ComfortZone

User and Installation Manual



Exhaust Air Heat Pump
RXC35 - RXC50 - RXC65

ComfortZone
VÄRMEPUMPAR *Proudly made in Sweden*

RXC: Smart and energy-efficient

RXC is a heat pump with comfort cooling designed to be both energy and cost-efficient. It utilizes the heat from indoor air that would otherwise have been lost through ventilation. The recovered heat is used to efficiently warm up your home as well as provide hot water.

The heat pump optimizes the heat supply by using both pre-set parameters and real-time data from temperature sensors. It also creates continuous ventilation in 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 as they should and that you achieve the energy savings and warmth you expect.

The heat pump is installed with a supply air unit that is connected to the existing home air supply system. With this feature, the air that is brought into the home is filtered and either cooled or preheated, so you get a temperature that is tailored to your needs.

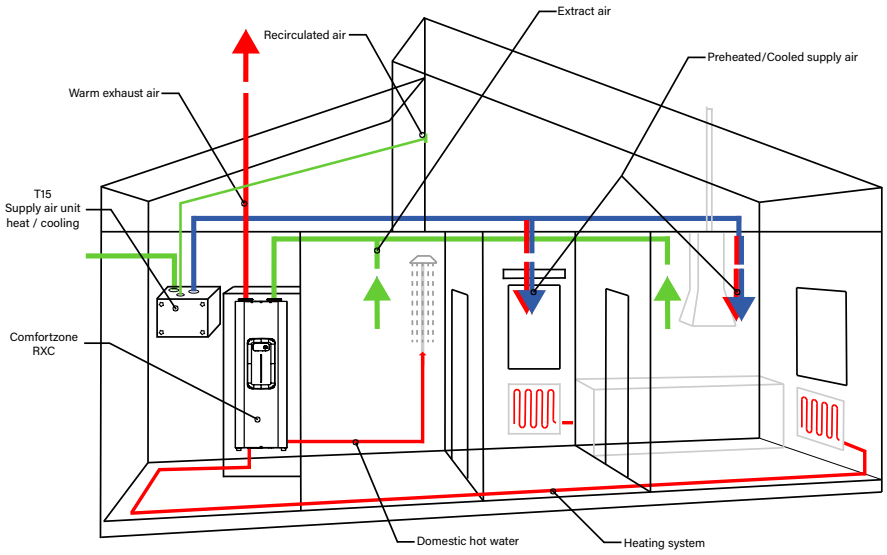


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1 IMPORTANT INFORMATION

⚠WARNING

Read the manual before installation and start-up!

Safety

This appliance can be used by children aged 8 years and older, and persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the risks involved. Children should not play with the appliance. Cleaning and user maintenance should not be performed by children without supervision.

⚠Warning!

- Only use manufacturer - recommended defrosting and cleaning methods.
- The appliance must be stored from 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 have no odor.
- 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 that one can injure oneself or others (seriously) or seriously damage the product.

⚠OBSERVE

This symbol indicates that the product can be damaged.

NOTE

This symbol signifies a note with additional information for the installer.

TIPS

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

Markings

These markings and symbols appear on the unit.

CE	Indicates that the unit has undergone the necessary checks before launch and that it meets the EU's 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: Flammable substances associated with refrigerent R32.
	Read the user manual for important information and instructions.
	Carefully read the manual before installation, use, or maintenance to ensure safe and proper handling.
	Warning: Electrical hazard. Follow safety instructions and avoid contact with electrical components during operation or maintenance to minimize the risk of electric shock or injury.

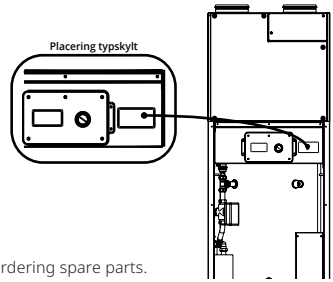
Combined manual

This manual is intended for both users and instalers to ensure safety and efficiency.

Specific knowledge is required for installation and service. Installation and service must be perfomed in a professional manner. The installer does not need to be a certified refrigeration technician but must follow all safety protocols and instructions. Everyone should be aware of the risks and follos safety instructions.

Serial number

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



Plant information

This information can be useful to have when contacting service technicians or ordering spare parts.

Model	
Serial number	
Installation date	
Installer	

Control values

At installation, these values are set according to the table (enter values from the display).

Heating curve	
Hot water temperature	
Heating system	
Control method	
Pump speed	
Fan speed normal	

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

Installation protocol

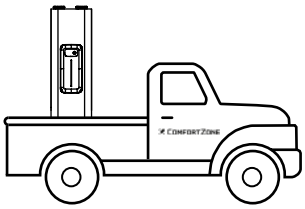
The heating system must undergo a check before it is put into operation. Only a person with the right qualifications may perform this check.

Heating and Tap 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		
Automatic circuit breaker for heat pump		
Measure phases, N and PE		
Outdoor sensor installed		
Set max electrical power		
Residual-current device		
Information to User	**Note**	**OK**
Filling water in the system		
How to change the heating curve		
Information about peace of mind warranty		
Changing filters		

2 BEFORE INSTALLATION

Transport

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



Tilt indicators are placed on the sides of the packaging. Check these indicators. If they show red in the direction of the white arrow, it means that the heat pump has been tilted too much during transport. In this case, the product's function cannot be guaranteed.

If the unit must be tilted, during transportation to the installation site, it can be tilted for a maximum of 15 minutes up to an angle of 45°.

Placement and space

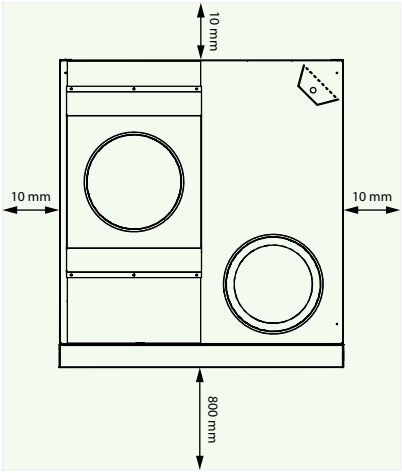
The unit may be placed in an environment between 5 to 50°C with a humidity level below 85%. Condensation and water droplets on surfaces should be avoided.

- Choose a room with a floor drain and a base that can bear the weight of the unit.
- Place the unit next to an exterior wall or a well-insulated interior wall. Avoid placement against bedrooms or other noise-sensitive areas.
- If placed next to a noise-sensitive area, the adjacent wall should be soundproofed.
- The ambient temperature should be at least 10 degrees for the compressor to start and a maximum of 50 degrees.
- In new constructions, the walls of the installation room should be insulated according to current building regulations.

Dimensions

The heat pump must not be installed in direct contact with walls or built-in. Leave at least 10 mm of space.

- 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.



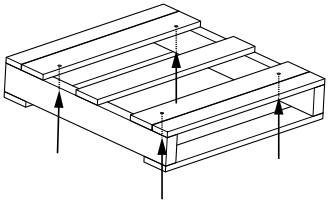
Included components

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

- Air duct sensor
- Outdoor sensor
- Heat pump feet

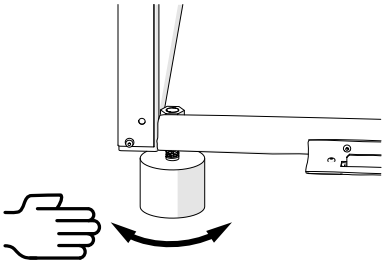
From pallet

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



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

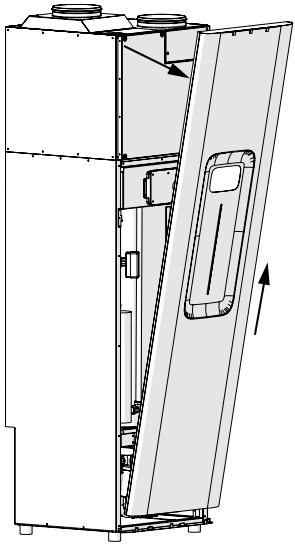
Adjust the unit so that it stands level. Use the mounted feet for fine adjustments of the position.



Removing panels

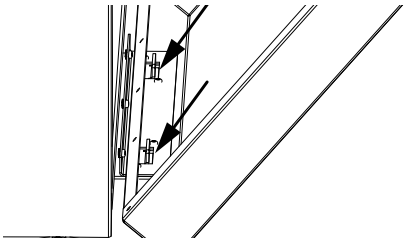
Remove the front

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

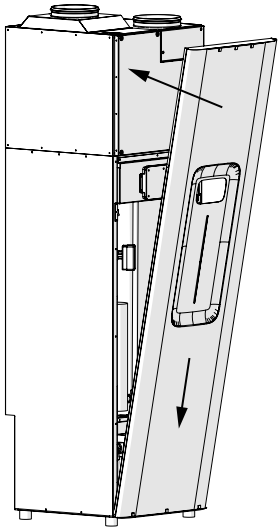


Mounting the front

Fit the front into the two holes at the bottom.

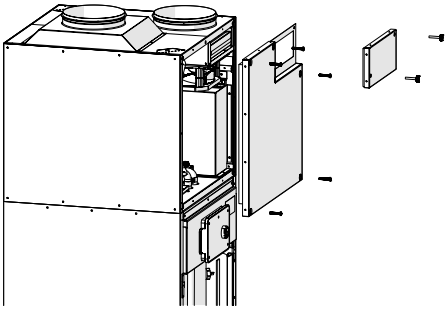


Press the front against the heat pump so that the hooks are in position. Then pull the front downwards.



Compressor box

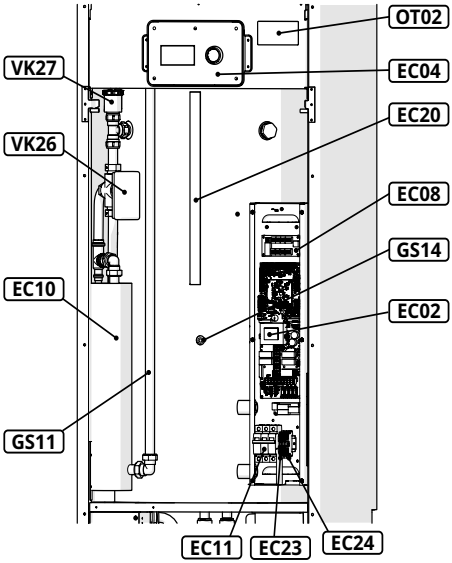
Unscrew the two screws for the filter cover and the screws for the hatch. Pull the hatch towards you.

