



Swimming Pool Heat Pump



INSTALLATION AND USER MANUAL

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Thank your choosing our product and your trust in our company.

To help you get maximum benefit from this product, please read this instruction manual carefully and operate strictly according to the instructions before starting the machine; otherwise, the machine may be damaged or cause you unnecessary harm.

I. Use

- 1- This heat pump will efficiently and economically set the water temperature for your swimming pool enhancing you comfort and pleasure.
- 2- The user chooses from the specifications to optimize the heating capacity to best suit their needs (please refer to technical specifications table).

II. Features

- 1- Highly efficient titanium heat exchanger.
- 2- Sensitive and accurate temperature control display.
- 3- High-and low-pressure protection.
- 4- Below low temperature circuit-breaker.
- 5- Automatic defrost Temperature setting.
- 6- Internationally known compressor.
- 7- Easy installation and operation.

III. Technical Specifications

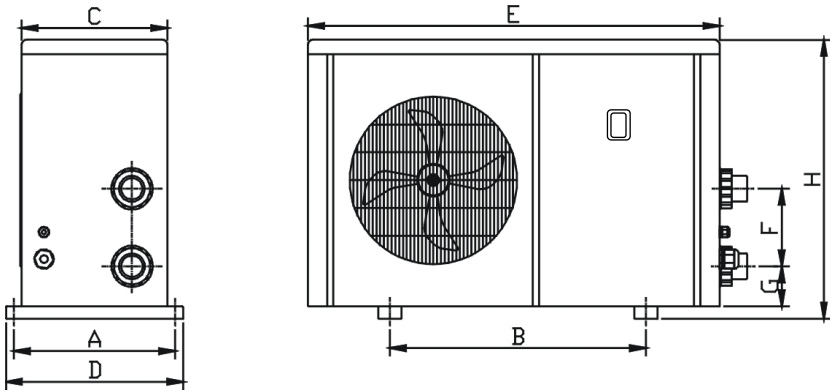
Model	GP00	GP01	GP02	GP03	GP04	GP05	GP06	GP07	
Performance Condition: Air 26°C, Water 26°C									
Heating capacity KW	3.6	5	7	10	13	17	25	26	
C.O.P.	5.2	5.3	6.3	6.2	6.3	6.2	6.4	6.5	
Performance Condition: Air 15°C, Water 26°C									
Heating capacity KW	2.7	3.7	5	7	9	12	16.5	17	
C.O.P.	4.1	4.3	4.5	4.4	4.5	4.5	4.5	4.7	
Advised Water Flux m³/h	2.5	3	3-4	4-6	5-7	6.5-8.5	8-10	8-10	
Power supply	220-240V/1Ph/50Hz							380-415V/3 Ph/50Hz	
Rated power Kw	0.66	0.86	1.11	1.59	2	2.67	3.67	3.62	
Rated current A	3	3.9	5.0	7.2	9.1	12.1	16.7	5.5	
Water pipe in-out spec mm	50								
Water pipe in-out spec(For UK) mm	48								
Net weight / Gross weight Kg	31/36	35/40	45/50	52/57	66/70	85/93	127/137	127/137	

Notice:

1- This Heat Pump can work well between 0°C~+43°C air temperature; efficiency will not be guaranteed out of this range. Please take into consideration that the pool heater performances may vary under different conditions. Consult your Pool specialist.

2- We reserve the right to make improvements periodically without further notice. For details please refer to the cover-plate on the Heat Pump.

IV. Dimensions



Size (mm) Model	Name	A	B	C	D	E	F	G	H
GP00		275	395	266	300	641	260	73	493
GP01		275	400	267	300	755	200	80	505
GP02		330	580	285	350	930	200	88	550
GP03		330	580	285	350	930	280	88	550
GP04		330	650	300	350	1000	280	88	630
GP05		330	650	300	350	1000	280	88	630
GP06		438	770	425	470	1120	350	88	950
GP07		438	810	425	470	1180	600	88	950

※ Above data is subject to modification without notice.

