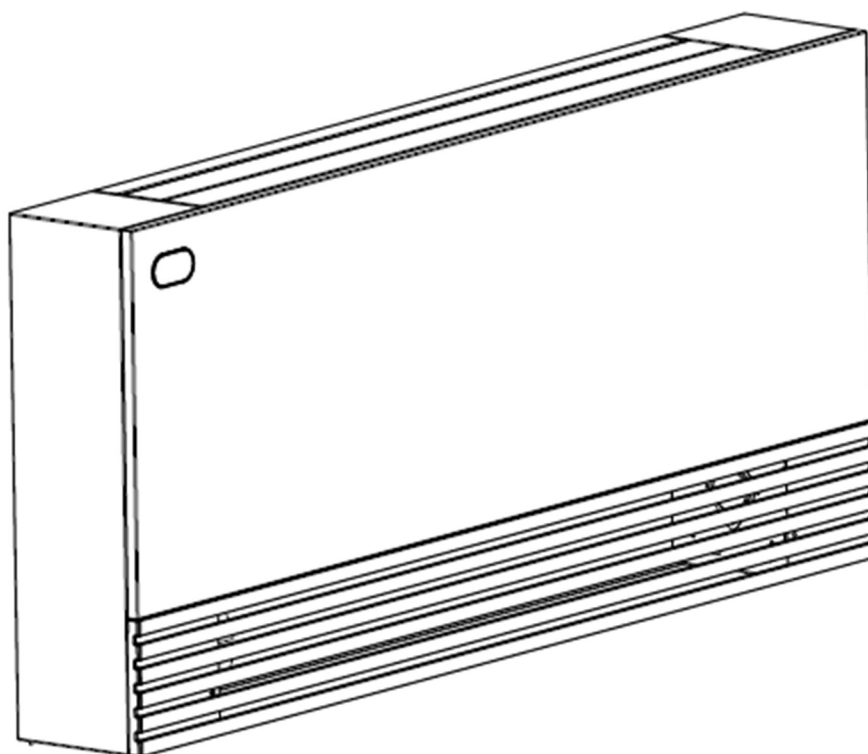


ClimaCalor

ProVC 300-600 / L-R



EN | INSTALLATION AND OPERATING INSTRUCTIONS

Thank you for choosing ClimaCalor. You have selected a model from the ClimaCalor ProVC line by ProCalor. The ClimaCalor is designed for efficient and sustainable heating and cooling.

This document is an integral and essential part of the product and must be provided to the user. It is recommended to carefully read the warnings and guidelines in this manual, as they contain important safety information regarding installation, operation, and maintenance.

The installation of this ClimaCalor must be carried out by qualified personnel, in compliance with applicable regulations and according to the manufacturer's instructions.

Both the commissioning and any maintenance work on this ClimaCalor may only be performed by ProCalor's authorized technical service.

Incorrect installation of this ClimaCalor may cause harm to people, animals, and property, for which the manufacturer assumes no liability.

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1. PRECAUTIONS

- Install the ClimaCalor in accordance with national regulations for electrical equipment.
- Carefully read this manual prior to installation.
- The precautions also concern your safety and that of others.
- Keep this manual in an accessible place for future reference.
- Before shipment from the factory, the ClimaCalor has been tested for:
 - Leakage through overpressure at the connections;
 - Static and dynamic balance of rotating parts;
 - Noise levels;
 - Air volume;
 - Electrical performance;
 - External defects.

Warning:

It is essential to observe the warnings stated in this document.
 Ensure that, upon completion of the installation, the unit operates smoothly during startup.
 Instruct the user on the operation and maintenance of the unit.

As product development is an ongoing process, all stated data is subject to change without prior notice.

2. IMPORTANT INFORMATION

Read this manual carefully to ensure the correct installation of the device. Only by fully complying with the contents of this manual can errors be avoided and trouble-free operation be ensured. Failure to follow the safety regulations, installation conditions, instructions, warnings, and notes in this document may result in personal injury or damage to the device. Please keep these instructions for future reference.

This device is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or by those lacking experience or knowledge, unless they are supervised and instructed by a responsible person on how to use the device safely. Keep children under supervision to ensure they do not play with the device.

The warranty is void in the following cases:

- Damage or defects resulting from failure to follow the manufacturer's installation, cleaning, or usage instructions.
- Incorrect, improper, and/or irresponsible use or handling of the device.
- Defects caused by incorrect or unqualified repairs and external factors.
- Repairs and/or modifications performed by unauthorized persons.
- Devices installed in such a way that they are difficult to access.

This device is subject to the general warranty terms and conditions of ProCalor B.V.

Warning:

- Improper installation, maintenance, or servicing may result in electric shocks, short circuits, leaks, fire, or other damage to the system.
- Ensure that only trained and qualified service technicians install, repair, and maintain the device.
- Install strictly according to the installation instructions.
- Use the supplied accessories and specified components for installation.
- The ClimaCalor must not be installed in a laundry room.
- Before working on electrical components of the device, it must be disconnected from the power supply.
- The power plug of the device must remain accessible.
- The flow direction of the central heating water must be indicated on the pipes.
- The national regulations must be followed for the electrical connection of the device.
- Use appropriate wiring for installation and secure the cable to prevent it from being pulled loose from the device.
- (Plug) connections must be properly installed to prevent unnecessary overheating and fire hazards at the (plug) connection points.
- If the power cable is damaged, it must be replaced by a qualified electrician to prevent damage.
- Do not modify the length of the internal power cable or combine the power supply with other electrical devices.
- After installation, check that no water is leaking from the device.
- The ClimaCalor is designed to withstand water temperatures between $\geq 3^{\circ}\text{C}$ and $\leq 70^{\circ}\text{C}$.

Note: The ClimaCalor ProVC series does not include a condensation tray or drain. Therefore, the minimum water temperature must remain above the dew point to prevent unwanted moisture. More information can be found under the section 'General Guidelines.'

- The water inside the device must be clean, with a pH value between 6.5 and 7.5. The air must be clean.

Important

- **Grounding the ClimaCalor:** Do not ground the ClimaCalor to a water or gas pipe, a lightning rod, or a telephone cable.
- **Securing the device:** Secure the ClimaCalor with a residual-current circuit breaker (RCCB).
- Do not connect the device to power until all installation work on pipes and cables has been completed.
- Install the ClimaCalor above the air condensation threshold inside the home. The ClimaCalor does not have a condensate drain.
- Install the power cables of the device at least 1 meter away from televisions and radios to prevent image or sound interference.
- The ClimaCalor must be operated by persons with knowledge and experience in using the device. Experienced users should pass on this knowledge and the operating instructions to less experienced individuals.
- **Disposing of the unit:** At the end of its service life, bring the device to a municipal collection point for electrical appliances.

Incorrect installation locations

Do not install the ClimaCalor in the following locations:

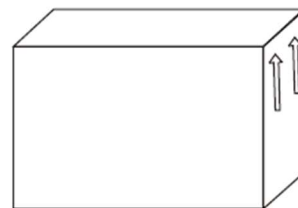
- Areas with flammable vapors, such as gasoline or petroleum fumes.
- Areas with salty air (e.g., near the sea).
- Areas with corrosive gases (e.g., sulfides) (such as near sulfur springs).
- Areas with strong vibrations (e.g., in factories).
- Kitchens with open flames and cooking fumes.
- Areas with strong electromagnetic radiation.
- Areas containing flammable materials or gas.
- Areas with steaming acids or bases.
- Any other environments with special conditions.

2.1 PACKAGING AND COMPONENTS

Open the packaging before installation to prevent transport damage. Leave the handling of the unit to professional personnel. Upon arrival, check the device for any damage and completeness.

Instructions for Removing the Packaging:

1. Check for visible damage to the packaging.
2. Open the packaging from the top.
3. Verify that the packaging includes an installation and user manual.
4. Separate the cardboard from the other packaging materials and dispose of them according to applicable regulations; recycle the packaging materials where possible.
5. Always transport and store the boxes containing ClimaCalor units with the arrows pointing upward.
6. Keep the packaging materials out of reach of children.



Handling

Move the device with care to prevent damage. Ensure a clear, obstacle-free path and follow occupational health and safety regulations. Use approved tools and transport equipment.

Storage of units

Units may be stored in their packaging, stacked no more than four layers high, and must be protected from moisture and dirt.

3. GENERAL GUIDELINES

- Check all components for visible damage.
- Handle the device with care to prevent damage to the casing and internal mechanical and electrical components.
- Ensure that the device remains easily accessible at all times for inspection, maintenance, and repairs.
- Do not place objects on the device.
- Ensure that no objects enter the air intake and outlet openings.

ClimaCalor serial number:

The serial number is indicated on the barcode located on the right side of the device (or on the left side if the connections are on the right side of the device)

Operational limitations:

For any installation that falls outside the specified operational limits, ProCalor B.V. is not liable for damage to property or injury to persons.

