



At a Glance

- *No condensation on Boards or Devices.*
- *166°C maximum operating temperature.*
- *Precise temperature and humidity uniformity.*
- *High dissipation capability.*



Special "stacked" LPB1-15V. Two complete systems in one chassis saves floor space.

LPB H.A.S.T. Chambers

Application: accelerated temperature/humidity stress testing of semiconductor devices.

Designed and manufactured in the U.S.A., the LPB Series can operate at temperatures up to 166°C and pressures up to 90 PSIG, higher than competitive units. Plus, it features powered test capabilities.

Pressure vessels are built per ASME code and constructed of electro-polished 316 stainless steel to assure long life. The single pressure vessel concept simplifies operation relative to conventional dual vessel systems.

Designed with all the technology and expertise that has become the hallmark of Despatch, the LPB Series will dramatically reduce your high humidity and temperature testing time of electronic components.

Features

- The LPB Series has the ability to avoid condensation on the DUT's (Device Under Test) not only during test, but during ramp up and ramp down, as well. This has proven to be important in avoiding corrosion, transportation of contaminants and pin to pin leakage.
- The pressure vessel is ASME approved for 100 PSIG. Interior baffles and optional shelving are constructed of electro-polished type 316 stainless steel for maximum protection against corrosion. All welds are ground smooth and electro-polished. Door and domed head are heavy gauge plate and include "O" ring seal, handle and hold downs.
- Vessel enclosure is constructed of reinforced, 20-gauge mild steel and finished with baked enamel in

contemporary textured light gray with coordinated darker gray accents. A hinged door(s) covers and insulates the vessel door.

- Immersion heating system heats water from the base of the vessel. Heaters are long-life, low watt density and protected in 316 stainless steel sheaths.
- One piece molded silicone gasket assures long-life, tight seal of high temperatures and humidity..
- Meets all requirements of JEDEC HAST standard # 22-A110.
- Digital set/indicating solid state programmer provides easy digital programming of temperature, % RH

and test time. Direct % RH read out means no look-up tables are required. Event programming allows powering devices under test at desired program time.

- Digital pressure indicator located on the control panel allows easy viewing of vessel pressure levels. A mechanical gauge is provided as a back-up in the event of a power outage.
- Alarm sounds in the event of over-temperature or over-pressure.
- RS232/EIA422 interface capability to the control.
- Corrosion-resistant mixing fan minimizes temperature stratification by mixing vapors.

Options

- Powered test capabilities allow the installation of power supplies and fixturing for powering DUT's.
- Voltage impression terminals allow convenient hook-up for bias testing.
- 19" base cabinet relay racks permit the mounting of supplies or other accessory equipment.
- Two-pen recording hi-limit takes the place of standard hi-limit to provide a permanent record of test conditions.
- Water cooling capabilities from 135°C to 50°C in 1.5 hrs.

Specifications

Model	LPB1-15v	LPB1-40v	LPB1-78v
Interior Volume	1.0 cu. ft. (0.03 cu. M)	4.5 cu. ft. (0.13 cu. M)	6.7 cu. ft. (0.19 cu. M)
Inside Dimensions (diameter x depth)	12.5" x 14.5" (31.7 x 36.8 cm)	22.5" x 24.0" (57.1 x 61 cm)	22.5" x 37" (57.2 x 94 cm)
Vessel Door Opening (dia.)	10.5" (26.7 cm)	23.5" (59.7 cm)	18" (45.7 cm)
Overall Dimensions (w x d x h)	24" x 30.5" x 66" (61 cm x 78 cm x 168 cm)	44" x 46" x 86" (97 cm x 112 cm x 211 cm)	38" x 56" x 83" (97 cm x 142 cm x 211 cm)
Temperature Range	105-166°C (221-331°F)	105-166°C (221-331°F)	105-166°C (221-331°F)
Humidity range ²	50-100% RH	50-100% RH	50-100% RH
Maximum Pressure	6.3 kg/cm ² G (90 psig)	6.3 kg/cm ² G (90 psig)	6.3 kg/cm ² G (90 psig)
Voltage	230/1/60 ³	230/1/60 ³	230/1/60 ³
Amp Draw	13	41	43
Approx. Shipping Weight lbs. (kg)	550 (250)	1100 (500)	1330 (605)
Time to Temperature (25-130°C) (25-130°C)	42 min. (85% RH) 64 min. (100% RH)	40 min. (80% RH) 61 min. (100% RH)	39 min. (85% RH) 59 min. (100% RH)
Control Accuracy	±0.5°C	±0.5°C	±0.5°C
Control Stability	±0.5°C	±0.5°C	±0.5°C
Temperature Uniformity ⁴	±0.5°C	±0.5°C	±0.5°C
Humidity Uniformity ⁴	±0.8% RH	±0.8% RH	±0.8% RH
Live load ⁵ (135°C, 85% RH)	80 Watts	300 Watts	500 Watts
Maximum Live load ⁵	400 Watts	950 Watts	1,500 Watts

1. Below 100°C option is available.
2. As limited by a 16 PSIA vapor pressure.
3. Units will operate satisfactorily on 208v with a 25% reduction in heater capacity. If full capacity is required, a 208v option is available.
4. Empty vessel.
5. Dissipation capability is dependent upon operating condition. Maximum values are at 166°C and 50% RH.

Note: Specifications are subject to change without notice.

If the standard products shown do not meet your requirements, we can provide customized solutions.