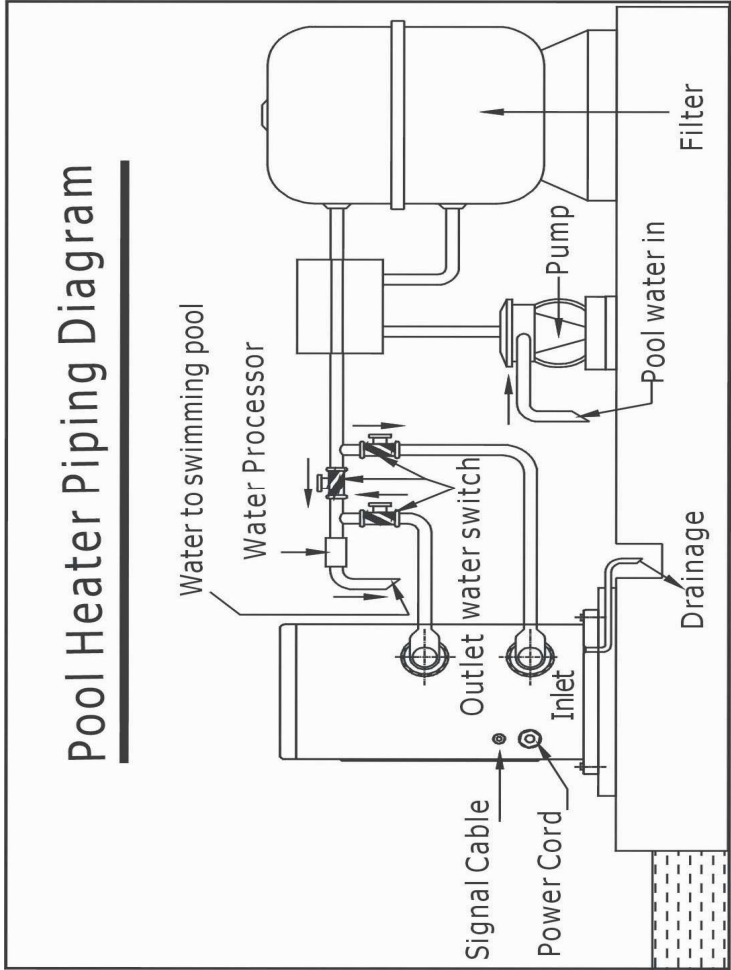
Note:

The diagram above is for the dimensions of the Heat Pump, for technician's layout reference only. We reserve the right to make improvements periodically without further notice.

V. Installation Instructions

1- Schema for plumbing the water pipes

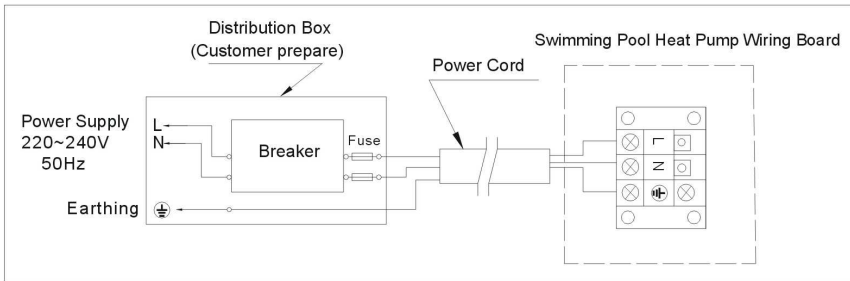
(Please note: This schematic layout of the pipes is only for reference.) .



