ComfortZone

User and Installation Manual



Exhaust Air Heat Pump
RX-RXL

ComfortZone
VÄRMEPUMPAR *Proudly made in Sweden*

RX: Smart and Energy-Efficient

The RX is a heat pump designed to be both energy- and cost-efficient. It captures heat from the indoor air that would otherwise be lost through ventilation. The recovered heat is then used to efficiently heat your home and provide domestic hot water.

The heat pump optimizes heat output by using both preset parameters and real-time data from temperature sensors. It also ensures continuous ventilation throughout the home, contributing to a better and healthier indoor climate.

For optimal performance and efficiency, regular maintenance of the heat pump is recommended, including an annual service. This ensures that all components function properly and that you achieve the energy savings and heating performance you expect.

The heat pump can be installed with a supply air unit connected to the home's existing ventilation system. This feature filters and preheats the incoming air, ensuring a temperature that is tailored to your needs.

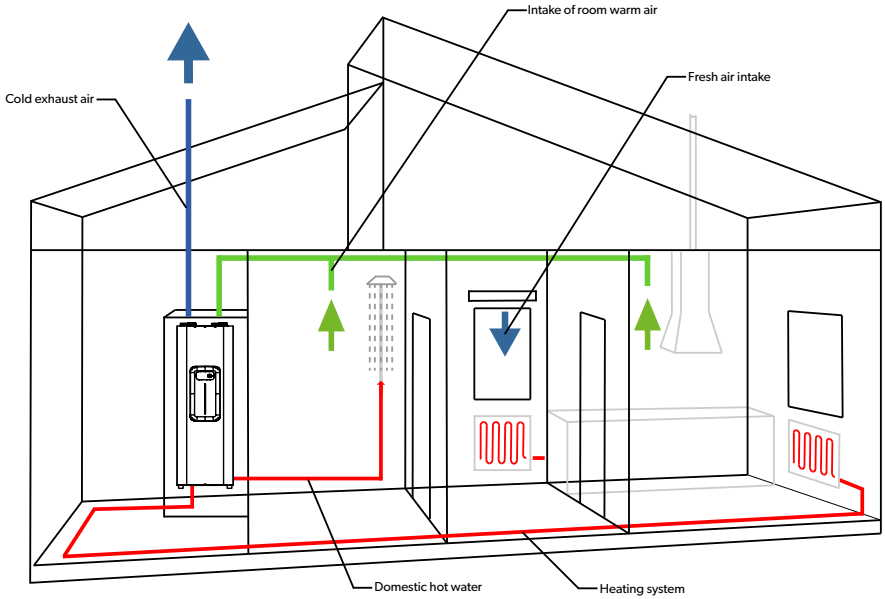


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1 IMPORTANT INFORMATION

⚠WARNING

Read the manual before installation and start-up!

Saftey

This appliance can be used by children aged 8 and above, as well as by persons with reduced physical, sensory, or mental capabilities or lack of experience and knowledge, provided they have been given supervision or instruction concerning the safe use of the appliance and understand the associated risks. Children must not play with the appliance. Cleaning and user maintenance must not be carried out by children without supervision.

⚠ Warning!

- Do not use methods to accelerate the defrosting process or for cleaning other than those recommended by the manufacturer.
- The appliance must be stored in a room without any ignition sources (e.g. open flames, a gas appliance, or an electric heater).
- Do not puncture or burn the appliance.
- Be aware that refrigerants may be odorless.
- The appliance must be installed, used, and stored in a room with a floor area larger than 4 m^2.

Symbols

⚠WARNING

This symbol indicates a risk of serious injury to yourself or others, or serious damage to the product.

⚠OBSERVE

This symbol indicates a risk of damage to the product.

NOTE

This symbol indicates a note with additional information for the installer or user.

TIP

This symbol indicates suggestions and advice for the installer to perform certain tasks more easily or conveniently.

Labeling

These markings and symbols appear on the unit.

CE	Indicates that the unit has undergone the necessary inspections before being released and that it complies with the EU requirements for safety, health, and environmental protection.
	When the unit is to be disposed of, it must be handled separately from other waste in accordance with local regulations for proper waste management.
	The unit is intended for indoor use only.
	Warning of flammable substances related to refrigerant R32.
	Read the user manual for important information and instructions.
	Read the manual carefully before installation, use, or maintenance to ensure safe and proper handling.
	Warning: Risk of electric shock. Follow safety instructions and avoid contact with electrical components during operation or maintenance to minimize the risk of electric shock or injury.

Combined Manual

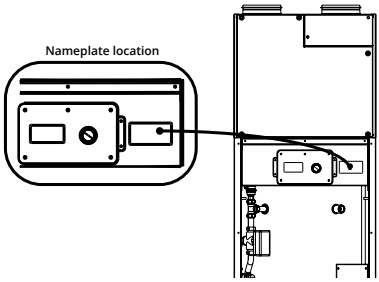
This manual is intended for both users and installers to ensure safety and efficiency. Specific knowledge is required for installation and service. Installation and service must be carried out in a professional manner. The installer does not need to be a certified refrigeration technician, but must follow all safety protocols and instructions. Everyone must be aware of potential risks and adhere to the safety guidelines.

Translations of the manual

If this manual is made available in languages other than Swedish, and any discrepancies arise between the language versions, the Swedish version shall take precedence and be regarded as the authoritative reference for the use and interpretation of this manual.

Serial Number

The serial number is located behind the front panel, to the right of the display.



Plant Information

This information may be useful when contacting a service technician or ordering spare parts.

Model	
Serial Number	
Installation Date	
Installer	

NOTE

If any problems or faults occur with the product, contact the retailer who sold the product or the house supplier. If repairs are needed, contact an authorized service technician.

COMFORTZONE ONLINE

With the Comfortzone Online app, you have full control of your heat pump – anytime, anywhere.

Easily monitor and adjust settings directly from your mobile phone for optimal comfort. Scan the QR code and follow the instructions to connect your heat pump.



Installations Report

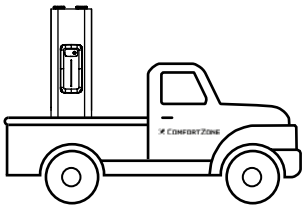
The heating system must be inspected before being put into operation. This inspection must be carried out only by a person with the appropriate qualifications.

Heating and DHW System	Note	OK
Filled		
System flushed		
System vented		
Check manometer pressure		
Check shut-off valves		
Check safety valves		
Thermostats open		
Speed of circulation pump set		
Spill funnel connected to drainage		
Ventilation System	**Note**	**OK**
Fan Speed Normal		
Exhaust duct insulated		
Electricity	**Note**	**OK**
House fuses		
Circuit breaker for heat pump		
Measure phases, N and PE		
Outdoor sensor installed		
Set max electrical power		
Residual-current device		
Control Values	**Note**	**OK**
Heating Curve		
Hot Water Temperature		
Heating System		
Control method		
Pump Speed		
Fan Speed Normal		
Information to User	**Note**	**OK**
Filling water in the system		
How to change the heating curve		
Information about warranty		
Changing filters		

2 BEFORE INSTALLATION

Transport

During transport and shipping, the heat pump must be kept in an upright position. It must not be laid down.



Tilt indicators are placed on the sides of the packaging. Check the indicators. If they show red in the direction of the white arrow, it means the heat pump has been tilted excessively during transport. In such cases, the functionality of the product cannot be guaranteed.

If the unit must be tilted during transport to its installation location, it may be tilted at an angle of up to 45° for a maximum of 15 minutes.

Placement and space

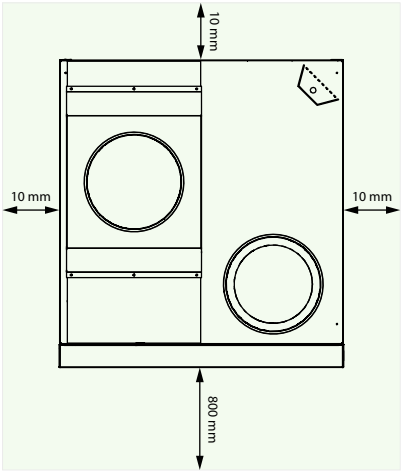
The unit may be installed in an environment with a temperature between 5 and 50°C and a humidity level below 85%. Condensation and water droplets on surfaces must be avoided.

- Choose a room with a floor drain and a base that can support the weight of the unit.
- Place the unit against an exterior wall or a well-insulated interior wall. Avoid placing it next to bedrooms or other noise-sensitive areas.
- If the unit is placed next to a noise-sensitive area, the adjoining wall must be soundproofed.
- The ambient temperature must be at least 10°C for the compressor to start, and must not exceed 50°C.
- In new constructions, the walls of the installation room must be insulated in accordance with applicable building regulations.

Dimensions

The heat pump must not be installed in direct contact with walls or enclosed. Leave a minimum clearance of 10 mm.

- At least 300 mm above for ventilation hoses.
- 800 mm free in front for service and maintenance.
- At least 10 mm from walls and other objects.



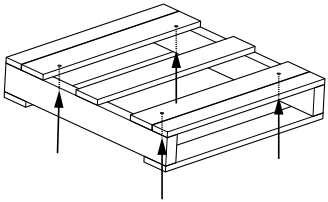
Included components

The components are placed at the bottom near the pipe connections in a box.

- Air duct sensor.
- Outdoor sensor.
- Heat pump feet.

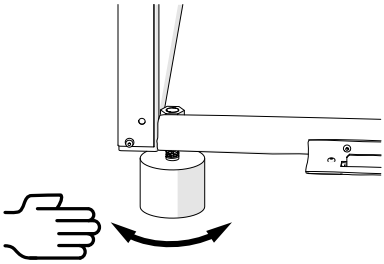
From pallet

Use a 16 mm socket wrench to unscrew the four screws underneth the pallet.



Once the screws are removed, mount the inlcuded feet into the now vacant screw holes.

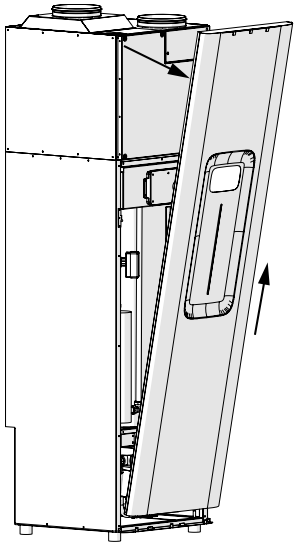
Adjust the unit so that stands level. Use the mounted feet for fine adjustments of the position.



Removing panels

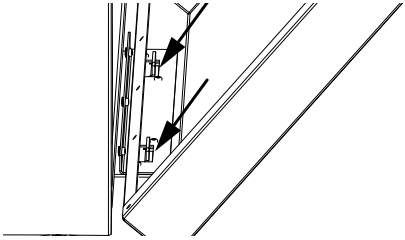
Remove the front

The front is removed by pulling it upwards and then pulling it straight out.

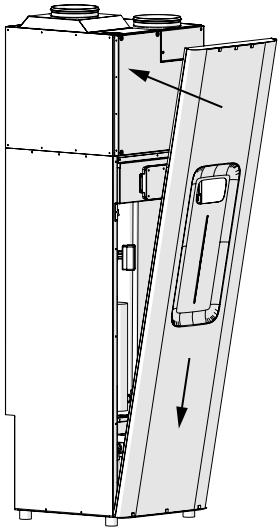


Mounting the front

Fit the front into the two holes at the bottom.

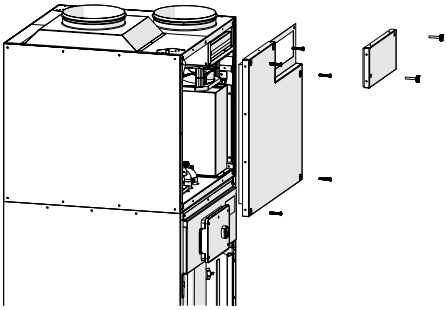


Press the front against the heat pump so that the hooks are in position. Then pull the front downwards.



Compressor box

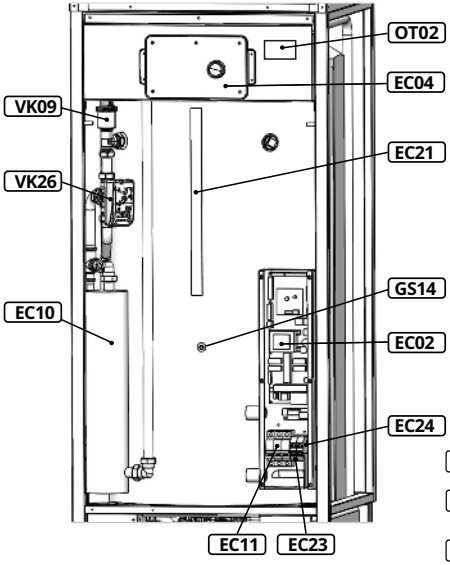
Unscrew the two screws for the filter cover and the screws for the hatch. Pull the hatch towards you.

