

HYDAC Brings Integrated Systems Approach To iVT Expo As Off-Highway Engineering Evolves

As electrification, automation, and intelligent machine design reshape the industry, HYDAC helps OEMs optimize complete machine performance.

BETHLEHEM, PA, UNITED STATES, August 19, 2026 /EINPresswire.com/ -- The off-highway equipment industry is undergoing one of its most significant engineering transformations in decades. Electrification, intelligent controls, connected hydraulics, software integration, and increasingly complex machine architectures are redefining how OEMs design, build, and optimize equipment. Success no longer depends solely on selecting the best individual components; it depends on how every system works together.



At iVT Expo USA 2026, HYDAC will demonstrate how its Integrated Systems Approach (ISA) helps OEMs address these evolving challenges by bringing together expertise in fluid power engineering, controls and electronics engineering, and application and system engineering to optimize complete machine performance.

"The complexity of today's machines demands a different way of thinking. OEMs are no longer looking for suppliers that optimize individual components; they're looking for engineering partners who understand how every system works together. Our Integrated Systems Approach brings together fluid power, controls, electronics, and application expertise to help customers solve complex engineering challenges, reduce development risk, and ultimately build better-performing machines."

— Chris Kolbe, Senior Vice President Sales and Marketing, HYDAC

Engineering Beyond Individual Components

Traditionally, mobile equipment design has focused on selecting best-in-class components. Today, however, machine performance depends on the interaction between hydraulic systems, electronic controls, sensors, filtration, cooling technologies, and intelligent software.

HYDAC partners with OEMs early in the design process to understand complete machine objectives, identify opportunities for system optimization, and develop integrated solutions that improve efficiency, reliability, and long-term performance.

This collaborative approach enables manufacturers to reduce engineering complexity while delivering equipment capable of meeting evolving customer expectations and regulatory requirements.

Three Engineering Disciplines. One Integrated Solution.

HYDAC's Integrated Systems Approach is built around three complementary engineering disciplines that work together to improve overall machine behavior.

Fluid Power Engineering focuses on hydraulic performance, filtration, thermal management, accumulators, and energy efficiency to ensure reliable operation under demanding conditions. Controls & Electronics Engineering integrates sensors, controllers, software, and machine intelligence to monitor, automate, and optimize system performance while providing valuable operational data.

Application & System Engineering combines these technologies into complete machine solutions, helping OEMs improve productivity, simplify integration, and accelerate innovation based on machine-specific applications. Rather than treating technology independently, HYDAC evaluates how systems interact to deliver measurable improvements in machine performance.

Supporting the Next Generation of Off-Highway Equipment

The conversations taking place throughout iVT Expo reflect the rapid evolution of mobile equipment engineering. Electrification, hybrid powertrains, intelligent hydraulics, predictive maintenance, thermal management, connected machine, and advanced controls are no longer isolated technologies—they are becoming essential elements of next-generation equipment design.

HYDAC's Integrated Systems Approach helps OEMs navigate this complexity by providing more than 60 years of engineering expertise that spans the entire machine, enabling customers to optimize performance while reducing technical risk and improving lifecycle value.

Visitors to Booth 510 will have the opportunity to discuss strategies for improving machine efficiency, integrating the right mix of hydraulic and electronic systems, managing critical thermal loads, enhancing condition monitoring, and ultimately developing intelligent mobile equipment for the future. To demonstrate the Integrated Systems Approach in a real-world application,

HYDAC will also showcase an OEM skid steer equipped with integrated HYDAC hydraulic, filtration, cooling, sensing, electronic, and control technologies. The machine illustrates how system-level engineering enables OEMs to optimize performance, improve reliability, and simplify machine design.

"The future of off-highway equipment isn't defined by a single technology," said Chris Kolbe, Senior Vice President Sales & Marketing at HYDAC. "It's defined by how effectively technologies work together. Our Integrated Systems Approach helps customers engineer smarter, more efficient, and more reliable machines by looking at the complete system rather than individual components. That's the conversation we're excited to have at iVT Expo."

For more information about HYDAC's Integrated Systems Approach and its complete portfolio of mobile equipment solutions, visit www.HYDAC.com/en-us or stop by Hall F - Booth 510 during iVT Expo USA 2026.

In addition to exhibiting, HYDAC product managers will deliver two technical presentations during the conference, sharing insights on integrated systems engineering and functional safety for off-highway equipment.

About HYDAC

HYDAC is a global technology partner providing fluid power, filtration, cooling, electronics, controls, accumulators, sensors, and integrated system solutions for mobile and industrial applications. Through engineering collaboration and application expertise, HYDAC helps OEMs optimize machine performance, improve reliability, and accelerate innovation across a wide range of industries.

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