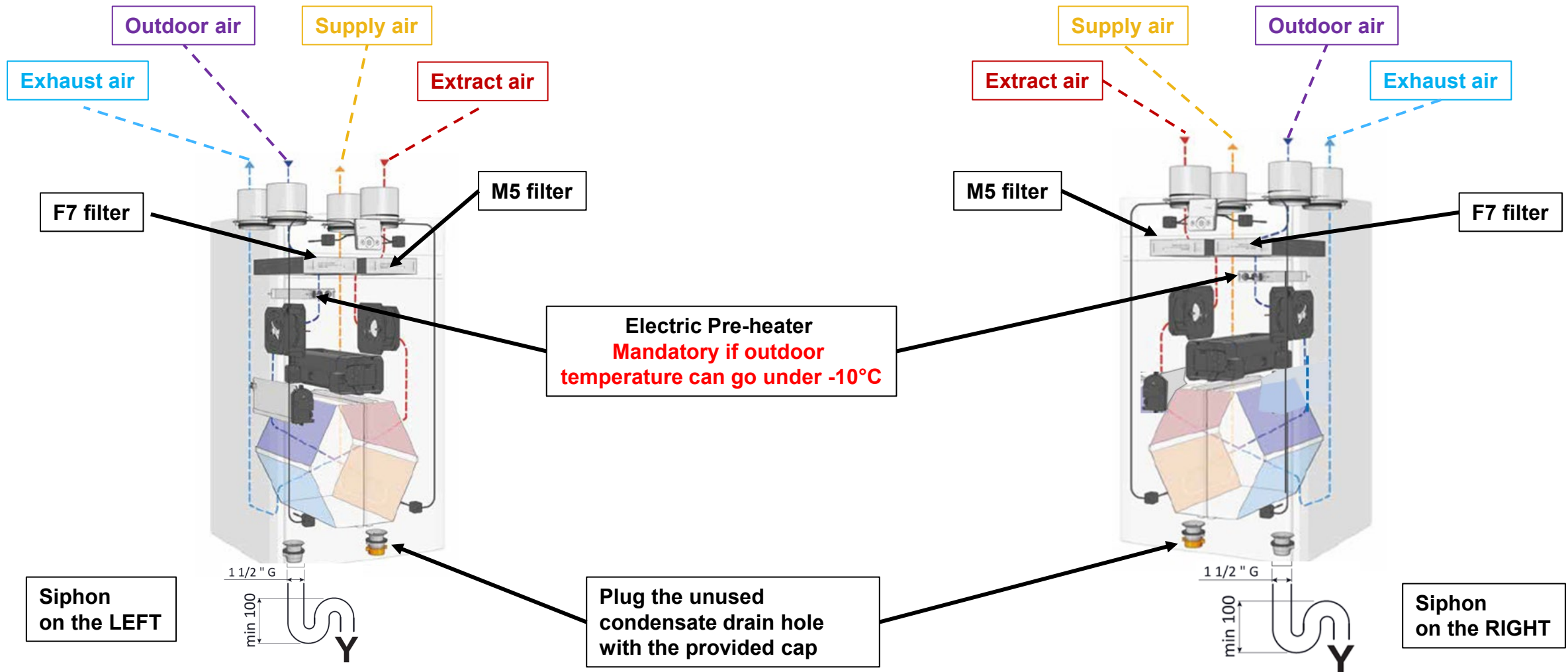
Floor installation



2. Left or right side units

Left side (standard)

