

# 5. MAINTENANCE AND INSPECTION

## 5.1 Maintenance

- Check the water supply device and the release often. You should avoid the condition of no water or air entering into the system as this will influence the unit's performance and reliability. You should clear the pool/spa filter regularly to avoid damage to the unit as a result of a clogged filter.
- The area around the unit should be dry, clean and well ventilated. Clean the side heating exchanger regularly to maintain good heat exchange and conserve energy. Do not pressure wash or use undue force in cleaning as this may damage fins and reduce efficiency and capacity of heat pump.
- The operation pressure of the refrigerant system should only be serviced by a certified technician.
- Check the power supply and cable connection often. Should the unit begin to operate abnormally, switch it off and contact your qualified technician.
- Discharge all water in the water pump and water system so that freezing of the water-inlet the pump or water system does not occur. You should discharge the water at the bottom of the water pump if the unit will not be used for an extended period of time. You should check the unit thoroughly and fill the system with water fully before using it for the first time after a prolonged period of no usage.
- Installation must be performed in accordance with the NEC/CEC by authorized person only.

## 5.2 Troubleshooting Guide

Malfunction	LCD Controller	Reason	Resolution
Water inlet temp. Sensor failure	P01	The sensor is open or short circuit	Check or change the sensor
Water outlet temp. Sensor failure	P02	The sensor is open or short circuit	Check or change the sensor
Coil sensor failure	P05	The sensor is open or short circuit	Check or change the sensor
Ambient sensor failure	P04	The sensor is open or short circuit	Check or change the sensor
Temp. differential between water-in and water-out is too large	E06	Water flow volume not enough, water pressure difference is too low	Check the water flow volume, or system obstruction.
Anti freezing under cooling mode	E07	Outlet water is too low	Check the water flow volume or outlet water temp. sensor
The first class freezing protection in winter	E19	Ambient or inlet water temp. is too low	
The second class freezing protection in winter	E29	Ambient or inlet water temp. is too lower	
High pressure protect	E01	Gas System pressure is too high	Check through the high pressure switch and the gas system pressure to judge whether the gas loop is blocked or the freon is suitable
Low pressure protect	E02	Gas System pressure is too low	Check through the low pressure switch and the gas system pressure to judge whether there is leaking or the freon is not enough;
Flow switch failure	E03	No water/little water in water system.	Check the water flowvolume, water pump and flowswitch is failure ornot
3times water-in and water-out temp.difference protectionin 30 minutes	E06	Water flowrate not enough	Check the water flow rate, or water system is jammed or not
Defrosting	Defrost Code Display		
Communication failure	E08	LED controller and The PCB connection failure	Check the wire connection

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### 5.3 Winterization

- Switch the heat pump to “OFF” Mode.
- Turn off the power supply to the heat pump.
- Drain the coil to avoid any risk of deterioration. (High risk of freezing).
- Close the by-pass valve and unscrew the inlet/outlet union connections.
- Drain as much of the residual stagnant water as possible from the coil
- Close the water inlet and outlet on the heat pump to stop foreign bodies entering.
- Cover the heat pump with a winter cover (not supplied).



***Any damage caused by poor winterization invalidates the warranty.***