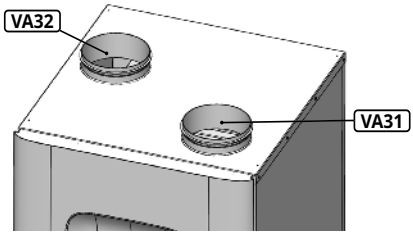


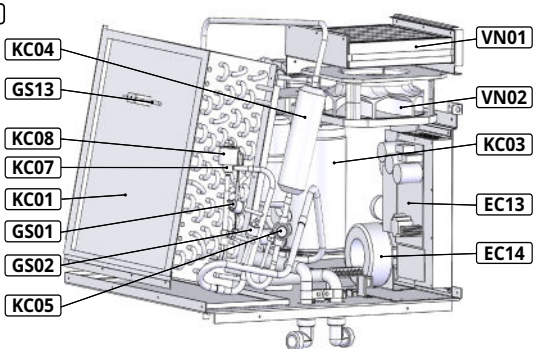
NOTE

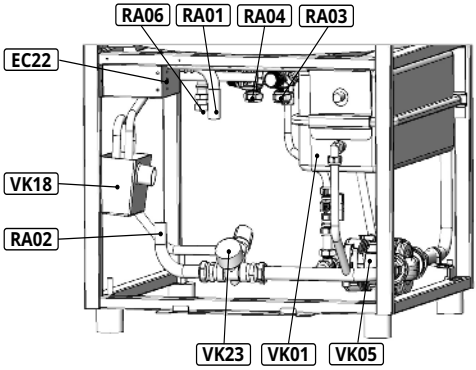
The screws are the only thing holding the hatch in place.

3 COMPONENTS









Connections	
RA01	Connection, Flow line
RA02	Connection, Return line
RA03	Connection, Cold water
RA04	Connection, Hot water
RA06	Connection, Air supply unit

Sensors	
GS01	High-pressure switch
GS02	Low-pressure switch
GS13	Temperatur sensor, Outlet Air TE7
GS14	Temperatur sensor, Hot water TE24

Plumbing	
VK05	Circulation pump
VK18	Drip tray
VK23	Manometer
VK26	Change-over valve
VK09	Automatic air vent

Refrigeration	
KC01	Evaporator
KC03	Compressor
KC04	Drying filter
KC05	Sight glas
KC07	Expansion valve
KC08	Expansion valve motor

Electronics	
EC02	Control board
EC04	Display unit
EC10	Electric heating element
EC11	Automatic fuse for electric heater
EC13	Inverter
EC14	Choke
EC19	LED strip Green
EC22	Overheat protection
EC23	Neutral terminal
EC24	Ground terminal

Ventilation	
VN01	Exhaust air filter
VN02	Exhaust fan
VA31	Ventilation, Exhaust
VA32	Ventilation, Air vent

Diverse	
OT02	Serial number and name plate

4 PIPE INSTALLATION

General

- Do not exceed 8 bar water pressure.
- Flush the heating system thoroughly before connecting the unit to avoid damage and operational disturbances.
- To simplify service and maintenance, valves can be installed on both the inlet and outlet pipes.
- Use flexible hoses for all pipe connections. This minimizes sound transmission in the water pipes.
- All hoses in the system must be diffusion-tight.
- If the heating system has high levels of magnetite particles, a magnetite filter should be installed.
- Ensure that the radiator system is properly dimensioned so that the supply temperature does not exceed 60 °C. If necessary, adjust the system or add additional radiators.
- For most underfloor heating systems, the built-in circulation pump is sufficient.
- If the house has both radiators and underfloor heating, connect the radiator system directly to the heat pump. The underfloor heating must be connected via a separate mixing circuit with its own circulation pump.
- If the radiators can operate at the same temperature as the underfloor heating, both systems can be connected in parallel directly to the heat pump.

⚠WARNING

Turn off the water pressure before installation.

⚠OBSERVE

If the cleanliness of the system or the water cannot be guaranteed, it is recommended to install a dirt filter on the return line.

NOTE

When connecting to a system with thermostatic valves, install a bypass valve or remove some thermostats to ensure sufficient flow.

Installation RX - Tall Unit

NOTE

The RX has a dedicated connection for a supply air unit to enable independent circulation. If no supply air unit is used, leave the connection marked <Supply Air Unit> untouched. Follow the included installation manual for mounting instructions.

Supply Air Unit

Connect the supply air unit's inlet to RA06 and the return to RA02. Follow the included installation manual for correct setup. If no supply air unit is used, RA06 must remain untouched or plugged.

Heating circuit - Supply (flow)

Connect the heating system's flow line to RA01.

Heating circuit - Return

Connect the return lines from the heating system to RA02.

Cold water inlet

Connect the cold water supply to RA03.

Domestic hot water (DHW) outlet

Connect the domestic hot water outlet to RA04.

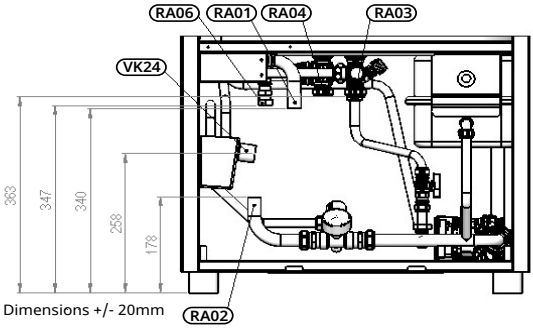
Pipe Dimension (mm)

Cennection	Diameter
RA01 Heating supply	22
RA02 Heating return	22
RA03 Cold water	22
RA04 Hot water	22
RA06 Supply air unit	15
VK24 Condensate drain	32

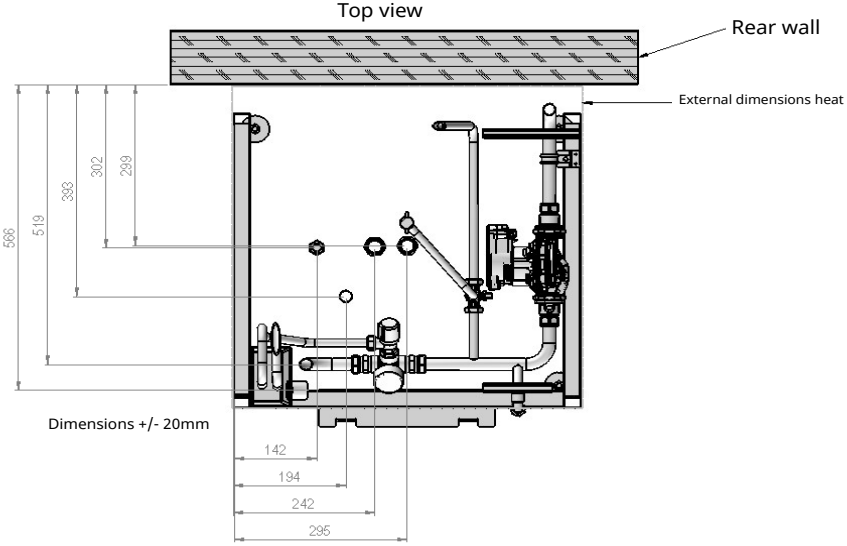
Pipe connections

Overview of the Tall RX Series

Front view

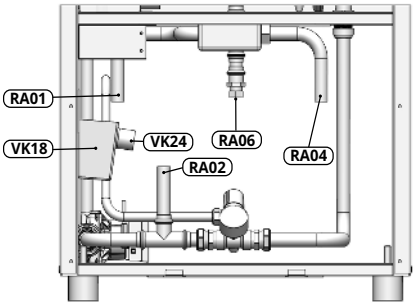


Top view



Pipe Connections

Overview of the low RX series



Pipe Dimension (mm)

Cennection	Diameter
RA01 Heating supply	22
RA02 Heating return	22
RA04 Hot water	22
RA06 Supply air unit	15
VK24 Condensate drain	32

Installation - Low Unit

Supply Air Unit

Connect the supply air unit's inlet to RA06 and the return to RA02. Follow the included installation manual for correct setup. If no supply air unit is used, RA06 must remain untouched or plugged.

Heating Circuit - Supply

Connect the heating system´s supply line to RA01.

Heating Circuit - Return

Connect the return lines from the heating system to RA02.

Domestic Hot Water (DHW)

Connect the domestic hot water outlet to RA04.

Hot Water Tank Connection- Low RX

1. Connect RA04 and RA02 to the hot water tank.
2. Connect the incoming cold water to the hot water tank.
3. Connect the outgoing hot water from th e tank to the domestic system.
4. Install a filling valve for the heating circuit in connection with the hot water tank. Use hot water to fill the heating system.
5. Mount the TE24 sensor (Hot water sensor) in a suitable location, e.g., om the tank´s immersion pocket. Ensure the sensor is properly secured and insulated from ambient air.
6. Connect sensor TE24 to the heat pump´s control unit at terminal block X4, ports 5 and 6. See the Technical information chapter for location details.

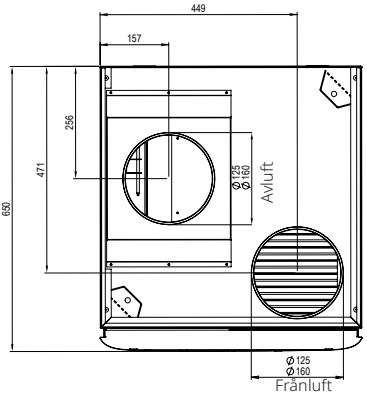
⚠OBSERVE

If the external hot water tank has an air vent, it must be accessible.

5 VENTILATION

- Connect the heat pump to ventilated ducts with sound dampening.
- Use flexible hoses to connect the exhaust and supply air ducts. The hoses should be fully extended and avoid sharp bends. Two 45°bends are preferred over on 90° bend. After installation, ensure the hoses remain flexible to prevent vibrations.
- The duct system must comply with airtightness class B, and the exhaust air duct must be insulated with diffusion-tight insulation (minimum PE30) according to the Swedish industry standard BTI (Branschstandard Teknisk Isolering). Any exhaust air ducts placed in cold spaces must be insulated, and all joints and connections must be carefully sealed.
- The exhaust air duct must be installed in such a way that anny condensate can drain back to the heat pump without creating water pockets.
- Ensure that there is sufficient space for maintenance of the ducts.

Ventilation Dimensions



Duct	RX35	RX50	RX65
Exhaust air (mm)	125	125 / 160	160
Extract air (mm)	125	125 / 160	160

WARNING

To prevent condensation and potential damage to the buildning, the entire exhaust air duct must be diffusion-tight insulated, as the exhaust air temperature can become extremely low.

Flow and balancing

To effectively minimize the risk of excess heat and potental moisture damage in your heating system, there are several important points to consider.

- The supply air flow should be kept lower than the extract air flow to avoid system imbalance and moisture to the buildning.
- If the extract air temperature drops below 10°C, the compressor is blocked, and the auxiliary heater is activated.
- The default setting for the supply air unit correction is -30%, which corresponds to approximately a 10% reduction in airflow.
- Adjustment to fan speed should be carried out by a certified ventilation technician to ensure optimal conditions.
- Fan speed adjustments and supply air fan correction are made in the Service menu under Basic Installation.

Acessing the Service Menu:

1. Go to *Advanced Settings,* then select *General Settings.*
2. Press and hold the button for 6 seconds. When prompted to open the service menu, confirm your selections by choosing *Yes* using the check mark.

6 ELECTRICAL INSTALLATION

General

⚠WARNING

Only a qualified electrician is allowed to carry out the installation, maintenance, or replacement of damaged power supply cable.

⚠OBSERVE

Before starting the heat pump, fill the system with water to the correct pressure.

To connect the unit, a power cable must be wired to the main power switch. Note that some sensors are not pre-connected and must be connected manually.

Circuit breaker

The unit is protected with a 16 A circuit breaker on each phase to safeguard internal components.

To acess the electrical connections

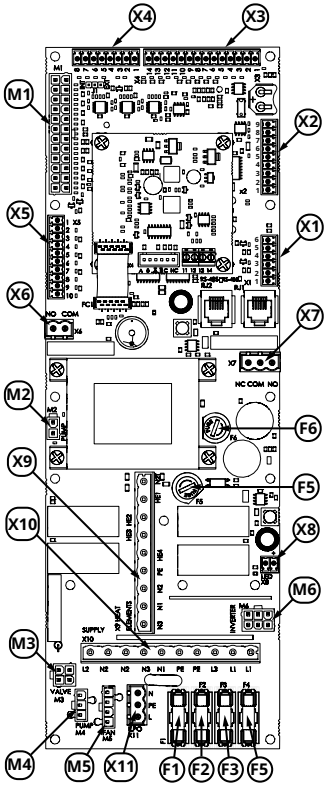
Remove the protective cover over the control board (EC02) by unscrewing the six screws securing the cover.

⚠WARNING

Avoid using extension cords - risk of overload and fire.

