

Media Release

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Voith at the IAMD 2018: High efficiency servo drives, innovative hydraulic systems and variable-speed internal gear pumps

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- The new CLSP self-contained servo drive reduces electric connection power using automatic, load-dependent shifting
- The variable-speed IPS internal gear pump results in further improvement of the machinery's control characteristics
- The self-contained PDSC hydraulic press drive has a press force of up to 10,000 kN and does not require classic valves
- The newly developed Eden calculation tool improves efficient communication between project partners

Heidenheim/Hanover: Voith will be presenting high efficiency, dynamic hydraulic systems, self-contained servo drives, and pump technology at the IAMD (Integrated Automation, Motion & Drives trade fair) in Hanover, Germany, from 23 to 27 April. The company will be showcasing the new self-contained CLSP servo drive, the self-contained PDSC press drive, the new variable-speed IPS internal gear pump and the established CLDP servo drive at booth B28 in hall 23. Using the new Eden application, the design of the self-contained CLDP drive is simplified and customer requirements are configured by means of a modular system. In its wide-ranging portfolio of hydraulic solutions, Voith emphasizes its great talent and experience in the area of drive technology, combined with Industry 4.0.

The independent CLSP servo drive excels with its compact design

The CLSP servo drive is a hydraulic linear axis from the Voith product family of self-contained drives. The high energy efficiency, overload protection and virtually wear-free operation are all characteristic features of Voith self-contained servo drives. The CLSP drive also has automatic, load-dependent shifting of the hydraulic transmission. This significantly reduces the connected load. As a result, the size of the motor and inverter

is more compact. The CLSP consists of three main components: The servo motor, a 4Q internal gear pump, and a directly coupled hydraulic cylinder. No hydraulic power pack or oil tank is required for operating the self-contained drive. As a result, all components can be integrated directly into the servo drive. The drive is also suitable for force control and position control. In addition, the sensors installed provide the basis for complete integration into automated manufacturing systems or production facilities.

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The variable-speed IPS internal gear pump improves control

The newly developed variable-speed IPS internal gear pump meets the tighter requirements on dynamic behavior and robustness in the area of servo drives. The new variable-speed pump, with its design innovations and the use of specially developed materials, makes machinery more productive and more efficient. The pump may be installed in existing servo drives but it is also available as a complete system with power-pack technology. In addition, the IPS internal gear pump is already compatible with Industry 4.0 because it is prepared for the required sensor technology.

The self-contained PDSC hydraulic press drive increases efficiency

The PDSC hydraulic press drive offers a high power density, precision force, and position control, with wear-free operation. At the same time, it also includes automatic, load-dependent gear shifting. The maximum press force of 10,000 kN can be scaled to meet individual needs. The drive requires no classic valves. Providing control with variable-speed internal gear pumps and gear shifting leads to enormous energy savings combined with a very low electrical connected load. In addition, the unit has only a few electrical connections and does not require a hydraulic power pack. The integrated control technology also makes it possible to almost freely program presses, process parameters and motion profiles.

The SFM 20 mobile service module simplifies oil changes

The SFM 20 Service and Flushing Module has been specially developed for oil maintenance in Voith self-contained servo drives. The mobile, portable unit is matched to a canister size of 20 liters and allows for trouble-free maintenance work, while the self-contained servo drives continue operation. To do this, the service and flushing module is connected to the drive using quick-release couplings and can replace the used oil in the drive with fresh oil in nearly no time. The required oil quality is ensured by using the integrated filter unit. The simple, logical and safe handling of the SFM 20 Service and Flushing Module guarantees a high degree of service quality with a low error rate.

The newly developed Eden calculation tool increases efficiency

With the innovative Eden calculation tool, Voith offers its clients the option of designing self-contained CLDP-series drives in advance. In this process, a large number of parameters can be changed in advance so that the ideal drive mode can be selected simply and efficiently. This results in faster communication between project partners and considerably reduces the cost of resources.

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The CLDP servo drive offers high performance with a long lifetime

The self-contained CLDP servo drive combines hydraulics with a servo-electric system. This drive is extremely compact, highly dynamic and facilitates significant increases in productivity both for the mechanical engineering firm and the operators of the systems and machinery. Furthermore, the drive is distinguished by its very high energy efficiency, force and position controls, long lifetime, and virtually wear-free operation. The CLDP servo drive is generally used in applications such as presses, test rigs, shearing machines, forming machines and special machines requiring dynamic response, repeatability and reliability.

PSH in combination with CSH cushion drive operates more efficiently

The PSH servo hybrid press drive was developed jointly by Voith and Siemens. It offers highly flexible pressing processes by using servo pumps for control, along with the best possible speed and force adjustment of the pressing process, replacing conventional valve and control technology. In addition, the drive with the intelligent control system can reduce energy consumption by up to 60% and, in combination with the CSH cushion die drive, even up to 80% by controlling the servo pump and using energy recovery. Productivity is significantly increased thanks to the coordinated drives.

Voith Turbo, a Group Division of Voith, is a specialist for intelligent drive solutions, systems and comprehensive services. Customers from highly diverse industries such as oil and gas, energy, rail and commercial vehicles, ship technology, mining and mechanical engineering rely on the advanced technologies and solutions-driven expertise of Voith Turbo.

Voith is a global technology group. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, oil & gas, paper, raw materials and transport & automotive. Founded in 1867, Voith today has more than 19,000 employees, sales of € 4.2 billion and locations in over 60 countries

worldwide and is thus one of the largest family-owned companies in Europe.

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The self-contained CLSP servo drive also has automatic load-dependent shifting of the hydraulic transmission, a feature that significantly reduces connected load.



The newly developed variable-speed IPS internal gear pump meets the stricter requirements on dynamic behavior and robustness in the area of servo drives, making the machinery more productive and more efficient.



The mobile, portable SFM 20 Service and Flushing Module has been specially developed for oil maintenance in the Voith self-contained servo drives.



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The PDSC hydraulic press drive provides a maximum press force of up to 10,000 kN and combines high dynamic behavior with increased efficiency.



The self-contained CLDP servo drive is extremely compact, highly dynamic, and enables significant increases in productivity, both for the machinery companies, and for the operators of the systems and machines.

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