WORLDWIDE BATTERY TESTING EXPERT
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CULTIVATING A GREENER FUTURE
FOR THE BATTERY INDUSTRY

CHEN TECH ELECTRIC THE LATEST PRODUCT CATALOG

FOR LEAD-ACID BATTERIES

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CULTIVATING A GREENER FUTURE FOR THE BATTERY INDUSTRY.

As a member of the global village, Chen Tech is committed to developing advanced testing technologies and integrating information technologies, providing our clients eco-friendly battery production and testing solutions.

Brand Story

1984

Chen Tech Electric is established followed by the opening of our first factory.

Produced high power DC control equipment.

1989

Bagan producing large lead-acid battery and sealed battery testing/ production equipment.

1996-99

Opened second factory, located in Erchong, Taiwan, and incorporated R&D for NiMH battery related products.

Awarded ISO 9001 Quality Management Systems Certification.

Our large-scale lead-acid and VRLA battery testing/ production equipment becomes the market leader in Taiwan.

2000

Opened sales and client service branch office in Guangzhou, China to provide more localized and prompt client services to meet the growing demand for Chen Tech Electric products and services.

2003

Initiated R&D for producing testing/ production equipment for lithium-ion battery cells and battery packs to meet next-generation technology developments and established a new production platform.

2004

Bagan developing lithium-ion and lithium polymer batteries, battery packs for consumer electrics, single-cell battery learning and formation equipment in response to the increasing demand in the consumer goods market.

2005

Utilized our abundance of expertise and experience in the field of electric vehicle applications to participate in a BES operation of first generation of electricity-powered motorcycles in Suzhou, China and further expanded our R&D department.

2006

Established a sales and client service branch office in Suzhou, China in response to our increasing market share in lithium-ion battery equipment.

2007

Began developing testing equipment for lithium-ion battery, LiFePO4 battery, and power battery packs in response to growing demand for electric vehicles.

2009

Our laptop battery pack production/ testing equipment becomes market leader in the world.

Began exploring the fields of power battery smart chargers, charging and exchange stations, and charging and exchange applications for hybrid and light electric vehicles.

2010

Started developing single-cell high precision charging/ discharging equipment MCL/ MCP to meet demands for charging/ discharging control precision from battery manufacturers.

2011

In order to establish roots in Japan's local market and to further cooperate with major Japanese manufacturers, we established a branch office offering sales and client service in Tokyo, Japan.

We organized a software and system integration team to develop a scalable cloud-based BES battery exchange platform and advanced data analytics software for cell testing.

2012

Our charging/ discharging equipment entered the supply chain of Korean manufacturers; we also established distribution center in Korea.

Enhanced gas gauge products to support multi-communication protocols; established and integrated solution for battery production information management system.

2013

Introduced the CRM system and established a service database that integrated prior experience from providing services to clients.

In response to the global pursuit of sustainability and low-carbon solutions, we invested in the research and development of advanced PWM controls and energy recycling technology, proposing the intelligent energy management solution SEMTest, which reduces energy consumption during battery manufacturing and testing by up to 70% - the best in the industry.

2014

Became the exclusive sales representative of Japan's SoftEnergy Controls Inc., to sell automated energy-efficient battery formation line, effectively reducing the labor and electricity costs needed for large-scale production of power battery.

2015

Developed premium portable battery testing equipment, MCL2 Mini, and provided different levels of current output (μA to A), enabling a mobile testing environment for battery researchers.

Developed MCF-Lite, the testing equipment for batteries used in wearable devices. MCF-Lite can be switched between two current output ranges and supports output as low as 50μA. A solution that is both economical and flexible.

Established sales representatives in the United States and Thailand, introducing Chen Tech's products to the cutting-edge testing markets.

2016

Collaborated with Germany's power supply company to develop an energy-efficient power battery testing system, PBT 1000, which can perfectly simulate the performance of power battery in actual vehicle operation.

The first in the industry to invest in the field of second-life batteries as well as the research on state of health (SoH) of batteries. A battery SoH evaluation system was developed, which can determine the SOH of a second-life battery as well as its remaining life span within 30 seconds at 92% accuracy.