Important Connections

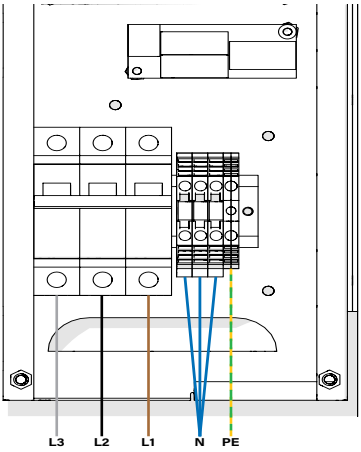
This section refers to the following connectors, terminals, and fuses.



Connect to the power grid

An all-pole switch with a minimum contact separation of 3 mm must be used for the installation. The cable cross-section must be dimensioned according to the size of the fuse used.

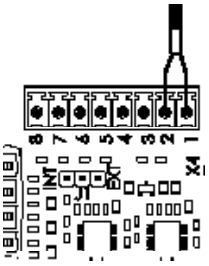
1. Remove the front panel of the unit.
2. Remove the protective cover of the electronics box.
3. Connect the cables to the circuit breaker.
4. Connect the neutral conductor to the blue terminal.
5. Connect the protective earth to the green-yellow terminal.



Outdoor sensor

Place the outdoor sensor on the north side of the house to avoid direct sunlight.

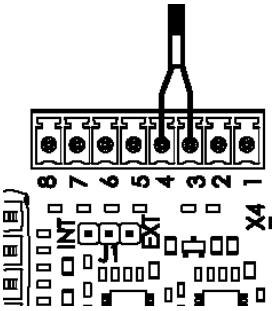
Connect the sensor ro reminal block X4, terminals 1 and 2.



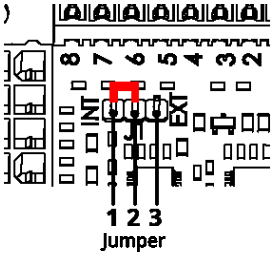
Room sensor (optional)

The room sensor is an optional accessory and measures the indoor temperature. The recommended installation location is in the hallway. Note that the heat pump is already equipped with a built-in temperature sensor mounted in the extract air duct above the air filter.

Connect the sensor to terminal block X4, terminals 3 and 4.



Move the jumper on terminal block J1from terminals 1-2 to 2-3.



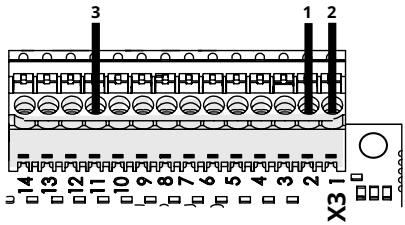
Supply air unit

To install the supply air unit, both power and control connections are required.

Fan control

The unit is powered via the heat pump. It includes a grey signal cable containing three black wires, each numbered. Connect these wires to connecor X3 on the heat pump´s control board as follows.

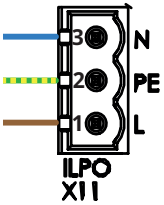
- Wire labeled 1 to pin 2.
- Wire labeled 2 to pin 1.
- Wire labeled 3 to pin 11.



Drive power

The power cable of the supply air unit consists of three conductors that must be connected to terminal block X11. To ensure a correct connection, follow these steps:

1. Blue - Connect to terminal 3.
2. Ground - Connect to terminal 2.
3. Brown - Connect to terminal 1



Fuses

Several components on the control board are protected by 5x20 mm glass fuses.

Fuse	Connection	Amp
F1	change-over valve	T4AH250V
F2	Circulation pump	T4AH250V
F3	Fan	T4AH250V
F4	Supply air unit	T4AH250V
F5	Transformer primary	T160mAL250V
F6	Transformer secondary	TT1.25A/250V

Fuses F1-F4

- **Location**: Lower rigth part of the control board.
- **Protection:** The fuses are covered by a plastic cover thar must be removed first.
- **Reassembly:** When a new fuse is in place, make sure to properly reassemble the plastic cover.

Fuses F5 and F6

- **Location:** In cylindrical fuse holders on the right side of the control board.
- **Tools:** A flathead screwdriver is required for replacement.
- **Replacement:**
  1. Place the screwdriver in the slot of the fuse holder.
  2. Press lightly and turn a quarter turn to the right. The fuse holder will loosen and pop up.
  3. Once the new fuse is inserted, screw the holder back in reverse order.

Be careful throughout the entire process to ensure assembly and avoid damage to control board.

7 COMMISSIONING

Preparation

- Ensure that the heat pump i completely turned off.
- Verify that all steps in the installation protocol have been followed correctly.

Filling the heating system

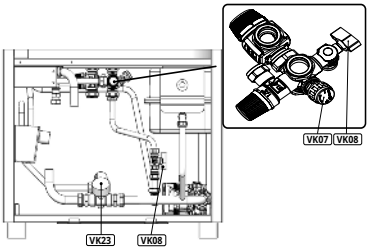
1. Open the filling valve (VK08).
2. Open the air vent valve (VK09).
3. Continue the process of filling and venting until all air is removed from the system and the correct pressure of 1-1,5 bar is achieved.

Venting the heating system

The heat pump´s venting function is activated at startup or restart if the water temperature ins below 30°C, alternating every 10 seconds between domestic hot water and circulation water for five minutes. Check the system pressure using the pressure gauge and refill with water if necessary. Perform an additional pressure check within 24-48 hours and adjust as needed.

Filling domestic hot water

1. Open a hot water tap.
2. Open the filling valve (VK07) at the mixing valve and leave it open.



NOTE

Even though most of the air in the hot water tank is removed, a small amount of air may still be released when you start using hot water.

Startup

When starting the heat pump for the first time, carefully follow these steps.

1. Ensure that the system is completely filled with water.
2. Start the unit.
3. Enter the system´s service menu to make the basic settings.

Acess to the service menu

1. Go to *Advanced settings*, then *General settings*.
2. Press and hold the button for 6 seconds.
3. When prompted to open the service menu, turn the dial one position to the left and confirm your selection by choosing *Yes* with the check mark. Then, press the button.
4. The service menu will now be displayed, showing servel configuration options.
5. Scroll to *Basic Installation*. This will display a quick menu of the most essential installation parameters.

NOTE

The compressor can only start if the indoor temperature is at least 10°C. At lower temperatures, the electrical heating will be activated for heating.

Basic installation

CW Heating mode

Choice: Floor | Radiator

Factory setting: Floor

Adjust the heat pump´s setting based on your heating system for proper temperature management:

Floor: Choose this if you have underfloor heating only.

Radiator: Choose this setting if your system combines radiators and underfloor heating.

CW Control mode

Choice: OUT | OUT & IN | IN

Factory setting: OUT & IN

Select how the heat pump should regulate the indoor temperature based on temperature sensor placed indoor and/or outdoors.

Outdoor & Indoor (OUT & IN): This function djust the heat pump´s output based on both the outdoor temperature and the indoor climate. The outdoor temperature determines the temperature of the circulation water, while the indoor sensor makes adjustments in case of devations to maintain an ideal indoor temperature.

Outdoor (OUT): The heat pump ist regulated solely based on the outdoor temperature. As it gets colder outside, warmer water is circulated. This method igonres the actual indoor temperature and prioritizes only the outdoor climate.

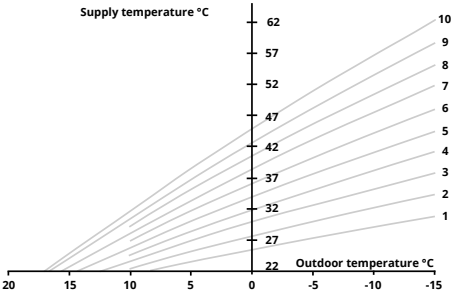
Indoor (IN): The heat pump adapts to the selected indoor temperature via a built-in or external sensor.

CW Heating curve

Choice: 1 - 10

Factory setting: Undefloor Heating: 3 | Radiator : 7

Select an appropriate heating curve to control the supply temperature. Adjust as needed in the user menu: *Temperature/Time > Indoor Temperature.*



CW Pump speed

Choice: 25-100%

Factory setting: RX35: 55 %, RX50: 70 %, RX65: 88 %.

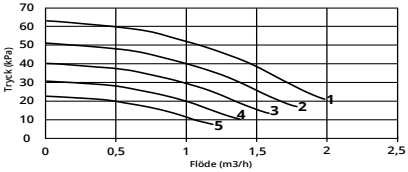
Set the circulation pump´s efficiency as a percentage based on the requirements of the heating system.

Minimum circulation flow: The heat pump´s minimum water flow at maximum heating setting is 8 l/min. To ensure a constant flow it is recommended to keep a floor heating loop in a small bathroom open.

Pump diagram

Pump speed is displayed in percentage:

1: 100% |**2:** 90% | **3:** 80% | **4:** 70% | **5:** 60%.



Normal fan speed

Choice: 0–100%.

Factory setting: 75%.

Control the fan speed during ventilation. Hire a certified ventilation technician for adjustment.

Fan diagram

For fan diagrams, see chapter *Technical information.*

Input power limit

Choice: 0–12000W.

Factory setting: 12000W.

This marks the maximum electrical power. Adjust only if local limitations apply.

⚠OBSERVE

The limit can only be lowered! To increase it, a new control board is required.

Supply fan adjustment

Choice: -50% – 0%.

Factory setting: -30%.

Control the suply air fan speed in relation to the heat pump´s fan. The factory setting provides approximately -10% supply air compared to extract air . No adjustment is needed if no supply air unit is installed.

Heat elements function

Choice: Normal | HE Only | HE blocked.

Factory settings: Normal.

The heating elements function offers different operating modes to supplement or replace the heat pump´s standard heating method with electric backup.

Normal: In this mode, the electric heater functions as a supplement to the heat pump´s normal operation. It is activated automatically, for example during high heating demand. Recommended for standard use.

HE Only: In this mode, the system operates solely with the electric heater and does not use the heat pump´s standard heating method. This mode may be useful during maintenance or repair of the heat pump.

HE Blocked: In this mode, the electric heater is completely deactivated. This option may be suitable in situations where the use of electric heating is to be avoided. In the event of a malfunction in the refrigeration circuit, the electric heater will start to provide emergency heating.

Time

Preset but can be adjusted if needed.

Test run

To ensure correct installation, perform test runs for both the heating system and the domestic hot water with the following steps.

Circulation water

1. Go to *Advanced Settings > Hot Water Settings > DHW Settings.*
2. Set the hot water temperature to 0 °C.
3. With the default settings on the heat pump, heating production is activated. To verify, see Operating information and check that the compressor starts.
4. Allow the pump to run for 10–15 minutes. Verify that the heat is properly distributed in the house's heating system.
5. When the test is complete, reset the hot water temperature to 55 °C.

Domestic hot water

1. The desired domestic hot water temperature has been set to 55 °C The compressor will now start to heat the hot water.
2. Note the current temperature (TE24). You can find the sensor readings under *Measurements > Sensors.*
3. Wait 15 mintes an then check the temperature again to confirm the temperature increase.

Balancing the heating system

For even heat distribution, adjust the system using the mixing valve (shunt) according to the room size. Use balancing valves, located on the return pipes or in the underfloor heating manifold, following the manufacturer´s instructions. Note thet the heat pump supplies a constant temperature and flow to the heating system.

Mixing valve group

To achieve optimal heat distribution between different floors, adjust the flow using the balancing valves located on the return lines. Increasing the flow in one group will raise the heat output there but may affect other groups. If a group requires more heat and is already at its maximum setting, reduce the flow from other groups. Avoid making adjustments via room thermostats.

Floor heating circuits

For even heat distribution throughout the floor, ensure that all thermostats are fully open. Adjust the flow of each circuit individually. Increased flow = more heat.

Radiators

For optimal heating, start with all thermostats fully open. If necessary, adjust the flow for each radiator, usually via the maximum setting on the radiator valve.

Additional settings

Minimum supply temperature

Factory setting: 18°C.

The heating system has a setting limit for the minimum supply temperature. The system is always maintained at this temperature and never fully cooled down. Note that the heat pump may consume power even during warm periods for this reason.

Heat elements without fan

Use this setting during construction or renovation to protect the heat pump from dust and debris. In this mode, the compressor and fan are switched off, but the electric heater remains in operation. Navigate to Fan Settings > Fan Speed Stop > Select YES instead of NO.

Frequency blocking

If the compressor produces disturbing resonance noise at certain speeds, you can use the frequency control to block specific frequencies and reduce these sounds. It is possible to block a frequency range or up to five independent frequencies. To block, proceed as follows:

- **Identify the issue:** If you notice disturbing noise at a specific frequency, that frequency can be blocked.
- **Block the frequency:** By setting the block, the compressor will automatically avoid the selected frequency.
- **Extend the block:** If necessary, up to five frequencies can be blocked to cover a wider range.

