PRESS RELEASE

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Sanden Corporation

SIE Secures Top-Class Finish in 17-Hour Electric Vehicle Endurance Race

～Demonstrates High-Efficiency Thermal Management Technology with Natural Refrigerant-Compatible ITMS～

Sanden International Europe (SIE), the European subsidiary of Sanden Corporation (Headquarters: Isesaki, Gunma, Japan), participated in the “ADAC e-competition,” a Battery Electric Vehicle (BEV) endurance race held at Germany’s Hockenheimring from October 18 to 19, 2025. The event aimed to demonstrate high-efficiency thermal management technology and collect real-world driving data.

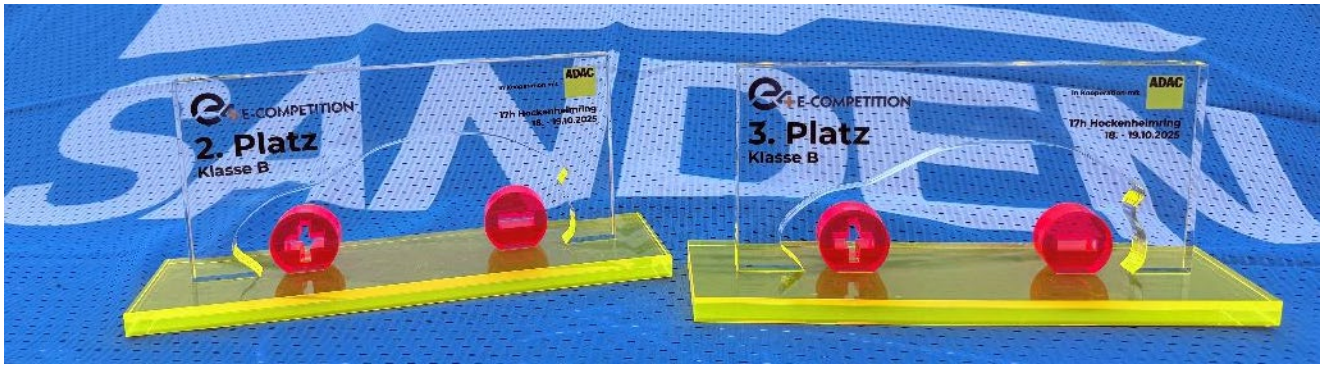
Unlike conventional speed-focused competitions, this 17-hour endurance race evaluated overall performance, including charging efficiency, energy management, and control precision. A total of 33 teams, including major automotive manufacturers, took part in the challenge. The Sanden team competed in Class B with two BMW iX1 vehicles equipped with natural refrigerants R290 and R744, achieving an impressive result.

Purpose

・Evaluate system performance and validate technology through real-world driving.
・Confirm stability of system control and thermal management during long-duration endurance runs.
・Verify charging strategies and optimize system balance under competitive conditions.

Competition Results and Future Outlook

All systems operated stably, and the effectiveness of improvements was confirmed. Both vehicles delivered outstanding performances. The R290-equipped vehicle completed 164 laps, securing second place in its class, while the R744-equipped vehicle achieved 162 laps and finished third. The R290 vehicle demonstrated slightly higher overall energy efficiency in thermal management systems, aligning with predictions from prior simulations and bench tests, and enabling the collection of valuable real-world data. (Bench testing is a critical process for evaluating product performance, durability, and reliability.)
Participation in this race marked a significant step toward enhancing refrigerant system reliability and acquiring essential driving data for thermal management solution development. Sanden will continue rigorous technology validation and accelerate the advancement of high-efficiency thermal management technologies for an electrified society.



■Event Overview

Date: October 18–19, 2025
Location: Hockenheimring Grand Prix Circuit, Germany
Participants: 33 teams, including major manufacturers such as BYD, KIA, Ford, Smart, Lucid, and Tesla
Classification：Five classes based on battery capacity, ranging from 33 kWh to over 75 kWh
(Sanden competed in Class B, with a maximum of 50 kWh)

■Test Vehicle：BMW iX1

Development: SIE Technical Center Europe（TCEu）
Previous Validation: Long-distance tests under multiple conditions conducted in Granada, Spain, during ITMS European summer validation trials
Refrigerants Used: R290 (propane) and R744 (carbon dioxide)
※BMW models were chosen because they already employ water-cooled condensers, enabling efficient implementation of a dual indirect system.

[Links]
・For detailed competition results, please visit：https://24ecompetition.com
・Sanden International Europe（SIE）sanden-europe.com

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