



## LBS-3750 / Load Bank



### Specifications

High capacity: 5,029 hp (3,750 kW)  
 Voltage: 480 V, 400 V, 380 VAC, 3-phase 50/60 Hz voltages  
 Digital load control, 1 kW load step resolution  
 Touchscreen operator interface  
 Data acquisition and recording

The Dyne Systems' LBS-3750 is stationary, outdoor (or indoor) load bank designed to provide high capacity load testing of generators, UPS, and other AC power sources; periodic reliability exercise of standby generators and other load bank applications. Operator interface is via a handheld remote controller with touchscreen or manually operated digital touch panel controller (HMI) in control area. Includes voltage and load selection, step load or numeric load application, measured power and frequency display. Load control is via screen keypad. All electrical values are displayed on the screen and recorded by the system for future data retrieval.

This system includes a test software/digital power metering package for automated load testing, data logging, and report generation using customer supplied laptop PC. Includes software CD, customer to supply Ethernet interconnect cable.



Data Acquisition Main Screen

The LBS-3750 offers resistive load for all common 3-phase 60, 50 Hz voltages:

- 60 Hz:** 208 V, 220 V, 240 V, 416 V, 440 V, 450 V, 460 V, 480 V, 575 V and 600 V
- 50 Hz:** 190 V, 200 V, 208 V, 380 V, 400 V and 416 V

### Features

- Portable, self-contained, modified, 20-foot (6.1 m) ISO shipping container with lifting lugs in four corners
- Heavy skid base, air inlets behind protective doors include louvers
- Air inlets to control sections are filtered
- Integral ladder on end wall for roof access
- Suitable for direct transport by standard flatbed truck (requires bulk rate international shipment)
- Power connection to full-rated copper bus bar behind hinged access door
- Local/remote control system, uses tray mounted load elements
- Branch circuit fuse protection of load elements
- Comprehensive system protection with sensors, alarms and lock-outs as appropriate for: fan failure, high exhaust temp, high intake temp, louver open/closed (each louver), access door open (each door), high inductor temp, fan motor overload and emergency stop
- Vertical airflow, exhausts hot air above level of personnel and away from buildings, pavement etc. Exhaust is through top hatch with powered opener



## Resistive Load Element

The LBS load bank uses an advanced design, air-cooled power resistor specifically designed for application to Load Bank systems. The elements are conservatively operated at half the maximum temperature rating of the alloy and features a short-circuit safe design based on continuous mechanical support of the element by high temperature, ceramic clad stainless steel rods. The elements are assembled into discrete trays which are assembled in a vertical "stack." Each tray in the "stack" is independently serviceable without disturbing adjacent trays.

## Specifications

Alloy: FeCrAl

Maximum continuous temperature rating: 1,920°F (1,049°C)

Maximum operating temperature as applied in Load Bank: 1,080°F (582°C)

Cool down time from operating to ambient temperature is 10 seconds

## Construction

- Ceramic clad, stainless steel through rods
- UL Recognized

## Capacity

| Model    | 480 V<br>3-phase<br>50/60 Hz | 400 V<br>3-phase<br>50/60 Hz | 380 V<br>3-phase<br>50/60 Hz |
|----------|------------------------------|------------------------------|------------------------------|
| LBS-3750 | 3,750 kW                     | 2,600 kW                     | 2,350 kW                     |

## Cooling System

| Model    | hp<br>(kW)       | CFM<br>(M <sup>3</sup> /H) | Exhaust Rise<br>°F (°C) | Hot Spots<br>°F (°C) |
|----------|------------------|----------------------------|-------------------------|----------------------|
| LBS-3750 | 2 x 30<br>(22.3) | 150,000<br>(254,852)       | 150-200<br>(65-93)      | 500<br>(260)         |

## Digital Load Step Control

1.0 kW step resolution

## Detailed Specifications

### Voltage

All common 3-phase 60, 50 Hz voltages:

