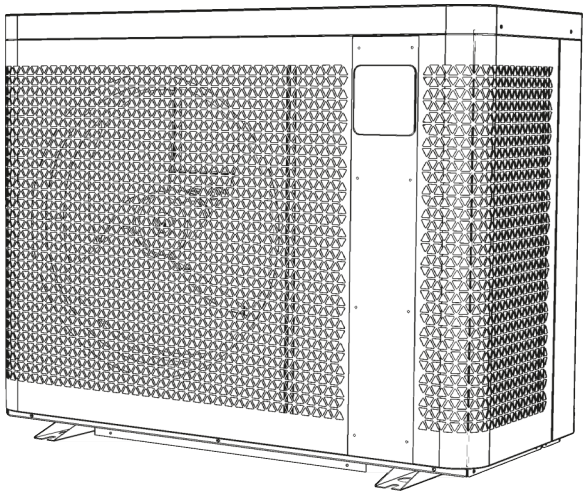
ZODIAC®

Z260IQ



works with FLUIDRA POOL

Notice d'installation et d'utilisation - Français
Pompe à chaleur
Traduction des instructions originales en anglais

FR

Instructions for installation and use - English
Heat pump
Original instructions

EN

Installation- und Bedienungsanleitung - Deutsch
Wärmepumpe
Übersetzung der französischen Originalanleitung

DE

Installatie- en gebruikshandleiding - Nederlands
Warmtepomp
Vertaling van de originele Franse instructies

NL

Manual de instalación y de uso - Español
Bomba de calor
Traducción de las instrucciones originales en francés

ES

Manual de instalação e utilização - Português
Bomba de calor
Tradução das instruções originais em francés

PT

Manuale di installazione e di uso - Italiano
Pompa di calore
Traduzione delle istruzioni originali in francese

IT

H0846100 - Rev.B - 2025/06

⚠ WARNINGS

	**This symbol indicates that the information is available in the User Manual or the Installation Manual.**		**This symbol indicates that this appliance uses R290, a slow-burning refrigerant.**
	**This symbol indicates that the User Manual must be read carefully.**		**This symbol indicates that service personnel must service this equipment in accordance with the Installation Manual.**

- 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.
- The manufacturer is constantly developing its products to improve their quality.
- We reserve the right to totally or partially change our products' features or the content of this document without prior warning.

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.
- 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 not include electrical switch for disconnection; include 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 R290 REFRIGERANT

- This device contains R290 refrigerant, a class A3 refrigerant, which is considered to be extremely flammable.
- Do not discharge R290 fluid into the atmosphere. A brief human exposure to 1% of propane causes no symptoms, concentrations below 10% cause only slight dizziness, exposure to high concentrations can cause anesthesia and loss of consciousness, very high concentrations can cause asphyxiation.
- In order to comply with the applicable standards and regulations in terms of the environment and installation, in particular European regulation EU 2024/573 and required national rules, 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.

- Install the unit outdoors. Do not insall the unit indoors or in a closed and unventilated area.
- 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).
- The device must be stored so as to prevent mechanical damage from occurring
- Be aware that R290 refrigerant may not contain an odour.
- Do not use means to accelerate the defrosing process or to clean, other than those recommended by the manufacturer.
- Do not piece or burn.

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.
- Do not install in one environment which has operating or potential ignition sources.
- In the event of a leak, escaping refrigerant may mix with air to form a flammable atmosphere. There is a risk of fire and explosion.
- Only carry out the work if you are competent and have knowledge about the special features and risks of R290 refrigerant.
- 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 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 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,

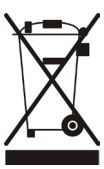
manufacturer's address, coolant and weight, electrical parameters, thermo-dynamic and acoustic performance.

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 appliance, 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.

CONTENTS

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.**

- The appliance can only be installed outdoors : provide free space around it (see § "1.1.2 Selecting the location").
- Place the appliance on its anti-vibration pads (supplied with appliance) on a stable, solid and level surface.
- The 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 may be secured to the ground using the holes in the base of the appliance or with rails (not supplied).

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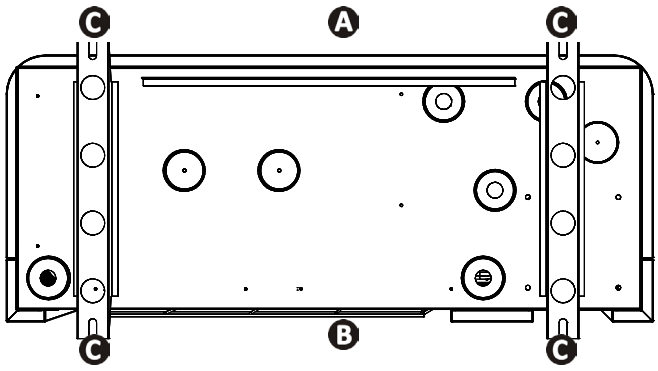


View of the appliance base from below for installing the anti-vibration pads

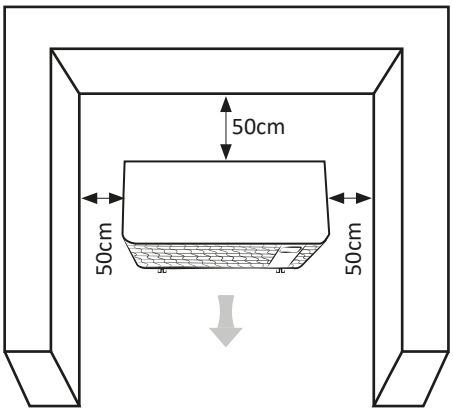
A: Front
B: Rear
C: Anti-vibration pads

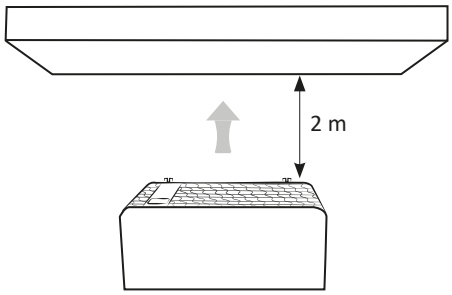
The appliance must not be installed:
- In a closed and unventilated room,
- In a location where it would be subject to snow build-up,
- In a location where it might be flooded by the condensates produced by the appliance when operating.
- In a location subject to high winds,
- With the blowing towards a permanent or temporary obstacle (awning, brushwood, etc.) less than 2,5 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,

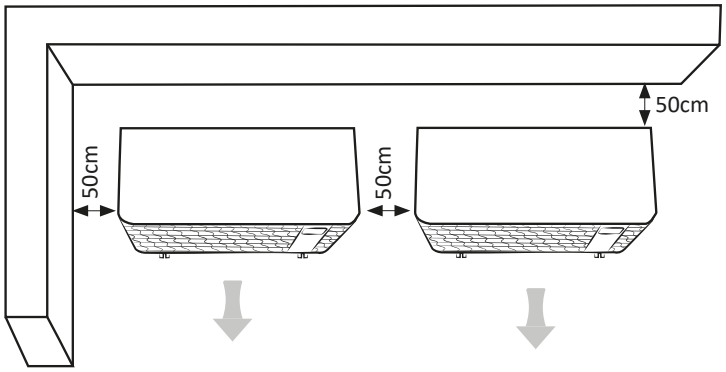
Tip: to reduce noise produced by your heat pump
- Do not install it under or facing a window.
- Do not tilt it towards your neighbours.
- Install the appliance in an open space (sound waves are reflected on surfaces).
- Install an acoustic screen around the heat pump, respecting the distances (see § "1.2 I Hydraulic connections").
- Install 50cm of flexible PVC pipe at the heat pump water inlet and outlet (to stop vibrations).

1.1.2 Selecting the location

When installing the appliance, provide free space around it as shown on the pictures below. The furthest the obstacles are, the quieter will be the heat pump.



