

Swimming Pool Heat Pump

User manual

MODEL :

KS8R

KS12R

KS15R

KS20R



Introduction

Congratulations for buying a reversible heat pump for your swimming pool.

This machine was installed in accordance with the current norms and it is now ready to be used.

In order that you might be fully satisfied with this machine, you'll find below a few remarks :

- The Heat pump heats the swimming pool water only if the filtration pump is working.

- At the beginning of the season or when the outside temperature is low, you must increase the daily filtration time so that the Heat pump can overcome thermal losses of the swimming pool which are more important at that period.

- An isothermic cover is strongly advised.

- Finally we would like to draw your attention to the fact that to expect a period of freezing, you must carry out the wintering of the heat pump, or make your filtration work 24h/24.

Please read completely this manual.

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Safety Instructions

Never cover (risk of overheating). Keep out of reach of children, and do not to let them play nearby, inform them of the dangers of this machine.

Never introduce a stick or your fingers into the protective grille of the ventilation. Never clean the machine with the water jet.

Never disconnect the machine when it's working ; for any intervention even of cleaning, stop the machine, by pressing first on the key OFF; in the event of an emergency, cut off the current to the unit.

Principle of working

The Heat pump uses the free heat contained in the outside air to transmit it to the swimming pool water.

The ventilator located in the heat pump has the air circulated on the radiator with gills.

When the Heat pump heats the swimming pool, the air blown is fresher than the outside air.

In the contrary, when the heat pump cools the swimming pool, the air blown is heater that the outside air.

You can regulate the temperature to which you want to heat your swimming pool.

Careful : Increase the required temperature does not increase the heating power (example: your swimming pool is at 18°C; if you want 28°C, don't post 35°C to reach more quickly 28°C).

Using when it's cold

Outside temperatures lower than 7°C.

When the outside temperature decreases and that the air becomes wet, you might observe a thin layer of white frost on the gills of the radiator. This is normal (*).

To avoid a strong thickness of white frost which would prevent the air to circulate through the gills of the radiator, the Heat pump launches regularly and automatically an operation of defrosting which is accompanied with the stopping of the compressor during a few minutes.

In addition the Heat pump is regulated in factory to stop as soon as the outside temperature becomes lower than 7°C, to start again at 12°C. You can choose your own adjustments for the two temperatures (if you want to heat your swimming pool late in the season), by using the procedure described at the paragraph "Adjustments", or by calling your retailer.

() the fluid which circulates in the Heat pump thanks to a compressor, is, at the time of the passage in this radiator at an high negative temperature (same principle used in your freezer).*

Checking before and after starting

Before starting:

Your machine is tested and regulated in factory, however it is advised to carry out the following controls before starting :

- electric connections correctly carried out
- installation carried out according to our recommendations
- correct connection of arrival and exit water pipes

according to the written indications

(For more details on the rules of establishments refer to the document: Of INSTALLATION AND MAINTENANCE)

- no foreign things on the machine or fixed on the grids of the radiator

After starting:

Ensure that operation is regular; if high vibrations occur, stop the Heat pump and call your fitter.