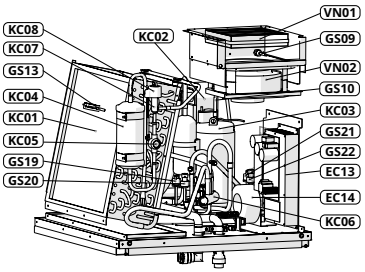


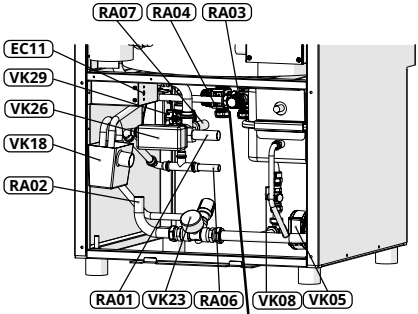
NOTE

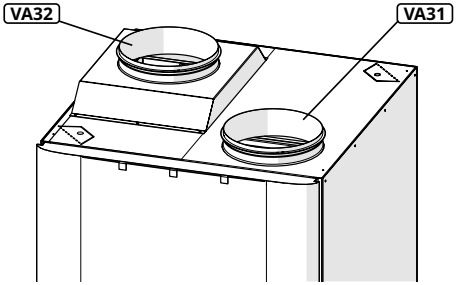
The screws are the only thing holding the hatch in place.

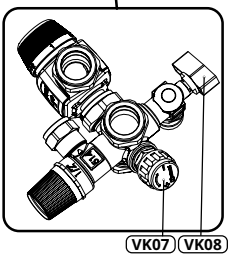
3 COMPONENTS











Connections	
RA01	Connection, Flow line
RA02	Connection, Return line
RA03	Connection, Cold water
RA04	Connection, Hot water
RA06	Connection, Air supply unit
RA07	Connection, Circulation heating/cooling
VA31	Ventilation, Exhaust air
VA32	Ventilation, Outlet air

Sensors	
GS09	Temperature sensor, Exhaust air TE3
GS10	Temperature sensor, Hot gas TE4
GS11	Temperature sensor, Heat exchanger TE5
GS13	Temperature sensor, outlet Air TE7
GS14	Temperature sensor, hot water TE24
GS19	Pressure sensor, Low pressure
GS20	Mini pressure switch, Low pressure
GS21	Mini pressure switch, High pressure
GS22	Pressure Sensor, High pressure

Plumbing	
VK05	Circulation pump
VK07	Filling valve, hot water
VK08	Filling valve, heating system
VK18	Overflow cup
VK23	Manometer
VK26	3-way valve
VK27	Automatic bleeding valve
VK29	Magnetic valve

Refrigeration	
KC02	Plate heat exchanger
KC01	Evaporator
KC03	Compressor
KC04	Drying Filter
KC05	Sight Glass
KC06	4-way valve
KC07	Expansion valve
KC08	Expansion valve motor

Electronics	
EC02	Control board
EC04	Display unit
EC08	Relay board
EC10	Electric heating element
EC11	Automatic fuse for electric heater
EC13	Inverter
EC14	Choke
EC20	LED strip blue
EC23	Neutral terminal
EC24	Ground terminal

Ventilation	
VN01	Exhaust air filter
VN02	Exhaust Fan

Miscellaneous	
OT02	Serial number and name plate

4 PIPE INSTALLATION

General

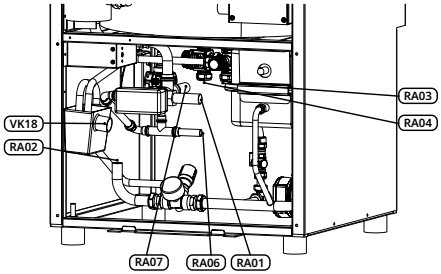
- All connections are located on the back.
- The unit can be supplied with a maximum water pressure of 8 bar.
- Flush the heating system thoroughly before connecting the unit to avoid damage and operational disturbances.
- To facilitate service and maintenance, valves can be mounted on both inlet and outlet lines.
- 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 correctly dimensioned so that the pipe temperature does not exceed 60 °C. If necessary, adjust the system or add extra 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 should be connected via a separate shunt group 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 pump.

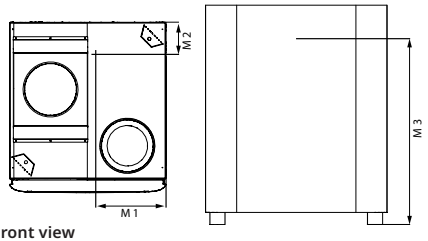
⚠OBSERVE

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

Pipe connections

Overview of dimensions for the pipe package.





Front view

Distance (mm)

Connection	M1	M2	M3
RA01 Heat carrier forward	402	235	281
RA02 Heat carrier return	470	466	136
RA03 Connection, Cold water	298	248	301
RA04 Connection, hot water	353	248	301
RA06 Connection air supply unit	360	248	185
RA07 Circulation heating/ cooling	285	445	381
VK18 Wastewater drainage	470	514	244

Dimension (mm)

Connection	Diameter
RA02 Heat carrier return	22
RA01 Heat carrier forward	22
RA06 Air supply unit	15
RA07 Circulation heating/ cooling	22
VK24 Wastewater drainage	32
RA04 Hot water	22

Installation

The heat pump has a separate connection for the air supply unit for independent circulation. If an air supply unit is not used, leave the connection marked RA06 untouched. Follow the accompanying installation manual for mounting.

Heat carrier return

Connect the return lines from the heating system (RA02) and T15.

Heat carrier forward

Connect the heating system's forward line (RA01) to the house.

Air supply unit

Connect the forward line of the air supply unit (RA06).

Circulation Heating/Cooling

This connection allows for cooling to the floor, radiator, or fan coil unit.

⚠ WARNING

Only use the heating system for cooling if it is specifically adapted for this purpose. If the heating system is not correctly adapted for cooling, there is a risk of condensation, which can lead to water damage. Always check that your system is suitable for cooling before using it for this purpose..

Hot Water

Connect the hot water connection to the hot water circulation.

NOTE

When connecting to a system with thermostats, install an overflow valve or remove some thermostats to ensure sufficient flow.

NOTE

RXC has a separate connection for the air supply unit for independent circulation. If an air supply unit is not used, leave the connection marked RA07 untouched. Follow the accompanying installation manual for mounting.

⚠ WARNING

Turn off the water pressure before installation.

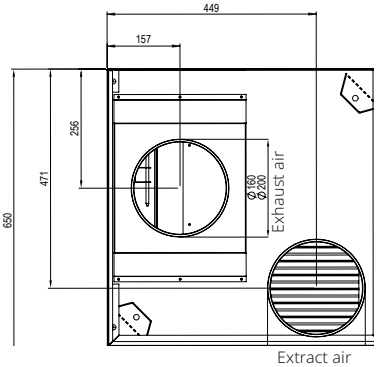
5 VENTILATION

- Connect the heat pump to ventilated ducts with soundproofing.
- Use flexible hoses to connect to the exhaust and supply air ducts. The hoses should be stretched out and avoid sharp folds. Choose two 45° bends over a 90° bend. After installation, ensure that the hoses are flexible to avoid vibrations.
- The duct system must meet tightness class B, and the exhaust air duct must be diffusion-tight according insulated (at least PE30) according to BTI (Industry Standard for Technical Insulation). All connections and joints should be sealed. An exhaust air duct placed in cold spaces must be insulated, and all connections and joints must be carefully sealed.
- Design to prevent condensation water from collecting on the heat pump.

⚠WARNING

To prevent condensation and potential damage to the house, it is necessary to fully insulate the exhaust air duct to be diffusion-tight, as the exhaust air temperature can become extremely low.

Ventilation dimensions



Duckt diameter	RXC35	RXC50	RXC65
Exhaust air (mm)	160	200	200
Extract air (mm)	160	200	200

Flow and balancing

To effectively minimize the risk of excessive heat and potential moisture damage in your heating system, there are some important points to consider.

- The supply air flow should be kept lower than the exhaust air flow to avoid an imbalance in the system and moisture damage in the house.
- If the exhaust air temperature drops below 10°C, the compressor is blocked, leading to the activation of the supplementary heater.
- The standard setting for the correction of the air supply unit is -30%, which corresponds to approximately a -10% reduction in flow.
- Adjustments to the fan speed should be carried out by a certified ventilation technician to ensure optimal conditions.
- Adjustments to the fan speed and correction of the supply air fan are made in the Service Menu under Basic Installation.

Accessing the Service Menu:

1. Go to *Advanced Settings* and then select *General Settings.*
2. Press and hold the button for 6 seconds. When prompted to open the service menu, confirm your selection by choosing *Yes* with a checkmark.

NOTE

It is important that the exhaust air flow does not fall below 70 l/s for the heat pump to operate efficiently.

6 ELECTRICAL INSTALLATION

⚠WARNING

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

⚠WARNING

Avoid extension cords – there is a risk of overload and fire.

⚠OBSERVE

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

⚠WARNING

Turn off the power and ensure that the circuit is de-energized before starting work.

To connect the unit, a mains cable is required for the main circuit breaker. Note that some sensors are not connected and must be connected manually.

Ciruit breaker

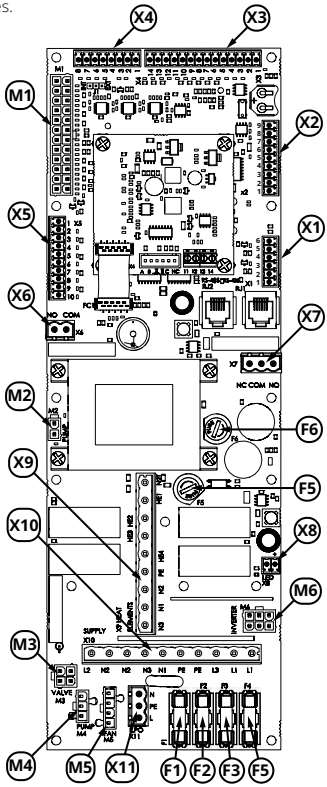
The unit is secured with a 16 A fuse on each phase to protect internal components.

To access electrical connections

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

Important connections

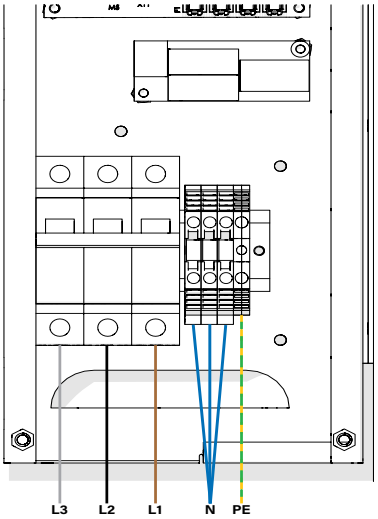
This chapter refers to the following connectors, terminals, and fuses.



Connecting to the power grid

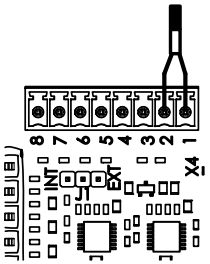
A multipole switch with at least 3 mm of contact separation must be used for the installation. The cable area should be sized according to the fuse rating used.

1. Remove the front of the unit.
2. Remove the protective cover on the electronics box.
3. Connect the cables to the automatic fuse.
4. Connect the neutral wire to the blue terminal.
5. Connect the protective ground to the green-yellow terminal.



Outdoor sensor

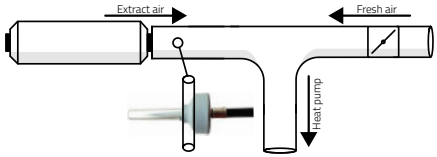
- Place the outdoor sensor on the north side of the house to avoid direct sunlight.
- Connect the sensor to the terminal block X4 and terminals 1 & 2.



