



WIIP

Macrii (MC) Temperature Control System

Water cooling Innovation International
Partnership





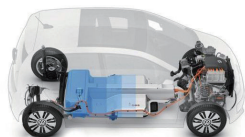
MC series new energy vehicle (EV) test temperature control system

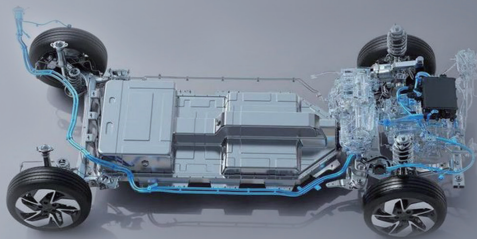
EV test temperature control system is a professional temperature control system designed based on the needs of EV industry for product performance, safety, environmental adaptability, etc. It can provide environmental simulation, performance simulation, reliability and other professional tests for **motors, controllers, battery packs, transmissions, hybrid engines, vehicle OBC, DC/DC, CCU, electronic pumps, cooling pipes**, etc.

At present, MC series EV test temperature control systems have launched seven categories, **MCC, MCt, MCa, MCy, MCm, MCs, and MCE**. The temperature range covers $-40\sim 150^{\circ}\text{C}$, the flow range covers $0.5\sim 90\text{L/min}$, and pressure range from $0\sim 600\text{kPa}$; Accept various circulation fluid; The constant temperature output, internal circulation mode, external circulation mode and constant power mode can be switched at will; Linear temperature change rate, segmented program temperature control, load leakage detection and automatic liquid return function meet the user's all-round needs.

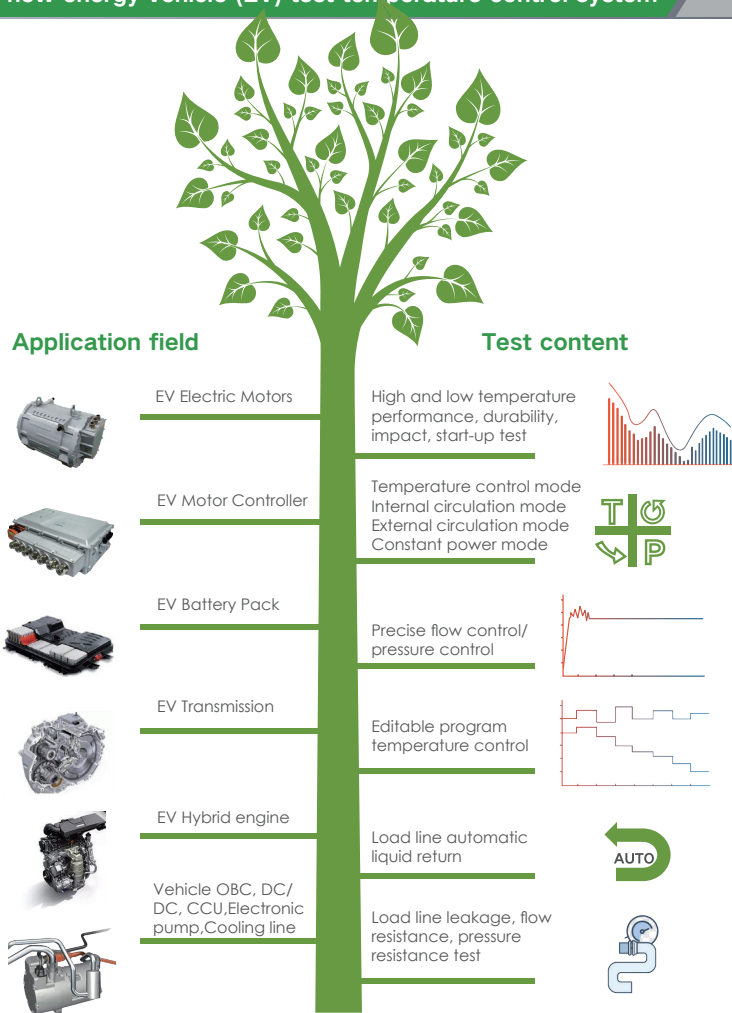


EV test temperature control system characterized by wide temperature range, wide flow range, high control accuracy, strong reliability, high field compatibility, complete user interface, mature and stable software, and high service efficiency.





MC series new energy vehicle (EV) test temperature control system



MCc Direct Cooling EV test temperature control system

MCc direct cooling EV test temperature control system, heat exchange from refrigerant to circulation fluid, heat exchange from refrigerant to circulation fluid, with higher heat exchange efficiency, faster temperature response and performance.

