

ebm-papst's Digital Ecosystem NEXAIRA Unveiled at ISH 2025

Efficiency Enhancement and High Availability through Digital and Intelligent Solutions

At ISH Frankfurt, ebm-papst unveiled its comprehensive NEXAIRA ecosystem, showcasing digital solutions that extend beyond traditional fan operation. Featuring innovative technologies for predictive maintenance, AI-driven cooling system optimization, and smart monitoring, NEXAIRA delivers cutting-edge approaches to maximizing energy savings, enhancing efficiency, and improving reliability across various applications in refrigeration, air, and climate technology.

Modern EC fans are a crucial component of efficient and reliable systems. To achieve significant energy and cost savings while meeting ever-growing demands, optimal "hardware" alone is no longer sufficient. Digital solutions that integrate operational and environmental data with software and artificial intelligence provide numerous additional benefits.

Maximum Energy Savings Through a Digital Ecosystem

The digital ecosystem NEXAIRA optimizes the energy consumption of fans and cooling systems by fine-tuning the operating points of highly efficient EC fans. Through targeted analysis of system data, fan and system operations (e.g., fans in a FanGrid) are intelligently adapted to actual demand. This approach delivers substantial benefits in both retrofitting and new project planning. Replacing outdated hardware with modern, energy-efficient fans already yields significant savings. When combined with digital solutions such as 360° monitoring and intelligent control, fan energy consumption can be reduced by up to 70%.

Industry-Specific Solutions

NEXAIRA offers various digital services, including demand-controlled ventilation (DCV), vibration analysis, and heat exchanger or filter clogging detection. These services can be tailored to meet the unique requirements of different industries. For retrofit projects, the focus is on easy commissioning, seamless maintenance, and optimal integration with remote monitoring capabilities. The ebm-papst Service App is a key component, which enables rapid commissioning, comprehensive functional tests, and seamless cloud connectivity. This not only simplifies the work of installers and service teams but also enhances long-term operational reliability.

Amid skilled labor shortages, NEXAIRA's specialized solutions for refrigeration and air handling systems stand out. The emphasis is on maximum energy efficiency, high operational reliability, and effortless system setup. To achieve this, ebm-papst leverages core functionalities such as 360° monitoring and cloud-to-cloud communication.

AI-Supported Cooling System Optimization: Enhancing Energy Efficiency for Data Centers

ebm-papst has developed a dedicated solution for data center operators that significantly reduces energy consumption across the entire cooling circuit. Using digital twin technology, all cooling processes are modeled in real-time to determine the most efficient operating parameters. Through adaptive control, energy savings of up to 50% can be achieved throughout the cooling process. Beyond cost reduction, this solution plays a key role in meeting sustainability targets and ensuring compliance with regulatory requirements. The on-premises setup guarantees the highest level of data security, while an integrated alerting system detects potential issues early, allowing for proactive countermeasures. Additionally, this advanced technology can be applied to other refrigeration systems, further expanding its benefits.

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Image 1: With the digital ecosystem NEXAIRA, ebm-papst emphasizes its ambition to lead air and refrigeration technology into a new era.



Image 2: Using a digital twin, the current system status can be determined and monitored. This increases operational safety and energy efficiency.



Image 3: The epCloud is the center where system data converges and can be monitored. It also represents the basic functions and digital services that form the foundation of the NEXAIRA ecosystem.

Images	ebm-papst
Characters	approx. 3,500, including headings and sub-headings
Tags	NEXAIRA, Data Center, AI-supported Cooling System Optimization, Digital Solutions, Air Technology, Efficiency, Predictive Maintenance, Cloud, Digitalization, AI (Artificial Intelligence), Innovation, Technology Leader, SME (Small and Medium-sized Enterprises), Air Technology, Artificial Intelligence, Energy Transition
Link	www.ebmpapst.com/digital-services

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About ebm-papst

The ebm-papst Group, a family-run company headquartered in Mulfingen, Germany, is the world's leading manufacturer of fans and motors. Since it was founded in 1963, the technological leader has set international industry standards with its core competencies in motor technology, electronics, digitalization, and aerodynamics. ebm-papst offers sustainable, intelligent, and tailor-made solutions for virtually every requirement in ventilation and heating technology.

In the 2023/24 financial year, the Group generated a turnover of EUR 2.408 billion. It employs just under 14,000 people at 30 production sites (including in Germany, China, and the U.S.) and in 50 sales offices worldwide. ebm-papst sets the benchmark in almost all sectors, such as ventilation, air conditioning and refrigeration technology, heating technology, information technology, mechanical engineering, intralogistics, and medical technology.

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