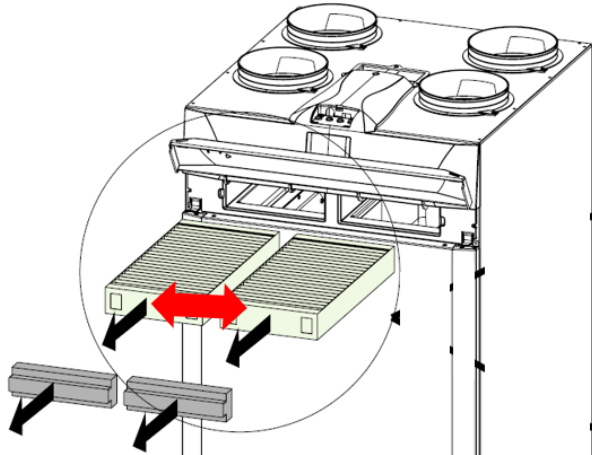
Right side



2. Left or right side units

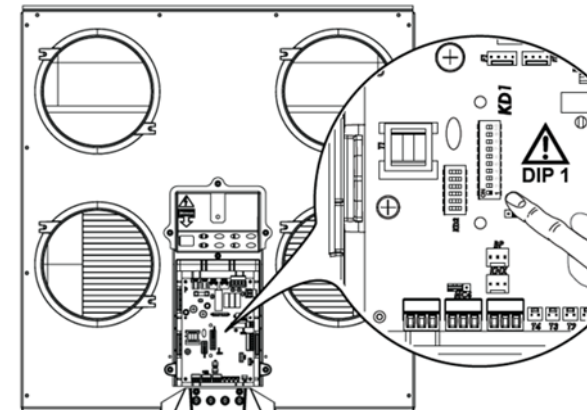
MVHR Units without Electric Preheater

- The units are standardly configured 'LEFT SIDE'.
- They can be configured 'RIGHT SIDE' by reversing the position of the F7 and M5 filters. The configuration dip 1 on the PCB must be switched ON.