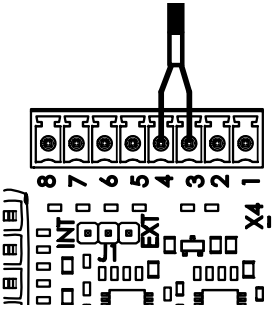
Air duct sensor

The sensor is necessary to measure the indoor temperature during cooling to be able to regulate this well. The sensor should be placed in the exhaust air duct.

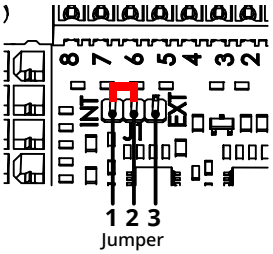
Install the sensor by positioning it between the heat pump and the silencer, before the mixing of indoor and outdoor air. Then drill a Ø12 mm hole for metal pipes or Ø14 mm for PVC/hard plastic, using an M12 grommet for sealing. In foam ducts, insert the sensor directly. Press the sensor in until it is in direct contact with the airflow for accurate temperature reading.



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



If the heat pump is to be temporarily operated without the air duct sensor, move the jumper on connection terminal J1 to positions 1 and 2. Now, only the exhaust air is measured with the built-in sensor. When activating cooling, the air duct sensor must be connected.



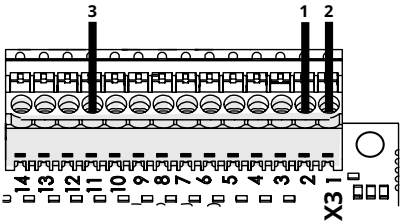
Supply air unit

To install the supply air unit, you need to connect both power supply and control. On the relay board, connect the power supply and the motor damper. The control for the fan is mounted on the control board. The relay board comes with pre-mounted connectors (11-19).

Fan control

The unit is powered via the heat pump. The unit has a grey signal cable with three black cables that are numbered. Connect these cables to connector X3 on the heat pump's control board as follows:

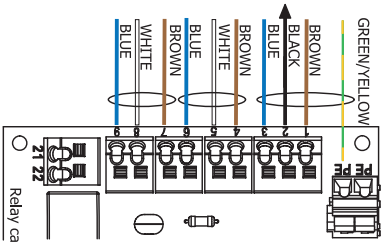
- Cable marked 1 to pin 2.
- Cable marked 2 to pin 1.
- Cable marked 3 to pin 11.



Drive power

For a complete wiring diagram, refer to the Technical Information under the Relay Card section. The supply air unit's power cable consists of four conductors. To make a proper connection, follow these steps:

1. Black (reversing valve control) - Connect to terminal 2.
2. Earth - Connect to terminal PE.
3. Brown - Connect to terminal 1.
4. Blue - Connect to terminal 3.



Motorized Dampers

When installing the RXC with cooling functionality, one or two shut-off dampers are installed. These are automatically controlled, meaning that the dampers open when the cooling function is activated and close when unpowerd, are spring-return, and operate on 230V~ (LM230A). Refer to the chapter *Wiring Diagram*, section *Relay Board* for connections.

Fuses

Several components are fused on the control board with glass fuses measuring 5x20 mm.

Fuse	Connection	Amp
F1	3-way 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 right part of the control board.
- **Protection:** The fuses are covered by a plastic cover that 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.

7 COMMISSIONING

Preparation

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

Filling the heating system

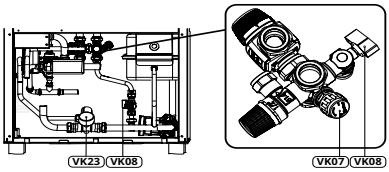
1. Open mounted filling valve (VK08).
2. Open the air vent valve.
3. Continue the process of filling and venting until all air is removed from the system and the correct pressure of 1-1.5 bar is achieved.

Venting the heating system

The heat pump's venting function activates upon start-up or restart when the water temperature is below 30°C, alternating every 10 seconds between hot water and circulation water for five minutes. Check the system pressure with the pressure gauge and refill water if necessary. Conduct a further pressure check within 24-48 hours and adjust if 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.
3. Note: Although most of the air in the hot water tank is removed, a small amount of air may still come out when you start using the hot water.



Filling valve	
VK23	Manometer
VK07	Filling valve, hot water
VK08	Filling valve, heating system

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.

Access 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 choice by selecting Yes with a tick mark. Then, press the button.
4. The service menu will now display, with several setting options.
5. Scroll to *Basic Installation*. Here, a quick menu of the most central installation parameters is presented.

NOTE

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

Basic installation

CW Heating system

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.

UV Control mode

Choice: OUT | OUT & IN | IN

Factory setting: OUT & IN

Choose how the heat pump should regulate indoor temperature based on temperature sensors placed indoors and/or outdoors.

Outdoor & Indoor (OUT & IN): This function adapts the heat pump's heat based on both outdoor temperature and the indoor climate. The outdoor temperature controls the heat of the circulating water, while the indoor sensor or the air duckt sensor adjusts for deviations to maintain an ideal indoor temperature.

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

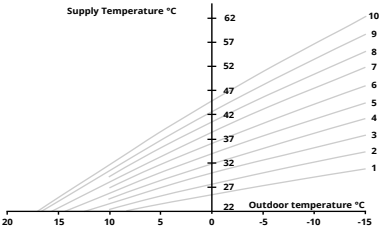
Indoor (IN): The heat pump adapts to the selected indoor temperature via a built-in or external sensor.

CV Heating curve

Choice: 1 - 10

Factory setting: Underfloor 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*



CV Pump speed

Choice: 25-100%

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

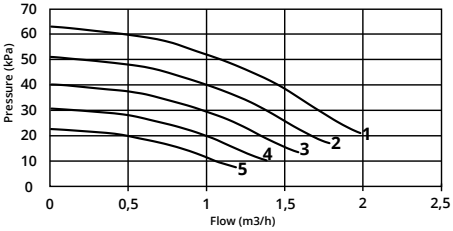
Set the circulation pump's efficiency in percentage depending on the heating system's needs.

Minimum circulation flow: The heat pump's lowest water flow at maximum heat setting is 8l/min. To ensure a constant flow, it is recommended to keep a floor loop in a smaller 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 diagams for all RXC, see chapter *Technical information.*

Input power limit

Choice: 0–12000W.

Factory setting: 12000W.

This marks the maximum electrical power. Only adjust if limitations exist by national regulations. Note: 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 supply air fan's speed relative to the heat pump's fan. The factory setting provides approximately -10% supply air compared to exhaust air. No adjustment is needed without a supply air unit.

Heat elements function

Choice: Normal | HE Only | HE Blocked.

Factory setting: Normal.

The heat elements function offers various operating modes to complement or replace the heat pump's usual heating method with an electrical supplement.

Normal: In this mode, the electrical supplement acts as a complement to the heat pump's normal operation. It is automatically activated when needed, for example, when the outdoor temperature is very low or in case of high heat demand. Recommended for regular use.

HE Only: In this mode, the system operates solely with the electrical supplement and does not use the heat pump's usual heating method. This mode can be useful during maintenance or repair of the heat pump.

HE Blocked: In this mode, the electric supplement is completely deactivated. This option may be suitable in situations where one wishes to avoid the use of electric supplement. If a malfunction occurs in the cooling circuit, the electric supplement will start for emergency operation.

Time

Preset but can be changed 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.

Circulating Water

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

Hot water

1. Set the desired hot water temperature to 55 °C. The compressor will now be activated for tap water heating.
2. Note the current temperature (TE24). You can find sensor readings under Measurements > Sensors.
3. Wait 15 minutes and then check the temperature again to confirm the temperature increase.

Adjusting the heating system

For even heat distribution, adjust the system with a shunt depending on the room size. Use balancing valves, located on the return pipes or in the underfloor heating distributors, as per the manufacturer's instructions. Note that the heat pump provides a constant temperature and flow to the heating system.

Shunt groups

To achieve the best heat distribution between different floors. Adjust the flow with the balancing valves, located on the return lines. More flow in one group increases heat there but can affect others. If a group needs more heat and is maxed out, regulate down the flow from other groups. Refrain from adjusting with room thermostats.

Underfloor Loops

For even heat distribution through the floor. Ensure that thermostats are fully open. Adjust the flow on each loop individually. Increased flow = more heat.

Radiators

For optimal heat, start with fully open thermostats. If necessary, adjust the flow on each radiator, often via the radiator valve's maximum setting.

Other settings

Minimum inlet temperature

Factory Setting: 18°C

The heating system has a setting limit for the minimum inlet temperature. The system is always maintained at this temperature and is never fully cooled. Note that the heat pump may use power even during warm periods due to this.

Supplement without Fan

Use this setting during construction or renovation to protect the heat pump from dust and dirt. With this function, the compressor and the fan are turned off, but the electrical supplement operates. Go to: *Fan Settings* > *Fan Speed. Stop* > *Choose YES instead of NO.*

Frequency locking

If the compressor generates disturbing resonance sounds at certain speeds, you can use frequency control to block specific frequencies and reduce these sounds. A frequency range of up to five independent frequencies can be blocked. To block, perform the following:

- **Identify the Problem:** Notice disturbing sounds at a particular frequency? This can be blocked.
- **Block the Frequency:** By setting the block, the compressor automatically avoids the chosen frequency.
- **Extend the Blocking:** If necessary, up to five frequencies can be blocked to cover a larger range.

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

Compressor maximum frequency

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

Airflow l/s	RXC35	RXC50	RXC65
65 and above	-	-	None
50-65	None	None	82 Hz
40-50	-	68 Hz	68 Hz
30-40	90 Hz	55 Hz	55 Hz
20-30	65 Hz	45 Hz	45 Hz
14-20	45 Hz	-	-

Adjust maximum frequency

1. Go to: *Heat Pump Settings* > *HP Compressor*.
2. Select Comp. freq. max. and adjust according to the above table.
3. Select Max Freq. Night Mode and set it to the same value as above.

Legionella protection

Automatic heating of the tank to 65°C at night is used to prevent legionella. The heating is by default activated on Mondays with a fixed time at 02:00. The choice of day can be changed in the menu.

Activation/deactivation

1. Go to: Hot Water Settings > Per.legionella Heat > Prev. of legionella.
2. Setting: Choose YES to activate or NO to deactivate.
3. Under the same menu, the choice of day can be specified.

NOTE

When installing multiple heat pumps in the same area, the day for the legionella protection should be adjusted to different days to prevent simultaneous operation, which reduces unnecessary load on the electrical grid.

Overheating limit

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

Adjust the temperature

1. Go to: *Settings* > *Hot Water* > *Overheating 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 overheat alarms.

Dual heating curves

This feature allows for individual settings of heating curves for different zones, tailored to each space's needs. Each zone requires a shunt group with a 0-10V control signal and circulation pump. Choose control method OT for outdoor temperature or OT & IN to include indoor temperature.