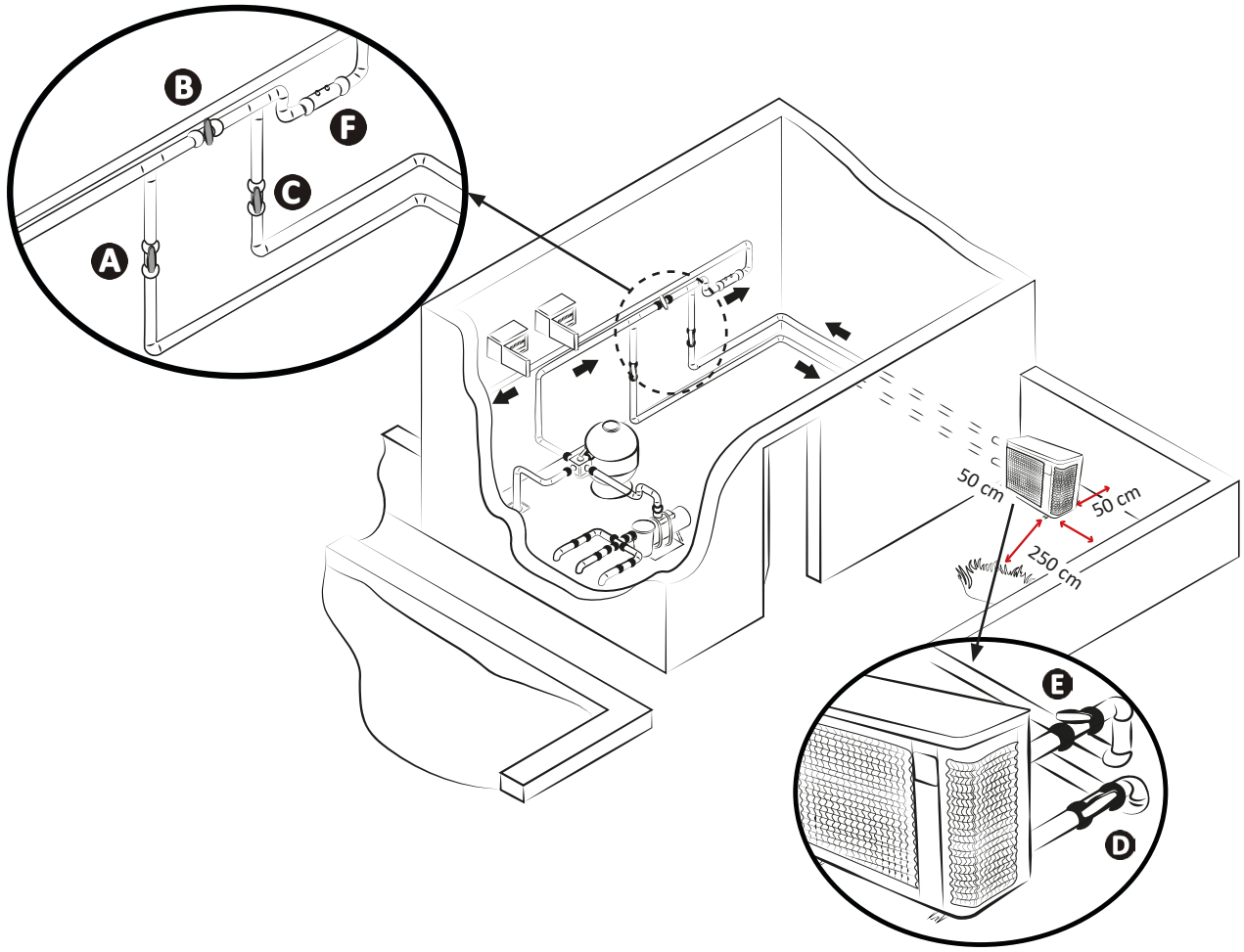




(minimal distances)

1.2 I Hydraulic connections

- The appliance will be connected with a Ø50 PVC pipe, using the half 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.



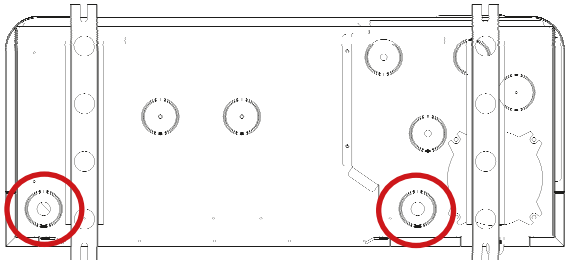
A: water inlet valve
B: by-pass valve
C: water outlet valve
* minimum distance

D: water inlet adjustment valve (optional)
E: water outlet adjustment valve (optional)
F: water treatment

Connection to a standard filtration circuit

To evacuate the condensates:

- Raise at least 10 cm the appliance with anti-vibration pads,
- Fit the two condensate drainage pipes to the openings located under the appliance base (supplied).



Location for connecting the condensate drainage pipes (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.

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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.**
- **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.**
- **Only a qualified and experienced technician is authorised to carry out cabling work within the appliance or to replace the power cord.**
- **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.**
- **The installer must consult the electricity provider if necessary and ensure that the equipment is connected correctly to an electricity network with impedance under 0.095 ohm.**

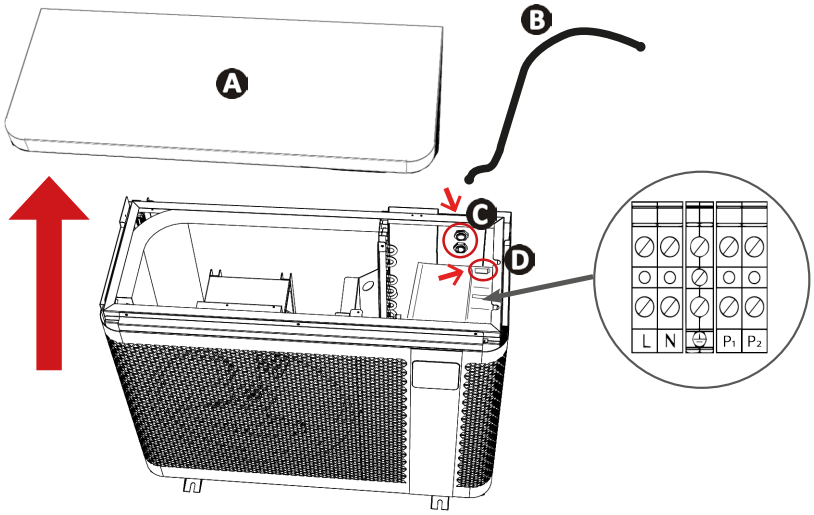
- The heat pump's electrical supply must be provided through a protection and circuit breaking device (not supplied) complying with the standards and regulations in force in the country where it is installed.
- The appliance is provided for connection to a general power supply with a TT and TN.S neutral regime.
- Electrical protection: by circuit breaker (D curve, rating to be defined according to the table, see § “5.2 I Technical data”), with a 30 mA dedicated residual-current protection system (circuit breaker or switch).
- An electrical switch for disconection OVC III category must be installed in the fixing wiring, in accordance with applicable national laws.
- 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 cable gland and cable clamp to pass the power cord into the appliance.
- Use the power cord (RO2V type) adapted for outdoor or buried use (or run the cable into a protection duct), see §”1.3.1 Cable cross section” for more details.
- 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.

1.3.1 Cable cross section

Model	Electricity supply	Max. current	Cable diameter*	Thermal magnetic protection (D curve)
MD4	220 - 240 V 1 phase 50-60 Hz	10	RO2V 3x2,5 mm²	16 A
MD5		12,5		
MD6		16,5	RO2V 3x4 mm²	20 A
MD8		18,5		

* Cable cross section suitable for max. lenght 10 meters. For longer than 10 meters, consult an electrician.

- Open the top panel (A) with a screwdriver (4 screws) to access the electrical terminal block.
- Insert the power supply cable (B) into one of the cable gland (C) on the rear part of the appliance.
- Inside the appliance, fix the power supply cable by threading it through the cable clamp (D) (maintained with one screw).



Accessing the electrical terminal block

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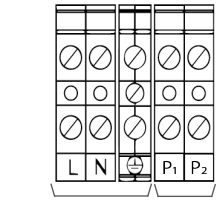
- Connect the power supply cable to the terminal block inside the appliance as following.



Connect to power supply

Connect options (filtration pump, power supply relay), see"1.4 I Option connections".

L: Live
N: Neutral
⏚ : Earth

Terminal block for single-phase power

- Carefully close the top panel.

1.4 I Option connections

<u>Connecting the "Heating priority" option</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 P1 to P2 may damage the appliance and cancel its warranty.**
- **Terminals P1 to P2 are exclusively dedicated to the options and must never be used to directly supply other equipment.**
- **When intervening on terminals P1 to P2, there is a risk of electrical return current, injuries, material damage and death.**
- **Use cables with a section of at least 2x0.75mm² , RO2V type and with a diameter between 8 and 13mm.**
- **If the power of the filtration pump exceeds 5A (1000W), activating heating priority requires the use of a power relay.**

- Before connecting any options: remove the seal (above the cable gland) and install the cable gland provided in order 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.

1.4.1 "Heating priority" option

Connect the filtration pump to the heat pump (= activate the heating priority) to force the filtration to operate if the water is not at the desired temperature.