Instructions

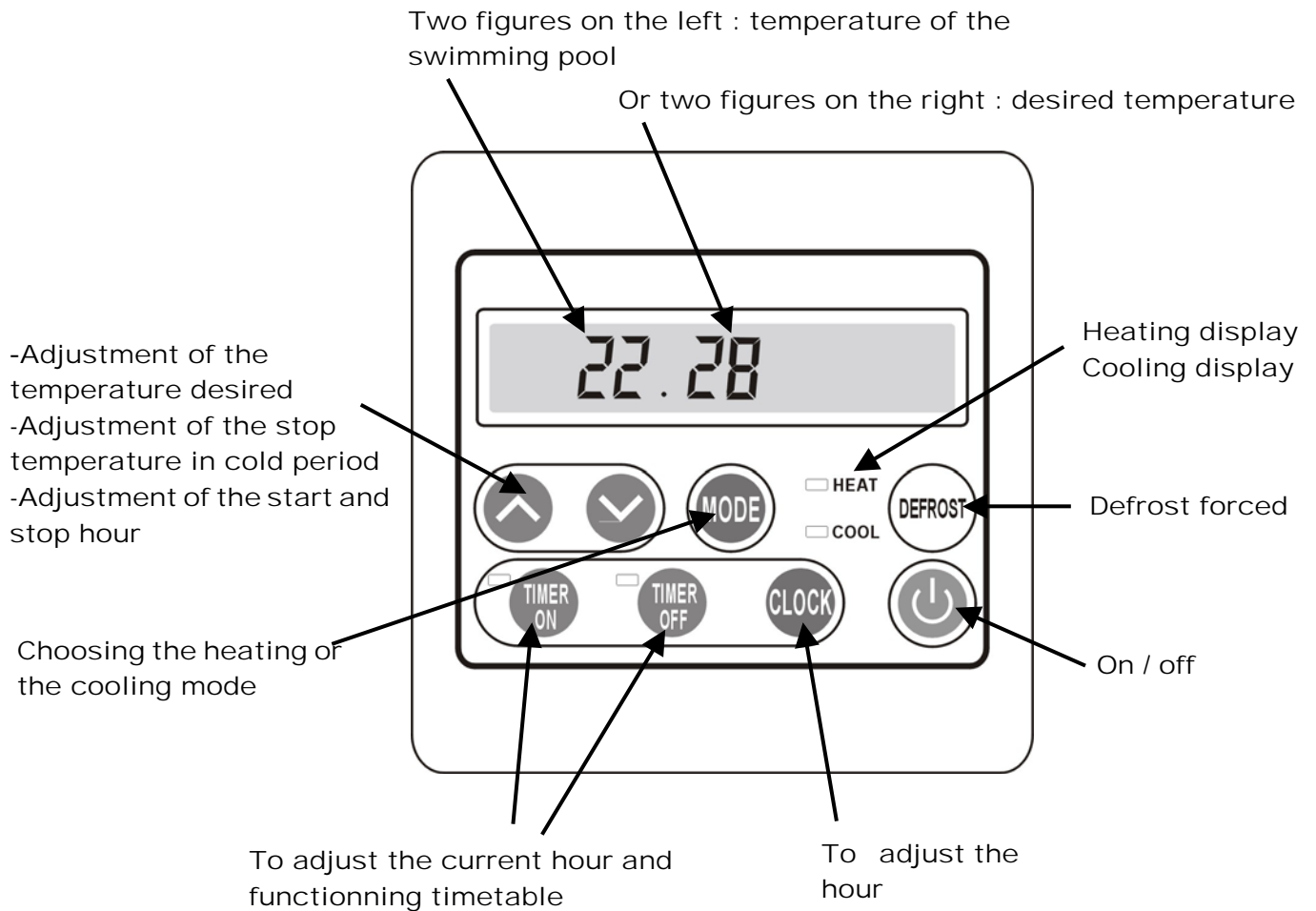
Careful :

The first pressure on the key ON/OFF gives the authorization of starting the Heat pump; the latter will start within a variable time: shortest within 1 second and longest within 4 minutes.

From its starting the heat pump heats or cools the swimming pool water, and will automatically stop when the required temperature has been reached; don't stop its operation unnecessarily.

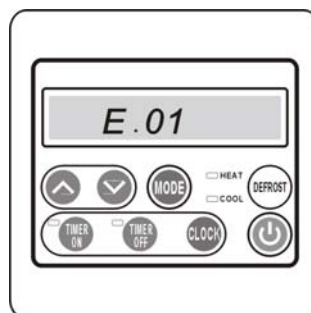
If you have to stop the Heat pump operation (for example to pass from the heating mode to the cooling mode), you will observe that the Heat pump will start again after 4 minutes.

