AVTRON POWER SOLUTIONS

LC00 SERIES
Data Sheet

Model LC20

The Avtron Model LC20 is ideal for data center commissioning and testing while integrating seamlessly with existing cooling infrastructure. They are resistive, AC liquid cooled load banks designed for operation indoors when up to 720kW of resistive load is required.

- Corrosion resistant stainless steel piping and tanks
- Controller enables networking a mix of up to 250 liquid or air cooled load banks
- Up to 5kW resolution
- Ability to drain system to avoid cross contamination between jobs
- Aluminized Steel enclosure, sturdy welded frame, and heavy duty casters for durability and long life
- Built-in flow meter visually displays flow rate and monitors for under or over flow conditions
- Patent Pending Design

LOAD BANK RATINGS

Standard capacity rating:

- 720 kW at 480V, 3 PH, 50/60Hz, 5 kW load step. Derates to 540 kW at 415V, 3 PH, 50/60 Hz.
- 500 kW at 415V, 3 PH, 50/60Hz, 5 kW load step. Also available at 480V

Please consult factory for non-standard ratings.

FEATURES

- **Flow:**
  720kw/540kW: 60 GPM Min [227 litres]
  300 GPM Max [1136 litres]

  500kW: 40 GPM Min [150 litres]
  300 GPM Max [1136 litres]
- **Sensors:**
  Over Pressure, Over Temperature, Low Flow Rate (60 GPM for 720kW and 40 GPM Min for 500kW) Protection
- **Pressure Rating:**
  70 PSI [4.8 bar] Working Pressure
  105 PSI [7.2 bar] Test Pressure
- **Temperature:**
  180°F [82.2°C] Max. Water Outlet
  85°F [29.4°C] Max. Temperature Change
- **Control Power:** INT/EXT with Switch
- **Inlet/Outlet Connections:**
  4" [101.6mm] Flange
- **Mobility:** 6" [152.4mm] Nylon Casters
- **Lock System:** Floor Lock

Avtron's Liquid Cooled Load Banks are engineered to align with ASHRAE's evolving S-class guidance, providing the ultimate test environment for liquid-cooled infrastructure. We enable data center operators, OEMs, and AI infrastructure providers to confidently validate system performance, ensure operational reliability, and demonstrate resiliency - all under standardized inlet temperature and flow profiles that reflect real-world AI workloads.

Control Power

Power is either derived externally from the control power receptacle located on the front of the unit or internally from a control power transformer. If external power is used, 120V, single Phase, 60 Hz, 5 amp power source is required for the control circuits.

Cooling System

The liquid cooled load bank has corrosion resistant stainless steel tanks and piping. The unit has 2 tanks, inlet & outlet piping, and resistors/elements on inside of the tanks. Avtron liquid cooled load banks have the capability to monitor flow, pressure and temp.

Operator Controls

The Avtron RxMS controller integrates both liquid cooled and air-cooled load banks within the same network, managing up to 250 load banks from a single Windows-based interface. It supports TCP/IP Modbus communication, utilizing an Ethernet-based wiring infrastructure for seamless connectivity.

The control panel features power on/off functions, master load on/off management, and alarm indicators for low flow, over-temperature, and over-pressure conditions, and control power internal/external switch, as well as a notification for remote mode and quantity (2) Ethernet connections.

An integrated Shark® power meter displays AC 3-phase voltage and current, power (kW), frequency, and power factor.

Two Year Warranty Included

The equipment is covered by a 24-month parts and labor warranty.

Model LC20 Specifications

Construction

The LC20 is constructed using heavy gauge aluminized steel per ASTM A463. It is designed for continuous indoor operation. Sturdy welded frame and heavy-duty castors are provided for easy mobility, durability, and long life.

Finish

The LC20 has a high quality baked polyester powder coated finish with a film thickness of 2.8 +/- 0.4 mils per coat. The standard color is gray (ANSI 61).

Resistor Elements

The heating elements are immersion-type, constructed from Incoloy® 800, and feature a stainless steel screw plug mounting for secure installation.

The elements are continuously rated at the specific voltage. Tests at lower voltages, with a corresponding reduction in overall rating, may be carried out.

Sensors

Thermocouples monitor temperature, triggering a resistor elements shutdown if over-temperature is detected by the iLB software.

Rugged pressure sensors measure pressure, shutting down the resistor elements if high-pressure levels are identified.