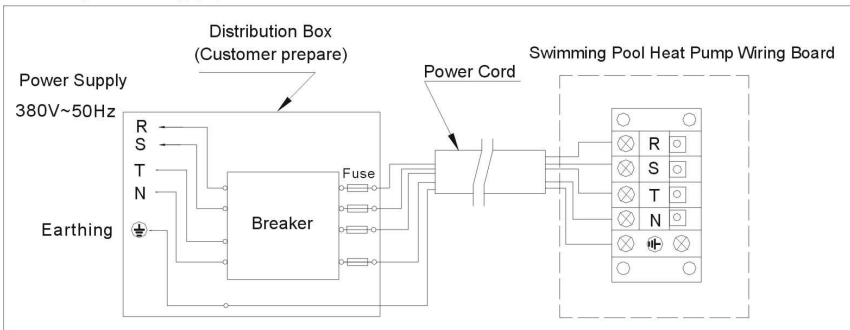
SCHEMA 2: HEAT PUMP Plumbing

2- Electrical Wiring Diagram

A.For power supply:220~240V 50Hz



B.For power supply:380V 50Hz



Options for circuit breakers and wire specs

MODEL		GP00	GP01	GP02	GP03	GP04	GP05	GP06	GP07
Breaker	Rated Current A	6	15	15	20	20	25	40	15
	Rated Residual Action Current mA	30	30	30	30	30	30	30	30
Fuse	A	7	15	15	20	20	25	40	15
Power Cord	(mm ²)	3×1.5	3×2.5	3×2.5	3×2.5	3×2.5	3×4	3×6	5×2.5
Signal cable	(mm ²)	3×0.5	3×0.5	3×0.5	3×0.5	3×0.5	3×0.5	3×0.5	3×0.5

※ Above data is subject to modification without notice.

Note: The above data is adapted to power cord ≤ 10 meters from the power supply .If power cord is > 10 meters away, the wire diameter must be increased. The signal cable can be extended to 50 meters at most.

3- Installation instructions and requirements

The swimming pool heater must be installed by a professional. The Public is not qualified to install by themselves for health and safety reasons.

A. Installation

- 1) The swimming pool heater should be installed in a place with good ventilation;
- 2) The frame must be fixed by bolts (M10) to a concrete foundation or brackets. The concrete foundation must be solid and fast; the bracket must be strong and treated against rust.
- 3) Please don't place objects that might block air flow in front of or behind the Heat Pump. The Heat Pump must stand at least 50 cm from any structure or obstacle otherwise the efficiency of the heater will be reduced or even stopped.
- 4) The machine needs a circulation pump (supplied by the user). The recommended pump flow: refer to Technical Specs, Max. lift ≥ 10 m.
- 5) When the machine is running, there will be condensation water discharged from the bottom of the unit and should go to drain. Please hold the drainage nozzle (accessory) into the hole and clip it well, and then connect a pipe to drain the condensation water out.

B. Wiring

- 1) Connect to the appropriate power supply; the voltage should comply with the rated voltage of the products.
- 2) Earth the machine.
- 3) Wiring must be handled by a professional technician according to the circuit diagram.
- 4) Set the Earth-leakage protector according to the local code for wiring

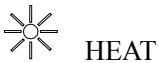
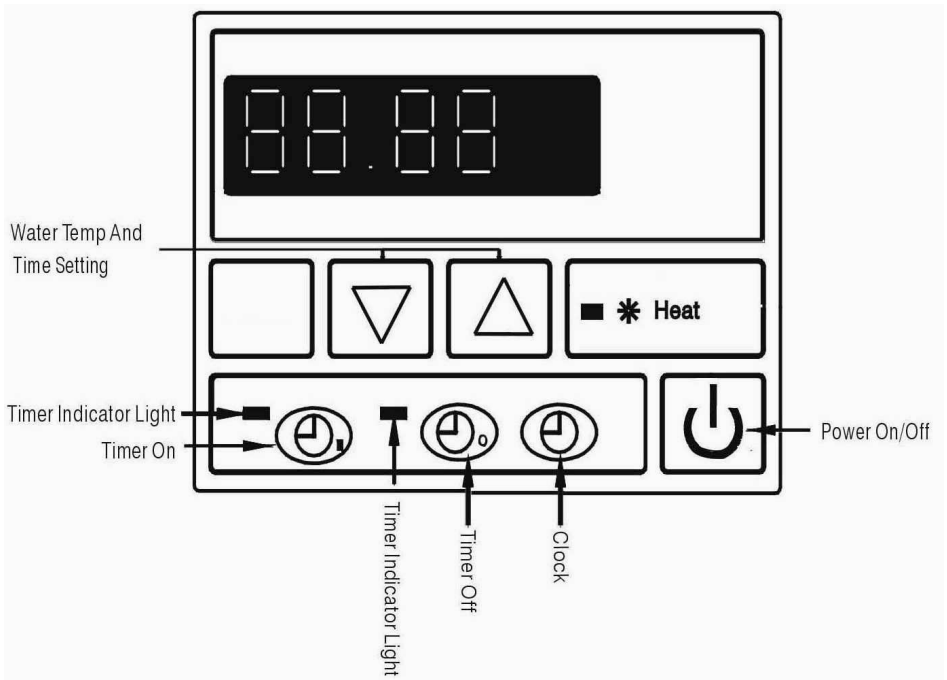
(leakage operating current $\leq 30\text{mA}$).