2017

FUTURE

The BT 1000 Responsive Multi-range Battery Test Equipment and the PBT 1000 Power Battery Pack Test Equipment are selected for the Best Products category during the 14th National Brand Yushan Award.

Introduced the MCE A Battery Cell Production System in response to the development of electric vehicles as well as the high demand for power batteries, which integrated automated production lines and effectively reduced the production costs of power batteries while improving production yield.

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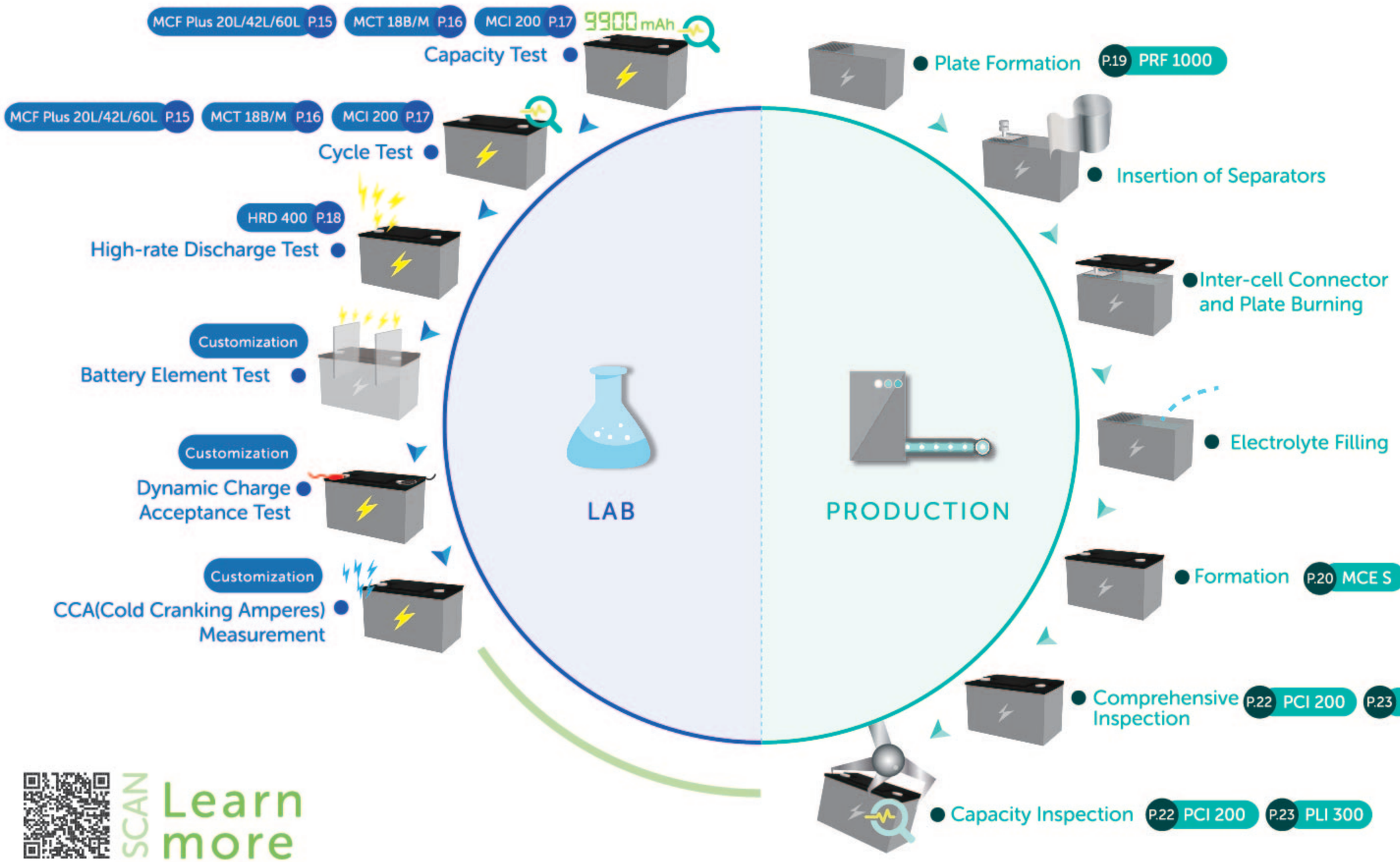

SCAN Learn more

Our products come in various formats to accommodate a range of applications, specifications, and functions according to the demands of research labs and production lines.