1. Go to: *Heat Pump Settings > HP Compressor > Blocked Frequency 1*
2. Enter the desired frequency to be blocked. Each blocked frequency covers a range of 5 Hz, where the frequency is blocked within ±2 Hz of the set value.
3. For additional frequencies, proceed to Blocked Frequency 2, 3, etc., as needed.

Maximum compressor frequency

If the minimum airflow cannot be achieved, the maximum compressor frequency must be reduced.

Air flow l/s	RX35	RX50	RX65
65 och uppåt	-	-	None
50-65	-	None	82 Hz
35-50	None	68 Hz	68 Hz
27-35	None	55 Hz	55 Hz
21-27	40 Hz	-	-

Adjust maximum frequency

1. Go to Heat Pump Settings > HP Compressor.
2. Select Comp. Freq. Max. and adjust according to the table above.
3. Select Max Freq. Nighttime and set it to the same value as above.

Legionella protection

Automatic nighttime heating of the tank to 65 °C is used to prevent legionella. By default, the heating is activated on Mondays at a fixed time of 02:00.

The day selection can be changed in the menu.

Activation/Deactivation

1. Go to Hot Water Settings > Periodic Legionella Heat-Up > Legionella Prevention.
2. Select YES to activate or NO to deactivate.
3. In the same menu, you can select the desired day.

NOTE

When multiple heat pumps are installed in the same area, the legionella protection day should be set to different days to prevent simultaneous operation, thereby reducing unnecessary load on the power grid.

Overheat limit

Activate safe connection to external heat sources such as solar panels or wood-fired boilers, which can generate high temperatures (above 73 °C).

Adjust the temperature

1. Go to Settings > Hot Water > Overheat Limit.
2. Adjust the value between 0–110 °C; the default setting is 73 °C.
3. Set the limit 3–5 °C above the highest expected tank temperature to avoid alarms.

Dual heating curves

This function allows individual heating curve settings for different zones, tailored to the needs of each space. Each zone requires a mixing valve group with a 0–10 V control signal and a circulation pump. Select the control method OUT for outdoor temperature or OUT & IN to include the indoor temperature.

Heating curve settings

- **Priority temperature zones:** Zone 1 must always have the highest set supply temperature. Zone 2 should be set to a lower temperature and must not exceed the setting of Zone 1.
- **Adjustable curves:** Adjust each zone's heating curve independently. For specific connection instructions, refer to Technical Information.
- **Control method:** For OUT & IN in Zone 1, install an external indoor thermometer on terminal X4. If you select the same control method for Zone 2, connect a corresponding thermometer to terminal X5.
- **External mixing valve groups:** For Zone 2, OUT & IN controls the external mixing valve temperature, which is detected by the pipe-mounted sensor on X5. Connect the control signal to terminal X3 (0–10 volts).
- **Activation:** To activate dual heating curves, go to Heating Settings > UV Dual Heating Curves and switch from OFF to ON.
- **Settings:** Performed in the same menu.

Room factor

The default UV room factor value is set to 2.0 °C for systems with underfloor heating and 3.0 °C for systems with radiator heating. The room factor determines how the indoor temperature affects the supply temperature and can be adjusted as needed in the same settings menu.

Control of external mixing valve

This setting allows control of an external mixing valve connected to a separate water tank with an independent heat source, such as solar panels or a water-jacketed wood-burning stove.

To control the external mixing valve, follow these steps:

1. Go to Heat Pump Settings.
2. Select HP Other.
3. Select External Mixing Valve in Use.

The default setting is NO. To activate, change to YES. This requires installation of the TE8 supply sensor after the valve. Refer to Technical Information for mounting details.

Synchronization with solar panels

This function is an optional feature and can be purchased through a reseller.
This setting enables integration with a solar panel system. To activate synchronization, follow the steps below:

1. Go to Heat Pump Settings.
2. Navigate to HP Other.
3. Select Solar Panel Sync.

The default setting is NO. To use this function, change to YES.

8 DISPLAY AND CONTROL

The display provides a quick overview of the system status – including current operating conditions, any error messages, and active settings. Adjustments can easily be made via the panel, giving you full control over your indoor climate.



How to navigate

- Rotate the navigation dial to scroll through the menu options.
- Press the dial to select or confirm your changes.
- The display dims after a period of inactivity to save energy, while the current room temperature continues to be shown with reduced backlighting.
- A simple press or rotation wakes the display to full brightness, restoring all icons and options for easy access.

Display temperature

The temperature shown on the display is an average of the air circulated through the heat pump. If an external room sensor is installed, the temperature from that sensor will be displayed instead.

Main menu

Fan speed



Selection: Low | Normal | Boost.

Factory setting: Normal.

The fan can be set to three different modes to increase or decrease ventilation compared to the normal speed.

- **Low:** Reduces the speed by 30%.
- **Normal:** The fan operates at the set speed.
- **Boost:** Increases the speed by 30%.

Indoor temperature

The current indoor temperature is displayed here.

23°C

The value represents an average temperature for the house. If an external indoor sensor is installed, the temperature at its location will be displayed.

Error message



If an operational fault occurs, it will be shown under this icon. Here, you can view the current error and the time it occurred. The alarm can also be reset by clicking the reset button; read more about the error under Info.

Extra hot water



Used to increase the hot water temperature for three hours. Press the icon to cancel, or let the function switch off automatically after three hours.

Temperature/Time



In this menu, you can adjust the house temperatures and hot water settings according to your needs.

Indoor temperature



This menu offers two adjustment options: adjusting the indoor temperature at certain outdoor temperatures and adjusting the heating curve.

Hot water temperature



Selection: 0-60 degrees.

Factory setting: 55 degrees.

Here you set the desired temperature for the hot water in the tank.

Hot water priority



Selection: Low | Normal | High.

Factory setting: Normal.

Here you can decide how much the Heat elements should assist in heating the hot water.

- **Low:** Used when the hot water demand is lower, as in smaller households. Most economical.
- **Normal:** Suitable for most households, providing sufficient hot water for most needs.
- **High:** Hot water is produced with the highest priority, providing faster availability but also increasing cost.

Minimum supply temperature



Selection: 0-40 degrees.

Factory setting: 18 degrees.

Under Minimum Supply Temperature, you can set the lowest temperature for the heating system. The system will never cool down completely but will be maintained at the temperature set here. This means that the heat pump may consume power even during the warmer seasons.

Holiday reduction



The holiday reduction function lowers the indoor temperature of the house by approximately 10 degrees for the number of days specified. One day before the end of the holiday period, the house begins to heat up. If there is a heating demand, the compressor will run for 12 hours. If the indoor temperature has not reached the desired value by then, the Heat elements will activate to ensure the house has the desired room temperature upon your return.

Operating information



The current operating modes of the heat pump are displayed here.

Compressor frequency

HZ

The compressor frequency is displayed here. This frequency corresponds to the compressor's rotational speed, where 1 Hz represents one revolution per second.

Compressor power

W

Displays the current heating output in watts without Heat elements. This is not the actual power consumption of the heat pump but only the calculated heating output.

Additional power

W

Displays the actual Heat elements power consumption in watts.

Electric power solar

W

If the Solar Panel Synchronization function is used, an additional value will appear under Operating Information in the display: Electric Power Solar.

Operating icons

Hot water production



When the icon shows a water tap with running water, the heat pump is producing hot water for the household taps.

Circulation mode



When the icon shows a green house with a thermometer, the heat pump is supplying hot water to the home's heating system, such as radiators or underfloor heating.

Defrosting



During operation, ice forms on and inside the evaporator, reducing efficiency. Therefore, the evaporator must be defrosted regularly. The compressor is switched off for a short period, and air flows through the evaporator to melt the ice. This is indicated by droplets on the display.

Statistics



Under Operating Information, there is a statistics function. Press the graph icon to display history for up to 1 year. Press one of the bars on the left to display one of the following graphs.

Heat pump output power

The calculated output power generated by the heat pump.

Output power Heat elements

Displays the usage of the Heat elements.

Compressor operating time

Displays the total operating time of the compressor in hours.

Indoor temperature

The indoor temperature is displayed here.

Hot water production

Displays the calculated amount of energy used to produce hot water.

Advanced settings



This menu contains several settings for the heat pump, such as temperature adjustments, fan control, and history.

General settings

History log

Displays the 30 most recent events, such as restarts, alarms, and alarm resets. You can also view information about what the events mean by pressing the question mark.

Language

Selectable languages: English, Finnish, Swedish, German, French, Danish, and Dutch.

Time

Set the time and date by selecting the one you want to change, pressing the dial, and rotating to adjust the time. Press again to confirm.

LED bar function

The LED strip can be adjusted in brightness or turned off. The brightness can be set between 1 and 6. To turn it off, select 0.

Heating settings

Heating curve

Selection: 1-10.

Factory setting: Floor: 3 | Radiator: 7

The selection of the heating curve determines how the supply temperature is automatically adjusted in relation to the outdoor temperature. Each home has unique heating efficiency requirements, so it may be necessary to adapt the curve that best suits your home. Your installer will initially set an appropriate heating curve during installation. However, you may need to fine-tune this setting later to ensure optimal indoor comfort, either by increasing the temperature if it feels too cold or lowering it if it is too warm.

Heating curve 2

If dual heating curves are activated, this is also adjusted here.

NOTE

Always change the heating curve value by no more than 1.0 step at a time. After 24 hours, the house temperature will have adjusted to the new setting.

CW Reference temperature

Factory setting: 22 degrees.

The heat pump's reference temperature is preset to 22 degrees. This setting specifies the indoor temperature you wish to maintain.

CW Heater Allowed

The heat pump's electric heater is designed to efficiently help maintain the desired indoor temperature. The number shown in parentheses indicates the highest outdoor temperature at which the Heat elements actively contribute to heating, based on your set room temperature. To adjust the Heat elements:

- You can adjust the temperature up or down by five degrees from the value shown without parentheses.
- An increase means that the Heat elements are allowed to operate more, up to the adjusted temperature limit shown in parentheses.
- A decrease in the value means that the Heat elements will only operate up to the temperature shown in parentheses.

This flexibility in the setting allows you to fine-tune the heat pump's performance to suit your home's specific heating needs.

CW Summer mode

Selection: Auto | Off.

Factory setting: Auto.

The summer mode is designed to adapt the heat pump's operation during warm days and cooler nights, preventing unnecessary heating at night when the temperature drops. This function is compatible with the control methods OUT or OUT & IN.

Activate summer mode:

To activate, set UV Summer Mode to Auto.

To deactivate, select Off.

When the outdoor temperature exceeds 18.0 °C for more than 8 hours (set in CW Min Heating Delay), the system automatically switches to minimum heating mode.

If the outdoor temperature remains below 18 °C for more than 12 hours (set in CW Normal), the system returns to normal heating mode.

Hot water settings

HW Extra

Factory setting: Off.

Activate this to temporarily increase the hot water temperature for three hours during periods of higher demand. An orange indicator on the icon signals activation. To switch off, select No or press the icon. The function will automatically turn off after three hours.

HW Settings

Selections: 0-60 degrees.

Factory settings: 55 degrees.

Here you set the desired temperature for the hot water in the tank.

HW Priority

Selections: Low |Normal | High.

Factory settings: Normal.

Here you can decide how much the Heat elements should assist in heating the hot water.

Select the level based on your hot water demand:

- **Low**: For smaller households with limited hot water demand; most energy-efficient.
- **Normal:** Suitable for average households.
- **High:** Fast hot water production with high priority, but increases the cost.

HW Smart control

Selections: On | Off.

Factory setting: Off & 13 degrees.

Used to reduce energy consumption during periods of low hot water usage. Activate to allow a temperature reduction during preset periods.

- Period 1: 10:30 AM - 12:30 PM
- Period 2: 6:20 PM - 8:20 PM

The periods can be adjusted as needed.

Legionella prevention

For additional operation of the legionella protection.

Selection: *Immediate leg. prev.* and chosse *start.*

Fan settings

Fireplace function

Selections: On | Off.

Factory setting: Off.

Use this function to reduce the risk of smoke entering the ventilation system when lighting a fireplace. Activation temporarily turns off the fan for 5 minutes.

- Activate by selecting On.
- For early shutdown, select Off.

Fan timer settings

Adjust the fan speed according to the time of day, especially for weekdays and weekends, by lowering it to a reduced level during preset times.

Setting for weekdays:

1. Press the timer icon at the bottom of the menu.
2. Select Low speed on weekdays.
3. Change from Off to On and set the desired start and stop time.
4. Finish by clicking the back arrow. The fan will then run at low speed during the specified times.

Setting for weekends:

1. Press the timer icon at the bottom.
2. Select Low speed on weekends.
3. Change from Off to On and select the start and stop time
4. Finish with the back arrow. The fan will now run at low speed during the selected times.

Deactivate timer control by returning to the selected setting and choosing Off.

Measurements

This menu provides a detailed overview of the various measurements in the system. It is divided into several subsections, each containing specific information.

Fan

Here you can see the current fan speed and the settings that apply to the fan. It also provides information about when it is time to replace the filter.