- Maximum water temperature: 70°C
- Minimum water temperature: 3°C (*Note: The ClimaCalor ProVC series does not include a condensation tray or drain. Therefore, the minimum water temperature must remain above the dew point to prevent unwanted moisture.*)
- Water pressure: Minimum 1.5 bar, maximum 16 bar
- Power supply voltage: 220 V AC $\pm 10\%$

The device can operate effectively under normal climatic conditions within the following temperature range:

	Room temperature	Water inlet temperature
Cooling	22°C – 32°C	19°C – 20°C
Heating	5°C – 30°C	28°C – 55°C

- If the ClimaCalor operates outside the specified conditions, the device may function abnormally.
- It is important that your heat pump is equipped with a dew point control system. If this is not the case, set a lower limit for the water temperature with a safe margin to ensure that the water temperature always remains above the dew point. If the water temperature falls below the dew point, the ClimaCalor may cause water vapor to condense on the heat exchanger. If this occurs, the water temperature must be increased to prevent moisture-related issues.

Usage:

- The device is designed for heating and cooling indoor spaces. During cooling, the water temperature must not be so low that water vapor condenses on the ClimaCalor.

- When mounted on the ceiling, the ClimaCalor must be secured in accordance with this manual.
- Installing the ClimaCalor in an explosive environment is strictly prohibited.
- The device has been developed and manufactured to function solely as a terminal unit for air treatment, with optional inlet and outlet plenums, and as a wall- or ceiling-mounted unit.
- The environment where the device is installed must be dry and dust-free, with a temperature range between 5°C and 70°C and a relative humidity of less than 90% (according to IEC EN 60335-2-40). **Note** that higher humidity levels correspond to a higher dew point temperature. The risk of condensation inside the ClimaCalor must always be prevented.
- This device is not suitable for industrial applications.
- The use of this device by children or unsupervised individuals with disabilities is strictly prohibited.

Maintenance:

- All repairs and maintenance work must be carried out by professionally qualified personnel.
- Disconnect the device from the power supply by switching off the main switch before performing cleaning and maintenance tasks. Wait until the components have cooled down to avoid the risk of burns.
- Do not use solvents or detergents for cleaning.
- Perform a check every six months on the heat exchanger, grilles, and ensure the system is properly vented.

Dismantling:

- If the device will not be used for an extended period, it must be disconnected from the electrical power supply.
- If there is a risk of freezing, an appropriate amount of antifreeze must be added to the system. **Antifreeze can affect the performance of the device!** Pay close attention to the safety instructions on the antifreeze packaging.

Packaging:

- Remove the packaging materials and dispose of them at designated collection points or recycling facilities, in accordance with local regulations.
- Keep the packaging out of reach of children.

Installation:

The device must be installed by a certified installer in accordance with the manual and the applicable national and local building and safety regulations. Incorrect installation may result in product malfunctions, reduced performance, vibrations, or increased noise levels.

- The device may have sharp edges; wear appropriate protective gear during installation and maintenance.
- Adhere to all dimensions specified in the manual to ensure optimal performance and to facilitate installation and maintenance. Allow additional space if valves need to be installed.
- Prevent the transmission of vibrations between different components by using sound insulation materials.

Guidelines for Device Placement:

- **For wall- and ceiling-mounted units:** The wall or ceiling where the device is installed must be perfectly flat, strong enough to support the weight, and free of pipes or electrical wiring.
- Ensure there are no obstacles in the immediate surroundings that could obstruct the inlet or outlet airflow.

Startup Procedure

The (re)starting and commissioning of the device must be performed by professionally qualified personnel. Before startup, verify that:

- The device is correctly installed.
- The supply and return pipes are properly connected and, if applicable for cooling, insulated.
- The pipes are clean and free of air.
- The ventilation grilles, filters, and heat exchanger are clean.
- The wiring connections are correctly installed and securely tightened.
- The power supply voltage is correct.

SYMBOLS



Danger sign



Danger: live electrical components



Danger: Sharp edges/components



Danger: Hot components/surfaces



Danger: Moving parts



Caution: Important warning/notification



Environmental protection symbol



VDC – Direct Current (DC)



VAC – Alternating Current (AC)

Dismantling and Disposal

The device must be dismantled and disposed of as an electrical appliance for recycling.

4. DESCRIPTION

The ClimaCalor unit is designed for heating, cooling, and circulating air in an enclosed space. It is available in various models with different installation options. The ClimaCalor ProVC series comes standard with a built-in thermostat, allowing independent temperature regulation in different rooms.

Standard operating conditions:

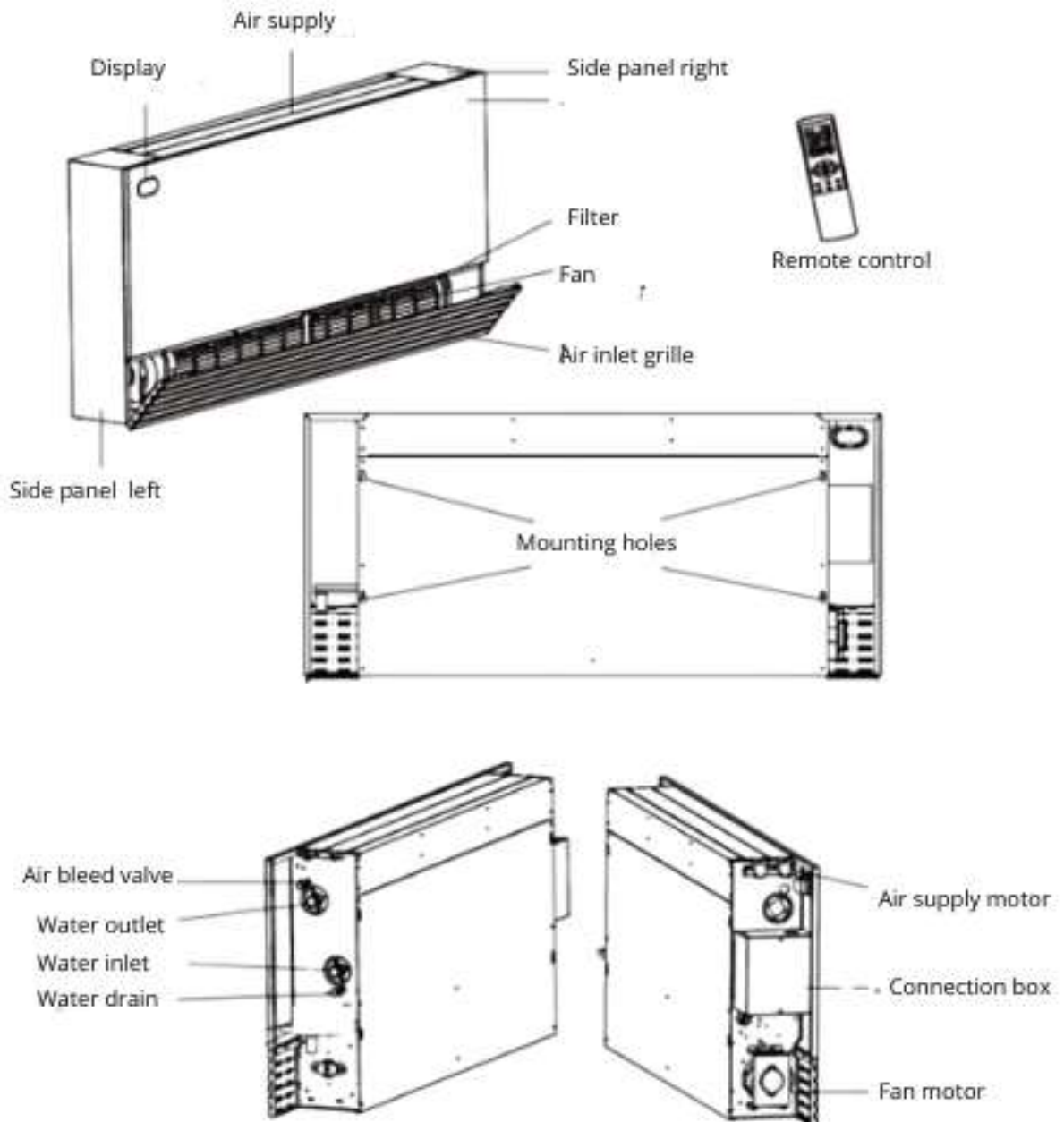
The ClimaCalor is intended for air treatment in buildings to ensure a comfortable indoor climate in both winter and summer.