Setting of heating curves

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

Room Factor

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

Control 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 stove.

To control the external mixing valve, follow these steps:

1. Go to *Heat Pump Settings.*
2. Select *HP Miscellaneous.*
3. Select *External Mixing Valve Used.*

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

Synchronisation with solar panels

The function is an optional extra and can be purchased through retailers.
This setting enables integration with solar panel systems.
To activate synchronisation, follow the steps below:

1. Select Heat Pump Settings in the main menu.
2. Navigate to *HP Miscellaneous*.

Select *Solar Panel Sync.*

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

8 DISPLAY AND CONTROL

The display provides you with a quick overview of the system's status - including current operating conditions, any error messages, and current settings. Settings can easily be modified via the panel, giving you full control over your indoor climate.



How to navigate

- Rotate the navigation wheel to scroll through menu options.
- Press the wheel to select or confirm your changes.
- The display dims after inactivity for energy saving, while the current room temperature continues to be displayed in reduced lighting.
- A simple press or rotation wakes the display to full brightness, reviving all icons and options for easy access.

Displayed temperature

The temperature displayed is an average from the air circulated through the heat pump.

If external room sensors are installed, it is the temperature at the sensor's location that is displayed.

Main menu

Fan speed



Choice: Low | Normal | Boost.

Factory setting: Normal.

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

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

Indoor temperature



This displays the current indoor temperature. The temperature is an average of the temperature in the house. If an external indoor sensor is installed, the temperature at that location is displayed.

Error message



Should a malfunction occur, it will be displayed under this icon. Here, you can see the current error and when it occurred. The alarm can also be reset by clicking the reset button, read more about the error under info.

Extra hot water



To raise the hot water temperature for 3 hours; the icon gets an orange bottom when active. Press to exit or wait until it turns itself off after 3 hours.

Temperatue/time



Under this menu, adjustments for the house's temperatures and hot water can be adjusted to your needs

Indoor temperature



Under this menu, there are two adjustment possibilities, adjusting the indoor temperature at certain outdoor temperatures, and adjusting the heating curve.

Hot water temperature



Choice: 0-60 grader.

Factory setting: 55 degrees.

Here you set the temperature you want the hot water in the tank to be.

Hot water priority



Choice: Low | Normal | High.

Factory setting: Normal.

Here you can decide how much the electric supplement should help to heat the hot water.

- **Low:** Used when the hot water need is not as great as in smaller households. Most economical.
- **Normal:** Suits most households, provides an adequate amount of hot water for most needs.
- **High:** Suits most households, provides an adequate amount of hot water for most needs.

Minimum inlet temperature



Choice: 0-40 grader.

Factory setting: 18 degrees.

Under minimum inlet temperature, a minimum temperature can be set for the heating system. The heating system never cools down but is kept at the temperature set here. This means that the heat pump can draw power even during the warm season.

Holiday reduction



The holiday reduction function lowers the house's indoor temperature by about 10 degrees for the number of days specified. A day before the end of the holiday reduction period, the house begins to warm up. If there is a heating need, the compressor starts and runs for 12 hours. If the indoor temperature has not reached the desired value, the supplementary heating kicks in so that the house has the desired room temperature upon return.

Cooling



To activate the cooling function on the heat pump, select Yes. If you want to deactivate the cooling function, select No. Note that the fan speed increases when the cooling function is activated.

Comfort temp



When the cooling function is activated, the desired temperature should be set here.

Operational information



This shows the current operating modes of the heat pump.

Compressor frequency

HZ

This displays the compressor's frequency. This frequency corresponds to the compressor's rotational speed. 1 Hz represents 1 rotation per second.

Heat pump power

W

Shows the current heat output in Watts without supplementary electric. This is not the actual consumption of the heat pump but only the calculated heat output.

Electric supplement

W

Visar den verkliga förbrukningen av eltillskott i Watt.

Solar power

W

If the Synchronization with *Solar Panels function* is used, a value under Operational Information in the display, *Solar Power, is added*.

Operation icons

Hot water production



If the icon shows a water tap with flowing water, the heat pump is producing hot water for the household's taps.

Circulation mode



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

Defrosting



During operation, ice forms in and on the evaporator, reducing efficiency, so the evaporator must be regularly defrosted. The compressor is turned off for a short time, and air flows through the evaporator, melting the ice. This is indicated by drops in the display.

Cooling



The heat pump produces cooling according to the set temperature.

Statistics



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

Output heat pump

The estimated output that the heat pump generates.

Supplementary output

Displays the usage of the electric supplement.

Compressor operating time

Shows the total operating time of the compressor in hours.

Indoor temperature

This displays the indoor temperature.

Hot water production

This shows the estimated energy used to produce hot water.

Advanced settings



In this menu, there are several settings for the heat pump, such as temperature adjustments, fan control, and history.

General settings

Log history

Displays the 30 most recent events, such as restarts, alarms, and alarm removals. You can also see 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 highlighting the one you want to change, press the wheel and rotate to change the time, press again to confirm.

LED strip function

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

Heating settings

Heating curve

Choice: 1-10.

Factory setting: Underfloor heating 3.

The heating curve adjusts the supply temperature based on the outdoor temperature, tailored to your home's unique needs. Your installer sets an initial curve, but you may fine-tune it later for comfort—raising it if too cold or lowering if too warm. Refer to the Technical Information chapter for the table of supply temperatures.

Heating curve 2

If dual heating curves are activated, adjustments are made here.

NOTE

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

Reference temperature

Factory setting: 22 degrees.

The heat pump's reference temperature is preset to 22 degrees. This setting indicates the temperature you wish to have indoors.

Electric supplement allowed

The heat pump's electric heater is designed to effectively help maintain the desired indoor temperature. The number shown in parentheses indicates the highest temperature at which the electric supplement actively contributes to the heating, based on your set room temperature.

To adjust the electric supplement:

- You can adjust the temperature up or down by five degrees from the value shown without parentheses.
- An increase means that the electric heater will work more, up to the adjusted temperature limit within parentheses.
- A decrease in value means that the electric heater operates only up to the temperature within parentheses.

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

HV cooling

To use the heat pump's cooling function, it must be activated. This is done by changing the setting to Yes. If you wish to turn off the cooling function, select No. Then set the desired comfort temperature.

NOTE

When the cooling function is activated, the fan speed will increase to make the cooling process more efficient.

Summer mode

Choice: Auto | No.

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 OT (Outdoor Temperature) or OT & IN (Outdoor & Indoor Temperature).

Activate Summer Mode

To activate, set HV summer mode to Auto.

To deactivate, choose No.

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

If the outdoor temperature is below 18°C for more than 12 hours (set on HV Norm), the system returns to normal heating mode.

Hot water settings

HW extra

Factory setting: Off.

Activate this to temporarily raise the hot water temperature for three hours when there's an increased need. An orange indicator on the icon signals activation. For deactivation, choose No or press the icon. The function automatically turns off after three hours.

HW settings

Choice: 0-60 degrees.

Factory setting: 55 degrees.

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

HW Priority

Choice: Low | Normal | High.

Factory setting: Normal.

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

Choose level based on your hot water needs::

- **Low**: For smaller households with limited hot water needs, most energy-efficient.
- **Normal:** Fits average households.
- **High:** Fast hot water production with high priority, increases cost, however.

Smart control

Choice: Yes | No.

Factory setting: No & 13 degrees.

Used to lower energy consumption during low hot water usage. Activate to allow a temperature reduction during predetermined periods.

Predetermined periods:

- Period 1: 10:30 - 12:30
- Period 2: 18:20 - 20:20

Periods can be adjusted as needed.

Per.legionella heat.

For extra operation of legionella protection.

Choose: *Immediate legionella heating.*

Fan settings

Fireplace function

Choice: Yes | No.

Factory setting: No.

Use this function to reduce the risk of smoke intake into the ventilation system when lighting a fireplace. The activation temporarily turns off the fan for 5 minutes.

- *Activate by choosing Yes.*
- For earlier deactivation, choose *No*.

Time-controlled fan speed

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

Weekday Setting:

1. Press the timer icon at the bottom of the menu.
2. Choose Low speed on weekdays.
3. Change from *No* to *Yes* 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.

Weekend Setting:

1. Press the timer icon at the bottom.
2. Choose Low speed on weekends.
3. Change from *No* to *Yes* and choose start and stop time.
4. Finish with the back arrow. The fan now runs at low speed during the chosen times.

Disable time control by going back to the selected setting and choosing *No*.

Measurements

This menu provides a detailed overview of the various measurable values in the system. This menu is divided into several subsections, each providing 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's time to change the filter.

Heating

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

Hot water

Information about the hot water production, whether it's hot water or for circulation. You 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 different sensors in the system.

Optimizing the system

- **Heat Distribution:** Ensure that the circulating water from the pump reaches all parts of the house effectively.
- **Thermostats:** For rooms and radiators should primarily be open to ensure a constant water flow. They are used to lower the temperature in individual rooms as needed.
- **Adjustment for Cold:** If the house still feels cold despite fully open thermostats, try raising the setting of the heating curve.
- **Troubleshooting for Individual Rooms:** A single cold room may be due to a closed thermostat in the room, or that the entire system needs balancing for better heat distribution.
- **Adjust Reference Temperature:** Change the reference temperature to achieve the desired indoor temperature.

NOTE

For the best energy efficiency, keep thermostats on radiators and underfloor heating open, so that the heating curve can control the temperature of the house.

TIPS

If your house feels too cold or too warm during certain outdoor temperatures, you can adjust the temperature by "tweaking the curve". This only affects the heat at those specific outdoor temperatures.Here's how to make the adjustment:

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

9 SERVICE

⚠OBSERVE

Only individuals with sufficient competence and knowledge are allowed to 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's crucial to regularly clean your heat pump's air filter. The need varies depending on the amount of dust in the ventilation air. The recommendation is to vacuum clean the filter every 90 days. Filter replacement needs to be done 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. Inspect the old filter. If it needs cleaning, ensure 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. Reattach the filter cover and tighten the screws.
8. Reassemble the front panel on the heat pump.
9. Restart the heat pump using the main switch.

Air supply unit filter

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

1. Turn off the air supply unit with the heat pump's main switch.
2. Remove the front cover from the air supply unit by loosening the four screws.
3. Remove the filter set from the air supply unit.
4. Inspect the old filter set. If it needs cleaning, ensure 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. Install the new filter set in the air supply unit.
7. Reattach the front cover on the air supply unit and tighten the screws.
8. Restart the air supply unit with the heat pump's main switch.

Drip tray

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

1. Turn off the heat pump with the main power switch.
2. Remove the front of the heat pump.
3. Unscrew the front cover of the compressor box.
4. Check the drip tray for dirt and blockages and remove any debris that could block the water's free passage.
5. Replace the front cover on the compressor box and screw it in place.
6. Reassemble the front.
7. Start the heat pump.

Spill water cup

he spill cup, located at the bottom left of the front of the heat pump, needs to be regularly cleaned.

1. Remove the front of the heat pump.
2. Inspect the spill cup and drain.
3. Remove any material obstructing the outlet funnel and ensure there's proper flow, then clean the inside of the outlet with a cloth.
4. Reassemble the front of the heat pump.

