

# LOAD BANK KPLB-2100



## KEYPOWER LOAD BANK:

- \* Frequency: 50/60 Hz;
- \* Voltage range: AC 110-690V;
- \* Duty: Continuous;
- \* Cooling system: Industrial grade axle fans;
- \* Discharged air direction: horizontal for 100 kw, vertical for larger models;
- \* Control power phase: Single-phase, two-wire for 500 kw and below; three-phase, four-wire for larger models.

## GENERAL SPECIFICATIONS

	Model	KPLB-2100
	Capacity	2100kW
	Type of load	Resistive
	Power factor	1
	Duty cycle	Continuous
	Cooling system	Industrial grade axial fan
	Cooling mode	Forced air-cooled
	Airflow	Vertical discharge
	Phase	Available at both single and three phase
	Rated testing voltage	3P3W 110 - 690V
	Rated frequency	50Hz / 60Hz
	Number of fans	6
	Control power input voltage	3P3W 220 - 480V



FREQUENCY



DRY TYPE



FORCED AIR COOLED



SOUNDPROOF

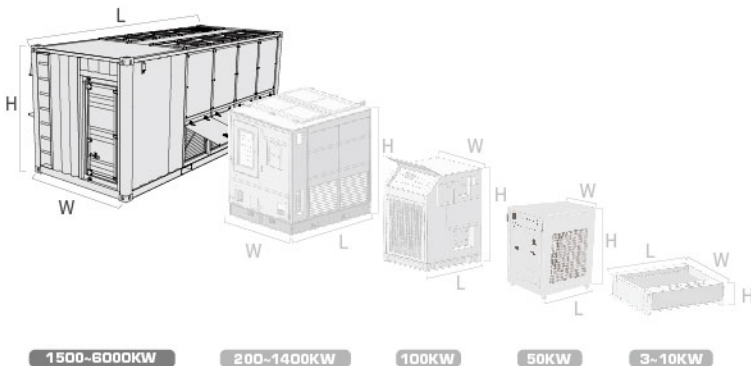


CERTIFICATION



ISO 9001

## Dimension and Weight



## DIMENSION

## KPLB-2100

	Length (L)	mm	6058
	Width (W)	mm	2438
	Height (H)	mm	2591
	Weight	kg	7500

KEYPOWER has the right to modify any feature without prior notice. Weights and dimensions based on standard products. Illustrations may include optional equipment. Technical data described in this catalogue correspond to the available information at the moment of printing. The illustrations and images are indicative and may not coincide in their entirety with the product. Industrial design under patent.

## Technical Specifications

PERFORMANCE PARAMETER	
Ambient Temperature	-10°C ~ +55°C
Relative Humidity	≤98% ventilated environment without explosive or corrosive dust
Altitude	≤3000m above sea level
Wire Connection	Socket / Terminal
Load Tolerance (each step)	±5%
Load Tolerance (overall)	±3%
Enclosure	ISO 20ft container
Parameter measuring accuracy grade	0.5
Noise level	91 dBA @ 1m
Enclosure protection class	IP 54
Forklift handling	No

CONTROL PANEL	
Control mode (Standard)	Local manual control
Control mode (Optional)	Intelligent / remote control
Remote control distance	≤100 m
Load step	10kW*4, 20kW*3, 50kW*2, 100kW*7, 200kW*6, (non-intelligent type) 10kW*13, 20kW*6, 50kW*7, 100kW*7, 200kW*4, (intelligent type)
Load bank protections	Fan failure alarm/Overload alarm/Overvoltage alarm/Overheating alarm/Low airflow alarm/Maintenance door open alarm/Control power failure/Fault reset
Multi functions display	voltage, current, load power, reactive power, apparent power, power factor, frequency etc.
One-step load/unload	Yes
Emergency stop	Yes
Phase sequence indicator	Yes

### Optional Items for Load Bank:



- Capacitive/Inductive/Resistive load bank with different power factor
- Intelligent control
- Laptop for remote control
- Generator tester
- Multi-voltage
- Water-proof cover for air outlet (200-1400KW)
- Air deflecting duct for containerized load bank
- Space heater
- Cable connector
- Galvanized sheet canopy
- Wheels for < 500KW load bank
- Trailer

RESISTOR FEATURES	
Material	Stainless steel
Cooling mode	Forced air cooling
Temperature resistance	500 ~ 600°C
Load Tolerance	±5%
Warranty	3 years with unlimited hours

