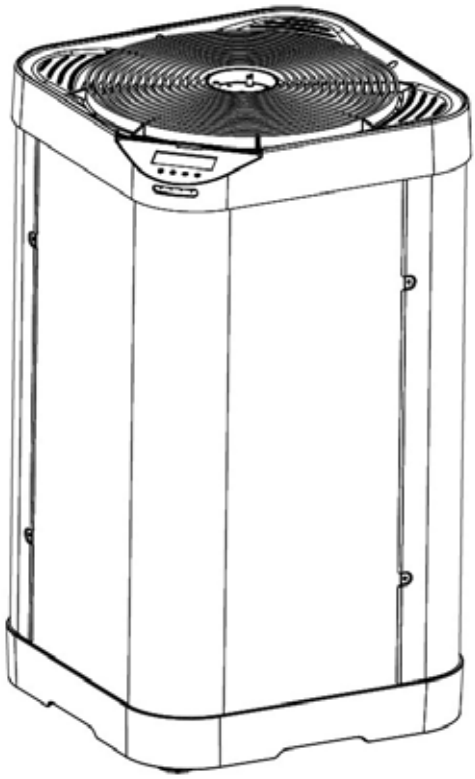
Z350iQ

*** Instructions for installation and use** - English
Heat pump
Translation of the original instructions in French

EN

iAquaLink™ CONTROL



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H0791600_REVB - 2023/04

⚠ WARNINGS

Carefully read the instructions in this manual before using the unit.

The appliance contains R32.

- Before handling the appliance, it is vital that you read this installation and user manual, as well as the "Warranties" booklet delivered with the appliance. Failure to do so may result in material damage or serious or fatal injury and will void the warranty.
- Keep and pass on these documents for later viewing throughout the appliance's service life.
- The distribution or modification of this document in any way is prohibited, without prior authorisation from the manufacturer.
- Zodiac® is constantly developing its products to improve their quality. The information contained herein may therefore be modified without notice.

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GENERAL WARNINGS

- Failure to respect the warnings may cause serious damage to the pool equipment or cause serious injury, even death.
- Only a person qualified in the technical fields concerned (electricity, hydraulics or refrigeration) is authorised to carry out maintenance or repair work on the appliance. The qualified technician working on the appliance must use/wear personal protective equipment (such as safety goggles and protective gloves, etc.) in order to reduce the risk of injury occurring when working on the appliance.

- Before handling the appliance, check that it is switched off and isolated from the power supply.
- The appliance is intended to be used for pools and spas for a specific purpose; it must not be used for any purpose other than that for which it was designed.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.Children should be supervised to ensure that they do not play with the appliance.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- The appliance must be installed according to the manufacturer’s instructions and in compliance with local and national standards.
- The installer is responsible for installing the appliance and for compliance with national installation regulations. Under no circumstances may the manufacturer be held liable in the event of failure to comply with applicable local installation standards.
- For any work other than the simple user maintenance described in this manual, the product should be referred to a qualified professional.
- If the appliance suffers a malfunction, do not try to repair it yourself; instead contact a qualified technician.
- Refer to the warranty conditions for details of the permitted water balance values for operating the appliance.
- Deactivating, eliminating or by-passing any of the safety mechanisms integrated into the appliance shall automatically void the warranty, in addition to the use of spare parts manufactured by unauthorised third-party manufacturers.
- Do not spray insecticide or any other chemical (inflammable or non-inflammable) in the direction of the appliance, as this may damage the body and cause a fire.
- Do not touch the fan or moving parts and do not place objects or your fingers in the vicinity of the moving parts when the appliance is in operation. Moving parts can cause serious injury or even death.

WARNINGS ASSOCIATED WITH ELECTRICAL APPLIANCES

- The power supply to the appliance must be protected by a dedicated 30 mA Residual Current Device (RCD), complying with the standards and regulations in force in the country in which it is installed.
- The equipment does not include electrical switch for disconnection; it includes a disconnection supply device in the fixing wiring at least OVC III, in accordance applicable national laws.
- Do not use any extension lead when connecting the appliance; connect the appliance directly to a suitable power supply.
- Before carrying out any operations, check that:
  - The required input voltage indicated on the appliance information plate corresponds to the mains voltage;
  - The mains supply is compatible with the appliance's electricity needs and is correctly grounded.
- In the event of abnormal operation or the release of odours from the appliance, turn it off immediately, unplug it from its power supply and contact a professional.
- Before servicing or performing maintenance on the appliance, check that it is powered off and completely disconnected from the power supply. Moreover, check that the heating priority (where applicable) is deactivated and that any other device or accessory connected to the appliance is also disconnected from the power supply.
- Do not disconnect and reconnect the appliance to the power supply when in operation.
- Do not pull on the power cord to disconnect it from the power supply.
- If the power cord is damaged, it must be replaced by the manufacturer, an authorised representative or a repair facility only.
- Do not perform maintenance or servicing operations on the appliance with wet hands or if the appliance is wet.
- Before connecting the appliance to the power supply, check that the connection unit or socket to which the appliance will be connected is in good condition and shows no signs of damage or rust.
- In stormy weather, disconnect the appliance from the power supply to prevent it from suffering lightning damage.
- Do not immerse the appliance in water or mud.

WARNINGS CONCERNING APPLIANCES CONTAINING R32 REFRIGERANT

- This device contains R32 refrigerant, a class A2L refrigerant, which is considered to be potentially flammable.
- Do not discharge R32 fluid into the atmosphere. This is a fluorinated greenhouse gas, covered by the Kyoto Protocol, with a Global Warming Potential (GWP) = 675 (European regulation EU 517/2014).
- In order to comply with the applicable standards and regulations in terms of the environment and installation, in particular Decree No. 2015-1790 and/or European regulation EU 517/2014, a leak test must be performed on the cooling circuit when the appliance is first started and at least once a year. This operation must be carried out by a specialist certified to test cooling appliances.
- The device must be stored in a ventilated place away from all sources of fire.
- The appliance can be installed indoor or outdoor without restrictions on operating area.
- Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.
- The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- Do not pierce or burn.
- Be aware that R32 refrigerant may not contain an odour.

INSTALLATION AND MAINTENANCE

- Our products may only be assembled and installed in pools compliant with standards IEC/HD 60364-7-702 and required national rules. The installation should

follow standard IEC/HD 60364-7-702 and required national rules for swimming pools. Consult your local dealer for more information.
- The appliance may not be installed close to combustible materials, or the air duct inlet of an adjacent building.
- During installation, troubleshooting and maintenance, pipes may not be used as steps: the pipe could break under the weight, spilling coolant and possibly causing serious burns.
- When servicing the appliance, the composition and state of the heat transfer fluid must be checked, as well as the absence of any traces of coolant.
- During the appliance's annual sealing test in accordance with applicable legislation, the high and low pressure switches must be checked to ensure that they are securely fastened to the cooling circuit and that they cut off the electrical circuit when tripped.
- During maintenance work, ensure there are no traces of corrosion or oil around the cooling components.
- Before beginning work on the cooling circuit, stop the appliance and wait for a few minutes before fitting the temperature and pressure sensors. Some elements such as the compressor and piping may reach temperatures in excess of 100°C and high pressures with the consequent risk of severe burns.

TROUBLESHOOTING
- All brazing must be carried out by qualified brazers.
- Replacement pipes must always be made of copper in compliance with standard NF EN 12735-1.
- Leak detection; pressure test:
  - never use oxygen or dry air (risk of fire or explosion)
  - use dry nitrogen or the mixture of nitrogen and refrigerant indicated on the information plate,
  - the test pressure for both the high and low pressure circuits must not exceed 42 bar in cases where pressure gauges are connected to the appliance.
- The high pressure circuit pipes are made of copper and have a diameter equal to or greater than 1’’5/8. A certificate as indicated in §2.1 in compliance with standard NF EN 10204 must be requested from the supplier and filed in the installation's technical file.
- Technical data relative to the safety requirements of the various applicable directives are indicated on the information plate. All this information must be recorded in the appliance's installation manual, which must be kept in its technical file: model, code, serial number, maximum and minimum OT, OP, year of manufacture, CE marking, manufacturer’s address, coolant and weight, electrical parameters, thermo-dynamic and acoustic performance.

LABELLING
- Equipment shall be labelled stating that it has been decommissioned and emptied of refrigerant.
- The label shall be dated and signed.
- For appliances containing flammable refrigerants, ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

RECOVERING
- When removing refrigerant from a system. either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
- When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed. Ensure that the correct number of cylinders for holding the total system charge is available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and. if possible. cooled before recovery occurs.
- The recovery equipment shall be in good working order with a set of instructions

concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, flammable refrigerants. In addition, a set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak-free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release. Consult manufacturer it in doubt.

- The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders.
- If compressors or compressor oils are to be removed. ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. The evacuation process shall be carried out prior to returning the compressor to the suppliers. Only electric heating to the compressor body shall be employed to accelerate this process. When all is drained from a system, it shall be carried out safely.

Recycling

This symbol is required by the European directive DEEE 2012/19/EU (directive on waste electrical and electronic equipment) and means that your appliance must not be thrown into a normal bin. It will be selectively collected for the purpose of reuse, recycling or creating value. If it contains any substances that may be harmful to the environment, these will be eliminated or neutralised. Contact your retailer for recycling information.

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Tip: to make it easier to contact your retailer

- Write down the retailer's contact details to help you find them more easily and fill in the "product" information on the back of the manual: the retailer will ask for this information.

1 Installation

1.1 I Selecting the location

1.1.1 Installation precautions

- **The appliance should be installed at a distance of at least 2 metres from the edge of the pool.**
- **Do not lift the appliance by the body; use its base.**

- Provide free space around the appliance (see § "1.1.3 Recommendentions for selecting the appliance location").
- The appliance can be installed indoor or outdoor without restrictions on operating area.
- Place the appliance on its anti-vibration studs (integrated under its base) on a stable, solid and level surface.
- This surface must be able to bear the weight of the appliance (in particular in the case of installation on a roof, a balcony or any other support).

The appliance must not be installed:
- With the blowing towards a permanent or temporary obstacle (awning, brushwood, etc.) less than 5 metres away,
- On brackets,
- Within range of water or mud jets, sprays or run-off (take the effect of the wind into account),
- Near a heat source or flammable gas,
- Near high-frequency equipment,
- In a location where it would be subject to snow build-up,
- In a location where it might be flooded by the condensates produced by the appliance when operating.

Tip: to reduce noise produced by your heat pump
- Do not install it under or facing a window.
- Do not tilt it towards your neighbours.
- Install the appliance in an open space (sound waves are reflected on surfaces).
- Install an acoustic screen around the heat pump, respecting the distances.
- Install 50cm of flexible PVC pipe at the heat pump water inlet and outlet (to stop vibrations).
- "SILENCE" mode reduces the sound level and improves the appliance's COP. However, we recommend using this mode simply to "maintain temperature" and increasing the filtration time by about 50%.

