



- A Schneider Electric and Siemens AG
authorized factory



Deyang Rata Technology Co.,Ltd

-Validate your electrical load test
www.cnloadbank.com/www.rata.top

Table of Contents

- About us.....2
- Application 1: BESS energy consumption.....3
 - Containerized LV resistive load bank.....3
 - Optional structures available.....4
- Application 2: Power Grid Balancing.....5
 - Containerized MV resistive load bank.....5
- Application 3: Data center server simulation.....7
 - Rack-mounted resistive load bank7
 - Canopy design LV AC resistive load bank(Schneider authorized series)..8
 - Special design: Portable indoor 100kw AC resistive load bank.....9
 - Canopy design LV AC resistive load bank(Si-board series).....10
 - Liquid cooled AC load bank..... 11
 - Rack mounted liquid cooled AC load bank.....12
- Application 4: Generator load test..... 13
 - AC LV resistive reactive load bank(Si-board series)..... 13
- Accessories available.....15
- Smart load testing platform.....16
- Strategic supply chain globally.....17

About us

2013

Found
time

8500+

Factory land
occupation

260+

Global
customer

We specialize in manufacturing
load bank equipment since 2013.

60+

Utility model
patent

20+

Senior
engineer

Who We Are ?

Deyang Rata Technology Co., Ltd., founded in 2013 with a registered capital of 20 million, stands as a one-stop solution provider for load bank & power supply systems rooted in Jinshan Industrial Park, Luojiang.

As the leading supplier of load banks, we specialize in a comprehensive range of solutions, spanning from data center to marine & offshore platforms. Our offerings include resistive, inductive, RLC, rack mounted , liquid cooled and others, tailored to meet the demands of virtually different application.



Visit us: www.cnloadbank.com / www.rata.top

● Application 1: BESS energy consumption.



Before shipment, the battery system (cells, racks, PCS/inverter, BMS) must be tested under load.

Load banks simulate **real-world power output**.

- Discharge capacity (kWh/kW rating)
- Inverter performance (efficiency, THD, stability)
- BMS response under different load profiles
- Resistive or RLC load banks are typically used for this stage.

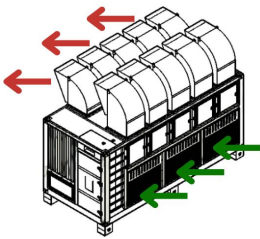
Containerized LV resistive load bank

Power ranges	2000kW - 5000kW
Testing voltages	3phases 380/400/ 415/480/690/800/1000Vac
Structure	Containerized
IP class	IP54
Models	SILV****L***
Control	Local HMI control panel + PC remote control
Control voltage	380/400/415/480/690Vac customized

Containerized LV resistive load bank			
Model	Power capacity	Dimension(L*W*H)mm	Weight
SILV1500L	1500kW	2500*2500*2600	4000KGS
SILV2000L	2000kW	3500*2500*2600	5,000KGS
SILV2500L	2500kW	4500*2500*2600	7,000KGS
SILV3000L	3000kW	5000*2500*2600	9,000KGS
SILV3500L	3500kW	5500*2500*2600	10,000KGS
SILV4000L	4000kW	6000*2500*2600	11,000KGS
SILV4500L	4500kW	6500*2500*2600	12,000KGS
SILV5000L	5000kW	7000*2500*2600	13,000KGS
SILV6000L	6000kW	9000*2500*2600	15,000KGS

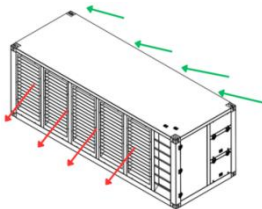
Optional structures available

Table 1



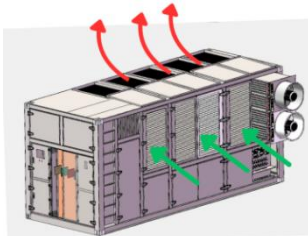
Structure(1)

- Container equipped with wind-chimney.
- Air direction: **Vertical**
- Bottom sided cold air in-take .Top hot air exhaust.
- IP 54 outdoor application.