Description of the order and display panel :

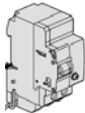

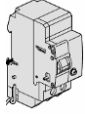


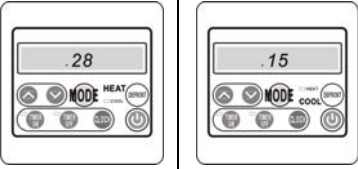


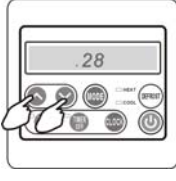

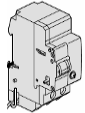



Error messages :

The Heat pump is equipped with regulation and safety components; when a regulation component is defective or a safety is activated, a message is posted like it's illustrated below; see the explanation of these messages in the paragraph "Error codes ".



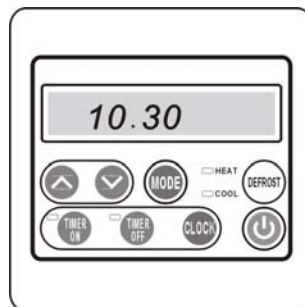
Procedure of use

Action	External appliance or button of heat pump	Display	Heat pump answer
Put the heat pump under tension	Engage the circuit breaker of the heat pump 		Indicates the current hour
Put in circulation the swimming pool water into the pipes	Engage the circuit breaker of pump of filtration 		Indicates the current hour
Start	Press the button ON/OFF		Start between 1 second and 4 minutes in the last active mode (heating or cooling)
Go from heating mode to cooling mode or inversely from cooling to heating	Press the button MODE		Stop for 4 minutes, reverse of cycle and restart in a new mode
Set the wished temperature into the swimming pool	Up  and Down  adjustable from 10°C to 35°C		The heat pump heats or cools until the required temperature
Stop	Press the button ON/OFF		Immediate stop and wait
Switch off	Engage the circuit breaker of pump of filtration 		Complete stop

Adjustments

Adjustment of operation timetable(timer):

- 1). While heat pump stops, press "clock" key to enter the set of o'clock. Press on the keys " " to increase or decrease hour numbers. Press "clock"key again to enter the adjustment mode of the minute. Press "clock"key once more to confirm the setting.
- 2). Press "Timer on"to enter timer setting to start the unit. Press " "key adjust hour number; Press "Timer on" again to adjust minute number. Press "Timer on" once more to confirm the setting.
- 3). Press "Timer off" to enter timer setting to stop the unit. Press " "key adjust hour number; Press "Timer on" again to adjust minute number. Press "Timer on" once more to confirm the setting.
- 4). You can timer to start and stop the unit at the same time.



8 - Regular operations of maintenance

Washing the sand filter of your filtration installation :

Stop the Heat pump

Wintering :

Stop and put the heat pump out of tension

Stop and put the filtration pump out of tension

Close the 2 isolating valves nearest of the Heat pump

Entirely unscrew the 2 connections on the Heat pump and have each pipe slip to make leave the openings coming out from the heat pump ; the Heat pump gets empty, wait for the complete emptying. (THE EXCHANGER MIGHT BURST IF IT HAS NOT EMPTIED COMPLETEY)

Put back each pipe to its place and screw again the connections to entirely close again (to avoid little animal's entry) Remark : supplement the draining of your filtration installation or call your fitter (all your installation must be protected against the freezing)

Maintenance :

Make sure that nothing comes to block the gilds radiator, if it's necessary clean it with a soft brush (no water jet under pressure)

Make sure that the gilds are right, rectilinear, if it's necessary rectify them with a fine comb

Make sure that the flue of the condensates is not blocked

9 – Error codes and how to solve them :

This table explains the error codes caused by a defective regulating component or by a security operation. You have to call your retailer.