1.1.2 Rotating the user interface

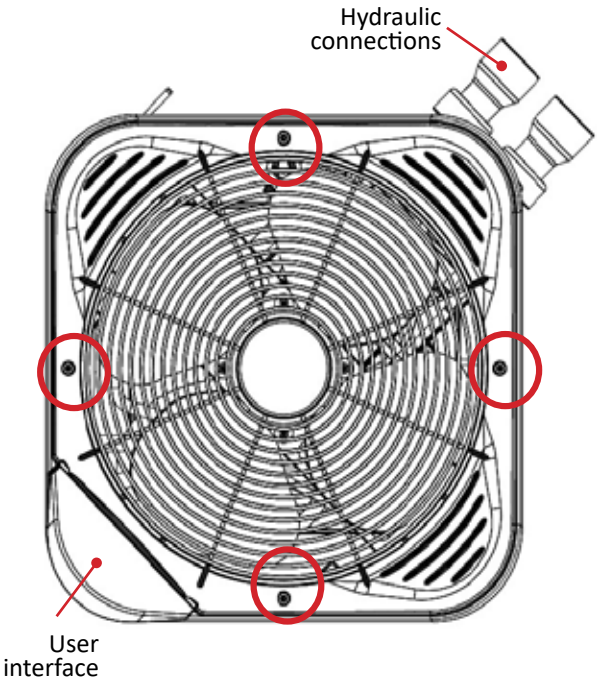
In its factory configuration, the user interface is positioned in the corner that is diametrically opposite to the hydraulic connections. To better match all types of installations, the top cover can be rotated to position the user interface on the two corners adjacent to the one used in the factory configuration. **Do not position the user interface directly above the hydraulic connections.**

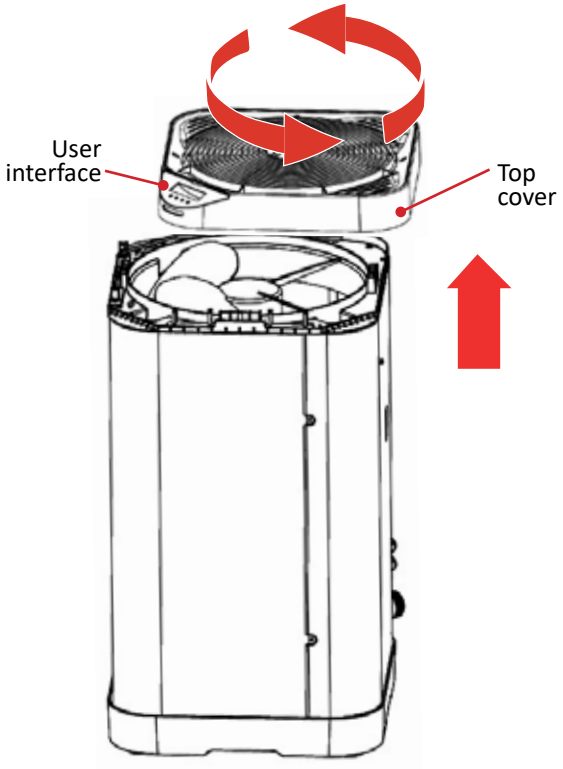
To rotate the user interface :

1. Unscrew the 4 screws on the top cover.

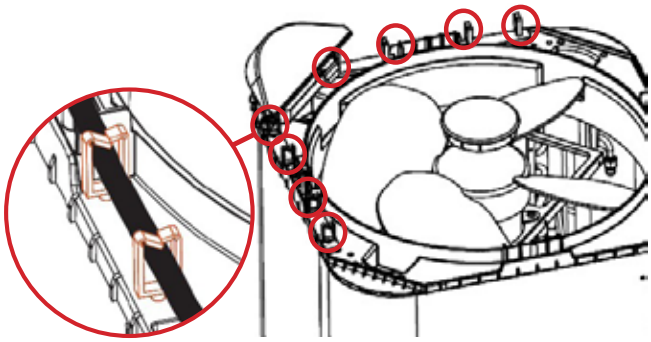
2. Lift the top cover and rotate it in the chosen position.

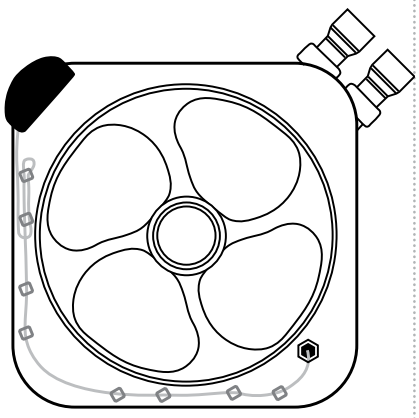
CAUTION : The display board (under the display screen) is connected by a cable to the control board inside the unit. **Handle the top cover carefully to do not damage this cable.**



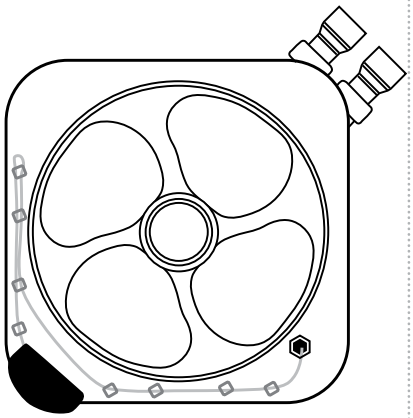


3. Pass the cable connecting the display board to the control board through the cable guides, depending on the desired position (see below).

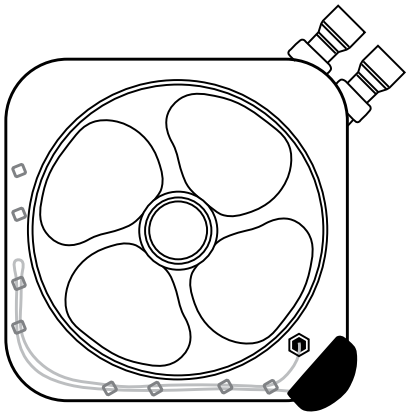




Wire path when rotating the user interface to the left



Wire path in neutral position



Wire path when rotating the user interface to the right

4. Screw back the 4 screws on the top cover.

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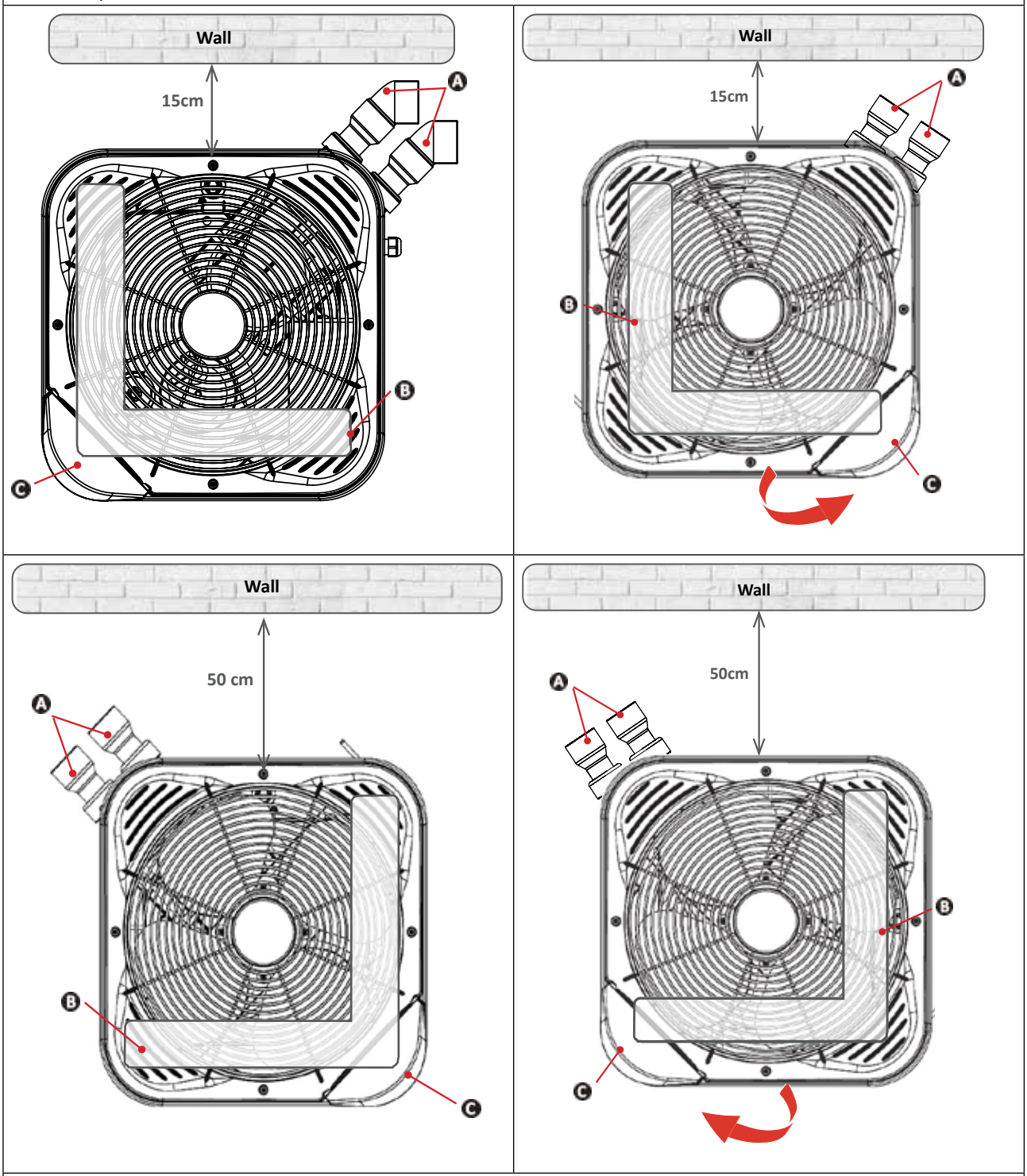
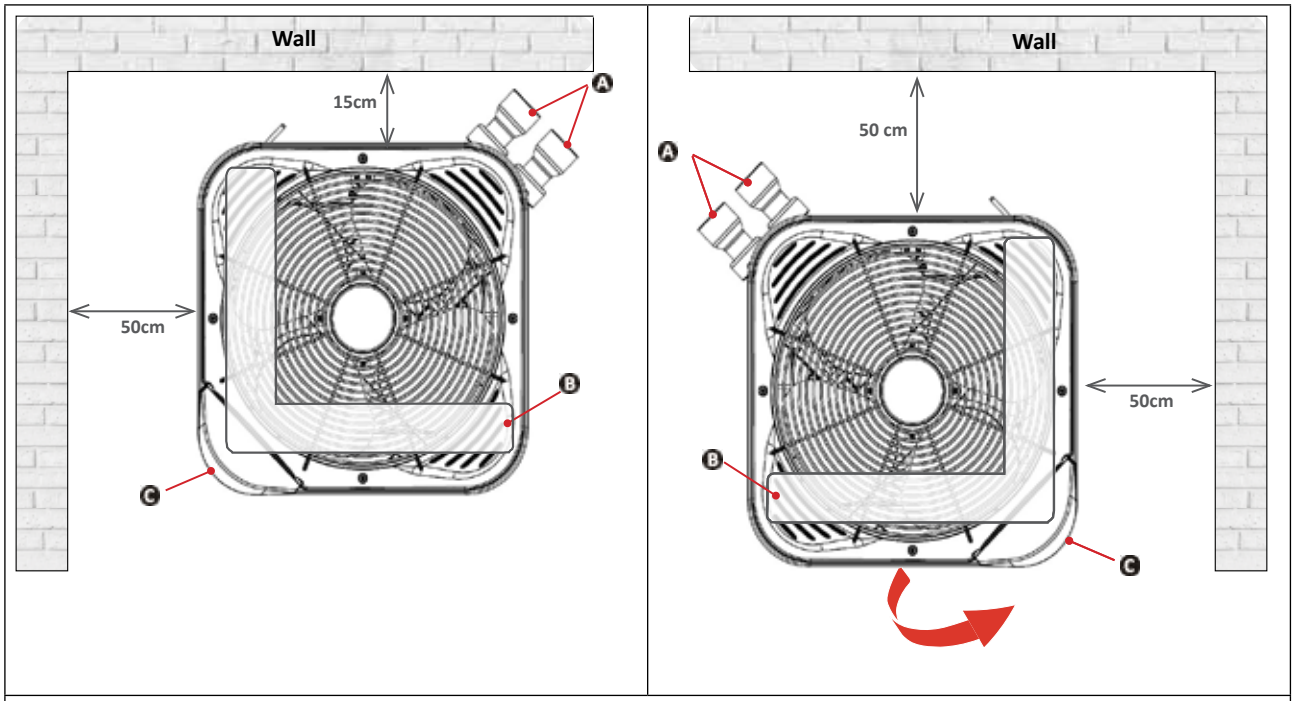
1.1.3 Recommendentions for selecting the appliance location

