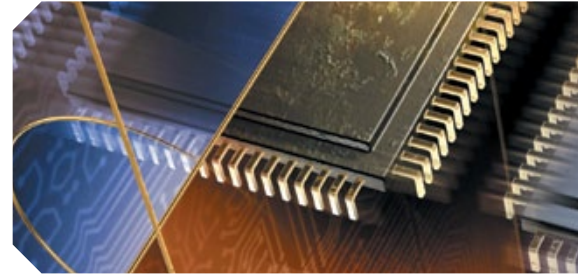


◆ **LCC and LCD Stackable Clean Process Ovens**  
**Save valuable floor space**  
**Stainless steel interior and exterior**



The Despatch LCC/LCD stackable clean process ovens are designed to save valuable floor space and provide a variety of tailored options for your specific needs. Typical applications for these ovens include die-bond curing and other semiconductor packaging processes, depyrogenation, sterilization and drying for life sciences. The oven is CE compliant for universal acceptance and configured for 220/240 volts and 50/60 hz.

For production environment processes where minimal contamination is essential, the LCC and LCD Series ovens offer the highest standards in HEPA filtration. Re-circulated airflow is 100% HEPA filtered for operation at ISO Class 5 (Class 100) or better within the oven chamber. Also available in a non-HEPA filter option LLC/LLD.

**FEATURES AT A GLANCE**

- ◆ Available in air or nitrogen atmosphere configurations (100ppm oxygen capability). Forced exhaust is standard on all models for rapid cooling. Programmable control of the nitrogen and cooling water is standard on the nitrogen atmosphere units.
- ◆ Lockable disconnect switch on the control panel for easy servicing.
- ◆ Protocol Plus™ programmable microprocessor control with real time clock makes oven operation simple and flexible.
- ◆ Stainless steel interior and exterior with all interior seams continuously welded on the insulation side to protect the work chamber from contamination.
- ◆ Programmable door lock with electronic release prevents operators from opening oven door when cycle is in process.
- ◆ Stackable design allows for independent batch processing.
- ◆ HEPA filtration— Recirculated airflow is 100% HEPA (High Efficiency Particulate Air) filtered for operation at ISO Class 5 (Class 100) throughout the cycle.
- ◆ Magnehelic™ gauge monitors the HEPA filter pressure drop so you know when it is time to replace the filter.
- ◆ UL & C-UL listed open control panel.
- ◆ CE compliant.

**MODEL OPTIONS**

- ◆ Two sizes: 1.6 or 5.1 cu ft (45 or 144 liter)
- ◆ Maximum temperature of 260°C (500°F) with LCC/LLC or 350°C (662°F) with LCD/LLD
- ◆ With HEPA filtration (LCC/LCD) Non-HEPA option (LLC/LLD)
- ◆ Air or nitrogen atmospheres



**LCC/LCD/LLC/LLD****1-16****1-51****PHYSICAL SPECIFICATIONS**

Chamber size (width x depth x height) * Clear opening width is reduced by 1.5" (3.8 cm) due to 3/4" (1.9 cm) shelf supports on each side.	15* x 14 x 14 inches 38* x 36 x 36 cm	23* x 20 x 20 inches 58* x 51 x 51 cm
Capacity in cubic feet (liters)	1.6 (45)	5.1 (144)
Overall size (width x depth x height)	32.5 x 35.5 x 20.75 in. 83 x 90 x 53 cm	40.5 x 42.5 x 27 in. 103 x 108 x 68 cm
Electrical single phase 50/60 HZ * Heater capacity based on 240 volt supply. Operating at 208V will result in 25% reduction in heater output.	220-240 volts* Heater: 3 kW	220-240 volts* Heater: 6 kW
Number of shelves provided	2	2
Maximum number of shelves	5 on 2" (5 cm) centers	8 on 2" (5 cm) centers
Approximate net weight	250 lbs (114 kg)	380 lbs (172 kg)
Approximate shipping weight	350 lbs (159 kg)	525 lbs (238 kg)

