LBP-700 / Load Bank

Specifications

High capacity: 939 hp (700 kW)
Dual voltage: 208-240/480 VAC
Digital load control, 5 kW resolution
Touchscreen operator interface
Data acquisition and recording available (purchased separately)

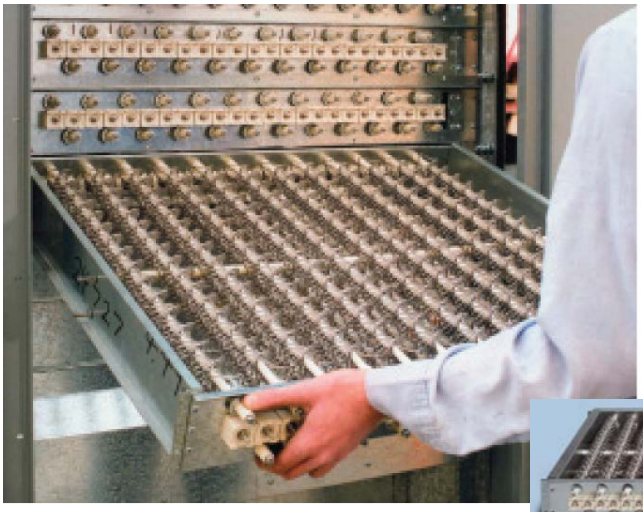
The Dyne Systems' LBP-700 is a very large capacity, high performance portable load bank designed to provide manufacturers, distributors and users of large AC generators and UPS systems with sophisticated testing capability. The LBP-700 features digital controls with network control and data acquisition capability. Operator interface is via a handheld remote controller with touchscreen. Load control is via screen keypad. All electrical values are displayed on the screen and recorded by the system for future data retrieval.

Data Acquisition Main Screen

The LBP-700 offers resistive load at both 240 V and 480 V, 3-phase. It can be applied at any AC voltage to 480 VAC, 50-60 Hz standard, single or 3-phase. Load step resolution is 5 kW.

Features

- **UL Listed**
  File Number E151624
- **Digital Control**
  PLC-based control with color TFT touchscreen interface; MODBUS over RS-485 network communication
- **Instrumentation**
  Digital power transducer with Ethernet communication to digital controller; data display on touchscreen
- **Load Elements**
  Chromium alloy, open wire, continuously supported, power resistor
- **Load Control**
  3-pole contactors
- **Load Element Circuit Protection**
  Branch circuit fuses, one set of fuses each 50 kW branch; fuses are current-limiting type, 200 KAIC, 600 V
- **Cooling System**
  3-phase, direct-drive fan, 12,500 CFM (21,237 M^3/H)
- **Malfunction Detection System**
  Protection against fan failure, high exhaust air temperature, high intake air temperature, overvoltage and fan reversal. Exhaust air temperature displays on screen
- **Control Power Supply**
  Dual voltage control power transformer with supply power switchable to internal (generator) or external



Resistive Load Element

The LBP 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 Detail

Model LBP-700	240/480 V	440 V	380 V	208 V 3-phase	240 V 1-phase 50/60 Hz
	700 kW	588 kW	439 kW	525 kW	467 kW

Cooling System

Model LBP-700	hp (kW)	CFM (M^3/H)	ΔT, Nom. °F (°C)	ΔT, Max. °F (°C)
	5 (3.7)	12,500 (21,237)	158 (70)	350 (176)

Digital Load Step Control

Nominal 5.0 kW resolution: direct enter any load value and controller will apply load within nominal 5 kW resolution.

Digital Load Calibration Versus Voltage

Controller automatically calibrates loads for reduced voltage operation.

Detailed Specifications

Voltage
Dual Voltage: 240/480 VAC, 3-phase operational at any voltage to 480 VAC maximum, single or 3-phase

