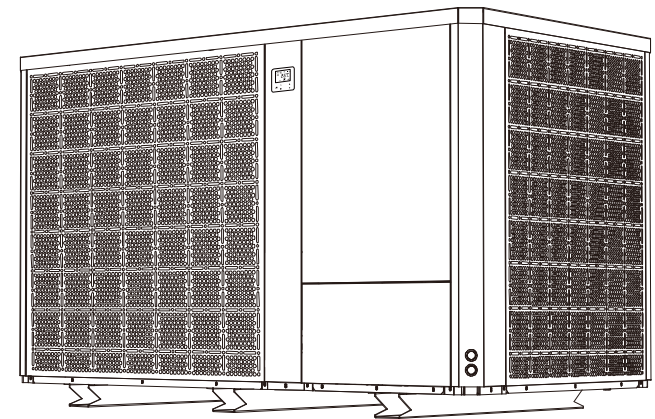


INSTALLATION AND USER MANUAL

Thank you for choosing Full-inverter pool heat pump

Thank you for choosing Full-inverter pool heat pump.



3. TROUBLE SHOOTING FOR COMMON FAULTS

| FAILURE | REASON | SOLUTION |
|--|-----------------------|-------------------------------|
| Heat pump doesn't run | No power | Wait until the power recovers |
| | Power switch is off | Switch on the power |
| | Fuse burned | Check and change the fuse |
| | The breaker is off | Check and turn on the breaker |
| Fan running but with insufficient heating | evaporator blocked | Remove the obstacles |
| | Air outlet blocked | Remove the obstacles |
| | 3 minutes start delay | Wait patiently |
| Display normal, but no heating | Set temp. too low | Set proper heating temp. |
| | 3 minutes start delay | Wait patiently |
| If above solutions don't work, please contact your installer with detailed information and your model number. Don't try to repair it yourself. | | |

ATTENTION! Please don't try to repair the heat pump by yourself to avoid any risk.

SUMMARY

For users P.1-P.7

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For installers and professionals P.8-P.15

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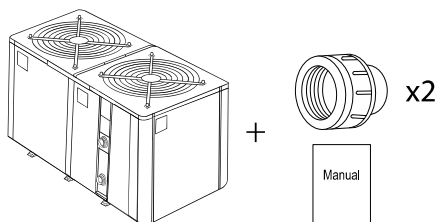
PLEASE READ IT CAREFULLY AND KEEP IT FOR SUBSEQUENT USE

This manual provides you necessary information for optimal use and maintenance

1. GENERAL INFORMATION

1.1. Contents:

After unpacking, please check if you have all the following components.





1.2. Operating conditions and range:

| ITEMS | | RANGE |
|-----------------|----------|---------|
| Operating range | Air temp | -7℃~43℃ |
| Temp. setting | heating | 18℃~35℃ |

The heat pump will have ideal performance in the operation range Air 15℃~25℃.

1.3. Advantages of different modes:

The heat pump has two modes: Smart and Silence. They have different advantages under different conditions.

| MODE | RECOMMENDATION | ADVANTAGES |
|---|----------------|--|
| Smart  | As standard | Heating capacity: 20% to 100% capacity Intelligent optimization Fast heating |
| Silence  | Use at night | Heating capacity: 20% to 80% capacity |

2.3.2. Trial

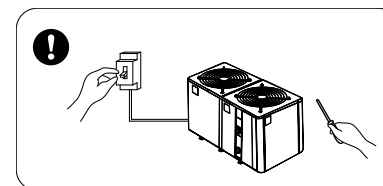
- The user is advised to start the water pump before the heat pump, and turn off the heat pump before the water pump for long life circle.
- The user should start the water pump, and check for any leakage of water; Power on and press the ON/OFF button of the heat pump, and set desired temperature in the thermostat.
- In order to protect the heat pump, the heat pump is equipped with start delay function. When starting the heat pump, the fan will start to run in 3 minutes, in another 30 seconds, the compressor will start to run.
- After pool heat pump starts up, check for any abnormal noise from the heat pump.
- Check the temperature setting.