Attention:

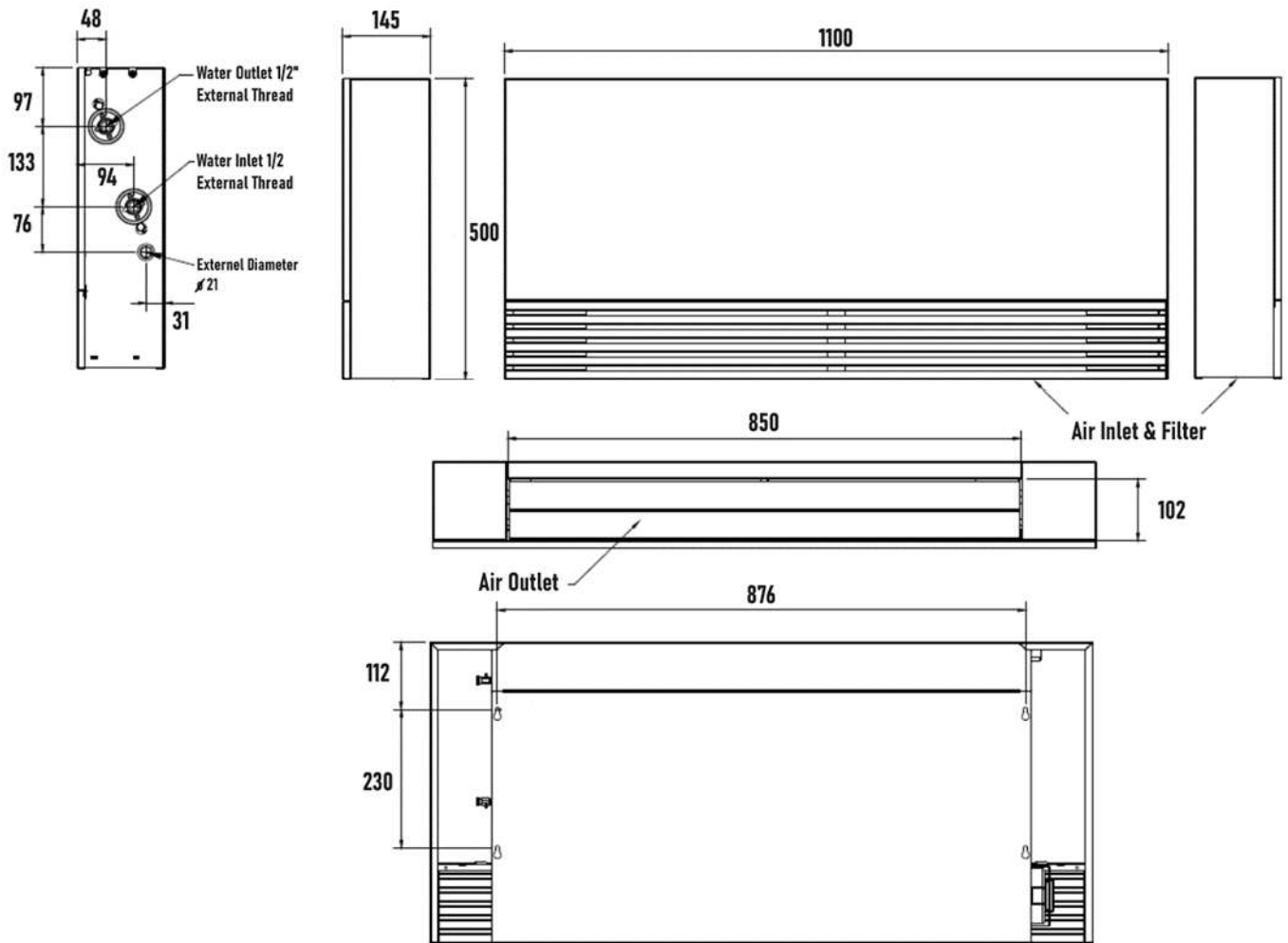
- The ClimaCalor is designed for installation inside buildings.
- Do not insert objects into the air inlet or outlet of the ClimaCalor.
- The ClimaCalor will function correctly only if the instructions in this manual are strictly followed.
- The ClimaCalor must be installed with the correct clearance distances to facilitate maintenance and prevent a decrease in performance.

5. COMPONENTS AND DIMENSIONS

5.1 COMPONENTS



5.2 DIMENSION



6. OPERATION

6.1 EXTENDED INACTIVITY PERIOD

If the ClimaCalor is not used for an extended period, it must be disconnected from the power supply. Additionally, during winter, the ClimaCalor must be kept frost-free to prevent the water in the heat exchanger and pipes from freezing, which could cause leaks. If the ClimaCalor is not in use during winter and is located in an unheated space, a sufficient amount of antifreeze must be added to the water.

Alternatively, the ClimaCalor can be drained via the water drain.

6.2 STARTUP AFTER EXTENDED INACTIVITY

Before Turning On the ClimaCalor After an Extended Inactivity Period:

- Clean the air filters.
- Clean the heat exchanger.
- Bleed the central heating pipes in the device.
- Run the ClimaCalor at maximum speed for several hours.

6.3 OPERATION

With the remote control, you can adjust the fan speed, temperature, and air distribution. The remote control is included with the device. A wall mount for the remote control is also provided. A detailed manual for the remote control can be found later in this guide.

Testing the Controls

During commissioning, the following tests should be performed using the controls:

- Start/stop operation of the ClimaCalor.
- Selection of the three fan speeds.
- Adjustment of thermostat settings and setting the desired temperature.
- Switching between cooling and heating modes.
- Ensuring a consistent airflow from the ventilation system.
- Reading and understanding the instructions in the control manual.

6.4 CLEANING

Important: Always turn off the power to the device before starting any cleaning or maintenance.

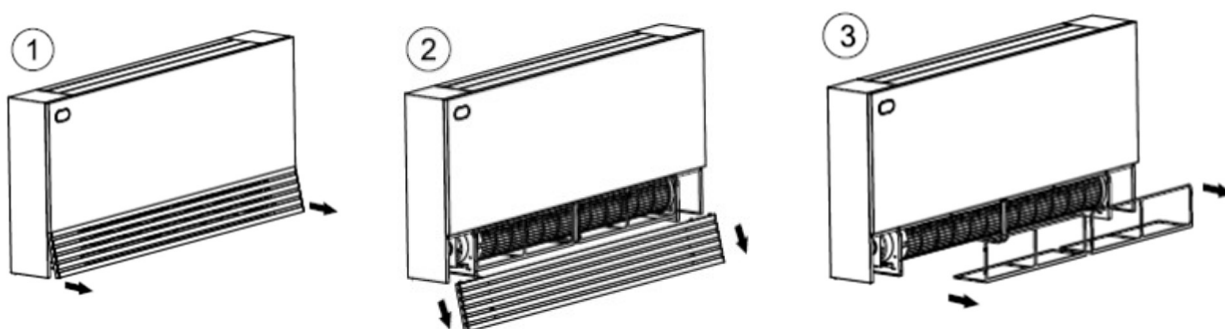
Do not spill water on the ClimaCalor. For cleaning, use a soft brush or a soft cloth with a small amount of water. Do not use hot water, solvents, abrasives, or corrosive substances.

6.5 CLEANING THE AIR FILTER

To ensure sufficient air intake, the air filter must be cleaned regularly. If the device is installed in a very dusty environment, the cleaning frequency may need to be increased to a monthly basis. The filter must always be removed before cleaning.

The air filter is located at the bottom of the device. To remove the air filter, follow these instructions:

1. Unscrew the two screws from the grille, pull the grille forward at a 20-degree angle, and then remove it.
2. Remove the air inlet grille.
3. Carefully pull the filter forward.



The air filter should be cleaned by blowing it with compressed air or washing it with water. Before reinstalling, ensure that the filter is clean and completely dry. If the filter is damaged, it must be replaced with an identical corresponding filter.

To reinstall the filter, follow the previous steps in reverse order.

6.6 WARNING AND TIPS

Prevent airflow blockage. The ClimaCalor must not be used as a surface to lean on or place objects on. Careless use of water or spray cans near the device can lead to electric shocks and malfunctions.

7. INSTALLATION

The installation of the ClimaCalor must only be carried out in accordance with applicable regulations and by qualified technicians. Incorrect installation can result in poor device performance and reduced efficiency.

A video of the installation process is available via the QR code below.

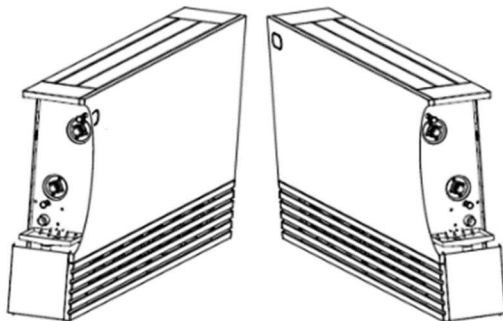


procalor.nl/climacalor

7.1 WATER CONNECTIONS

The ClimaCalor is available with either a left- or right-sided central heating (CH) connection. Choose the correct connection side for the CH pipes to ensure an easy installation and to save space and materials. This decision must be made **before** installation, as modifications are not possible afterward.

