FALKONAIR NEWS

Smarter. Proven. Protected
January 2026

Independent Field Results Validate Falkonair VMF Performance

A recent U.S. field demonstration conducted under the CalNEXT program independently validated Falkonair's Variable Mass Flow (VMF) package-incorporating our patented Smart Compressor Control - in refrigerated warehouse applications.

The study demonstrated 20-30% energy savings, 25-30% peak demand reduction, and up to 10-11 metric tons of CO_2 avoided per compressor annually, with a simple payback of approximately 1.7-2.0 years.

Notably, these results were achieved through retrofits of existing fixed-speed compressors, delivering measurable efficiency gains without system replacement or operational disruption.

What We've Been up to At Falkonair

Over the past few months, the team at Falkonair has been focused on pushing performance, reliability, and innovation even further. From refining our core technologies to supporting new and existing partners, we've been busy turning ideas into real-world results.

We've continued developing and testing advanced control strategies to improve system efficiency, stability, and operational insight-while staying closely aligned with the needs of operators and OEMs. At the same time, we've been strengthening collaborations, streamlining internal processes, and laying the groundwork for upcoming deployments.

As always, our focus remains the same: delivering smarter, more efficient air and refrigeration solutions that perform in the real world.

Scan the QR code to read the complete independent report and visit our website.

Why Control Is the Opportunity!

Much of the discussion around HVAC-R efficiency continues to focus on equipment selection installed capacity, replacement cycles, and nominal efficiencies. While these factors are important, they address only part of system performance. Far less attention is given to how systems operate under real, dynamic conditions once commissioned.

In practice, day-to-day efficiency is governed by control behavior: how compressors stage and unload in response to changing demand, how mass flow is distributed across circuits, how head pressure and suction conditions are managed, and how frequently systems cycle under part-load operation. When these control strategies remain static or are based on conservative design assumptions, systems can operate persistently away from their optimal efficiency point, regardless of the underlying hardware.

At Falkonair, this has driven a focus on control as a primary mechanism for improving performance within existing assets. Our Smart Compressor Control targets compressor sequencing, load sharing, and head pressure stability. Variable Mass Flow and Micro VMF extend this approach by dynamically adjusting refrigerant mass flow to match instantaneous load, reducing unnecessary compression work and improving part-load efficiency.

As regulatory and commercial pressure increases to reduce energy consumption without wholesale plant replacement, control strategies become increasingly critical. This raises a fundamental question for the industry: if most HVAC-R systems already function as designed, are their control algorithms sufficiently responsive to the conditions they experience in operation?

Patent Granted: A Major Milestone

We are proud to announce that Falkonair's Smart Compressor Control technology has been officially granted patent protection.

This achievement validates years of advanced engineering and further strengthens the technical differentiation of our Variable Mass Flow (VMF) platform.

For customers and partners, it provides added confidence that Falkonair delivers proven, protected technology designed to deliver measurable energy performance improvements.

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Measured Results: 28% Energy Savings with a U.S. Based ESCO

Recent projects delivered by a U.S. based Energy Service Company (ESCO) demonstrate an average 28% reduction in energy consumption following the deployment of Falkonair's VMF package, including the patented Smart Compressor Control.

These results were achieved across live commercial HVAC-R installations, without equipment replacement or operational disruption. By dynamically optimizing compressor operation in real time, the solution reduces unnecessary runtime, stablizes system performance, and delivers immediate, measurable efficiency gains.

For ESCOs, this translates into faster payback periods, verifiable M&V outcomes, and scalable savings across portfolios-addressing rising energy costs while supporting decarbonization goals.

Learn more about the Micro VMF and how it delivers measurable, repeatable energy savings.

Visit Us At

AHR FEB 2-4 2026 VEGAS

Presenting
LIVE
Mon, Feb 2 | 10:15 AM
(Theater C).

Stand
C5650
See our VMF and Micro VMF solutions up close.

Expanding Our U.S. Capabilities

Falkonair has expanded its offices, warehousing, manufacturing, and R&D capabilities in West Palm Beach, Florida. This strategic investment strengthens our ability to support customers across North America through faster delivery, increased production capacity, and advanced technical development.

By scaling our U.S. operations, we are accelerating product innovation, improving lead times, and providing deeper on-the-ground support for partners and facility owners implementing Falkonair's VMF package powered by our patented Smart Compressor Control.

Interested in visiting our West Palm Beach facility or learning how our expanded U.S. operations support your projects. Contact us to arrange a tour or discussion.

Projects Over the Last 5 Years

Lennox RTU - Walmart owned Supermarket

Carrier 50 ton Air-Cooled Chillers – Crane Currency

York Ammonia 150 hp Screw Compressors - Stemilt Farm

Bitzer Recip – Rodman Ice Arena