

# NEWARE

NEWARE  
— Since 1998 —



Version Number: HC-EN-230509-V1.0

Note: This document may undergo version changes without further notice.  
We apologize for any inconvenience this may cause.

## Turnkey Solution for Battery Testing



LabTech



Store



Client



Step



DataAnalyzer



Edge



LIMS



Analytics



Report



Calibration



Tele-Control & Tech-Support  
Smart-Lab Solutions Platform



Tailor-Made & Worry-Free  
One-Stop Purchasing Platform

4130 164TH CT SE, BELLEVUE, WA, 98006, USA

www.neware-usa.com

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# NEWARE

## CT-4000 mA-Equipment (3 Ranges)

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

GITT

GITT Test

DCIR

DCIR Test



dQ/dV Curve



### Product Characteristics



Voltage & Current Accuracy  $\pm 0.05\%$  F.S.



Recording Frequency 10Hz



Sampling Time 100ms



Current Response Time (10% F.S. ~ 90% F.S.)  $< 500\mu s$



Resolution Ratio AD 24Bit



Off-Line Test 1GB



$\mu A$  Level Current Output



Test Security



Data Security

01



02



03



04



Voltage & Current	Range	Range 1	Range 2	Range 3
5V/10V10mA		5 $\mu A$ ~ 1mA	1mA ~ 5mA	5mA ~ 10mA
5V/10V20mA		5 $\mu A$ ~ 1mA	1mA ~ 10mA	10mA ~ 20mA
5V/10V50mA		5 $\mu A$ ~ 1mA	1mA ~ 25mA	25mA ~ 50mA

\*Other models can be customized according to voltage and current requirements.

- Suitable for Coin Cells, Small Capacity Batteries, Small Pouch Cells, Super Capacitors, Three-Electrode System Testing, etc.
- 8 independent channels each.
- Supports testing including Cycle Life, Rate Performance, Pulse Simulation, GITT, DCIR, and dQ/dV Analysis.
- Charging & Discharging modes: Constant Current, Constant Voltage, Constant Current & Voltage, Constant Power, Constant Resistance.
- Safety features such as shutdown, off-line testing, and overheating protection.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## CT-4000 mA-Equipment (4 Ranges)

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

GITT

GITT Test

DCIR

DCIR Test



dQ/dV Curve



### Product Characteristics



4 Ranges



Voltage & Current Accuracy  
±0.01% F.S.



Recording Frequency  
100Hz



Sampling Time  
10ms



Current Response Time  
(10% F.S. ~ 90% F.S.)  
≤ 1ms



Resolution Ratio AD  
24Bit



Off-Line Test  
1GB



µA Level Current Output



Test Security



Data Security

01



02



03



04



Range	Range 1	Range 2	Range 3	Range 4
Voltage & Current	0.2µA ~ 0.1mA	0.1mA ~ 1mA	1mA ~ 10mA	10mA ~ 100mA
5V100mA				

\*Other models can be customized according to voltage and current requirements.

- Suitable for Coin Cells, Small Capacity Batteries, Small Pouch Cells, Super Capacitors, Three-Electrode System testing, etc.
- 8 independent channels each.
- Features micro-flow testing down to µA level.
- 4-range high-precision testing intervals.
- Supports testing including Cycle Life, Rate Performance, Pulse Simulation, GITT, DCIR, and dQ/dV Analysis.
- Safety features such as shutdown, off-line testing, and overheating protection.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## CT-4000 5V6A & 5V12A (3 Ranges)

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

**GITT**

GITT Test

**DCIR**

DCIR Test



dQ/dV Curve



### Product Characteristics



Voltage & Current Accuracy  
±0.05% F.S.



Recording Frequency  
10Hz



Sampling Time  
100ms



Current Response Time  
(10% F.S. ~ 90% F.S.)  
≤ 1ms



Resolution Ratio AD  
24Bit



Off-Line Test  
1GB



Test Security



Data Security

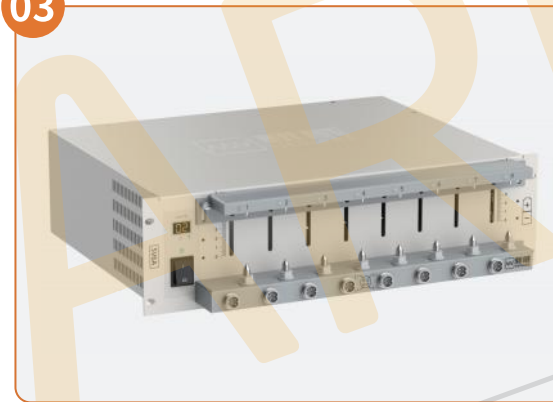
01



02



03



04



Voltage & Current	Range	Range 1	Range 2	Range 3
5V6A		0.5mA ~ 0.1A	0.1A ~ 3A	3A ~ 6A
5V12A		5mA ~ 1A	1A ~ 6A	6A ~ 12A

\*Other models can be customized according to voltage and current requirements.

- Suitable for testing Cylindrical and Pouch Cells for 3C digital products, meeting various testing requirements of battery /3C Manufacturers and Research Institutions.
- 8 independent channels each.
- Supports testing including Cycle Life, Rate Performance, Pulse Simulation, GITT, DCIR, and dQ/dV Analysis.
- Charging & Discharging modes: Constant Current, Constant Voltage, Constant Current & Voltage, Constant Power, Constant Resistance.
- Safety features such as shutdown, off-line testing, and overheating protection.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

## CT-4000 Super-Capacitor Testing System



### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

**GITT**

GITT Test

**DCIR**

DCIR Test



dQ/dV Curve



### Product Characteristics



Voltage & Current Accuracy  $\pm 0.05\%$  F.S.



Recording Frequency 10Hz



Sampling Time 100ms



Current Response Time (10% F.S. ~ 90% F.S.)  $\leq 1\text{ms}$



Resolution Ratio AD 24Bit



Off-Line Test 1GB



$\mu\text{A}$  Level Current Output



Test Security



Data Security

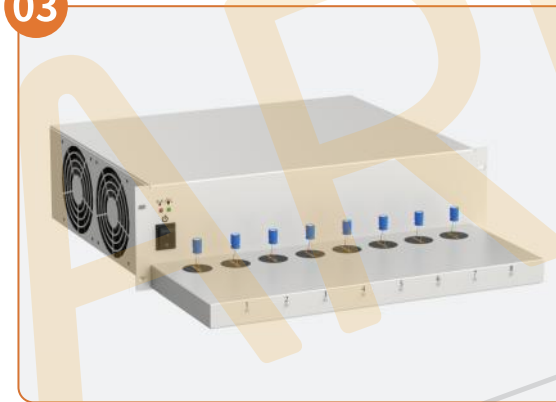
01



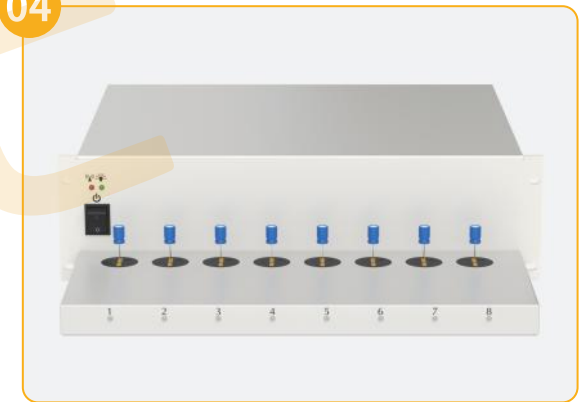
02



03



04



Range	Range 1	Range 2	Range 3
5V10mA	5 $\mu\text{A}$ ~ 1mA	1mA ~ 5mA	5mA ~ 10mA
5V6A	0.5mA ~ 0.1A	0.1A ~ 3A	3A ~ 6A
5V12A	5mA ~ 1A	1A ~ 6A	6A ~ 12mA

\*Other models can be customized according to voltage and current requirements.

