



ZODIAC

Optipac 10 - 15



GB Heat pump Instructions for installation and use

IMPORTANT

These installation instructions are an integral part of the product and must be given to the installer and kept by the user.

The warnings and indications contained in the present handbook must be carefully read and understood as they provide important information relative to handling and operating safety. This handbook must therefore always be kept available for later consultation.

Installation must be carried out in compliance with valid regulations and the manufacturer's instructions by a qualified professional.

The term «qualified professional» refers to a person possessing the technical knowledge associated with P.S.A. components and heating installations.

An installation error could result in physical injury to persons or animals as well as mechanical damage for which the manufacturer may under no circumstances be held responsible.

After having unpacked the heat pump, the content should be checked for possible damage.

Before connecting the heat pump, ensure that the data provided by P.S.A. is compatible with the true installation conditions and does not exceed the maximum authorised limits for the product in question.

Before beginning any installation, handling or repair work on the heat pump, always isolate the electrical power supply to the unit.

In the case of a fault and/or operating error on the heat pump, the electrical power supply must be isolated and no attempt should be made to repair the fault.

Repair work may only be carried out by **an authorised technical assistance service** using **original spare parts only**. Non-respect of the aforementioned clauses may have a negative influence on the operating safety of the heat pump.

To guarantee the efficiency and correct operation of the heat pump, it is important to ensure it is regularly maintained in compliance with the instructions provided by P.S.A.

In the case where a heat pump is sold or transferred to another user, always ensure that all technical documentation is sent with the equipment to be used by the new user or installer.

This heat pump may only be used for the purpose for which it was designed: to heat a swimming pool; all other uses must be considered inappropriate, incorrect or even dangerous.

All contractual or extra-contractual responsibilities of P.S.A. will be considered nil and void for any damage caused by installation or operating errors, or due to non-respect of the instructions provided by P.S.A. or valid installation standards for the equipment object of the present document.

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1. GENERAL

1.1 General terms of delivery

Any equipment, even CARRIAGE and PACKING FREE, travel at the consignee's risk. The consignee shall make reserves in writing on the carrier's delivery bill if he notes damage caused during the transport (confirmation to be sent to the carrier within 48 hours by registered mail and Acknowledgement of Receipt).

1.2 Voltage

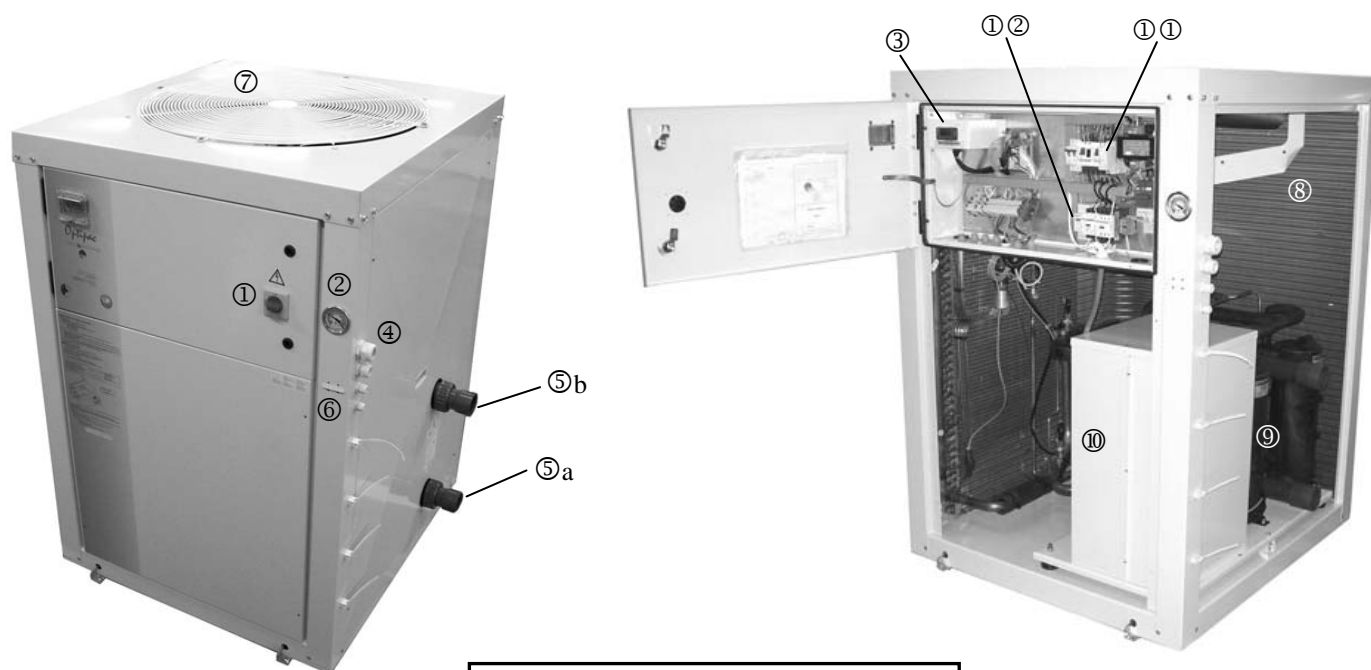
Prior to any operation, check that the voltage on the identification plate of the appliance corresponds to the mains voltage provided on site.

1.3 Water treatment

In order to use our appliances in the best conditions, swimming pool water shall comply with the following values: free chlorine: max. 2.5 mg/l, total bromine: max. 5.5 mg/l, pH between 6.9 and 8.0. For any other treatment, the fitter and the user shall apply to the supplier of the planned disinfection process (chemical, electrochemical or electrophysical) for the compatibility with the materials of our appliances. In any case, treatment shall be installed downstream the heating equipment.

