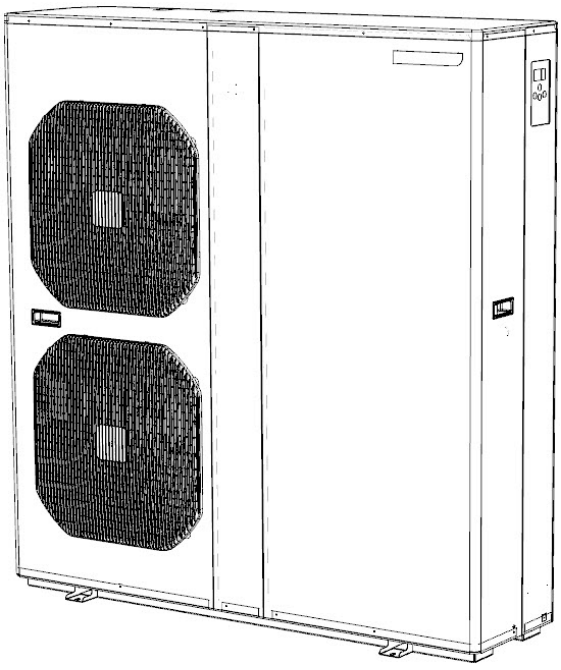
Power Force

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

EN



More documents on:
www.zodiac.com

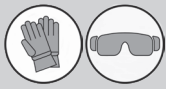
H0361900_REVH - 2020/12

⚠ WARNINGS

- 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 reference during the appliance's service life.
- The distribution or modification of this document in any way is prohibited, without prior authorisation from Zodiac®.
- Zodiac® is constantly developing its products to improve their quality. The information contained herein may therefore be modified without notice.

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 individuals (including children) with impaired physical, sensorial or mental abilities, or persons lacking in knowledge and experience, unless they receive supervision or prior instructions on using the appliance from a person responsible for their safety. Children must be supervised to ensure that they do not play with the appliance.
- This appliance can be used by children under 8 and adults with impaired physical, sensory or mental capabilities, or who lack experience and knowledge, if they are correctly supervised or have been instructed in how to use the appliance safely and understand the hazards involved. User cleaning and maintenance operations must not be carried out 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 (flammable or non-flammable) 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.
- Do not use any extension lead when connecting the appliance; connect the appliance directly to a suitable power supply.
- A suitable disconnection method, compliant with all local and national regulations on category III overvoltage, and which disconnects all poles of the power supply circuit, must be installed on the power supply circuit to the appliance. This disconnection method is not provided with the appliance and must be supplied by the professional fitter.
- 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.
- For any component or sub-assembly containing a battery: do not recharge or dismantle the battery, or throw it into a fire. Do not expose it to high temperatures or direct sunlight.
- In stormy weather, disconnect the appliance from the power supply to prevent it from suffering lightning damage.
- Do not immerse the appliance in water (with the exception of cleaners) or mud.

WARNINGS CONCERNING APPLIANCES CONTAINING R410A REFRIGERANT

- Do not discharge R410A fluid into the atmosphere. This is a fluorinated greenhouse gas, covered by the Kyoto Protocol, with a Global Warming Potential (GWP) = 2088 (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.

INSTALLATION AND MAINTENANCE

- The appliance may not be installed close to combustible materials, or the air duct inlet of an adjacent building.
- With some appliances, it is essential to fit a "protection grid"-type accessory if the unit is installed in an area with uncontrolled access.
- 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 (for R410A) in cases where the appliance is equipped with the optional pressure gauge.
- 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.

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 the 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

- **The device must be installed at a minimum distance from the pool's surrounding edge. This distance is determined by the electrical standards which apply in the installation country.**
- **Do not lift the device by the body; use its base.**