Heating

Information about the calculated heating demand in your home. You can also see the set room temperature and the calculated flow temperature. The current supply water temperature is also displayed here.

Hot water

Information about the hot water production, whether it is for hot water or for circulation. You can see the calculated settings for hot water production, the set hot water temperature, and the hysteresis.

Sensors

Here you can check the current temperatures from the various sensors in the system.

Optimize the system

- **Heat distribution:** Ensure that the circulation water from the pump reaches all parts of the house efficiently.
- **Thermostats:** For rooms and radiators, they should mainly be open to ensure a constant water flow. They are used to lower the temperature in individual rooms when needed.
- **Adjustment in cold weather:** If the house still feels cold despite fully open thermostats, try increasing the heating curve setting.
- **Troubleshooting for individual rooms:** A single cold room may be due to a closed thermostat in the room, or the entire system may need balancing for better heat distribution.
- **Adjust reference temperature:** Change the reference temperature to achieve the desired indoor temperature.

NOTE

For optimal energy efficiency, keep the thermostats on radiators and underfloor heating open, allowing the heating curve to control the house temperature.

TIPS

If the house feels too cold or too warm at certain outdoor temperatures, you can 'fine-tune the curve,' which adjusts the heating at those temperatures. Here's how:

1. Navigate in the main menu to Temperature/Time and then to Indoor temperature.
2. Select the temperature range you want to adjust.
3. Use the dial to adjust the temperature.
4. Start by adjusting the heating curve by one whole unit.
5. Fine adjustments can be made if needed.

9 SERVICE

⚠OBSERVE

Only qualified personnel may perform service and maintenance on the unit.

Type of maintenance	How often?
Inspection and cleaning of filters	Every quarter
Filter replacement	Annually
Cleaning of drip tray and drainage hole	Annually
Inspection of expansion vessel	Annually
Cleaning of spill funnel	Annually
Inspection of safety valves	Every quarter
Inspection of system pressure	Every quarter

Heat pump air filter

It is important to regularly clean the air filter on your heat pump. The need varies depending on the amount of dust in the ventilation air. It is recommended to clean the filter with a vacuum cleaner every 90 days. The filter should be replaced annually.

1. Turn off the heat pump using the main switch.
2. Remove the front panel from the heat pump.
3. Remove the filter cover by loosening the screws with the black knobs.
4. Remove the filter from the heat pump.
5. Check the old filter. If it needs cleaning, make sure not to use water or other liquids. Also check that the filter has no damage.
6. Replace the existing filter with a new one.
7. Reinstall the filter cover and tighten the screws.
8. Reattach the front panel to the heat pump.
9. Start the heat pump using the main switch.

Supply air unit air filter

Clean the air filters in the supply air unit once every six months. A general recommendation is to replace the filters once a year.

1. Turn off the supply air unit using the heat pump's main switch.
2. Remove the front cover from the supply air unit by loosening the four screws.
3. Remove the filter set from the supply air unit.
4. Check the old filter set. If it needs cleaning, make sure not to use water or other liquids. Also check that the filter set has no damage.
5. Replace the existing filter set with a new one.
6. Reinstall the front cover on the supply air unit and tighten the screws.
7. Start the supply air unit using the heat pump's main switch.

Drip tray heat pump unit

The drip tray is installed in the compressor compartment. The drip tray, hole, and hose should be inspected and cleaned annually to ensure free flow.

1. Turn off the heat pump using the main power switch.
2. Remove the front panel of the heat pump.
3. Unscrew and remove the front cover of the compressor compartment.
4. Check the drip tray for dirt and blockages, and remove any debris that may obstruct it to ensure free water flow.
5. Reinstall the front cover on the compressor compartment and secure it with screws.
6. Reattach the front panel.
7. Start the heat pump.

Condensate cup

The condensate cup is located at the bottom left on the front of the heat pump. It needs to be cleaned regularly.

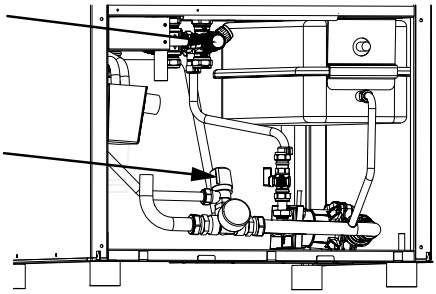
1. Remove the front panel of the heat pump.
2. Inspect the condensate cup and drainage.
3. Remove any material blocking the outlet channel and ensure proper flow. Then clean the inside of the outlet with a cloth.
4. Reattach the front panel.

Expansion vessel

To test the pre-charge pressure in the expansion vessel, use the Schrader valve. The vessel must always have the correct pre-charge pressure. If liquid comes out, the vessel needs to be replaced.

Safety valve

The heat pump is equipped with safety valves. It is important to check their function regularly. To inspect the valves, turn the valve knob counterclockwise; water should then flow through the valve. The valve closes automatically when released. The system pressure may drop slightly during the check and may need to be topped up. The valves should be inspected every 3 months.



System pressure

The system pressure should be checked every three months and may need to be topped up to maintain the correct circulation pressure. The pressure should be checked daily during the first few days after installation.

1. Remove the front panel of the heat pump.
2. Check the pressure on the pressure gauge (VK23). The black indicator should show between 1 and 1.5 bar.
3. Open the filling valves (VK08) to increase the system pressure.
4. Close both filling valves when the pressure gauge shows the correct value.
5. Reinstall the heat pump's front panel.

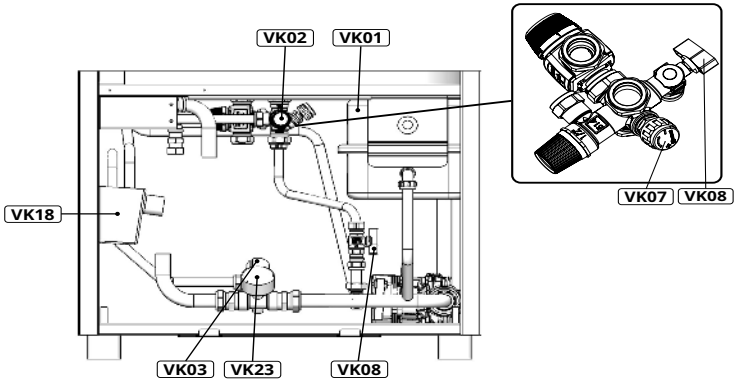
Draining/Emptying the System

Follow these steps when emptying the system. Remember that the main power switch must always be in the OFF position:

1. Turn off the heat pump using the main power switch.
2. Remove the front panel of the heat pump.
3. Turn off the incoming water supply.
4. Open the safety valve (VK02) and drain the tank.

Draining the Heating Circuit

1. Turn off the heat pump using the main power switch.
2. Open the safety valve (VK03) to the maximum position until it remains in the open position.
3. When the system is depressurized, open the drain valve located under the electric heater.



Components			
VK01	Expansion Vessel	VK07	Filling Valve, Domestic Hot Water
VK02	Safety Valve, Domestic Hot Water	VK18	Drip Tray
VK03	Safety Valve, Heating System	VK23	Manometer

10 DISTURBANCE

General

If a disturbance occurs, an orange clock symbol will appear on the screen. This symbol provides information about the current fault and the time it occurred. The alarm can be reset by pressing Reset on the screen, and more detailed information about the fault can be obtained by pressing Info. Note that the heat pump may also indicate problems in the overall heating system; the fault is not always related to the heat pump itself.

Disturbance Information

By clicking on the question mark, you can obtain further information about the cause of the disturbance and any actions that should be taken.

Resetting the Alarm

To reset the alarm, press the green checkmark. Once this is done, the green checkmark changes to a right arrow and the orange clock disappears from the display. If the alarm does not reoccur, no further action is necessary. If the alarm returns, you should contact your installer or an authorized service partner.

Emergency Mode

Typically, the electric supplement is activated if the compressor is taken out of operation due to a fault. This means you are rarely left completely without heating or hot water. You can see if the electric supplement is active under Operational Information.

Troubleshooting and Solutions

This section of the manual describes the most common problems and faults that may occur with your heat pump, and lists potential causes and recommended solutions for each issue.

If you cannot resolve the problem using the instructions in this chapter, contact the supplier from whom you purchased the heat pump or an authorized service partner.

Why Does the System Pressure Drop to Zero?

If the system pressure in your heat pump drops to zero, it is an indication of a possible serious problem that requires prompt action. Here are some likely causes and the actions you can take.

Cause

- *Low or no pre-pressure in the expansion vessel:* If there is insufficient pre-pressure in the expansion vessel, this can cause the system pressure to drop.
- *Faulty expansion vessel:* A defective expansion vessel will not function properly, which can cause low system pressure.
- *Leakage in the safety valve:* If the safety valve is leaking, it can also result in the system pressure dropping.
- *Leakage in the heating system:* If there is a leak somewhere in your heating system, this can also cause the pressure to drop.

Action

- *Check the expansion vessel's pre-pressure:* Use a pressure gauge to ensure that the pre-pressure in the expansion vessel is 0.8 bar. If it is not, adjust the pre-pressure.
- *Inspect the safety valve:* Check the safety valve for any signs of leakage. If there are any, it will likely need to be replaced.
- *Inspect the heating system:* Perform a visual inspection of the entire heating system to look for leaks. This includes checking pipes, connections, and other components. If you find a leak, fix it promptly or contact an authorized service partner for repair.

No Heating to the House

If you experience a lack of heating in the system even though the compressor in your heat pump is running, several issues could be causing the problem. Here are some possible scenarios and how you can address them.

Cause

- *Heat is first directed to the hot water tank:* The heat pump prioritizes heating the domestic hot water in the tank first. Once the hot water has been heated, the system switches after 30 minutes to heating the circulation water for the house. This time setting is adjustable.
- *Faulty diverting valve or valve control:* If the diverting valve or its control is defective, it will prevent proper transfer of heat to the circulation system. In such cases, you will usually receive an alarm such as High-Pressure Hot Gas or Hot Water Tank Overtemperature after 1–2 hours.

Action

- *Wait:* If the issue is that all the heat is initially directed to the hot water tank, the best course of action is to wait until the system automatically switches the heat to the circulation system.
- *Lower the desired hot water temperature:* If you need heat in the circulation system quickly, you can lower the desired hot water temperature to 0°C in the system settings. This should force the system to immediately switch the heat to the circulation system.

The heat pump heats the hot water tank and then stops

If the heat pump heats the hot water tank and then stops, this can be a natural part of its operating cycle. This is normal as long as you do not notice any issues with the indoor temperature. Here are some possible scenarios and how you can manage them.

Cause

- *The indoor temperature is higher than or close to the set value:* If your heat pump has a built-in thermostat and the indoor temperature is already sufficiently warm, it will stop after heating the hot water tank. This is normal.
- *The outdoor temperature is high:* If the weather is warm, the heat pump will determine that no additional heating is needed and will therefore stop.

Action

- *No action needed:* If you do not experience any issues with the indoor temperature, no action is required. When the temperature drops again, the heat pump's compressor will restart.
- *Test the heating:* If you want to ensure that the heat pump is correctly heating the radiator or underfloor heating system, you can temporarily adjust the settings. Increase the desired room temperature to a very high value, for example 30°C, and/or switch to a higher heating curve in the heat pump's settings. If the heat pump starts and your home begins to warm up, you know the system is functioning correctly. Remember to return the settings to normal values once the test is complete.

Overheated electric heater – Smell of burning rubber

If you notice an unpleasant burning rubber smell coming from your heat pump and have identified that the electric heater element has overheated, there are specific steps you can follow to address the issue.

Cause

- *Air in the electric heater element:* If your heat pump was started without being filled with water first, air can become trapped in the electric heater element. This can cause an unpleasant smell and may also lead to overheating.
- *Heater has been running too long:* If the electric heater has been on for an extended period without proper water filling, an unpleasant burning rubber smell may occur.

Action

- *Refill water and bleed the system:* The first step is to refill the system with water and ensure it is properly bled. This should resolve the issue of air in the electric heating element and prevent further overheating.
- *Reset the overheat protection:* The electric heating element

has a reset button for overheat protection. Press this button to reset the system.

- *Check and replace the insulation:* If an unpleasant smell has occurred, inspect the insulation on the electric heating element. If it is damaged or deteriorated, replace it with a new 9 mm Armaflex mat or equivalent insulation material.

Poor hot water capacity

If you are experiencing poor hot water capacity in your heating system, this may be due to several factors. Here are some steps you can take to address the issue.

Cause

- *Too low hot water temperature and hot water priority settings:* If these values are set too low, the system will not be able to deliver sufficient hot water.
- *Hot water hysteresis set incorrectly:* If this value is set incorrectly, it can also cause issues with hot water supply.