A magmeter tracks flow rate and the resistor elements shut down if flow drops below 40 GPM.

Load is automatically reapplied when over-temperature, pressure or under/over flow conditions are restored to normal.

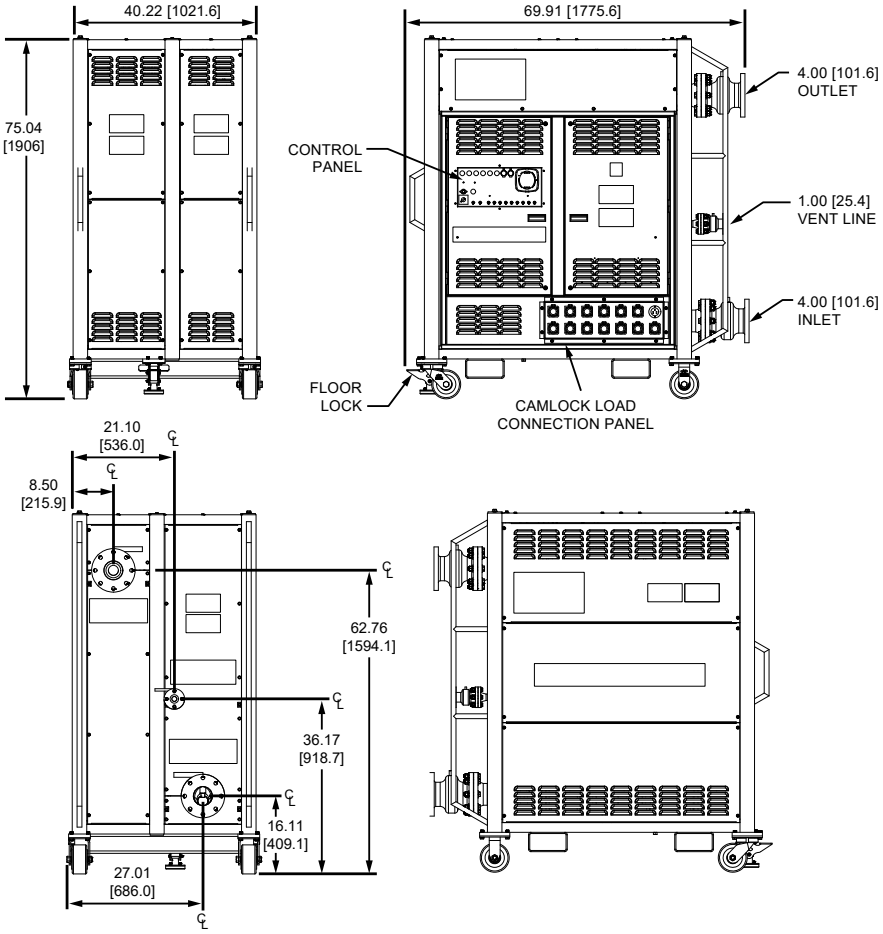
The load bank contains fuses for short circuit protection. The control circuit is protected with a 10 amp fuse while the individual load steps have branch circuit fuse protection.

Ambient Temperature

The LC20 load bank is designed for continuous duty cycle with no limitations. The ambient temperatures max is 120°F (49°C).

Environment

The LC20 is self-contained portable load bank designed for operation and storage indoors.



All dimensions are in inches [millimeters].
Specifications subject to change without notice.

Power Terminals

Input connections are quick connect style male receptacles mounted on the load bank.

Optional Accessories

- 20' [6096 mm] Load Cable Set with Connectors

Documentation - Operating Manual

A comprehensive operator's manual is supplied electronically via a USB drive.

Sections include: Safety, Installation, Operation, Maintenance, and Trouble-shooting.

Testing and Standards

Avtron load banks comply with NEMA, NEC, and ANSI standards.

Dimensions (approx. in/mm)

Length	Width	Height
65/1650	39.5/1005	74.5/1892

Weight
720kW
Full tanks: 3,393 lbs [1539 kg]
Empty tanks: 2,609 lbs [1183.4 kg]

Fluid Volume
102 gal [386.1 ltr]

500kW
Full tanks: 3,328 lbs [1509.5 kg]
Empty tanks: 2,504 lbs [1135.8 kg]

Fluid Volume
103 gal [389.9 ltr]

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