- Compatible with performance testing of various types of Super Capacitors, meeting various testing requirements of 3C/Battery Manufacturers and Research Institutions.
- 8 independent channels each.
- Supports testing including Cycle Life, Rate Performance, Pulse Simulation, GITT, DCIR, and dQ/dV Analysis.
- Charging & Discharging modes: Constant Current, Constant Voltage, Constant Current & Voltage, Constant Power, Constant Resistance.
- Safety features such as shutdown, off-line testing, and overheating protection.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## CT-5000 5V6A & 5V12A (3 Ranges)

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

GITT

GITT Test

DCIR

DCIR Test



dQ/dV Curve



### Product Characteristics



Voltage & Current Accuracy  $\pm 0.02\%$  F.S.



Recording Frequency 100Hz



Current Response Time (10% F.S. ~ 90% F.S.)  $< 2\text{ms}$



Resolution Ratio AD 16Bit



Off-Line Test 1GB



Test Security



Data Security

SMB

SMBus Communication

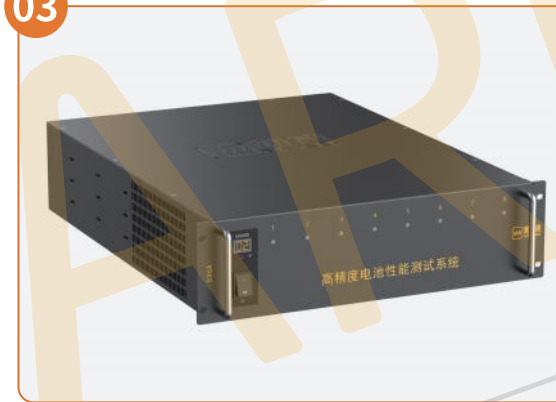
01



02



03



04



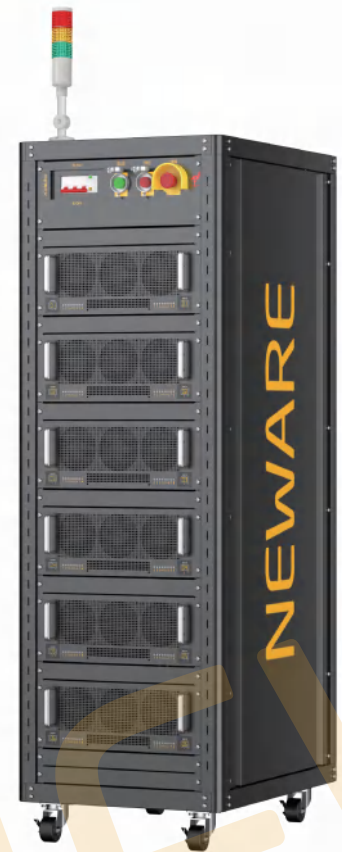
Voltage & Current	Range	Range 1	Range 2	Range 3
5V6A		0A ~ 0.2A	0.2A ~ 1A	1A ~ 6A
5V12A		0A ~ 1A	1A ~ 4A	4A ~ 12A

\*Other models can be customized according to voltage and current requirements.

- Suitable for performance testing of battery cells such as Coin, Pouch, and Cylindrical types, can meet the testing needs of institutions such as Universities, Materials Research, and Battery Manufacturers.
- 8 independent channels each.
- Supports testing including Cycle Life, Rate Performance, Pulse Simulation, DCIR, and dQ/dV Analysis.
- Channel uses constant current and constant voltage sources in a dual closed-loop structure.
- Safety features such as power-off protection, offline testing, overheating protection, and reverse connection prevention.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## CTE-5016-5V75A-DSP



### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

**GITT**

GITT Test

**DCIR**

DCIR Test

### Product Characteristics



Voltage Accuracy  
±0.02% F.S.



Voltage & Current Accuracy  
±0.05% F.S.



Recording Frequency  
100Hz



Current Response Time  
(10% F.S. ~ 90% F.S.)  
≤ 1ms



Resolution Ratio AD  
16Bit



Off-Line Test  
1GB



μA Level Current Output



Test Security



Data Security



Energy-saving Inverter



5V	75A	150A	300A	600A	1200A	10kA
----	-----	------	------	------	-------	------

\*CTE-5000: E indicates the energy feedback function.

\*Other models can be customized according to voltage and current requirements.

- Suitable for Electric Bicycles, Electric Vehicles, and related fields.
- SMBus/I2C communication capabilities.
- Modular design with 16 independent channels per unit.
- Supports parallel connections between adjacent channels and DBC format file import, editing, and export.
- Supports Cycle Life, Rate Charge/Discharge, Pulse Simulation, and DCIR Testing.
- Safety features such as power-off protection, offline testing, overheating protection, and reverse connection prevention.
- Can recover and redistribute energy produced by battery discharge.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.



# NEWARE

## CE-5000 Laptop Battery Testing System

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

**GITT**

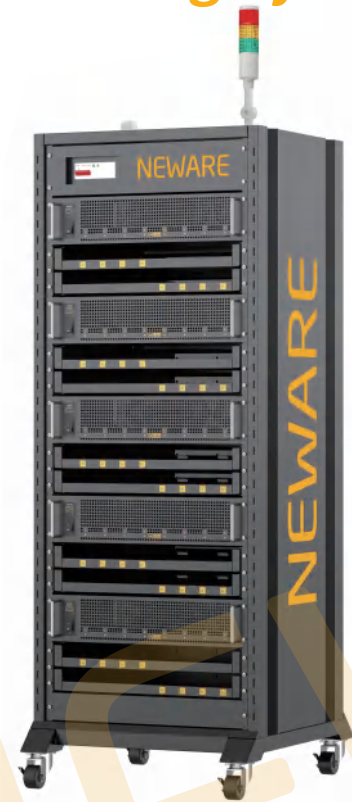
GITT Test

**DCIR**

DCIR Test



dQ/dV Curve



### Product Characteristics



Voltage & Current Accuracy  $\pm 0.02\%$  F.S.



Recording Frequency 100Hz



Current Response Time (10% F.S. ~ 90% F.S.)  $\leq 30\text{ms}$



Resolution Ratio AD 16Bit



Off-Line Test 1GB



Test Security



Data Security

**SMB**

SMBus Communication

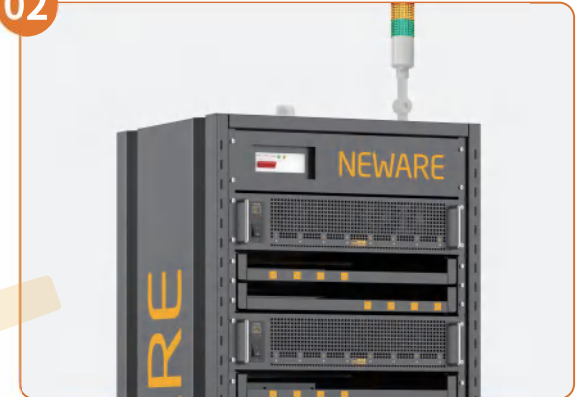


Energy-saving Inverter

01



02



03



04



20V/24V/30V

10A

15A

20A

30A

\*CE-5000: E indicates the energy feedback function.

\*Other models can be customized according to voltage and current requirements. (10V ~ 30V, 5A ~ 30A)

- Suitable for Laptop Batteries, Tablet Batteries, and Power Tool Batteries, etc.
- SMBus/I2C communication capabilities.
- Modular design with 8 independent channels per unit.
- Supports parallel connections between adjacent channels and DBC format file import, editing, and export.
- Supports Cycle Life, Rate Charge/Discharge, Pulse Simulation, DCIR Testing and dQ/dV Analysis.
- Channel uses constant current and constant voltage sources in a dual closed-loop structure.
- Safety features such as power-off protection, offline testing, overheating protection.
- Can recover and redistribute energy produced by battery discharge.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

## CE-6000 Cell Testing System

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

DCIR

DCIR Test



Working Condition Simulation Test



### Product Characteristics



Voltage & Current Accuracy  
±0.05% F.S.