The electrical box is always located on the opposite side of the CH connection. However, the electrical cable can be routed from either side using the built-in conduit.



Left side connection

Right side connection

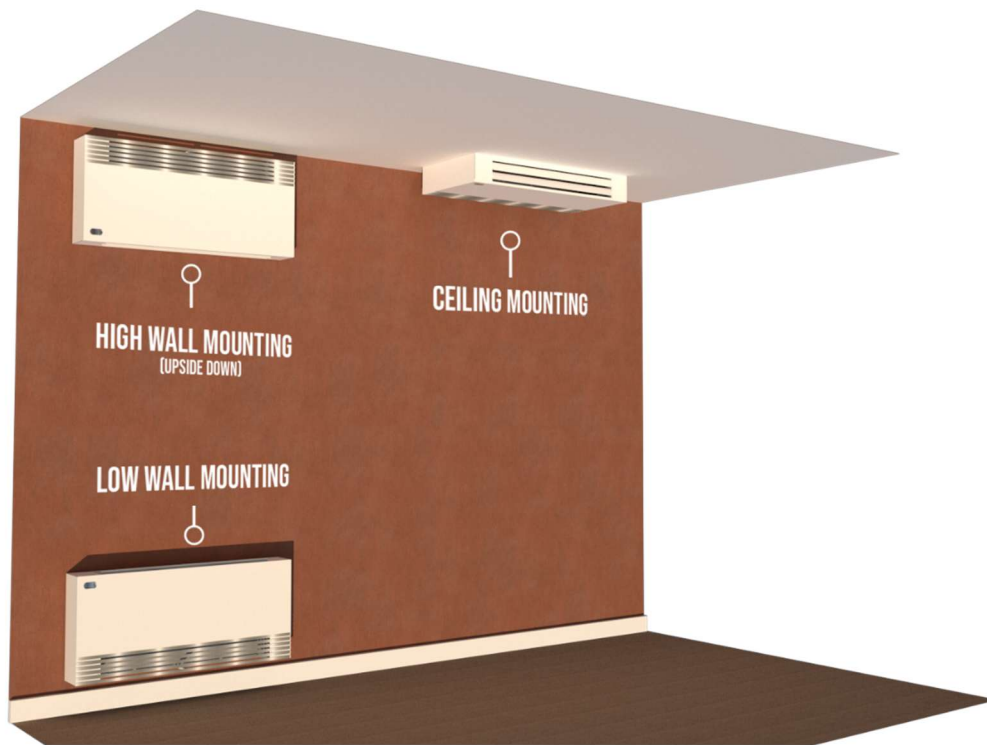
ClimaCalor	CH-connection (in and out)	Electical box with electric motor
Right side connection	Right	Left
Left side connection	Left	Right

7.2 POSITIONING

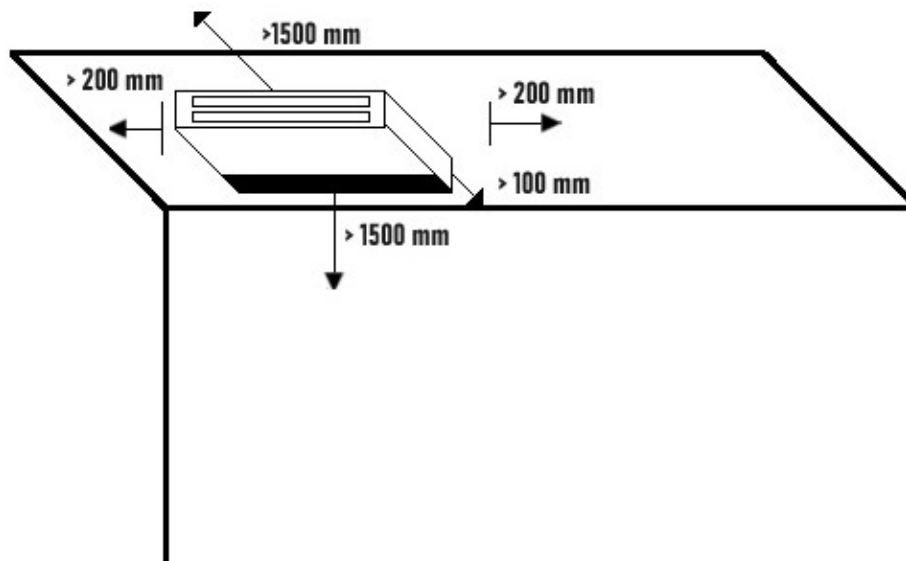
The ClimaCalor offers three installation options:

- Low wall mounting (similar to a radiator)
- High wall mounting (similar to an air conditioner)
- Ceiling mounting

Choose the most suitable installation option based on your specific situation, preferences, and pipe layout.

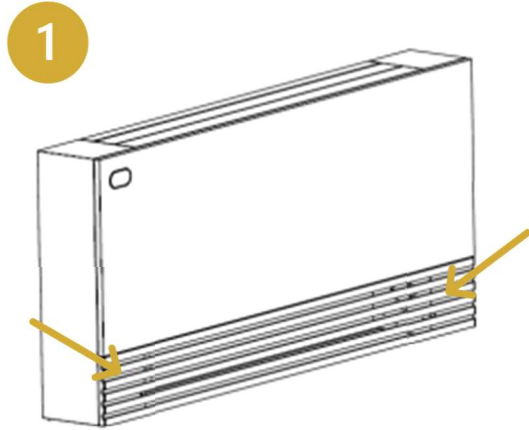


In addition to selecting the correct connection side, it is also essential to maintain the proper clearance around the ClimaCalor. Incorrect positioning or installation may amplify the device's noise levels or cause vibrations during operation.

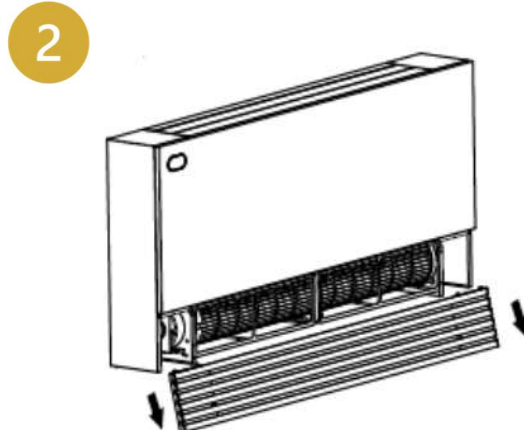


7.3 (DIS)ASSEMBLING SIDE PANELS

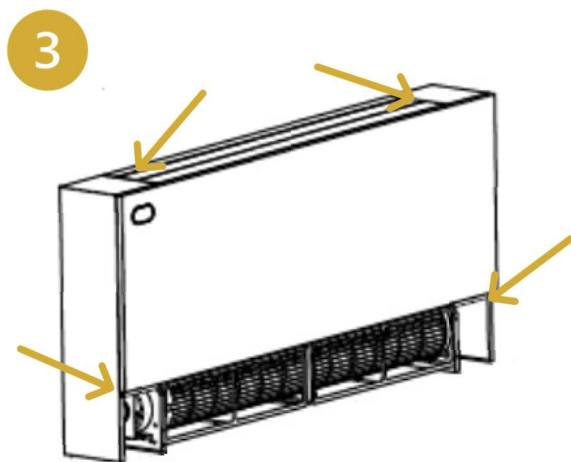
(DIS)ASSEMBLING SIDE PANELS



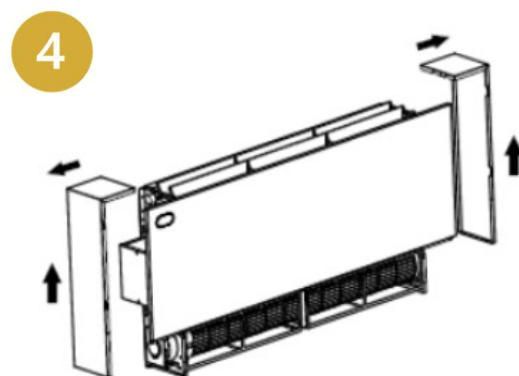
Remove the screws at the front.



Detach the grille.



Remove the four screws.



Detach the side panels from the frame.

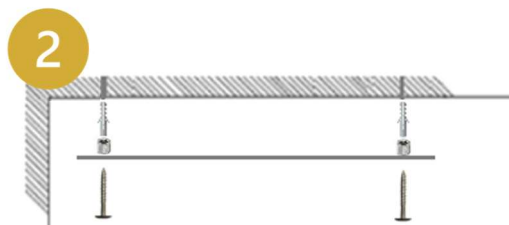
7.4 MOUNTING

The ClimaCalor comes with an **H-frame** for easy installation. The H-frame is designed to also function as a spacer. Follow the five steps below to mount the ClimaCalor.