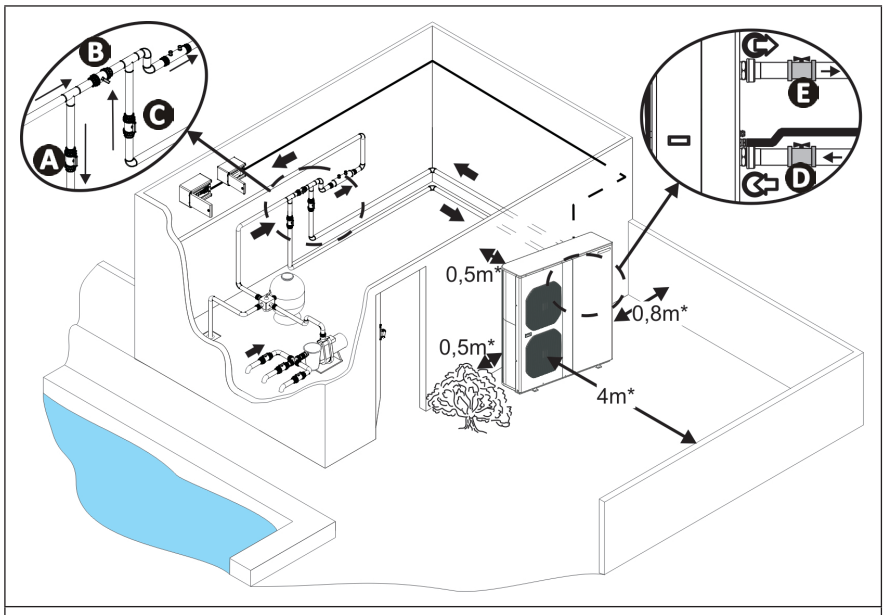
- Install the device outdoors; provide free space around it (see § “1.2 I Hydraulic connections”).
- Install the 4 anti-vibration studs under the base and place the device on a stable, solid and level surface.
- This surface must be able to bear the weight of the device (in particular in the case of 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.

The device must not be installed:
- In a location subject to high winds,
- With the blowing towards a permanent or temporary obstacle (window, wall, hedge, awning, etc.) less than 4 metres away,
- 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 condensation produced by the device when operating.

Tip: reduce any noise annoyance from your heat pump
- Do not install it under or towards a window.
- Do not tilt it towards your neighbours.
- Install it in a clear space (the sound waves are reflected on surfaces).
- Install an acoustic screen around the heat pump, respecting the distances.
- Install the anti-vibration studs under the heat pump and replace them regularly.
- Install 50cm of flexible PVC pipe at the heat pump water input and output (stops vibrations).

1.2 I Hydraulic connections

- The device will be connected with a Ø63 PVC pipe, using the half union connectors supplied, 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 device.
- Adjust the water flow with valve A and leave valves B, C, D and E open.



Connection to a standard filtration circuit

Ⓐ: water entry valve

Ⓑ: by-pass valve

Ⓒ: water exit valve

Ⓓ: water entry adjustment valve (optional)

Ⓔ: water exit adjustment valve (optional)

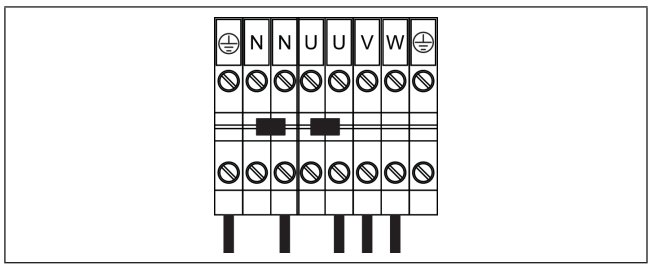
* minimum distance

Tip: condensation drainage
Caution, several litres of water must be drained from your device each day. We strongly recommend connecting the drainage to the sewers

1.3 I Electricity supply connections

- **Incorrectly tightened terminals may cause the terminal unit to heat up and invalidate the warranty.**
- **Before any work inside the device, 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 in the equipment or to replace the supply cable.**
- **The installer must consult the electricity provided 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 device is provided for connection to a general power supply with a TT and TN.S neutral regime.
- Electrical protection: by circuit breaker (D curve) (for calibre, see § “5.2 I Technical specifications”), with a 30 mA dedicated differential circuit breaker (circuit breaker or switch).
- Additional protection may be required during installation to guarantee the II overvoltage category.
- The electricity supply must correspond to the voltage indicated on the device's information plate.
- The electricity supply cable must be insulated against any cutting or hot elements that may damage or crush it.
- The equipment must be connected to an earth socket.
- The electrical connection lines must be fixed.
- Use the gland to pass the supply cable into the device.
- Use the supply cable (RO2V type) adapted for outdoor or buried use (or run the cable into a protection duct) with an external diameter of between 9 and 18mm.
- We recommend burying the cable at a depth of 50 cl (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 supply cable to the connection terminal unit inside the device.



U-V-W: live

N: neutral

⏚: earth

1.4 I Option connections

<u>Connecting the "Heating priority", "On/off command" and "Alarm" options</u>:

- **Any incorrect connection to terminals 1 to 8 may damage the device and cancel its warranty.**
- **Under no circumstances should the filtration pump motor be supplied via terminals 1-2.**
- **When intervening on terminals 1 to 8, there is a risk of electrical return current, injuries, material damage and death.**
- **Use cables with a section of at least 2x1.5mm² , RO2V type and with a diameter between 8 and 13mm.**
- **Use the gland to pass the cables into the device. The cables used for the options and the supply cable must be kept separate (risk of interference) using a collar inside the device just after the glands.**

1.4.1 "Remote control" option

- This option enables the device's user interface to be duplicated to enable the device to be controlled by remote. To do so, use the remote control kit available as an option.
- For the connection, consult the manual supplied with the kit.