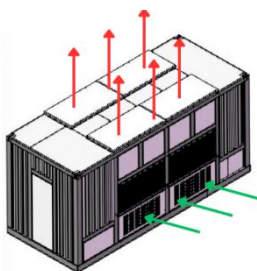
Structure(2)

- Sided cold air in-take, sided hot air exhaust.
- Air direction: **Horizontal**
- IP 54 outdoor application.



Structure(3)

- Bottom sided cold air in-take,top hot air exhaust.
- Air direction: **Horizontal.**
- IP 54 outdoor application.



Structure(4)

- Container equipped with wind-chimney.
- Air direction: **Vertical.**
- Bottom sided cold air in-take .top hot air exhaust.
- IP 23 indoor application.

● Application 2: Power Grid Balancing



- The grid must maintain a stable frequency (50/60 Hz) and voltage.
- During sudden drops in demand or oversupply (e.g., renewables producing too much power), load banks absorb the excess energy.
- This prevents overvoltage and frequency rise, protecting sensitive equipment.
- Solar and wind generation are intermittent and cause fluctuations.
- Load banks help balance the mismatch between **generation and consumption** by acting as a controllable “sink” for surplus power.
- They smooth out variations, supporting **grid inertia** and stability.

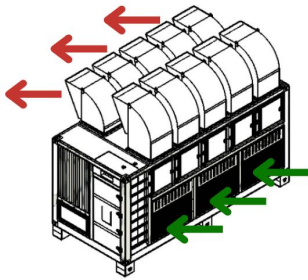
Containerized MV resistive load bank

Power ranges	1500kW - 5000kW
Testing voltages	3phases 10/11/20 kV
Structure	Containerized
IP class	IP54
Models	SIMV***L***
Control	Local HMI control panel + PC remote control
Control voltage	380/400/415/480/690Vac customizable

Containerized MV resistive load bank			
Model	Power capacity	Dimension(L*W*H)mm	Weight
SIMV1500L	1500kW	3000*2500*2900	5000KGS
SIMV2000L	2000kW	4500*2500*2900	7500KGS
SIMV2500L	2500kW	6000*2500*2900	9,000KGS
SIMV3000L	3000kW	7000*2500*2900	10,000KGS
SIMV3500L	3500kW	8000*2500*2900	13,000KGS
SIMV4000L	4000kW	9000*2500*2900	14,000KGS
SIMV4500L	4500kW	10000*2500*2900	15,000KGS
SIMV5000L	5000kW	12000*2500*2900	16,000KGS

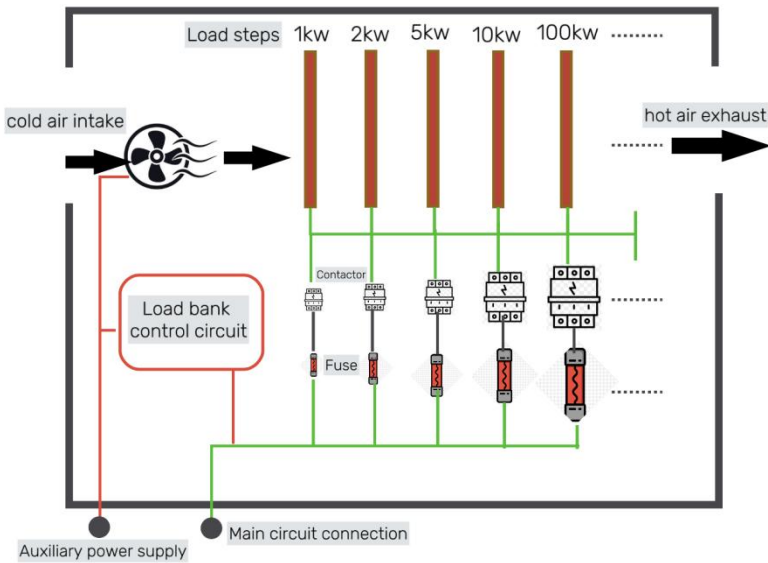
Table 2

Optional structures available



Structure(1)

- Container equipped with wind-chimney.
- Air direction: **Vertical**
- Bottom sided cold air in-take .Top hot air exhaust.
- IP 54 outdoor application.