2.4. Maintenance and winterizing

2.4.1 Maintenance

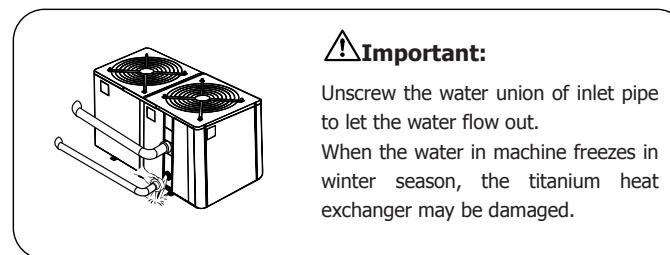
⚠ The maintenance should be carried out once per year by qualified professional technician.

- Cut off power supply of the heat pump before cleaning, examination and repairing . Do not touch the electronic components until the LED indication lights on PCB turn off.
- Please clean the evaporator with household detergents or clean water, NEVER use gasoline, thinners or any similar fuel.
- Check bolts, cables and connections regularly.



2.4.2 Winterizing

In winter season when you don't swim, please cut off power supply and drain water out of the heat pump. When using the heat pump under 2℃, make sure there is always water flow.

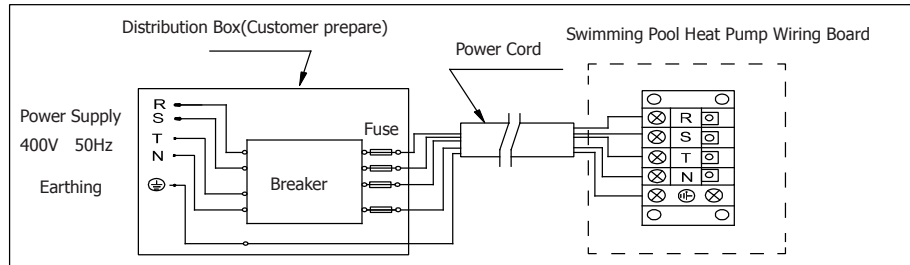


⚠ Important:

Unscrew the water union of inlet pipe to let the water flow out.
When the water in machine freezes in winter season, the titanium heat exchanger may be damaged.

2. Wiring diagram

For power supply: 400V 50Hz



NOTE:

⚠ Must be hard wired, no plug allowed

- For your safe use in winter, it's strongly recommended to equip heating priority function.
- For the detailed wiring diagram, please refer to Appendix 1.

3. Options for protecting devices and cable specification

| MODEL | | IPH150T | IPH300T |
|---------------------------------|----------------------------------|---------|---------|
| Breaker | Rated Current A | 25 | 48 |
| | Rated Residual Action Current mA | 30 | 30 |
| Fuse A | | 25 | 48 |
| Power Cord (mm ²) | | 5×6 | 5×16 |
| Signal cable (mm ²) | | 3×0.5 | 3×0.5 |

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 at most.

2.3. Trial after installation

⚠ Please check all the wirings carefully before turning on the heat pump.

2.3.1. Inspection before use

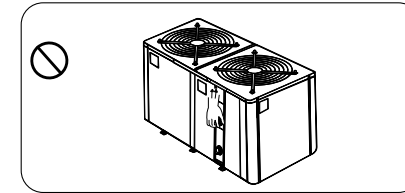
- Check installation of the whole heat pump and the pipe connections according to the pipe connecting drawing;
- Check the electric wiring according to the electrical wiring diagram and earthing connection;
- Make sure that the main power is well connected;
- Check if there is any obstacle in front of the air inlet and outlet of the heat pump

1.4. Kind reminder:

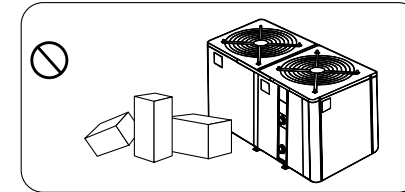
⚠ This heat pump has Power-off memory function. When the power is recovered, the heat pump will restart automatically.

1.4.1. The heat pump can only be used to heat the pool water. **It can NEVER** be used to heat other flammable or turbid liquid.

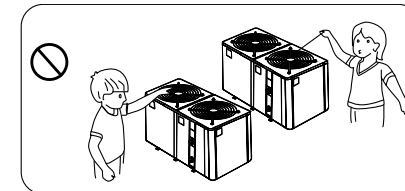
1.4.2. Don't lift the water union when moving the heat pump since the titanium heat exchanger inside the heat pump will be damaged.