World-class Reputation

"From the news media and our recent interaction with Chen Tech, we can see that Chen Tech is constantly innovating and improving itself at a quick speed. We are very pleased as a long-term partner of Chen Tech".

— 《A leading Taiwanese lead-acid battery brand》

"Although Chen Tech does not have offices here, it does not affect the service to us. Whenever we have problem, they always respond quickly to understand our issues and send people to help us".

— 《A branch office of Japanese lead-acid battery brand in Indonesia》

"We've been Chen Tech's customer since its founding 30 years ago. Their equipment is very reliable. The lead-acid equipment purchased 30 years ago is still working in the factory" .

— 《 A Taiwanese lead-acid battery brand that has been a customer of Chen Tech for over 30 years》

"Chen Tech's battery testing equipment has a simple software interface that is easy to operate. It is very helpful for students during their researches".

— 《Power and Electronics Lab at Department of Electrical Engineering of National Sun Yat-Sen University》

"The software is user-friendly and easy to learn. The working channels are reliable and robust for long duration tests. In addition to manufacturing precision measurement instruments, the Chen Tech team add value by engaging in application specific discussions with their customers on how best to leverage their intelligent instruments."

— 《Advanced Diagnosis, Automation, and Control (ADAC) Laboratory at NC State University》

"Chen Tech works closely with us. It meets our requirements for customization and delivers within the promised time schedule. It is our good partner in battery testing".

— 《A top-three lithium battery manufacturers in Japan》

Our Commitment

World-class Services

24-hour online issue reporting service

New products are covered with standard one-year warranty and ten-year maintenance plan

Flexible Customization

❶ Plug-in module integration
❷ Diverse data report formats

❶ Charge and discharge specifications
❷ AC power
❸ Fixtures

❶ Extended warranty
❷ On-site installation
❸ Regular maintenance and calibration
❹ Quick repair guarantee

MCF Plus 20L/42L/60L Series

Lead-acid Battery Production System

Features

The MCF Plus 20L/42L/60L is suitable for performing cycle tests of serially connected lead-acid batteries. The system is highly accurate and reliable; it offers a variety of test modes and parameters, records test data, and generates battery life cycle reports to enhance the efficiency of lead-acid battery life tests.

- Streamlined production settings and fully automatic operations reduce the amount of manpower required for testing.

Specifications

AC Power		220VAC, 50/60Hz, 1Φ/3Φ
Loading Range	Charge	0~18V/0~42V/0~60V
	Discharge	2~18V/2.5~42V/3~60V
Output	Constant Voltage – Maximum Voltage	18V, 42V, 60V
	Constant Voltage – Resolution	16 bit
	Constant Voltage – Accuracy	± 0.1%F.S.
	Constant Current – Maximum Current	+4/-5A, +6/-10A, +10/-15A, +12/-20A, +20/-30A, +24/-40A, +40/-80A*
	Constant Current – Resolution	16 bit
	Constant Current – Accuracy	± 0.1%F.S.
	Constant Power – Maximum	Depend on spec
	Constant Power – Resolution	16 bit
	Constant Power – Accuracy	±0.2%F.S.

*Accept customized request

Temperature	Range	-50~150°C
	Resolution	0.1°C
	Accuracy	±1°C(-40~90°C)

Operation	Control Mode	MOSFET
	Operation Mode	PC
	Charge/Discharge Mode	CC, CC-CV, CP
	End Type	Time, End Voltage, End Current, Voltage Change, Capacity, Energy
	Protection	Over Voltage, Low Voltage, Over Current, Low Current, Over Temperature, Reversibility, Fuse
	Data Recording Time	0.1S/128CH
	Data Record	Voltage, Current, Power, Temperature, Capacity
	Communication Interface	CANBus (USB to PC)
	Ambient Environment	23°C±2°C; 20~90HR
Accessory		Auxiliary Voltage, Auxiliary Temperature, Customized Fixture, Barcode Scanner

MCT-18B/18M Series

Lead-acid Battery Test Equipment

Features

MCT-18B/18M is suitable for the performance evaluation of lead-acid batteries. It offers a variety of special charge and discharge modes and flexible testing program settings to meet various testing requirements. Numerous report formats and curve styles are built-in, allowing users to quickly evaluate results. The modular approach provides an economical base-model that can be expanded in the future.

