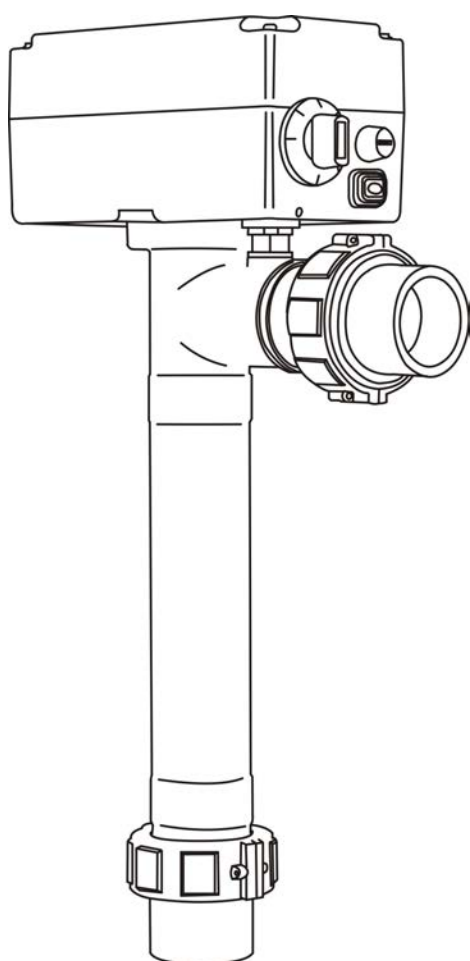
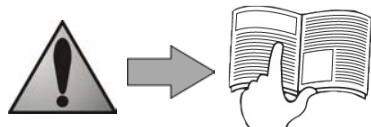




REAL



Instructions for installation and use
English

EN



- Read this manual carefully before installing, maintaining or repairing this device!
- The symbol  indicates important information that must be taken into account in order to avoid risk of personal injury and/or damage to the appliance.
- The symbol  indicates useful information.



Warnings



- Our products may be subject to change without notice as part of our continuous improvement policy.
- Exclusive use: pool water heating (must not be used for any other purpose).
- 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 the correct installation of the device and for ensuring compliance with local regulations. The manufacturer shall not be held liable for any potential issues that may occur as a result of failure to comply with local standards pertaining to installation.
- This appliance must be handled by competent and qualified personnel (physically and mentally) who are familiar with the operating instructions (by reading the user guide). Persons who do not satisfy these requirements must not handle the device so as to avoid exposure to potentially dangerous parts.
- If the device malfunctions: do not attempt to repair the device yourself, call your installer.
- Before carrying out any operation on the machine, check that the power supply is cut and that the machine is tagged out,
- Before reconnecting any component, check that the voltage indicated on the device corresponds to the mains voltage.
- If any safety device is removed or shunted, the warranty will automatically be void. This will also apply if parts are replaced with parts acquired elsewhere than our stores.
- Incorrect installation may cause serious damage and/or personal injuries (possibly death).
- Keep the device out of the reach of children.

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Available in appendix at the end of the manual:

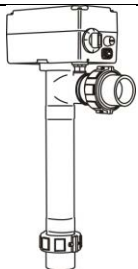

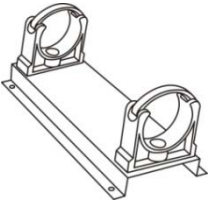



- wiring diagrams
- dimensions and description

1. Information before installation

1.1 General terms of delivery, storage and transport

Any equipment, even carriage and packing free, travels at the consignee's risk. The consignee shall make reservations in writing on the carrier's bill of lading if damage is detected, caused during transport (confirmation to be sent to the carrier within 48 hours by registered mail with acknowledgement of receipt).

1.2 Content

					
X1	X2	X1	X4	X4	X2

1.3 Operating conditions

Operating range: water temperature of between 2 °C and 40 °C

1.4 Technical specifications

RE/LE	L-shaped heating electrical resistor power at nominal voltage (with a manufacturer tolerance of ± 5 %)	
	kW	
3	3	
6	6	
9	9	
12	12	

- protection rating: IP 45

2. Installation

2.1 Selecting an installation site

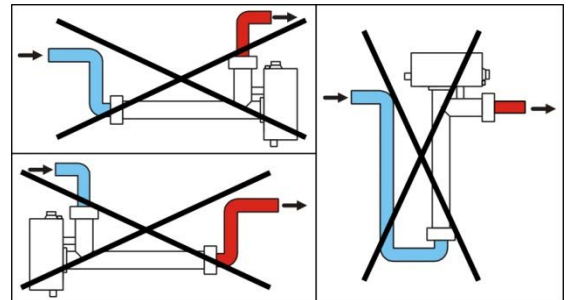


It is imperative that the appliance be installed close to the pool filter.
In any case, the device must NOT be held by the filtration pipes.