2. DESCRIPTION

2.1 Presentation

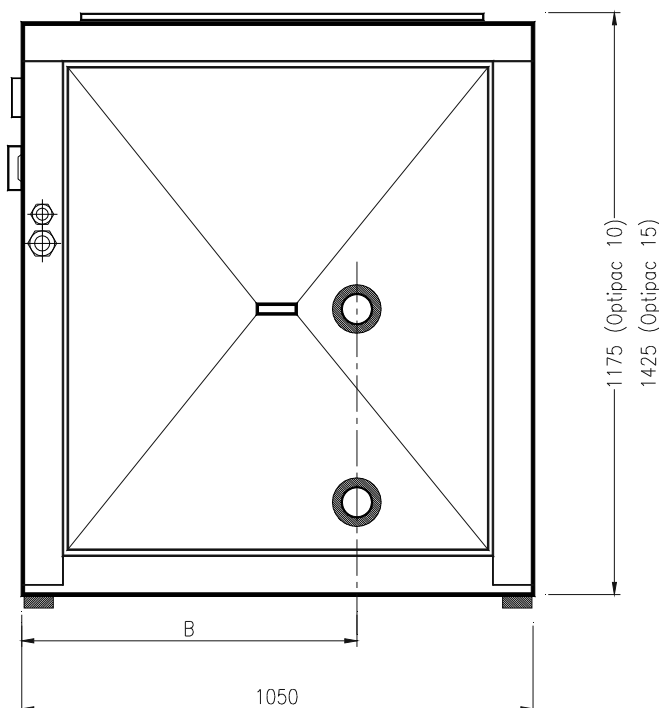


- ① Power switch ON/OFF.
- ② Pressure gauge "water flow"
(measures the refrigerant pressure in the HP circuit
and is used to regulate the water flow-rate).
- ③ Digital regulator Euro α FK.
- ④ Packing gland (and/or cable inlet).
- ⑤ a -> Pool water inlet.
- ⑤ b -> Pool water outlet.
- ⑥ Anti-frost sensor.
- ⑦ Motor fan unit.
- ⑧ Arched "plate fin" evaporator.
- ⑨ TITANIUM condensers.
- ⑩ SCROLL compressor box.
- ① ① Phase order relay.
- ① ② Hourmeter "compressor".

2.2 Dimensional characteristics

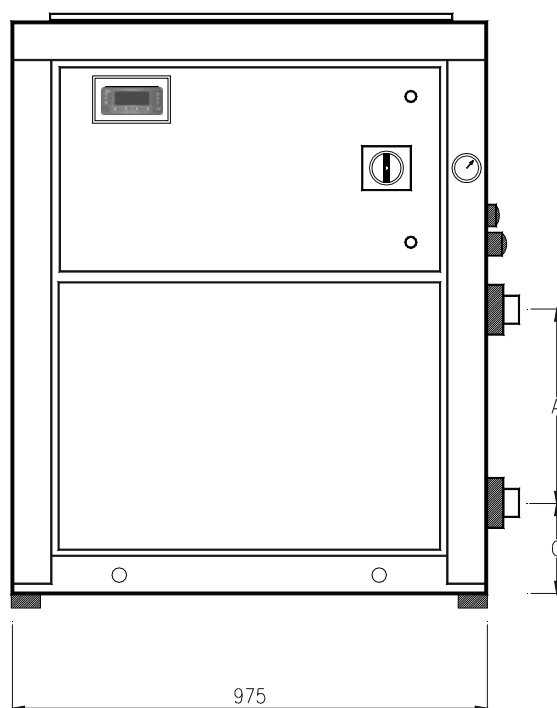
Optipac 10 :

A = 328 mm B = 690 mm C = 200 mm Weight 300 kg



Optipac 15 :

A = 383 mm B = 683 mm C = 197 mm Weight 350 kg
A, B, and C (+ or - 3 mm)

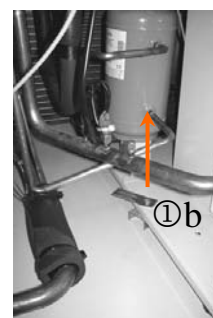
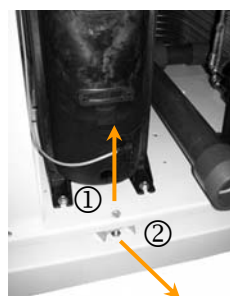


3. INSTALLATION OF THE UNIT

- **The appliance shall be installed outside (IP 24).**
- Keep a clearance of at least 0.60m all around the appliance.
- The appliance shall be installed on a solid and stable socle (concrete), and be protected from flood risks.
Caution: When working, the appliance will produce water due to the condensation of humidity of ambient air on the evaporator. Provide a drain in the socle to flush that water away.
- Place vibration reducing blocks (provided) under the feet of the heat pump.
- Avoid blowing cold air to windows.
- Keep the appliance out of reach of the public.
- The heat pump shall be installed at a minimum distance of the end of the pool, according to the national electric regulation.
- Top of the appliance must be clear to evacuate the cold air produced.
- The heat pump shall not be installed close to a flammable gas device.
- The heat pump shall not be installed close to a road in order to avoid projections of mud or stones.

Before any start up, remove this security bar

- 1- Remove the bottom face and right panels.
- 2- Remove bolts (1) and (1b)
- 3- Remove bar (2).



4. CONNECTIONS

4.1 To have access to electric box

First, turn rotary On/Off switch to position Off. Open the locks with the supplied plastic keys and pull the front panel

