



Model 5900 shown mounted on trailer with cable reels. (Trailer and cable reels are not included and are sold separately, see Add-on Options.)

14 cams per phase and 4 grounds will be provided. (Correct number of cams are not shown.)



Control Enclosure with SIGMA 2 interface panel and HMI screen.

## LOAD BANK RATINGS

### Standard capacity ratings

- 3000 kW

Standard load step resolution of 5 kW.  
Standard three phase voltage ratings for 3000 kW

- 480-60Hz

### Blower Motor Control

The blowers are factory wired to the main load bus. Provisions for an external power source are also provided.

An integral 120V, 1 Phase, 60 Hz control power transformer is provided for control operation.

### Cooling System

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.

## TRAILER READY LOAD BANK

| Capacity (kW) | Load Step (kW) | Voltage Range (V) | Item Number | Catalog Number        |
|---------------|----------------|-------------------|-------------|-----------------------|
| 3000          | 5              | 480               | 1437814     | 59003000HAB1B30Z, R6A |

## Accessories\*

| Item                                          | Description                                                                                                                                                                                                                                              | Item Number |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| SIGMA 2 Hand-Held & Interconnection Cable Kit | This kit includes a SIGMA 2 Hand-Held and 10M Control Interconnection Cable. The hand-held provides control and monitoring of the load bank connected to load bank via the 10M interconnection cable through the SIGMA interface panel on the load bank. | 1171503     |

\*Accessories are optional and may ship separately with longer lead time.

## Add-on Options\*\*

Discuss with sales representative to assist in specifying the options you may need.

| Item                            | Description                                                                                                                                                                                               | Option Code |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Trailer and Trailer Accessories | Load Bank can be mounted onto a Heavy-Duty, Dual-Axle, DOT Road Legal Trailer. This accessory code also includes: manual or electric load cable reels, cable security reel covers, storage box, and more. | R20(A-F)    |

\*\*Options may ship separately with longer lead time.

The Avtron Model 5900 are resistive, AC trailer ready load banks designed for operation outdoors at 3000 kW of resistive load.

## Operator Controls

The standard load control for the 5900 is a local manual 19" rack mount panel. Controls include: SIGMA 2 Digital Control System. Base platform includes control module and interface panel to connect either to PC and Hand-Held Control. This item also includes a 10" HMI screen with PC Basic software installed, as seen in photo above, left.

## Construction

The 5900 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.

Intake and exhaust louvers open and close with a simple swing handle and lock securely in open and closed positions with a locking pin. The louvers prevent debris from entering the load bank while in transit or storage.

All exterior fasteners are stainless steel. The main input bus, load step relays, fuses, and blower/control relays are located in the main enclosure.

## Load Connections

Quick connect cable receptacles are securely mounted to the cool air intake side of the load bank.

## Finish

The 5900 has a high quality baked polyester powder coated finish with a film thickness of 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 5900 Specifications

## Resistor Elements

Avtronload 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 5900 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

Differential pressure switches are interlocked with the load application controls to prevent load from being supplied if cooling air is not present.

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

The fan motors are protected with fuses and overloads.

The adjustable louver design is a self-contained solution with the intake and exhaust louvers opening in less than 10 seconds.

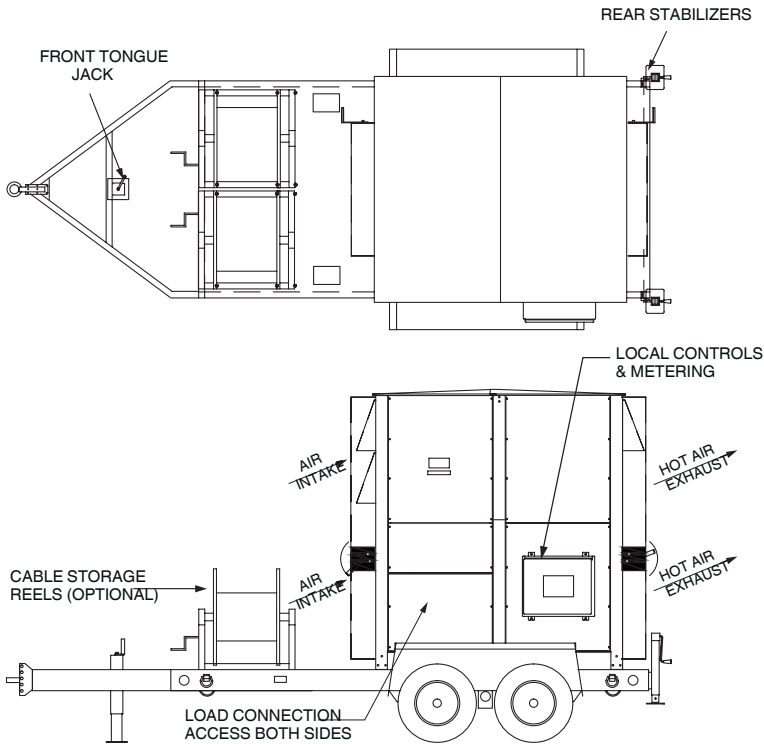
Major fault protection is provided by branch circuit fuse protection. Fuse protection is provided on all load steps.

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 5900 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 upward away from personnel.



Specifications subject to change without notice.

## Ambient Temperature

The 5900 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).

## Optional Trailer

If the trailer option is selected, the 5900 will be factory mounted and balanced on a DOT and ICC legal trailer. Electric brakes, stabilizer jacks and lunette eyes are provided as standard.

## Testing and Standards

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

## Options and Accessories

- SIGMA 2 Hand-Held
- Cable Reels (Manual or Electric)
- Cable Reel Security Cover(s)
- Lockable Storage Box
- Spare Tire
- Solar Battery Charger
- Hydraulic Brakes
- 2 5/16 Ball Hitch (3" Pintle Standard)

## Documentation - Operating Manual

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

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

## Weight and Dimensions

| Load Bank System<br>Dimensions (approx. in/mm) |            |              | Weight<br>(approx.<br>lb/kg) |
|------------------------------------------------|------------|--------------|------------------------------|
| Length                                         | Width      | Height       |                              |
| *                                              | 96/<br>243 | 122/<br>3099 | *                            |

\*NOTE: Length & Weight are dependent on available option selection.