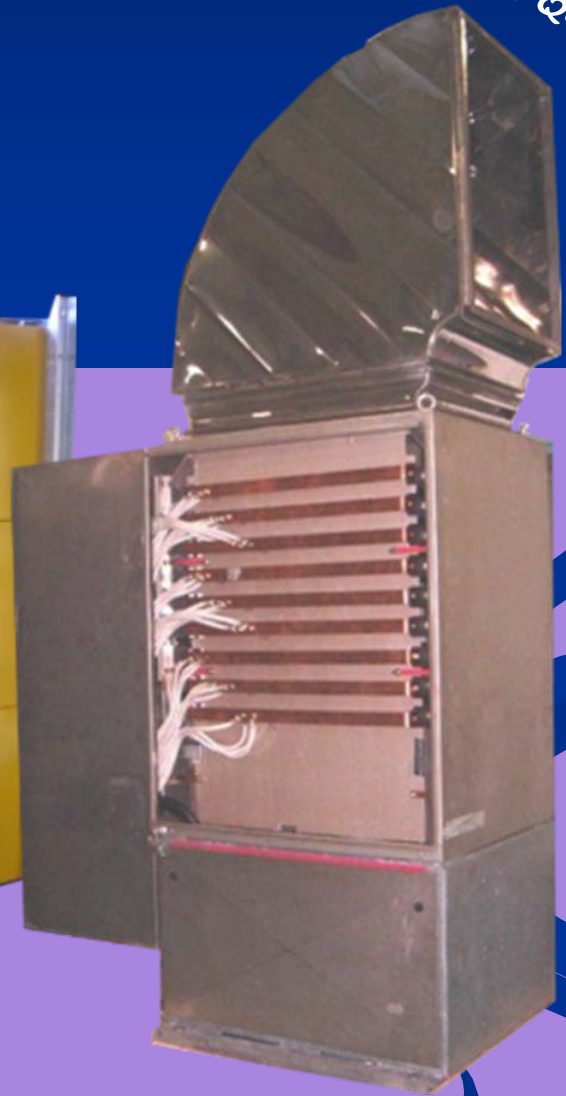


*The Global Quality*

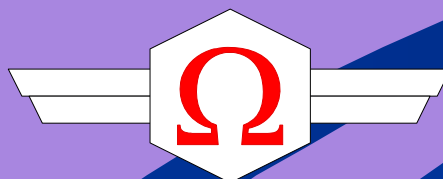
*LOAD Banks*

*IMPROVED DESIGN*

*APPROVED QUALITY*



*HIGH TECHNICAL PERFORMANCE*



*M.S. RESISTANCES*  
*MICROELETTRICA SCIENTIFICA*  
*Resistors Builder Since 1952*

A **load bank** is a device which develops an electrical load, applies the load to an electrical power source and converts or dissipates the resultant power output of the source.

The purpose of a load bank is to accurately mimic the operational or “real” load that a power source will see in actual application.

Consequently, a load bank can be further defined as a self-contained, unitized, systematic device that includes load elements with control and accessory devices required for operation.

Whereas the “real” load is served by the power source and uses the energy output of the source for some productive purpose, the load bank serves the power source, using its energy output to test, support or protect the power source.

### **Applications**

Load banks are used in a variety of applications, including:

Factory testing of engine diesel generator sets, To reduce wet stacking problems, Periodic exercising of stand-by engine generator sets, UPS system testing, Battery system testing, Load optimization in prime power applications, Factory testing of turbines

### **Types of load bank**

The three most common types of load banks are resistive load banks, reactive load banks, and capacitive load banks.

#### **Resistive Load bank**

A resistive load bank, the most common type, provides equivalent loading of both generator and prime mover.

The “load” of a resistive load bank is created by the conversion of electrical energy to heat by power resistors. This heat must be dissipated from the load bank, either by air or by water, by forced means or convection.

In a testing system, a resistive load simulates real-life resistive loads, and heating loads as well as the resistive or unity power factor component of magnetic (motors, transformers) loads.

#### **Reactive load bank**

A “reactive” load includes inductive (lagging power factor) and/or capacitive (leading power factor) loads.

Inductive loads are used to simulate real-life mixed commercial loads consisting of lighting, heating, motors, transformers, etc. With a resistive/inductive load bank, full power system testing is possible, given the impact of reactive currents on generator/voltage regulator performance as well as effects on conductors and switchgear.

#### **Capacitive load bank**

A capacitive load bank is similar to a reactive load bank in rating and purpose, except leading power factor loads are created. These loads simulate certain electronic or non-linear loads typical of telecommunications, computer or UPS industries.