- Install the appliance at the filter system low point so that its body is permanently filled with water by retention,
- The appliance must be installed vertically and on a level in order to allow the evacuation of water through the hole in the electric box (see "Description" § in the appendix),
- The supplied support can be used to mount the heater on the wall,
- For indoor installation, the appliance must be installed in a technical room ventilated, dry and without stored pool treatment products,
- For outdoor installation, the appliance must be installed at a minimum distance from the end of the pool so as to avoid exposure to water splashes. The appropriate distance should be defined with reference to the national electrical standards that apply in the country of installation (in France: 3.5meters).

2.2 Installing the device

- The appliance must be installed in the vertical position,
- fix the support to the wall with inserts and the supplied screws (see the centre point sizes § "Sizes" in the appendix),
- using a screwdriver, open the black plastic hold straps,
- place the heater body on the support,
- close the straps,
- check that the appliance is correctly fixed to the side.



2.3 Hydraulic connections

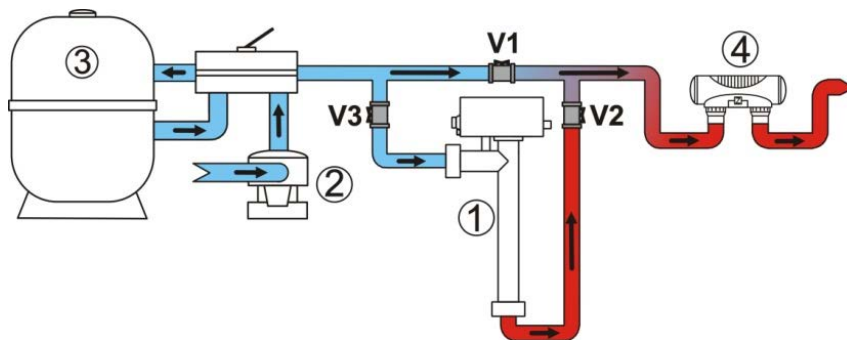


Observe the hydraulic connection direction.

The connection shall comprise a PVC rigid pipe:

- directly if the flow rate is less than 22m³/hour,
- from a by-pass if the water flow rate is greater than 22m³/h,
- it is recommended to use a by-pass as this makes maintenance of the appliance simpler,
- on the swimming pool filtration circuit, after the filter ③ and before any water treatment unit ④.

Check the tightening of the hydraulic connections, and for leaks.



V1-V2-V3 : by-pass valves

① RE/L equipped

② pump

③ filter

④ water treatment unit

RE/L E	Hydraulic circuit pressure		Connections	Minimum water flowrate	Maximum water flowrate
	test	service			
3-6-9-12	4 bars	2 bars	Ø50 inlet Ø63 outlet	5 m ³ /h	22 m ³ /h

2.4 Electrical connections

2.4.1 Voltage and protection

- the electrical supply to the heater must pass via a protection and disconnection device (not supplied) complying with the standards and regulations in force in the country,
- electrical protection: 30 mA differential trip switch (circuit-breaker or switch) dedicated.



- electric cables shall be fixed,
- acceptable tolerance of tension variation: $\pm 6\%$ (while working),
- the stuffing box must be used for all electrical connections.

2.4.2 Connections

- the electrical supply cable must not be exposed to elements that are sharp, hot or represent a crush hazard,
- check that all cables are secure and all terminal connections are correct.

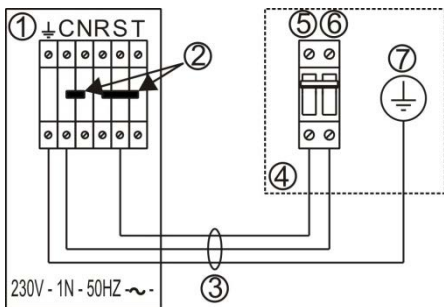


Factory configuration: all 3-6-9 kW heaters have a power terminal strip equipped with clamps for an electrical connection to the single-phase power supply 230V-50Hz-. For connection to the three-phase power supply 400V-50Hz- plus neutral, remove these clamps.