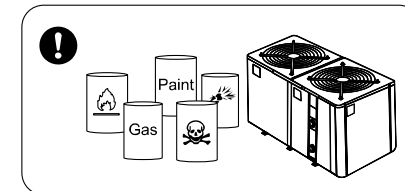
1.4.3. Don't put obstacles before the air inlet and outlet of the heat pump.



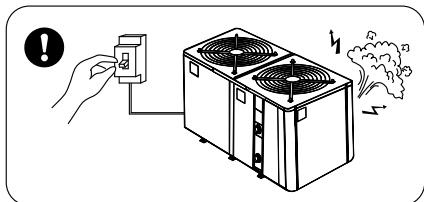
1.4.4. Don't put anything into inlet or outlet, or the efficiency of the heat pump will be reduced or even stopped.



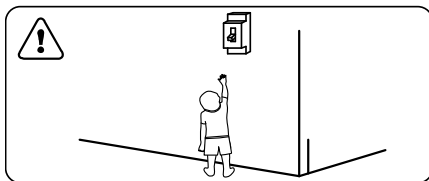
1.4.5. Don't use or store combustible gas or liquid such as thinners, paint and fuel to avoid fire.



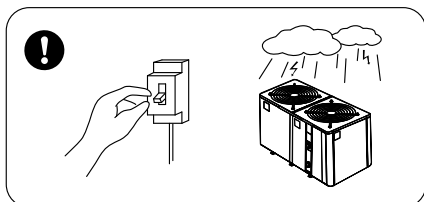
1.4.6. If any abnormal circumstances occurred, **e.g.: abnormal noises, smells, smokes and leakage of electricity, switch off the main power immediately and contact your local dealer.** Don't try to repair the heat pump by yourselves.



1.4.7. The main power switch should be out of the reach of Children.



1.4.8. Please cut off the power in the lightning storm weather.

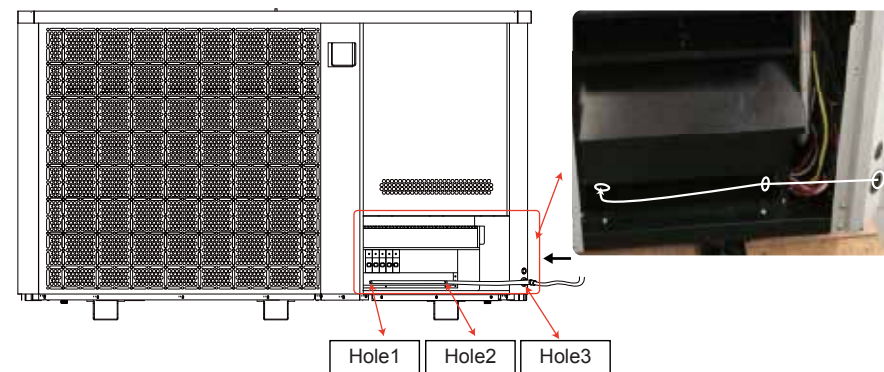


1.4.9. Please note that following codes are not failure.

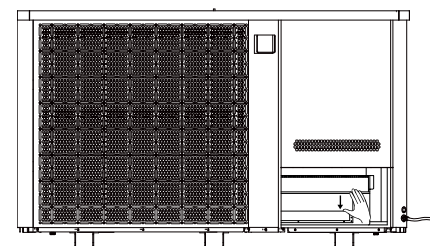
| | CODES |
|---|-------|
| No water flow | E3 |
| Anti-Freezing Reminder | Ed |
| Out of the operating range | Eb |
| Insufficient water flow or pump blocked | E6 |
| Power abnormal | E5 |