**60 Hz:** 208 V, 220 V, 240 V, 416 V, 440 V, 450 V, 460 V, 480 V, 575 V and 600 V

**50 Hz:** 190 V, 200 V, 208 V, 380 V, 400 V and 416 V

### Frequency

50, 60 Hz

### Connection

Plated bus bar within an oversized terminal junction box

### Time Rating

Continuous

### Ambient Air Temperature

125°F (51°C) maximum

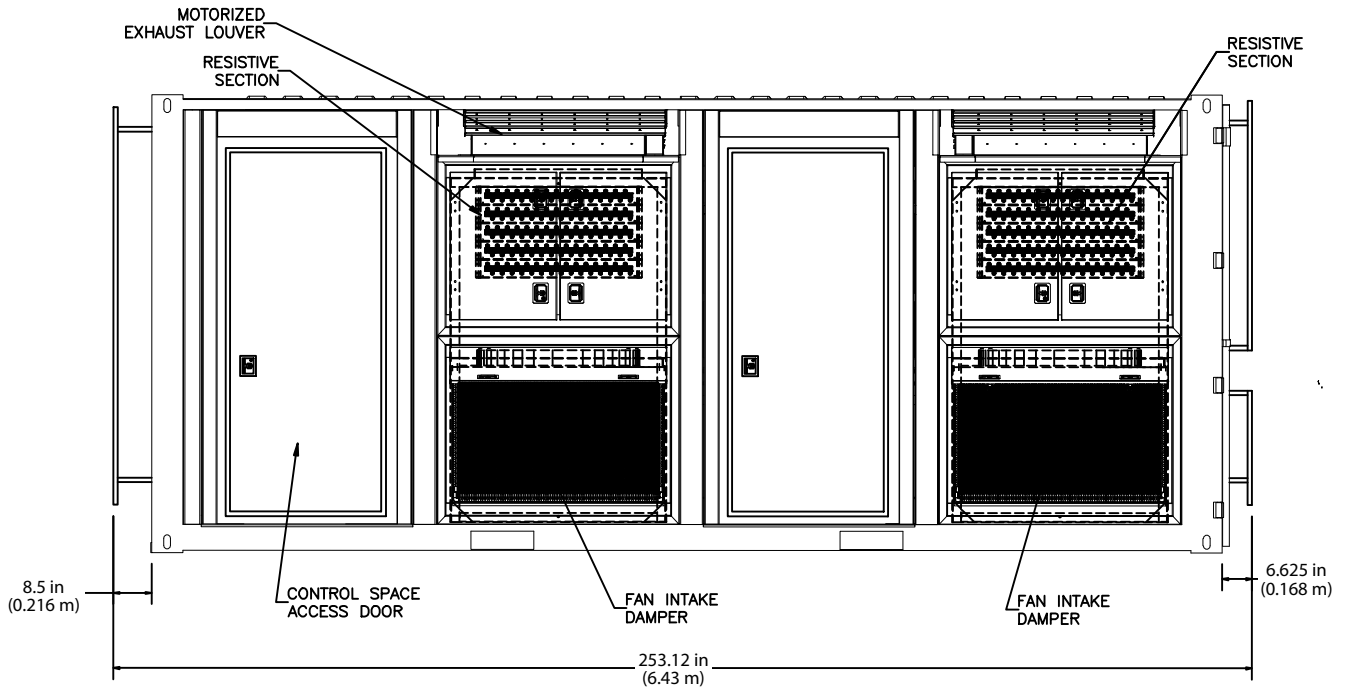
### Control/Fan Power

External or internal from load bus. Control circuits at 120 V via transformer. The cooling fan operates at 3-phase line voltage. Load control circuits and fan motor control operate at 120 V. Control circuits are fused. Control circuit fuses are 100,000 A.I.C., 600 V rated.