- When installating the appliance, choose the hydraulic connectors that are best fitting the installation configuration between elbow connectors and straight connectors.
- In a installation with the elbow connectors, position the appliance so that the connectors' outlets run parallel to the wall.
- For optimum performances, position the appliance in one of the configurations detailed in the table below, with:
  - A minimum distance of 15 cm between the side panel next to the hydraulic connections (A) and the wall against which the appliance is positioned,
  - A minimum distance of 50 cm between the lateral panel to access electrical terminals and the wall against which the appliance is positioned to allow maintenance access.
  - A minimum distance of 50 cm between the side panels covering the evaporator (B) and the wall(s) against which the appliance is positioned.

A : Hydraulic connections
B : Evaporator
C : User interface



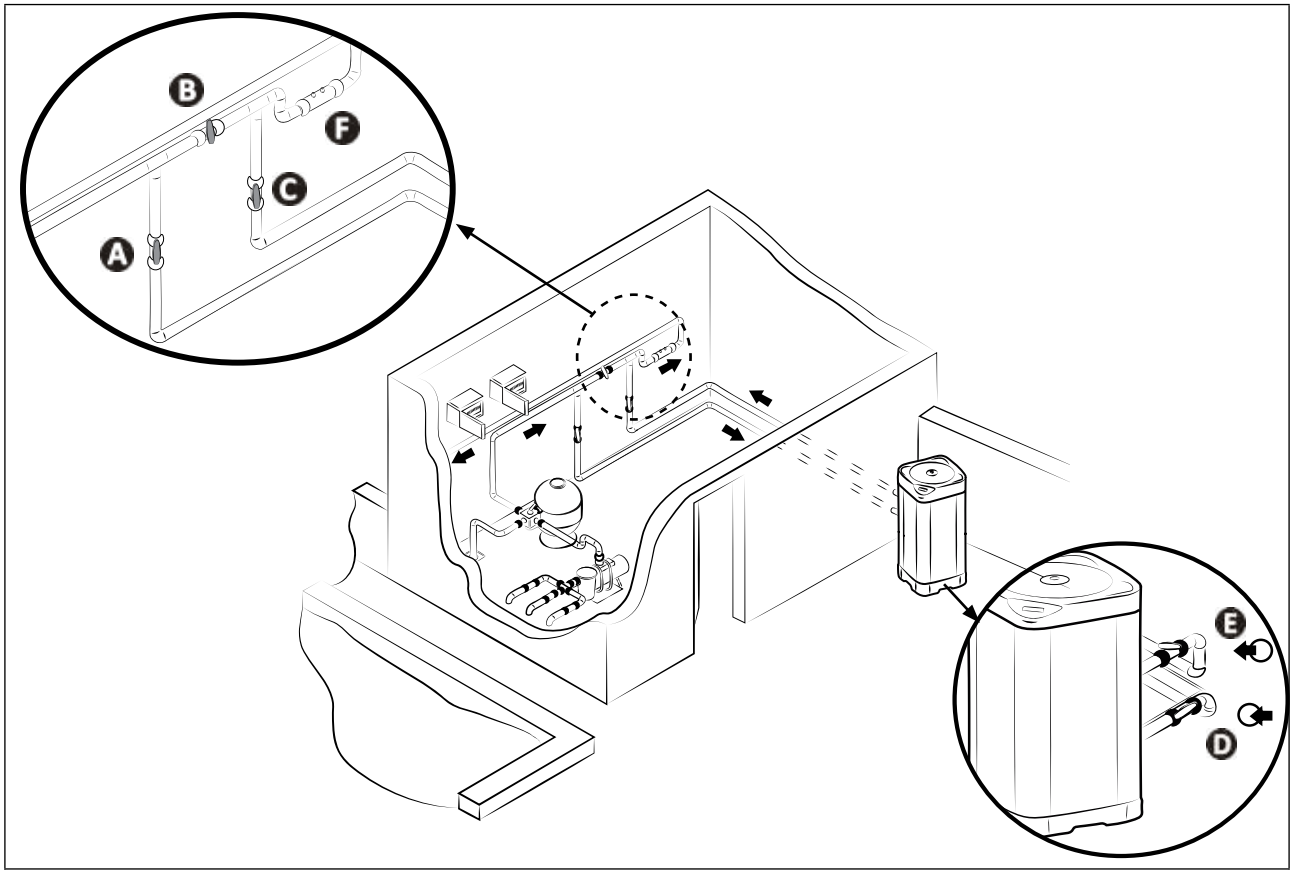
Installing the appliance against a wall



Installing the appliance in a corner

1.2 I Hydraulic connections

- The device will be connected with a Ø50 PVC pipe, using the union connectors supplied (see § “5.1 I Description”), to the pool's filtration circuit, **after the filter and before the water treatment**.
- Respect the direction of hydraulic connection.
- A by-pass must be installed to make it easier to work on the appliance.



A: water inlet valve
B: by-pass valve
C: water outlet valve
* minimum distance
D: water inlet adjustment valve (optional)
E: water outlet adjustment valve (optional)
F: water treatment

Connection to a standard filtration circuit

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- Provide free space around the appliance (see § “1.1.3 Recommendentions for selecting the appliance location”).
- To evacuate the condensates, fit a Ø18 pipe on the grooved elbow to be mounted under the appliance base (supplied, see § ««5.1 I Description»).

Condensate drainage orientation (seen from below the appliance)

Tip: condensate drainage

- Caution, several litres of water can be drained from your appliance each day. We strongly recommend connecting the drain to a suitable water drainage system.
- We also recommend tilting the appliance slightly backwards (using the adjustable studs) for better condensate drainage.

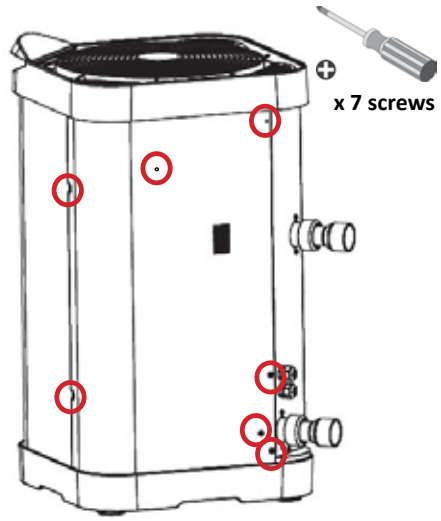
1.3 I Electricity supply connections

- **Before any work inside the appliance, you must cut the electricity supply as there is a risk of electric shock which may cause material damage, serious injury or even death.**
- **Only a qualified and experienced technician is authorised to carry out cabling work within the appliance or to replace the power cord.**
- **Poorly tightened cabling terminals can cause the cables to overheat at the terminals and create a fire risk. Make sure that the terminal screws are fully tightened. Incorrectly tightened terminal screws will cancel the warranty.**
- **Do not disconnect the electricity supply when the appliance is running. If the electric power supply is interrupted, wait a minute before restoring the power.**
- **Means for disconnecting from the mains supply for all poles guaranteeing full disconnection in the over-voltage category III must be compliant and incorporated into the wiring.**

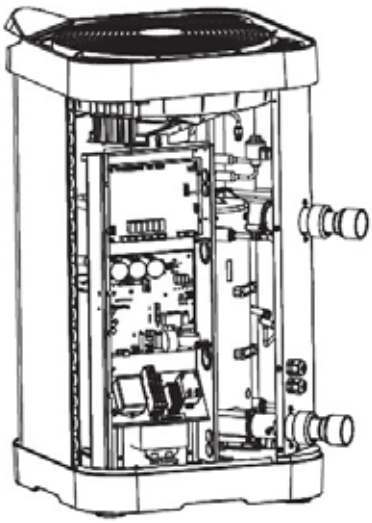
- The heat pump's electrical supply must be provided through a protection and circuit breaking device (not supplied) complying with the standards and regulations in force in the country where it is installed.
- The appliance is provided for connection to a general power supply with a TT and TN.S neutral regime.
- Electrical protection: by **circuit breaker (C or D curve)** (for rating, see § “5.2 I Technical data”), with a **30 mA dedicated residual-current protection system (circuit breaker or switch)**.
- Additional protection may be required during installation to guarantee the overvoltage category II.
- The power supply must correspond to the voltage indicated on the appliance's information plate.
- The power cord must be insulated against any cutting or hot elements that may damage or crush it.
- The appliance must be correctly connected to a suitable earth/ground circuit.
- The electrical connection lines must be fixed.
- Use the gland to pass the power cord into the appliance.
- Use the power cord (**H07RN-F type**) adapted for outdoor or buried use (or run the cable into a protection duct) with an external diameter of between **13 and 18mm**.
- We recommend burying the cable at a depth of 50 cm (85 cm under a road or path) in an electrical duct (red ribbed).
- If this buried cable meets another cable or pipe (gas, water, etc.), there must be more than 20 cm between them.
- Connect the power supply cord to the spring-cage terminal block inside the appliance (see § "1.3.1 I Wiring on a spring-cage terminal block").