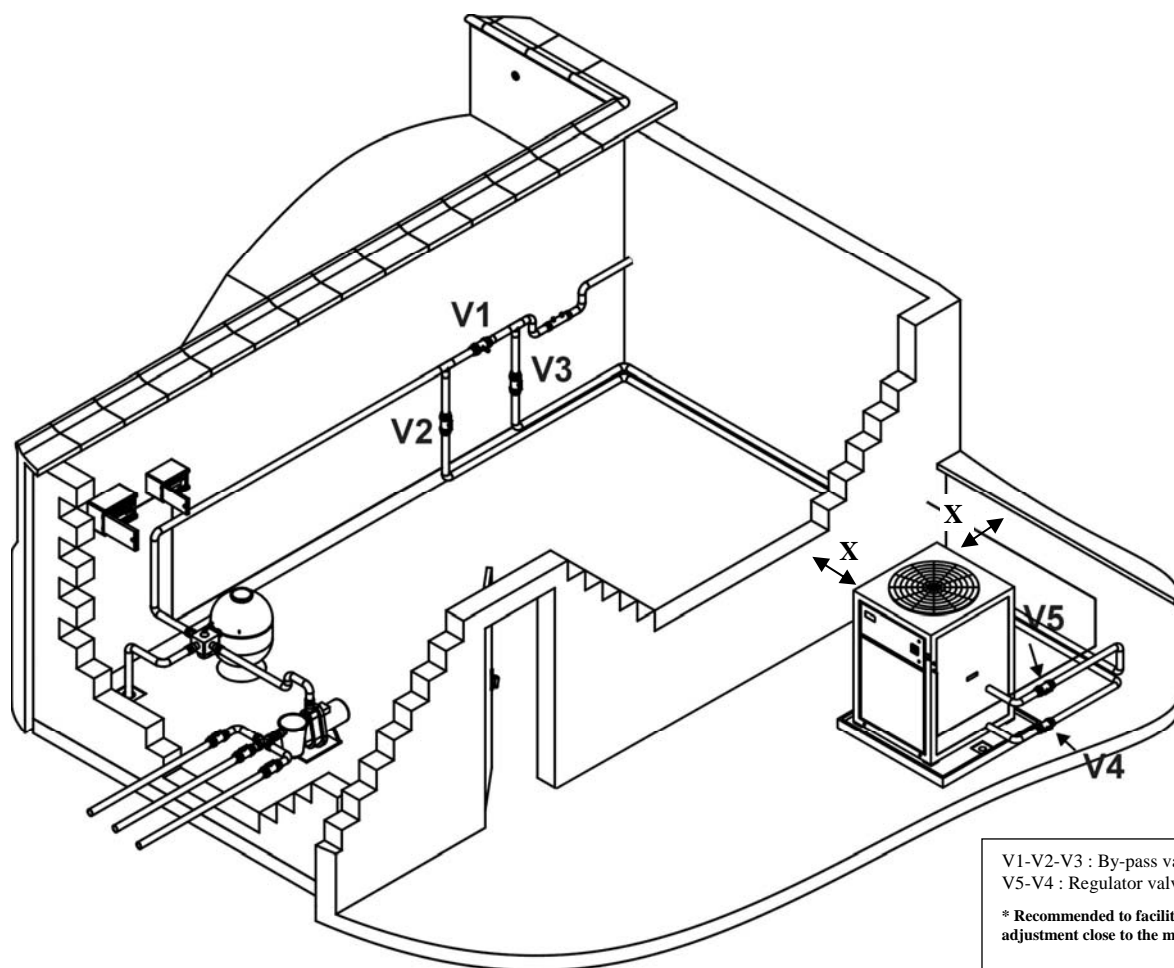
4.2 Hydraulic connections

Connect water inlet and outlet according to the stickers (ENTREE=INLET, SORTIE=OUTLET), using the removable fittings provided and Ø 63 mm PVC pipes, from a by-pass on the filtration circuit between filter and water treatment device.

- Hydraulic circuit test pressure: 3 bars

- Hydraulic circuit operating pressure: 1.5 bar

Optipac 10 and 15 : - Average water flow 15 m³/h- pressure drop 1.5 mCE (0.15 bar) with the
Optipac 10 - pressure drop 1.3 mCE (0.13 bar) with the *Optipac 15*



V1-V2-V3 : By-pass valve
V5-V4 : Regulator valve*

* Recommended to facilitate adjustment close to the machine.

X has to be superior or equal to 0.6 m

4.3 Electric connections

- The power supply of the heat pump must pass via a protection facility and circuit-breaker (not supplied) in compliance with applicable standards and regulations.
- The appliance is foreseen for connection to the mains circuit with TT and TN.S neutral connection (according to NF C 15-100 or national standards in force).
- Supply cable section :

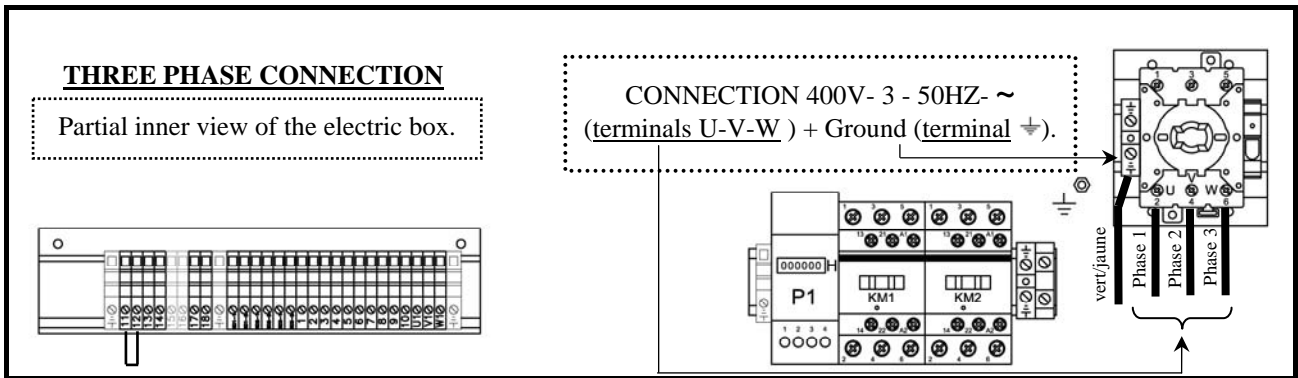
- Optipac 15	4 x 6 mm ² * (three-phase 400V/3/50Hz)	** protection :	32 A
- Optipac 10:	4 x 6 mm ² * (three-phase 400V/3/50Hz)		25 A

* This section is indicative and must be checked and adapted, if necessary, according to installation conditions.

- Electrical protection: circuit breaker (curve D) or fuse (Am) delayed designed for motors adapted to the type of unit (see ** below) with a protection system by 30 mA differential on the incoming supply side (circuit breaker or switch).

Note:

- The acceptable voltage variation during operation is $\pm 10\%$
- The cable ways and ducts must be fastened.
- Only use **cable suitable for outdoor use**.
- Use the packing glands and cable inlets to feed the cables into the unit.



Optional remote control functions:

Remote On/Off start up

The terminals 11 and 12 of the Optipac heat pump enable a remote start up by means of a switch or any other device. The heat pump is supplied with a jumper between these terminals. If this function is used, the jumper shall be removed. Otherwise it must be kept.