How does the resistive load bank work ?



● Application 3: Data center server simulation



Rack load banks in data centers are typically used as **test tools** during commissioning, maintenance, and optimization phases. They simulate the real power consumption of IT equipment (servers, storage, networking devices) without requiring the actual hardware to be installed.

Rack-mounted resistive load bank

Power ranges	3 - 21kW.
Testing voltages	Single phase 110/220/230Vac or 380/400/415/480Vac.
Control method	Circuit breaker.
Power cables	C19 / C20/ C21 3 meters or waterproof quick connector.
Protection	85°C alarm, 90°C trip off.



Rack-mounted resistive load bank			
Model	Power capacity	Height	Weight(kgs)
RM3	3kW	4U	22
RM5	5kW	5U	26
RM6	6kW	6U	30
RM8	8kW	7U	38
RM9	9kW	8U	33
RM10	10kW	9U	40
RM12	12kW	12U	45
RM15	15kW	14U	50
RM18	18kW	19U	60
RM21	21kW	20U	54

Table 3

Canopy design LV AC resistive load bank(Schneider authorized series)

Power ranges	100 - 675 kW.
Testing voltages	3 phases 380/400/415/480/690Vac power lock connection
Control method	Local push buttons + remote PC control
Control voltage	3 phases 380/400/415/480/690Vac quick connector
Protection	Low air pressure cut out
	Fan overload protection
	Thermal emergency cut out
	Emergency stop



Schneider branded components

- Digital meter
- Contactors
- Circuit breakers
- Relays



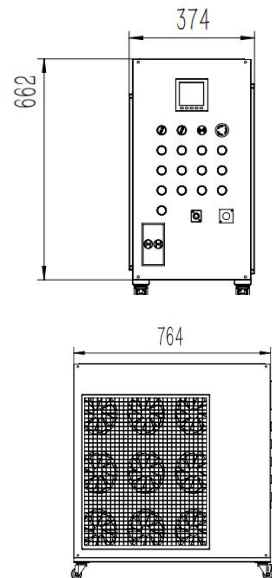
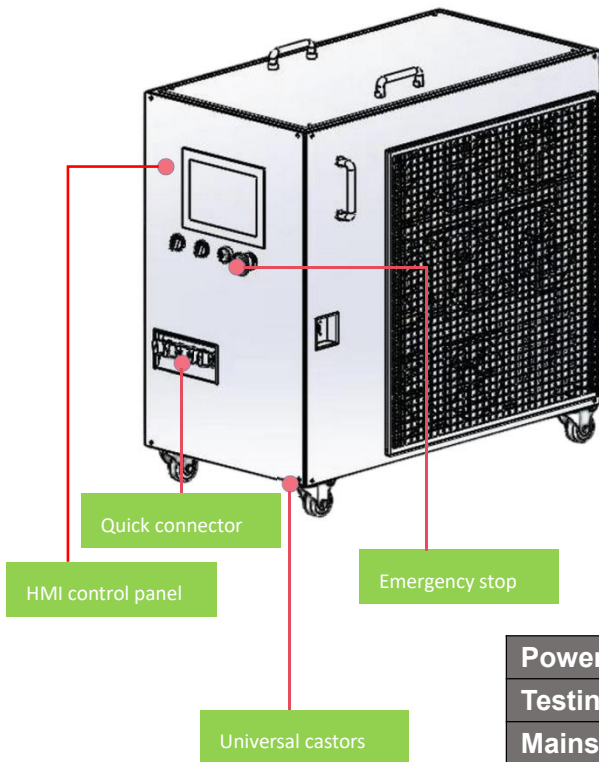
Canopy design AC resistive load bank(Schneider authorized series)			
Model	Power capacity	Dimension(L*W*H)mm	Weight(kgs)
A100L	100kW	940*790*640	220
A200L	200kW	950*870*856	400
A265L	265kW	950*870*856	520
A400L	400kW	1350*1157*1150	800
A500L	500kW	1350*1157*1150	950
A600L	600kW	1000*1675*1437	1200
A675L	675kW	1000*1675*1437	1350

