



OIL & GAS CASE STUDY

INCREASING EFFICIENCY AND RELIABILITY WITH DUAL-COMPRESSOR CONTROL

CHALLENGE

Natural gas compressor operators were facing efficiency losses from oversized equipment. Running a 400 HP compressor at partial load significantly reduced efficiency, sometimes cutting performance in half. At the same time, existing control systems from competitors led to excessive cycling, causing mechanical stress and oil loss in rotary screw compressors. Operators needed a smarter way to match capacity with demand while maintaining reliability in harsh field environments.

SOLUTION

AID engineered a dual-compressor lead-lag control system featuring a redundant, dual-controller architecture. Each compressor was equipped with its own independent controller, allowing the system to intelligently sequence operation based on demand while automatically alternating lead units to balance runtime. By splitting the load across two smaller motors instead of one oversized unit, the system maintained operation near peak efficiency. Built-in redundancy ensured that if one unit failed, the other could continue operating without interruption.

RESULT

The new system significantly improved energy efficiency by keeping compressors operating at optimal load levels. Reduced cycling minimized wear and eliminated common issues like oil discharge, extending equipment life. Most importantly, the redundant design enhanced reliability, ensuring continuous operation even in the event of a failure. This solution has since been deployed across thousands of units in the field, supporting operators, OEMs, and packagers with a more efficient and dependable approach to gas compression.

DRIVE OPTIONS

With over 40 years serving the oil & gas fields, our PressureMaster drives have a long history of performing in the most demanding conditions in the world. Our fully engineered drive packages give Gas Lift, VRU, and Wellhead Compression sites the dependability and control you need to increase production and extend equipment life.