### 304 STAINLESS STEEL RESISTORS



## Generator Tester Function

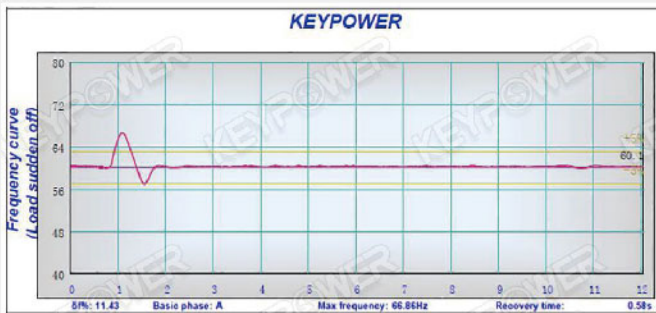
### GENERATOR TESTER



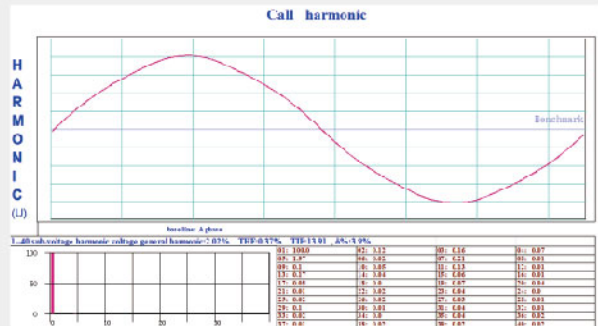
### TEST REPORT

Test report of generator set's steady performance									
Source: 0000000000		Model specification		Date of test: 2012-11-10		Test time: 07:30:33			
1. Set type	1. Voltage	2. Set type	3. Power factor	4. Set type	5. Power factor	6. Date of production	7. Date of production	8. Date of production	9. Date of production
Rated frequency	Rated current	Rated power	Rated voltage	Rated current	Rated power	Rated voltage	Rated current	Rated power	Rated voltage
Generator type	Generator type	Generator type	Generator type	Generator type	Generator type	Generator type	Generator type	Generator type	Generator type
2. Test of insulation resistance between enclosure and ground	3. Test of insulation resistance between phase and ground	4. Test of insulation resistance between phase and phase	5. Test of insulation resistance between phase and ground	6. Test of insulation resistance between phase and phase	7. Test of insulation resistance between phase and ground	8. Test of insulation resistance between phase and phase	9. Test of insulation resistance between phase and ground	10. Test of insulation resistance between phase and phase	11. Test of insulation resistance between phase and ground
Insulation resistance	Insulation resistance	Insulation resistance	Insulation resistance	Insulation resistance	Insulation resistance	Insulation resistance	Insulation resistance	Insulation resistance	Insulation resistance
3. Check error indicator equipment with condition of motor running	4. Check error indicator equipment with condition of motor running	5. Check error indicator equipment with condition of motor running	6. Check error indicator equipment with condition of motor running	7. Check error indicator equipment with condition of motor running	8. Check error indicator equipment with condition of motor running	9. Check error indicator equipment with condition of motor running	10. Check error indicator equipment with condition of motor running	11. Check error indicator equipment with condition of motor running	12. Check error indicator equipment with condition of motor running
4. Load test	5. Load test	6. Load test	7. Load test	8. Load test	9. Load test	10. Load test	11. Load test	12. Load test	13. Load test
Power (kW)	Power (kVA)	Power (kVA)	Power (kVA)	Power (kVA)	Power (kVA)	Power (kVA)	Power (kVA)	Power (kVA)	Power (kVA)
Current (A)	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)	Current (A)
Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)	Frequency (Hz)
Steady time	Steady time	Steady time	Steady time	Steady time	Steady time	Steady time	Steady time	Steady time	Steady time
Recovery time	Recovery time	Recovery time	Recovery time	Recovery time	Recovery time	Recovery time	Recovery time	Recovery time	Recovery time
Harmonic	Harmonic	Harmonic	Harmonic	Harmonic	Harmonic	Harmonic	Harmonic	Harmonic	Harmonic
THD	THD	THD	THD	THD	THD	THD	THD	THD	THD