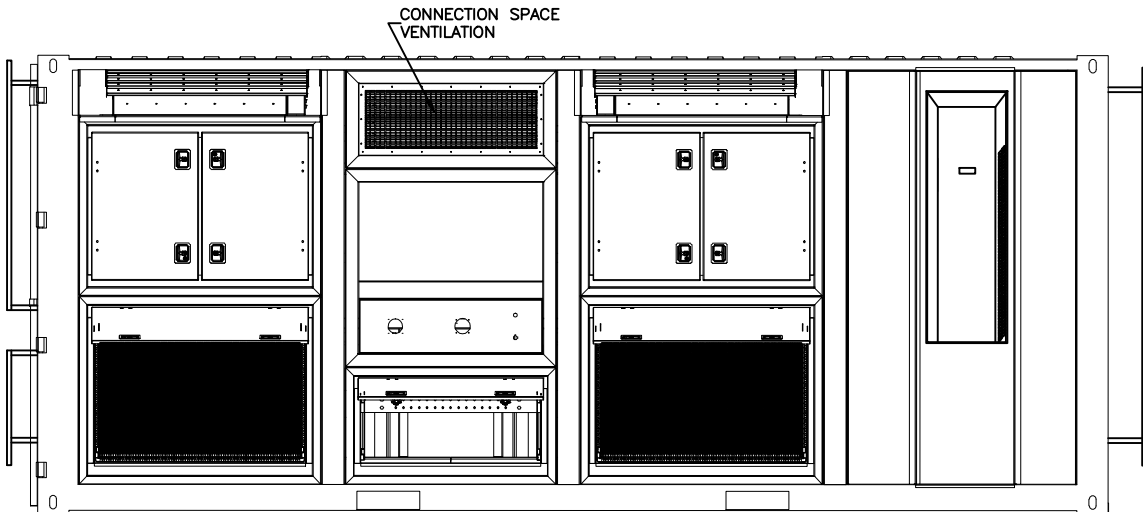
### Net Weight

20,000 lb (9,072 kg)

