All-Electric integrated AC for e-powered double deck buses

DD540-E



Best-in-Class 1000V A/C Solution for High-Performance Electric & Hydrogen Double-Deckers

The DD540-E is a compact, high-efficiency rear-mounted A/C unit specifically engineered for modern electric and hydrogen double-decker buses. Built for 1000 VDC high-voltage platforms, it combines up to 54 kW cooling capacity with a lightweight modular split design.



Featuring an integrated 1000 V compressor and inverter, advanced anti-corrosion nano-coating, and an innovative hinge structure for effortless maintenance, the DD540-E delivers maximum reliability, whisper-quiet operation, and lowest life-cycle costs.

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DD540-E – for e-powered double deck buses





HIGHLIGHTS

High Performance & 1000V Readiness

- Engineered for modern high-voltage architectures up to 1000 VDC (integrated 1,000 V compressor & inverter)
- High cooling capacity of up to 54 kW for demanding climate environments
- Modular split design enabling uniform airflow distribution across both decks

Low Life-Cycle Costs & Fast Servicing

- Lightweight aluminum construction reducing overall vehicle energy consumption
- Innovative hinge-opening structure for quick, tool-free maintenance access
- Anti-corrosion nano-coated coils ensuring maximum durability without loss of thermal efficiency
- High-performance silent BLDC fans for extended operational lifespan

Passenger Comfort & Clean Air

- Independent dual-deck temperature management
- Optional Electrostatic Air Cleaner (EAC) removing up to 97 % of fine particles (0.3 µm)
- Optimized climate integration for the driver workstation

Safety & Sustainability

- Hermetically sealed refrigerant circuit for reliable leak protection
- Low noise emissions for quiet urban operation
- Washable air filtration options to minimize consumable filter waste

TECHNICAL DATA

	CC540-E Split
Maximum cooling capacity (kW)	54
Evaporator air flow (m^3/h) – each deck	8,000
Condenser air flow (m^3/h)	12,000
Input HV range (VDC)	450V - 1,000V
Total current (A)	34 (DC600V)
Weight (kg)	400
Dimensions L x W x H (mm)	2,180 x 730 x 760
Refrigerant	R407C
Cut-Off temperature (°C)	52
Optional	- Integrated Battery Cooling - Nono-coated Coils - Electrostatic Air Cleaner

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