Mini Swimming Pool Heat Pump

Installation manual

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INSTALLATION AND USER MANUAL

Thank you choosing our product. Its applicable temperature is 10-43℃

⚠Note: This manual contains all the necessary information to use and install the heat pump.

1. It must be installed or removed by professionals,

2.Be sure to install a suitable circuit breaker

If abnormal conditions (such as noise, smell, smoke) occur, please immediately turn off the power and contact the seller, do not try to repair it yourself, otherwise it may cause danger.

The main power switch should be placed in a position that children cannot reach, in order to prevent children from playing with the main power switch.

3.Do not put objects such as hands or sticks into the air inlet and outlet of the equipment and do not remove the fan mesh.

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Warning:

a. please read the following tips before installation, use and maintenance.

b. Installation, removal and maintenance must be carried out by professional personnel in accordance with the instructions.

c. Gas leakage test must be done before and after installation.

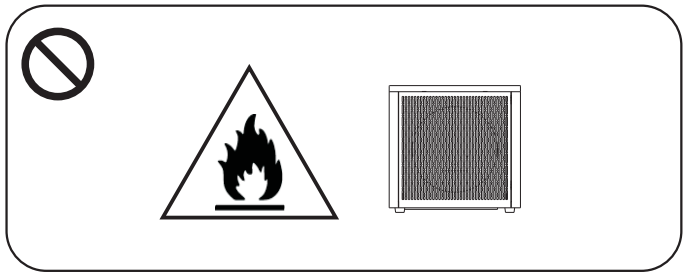
1.Use

a. It must be installed or removed by professionals, and it is forbidden to dismantle and refit without permission.

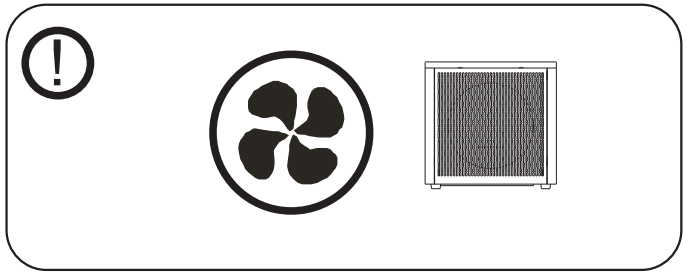
b. Don’t put obstacles before the air inlet and outlet of the heat pump.

2. Installation

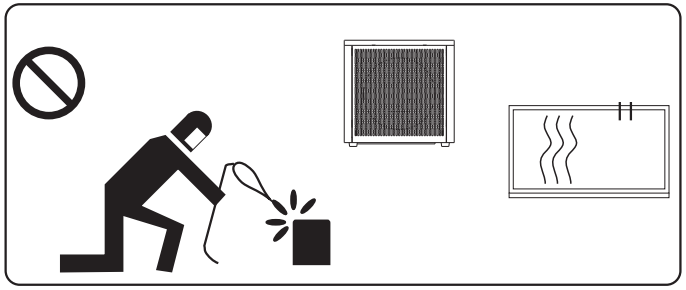
a. This product must be kept away from any source of fire.



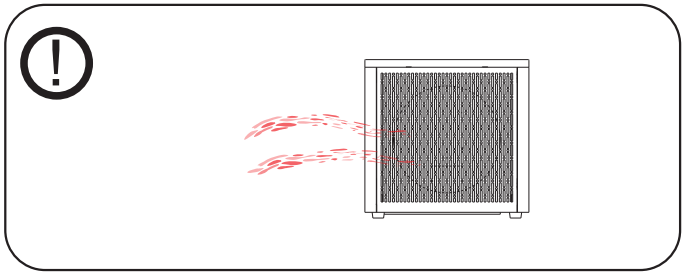
b. The installation can’t be in a closed environment or indoors, and must be kept well ventilated.



C. Vacuum completely before welding, field welding is not allowed, welding can only be performed by professional personnel in professional maintenance center.



d. Installation must be stopped if any gas leakage, and the unit must be returned to professional maintenance center.



3. transportation & Storage

a. Sealing is not allowed during transportation

b. Transporting goods at a constant speed is need to avoid sudden acceleration or sudden braking, so as to reduce the collision of goods.

c. The unit must be far away from any source of fire.

d. Storage place must be bright, wide, open and good ventilation, ventilation equipment is required.