Step 2. Power cord must be passed through below 3 holes

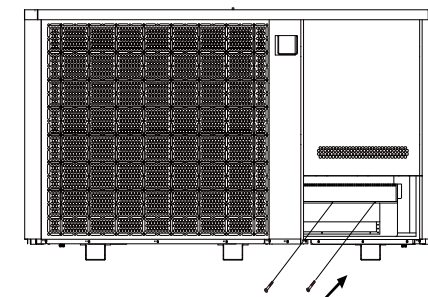
① Connect the wire through three holes



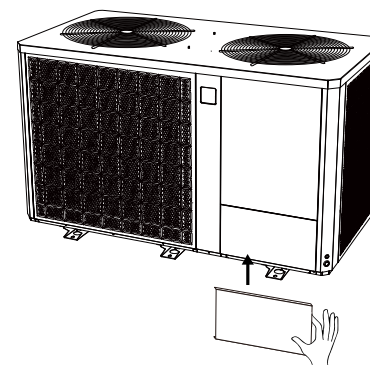
② Restore the internal panel



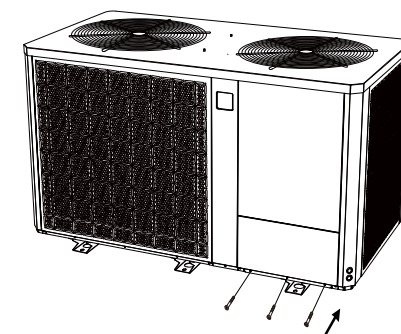
③ Fix the internal panel by two screws



④ Restore the panel



⑤ Fix the panel by three screws



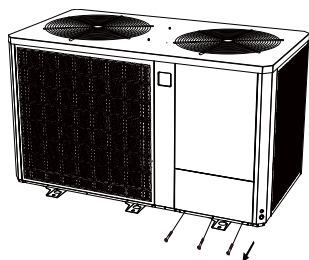
FOR INSTALLERS AND PROFESSIONALS

- Connect to appropriate power supply, the voltage should comply with the rated voltage of the products.
- Well earth the heat pump.
- Wiring must be connected by a professional technician according to the circuit diagram.
- Set breaker or fuse according to the local code (leakage operating current $\leq 30\text{mA}$).
- The layout of power cable and signal cable should be orderly and not affecting each other.

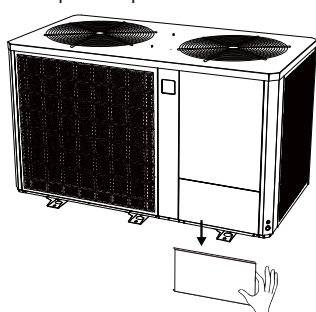
⚠ 1. How to connect to the terminal board of IPHC300T

Step 1. open the maintenance panel

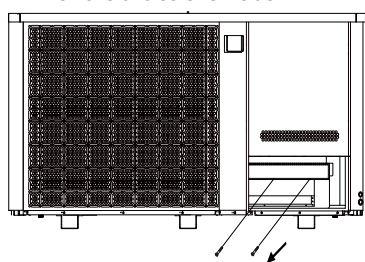
① Remove three screws outside



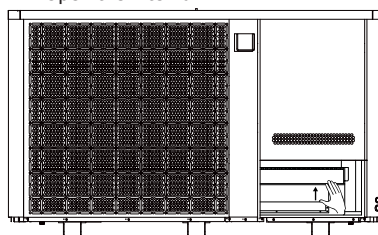
② Open the panel



③ Remove two screws inside



④ Open the internal




FOR USER

2. OPERATIONS





2.1. Notice before using

2.1.1. For longer service life, please ensure water pump is on before heat pump starts to work, and water pump is off after heat pump is off.

2.1.2. Ensure no water leakage on piping system, then unlock screen and press  to power on heat pump.

2.2. Operation instructions




| SYMBOL | DESIGNATION | OPERATION |
|---|-------------|--|
|  | ON/OFF | Power On/Off |
|  | Unlock | Press it for 3 seconds to unlock/lock screen |
|  | Speed | Select Smart/Silence mode |
|  | Up / Down | Adjust set temperature |

Note:


① Screen lock:

