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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.

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FEATURES

Temperature Control System for EV’s Energy Saving – ToronChill™ TCSe Key Features

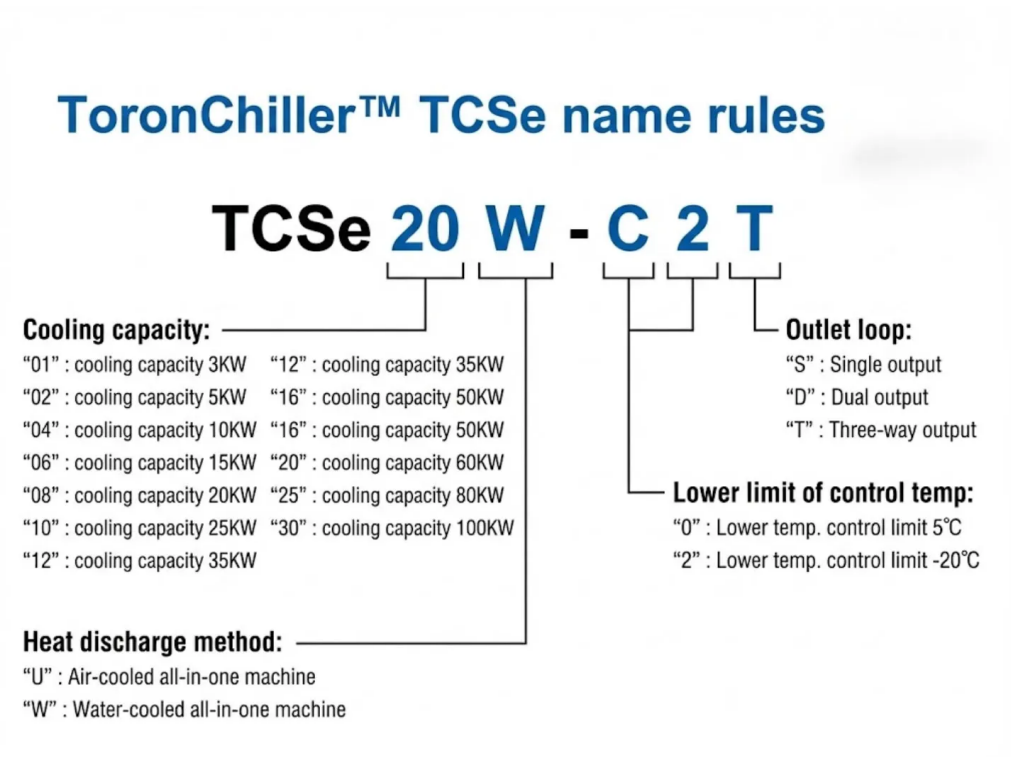
- Energy-saving direct heat exchange: Uses cooling/chilled water direct heat exchange to reduce energy consumption.
- Low-noise, environmentally friendly operation: Designed for quieter operation without a traditional refrigeration loop.
- Temperature control range for warm-side testing: Operates from +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



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