

# GAS COMPRESSION

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## ELECTRIC-DRIVE **COMPRESSION** WITH ECOFLEX



# ELECTRIC-DRIVE COMPRESSION WITH ECOFLEX

MONARCH RESOURCE PARTNERS FINDS SUCCESS WITH ITS ECOFLEX FLEET



BY BRENT HAIGHT

Monarch Resource Partners (Monarch) began operation in 2021 with a simple mission to provide employees and customers with consistent, long-lasting service. “One of the driving factors was to bring service back to our industry,” said Brett Schubert, CEO of Monarch. “Our industry has become hyper-focused on putting horsepower on the ground for the sake of growth and less focused on the opportunity to offer solutions and service expertise to the customer. This is an industry that was bred on service, on a sense of urgency, on runtime. Both our customers and team deserve consistency in what we provide, and it is our goal to provide both with an exceptional experience when it comes to the service and support we offer — whether it is a Monarch unit or a customer-owned unit.”



EcoFlex uses a TECO-Westinghouse electric motor and Ariel compressors.

ing traditional mechanical components, and the elimination of greenhouse gas emissions of a standard gas drive package,” said Schubert. “The demand for our electric-drive units has grown much faster than we expected. While we are excited about the early success we have experienced with the adoption of this type of compression offering, we understand the need to remain focused on consistently delivering a reliable and cost-effective compression solution. We can’t solely rely on the environmental, social, and governance [ESG] movement. We have to be competitive regardless of what the market trends are. If ESG were to go away tomorrow, customers need to source compression from Monarch because of the service we provide them, not because of the type of package we deploy.”

EcoFlex uses a TECO-Westinghouse electric motor and Ariel compressors. Four models are available, offering 800, 1500, 2500, and 5000 hp (596, 1119, 1865, and 3730 kW). Its Scope I zero-emissions design incorporates an on-skid air compressor for instrumentation, pressure safety valves that are captured and brought to the skid edge, packaging vents and drains that are captured and brought to the skid edge, and more.

“Our end devices are standard relative to what we’ve packaged in the past at traditional compression companies,” said Schubert. “We wanted to incorporate the same components and design aspects our operations team has experience working with. We’ve applied some new features to eliminate fugitive gas emissions and developed a modular drive system that has been instrumental in our early success, but the process in which we compress gas has not changed.”

Monarch’s E-Skid is a cornerstone to its electric compression fleet. A variable frequency drive (VFD) modular skid option, E-Skid is Monarch’s exclusive design to “reduce customer lease operating expenses and provide a reliable technology to support the transition toward a

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Headquartered in College Station, Texas, with offices in Midland, Texas, Monarch provides natural gas contract compression services with its EcoFlex compressor fleet and contract operations for customer-owned compression. In addition, it provides turnkey solutions for compressor facility design and construction. While Monarch continues to grow its contract operations and facility offerings, the demand for its EcoFlex fleet has exceeded expectations.

“We are proud to be the first 100% electric-driven fleet in the industry. Our EcoFlex package provides customers with increased flexibility of gas volumes, superior reliability by minimiz-



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Monarch offers full turnkey solutions to help customers adopt electrification in their compression operations.

cleaner natural gas compression solution,” said Schubert. “The modular medium-voltage VFD allows users to start motors from 0% of full load amps and control rpms as needed. Using a synchronous transfer design, we are able to start multiple compressors with one E-Skid and efficiently drop them ‘across-the-line’ as needed, or we can leave a unit on the drive to allow for more volume control for that location. This reduces footprint, lowers installation cost, and reduces customer lease operating expenses.”

Designed to be suitable for harsh ambient or elevation conditions, the skid uses NEMA 3R and NEMA 4 enclosures and is open to atmosphere — eliminating building, permitting, and hazardous gas collection areas. Motor protection relays at each run contactor provide motor protection and allow coordination with upstream relays for additional protection of site equipment. The medium-voltage drive meets IEEE 519 requirements. Step-down transformation and controls for auxiliary loads on the compressor package are self-contained on the E-Skid.

To accommodate varying degrees of customers’ electric transitions, Monarch offers full turnkey solutions to help adopt electrification in their compression operations. “Among the hurdles we face is the learning curve that exists when moving from natural gas engines to electric-drive compression. It’s not as simple as just hooking up to the suction and discharge and smashing gas,” said Schubert. “Because of this, we offer solutions stepping down from utility power through the design and installation of all secondary electrical infrastructure on-site.”

In addition to its EcoFlex design and E-Skid VFD, Monarch provides customers with modular compressor facilities that can be tailored to specific process conditions and challenges. Facilities are engineered, fabricated, and skid-mounted in a shop environment and then installed and managed through start-up.

“The transition toward electrification in the oil and gas industry presents challenges for everyone involved throughout the value chain. Fortunately, we feel that Monarch is well positioned to help our clients achieve this transition as it relates to their compression solutions,” said Schubert. “When you look at our EcoFlex fleet, mechanically you see mostly what you would see from a traditional gas compression package, but the difference isn’t simply in the equipment. We leverage traditional industry knowledge with a new vision and application of natural gas compression to help our customers navigate through the changes in our industry — and that is only achievable through continued focus on providing customers with the service our industry was built on.” 