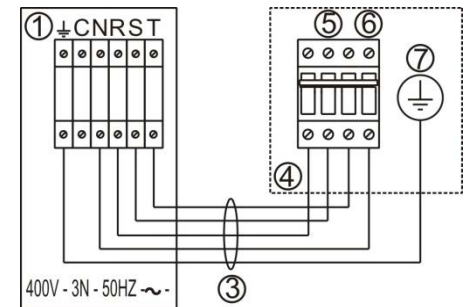
Loose terminals may cause the supply terminal board to overheat, and will void the warranty.
The device must be connected to an earth electrode.
Risk of electric shock inside the device.
The device must only be connected by a qualified and experienced technician.
If the power cable is damaged, it must be replaced by a qualified technician.

Single-phase



- ① Heater terminal strip
- ② Shunt
- ③ Power cable
- ④ 30 mA differential circuit breaker
- ⑤ Phase
- ⑥ Neutral
- ⑦ Earth

Three-phase



2.4.3 Cable cross-sections

- supply cable cross-section: cables with a maximum length of 20 metres (calculation base: 5A/mm²), must be checked and adapted depending on installation conditions.

RE/L E	Voltage	Current consumption		Cable section		Electrical protection
		A	mm ²		A	
3	230V/1N/50Hz	14	3x4	3G4	16	
	400V/3N/50Hz	5	5x2.5	5G2.5	10	
6	230V/1N/50Hz	27	3x6	3G6	32	
	400V/3N/50Hz	9	5x2.5	5G2.5	16	
9	230V/1N/50Hz	40	3x10	3G10	50	
	400V/3N/50Hz	13	5x4	5G4	16	
12	400V/3N/50Hz	18	5x4	5G4	20	

3. Use

3.1 Starting the device

- switch on the filtration pump,
- check the degassing and water circulation in the heater,
- engage the protective 30 mA differential circuit breaker associated with the heater,
- set the switch to the “on” position,
- adjust the control thermostat to the desired temperature.



- Marks * to 6: * = 16 °C ; 1 = 20 °C ; 2 = 24 °C ; 3 = 28 °C ; 4 = 32 °C ; 5 = 36 °C ; 6 = 40 °C
- the indicator of heating of orange color indicates that the device is heating the basin

3.2 Checks to be carried out after operating for a few moments

Check that the heater stops heating when:

- decreasing the required temperature on the control display (if the pool water is below 16 °C, the heater will always be operating, although it is set to “*”),
- filtration is switched off.

3.3 Winter storage



Winter storage is essential due to the risk of body of the heater freezing and breaking. This situation is not covered by the warranty.

- switch off the appliance
- switch off the power supply (by disengaging of the 30 mA differential circuit breaker of the heater),
- drain the pool circuit by removing both connection union fittings.

4. Maintenance

4.1 Maintenance instructions



It is recommended that the device be general serviced on a yearly basis to ensure proper operation, maintain performance levels and prevent some potential failures.

This is the responsibility of the user and must be performed by a qualified technician.

- visual check of the condition of the various electrical components,
- retighten cables and supply terminal board shunts and the switch.

4.2 Recycling



This symbol means that your device must not be thrown in the bin. The device must be collected by a selective system in view of re-use, recycling or similar. Any substances it may contain which are potentially dangerous to the environment shall be eliminated or neutralised.

Request information on recycling procedures from your retailer.

5. Resolution of problem

5.1 Malfunctions of the device

Dysfunction	Causes	solution
Orange light doesn't switch on anymore	circuit breaker is off	switch on circuit breaker
	"on/off" switch is off	switch on
	thermostat is not on demand	increase setting of required temperature
	pool water doesn't cross the heater	run the filtration pump
	filter is clogged (water flow rate insufficient)	backwash the filter
	filtration pump is drained	prime the pump
	high limit thermostat is released (cause: warmer overheating)	reset high limit thermostat Caution: in event of successive releases of high limit thermostat, make sure flow rate is sufficient and regular
The heater makes trip electrical installation	The protection circuit breaker is under dimensioned on the level of its gauge (in amp)	put a differential circuit breaker good gauged with respect to the intensity consumed by the appliance (see table §2.4.3)
	the section in mm ² of the supply cable is insufficient	put a good cable section adapted to the intensity consumed by the appliance (see table §2.4.3)
	the power terminal strip cable and/or the clamps are badly tightened or badly connected	check the electric connections
	an earthing of electrical resistance	replace electrical resistance (realized by an approved person)
Orange light is flashing: immediately switch off the heater using the "on/off" switch	flow rate is irregular	check installation and pump
	filter close to be clogged	backwash the filter
	pump is drained	prime the pump

5.2 FAQ

Where should my water treatment system be positioned with respect to the heating system?	The water treatment system (chlorinator, salt chlorinator, etc.) must be installed preferably downstream from the appliance (see installation §2.3), and must be compatible with the latter (check with the manufacturer)	
Is it possible to improve temperature performance?	protect the pool with a cover (floating cover, roller cover, etc.), to avoid heat loss	
	Check that filtration time is sufficient	during the heating phase, water flow must be continuous (24/24)
		to maintain the temperature throughout the season, allow for "automatic" flow of at least 12 hours/day (the longer automatic flow is used, the more time the appliance will have to function and to heat the water)

6. Product registration

Register your product using our website:

- you will be among the first to be informed of new Zodiac products and special offers,
- You can help us to constantly improve our product quality.