4. Maintenance Notice

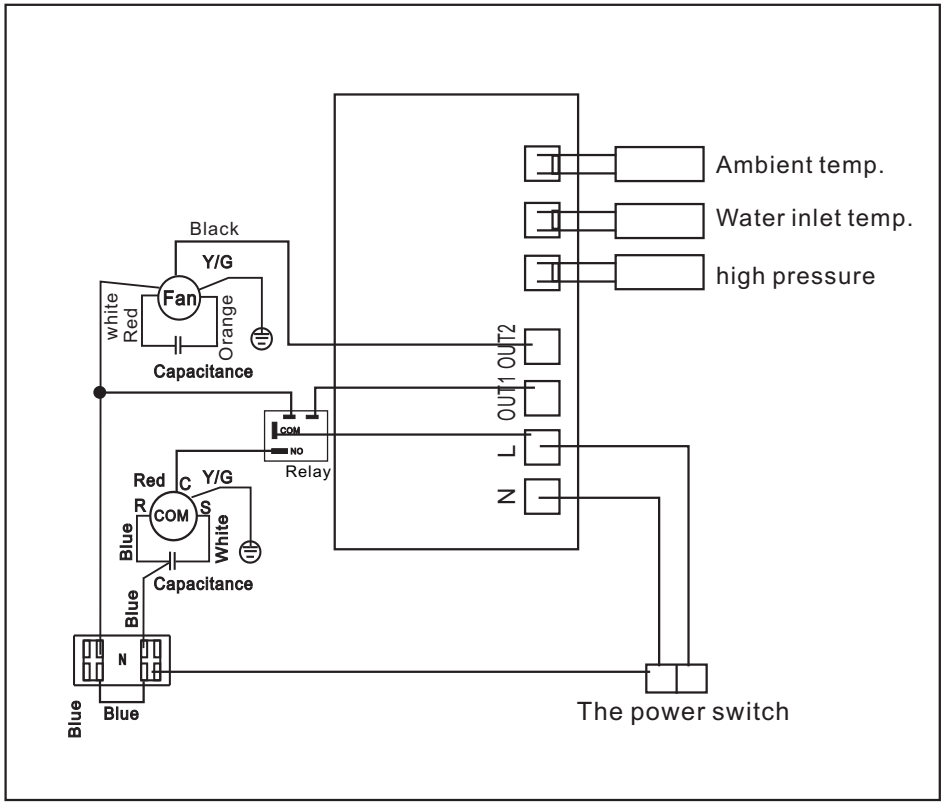
a. If maintenance or scrap is required, contact an authorized service center nearby

b. Qualification requirement

All operators who dispose gas must be qualified by valid certification which issued professional agency.

c. Please strictly comply with the requirement from manufacturer when maintenance or gas. Please refer to the technical service manual.

7.The wiring diagram



“▲” and “▼” button
up-turn button and down-turn button
Current setting temperature may be adjusted by pressing this button under interface display.

6.Fault code and parameter list

6.1 System fault table:

Fault code	Protection Name	Solution
P1	Inlet water temp. sensor failure	Check or change the sensor
P2	Ambient temp. sensor failure	Check or change the sensor
P3	Ambient too low temp. protection	Check or change the sensor
P5	High pressure protection	Check whether the pressure switch and water cycle system
E5	High pressure sensor failure	Check whether the pressure switch and water cycle system

6.2 Parameter list:

Digit	meaning	range	default
A	Heating temperature set point	15℃~40℃	28℃
B	Heat pump Back to the difference	1℃~10℃	2℃
C	Ambient temp. too low protect set point	0℃~15℃	5℃
D	Ambient temp. too low back to the poor	1℃~15℃	2℃
E	Power lost memory	0~1	1(Y)
F	Temperature calibration	-15℃~15℃	0℃
H	Inlet water temperature	-19℃~99℃	
L	Outlet water temperature	-19℃~99℃	

1.Installation instruction & Operation points

Cautions of Installation:

1. Any chemicals must be guaranteed to be added to the pipes after the heat pump(ie, the chemicals cannot enter the heat pump).