Recording Frequency  
100Hz



Current Response Time (10% F.S. ~ 90% F.S.)  
≤ 2ms



Current Response Time  
≤ 5ms



Resolution Ratio AD  
24Bit



Feedback Efficiency(Max)75%  
(More than 80% output power)



Minimum Pulse Width  
20ms

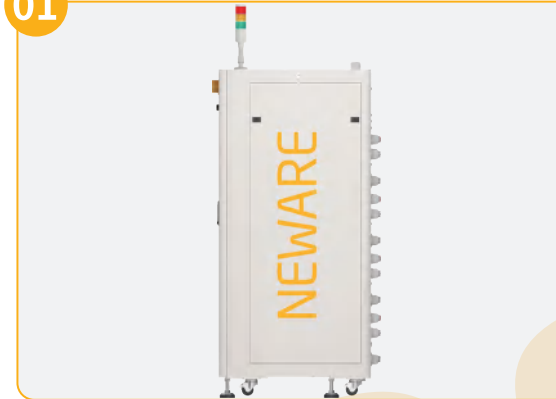


Test Security

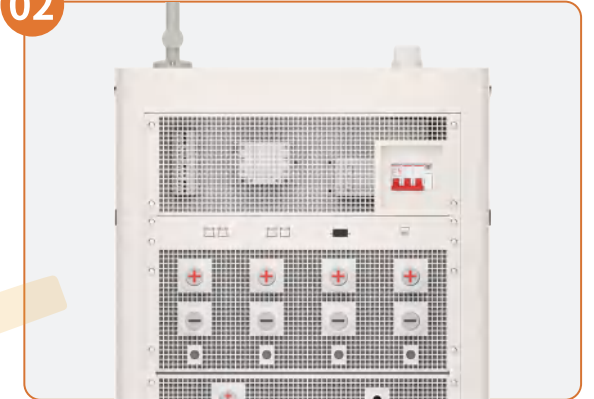


Data Security

01



02



03



04



5V / 6V

75A

150A

300A

600A

1200A

\*CE-6000: E indicates the energy feedback function.

\*Other models can be customized according to voltage and current requirements.

- Suitable for Power Batteries, Energy Storage Batteries, and other fields, to meet the testing needs of Battery Manufacturers, Electric Vehicle Manufacturers, and Energy Storage Companies.
- Supports comprehensive performance indicators testing such as Cycle Life, Capacity, Efficiency, Working Conditions, Float Performance, SOC, DOD, and Rate.
- Can recover and redistribute energy produced by battery discharge.
- Adopts AC/DC, DC/DC dual-stage high-frequency isolation modular design, combined with low-temperature drift, high-performance multi-channel 24-bit ADC chip, and steady-state accuracy is higher than traditional equipment.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

## CE-6000 Module Testing System



### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



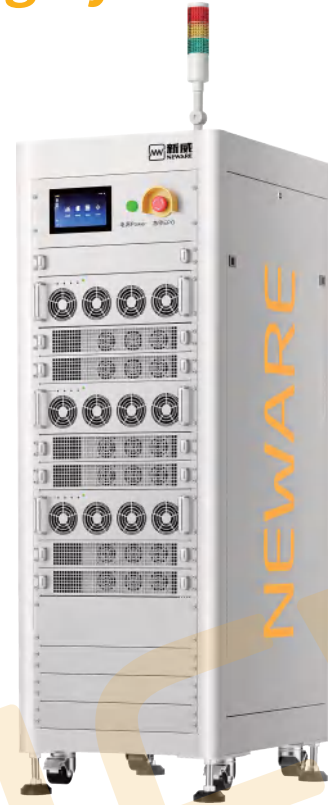
Pulse Simulation Test

DCIR

DCIR Test



Working Condition Simulation Test



### Product Characteristics



Voltage & Current Accuracy  $\pm 0.02\%$  F.S.



Voltage Accuracy  $\pm 0.05\%$  F.S.



Recording Frequency 100Hz



Current Response Time (10% F.S. ~ 90% F.S.)  $< 3\text{ms}$



Current Response Time  $\leq 6\text{ms}$



Resolution Ratio AD 24Bit



Feedback Efficiency(Max) 90%



Minimum Pulse Width 100ms



Test Security

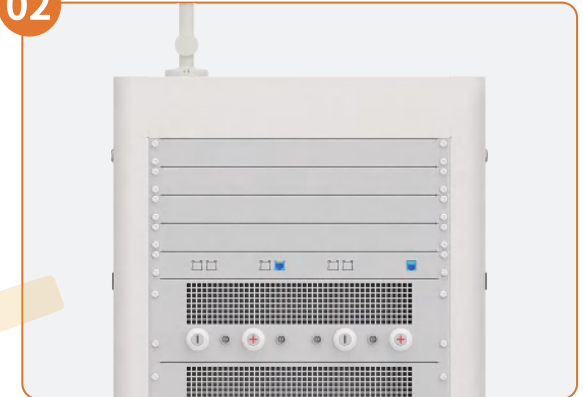


Data Security

01



02



03



04



$20\text{V} \leq V \leq 60\text{V}$	60A	120A	240A	480A	960A	1200A	-
$60\text{V} < V \leq 120\text{V}$	50A	100A	200A	400A	600A	800A	1000A
$120\text{V} \leq V \leq 200\text{V}$	50A	100A	200A	300A	400A	500A	-

\*CE-6000: E indicates the energy feedback function.

\*Other models can be customized according to voltage and current requirements.

- Used for performance testing of Battery Modules by Battery Manufacturers, Electric Vehicle Manufacturers, and Energy Storage Companies.
- Supports comprehensive performance indicators testing such as Cycle Life, Capacity, Efficiency, Working Conditions, Float Performance, SOC, DOD, and Rate.
- Can recover and redistribute energy produced by battery discharge.
- Adopts AC/DC, DC/DC dual-stage high-frequency isolation modular design, combined with low-temperature drift, high-performance multi-channel 24-bit ADC chip, and steady-state accuracy is higher than traditional equipment.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

## CE-6000 Pack Testing System



### Main Functions

- Cycle Life Test
- Rate Charging / Discharging Test
- Pulse Simulation Test
- DCIR DCIR Test
- Working Condition Simulation Test



### Product Characteristics

- Voltage & Current Accuracy  $\pm 0.05\%$  F.S.
- Recording Frequency 100Hz
- Current Response Time (10% F.S. ~ 90% F.S.)  $\leq 5\text{ms}$
- Current Response Time  $\leq 10\text{ms}$
- Resolution Ratio AD 24Bit
- Off-Line Test 1GB
- Feedback Efficiency(Max) 94%
- Minimum Pulse Width 100ms
- Test Security
- Data Security



100kW	500V	200A
150kW	750V	200A
300kW	1000V	300A

\*CE-6000: E indicates the energy feedback function.  
 \*Other models can be customized according to voltage, current and power requirements. (200V ~ 1000V、100A ~ 1000A)

- Tests Battery Pack performance for Battery Manufacturers, EV Manufacturers, and Energy Storage Companies.
- Supports comprehensive performance indicators testing such as Cycle Life, Capacity, Efficiency, Working Conditions, Float Performance, SOC, DOD, and Rate.
- Can recover and redistribute energy produced by battery discharge.
- Adopts AC/DC, DC/DC dual-stage high-frequency isolation modular design, combined with low-temperature drift, high-performance multi-channel 24-bit ADC chip, and steady-state accuracy is higher than traditional equipment.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

## CT/CTE-8000 Simulation Battery Testing System

### Main Functions



Cycle Life Test



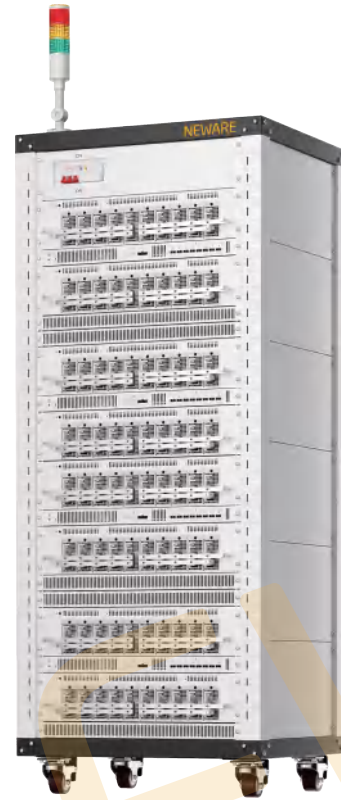
Rate Charging / Discharging Test



Pulse Simulation Test



HPPC



### Product Characteristics



Voltage & Current Accuracy  $\pm 0.05\%$  F.S.



