

SierraTherm LTCC 16-24-4A batch furnace

This SierraTherm LTCC16-24-4A 8500 Series Forced Convection Elevator Batch Oven has internal dimensions of the chamber are approximately 457mm wide by 457mm deep by 609mm high. The rated temperature is 1050°C though the typical sintering temperature for LTCC is 850°C. The furnace with equipped with four distinct zones each with its own flow meter for air. One computer has the SierraTherm Furnace Monitoring System Software loaded on it, as shown.

SierraTherm LTCC 16-24-4A batch furnace: The furnace can burn out and sinter a batch of GreenTape assemblies as opposed to the single-fire furnaces employed now. Looking to have the system evaluated either by the OEM for possible upgrade or a local third-party vendor who specializes in customer controllers.

1. GreenTape sintering envelope: 457mm x 457mm x 609mm
2. Reflow temperature range: 400°C to 1050°C
3. Estimated rate: \$60/hour (academic)



Facility Requirements: The furnace is equipped with four distinct zones each with its own flow meter for air.

1. Power: 240 VAC, 3 phase, 60 Hz
2. Compressed air: 5.5 CFM requirement



Statement of Work: These are the items to be addressed prior to providing this enhancement to the LTCC facility.

1. SME evaluate install site:
 - a. Do we have sufficient height clearance?
 - b. How should the exhaust be properly installed?
2. Replace legacy computer and software
 - a. OEM computer upgrade or
 - b. Third party monitoring software.
3. Air demand beyond current house ability
 - a. Purchase dedicated air compressor



Process development: These are the items to accomplish prior to releasing the tool to production.

1. Calibrate temperature profile in all zones
2. Establish GreenTape firing profiles
3. Confirm temperature profile as related to recipes.
4. Check oxygen concentration?
5. Sinter test vehicles and compare with existing furnace

