




Top Loading Ovens

HEAVY DUTY ELECTRIC AND GAS HORIZONTAL AIR FLOW TOP LOADING OVENS

For annealing, preheating, baking, or any other heat processing where overhead handling equipment is used. Temperatures to 1050°F. Full opening door exposes entire work space for easy loading. Constructed for long, hard, continuous use. Ideal for severe service applications—load capacities up to 4000 lbs.

STANDARD FEATURES

-  **UL LISTED CONTROL PANEL**
- **Standard Top Loading Ovens from Grieve meet the requirements of National Fire Protection Association Standard 86, Industrial Risk Insurers, Factory Mutual and OSHA standards. For some applications, such as those involving flammable solvents or hazardous locations, the above organizations require additional safety devices.**
- **Controls**
 - Digital, microprocessor based, thermocouple actuated, indicating temperature controller
 - Modulating burner on gas ovens.
 - Motor control push buttons and on-off heat switch
 - LED pilot lights
- **Safety Equipment Electric Oven**
 - Adjustable, thermocouple actuated, manual reset excess temperature controller
 - Separate heating element control contactors
 - Recirculating blower air flow safety switch
- **Safety Equipment Gas Oven**
 - Adjustable, thermocouple actuated, manual reset excess temperature controller
 - Electronic flame safeguard protection
 - Powered forced exhauster for combustion venting
 - Exhauster air flow safety switch
 - Recirculating blower air flow safety switch
 - Purge timer
 - High gas pressure switch
 - Low gas pressure switch
 - Two pilot safety shutoff valves with leak test stations
 - Two main safety shutoff valves with leak test stations*
 - Valve position indicator on main safety shutoff valves
 - Over 400,000 BTU/HR safety shutoff valve interlocked with purge timer
- **Construction**
 - Adjustable opposed louvers on full coverage supply and return duct work
 - Automatic air operated door
 - 1/4" steel plate top prevents loading damage
 - Wear bars at sides of work space
 - Reinforced floor with removable grate
 - 10 lbs/cf density industrial rockwool insulation
 - Aluminized steel interior
 - Aluminized steel exterior with enamel finish
 - Brushed stainless steel control panel face
 - Adjustable fresh air intake and exhaust dampers
 - High temperature door gasket with stainless steel spring insert
 - All welded construction
 - Low profile minimizes interference with loading equipment
 - 1 year limited warranty
- **Every oven fully assembled and individually factory tested**



MODEL LB-550



MODEL LD-1050

SPECIFICATIONS

CAUTION: OVENS PROCESSING COMBUSTIBLE MATERIAL ARE REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 86 TO HAVE A FIRE SUPPRESSION SYSTEM. IF FLAMMABLE SOLVENTS OR VAPORS ARE PRESENT IN AN OVEN, OSHA REQUIRES CONFORMANCE WITH NFPA 86 WHICH DEFINES OVENS FOR THESE APPLICATIONS AS CLASS A OVENS. A POWERED FORCED EXHAUSTER AND OTHER NON-STANDARD SAFETY EQUIPMENT MUST BE ADDED. SEE BULLETIN TC-940 AND CONSULT FACTORY.