To access the electrical connection terminals and connect the unit to the power supply :

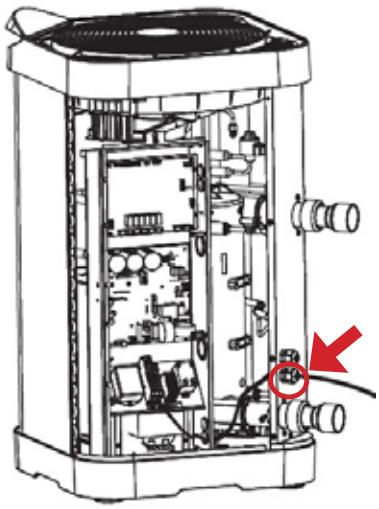
❶ Unscrew the 7 screws.



❷ Remove the lateral panel.



❸ Pass the power cable through bottom cable gland.



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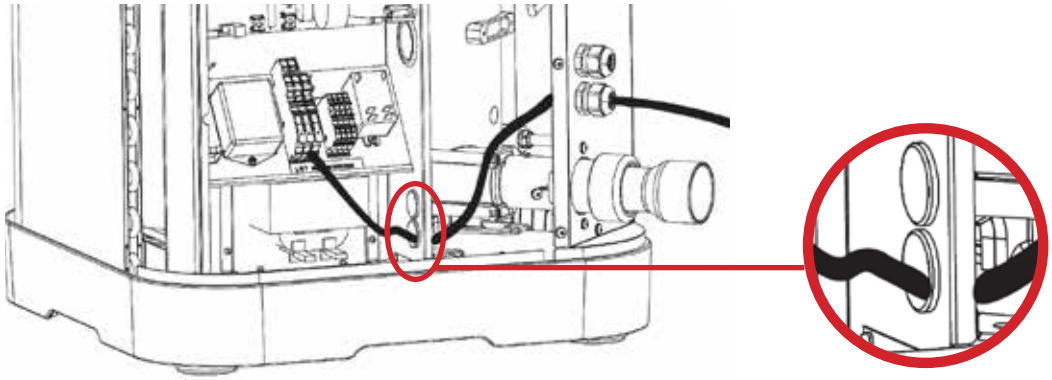
❹ Inside the appliance, pass the power cable through the bottom pre-created cable gland.

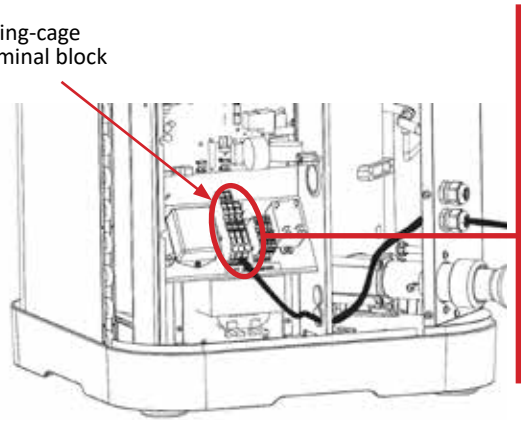


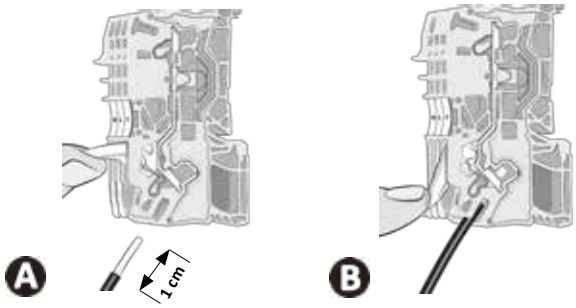
❺ To wire on the spring-cage terminal block:

Ⓐ Pull the lever up as far as it will go, then connect the stripped (1cm) cable .

Ⓑ Return the lever back to its initial position

Spring-cage terminal block



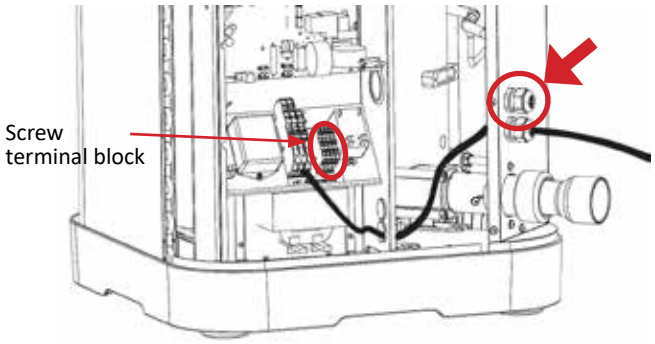


1.4 I Option connections

<u>Connecting the "Heating priority" and "Remote "On/off" control" options</u>:

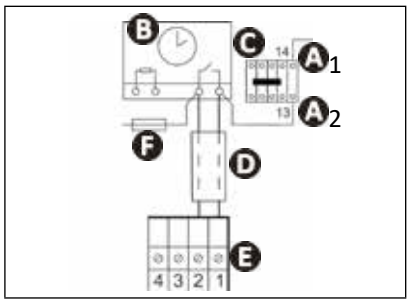
- **Before any work inside the appliance, you must cut the appliance's electricity supply as there is a risk of electric shock which may cause material damage, serious injury or even death.**
- **Any incorrect connection to terminals may damage the appliance and cancel its warranty.**
- **Under no circumstances should the filtration pump motor be supplied via terminals 1 - 2.**
- **When intervening on terminals, there is a risk of electrical return current, injuries, material damage and death.**
- **Use cables with a section of at least 2x0.75mm² , H07RN-F type and with a diameter between 8 and 13mm.**
- **Use the gland to pass the cables into the appliance. The cables used for the options and the power cord must be kept separate (risk of interference) using a collar inside the appliance just after the glands.**

When connecting the options to the screw terminal block, do not run the cables through the same cable gland as the power cable. Inside the unit, use the two pre-created cable glands to connect the options.



1.4.1 "Heating priority" option

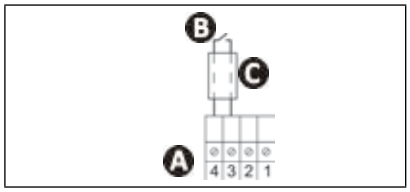
- This function allows the appliance to start filtration (in 5-minute cycles every 120 minutes) in order to detect the water temperature and thus activate the filtration + heating unit to maintain a constant water temperature. The filter pump is thus said to be slaved to the heating system. Filtration is kept in operation or activated if the pool temperature falls below the desired temperature.
- For the connection, connect the filtration timer to **terminals 1 - 2** (dry contact, no polarity, maximum intensity 8A).
- The "Heating priority" function is desactivated by default; to activate it, set the P50 parameter to "**ON**".



A1- A2: power for the filtration pump power contactor coil
B: filtration timer
C: power contactor (tripolar or bipolar) for the filtration system pump motor
D: separate cable for the "heating priority" function (not supplied)
E: heat pump terminal board
F: fuse

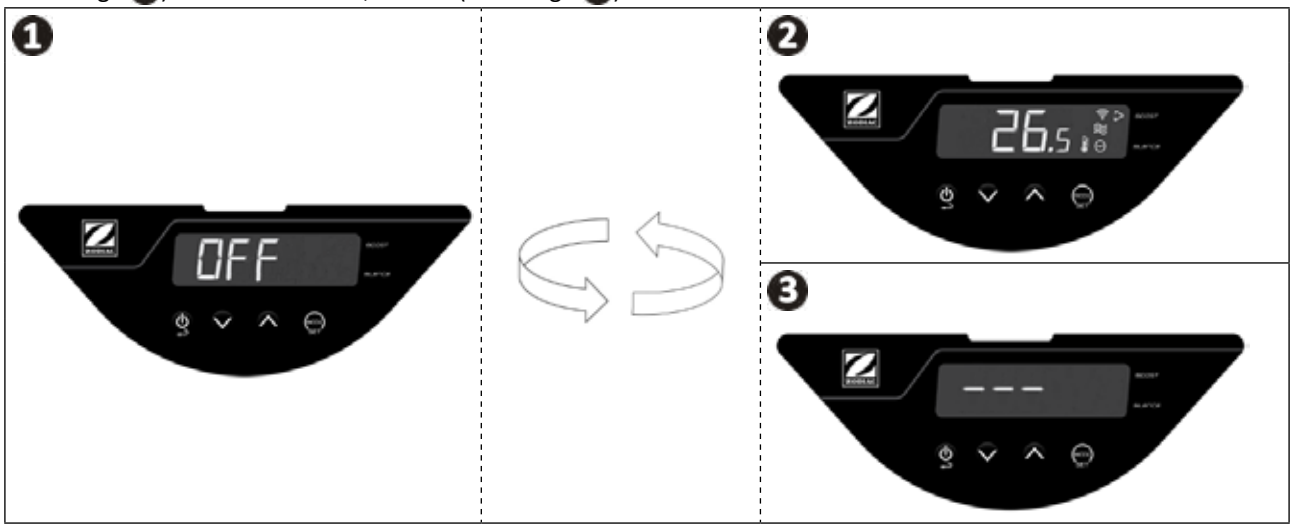
1.4.2 "Remote "On/Off" control" option

- This option allows the "remote On/Off" function to be enabled by way of a switch installed remotely.
- To connect, couple the remote "On/Off" switch (not provided) to **terminals 3 - 4** (dry contact).



A: heat pump terminal board
B: remote "on/off" switch (not supplied)
C: separate connection cable (not supplied)

- When the contact 3 - 4 is open:
  - The device cannot be started in any way.
  - The "OFF" message (see image 1) alternates with the current display: the measured water temperature (see image 2) if the device is on, or "---" (see image 3) if the device is switched off.



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2 Use

2.1 I Operating principle

The heat pump uses the calories (heat) in the air to heat up your pool's water. The process to heat your pool's water to the temperature you want may take a few days as it depends on the weather conditions, the heat pump's power and the difference between the water temperature and the temperature you want.
The heat pump is ideal for maintaining temperature.
The hotter and more humid the air, the better your heat pump will perform.

