

Media Release

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Voith at EuroBLECH 2018: Progressive hydraulic solutions

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2018-08-15

- **PDSC self-contained hydraulic press drive with a press force of up to 10,000 kN significantly increases productivity**
- **PSH press drive offers up to 60% reduction in energy consumption When combined with the CSH die cushion drive, energy savings can be increased to as much as 80%**
- **New CLSP self-contained servo drive significantly reduces the connected load through automatic, load-dependent shifting**

Heidenheim/Hanover: From 23 to 26 October, Voith will be showcasing its highly efficient, dynamic hydraulic solutions and self-contained drive technologies at EuroBLECH in Hanover. The self-contained PDSC press drive, PSH press drive and CSH die cushion drive with AFFC controller will be on display at booth K82 in hall 27. The exhibit will also feature the self-contained CLDP and CLSP servo drives and the drive systems for punching and nibbling machines. With its extensive range of hydraulic solutions, Voith is underlining its substantial expertise in drive technology in combination with Industry 4.0.

Self-contained PDSC hydraulic press drive increases efficiency while conserving resources

The hydraulic PDSC press drive delivers high power density and precision force and position control as well as wear-free operation and automatic, load-dependent gear shifting. The maximum press force of 10,000 kN, which is provided by variable speed internal gear pumps without using valves, can be scaled to meet individual requirements. The gear shifting results in very high energy savings combined with a very low connected load. In addition, the unit only has a few electrical connections, does not need a hydraulic power pack and therefore requires only a few components and a minimal supply of oil. The integrated control technology also allows user programming of presses, process parameters and motion profiles.

PSH press drive and CSH die cushion drive work efficiently and productively thanks to intelligent controls

The PSH servo hybrid press drive was developed jointly by Voith and Siemens. It offers highly flexible pressing processes due to the use of servo pumps for control, along with optimum speed and force adjustment of the pressing process. It also replaces conventional valve and control technology. In addition, the drive with intelligent control system can reduce energy consumption by up to 60%, or as much as 80% in combination with the CSH cushion die drive, by controlling the servo pumps and exploiting energy recovery. Because the drives are coordinated with one another productivity is significantly increased.

The innovative Voith CSH die cushion drive represents a highly flexible servo-hydraulic drive system. The characteristics for position, force and speed can be actively and precisely defined for the entire deep drawing process. From its knowledge of the system components, the innovative AFFC (Adaptive Feed Forward Control) calculates the motor speed as the control variable for controlling the pressure. Due to the adaptive component of the actual value signal, this controller is extremely stable and resistant to disturbances from the process.

Voith's self-contained CLDP and CLSP drives offer great performance and long service life

Self-contained servo drives from Voith are distinguished by their high energy efficiency, overload protection and virtually wear-free operation. The self-contained CLDP servo drive combines hydraulics with a servo-electric system. The drive is extremely compact and highly dynamic and facilitates significant productivity increases for both mechanical engineering companies and operators of the systems and machinery. In addition, the drive offers outstanding features like very high energy efficiency, force and position controls, long service life and virtually wear-free operation. The CLDP servo drive is generally used in applications such as presses, test rigs, cutting and forming machines and other special-purpose machines that necessitate dynamic response, repeatability and reliability.

The CLSP servo drive is the latest addition to Voith's product range of self-contained drive systems. It also features automatic, load-dependent shifting of the hydraulic transmission, which significantly reduces the connected load and therefore allows for a more compact motor and

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inverter. The CLSP comprises three main components: a servo motor, 4Q internal gear pump and directly coupled hydraulic cylinder. Self-contained drives do not need hydraulic power packs or oil tanks to operate, which is why all components can be integrated directly into the servo drive. The drive is also suitable for force and position control. The sensors installed also provide the basis for complete integration into automated manufacturing or production facilities.

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Newly developed Eden calculation tool improves efficiency

Voith's innovative Eden calculation tool offers its customers a convenient option for configuring self-contained CLDP drives in advance. 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 the project partners and lowers the costs of resources significantly.

The SFM 20 mobile service and flushing module simplifies maintenance of self-contained drives

The SFM 20 service and flushing module has been specially developed for oil maintenance in Voith's self-contained servo drives. The mobile, portable unit is designed for a canister size of 20 liters and allows trouble-free maintenance with the self-contained servo drives still running. This is achieved by using quick-release couplings to connect the service and flushing module to the drive, so that the used oil in the drive can be replaced with fresh oil in next to no time. An integrated filter unit ensures the necessary oil quality. The simple, logical and safe mode of operation of the SFM 20 service and flushing module guarantees a high degree of servicing quality with a low error rate.

About the company

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 PDSC hydraulic press drive offers a maximum press force of 10,000 kN and combines highly dynamic behavior with improved efficiency.



Combining the PSH servo hybrid press drive with the CSH die cushion drive can deliver energy savings of up to 80%.



Customized solutions for limited space conditions or to meet special requirements are also available in addition to the standard CLDP product range.



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The CLSP also features automatic, load-dependent shifting of the hydraulic transmission, which reduces the connected load.



The mobile, portable SFM 20 service and flushing module was specially developed for oil maintenance in Voith's self-contained servo drives.

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