Table 4



Special design: Portable indoor 100kW AC resistive load bank

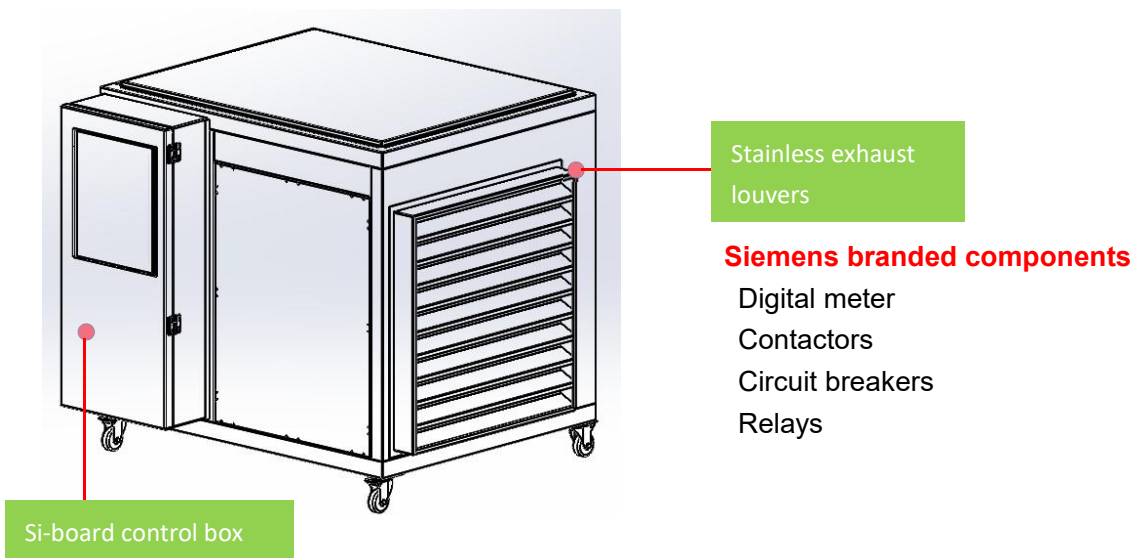
A 100 kW portable load bank is the workhorse for data center testing because it provides the right balance of power, portability, and modularity. It can validate UPS, generators, PDUs, and cooling systems, making it the most common and versatile load bank size in the industry.



Power	100 kW
Testing voltage	400Vac/ 480Vac
Mains connection	Quick connector
Dimensions(W*D*H)	375*765*662
Weight	80 KGS

Canopy design LV AC resistive load bank(Si-board series)

Power ranges	100 - 1500 kW.
Testing voltages	3 phases 380/400/415/480/690Vac power lock connection
Control method	Local push buttons + remote PC control
IP Grade	IP54
Control voltage	3 phases 380/400/415/480/690Vac quick connector
Protection	Low air pressure cut out
	Fan overload protection
	Thermal emergency cut out
	Emergency stop