Australia – New Zealand	www.zodiac.com.au
South Africa	www.zodiac.co.za
Europe and rest of the world	www.zodiac-poolcare.com

7. Conformity certificate

Z.P.C.E. declares that the following products or ranges:

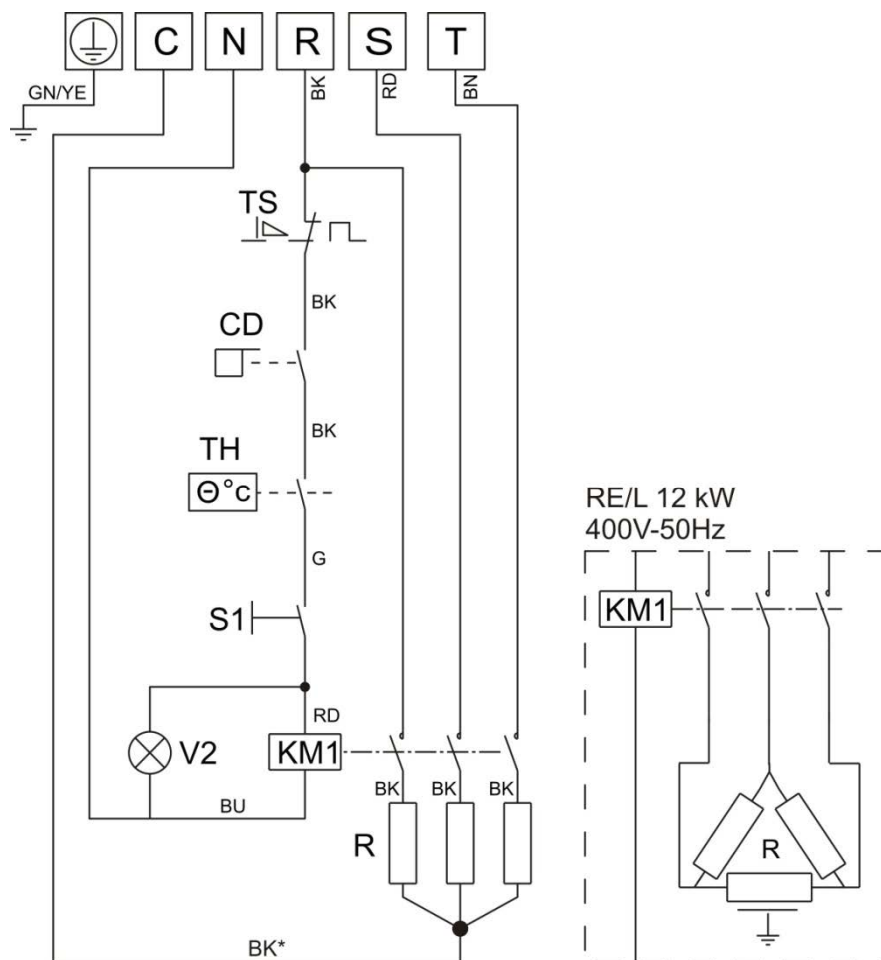
Special swimming pool heater: RE/L equipped 3-6-9-12


are in compliance with the provisions of:

- **the ELECTROMAGNETIC COMPATIBILITY directive 89/336/EEC**
- **the LOW VOLTAGE directive 73/23/EEC**

