

CNYOG Turns to D-R

FOR HELP “GOING GREEN”

FROM TIME TO TIME, necessity truly is the mother of invention. Such a case could be made for Dresser-Rand’s DATUM® C compressor.

While the natural gas pipeline industry was at one time limited to rural areas, in recent years, the ever-expanding network of transmission pipelines and stations has become commonplace, including in heavily populated areas. As a result, gas suppliers have had to balance the demands for a reliable source of natural gas with the environmental and aesthetic concerns of their neighbors. Companies have been forced to seek new and innovative ways to reduce noise and emissions from their pipeline operations.

Put simply, they’ve had to “go green.”

Enter the DATUM C “compact compressor,” an integral high-speed motor-driven compact compressor designed for natural gas pipeline and process gas applications. Its small footprint (approximately 8 feet by 12 feet, or 2.4 meters by 3.6 meters) and modular compressor bundle make installation and maintenance easier than for conventional units, while minimizing the requirements for auxiliary systems and buildings. Because of its integrated, totally enclosed configuration, the DATUM C compressor offers significant environmental benefits including emission-free design, quiet operation, reduced footprint, no on-site leakage from shaft seals, and magnetic bearings that eliminate need for oil lubrication and subsequent oil disposal.

It’s no surprise that these features were attractive to Central New York Oil & Gas (CNYOG), who recently purchased and installed a DATUM C unit at their Stagecoach Natural Gas

Storage Facility near Owego, in upstate New York. The size of the DATUM C compressor package was an excellent fit for the existing site and it represents the fourth compressor train installed at this facility. Furthermore, the site is approximately three hours by car from Dresser-Rand’s Olean, N.Y. facility where the DATUM C compressor was designed and manufactured.

Barry Cigich, vice president of storage operations at Central New York Oil & Gas, states, “Having Dresser-Rand as our neighbor in Olean added a level of service that was crucial to our operating success.”

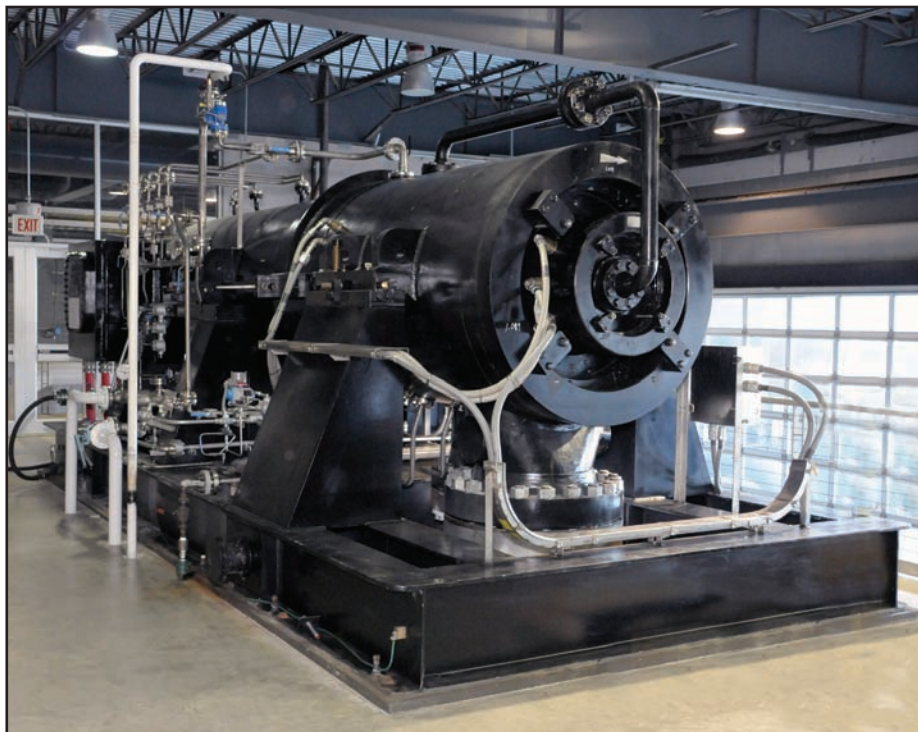
According to Doug Gewand, project development manager for Dresser-Rand, “The aerodynamic, high-efficiency design of the DATUM compressor, coupled with our rotor dynamic experience and magnetic bearing technology, allowed us to offer CNYOG the lowest total life cycle cost solution.” Gewand believes the compressor’s hermetically sealed design was also a key factor in CNYOG’s decision to purchase the DATUM C unit. Because there are no shaft seals exposed to the atmosphere, there is no leak path for the gas to escape from inside the compressor (not unlike a household refrigerator). The DATUM C compressor design also lends itself to unmanned remote operation that further minimizes its environmental impact.

Another important “green” factor, says Gewand, was noise reduction. The system is completely enclosed, so it’s quieter than conventional compressor systems, thanks to Dresser-Rand’s patented D-R™ duct resonator arrays installed in the compressor internals for the CNYOG project. This advanced acoustic array research has helped Dresser-Rand

develop compressors achieving field noise level reductions in the range of 10 to 20 db. D-R duct resonator arrays can be designed into new equipment and revamps, including rotating equipment manufactured by other OEMs.

One of the most significant design characteristics of the DATUM C is its use of magnetic bearings. “Because of the magnetic bearings, there is no need for an oil lubrication system, which allows for a significant reduction in overall footprint and weight compared to a traditional compressor with oil lubricated bearings,” says Harry Miller, Dresser-Rand’s turbo products manager. “The entire system is oil-free and produces no on-site emissions, so it’s environmentally friendly.”

The DATUM C compressor represents the latest concept in pipeline compression – one that addresses not only reliability, performance and installation costs, but just as importantly, the environmental concerns of today’s pipeline operators. And it’s a testament to Dresser-Rand’s commitment to invest in new technologies that offer operational and environmental benefits and allow its clients to increase their competitiveness. ■



Dresser-Rand's DATUM C compressor.