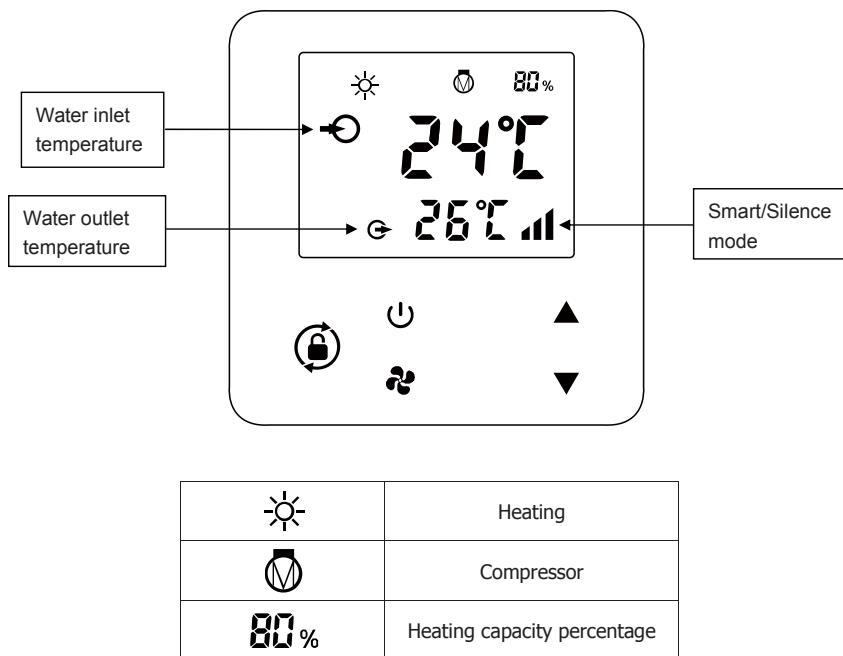
- If no operation in 30 seconds, screen will be locked.
- When HP is off, screen will be dark and "0%" will be displayed.



FOR USER

c. Press  for 3 seconds to lock screen and it will be dark

② Screen unlock:


- Press  for 3 seconds to unlock screen and it will be lit up.
- Only after screen is unlocked, any other buttons can be functioned.




1.Power On: Press  for 3 seconds to light up screen, then press  to power on heat pump.

2.Adjust Set Temperature: When screen is unlocked, press  or  to display or adjust the set temperature.

3.Smart/Silence mode selection:

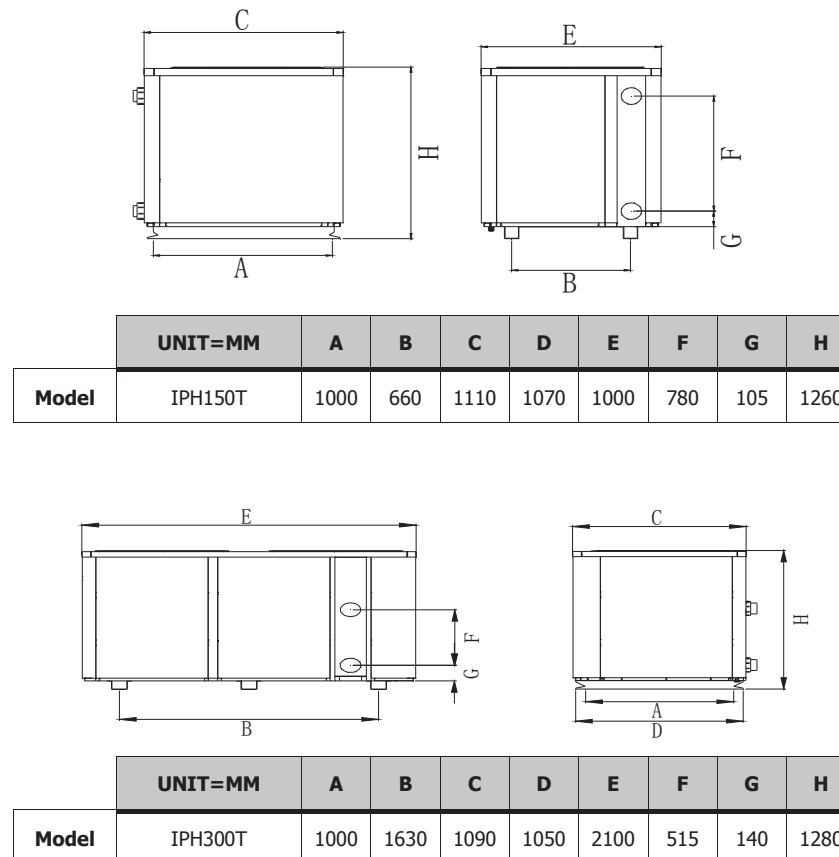
① Smart mode as default will be activated when heat pump is on, and screen shows .

② Press  to enter Silence mode, and screen shows .

(Suggestion: select Smart mode for initial heating.)

4.Defrosting

FOR INSTALLERS AND PROFESSIONALS



※ Above data is subject to modification without notice.