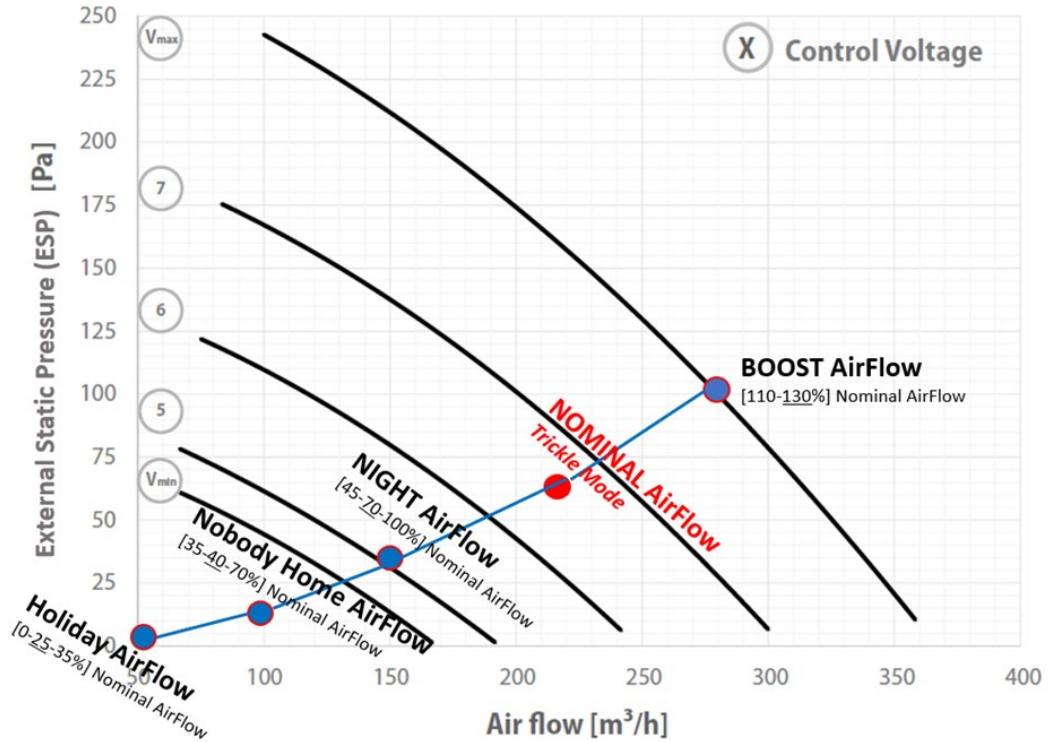
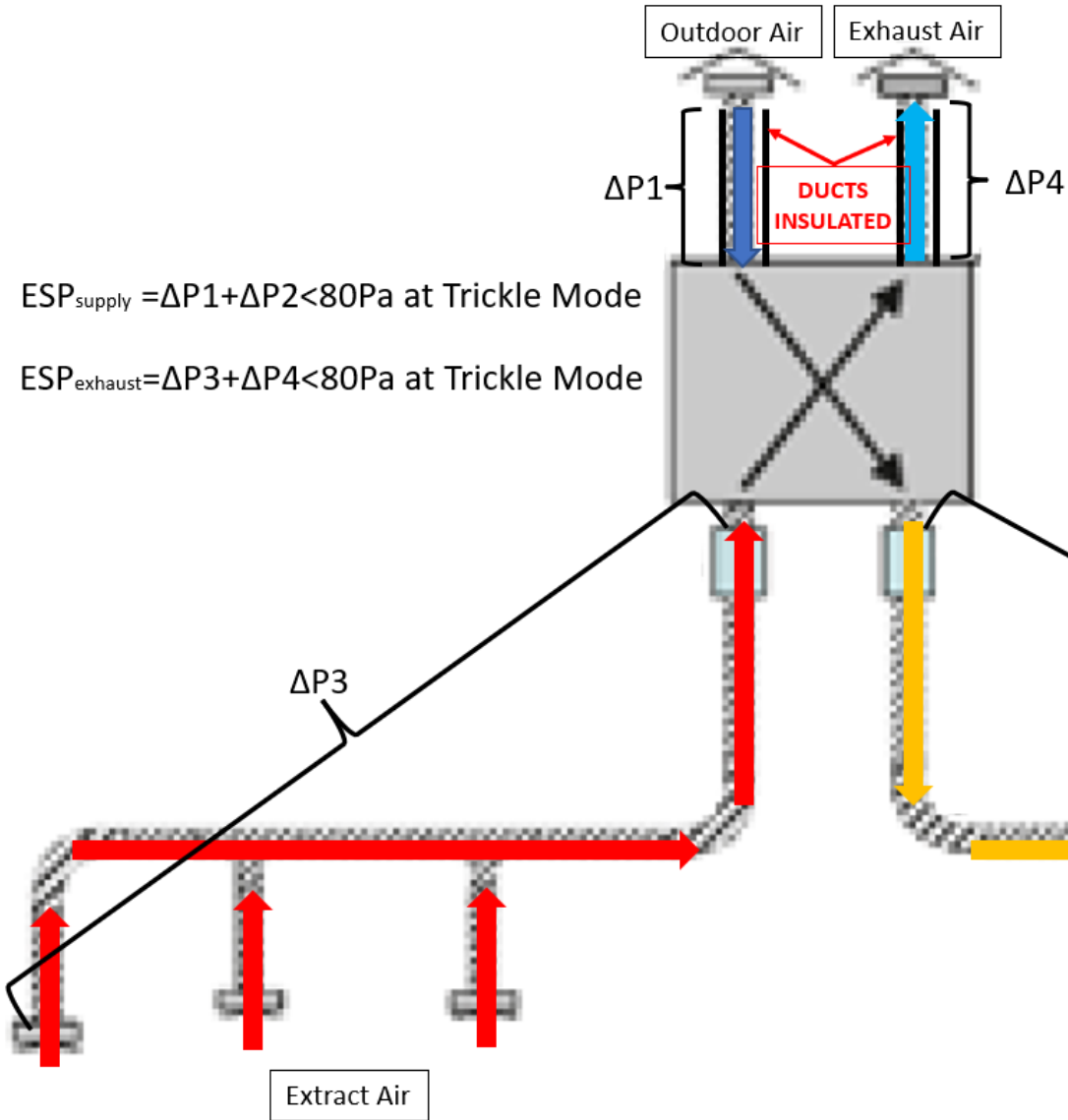


MVHR Units with Electric Preheater

- These units cannot be reversed on site and must be directly ordered LEFT or RIGHT:
- RHR-CF-V XX PRO EL (Left Side) or RHR-CF-V XX PRO ER (Right Side)
- Check that the positions of the filters and of the configuration dipoles were correctly set in the factory:
- Left side: dip 2 and 9 are ON. Others are OFF. F7 filter on the left and M5 filter on the right.
- Right side: dip 1, 2 and 9 are ON. Others are OFF. F7 filter on the right and M5 filter on the left.