### FREQUENCY AND VOLTAGE CURVES



### HARMONIC CURVE

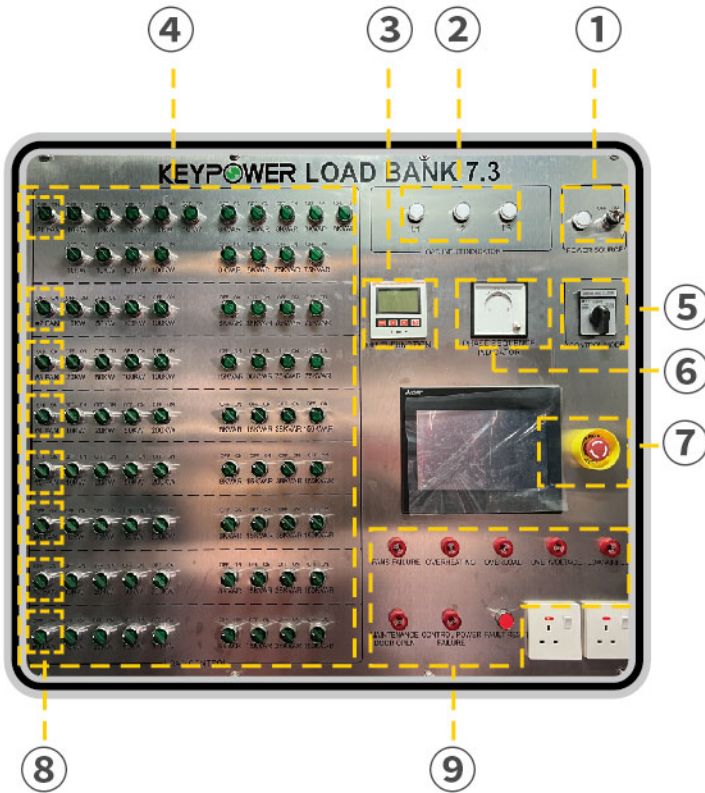


This generator tester can measure most electric parameters of a single-phase or three-phase AC generator. The standards it complied with are GB/T 2820-1997 and GB 2820-90. The signal frequency can be measured varies from 45 Hz to 65Hz. You can select one wiring mode from four modes – 1Φ2W, 3Φ3W, 3Φ4W and 3V3A. The following table shows the parameters: It's the best way to replicate, prove and verify the real-life demands on critical power systems.

MEASUREMENT MODE	PARAMETERS
Normal	Voltage, Current, Active Power, Reactive Power, Apparent Power, Power Factor, Frequency, Energy runtime, Imbalance degree of Voltage
Harmonic	Voltage & Current: 2~50th order and the THD (Total harmonic distortion)
Adjustment	In 100 seconds: Records the maximum & minimum value of Voltage & Frequency. Calculates the increase & decrease range of Voltage & Frequency and the percentage of adjustment.
Fluctuation	In 60 seconds: Records the maximum & minimum value of Voltage & Frequency. Calculates the NORMAL frequency rang, NORMAL voltage offset, voltage modulation, percentage of fluctuation and frequency.
Load	In 12 seconds: Records the minimum value of Voltage & Frequency. Records the maximum value of Current and the recovery time. Calculates the offset of Voltage & Frequency.
Unload	In 12 seconds: Records the maximum value of Voltage & Frequency. Record the minimum value of Current and the recovery time. Calculates the offset of Voltage & Frequency.
Wave Record	Records the real-time voltage waves by five optional modes. The recording time is between 5 seconds and 5 minutes by different modes.



## Control Panel



MANUAL CONTROL	FUNCTION
① Turn on / off power source	Tested power source input
② Load input indicator	Indicate U V W load input normal or not
③ Multi-function meter	Show testing parameters
④ Master load on / off	One step loading / unloading
⑤ Control mode selection	Choose control mode: Local manual control / Touch screen control / Remote control
⑥ Phase sequence indicator	Indicate phase sequence of tested power right or not
⑦ Emergency stop button	Emergency stop
⑧ Load Steps	Loading / unloading
⑨ Alarm	Load bank protection: Fan failure alarm / Overload alarm / Overvoltage alarm / Overheating alarm / Low airflow alarm / Maintenance door open alarm / Control power failure

In addition to all manual control functions, Intelligent/remote control also contains the following functions:

- Touch screen control/remote control
- Auto loading/unloading test
- Data setting

Intelligent control system with **Mitsubishi**<sup>®</sup> PLC



**KEYPOWER** Fuzhou GFF KEYPOWER Equipment Co., Ltd.

MANUAL	U-VOLTAGE	CURRENT	P/Q/S/POWER
U <sub>ab</sub>	0 V	0 A	0 KW COSφ 0.00
U <sub>bc</sub>	0 V	0 A	0 KVAR FPF 0.0 HZ
U <sub>ca</sub>	0 V	0 A	0 KVA ON LOAD 0 MIN

**AUTO** **AUTO**

RATED POWER: 1000 KW **CONFIRM**

LOAD SETTING: 0 KW, 250 KW, 500 KW, 750 KW, 1000 KW, 1100 KW

ON LOAD DURATION: 1 MIN, 5 MIN, 10 MIN, 15 MIN, 20 MIN, 30 MIN, 60 MIN

OFF LOAD DURATION: 1 MIN, 5 MIN, 10 MIN, 15 MIN, 20 MIN, 30 MIN, 60 MIN

PF CHOICE: PF=1.0, PF=0.8

ALARM: GENSSET RATED VOLTAGE: 0 V

Intelligent Control Interface