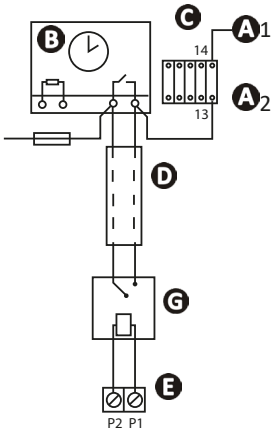
When heating priority is activated:

- If heating is needed, the heat pump will force the filtration pump to run even though it is outside its filtration hours to maintain the pool water temperature.
- If heating is not needed :
  - And filtration is inside its running hours : the filtration pump will continue to run without the heat pump.
  - And filtration is outside its running hours : the filtration pump will not run.

- Make sure that the electricity supply has been switched off.
- **Connect a <u>230 V/dry contact relay</u> (not included)** to terminals P1 and P2 (230 V output), then connect the connection cable (**not included**) from the output of this relay to the filtration timer as shown in the diagram below.
- By default, when connecting the filtration pump to the heat pump electrically, the heating priority is activated (system parameter **L0**, set on "1" by default): every 120 minutes (system parameter **L1,** set on "120" by default), the filtration pump will run during 5 minutes to check if heating is needed.

- Access to the system parameters and modify **L0** and **L1**, if needed, see § "4.4 I Accessing to system parameters".

Example : if choosing L1=90, the filtration pump will be activated every 90 minutes to check if heating is needed.



A1- **A**2: Power for the filter pump power contactor evaporator

B: Filtration timer

C: Power contactor (two-pole contactor) for the filter pump motor

D: Independent connecting cable for the "heating priority" function (not included)

E: Heat pump terminal (230V output)

F: Fuse

G: **230V/<u>dry contact</u>** relay (**not included**)

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 hotter and more humid the air, the better your heat pump will perform. The outdoor parameters for optimal operation are an air temperature of 26°C, a water temperature of 26°C and 80% relative humidity.

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.
- When the temperature of the pool is increasing at the beginning of a season to reach the desired temperature, set the water circulation to continuous operation (24/7).
- 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).
- 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.

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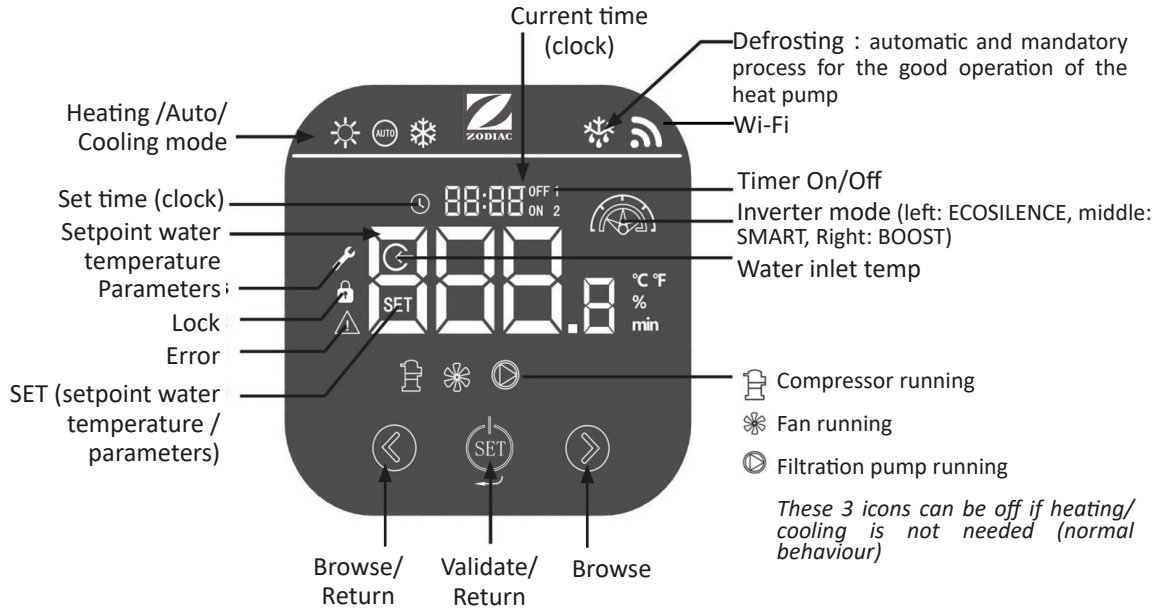
2.1.1 Precautions

- **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 120 minutes by default.
  - **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 Mode details

Icons	Mode		Description
	Heating	ECOSILENCE	Reduced power to further energys savings and lowest noise level. Best to maintain the temperature when outside air temperature is warm.
		SMART	Automatic power adjustment depending on the need. Chooses between ECOSILENCE and BOOST modes automatically.
		BOOST	Maximum power for fast heat-up. Best at the beginning of the season to rise up the temperature or to maintain the temperature when the outside temperature is cold.
AUTO	**Heating/ Cooling** (recommended mode)	**SMART**	The heat pump intelligently chooses the most appropriate operating mode according to the setpoint temperature.
	Cooling	ECOSILENCE	Cooling the pool at reduced power to further energys savings and lowest noise level.
		SMART	Automatic power adjustment depending on the need. Chooses between ECOSILENCE and BOOST modes automatically.
		BOOST	Cooling the pool at maximum power for fast cooling.

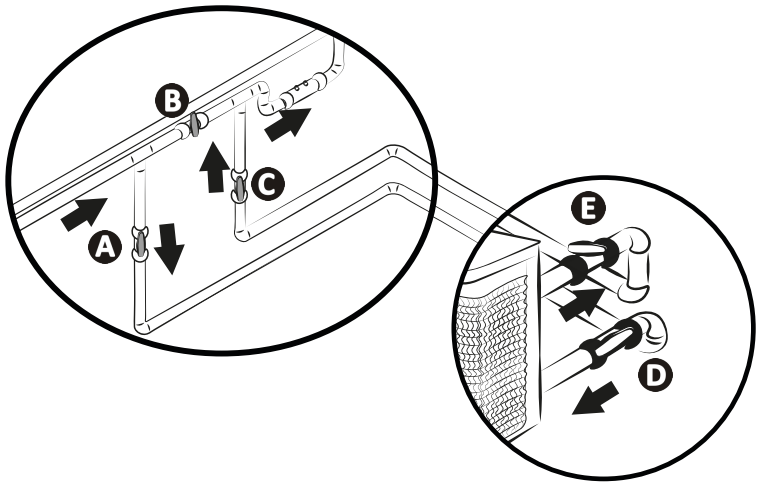
2.3 I Operation

2.3.1 Recommendations prior to start

- Check that there are no tools or other foreign objects in the appliance.
- The top panel that provides access to the technical section must be put in place.
- Check that the appliance is stable.
- Check that the electrical wiring is properly connected to the terminals and the earthing.
- Check that the hydraulic corrections are correctly tightened and that there are no leaks.

2.3.2 Operation

- Activate the filtration pump (if heating priority is not activated) to turn on the water flow : check that the water is circulating correctly in the heat pump and that the flow rate is adequate.
- 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 (differential switch and circuit-breaker), see §"1.3 I Electricity supply connections".
- Press SET once to turn on the screen.
- If needed, press SET for 3 seconds to unlock the keypad.
- Adjust the clock, see § "2.4.6 Deactivating the operation of the heat pump".
- Select a mode, see § "2.4.4 Choosing an operating mode".
- Set the desired temperature (called the "setpoint"), see § "2.4.5 Adjusting the temperature setpoint".

The heat pump's compressor will start up after few minutes.

To check if the heat pump is correctly operating, after the start-up steps :

- Shut down the water circulation temporarily (by stopping the filtration or closing valve A or C) to check that the appliance stops after a few seconds (via the activation of the flow switch), **or,**
- Reduce the setpoint temperature to below the water temperature to check that the heat pump stops operating.

2.3.3 Antifreeze protection (if heating priority is activated)

• For the antifreeze protection to work, the heat pump must be powered and the filtration pump activated. If the heating priority is activated, the antifreeze protection will work automatically.

When the heat pump is on stand-by, the system monitors the ambient temperature and the water temperature in order to activate the antifreeze programme if required. The antifreeze protection is automatically activated when the air temperature or water temperature are less than 2°C and when the heat pump has been shut down for more than 120 minutes. When the antifreeze protection is running, the appliance activates its compressor and the filtration pump to reheat the water until it exceeds 2°C .The heat pump automatically leaves the antifreeze mode when the ambient temperature is higher than or equal to 2°C or when the heat pump is activated by the user.