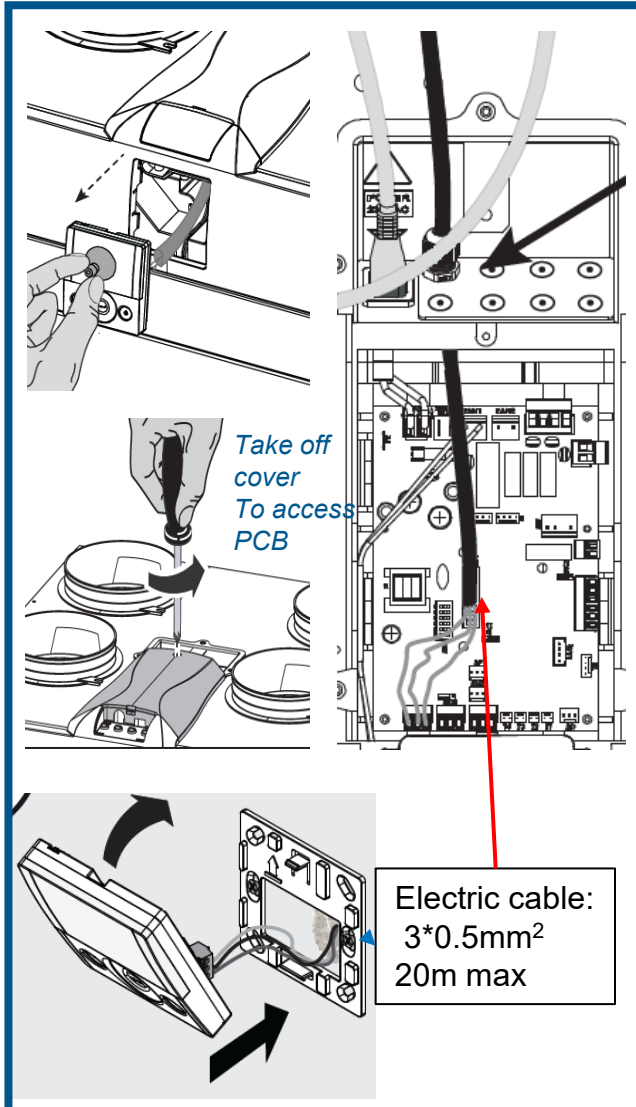


3. Airflows & ducts



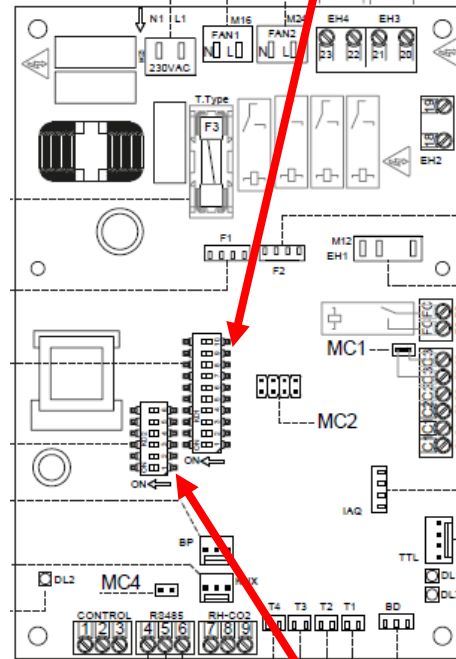
Electric operations

A. Remote control panel (optional)



B. PCB

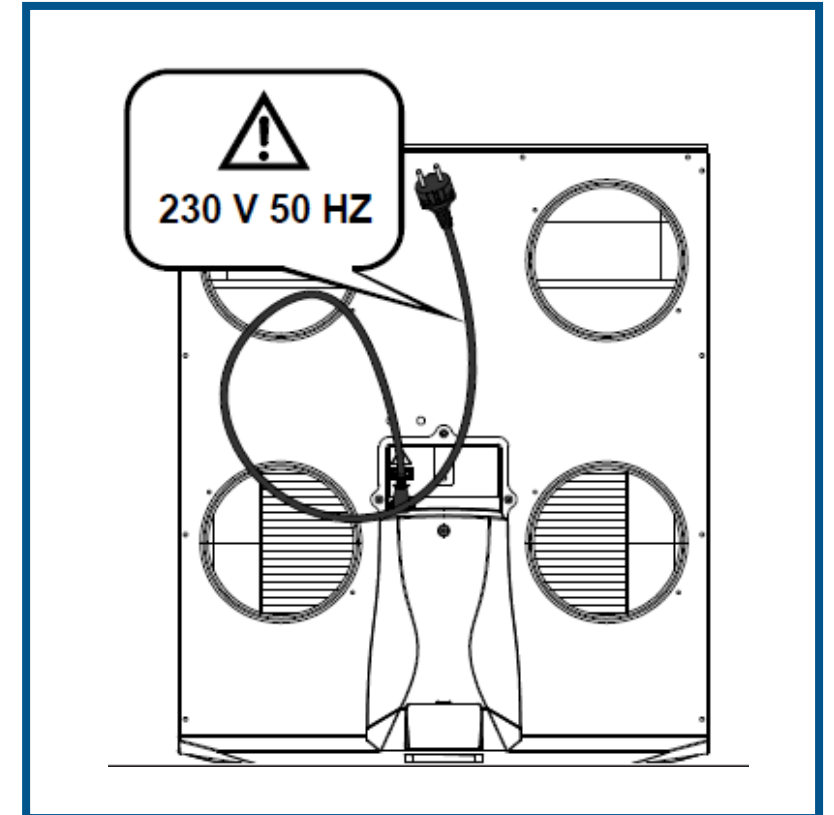
- Set or check the setting of dip-switches KD1 (see page 14)



- If connected to BMS, set Modbus address with dipswitches KD2

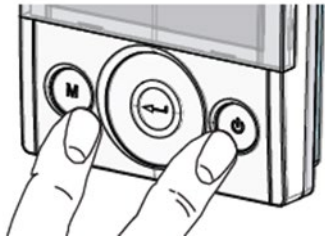
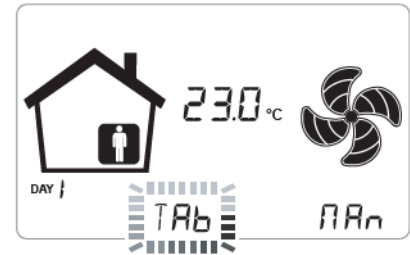
The DIP-SWITCHES must be set when the unit is OFF GRID!

C. Plug power chord



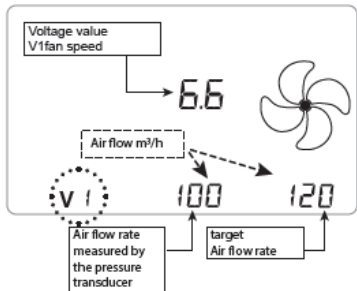
Set the nominal airflow rate, the clock and the day

1. When you start for the first time, the unit runs at the default airflow and it is written TAb on the screen. To modulate the speed of the fans, the NOMINAL AIRFLOW RATE must firstly be set.



2. When the appliance is ON, press the buttons ON/OFF and M at the same time to access the TECHNICAL MENU. Select INSTALLER MENU and then select V.

3. Set the Nominal AirFlow Rate (m³/h) with the TOUCH PAD and press ENTER.



4. The control system will then vary the voltage control signal of the fans on the Supply and then on the Exhaust sides until measuring the correct airflow with the differential pressure transmitters on the fans. If needed, the airflows on the supply and exhaust sides can slightly be unbalanced in the parameter menu after this operation.

5. Go back in the TECHNICAL MENU. Select the CLOCK ICON and set the time and the day of the week

The unit is then completely operational!