2.When placing or transporting the equipment, it should be placed upwards and kept upright, and must not be dumped or inverted.

1.1 Installation Locations

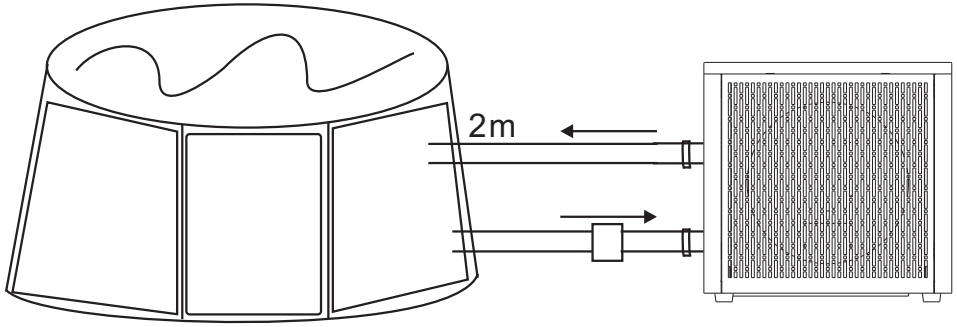
The product can be installed and used at any predetermined location as long as the following three conditions are met:

1) Good ventilation

2) Stable power supply

3) Pool filter

This heat pump should be installed in a well-ventilated place outside, and the distance from swimming pool should be at least 2 meters. The machine outlet should be at least 1 meter away from the obstacles, and the surrounding obstacles should be at least 0.5 meters. If installed indoors, please consult the installer to keep the room well ventilated.

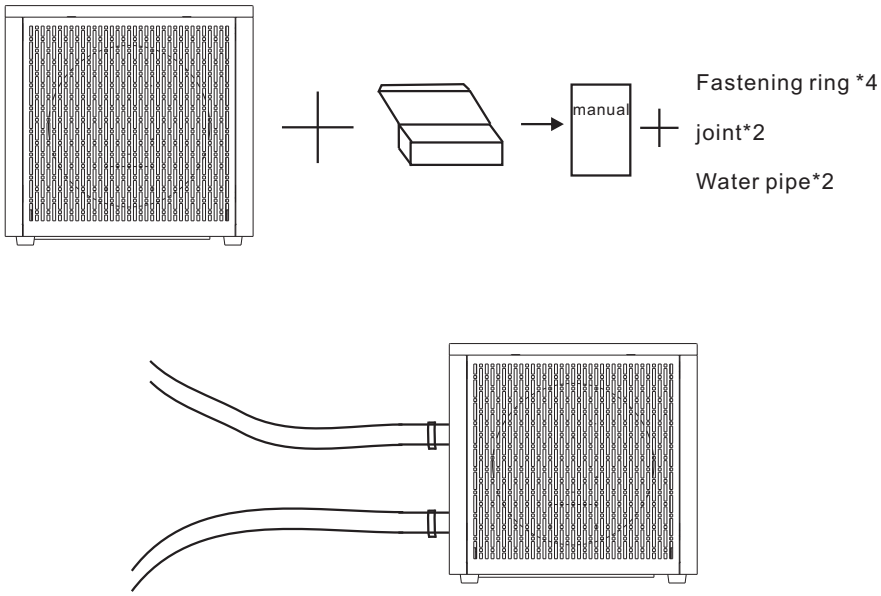


Note: Do not install the unit in a confined or insufficient ventilation location, or in a location where it may block the air intake. These locations can affect the flow air c. It will cause the air to recirculate, resulting in reduced efficiency. It even may stop the system from running.

1.2 Trial

Note: please ensure the order of “When start, start water pump before heat pump, When finish, turn off heat pump before water pump”, otherwise it will damage the heat pump.

1.3 Connection



1.4 Power supply

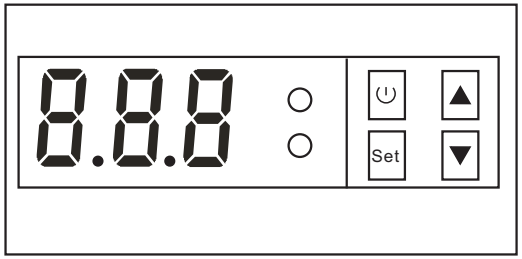
Before connecting the power supply, make sure that the power supply matches the rated power supply of the product.