Frequency
50, 60 Hz standard

Connection
3-wire plus ground

Time Rating
Continuous

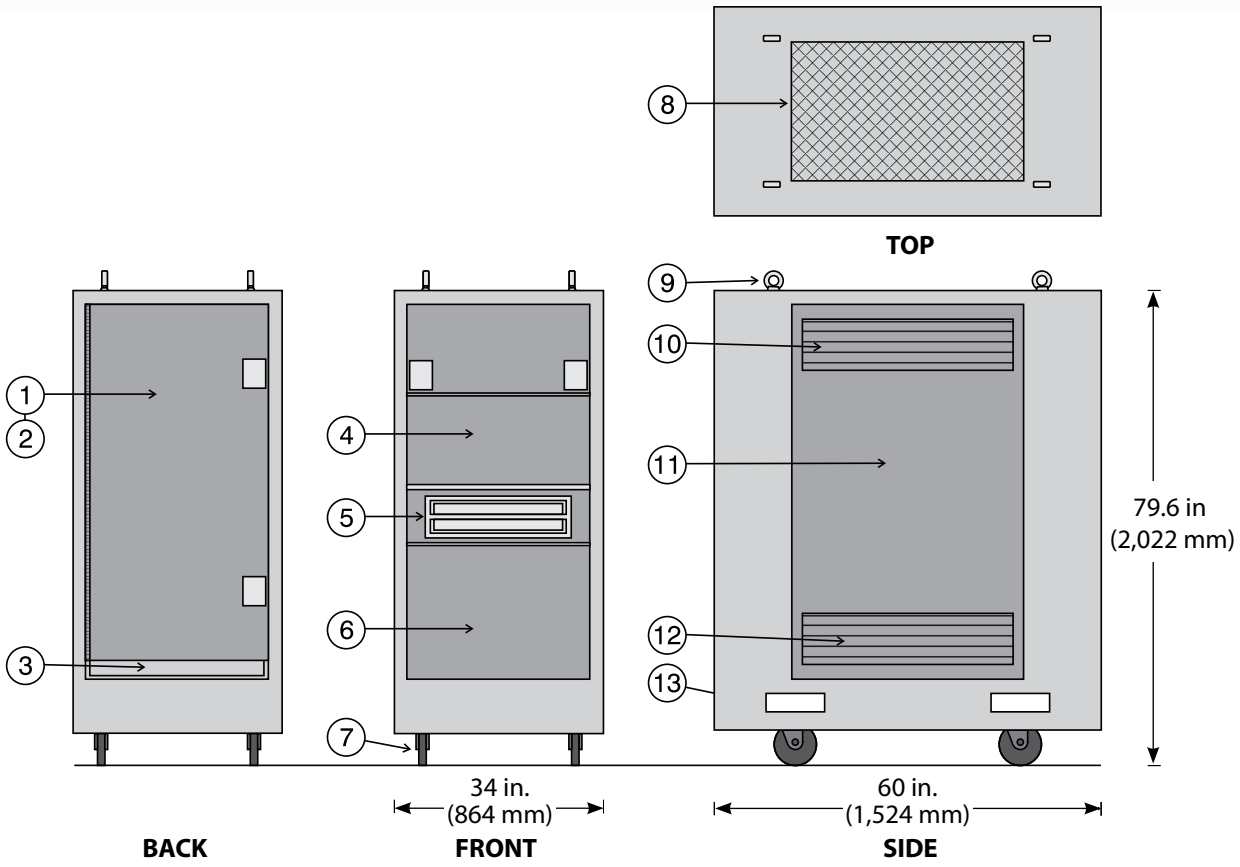
Ambient Air Temperature
120°F (49°C) maximum

Fault Rating
200 KAIC

Insulation Rating
600 V, 302°F (150°C)

Control/Fan Power
- 230/460 V, 3-phase, 60 Hz
- 190/380 V, 3-phase, 50 Hz
- Switchable internal (generator) - external
- 230/460-115 V control power transformer internal to Load Bank
- 15 ft (4.5 m) external power cord

Net Weight
1,675 lb (760 kg)



Features

1. Cam-lok type power connections compartment behind hinged door
2. Behind connections compartment: removable access panel to rear distribution bus, fuses, contactors
3. Cable exit-allows rear door to close
4. Touchscreen behind doors
5. Recessed handle pocket
6. Removable access panel to front distribution bus, fuses, contactors
7. Rubber tired caster, 6" (152 mm), front swivel, rear fixed
8. Screened hot air exhaust
9. Lifting eyes
10. Ventilation louvers
11. Removable access panel, both sides, to load element trays
12. Cooling air intake louvers
13. Forklift channels

Options

- Data Acquisition and Control software
- 12 ft (3.65 m) connection cables
- Weather resistant enclosure