

TROUBLESHOOTING TS-130

The TS-130 comes in one version that operates at 12 volts DC. It is provided with a universal, bench top power supply that is capable of operating with inputs varying from 90 to 265 volts AC, 50 or 60 Hz. The power supply provides 12 volts DC to the column oven. Each unit is provided with the appropriate AC line cord for the country to which it is shipped.

The TS-130 Column Oven is a heat only device with an operating temperature range from 20.0°C to 80.0°C. However, it does not have the cooling capability of the TS-430, so it cannot operate below ambient. If the room temperature is 25.0°C the unit cannot control below that temperature even though it can be set below that temperature.

The TS-130 is a simple device. It has a self-adhesive backed, silicon rubber strip heater element rated at 40 watts at 12 volts DC. It covers about 14 inches of the 15-inch channel. The temperature sensor is a solid state integrated circuit (IC). The electronics are all on one PC board, and the control loop is PID.

When operating, the unit can go from ambient to 80.0°C in about 15 minutes. Quicker for lower temperatures. The unit has a temperature stable indicator that will light after the target temperature and actual temperature are within 0.2 °C for 2 minutes. It will regulate to 0.1 °C at any setting. It should be very stable.

The secondary functions are all reachable by depressing the UP and DOWN arrows at the same time. The counter, timer and calibration functions are all reached this way.

Performance other than expressed here can be suspect.