Model	Work Space		Outside* Dimensions (WxLxD)	Max Temp	Blower		Insulation	Floor Loading	Heat Input		Operating Characteristics†				Approx Shipping Weight
	Dimensions (WxLxD)	Volume Cu Ft			CFM	HP			KW	BTU/HR	Control Accuracy	Oven Uniformity	Rise Time		
												Electric	Gas		
LA-550	36" x 36" x 36"	27	59" x 87" x 52"	550°F	1500	1 1/2	6"	1000	15	100,000	±0.3%	±6°F	38 min	24 min	2280 lbs
LA-700	36" x 36" x 36"	27	61" x 89" x 54"	700°F	2000	2	7"	1000	20	150,000	±0.3%	±8°F	44 min	26 min	2795 lbs
LA-850	36" x 36" x 36"	27	63" x 93" x 56"	850°F	3000	2	8"	1000	30	250,000	±0.3%	±10°F	57 min	27 min	4120 lbs
LA-1050	36" x 36" x 36"	27	69" x 97" x 60"	1050°F	4000	3	10"	1000	40	300,000	±0.3%	±12°F	60 min	33 min	5865 lbs
LB-550	72" x 36" x 36"	54	121" x 59" x 52"	550°F	2450	1 1/2	6"	2000	30	250,000	±0.3%	±6°F	30 min	22 min	4665 lbs
LB-700	72" x 36" x 36"	54	123" x 61" x 54"	700°F	3300	2	7"	2000	40	300,000	±0.3%	±8°F	35 min	19 min	5585 lbs
LB-850	72" x 36" x 36"	54	127" x 65" x 56"	850°F	4000	3	8"	2000	60	400,000	±0.3%	±10°F	47 min	26 min	7320 lbs
LB-1050	72" x 36" x 36"	54	131" x 71" x 60"	1050°F	5000	5	10"	2000	80	600,000	±0.3%	±12°F	52 min	24 min	8475 lbs
LC-550	48" x 48" x 48"	64	71" x 99" x 64"	550°F	2450	1 1/2	6"	2000	30	250,000	±0.3%	±6°F	35 min	18 min	4995 lbs
LC-700	48" x 48" x 48"	64	73" x 101" x 66"	700°F	3300	2	7"	2000	40	300,000	±0.3%	±8°F	40 min	20 min	5915 lbs
LC-850	48" x 48" x 48"	64	77" x 105" x 68"	850°F	4000	3	8"	2000	60	400,000	±0.3%	±10°F	52 min	28 min	7855 lbs
LC-1050	48" x 48" x 48"	64	83" x 109" x 72"	1050°F	5000	5	10"	2000	80	600,000	±0.3%	±12°F	57 min	26 min	9005 lbs
LD-550	96" x 48" x 48"	128	145" x 73" x 64"	550°F	4200	3	6"	4000	60	400,000	±0.3%	±6°F	24 min	14 min	7445 lbs
LD-700	96" x 48" x 48"	128	147" x 77" x 66"	700°F	6000	5	7"	4000	80	600,000	±0.3%	±8°F	27 min	16 min	8880 lbs
LD-850	96" x 48" x 48"	128	159" x 83" x 68"	850°F	7800	5	8"	4000	100	700,000	±0.3%	±10°F	46 min	25 min	11660 lbs
LD-1050	96" x 48" x 48"	128	163" x 91" x 72"	1050°F	10,000	7 1/2	10"	4000	120	800,000	±0.3%	±12°F	52 min	30 min	14740 lbs

*All Models—Control panel overhang 9" right side.
 LA & LC Models—Blower motor overhang 19" at rear.
 LB & LD Models—Blower motor overhang 19" at right side (26" on 7 1/2HP)
 LA & LB Models—Additional height with door open 58"
 LC & LD Models—Additional height with door open 70"
 Gas Models—Burner overhang 15"; LA & LC Models right side; LB & LD Models rear

†Accuracy as percent of controller span. Uniformity at 100°F below maximum temperature. Rise Time in minutes to 100°F below maximum temperature. Tests run with empty oven and minimum exhaust. Performance will vary with load and application. See Bulletin TC-920 for additional details.

STANDARD EQUIPMENT

- All Models
 - 208 volts, 3-phase, 60 Hz
 - 230 volts, 3-phase, 60 Hz
 - 460 volts, 3-phase, 60 Hz
 - Other electrical characteristics available

Inner oven floor reinforced for loading and equipped with removable grating. Oven top surface constructed of 1/4" steel plate and work space interior equipped with wear bars to prevent damage during loading. Automatic door opening mechanism consisting of solid steel shaft, bearings, and air cylinder system. Requires 60 psig compressed air.

