



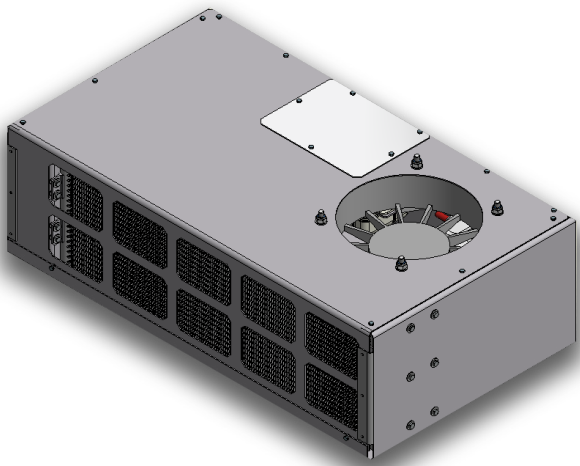
MCC Battery Cooler

Thermal management system for liquid-cooled batteries

The MCC Battery Cooler is an Integrated Stand-alone Battery Thermal Management System for Liquid-cooled Batteries. The cooler is designed to operate between -40 to 55 °C ambient temperature. Through circulating the coolant (glycol) using its own on-board brushless and seal-less pump, the Battery Cooler manages the battery temperature through the following functions:

1. Active cooling mode: Through the on-board and stand-alone refrigeration system using R-134a

2. Passive cooling mode: This mode is used during colder ambient conditions through an on-board liquid-to-air heat exchanger (radiator), which results in less power consumption and extended refrigeration components service life
3. Heating mode: Using an on-board liquid-to-liquid heat exchanger, where hot coolant from the engine or from a separate heating loop is used as a heat source. Another option is available to use an electric glycol heater as a heat source



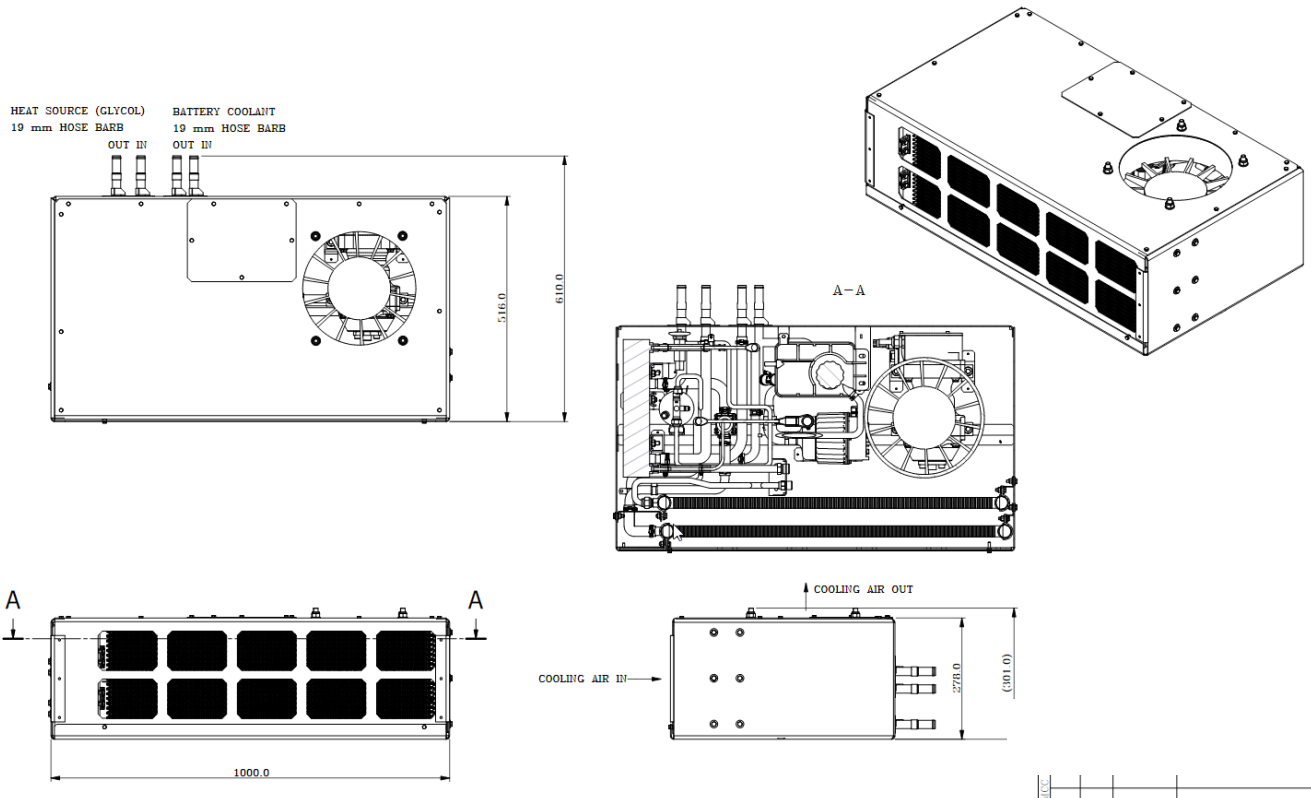
Features

- CANBUS communication
- Stand-alone refrigeration system
- Passive cooling
- Liquid-to-liquid heat exchanger for heating

Benefits

- Ease and flexibility of communication
- Energy conservation
- Energy conservation
- No isolation between the battery glycol and the heat source

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Technical Data

Cooling capacity (active cooling mode)	3.5 kW at 40°C ambient
Cooling capacity (passive cooling mode)	5 kW at -10°C ambient
Heating capacity	3 kW Q_{80}
Glycol flow rate	30 l/min (max)
Voltage	26 Vdc (Except electric glycol heater- application-specific)
Power consumption	Active cooling mood: ~1.5 kW / Passive cooling mode: ~250 W Heating mode: ~125 W (Except electric glycol heater – application-specific)
Dimensions (W x D x H)	1000 mm x 610 mm x 300 mm
Weight	40 kg (88 lbs)