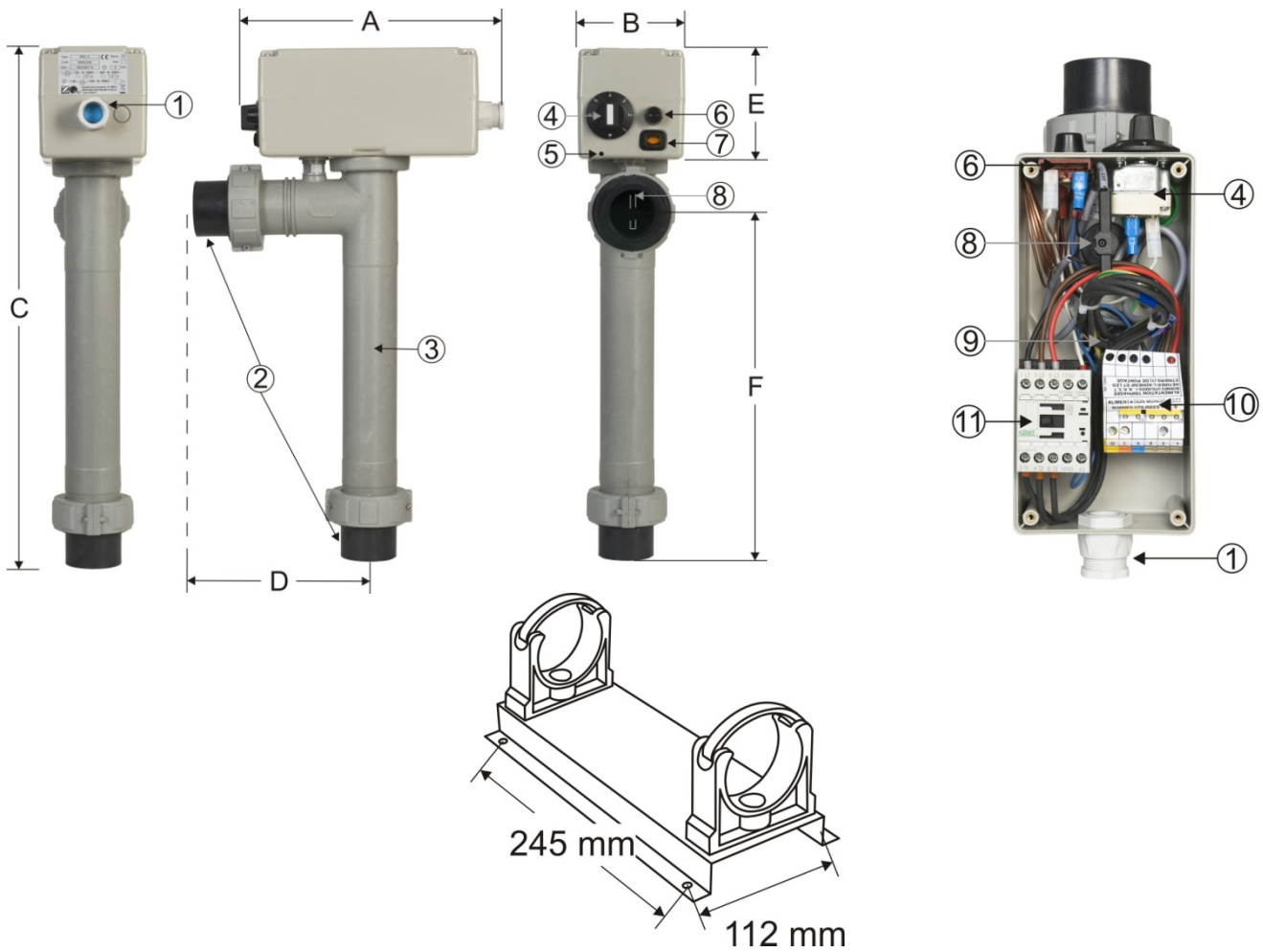


Wiring diagram



C	Start point terminal
N-R-S-T	Connection to 230V - 50 Hz mains supply (terminal R-S-T and C-N shunted) or 400V-3N-50Hz
	Earth
CD	Flow rate controller
KM1	Power contactor
RT	Heating element Titanium (power engraved on the metal resistor cup)
TH	control thermostat 16-40 °C
S1	"On/Off" switch
TS	positive safety thermostat
V2	operating light
BK	Black
BN	Brown
BU	Blue
G	Grey
GN/YE	Green/yellow
RD	Red
*	Black wire with clips according to the power

Dimensions and description



RE/L	weight (Kg)	Dimensions (mm)					
		A	B	C	D	E	F
3-6	4	275	120	550	198	100	395
9-12	5	275	120	730	198	100	575

1	Stuffing box
2	PVC fitting Ø50 inner, Ø63 outer
3	body
4	control thermostat 16/40 °C
5	box water evacuation and aeration hole
6	positive safety thermostat (high temperature limit at 63 °C, manual rearmament)
7	"on/off" switch, with "heating on" indicator
8	flow rate controller
9	titanium electric resistance, 3 to 12 kW depending on model
10	electric terminal strip
11	power contactor

Plaque signalétique – Product name plate

Pour plus de renseignements, merci de contacter votre revendeur.
For further information, please contact your retailer.

Votre revendeur / your retailer