**FUNCTIONAL SPECIFICATIONS**

Time to temperature with no load (40°C to 100°C)	7 minutes	5 minutes
Time to temperature with no load (40°C to 200°C)	30 minutes	27 minutes
Time to temperature with no load (40°C to 260°C)	45 minutes	35 minutes
Time to temperature with no load (40°C to 350°C) * For LCD and LLD only, LCC and LLC max temp is 260°C	60 minutes	50 minutes
Cooling time to temperature with no load (100°C to 55°C) * Based on cooling water supplied at 2 GPM (7.6 lpm), 16°C	35 minutes (air) 30 minutes (nitrogen)*	40 minutes (air) 25 minutes (nitrogen)*
Cooling time to temperature with no load (200°C to 55°C) * Based on cooling water supplied at 2 GPM (7.6 lpm), 16°C	65 minutes (air) 55 minutes (nitrogen)*	75 minutes (air) 40 minutes (nitrogen)*
Cooling time to temperature with no load (260°C to 55°C) * Based on cooling water supplied at 2 GPM (7.6 lpm), 16°C	75 minutes (air) 60 minutes (nitrogen)*	85 minutes (air) 45 minutes (nitrogen)*
Cooling time to temperature with no load (350°C to 55°C) (For LCD and LLD only, LCC and LLC max temp is 260°C) * Based on cooling water supplied at 2 GPM (7.6 lpm), 16°C	90 minutes (air) 80 minutes (nitrogen)*	100 minutes (air) 50 minutes (nitrogen)*
Temperature uniformity at 100°C	+/- 1°C	+/- 1°C
Temperature uniformity at 200°C	+/- 2°C	+/- 2°C
Temperature uniformity at 260°C	+/- 3°C	+/- 3°C
Temperature uniformity at 350°C (For LCD and LLD only)	+/- 4°C	+/- 4°C
Control stability	+/- 0.5°C	+/- 0.5°C
LCC/LLC operating range with 20°C ambient - air atmosphere (nitrogen atmosphere).	40°C-260°C (35°C-260°C)	45°C-260°C (35°C-260°C)
LCD/LLD operating range with 20°C ambient - air atmosphere (nitrogen atmosphere)	40°C-350°C (35°C-350°C)	45°C-350°C (35°C-350°C)
Maximum load capacity	200 lbs (90 kg)	200 lbs (90 kg)
Maximum shelf capacity	50 lbs (23 kg)	25 lbs (11 kg)
1/4 HP recirculating fan	240 CFM (113 lps)	435 CFM (205 lps)

Notes: Uniformity figures are based on a nine-point test conducted in an empty oven after stabilization period. Uniformity can vary slightly depending on unit and operating conditions. Class 100 HEPA filtration will limit ramp rates.

Minimum operating temperature and cooling times are based on 20°C ambient temperature measured at the fresh air inlet

Specifications are subject to change without notice. If the existing specifications differ from yours, ask about our customizing capabilities.

**OPTIONS**

- ◆ Silicone-free construction
- ◆ Non-HEPA filtration model
- ◆ PC interface for remote input, monitoring and recording (RS485/422/232)
- ◆ Door interlock switch turns off heater and fan when door is opened
- ◆ Cleaning and triple bagging in clean room prior to shipment
- ◆ End of cycle and high limit audible and visual alarms
- ◆ Process control interlock systems
- ◆ Chart recorders
- ◆ IQ/OQ protocol
- ◆ Three color process stack light
- ◆ Teflon™ shelf supports (LLC and LCC only)
- ◆ Stacking hardware
- ◆ Skirted stands
- ◆ Extra shelves
- ◆ Oxygen concentration monitor system
- ◆ Data acquisition software
- ◆ Non-HEPA filtration model (LLC/LLD)
- ◆ Customization available
- ◆ LN2 boost cooling (LLC and LLD only)

*Warning: Despatch Stackable Clean Room Ovens are not to be used with flammable solvents, combustible materials or enclosed containers. If your process involves flammable solvents, consult factory about modifications.*

**SERVICE AND TECHNICAL SUPPORT**

**service parts:** 1-800-473-7373  
**international service/main:** 1-952-469-8230  
**service fax:** 1-952-469-8193

service@despatch.com

**GLOBAL HEADQUARTERS**

**phone:** 1-888-DESPATCH (1-888-337-7282)  
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