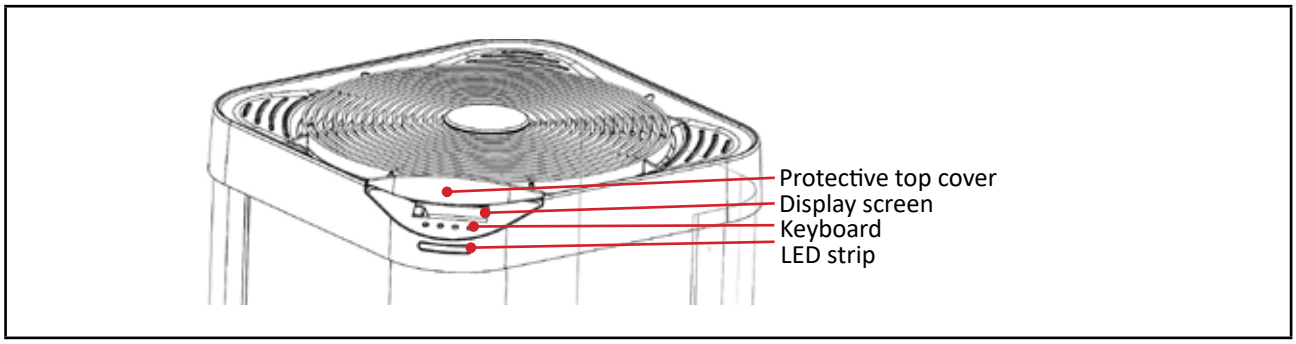
Tip: to improve the heating and maintaining of your pool's temperature

- Anticipate the commissioning of your pool far enough in advance before you use it.
- For the temperature rise, set the water circulation to continuous (24/24) in "Boost" mode.
- To maintain the temperature throughout the season, run "automatic" circulation for the equivalent of the water temperature divided by two (the longer this time, the more sufficient the operating range of the heat pump to heat the pool), in "SMART" or " SILENCE" mode.
- Cover the pool with a sheet (bubble canopy, canvas, etc.) to prevent heat loss.
- Take advantage of a period with mild outdoor temperatures (on average > 10°C at night); it will be even more effective if it runs during the warmest hours of the day.
- Keep the evaporator clean.
- Set the temperature you want and let the heat pump run.
- Connect the "Heating priority"; the filtration pump and heat pump operating time will be set according to requirements.

2.1.1 Precautions

- **Even though the appliance can be used all year round, certain precautions must be taken to avoid damaging the condenser (for the precautions specific to winterising, refer to § 3.1).**
- **If the heat pump is subjected to extended exposure to negative outdoor temperatures (excluding winterising period), you must:**
  - **Activate the ''Heating Priority'' option:** the filtration pump will operate while the pool's temperature is below the heat pump's setpoint temperature. If the setpoint is reached, the pump will operate for 5 minutes every 2 hours.
  - **Make sure that the pool's filtration pump is activated at least every 4 hours if the ''Heating Priority'' option is not activated on the heat pump.**

2.2 I User interface presentation



2.2.1 Display screen and keyboard

*Displays the temperature measured during the last operation of the heat pump.

		Function
Keys		"On/off" (press for 3 seconds) or back/exit
	MODE SET	Menu access (short press) Selection and validation (press for 3 seconds)
		To browse and adjust the values

		Description	Steady	Flashing	Off
Indicator lights		Padlock	Keypad locked	/	Keyboard unlocked
		Water flow	Water flow okay	Water flow too low or missing	/
		Mode	Indicates the selected mode	/	/
		Air temperature	/	Air temperature outside range of operation.	Air temperature inside range of operation
	°C °F	Temperature unit	Selected temperature unit	/	/
		Wi-Fi	Wi-Fi connected	Wi-Fi pairing in progress	Wi-Fi not connected

2.2.2 LED strip

The LED strip on the front of the appliance gives you a rapid overview of the heat pump's operating status. The following table explains the meaning of the different strip lights.

The front LED strip is lit by default. To switch it off, see «2.4.4 Using and selecting the different active operating modes».

	Colour	Mode	Meaning
LED strip	Green	Heating	The heat pump is heating the water.
			Temperature set point reached.
	Blue	Cooling	The heat pump is cooling the water.
	Red	Error	Error in progress => see error message on the screen (see § 4.2 I "Error code display")
	Off	Stand-by	Heat pump on standby for one of the following reasons (inherent to the machine's regulation in normal operation): Compressor timer (anti-short-cycle protection) With ≋ flashing = water flow too low or missing. With display of transitional "OFF" message = operation not authorised by the remote "On/Off" switch (see § "1.4.2 Remote "On/Off" option"). With 🌡 flashing = external air temperature outside range of operation (-7°C to 35°C in Heating mode, 10°C to 35°C in Cooling mode).
		/	Appliance switched off or not connected to the power supply.

Information: appliance display powered and off

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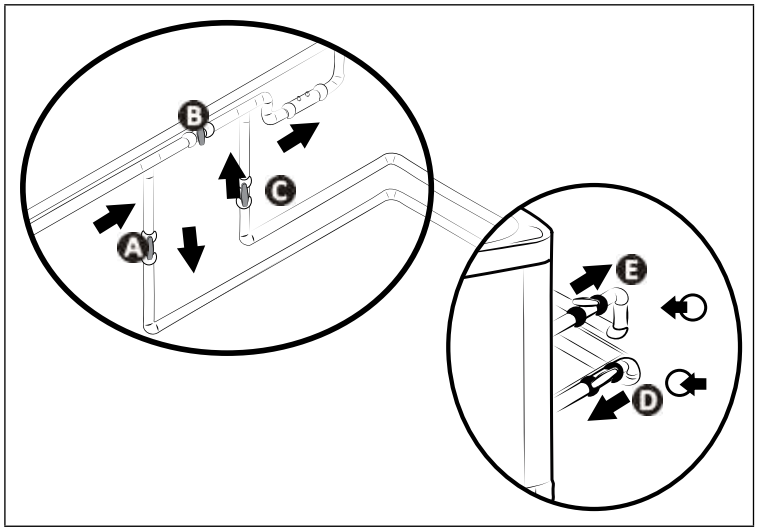
2.3 I Operation

- Check that there are no tools or other foreign objects in the machine.
- The panel that provides access to the technical section must be put in place.
- Check that the hydraulic corrections are correctly tightened and that there are no leaks.
- Check that the appliance is stable.
- Set the water circulation running.
- Set the valves as follows: valve B wide open, valves A, C, D and E closed.



A: Water inlet valve

B: By-pass valve

C: Water outlet valve

D: Water inlet adjustment valve (optional)

E: Water outlet adjustment valve (optional)

- **An incorrect by-pass setting may cause the heat pump to malfunction.**

- Close valve B gradually so that the filter pressure is increased by 150g (0.150 bars).
- Open valves A, C and D fully then valve E by half (the air which has built up in the heat pump condenser and the filtration circuit will bleed out). If valves D and E are not present, open valve A wide and close valve C by half.
- Connect the power supply to the heat pump.
- If the heat pump is on standby, press ⏻ for 3 seconds: for 4 seconds, all indicators light up on the display screen and the LED strip is lit in green. Then the software version displays for 3 seconds. After these 7 seconds, the main screen displays.
- Set the desired temperature (called the "setpoint", see § 2.4.2 "Adjusting the temperature setpoint").

After the start-up steps for your heat pump:

- Shut down the water circulation temporarily (by stopping the filtration or closing valve A or C) to check that your appliance stops after a few seconds (via the activation of the flow switch).
- Reduce the setpoint temperature to below the water temperature to check that the heat pump stops operating.
- Switch off the heat pump by pressing and holding ⏻ for 3 seconds and check that it stops.

2.4 I User functions

2.4.1 "Automatic keypad lock" function

The "automatic keypad lock" function allows the keypad to be disabled when inactive for at least 30 seconds (default value) to prevent mishandling.

Locking/unlocking the keypad:

- Press ^ and v simultaneously for 3 seconds. The lock indicator appears (= locked) or disappears (= unlocked) depending on the keypad's state.

Enabling/disabling the "automatic keypad lock" function:

- From the main screen (where the measured water temperature is displayed), press and hold MODE/SET. "COOL" is displayed on the screen.
- Use the ^ or v keys to find the "P19" setting, then press MODE/SET to confirm.
- Use the ^ or v keys to select either 0 or 1:

  - 0 = "automatic lock" function disabled.

  - 1 = "automatic lock" function enabled.
- Press MODE/SET to confirm.
- Press ⏻ to go back to the previous screen. Press ⏻ several times to return to the main screen (where the measured water temperature is displayed).

2.4.2 Adjusting the temperature setpoint.

- From the main screen (where the measured water temperature is displayed), press and hold ^ or v. The setpoint temperature is displayed and flashes on the screen.
- Press ^ to increase the temperature by 0.5°C,
- Press v to reduce the temperature by 0.5°C.
- Press MODE/SET to confirm the setpoint temperature. However, when the keypad remains inactive for more than 3 seconds following the moment that the setpoint temperature has been modified, it is confirmed automatically, even if the MODE/SET button has not been pressed. Once the setpoint temperature has been confirmed, the display automatically returns to the main screen (where the measured water temperature is displayed).

- When the setpoint temperature is reached (+ 0.5° C), the heat pump stops heating the water.

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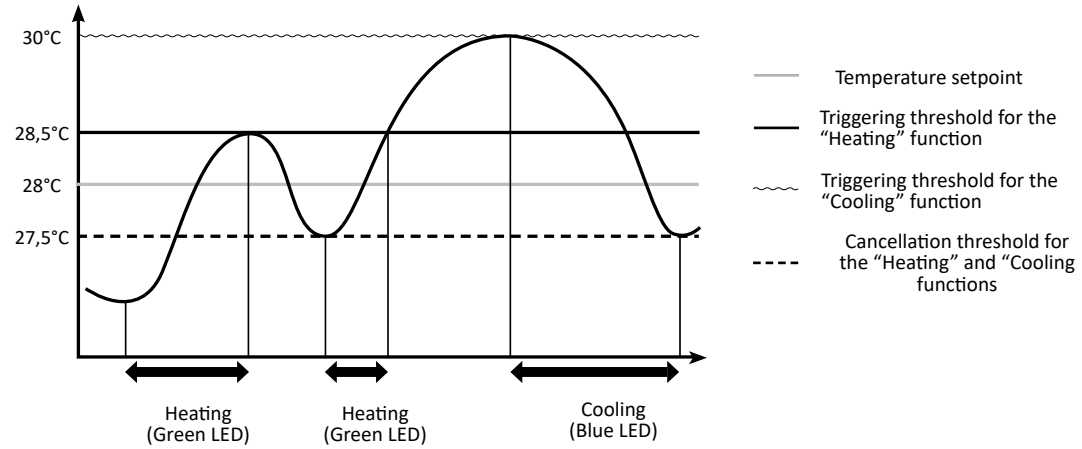
2.4.3 Activating/deactivating the "Cooling" mode

Information: "Cooling" function

- Activating the "Cooling" mode allows the machine's cycle to be automatically reversed to cool the pool water.
- When the "Cooling" function is activated, as soon as the water temperature exceeds the setpoint temperature by more than 2°C (see following diagram), the heat pump automatically activates the "Cooling" function until the temperature setpoint is reached (+ 0.5°C).
- When the "Cooling" function is activated (+2°C above the setpoint temperature), the heat pump will automatically switch to "Cooling" mode (LED strip lit in blue, see § "2.2.2 LED strip") until returning to the setpoint temperature (+ 0.5°C).



- From the main screen (where the measured water temperature is displayed), press and hold MODE SET. "COOL" is displayed on the screen.
- Press and release MODE SET, depending on the "Cooling" function status (activated or deactivated), the screen displays "On" (= activated) or "Off" (= deactivated). If necessary, press and release ^ or v to switch to the status ("On" or "Off") that is required.