Expansion vessel

To test the externally mounted expansion vessel, press the valve in the middle of the connection. If air and water hiss out, it indicates a leaking membrane, and the expansion vessel should be replaced. If only liquid comes out, the expansion vessel also needs to be replaced for optimal operation of the heat pump.

Safety valves

The heat pump is equipped with two safety valves. It's important to regularly check their function. To test the valves, turn the valve knob counterclockwise; water should then flow through the valve. The valve automatically closes when released. The system pressure may drop slightly during testing and may need to be refilled. The valves should be checked every quarter.

System pressure

The system pressure should be checked every quarter, and the heating system may need to be refilled to maintain the correct circulation heat pressure. The pressure should be checked daily for the first few days after installation.

1. Remove the front of the heat pump.
2. Check the pressure on the manometer (VK23). The black indicator should show between 1 - 1.5 bar.
3. Open the filling valves (VK08) to increase the system pressure.
4. Close both filling valves once the gauge shows the correct value.
5. Reassemble the front.

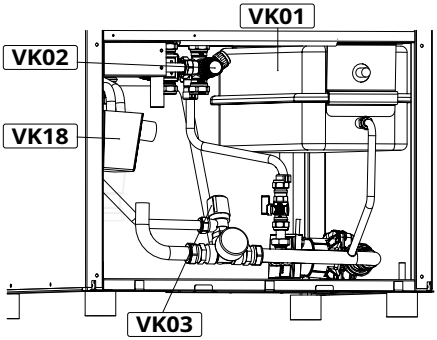
Draining/emptying the system

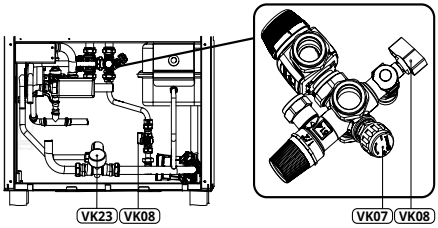
Follow these steps when the system needs to be emptied, remember the main power switch should always be in the off position:

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

Emptying the heating circuit

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





Komponenter	
VK01	Expansion vessel
VK02	Safety valve, hot water
VK03	Safety valve, heating system
VK07	Filling valve, hot water
VK18	Wastewater drainage
VK23	Manometer

10 DISTURBANCE

General

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

Disturbance information

By clicking the question mark, you get 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 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 rarely are 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 frequent problems and errors that can occur with your heat pump, and lists potential causes and recommended solutions for each issue.

If you cannot resolve the issue with the instructions in this chapter, contact the seller of your heat pump or a 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 expansion vessel:* If there is insufficient pre-pressure in the expansion vessel, this can lead to the system pressure dropping
- *Faulty expansion vessel:* A defective expansion vessel will not function properly, which can cause low system pressure.
- *Leakage in safety valve: If the safety valve is leaking, it can also result in the system pressure dropping*.
- *Leakage in heating system:* If there is a leakage somewhere in your heating system, this can also lead to pressure dropping.

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:* Examine the safety valve for any signs of leakage. If there is, it probably needs to be replaced.
- *Inspect the heating system:* Perform a visual inspection of the entire heating system to look for leaks. This includes looking at pipes, connections, and other components. If you find a leak, fix it promptly or contact an authorized service partner for repair.

No heat to the house

If you encounter problems with no heat in the heating system despite the compressor in your heat pump running, there are several things that could be wrong. Here are some possible scenarios and how to address them.

Cause

- *Heat goes first to the hot water tank:* The heat pump prioritizes heating the hot water in the tank first. Once the hot water has been heated, the system switches after 30 minutes to heating the circulating water for heating the house. This time setting is adjustable.
- *Fault in the 3-way valve or its control:* If the valve or its control is defective, it will prevent the correct transfer of heat to the circulation system. In these cases, you will usually receive an alarm like High-pressure hot gas or Overtemp HW tank after 1-2 hours.

Action

- *Wait:* If the problem is that all heat first goes to the hot water tank, the best thing you can do is wait until the system automatically switches the heat over to the circulation system.
- *Lower the desired hot water temperature:* If you quickly need heat in the circulation system, you can lower the desired temperature for the hot water to 0°C in the system settings. This should force the system to immediately switch the heat over to the circulation system.

The heat pump heats up the hot water tank and stops

If the heat pump heats up the hot water tank and then stops, it could be a natural part of its operating cycle. This is especially true if you are not experiencing any indoor temperature problems. Here are some possible scenarios and how to handle them.

Cause

- *Indoor temperature is higher than or close to the set value:* If your heat pump has a built-in thermostat and it's already warm enough indoors, it will stop after heating the hot water tank. This is normal.
- *Outdoor temperature is high:* If it's warm outside, the heat pump will assess that no further heating is needed and thus stop.

Action

- *No action needed:* If you are not experiencing any problems with indoor temperature, you don't need to do anything. When the temperature drops again, the heat pump's compressor will restart.
- *Test the heat:* If you want to make sure that the heat pump correctly heats the radiator or underfloor heating system, you can temporarily change the settings. Raise 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 as it should. Don't forget to lower the settings to normal values when you're done with the test.

Overheated auxiliary heater - smell of burnt rubber

If you experience an unpleasant smell of burnt rubber from your heat pump and have identified that it is the auxiliary heater that has overheated, there are specific steps you can follow to resolve the issue.

Cause

- *Air in the auxiliary heater:* If your heat pump has been put into operation without first being filled with water, this can lead to air being trapped in the auxiliary heater. This can cause an unpleasant smell and even overheating.
- *The heater has been running for too long:* If the auxiliary heater has been switched on for an extended period without proper water filling, an unpleasant smell of burnt rubber may occur.

Action

- *Fill up water and bleed the system:* The first step is to fill the system with water and ensure it is properly vented. This should solve the problem with air in the auxiliary heater and prevent further overheating.
- *Reset the overheating protection:* The auxiliary heater has a

reset button for the overheating protection at the end. Press this button to reset the system.

- *Check and replace the insulation:* If an unpleasant smell has occurred, check the insulation on the auxiliary heater. 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're experiencing issues with poor hot water capacity in your heating system, this could be due to several factors, including settings for hot water temperature, hot water priority, and HW Hysteresis. Here are some steps to troubleshoot the issue.

Cause

- *Low values for hot water temperature and hot water priority:* If these values are too low, the system will not be able to deliver sufficient hot water.
- *HW Hysteresis set to an incorrect value:* If this value is incorrectly set, it can also lead to issues with hot water supply.

Action

- *Check and adjust settings*
- Go to *Advanced settings.*
- Navigate to *Hot Water settings.*
- Increase the values for hot water temperature and hot water priority if they are too low. Higher values should provide higher hot water capacity.
- Check HW Hysteresis:
- Go to *Advanced settings*.
- Navigate to *Hot Water settings*.
- Check HW Hysteresis; the recommended value is 1.5°C.
- Adjust Extra Hot Water settings:
- If you notice that the *HW Hysteresis* value has spontaneously changed to more than 10°C, you should adjust the parameter for *Extra Hot Water*.
- Navigate to *Advanced settings* and then to *Hot Water settings.*
- Change HW Extra from 70°C to 60°C.

The heat pump is completely off and does not start

If the heat pump is completely off and does not start, this can be caused by several factors. A power outage or a blown fuse are likely reasons. Here are some recommended actions you can take to identify and resolve the issue.

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 why your heat pump does not start

Action

- *Check voltage and neutral:* Make sure there is 400 V voltage reaching the main switch of your heat pump. This can be done using a voltage meter. Also, check that the neutral is correctly connected. An incorrect neutral connection can cause the system not to function properly.
- *Check the fuses:* See the Technical Information chapter, section Connections and Fuses. If any of these fuses are blown, they need to be replaced. Follow the manual's instructions or contact an authorized service partner.

Overheat protection cannot be reset

If the overheat protection cannot be reset, despite following the instructions in the alarm list and the heater not being overheated, contact an authorized service partner.

Cause

- *Loose connection in overheat protection:* A poor connection in the overheat protection can prevent it from being reset.
- *Cable break:* If there is a cable break between the overheat protection and the control board, the communication between them will be deficient, which can lead to the protection not being resettable.
- *Fault in the control board:* If the control board itself has a problem, it can also prevent the overheat protection from being reset.

Action

Contact Your Service Partner: Due to the complexity and risks associated with this problem, it is recommended that you contact an authorized service partner to conduct a thorough troubleshooting and possible repair of the system.

The house is warm in summer

During the warm months of summer, the house feels overheated, and the heat pump's display shows a high temperature. The display's temperature measurements show the house's average temperature from the exhaust air vents.

Cause

- *Solar radiation:* Direct solar radiation on the house's surfaces can lead to a significant increase in indoor temperature.
- *High set supply or return temperature:* If the Min supply temperature or Min 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 solar radiation.
- *Roof overhangs:* A roof overhang can reduce the amount of direct solar radiation hitting windows and walls.
- *Sun protection film:* Apply sun protection film on windows that are exposed to a lot of sun.

Adjust the system's base heat

- Go to *Temperature/Time*.
- Select Min supply temperature or *Min return temperature*, set this to 18 degrees Celsius. This will limit the water's temperature in the heating system to a maximum of 18 degrees, which helps lower the indoor temperature.

By combining these methods and proactively managing these factors, you can effectively reduce the indoor temperature and improve your house'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 initiate an alarm. This alarm is displayed in the form of a clock symbol on the right side of the display and is recorded in the system's alarm history.

Identifying and addressing active alarms

When an alarm is active, an orange clock symbol lights up in the right corner of the display, and the heat pump enters a safety mode.

Text on the screen indicates the type of alarm triggered. If the fault causing the alarm is rectified, the alarm is reset, and the heat pump resumes normal operation.

For some alarms, the system may automatically block the compressor's function.

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

Alarm history

he system's alarm menu provides a log of the last 30 alarms.

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

Alarm List

Defrosting error/melting error alarm

The defrosting error alarm or melting error alarm is triggered when the defrosting does not complete within 60 minutes, usually due to a faulty sensor (TE7), and the action involves replacing the misleading sensor.

EEV max pos time out alarm

The EEV Max Pos Time Out alarm is triggered when the electronic expansion valve (EEV) stays in the maximum position for more than 30 minutes, which could be due to a lack of refrigerant or the expansion valve not opening correctly, and the action is to reset the alarm or contact the service partner if the alarm recurs.

Wrong controller type/version

The Wrong Controller Type/Version alarm indicates that the software in the control board is not compatible with the software in the display unit, and if this alarm occurs during operation, it signals a fault on either the display or the control board

Filter replacement alarm

The filter replacement alarm signals that the air filter needs to be changed or cleaned, and the action is to turn off the main power switch, replace the filter (annually) or vacuum it (at least every three months) and reset the alarm on the display unit.

Sensor connection error (TE1-TE5)

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

Sensor error TE0-TE24

The sensor error TE0-TE24 alarm occurs when the measured resistance value of the sensor is outside the specified range of 0.5 – 1.5 kΩ, which can be due to a loose connection, interruption, or short circuit in the sensor or sensor circuit. The action involves checking and possibly replacing the cables, connectors, and the sensor.