Functions and Features

- Temperature control range: -40~95℃ .
- Temperature control stability $\pm 0.5^{\circ}\text{C}$.
- Optional flow control range: 0.5~10L/min, 2~20 L/min, 4~40 L/min, 6~60L/min, 9~90L/min, 10~150L/min control stability better than $\pm 0.2\text{L/min}$.
- Intelligent liquid return technology, automatic blowing liquid.
- Load leakage detection technology, test whole pipeline tightness.
- Optional communication mode, RS485/CAN/Ethernet.
- Built-in anti-leakage water tank design, and leakage monitoring.

Typical Application

Widely used in motor support, endurance fatigue test, high and low temperature start-up test and other occasions.



MCc Name rules

MCc 08 U - C 2 S

Outlet loop:

"S" : Single output "D" : Dual output "T" : Three-way output

Lower limit of control temp.:

"0" : Lower temp. control limit 5℃ "2" : Lower temp. control limit -20℃
 "3" : Lower temp. control limit -30℃ "4" : Lower temp. control limit -40℃

Heat discharge method:

"U" : Air-cooled all-in-one machine "W" : Water-cooled all-in-one machine
 "V" : Water-cooled energy-saving all-in-one machine

Cooling capacity:

"04" : Cooling Capacity 10KW "06" : Cooling Capacity 15KW
 "08" : Cooling Capacity 20KW "10" : Cooling Capacity 25KW
 "12" : Cooling Capacity 35KW "16" : Cooling Capacity 50KW
 "20" : Cooling Capacity 60KW "25" : Cooling Capacity 80KW
 "30" : Cooling Capacity 100KW

MCt Pressure EV test temperature control system

MCt pressure EV test temperature control system, adopts closed pressurized cooling cycle system, which can realize antifreeze operated under high temperature. And it can keep the circulating fluid from deteriorating for a long time. It is a good assistant for high and low temperature experiments and airtight experiments in EV testing.

Functions and Features

- Temperature control range: -40 °C to 135 °C .
- Temperature control stability $\pm 0.5^{\circ}\text{C}$.
- Optional flow control range: 0.5~10L/min, 2~20 L/min, 4~40 L/min, 6~60L/min, 9~90L/min, 10~150L/min control stability better than $\pm 0.2\text{L/min}$.
- Frequency conversion flow & pressure control to ensure stable output flow/pressure.
- Intelligent liquid return technology, automatic blowing.
- Load leakage detection technology, test production line load and pipeline tightness.
- Optional communication mode, RS485/CAN/Ethernet.
- Built-in anti-leakage flume design, and with leakage monitoring.

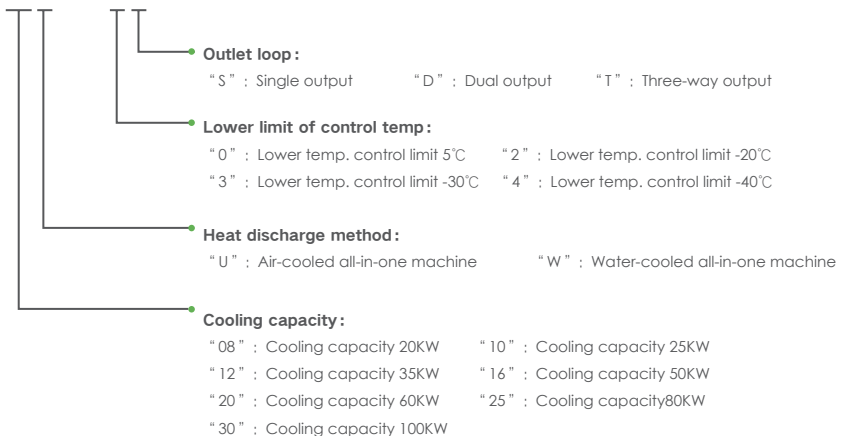
Typical Application

Widely used in motor, controller, battery pack performance test, as well as endurance fatigue test, new product development



MCt Name rules

MCt 12 U - C 2 D



MCa cold storage EV test temperature control system

MCa cool storage EV test temperature control system adopts a two-stage low-temperature special compressor to realize ultra-low temperature and high temperature control, different temperature can be set among each independent loops.

Functions and Features

- Temperature control range: -40 °C to 95°C .
- Temperature control stability $\pm 0.2^{\circ}\text{C}$.
- Control range 0.5~10L/min, 2~20 L/min, 4~40 L/min, 6~60L/min, control stability better than $\pm 0.2\text{L/min}$.
- Each channel controls temperature independently, with a maximum temperature difference of 135°C .
- Super fast rising and cooling rate, temperature change rate $\geq 10\text{K}$.
- Frequency conversion flow & pressure control to ensure stable output.
- Intelligent liquid return technology, automatic blowing.
- Load leakage detection technology, test production line load and pipeline tightness.
- Optional communication mode, RS485/CAN/Ethernet.
- Built-in anti-leakage flume design, and with leakage monitoring.

