

Press Release

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Self-contained CLDP servo drive reduces energy consumption by up to 50 percent

Industrial operations in South Africa that are being placed under increasing pressure from rising energy costs and interrupted power supply as a result of load shedding can save substantially on energy costs, using Voith Turbo's advanced new closed loop differential pump (CLDP) servo drive.

"The servo drive design is simple. The heart of the unit is an integrated servo pump consisting of a servo motor and an internal gear pump. Its flow rate is perfectly matched to the cylinder surfaces of a differential cylinder," says Grant Robinson, Voith Turbo VP – EMEA Division, Mining and Metals Southern Africa.

The unit also includes intelligent control via fieldbus connection, a pressure limiter, and a small compensating tank. This control system design renders other components, such as expensive valve engineering, unnecessary.

"As a result, energy losses caused by throttle effects do not occur with the CLDP. This increases the machine energy savings by up to 50 percent, compared to machinery using conventional drive systems," adds Robinson.

The self-contained linear drive combines electromechanical and hydraulic systems, making it compact, dynamic and energy-efficient. Additional benefits include; overload protection, a high power density and virtually wear-free operation.

Robinson indicates that the servo drive is essentially a hydraulic gearbox with an almost unlimited gear ratio, making it ideally-suited for use in applications with high dynamic speed requirements and high power demands.

"Thanks to the integrated servo pump, the energy efficiency is far greater than that of conventional solutions. This also makes it ideal for all direct

linear motions – primarily when dynamic response, reproducibility and reliability are needed,” Robinson continues.

The CLDP servo drive can be easily integrated into new or existing machines. Only the electrical connection for the servo motor is needed. Customers from highly diverse industries – such as oil and gas, energy, mining and metal processing, mechanical engineering, ship building, rail and commercial vehicles – can benefit from this advanced technology.

Voith Turbo, a Group Division of Voith GmbH, is a specialist for intelligent drive solutions. Customers from highly diverse industries such as oil and gas, energy, mining and metal processing, ship technology, rail and commercial vehicles rely on advanced technologies from Voith Turbo.

Voith sets standards in the markets energy, oil & gas, paper, raw materials and transportation & automotive. Founded in 1867, Voith employs more than 39,000 people, generates € 5.3 billion in sales, operates in about 50 countries around the world and is today one of the largest family-owned companies in Europe.

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