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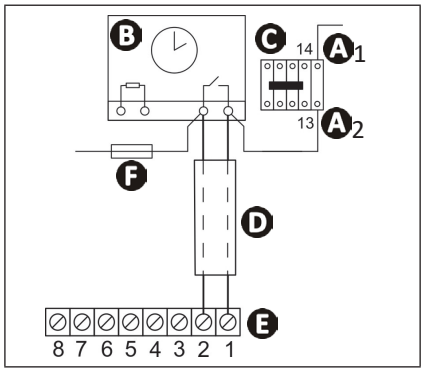
1.4.2 "Heating priority" option

- This function helps to keep the water temperature constant by checking the water temperature at regular time intervals (minimum 5 minute cycle every 60 minutes) by filtration pump control. The filtration is kept operating if the pool temperature is below the temperature requested.
- For the connection, connect the filtration timer to terminals 1 and 2 (dry contact, no polarity, maximum intensity 8A).



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

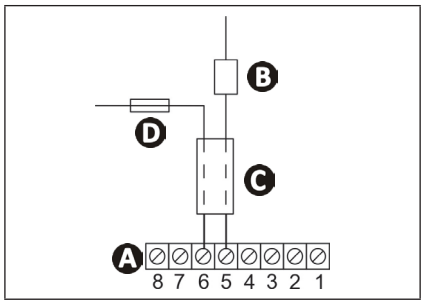
D: separate cable for the "heating priority" function

E: heat pump terminal unit

F: fuse

1.4.1 "Alarm" option

- This option enables a relay to be connected to the alarm contact to indicate a fault by remote.
- For the connection, connect the cables to terminals 5 and 6 (dry contact, no polarity, maximum intensity 2A).



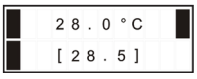
A: heat pump terminal unit

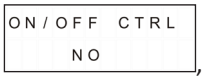
B: alarm contact relay

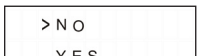
C: separate connection cable

D: fuse

1.4.3 Remote "on/off" control option

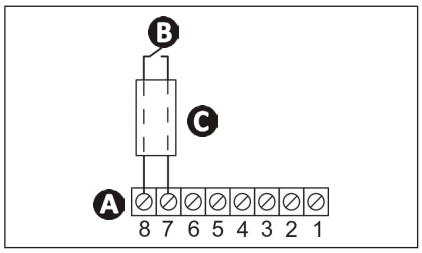
- This option enables the "on/off" button function to be transferred via a switch installed by remote.
- For the connection, remove the shunt between terminals 7-8 and connect the switch cable in place (potential free contact, no polarity, 220-240V ~ 50Hz).
- Activate the command by pressing **SET** for 5 seconds when the regulation is not on standby: 

then 

,
- Press **SET** for 3 seconds: 

,
- Select "Yes" with ▼, then validate by pressing **SET**: 

,
- Press ⏻ to exit.



A: heat pump terminal unit

B: remote "on/off" switch

C: separate connection cable

2 Use

2.1 I Operating principle

Your 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, your 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 warmer and damper the air, the better your heat pump will perform. The outdoor parameters for optimum operation are an air temperature of 27°C, a water temperature of 27°C and 80% hygrometry.

Tip: improve your pool's temperature rise and maintenance

- Anticipate the commissioning of your pool far enough in advance before you use it.
- For the temperature rise, set the water circulation to continuous operation (24/24).
- To maintain the temperature throughout the season, run "automatic" circulation for at least 12 hours/day (the longer this time the longer the heat pump will have enough operating range to heat up).
- Cover the basin 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 (adjusting the setpoint to maximum will not heat the water more quickly).
- Connect the "Heating priority"; the filtration pump and heat pump operating time will be set according to requirements.

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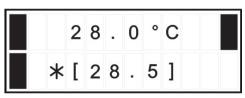
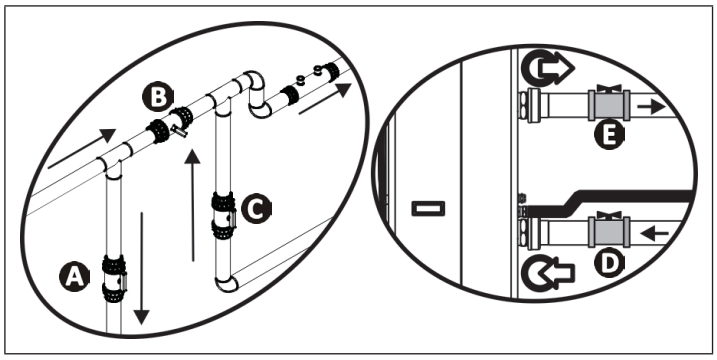
2.2 User interface presentation