- Support constant current (CC), constant current-constant voltage (CC-CV), constant power (CV), dynamic constant current discharging (DPC), dynamic constant power discharge (DPP) and other charging/ discharging modes.
- Support nested loops test program with each level of loop up to *65,535 cycles*.
- Customized capacity report formats, such as multi-parameter testing chart and capacity-life cycle chart.

Specifications

AC Power			220VAC, 50/60 Hz,1Φ
Loading Range		Charge	0~18V
		Discharge	4~18V
Output	Constant Voltage	Maximum	18V
		Resolution	16 bit
		Accuracy	± 0.1% F.S.
	Constant Current	Maximum	±12, ±25, ±50, +10/-30, +20/-60, +40/-120A*
		Resolution	16 bit
		Accuracy	± 0.1% F.S.
	Constant Power	Maximum	Depend on spec
		Resolution	16 bit
		Accuracy	± 0.2% F.S.
Measurement	Voltage	Maximum	32V
		Resolution	16 bit
		Accuracy	± 0.1% F.S.
	Current	Maximum	Depend on spec
		Resolution	16 bit
		Accuracy	± 0.1% F.S.

*Accept customized request

Temperature	Range	0~90°C
	Resolution	0.1°C
	Accuracy	±3°C

Operation	Control Mode	MOSFET
	Operation Mode	PC
	Charge/Discharge Mode	CC, CC CV, CP
	Grading	10
	End Type	Time, End Voltage, End Current, Voltage Change, Temperature Change, Capacity, Energy
	Protection	Over Voltage, Low Voltage, Over Current, Low Current, Over Temperature, Reversibility, Fuse
	Data Recording Time	1S/8CH
	Data Record	Voltage, Current, Power, Temperature, Capacity
	Communication Interface	CANBus (USB to PC)
	Ambient Environment	23°C±2°C; 20~90HR
Dimension		442*230*600mm
Weight		≒39kg

MCI 200 Series
Lead-acid Battery Test Equipment

Features

Used in capacity and cycle tests during the R&D process of lead-acid batteries to improve understanding of battery performance.

- Uses micro-computers to control processes automatically, thereby reducing manpower costs.
- Output precision is within ±0.5% — a level of precision unrivalled in the market by any other lead-acid equipment manufacturers.

Specifications

AC Power			AC 220V, 50/60Hz, 3Φ
Loading Range		Charge	0~18V
		Discharge	3~18V
Output	Constant Voltage	Maximum	18V
		Resolution	16 bit
		Accuracy	±0.5%F.S.
	Constant Current	Maximum	±60, ±600A
		Resolution	16 bit
		Accuracy	±0.5%F.S.
	Constant Power	Maximum	Depend on spec
		Resolution	16 bit
		Accuracy	±1%F.S.
Measurement	Voltage	Maximum	0~19.80V
		Resolution	16 bit
		Accuracy	±0.5%F.S.
	Current	Maximum	Depend on spec
		Resolution	16 bit
		Accuracy	±0.5%F.S.

Temperature	Range	-50~150°C
	Resolution	0.1°C
	Accuracy	±1°C(-40~90°C)

Operation	Control Mode	SCR, BJT
	Operation Mode	PC/Panel
	Charge/Discharge Mode	CC, CC-CV (Charge only)
	Life Cycle Test	Nested loop (max. 9999 cycles)
	Step Tme	1S~9999H59M59S
	End Type	Time, End Voltage, End Current
	Protection	Over Voltage, Low Voltage, Over Current, Low Current, Reversibility, Fuse
	Data Recording Time	1S/64ch
	Data Record	Voltage, Current, Power, Temperature, Capacity
	Communication Interface	RS-485
	Ambient Environment	23°C±2°C; 20~90HR

HRD 400 Series
High Rate Discharge Battery Test Equipment

Features

Suitable for high-rate discharging testing during the R&D stage of lead-acid batteries in order to verify a battery's quality.