Action

Check and adjust the settings

- Go to Advanced Settings > Hot Water Settings. Increase the values for hot water temperature and hot water priority if they are set too low. Higher values will provide greater hot water capacity.
- Check HW Hystersis: Go to Advanced Settings > Hot Water Settings. Verify the HW Hystersis; the recommended value is 1.5 °C.
- Adjust Extra Hot Water settings: Navigate to Advanced Settings > Hot Water Settings. Change HW Extra from 60 °C to 70 °C.

The heat pump is completely off and does not start

If the heat pump is completely off and does not start, this may be caused by several factors.

Cause

- *Power outage:* If there has been a power outage in the area, it will of course affect the operation of your heat pump.
- *Blown fuse:* A broken or blown fuse can also be the reason your heat pump does not start.

Action

- *Check voltage and neutral:* Ensure that 400 V voltage is reaching the main switch of your heat pump. You can do this using a voltmeter. Also, check that the neutral wire is connected correctly. An incorrect neutral connection can cause the system not to operate properly.
- *Check the fuses:* See the chapter Technical Information, section Connections and Fuses. If any of these fuses are blown, they need to be replaced. Follow the instructions in the manual or contact an authorized service partner.

The overheat protection cannot be reset

If the overheat protection cannot be reset, even though you have followed the instructions in the alarm list and the heater is not overheated, contact an authorized service partner.

Cause

- *Loose connection in the overheating protection:* A poor connection in the overheating protection may prevent it from being reset.
- *Cable break:* If there is a cable break between the overheating protection and the control board, the communication between them will be impaired, which may prevent the protection from being reset.
- *Interruption in the control board:* If the control board itself has a problem, it may also prevent the overheating protection from being reset.

Action

Contact your service partner: Due to the complexity and risks associated with this issue, it is recommended that you contact an authorized service partner to perform a thorough troubleshooting and, if necessary, repair of the system.

The house is warm in the summer

During the warm summer months, the house may feel overheated, and the heat pump display will show a high temperature. The display's temperature readings represent the house's average temperature measured from the exhaust air vents.

Cause

- *Solar radiation:* Direct sunlight on the surfaces of the house can lead to a significant increase in the indoor temperature.
- *High supply or return temperature setting:* If the minimum supply temperature or minimum return temperature is set to a high value, this will also contribute to high indoor temperatures.

Action (passive cooling)

- *Awnings:* Use awnings to shade windows that are exposed to direct sunlight.
- *Roof overhang:* A roof overhang can reduce the amount of direct sunlight hitting windows and walls.
- *Solar control film:* Apply solar control film to windows that are exposed to a lot of sunlight.

Adjust the system's base heating.

- Go to Temperature/Time.
- Select Minimum supply temperature or Minimum return temperature, and set it to 18 degrees Celsius. This will limit the water temperature in the heating system to a maximum of 18 degrees, helping to reduce the indoor temperature.

By combining these methods and proactively managing these factors, you can effectively lower the indoor temperature and improve your home's comfort during the warm summer months.

Alarm

Alarm menu

The heat pump continuously monitors several critical parameters. If any of these values fall outside the accepted range, the system will trigger an alarm. This alarm is indicated by a clock symbol on the right side of the display and is recorded in the system's alarm history.

Identification and resolution of active alarms

A message on the screen indicates the type of alarm that has been triggered. If the fault that caused the alarm is resolved, the heat pump will return to normal operation. For certain alarms, the system may automatically block the compressor function.

Frequent alarms may be a sign of underlying issues. It is important to promptly contact an authorized service partner to resolve these problems and prevent damage to the system.

Alarm history

The system's alarm menu provides a log of the 30 most recent alarms.

Even if the cause of the alarms has been resolved, the alarms must be manually reset in the system's alarm menu to return to normal operation.

Alarm list

Defrost error / Melting error alarm

The defrost error or melting error alarm is triggered when the defrost cycle does not finish within 60 minutes. This is usually caused by a faulty exhaust air sensor (TE7), and the solution is to replace the defective sensor.

EEV Max pos time out alarm

The EEV Max position timeout alarm is triggered when the electronic expansion valve (EEV) remains at its maximum position for more than 30 minutes. This may be due to a lack of refrigerant or the expansion valve not opening properly. Resolve the issue by resetting the alarm or contacting a service partner if the alarm reoccurs.

Incorrect controller type/version

The incorrect controller type/version alarm indicates that the software in the control board is not compatible with the software in the display unit. If this alarm occurs during operation, it indicates a fault in either the display or the control board.

Filter replacement alarm

The filter replacement alarm indicates that the air filter needs to be replaced or cleaned. To resolve this, turn off the unit using the main power switch. Clean the filter with a vacuum cleaner (at least every three months) or replace it (once a year), and reset the alarm on the display unit. Then restart the heat pump.

Sensor connection error (TE1–TE5)

The alarms (TE1–TE2, TE2–TE3, TE4, TE5) occur during heating in circulation mode. They indicate specific temperature deviations between different sensors and components, resulting in different alarms depending on the situation and the duration of these deviations.

Sensor fault TE0-TE24

The sensor fault TE0–TE24 alarm occurs when the sensor's measured resistance value is outside the specified range of 0.5–1.5 kΩ, which may be caused by a loose connection, a break, or a short circuit in the sensor or sensor circuit. To resolve this, check and, if necessary, replace the cables, connector, or sensor.

Sensor fault TE8 and/or TE9

The sensor fault TE8 and/or TE9 alarm occurs when these sensors are configured but not connected. The corrective action involves checking whether the parameters "Dual heating curves" or "External mixing valve" are enabled and following the corresponding instructions to correctly configure the heat pump.

Discharge gas temperature alarm

The discharge gas temperature alarm indicates an excessively high discharge gas temperature, above 120 °C, which is most often caused by a lack of refrigerant or the expansion valve not opening properly.

HP circulation alarm

The HP circulation alarm occurs when the pressure after the compressor has been too high and the high-pressure switch has tripped. This can be caused by air in the system, insufficient water circulation, an undersized radiator system, or an interruption in the HP alarm circuit. To resolve the issue, bleed the circulation system, check the circulation, and inspect the HP alarm circuit.

HP hot water alarm

The HP hot water alarm occurs when the pressure after the compressor has been too high and the high-pressure switch has tripped. This may be caused by an incorrectly adjusted DHW sensor TE24 or an interruption in the HP alarm circuit. Corrective actions include increasing the TE24 correction value by 2.0 °C and checking the HP alarm circuit.

Inverter connection error

The alarm may be caused by an incorrectly set parameter, a cable break, or a misconnected cable in the display.

Inverter alarm (all)

The inverter has detected a fault. Restart the heat pump; if the alarm does not clear, contact the dealer or an authorized service partner.

Compressor function alarm

The compressor function alarm is triggered when there is no output despite the compressor being expected to run. This may be caused by reversed phases, incorrectly connected signals, or a fault in the refrigeration circuit.

Condenser temperature alarm

The condenser temperature alarm is triggered when TE5 Heat exchanger out exceeds 73 °C, which may indicate a problem with the water circulation.

Alarm – Multiple alarms

The "Multiple alarms" alarm is triggered when the connectors on the control board have been unplugged or the cables have come loose. This requires checking and reconnecting the connectors and cables.

Low pressure 1 alarm

The alarm is triggered when the evaporation temperature is too low, usually due to insufficient airflow, and may require checking and possibly replacing the filter to resolve the issue.

Low pressure 2 alarm

The alarm indicates that the evaporation pressure is too low, which may be caused by an airflow blockage, a dirty filter, refrigerant leakage, a faulty expansion valve, or an interruption in the alarm circuit.

Unknown heat pump unit alarm

The "Unknown heat pump unit" alarm occurs when the controller cannot identify the heat pump unit, most likely due to poor electrical contact or incorrect wiring.

PL1 input alarm

The alarm indicates either that terminal X3:11 is incorrectly connected or that there is a fault in the sensor input X3:11.

Room overheat alarm

The alarm is triggered when the room temperature TE3 exceeds 100 °C for 60 minutes, indicating that the sensor should be checked.

Room underheat alarm

The alarm is activated when the room temperature TE3 drops below 2 °C for a period of 20 minutes.

SD memory card error

The alarm is triggered if the SD memory card is damaged or missing. The standard 4 GB card can be replaced with a 4 GB, 8.0 GB, 16.0 GB, or 32.0 GB card.

Pressure ratio alarm

The pressure ratio alarm is triggered when the pressure ratio is too high, with the high pressure being too high relative to the low pressure. This may be caused by an excessively high supply temperature.

Heating limitation alarm

The alarm is activated when the supply temperature limitation has completely shut down the compressor. This is usually due to poor circulation and/or a high return temperature.

Heating cooling risk alarm

The alarm is activated when the return temperature TE2 falls below 1.5 °C for 30 seconds, and this temperature is also monitored during hot water operation.

Heating minimum alarm

The alarm is activated when the supply temperature TE1 falls below 3.0 °C for 20 minutes, and it can only be triggered during heating operation.

Heating overheat alarm

The heating overheat alarm is triggered when the set alarm limit for maximum supply temperature is exceeded, most likely due to poor circulation or issues with the elements in the radiator circuit. The factory-set alarm limits are 45 °C for underfloor heating and 75 °C for radiator heating.

Heating return max alarm

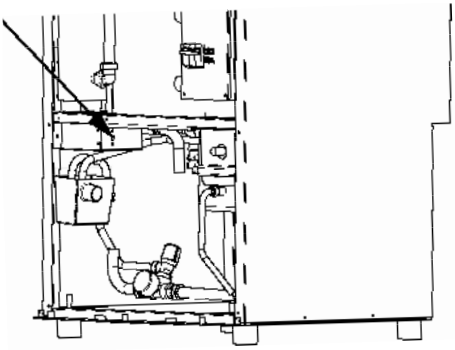
The heating return max alarm is triggered when the return sensor temperature is too high. This can be resolved by checking that any circulation pumps are working and that the return sensor is correctly connected to the control board at X5:3–4.

Hot water overheat alarm

The hot water overheat alarm is caused by the diverter valve being stuck in DHW mode, which may be due to a fault in the diverter valve, the connection cable, or the diverter valve relay in the control system. Resolving the issue requires multiple checks and possibly replacing components.

Heater overheat alarm

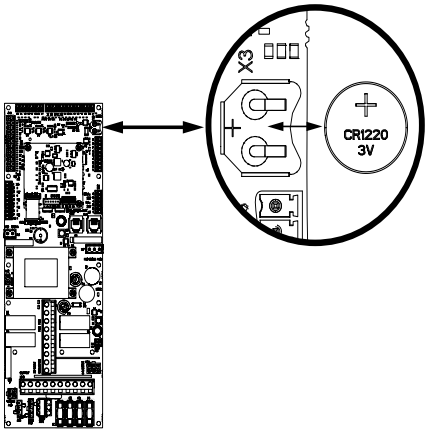
The heater overheat alarm occurs when the auxiliary heater's overheating protection is triggered, most often due to poor circulation, but it may also be caused by a poor connection at connector X9 or a fault in the control board. The alarm can be reset by firmly pressing the red push button located under the electric heater. See image below.



Clock not set alarm

The “Clock not set” alarm indicates an abnormal clock function and may be caused by an incorrect time setting or a weak battery, which can result in loss of the clock setting during a power outage.

1. Turn off the heat pump using the main power switch.
2. Remove the heat pump’s front panel.
3. Open the electrical box cover to access the battery.
4. Locate the battery position (see image).
5. Replace the old battery with a new CR1220 type.
6. Reinstall the electrical box cover and the front panel.
7. Start the heat pump using the main power switch.

