

Troubleshooting Guide for UNITY1/UNITY2

Message:

Cold trap stays in "Equilibrating", cannot reaches the Setpoint or stays at ambient temperature:

Causes:	Check:	Parts Needed:
Purge Gas (air or N2) is OFF	Pressure must be around 50PSI Check if He is used instead of Air/N2 Check the pressure switch	Control PCB (U2) Pressure Switch
Damaged Peltier	Gas Not Dry Enough	Pealtier, heatsink compund,
(Water/Umidity inside)	Cold trap Box leaking	Silicone, Trap Heater, Thermocouple (U1) Heatsink Assy (U2)
Cooling Fan Not working (most frequent on Unity1)	Check Loosen Connection	New Fan (U2/U1)/New PCB (U2)
Poor Ventilation	Remove Black Top Cover (U1)	
Ambient Temperature	Check Site Preparation	
Faulty Thermocouple	Check the Temperature, Try recalibrate	New Thermocouple, New Trap Heater (U1) New Heatsink Assy (U2)
Calibration Inoorrect	Recalibrate	New main Board

On Unity1 when you replace trap Heater, Thermocouple, Peltier always remember to recalibrate.

On Unity2 put the calibration values that you find on the yellow sticker.

The parts in GREEN are not needed but recommended, they can be broken during thereapair, or involved in the fault.

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Heated Zones Errors

If an Heated Zone require more than 75% of power to increase the temperature the message "*name of the zone not heating*" will pop up.

TRAP:

Parts Needed:

Bad Thermocouple (check thermocouple position)	Thermocouple, Trap Heater (U1) Heatsink Assy (U2)
Helium as purge gas (Temp rise slowly)	
Heater Shorted/damaged	Heat Sink Assy (U2) Heat sink assy, silicon, heatsink compund (U1)
Calibration incorrect	Recalibrate
Bad connection to the Board	
Control Board Failure	New Control PCB
Power Supply	Not enough Power to the heater

OVEN:

Parts Needed:

Bad Connection	New Tube Oven Heater Assy
Heater	New Tube Oven Heater Assy
Thermocouple	New Tube Oven Heater Assy
Calibration	Recalibrate

The message "Trap/Oven not heating" can pop up during the run.

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Heated Valve:

Bad Connection	Check Connectors
Heater	Change the Heater, remove the back screws if needed. There are 3 Heater on Unity2, and they can fail singularly; in this case you'll see the valve heating up very slowly.
Control PCB	Change the Control PCB
Thermocouple	Change thermocouple, Heatevalve Assy
Calibration Incorrect	Recalibrate (May need a New HV, the bad calibration can damage the HV by overheating).

TRANSFERLINE:

Calibration	Recalibrate
Faulty Control PCB	Change the control PCB
Bad Connection	Check the connector on the back of the Unity

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Error or Not ready messages during RUN or STANDY

Trap Temperature above or below setpoint	<p>U1 - Air on during FW download. Restart SW and Air always off during startup</p> <p>Open Circuit/TC</p> <p>Heater Shorted</p> <p>Calibration lost/incorrect</p>	<p>Cold trap can be damaged by overheating</p> <p>Change TC or Heatsink Assy</p> <p>Heatsink Assy</p> <p>Recalibrate</p>
Oven Temperature	<p>Heater Shorted</p> <p>TC Open circuit</p>	<p>Tube Oven Heater ay</p> <p>Tube oven heater Ay</p>
HV Temperature	<p>Heater Shorted</p> <p>TC Open Circuit</p>	<p>HV Assy</p> <p>HV Assy</p>
Transferline Temp	<p>Not connected/poor connection</p> <p>Shorted</p> <p>Open Circuit TC</p>	<p>Check bendings</p> <p>Tranferline Assy</p>
Low carrier gas P	<p>Carrier below the set value</p> <p>Pressure Transducer/cal lost</p> <p>Large Leak</p>	<p>Check value</p> <p>Replace P transducer recalibrate</p>
Waiting in Ready to desorb/ ready to inject	<p>Waiting for GC to become ready</p> <p>Check remote cable</p> <p>Ensure that "use unity 2 with unity 1 harness" is selected in options.</p> <p>Check GC SW</p> <p>Port settings must be "closed" fo readiness</p>	<p>Check GC cycle time</p>

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Tube leaked	Check for leaks Check tube in place and aligned check all the connections Broken cold trap check the solenoid valve	All O-Rings
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