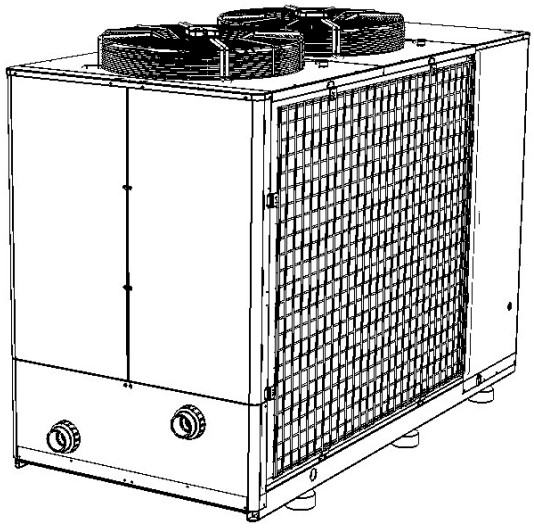
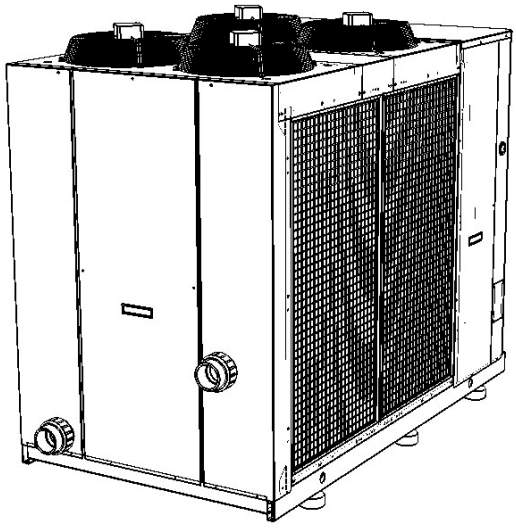
ZODIAC®

Z900





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

EN

More documents on:
www.zodiac-poolcare.com

H0590800.A - 2017/05

WARNINGS

- Failure to respect the warnings may cause serious damage to pool equipment or cause serious injury, even death.
- The appliance is intended to be used only for swimming pools and spas; it must not be used for any purpose other than that for which it has been designed.
- It is important that the equipment is operated by competent and qualified (both physically and mentally) people who have previously received the instructions for use. All persons not meeting these criteria must not approach the appliance in order to avoid exposure to dangerous elements.
- Keep the appliance out of the reach of children.
- The device must be installed by a qualified technician according to the manufacturer's instructions and in compliance with local regulations. The installer is responsible for installation of the equipment and for compliance with national installation regulations. Under no circumstances can the manufacturer be held liable in the event of failure to comply with applicable local standards.
- Incorrect installation and/or use may cause serious damage to property or serious injuries (possibly resulting in death).
- Any equipment, even carriage and packing paid, travels at the consignee's risk. The consignee should enter any reservations in writing on the carrier's delivery note, if there is any evidence of transport damage (and confirm them by recorded delivery letter to the carrier within 48 hours). In the event of a device containing coolant fluid that has been tipped over, issue your reservations to the carrier in writing.
- If the appliance suffers a malfunction, do not try to repair it yourself; contact a qualified technician.
- Refer to the warranty conditions for details of the permitted water balance values for operating the appliance.
- Eliminating or shunting one of the safety devices automatically voids the warranty, as does the replacement of parts using parts not manufactured by ourselves.
- 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.
- Heat pump, filtration pump and filter appliances are compatible with all types of water treatment.
- Do not touch the fan and/or moving parts or insert a rod or your fingers in the vicinity of the moving parts while the appliance is in operation. The moving parts may cause severe injury, including death.
- The electrical supply to the appliance must be protected by a dedicated 30 mA differential residual current protection device, complying with the standards and regulations in force in the country where it is installed.
- Do not use an extension cord to plug the appliance into; plug it directly into a proper wall socket or outlet.
- Before carrying out any operations, check that:
  - The voltage indicated on the maker's plate of the appliance corresponds to the mains voltage,
  - The power grid is adapted to the power requirements of the appliance, and is properly grounded.
  - The plug (where applicable) is suitable for the socket.
- In the event of abnormal function or the release of odours from the appliance, turn it of immediately, unplug it from its power supply and contact a professional.
- Before any access to the appliance for any required service or maintenance, ensure that it is switched off and disconnected from the power supply. In addition to any other equipment connected to the appliance, and that the heating priority (where applicable) is deactivated.
- 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.
- Do not attempt to carry out any service or maintenance with wet hands or while the appliance is wet.
- Clean the terminal board or the power supply socket before connection.
- 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, unplug the appliance to prevent it from suffering lightning damage.
- Do not immerse the appliance in water (with the exception of cleaners) or mud.
- Do not discharge R410A or R407C fluid into the atmosphere. These are fluorinated greenhouse effect gases, covered by the Kyoto Protocol, with a Global Warming Potential (GWP) = 2088 for R410A (Directive EC 842/2006).
- According to French decree No. 2015-1790, if the appliance has more than 5teq CO2 of refrigerant gas (refer to manufacturer specifications), the cooling circuit must be checked for leakage at least once a year. This operation must be carried out by a certified cooling appliance specialist.

