



XD THERMAL Develops Integrated Cooling Architecture for European Electric Bus Platform

Descrizione

COMUNICATO STAMPA - CONTENUTO PROMOZIONALE

SUZHOU, China, Sept. 1, 2026 /PRNewswire/ - XD THERMAL has completed development of an integrated dual-sided liquid-cooling architecture for a European electric bus platform.

The platform's 35.3-kWh battery system combines liquid-cooled enclosures with stamped top plates, enabling heat to be managed from both sides of the battery modules. The first prototype was delivered in approximately six weeks, and the design reached production readiness within two months.

By integrating cooling functions into the battery enclosure, the design reduced cooling-related components by approximately 25% and simplified several assembly steps. The multi-interface configuration also improved heat distribution across the battery system, helping maintain better lithium battery lifespan.

Validating system-level sealing presented a key engineering challenge because multiple interfaces, joints and sealing paths had to be assessed together rather than as separate components. The team developed precision fixtures and conducted staged air-leak and helium-leak testing to verify overall sealing integrity and detect low-rate leakage before release.

A second challenge was developing a reliable production process for the multifunctional coating system. Different surfaces required different insulating and thermal-barrier materials rather than a uniform coating. Tailored hanging and masking methods were therefore developed to maintain clear coating boundaries and consistent application across complex geometries.

"Once cooling becomes part of the enclosure, the design boundary changes," said Xu, Technical Director at XD THERMAL. "The challenge is no longer to optimize a cooling plate alone, but to ensure that the complete structure delivers stable thermal performance while remaining practical to manufacture."

Thermal, structural, process, quality and manufacturing teams worked in parallel throughout development, allowing prototype experience to feed directly into design and process revisions. The scalable architecture can be adapted to different vehicle platforms, battery-pack dimensions and capacity requirements without fundamentally redesigning the cooling concept.

Since early 2025, the company has expanded its commercial-vehicle thermal-management operations, adding dedicated production resources for larger-format battery-cooling components and achieving volume-production readiness by year-end. This manufacturing base now supports electric bus and heavy-duty vehicle programs beyond the initial platform, bringing engineering, validation and production resources into a common workflow for programs with different pack sizes and structural requirements.

The company will also participate in IAA TRANSPORTATION 2026 in Hannover this September at Hall 22 C23, where battery integration, manufacturability and the transition from prototype to series production will be discussed with industry partners.

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