2.4 I User functions

2.4.1 Locking/unlocking the keypad

- Press SET for 3 seconds to unlock the keypad : the main menu is displayed. The icon appears (= locked) or disappears (= unlocked) depending on the keypad's state. The keypad is automatically locked after 60 seconds of inactivity.

2.4.2 Setting the time (clock)

- Unlock the keypad: the main menu is displayed.
- Press SET twice to enter the clock setting interface. The icon flashes.
- Press > to set the time.
- Press SET to set the hours. The hours digit is flashing. Press < and > to change it and press SET to validate.
- Press SET to set the minutes. The minutes digit is flashing. Press < and > to change it and press SET to validate.
- Press SET for 1 second to confirm and return to the main screen.

2.4.3 Setting the timer

- **If two different timers are set up on the filtration pump and on the heat pump, the timer on the filtration pump will be ignored.**
- **If a timer is set on the heat pump, it is recommended to activate the "heating priority" to ensure that the pool will be heated during this time slot (the heat pump only works when the filtration pump is also working).**

Two timer programs can be set up on the heat pump.

- Unlock the keypad: the main menu is displayed.
- Press SET three times : **OFF 1** / **ON 2** flashes.
- Press >. "**1**" and the icon are displayed. Press SET to modify this timer (first timer program) or press > to access to the second timer (second timer program : "**2**" is displayed) and press SET to modify the second timer.
- **ON** is displayed (start time of the timer program). Press < and > to set the hours. Press SET to validate. Press < and > to set the minutes. Press SET to validate.
- **OFF** is displayed (end time of the timer program). Press < and > to set the hours. Press SET to validate. Press < and > to set the minutes. Press SET to validate.
- Press < for 1 second to confirm the setting and return to the main menu. If the timer is validated, "1" displays on the screen.

2.4.4 Choosing an operating mode

The operating mode can be adjusted depending the heating/cooling need for the pool, see “2.2.1 Mode details” for more details about operating modes. To change the operating mode :

- Unlock the keypad: the main menu is displayed.
- Press SET to change the operating mode :  appears.
- Press > to browse through the available modes.
- Press SET to validate one operating mode and return to the main menu.
- Press SET for 2 seconds to activates the compressor and start heating/cooling.

2.4.5 Adjusting the temperature setpoint

- Unlock the keypad : the main menu is displayed.
- Check that the compressor is working : the  icon must be displayed, see “2.4.4 Choosing an operating mode” and “2.2.1 Mode details” to choose an operating mode and activate the compressor.
- **SET** is displayed. Press < and > to modify the temperature setpoint.

- When the setpoint temperature is exceeded by 1°C, the heat pump stops heating/cooling the water. Then, the heat pump automatically regulates the pool water temperature (independant to the chosen mode).
- The heat pump runs again to reach out the setpoint when there is a gap of 1°C between the pool water temperature and the setpoint water temperature.
- *Example: the setpoint temperature is 25°C and the pool water temperature has reached 26°C in heating or cooling mode. The heat pump stops.*
  - *In cooling mode, the appliance will automatically run again if the pool water temperature is higher than 26°C.*
  - *In heating mode, the appliance will automatically run again if the pool water temperature is lower than 24°C.*
- If heating priority is not activated, the heat pump waits for the next filtration pump cycle to run.

2.4.6 Deactivating the operation of the heat pump

It may be necessary to deactivate the operation of the heat pump, for maintenance purposes for example. **In this case, the user interface (screen) remains powered.** To deactivate the operation of the heat pump :

- Unlock the keypad: the main menu is displayed.
- Press SET for 2 seconds. The heat pump’s compressor will stop after few minutes : the  icon disappears when the compressor isn’t working.
- Make sure to switch the compressor on again by pressing SET for 2 seconds to guarantee the normal operation of the heat pump.

The heat pump may take up to 5 minutes to restart after the starting it back up.

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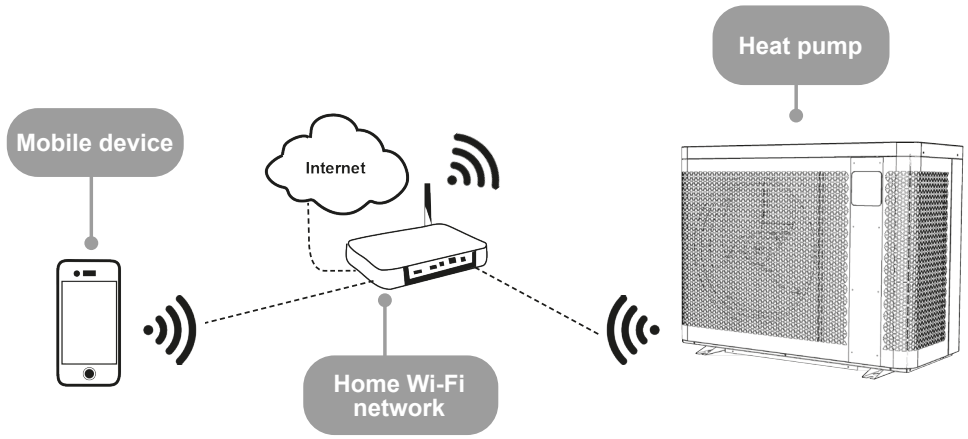
2.5 I Connecting to the Fluidra Pool App



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

Before connecting to the Fluidra Pool 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.**

1. Download the Fluidra Pool app (QR code on the back of the product).
2. Press and hold (<) + SET. flashes.
3. Open the application 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 prevent condensation from damaging the appliance: cover the appliance with the winterising cover supplied (do not hermetically-seal the appliance inside a cover).**

- Deactivate the operation of the appliance by pressing and holding SET for 2 seconds (the user interface remains powered),
- Disconnect the power supply,
- Open valve B (see § "1.2 I Hydraulic connections"),
- Close valves A and C and open valves D and E (if present, see § "1.2 I Hydraulic connections"),
- 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): do not tighten the connectors but set up the 2 protective caps (supplied) behind the hydraulic inlet/outlet connectors.
- We recommend that you put the aired winterising micro cover (provided) on the heat pump.

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.**
- **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 R290 refrigerant

Area check

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

Work procedure

- Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapor 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 CO2, 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 recommendations in terms of care and maintenance must always be complied with. When replacing electric components, check that components used are of the same type and category as those recommended/ approved by the manufacturer. When in doubt, contact the manufacturer's technical department for assistance.
- The following checks must be applied to installations using flammable refrigerants:
  - if an indirect cooling circuit is used, the presence of refrigerant in the secondary circuit must be analysed;
  - the markings on the equipment must remain visible and legible; any illegible markings or signs must be rectified;
  - the hoses or components of the cooling circuit are installed in a position where they are unlikely to be exposed to any substance capable of corroding the components containing refrigerant, unless the components are made from materials that are typically corrosion-proof or correctly protected from such corrosion.

Electric component check

- The repair and maintenance of electric components must include initial safety checks and component inspection procedures. If a defect capable of jeopardising safety arises, no power supply must be connected to the circuit until the problem has been completely resolved. If the defect cannot be rectified immediately and if maintenance work must continue, an appropriate temporary solution must be found. This must be reported to the equipment's owner so that all persons concerned are made aware.
- The repair and maintenance of electric components must include the following initial safety checks:
  - the capacitors are discharged: this must be carried out safely to prevent all risks of ignition;
  - no electric component or live wiring is exposed while charging, overhauling or draining the system;
  - the system must be grounded at all times.

Repair of insulated components

- When repairing insulated components, all power sources must be disconnected from the equipment on which the work is being carried out before removing the insulating cover, etc. If the equipment must be powered during maintenance work, a leak detector must continuously monitor for leaks at the most critical point in order to report any potentially hazardous situation.
- Particular attention must be paid to the following points to ensure that, when performing work on the electric components, the housing is not altered to the point of affecting the protection rating. This includes damaged wires, an excessive number of connections, terminals that do not comply with the original specifications, damaged seals, incorrect installation of the cable glands, etc.
- Make sure that the appliance is properly fixed.
- Make sure that the seals or insulating materials are not deteriorated to the point that they no longer prevent a flammable atmosphere from penetrating the circuit. Spare parts must be compliant with the manufacturer's specifications.

Repair of intrinsically safe components

- Do not apply any permanent electric capacitance or induction charge to the circuit without checking that it does not exceed the allowed voltage and intensity for the equipment being used.
- Typically safe components are the only types on which work can be carried out in the presence of a flammable atmosphere when live. The test appliance must fall under a suitable classification.
- Only replace components with parts specified by the manufacturer. Other parts could cause the refrigerant to leak and ignite in the atmosphere.