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The heat pumps comply with Directive 2014/68/EU (PED) via Annex III, Module D1, and certified as such by the third-party, independent Notified Body, ICIM No. 0425.

Additional considerations in relation to this Directive

Installation and maintenance

The unit may not be installed close to combustible materials, or the air duct inlet of an adjacent building .

With some devices, it is essential to fit protection grids 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 refrigerant and possibly causing serious burns.

When servicing the appliance, the composition and state of heat carrying fluid must be checked, as well as the absence of any refrigerant.

During the annual unit 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 coolant circuit and that they cut-off the electrical circuit when tripped.

During maintenance work, ensure there are no traces of corrosion or oil around cooling components.

Before beginning work on the cooling circuit, stop the device 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 scalding.

Troubleshooting

All soldering work must be carried out by a someone qualified to do so.

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 the case the device 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 will be requested from the supplier and filed in the facility's technical documentation.

Technical data relative to the safety requirements of the various applicable directives must be indicated on the information plate. All this information must be recorded in the unit's installation manual, which must be kept in the technical file of the unit: model, code, serial number, maximum and minimum OT, OP, year of manufacture, EC label, manufacturer's address, refrigerant and weight, electrical parameters, thermo-dynamic and acoustic performances.

Recycling

This symbol means that your appliance should not be disposed of with other rubbish. It should be selectively sorted so that it can be re-used, recycled or transformed. If it contains any substances that may be harmful to the environment, these will be disposed of or neutralised.

Contact your retailer for recycling information.

- **Before you do anything with the device, it is vital that you read this installation and user manual, as well as the "warnings and warranty" booklet delivered with the device. Failure to do so may result in material damage or serious or fatal injury and will devalidate the warranty.**
- **Keep and pass on these documents for later consultation during the device's life time.**
- **It is prohibited to distribute or modify this document in any way without authorisation from Zodiac®.**
- **Zodiac® is constantly developing its products to improve their quality; therefore, the information contained in this document may be modified without notice.**

CONTENTS

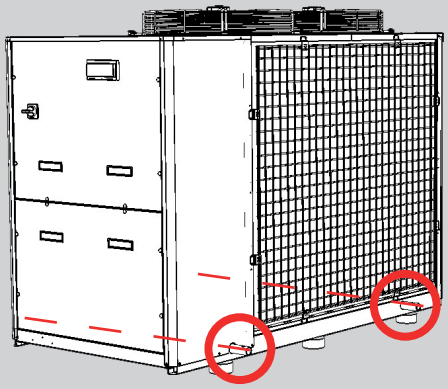
Tip: to make it easier to contact your dealer

- Write down your dealer's contact details to help you find them more easily and fill in the "product" information on the back of the manual; your dealer will ask you 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.**
- **Use the holes provided (Ø 40mm) when lifting the device. A lifting kit is available as an accessory (see § "5.1 I Description"»).**



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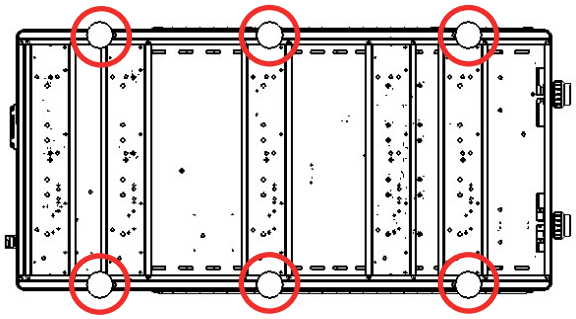
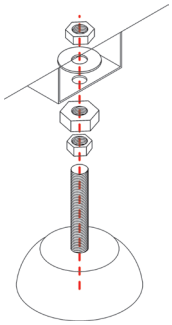
- Install the device outdoors; provide free space around it (see § “1.2 I Hydraulic connections”).
- Install the 6 anti-vibration studs under the base and place the device on a stable, solid and level surface.



