



The Avtron Model 4100 are resistive, AC load banks designed for outdoor installation when up to 150 kW of resistive load is required.

LOAD BANK RATINGS

Standard capacity ratings of:

- 50 kW
- 75 kW
- 100 kW
- 125 kW
- 150 kW

Standard load step resolution of 5 kW.

Select from standard three phase voltage ratings of:

- 208-60Hz
- 240-60Hz
- 480-60Hz
- 240/480-60Hz
- 400-50Hz
- 600-60Hz

Single phase 240 voltage is also available.

Please consult factory for non-standard ratings.

Blower Motor Control

The blower motor is factory wired to the main load bus. If external blower connection is required, the factory installed wired must be removed. Refer to the load bank schematic for specific details.

An external 120V, 1 Phase, 60 Hz supply is required for control circuit operation.

An optional step-down transformer is available to provide the required control power. The transformer receives its power from the blower motor circuit described above.

Cooling System

Approximately 5,000 CFM cooling is provided by integral TEFC or TEAO motor which is direct coupled to the cooling fan blade.

The fan motor is fully protected with fuses, motor starter contractor, and overload relay.

Operator Controls

The standard load control for the 4100 is a manual 19" rack mount panel. Controls include: Power On/Off switch, Blower Start/Stop push buttons, Master Load On/Off switch, and Individual Load Step switches. Visual indicators include: Power On, Blower On, and Blower/Air Failure.

Other control options are available, please consult factory.

Construction

The 4100 is constructed using heavy gauge aluminized steel per ASTM A463. It is designed for continuous outdoor weatherproof operation. Forklift channels are provided in the base for lifting.

All exterior fasteners are stainless steel. The main input bus, load step relays, fuses, and blower/control relays are located in the main enclosure. The 4100 load bank is listed to UL standard 508A.

Finish

The 4100 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).

Two Year Warranty Included

The equipment is covered by an industry exclusive 24-month parts and labor warranty.

Model 4100 Specifications

Resistor Elements

Avtron load banks use helically wound chromium alloy Helidyne elements. Elements are fully supported across their entire length by segmented ceramic insulators on stainless steel rods. These elements are designed to operate at approximately 1/2 of their maximum continuous wire rating.

Elements are positioned within the cooling airstream for optimal performance. Changes in resistance due to temperature are minimized by maintaining conservative watt densities.

The overall load tolerance of the 4100 load bank is -0, +5%. This ensures that advertised kW is delivered at rated voltage.

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

Safety Features

A differential pressure switch is interlocked with the load application controls to prevent load from being supplied if cooling air is not present.

An overtemperature switch is provided to sense the load bank exhaust. The switch is interlocked with the load application controls to disable load from being supplied if an over-temperature condition is present.

The fan motor is protected with fuses and overloads.

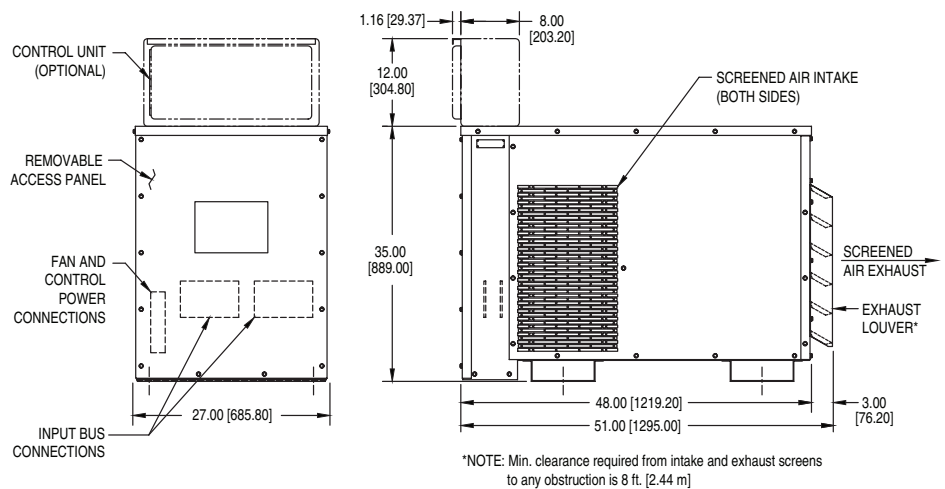
Major fault protection is provided by branch circuit fuse protection. Fuse protection is provided on all load steps.

The exterior of the load bank has appropriate warning and caution statements on access panels.

Internal access is restricted by bolt on exterior panels.

The air intake on the 4100 is designed to prevent objects greater than 0.50" diameter from being ingested into the unit.

Horizontal air discharge is provided and exhaust air is directed downward away from personnel.



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

Ambient Temperature

The 4100 load bank is designed for continuous duty cycle with no limitations. The ambient temperatures range is -20°F to 120°F (-28°C to 50°C).

Mounting

The 4100 is designed for outdoor installation on a concrete pad or structural base.

Power Terminals and Cable Entry

The power terminals are located behind a removable, bolt on access panel. The 4100 has a recommended conduit entry area underneath the power terminal assembly to facilitate load cable installation.

Optional Accessories

- Control Power Transformer
- NEMA 4 Type Control Panel Enclosure
- Automatic Load Control
- Digital Metering with Data Logging
- SIGMA 2 Digital Controls
- Remote I/O Control
- Pilot Relay Control
- PLC Control
- Arctic Rating (low temperature)

Documentation - Operating Manual

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

Sections include: Safety, Installation, Operation, Maintenance, and Troubleshooting.

Testing and Standards

Avtron load banks comply with NEMA, NEC, and ANSI standards. Quality control system is certified to ISO9001 standards.

Weight and Dimensions

Dimensions (approx. in/mm)			Weight (approx. lb/kg)
Length	Width	Height	
48/1219	27/685	35/889	500/227