Sampling Time 10ms



Current Response Time  $\leq 10\text{ms(CTE)}$   
 $\leq 20\text{ms(CT)}$



Minimum Pulse Width 100/500ms



Resolution Ratio AD 16Bit



Off-Line Test 1GB



Working Condition Simulation 1,000,000 Rows



Test Security

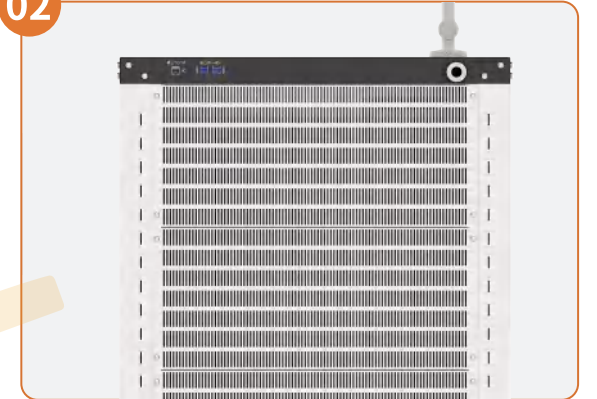


Data Security

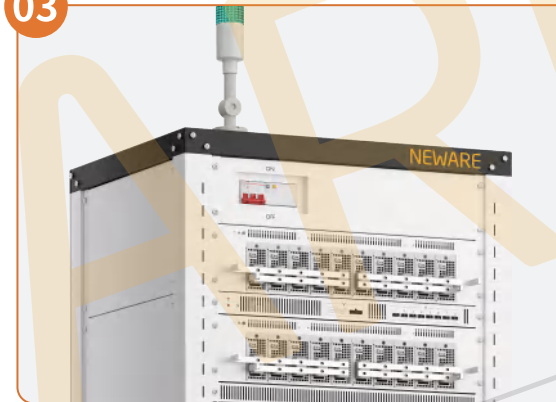
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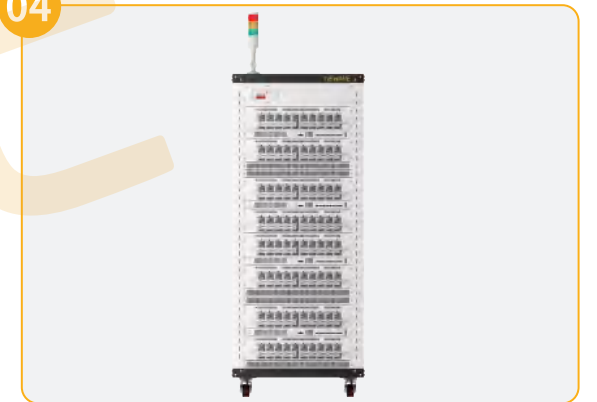
02



03



04



CTE-8000	5V	100A	200A	300A	500A	600A
CT-8000	5V	30A	50A	100A	200A	300A
		200A	600A	800A	1000A	-

\*CTE-8000: E indicates the energy feedback function.

\*Other models can be customized according to voltage and current requirements.

- Suitable for Power Batteries, Energy Storage Batteries, and other fields, to meet the testing needs of Battery Manufacturers, Electric Vehicle Manufacturers, and Energy Storage Companies.
- Supports comprehensive performance indicators testing such as Cycle Life, Capacity, Efficiency, Working Conditions, Float Performance, SOC, DOD, and Rate.
- Can recover and redistribute energy produced by battery discharge.
- Adopts AC/DC, DC/DC dual-stage high-frequency isolation modular design, combined with low-temperature drift, high-performance multi-channel 16-bit ADC chip, and steady-state accuracy is higher than traditional equipment.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## CT-9000 Ultra-Precision Battery Testing System

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test



Pulse Simulation Test

DCIR

DCIR Test



dQ/dV Curve



### Product Characteristics



Voltage & Current Accuracy  $\pm 0.02\%$  F.S.



Recording Frequency 1000Hz



Current Response Time  $\leq 100\mu s$



Minimum Pulse Width 400 $\mu s$



Resolution Ratio AD 16Bit



Off-Line Test 1GB



Test Security



Data Security

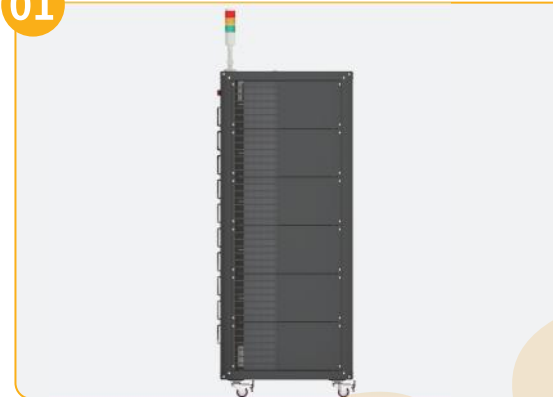


SMBus Communication

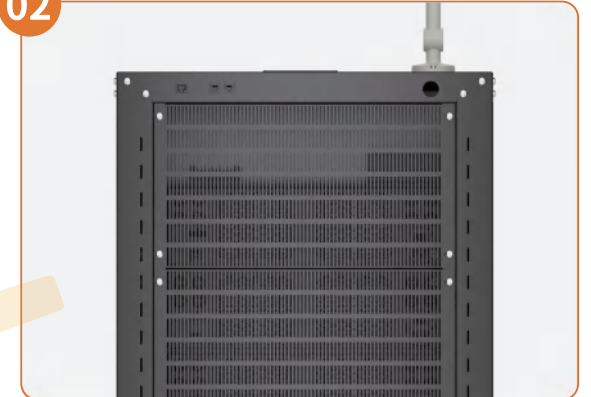


GSM

01



02



03



04



Range	Range 1	Range 2	Range 3	Range 4
5V6A	0.1 $\mu A$ ~ 180 $\mu A$	180 $\mu A$ ~ 6mA	6mA ~ 180mA	180mA ~ 6A
5V12A	0.1 $\mu A$ ~ 300 $\mu A$	300 $\mu A$ ~ 10mA	10mA ~ 300mA	300mA ~ 12A

\*Other models can be customized according to voltage and current requirements.

- For precise testing of batteries such as Coin Cells, Pouch Cells, and Three-Electrode System in Academic, Research, and 3C Industry Settings.
- Modular design with 4 or 8 independent channels per unit.
- Supports cycle Life Testing, Rate Charge/Discharge Testing, DCIR Testing, Pulse Charge/Discharge Testing, etc.
- High sampling accuracy, fast response time, high control precision, wide measurement range.
- Part of NEWARE's high-end series with a test current as low as 0.1  $\mu A$ .
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## Coin Cell All-in-One Testing System

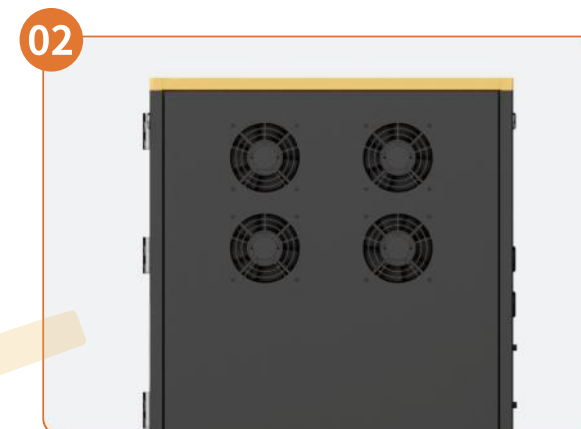
**Main Functions**

- Cycle Life Test
- Rate Charging / Discharging Test
- GITT**  
GITT Test
- DCIR**  
DCIR Test
- Constant Temperature Test