5) The layout of power cable and signal cable should be separated.

C. Switch on after finishing and double-checking all wiring.

VI. Instructions for Use





Pictograms on the LED screen











1. Use of the Display Panel

- A. The display panel shows Time when the machine is off;
- B. The display panel shows Temperature of the swimming pool water when the machine is on.







2. Water temperature setting


- A. Available whether the machine is on or off;
- B. Press the key  or  to set water temperature. The display panel indicates a flashing Temp. Press  or  to adjust to your required water temp.
- C. 5 seconds later, the display panels will return to the normal mode.









3. Time setting

- A. Available whether the machine is on or off;
- B. Press  key to set time. When the clock on the screen is flashing, press  again to set hour. Use  and  to adjust. Before the flashing stops, press  to set minute Use  and  to adjust. After adjusting, press  and water temperature will be seen. 30 seconds later, the display panel will be return the normal mode.




4. Timer on and off

- A. Press  to set timer on. When the indicator light is on and the time is flashing, press  again to set hour. Use  and  to adjust. Before the flashing stops, press  to set minute Use 

and  to adjust. After adjusting, press “TIMER ON” and water temperature will be seen. 30 seconds later, the display panel will return to the normal mode;

- B. Press  to set timer off. When the indicator light is on and the time is flashing, press  again to set hour. Use  and  to adjust. Before the flashing stops, press  to set minutes. Use  and  to adjust. After adjusting, press  and water temperature will be seen. 30 seconds later, the display panel will return to the normal mode;

- C. Cancel timer on and off

Press  or  to cancel timer on and off. When the number is flashing, press . When timer indicator light is off and LED shows water temperature, the timer on and off is canceled. 30 seconds later, the display panel will return to the normal mode.

VII. Testing

1 . Inspection before use

- A. Check the installation of the plumbing installation and the Heat Pump against the Heat Pump Plumbing schema.
- B. Check the electric wiring according to the electrical wiring and earthing diagrams.
- C. Make sure that the mains power is switched off.
- D. Check the temperature setting.
- E. Check the air intake and outlet.

2 . Trial

- A. Please start the pump before the heat pump and turn it off after the heat pump, so there is water running through the system throughout operation hours.
- B. The user should start the pump, making sure the water pressure is correct; set the desired temperature on the thermostat, and then switch on the power supply.
- C. In order to protect the swimming pool heater, the Heat Pump is equipped with a time lag starting function, when starting the Heat Pump, the blower will run 1 minute before the compressor;
- D. After the swimming pool heater starts up, check for any abnormal noise from the Heat Pump.

VIII. Be Careful

1 . Attention

- A. To set the desired temperature in order to get comfortable water temperature; this will avoid overheating or overcooling;
- B. Please don't stack objects that can block air flow near intake or outlet area, the Heat Pump's efficiency may be reduced or even stopped;
- C. Please don't put hands into the outlet of the swimming pool heater, and don't remove the screen of the fan at any time;
- D. If there are suspect conditions such as noise, smell, smoke and electrical leakage, please switch off the machine immediately and contact the local dealer. Don't try to repair it yourself;
- E. Do not use or stock combustible gas or liquid such as thinners, paint and fuel near the Heat Pump to avoid fire;
- F. In order to optimize the heating effect, please install heat preservation insulation on pipes between swimming pool and the heater. When the Heat Pump is working please use a recommended cover on the swimming pool to avoid heat loss through evaporation;
- G . The Heat Pump should be placed $\leq 10\text{m}$ of the swimming pool, or the

heating effect of the heater cannot be ensured;

H. This series of Heat Pumps can achieve high efficiency between the air temperatures of $+15^{\circ}\text{C} \sim +25^{\circ}\text{C}$.

