

9.Trouble Shooting

NO.	Analysis	Solution
E03	<ol style="list-style-type: none"> 1. No water flow <ol style="list-style-type: none"> 1.1 Gate valve is not open. 1.2 Water pump is not working. 1.3 Water pump failure. 2. Low water flow <ol style="list-style-type: none"> 2.1 Water system is blocked. 3. Flow switch <ul style="list-style-type: none"> - stuck and cannot be reset. - installed incorrect. - Connection on main board is poor. 4. Main board failure. 	<ol style="list-style-type: none"> 1.1 Open the valve. 1.2 Turn on the pump. 1.3 Need to replace the water pump. 1.4 Clean or replace the filter. 2.1 Clean or replace the blocked part. 3a. Reset the flow switch manually. b. Install the flow switch in the correct way. c. Reconnect the flow switch cable. d. Replace the flow switch. 4. Replace the main board.
E04	<ol style="list-style-type: none"> 1. When the outside temp. is $\geq 8^{\circ}\text{C}$, exit the anti-freeze state. 2. When the water temp. $> 3^{\circ}\text{C}$, exit the anti-freeze state. 3. circulation pump <ol style="list-style-type: none"> A. Frozen B. Obstruction C. failure 	<p>Anti-freeze protection (not a fault). Circ pump will run every 10 mins for 30 secs.</p> <ol style="list-style-type: none"> 1. If outside temperature continues to drop below freezing and the water temperature continues to lower. <ol style="list-style-type: none"> A. Switch to heat mode B. Manually heat water C. Protect Plunge from freezing 3.1 unfreeze pump 3.2 Remove obstruction 3.3 Replace pump/motor
E05	<ol style="list-style-type: none"> 1. Poor connection of high-pressure switch. 2. Main board is broken. 3. Poor condensing <ol style="list-style-type: none"> 3.1 Water temperature is too high (over range operation). 3.2 Low water flow <ol style="list-style-type: none"> 3.2.1 Gate valve in water system is not open. 3.2.2 Waterway blockage may appear in the heat exchanger or gate valve. 3.2.3 Pump/motor failure. 4. High pressure switch failure 	<ol style="list-style-type: none"> 1. Reconnect the wire. 2. Replace the main board. 3.1 Operate within the allowable range. <ol style="list-style-type: none"> 3.2.1 Open the gate valve. 3.2.2 Clean the blocked gate valve or replace it. 3.2.3 Replace pump/motor. 4. Replace heat pump.

E06	<ol style="list-style-type: none"> 1. Low pressure switch <ol style="list-style-type: none"> 1.1 loose wire 1.2 switch failure 2. No or low reading on pressure gauge. 3. Main board is failure. 	<ol style="list-style-type: none"> 1.1. Confirm wire connection. 1.2 Replace heat pump. 2. Replace heat pump. 3. Replace main board.
E09	<ol style="list-style-type: none"> 1. Controller <ol style="list-style-type: none"> 1.1 Poor connection between controller and main board. 1.2 Poor internet connection with App. 1.3 Faulty wire for controller 2. Main board fault. 	<ol style="list-style-type: none"> 1.1. Confirm wire connection 1.2.1 Re-establish connection of home Wi-Fi. 1.2.2 Stop using the App until you have better WIFI connection. 1.3 Replace controller 2. Replace the main board.
E10	<ol style="list-style-type: none"> 1. Poor internet connection with App. 2. Voltage outside the range of 85~127V 3. Poor connection between IPM(Large) board and main (Small) board. 4. Faulty IPM(Large) board 5. Faulty Main board 	<ol style="list-style-type: none"> 1.1 Re-establish connection of home Wi-Fi. 1.2 Stop using the App until you have better WIFI connection. 2.1 Confirm 110V outlet is producing correct voltage (85~127V). 2.2 Minimize other appliances on the same circuit. 3. Confirm cable connection between main board and IPM board. 4. Replace IPM(Large) board. 5. Replace Main board
E12	<ol style="list-style-type: none"> 1. External temperature exceeds normal operating temperature 104°F (40°C). 2. Poor heat exchange <ol style="list-style-type: none"> 2.1. No water flow <ol style="list-style-type: none"> 2.1.1 Gate valve is not open. 2.1.2 Water pump is not working. 2.1.3 Water pump failure. 2.1.4. Low water flow 2.2 Water system is blocked. 3. Insufficient air flow 	<ol style="list-style-type: none"> 1. No fault, normal operation will resume once external temperature is below 104°F (40°C). 2. Insufficient water flow <ol style="list-style-type: none"> 2.1.1 Open the valve. 2.1.2 Turn on the pump. 2.1.3 Replace the water pump. 2.1.4 Clean or replace the filter. 2.2 Clean or replace blockage. 3. Confirm minimum required clearance of external plunge: <p>Maintain an open space of 3'1 meter (at least 30cm) for the air inlet and 8' /2.5meters (at least 150cm) for the air outlet without obstacles.</p> <p>Maintain an open space of 3'1 meter (at least 30cm) for the air inlet and 8' /2.5meters (at least 150cm) for the air outlet without obstacles.</p>