- Electric Models

Each features completely wired, side access UL listed control panel enclosing terminals for incoming power, temperature controllers, push buttons and pilot lights. Motor starter and heating element contactors electrically interlocked to shut off heaters if power to blower is interrupted and to permit operation of blower without heat for cooling. Incoloy sheathed tubular heating elements. Exhaust outlet 4" diameter.

- Gas Models
 - 1,000 BTU natural gas at 6" water column pressure, 1" NPT inlet
 - Other gas characteristics available

Control panel as detailed above and safety devices as listed on the front of this bulletin. Automatic pre-ignition purge period and push button electric ignition contributes to ease of

operation. Modulating gas burner is protected with electronic flame safety relay.

These electric or gas ovens come in four sizes. They feature full horizontal air flow with adjustable opposed louvers for balanced air flow. The horizontal air flow pattern allows heated air to pass between stacked parts for uniform heating. High volume recirculating blowers are specifically designed for heating heavy loads.

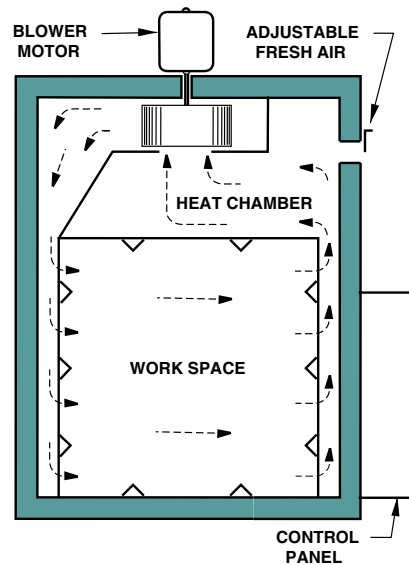
The removable grating on the oven floor protects the oven from impact during loading and distributes concentrated loads across the entire oven floor. The grating allows for air movement beneath the work for uniform processing.

The LA and LC Series have the heat chamber located to the rear of the work space. On the LB and LD Series, the heat chamber is located to the right side of the work space to position the supply and return duct work at the front and rear of the work space respectively. This provides the shortest distance between ducts which minimizes the temperature differential across the work space.

- 1050°F Models Only

Insulated with 2" of 1900°F insulating block backed up with 1250°F industrial rockwool. 16 gauge aluminized steel work space interior; 304 stainless steel heat chamber interior with stainless steel recirculating blower. Gas models include stainless steel exhauster.

Circulation Diagram (Top View)



Heated air is blown sideways between stacked parts

ADDITIONAL EQUIPMENT AVAILABLE*

- Programmable Temperature Controller, microprocessor based, digital indicating, thermocouple actuated, in lieu of standard controllerPTC3
- Recording Thermometer, thermocouple actuated, 24-hour, 10" diameter circular chart used in conjunction with standard controllerRT
- Programmable Recording Temperature Controller, microprocessor based, thermocouple actuated, digital display, 24-hour, 10" diameter circular chart, in lieu of standard controllerPRTC3

- Digital Timing Temperature Controller, microprocessor based, digital indicating, incorporates 99 hour 59 minute timer, starts timing when temperature reaches set point and shuts down oven at end of set timeDTS3
- Digital Shut Down Timer, with continuous "hold" featureSDT
- Digital Batch Timer, for uniformly timing batch operations. Continuous alarm with door interlock; alarms at end of preset time period until door is opened or timer resetBT

- Automatic Door Switch, turns off blower and heat when door is opened. Restores blower and heat on electric models, blower only on gas models, when door is closedADS
- Powered Forced Exhausters with exhauster air flow safety switch†

Capacity	HP	Outlet Diameter	Height
130 CFM	1/3	4"	20"
325 CFM	1/3	6"	23"
650 CFM	1/2	6"	23"
975 CFM	1	8"	23"

†Gas ovens include 325 CFM exhauster, except 650 CFM on LD-1000. Electric ovens may require additional heat input.



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*See Bulletin TC-960 for modifications and other optional equipment.