Wiring

- Check that the wiring shows no signs of wear, corrosion, excessive pressure, vibration, cutting edges or any other detrimental environmental effect. The check must also take into account the effects of ageing or continuous vibrations caused by sources such as compressors or fans.

Detection of flammable refrigerant

- Under no circumstances must potential ignition sources be used to search for or detect refrigerant leaks. A halide torch (or any other detector using a naked flame) must not be used.
- The following leak detection methods are considered to be acceptable for all cooling systems.
- Electronic leak detectors can be used to detect refrigerant leaks; however, in the case of flammable refrigerants, the sensitivity level may not be suitable or recalibration may be necessary. (The detection equipment must be calibrated in an area devoid of refrigerant). Check that the detector is not a potential ignition source and is appropriate for the refrigerant used. The leak detection equipment must be adjusted to a percentage of the refrigerant's LFL and must be calibrated according to the refrigerant used. The appropriate gas percentage (25% at most) must be confirmed.
- Leak detection fluids are also suited for use with most refrigerants, however the use of detergents containing chlorine must be avoided since it could react with the refrigerant and cause corrosion to the copper piping.
- If a leak is suspected, all naked flames must be removed/extinguished.
- If a refrigerant leak is detected and requires soldering, the entire quantity of refrigerant must be removed from the

system or isolated (by way of shut-off valves) in part of the system located away from the leak.

Removal and discharge

- When accessing the cooling circuit to carry out repairs, or for any other reason, conventional procedures must be employed. However, for flammable refrigerants, the recommendations must be complied with in order to take account of the product's flammability. The following procedure must be followed:
  - remove the refrigerant;
  - purge the circuit with an inert gas;
  - drain;
  - purge with an inert gas;
  - open the circuit by cutting or soldering.
- The refrigerant charge must be recovered in suitable recovery cylinders. For appliances containing R290, the system must be bled with nitrogen devoid of oxygen to make the appliance suitable for receiving flammable refrigerants. You may need to repeat this process several times. Compressed air or oxygen must not be used to purge cooling systems.

Loading procedures

- Check that the vacuum pump outlet is not located in the vicinity of any potential ignition source and that ventilation is provided.
- In addition to conventional charging procedures, the following requirements apply.
  - Check that there is no possibility of cross-contamination between the different refrigerants when using charging equipment. Hoses or lines must be as short as possible to reduce the quantity of refrigerant contained therein.
  - Cylinders must be kept in an appropriate position, in accordance with the instructions.
  - Check that the cooling system is grounded before charging the system with refrigerant.
  - Label the system once charging is complete (if this is not already the case).
  - Pay close attention to not overfilling the cooling system.
- Before recharging the system, carry out a pressure test using a suitable purge gas. The system must be examined to make sure there are no leaks after the charging operation and before commissioning. A follow-up leak test must be carried out before leaving the site.

Dismantling

- Before dismantling, the technician must familiarise himself/herself with the equipment and its specifications. We highly recommend carefully recovering all refrigerants. Before this, oil and refrigerant samples must be taken if analyses are to be carried out before any other use of the recovered refrigerant. Check for the presence of a power supply before starting work.

1. Familiarise yourself with the equipment and how it operates.
2. Electrically isolate the system.
3. Before starting work, check the following points:
   - mechanical handling equipment is available if needed to handle the refrigerant cylinders;
   - all personal protective equipment is available and used correctly;
   - the recovery process is followed at all times by a cognizant person;
   - the recovery cylinders and equipment comply with the relevant standards.
4. Drain the cooling system where possible.
5. If a vacuum cannot be created, install a manifold in order to be able to remove the refrigerant from various locations within the system.
6. Make sure that the cylinder is located on the scales before starting recovery operations.
7. Start the recovery unit and operate as per its instructions.
8. Do not overfill the cylinders (no more than 80% of the volume must be filled with liquid).
9. Do not exceed the maximum working pressure of the cylinder, even temporarily.
10. When the cylinders have been filled correctly and the process is complete, check that the cylinders and the equipment are quickly removed from the site and that the alternative shut-off valves on the equipment are closed.
11. The recovered refrigerant must not be charged in another cooling system, unless it has been cleaned and inspected.

3.2.2 User maintenance

- Clean your pool and the water system regularly to avoid the damage of the unit.
- Clean the evaporator 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	• 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 -20 °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 -20°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. Turn 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 -20 °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. 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 : defrost cycle is activated when air/water temperature is less than 2°C and when the heat pump has been shut down for more than 120 minutes. It is automatically deactivated when the air/water temperature is greater than or equal to 2°C. • 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.

4.2 I Error code display

• : Actions to be performed by a qualified technician only.

If an error occurs, the ⚠ icon is displayed and an error code replaces the temperature indications, see table below to find the possible causes.

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Display	Possible causes	Solutions
Er20 (01) *Excessive internal current (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	IPM module failure	Replace the board connected to the compressor (main board or compressor board depending on the model)
Er20 (02) *Compressor failure (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Compressor failure	Replace the compressor
Er20 (16) *Internal voltage too low*	Input voltage too low/PFC module failure	Replace the board connected to the compressor (main board or compressor board depending on the model)
Er20 (260) *AC input voltage too high*	Input three-phase unbalance	Check the input three-phases voltage
Er20 (264) *AC input voltage too low*	Input voltage too low	Check input voltage
Er20 (288) *Internal temperature too high*	• Fan motor failure • Obstructed air flow	Check fan motor Check air duct
Er03 *Lack or absence of water flow*	Insufficient water in heat exchanger	Check your water circuit operation and the opening of the by-pass valves
	Flow controller disconnected or faulty	Reconnect or replace sensor
Er04 *Antifreeze protection*	Protection activated when the ambient temperature is too low and the appliance is on standby	No intervention necessary

E05 *High pressure protection* *If this error occurs 3 times in 30 minutes, unplug the pump to clear the error.*	Insufficient water flow	Check water pump operation and openings of by-pass inlet/outlet valves Check the correct operation of the flow controller
	Excess refrigerant gas	Check and readjust the refrigerant volume
	Defective 4-way valve	Replace the 4-way valve
	High pressure switch disconnected or defective	Reconnect or replace high pressure switch
E06 *Low pressure protection* *If this error occurs 3 times in 30 minutes, unplug the pump to clear the error.*	Insufficient refrigerant gas	Check and readjust the refrigerant volume
	Defective 4-way valve	Replace the 4-way valve
	Low pressure switch disconnected or defective	Reconnect or replace low pressure switch
E09 *Connection error between the main board and the HMI board*	Bad connection	Check wiring connections between remote control and PCB
	Defective HMI board	Replace the HMI
	Defective main board	Replace the main board
E010 *Connection error between the main board and the compressor driver board*	Bad connection	Check wiring connections between PCB and inverter module
	defective compressor driver board	Replace the compressor driver board
	Defective main PCB	Replace the main board
E11 *Temperature difference too high between inlet and outlet water temperature* *If this error occurs 3 times in 30 minutes, unplug the pump to clear the error.*	Insufficient water flow	The error code will disappear after 3 minutes and the unit will start working again.
E12 *Compressor discharge gas temperature too high*	Insufficient refrigerant gas	Check and readjust the refrigerant volume and check for gas leaks
E13 *Outdoor air temperature range protection*	The outdoor air temp is beyond the unit working temp range	Unit stops working (please wait)
	The sensor is abnormal or too close to the heat exchanger surface	Change the position for ambient temp sensor to right position
E14 *Water temperature at outlet too low for cooling mode*	Insufficient water flow	Check water pump operation and openings of by-pass inlet/outlet valves
E15 *Water intake temperature sensor malfunction*	Sensor disconnected or defective	Reconnect or replace sensor
E16 *Evaporator temperature sensor error*	Sensor disconnected or defective	Reconnect or replace sensor
E18 *Compressor discharge gas temperature sensor error* *If this error occurs 3 times in 30 minutes, unplug the pump to clear the error.*	Sensor disconnected or defective	Reconnect or replace sensor