Screen and state of the heat water pump	Component	Possible cause	Intervention of your retailer
<i>E 1</i> The heat pump continues running	Water temp sensor	Sensor disconnected, non supplied or defective	Check the connections, the wires, change it or replace the electronic card
<i>E 2</i> The compressor stops and after the fan stops too	Ambient air temperature sensor	Sensor disconnected, non supplied or defective	Check the connections, the wires, change it or replace the electronic card
<i>E 3</i> The heat pump continues running	Outlet compressor temperature sensor	Sensor disconnected, non supplied or defective	Check the connections, the wires, change it or replace the electronic card
<i>E 4</i> Compressor and fan stop	Defrosting system	The defrosting is incomplete and the automatism decides to stop the heat pump	Increase lightly the water flow going into the heat pump; the effect is to increase the temperature of the refrigerant in the evaporator.
<i>E 5</i>	Magnetic ammeter	The compressor stops 3 times in 24h because of intensity excess in the compressor	Environment problem See DIRECTIONS FOR INSTALLATION AND MAINTENANCE
<i>E 6</i> Compressor and fan stop	Outlet compressor temperature sensor	Outlet compressor temperature detected up to 105°C more than 3 times in 24h	Environment problem See DIRECTIONS FOR INSTALLATION AND MAINTENANCE
<i>E 7</i> Compressor and fan stop	Magnetic circuit breaker	Electric current leak from the compressor, from the fan or from an electrovalve; electric safety system of the heat pump	Switch off the current and call an electrician for repairing or replacing the defective component
	Flow switch	Flow switch disconnected, non supplied or defective	Check the connections, the wires, change it or replace the electronic card
<i>E 9</i>	Pressure controller High pressure	Pressure controller is disconnected, or defective. Or increasing in pressure in the refrigerant circuit	Call a refrigerating engineer who will do the necessary controls of the circuit pressure
<i>E A</i>	Pressure controller Low pressure	Pressure controller is disconnected, or defective. Or lack of gas in the refrigerant circuit.	Call a refrigerating engineer who will do the necessary controls of the circuit pressure

10-Problems / solutions :

The difficulties met the most often can be solved by reading the table below.

If nothing corresponds to the list, or if the solutions applied do not solve the problem, refer to **DIRECTIONS FOR INSTALLATION AND MAINTENANCE** or contact your retailer.

Difficulty	Observation	Probable cause	Explanation / Solution
The heat pump does not start	Extinct screen	No power	Check that the circuit breaker of the table is engaged in the technical room
	Extinct screen and heat pump supplied in power	The power supply is defective	Call your retailer
	Extinct screen, filtration is working	The in and out pipes of the heat pump are reversed or the flow switch is not sufficient	Check on the heat pump that the in and out pipes are not reversed. Check the filtration pump works or is not defused
	Normal, lit screen	The ambient temperature has decreased below 5°C	The heat pump will start again above 7°C
Water is running below the heat pump	The water comes from the bottom of the heat pump	Drain of the condensates not installed or stopped : black, plastic conduit prolonged with a flexible pipe of evacuation	It's natural : these condensates are caused by condensation of the humid air on the gilds of the evaporator
The temperature of the swimming pool is increasing very slowly	The heat pump works	The rising in temperature is more or less rapid according to the volume of the swimming pool and to the climatic conditions. An isothermic cover will improve the performances in heating	
White frost or ice appears outside on the gilds of the evaporator	The layer of the white frost is thin	The outside temperature is low and the air is humid	See the paragrah 5 of this manuel
	The layer of the white frost is thick (the blades of the ventilator may rub on the ice much thicker inside)	Outside temperature very low and air very humid	The automatic de-icing is not sufficient ; stop the heat pump for the operations of wintering
The heat pump emits noises of vibration or sheet	The vibrations can be located or the heat pump is not stable	It's not horizontal or not well fixed ; the pipes may have moved into the pump during the transport or the installation	Call your retailer