Cable Selection of the Protection Device

Model		MALCRW008ZA-R32
breaker	Residual-current circuit breaker	4.5
	Rated residual leakage current	30
Fuse		4.5
Power Cord (MM2)		3X1. 5

5.Operation instruction

5.1 LED display interface



SYMBOL	DESIGNATION	OPERATION
⏻	Power ON/OFF	Press to power on or off the heat pump
▲ ▼	Up/Down	Press to set desired water temperature

5.2 Temperature display

28℃ is shown on the screen as below for your reference:



5.3 Controller display instruction

The red color indicator light is lighted up when the unit is input power to switch on.
The green color indicator light is lighted up when the compressor is switched on.
Under switch-off status, the interface display will show “off”, and all indicator lights will be extinguished.
Under switch-on status, the interface display will show input water temperature.
It will show breakdown code when there is any breakdown.

5.41.Definition and operation of the buttons

⏻ “on/off”button
Pressing this button on the interface display may turn on/off the unit.
On the parameter/parameter setting interface, when press this button, it will return to the interface display.

Set “Set”button
Function button
Long press 5S button may check the parameters, and may turn pages in combination with “▲” and “▼”
Under system parameter checking status, press “Sel” button to enter the current parameter setting status (only parameter setting flashing), press “▲” or “▼” to modify the corresponding parameter, press “Sel” again to exit parameter setting status and return to parameter checking status.

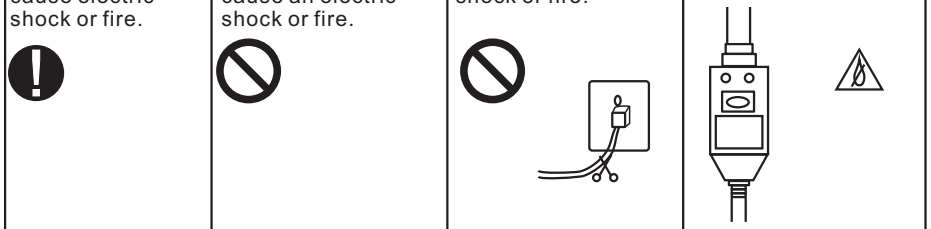
4.Important Notice

Improper use will cause danger which will possibly cause personal damage or death.
Improper use will cause danger which will possibly cause damage or accelerating damage for the equipment.
As the situation is variable, there is still danger except the listed notice.
Please fix it on the panel like metal which is not easy to be fired and fix it firmly in case of any drop because of shaking.
Do not fix the controller when it is damaged or lack of parts.
When installing, do not expose it under sunniness, strong airflow and spray.
When installing, do not expose them to the corrosive or polluted gas. For example, sulfide gas or salt atmosphere.
When installing, please make sure the temperature range for the electrics case is -10°C~ +50°C. Add an exhaust fan if necessary.
When wire connecting, please make sure the input power is under off status.
When wire connecting, the wire should be connected by the professional electrical workers.
When wire connecting, if the input is passive switch signal, please do not connect to power.
When wire connecting, please add system protection in case it causes danger because of losing efficacy of the computer controller.
When wire connecting, please uphold the principle of separated strong and weak power.
When wire connecting, please use the wire which conforms to the requirement of technology and specification for wire.
When wire connecting, please adopt parallel-connection method for the ground wire which is as wide as possible.
When wire connecting, please use a proper screwdriver to fix the screw. Too big or too small will be not suitable.
Set regarding parameters according to the unit's configuration to ensure its ordinary running.
When operating, please make sure of proper wire connection before running the unit, and then input the power.
When operating, please make sure that the environmental condition and voltage are under allowed conditions, and then turn on and run the unit.
When operating, please do not check the signal.
When operating, please do not modify the setting parameters at will.
When operating, please do not stand too close to the unit.
Please contact the factory and do not repair by yourselves if any repair is needed.
Please do not pull or contort the wire cable and communication wire cable in case serious breakdown is occurred.
Please do not touch the parts of the control board in case of any static damage.
For any aftereffect caused by the defect of the software of the computer controller, our company has the right to repair the defect, but have no duty to bear any responsibility.
Our company has no duty to bear any responsibility for any improper use.
Our company has the right but not duty to offer site service to the terminal customers.

