

TEMPERATURE CONTROL SYSTEM FOR SMALL EV TEST



Temperature Control System for Small EV Test - ToronChill™ TCSm

ToronChill™ TCSm is a compact Temperature Control System designed for small-scale EV test work on low-power battery packs and battery modules. It delivers stable heating and cooling to create controlled high/low temperature environments for performance checks, thermal shock routines, and constant-power test setups.

This Temperature Control System combines a space-saving footprint with flexible circulation modes and optional communications for easy integration. Intelligent fluid return control, leakage detection support, and stable flow/pressure control help improve repeatability when running small EV test cycles in labs and pilot lines.

APPLICATIONS

Temperature Control System for Small EV Test - ToronChill™ TCSm Applications

- Battery pack performance testing: Supports steady temperature conditioning for low-power packs during baseline and comparative EV test runs.
- Battery module validation: Enables controlled hot/cold environments to evaluate module behavior under changing temperatures.
- Thermal shock screening: Helps run heat-to-cold transitions for reliability checks on packs and modules.
- Constant-power test workflows: Maintains consistent thermal conditions during constant load or cycling programs.
- Lab and pilot-line EV test benches: Fits tight spaces while still supporting internal or external circulation setups.



FEATURES

Temperature Control System for Small EV Test - ToronChill™ TCSm Key Features

- Compact mini design: Built for small EV test stations where footprint and portability matter.
- Temperature control range: -20°C to 95°C for common battery pack and module evaluations.
- Stable control performance: Temperature control stability of ±0.5°C for repeatable EV test results.
- Optional flow control selections: 0.5–10 L/min or 2–20 L/min, with control stability better than ±0.1 L/min.
- Stable flow and pressure output: Frequency conversion flow and pressure control helps maintain steady circulation conditions.
- Smart fluid management: Intelligent liquid return with automatic blowing supports stable operation and easier recovery.
- Leakage detection support: Helps verify pipeline tightness during EV test operation.
- Multiple circulation modes: Supports internal circulation, external circulation, and constant-power output modes.
- Connectivity options: Optional RS485 / CAN / Ethernet for integration with EV test control systems.
- Upgradeable modular concept: Designed for easier upgrades to match changing test requirements.
- User-friendly control: 10-inch large color touchscreen for simpler setup and monitoring.

TECHNICAL SPECIFICATIONS

Temperature Control System for Small EV Test - ToronChill™ TCSm Technical Specifications

Specification	Details
Product Name	Temperature Control System for Small EV Test - ToronChill™ TCSm

Specification	Details
System Type	Compact Temperature Control System for EV test benches
Temperature Control Range	-20°C to 95°C
Temperature Control Stability	±0.5°C
Optional Flow Control Range	0.5-10 L/min or 2-20 L/min
Flow Control Stability	Better than ±0.1 L/min
Flow/Pressure Control	Frequency conversion flow & pressure control
Fluid Return Management	Intelligent liquid return; automatic blowing
Leak Management	Load leakage detection to support pipeline tightness
Operating Modes	Internal circulation; external circulation; constant-power output
Communication Options	RS485 / CAN / Ethernet (optional)
HMI	10-inch color touchscreen
Design	Compact structure; modular/upgrade-friendly configuration

ToronChiller™ TCSm name rules

TCSm 02 U - C 2 S

Cooling capacity:

"01" : Cooling capacity 3KW

"02" : Cooling capacity 5KW

"04" : Cooling capacity 10KW

"06" : Cooling capacity 15KW

Heat discharge method:

"U" : Air-cooled all-in-one machine

Outlet loop:

"S" : Single output

Lower limit of control temp:

"2" : Lower temp.
control limit -20°C



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