Position of the anti-vibration studs as seen from under the device



Stud mounting order

- 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). We recommend that you install the device on a slab to channel the condensation away.

The device must not be installed:

- With the blowing towards a permanent or temporary obstacle (awning, brushwood, etc.) less than 5 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.

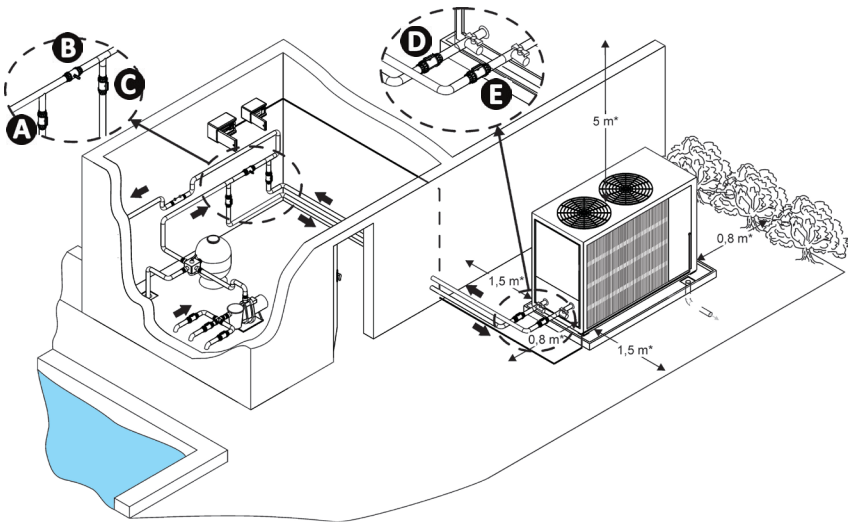
Information: condensation drainage
Caution, your device may evacuate several litres of water per day, caused by condensation from the water present in the air.

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 50cm of flexible PVC pipe at the heat pump water inlet and outlet (to stop the transmission of vibrations).

1.2 I Hydraulic connections

- The device will be connected with a Ø63 or Ø90 PVC pipe, using the 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.



Connection to a standard filtration circuit

A: water inlet valve

B: by-pass valve

C: water outlet valve

D: water inlet adjustment valve (optional)

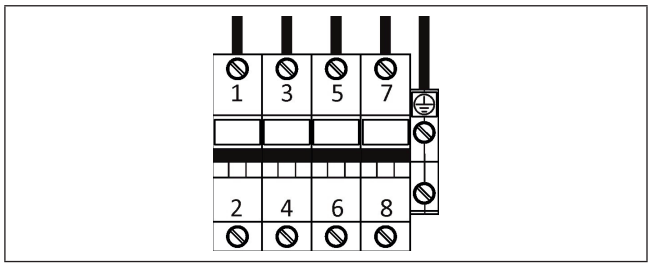
E: water outlet adjustment valve (optional)

* minimum distance

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 disconnect the electricity supply to avoid the 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 heat pump's electrical supply must be provided through a properly selected and rated 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 Ground Fault Circuit Interrupter (GFCI).
- 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 protected from any damage such as sharp edges, abrasion, excessive heat that may damage or crush it.
- The equipment must be reliably connected to an appropriate earthing (grounding) point.
- 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 16 and 22mm.
- We recommend burying the cable at a depth of 50 cm (85 cm under a road or path) in an electrical duct (ribbed).
- If this buried cable meets another cable or pipe (communication, gas, water, etc.), there must be more than 20 cm between them.
- Connect the supply cable to the connection terminal unit inside the device.



