



The Avtron Model 3110LTR are resistive, AC load banks designed for static or moveable, outdoor installation when up to 1250 kW of electrical load is required.

LOAD BANK RATINGS

Standard capacity rating up to:

- 1250 kW

Standard load step resolution:

- 10 kW, 1 kW with hand-held

Standard voltage ratings:

Voltage	Hz	Max. Capacity
400	50	1000 kW
480	60	1250 kW

Airflow and Noise Level

Forced-air cooling is by a single axial metal-bladed aerofoil fan, giving horizontal discharge. At 50Hz (DOL) the fan motor is rated at 4.5kW, 3 phase and airflow is 8.3 m³/s (17,587 CFM). At 60Hz (DOL) the fan motor is rated at 7.5kW, 3 phase and airflow is 10 m³/s (21,189 CFM).

Typical noise level is 74dBA at 50Hz. Measurements are taken 3 metres from the load bank and at 90° to the airflow direction. Noise readings are subject to a tolerance of ±3dBA.

Load Control

The load contactors are actuated by the specified load control system. Control is from SIGMA LT system. SIGMA LT consists of both digital toggles located on the load bank and an optional hand-held for linking load banks in a network. For more information view the SIGMA LT data sheet.

Construction

The frame of the load bank is constructed from 2mm 'Zintec' steel, folded and welded to form a monocoque construction.

Double skinned recessed doors allow easy access to the separate enclosures for control, switch gear and power connections.

The double skinned, horizontal discharge duct with aluminised steel heat shield contains the resistive load elements and the cooling fan.

Stainless steel mesh screens on the main air inlet and outlet provide protection against access to hazardous parts to IP1X.

All electrical enclosures are to IP55.

An optional single and four point lifting frame has corner tie bars to connect the frame to the fork base. The overall effect provides a mini crash frame.

Finish

High quality two-pack industrial acrylic paint system applied to an electro-plated zinc base and low-bake finish. Standard colour is grey (RAL7042).

Warranty

The equipment is covered by a 24-month warranty as detailed in our Conditions of Trade.

Model 3110LTR Specifications

Resistor Elements

The 3110LTR load banks use replaceable, non-finned sheathed elements. The outer sheath is made from stainless steel to give good corrosion resistance.

The heating element is a ferritic iron-chromium-aluminium alloy. The alloy is characterised by high resistivity and good oxidation resistance.

The elements are very conservatively rated and there is no need for cooling fins to dissipate the heat into the airflow. This ensures that foreign matter or a loosely fitting fin cannot possibly cause hot spots and therefore ensures high reliability.

The elements are designed to operate continuously at up to 800°C (red/orange). The actual temperature is below 500°C (dull red). This gives a wide margin of safety and very long life.

Load tolerance is within 2½ % of total capacity.

Elements are continuously rated at the specific voltage. Short-term tests (1 hour in 12) with fluctuations up to 10% above rated voltage are permissible. Tests at lower voltages, with a corresponding reduction in overall rating, may be carried out. Power is proportional to voltage squared.

Safety Features

An emergency stop/disconnect switch gives full isolation of the fan and control supply.

A 110 Volt AC control circuit transformer provides isolation and operator safety.

The fan motor is fully protected with fuses and a thermal overload.

Thermal detectors are fitted to protect against overheating in the resistive duct and switchgear enclosure.

Over voltage protection for the load circuit is provided by SIGMA LT control.

Each element group and its associated contactor are protected by an HRC fuse. This is very important when testing large capacity power supplies, due to the possible high fault currents.

The load contactors are interlocked with the fan controls to ensure load can be applied only when the fan is running.

Internal access is restricted by key operated door catches.

Ambient Temperature and Humidity

Standard load banks are rated at 50°C. Average air temperature rise is 125°C.

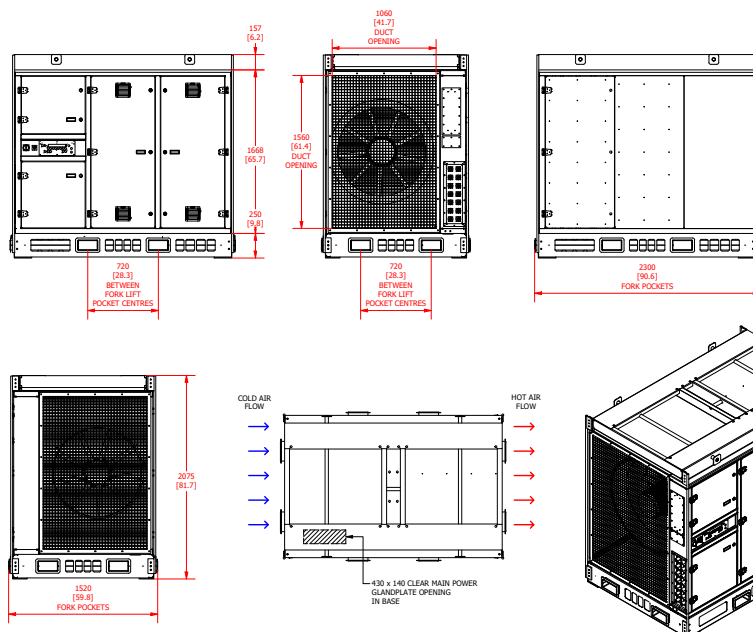
Ambient humidity may be up to 90% RH, non-condensing.

Mounting

The load bank is mounted on a hot-dip galvanised forklift pocket base.

Power Terminals & Cable Entry

There are two options for power connections.



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

Option one is single pole power connectors (panel drain) located on the side of the load bank.

Option two is power terminals located behind a dedicated door.

Load banks are fitted with a pre-punched, non-metallic gland plate with a flexible rubber shutter, to enable safe temporary power connections to be easily made in a controlled test environment. A blank non-ferrous gland plate is also supplied to enable a fully compliant installation to IP55 if necessary.

The gland plate opening size is 430 x 140mm.

Auxiliary Supply

The fan and control circuit may be powered from an external auxiliary supply or from the supply on test, provided it is of the correct voltage and frequency. Lower voltages and other frequencies must be tested using the external supply.

An IEC 60309-2 plug and socket with a three-position switch enables quick and easy connection.

Optional Accessories

- Castor Sets
- Highway Trailer
- Protective Cover

Documentation – Operator Handbook

A comprehensive illustrated operator's manual is supplied. Sections cover safety, installation, commissioning, operation, calibration, maintenance and fault finding.

Testing and Standards

Functional operation and load tests are completed on all load banks, before despatch, in line with our ISO 9001:2015 procedures.

Avtron load banks comply with international standards and are CE and UKCA marked to confirm compliance with both the EMC and Low Voltage Directives.

Weight and Dimensions

Measurements: mm/in. and kg/lbs.

Model	3110LTR
Length along airflow	2300/90.56
Width across airflow	1540/60.63
Height on forklift base	2075/81.70
Approximate weight	1500/3307

Additional Information

An extensive range of resistive, inductive, capacitive or combined load banks of varying capacities are also available. For further information on this model or any other 3000 SERIES load bank, please contact a member of our sales team.