Note: Step 5 is very important for **ceiling installation!**



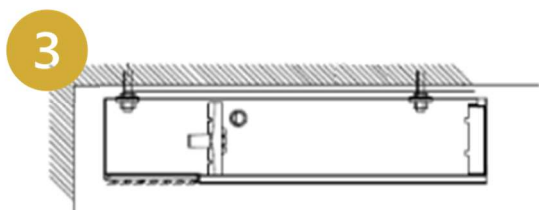
Use the **H-frame** or a **template** to mark the drill holes. Ensure the correct clearances around the unit, as specified in the positioning guidelines. Drill the holes at the marked locations



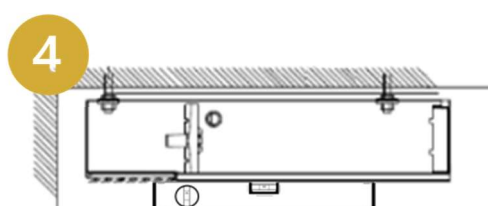
Insert the **wall plugs** into the wall or ceiling, depending on the chosen mounting option. Use the appropriate **fastening materials** to ensure a secure anchoring.

The **folded edges** of the H-frame act as spacers. The **other side** of the H-frame has **four hooks** where the ClimaCalor will be attached.

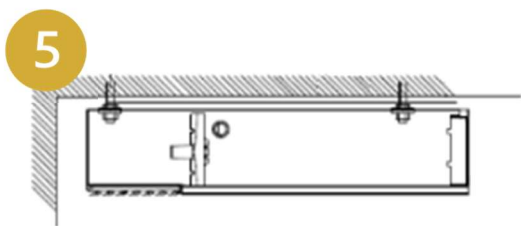
Mount the **H-frame with the hooks facing forward** and the **opening facing upward** (for wall mounting). For **ceiling mounting**, choose the most logical direction for the hooks based on your setup. Secure the H-frame firmly using the appropriate screws.



Slide the ClimaCalor, without the side panels, onto the mounting hooks of the H-frame.



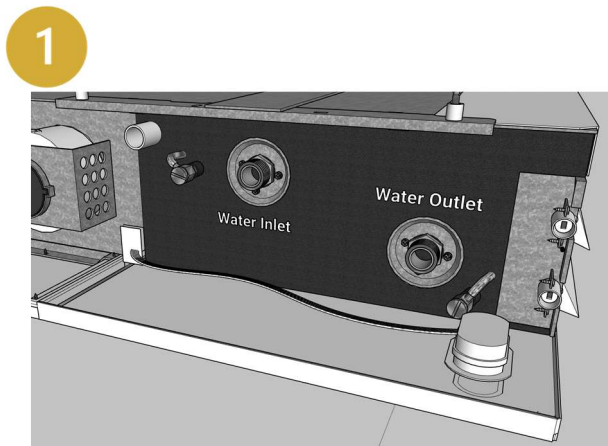
Ensure that the ClimaCalor is properly leveled. Adjust if necessary to achieve a perfect position.



Only applicable for ceiling mounting:

Bend the four mounting hooks by a quarter turn to secure the Climacalor, preventing it from being removed from the H-frame without bending the hooks back.

7.5 CONNECTING TO CENTRAL HEATING AND POWER SUPPLY

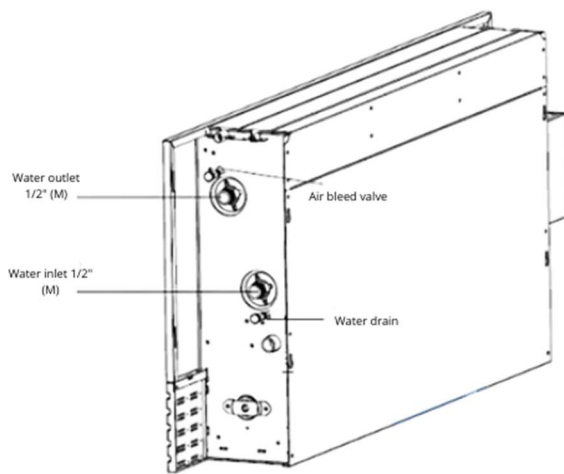


Connect the Climacalor to the central heating system at the designated inlet and outlet connections. Ensure that all connections are watertight and airtight by using an appropriate sealant..



Connect the Climacalor to the power supply.

Hold the hydraulic connection in place during installation



Central heating connections

It is essential that the CH connections are made by qualified technicians. Over-tightening the fittings on the heat exchanger can cause leaks. Always hold the fitting in place during installation to prevent damage.

All water-based ClimaCalor units are equipped with an air vent and a water drain. These valves can be opened and closed using a screwdriver

Important:

The heat exchanger can be partially drained using the water drain.

To fully empty the unit, it must be blown through with compressed air.

Once installation is complete, all air must be removed from the ClimaCalor by opening the air vent and flushing the system.

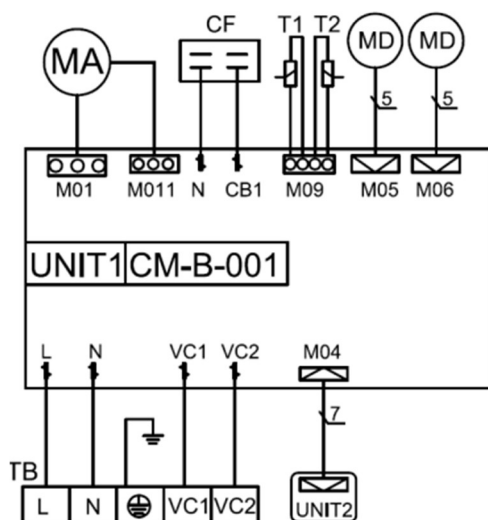
7.6 ELEKTRICAL CONNECTIONS

The electrical connection of the device must be carried out by qualified technicians in compliance with applicable installation regulations and standards. The supplier cannot be held responsible for any damage caused by incorrect electrical connections.

Connection Requirements: A double-pole plug or switch must be installed in the power cable leading to the device. The device must be protected with a 10A fuse or residual current circuit breaker (RCCB). The thickness of the electrical cables must be suitable for the maximum current load of the device.

Cable Specifications: Use a 1.5 mm² flexible cable with three cores (two for power supply, one for grounding). Use the pre-installed female connector inside the device and the supplied plug for the electrical connection. If the power cable needs to be connected on the opposite side of the CH connections, use the built-in conduit inside the device to route the cable with the plug accordingly.

7.7 WIRING DIAGRAM



Power connection

L	Connect tot he phase wire
N	Connect to the neutral wire
	Connect to the ground wire

Power supply 220/240V ~ 50/60Hz

UNIT1	Inner control panel	VC1	Connect to the water valve (valve open line)
UNIT2	Display panel	VC2	Connect tot he watervalue (valve close line)
MA	Internal fan	MD	Swivel motor
T1/T2	Temperature snesor	CF	Capacitor for internal fan

7.8 CONDENSATION AND MOISTURE PROTECTION

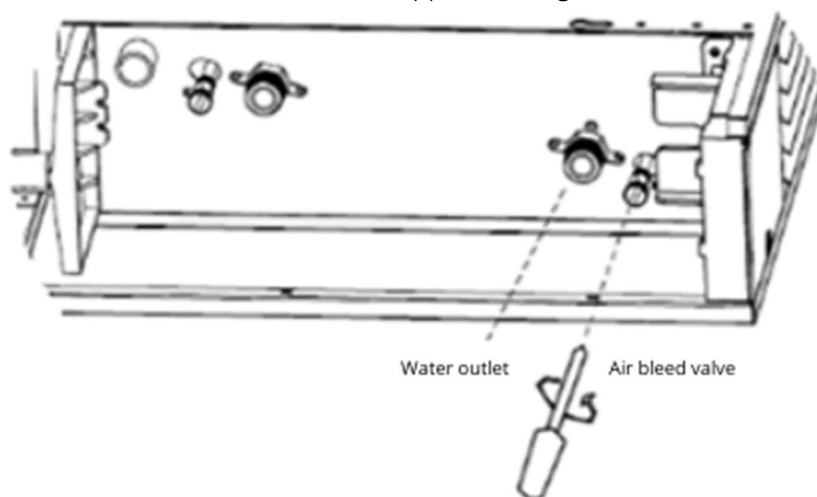
The ClimaCalor ProVC series is not suitable for cooling rooms with a water temperature below the air's dew point. The device does not have a condensate drain pan, so installing a drainage system at the installation location is not necessary. However, it is recommended to insulate the central heating (CH) pipes leading to and from the device to prevent condensation.