	Water temperature Setpoint temperature (✳ = cold mode)
	"On/off" button
SET	Pool water temperature reading or parameter setting button
	Value setting buttons

Symbol	Designation	Fixed	Flashing
	Water flow	Water flow ok	Water flow too low or missing
	Power indicator	Heating or cooling	Waiting for operating request
	Ambient air temperature	Sufficient	Insufficient
	Defrost light	Defrosting	/

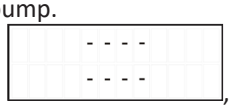
2.3 I Operating

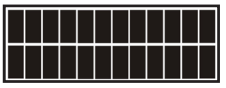
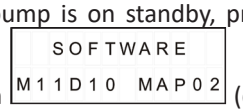
- Check that there are no tools or other foreign objects in the machine.
- The panel that provides access to the technical section must be put in place.
- Set the valves as follows: valve B wide open, valves A, C, D and E closed

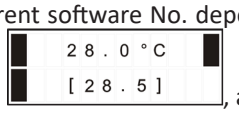


A: water entry valve
B: by-pass valve
C: water exit valve
D: water entry adjustment valve (optional)
E: water exit adjustment valve (optional)

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

- Check that the hydraulic corrections are correctly tightened and that there are no leaks.
- Check that the device is fully stable.
- Set the water circulation running.
- 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 ⏻,  appears for 2 seconds then 

(different software No. depending on the devices) for 3 seconds , and the water and setpoint temperatures are displayed 

, a 2 minute timer will start.
- Set the temperature you want ("setpoint" temperature).

After the start-up steps for your heat pump:

- Shut down the water circulation temporarily (by stopping the filtration or closing valve B or C) to check that you device stops after a few seconds (via the activation of the flow rate controller).
- Switch off the heat pump by pressing and holding ⏻ for 3 seconds and check that it stops.

2.4 I Additional user functions

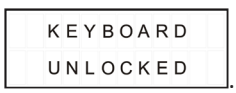
2.4.1 Adjusting the temperature setpoint

- Press ▲ to increase the temperature by 0.5 °C,
- Press ▼ to reduce the temperature by 0.5 °C.

The heat pump stops automatically when the pool reaches the required temperature.

2.4.2 Locking/unlocking the keyboard

Press and hold ▲ and ▼ for 3 seconds: 

or 

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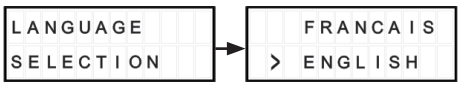
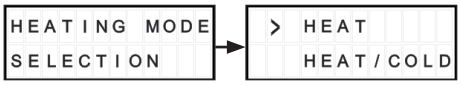
2.5 I Presentation of the menu

To access the menu, press **SET**.
To browse the menus and modify the values, press ▲ or ▼
To validate a selection, press **SET**.
To exit the menu, press ⏻.

❶ 

Select the language for the interface (2 languages available: French and English)

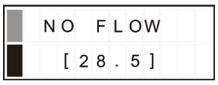
Optional

❷ 

Select the device's operating mode:
Water heating only
Water heating or cooling (automatic according to need)

❸ 

The light Ⓐ must be fixed.

No water flow: 

Water flow too low: 

or 

Water flow too high: 

or 

Set the rate using valve E (or C if no valve E).
In this setting phase, wait a few minutes after each valve position change for the device to balance out.

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3 Maintenance

3.1 I Wintering

- **Wintering is vital to prevent the condenser breaking due to freezing. This is not covered by the warranty.**
- **To avoid damaging the equipment with condensation, do not fully cover it.**

- 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 input and output connectors on the back of the heat pump,
- In the case of full wintering for the pool (complete shutdown of the filtration system, bleed the filtration circuit or even pool drainage): tighten the two connectors by one turn to prevent any foreign bodies from getting into the condenser,
- In the case of wintering 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 inputs and outputs.

3.2 I Maintenance

- **It is recommended that the device be general serviced at least on a yearly basis to ensure proper operation, maintain performance levels and prevent some potential failures. These operations are carried out at the user's expense, by a technician.**

3.2.1 User maintenance

- Make sure that the filter 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 condensation drainage pipe 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 device; do not use any solvent-based products. We can provide you with a specific cleaning kit as an option: the PAC NET, see § “5.1 I Description”.

3.2.2 Maintenance to be carried out by a qualified technician

- Check that the regulation is operating correctly connected.
- Check that the condensation flows correctly when the device is operating.
- 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 electrical unit is clean.