Sensor error TE8 and/or TE9

The sensor error TE8 and TE9 alarm occurs when these sensors are configured but not connected. The action involves checking if the parameters "Dual Heating Curves" or "External Mixing Valve" are activated, and following the corresponding instructions to correctly set up the heat pump.

Hot gas temperature alarm

The hot gas temperature alarm indicates a too high hot gas temperature, over 120 °C, usually due to a lack of refrigerant or the expansion valve not opening correctly

HP alarm circulation

The HP alarm circulation occurs when the pressure has been too high after the compressor, and the high-pressure switch has tripped, which can be due to air in the system, inadequate water circulation, a too small radiator system, or an interruption in the HP alarm circuit. Actions involve venting the circulation system, checking the circulation and the HP alarm circuit.

HP alarm hot water

The HP alarm hot water occurs when the pressure has been too high after the compressor, and the high-pressure switch has tripped, which can be due to a misadjusted HW sensor TE24 or an interruption in the HP alarm circuit; actions include increasing the value of TE24 correction by 2.0 °C and checking the HP alarm circuit.

Inverter connection error

The alarm can be due to a misadjusted parameter, 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 disappear, contact the retailer or an authorized service partner.

Compressor function alarm

The compressor function alarm is activated when there is no output despite the compressor being supposed to run, and it can be due to reversed phases, misconnected signals, or a fault in the refrigeration circuit.

Condenser temperature alarm

The condenser temperature alarm is activated when TE5 Heat Exchanger Out exceeds 73°C, and it may indicate a problem with water circulation.

Alarm - multiple alarms simultaneously

The "Multiple Alarms Simultaneously" alarm is triggered when the connectors on the control board have been pulled out or the cables have come loose, requiring a check and reconnection of connectors and cables.

Low pressure 1 alarm

The alarm occurs when the evaporation temperature is too low, usually due to too low airflow, and may require a check and possible replacement of the filter to address the issue.

Low pressure 2 alarm

The alarm indicates that the evaporation pressure is too low, which can be due to obstruction in airflow, a dirty filter, leakage of refrigerant, fault in the expansion valve, or interruption in the alarm circuit.

Unknown HP box alarm

The "Unknown HP Box" alarm occurs when the control unit cannot identify the HP box, likely due to poor electrical contact or misconnection.

PL1 input alarm

The alarm indicates either that terminal X3:11 is incorrectly connected or that there is a fault on 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, missing, or a parameter is incorrectly set. The standard 4 GB memory card can be replaced with an 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 too high relative to the low pressure, and it can be due to too high supply temperature.

Heating limitation alarm

The alarm is activated when the temperature limitation of the supply temperature has completely shut off the compressor, usually due to poor circulation and/or high return temperature

Heating cooling hazard alarm

The alarm is activated when the return temperature TE2 drops 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 drops below 3.0°C for 20 minutes, and the alarm 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, likely due to inadequate circulation or issues with the elements in the radiator circuit, with factory-set alarm limits at 45°C for underfloor heating and 75°C for radiator heating.

Heating return max alarm

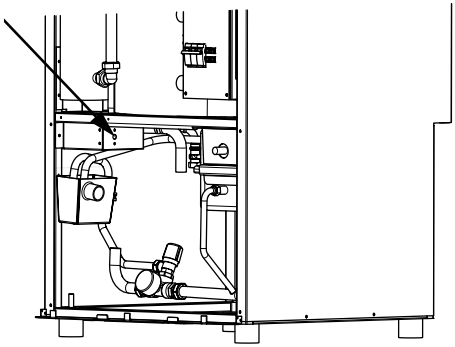
The heating return max alarm is triggered when the temperature of the return sensor is too high, and it can be addressed by checking that any push pumps are working and that the return sensor is correctly connected to the control board at X5:3-4.

Hot water overheat alarm

The hot water overheat alarm is caused by the changeover valve being stuck in HW mode, which can be due to a fault in the changeover valve, the connection cable, or the changeover valve relay in the control, and it requires a series of checks and possibly replacing components to address.

Heater overheat alarm

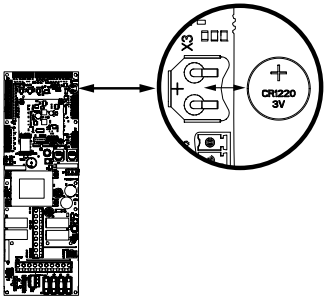
The heater overheat alarm occurs when the supplementary element's overheat protection is triggered, usually due to poor circulation, but can also be due to a poor connection at connector X9 or a fault in the control board. The alarm can be reset by pressing hard on the red push button located at the end of the electric supplement. Shown below.



Clock not set alarm

The "Clock Not Set" alarm indicates an abnormal clock function and can be due to incorrect time setting or a faulty battery, which can lead to loss of clock settings during power outages

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



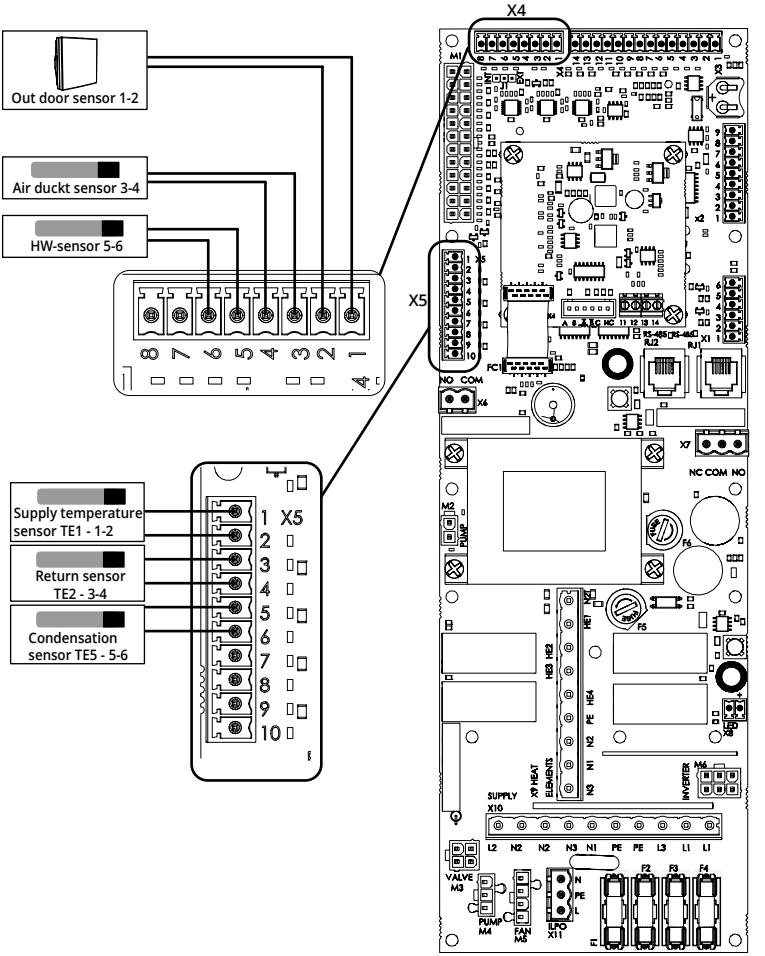
11 TECHNICAL INFORMATION

Specifications

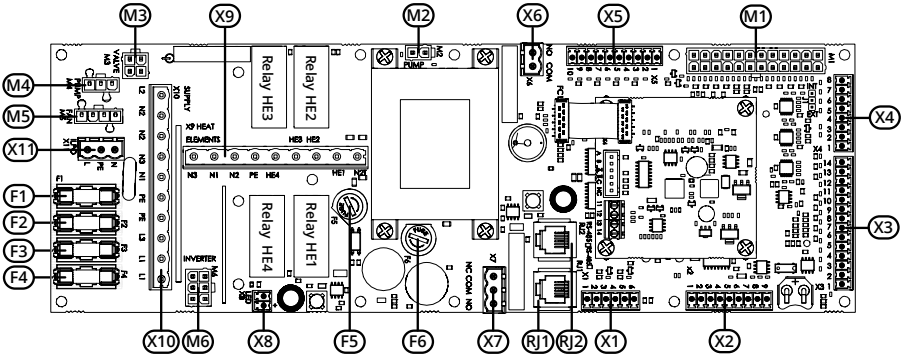
Specifications	RXC35	RXC50	RXC65
Maximum heat pump capacity	3,0 kW	5,0 kW	6,6 kW
SCOP for average climate, 35/55	4,60/3,21	5,39/4,02	4,96/3,85
Maximum heating capacity	9,0 kW	11,0 kW	12,6 kW
Electrical heater	6,0 kW	6,0 kW	6,0 kW
Maximum cooling capacity at 18°C	2,5 kW	3,4 kW	3,8 kW
Maximum cooling capacity at 7°C	1,7 kW	2,4 kW	2,7 kW
Heat carrier pump	4-75 W	4-75 W	4-75 W
Refrigerant R32	1110 g	1110 g	1110 g
Fan, rated power	83 W	169 W	169 W
Exhaust air flow	100-150 m^3/h	150-250 m^3/h	200-340 m^3/h
Outdoor air flow during cooling operation	150-150 m^3/h	150-250 m^3/h	250-340 m^3/h
Minimum exhaust air temperature	Down to -20C°	Down to -20C°	Down to -20C°
Max working pressure	3 bar	3 bar	3 bar
Max heat carrier temperature	70°C	70°C	70°C
Nominal flow of circulation water (20kPa)	6-33 l/min	8-33 l/min	10-33 l/min
Minimum flow of circulation water	3 l/min	3 l/min	3 l/min
Tank volume	170 l	170 l	170 l
Sound power level	46 dB (A)	52 dB (A)	51 dB (A)
Duct	160 mm	200 mm	200 mm
Voltage	400V 3-fas 50Hz	400V 3-fas 50Hz	400V 3-fas 50Hz
Fuse	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-pressure	0,8 bar	0,8 bar	0,8 bar
IP rating	IP21	IP21	IP21
Height	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