E15	<ol style="list-style-type: none"> 1. Poor/Loose connection between temp sensor (T2) and main board. 2. Temp. sensor fault. (T2) 3. Faulty sensor(T2) resistance on the main board(small). 	<ol style="list-style-type: none"> 1. Reconnect temp.sensor (T2) cable. 2. Replace temp.sensor (T2). 3. Replace main board(small).
E16	<ol style="list-style-type: none"> 1. Poor/Loose connection between temp sensor (T3) and main board. 2. Temp. sensor fault. (T3) 3. Faulty sensor(T3) resistance on the main board(small). 	<ol style="list-style-type: none"> 1. Reconnect temp.sensor (T3) cable. 2. Replace temp..sensor (T3). 3. Replace main board(small).
E18	<ol style="list-style-type: none"> 1. Poor/Loose connection between temp sensor (T1) and main board. 2. Temp. sensor fault. (T1) 3. Faulty sensor(T1) resistance on the main board(small). 	<ol style="list-style-type: none"> 1. Reconnect temp.sensor (T1) cable. 2. Replace temp..sensor (T1). 3. Replace main board(small).
E19	<ol style="list-style-type: none"> 1. Poor/Loose connection between Fan and IPM(Large) board. 2. Fan fault. 	<ol style="list-style-type: none"> 1. Re-connection fan motor and IPM(Large) board. 2. Replace Fan.
E20	<ol style="list-style-type: none"> 1. Voltage outside the range of 85~127V 2. Faulty IPM(Large) board 	<ol style="list-style-type: none"> 1.1 Confirm 110V outlet is producing correct voltage (85~127V). 1.2 Minimize other appliances on the same circuit. 2. Replace IPM(Large) board.
E21	<ol style="list-style-type: none"> 1. Poor/Loose connection between temp sensor (T6) and main board. 2. Temp. sensor fault. (T6) 3. Faulty sensor(T6) resistance on the main board(small). 	<ol style="list-style-type: none"> 1. Reconnect temp..sensor (T6) cable. 2. Replace temp..sensor (T6). 3. Replace main board(small).