4 Troubleshooting

- **Before you contact your reseller, please carry out these few simple checks using the following tables if a problem occurs.**
- **If the problem continues contact your reseller.**
- **: Actions reserved for a qualified technician**

4.1 I Device behaviour

The device does not start heating straight away	• On start-up, the device remains "paused" for 3 minutes before it starts operating. • When the setpoint temperature is reached, the heat pump 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 heat pump stops: check that the water is circulating correctly in the heat pump (see § "2.5 I Presentation of the menu") and that the hydraulic connections are correct. • The heat pump stops when the outdoor temperature falls below -12 °C. • It may be that the heat pump has detected an operating fault (see § "4.2 I Error code display"). • If you have checked these points and the problem persists: contact your reseller.
The device is draining water	• Often called condensation. This water is the moisture contained in the air which condenses on contact with certain cold mechanisms in the heat pump, especially on the evaporator. The more damp the air, the more condensation your heat pump will produce (your device may drain several litres of water per day). This water is retrieved by the base of the heat pump and drained through a hole. • To check that the water is not coming from a leak in the pool circuit on the heat pump, shut down the heat pump and run the filtration pump for the water to circulate in the heat pump. If the water continues to flow through the condensation drains after half an hour, there is a water leak in the heat pump; contact your reseller.
The evaporator is iced over	• Your heat pump will soon switch to its defrost cycle to melt the ice. • If your heat pump cannot manage to deice its evaporator, it will stop itself; this means that the outdoor temperature is too low (below -12 °C).
The device is "smoking"	• This may occur when it is in a defrost cycle and the water is converted to gas.
The device is not working	• If there is no display, check the supply voltage and the F1 fuse. • When the setpoint temperature is reached, the heat pump 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 heat pump stops: check that the water is circulating correctly in the heat pump (see § "2.5 I Presentation of the menu"). • The heat pump stops when the outdoor temperature falls below -12 °C. • It may be that the heat pump has detected an operating fault (see § "4.2 I Error code display").
The device is working but the water temperature does not increase	• It may be that the heat pump has 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 your pool. • The heat pump 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 heat pump is the right size for this pool and its environment.
The ventilator is running but the compressor stops from time to time with no error message	• If the outdoor temperature is low, the heat pump will perform defrost cycles. • The heat pump 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 device trips the circuit breaker	• Check that the circuit breaker is correctly dimensioned and that the cable section used is the right one (see § "5.2 I Technical specifications"). • The supply voltage is too low; contact your electricity supplier. • The varistor(s) V1 and/or V11 may be damaged; replace them.

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4.2 I Error code display

Display	Possible causes	Solutions	Resetting
ERROR 01: FREEZE-UP Exchanger protection in cool mode	ST4 sensor temperature too low	Wait until the exterior temperature rises	Automatic
ERROR 02: T° OVERHEATING High temperature error on evaporator in "cooling" mode	ST3 sensor temperature over 60°C or evaporator scaled up	Clean the evaporator, if problem persists, call an approved technician	Automatic if ST3 sensor temperature below 450C
ERROR 03: COMP SECURIT Phase order fault	Cabling not respected on the appliance's supply terminals,	Invert phases on power terminals (appliance switched off)	By electricity supply disconnection or by pressing ⏻
	Electricity provider has changed the order of the phases	Contact the electricity provided to find out if your installation has been modified.	
	Temporary disconnection of the power supply to one or more phases		
ERROR 04: LP LOW PRESS Low pressure fault on cooling circuit	Pressure fault in the low pressure circuit (if problem persists after resetting)	Call an approved technician	Automatic (if fewer than 4 faults per hour) or press ⏻
ERROR 05: HP HIGH PRESS Cooling circuit high pressure fault	Water condenser scaled up	Clean the water condenser	Automatic (if fewer than 4 faults per hour) or press ⏻
	Insufficient water flow	Increase flow using by-pass, check that the pool filter is not clogged	
	Air and water emulsion passed into the device	Check the pool's hydraulic circuit	
	Flow controller blocked	Check the flow controller	
ERROR 06: COMPRES TEMP Compressor discharge temperature fault	Compressor discharge temperature too high	Call an approved technician	Press ⏻ for 3 seconds
ERROR 07:ST1 WATER INLET ST1 sensor fault water intake sensor	Sensor is faulty or offline (J12-A1 connector)	Reconnect or change the sensor	Cut power or press ⏻
ERROR 08:ST4 LIQUID LINE ST4 sensor fault fluid line sensor	Sensor is faulty or offline (J8-A1 connector)	Reconnect or change the sensor	By electricity supply disconnection or automatic if the fault disappears
ERROR 09:ST3 DEFROST TEMP ST3 sensor fault Defrost sensor	Sensor is faulty or offline (terminals 1-2 connector J3-A2)	Reconnect or change the sensor	Cut power or press ⏻
ERROR 10:ST2 AIR INLET ST sensor fault air intake sensor	Sensor is faulty or offline (terminals 3-4 connector J3-A2)	Reconnect or change the sensor	Cut power or press ⏻