12 WIRING DIAGRAMS

Sensors



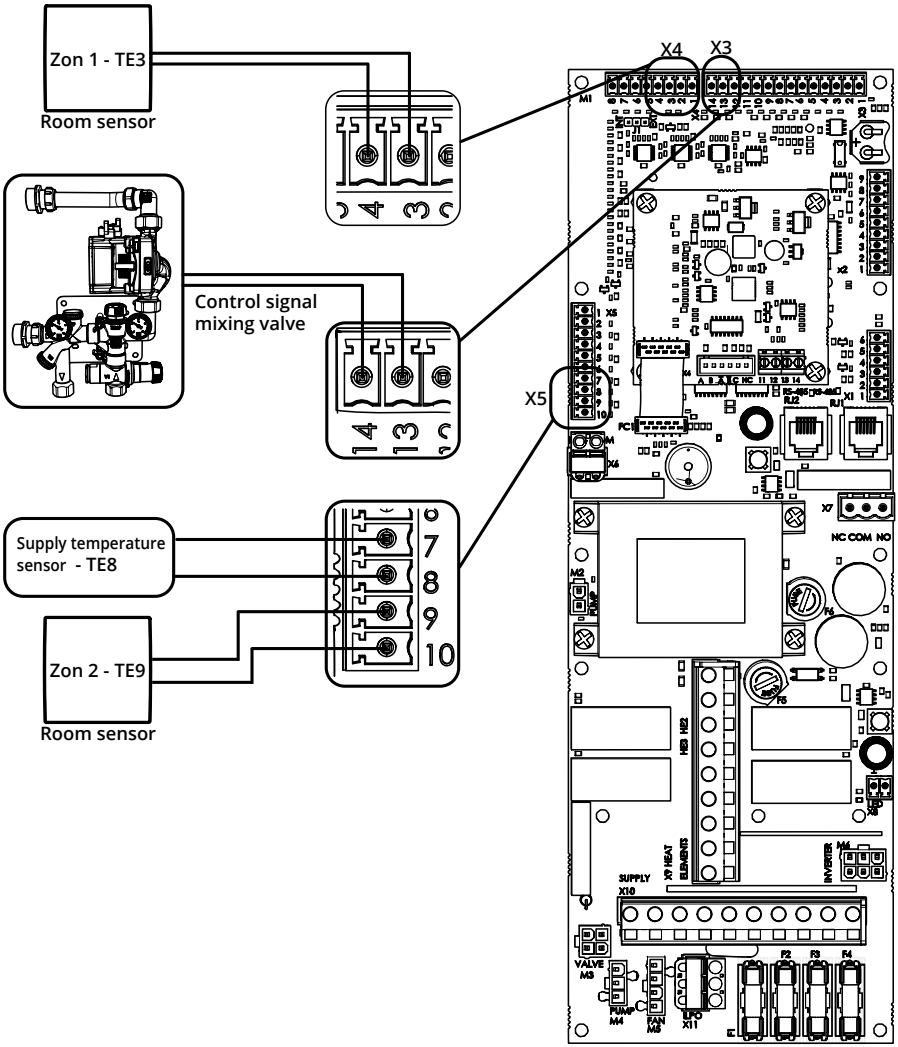
Connections and Fuses



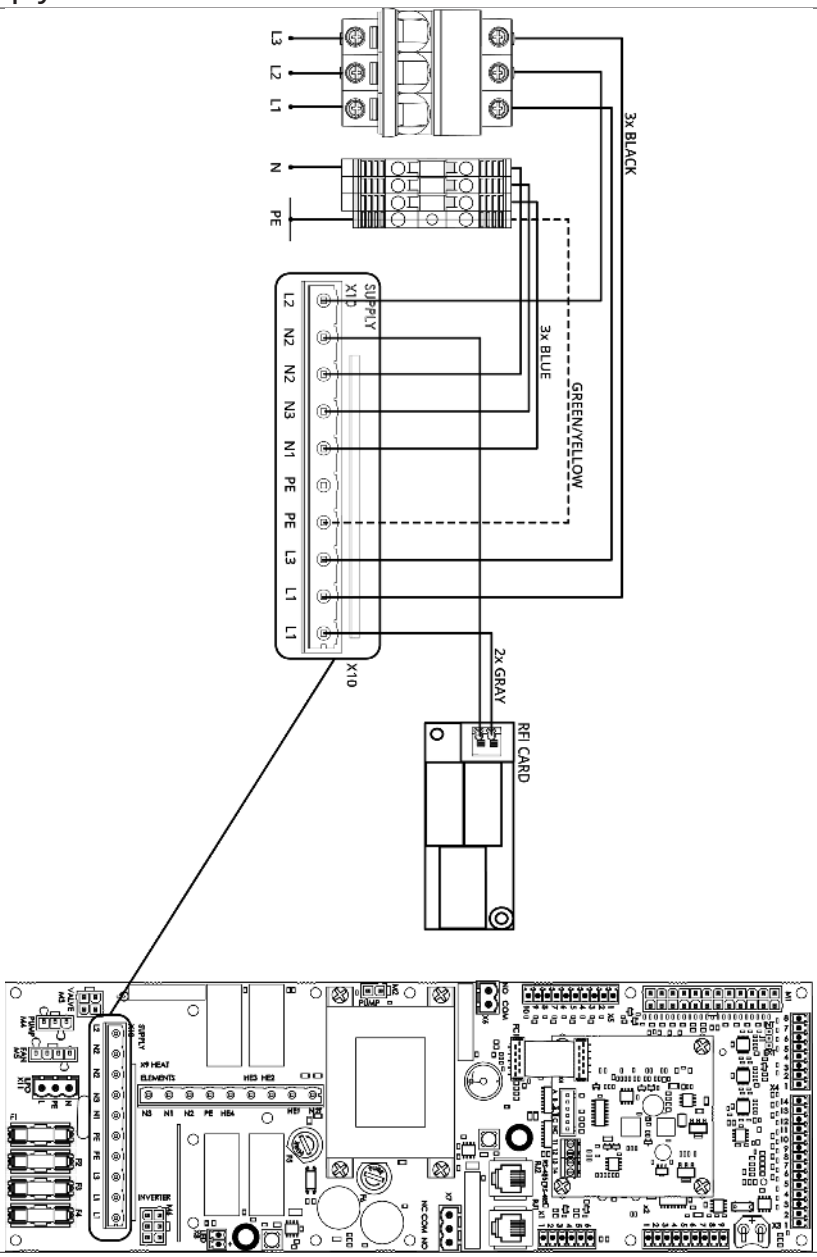
Connection	Function
F1	3-way valve (4.0Amp, 5x20 mm)
F2	Circulation pump (4.0Amp, 5x20 mm)
F3	Fan (4.0Amp, 5x20 mm)
F4	Air supply unit (4.0Amp, 5x20 mm)
F5	Fuse (160mAT, 5x20 mm)
F6	Fuse (1.25AmpTT, 5x20 mm)
M1	Communication contact / control of circulation pump 0-10 V (M1-13)
M2	Circulation pump, control
M3	Changeover valve 230 V
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 sensor in heat pump
X6	Relay
X7	Alarm relay
X8	LED light Strip
X9	Electrical heater
X10	Incoming power connection
X11	Air supply unit 230V

Dual heating curves connection

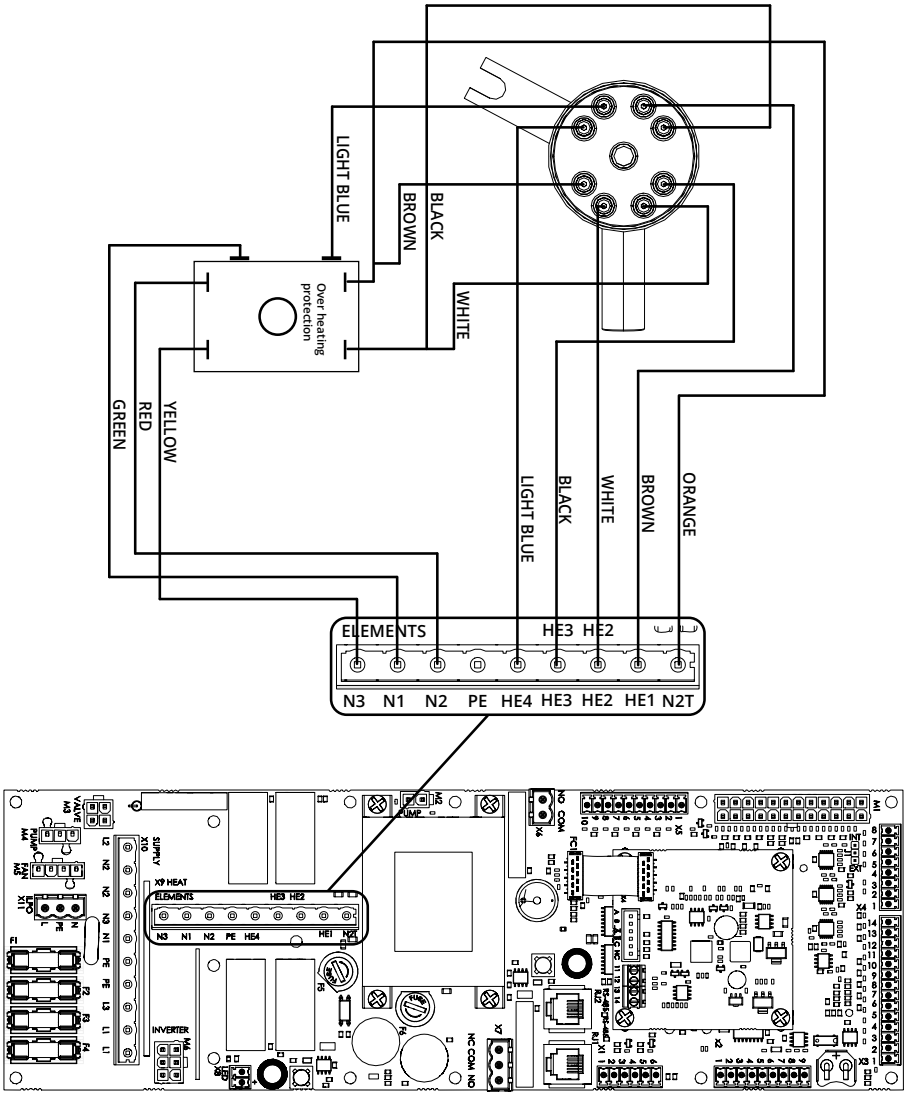
The jumper located on terminal block J1 should be moved from terminals 1-2 to 2-3. Refer to the Electrical Installation section in the Installation chapter for instructions.