**Product Characteristics**

- Voltage & Current Accuracy  $\pm 0.01\%$  F.S.
- Recording Frequency 100Hz
- Number of Channels (Coin Cells) 160CH
- Environment Temperature  $5^{\circ}\text{C} \sim 35^{\circ}\text{C}$
- Temperature Range & Deviation  $0^{\circ}\text{C} \sim 60^{\circ}\text{C} \pm 2.0^{\circ}\text{C}$  (No Load & Stable Temperature)
- Temperature Fluctuation  $\leq 1^{\circ}\text{C}$  (No Load & Stable Temperature)
- Heating Time  $25^{\circ}\text{C} \sim 60^{\circ}\text{C} (\leq 30\text{min})$
- Cooling Time  $25^{\circ}\text{C} \sim 0^{\circ}\text{C} (\leq 50\text{min})$



Model Number	MIHW-200-160CH-B			
Nominal Specification	200L; 160CH			
Internal Size(mm)	500 × 500 × 800			
Overall Size(mm)	600 × 920 × 1800			

Range	Range 1	Range 2	Range 3	Range 4
Voltage & Current				
5V100mA	0.2 $\mu\text{A}$ ~ 0.1mA	0.1mA ~ 1mA	1mA ~ 10mA	10mA ~ 100mA

\*Other models can be customized according to voltage and current requirements.

- Combines charge-discharge and constant temperature testing for efficient and precise battery temperature performance testing.
- Supports Cycle Life, Temperature Condition, and Reliability Testing.
- Uses combined air regulation channel.
- Connects to BTS communication protocol to set temperature parameters and control conditions.
- Complete equipment protection function with leak detection, short circuit, high temperature fuse, independent redundancy, and over-temperature protection.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## 3C All-in-One Testing System

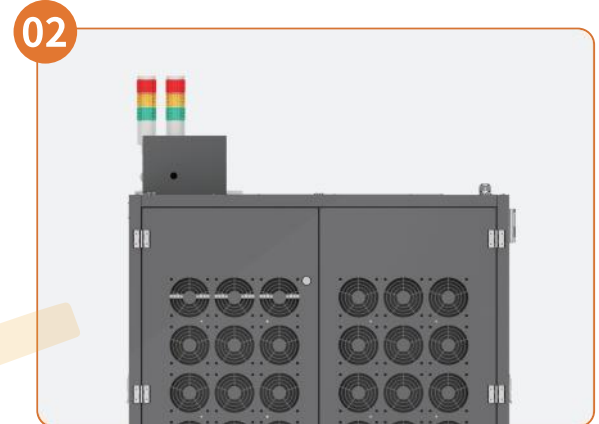
### Main Functions

- Cycle Life Test
- Rate Charging / Discharging Test
- Pulse Simulation Test
- GITT**  
GITT Test
- DCIR**  
DCIR Test
- Constant Temperature Test



### Product Characteristics

- Voltage & Current Accuracy  $\pm 0.05\%$  F.S.
- Sampling Time 100ms
- Temperature Range & Deviation  $10^{\circ}\text{C} \sim 85^{\circ}\text{C}$
- Temperature Deviation  $\pm 2.0^{\circ}\text{C}$  (No Load & Stable Temperature)
- Test Security
- Data Security



Model Number	MHW-500-5V6A80CH-380V / MHW-500-5V12A80CH-380V		
Nominal Specification	500L; 80CH		
Internal Size(mm)	700 × 700 × 1000		
Overall Size(mm)	1100 × 1700 × 1950		

Range	Range 1	Range 2	Range 3
Voltage & Current			
5V6A	0.5mA ~ 0.1A	0.1A ~ 3A	3A ~ 6A
5V12A	5mA ~ 1A	1A ~ 6A	6A ~ 12A

\*Other models can be customized according to voltage and current requirements.

- For Pouch Cell charging, discharging, and temperature performance.
- Supports Cycle Life, Constant Temperature, Temperature Conditioning, and Reliability Testing.
- Accommodates up to 80 Pouch Cells with efficient spatial layout.
- Connects to BTS communication protocol for temperature and process control settings.
- PID algorithm calculates and controls heater output for dynamic balance based on set temperature.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.



# NEWARE

## 4 Temperature Zone All-in-One Testing System

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test

**GITT**

GITT Test

**DCIR**

DCIR Test



Constant Temperature Test



### Product Characteristics



Space Saving <math>< 0.5\text{m}^2</math>



Voltage & Current Accuracy  $\pm 0.05\%$  F.S.



Sampling Time 100ms



Number of Channels (Coin Cells) 4 x 16CH



Temperature Range & Deviation  $15^{\circ}\text{C} \sim 60^{\circ}\text{C} \pm 2.0^{\circ}\text{C}$  (No Load & Stable Temperature)



Temperature Fluctuation  $\leq 1^{\circ}\text{C}$  (No Load & Stable Temperature)



Heating Time  $25^{\circ}\text{C} \sim 60^{\circ}\text{C} (\leq 50\text{min})$  (No Load & Stable Temperature)



Cooling Time  $25^{\circ}\text{C} \sim 15^{\circ}\text{C} (\leq 60\text{min})$  (No Load & Stable Temperature)

01



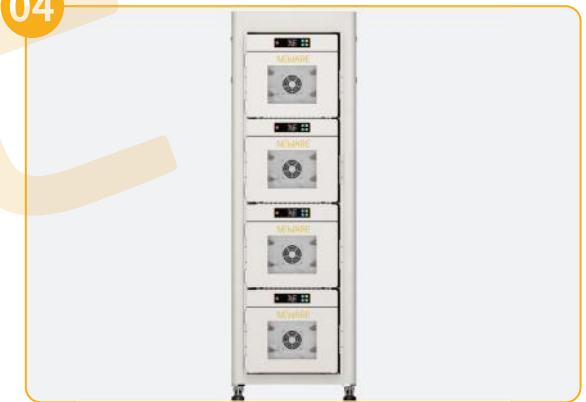
02



03



04



Model Number	MHW-25-S-16CH
Nominal Specification	25L x 4; 16CH x 4
Internal Size(mm)	360 x 300 x 235
Overall Size(mm)	440 x 580 x 410

Range	Range 1	Range 2	Range 3
Voltage & Current			
5V / 10V10mA	5 $\mu$ A ~ 1mA	1mA ~ 5mA	5mA ~ 10mA
5V / 10V20mA	5 $\mu$ A ~ 1mA	1mA ~ 10mA	10mA ~ 20mA
5V / 10V50mA	5 $\mu$ A ~ 1mA	1mA ~ 25mA	25mA ~ 50mA

\*Other models can be customized according to voltage and current requirements.

- Combines charge-discharge and constant temperature testing for efficient and precise battery temperature performance testing.
- Supports Cycle Life, Constant Temperature, Temperature Conditioning, and Reliability Testing.
- Accommodates up to 64 Coin Cells with efficient spatial layout.
- Connects to BTS communication protocol for temperature and process control settings.
- Complete equipment protection function with leak detection, short circuit, high temperature fuse, independent redundancy, and over-temperature protection.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## Mini-All-in-One Testing System

### Main Functions



Cycle Life Test



Rate Charging / Discharging Test

**GITT**

GITT Test

**DCIR**

DCIR Test



Constant Temperature Test



### Product Characteristics



Space Saving <math>< 0.5\text{m}^2</math>



Voltage & Current Accuracy  $\pm 0.05\%$  F.S.



