

# DEHUMIDIFIER

## TROUBLESHOOTING GUIDE



### DEHUMIDIFIER FACTS:

Many people believe that the coils on a dehumidifier should be freezing up to be working, truthfully if the coils are frozen it means that the unit is working harder than it should be and environmental changes need to be made to get the unit working at peak efficiency. When a dehumidifier is working at peak efficiency the moisture should be building on the coil as water droplets and dripping down into the tray.

38% humidity is considered the absolute lowest for indoor air comfort, between 40-60% is considered the most healthy range.

These units can be used in temperatures as low as 1 degree celsius but if the temperature is below 15 degrees C the unit will become less efficient the lower the temperature goes. Optimal working temperature for these units is between 15.5 C & 29 C. Anything below 40% humidity will decrease the unit's efficiency as the humidity gets lower. Combining a low humidity with a low temperature will cause the unit to appear to not be working properly.

### OPTIMAL TESTING CONDITIONS:

Testing should be done at or above 20 degrees C and should have a minimum of 40% humidity in the room being tested. Try to make the room as air tight as possible, a smaller room will get you reliable findings in a quicker time period.

*If your testing area is below 40% humidity consider adding moisture to the room using steaming water or a humidifier. Air flow aids in getting moisture into the air. Putting a puddle on the floor and not having heat or air flow to get it into the air will not increase the humidity in the room.*

| ISSUE                                                      | STEPS                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fan is running, unit is <u>not</u> extracting water</b> | Ensure humidistat is set above ambient humidity on the control panel. Compressor will not turn on unless humidity in the area is above the setting.                                                                                                                    |
|                                                            | Ensure that the filter is not clogged with debris which will restrict air flow                                                                                                                                                                                         |
|                                                            | Ensure that the fins are not covered with dust or debris. If the coils are covered they cannot catch the moisture in the air.                                                                                                                                          |
|                                                            | Ensure drain hose is properly connected to unit (will not pump unless hose is connected)                                                                                                                                                                               |
|                                                            | Check if water is present in the pump bucket. It's possible that the unit is extracting water, but at a slow rate, due to environmental factors.                                                                                                                       |
|                                                            | Use the "Purge" button to attempt to pump water out of the bucket.                                                                                                                                                                                                     |
|                                                            | <p>Ensure the environment meets minimum testing conditions (see above), by viewing temperature and ambient humidity readings on the control panel.</p> <p>If temperature readings appear incorrect the unit may require replacement sensors or a new control board</p> |
|                                                            | Allow the unit to run for 10 minutes. If front coils are not cool, and exhaust air is not slightly warm, there is a potential refrigerant or compressor issue. Contact Patron for assistance (1-800-818-1199)                                                          |
|                                                            | Remove front access cover and ensure internal drain hose is properly connected and has no kinks                                                                                                                                                                        |
|                                                            | Remove hose from outlet spigot on pump, blow through hose to ensure there is not an obstruction, if air does not pass separate unit in half to inspect the hose going from the pump to the drain hose quick disconnect                                                 |

| ISSUE                         | STEPS                                                                                     |
|-------------------------------|-------------------------------------------------------------------------------------------|
| <b>Unit is not turning on</b> | Ensure power cord has continuity and proper power is supplied                             |
|                               | Check for Error Codes on display panel (refer to error code table below)                  |
|                               | If screen is not on, remove control panel cover and inspect all connections on main board |
|                               | Replace Control Board                                                                     |

| ISSUE                        | STEPS                                                                                                                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Coils are freezing up</b> | Ensure that your environment is above 15 degrees C and re-test. If the unit continues to ice up and will not defrost after running the unit for 60 minutes, contact Patron for assistance (1-800-818-1199). |

| ISSUE                        | STEPS                                                                                                                                                                                                                                                                                                                                            |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit is leaking water</b> | Check that the drain hose connects properly using the quick disconnect                                                                                                                                                                                                                                                                           |
|                              | Remove the front pump cover by removing the two bolts holding it on. Ensure that the hose going from the drip tray to the pump bucket is properly installed in the receptacle on the pump. Also ensure that there is no obstruction in the drip tray and that the hose is not damaged                                                            |
|                              | Ensure that the outlet hose going from the outlet on the pump to the back of the unit is not kinked, obstructed or damaged. This can be tested by removing the hose from the outlet hose from the pump and blowing through it, if air does not pass separate the unit in half and inspect internal hose from pump to drain hose quick disconnect |

| ISSUE                                   | STEPS                                                                                                              |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>Board is showing strange numbers</b> | Check connections on back of board are all installed tightly                                                       |
|                                         | Replace main control board                                                                                         |
|                                         | If main control board does not fix the issue, re-install original control board and swap the Display control board |

| ERROR CODE EXPLANATIONS |                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>E1</b>               | Copperhead Sensor Failure - sensor that reads the temperature of the coils. Replace sensor                                                                                                                                                                                                                                                             |
| <b>E2</b>               | Inlet Sensor Failure - sensor that reads the inlet temperature and relative humidity. Replace sensor                                                                                                                                                                                                                                                   |
| <b>E3</b>               | Outlet Sensor Failure - sensor that reads the outlet temperature and relative humidity                                                                                                                                                                                                                                                                 |
| <b>E4</b>               | Pump Failure - Ensure drain hose is connected properly and there are no kinks or obstructions in the hose. Check the hose connection on the back of the unit for damage. Remove pump cover from front of unit, disconnect drain hose from spigot on pump and blow through the hose, if you cannot blow through the hose contact Patron for assistance. |
| <b>E5</b>               | 4 Way Valve Failure- Replace the valve, Requires a refrigerant technician                                                                                                                                                                                                                                                                              |