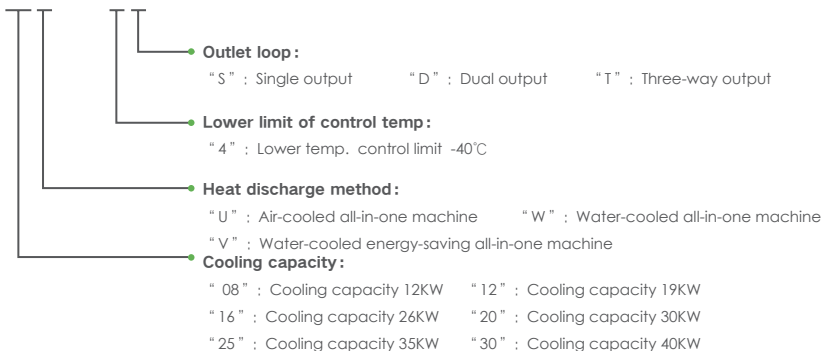


Typical Application

Widely used for extreme performance testing of motors and battery packs testing, rapid heating and cooling thermal shock test, and comprehensive environmental adaptability evaluation test.

MCa Name rules

MCa 16 W - C 4 T



MCy Oil Cooled EV test temperature control System

MCy oil-cooled EV test temperature control system adopts refrigerant-heat transfer oil-circulating oil secondary heat exchange mode to meet operation test of various working conditions for high and low temperature of oil- cooled equipment such as gearboxes and engines.

Functions and Features

- Temperature range: -40~150℃ .
- Temperature stability: $\pm 0.5^{\circ}\text{C}$.
- Optional flow control range: 2~20 L/min, 4~40 L/min, 6~60L/min, control stability better than $\pm 0.2\text{L/min}$.
- Secondary heat exchange technology to prevent direct contact between heater and oil.
- Switchable open/closed system to meet external test open/closed conditions.
- Special oil pump and flowmeter suitable for low temperature high viscosity fluid.
- Intelligent liquid return technology, automatic reverse blowing.
- Load leakage detection technology, test whole pipeline tightness.
- Optional communication mode, RS485/CAN/Ethernet.
- Built-in anti-leakage tank,equipped with leakage monitoring.

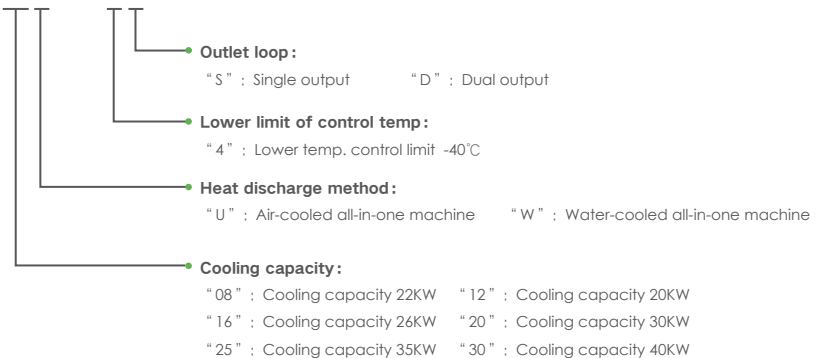
Typical Application

Widely used in high and low temperature shock, durability test conditions of oil-cooled motors, gearboxes, engines and other equipment.



MCy Name rules

MCy 16 W - C 4 D



MCm Mini EV test temperature control System

MCm mini EV test temperature control system is specially designed for low-power battery packs and battery modules etc. Compact structure, beautiful appearance and a wide range of functions can provide high and low temperature test environment, cold and heat shock and constant power for tests.

Functions and Features

- Temperature control range: -20°C to 95°C .
- Temperature control stability $\pm 0.5^{\circ}\text{C}$.
- Optional flow control range 0.5~10L/min, 2~20 L/min, control stability better than $\pm 0.1\text{L/min}$.
- Frequency conversion flow & pressure control to ensure stable output.
- Intelligent liquid return technology, automatic blowing.
- Load leakage detection technology, test whole pipeline tightness.
- Optional modes, internal circulation, external circulation, constant power output.
- Optional communication mode, RS485/CAN/Ethernet.Independent modular design.
- Can be upgraded easily.is adopted inside to easily meet users' upgrade requirements.
- 10 inch large color screen, friendly operation.