Remote failure light

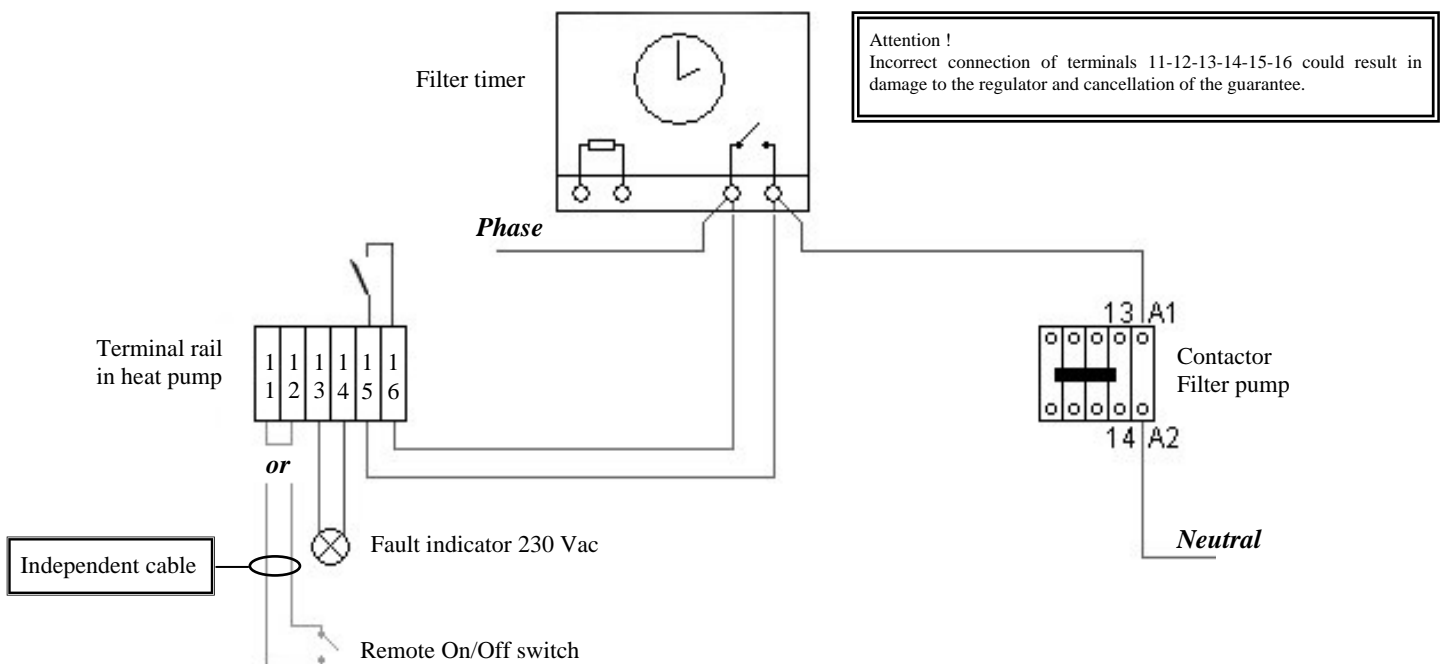
In order to indicate in a technical facility that the heat pump is failing, terminals 13 and 14 provide a signal that can be connected to a light or an alarm (230 V).

Priority to heating

A heating device, whatever it is, is designed to heat the water of the pool only when the water circulates. Most of the time, a pool is filtered between 6 and 8 hours a day. But such a time can't be sufficient sometimes to maintain the water at the desired temperature, depending on the seasons. This is the reason why the Optipac is equipped with the "priority to heating" function that will manage the temperature of the pool, taking itself the time to do it without caring of the scheduled time of operation of the filtration.

Terminals 15 and 16 shall be connected to the terminals of the filtration timer (see attached diagram). Every hour, the contact between 15 and 16 is going to be closed, starting up the filtration for 5 minutes. If after 5 minutes, the temperature of the water is over the required temperature, the filtration shuts off for one more hour. Otherwise, the filtration and the heat pump are going to keep on operating until the desired temperature is reached. By this mean, the user is sure the water is always ready for bath, at day or at night.

If this option is not used, the heat pump will operate only while the filtration runs.



- It is possible to connect a remote control module ⁽¹⁾ (with display). To do this use terminals : 34-35 (signals Tx-Rx) and 36-37 for 12 Vac supply of the interface A1 card.

Important :

To connect the remote On/Off⁽²⁾ functions, fault and warning functions for filter start up, use cables with a section of at least 1mm². Packing glands and cable inlets are available for passage of these cables into the unit.

To connect the remote module⁽¹⁾ (max. distance = 50 m) use a shielded cable of 4x0.75 mm² minimum (connected to the earth harness in the heat pump).


⁽¹⁾ module available as an **optional extra**.

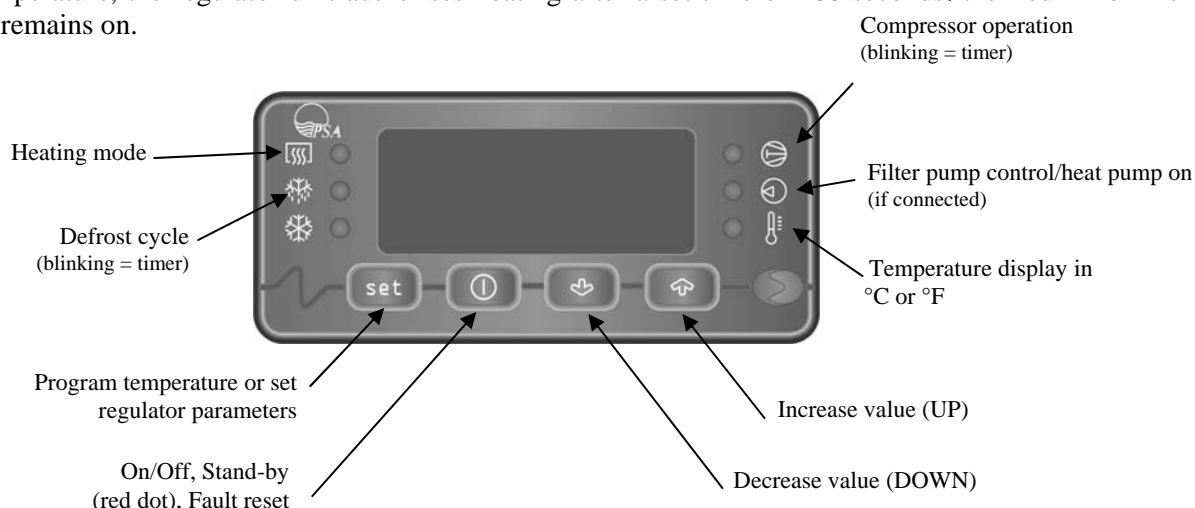
⁽²⁾ it is essential to use an independent cable for connection of this function (terminals 11 and 12).

5. REGULATOR OPERATION




5.1 Presentation

The **Euro α FK** setting thermostat with digital display is supplied fitted in the appliance, electrically connected and pre-set in the factory for swimming pool heating.