1-3-5: phases

7: neutral

⏚: earth

- **Check that the phases are in the right order: the LED on the phase order controller (RSF) must be on fixed.**

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1.4 I Optional connections

Connecting the "Remote on/off command" and "Alarm" options:

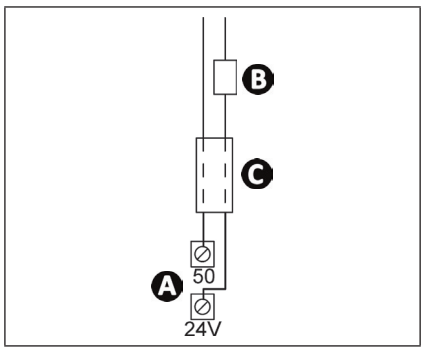
- **Any access to the electrical enclosure and mains terminal area presents a risk of electrical shock which can result in electrocution, property damage, and serious injury, including loss of life. Be sure to disconnect the device from the power source before accessing the electrical enclosure of terminal area.**
- **Any incorrect connection to the main terminal unit may damage the device and void its warranty.**
- **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 lets you manage the device remotely. To do so, use the remote control kit available as an accessory.
- For the connection, consult the manual supplied with the kit.
- If a remote control device is to be installed, provide an RS485 cable having a maximum length of 50 metres.

1.4.2 "Alarm" option

- This option enables a relay to be connected to the alarm contact to indicate a fault remotely.
- For the connection, connect the cable to the 24V terminal and to terminal “50”. This is a dry-contact connection, is polarity-independent, and is rated 2 Amps, Max.



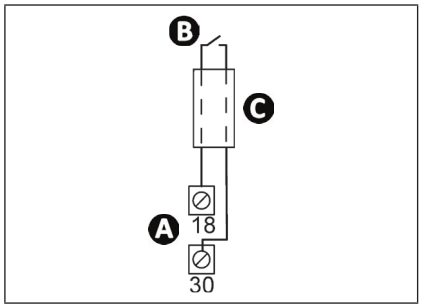
A: heat pump terminal unit

B: alarm contact relay

C: separate connection cable

1.4.3 Remote "on/off" control option

- This option enables the "on/off" button function to be transferred via a switch installed remotely.
- For this connection, remove the shunt between terminals 30 and 18. Then connect each of the two wires of the switch to each of these terminals. This connection is polarity independent and is rated 220-240V, 50Hz.



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 warmer and damper the air, the better your heat pump will perform.

Tip: improve your pool's temperature rise and maintenance

- Anticipate and plan the use of your pool well 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 pool with a an appropriate pool cover (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).

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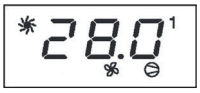
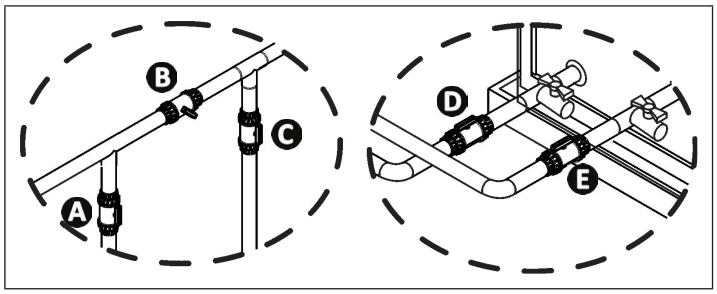
2.2 I User interface presentation

	Water temperature
	• Back button • Alarm deactivation button
	• Parameter access button • Entry/display/validation in a parameter button
	• Single press: sensor value reading (see § “2.4.2 Sensor temperature reading”) • 5-second press: start/stop the device in heating mode (default mode) In the parameters menu: • Button to navigate from the top in the parameters • Value increase button
	• Single press: sensor value reading (see § “2.4.2 Sensor temperature reading”) • 5-second press: start/stop the device in cooling mode (if activated) In the parameters menu: • Button to navigate from the bottom in the parameters • Value reduce button

Symbol	Designation	Fixed	Flashing
	Heating mode	In operation	/
	Cooling mode	In operation	/
	Alarm	Alarm active	/
	Condenser anti-freeze resistance	In operation	/
	Defrosting	In operation	In operating request
	Fan	In operation	/
	Compressor	In operation	/
1	Compressor (1 + 2 on TD50)	In operation	In operating request

2.3 I Operating

- Check that there are no tools or other foreign objects in the machine.
- The panel that provides access to the electrical enclosure must be properly secured in place.
- 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.**

- Ensure that the hydraulic connections are enough tightened and correctly so that there are no leaks.
- Ensure that the device is fully stable.
- Set the water circulation running.
- Close valve B gradually so that the filter pressure is increased by 150 mbars (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.
- Press and hold ▲ for 5 seconds to start the appliance in heating mode.