- Streamlined production settings and fully automatic operations reduce the amount of manpower required for testing.
- Supports sample testing: Samples can be tested, and test sample results can be subsequently used to establish OV/CV testing standards.
- Able to calibrate current and voltage by using the panel directly.

Specifications

AC Power			AC220V, 5A, 50/60 Hz,1Φ
Loading Range		Charge	(Option)
		Discharge	6~15V(Option:3~15V)
Output	Constant Current	Maximum Current	-1000A, -2000A, -3000A, -4000A, -5000A*
		Resolution	16 bit
		Accuracy	±0.1% F.S.
Measurement	Voltage	Maximum	19.999V
		Resolution	16 bit
		Accuracy	±0.1% F.S.
	Current	Maximum	Depend on spec
		Resolution	16 bit
		Accuracy	±0.1% F.S.

*Accept customized request

Temperature	Range	0~90°C
	Resolution	0.1°C
	Accuracy	±3°C

Operation	Control Mode	MOSFET, BJT
	Operation Mode	PC/Panel
	Discharge Mode	CC
	End Type	Time
	Protection	Over Voltage, Low Voltage, Over Current, Low Current, Over Temperature, Reversibility, Fuse
	Data Recording Time	0.1S
	Data Record	Voltage, Current, Temperature
	Ambient Environment	23°C±2°C; 20~90HR
Optional Features		CV, CP (Discharge only)

PRF 1000 Series

Lead-acid Battery Plate Formation System

Features

Low-harmonic wave/high-efficiency design, used as plate formation of Ni-MH, NiCd, lead-calcium, lead-acid, and other secondary batteries.

- Offers adjustable *2-phase* currents and comprehensive production settings, allowing field operators to make all adjustments to production settings at once, thereby reducing labor costs.
- Flexible system designs can be incorporated to improve equipment power factor and efficiency by up to *90%*.

Specifications

AC Power			220/380/440/480VAC, 50/60Hz, 3Φ
Loading Range		Charge	5~1000V
		Discharge	-
Output	Constant Current	Maximum	50, 100, 150, 200, 250, 300, 400, 500, 600, 800, 1000, 1200, 1500, 2000A*
		Muitiple Ranges	2(Option)
		Accuracy	±0.5% F.S.
Measurement	Voltage	Maximum	1100V
	Current	Maximum	Maximum +10%

Operation	Control Mode	SCR
	Charge/Discharge Mode	CC
	End Type	Time
	Protection	Over Current, Reversibility, Fuse
	Ambient Environment	23°C±2°C; 20~90HR
Optional Features		Auxiliary Temperature , Polarity Reverse

*Accept customized request

MCE S Series

Eco Series: Lead-acid Battery Formation Equipment

Energy Recycle

Green

Features

MCE S is suitable for the formation process required in the production of lead-acid battery. It introduces the discharged energy recycling feature that allows as much as *97%* of the electrical energy produced during discharge to be recycled and then supply the energy needed for the charge process, even returned to the grid to provide electricity for other utilities within the factory site. This design greatly reduces the battery production cost and the energy recovery can effectively reduce the temperature rise in the plant, improving the comfort for the operators on-site. To optimize energy use, smart energy management system can be added to monitor the real-time production information at the factory site and obtain important notification and the best scheduling recommendations.

- Support DC-DC and DC-AC energy recovery, with an efficiency up to *97%*.
- When the system is at full load, power factor *>99%*.
- System load of more than *30%*, the total harmonic distortion (THD) *<3%*.