- When the "Cooling" function is activated, the LED strip flashes blue 3 times.

- Once the "Cooling" function is activated or deactivated, press ⏻ several times to return to the main screen (where the measured water temperature is displayed).

2.4.4 Using and selecting the different active operating modes

In “Heating” mode, the heat pump has 3 active operating modes for adjusting its operating speed to the power that is required and the mode that is selected.
Depending on the selected operating mode (*“BOOST”*, *“SMART”* or *“SILENCE”*), the power delivered by the heat pump can vary over a predefined range (depending on the speed of its compressor and fan).
The number of lit LEDs on the strip reflects the compressor’s actual operating speed. This feature is particularly useful in the *“SMART”* and *“SILENCE”* modes to see if the machine is operating at its maximum over the predefined power range or, on the contrary, at a reduced power level.

<table>
<tr><th></th><th colspan="3">Active operating mode</th></tr>
<tr><th></th><th>▷ BOOST</th><th>▷ SMART</th><th>▷ SILENCE</th></tr>
<tr><td>Status</td><td colspan="3">Heating</td></tr>
<tr><td rowspan="2">Objective</td><td rowspan="2">Quickly increasing the setpoint temperature</td><td>Intelligently controlling the operating speed</td><td>Operating the most economically and quietly</td></tr>
<tr><td colspan="2">Automatically adapting the power to requirements</td></tr>
<tr><td rowspan="2">When to use</td><td rowspan="2">When commissioning the pool</td><td colspan="2">To maintain the temperature</td></tr>
<tr><td>To avoid having to intervene on the appliance</td><td>To benefit from quiet operation when little heating is required</td></tr>
</table>

* The compressor speed directly affects the appliance’s power output.

To select the active operating mode:

- From the main screen (where the measured water temperature is displayed), press MODE/SET. The indicator ▷ stops in front of one of the 3 operating modes (*“BOOST”*, *“SMART”* or *“SILENCE”*).

Press MODE/SET until reaching the desired mode. Once the indicator ▷ is placed in front of the desired operating mode, it is confirmed automatically.

2.4.5 Switching the LED strip on/off

The front LED strip is lit by default. To switch it off:

- From the main screen (where the measured water temperature is displayed), press and hold MODE/SET.

«COOL» is displayed on the screen.

- Press ∨ and release. «LED» is displayed on the screen.
- Press MODE/SET and release. «ON» is displayed on the screen.
- Press ∨ and release: «ON» flashes.
- Press ∨ and release: «OFF» flashes.
- Press MODE/SET and release. The LED strip is switched off and the LEDs will remain unlit.

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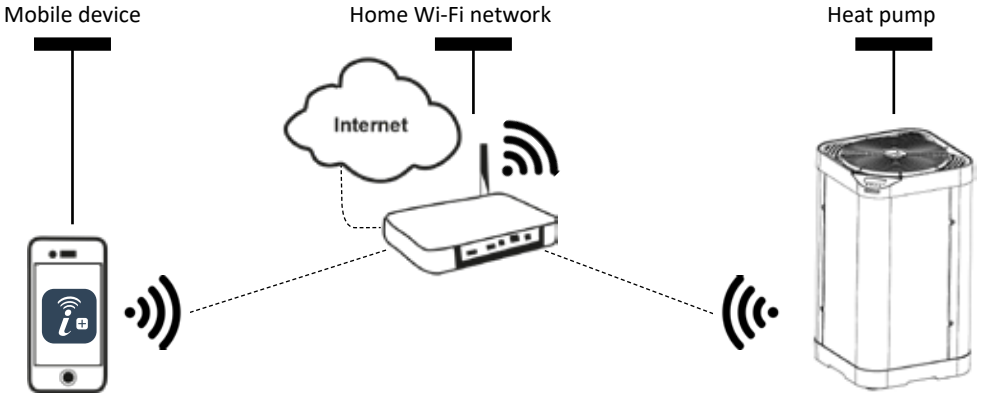
2.5 I Connecting to the iAqualink+™ app



The heat pump can be remotely controlled from a smartphone or tablet, via the iAqualink+™ app available for iOS and Android systems.

Before connecting to the iAqualink+™ app, ensure that you:

- **Use a Wi-Fi-enabled smartphone or tablet.**
- **Use a Wi-Fi network with a reasonably strong signal when connecting to the heat pump: the Wi-Fi signal must be detectable at the place where the appliance is used. If this is not the case, a technical solution must be provided to amplify the existing signal.**
- **Rest close to the appliance and have your home Wi-Fi network password at the ready.**

❶. Download the iAqualink+™ app from the App Store (iOS) or Google Play Store (Android) then create an iAqualink+™ account (if the app is already installed, move onto the next step).

❷. Open the app and follow the steps described in the app to add the heat pump.

3 Maintenance

3.1 I Winterising

- **Winterising is vital to prevent the condenser breaking due to freezing. This is not covered by the warranty.**
- **To avoid damaging the appliance with condensation, do not fully cover it; a winterising cover is provided.**

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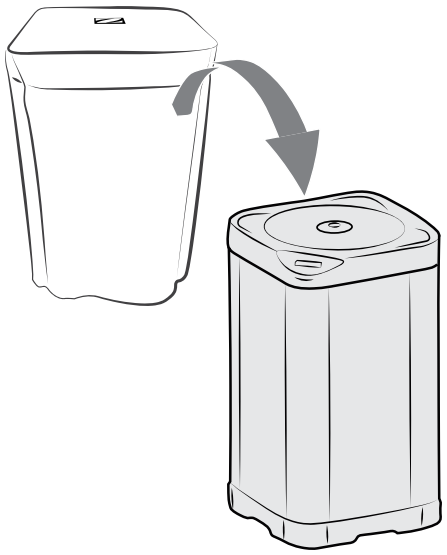
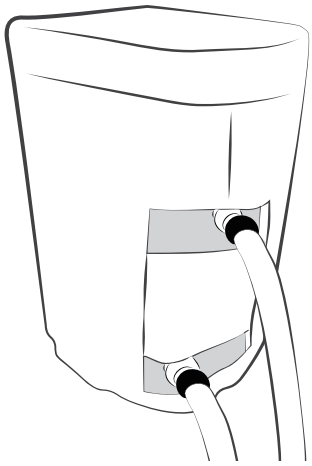
- Set the regulator to "standby" mode by pressing and holding ⏻ for 3 seconds and disconnect the power supply,
- Open valve B,
- Close valves A and C and open valves D and E (if present),
- Make sure that there is no water circulating in the heat pump,
- Drain the water from the condenser (risk of freezing) by unscrewing the two water inlet and outlet connectors on the back of the heat pump,
- In the case of full winterising for the pool (complete shutdown of the filtration system, bleed the filtration circuit or even pool drainage): re-fit the two connectors by one turn to prevent any foreign bodies from getting into the condenser,
- In the case of winterising for the heat pump only (shutdown of the heating only, the filtration keeps running): to not tighten the connectors but add 2 caps (provided) on the condenser's water inlets and outlets.
- Put the aired winterising micro cover (provided) on the heat pump passing the hydraulics connections up through the opening provided for that purpose on the cover. It is not necessary to disconnect hydraulic and electrical connections.



Front



Rear (with winterising cover)

3.2 I Maintenance

- **Before any maintenance work on the appliance, you must cut the electricity supply as there is a risk of electric shock which may cause material damage, serious injury or even death.**
- **Before any maintenance, troubleshooting or repair operation, deactivating the modem's Wi-Fi connection is recommended to avoid any risk of the appliance being remotely controlled.**
- **Do not disconnect the electricity supply when the appliance is running.**
- **If the electric power supply is interrupted, wait a minute before restoring power to the appliance.**
- **It is recommended that the appliance undergo general servicing at least on a yearly basis to ensure proper operation, maintain performance levels and potentially prevent certain failures. These operations are carried out at the user's expense by a technician.**

3.2.1 Safety instructions concerning appliances containing R32 refrigerant

Area check

- Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimised.

Work procedure

- Work shall be undertaken under a controlled procedure so as to minimise the risk of a flammable gas or vapour being present while the work is being performed.

General work area

- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

Check for the presence of refrigerant

- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

Check for the presence of a fire extinguisher

- If any work involving heat is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO_2, fire extinguisher adjacent to the charging area.

No source of ignition

- No person carrying out work in relation to a refrigerating system which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. «No Smoking» signs shall be displayed.

Area ventilation

- Prior to penetrating the unit in any way to perform any required service, ensure that the area is open and adequately ventilated. Proper ventilation, to allow for safe dispersion of any refrigerant which may be inadvertently released to the atmosphere, should be maintained while service is being performed on the unit.

Refrigeration equipment check

- The manufacturer's service and maintenance guidelines must be followed at all times. When replacing any electrical components, be sure to use only components which are of the same type and rating and which are recommended/ approved by the manufacturer. If in doubt, consult the manufacturer's technical department for assistance.
- The following checks shall be applied to installations using flammable refrigerants:
  - if an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
  - Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
  - refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

Electrical component check

- Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.
- Initial safety checks shall include:
  - that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
  - that no live electrical components and wiring are exposed while charging, recovering or purging the system;
  - that there is continuity of earth bonding.

Repair of insulated components

- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
- Ensure that the apparatus is mounted securely.
- Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

Repair of intrinsically safe components

- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
- Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable

atmosphere. The test apparatus shall be at the correct rating.

- Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

Wiring

- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

Detection of flammable refrigerant

- Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.
- The following leak detection methods are deemed acceptable for all refrigerant systems.
- Electronic leak detectors may be used to detect refrigerant leaks but, in the ease of flammable refrigerants, the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-tree area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25% maximum} is confirmed.
- Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine may react with the refrigerant and corrode the copper pipe-work.
- If a leak is suspected, all naked names shall be removed/extinguished.
- If a leakage of refrigerant is found which requires brazing. all of the refrigerant shall be recovered from the system. or isolated (by means of shut off valves} in a part of the system remote from the leak.

Removal and discharge

- When breaking into the refrigerant circuit to make repairs - or for any other purpose - conventional procedures shall be used. However, for flammable refrigerants it is important that best practice is followed since flammability Is a consideration. The following procedure shall be adhered to:
  - remove refrigerant;
  - purge the circuit with inert gas (optional for A2L);
  - evacuate (optional for A2L);
  - purge with inert gas (optional for A2L);
  - open the circuit by cutting or brazing.
- The refrigerant charge shall be recovered into the correct recovery cylinders. For appliances containing flammable refrigerants other than A2L refrigerants, the system shall be purged with oxygen-free nitrogen to render the appliance safe for flammable refrigerants. This process may need to be repeated several times. Compressed air or oxygen shall not be used for purging refrigerant systems.