Display of	Possible causes	Solutions	Resetting
ERROR 11:ST5 DISCHARGE CP ST5 sensor error compressor discharge sensor	Sensor is faulty or offline (J7-A1 connector)	Reconnect or change the sensor	By electricity supply disconnection or automatic if the fault disappears
ERROR 12: COMUNICATION Communication fault between the regulation board and the display board	Bad connection between the A1 and A2 boards	Check the J8, J9, J7 and J4-J5 connectors on the link cable between the boards	By electricity supply disconnection or automatic if the fault disappears
	Board power supply fault	Check the boards' power supply	
	Faulty boards	Replace the boards	
ERROR 13: VENTILATION Ventilation command fault	Lack of information on the fan speed	Call an approved technician	Cut power or press ⏻
ERROR 14: COM. VENTIL Communication fault with the A3 ventilation board	Poor connections	Check the connections	By electricity supply disconnection or automatic if the fault disappears
	Power supply fault	Check the power supply	
	Incorrect configuration	Check the position of switches SW1 and SW2 and the JPC bridge	
	Board out of service	Replace the board	

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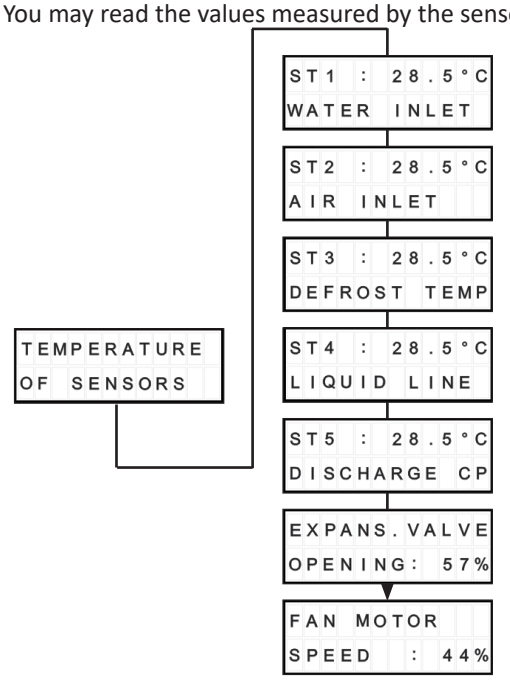
4.3 I Additional menus

To access the menu, press **SET**.
To browse the menus and modify the values, press ▲ or ▼
To exit the menu, press ⏻.

