

# HYBRIDRIVE SERIES-E

THE SMAERT ELECTRIC

# HYBRIDRIVE COOLING PACKAGE (HCP)

HybriDrive<sup>®</sup>  
PROPULSION SYSTEMS

**SERIES-E: THE “SMART” ELECTRIC IS A COMPLETE ELECTRIC PROPULSION AND POWER SYSTEM; AND WITH 4,500 SYSTEMS OPERATING AROUND THE WORLD, BAE SYSTEMS IS CONTINUALLY INNOVATING AND BRINGING ZERO-EMISSION TECHNOLOGY TO TRANSIT.**

The HybriDrive Cooling Package (HCP) is an integrated, self-contained cooling system designed to provide proper cooling and thermal management for HybriDrive system components. The HCP can be used to provide cooling for the electronic components including the Propulsion Control System (PCS), Accessory Power System (APS1 or -APS2), or the Modular Traction System (MTS). Two HCPs are required to provide cooling for the complete HybriDrive propulsion system. HCP is available for the HDS 100, HDS 200, and HDS 300 systems.

The HCP includes a radiator, fans, coolant pump, and expansion reservoir, and is designed to easily integrate directly into the HybriDrive system. The HCP communicates with the System Control Unit (SCU), which controls fan speed and coolant flow to maintain optimum cooling and system

## Features

- Fully integrated, self-contained design
- High efficiency electric fans and cooling pump
- Robust packaging for unprotected exterior installation
- Integrated CAN Bus communications for system control and monitoring

## Benefits

- Provides optimum cooling for HybriDrive power components
- Single design cools electronics or MTS components
- HybriDrive integrated design simplifies system design, installation and integration issues for vehicle original equipment manufacturer
- High efficiency, brushless electric motors are reliable and maintenance free
- System controlled fan and pump speeds provide optimum cooling for all operating conditions, boosting overall system efficiency

HybriDrive propulsion system components are sold as part of our HDS family of products and are available through BAE Systems qualified OEMs. Components are not sold separately.



## HybriDrive Cooling Package (HCP)

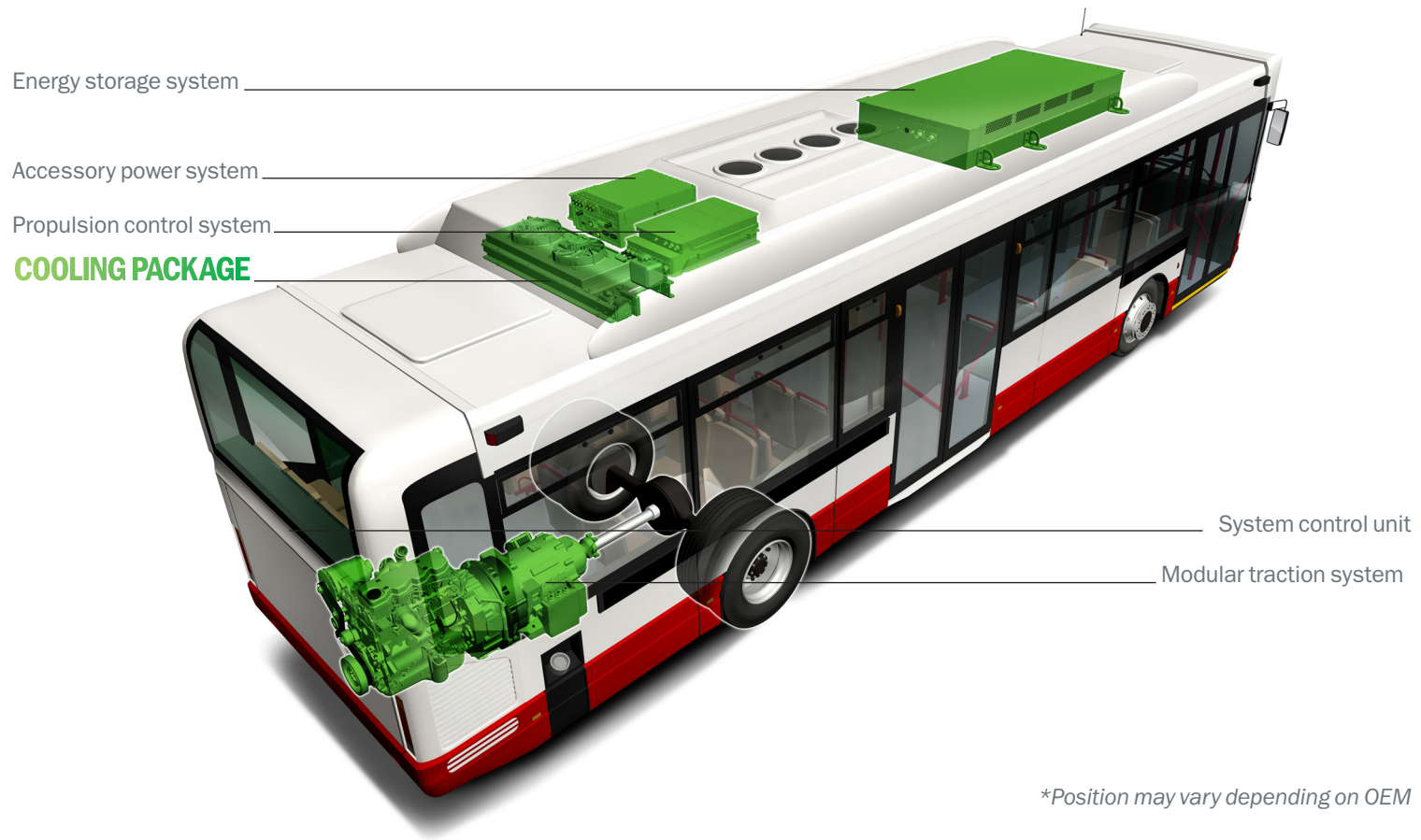
### RATINGS

- Heat rejection
  - 17.0 kW @ 36°F (20°C) inlet temperature differential
  - 23.3 kW @ 54°F (30°C) inlet temperature differential
- Maximum outlet pressure: 25 psi (172.4 kPa)
- Maximum flow rate: 15 gpm (56.8 lpm)
- Operating temperature: -40°F to 185°F (-40°C to 85°C)

### SIZE

- Length: 52.6 in. (1336 mm)
- Width: 17.8 in. (452 mm)
- Height: 10.9 in. (277 mm)
- Weight: wet: 106 lbs. (48 kg)
- Coolant: water ethylene or propylene glycol

**BAE SYSTEMS**



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