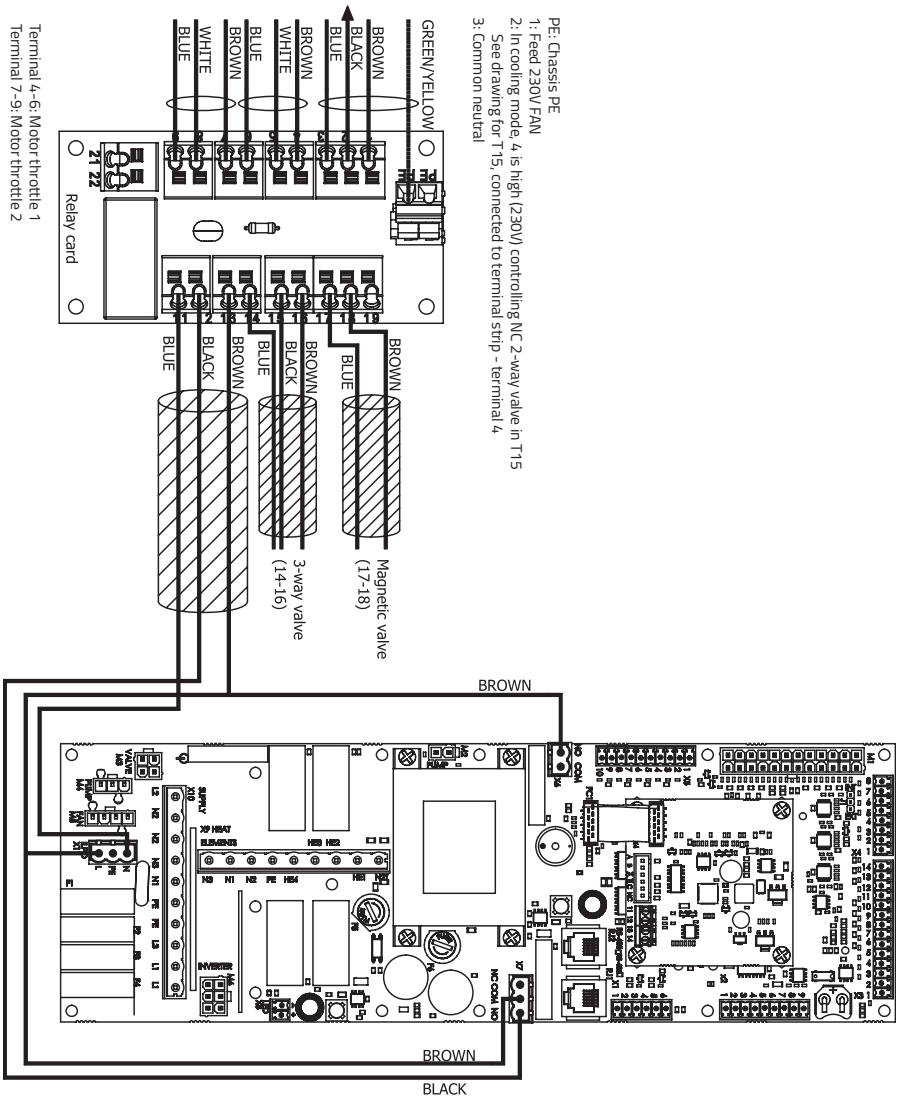
Supply and RFI board



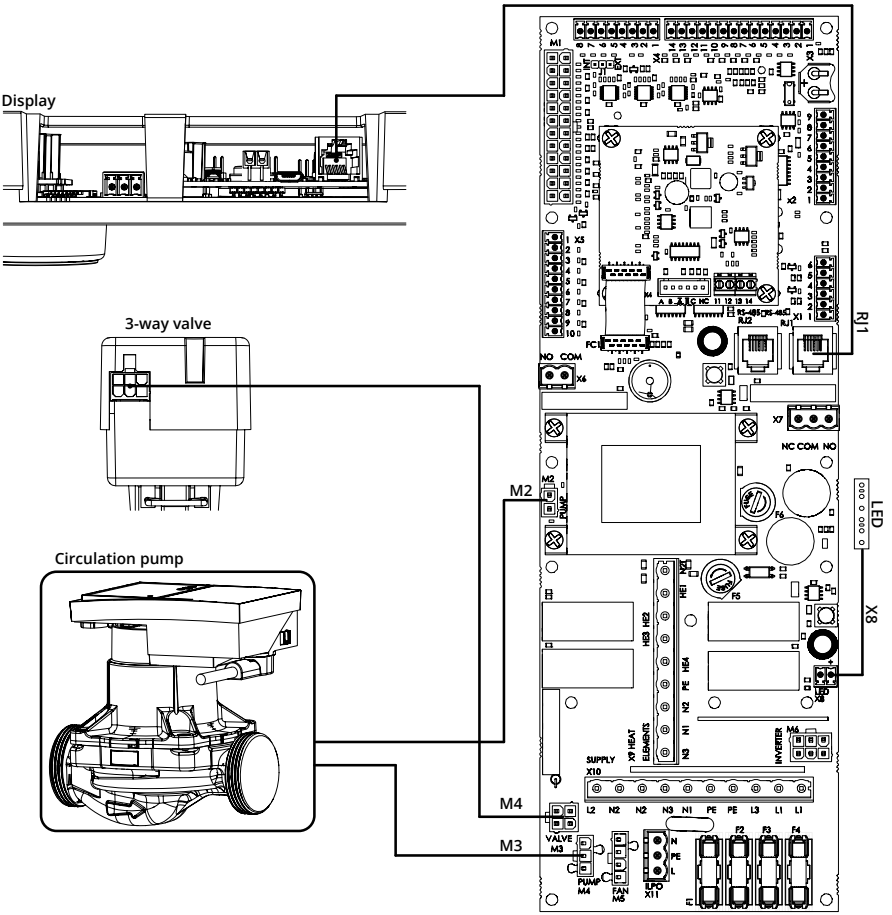
Electrical heater



Relay card


PE: Chassis PE
1: Feed 230V FAN
2: In cooling mode, 4 is high (230V) controlling NC 2-way valve in T15
See drawing for T15, connected to terminal strip - terminal 4
3: Common neutral
Terminal 4-6: Motor throttle 1
Terminal 7-9: Motor throttle 2
GREEN/YELLOW
BROWN
BLACK
BLUE
WHITE
Relay card
3-way valve (14-16)
Magnetic valve (17-18)
BROWN
BLACK
BROWN

Components

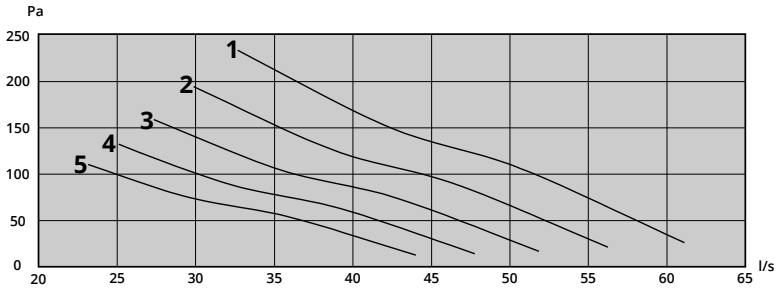

Display
3-way valve
Circulation pump
M2
M4
M3
RJ1
LED
X8
NC COM NO
NO COM
SUPPLY
X10
VALVE
M3
PUMP
M4
FAN
M5
LOAD
X11
INVERTER
M6
X9 HEAT
ELEMENTS

Fan diagram

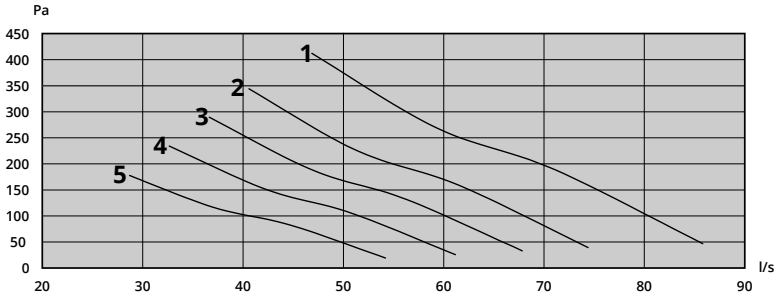
Fan speed is shown in percentage:

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

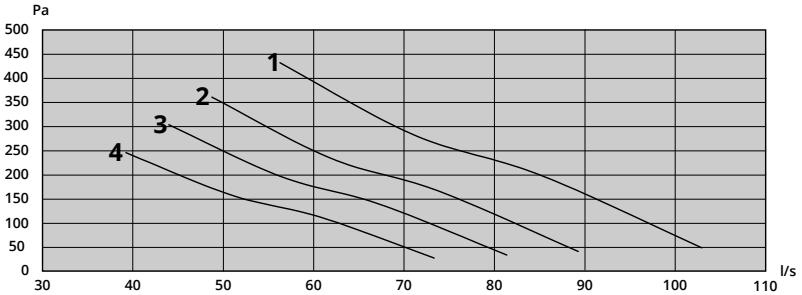
RXC35



RXC50



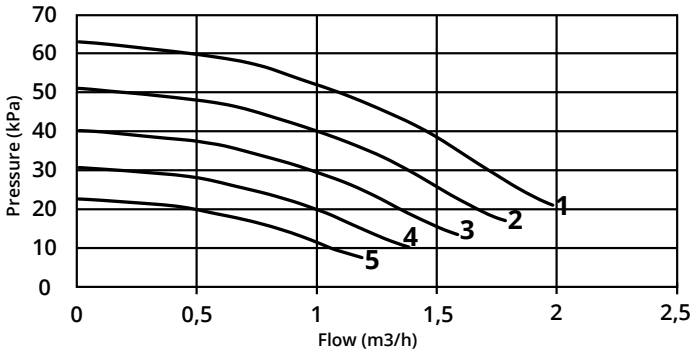
RXC65



Pump diagram

Pump speed is shown in percentage:

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



Supply water temperature table

Outside 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

Denmark

IKM A/S

H.C. Ørsteds Vej 2D-E, DK-6100 Haderslev

Tel: +45 294 899 89

mail: salg@ikm.dk • www.ikm.dk

Faroe Islands

Svend Krosstein

P/F Postbox 3229, FO-110 Tórshavn

Tel: +298 34 46 00

mail: krosstein@krosstein.fo • www.krosstein.fo

Netherlands

Inventum Technologies BV

Kaagschip 25, 3991 CS Houten

Tel: +31 30 274 8484

mail: info@inventum.com • www.inventum.com

Ireland

Joule

Unit 407 NW Business Park, Ballycoolin, Dublin

Tel: +353 1 623 7080

mail: info@joule.ie • www.joule.ie

Germany

Pollmann-Technik GmbH & Co.

KG Brinkstr 81, 46348 Raesfeld

Tel: +49 2865 603 665

mail: info@pollmann-technik.de • www.pollmann-technik.de

Sweden

Comfortzone AB

Sjöflygvägen 35, 183 62 Täby

Tel: +46 1 682 16 40

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

In the event of a fault or problem, always contact the dealer who sold the product or the house where the air handling unit is installed. A service agent can be contacted for repairs.

14 WARRANTY INFORMATION

NOTE: This warranty is valid exclusively in Sweden. If you're outside of Sweden, please contact your local ComfortZone distributor for warranty conditions specific to your country. The following is only a general summary of what applies. It is therefore important to note that certain specific conditions apply to the validity of the right of complaint and warranty. For detailed terms, refer to the ComfortZone Purchase and Warranty Conditions on our website.

Product warranty - exhaust air heat pump & supply air unit

Validity: 3 years

Scope: Covers original defects found within 3 years from the date of manufacture.

Peace of mind warranty - exhaust air heat pump & supply air units

Validity: 3 years

Scope: Covers deductible and age reduction in case of machine damage. Valid from the end of the product warranty. Provided that there is an insurance policy granted by a Swedish insurance company and that the machine damage has been approved by the insurance company. Does not apply if the cost is less than the excess.

Extended safety warranty for exhaust air heat pumps

Validity: 1-18 years

Scope: The customer has the possibility to extend the peace of mind warranty by taking out a special heat pump insurance with Söderbergs & Partners. Covers deductible and age reduction in case of machine damage. ComfortZone's liability ceases at the end of the regular peace of mind 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 ComfortZone parts installed by an authorized service company. Does not include spare parts installed to correct faults 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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