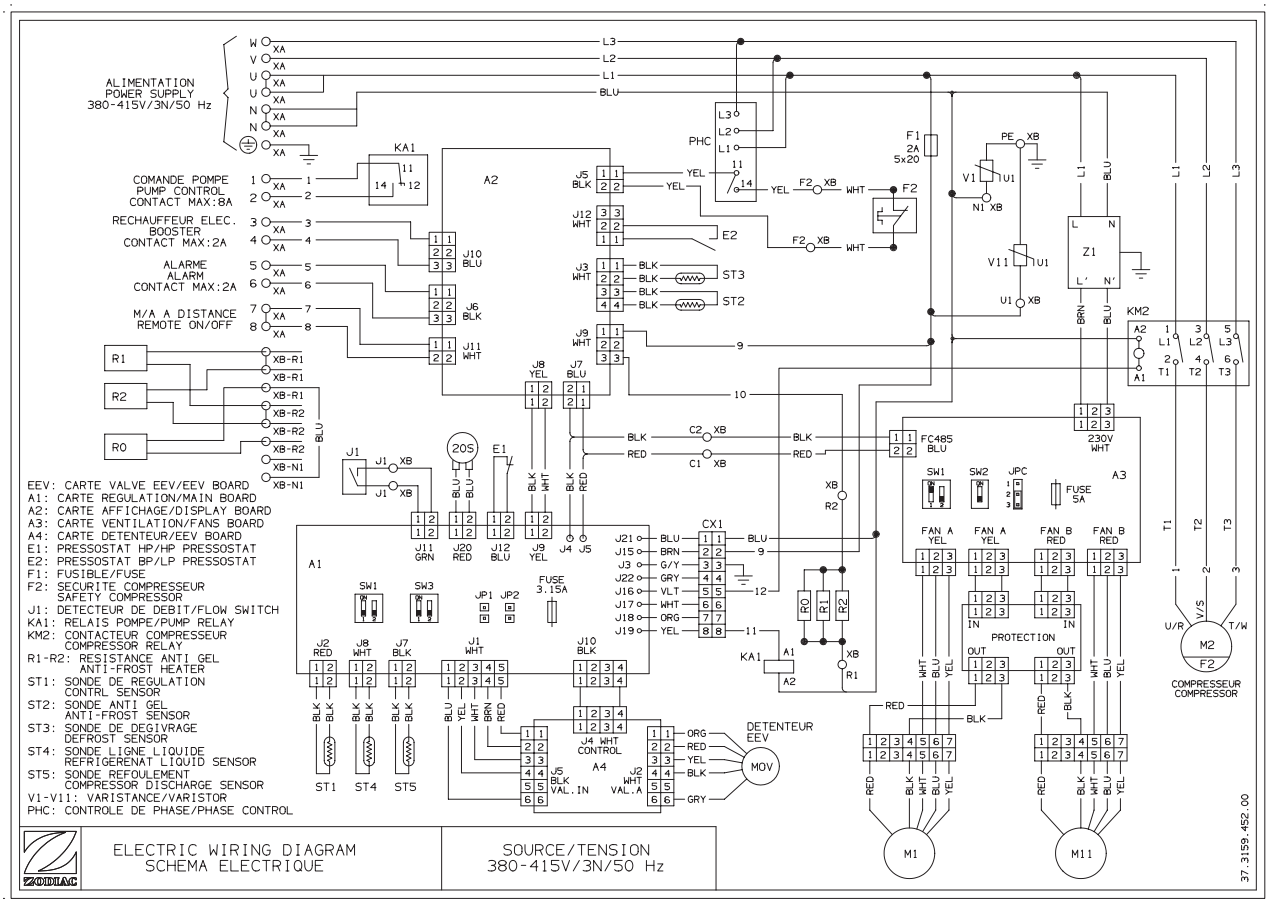
You may consult the latest faults: ERROR LISTING

You may read the values measured by the sensors and the operation of the electronic valve and the fan.



Water temperature on intake	
Air temperature	
Defrost sensor	
Fluid line sensor	
Compressor discharge temperature	
Opening of electronic valve	
Fan operating speed	

4.4 I Wiring diagram

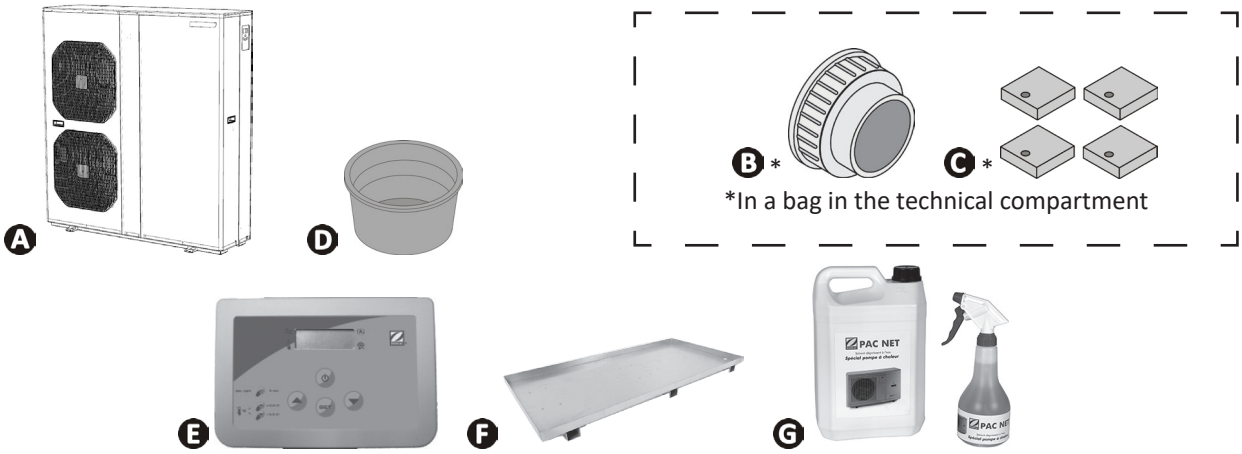


U-V-W-N	Power supply (380-415V/3N/50Hz)
⏚	Earth
1-2	Pump command (8A contact maximum)
3-4	Electric heater command (2A contact maximum)
5-6	Alarm command (2A contact maximum)
7-8	Remote "on/off" contact
20S	4-channel valve coil
A1	Regulation board
A2	Display board
A3	Ventilation board
A4	Release board
E1	High pressure switch
E2	Low pressure switch
F1	2A 5x20 electronic board protection fuse
F2	Compressor internal safety
J1	Flow controller
KA1	Pump relay
KM2	Compressor contact
M1-M11	Ventilator motor
M2	Compressor motor
MOV	Electronic regulator