Er21 *Outside air temperature sensor error*	Sensor disconnected or defective	Reconnect or replace sensor
Er27 *Water outlet sensor error*	Sensor disconnected or defective	Reconnect or replace sensor
Er29 *Water inlet temperature sensor error*	Sensor disconnected or defective	Reconnect or replace sensor
Er33 *Evaporator temperature too high in cooling mode*	Ambient or water temperature too high	Make sure the unit is working in the available temperature range for ambient and water temp
	Poor heat exchanger for evaporator	Check if the evaporator is blocked and clean
	Gas pipe blocked for cooling system	Check if the gas pipe is blocked
	Defective temperature sensor	Replace temperature sensor
	Defective fan motor	Check and replace fan motor
Er34 *Fan motor error* *If this error occurs continuously 6 times, unplug the pump to clear the error.* *When the error occurs, the unit tries to restart the fan every 10s and decides if the fan is normal after 20s of operation.*	Defective fan motor	Replace fan motor
	Board powering the fan is defective	Replace the PCB
	Defective fan blade or blocked	Clean the fan blade or replace a new one
Er40 *Absence of a phase* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	The compressor is no longer powered on 3 phasesntrol	Check the connections
		Replace the main board
Er41 *Compressor current protection (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Check if the refrigerant is sufficient and the vacuum of the system if sufficient
		Replace drive PCB
		Replace compressor
Er45 *Internal temperature error on electronics* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Replace the main board
Er46 *Input power abnormal error (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Check if the input voltage is normal
		Replace drive PCB
Er47 *Power supply current too high (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Check if the refrigerant is sufficient and the vacuum of the system if sufficient
		Replace the main board
		Replace compressor

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Er48 *Internal temperature error on electronics (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Replace drive PCB
Er49 *Internal electrical error (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Replace main board Replace compressor
Er50 *Internal temperature error on electronics (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Replace main board
Er51 *Software error (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Replace the main board
Er52 *Internal voltage too low (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Abnormal driving control	Replace the main board
Er99 *VDC voltage too low protection (unit stops working)* *If this error occurs 6 times in 60 minutes, unplug the pump to clear the error.*	Software error	Replace the main board

4.3 I Displaying the working parameters

- **Modifying the default settings must be performed by a qualified technician only to facilitate maintenance or future repairs.**

To access to the working parameters:

- Unlock the keypad: the main menu is displayed.
- Press SET four times : the icon flashes,
- Press > to browse through the available parameters.
- Press SET to return the main menu.

The parameters that can be displayed are listed in the following table.

Code	Description
r1	Compressor discharge gas temperature
r2	Compressor suction gas temperature
r3	Inlet water temperature
r4	Outlet water temperature
r5	Temperature evaporator
r6	Outdoor air temperature

F7	IPM temperature
F8	Indoor coil temperature
F9	(reserve)
F10	(reserve)
F11	(reserve)
Ft	Target frequency
Fr	Current frequency
1F	Main EEV opening
2F	Auxiliary EEV opening
od	Operating mode : 1: Cooling / 4: Heating
Pr	Fan speed (DC - value*10)
dF	Defrosting condition
OIL	Oil return situation
r1	(reserve)
r2	Heating cable condition
r3	(reserve)
SFF	4 way valve status
HF	(reserve)
PF	(reserve)
PFF	(reserve)
Pu	Heating priority output status
AH	High fan speed
Ad	Medium fan speed
AL	Low fan speed
dcU	DC bus voltage
dcC	Compressor current
AcU	Input voltage
AcC	Input current
HE1	History error code
HE2	History error code
HE3	History error code
HE4	History error code
Pr	Protocol version
Sr	Software version

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4.4 I Accessing to system parameters

- **Modifying the default settings must be performed by a qualified technician only to facilitate maintenance or future repairs.**

To access to the system parameters:

- Unlock the keypad: the main menu is displayed.
- Press SET five times : **SET** icon flashes.
- Press >. The screen displays "000".
- Press simultaneously SET and > for 3 seconds. A signal tone will sound.
- Press SET. The first number flashes. Press < or > to enter the password : 138. Validate each number by pressing SET,
- Press > to browse through the available parameters (see following table) and press SET to modify the parameter,
- Pressing < or > to modify the value and validate by pressing SET,
- Press SET for 3 seconds to return to the main screen.

The parameters that can be modified are listed in the following table.

Code	Name	Range	Default
L0	Heating priority	0 : Heating priority output active (P1P2 powered) 1: Heating priority activated	1
L1	Period between 2 filtration pump starts	Filtration pump works 5 min per L1 min (L1 range : 3 - 180) to check if heating is needed	120
L2	Timer setting	0 : timer function OFF 1 : timer function ON	1
L3	Power OFF remember function	0 : OFF 1 : ON	1
L4	Background light setting	0 : No background light 1 : light ON constantly 2 : light ON if operating, light OFF if no operation	2
L5	Unit operation mode	0 : Heating only 1 : Cooling only 2 : Heating & Cooling 3 Cooling / Heating / Auto / Quick Heating / Ecosilence / Heating mode / Quick Cooling / Ecosilence / Cooling mode	3

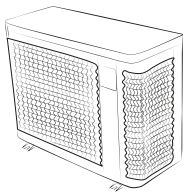
4.5 I Wiring diagrams

- See the wiring diagrams at the end of the document.

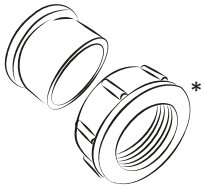
5 Characteristics

5.1 I Description

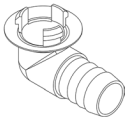
A



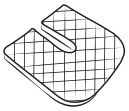
B



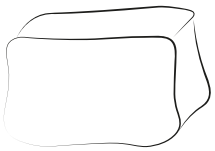
C



D



E



A		Z260iQ
B	Hydraulic inlet/outlet connectors **(x2)**	✔
C	Condensate drainage kit (Ø18) + pipe **(x2)**	✔
D	Anti-vibration pads **(x4)**	✔
E	Winterising cover	✔

* already mounted on the appliance. Two protective caps are placed behind the connectors. Remove them the first time the appliance is used. Keep them for later use (winterising).

✔: Included

⊕: Available as an accessory

EN

5.2 I Technical data

Performances : air at 26 °C / water at 26 °C / humidity at 80 %		MD3	MD4	MD5	MD6
Operating power (max-min speed)	kW	10,0 - 3,6	13,0 - 5,1	15,5 - 5,5	19,5 - 7
Consumed power (max-min speed)	kW	1,6 - 0,3	2,1 - 0,5	2,6 - 0,4	3,5 - 0,5
COP (max-min speed)		6,2 - 12,2	6,1 - 11,2	6,1 - 12,4	5,6 - 12,5

Performances : air at 15 °C / water at 26 °C / humidity at 70 %		MD3	MD4	MD5	MD6
Operating power (max-min speed)	kW	8,0 - 2,7	10,0 - 3,9	12,0 - 3,9	15,0 - 4,8
Consumed power (max-min speed)	kW	1,6 - 0,3	2 - 0,5	2,4 - 0,5	3,2 - 0,7
COP (max-min speed)		4,8 - 7,7	4,9 - 7,3	4,9 - 7,8	4,6 - 6,7

Technical specifications		
Operating temperature	Air	-20 to 43°C
	Water	In “heating mode” from 15 to 40°C In “cooling mode” from 8 to 28°C
Operating pressure	Refrigerant	from 0,5 to 25 bar (from 0.05 to 4.2 MPa)
	Water	from 0 to 2 bar (from 0 to 2.5 MPa)
Power supply		175V - 270V ~ / 1 phase / 50-60 Hz
Admissible variation in voltage		± 6 % (during operation)
Hydraulic connections		2 PVC Unions Ø 50
Type of refrigerant fluid		R290
Protection rating		IPX4
Frequency bands	GHz	2.400 - 2.497
Radiofrequency emission power	dBm	+19.5
Installation location		Outdoors

Technical specifications		MD3	MD4	MD5	MD6
EN 17645 rating		A	A	A	A
EN 17645 SCOP		8.2	7.8	8.4	8.2
Nominal operating power	A	7,2	9,0	10,6	14,1
Max operating power	A	10	12,5	16,5	18,5
Minimum cable section*	mm²	3 x 2,5		3 x 4	
Acoustic power** (max-min)	dB(A)	63		64	71
Acoustic pressure at 10m** (max-min)	dB(A)	32		33	40
Recommended water flow	m³/h	4	5	6	7
Refrigerant fluid load	kg	0,42	0,49	0,69	0,77
	Tonn CO2 eq.	0.01	0.01	0.02	0.02
Approximate weight	kg	66	67	78.5	84