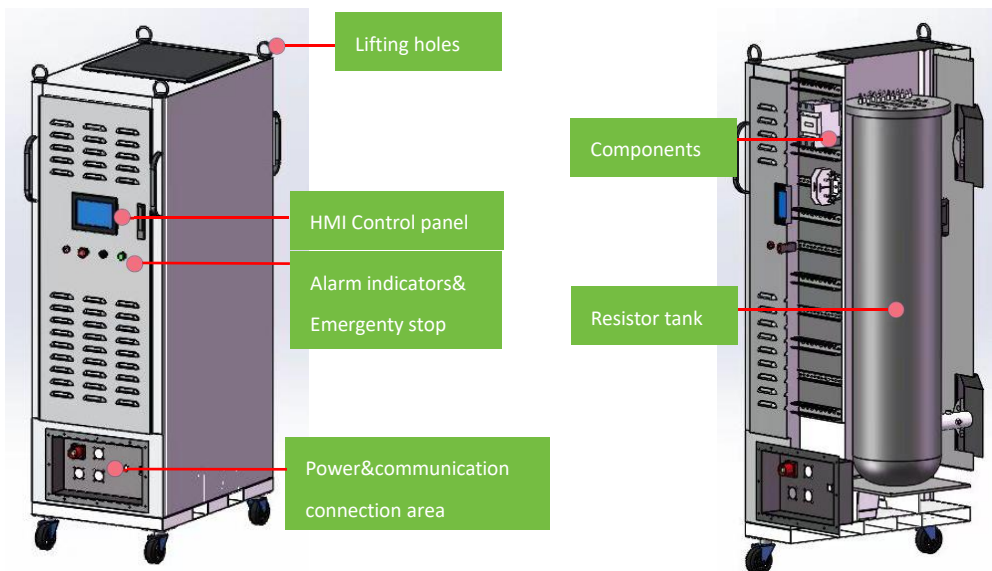


Canopy design AC resistive load bank(Schneider authorized series)			
Model	Power capacity	Dimension(L*W*H)mm	Weight(kgs)
SILV-100L	100kW	940*790*640	180
SILV-200L	200kW	1200*815*718	350
SILV-400L	400kW	1235*965*890	600
SILV-500L	500kW	1400*1065*950	700
SILV-600L	600kW	1410*1100*1020	900
SILV-800L	800kW	1425*1300*1180	1000
SILV-1000L	1000kW	1690*1000*1640	1450
SILV-1200L	1200kW	1720*1050*1680	1800
SILV-1400L	1400kW	1400*1730*1750	2200

Table 5

Liquid cooled AC load bank

Power ranges	100 - 600 kW.
Testing voltages	3 phases 380/400/415/480/690Vac power lock connection
Control method	Local touch screen + remote PC control
Enclosure IP Grade	IP23
Control voltage	3 phases 380/400/415/480/690Vac quick connector
Sensor	Liquid flow volume sendor
	Liquid pressure sensor
	In-let / out-let temp. sensor



Liquid cooled resistive load bank			
Model	Power capacity	Dimension(L*W*H)mm	Weight(Kgs)
Hydro100L	100kW	1033*800*1400	350
Hydro125L	125kW	475*680*1755	410
Hydro150L	150kW	505*720*1755	470
Hydro200L	200kW	555*780*1755	620
Hydro250L	250kW	1200*1000*1450	750
Hydro400L	400kW	750*930*1950	920
Hydro500L	500kW	1550*1204*1592	1200
Hydro600L	600kW	910*1100*1950	1350

Table 6

Rack mounted liquid cooled AC load bank

Power ranges	30-50kW.
Testing voltages	3 phases 380/400/415/480/690Vac power lock connection
Control method	Circuit breaker. (Optional touch screen with PLC)
Enclosure IP Grade	IP23
Flange connector	DN25
Display	digital meter(V / A / KW / Hz.)
Control voltage	3 phases 380/400/415/480/690Vac quick connector
Sensor	Liquid flow volume sendor(Optional)
	Liquid pressure sensor (Optional)
	In-let / out-let temp. sensor



Liquid cooled resistive load bank			
Model	Power capacity	Dimension(L*W*H)mm	Weight(Kgs)
HydroRM30	30kW	5U(448*716*223)	40
HydroRM35	35kW	6U(448*716*267)	45
HydroRM40	40kW	7U(448*716*311)	50
HydroRM45	45kW	8U(448*716*355)	55
HydroRM50	50kW	9U(448*716*400)	60
HydroRM55	55kW	10U(448*716*445)	70
HydroRM60	60kW	11U(448*716*490)	75

Table 7

● Application 4: Generator load test



Apparent Power ranges	125-6250kVA
Voltage	380/400/415/480/690Vac
Control method	Local touch screen + remote PC control
Control voltage	3phases 380/400/415/480/690Vac Terminal block

Role of Resistive-Reactive Load Banks in Generator Testing

- Simulating Real Loads
- Verifying Generator Capacity
- Power Factor Testing
- Stability & Transient Response