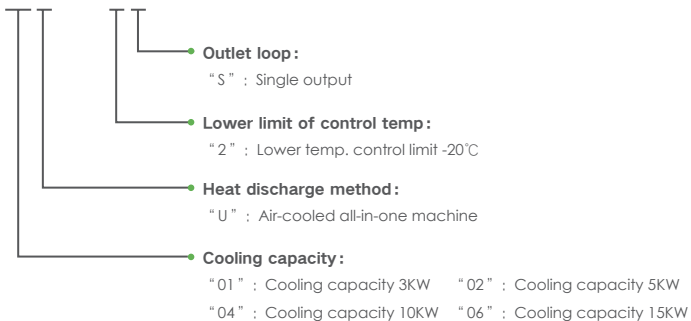
Typical Application

Widely used in the extreme performance test and thermal shock test of battery packs and modules; special tests such as internal cycle, external cycle, constant power, etc.



MCm name rules

MCm 02 U - C 2 S



MCs production line EV test temperature control system

MCs production line EV test and temperature control system, widely used in production line batch rapid testing, compact structure, beautiful appearance, cost-effective.

Functions and Features

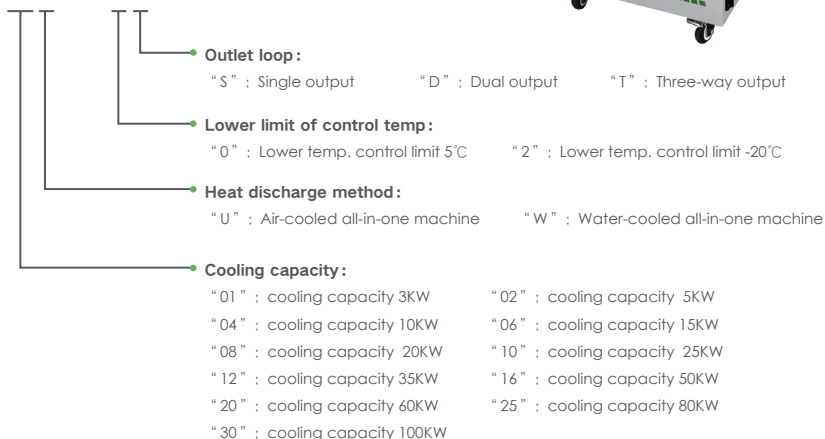
- Temperature control range: -20 °C to 95°C .
- Temperature control stability $\pm 0.5^{\circ}\text{C}$.
- Optional flow range: 2~20 L/min, 4~40 L/min, 6~60L/min, 9~90L/min, 10~150L/min.
- Intelligent liquid return technology, automatic blowing.
- Load leakage detection technology, test whole pipeline tightness.
- Optional communication mode, RS485/CAN/Ethernet.
- Compact structure, beautiful appearance, high cost performance.

Typical Application

Widely used in motor, controller, battery pack and other production line rapid testing.

MCs name rules

MCs 20 W - C 2 T



MCE energy-saving EV test temperature control system

MCE energy-saving EV test temperature control system, cooling water/chilled water direct heat, no refrigeration system, energy saving, low noise, environment friendly.

Functions and Features

- Temperature range: +10~95℃ .
- Temperature stability: $\pm 1^{\circ}\text{C}$.
- Optional flow control range: 2~20 L/min, 4~40 L/min, 6~60L/min, 9~90L/min, 10~150L/min.
- Water-liquid direct heat exchange, energy saving.
- Intelligent liquid return technology, automatic blowing.
- Load leakage detection technology, test whole pipeline tightness.
- Optional communication mode, RS485/CAN/Ethernet.
- Interior adopts an independent modular design, can be upgraded easily needs.

Typical Application

Widely used in high temperature performance and fatigue testing of motors, controllers, battery packs, etc.



MCE name rules

MCE 100 W - C 0 D

- **Outlet loop :**
 - " S " : Single output
 - " D " : Dual output
- **Lower limit of control temp :**
 - " 0 " : Lower temp. control limit 5℃
- **Heat discharge method :**
 - " W " : Water-cooled all-in-one machine
- **Cooling capacity :**

" 20 " : Cooling capacity 20KW	" 30 " : Cooling capacity 30KW
" 50 " : Cooling capacity 50KW	" 75 " : Cooling capacity 75KW
" 100 " : Cooling capacity 100KW	" 125 " : Cooling capacity 125KW
" 150 " : Cooling capacity 150KW	" 200 " : Cooling capacity 200KW
" 250 " : Cooling capacity 250KW	" 300 " : Cooling capacity 300KW



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Headquarters:

Beijing Wiip Co. Ltd.

Add: 4030, Building B, Hongfu International Innovation Center, Changping District,
Beijing 102209

Tel:+86-10-81789901/9902

Fax:+86-10-81780367

Web:www.wiipchiller.com

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