Loading procedures

- Ensure that the outlet for the vacuum pump is not close to any potential ignition sources and that ventilation is available.
- In addition to conventional charging procedures, the following requirements shall be followed.
  - Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
  - Cylinders shall be kept in an appropriate position according to the instructions.
  - Ensure that the refrigerating system is earthed prior to charging the system with refrigerant.
  - Label the system when charging is complete (if not already).
  - Extreme care shall be taken not to overfill the refrigerating system.
- Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Dismantling

- Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

1. Become familiar with the equipment and its operation.
2. Isolate system electrically.
3. Before attempting the procedure, ensure that:
   - mechanical handling equipment is available. if required. for handling refrigerant cylinders;
   - all personal protective equipment is available and being used correctly:
   - the recovery process is supervised at all times by a competent person;
   - recovery equipment and cylinders conform to the appropriate standards.
4. Pump down refrigerant system, if possible.
5. If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system
6. Make sure that cylinder is situated on the scales before recovery takes place.
7. Start the recovery machine and operate in accordance with instructions.
8. Do not overfill cylinders (no more than 80 % volume liquid charge).
9. Do not exceed the maximum working pressure of the cylinder, even temporarily.
10. When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and alt isolation valves on the equipment are closed off.
11. Recovered refrigerant shall not be charged into another refrigerating system unless it has been cleaned and checked.

3.2.2 User maintenance

- Make sure that the grid on the top cover is not blocked by any foreign bodies.
- Clean the evaporator (for location see § “5.3 I Dimensions and marking”) using a soft brush and a fresh water spray (disconnect the power cable); do not fold over the metal wings, then clean the condensate drainage line to remove any impurities that may be blocking it.
- Do not use a high pressure jet. Do not spray with rain water, salt water or water which is full of minerals.
- Clean the outside of the appliance; do not use any solvent-based products. We can provide you with a specific cleaning kit as an accessory: the PAC NET, see § “5.1 I Description”.

3.2.3 Maintenance to be carried out by a qualified technician

- Check that the control system is operating correctly.
- Check that the condensates flow correctly when the appliance is in operation.
- Check the safety mechanisms.
- Check the connection of the metal masses to the earth.
- Check that the electrical cables are correctly tightened and connected and that the switch box is clean.

4 Troubleshooting

- **Before you contact the retailer, carry out these few simple checks using the following tables if a problem occurs.**
- **If the problem is not resolved, contact your retailer.**
- **: Actions to be performed by a qualified technician only**

4.1 I Appliance behaviour

The appliance does not start heating straight away	• On start-up, the appliance remains "paused" for 30 seconds before it starts operating. • When the setpoint temperature is reached, the appliance stops heating: the water temperature is higher than or equal to the setpoint temperature. • When the water flow rate is zero or is not enough, the appliance stops: check that the water is circulating correctly in the appliance and that the hydraulic connections are correct. • The appliance stops when the outdoor temperature falls below -7 °C. • The appliance may have detected an operating fault (see § “4.2 I Error code display”). • If you have checked these points and the problem persists: contact your retailer.
The appliance is discharging water	• Often called condensates, this water is the moisture contained in the air which condenses on contact with certain cold mechanisms in the appliance, especially on the evaporator. The damper the air, the more condensates your appliance will produce (your appliance may drain several litres of water per day). This water is retrieved by the base of the appliance and drained through the holes. • To check that the water is not coming from a leak in the pool circuit on the appliance, shut it down and run the filter pump to circulate water in the appliance. If the water continues to flow through the condensate drainage lines, there is a water leak in the appliance; contact your retailer.
The evaporator is iced over	• The appliance will soon switch to its defrost cycle to melt the ice. • If the appliance cannot manage to defrost its evaporator, it will stop itself; this means that the outdoor temperature is too low (below -7°C).
The appliance is "smoking"	• This may occur when the appliance is in a defrost cycle and the water is converted to gas. • If the appliance is not in its defrost cycle, this is not normal. Switch off and disconnect the appliance immediately and contact your retailer.
The appliance is not working	• If there is no display, check the supply voltage and the F1 fuse. • When the setpoint temperature is reached, the appliance stops heating: the water temperature is higher than or equal to the setpoint temperature. • When the water flow rate is zero or is not enough, the appliance stops: check that the water is circulating correctly in the appliance. • The appliance stops when the outdoor temperature falls below -7 °C. • The appliance may have detected an operating fault (see § “4.2 I Error code display”).

The appliance is working but the water temperature does not increase	• The operating mode is not powerful enough (appliance in *"SILENCE"* or *"SMART" mode*). Switch to *"BOOST"* mode and set the filtration to 24/24 manual while the temperature rises. • The appliance may have detected an operating fault (see § "4.2 I Error code display"). • Check that the automatic filling valve is not stuck in open position; this will keep supplying cold water into the pool and will prevent the temperature from rising. • There is too much heat loss as the air is cool. Install a heat insulated cover on the pool. • The appliance is unable to capture enough calories as its evaporator is clogged with dirt. Clean it to restore its performances (see § "3.2 I Maintenance"). • Check that the external environment is not hindering the heat pump (see § "1 Installation"). • Check that the appliance is the right size for this pool and its environment.
The fan is running but the compressor stops from time to time with no error message	• If the outdoor temperature is low, the appliance will perform defrost cycles. • The appliance is unable to capture enough calories as its evaporator is clogged with dirt. Clean it to restore its performances (see § "3.2 I Maintenance").
The appliance trips the circuit breaker	• Check that the circuit breaker is correctly dimensioned and that the cable section used is correct (see § "5.2 I Technical data"). • The supply voltage is too low; contact your electricity supplier.

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4.2 I Error code display

Display	Possible causes	Possible Solutions
E04 *Low pressure fault on cooling circuit*	Pressure fault in the low pressure circuit (if problem persists after resetting)	Call a qualified technician
	Exchanger clogged with dirt	Clean the exchanger with water
	Sensor is faulty or offline	Reconnect or change the sensor
	Refrigerant loss	Call a qualified technician
E05 *Cooling circuit high pressure fault*	Insufficient water flow	Increase flow using the by-pass, check that the pool filter is not clogged
	Air and water emulsion has passed into the appliance	Check the pool's hydraulic circuit
	Flow switch blocked	Check the flowswitch: it must be correctly screwed in the right direction (the arrow indicates the direction of the water flow).
	Sensor is faulty or offline	Reconnect or change the sensor
E06 *Compressor discharge temperature fault*	Compressor discharge valve temperature too high	Call a qualified technician
	Insufficient cooling fluid	Call a qualified technician
	Fan operating incorrectly	Replace the fan motor
E07 *ST1 sensor fault - water inlet sensor*	Sensor is faulty or offline (J46 connector)	Reconnect or change the sensor
E08 *ST4 sensor fault - fluid line sensor*	Sensor is faulty or offline (J16 connector)	Reconnect or change the sensor
E09 *ST3 sensor fault - defrost sensor*	Sensor is faulty or offline (J14 connector)	Reconnect or change the sensor
E10 *ST2 sensor fault - air inlet sensor*	Sensor is faulty or offline (J12 connector)	Reconnect or change the sensor
E11 *ST5 sensor fault - compressor discharge sensor*	Sensor is faulty or offline (J13 connector)	Reconnect or change the sensor

Display	Possible causes	Possible Solutions
E12 *Communication fault between the regulation board and the display board*	Bad connection between the boards A1 - A2 - A5	Check the RJ45 cables between A1 - A5 and A2 - A5
	Faulty boards	Replace the boards
E14* *Overheating of compressor driver electronic board*	Electronic board's radiator clogged	Check the condition of the radiator to the rear of the electrical board and clean it up if needed.
	Fan operating incorrectly	Check that the air flow is correct
	Faulty component on the Driver	Replace the Driver
E15* *Automatic protection against electrical network instabilities*	Electrical network overvoltage or interruption or drop in the network voltage	Check the quality of the electrical network
	Incorrect earthing	Check that the earth cables and power cables are correctly connected
E16 / E17 *Error on the fan motor*	Fan motor disconnected	Check the fan motor connector. If the problem persists, call a qualified technician
	Fan motor damaged	Replace the fan motor
E18* followed by a number *Driver trip*	See E18 table below	
E19 *Driver - compressor communication fault*	Bad connection between the A1 and A4 boards	Check that the CONIN (A1 board) and AB (A4 driver board) connectors are correctly connected
	Board power supply fault	Check the boards' power supply by visual inspection and/or with a multimeter if necessary.
	Faulty boards	Replace the A1 (regulation board) and A4 (compressor driver) boards
E20 *Main board not configured*	Board settings	Enter the appliance model in the settings

*If error E14, E15 or E18 occurs, a minimum waiting time of at least 3 minutes must be respected before the error can be cleared, even if the error-generating conditions are no longer present.

For example, in the event of a power cut to the compressor while in operation, the appliance will display error E18 for 3 minutes after power has been restored.

E18 followed by a number - driver trip

Display sequence « E18 » / « # »