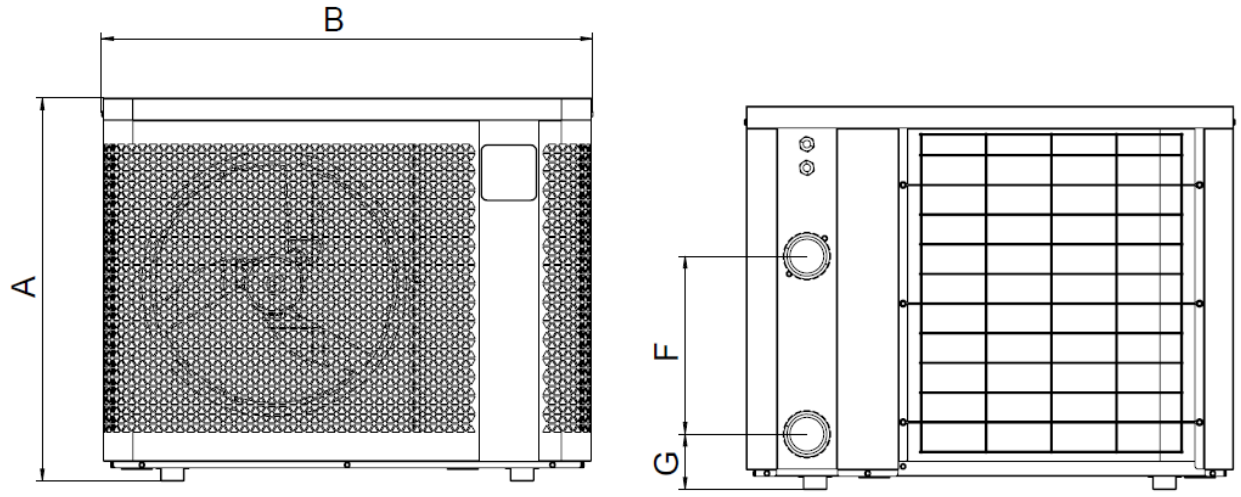
The technical specifications are provided for information purposes only. The manufacturer reserve the right to make changes without prior notice.

* 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.

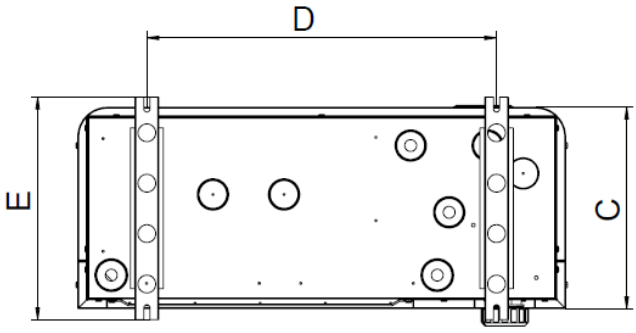
** Acoustic values at 10 m in accordance with Directives EN60704-1:2010+A11:2012 standard

5.3 I Dimensions

5.3.1 Appliance dimensions



Front | Rear



Bottom

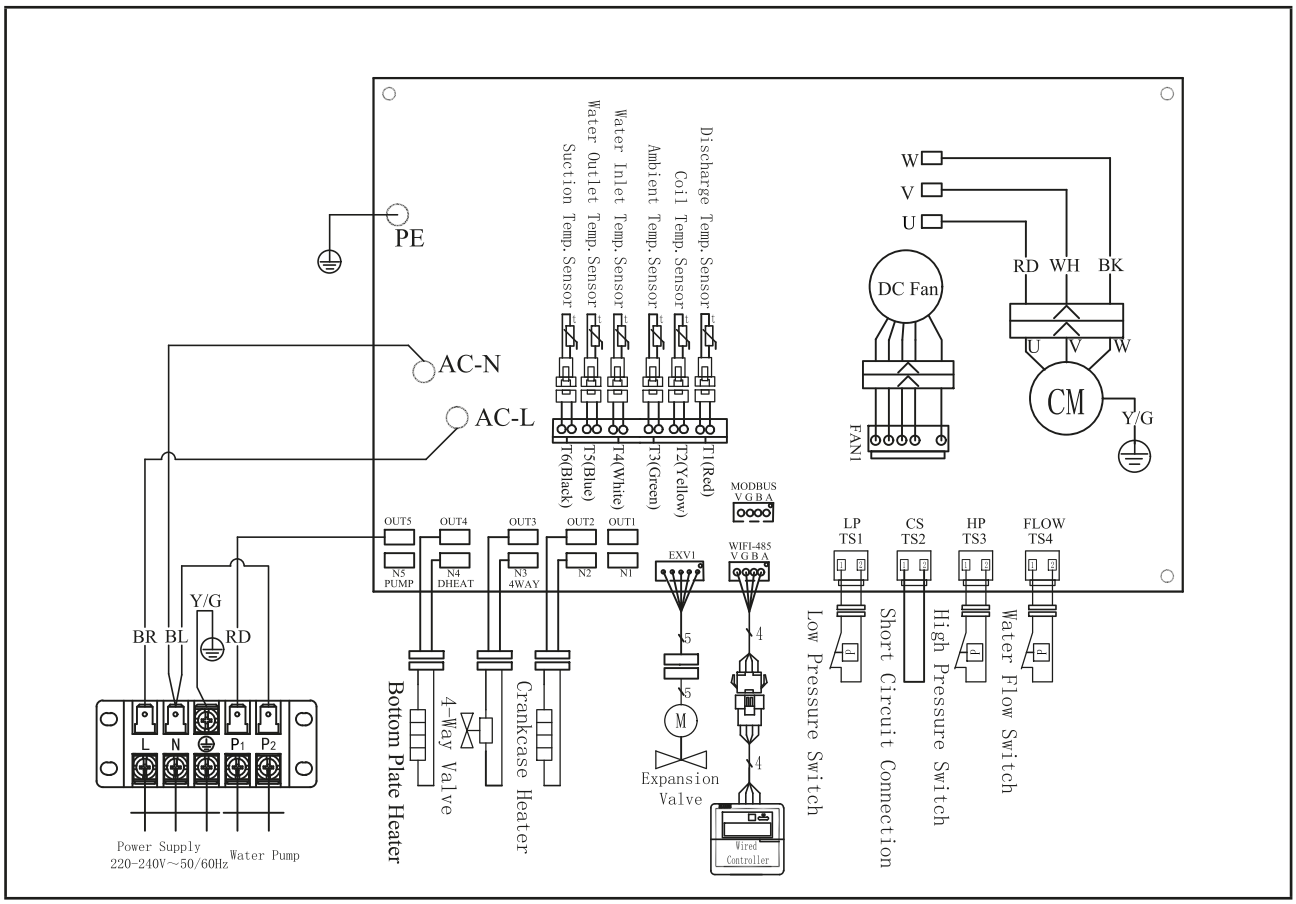
	A	B	C	D	E	F	G
MD4	750	1135	392	721	423.5	275	110
MD5							
MD6						390	
MD8							

* Dimensions in mm.