Frost protection

If the device is not in operation and located in an area exposed to freezing temperatures, it is advisable to drain the CH water from the unit. Draining, refilling, and venting the system requires additional time. Alternatively, adding glycol to the water can prevent freezing, but this will affect the device's performance.

8. STARTUP INSTRUCTIONS

The **initial startup** of the device must be performed by **experienced technicians** who are qualified to work with ClimaCalor units. Before turning on the device, all connections should be thoroughly checked and made in accordance with applicable regulations.



8.1 FILLING THE CLIMACALOR

- Turn on the CH pump to circulate water in the central heating system.
- Open the side of the unit where the CH connections are located.
- Open the water supply and return valves of the central heating system.
- Use a PH-screwdriver to open the air vent and bleed the air until all air has been expelled from the ClimaCalor.
- As long as air is still escaping from the vent, you will hear a hissing sound.
- Once all air has been expelled from the device, close the air vent.

8.2 CHECKPOINTS FOR STARTUP

Before turning on the ClimaCalor, the following points must be checked:

- Is the device properly installed?
- Is the device positioned horizontally?
- Is the device leak-free under a test pressure of 1.0 MPa?
- Are the supply and return pipes properly connected?
- Are the pipes clean and free of air? Pay attention to dirty central heating water.
- Are the heat exchangers clean?
- Are the electrical connections correctly installed?
- Are the mounting fixtures for the device secure and properly installed?
- Are the cables neatly organized and secured?
- Is the required connection voltage available?
- Is the power consumption of the fan correct?
- Is the remote control holder mounted in an accessible location on the wall?

8.3 STARTING UP THE CLIMACALOR

Turn on the power to the device and use the remote control to switch it on.

Then check the following:

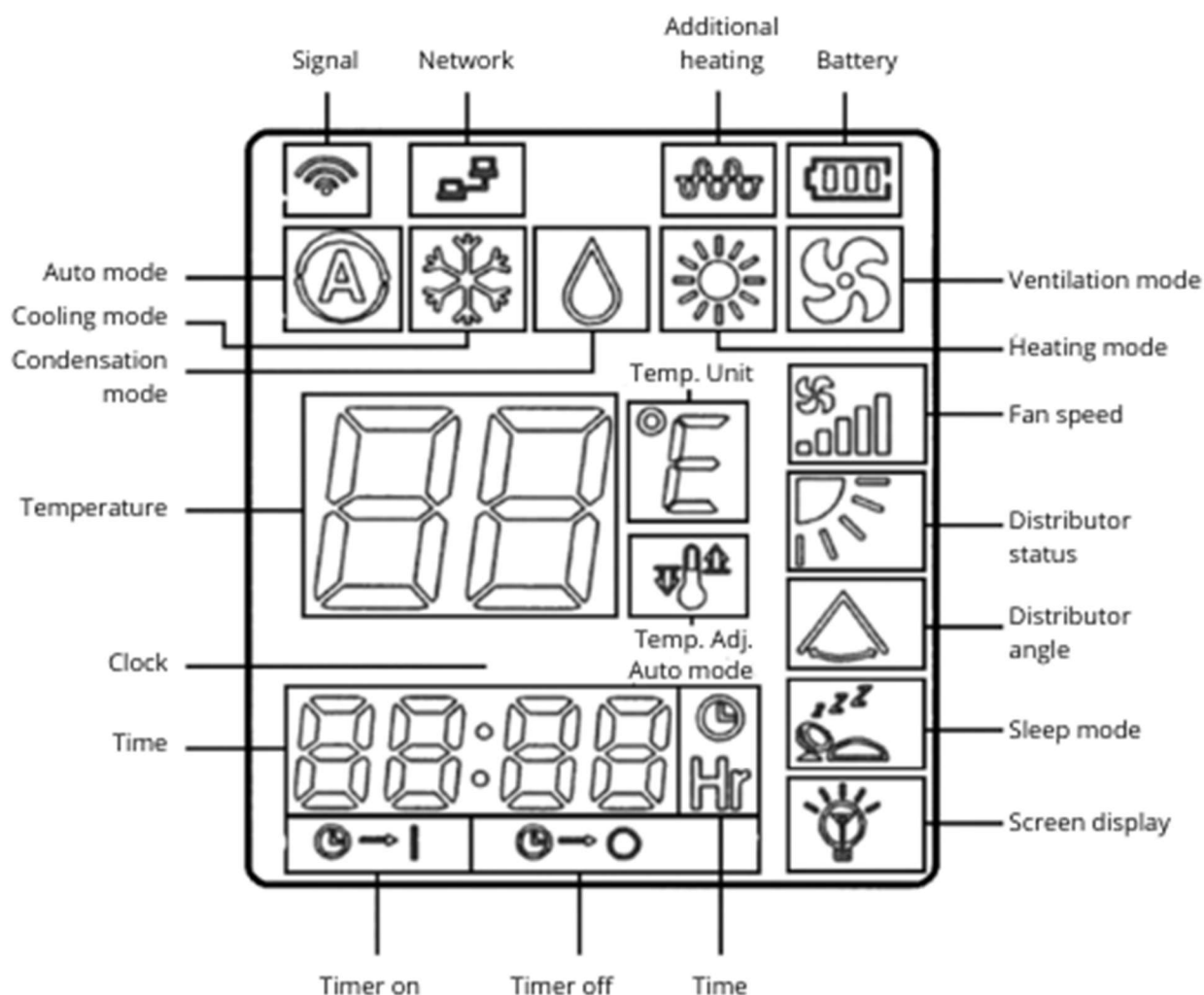
- Is the airflow at low/medium/high speeds comfortable and noticeably different at each speed?
- Is there no abnormal sound during the operation of the device?
- Can the air distributor be controlled without any additional noise?

8.4 VENTING THE DEVICE

- Open the side of the unit where the central heating connection is located.
- Turn on the central heating pump to circulate water through the device.
- Use a PH-screwdriver to open the air vent and bleed the air until all air has been expelled from the ClimaCalor.
- As long as air is still coming out of the vent, a hissing sound will be heard.
- Close the air vent once all air has been expelled from the device.

9. OPERATING INSTRUCTIONS CLIMACALOR

9.1 OVERVIEW SCREEN REMOTE CONTROL CLIMACALOR



1. Signal: Each time the remote control sends a signal to the ClimaCalor, the symbol blinks once.
2. Network: Displays when the system is connected to a network (for networks compatible with the remote control).
3. Additional Heating: This function is not available.
4. Battery: Displays the charge level of the remote control's battery in three segments.
5. Auto Mode: Displays when Auto mode is selected.
6. Cooling Mode: Displays when Cooling mode is selected.
7. Condensation Mode: Displays when Condensation mode is selected. This mode is not activated in the ClimaCalor ProVC series.
8. Heating Mode: Displays when Heating mode is selected.
9. Ventilating Mode: Displays when Ventilating mode is selected.
10. Fan Speed: Displays the selected fan speed.

11. Distributor Status: Displays the selected distributor setting.
12. Distributor Angle: Shows whether the distributor is on or off.
13. Sleep Mode: Displays when Sleep mode is selected.
14. Screen Display: Shows if the screen display button is pressed.
15. Temperature: Displays the set temperature.
16. Temperature Unit: Shows temperature in °C/°F.
17. Temp. Adjustment in Auto Mode: Displays the minutes of temperature adjustment in Auto mode.
18. Time: Displays the timer time and clock time.
19. Clock: Displays whether the clock or timer function is selected.
20. Time Hr: Displays the unit of time (hour).
21. Timer On: Blinks when the timer on function is selected.
22. Timer Off: Blinks when the timer off function is selected.

9.2 BUTTONS ON THE REMOTE CONTROL



Power button

Press the power button to start the device. The default settings are as follows: Auto modus  / Auto speed  / (flashing) Auto distributor . The screen will display the set temperature. In Auto mode, the set temperature can be adjusted by +1°C or -1°C using the increase and decrease buttons..

After the remote control is turned off, it will display the battery , time display , clock  and time sign .



Increase button

Press the button to increase the set temperature or the time on the clock or timer. By default, the button is used for adjusting the temperature. The button can be used to set the clock or timer after the clock or timer setting process is activated. Each press of the button increases the temperature by 1°C, with a maximum set temperature of 31°C. When adjusting the time, each press of the button increases the time by 1 hour. If the button is pressed for more than 3 seconds, the time will increase continuously. When the ClimaCalor remote control is on standby, the controls will not function.



Decrease button

Press the button to decrease the set temperature or the time on the clock or timer. By default, the button is used for adjusting the temperature.

The button can be used to set the clock or timer after the clock or timer setting process is activated.

Each press of the button decreases the temperature by 1°C, with a minimum set temperature of 16°C.

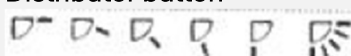
When adjusting the time, each press of the button decreases the time by 1 hour.