: Actions to be performed by a qualified technician only

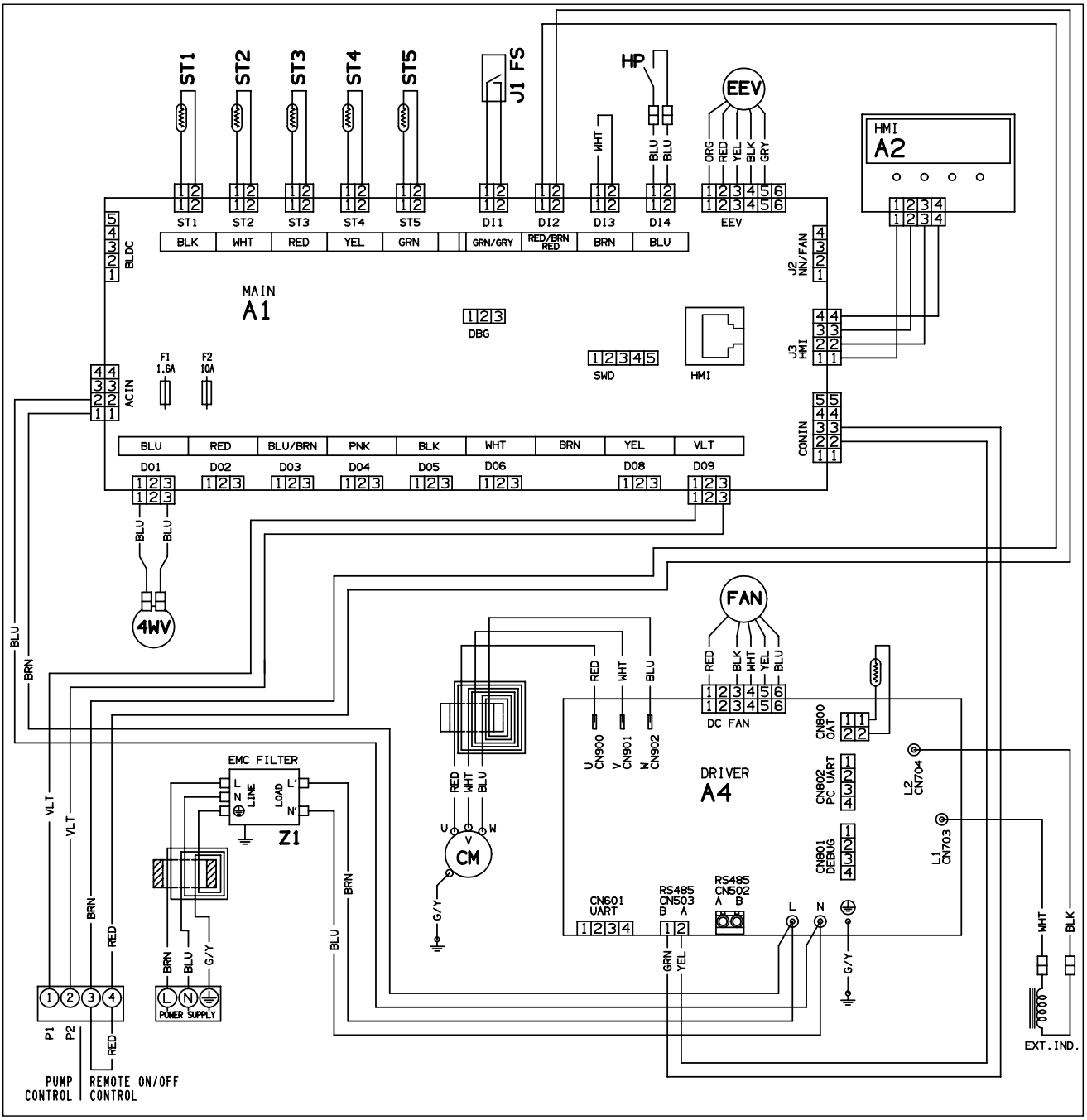
#	Description	Possible causes	Possible solutions
4	Communication fault with master controller	Driver is damaged	Replace the driver board
14	Out-of-speed fault		
22	Compressor and PFC key data fault (can not be cleared		
27	MCU FLASH verification fault (can not be cleared)		
3 / 9	3 = PFC Over Current OR 9 = Power overloading	The Input current is over Limit	Compressor load too high: - No flow in the heat exchanger: Close by pass valve if it is open too much - Evaporator obstructed: Clean it with clear water - Expansion valve malfunction: check if temperatures are normal (ST1 to ST5)
		Driver is damaged	Replace the driver board
13	Start up Failure	Compressor load is too high	Power OFF and then power ON the unit
		Compressor is damaged	Measure the winding values
12	Motor position Loss	Compressor cable disconnected or is not connected properly	Check wiring of the compressor's phases
2	Compressor Over Current	The compressor Load is too high	Power OFF and then power ON the unit
		Compressor cable disconnected or is not connected properly	Check wiring of the compressor's phases
		Compressor is damaged	- Measure the winding values - Check compressor insulation
18	BLDC1 motor speed is abnormal	Check fan motor	Replace fan motor if necessary

4.3 I Lighting of LEDs on the printed circuit board

	LED5	LED4	LED3	LED2	LED1
No errors Appliance switched on	◯				
Error 04	◯				◯
Error 05	◯			◯	
Error 06	◯			◯	◯
Error 07	◯		◯		
Error 08	◯		◯		◯
Error 09	◯		◯	◯	
Error 10	◯		◯	◯	◯
Error 11	◯	◯			
Error 12	◯	●	●	●	●
Error 14	◯	◯	◯		◯
Error 15	◯	◯	◯	◯	
Error 16	◯	◯	◯	◯	◯
Error 17	◯				●
Error 18	◯			●	
Error 19	◯			●	●
Error 20	◯		●		

●: LED on ◯: Flashing LED **Empty**: LED off

4.4 I Wiring diagrams



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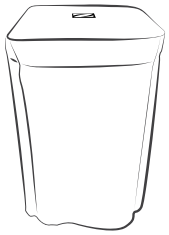
Symbol	Description
A1	Electronic regulation board
A2	Display board (HMI)
A4	Compressor and fan driving electronic board (driver)
BLK	Black
BLU	Blue
BRN	Brown
CM	Compressor
EEV	Electronic expansion valve
F1 - F2	Fuse
FAN	Fan motor
G/Y	Green/Yellow
HP	High pressure switch
ORG	Orange
PNK	Pink
RED	Red
ST1	Water flow regulation sensor
ST2	Anti-freeze sensor
ST3	Defrost sensor
ST4	Liquid line temperature sensor
ST5	Compressor discharge temperature sensor
4WV	4 way valve
GRY	Grey
BLK	Black
FS	Flowswitch
V1 - V2	Varistor
VLT	Violet
WHT	White
YEL	Yellow

5 Characteristics

5.1 I Description








A		Z350iQ
B	Ø50 elbow connectors (x2) and straight connectors (x2)	✔
C	Condensate drainage kit (Ø18)	✔
D	Winterising cap (x2)	✔
E	Winterising cover	✔
F	PAC NET (cleaning product)	⊕

✔: Included

⊕: Available as an accessory

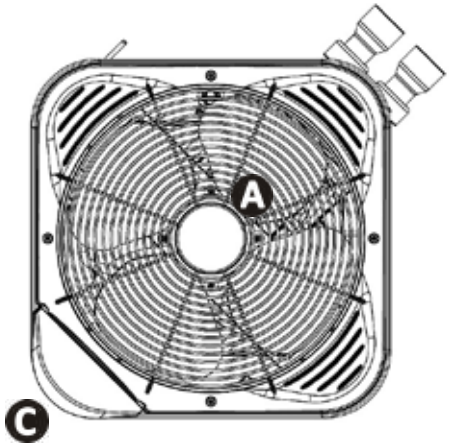
EN

5.2 I Technical data

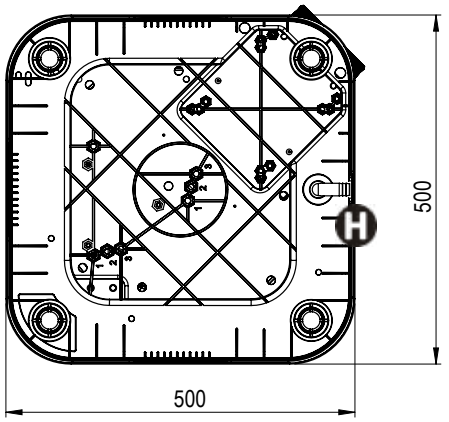
Z350iQ		MD4	MD5	MD6
Performances: air at 28°C / water at 28°C / humidity at 80 %				
Power output (max-min speed)	kW	11 - 3.1	14 - 4.4	16 - 4.7
Power consumed (max-min speed)	kW	1.9 - 0.3	2.6 - 0.5	3.2 - 0.5
Average COP (max-min speed)		5.8 - 10.3	5.4 - 8.8	5 - 9.4
Performances: air at 15°C / water at 26°C / humidity at 70 %				
Power output (max-min speed)	kW	8 - 2.5	10 - 2.7	12 - 3
Power consumed (max-min speed)	kW	1.8 - 0.4	2.3 - 0.5	2,8 - 0.6
Average COP (max-min speed)		4.4 - 6.3	4.3 - 5.4	4.3 - 5
Technical specifications				
Operating temperature	Air	In "heating" mode: from -7 to 35°C In "cooling" mode: from 10 to 35°C		
	Water	from 15 to 32°C		
Power supply		220 - 240V ~ / 1 / 50-60 Hz		
Admissible variation in voltage		± 6 % (during operation)		
Nominal electric current requirement	A	8	10.1	12.3
Maximum electric current requirement	A	9.1	10.8	13.5
Minimum cable section**	mm²	3x2.5	3x2.5	3x2.5
		3G2.5	3G2.5	3G2.5
Hydraulic connections		2 PVC Union Ø 40 2 PVC reduction Ø 40/50 2 PVC Union 45° Ø 50		
Service pressure	Refrigerant	42 bar (4,2 MPa)		
	Water	2 bar (0,2 MPa)		
Sound power (max-min)	db(A)	70 - 64	71 - 63	73 - 65
Sound pressure at 10m (max-min)	db(A)	39 - 33	40 - 32	42 - 34
Head loss	mWG	1.5		
Recommended water flow	m³/h	3.4	4.2	5
Type of cooling fluid		R32		
Cooling fluid load	kg	0.7	0.85	0.95
	Tonn CO_2 eq.	0.47	0.57	0.64
Approximate weight	kg	41	46	47
Protection rating		IP24		
Frequency bands	GHz	2.400 - 2.497		
Radiofrequency emission power	dBm	+19.5		

* These specifications have been determined based on the requirements defined in standards IEC/EN 60335-1 and IEC/EN 60035-2-40 on the safety of electrical appliances for household and similar purposes.
** Values provided for information purposes for a maximum length of 20 metres (calculation base: NFC15-100), must be checked and adapted to the installation conditions and standards of the installation country.

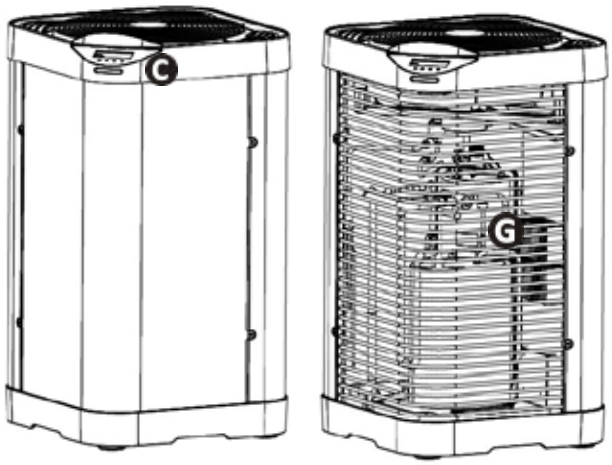
5.3 I Dimensions and marking



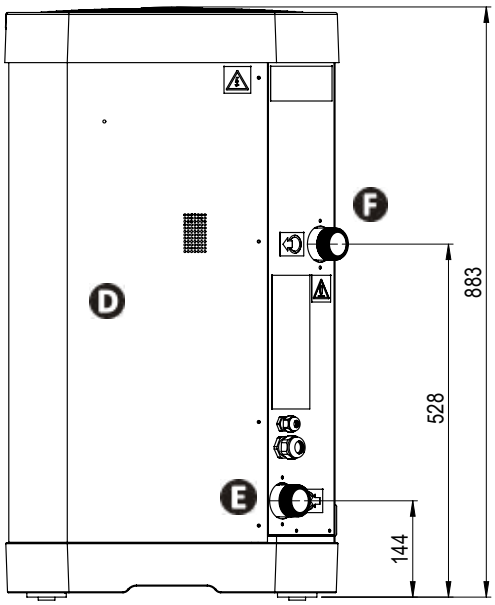
Top



Bottom



Front



Rear

A	Grid
B	LED strip
C	User interface
D	Technical access door
E	Pool water inlet
F	Pool water outlet
G	Evaporator
H	Condensates drain

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Your retailer	
Appliance model	
Serial number	

For more information, product registration and customer support:

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