Specifications

AC Power			220/380VAC, 50/60Hz, 3Φ
Loading Range		Charge	100~300V
		Discharge	100~300V
Output	Constant Current	Maximum	+3/-4, +5/-7, +6/-8, +10/-14*
		Resolution	PWM
		Accuracy	±0.5% F.S.
Measurement	Voltage	Maximum	330V
		Resolution	12 bit
		Accuracy	±0.5% F.S.
	Current	Maximum	Maximum+10%
		Resolution	12 bit
		Accuracy	±0.5% F.S.
Temperature		Maximum	0~90°C
		Resolution	0.1°C
		Accuracy	±3°C

Operation	Control Mode	IGBT
	Operation Mode	PC
	Charge/Discharge Mode	CC
	End Type	Time, Voltage
	Protection	Over Voltage, Low Voltage, Over Current, Low Current, Over Temperature, Reversibility, Fuse
	Data Recording Time	1S
	Data Record	Voltage, Current, Power, Temperature, Capacity
	Communication Interface	CANBus (USB to PC)
	Ambient Environment	23°C±2°C; 20~90HR
Optional Features		Smart Energy Management System
Accessory		Auxiliary Voltage, Auxiliary Temperature

*Accept customized request

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MCIF Series
Lead-acid Battery Formation Equipment

Features

MCIF offers dual operating modes: centralized control and stand-alone control. One computer controls up to ***64 channels*** simultaneously, which means program edition and execution on multiple channels can be done with one click. Moreover, in case of emergency, individual channel can also be operated using its panel controller. During the formation process, the data can be recorded in real-time and reports can be automatically generated. In the event of power loss, testing data will be stored in the system, therefore maintaining the complete production log of the battery.

- The customized specifications can reach up to ***800V/800A, with a precision of 0.5%.***
- Dual operating modes of PC- based centralized control and panel-based stand-alone control.
- Data recording as rapid as ***1s*** during formation process.

Specifications

AC Power			220/380VAC, 50/60 Hz, 3Φ
Loading Range		Charge	0~600V (Depend on spec)
		Discharge	6~540V (Depend on spec)
Output	Constant Voltage	Maximum	300, 600V (Depend on spec)
		Resolution	16 bit
		Accuracy	±0.5% F.S.
	Constant Current	Maximum	±5, ±10, ±30, ±50, ±60, ±100*
		Resolution	16 bit
		Accuracy	±0.5% F.S.
Measurement	Voltage	Maximum	330, 660V (Depend on spec)
		Resolution	16 bit
		Accuracy	±0.5% F.S.
	Current	Maximum	Maximum +10%
		Resolution	16 bit
		Accuracy	±0.5% F.S.

*Accept customized request

Temperature	Range	-50~150°C
	Resolution	0.1°C
	Accuracy	±1°C (-40~90°C)
Operation	Control Mode	SCR
	Operation Mode	PC/Panel
	Charge/Discharge Mode	CC, CC - CV (Charge only)
	End Type	Time, End Voltage, End Current
	Protection	Over Voltage, Low Voltage, Over Current, Low Current, Over Temperature, Reversibility, Fuse
	Data Recording Time	1S /64ch
	Data Record	Voltage, Current, Power, Temperature, Capacity
	Communication Interface	RS-485
	Ambient Environment	23°C±2°C; 20~90HR
Accessory		Auxiliary Voltage, Auxiliary Temperature

PCI 200 Series
Lead-acid Battery Capacity Tester

Features

Suitable for lead-acid battery capacity check and classification; the system can produce various test curves and statistical reports to help production line personnel quickly understand current production status and yield.

- Meets CNS, SIS, SAE, and SBA testing standards.
- Highly precise, and can be controlled by a computer to perform multi-channel operations.
- Applies energy regeneration technique for large capacity discharge to reduce heat loss and conserve energy.
- Supports diverse data collection and comparison, test curves, statistical reports, and tables/charts.
- Selects from bypassing/without bypassing when testing a single battery.