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 switch).

2.4 I Additional user functions

2.4.1 Adjusting the temperature setpoint (in heating mode)

The setpoint temperature is set by default to 28°C.

- Press Sel + Prg mute for 5 seconds: 000 then press Sel to confirm,
- Go to S-P then press Sel to confirm,
- Go to the -r- parameter, press Sel,
- Go to r03 (= heating mode setpoint), press Sel,
- Set the value you want with ▲ or ▼, then press Sel to confirm.
- Press Prg mute to exit.

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

2.4.2 Sensor temperature reading

- Press ▲ : b01 (water inlet sensor) then wait 3 seconds for the value to display.
- Press ▲ : b02 (water outlet sensor) then wait 3 seconds for the value to display.
- Press ▲ : b03 (air sensor) then wait 3 seconds for the value to display.
- Press ▲ : b04 (low pressure sensor) then wait 3 seconds for the value to display.
- Press Prg mute to exit.

2.5 I Change to cooling mode

2.5.1 Connection to be made to change to cooling mode

The device operates either in heating mode or in cooling mode.
By default, the heat pump is in heating mode; to change to cooling mode, install a shunt between terminals 19 and 30 on the terminal unit. The device must then display ❄ in place of ☀.

2.5.2 Adjusting the temperature setpoint (in cooling mode)

The setpoint temperature is set by default to 28°C.

- Press Sel + Prg mute for 5 seconds: 000 then press Sel to confirm,
- Go to S-P then press Sel to confirm,
- Go to the -r- parameter, press Sel,
- Go to r01 (= cooling mode setpoint), press Sel,
- Set the value you want with ▲☀ or ▼❄, then press Sel to confirm.
- Press Prg mute to exit.

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

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3 Maintenance

3.1 I Winterising

- **Winterising is recommended if the device is not used for a long period.**
- **If only the heat pump is wintered, the device may be kept frost-free thanks to the resistances on the condensers and the compressor(s); in this case, keep it powered with electricity. There will be no need to drain the condensers.**
- **To avoid damaging the equipment due to condensation, do not fully cover it.**

- Disconnect the electrical 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 condensers (risk of freezing) by unscrewing the two water inlet and outlet 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): insert the two plugs provided and, where necessary, tighten the two connectors by one turn to prevent any foreign body from penetrating the condenser,
- In the case of wintering for the heat pump only (shutdown of the heating only, but the filtration keeps running): do not tighten the connectors but instead add 2 caps (provided) on the condensers water inlets and outlets.

3.2 I Servicing

- **It is recommended that the equipment is fully serviced at least once a year to ensure proper operation, maintain performance levels and possibly prevent potential failures.**
- **Depending on the legislation in the country where the device is installed, regular cooling system checks may be required. Contact your technician.**
- **These operations are carried out at the user's expense and some must be carried out by a qualified technician, as detailed below.**

3.2.1 User maintenance

- Make sure that the ventilation grates are not blocked in any way.
- 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.
- 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. Zodiac 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.
- Check that the condensation flows freely and without any blockage when the device is operating; service as needed.
- Check for proper operation of all safety and protective mechanisms and devices; service as needed.
- Ensure that the appliance and all its dead metal components are properly connected to earth (ground).
- Make sure 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 only to be carried out by a qualified technician**

4.1 I Device behaviour

The device does not start heating straight away	• On start-up, the device remains "paused" for 1 at 6 minutes before it starts operating; the compressor number(s) flash. • When the setpoint temperature is reached, the heat pump stops heating: the water temperature. • It may be that the heat pump has detected an operating fault (see § “4.2 I Displays”). • 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). • 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 general protection fuses. • 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 (fault [FL] displayed). • The heat pump stops when the outdoor temperature is too low (fault [LP1] displayed). • It may be that the heat pump has detected an operating fault (see § “4.2 I Displays”).
The device is working but the water temperature does not increase	• Set the filtration 24/24 and close the cover or shutter if the pool has one. • Check that the automatic filling valve (if present) 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 Servicing”). • 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 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.