Setting principle: a control sensor placed at the water inlet side of the heat pump measures the temperature in the pool and compares it to the target temperature. If the water temperature becomes or is lower than the target temperature, the regulator unit authorises heating after a set time of 180 seconds. the Led  blinks and then remains on.



5.2 Setting of the required temperature

Press key  to display the required temperature, without releasing, press key  to increase or  to decrease. Release both keys, the temperature of the water is then displayed.

Advice: The maximum target temperature is limited to **32°C** in order to protect the swimming pool liner. This high target may, however, be modified by the installer, but at his own responsibility. The temperature control will run the heat pump (and the filtration pump if remote connection 15-16 is used) until the required temperature is reached. Then, the heat pump will automatically cut off.

6. STARTING UP

*** Technical features:**

Appliance	Power consumption *	Power restored*	Rated current consumption *	Air flow-rate	Acoustic power	Acoustic power at 10 m
OPTIPAC 10	8 kW	30 kW	16.3 A	11 000 m ³ /h	75 dBA	47 dBA
OPTIPAC 15	14 kW	45 kW	26.1 A	12 000 m ³ /h	82 dBA	54 dBA

* Air at + 15°C, pool water at 26°C

- Index of protection (heat pump): **IP 24**
- Index of protection (electrical equipment): **IP 44**
- Refrigeration gas : **R 407C**.



Do not vent R407C into atmosphere: R407C is a fluorinated greenhouse gas, covered by Kyoto Protocol, with a Global Warming Potential (GWP) = 1653.

- Gas load : OPTIPAC10 = **3870 g** OPTIPAC15 = **4840 g**

**** Heat pump operating conditions:***

- The outside temperature must be higher than +5°C (automatic shut-off by anti-frost sensor SD2).
- A sufficient water flow must pass into the heat pump.

Note : The heat pump stops heating the pool when it starts a defrost cycle that can occur when surrounding air temperature is between 5 and 12°C. The operation of the compressor is interrupted but the fan keeps running, according to the information provided by the defrost sensor SD3 which is factory-set to -5 °C in the refrigeration circuit. As soon as this temperature increases to 5 °C, the fan switches off and a 300 second time period starts (depending on the compressor stoppage time) before the fan and compressor restart simultaneously.

6.1 Before starting up, check:







- That the hydraulic connections are correctly tightened.
- That there is no water leak.
- That the appliance is stable (with a level gauge and spirit level).
- That the cables are correctly connected to their terminals.
Incorrectly tightened cables may cause overheating of terminals.
- That the cables cannot be damaged by sharp metal sheets or elements.
- The earth connection.
- That no tools or other objects have been left inside the appliance.

6.2 Starting up

- Switch on the heat pump power supply protection device located inside the filter control cabinet.
- Start the filtration pump to make the pool water flow through the condenser of the heat pump.
- Set the by-pass and setting valves* as follows:
 - valve N°1 slightly closed to increase the filter pressure from 200g (0.20 bar).
 - valve N°2 fully opened.
 - valve N°3 fully opened.
 - valve N°4 fully opened.
 - valve N°5 half-closed.

* see paragraph 4.2.

If the valves (V4 & V5) are not present, set valve V2 to fully open and valve V3 to half closed.

- Check that the swimming pool water hydraulic circuit has been vented.
- Turn rotary On/Off switch to position On.
- Start the heat pump if it is in stand-by mode (red dot) by pressing , ON appears on the display for a period of 5 s before displaying the water temperature.
- Set the target temperature ( +  or  + ) => if the pool should be heated: Led  blinks and then remains on after approx. 2 to 3 minutes max. and the heat pump starts.

5 min. after re-start of the heat pump (fan + compressor), check the water flow pressure gauge display and set valve V3 or V5 in order to bring the needle into the green zone (beginning of season {cold water}: position at the start of the green zone).



Reminder: If, when setting the by-pass and setting valves, the flow rate is less than 1.5 m3/h the heat pump will not function (the flow switch remains open and the regulator displays the message AId alternating with the water temperature). Adjust the setting valves: -V5- (if present) or -V3- and -V1-.

When the heat pump is running :


-If the flow rate switch switches on or off for a period longer than or equal to 3 s, a timer of 130 seconds* min. is activated before the unit starts again.

* For information this time period may increase during a defrost cycle or if the compressor stop time is less than 180 s.

-In case of a power failure, a timer of 125 seconds starts when the power supply is restored before the unit starts again.

Observation: When the water attains the target temperature (Leds  and  off) the heat pump switches off automatically.

Reminder:

The 3-phase heat pump is equipped with a phase order control system (**KA1**) used to check that the phase order is correct at start up (and during operation) and to signal a phase order fault (regulator indicates dCP fault and the state light **R** or  [according to model] on **KA1** inside the unit is off). In that event, **switch off and isolate the unit** and it is sufficient to invert two phase wires directly on the main supply terminal.

ATTENTION ! this operation must be carried out by a qualified and authorised professional


6.3 Checking













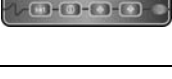

Check that the heat pump stops heating when:






- the target temperature on the digital display thermostat is decreased.
- filtration is switched off or valve V2 or V4 closed.

6.4 Troubleshooting




Faults :



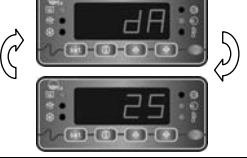
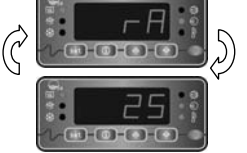
Info: led  remains on for 120s after a fault is indicated (except in the case of a dC indication when the heat pump remains operational).