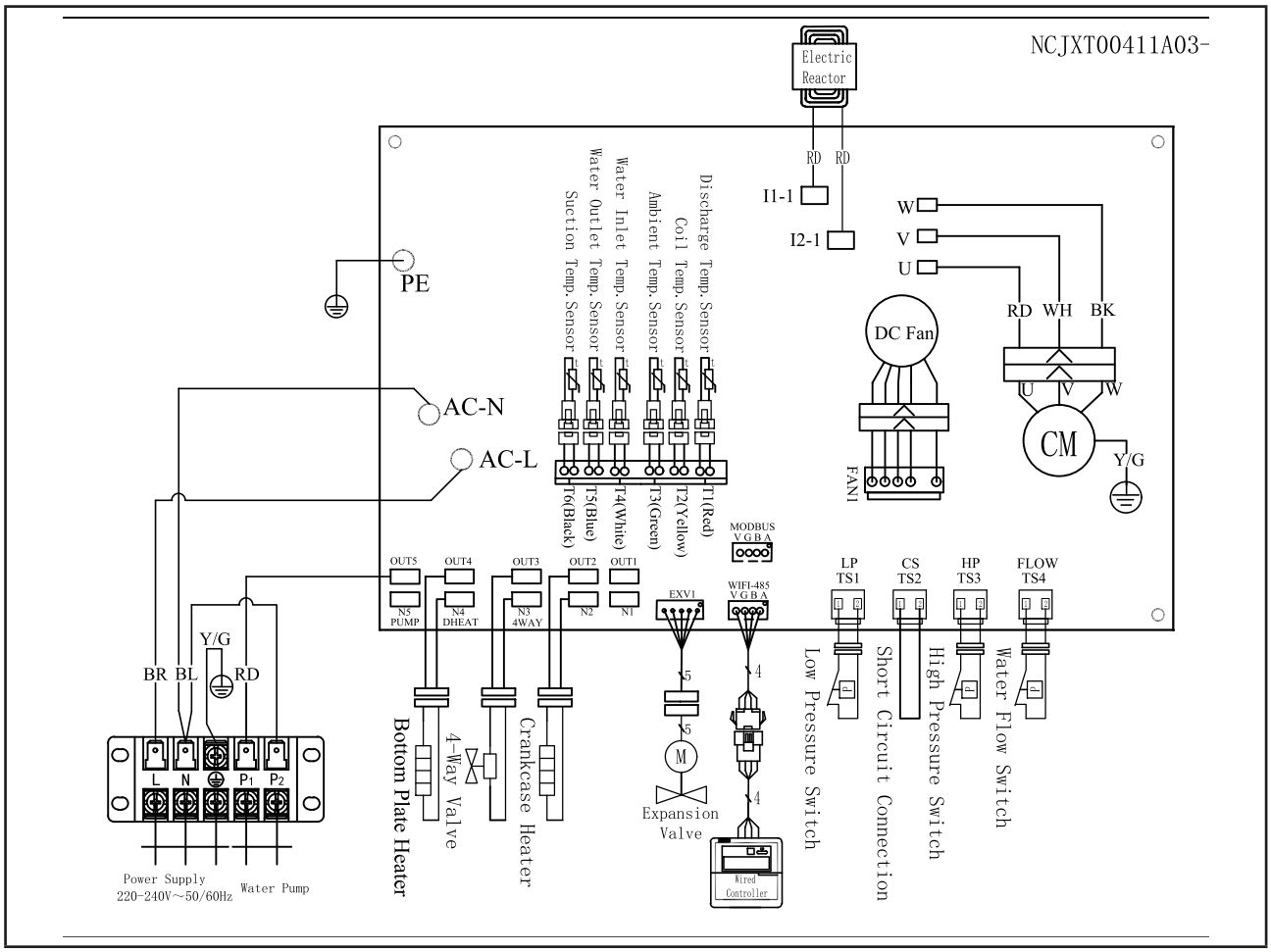
EN

Schémas électriques / Wiring diagrams / Schaltpläne / Schakelschema's / Esquemas eléctricos / Diagramas de cablagem / Diagrammi di cablaggio

4.6.1 MD4 - MD5



4.6.2 MD6 - MD8


NCJXT00411A03-
Electric Reactor
RD RD
I1-1
I2-1
W
V
U
RD WH BK
DC Fan
FAN1
U V W
CM
Y/G
PE
AC-N
AC-L
Discharge Temp. Sensor
Coil Temp. Sensor
Ambient Temp. Sensor
Water Inlet Temp. Sensor
Water Outlet Temp. Sensor
Suction Temp. Sensor
T1(Red)
T2(Yellow)
T3(Green)
T4(White)
T5(Blue)
T6(Black)
MODBUS V G B A
WIFI-485 V G B A
EXV1
OUT5 OUT4 OUT3 OUT2 OUT1
N5 PUMP
N4 DHEAT
N3 4WAY
N2
N1
LP TS1
CS TS2
HP TS3
FLOW TS4
Low Pressure Switch
Short Circuit Connection
High Pressure Switch
Water Flow Switch
Y/G
BR BL RD
L N P1 P2
Power Supply
220-240V~50/60Hz
Water Pump
Bottom Plate Heater
4-Way Valve
Crankcase Heater
Expansion Valve
M
Wired Controller

EN	FR	DE	NL	ES	PT	IT
Power supply	Alimentation électrique	Stromversorgung	Voeding	Alimentación eléctrica	Alimentação elétrica	Alimentazione elettrica
Water pump	Pompe de filtration	Wasserpumpe	Waterpomp	Bomba de agua	Bomba de água	Pompa dell'acqua
Discharge temp. sensor	Sonde température de refoulement	Austritts--temperaturfühler	Afvoertemperatuursensor	Sensor de temperatura de impulsión	Sensor temp. descarga	Sensore temp. scaricamento
Evaporator temp. sensor	Sonde température évaporateur	Temperaturfühler Verdampfer	Temperatuursensor verdamper	Sonda de temperatura evaporador	Sonda temperatura evaporador	Sonda temperatura evaporatore
Ambient aire temp. sensor	Sonde de température air ambiante	Umgebungslufttempera-turfühler	Temperatuursensor omgevingslucht	Sensor de temperatura aire ambiente	Sonda de temperatura do ar ambiente	Sonda temperatura aria ambiente
Inlet water sensor	Sonde entrée d'eau	Einlasswasserfühler	Inlaatwatersensor	Sensor de entrada de agua	Sensor água de entrada	Sensore entrata acqua
Outlet water sensor	Sonde sortie d'eau	Auslasswasserfühler	Uitlaatwatersensor	Sensor de salida de agua	Sensor Água de saída	Sensore uscita acqua
Compressor suction gas temp sensor	Sonde température gaz, aspiration compresseur	Gastemperaturfühler an der Saugseite des Kompressors	Temperatuursensor gas, aanzuiging compressor	Sonda de temperatura gas, aspiración del compresor	Sensor temperatura gás, aspiração compressor	Sonda temperatura gas, aspirazione compressore
Water Flow switch	Interrupteur de débit d'eau	Wasserdurchflussschalter	Waterstroomschakelaar	Interruptor de caudal de agua	Interruptor caudal de água	Interruttore portata d'acqua
High Pressure switch	Pressostat Haute pression	Hochdruckschalter	Hogedrukschakelaar	Presostato de alta presión	Interruptor Alta pressão	Interruttore alta pressione
Bridge	Pont	Kurzschlussanschluss	Brug	Puente	Ponte	Ponte
Low pressure switch	Pressostat Basse pression	Niederdruckschalter	Lage-drukschakelaar	Presostato de baja presión	Interruptor baixa pressão	Interruttore pressione bassa
Display	Afficheur	Display	Display	Pantalla	Display	Display
DC Fan	Moteur ventilateur	DC Gebläse	DC-ventilator	Ventilador CC	Ventilador DC	Ventola
Reactor	Réactance	Blindwiderstand	Reactantie	Reactor	Reator	Bobina di reattanza
PFC	PFC	PFC	PFC	PFC	PFC	PFC
CM (compressor)	PFC CM (compresseur)	CM (Kompressor)	CM (compressor)	Compresor	CM (compressor)	CM (compressore)
N (Neutral)	N (neutre)	N (Neutral)	N (nulleider)	Neutro	N (Neutro)	N (Neutro)
L (Live)	L (tension)	L (Live)	L ('Live', onder spanning)	Fase	L (Potência)	L (Fase)
PE	PT (Protection Terre)	Schutzerdung	PE (aardbeveiliging)	Protección tierra	PE	PE
GND (Ground)	Terre	Erde	Aarde	Tierra	Terra	Terra
PUMP	Pompe	PUMP	POMP	Bomba	BOMBA	POMPA
4WAY	Vanne 4 voies	4WAY	4WAY	Válvula 4 vías	4WAY	4WAY
EXV	EEV (détendeur électronique)	EEV	EEV	Válvula de expansión electrónica	EEV	EEV
LP (Low pressure)	Basse pression	LP (Niederdruck)	LD (lage druk)	Baja presión	Baixa pressão	LP (Pressione bassa)
CS	CS (connexion en court-circuit) Shunt	Shunt	Shunt	Shunt	Curto-circuito	Shunt
HP (High pressure)	Haute pression	HP (Hochdruck)	HD (hoge druk)	Alta presión	Alta pressão	HP (Pressione alta)
EEV (Electronic Expansion Valve)	Détendeur électronique	EEV (Elektronisches Expansionsventil)	EEV ('Electronic Expansion Valve', elektronische expansieklep)	Válvula de expansión electrónica	EEV (válvula de expansão eletrónica)	EEV (Valvola di espansione elettronica)
Y/G (Yellow/ Green)	Jaune/vert	Y/G (gelb/grün)	Y/G ('Yellow'/'Green', geel/ groen)	Amarillo/Verde	Amarelo/Verde	Y/G (Giallo/Verde)
Red	Rouge	Rot	Rood	Rojo	Vermelho	Rosso
Yellow	Jaune	Gelb	Geel	Amarillo	Amarelo	Giallo
Green	Vert	Grün	Groen	Verde	Verde	Verde
White	Blanc	weiß	Wit	Blanco	Branco	Bianco
Blue	Bleu	blau	Blauw	Azul	Azul	Blu
Black	Noir	Schwarz	Zwart	Negro	Preto	Nero

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