PHC	Phase order controller
R0	Compressor casing resistance
R1-R2	Anti-freeze resistance (condenser)
ST1	Water regulation sensor
ST2	Anti-freeze sensor
ST3	Defrost sensor
ST4	Fluid line sensor
ST5	Compressor backflow sensor
V1-V11	Varistor
Z1	Filter
BLK	Black
BLU	Blue
BRN	Brown
G/Y	Green/Yellow
GRN	Green
GRY	Grey
ORG	Orange
RED	Red
VLT	Violet
WHT	White
YEL	Yellow

5 Characteristics

5.1 I Description



A		Power Force
B	Ø63 connector (x2)	✔
C	Anti-vibration studs (x4)	✔
D	Wintering cap (x2)	✔
	Heating priority	✔
E	Remote control	⊕
F	Condensate pan	⊕
G	PAC NET (cleaning product)	⊕

✔: supplied
⊕: available as accessories

5.2 I Technical specifications

Power Force		25	35
Operating temperature range	air	-12 to 38 °C	
	water	10 to 32 °C	
Voltage		380-415 V - 50Hz	380-415 V - 50Hz
Acceptable variation in voltage		± 6 % (during operation)	
Pollution class		I	
Pollution degree		2	
Overvoltage category		II	
Nominal absorbed intensity	A	10.6	12.9
Maximum absorbed intensity	A	14.2	18.1
Minimum cable section*	mm²	5x4	
		5G4	
Proof pressure	bar	3	
Service pressure	bar	1.5	
Head loss	bar	0.13	
Medium water flow	m³/h	10	

* 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.

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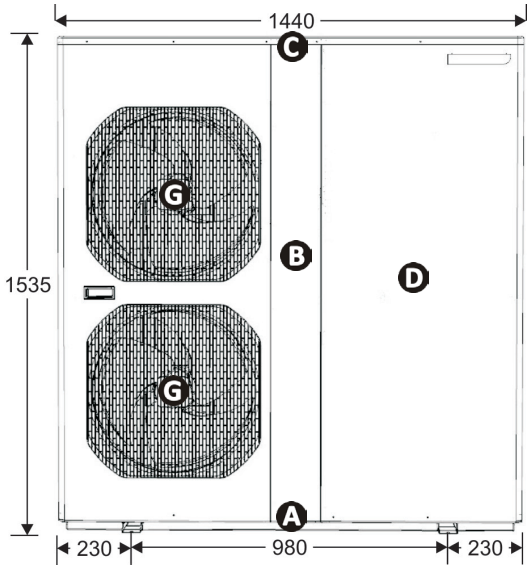
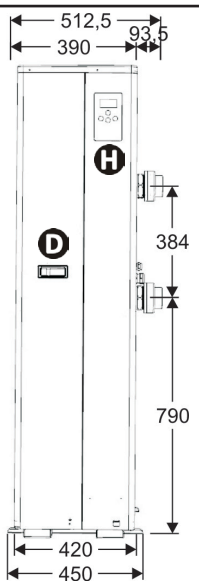
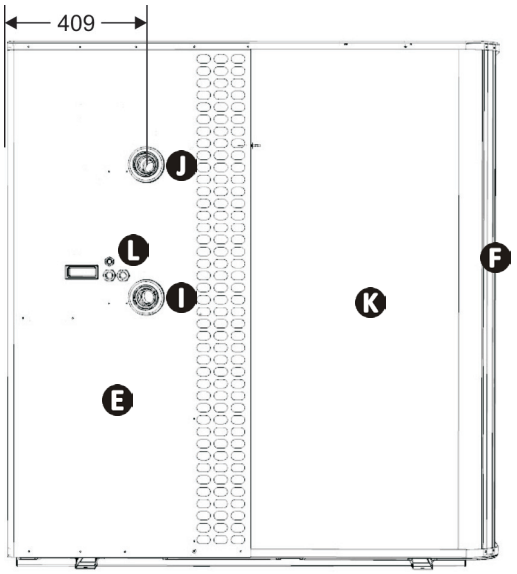
5.3 I Dimensions and marking



Front



Side



Rear

A: Base
B: Front panel
C: Cover
D: Technical access door
E: Rear panel
F: Column
G: Grid
H: User interface
I: Pool water intake
J: Pool water output
K: Evaporator
L: Gland

Overall dimensions

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Modèle appareil *Appliance model*	
Numéro de série *Serial number*	

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