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Behaviour	Possible causes	Solutions
The device does not start working	• No external signal	• Bleed the circuit, • Check that the flow switch (terminals 16 and 30) is operating correctly.
	• Delay between two compressor starts/ stops; the number(s) flash	• Wait 5 minutes for the timer to provide the signal
	• Intervention on the general switch	• Make sure that there are no short circuits on the cabling and the pump motor, fan, compressor and transformer windings
	• No signal from the high or low pressure switch	• see HP 1 and/or LP 1
	• Compressor defective	• See "The compressor does not start working"
The compressor does not start working	• The compressor is defective or stuck	• Replace the compressor
	• Power circuit open	• Establish the cause of the protection intervention • Make sure that there are no short circuits on the cabling and the pump motor, fan, compressor and transformer windings
	• Motor thermal protection open • Compressor operating under critical conditions • Insufficient load in the circuit, coolant leak	• Make sure that the operating conditions conform to the specified limits. • Check the cooling circuit with a leak detector after setting its pressure to 4 bars. Repair, create a vacuum and load.
The compressor starts and stops repeatedly	• Minimum pressure switch intervention	• see LP 1
	• Compressor remote switch defective	• Check and replace if necessary
	• Insufficient quantity of gas, leak possible	• Check the cooling circuit with a leak detector after setting its pressure to 4 bars. Repair, create a vacuum and load.

4.2 I Displays

- **The fault number may vary according to the number of compressor(s) in the heat pump.**

Display	Possible causes	Solutions	Resetting
ALt	Water temperature too low	Wait until the water temperature rises naturally	Automatic
d1	Defrosting in progress	Wait until the cycle is finished	Automatic
dF1	Error during defrosting: • maximum time exceeded • temperature not reached	The air temperature is too low, wait until the temperature rises naturally	Automatic
E1 Water inlet sensor fault	Sensor is faulty or offline	Reconnect or change the sensor	Automatic
E2 Water outlet sensor fault	Sensor is faulty or offline	Reconnect or change the sensor	Automatic
E3 Air inlet sensor fault	Sensor is faulty or offline	Reconnect or change the sensor	Automatic
E4 Pressure sensor fault	Sensor is faulty or offline	Reconnect or change the sensor	Automatic
EHS ELS	• Defective connection or contacts open • Wrong voltage (outside tolerance limits ±5%)	Check the voltage and close the contacts	Automatic
EPb EEPROM fault EPr EEPROM fault	Problem saving parameters in the EEPROM non-volatile memory	Call a qualified technician	Automatic
FL Water flow switch	Water flow problem	• Make sure that there flow passing through the heat pump • Check the flow switch	Automatic
CP HP	The water flow is too low, the difference between the b01 sensor (water inlet sensor) and the b02 sensor (water outlet sensor) must be lower than or equal to 6°C.	Increase the water flow	Automatic if fewer than 3 faults within the hour on TD20-TD30, otherwise manual

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Display	Possible causes	Solutions	Resetting
HP 1 High pressure or phase order controller fault	Cabling not respected on the appliance's supply terminals	Check that the RSF light is steady; if this is not the case, reverse the phases on the power supply terminal unit (device powered down)	Automatic
	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		
	No signal from the high pressure switch	Pressure switch defective, replace it if necessary	Manual of pressure sensor (position K, on § «5.3 I Dimensions and marking», page 18
	Evaporator blocked, air flow too low	Remove the dirt on the evaporator and any obstacles preventing the air from passing through	
	Fan operating problem	Check that the fan is working correctly (replace it if necessary).	
	Water condenser scaled up	Clean the water condenser	
	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 switch blocked	Check the flow switch	
	Electronic expansion valve closed	Valve expansion (or its driver) defect, replace it if necessary	
	Rotation of the propeller not free	Declutter in front of the fan	Automatic
	Fan motor disconnected	Check the connector of the fan motor. If there is always the default, call a qualified technician.	
	Fan motor damaged	Call a qualified technician	
	Compressor thermal protection (kriwan) (only on TD30)		
LP 1 Low pressure fault	No signal from the low pressure switch	Pressure switch defective, replace it if necessary	Automatic if fewer than 3 faults within the hour, otherwise manual
	Leak on the cooling circuit	Call a qualified technician.	
	Evaporator blocked, air flow too low	Remove the dirt on the evaporator and any obstacles preventing the air from passing through	
	Frost present on the evaporation battery + alternating dF 1 fault	Check that the 4-way valve is operating correctly	
	Fan operating problem	Check that the fan is working correctly (replace it if necessary)	
	Electronic expansion valve closed	Valve expansion (or its driver) defect, replace it if necessary	