Sampling Time 100ms



Number of Channels (Coin Cells) 16CH



Temperature Range & Deviation  $15^{\circ}\text{C} \sim 60^{\circ}\text{C} \pm 2.0^{\circ}\text{C}$  (No Load & Stable Temperature)



Temperature Fluctuation  $\leq 1^{\circ}\text{C}$  (No Load & Stable Temperature)



Heating Time  $25^{\circ}\text{C} \sim 60^{\circ}\text{C} (\leq 50\text{min})$  (No Load & Stable Temperature)



Cooling Time  $25^{\circ}\text{C} \sim 15^{\circ}\text{C} (\leq 60\text{min})$  (No Load & Stable Temperature)

01



02



03



04



Model Number	MHW-25-S-16CH
Nominal Specification	25L; 16CH
Internal Size(mm)	360 × 300 × 235
Overall Size(mm)	440 × 580 × 410

Range	Range 1	Range 2	Range 3
5V / 10V10mA	5 $\mu$ A ~ 1mA	1mA ~ 5mA	5mA ~ 10mA
5V / 10V20mA	5 $\mu$ A ~ 1mA	1mA ~ 10mA	10mA ~ 20mA
5V / 10V50mA	5 $\mu$ A ~ 1mA	1mA ~ 25mA	25mA ~ 50mA

\*Other models can be customized according to voltage and current requirements.

- Suitable for testing charging, discharging, and temperature performance of Coin Cells.
- Supports Cycle Life Testing, Constant Temperature Testing, Temperature Performance Testing, and Reliability Testing.
- Uses electrically insulated wooden trays, which can accommodate 16 Coin Cells.
- Connects to BTS communication protocol for temperature and process control settings.
- Complete equipment protection function with leak detection, short circuit, high temperature fuse, independent redundancy, and over-temperature protection.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## Mini Constant Temperature Test Chamber

**Main Functions**

Constant Temperature Test

Temperature Condition Test



**Product Characteristics**

Space Saving  
< 0.5m<sup>2</sup>

Number of Channels (Coin Cells)  
16CH

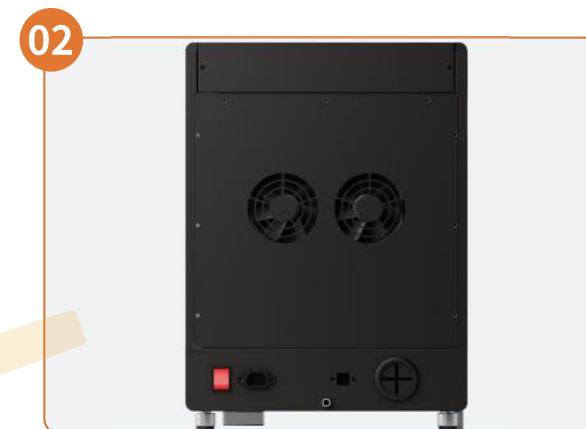
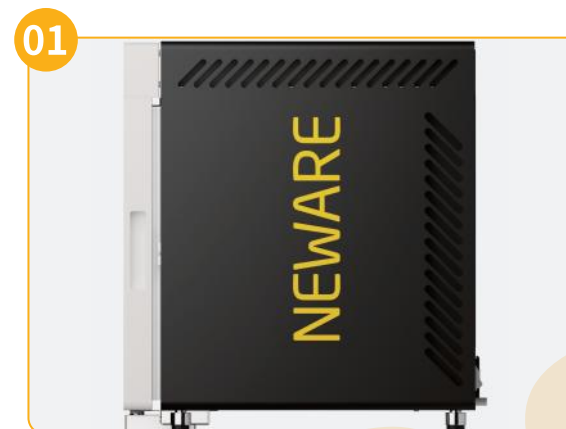
Temperature Deviation  
± 2.0°C  
(No Load & Stable Temperature)

Temperature Fluctuation  
≤ 1°C  
(No Load & Stable Temperature)

Temperature Range  
15°C ~ 60°C  
(No Load & Stable Temperature)

Test Security

Data Security



Model Number	MHW-25
Nominal Specification	25
Internal Size(mm)	280 × 250 × 360
Overall Size(mm)	360 × 450 × 500

\*MHW-25 MHW: Constant temperature test chamber series 25: Nominal content area

- Suitable for temperature performance testing for various batteries, such as Coin Cells and Pouch Cells.
- Compact and novel appearance, occupying less than half a square meter of space.
- Unique temperature control system with PID algorithm.
- Holds a total of 16 Coin Cells.
- Wooden tray layer board for insulation.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## Constant Temperature Test Chamber



### Main Functions



Constant Temperature Test



Temperature Condition Test

### Product Characteristics



Forced Circulation Air Cooling



PID Fuzzy Algorithm



Number of Channels (Coin Cells)  
160CH



Environment Temperature  
5°C ~ 35°C



Temperature Range & Deviation  
0°C ~ 60°C ± 2.0°C  
(No Load & Stable Temperature)



Temperature Fluctuation  
≤ 1°C  
(No Load & Stable Temperature)

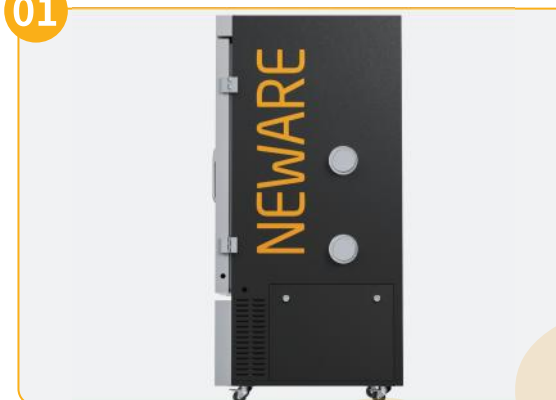


Heating Time  
25°C ~ 60°C (≤ 30min)



Cooling Time  
25°C ~ 0°C (≤ 50min)

01



02



03



04



Model Number	MHW-200
Nominal Specification	200
Internal Size(mm)	500 × 500 × 800
Overall Size(mm)	600 × 720 × 1500

\*MHW-200 MHW: Constant temperature test chamber series 200: Nominal content area





- Suitable for temperature performance testing for various batteries, such as Coin Cells and Pouch Cells.
- Supports Constant Temperature Testing, Temperature Performance Testing, and Reliability Testing.
- Equipped with a fan, heater, evaporator, and contactless pulse-width modulation.
- Holds 40 snap-on batteries per layer, four layers available.
- Wooden tray layer board for insulation.
- Complete equipment protection functions.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE







## High and Low Temperature Test Chamber

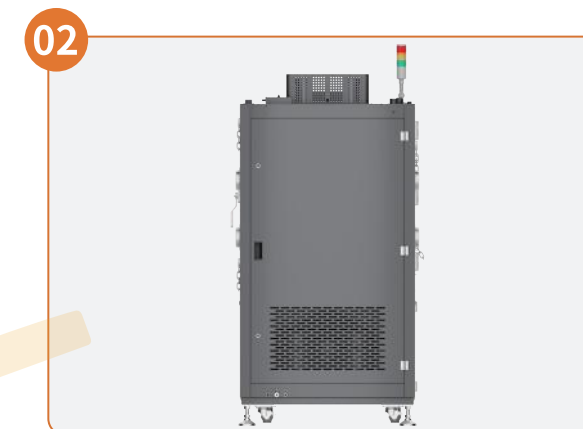
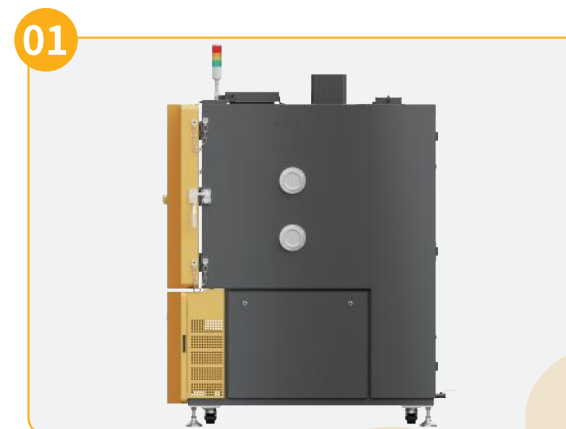


### Main Functions

-  Constant Temperature Test
-  Temperature Condition Test
-  Flameproof Function
-  Automatic Fire Extinguishing Function

