

### ◆ LBB Forced Convection Oven Drying and Testing Asphalt and Aggregate Samples



*Most asphalt and aggregate sample testers use Despatch LBB ovens for moisture content/density determination testing. Samples of aggregate materials with a known weight are put into the oven, after the time spent in the oven the sample is re-weighed and the reduced weight is subtracted from the beginning weight to provide the percent of moisture the original sample had. Properly dried samples can be sieved and graded by particle size to assure they meet the required aggregate class.*

*Other applications include drying rocks, aging asphalt paving mixtures and keeping compaction molds and industry tools at a certain temperature so cement will not bond to them, during the mixing process. Other tests include heating samples to a temperature where they can be easily separated into fine aggregate particles.*

#### The Despatch LBB Forced Convection Bench-top oven

The LBB oven is specifically designed for soil and asphalt testing. It features a rugged, double-wall steel frame and heavy-duty shelves to handle even the heaviest gyratory molds. Forced-Convected airflow provides temperature uniformity that meets AASHTO requirements of +/- 3°C at 150°C.

The Despatch LBB oven features a combination of horizontal and vertical airflow that offers excellent temperature uniformity, fast heat-up rates and short processing times at a moderate price. Digital controls regulate temperatures within tight tolerances.

The LBB is designed and manufactured to provide years of dependable service. The fan and heater are top-mounted to prevent damage from spills. When spills do occur, the corrosion-resistant stainless steel interior and nickel plated shelves clean up easily. The motor is permanently lubricated and virtually maintenance free. And Despatch warrants the heater performance for a full five years – the best warranty in the industry.

#### FEATURES AT A GLANCE

- ◆ Forced convection from top-mounted fan and plenums on sides of chamber
- ◆ Temperatures up to 204° C (400° F)
- ◆ 304 Stainless steel interior
- ◆ Digital control with 3/4" (1.9cm) LED display
- ◆ Nickel plated shelves - by model rated to 50 or 200lbs (23 or 91kg)
- ◆ High-limit control
- ◆ Five year heater warranty
- ◆ UL and C-UL listed



## OPTIONS

- ◆ Additional shelves
- ◆ Protocol 3™ programmable control with large LCD display, integrated data logging capabilities and USB port for simple oven set-up and data export
- ◆ Process timer with audible and visual alarm
- ◆ Door with window and interior light
- ◆ 2" and 4" access port
- ◆ Oven stand
- ◆ CE compliance



**Warning: Not for use with flammable or combustible materials. If your process has flammable solvents, contact Despatch.**

