

6.2 Before You Call for Service

DANGER

- **ELECTRIC SHOCK! Before working on the power circuits on the primary side of the main power switch (leakage breaker), shut OFF primary power supply and check the line is dead. Also, take measures to prevent accidental charging.**

Working with primary power supply ON runs the risk of electric shock.

- **Shut OFF power from the main power switch (leakage breaker) BEFORE detaching the water circuit (heat exhaust) compartment panel.**

This section explains troubles undetected in chamber self-checks and cases of misoperation which are easily mistaken as trouble. If the trouble cannot be remedied after taking the prescribed action, contact the place of purchase or ESPEC CORP.

Table 6.2 Before you call for service

Trouble	Cause	Remedial action
The instrumentation panel does not light up after pressing the POWER key.	Primary power supply is OFF.	Activate the primary power supply.
The display goes out all of sudden or the displayed information is strange.	System trouble or internal board trouble	Switch the main power switch OFF and ON. If the same trouble reoccurs, call for service.
The door is hard to close.	Something is caught in the door.	Remove the obstruction.
	Frost has formed and hardened on the door packing.	Defrost the chamber. See "6.3 User Practical Servicing".
	Internal pressure is high because the chamber is hot and highly humid on the inside.	There is nothing wrong with the equipment. Proceed as planned.
The door is hard to open.	Internal pressure is lower than room pressure.	There is nothing wrong with the equipment. Proceed as planned.
	Frost has formed and hardened on the packing.	Defrost the chamber. See "6.3 User Practical Servicing".
During operation below zero, icicles 5 cm or longer formed on the internal drain port, or the test area is covered in frost. (Not applicable to LH or LHL chambers)	Outside air has infiltrated through the cable port.	Cover the cable port with the cap or rubber plug.
	Door packing is not properly sealing the door and frame, or packing has deteriorated.	Call for service.

Cont.

Trouble	Cause	Remedial action
Strange noises are heard.	The condenser filter is clogged.	Clean the filter. See "5.3 Maintenance".
Strange odors are detected.	Lingering odors inside the chamber	Clean the test area. See "5.3 Maintenance".
	Specimens are generated odors.	Remove the source of the odor.
The chamber is wet on the outside.	The room is highly humid.	There is nothing wrong with the equipment. Proceed as planned.
Frost has formed on door hinges and around the door frame and viewing window. (Not applicable to LH or LHL chambers)	The room is highly humid.	There is nothing wrong with the equipment. Proceed as planned.
Temperature (&humidity) is unstable.	The door is open.	Shut the door.
	The cable port is not covered.	Reattach cap or plug.
	Ambient temperature changes more than 5°C/hr.	Stabilize ambient temperature and resume testing.
	High heat load equipment is being turned ON/OFF.	Reduce the heat load.
Temperature gradually rises higher than the target temperature.	Specimen heat load is high.	Reduce the specimen heat load.
	Frost has formed on the cooler.	Defrost the chamber (Not necessary for LH chambers). See "6.3 User Practical Servicing".
Settings cannot be changed.	The keys are locked.	Unlock the keys. See "4.2 User Setup and Safety Device Options Setup".
Temperature heat-up/pull-down rate does not satisfy specifications.	The door is open.	Shut the door.
	Specimen heat load is high.	Reduce the amount of specimens.
	Ambient temperature too low (high).	Raise (Lower) ambient temperature.
Humidity pull-up/pull-down rate does not satisfy specifications.*1	The door is open.	Shut the door.
	Ambient temperature too low (high).	Raise (Lower) ambient temperature.
Temperature stops rising or begins to drop during heat-up.	Frost has formed on the dehumidifying-cooler.	There is nothing wrong with the equipment. Defrost the chamber, if necessary. See "6.3 User Practical Servicing."
Poor temperature uniformity	Air flow inside the chamber is poor.	Rearrange specimens so as not block air flow.
	Specimen heat load is high.	Reduce the amount of specimens.
	Frost has formed on the cooler.	Defrost the chamber (Not necessary for LH chamber) See "6.3 User Practical Servicing".

Cont.

Trouble	Cause	Remedial action
During humidity operations, water does not flow in the humidifying tray or the wick pan (water tank does not collect water).	The water tank is empty.	Add water to the water tank.
	Water supply/drain hose is connected to the quick plug of humidifier drainage (in draining condition).	Detach the water supply/drain hose.
	The water pump and/or the level sensor have trouble.	Call for service.
Humidity does not reach the set point.	Vapor is leaking due to open door or cable boring.	Close the door and/or the cable boring.
	Door packing has degraded to leak vapor.	Call for service.
	The set point is out of the control range of temperature and humidity.	Correct the set point to be within the control range.
	Water does not flow into the wick pan and/or humidifying pan.	Refer the row of "During humidity operations, water does not flow in the humidifying tray or the wick pan" in this table.
Consumption of the humidifying water is high.	Vapor is leaking due to open door or cable boring.	Close the door and/or cover the cable port.
	Door packing has degraded to leak vapor.	Call for service.
	Water supply/drain hose is connected to the quick plug of humidifier drainage (in draining condition).	Detach the water supply/drain hose.
	Water level in the humidifying tray is high enough to cause overflow and drainage in the tray.	Call for service if the problem is not fixed even after leveling the chamber.

*1 The LHU/LU-123 may require about 2 h for the test area humidity to attain the target temperature, after settings have been changed, depending on the surrounding temperature and operating conditions. This slow humidity ramping serves to keep the maximum current down. It works by means of cross-output temperature and humidity control that prioritizes heater output over humidifier output.

6.3 User Practical Servicing

Defrosting

Frost may form on the cooler in temperature (humidity) operations below 30 to 40°C. Defrost the chamber in the following cases.

- If temperature (& humidity) inside the chamber is uncontrollable or rises slowly
- If air blown from the chamber is weak (when the door is opened)
- If frost or ice form on test area walls
- If frost or ice form on the viewing window on the inside
- If frost forms on the chamber door gasket and alarm “AL26” is displayed during temperature-humidity operation

Use this procedure to defrost packing as well.

■ How to defrost chamber

- Procedure**
1. Check the main power switch is in the ON position.
 2. Set target temperature to 70°C and turn humidity control OFF (not necessary for LU chambers).
 3. Press one of the OPER./STOP keys.

Run the chamber for about 60 minutes with the door closed, then for 15 minutes with the door slightly cracked.