Note: The above data is adapted to power cord≤10m. If power cord is >10m, wire diameter must be increased. The signal cable can be extended to 50m most.

Pay attention:

please ensure the safety of the power plug. Otherwise, it could cause electric shock or fire.	Do not disconnect the power supply while running Otherwise, it could cause an electric shock or fire.	Do not use damaged or substandard wires. Otherwise, it could cause an electric shock or fire.	Not waterproof : RCD plug must be protected against any damage and used in dry environment.



After all connections are complete and checked, perform the following steps:
1) The user should start the water pump first to ensure no water leakage in the water pipe system; then set the thermostat at the appropriate temperature after power on.

2)In order to protect the machine, it has a delayed start function, after start up, the water pump start, next fan runs, and the compressor will start up automatically after about 3 minutes.

3)Check if there is any abnormal noise when running

4) Check that the set temperature is appropriate

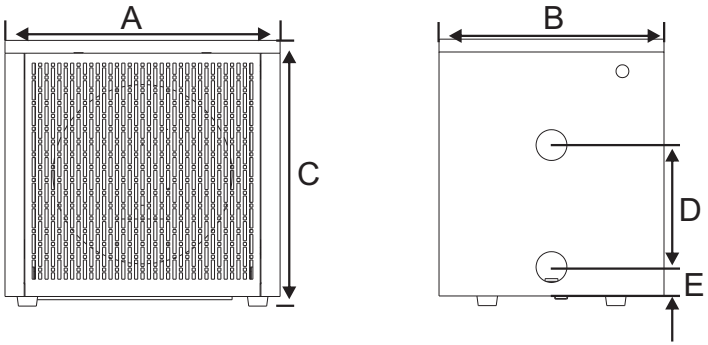
Depending on the initial temperature of the pool water and the air temperature, it may take several days heat the water to the desired temperature. A good swimming pool cover can greatly reduce the time required.

Time delay - the heat pump has a built-in 3-minute start delay (only started when heated) to protect the circuit and avoid frequent switches causing losses. The machine will restart automatically after the delay period. Even a brief power outage can trigger this delay does not affect the 3-minute duration of the delay.

1.5 Condensate water

The air enter the heat pump is strongly cooled when heat pump heat the pool water, which may cause condensation of the evaporator fins. At higher relative humidity, condensation can reach several litters per hour. This phenomenon is sometimes mistaken for a leak.

2.Dimension



Size(mm) \ Name / Model	A	B	C	D	E
MALCRW008ZA-R32	430	350	415	190	45

3.Technical parameter

Model	MALRW	005ZA	008ZA
FOB price	RMB/PCS		
Advised pool volume	m^3	5~15	10~20
Refrigerant type		R32	R32
Power supply		230V/1Ph/50Hz	
Function		Heating only	
Casing type		Galvanized stell case	
Colour		White/Black/Customized	
Control		LED digital display	
Operating ambient temp.	℃	7~43	7~43
Heating:(Air27℃water 26℃ Humidity 80%	Capacity(kw)	2	3.8
	Power inpput(kw)	0.36	0.68
	Rated current(A)	1.64	3.09
	COP	5.50	5.50
Heating:(Air15℃water 26℃ Humidity 70%	Capacity(kw)	1.5	2.6
	Power inpput(kw)	0.35	0.62
	Rated current(A)	2.39	2.82
	COP	4.10	4.10
Max current	A	2.3	4.3
Power cable		Rubber cable with RCD main plug(Plug&play)	
Plug type		EU or UK	
Sound pressure @ 1m	dB(A)	45	45
Compressor type		Rotary	
Condenser		Horizontaltype spiral titanium tube in PVC	
Evaperator		Horizontaltype aluminium fins & copper tubes	
Fan type		Horizontal	
Fan qty.		1	
Fan power input	W	30	30
Advised water flow	m^3/h	1~2	1~2
Water connection	mm	25.4	25.4