AC LV resistive reactive load bank (Si-board series)

Resistive reactive load bank pf. 0.8				
Model	kW	KVA	Dimension(L*W*H)mm	Weight (Kgs)
KVA125	100	125	1500*1500*1500	600
KVA250	200	250	1700*1600*1500	1200
KVA500	400	500	1800*1600*1500	2000
KVA625	500	625	2000*2000*2000	3200
KVA750	600	750	2300*1800*1800	4500
KVA1000	800	1000	2500*2000*1800	5300
KVA1250	1000	1250	3000*2438*2591	7000
KVA1500	1200	1500	3500*2438*2591	8500
KVA1875	1500	1875	4000*2438*2591	9500
KVA2500	2000	2500	5000*2438*2591	12000
KVA3125	2500	3125	6000*2438*2591	13500
KVA3750	3000	3750	6500*2438*2591	14500
KVA4375	3500	4375	7000*2438*2591	16000
KVA5000	4000	5000	7500*2438*2591	17500
KVA6250	5000	6250	8000*2438*2591	19000

Table 8



Rata Self-developed reactive inductor

Reactive load element is critical in resistive reactive load bank.

- $\leq 60^{\circ}\text{C}$ temperature rise
- 2000Vac voltage tolerance @1minute
- Low "Hum sound" noise
- High accuracy
- Maximum unit inductor power 150kVar

Main parts



Finned tubular resistors are high-power wirewound resistors designed for applications requiring efficient heat dissipation and compact size.

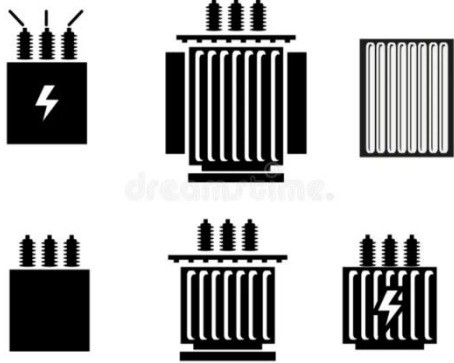
- Working temperature: 200°C – 450°C
- 2.5kVac insulation voltage
- Typically made of Nickel-Chromium (NiCr) or Iron-Chromium-Aluminum (FeCrAl) alloy
- Outer sheath is made of stainless steel, with pressed fins to maximize heat dissipation surface area.



Three-phase axial flow fans, with power ratings ranging from 2.5 kW to 4 kW, are engineered to deliver large air volumes up to 30,000 m³/h

- Three-phase motor drive: Ensures stable, efficient, and continuous operation.
- Redundant air volume min 80m³/h to cool down 1kW resistors.
- Compact axial design: Facilitates direct airflow across resistor assemblies.
- High reliability: Suitable for continuous duty in demanding environments.

● Accessories available



Step down transformer

Our load banks are typically designed for low-voltage **400Vac** input, which can be directly connected to conventional power grids or generator outputs. In high-voltage applications (such as **6kV, 10kV, or higher voltage levels**), the load bank cannot be connected directly to the high-voltage system. In such cases, a step-down transformer is required to convert the high voltage into 400Vac low voltage before feeding it into the load bank. This configuration ensures safe and reliable operation while meeting the testing requirements of high-voltage power systems.

Power cables



In addition to standard load banks, we can also provide **cable solutions tailored** to customer requirements. The cable specifications, lengths, and connector types can be customized according to the testing environment and electrical system conditions. By supplying load banks together with matching cables, we ensure greater convenience and reliability in field connections, delivering a more complete and efficient testing experience for our customers.