I. In case a power cut during operation, the heat pump will stop, and will start up automatically when the the power resumes.

2 . Safety

A. Please keep the main power supply switch far away from the children;

B. Please switch off the main power supply during lightning and stormy weather to prevent damage caused by lightning;

C. If the Heat Pump is not in use for a long time, please cut off the power supply and drain water out of the Heat Pump by opening the tap of inlet pipe.

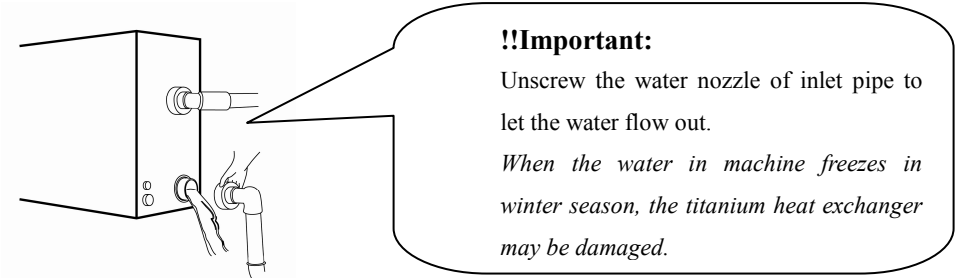
IX. Maintenance

A. “Cut off” power supply of the heater before any examination and repair;

B. In winter season when you don’t swim:

a) Cut off power supply to prevent any machine damage

b) Drain water clear of the machine.



c) Cover the Heat Pump to avoid dirt entering

C. Please clean this Heat Pump with household detergents or clean water,
NEVER with gasoline, thinners, or any similar petrol products;

D. Check bolts, cables and connections regularly.

X. Trouble shooting for common faults

	Problem	Reason
Not a failure	<p>A. Noticeable White vaporous cold air or water</p> <p>B. Gurgling sound</p>	<p>A. The fan motor stops automatically for defrost.</p> <p>B. Sound from the solenoid valve when starting and ending of defrost.</p> <p>C. During use or just after use, a sound like water flowing, usually in 2~3 minutes of starting the machine. This Sound comes from flowing refrigerant or dehumidification.</p> <p>D. The gurgling sound during use is caused by expansion on heating and contraction on cooling of the heat exchanger when the temperature varies.</p>
	Automatic start or stop	Check whether the timer is working.
Recheck	Heat pump does not run	<p>A. Power supply failure</p> <p>B. Check manual power supply switch to make sure it is on.</p> <p>C. Fuse burned.</p> <p>D. If protector has started (operating light is on)</p> <p>E. Set timer on (the operating light is on)</p>
	Running but not heating	Check if the intake is blocked, or if the outlet is obstructed.

Note: If the following conditions happen, please stop the machine immediately, and turn off the manual power supply switch, then the contact your local dealer.

- a) Inaccurate switch action;
- b) The fuse is frequently broken or circuit breaker acts.

Failure code

NO.	Failure code	Failure description
1	EE 1	High pressure protection
2	EE 2	Low pressure protection
3	EE 3	Low water pressure protection
4	EE 4	A.1 phase machine: failure connection due to loose wire terminal of PROT2 on the PC board; B.3 phase sequence protection.
5	PP 1	Swimming pool heat pump sensor failure
6	PP 2	Exhaust sensor failure
7	PP 3	Coil pipe sensor failure
8	PP 4	Intake pipe sensor failure
9	PP 5	Air temperature sensor failure
10	PP 6	Compressor exhaust overload protection
11	PP 7	When the air temperature < 0°C, auto stop protection (Not Failure)