### Product Characteristics

-  Environment Temperature  
5°C ~ 35°C
-  Temperature Range  
-20/-40/-70°C ~ 150°C
-  Temperature Deviation  
±2.0°C  
(No Load & Stable Temperature)
-  Temperature Fluctuation  
≤1°C  
(No Load & Stable Temperature)
-  Heating Time  
-20°C ~ 150°C(≤60min)  
-40°C ~ 150°C(≤60min)  
-70°C ~ 150°C(≤75min)
-  Cooling Time  
20°C ~ -20°C(≤45min)  
20°C ~ -40°C(≤60min)  
20°C ~ -70°C(≤75min)



MGDW High and Low Temperature Test Chamber Series (Single-layer box type)	Temperature rise/fall time	-20°C→150°C≤60min 20°C→-20°C≤45min	-40°C→150°C≤60min 20°C→-40°C≤60min	-70°C→150°C≤60min 20°C→-70°C≤75min		
	Capacity(L)	150	225	408	800	1000
	Internal Size(mm)	500×500×600	600×500×750	800×600×850	1000×800×1000	1000×1000×1000
	Overall Size (mm)	750×1300×1750	850×1300×1850	1050×1400×1950	1250×1600×2100	1250×1800×2100

\*Customizable dry and moist heat type and multi-body structure

- Equipped with high-performance temperature control components and refrigeration systems.
- Optional configurations include humidity and explosion-proof functions.
- Complete equipment protection functions.
- The charge and discharge testing system and environmental test chamber can be controlled uniformly from a PC.

# NEWARE

## Explosion-Proof Test Chamber

### Main Functions



Flameproof Function



Overcharge & Discharge Test



### Product Characteristics



Environment Temperature  
5°C ~ 35°C



Relative Humidity  
≤85%RH



Atmospheric Pressure  
86kPa ~ 106kPa



Test Security



Multi-storey



Fog Alarm

01



02



03



04



	Capacity(L)	220	350	500	600	
MFB Series	Storage Spaces	2	20	2		
	Inner Box Size (mm - single storage)	780×680×220	180×350×180	780×680×330	780×680×480	780×800×480
	Overall Size (mm)	950×980×1180	950×910×1600	950×980×1400	950×980×1700	950×1100×1700

\*Customization available upon request

- Suitable for testing batteries of different specifications.
- Each storage unit can accommodate one battery pack.
- Equipped with safety devices such as smoke alarms, explosion-proof chains, and explosion-proof window.

# NEWARE

## Auto Calibration



### Product Characteristics



24CH Detection Channel



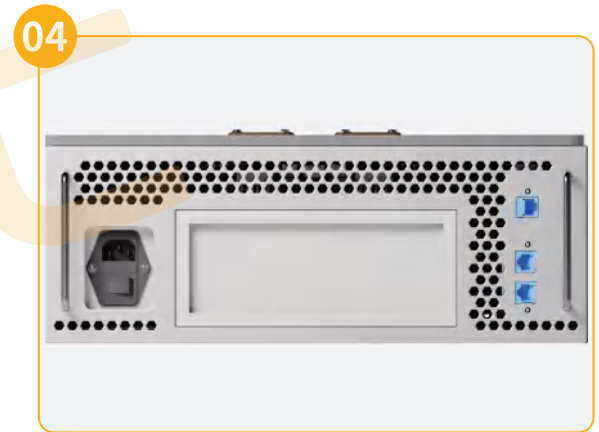
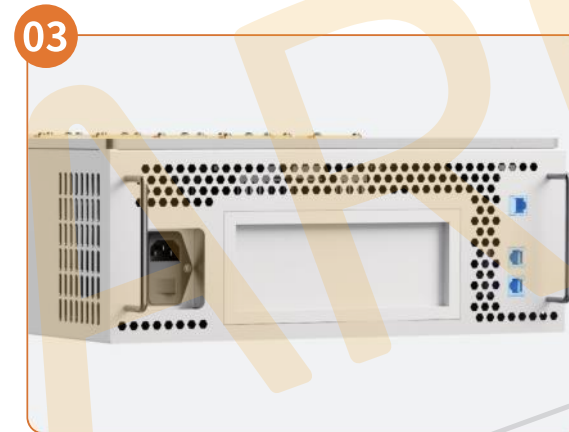
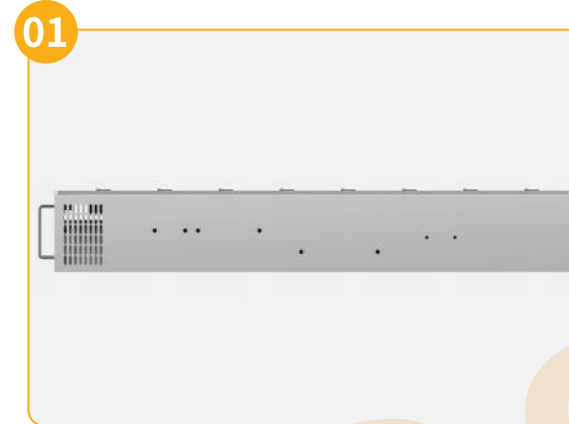
Calibration & Detection Time 240s



Test Security



Data Security



Calibration Voltage	0-10V
Segment	3
Measurement range	5V50mA, 5V6A, 5V12A, 5V60A, 5V120A
Calibration & Testing Time	240s
Operating Temperature	25°C ± 10°C
Communication Method	TCP/IP
Data Export Format	PDF, EXCEL, TXT

- Calibrates and tests 24-channel main equipment (customizable) at once.
- Integrates industrial control computer, DC power supply, electronic load, digital multimeter, switching circuit, fixture, and optional wireless communication.
- Can be automatically calibrated with the RGV and calibration software.

# NEWARE

## BT-9562 High Precision Battery Internal Resistance Instrument

### Main Functions:



Impedance Measurement



Voltage Measurement



Reactance Measurement



Complex Impedance Measurement



Impedance Phase Angle Measurement



### Product Characteristics

**ACIR**

ACIR Design



$\mu\Omega$  Resolution



Test Security



Data Security

01



02



03



04



	Range	Display Range	Resolution	Current	Accuracy
Impedance Measurement (0 ~ 3Ω)	3mΩ	-3.3 ~ 3.3mΩ	0.1μΩ	250mA	±0.4%
	30mΩ	-33 ~ 33mΩ	1μΩ	100mA	±0.3%
	300mΩ	-330 ~ 330mΩ	10μΩ	10mA	±0.3%
	3Ω	-3.3 ~ 3.3Ω	0.1mΩ	1mA	±0.3%

	Range	Display Range	Resolution	Accuracy
Voltage Measurement (0 ~ 60V)	6V	-6.6 ~ 6.6V	10μV	±0.01%
	60V	-66 ~ 66V	100μV	±0.01%