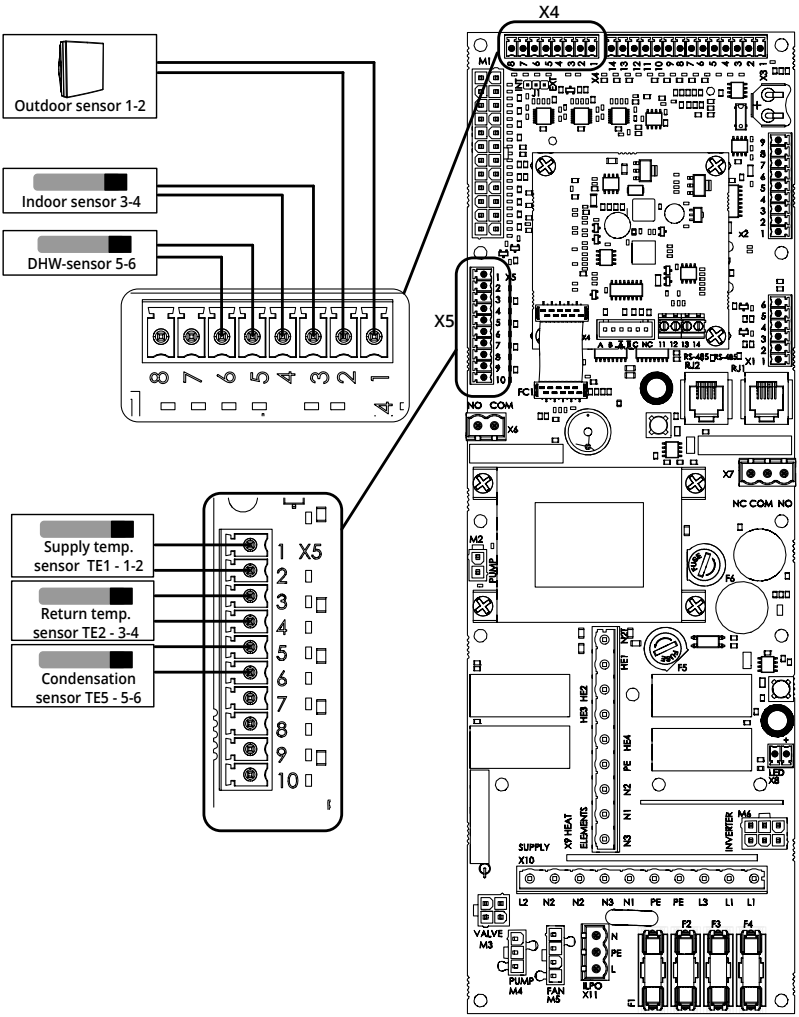


11 TECHNICAL INFORMATION

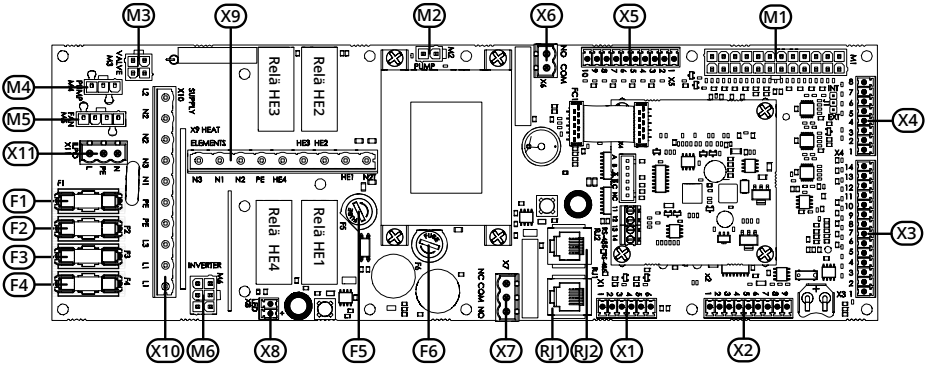
Specifications	RX35	RX50	RX65
Maximum heat pump output	3,5 kW	5,0 kW	6,6 kW
SCOP average climate, 35/55	4,6/3,32	5,39/4,02	4,96/3,85
Maximum heating output	9,5 kW	11,0 kW	12,6 kW
Electric heater	6,0 kW	6,0 kW	6,0 kW
Heating medium pump	4-75 W	4-75 W	4-75 W
Refrigerant R32	950 g	950 g	950 g
Fan, rated power	83 W	153 W	169 W
Exhaust air flow	21-42 l/s	28-69 l/s	28-92 l/s
Maximum operating pressure	3 bar	3 bar	3 bar
Maximum supply temperature	70°C	70°C	70°C
Minimum exhaust air temperature	Down to -20 C°	Down to -20 C°	Down to -20 C°
Nominal circulation water flow (20 kPa)	6-33 l/min	8-33 l/min	10-33 l/min
Minimum circulation water flow	3 l/min	3 l/min	3 l/min
Tank volume	170 l	170 l	170 l
Sound power level	39 dB (A)	46 dB (A)	48 dB (A)
Duct connector	125 mm	125/160 mm	160 mm
Voltage	400V 3-fas 50Hz	400V 3-fas 50Hz	400V 3-fas 50Hz
Fuse rating	16A	16A	16A
Cable, electrical connection	2,5 mm^2	2,5 mm^2	2,5 mm^2
Cable, outdoor sensor 0–50 m EKKX, LiYY or equivalent	min 0,5 mm^2	min 0,5 mm^2	min 0,5 mm^2
Expansion vessel, pre-charge pressure	0,8 bar	0,8 bar	0,8 bar
IP rating	IP21	IP21	IP21
High	2100 mm	2100 mm	2100 mm
Width	600 mm	600 mm	600 mm
Depth	650 mm	650 mm	650 mm
Weight	210 kg	210 kg	210 kg
	RXL35	**RXL50**	**RXL65**
High	1600 mm	1600 mm	1600 mm
Width	600 mm	600 mm	600 mm
Depth	650 mm	650 mm	650 mm
Weight	175 kg	175 kg	175 kg

12 WIRING DIAGRAM

Sensor



Connections and fuses

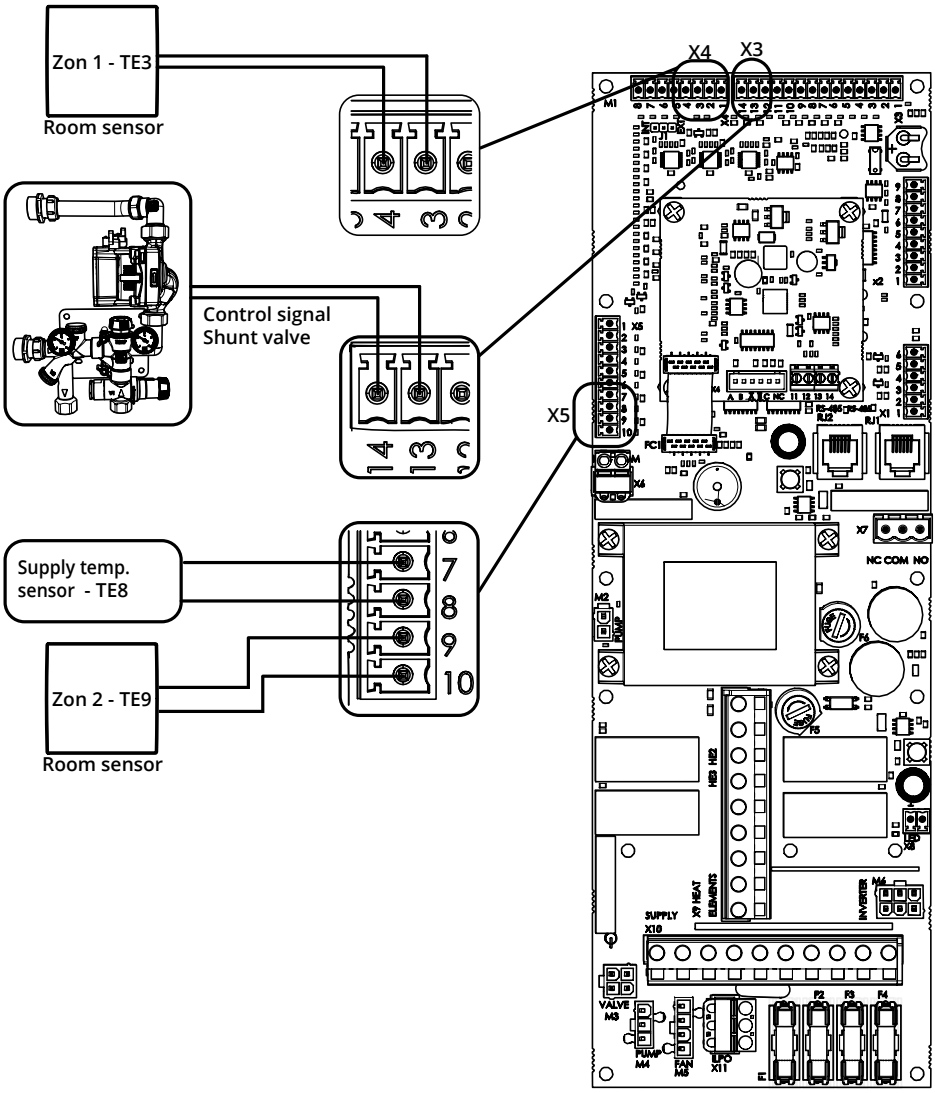


Connection	Function
F1	Change over valve (T4AH250V, 5x20mm)
F2	Circulation pump (T4AH250V, (5 x20mm)
F3	Fan(T4AH250V, 5x20 mm)
F4	Supply air unit (T4AH250V, 5x20 mm)
F5	Fuse (T160mAL250V, 5x20 mm)
F6	Fuse (TT1.25A/250V, 5x20 mm)
M1	Signal cable / Circulation pump control 0-10 V (M1-13)
M2	Circulation pump, control
M3	Change over valve 230V
M4	Circulation pump 230V
M5	Fan 230V Supply
M6	Inverter 230V Supply
RJ1	Display
RJ2	Not used
X1	Not used
X2	Data port
X3	External fan control
X4	External sensors
X5	Temperature sensors in the heat pump
X6	Not used
X7	Not used
X8	LED light strip
X9	Electric heating element
X10	Incoming power connection
X11	Supply air unit 230V

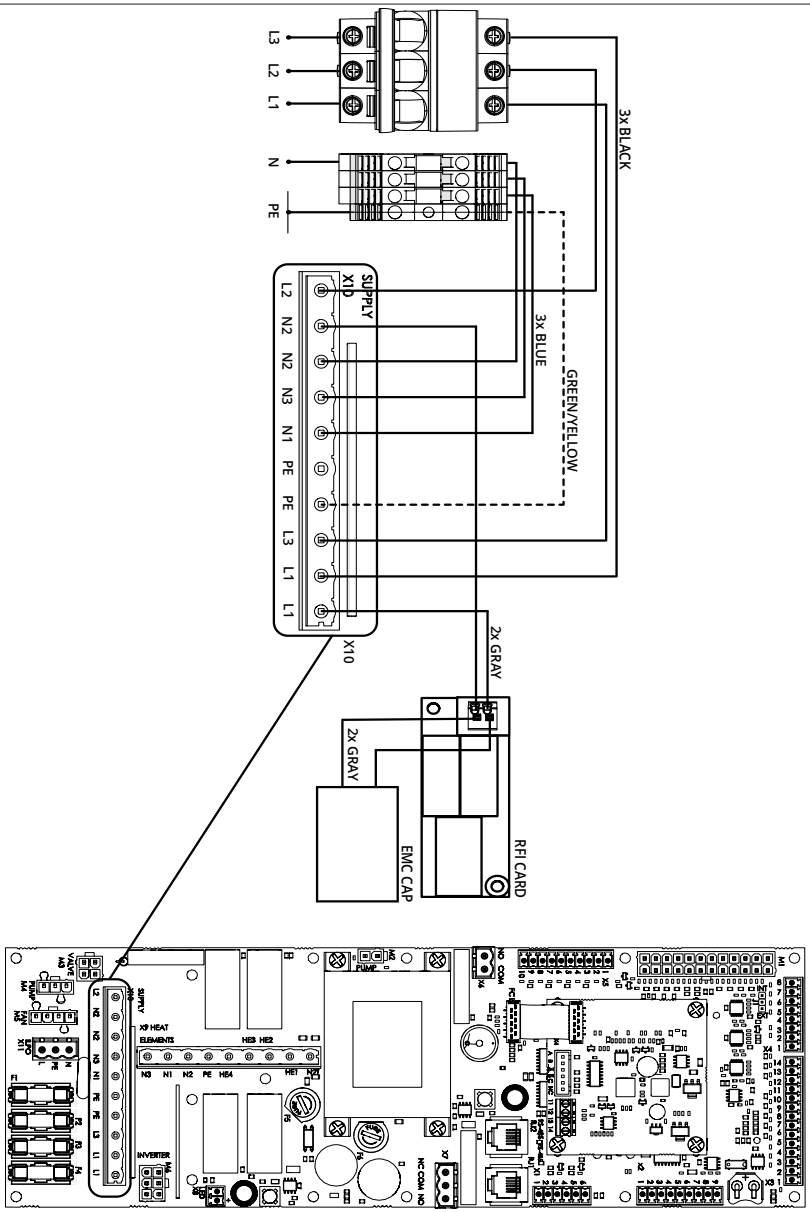
Connection for dual heating curves

The jumper located on terminal block J1 must be moved from terminals 1–2 to 2–3.