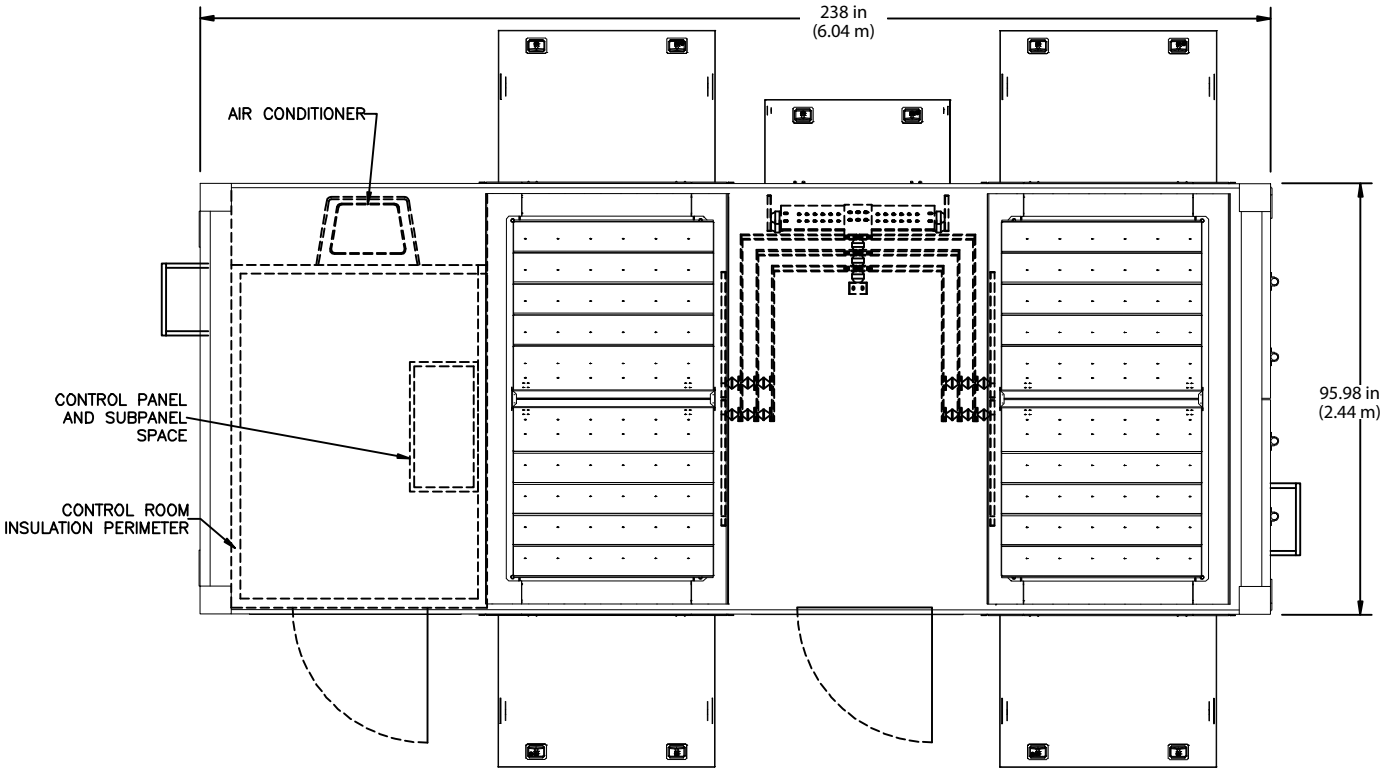
### Front



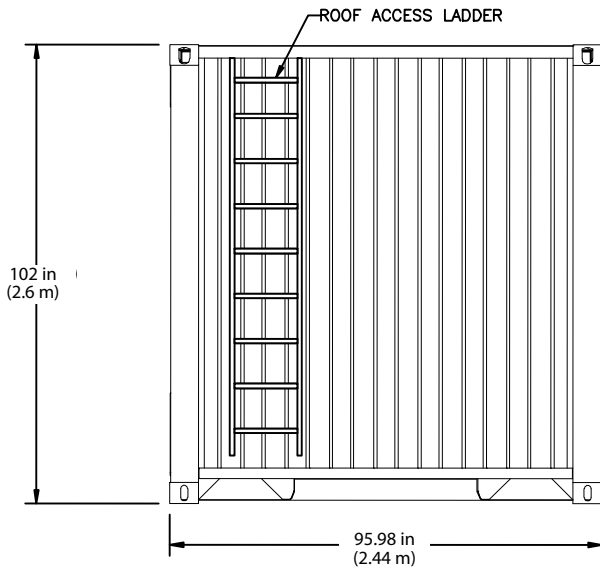
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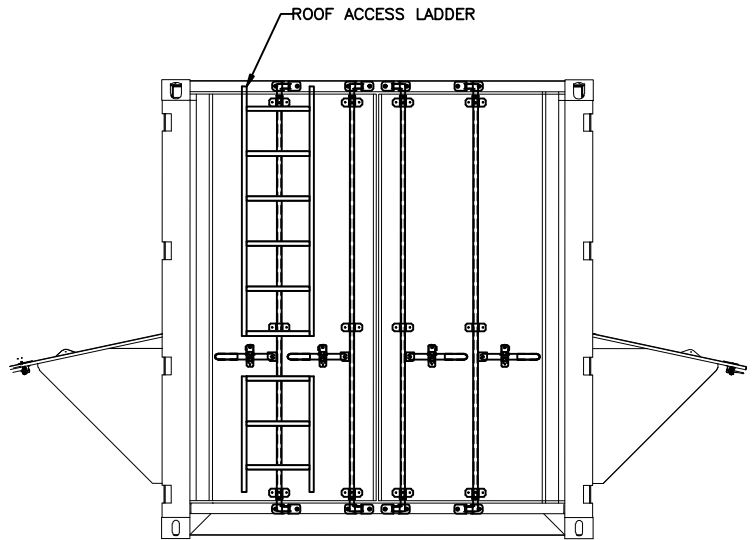
### Top



### Left Side



### Right Side



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