Message	Designation	Cause	Remedy	Reset	Alarm
	Control sensor fault	Sensor defective or disconnected	Replace or reconnect the sensor	Cut power supply or press button  if dSr starts blinking	YES (terminals 13-14)
	Anti-frost sensor fault	Sensor defective or disconnected	Replace or reconnect the sensor	Cut power supply or press button  if dSA starts blinking	YES (terminals 13-14)
	Defrost sensor fault	Sensor defective or disconnected	Replace or reconnect the sensor	Cut power supply or press button  if dSd starts blinking	YES (terminals 13-14)
	Low pressure fault in refrigerating circuit	Insufficient refrigerant	Consult a PSA-approved technician to look for leaks and refill refrigerant	Automatic (if less than 4 faults within an hour) or by pressing the button  if dbP starts blinking	YES - if more than 4 faults within one hour - (terminals 13-14)
	High pressure fault in refrigerating circuit	1- Water and air mixture passing in the appliance 2- Refrigerant overload	1- Purge hydraulic circuit 2- Consult a PSA-approved technician to check the refrigerant level	Automatic (if less than 4 faults within an hour) or by pressing the button  if dHP starts blinking	YES - if more than 4 faults within one hour - (terminals 13-14)
	Phase order fault (only on three-phase heat pumps)	1- Incorrect wiring at unit supply terminals 2- Modification of phase order by electrical supplier 3- Temporary failure of one or several phases	1- Check wiring at unit supply terminals 2- Contact your local electricity supplier to ensure no modifications have been made to your supply	Cut power supply or press the button  if dCP starts blinking	YES (terminals 13-14)
	Triggering of thermal protection device(s) (Q1-Q2 reset manually via the electrical box) or the fan's internal safety device (F1-F11 automatically reset)	1- Over-current on the power supply line of the fan and/or the compressor. 2- Overheating of the fan motor.	Arrange for a visit by a PSA approved engineer to analyse the causes of these breakdowns.	By resetting the thermal protection device(s) (Q1-Q2) + pressing the button  if dt starts blinking	YES (terminals 13-14)



Message	Designation	Cause	Remedy	Reset	Alarm
	Defrost cycle Time Out	Incorrect signal from the defrost sensor or defrost cycle too long (> one hour)	Consult a PSA-approved technician to check the sensor and operation of the defrost cycle.	Cut power supply or press the button  if dtd starts blinking (after stand by 'Ofr5 => .') and switch the regulator on again by pressing )	YES (terminals 13-14)
	EEPROM fault	Incorrect parameter data in the regulator EEPROM	Consult a PSA-approved technician to replace the regulator	Cut off power	YES (terminals 13-14)
	Connection fault	Remote control module (optional) incorrectly connected or declared present for the regulator but in reality absent	Consult a PSA-approved technician and refer to the installation instructions of the remote control module	Automatic	NO

The states :

 : Example of the pool water temperature display.	 : Alternating	Info: led  remains on for 120s after the status signal (except in the case of a defrost cycle with the remote On/Off function (Cad) and SD3 < 3°C).
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Message	Designation	Cause	Remedy	Reset	Alarm
	Flow switch open for more than 3 s.	1- Filter pump is off (filter timer is outside the operating time limit) 2- Insufficient water flowing through the unit 3- Flow controller damaged or disconnected	1- Wait for the programmed filter time period * Test possible in mode : filtration « manual » 2- Adjust the BY-PASS * Filtration on 3- Change or reconnect the flow controller	Automatic after timer	NO
	Remote control ON/OFF.	Remote control on OFF (Contact open)	1- Switch the remote control to ON (Contact closed) 2- Contact a PSA-approved technician to check the cable linking the remote control box to the unit	Automatic	NO
	Anti-frost safety triggered	Outside temperature too low (< +5°C)	Wait for natural rise of outside temperature	Automatic	NO
	Anti-frost protection heater is on	Outside temperature too low (< +3°C) with compressor OFF	Wait for natural rise of outside temperature	Automatic	NO

6.5 Winter storage

- Press the button  to switch the regulation to «stand-by»,  is displayed for 5 s before a small red dot appears.
- Close the valves V2 and V3 of the BY-PASS.
- Open valves V4 and V5 next to the unit (if present).
- Drain the water condenser (**RISK OF FROST**) by unscrewing the two pool water inlet and outlet unions on the side of the heat pump.
- Lightly retighten the two unions to avoid any risk of foreign bodies entering the condenser.
- Do not hermetically seal the unit (risk of condensation).

Incorrect winter storage automatically cancels the GUARANTEE.

7. MAINTENANCE INSTRUCTIONS

Tasks to be carried out by a qualified and authorised person:

The following operations must be carried out at least once a year:

- Clean the evaporator at the back of the heat pump (with a soft brush and gentle water spray).
 - Never use a high-pressure cleaner for this operation -
- Check the settings.
- Check safety devices.
- Check the presence of refrigerant (check the pressure gauge needle with the compressor switched off).
- Check sealing of the cooling circuit on the Optipac 10 & 15.
- Check electrical connections and terminals (retighten the supply cable terminals).
- Check earth connections.
- Do not use solvents to clean the outside of your unit, PSA NET offers an optional specific cleaning kit.

IMPORTANT

Before working on the appliance, ensure that the power supply is disconnected and secured. All interventions must be carried out by persons who are qualified and authorised to work on this type of equipment .