4.3 I Wiring diagram

AP	High pressure switch
LP	Low pressure switch
CF	Fan control
EVD	Solenoid valve driver
FL	Line fuse (not supplied)
SF	Isolating switch with fuses
IG	General switch
IL	Line switch (not supplied)
KLT	Compressor contact
KRAP	High pressure relay
MC	Compressor motor
MV	Fan motor
NTC	Temperature sensor
PCD MA PCDS	Remote control (accessory)

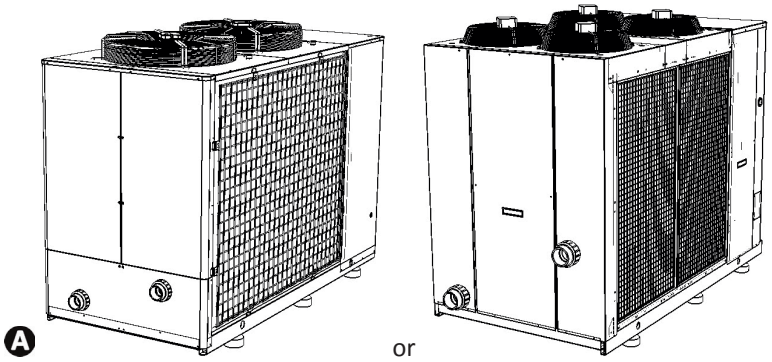
PD	Differential pressure switch
RC	Compressor resistance
RG	Regulator
RS	Anti-frost resistance
RSF	Phase order controller
SA	Ambient air sensor
SC	Condensation sensor
SPR	Pressure sensor
T	Anti-frost heating thermostat
TR	Transformer
VE	Solenoid valve
VI	Reversal valve
WIN	Water inlet sensor
WOUT	Water outlet sensor

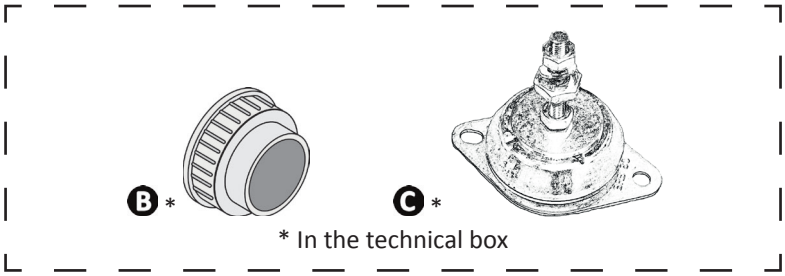
- The wiring diagram and the EU declaration are provided in a separate booklet from the installation and user manual.

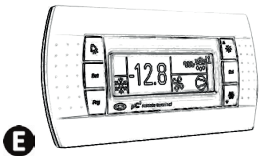
EN

5 Characteristics

5.1 I Description







A	Z900	TD20	TD30	TD50
B	Ø63 connector (x2)	✔	✔	
	Ø90 connector (x2)			✔
C	Anti-vibration studs (x6)	✔	✔	✔
D	Wintering cap (x2)	✔	✔	✔
E	Remote control	⊕	⊕	⊕
F	Lifting kit	⊕	⊕	⊕
G	PAC NET (cleaning product)	⊕	⊕	⊕

✔: supplied

⊕: available as accessories

5.2 I Technical specifications

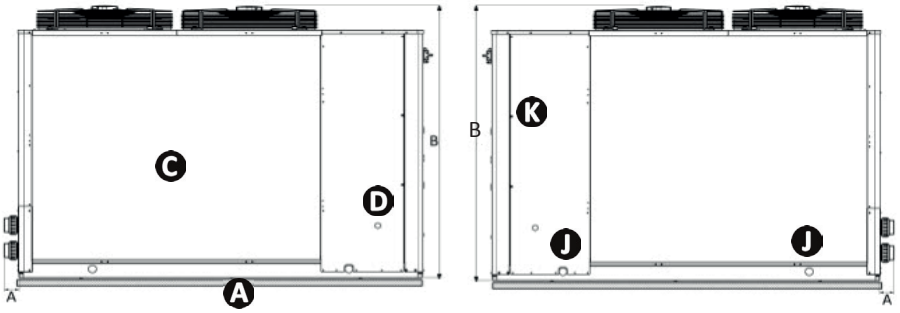
Z900		TD20	TD30	TD50
Operating temperature range	air	-12 to 38 °C		
	water	10 to 32 °C		
Voltage		380-415 V - 50Hz - 3-phase		
Acceptable variation in voltage		± 5 % (during operation)		
Pollution class		I		
Pollution degree		2		
Overvoltage category		II		
Nominal absorbed intensity	A	19.2	35	43.5
Maximum absorbed intensity	A	38	40	69
Minimum cable section*		5G10 (5x10mm²)	5G16 (5x16mm²)	5G16 (5x16mm²)
Proof pressure	bar	3	3	3
Service pressure	bar	1.5	1.5	1.5
Head loss	bar	0.15	0.15	0.15
Nominal water flow	m³/h	15	20	25
Net weight	bar	430	520	837

* 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.

