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D Series Cast Iron Gear Motor Now Features Reversing Functionality for Fan Drive Applications

Sauer-Danfoss introduces new features for high performance fan drive systems.

AMES, Iowa, USA, April 20, 2010 – Sauer-Danfoss Inc. (NYSE:SHS)

Sauer-Danfoss' D Series cast iron fan drive gear motor now offers an integrated valve solution to match fan speed to cooling demand with the additional capability to reverse fan rotation for radiator cleaning.

According to Misty Metschke, Gear Products Project Manager for Sauer-Danfoss, "Global emissions standards require cooling systems to become more advanced. Vehicle systems will reject more heat, requiring fans to run longer and more often. Our goal is to give the customer a variety of system solutions that maximize machine performance without sacrificing compactness, durability, and total installed cost."

The D Series motor offers the pressure, temperature, and radial load capabilities of a piston motor with the compact size, contamination resistance and cost advantages of a gear motor. The cast iron construction exceeds capabilities of traditional aluminum motors in applications requiring higher pressures, temperatures, and duty cycles.

D Series is the only cast iron fan drive motor with an integrated reversing feature on the market. "With the new reversing feature," Metschke says, "we built upon the high-efficiency design of the D Series motor and will continue to focus on key product attributes: increased performance, durability and installation flexibility."

Increased Performance

The reversing function integrates a solenoid operated directional control valve to reverse fan rotation and a proportional relief valve to regulate fan speed. Dual shock/anti-cavitation valves limit pressure spikes during sudden reversals and allow flow to bypass the motor as the fan winds down. The directional control and pressure relief valves are available in two flow ranges minimizing pressure losses in the system. The 3-piece cast iron motor offers displacements from 14-45cc and utilizes pressure balanced thrust plates to maintain high levels of efficiency up to rated conditions of 276 bar [4000 psi] and 110°C [230 °F].

Durability

All D Series valve components are rated in excess of 276 bar [4000 psi] and are contained in a steel body to maintain full pressure and temperature capabilities. Deutsch connectors, high-temperature Viton® seals and an integrated shaft seal dust protector ensure long life in severe off-highway operating environments. Heavy duty bearings provide superior load carrying capability and eliminate the need for an external outrigger bearing.

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Installation Flexibility

Compact design makes the D Series motor 20 percent smaller than a conventional motor. The shorter length and consequent high power density ease installation in tight spaces. “It’s the most power-dense fan drive motor on the market today,” Metschke says. The integrated valve design eliminates the need for extra hoses, fittings, and assembly while a wide selection of displacements, shafts flanges, and port options add to greater machine design flexibility.

The D Series motor is fully PLUS+1™ Compliant, ensuring seamless integration with PLUS+1 microcontrollers and other Compliant products, including sensors, joysticks, and graphical display terminals.

About Sauer-Danfoss

Sauer-Danfoss Inc. is a worldwide leader in the design, manufacture, and sale of engineered hydraulic, electric, and electronic systems and components for use primarily in applications of mobile equipment. Sauer-Danfoss, with 2009 revenues of approximately \$1.2 billion, has sales, manufacturing, and engineering capabilities in Europe, the Americas, and the Asia-Pacific region. More details online at www.sauer-danfoss.com/Applications/FanDriveSystems.

Viton is a registered trademark of DuPont Performance Elastomers.

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PHOTO CAPTION:

Sauer-Danfoss’ D Series cast iron fan drive gear motor now offers an integrated valve solution, matching fan speed to cooling demand. It also reverses fan rotation for radiator cleaning.

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