

BATTERY THERMAL MANAGEMENT SOLUTIONS

THERMAL MANAGEMENT SOLUTIONS
for ENERGY STORAGE SYSTEMS.

HOTSTART's Thermal Management System (TMS) features an intelligent design integrating proven technologies. Liquid cooling and heating assists in preventing thermal runaway while maximizing battery performance during both charge and discharge cycles.

For more information:
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HELP PREVENT THERMAL
RUNAWAY AND FIRE RISK



MAINTAIN PERFORMANCE
IN VARIOUS ENVIRONMENTS



INCREASE OVERALL
BATTERY LIFE



MAXIMIZE CHARGING AND
DISCHARGING CYCLES



THERMAL MANAGEMENT MADE SIMPLE

DIRECT COOLING & HEATING

Utilizing a rack-mounted manifold system, efficient, liquid-based cooling or heating is directly delivered to each battery module.

FULL CONTROL

The system controls go beyond basic temperature monitoring and warning.

When fully integrated into an ESS, the system responds to temperature requirements, including charge and discharge battery cycles.

ROBUST THERMAL MANAGEMENT

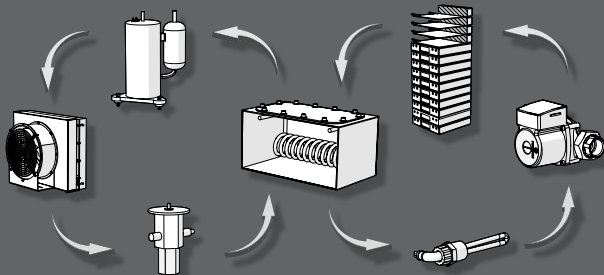
To maximize battery usage, either 3500 watts of cooling power or 1500 watts of heating power may be applied to the system's thermal transfer fluid reservoir – each TMS unit has sufficient capacity to support a typical 250 kW LFP battery module configuration.*

COMPACT & EFFICIENT

Designed to fit within a standard server rack, the system may also be floor-mounted or installed as modular components to minimize footprint and maximize output.

CHILLING

THERMAL TRANSFER



By harnessing two fluid cycles for chilling and thermal transfer, HOTSTART's TMS can quickly deliver efficient cooling and heating directly to each battery module – optimizing overall ESS performance.

System	
Phase, Hz	single-phase (1 Ø), 60 Hz
Voltage	120V 240V
Ingress Protection	indoor use only

Thermal Transfer	
Fluid Type	water/ethylene glycol (50/50 mix)
Flow	10 gpm (38 L/min)
Cooling Capacity*	3516 watts (1 ton)
Heating Capacity*	1500 watts

*TMS unit capacity designed to support approximately 250 kW LFP battery module configuration. System capacity is dependent on a variety of factors. Consult with HOTSTART for specific custom project requirements.