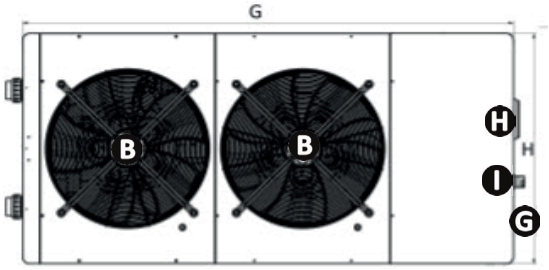
The information plate provides the following data (normally located on the appliance's external panel next to the evaporator):
- the appliance model and power
- the manufacturing date
- the main technical data
- the manufacturer
- the appliance serial number

The serial number is used to identify the technical characteristics and the components installed. The appliance cannot be correctly identified without this number.
Important: never remove this plate!

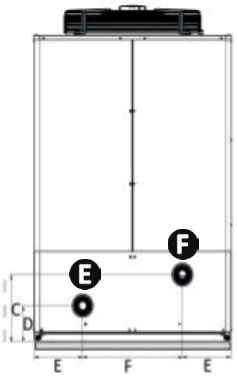
5.3 I Dimensions and marking



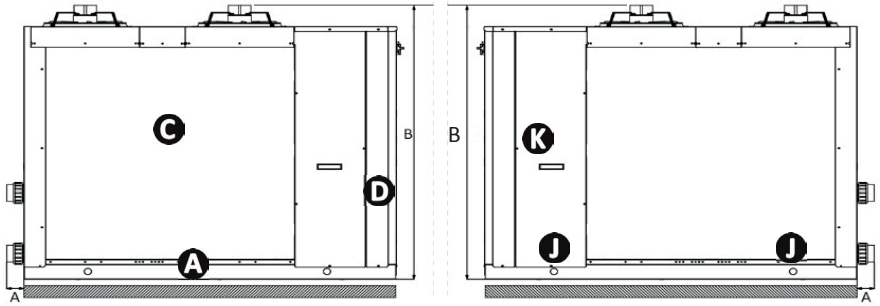
Fronts Z900 TD20 - TD30



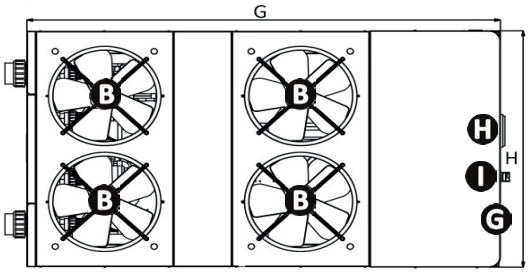
Top Z900 TD20 - TD30



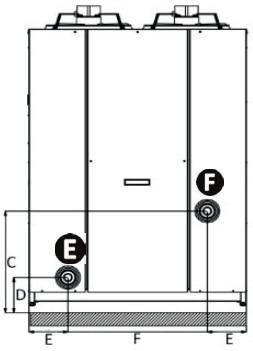
Side Z900 TD20 - TD30



Fronts Z900 TD50



Top Z900 TD50



Side Z900 TD50

- **A**: Base
- **B**: Fan
- **C**: Evaporator
- **D**: Gland
- **E**: Pool water inlet
- **F**: Pool water outlet
- **G**: Technical access door
- **H**: User interface
- **I**: "On/off" switch
- **J**: Lifting points
- **K**: High pressure switch

dimensions in mm	A*	B*	C	D	E*	F*	G*	H*
Z900 TD20 Z900 TD30	73	1450	282	137	233.5	480	1965	951
Z900 TD50	97	1730	546	162	211	755	2091	1183

*Overall dimensions

ZODIAC®

Votre revendeur *Your retailer*	
Modèle appareil *Appliance model*	
Numéro de série *Serial number*	

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