If the button is pressed for more than 3 seconds, the time will decrease continuously.

When the ClimaCalor remote control is on standby, the controls will not function.



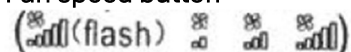
Distributor button



Press the button to set the status of the air distributor between various positions. In the last displayed position, the swing mode is activated.



Fan speed button



Press the button to set the fan speed to Auto/Low/Medium/High.

The device can be set to any of these modes when the ClimaCalor remote control is turned on.



Mode selection button



Press the button to select the mode between Auto/Cooling/Heating/Condensation/Ventilating.

The device can be set to any of these modes when the ClimaCalor remote control is turned on. The ClimaCalor ProVC series cannot enter Condensation mode.



Airflow selection button

Press the button to start or stop the air distribution.

The air distributor stops or changes position when the stop button on the distributor is pressed. The screen will show the  symbol.

When the button is pressed again, the screen will display the  symbol, and the distributor will begin



Sleep mode button

Press the button to start or stop Sleep Mode. Once Sleep Mode is selected, the screen will display the  symbol, and the fan will switch to low speed. Sleep Mode will automatically deactivate after 8 hours.



Display On/Off Button

This button is only for units with an LED/Digital display that wish to turn the display on or off. Press the button to toggle the display on and off.



Timer On Button

When the device is on standby, you can press the button to set the timer.

After pressing the button, the "time"  and "Timer On"  indicators will blink simultaneously.

Press the increase  and decrease  buttons to set the time for the timer.

When the "time"  display stops blinking and "Timer On"  blinks every 0.5 seconds, this means the timer has been successfully set.

Other settings (such as mode, set temperature, sleep mode, etc.) can now be adjusted. The device will operate according to the set values once the time set in the timer is reached.

Press the "Timer On" button again to stop the timer setting.

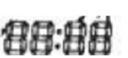


Timer off button

Press the button while the device is running to turn off the timer.

After pressing the button, the "time"  and "Timer Off"  indicators will blink simultaneously.

Press the increase  and decrease  buttons to set the time for the timer off.

When the "time"  display stops blinking and "Timer Off"  blinks every 0.5 seconds, this means the timer off has been successfully set.

The device will stop once the timer off time is reached.

Press the "Timer Off" button to stop the timer off setting.

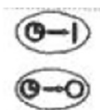


Timer on/off combination

It is acceptable to set Timer Off after setting Timer On, and vice versa.

Note: The accuracy of the remote control's timer is 1 minute. The device may have a different accuracy.

The Timer On/Off action is determined by the clock on the remote control.



Clock setting button

Press the buttons simultaneously to activate the remote control for setting the clock.

Press the increase  and decrease  buttons to set the time for the clock in hours and minutes.



Temperature unit

Press the buttons simultaneously, and the remote control will toggle between °F and °C.

9.3 OPERATION AND MODES OF CLIMACALOR

9.3.1 SENSORS AND FAN SPEED SETTINGS

Set Temperature (Ts): The desired temperature set by the user.

Room Temperature (T1): The current temperature in the room, measured by the ClimaCalor's temperature sensor.

Pipe Temperature (T2): The temperature of the heat exchanger.

The fan operates in 5 settings, with **setting 1** being the lowest speed and **setting 5** being the highest speed.

Host coupling function: The host coupling function ensures that the fan and valve operate in sync in the cooling, heating, dehumidification, and auto modes. The valve opens and closes depending on the need for cooling or heating, and the fan adjusts accordingly.

Fan Speed and Voltage Relationship:

- Setting 5 corresponds to 10V
- Setting 4 corresponds to 9V
- Setting 3 corresponds to 8V
- Setting 2 corresponds to 6V
- Setting 1 corresponds to 4V

5-Speed fan description:

- In sleep mode, the fan operates at setting 1.
- The lowest setting via the remote control corresponds to setting 2.
- The middle setting corresponds to setting 3.
- The highest setting corresponds to setting 5.
- Setting 4 is used in the operational modes.

9.3.2 FAN SPEED BASED ON TEMPERATURE DIFFERENCE

The fan speed automatically adjusts based on the difference between the room temperature (T1) and the set temperature (Ts). This applies to both the cooling mode and the heating mode. The fan speed is adjusted according to the following schedule: $T1 \leq Ts$: Ventilator op stand 1

- $T1 \geq Ts + 1^{\circ}\text{C}$: Fan on setting 2
- $T1 \geq Ts + 2^{\circ}\text{C}$: Fan on setting 3
- $T1 \geq Ts + 3^{\circ}\text{C}$: Fan on setting 4
- $T1 \geq Ts + 4^{\circ}\text{C}$: Fan on setting 5

This automatic adjustment ensures that the fan convector operates efficiently and can quickly respond to changes in room temperature.

9.3.3 PRIORITY CONDITIONS:

1. Startup behavior:

- When powered on, the fan runs for 3 minutes, after which the room temperature (T1) is measured. The corresponding mode is then selected.
- During the first 3 minutes after startup in heating mode, the anti-cold air function takes priority.

2. Stand-by mode:

- In standby, the fan runs every 20 minutes for 5 minutes at medium speed.
- During this 5-minute period, the room temperature (T1) is checked. If T1 falls outside the deadband of the set temperature (Ts), the fan switches to normal operating mode to maintain the desired temperature (see the fan speed schedule based on temperature difference).
- In standby, the system remains powered on, but the fan is off once T1 reaches the set temperature (Ts). The system stays powered and ready for use, although the fan is not running.
- The system stays in standby until T1 falls outside the deadband of Ts. Once room temperature requires action, the system switches to active mode

9.3.4 AIR SUPPLY MODE

Operating behavior:

- In air supply mode, the fan operates without the influence of the set temperature.
- The fan can be manually set to speeds 1-5 or set to automatic mode.
- Automatic mode: If the room temperature is $<25^{\circ}\text{C}$, the fan runs at setting 1, at $\geq 25^{\circ}\text{C}$ at setting 2, at $\geq 27^{\circ}\text{C}$ at setting 3, at $\geq 29^{\circ}\text{C}$ at setting 4, and at $\geq 30^{\circ}\text{C}$ at setting 5 (see the fan speed schedule based on temperature difference).
- The air guiding valves in air supply mode work the same as in cooling mode.
- The set temperature (Ts) is not applicable in this mode.

9.3.5 AUTO MODE

Operating behavior:

When first activating auto mode, the fan runs for 3 minutes at setting 3, after which the room temperature is measured again, and a choice is made between auto-cooling, auto-ventilating, and auto-heating.

If the room temperature is $\geq 25^{\circ}\text{C}$, the system automatically selects the cooling mode with a default temperature of 25°C .

If the room temperature is between 21°C and 25°C , the ventilation mode is selected.

If the room temperature is $< 21^{\circ}\text{C}$, the system selects heating mode with a default temperature of 23°C .

The chosen mode does not change with room temperature unless the system has been turned off for more than two hours.

Fan speed:

The fan speed adjusts based on the selected mode and the temperature difference with the set temperature (see the fan speed schedule based on temperature difference).

9.3.6 COOLING MODE

In cooling mode, both manual and automatic fan speeds can be selected. The automatic fan speed in cooling mode adjusts based on the room temperature according to the fan speed schedule based on temperature difference.

9.3.7 HEATING MODE

In heating mode, both manual and automatic fan speeds can be selected. The anti-cold air function ensures that the fan stops and the fan speed adjusts based on the pipe temperature (T_2). If $T_2 \geq 35^{\circ}\text{C}$, the fan runs; if $T_2 \leq 30^{\circ}\text{C}$, the fan stops. This function prevents the blowing of cold air.

The automatic fan speed in heating mode adjusts based on the room temperature according to the fan speed schedule based on temperature difference.

9.3.8 DEHUMIDIFICATION MODE

The ClimaCalor ProVC series cannot dehumidify because there is no drain pan. Therefore, it is also not necessary to install a drainage system at the location where the unit is placed. However, the function is pre-programmed by default. When the dehumidification mode is activated, the unit will respond as described below. The air is not dehumidified because the supply temperatures must always remain above the dew point. Additional information on this can be found under the general guidelines in this manual.

Operating behavior:

- If the room temperature (T1) is $\geq 25^{\circ}\text{C}$, both the fan and the associated components run for 3 minutes and then stop for 4 minutes.
- If the room temperature is $< 25^{\circ}\text{C}$, both the fan and the associated components run for 3 minutes and then stop for 6 minutes.
- If the room temperature is $< 16^{\circ}\text{C}$, the fan and the associated components stop operating until the temperature rises above 16°C again.

Room temperature sensor failure:

- If the room temperature sensor is defective, the fan will run at level 3 when set to automatic mode.