2.2.2. Heat pump installation.

- The frame must be fixed by bolts (**M10**) to concrete foundation or brackets. The concrete foundation must be solid; the bracket must be strong enough and anti-rust treated;
- The heat pump needs a water pump (**Supplied by the user**). The recommended pump specification-flux: refer to Technical Parameter, Max. lift **≥10m**;
- When the heat pump is running, there will be condensation water discharged from the bottom, please pay attention to it. Please insert the drainage tube(accessory) into the hole and clip it well, then connect a pipe to drain off the condensation water.

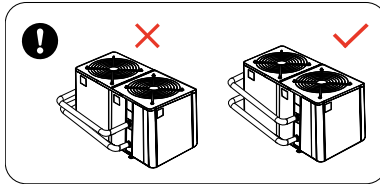
2.2.3. Wiring & protecting devices and cable specification

2. INSTALLATION AND MAINTENANCE

⚠ The heat pump must be installed by a professional team. The users are not qualified to install by themselves, otherwise the heat pump might be damaged and risky for users' safety.

2.1. Notice before installation:

2.1.1. The inlet and outlet water unions **can't** bear the weight of soft pipes. The heat pump must be connected with hard pipes!

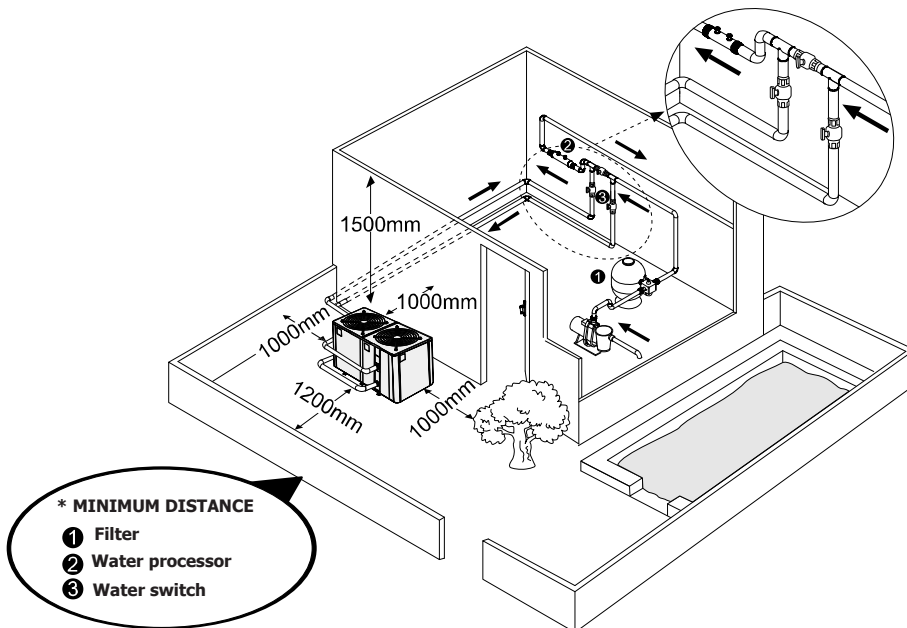


2.1.2. In order to guarantee the heating efficiency, the water pipe length should be $\leq 10\text{m}$ between the pool and the heat pump.

2.2. Installation instruction

2.2.1. Location and size

⚠ The heat pump should be installed in a place with good ventilation



a. Auto Defrosting: When heat pump is defrosting, ☀ will be flashing. After defrosting, ☀ will stop flashing.

b. Compulsory Defrosting: When heat pump is heating, press and together for 5 seconds to start compulsory defrosting, and ☀ will be flashing. After defrosting, ☀ will stop flashing.

(Note: Compulsory defrosting intervals should be more than 30 minutes and the compressor should run for more than 10 minutes.)