E27	<ol style="list-style-type: none"> 1.Poor/Loose connection between temp sensor (T7) and main board. 2. Temp. sensor fault. (T7) 3.Faulty sensor(T7) resistance on the main board (small). 	<ol style="list-style-type: none"> 1.Reconnect temp..sensor (T7) cable. 2.Replace temp..sensor (T7). 3. Replace main board(small).
E29	<ol style="list-style-type: none"> 1.Poor/Loose connection between temp sensor (T4) and main board. 2. Temp. sensor fault. (T4) 3.Faulty sensor(T4) resistance on the main board(small). 	<ol style="list-style-type: none"> 1. Reconnect temp..sensor (T4) cable. 2. Replace temp..sensor (T4). 3. Replace main board(small).
E42	<ol style="list-style-type: none"> 1.Poor/Loose connection between temp sensor (T5) and main board. 2. Temp. sensor fault. (T5) 3.Faulty sensor(T5) resistance on the main board(small). 	<ol style="list-style-type: none"> 1.Reconnect temp..sensor (T5) cable. 2.Replace temp..sensor (T5). 3. Replace main board(small).
E44	<ol style="list-style-type: none"> 1. In cooling mode, if outside Temp lower than recommended -18 C (zero-degree F) 	<ol style="list-style-type: none"> 1. Safely increase temp inside equipment area, for example small light bulbs or small space heaters, don't allow heat source indirect contact between equipment, pipes or frame. Do at risk, 2.drain and winterize cold plunge.
E45	<ol style="list-style-type: none"> 2. In heating mode, if outside Temp is lower than recommended -18 C (zero-degree F) 	<ol style="list-style-type: none"> 1. Safely increase temp inside equipment area, for example small light bulbs or small space heaters, don't allow heat source indirect contact between equipment, pipes or frame. Do at risk, 2.drain and winterize cold plunge.

Service Code accessed by pushing and holding the down arrow for 3 seconds.

Code	Sensor#			Solution
A01	T2 (inlet water temp)	Equal to water temp	A01 should be within 3-degree F of A02.	If not within 3-degree F, ensure sensor T2 and T7 are fully installed.
A02	T7(outlet water temp)	Equal to outlet water temp		
A03	T6(intake side temp)	Equipment area temp	Acceptable range: -18 C (0-degree F) to 40 C (104-degree F)	If temp is lower than -18 C (0-degree F), refer to E44 and E45. If temp higher than 40C (104-degree F), refer to E12.
A04	T1(Compressor outlet temp)	Compressor outlet temp	Acceptable range:0 C (32-degree F) to 125 C (257-degrees F)	If temp is higher than 125 C (257-degree F), refer to E12.
A05	T4(Compressor inlet temp)	Compressor inlet temp	Acceptable range: -30C (-22-degree F) to 99 C (210-degree F).	Step 1. If outside temp acceptable temp range, replace T4 sensor. Step 2. If not work after replacing T4 sensor, then 1. If error code, refer to error code 2. If there is no error code, replace main board(small), or heat pump if necessary
A06	T3(External coil temp sensor)	External coil temp sensor	Acceptable range: -30C (-22-degree F) to 99 C (210-degree F).	Step 1. If outside temp acceptable temp range, replace T4 sensor. Step 2. If not work after replacing T4 sensor, then 3. If error code, refer to error code If no error code, replace main board (small), or heat pump if necessary
A07	T5(Inner coil temp sensor)	Inner coil temp sensor	Acceptable range: -30C (-22-degree F) to 99 C (210-degree F)	Step 1. If outside temp acceptable temp range, replace T4 sensor. Step 2. If not work after replacing T4 sensor, then 4. If error code,

				refer to error code If no error code, replace main board(small), or heat pump if necessary
A08	Electronic expansion valve	Electronic expansion valve	Acceptable range:21 to 480	If out of range, replace electronic expansion valve
A09	N/A	N/A	0	N/A
A10	Compressor amperage	Compressor amperage	When running, acceptable range:1 to 13	If out of range, replace heat pump
A11	Heat sink temp	Heat sink temp	Below 120 C (248-degree F)	If out of range, 1. check intake and discharge air flow, maybe poor air flow etc. 2. Ensure fan works properly.
A12				
A13	Compressor frequency		Acceptable range:15-85	If out of range, replace heat pump.
A14	Fans speed (RPM)		Acceptable range:100-1010	If out of range, 1. Replace Fans. 2. Replace heat pump.
A15	N/A	N/A	0	N/A