8. RECYCLING THE PRODUCT

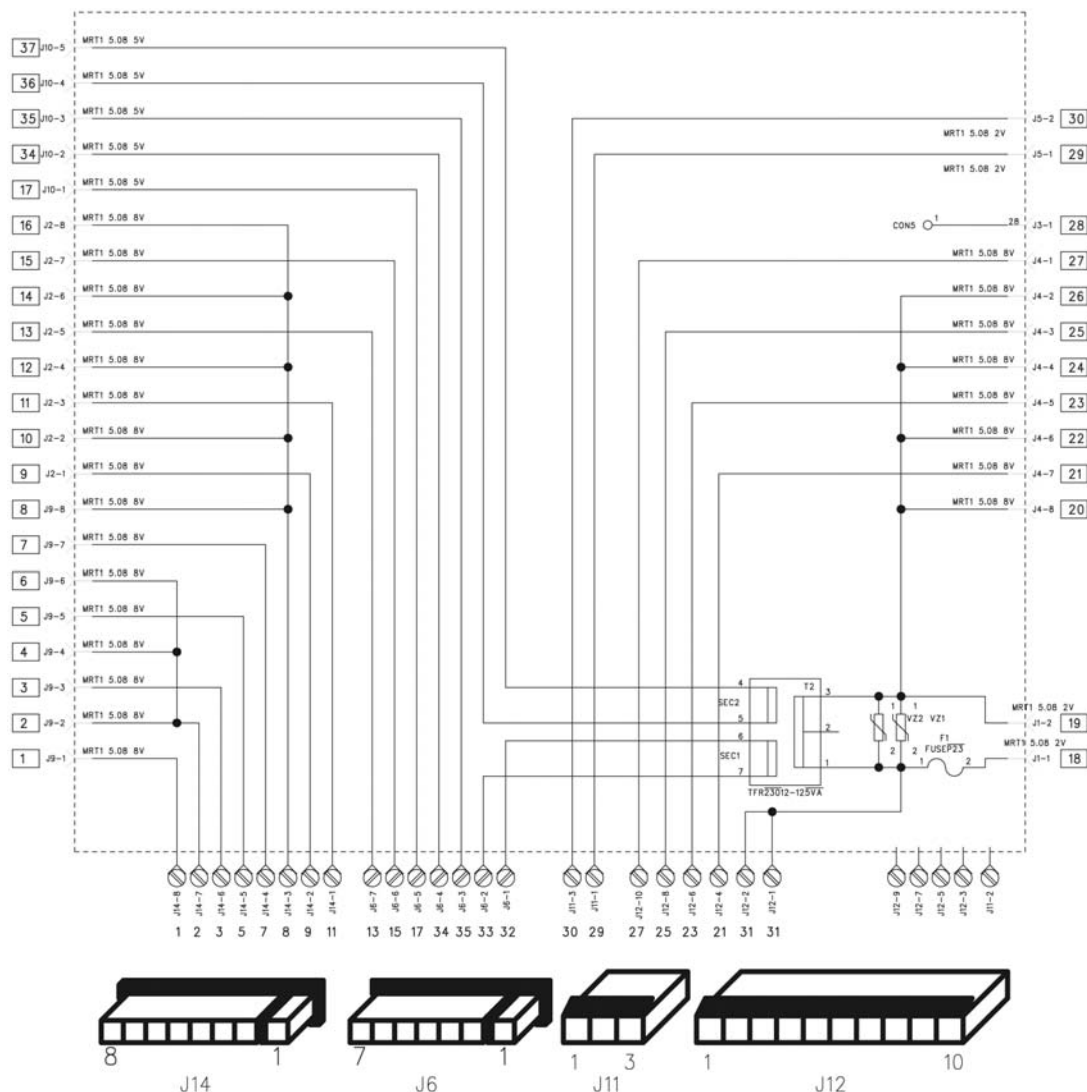


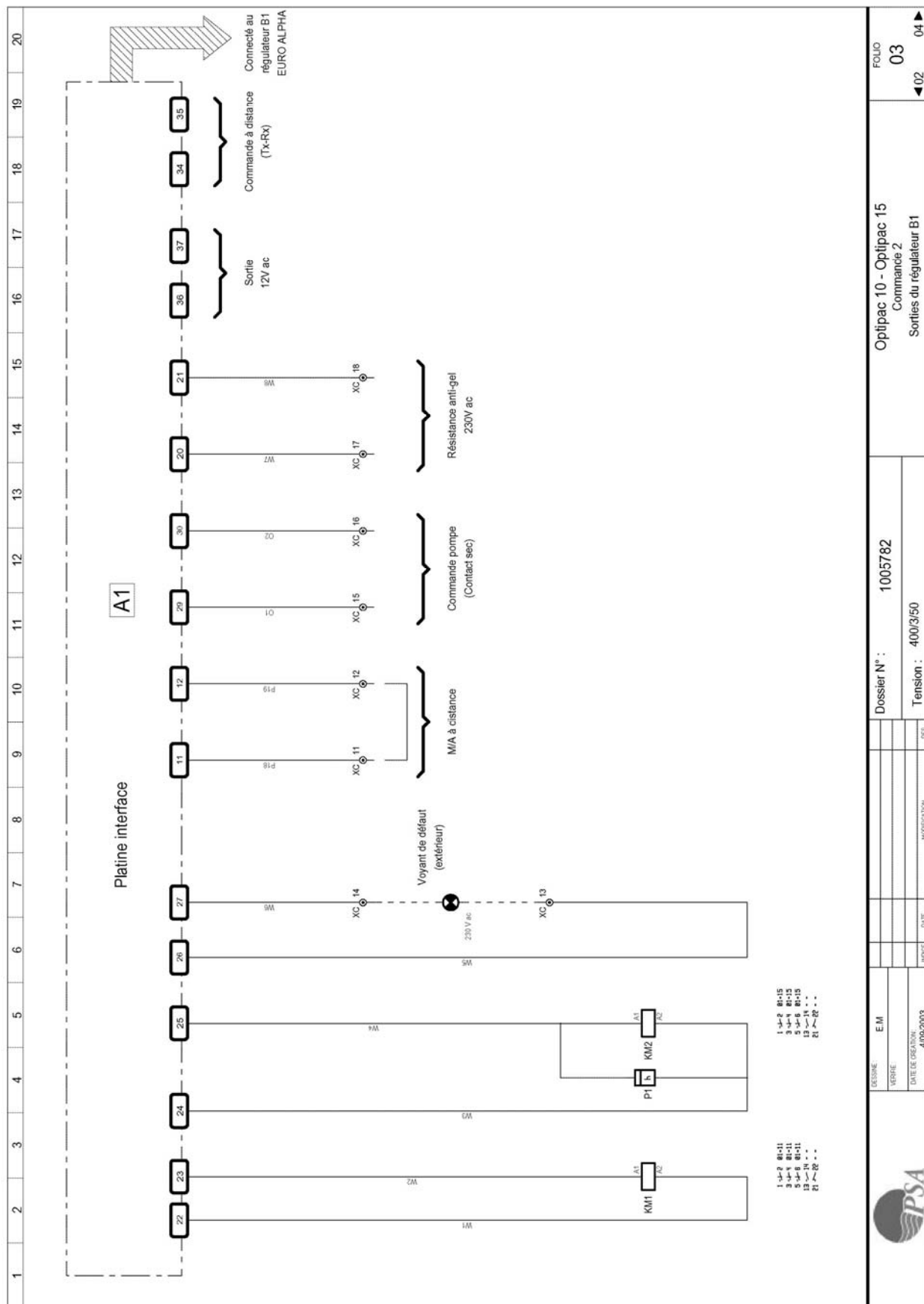
This device is subject to directive EU 2002/96/CE (with regard to WEEE). At the end of its life, the device should be disposed of at a waste centre or given to the seller when purchasing an equivalent new product.