Specifications

Control Mode	SCR
Operation Mode	PC or PC/Panel
AC Power	220/380/440/480 VAC, 50/60Hz, 3Φ
Accuracy	±0.5%F.S.
Charge/Discharge Mode	CC, CP (Discharge only)
Protection	Over Current, Over Voltage, Short Circuit, Open Circuit, Reversibility

Number of Batteries			24	48	72	96	120	144	168	192
DCV	Lead-acid Batteries	2V	0V~72V	0V~144V	0V~216V	0V~288V	0V~360V			
		12V	0V~435V							
DCA			5.700~57.000mA, 57.00~570.00mA, 0.5700~5.7000A, 5.700~57.000A, 57.00~570.00A, 570.0~5700.0A							

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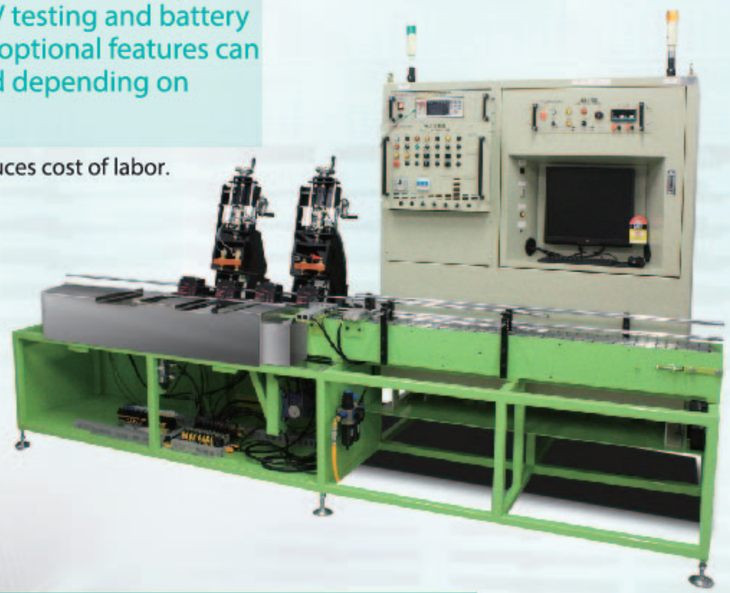
PLI 300 Series
Lead-acid Battery Inspection System

Features

Suitable for performing comprehensive testing on the production line; the ***4-in-1*** device supports measurement of battery internal resistance, OC/CV testing and battery seal, as well as stamping; optional features can be purchased or excluded depending on client requirements.

- Fully automatic operation reduces cost of labor.



Specifications

AC Power			220VAC/10A, 50/60 Hz,1Φ
Loading Range		Charge	-
		Discharge	6~15V(Option: 3V~6V)
Output	Constant Current	Maximum	5000A
		Accuracy	±0.1%
		Resolution	16 bit
Measurement	Voltage	Maximum	0~19.999V
		Resolution	16 bit
		Accuracy	±0.1%
	Current	Maximum	0~5500A
		Resolution	16 bit
		Accuracy	±0.1%

8H Yield	# of Batteries	7200	5760	4800	4100	3600	2800	2400
	Inspection Time	2s	3s	4s	5s	6s	8s	10s

Operation	Control Mode	MOSTFET, BJT
	Operation Mode	PC or PC/Panel
	Discharge Mode	CC (Option: CP, CR)
	End Type	Time
	Protection	Reversibility, Over Current
	Data Recording Time	100ms(Option: 10ms)
	Data Record	Time, Current, mAh(Option: Standard Deviation, Freguency Distribution Chart, Histogram)
	Communication Interface	CANBus
	Ambient Environment	23°C±2°C; 20~90HR
Optional Features		Customized Report
Accessory		Customized Fixture, Customized Mold

New Generation
Auxiliary Voltage/ Auxiliary Temperature

Features

Auxiliary voltage and auxiliary temperature are suitable for collecting the voltage and temperature data of single cell in the battery pack. Every module contains ***16~24 measurement points***. The data recording time is 100ms and the accuracy is at ***0.02% F.S.*** Collected data can be used as step cutoff conditions, improving the flexibility of production line and laboratory.

Auxiliary Voltage ES-100B	
Channels	16~24
Measurement Range	± 64V, ± 32V, ± 8V
Measurement Resolution	16 bit
Measurement Accuracy	±0.02% F.S.
Data Recording Time	100ms (24CH)

Auxiliary Temperature ET-100B	
Channels	16~24
Measurement Range	-50°C~150°C*
Measurement Resolution	0.1°C
Measurement Accuracy	± 1°C(-40°C~90°C)
Data Recording Time	100ms (24CH)

*Depend on chosen thermal sensors

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