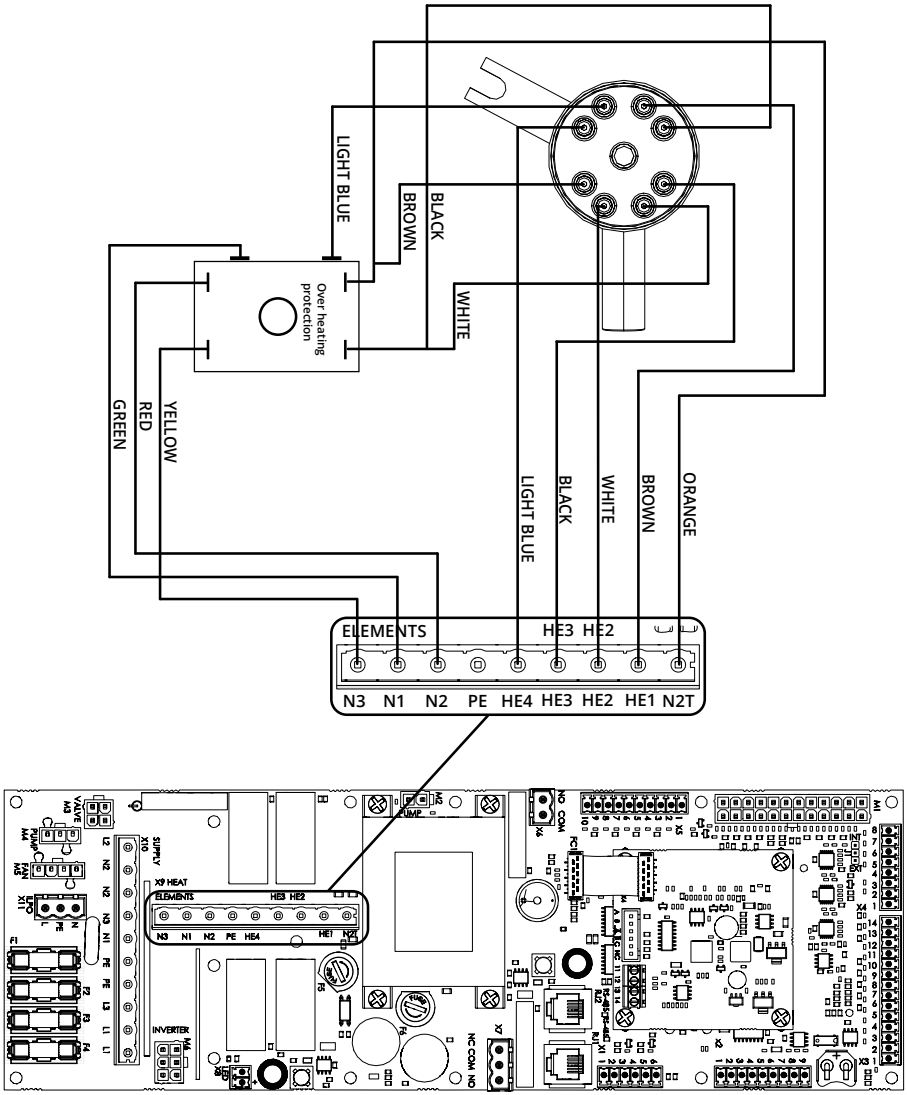
See section Other settings in the chapter Commissioning for instructions.



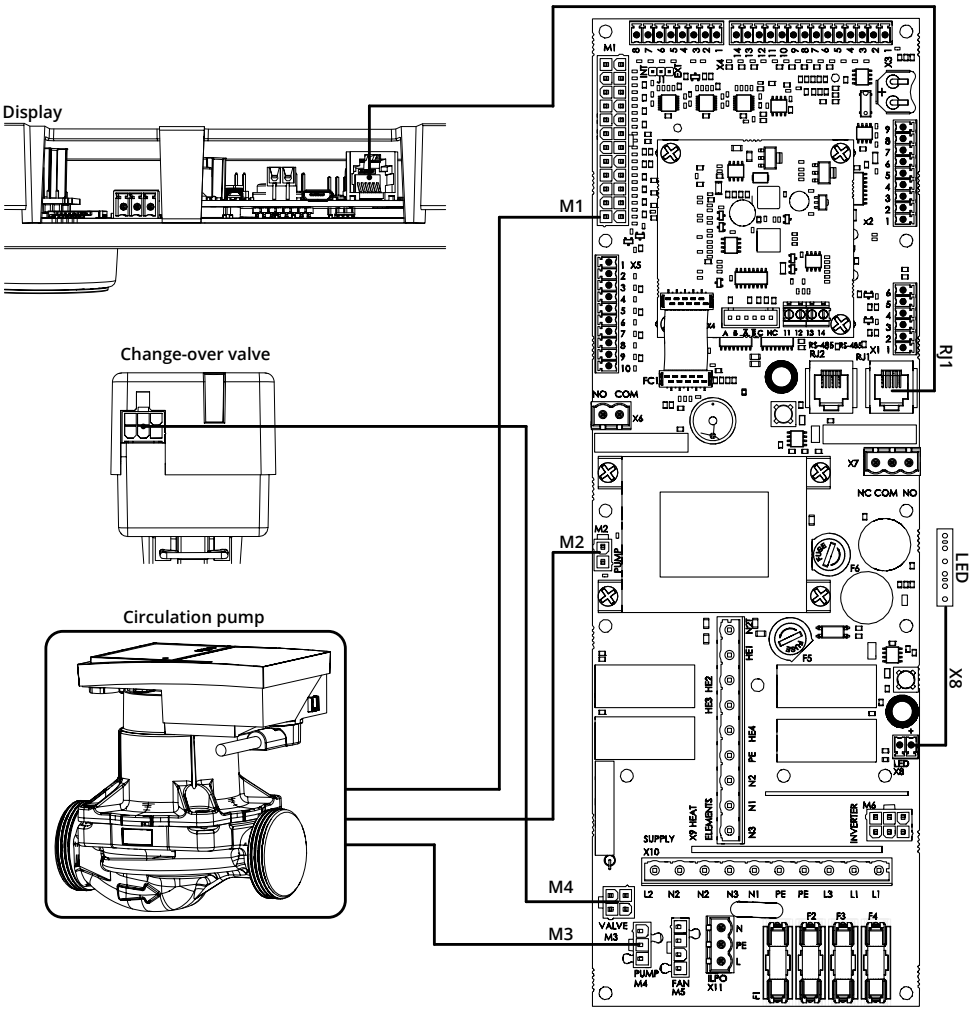
Power supply, EMC and RFI card



Electric heating element



Components

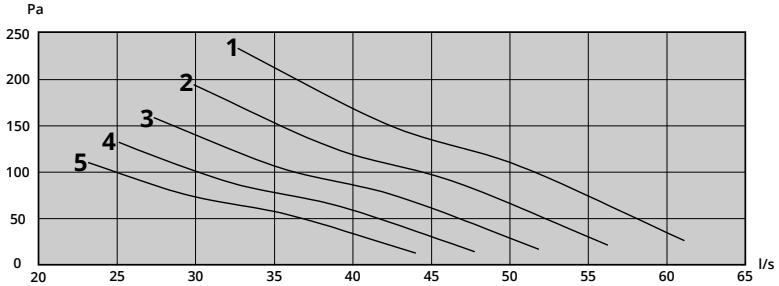

Display
Change-over valve
Circulation pump
M1
M2
M3
M4
RJ1
X8
LED

Fan diagram

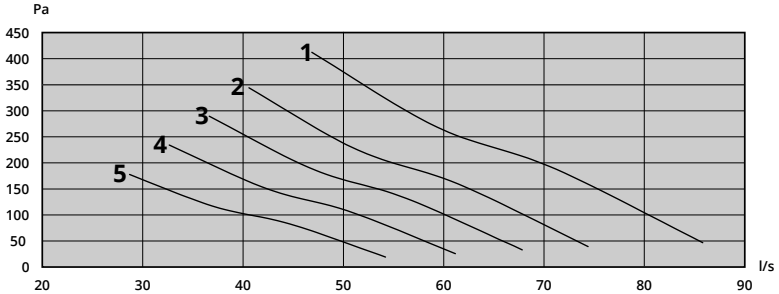
Fan speed is displayed as a percentage:

1=100%, 2=90%, 3=80%, 4=70%, 5=60%.

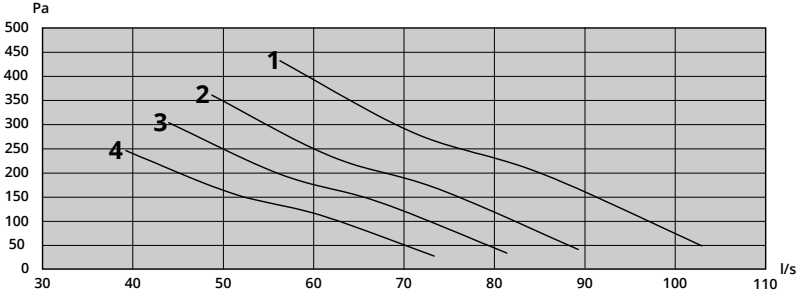
RX35



RX50

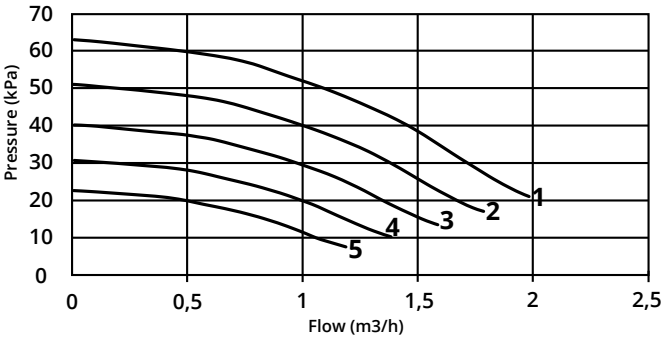


RX65



Pump diagram

Pump speed is displayed as a percentage: 1=100%, 2=90%, 3=80%, 4=70%, 5=60%.



Table, supply temperature

Outdoor temp. / Heating curve	20 °C	15 °C	10 °C	5 °C	0 °C	-5 °C	-10 °C	-15 °C
10	17,9	24,8	31,7	38,5	44,9	50,9	56,7	62,2
9	17,8	24,1	30,5	36,8	42,7	48,2	53,5	58,5
8	17,5	23,4	29,3	35,2	40,6	45,7	50,4	55,0
7	17,4	22,7	28,1	33,4	38,4	43,1	47,5	51,7
6	17,5	22,2	27,0	31,7	36,1	40,2	44,1	47,9
5	17,3	21,5	25,8	30,0	34,0	37,6	41,0	44,4
4	17,0	20,8	24,6	28,4	31,8	35,0	38,1	41,1
3	17,0	20,3	23,6	27,0	30,0	32,6	35,2	37,7
2	17,0	19,7	22,4	25,2	27,6	30,0	32,1	34,1
1	16,9	19,1	21,3	23,5	25,5	27,3	29,1	30,8

13 CONTACT

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Tel: +46 1 682 16 40

mail: info@comfortzone.se • www.comfortzone.se

In case of faults or problems, always contact the dealer who sold the product or the house where the heat pump is installed.

A service technician may be contacted for repairs.

14 WARRANTY

These warranty terms apply only to the Swedish market. The following is only a general summary of the applicable terms. It is therefore important to note that certain specific conditions apply in order for warranty and right of complaint to be valid. For complete information, please refer to ComfortZone's terms of purchase for consumers and businesses as well as ComfortZone's warranty terms. You can find the latest version of these terms on ComfortZone's website.

Product warranty – Exhaust air heat pump & supply air unit

Validity: 3 years.

Scope: Covers original defects discovered within 3 years from the installation date.

Care warranty – Exhaust air heat pump & supply air unit

Validity: 3 years.

Scope: Covers deductible and depreciation in the event of mechanical damage. Applies from the expiration of the product warranty. Requires that insurance is granted by a Swedish insurance company and that the mechanical damage has been approved by the insurance company. Does not apply if the cost is less than the deductible.

Extended Care Warranty - Exhaust air heat pump & supply air unit

Validity: 1–18 years.

Scope: The customer has the option to extend the Care Warranty by signing a special heat pump insurance with Söderberg & Partners. Covers deductible and depreciation in the event of mechanical damage. ComfortZone's responsibility ends upon the expiration of the standard Care Warranty.

Spare parts for exhaust air heat pumps and supply air units

Validity: 1 year.

Scope: Covers original defects and applies only to new original parts from ComfortZone installed by an authorized service company. Does not cover spare parts installed to remedy defects covered by the product warranty.

15 SERVICE BOOK

SERVICE 1

Work order	Signature	Work performed
Company	Date	

SERVICE 2

Work order	Signature	Work performed
Company	Date	

SERVICE 3

Work order	Signature	Work performed
Company	Date	

SERVICE 4

Work order	Signature	Work performed
Company	Date	

SERVICE 5

Work order	Signature	Work performed
Company	Date	

SERVICE 6

Work order	Signature	Work performed
Company	Date	

SERVICE 7

Work order	Signature	Work performed
Company	Date	

SERVICE 8

Work order	Signature	Work performed
Company	Date	

SERVICE 9

Work order	Signature	Work performed
Company	Date	

SERVICE 10

Work order	Signature	Work performed
Company	Date	

SERVICE 11

Work order	Signature	Work performed
Company	Date	

SERVICE 12

Work order	Signature	Work performed
Company	Date	

SERVICE 13

Work order	Signature	Work performed
Company	Date	

SERVICE 14

Work order	Signature	Work performed
Company	Date	

SERVICE 15

Work order	Signature	Work performed
Company	Date	

SERVICE 16

Work order	Signature	Work performed
Company	Date	

SERVICE 17

Work order	Signature	Work performed
Company	Date	



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