Trailer

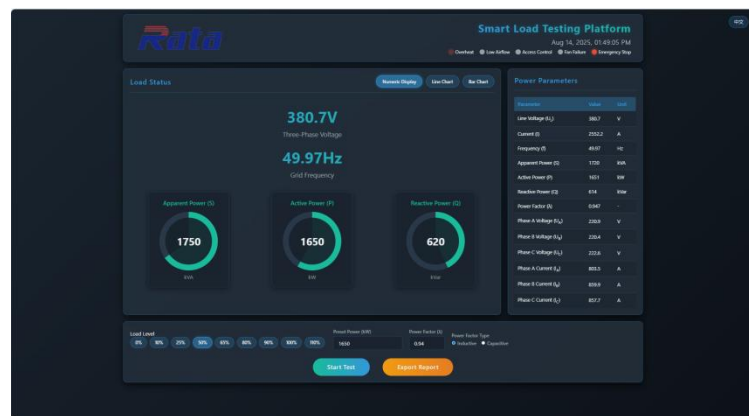
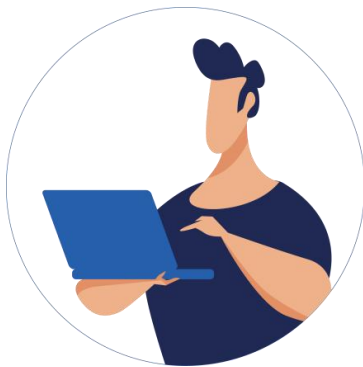
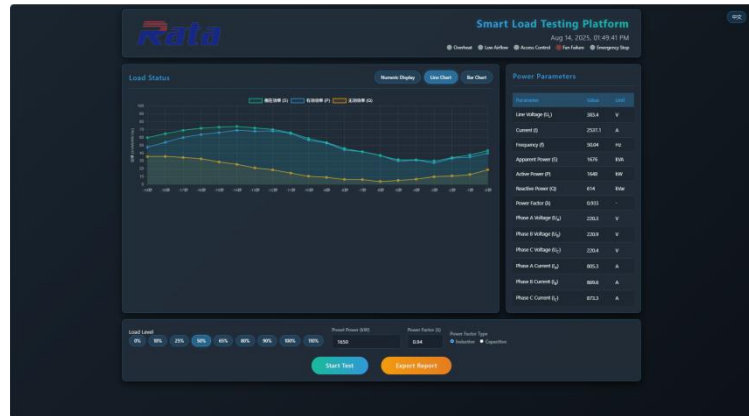
For customers requiring mobility or outdoor testing, we offer **trailer-mounted load bank solutions**, which integrate the load bank with a trailer system. This design provides flexible transportation, rapid deployment, and enhanced protection, making it ideal for temporary testing, emergency drills, and multi-site applications.

Hand-held device



The **hand-held controller** enables start/stop, power adjustment, status monitoring, and emergency shutdown of the load bank, offering simple operation with enhanced safety and flexibility.

● Smart load testing platform



● Load Control

- 1) Manual and automatic switching of load steps (resistive, reactive, or combined).
- 2) Percentage-based loading (e.g., apply 25%, 50%, 75%, 100%).
- 3) Ability to create custom load profiles (ramp-up, step changes, cyclic load, etc.).

● Cooling System Control

● Protection & Safety

- 1) Over-temperature alarm & automatic load disconnection.
- 2) Emergency stop integration.
- 3) Voltage, current, frequency, and power limit protections.
- 4) Real-time display of V, A, kW, kVAR, kVA, PF, Hz./ Data logging for trend analysis. /Multiple phase measurement (Phase A/B/C + Neutral).

● Visualization

- 1) Curves & charts: load profile, voltage
- 2) frequency stability, temperature rise.
- 3) Dashboard with gauges/meters for live values.
- 4) Export graphs for reports (Excel, PDF, CSV).

● Strategic supply chain globally



- Powered by Global Partnerships
- World-Class Supply, Always On Time
- Strategic Alliances, Reliable Deliveries

- Global Brands Behind Every Solution
- Trusted Partners, Guaranteed Performance

Want to become RATA's exclusive local agent?

Please contact: 0086-13890270038
gongzhenhua@rata.top
Deyang Rata Techology Co.,Ltd
 Jinshan town-618508, Deyang, PRC.





Please contact: 0086-13890270038

gongzhenhua@rata.top

Deyang Rata Technology Co.,Ltd

Jinshan town-618508, Deyang, PRC.