LBB	1-23	1-69	2-12	2-18	2-27	
<b>PHYSICAL SPECIFICATIONS</b>						
Chamber size (width x depth x height) <i>Clear opening width is reducing 1 1/2" (3.8cm) due to 3/4" (1.9cm) shelf supports on each side.</i>	18 x 18 x 12 in. 46 x 46 x 30 cm	30 x 18 x 22 in. 76 x 46 x 56 cm	30 x 20 x 35 in. 76 x 51 x 89 cm	37 x 24 x 35 in. 94 x 61 x 89 cm	37 x 37 x 35 in. 94 x 94 x 89 cm	
Capacity in cubic feet (liters)	2.3 (65)	6.9 (195)	12.1 (343)	18 (510)	27.7 (784)	
Overall size (width x depth x height) <i>Depth includes spacer for exhaust on rear of oven and door handle</i>	24 x 26 x 26 in. 61 x 66 x 67 cm	36 x 26 x 36 in. 92 x 65 x 92 cm	36 x 28 x 51 in. 91 x 71 x 130 cm	43 x 32 x 51 in. 109 x 81 x 130cm	43 x 45 x 51 in. 109 x 114 x 130 cm	
Electrical: 50/60 hertz - single phase <i>*Oven will run on 208V with a 25% reduction in heater output</i>	Volts*	120    240	120    240	240	240	
	Amps	11.6    5.8	21.6    10.8	16.6 amps	16.7 amps	21.7 amps
	Heater kW	1.2 kW	2.4 kW	3.6 kW	3.6 kW	4.8 kW
Capacity per shelf	50lb/23kg	200lb/91kg	200lb/91kg	200lb/91kg	200lb/91kg	
Maximum number of shelves (Two provided)	5 on 2 in. centers	10 on 2 in. centers	16 on 2 in. centers	16 on 2 in. centers	16 on 2 in. centers	
Shelf dimensions (width x depth)	17.75 x 17.75 in. 45 x 45 cm	29.75 x 17.75 in. 75.5 x 45 cm	29.75 x 19.75 in. 75.5 x 50 cm	36.75 x 23.75 in. 93.3 x 60.3 cm	36.75 x 36.75 in. 93.3 x 93.3 cm	
Cord and plug	15 amp	None - hardwire	None - hardwire	None - hardwire	None - hardwire	
Number of doors	1	2	2	2	2	
Approximate net weight	140 lbs (63 kg)	245 lbs (112 kg)	315 lbs (144 kg)	400 lbs (182 kg)	550 lbs (250 kg)	
Approximate domestic shipping weight (export adds weight)	205 lbs (92 kg)	320 lbs (146 kg)	385 lbs (175 kg)	485 lbs (221 kg)	635 lbs (289 kg)	
<b>FUNCTIONAL SPECIFICATIONS</b>						
Time to temp with no load (40°C to 150°C)	17 minutes	15 minutes	15 minutes	17 minutes	17 minutes	
Time to temp with no load (40°C to 204°C)	31 minutes	29 minutes	26 minutes	33 minutes	33 minutes	
Recovery time after door open 1 min. (150°C) **	2 minutes	3 minutes	3 minutes	3 minutes	4 minutes	
Recovery time after door open 1 min. (204°C) **	4 minutes	6 minutes	6 minutes	7 minutes	8 minutes	
Temperature uniformity Based on 9 point test in empty oven	+/- 3°C at 150°C +/- 4°C at 204°C	+/- 3°C at 150°C +/- 4°C at 204°C	+/- 3°C at 150°C +/- 4°C at 204°C	+/- 3°C at 150°C +/- 4°C at 204°C	+/- 3°C at 150°C +/- 4°C at 204°C	
Operating range with 20°C ambient	35°C - 204°C	35°C - 204°C	40°C - 204°C	40°C - 204°C	40°C - 204°C	
Control stability	+/- 0.5°C	+/- 0.5°C	+/- 0.5°C	+/- 0.5°C	+/- 0.5°C	
Maximum load capacity	200 lbs. (91 kg)	400 lbs. (181 kg)	600 lbs. (272 kg)	600 lbs. (272 kg)	600 lbs. (272 kg)	
Maximum shelf capacity ( <i>reinforced shelves except LBB1-23</i> )	50 lbs. (23 kg)	200 lbs. (91 kg)	200 lbs. (91 kg)	200 lbs. (91 kg)	200 lbs. (91 kg)	
Exhaust capacity	Adj. to 1 CFM (0.5 lps)	Adj. to 3 CFM (1.4 lps)	Adj. to 12 CFM (5.71 lps)	Adj. to 14 CFM (6.61 lps)	Adj. to 14 CFM (6.61 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. Time to temperature, recovery time, and temperature uniformity are based on 240V/60hz operation, with control panel on top. Actual results may vary slightly depending on unit configuration and operating conditions. Minimum operating temperature is based on 20°C ambient temperature measured at the fresh air inlet with the exhaust air damper fully open. Maximum load capacity figures are only for standard configurations with controls on top. Specifications are subject to change without notice. \*\*Recovery time as measured at control thermocouple.

## 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  
parts@itweae.com

## GLOBAL HEADQUARTERS

main phone: 1-800-726-0110  
international/main: 1-952-469-5424  
sales: 1-800-726-0550  
international/sales: 1-952-469-8240  
sales@despatch.com

[www.despatch.com](http://www.despatch.com)

8860 207th Street West  
Minneapolis, MN 55044 USA

**Despatch**  
Thermal Processing Technology 