9. ELECTRICAL DIAGRAMS

9.1 Electrical diagram of connection interface card.





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20										
REPERE		DESIGNATION								FOLIO		REPERE								DESIGNATION								FOLIO	
A1		Platine interface								02-03																			
E1		Pressostat HP								02																			
E2		Pressostat BP								02																			
F1		Sécurité ventilateur								02																			
FU1		Fusible circuit de commande 230 V								01																			
J1		Défecteur de débit circuit								02																			
KA1		Relais ordre de phase								01																			
KM1		Contacteur ventilateur								03																			
KM2		Contacteur compresseur								03																			
M1		Ventilateur								01																			
M2		Compresseur								01																			
P1		Compteur horaire								03																			
Q1		Disjoncteur ventilateur								01																			
Q2		Disjoncteur compresseur								01																			
Q3		Disjoncteur circuit de commande								01																			
S1		Interrupteur principal								01																			
SD1		Sonde régulation								02																			
SD2		Sonde antigel								02																			
SD3		Sonde dégivrage								02																			
T1		Transformateur								01																			

REFERENCE	FONCTION	FUNCTION
A1	Platine interface	Connection Interface board
E1	Pressostat HP	High Pressure switch
E2	Pressostat BP	Low Pressure switch
F1	Sécurité ventilation	Fan motor safety
FU1	Fusible circuit de commande	230V control circuit fuse
J1	Interrupteur de débit	Flow switch
KA1	Relais d'ordre de phase	Phase order relay
KM1	Contacteur ventilation	Fan contactor
KM2	Contacteur compresseur	Compressor contactor
M1	Ventilation	Fan motor
M2	Compresseur	Compressor
P1	Compteur Horaire	Time meter
Q1	Disjoncteur ventilation	Fan circuit breaker
Q2	Disjoncteur compresseur	Compressor circuit breaker
Q3	Disjoncteur circuit de commande	Control circuit breaker
S1	Interrupteur principal	Main On/Off switch
SD1	Sonde de régulation	Control sensor
SD2	Sonde anti-gel	Anti-frost sensor
SD3	Sonde de dégivrage	Defrost sensor
T1	Transformateur	Transformer

IMPORTANT

Elimination or shunting of one of the safety or remote control devices automatically cancels the GUARANTEE.

With an aim to improving its products, PSA reserves the right to modify the characteristics without prior notice
- Edition 03/08 -

ADDITIONAL RECOMMENDATIONS

In relation with the Pressurised Equipment Directive (PED-97/23/CE)

I. Installation and maintenance

- Before beginning any installation, commissioning, operation or maintenance work, the persons responsible for these tasks must have read and understood all instructions and recommendations contained in the unit installation instructions as well as in the project technical file.
- The person responsible for final acceptance of the unit must carry out a visual inspection to detect any damage the unit may have suffered during transport: refrigeration circuit, electrical enclosure, frame and casing.
- The unit may not be installed close to:
 - a heat source
 - combustible materials
 - the air duct outlet of an adjacent building.
- For certain appliances, it is essential to fit protection grids if the unit is installed in an area which is unprotected and easily accessible.
- The appliance may only be installed, commissioned, serviced and repaired by properly qualified persons in accordance with directives, laws, valid regulations and acceptable professional practice.
- During installation, repair and maintenance work, it is strictly prohibited to step on pipes and hoses as these could break and the escaping refrigerant could cause serious scalding.
- 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 valid legislation, the high and low pressure switches must be checked to ensure they are securely fastened to the refrigeration circuit and that they shut-off the electrical circuit when tripped.
- During maintenance work, ensure there are no traces of corrosion or oil around refrigeration components.
- Before beginning work on the refrigeration circuit, isolate the appliance and wait several minutes before removing the temperature or pressure sensors. Certain elements such as the compressor and associated piping may attain temperatures in excess of 100°C and high pressures with the consequent risk of severe scalding.

II. Repair

- All work on the refrigeration circuit must be carried out with total respect of valid safety regulations and acceptable professional practice: recuperation of refrigerant, nitrogen brazing, etc...
- All brazing work must be carried out by a qualified brazer/welder.
- In the case of units filled with R407C, refer to the specific indications in the installation instructions.
- This unit contains pressurized components, some of which may be manufactured by PSA, this is the case of piping elements. Only use the original spare parts indicated in the spare parts list to replace a defective refrigeration component.
- 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 name plate
 - The test pressure for both the high and low pressure circuits must not exceed 20 bar and 15 bar in case the device is equipped of the option manometer.
- 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 installation technical documentation.
- The use of non-original spare parts, modifications to the refrigeration circuit, replacement of the refrigerant with a refrigerant type other than that indicated on the name plate, use of the appliance under conditions outside the application limits indicated in the associated documentation will result in a cancellation of the EC label and PED conformity and the person who carried out these modifications will be sole responsible for the consequences.
- The technical data relative to the safety requirements of the various applicable directives must be indicated on the name plate. **This data must be recorded in the unit installation instructions which are included in the installation technical file:**
 - Model – code – serial number
 - Max. and min. OT
 - OP
 - Year of manufacture
 - EC label
 - Manufacturer's address
 - Refrigerant and weight
 - Electrical parameters
 - Thermo-dynamic and acoustic performance.

CONFORMITY CERTIFICATE OPTIPAC 10 - 15 SWIMMING POOL HEAT PUMPS



- Are fully compliant with:
- **ELECTROMAGNETIC COMPATIBILITY** directive 89/336/CEE
 - **LOW VOLTAGE** directive 73/23/CEE

The following harmonised standards have been applied:

NF EN 60335.1
NF EN 60335.2.40

Votre installateur - Your installer

Zodiac, la maîtrise des éléments.

Mondialement reconnu pour la qualité et la fiabilité de ses produits dans les secteurs de l'aéronautique et du nautisme, Zodiac engage son nom dans l'univers de la piscine pour vous offrir toute une gamme de piscines, nettoyeurs automatiques, systèmes de traitement d'eau, systèmes de chauffage et de déshumidification de piscines. En s'appuyant sur le savoir-faire technologique et l'expérience de PSA, Zodiac vous apporte la garantie d'appareils de très haut niveau tant dans leur conception que dans leurs performances.

Un véritable gage d'efficacité et de tranquillité !

Zodiac, mastering the elements.

Renowned worldwide for the quality and reliability of its products in the aeronautical and marine sectors, Zodiac has now brought its expertise to swimming pools, to bring you a full range of pools, automatic pool cleaners, water treatment systems, heating and dehumidification units.

Backed by PSA technology, expertise and experience, Zodiac brings you the reassurance of top quality equipment in terms of both design and performance.

A real guarantee of efficiency and peace of mind !

