

TEMPERATURE CONTROL SYSTEM FOR EV'S ENERGY SAVING



Temperature Control System for EV's Energy Saving - ToronChill™ TCSe

ToronChill™ TCS is an energy-efficient Temperature Control System designed for EV test operations that need stable temperature control with lower operating cost. It uses direct heat exchange with cooling/chilled water, helping reduce noise and power consumption versus conventional refrigeration-based systems.

Built for production and durability testing, this Temperature Control System supports multiple flow configurations, optional communications, and intelligent fluid management. Load leakage detection and a modular internal design help maintain stable output and simplify long-term service in EV's Energy Saving test environments.

APPLICATIONS

Temperature Control System for EV's Energy Saving - ToronChill™ TCSe Applications

- Motor performance and durability testing: Maintains stable temperatures for high-temperature performance and fatigue testing cycles.
- Controller and inverter validation: Supports repeatable thermal conditions to compare performance across builds and batches.
- Battery pack thermal conditioning: Provides controlled temperatures for functional checks and thermal screening.
- EV production and lab environments: Fits high-throughput test areas needing an EV's Energy Saving temperature solution.
- Water-based facility integration: Ideal where cooling water or chilled water is already available and stable.



FEATURES

Temperature Control System for EV’s Energy Saving - ToronChill™ TCSe

Key Features

- Energy-saving direct heat exchange: Uses cooling/chilled water direct heat exchange to reduce energy consumption.
- Low-noise, environmentally friendly operation: Designed for quieter operation without a traditional refrigeration loop.
- Temperature control range for warm-side testing: Operates from +10°C to 95°C for many EV validation workflows.
- Stable temperature control: Temperature stability of ±1°C supports repeatable testing.
- Multiple flow configurations: Optional flows of 2-20 / 4-40 / 6-60 / 9-90 / 10-150 L/min to match different loads.
- Intelligent fluid return and blowing: Supports stable circulation and faster recovery during testing.
- Pipeline tightness support: Load leakage detection technology helps verify whole pipeline tightness.
- System connectivity: Optional RS485 / CAN / Ethernet integration for test control and data logging.
- Modular internal design: Independent modular structure supports upgrades and maintenance over time.

TECHNICAL SPECIFICATIONS

Temperature Control System for EV’s Energy Saving - ToronChill™ TCSe

Technical Specifications

Specification	Details
Product Name	Temperature Control System for EV’s Energy Saving - ToronChill™ TCS
System Type	Energy-saving Temperature Control System (direct heat exchange)
Temperature Control Range	+10°C to 95°C

Specification	Details
Temperature Control Stability	±1°C
Optional Flow Range	2-20 L/min; 4-40 L/min; 6-60 L/min; 9-90 L/min; 10-150 L/min
Heat Exchange Method	Cooling/chilled water direct heat exchange
Intelligent Fluid Return	Yes (with automatic blowing)
Leakage Monitoring	Load leakage detection for pipeline tightness
Communication Options	RS485 / CAN / Ethernet (optional)
Design Notes	Low noise; modular internal design; upgrade-friendly

ToronChiller™ TCSe name rules

TCSe 20 W - C 2 T

Cooling capacity:

"01" : cooling capacity 3KW "12" : cooling capacity 35KW
 "02" : cooling capacity 5KW "16" : cooling capacity 50KW
 "04" : cooling capacity 10KW "16" : cooling capacity 50KW
 "06" : cooling capacity 15KW "20" : cooling capacity 60KW
 "08" : cooling capacity 20KW "25" : cooling capacity 80KW
 "10" : cooling capacity 25KW "30" : cooling capacity 100KW
 "12" : cooling capacity 35KW

Heat discharge method:

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

Outlet loop:

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

Lower limit of control temp:

"0" : Lower temp. control limit 5°C
 "2" : Lower temp. control limit -20°C



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