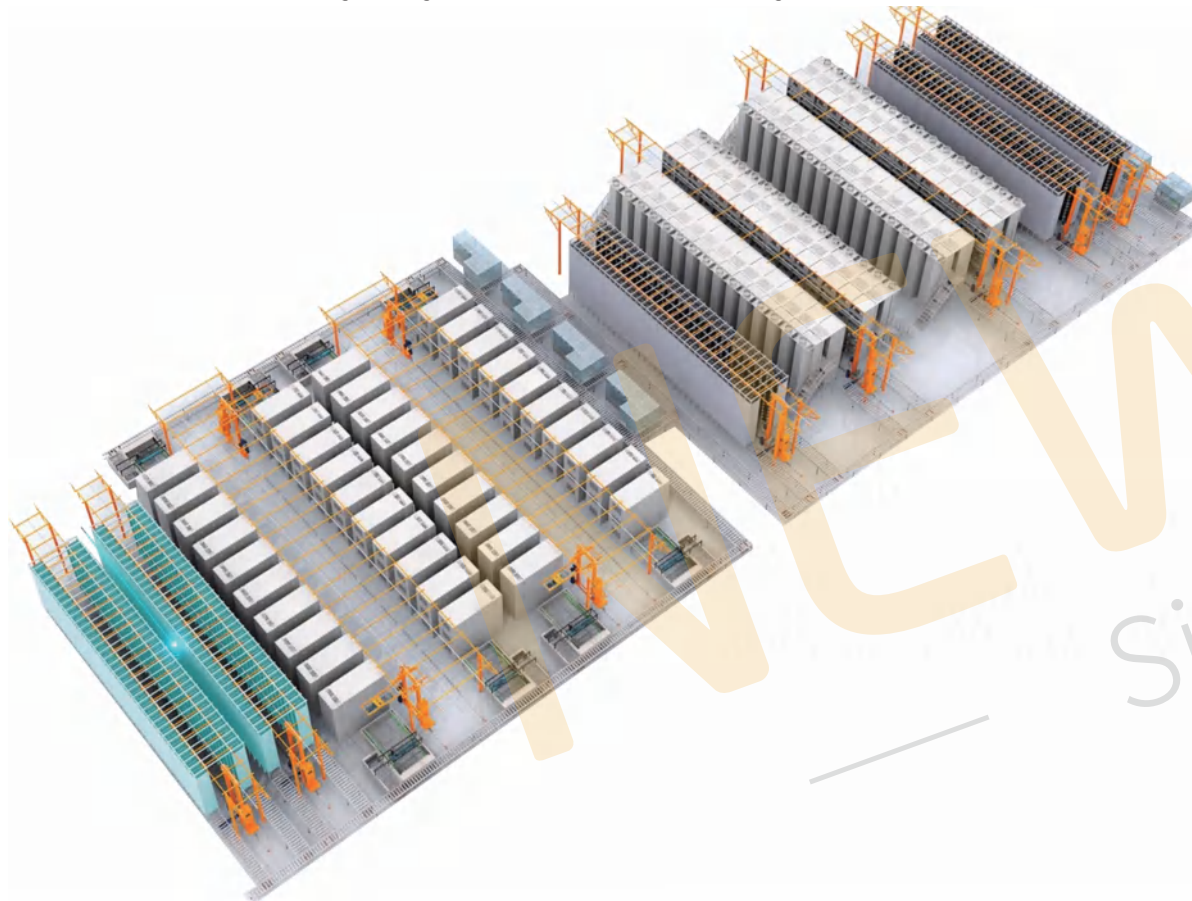
- Compatible with different battery types and capacities.
- Uses AC impedance for online testing with high reproducibility and wide testing range.
- Measures 5 types of data for comprehensive battery monitoring: internal resistance, voltage, reactance, complex impedance, and impedance phase angle.
- High-precision ADC and high-speed DAC for accurate measurements and less noise interference.
- Supports fast LAN communication and connection with NEWARE battery testing system.



## Automatic Production Line

Battery Automation Production Solutions

Link-Wide Services | Intelligent Algorithm | Real-Time Scheduling



## LIMS for Lean Lab Management

Accelerating Battery Technology Change with Digital Technology

Connection | Management | Insight



## NEWARE LabTech App

Smart-Lab Solutions Platform

Remote Intelligent Control | Technical Support | Asset Management  
Academic Live Streaming | Selected Top Journals | Research Community



## NEWARE Store App

One-Stop Purchasing Platform

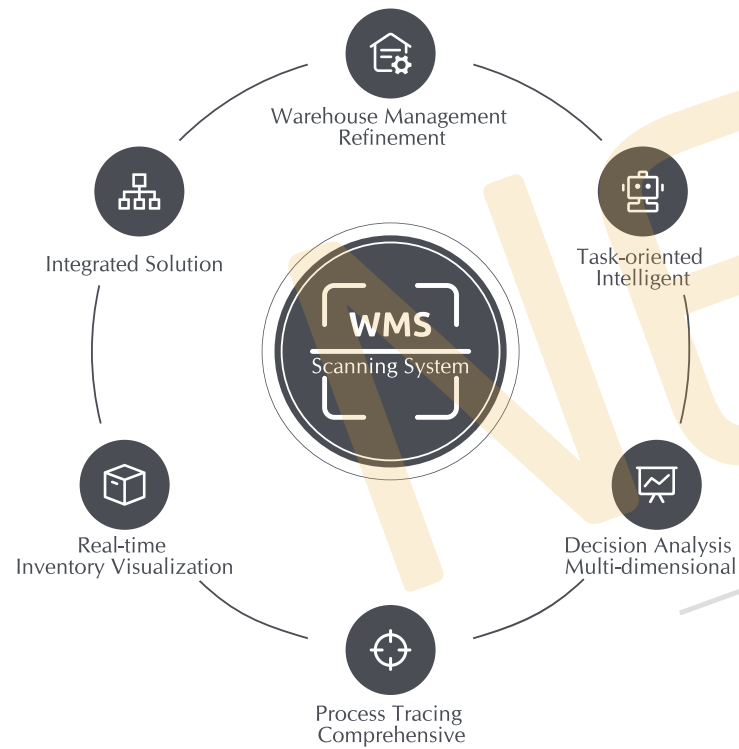
Complete Product Categories | One-Click Procurement | Video Explanation  
Tool Guide | Academic Paper Award | Information Sharing



## WMS Warehouse Management System

Creating Digital Intelligence Warehouse Management Platform for Enterprises

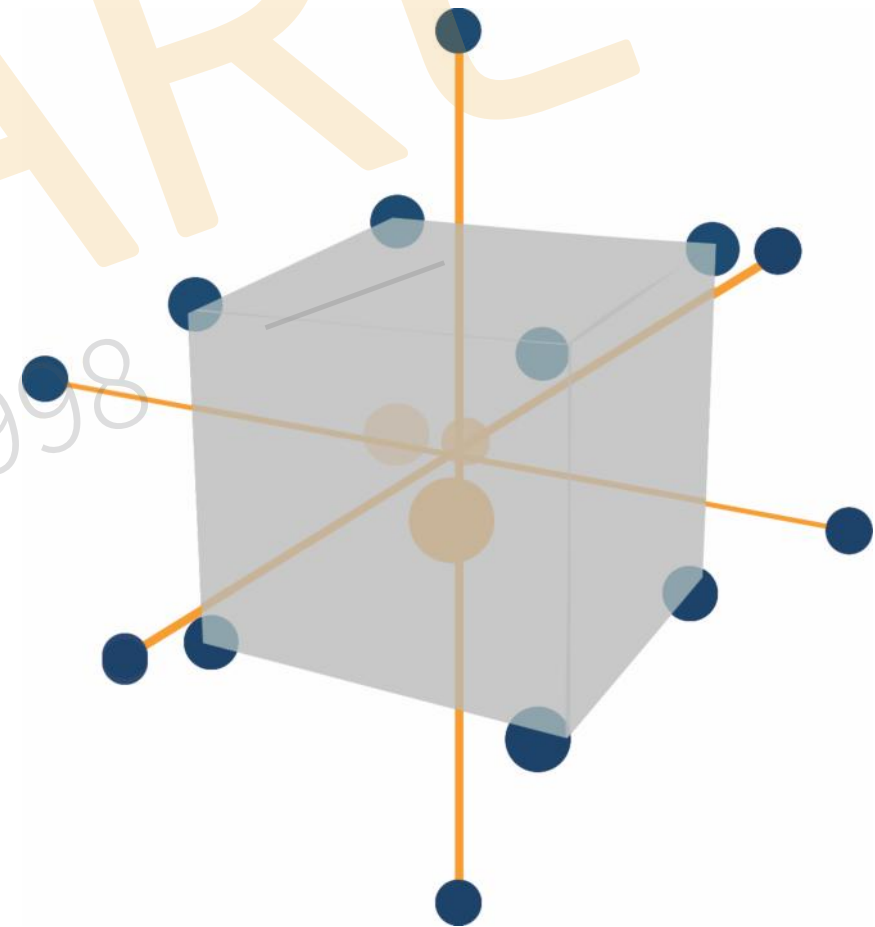
Supplier Collaboration | Procurement Receipt | Stock-In & Stock-Out | Inventory Management | Cargo Management | Statistics | Product Management



## Newell Test

Guaranteeing You a Accurate Test Data

Calibration Service | Data Collaboration | CNAS Certification



## Battery Testing Solution



## Coin Cell Solution



## Pouch Cell Solution



## Environmental Test Chamber Solution



## Cylindrical Cell Solution



NEWARE  
Since 1998