

Press Release

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Energy Efficient and Highly Dynamic – Hydraulic Systems from Voith at EuroBLECH 2014

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From October 21–25, 2014, visitors to the EuroBLECH trade fair in Hannover will experience live at the Voith stand (Hall 27, Stand H40) how operators of sheet metal processing systems can save up to 80 % energy in the future, while simultaneously increasing productivity. Voith will be presenting its innovative hydraulic systems under the motto "Saving Energy while Increasing Productivity." The spotlight will focus on the Press Drive Servo Hybrid PSH, the CSH die cushion drive, and the newly developed HDE high-performance punch system.

Powering Presses Innovatively – PSH Press Drive

The Press Drive Servo Hybrid PSH is a drive that replaces the classic valve and control technology. The intelligent control and regulation, developed jointly by Voith and Siemens, enables highly flexible use of the press. The PSH drive thus guarantees the best possible matching of power and speed to the process for which the press is used. As a result, the press only uses as much energy as required by the particular process phase. The advantage for the operator is up to 60 % energy savings and improved Total Cost of Ownership (TCO).

Energy-Saving and Freely Programmable – CSH Die Cushion Drive

For demanding forming processes, Voith has developed a combination of a press drive and die cushion drive that can give operators energy savings of even up to 80 %. By using a servo hybrid die cushion drive consisting of a servo pump and double-acting die cushion, previously unattainable efficiency levels become achievable. Compared to conventional systems consisting of a die cushion and pressure-relief valve, the Voith system feeds the mechanical power of the servo pump back to the process through the motor in the form of electric power. The CSH die cushion drive is freely programmable in terms of speed, force, position, and acceleration. It simul-

taneously increases output and the quality of the workpieces produced while providing process variability.

Highly Dynamic and Precise – HDE Punch System

With its integrated HDE high-performance punch system, Voith is launching a new generation of stamping systems. The HDE was developed specifically for punching, nibbling, and forming applications in the high-end segment. It offers convincing performance with high dynamic behavior and precision control. The highly dynamic behavior of the HDE is based on newly developed valves as well as intelligent hydraulic and electronic control circuits. With a punch stroke of 4 mm, the new punch system achieves a cycle time of 18 ms. The operator benefits from very high machine productivity.

The extensive product portfolio from Voith includes punch systems for everything from entry-level to high-end machines. The HPPC electrohydraulic punch drive is the most powerful punch system and achieves over 1 500 cycles per minute – performance unmatched anywhere in the world. The lifting cylinder operates in a hydromechanical control circuit and satisfies every demand placed on a high-performance punching drive. Besides the large high cycle rate for punching and nibbling, it also can operate with precision during forming. Voith punching systems impress with a simple installation using preprogrammed software modules.

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Figure 1: The Press Drive Servo Hybrid PSH from Voith permits optimal matching of force and speed. Through the use of a servo hybrid die cushion control, operators achieve energy savings of up to 80 %.



Figure 2: The Voith servo pump is the heart of the CSH die cushion drive.



Figure 3: The HDE high-performance punch system from Voith convinces with its highly dynamic behavior and very accurate control response thanks to new DECV valves.



Figure 4: The HPPC electrohydraulic high-performance punch drive achieves over 1 500 cycles per minute.

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Voith Turbo H + L Hydraulic is a subsidiary of Voith Turbo. Voith Turbo, a division of Voith GmbH, specializes in intelligent drive solutions and systems. Our customers in the oil and gas, energy, mining and mechanical engineering, marine propulsion, rail and commercial vehicle industries rely on solutions from Voith.

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Voith sets standards in the markets energy, oil & gas, paper, raw materials and transportation & automotive. Founded in 1867, Voith employs more than 43,000 people, generates €5.7 billion in sales, operates in over 50 countries around the world and is today one of the largest family-owned companies in Europe.

Page 4 of 4

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