2.3. Daily maintenance and winterizing

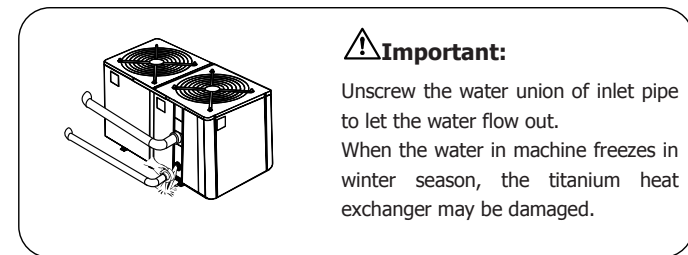
2.3.1. Daily Maintenance

⚠ Please don't forget to cut off power supply of the heat pump

- Please clean the evaporator with household detergents or clean water, NEVER use gasoline, thinners or any similar fuel.
- Check bolts, cables and connections regularly.

2.3.2. Winterizing

In winter season when you don't swim, please cut off power supply and drain water out of the heat pump. When using the heat pump under 2°C , make sure there is always water flow.



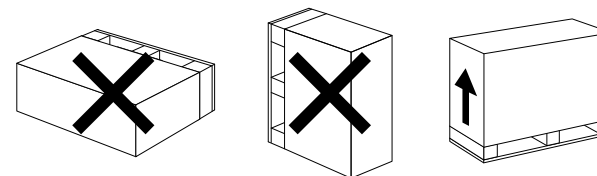
3. TECHNICAL SPECIFICATION

| Model | IPH150T | IPH300T |
|---|-----------------------------|----------------|
| Advised pool volume (m ³) | 130~260 | 260~520 |
| Operating air temperature (°C) | -7~43 | |
| Performance Condition: Air 26°C, Water 26°C, Humidity 80% | | |
| Heating capacity (kW) | 60.0 | 110.0 |
| COP at 50% capacity | 10.1 | 10.0 |
| Performance Condition: Air 15°C, Water 26°C, Humidity 70% | | |
| Heating capacity (kW) | 40.0 | 81.0 |
| COP at 50% capacity | 6.8 | 6.8 |
| Compressor | DC inverter | |
| Heat exchanger | Spiral titanium tube in PVC | |
| Casing | Aluminum-alloy | |
| Fan direction | Vertical | |
| Power supply | 400V/3Ph/50Hz | |
| Rated input power at air 15°C (kW) | 2.20~8.05 | 4.69~17.6 |
| Rated input current at air 15°C (A) | 3.17~12.0 | 6.77~25.4 |
| Max input current (A) | 20.0 | 40.0 |
| Circuit breaker (A) | 25.0 | 48.0 |
| Advised water flux (m³/h) | 20~25 | 40~50 |
| Water pipe in-out size (mm) | 75 | 110 |
| Net dimension LxWxH (mm) | 1000x1110x1260 | 2100x1090x1280 |
| Net weight (kg) | 212 | 459 |

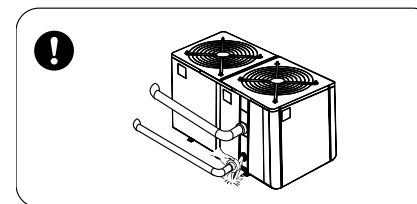
- The values indicated are valid under ideal conditions: Pool covered with an isothermal cover, filtration system running at least 15 hours per day.
- Related parameters are subject to adjustment periodically for technical improvement without further notice. For details please refer to nameplate.

1. TRANSPORTATION

1.1. When storing or moving the heat pump, the heat pump should be at the upright position.

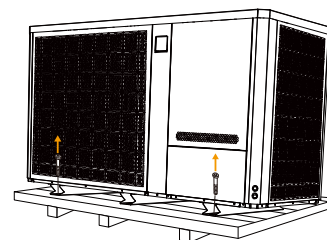


1.2. When moving the heat pump, do not lift the water union since the titanium heat exchanger inside the heat pump will be damaged.

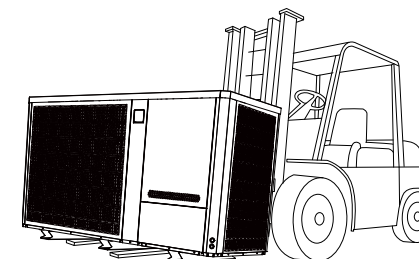


1.3. Before moving the Commercial inverter, remove the screws which fixed on the pallet and remove the pallet.

1. Remove the screws which fixed on the pallet



2. Deliver with fork lift



Australian Energy Systems
Unit 17/6 Maunder St
Slacks Creek Queensland 4127
Phone: 07 3299 2700
Web: www.poolheating.com.au
Email: reception@poolheating.com.au