9.3.9 SLEEP MODE

The sleep function is only effective in heating and cooling modes. The sleep time can be set for up to 8 hours. After 8 hours or when the sleep mode is turned off, the previous operating mode will resume.

Specific operation:

- In cooling mode, the fan switches to the lowest speed (setting 1) when the sleep mode is activated (fan speed can also be manually adjusted). Two hours after activating sleep mode, the set temperature is increased by 1°C every hour.
- In heating mode, the fan switches to the lowest speed (setting 1) when the sleep mode is activated (fan speed can also be manually adjusted). Within two hours after activating sleep mode, the set temperature is decreased by 1°C every hour.

9.3.10 SENSOR PROTECTION IN CASE OF DAMAGE

Assessment of Sensor Failures:

The system detects that the room temperature sensor (T1) is damaged when the measured temperature is lower than -45°C or higher than 90°C . In this case, the LED screen will display an error code. The same applies to the pipe temperature sensor (T2) if temperatures fall outside this range.

Action After Sensor Damage (Restoration of Function After Resetting the Error):

After damage to the T1 sensor, the device operates in the received on mode.

After damage to the T2 sensor, the device functions normally and only reports the sensor error.

Protection features for the evaporator in low-temperature cooling mode, anti-cold air, and high-temperature protection in heating mode are canceled.

Assessment of Motor Failures:

If the main circuit board does not receive feedback from the motor for 1 minute, this is considered a failure. The entire system stops, reports the error code, and the motor is restarted every hour.

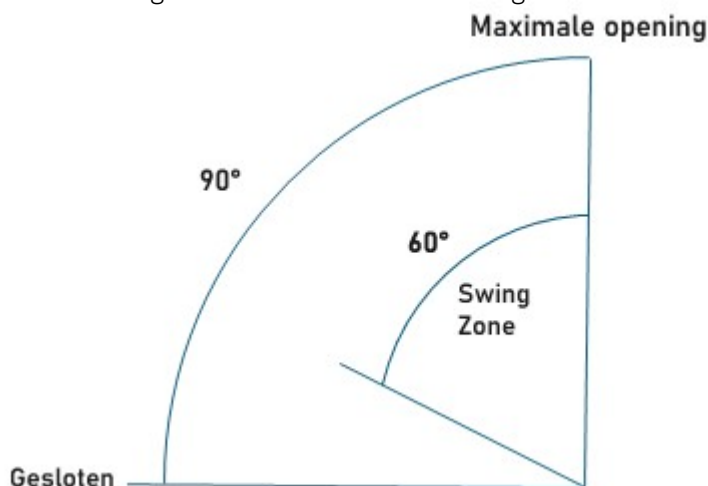
9.3.11 OPERATION OF THE TIMER FUNCTION

1. **Settings:** When the ClimaCalor is turned on, only the off timer can be set. When the ClimaCalor is turned off, only the on timer can be set. The off timer can be switched to the on timer when the ClimaCalor is on, and the on timer can be switched to the off timer when the ClimaCalor is off.
2. **Time Setting:** The time range for the settings is from 1 minute to 24 hours (with intervals of 1 minute), which can be adjusted using the remote control. The corresponding timer icon will light up when the timer function is activated.

These functions ensure that the fan convector operates efficiently and is user-friendly, with advanced capabilities for time settings, sensor protection, and automated operating modes.

9.3.12 OPERATION OF THE SWING MOTOR

The two air guiding vanes are controlled by the same control signals sent to the two stepper motors. Upon initial startup and shutdown, the vanes move to the closed starting position and open to the maximum angle upon activation. In automatic swinging, the vanes move back and forth within the area designated for automatic swinging. In manual swinging, the swing position can be fixed by pressing the swing button again, after which automatic swinging resumes with the next press of the button. The maximum swing angle is 90 degrees, and the movement from the closed position to the maximum angle takes 8 seconds. The swing area in manual operation is 60 degrees.



9.4 ERROR CODE TABLE

This table displays the error codes shown by the fan convector when the device is turned on. If an error occurs, the error code will remain visible until the issue is resolved.

Code	Description	Display
E1	Room Temperature Sensor (T1) Open or Short Circuit	Always visible
E2	Pipe Temperature Sensor (T2) Open or Short Circuit	2 seconds per minute
E3	Empty (no error)	Not applicable
E4	Motor failure	Always visible
E5	Communication error	2 seconds per minute
E6	Anti-cold air error	2 seconds per minute

Explanation of error codes

- **E1 (Room Temperature Sensor Open or Short Circuit):** This error occurs when the T1 sensor detects an open circuit or short circuit. The error code will remain on the display until the issue is resolved.
- **E2 (Pipe Temperature Sensor Open or Short Circuit):** This error occurs when the T2 sensor detects an open circuit or short circuit. The error code will be displayed every minute for 2 seconds.
- **E3 (No Error):** No error has been detected, and nothing is displayed.
- **E4 (Motor Failure):** This error occurs when the motor is not functioning correctly. The error code will remain on the display until the issue is resolved.
- **E5 (Communication Error):** This error occurs when there is a communication issue within the system. The error code will be displayed every minute for 2 seconds.
- **E6 (Anti-Cold Air Error):** This error occurs when there is a problem with the anti-cold air function. The error code will be displayed every minute for 2 seconds.

It is important to check these error codes and take the necessary steps to resolve any issues so that ClimaCalor can operate optimally.

10. MAINTENANCE

Maintenance tasks must be performed by qualified technicians. No objects should be inserted into the air intake and exhaust. Disconnect the power supply before starting any maintenance on the device.

REGULAR MAINTENANCE

Every month

Check the status of the air filters regularly at the beginning of the heating and cooling seasons. If the filters are dirty, they can be washed or cleaned with compressed air.

Every 6 months

Check the contamination of the heat exchanger. To do this, remove the front of the unit and inspect the condition of the heat exchanger. If necessary:

- Remove dirt from the heat exchanger fins.
- Clean the fins with compressed air or gently wash the heat exchanger with a soft brush and water.
- Dry the heat exchanger with compressed air.
- Start the device and wait for a few minutes.
- Turn off the device and check with the air vent if there is still any air in the system.

Electrical Circuit

The following maintenance tasks are recommended for the electrical circuit:

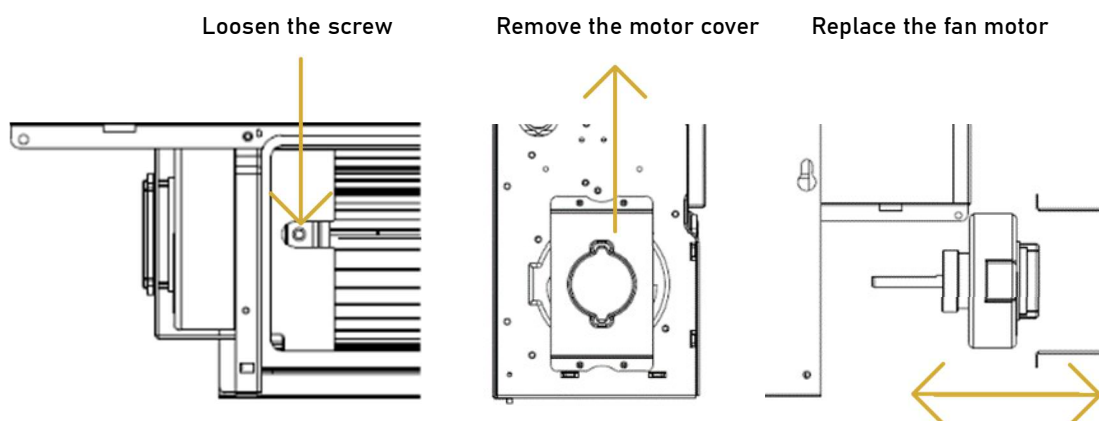
- Check the power consumption of the fan with an ammeter and compare it with the values in the documentation.
- Verify that the electrical contacts are still securely fastened.

TROUBLE SHOOTING MAINTENANCE

Replacing the Fan motor.

In the case of a burnt-out fan motor, the entire fan and blower assembly needs to be replaced as follows:

- Remove the side panel of the unit and disconnect the power supply.
- Disconnect the fan motor from the terminal box.
- Open the air supply grille and remove the filter.
- Unscrew the screws securing the fan.
- Remove the motor cover.
- Take out the fan motor from the housing.
- Install the new fan motor.
- Reverse the previous steps to reassemble and reconnect everything properly.



Sustainability with Procalor

Our ClimaCalor is one of the building blocks of Procalor's sustainability concept. Our products make it easy and efficient to improve the sustainability of both existing and newly built homes – even in the most challenging situations.

ProCalor is committed to a sustainable and future-proof heating supply with smart, energy-efficient solutions for optimal living comfort.

ProCalor

Frisselsteinstraat 5
5461 AD Veghel
+31 (0)413 870061
info@procalor.nl
www.procalor.nl