



LOAD BANKS

SALES, SERVICE
AND RENTAL SOLUTIONS.

GULF INCON INTERNATIONAL LLC

has more than 18 years' experience in supply, service, calibration and onsite jobs for hydraulic and instrumentation products.

Our comprehensive product range and on-site service teams support our Middle East customers. With offices and workshop facilities in Dubai, Abu Dhabi, Qatar and Saudi Arabia we cater around 40 MW of load bank requirements in the region. We are the biggest in the region with large capacity of rack mounted load banks and change over panel for internal and uptime tests in the Data centers. Certified by Bureau Veritas ISO 9001-2015 we work with customers to plan and execute the load testing requirement in a most economical and efficient way. Our aim is to maximize safety and improve operational efficiency by supplying right products and services that provide high quality supply and service jobs.

Our Resistive or Combined load banks can test any system from 1kW to Maximum at low or medium voltage, AC or DC.

OUR EXPERTISE

- To set up, commission, verify and maintain emergency power systems
- Long term tests – heat runs
- Transient response tests – block loading
- Battery capacity testing
- Site Load Correction (SLC)
- Bus way testing (Busbar raiser)
- Data center HVAC system testing
- Routine maintenance



The best way to replicate, prove and verify the real life demands of emergency power.

HOW WE CLASSIFY LOAD BANKS

Resistive

Radiator mounted

Small and light-weight portable - for indoor use

Heavy-duty, moveable or permanently installed - for outdoor use

Rack Mounted

Containerized

Combined

Heavy-duty, moveable or permanently installed

Containerized

MV

Heavy-duty, permanently installed

Containerised

DC

Small and light-weight portable



TYPES OF SUPPLY LOAD BANK TEST

AC

UPTO 690V

Resistive – allows full load engine testing

Reactive (Inductive or Capacitive) – not generally used separately without a resistive load bank

Combined (Resistive, Inductive and/or Capacitive) – allows full engine load and alternator testing at full rated current

MV

FROM 3.3kV UPTO 33kV

Directly connected

Via separate stepdown transformer

DC

UPTO 600V

Battery testing, Rectifier

DC UPS & DC Generator

Ground Power Unit testing (GPU)

AC GENERATOR LOAD TEST

Generator load bank testing refers to a process to assess a generator's capabilities, verifying all genset components are in optimal working condition under different loads. As it is, standby and emergency generators are not always run on a regular basis, so it is important to run tests to make sure they can run your operations or facility at their full kilowatt ratings.

- The aim of load bank testing is make sure your generator maintains the proper pressure levels and temperature while it also produces optimal horsepower needed for your operations or facility.
- Ensure back-up power supply will work in the event of a power shortage.
- Commission and verify the name plate power rating.
- Regular load bank maintenance will keep the generator in optimal operating condition.
- Load banks will identify any potential back-up power issues that may lead to power outage.

BUS TRACKS TEST

- Ensure temperature rise of the bus bars remain within limit with specific electrical loads.
- Validate the power tap offs and feed tracks.



UPS SYSTEMS TESTING

Uninterruptable Power Supply system's consisting of a generating set combined with a set of batteries are a common feature of data centers and other installations where maintaining a constant power supply is critical. In the event of a power failure the batteries provide an immediate source of power whilst the generator is automatically started, synchronized to the correct frequency and put online.

Regular testing of the batteries, generator and its automatic control gear is extremely important, but testing using the site load could put critical systems at risk and may not provide sufficient load for a complete test. Load banks provide an ideal solution because they will allow the operation of the UPS to be fully tested without posing any risk to the site load.



- All the components of the system will function correctly together and perform as intended when required.
- Fully loading the power support system stresses all components.
- It is clearly preferable to identify potential weaknesses under controlled conditions rather than to wait until the system is supporting a critical load.
- Load bank testing ascertains the performance of the UPS, and of the entire electrical supply infrastructure including cabling, switchgear, generator and fuses.
- Test and maintain UPS's as the part of a maintenance schedule.
- A load bank can also be used to discharge batteries as an effective, accurate and relatively low-cost method of determining battery autonomy.

POWER DISTRIBUTION UNIT (PDU) TEST

- Commission PDU's to ensure correct operation for real world conditions.
- Ensure power distribution efficiency and uptime.
- Validate the PDU bus bar system and monitor temperature changes.

BATTERY DISCHARGE TEST



Discharge testing is the only test method that provides a comprehensive insight into battery capacity, and is therefore an essential part of vigorous battery maintenance programmes. Load testing is used to verify that the battery can deliver its specified power when needed.

- Check the initial battery performances.
- Avoid deterioration of battery systems due to early detection of defective cells.
- Guarantee smooth operation of back-up systems during emergencies.
- Improve overall health and life of systems.

DATA CENTRE HVAC TESTING

Heating, Ventilation and Air Conditioning (HVAC) systems are vital in providing cooling to server racks by maintaining a constant cool temperature when the servers are working at full capacity. Load banks are a cost effective method of simulating heat produced by the servers. Operators can analyse how the HVAC system copes with the temperature rise, without risking the vastly expensive server racks overheating.

Rack-mounted load banks are used to precisely simulate the operational conditions of production servers and validate the hot/cold aisle cooling design before the first server is installed. Traditional load bank solutions create unrealistic airflow and hotspots that could produce inaccurate results. By generating the heat and power consumption that servers would create, data center managers are able to complete validation tests with confidence.

- Verify and validate efficient power distribution to all server components.
- Simulate server heat production to verify data center HVAC systems.
- Ensure data center power and temperature conditions are optimal before installing servers.



SITE LOAD CORRECTION (SLC)

Maintain predetermined load on a generator to alleviate the effects of light loading. The Site Load Correction (SLC) will automatically maintain a required level of loading on the generator. The system includes a 3 Phase power transducer which is detecting the site load. When the site load decreases the load provided by the load bank will increase.

- Maintain gen-set load levels to prevent wet stacking.
- Pre-set a number of variables of how and when the load bank will apply and reject load.
- Configure load correction points locally at the load bank if required.
- The load bank can be controlled normally for other load test requirements when site load correction is not in operation.

INSPECTION, REPAIR AND CALIBRATION



Regular inspection and calibration of all measurement instruments is essential to ensure the best accuracy. Gulfincon offers high quality calibration and repair services for load banks. We are able to fulfill all original requirements and the strictest quality standards.

- Testing and commissioning of load banks.
- Repairing and Maintenance of load banks.
- Calibration of load banks.



DUBAI

Gulf Incon International, Al Qusais Industrial Area 3
PO Box 49970. Dubai. UAE

T: +971 4 2588155

F: +971 4 2588166

E: enquiries@gulfinconme.com

ABU DHABI

Al Yasat Commercial and Management Services
Block C, C-5 Plot 102, MW5, Mussafah,
Abu Dhabi UAE

T: +971 2 650 4373

E: info@alyasat.ae