

Media Release

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Hybrid Servo Punch Drive HPD: Voith Combines Proven Hydraulics with an Efficient Servo Drive

- **600 strokes/min with 300 kN punching force**
- **Maximum force delivery over the entire stroke**
- **Up to 20% less power consumption and 75% less installed power compared to a servo-mechanical drive**

Rutesheim, Germany: Voith introduces the HPD punch drive – its newest development in the field of punching and nibbling machines – at EuroBLECH 2016 in Hanover, Germany. The hybrid servo drive combines the experience from 30 years of hydraulics technology with the advantages of a servo drive to yield a compact and economic system for the medium power range.

The HPD is a versatile drive for punching and nibbling machines. It allows adapting the transmitted force individually to the specific operation profile. When power requirements are low, the HPD uses a partial load operation at high speed in order to achieve high productivity. During punching or forming it automatically switches to full load operation. That way it delivers up to 300 kN at any time and at any point of the cylinder stroke. Despite its flexibility, the HPD requires only 4 kW of power at 600 strokes/min.

Compact and Easy to Integrate

The functional principle of the HPD is a closed loop hydraulic system without directional valves or servo valves. Connecting the pump directly to the cylinder allows it to operate as a hydrostatic gear – without friction or wear. Together with the linear cylinder, also virtually wear-free, operators benefit from an extremely robust and low-maintenance solution. Without a mechanical gear, the system furthermore is absolutely overload-safe.

Voith uses a modular design and standardized components to make system integration of the HPD remarkably easy. The drive has the same electronic interface and mounting interface as all Voith punch drives. This includes the proven Voith HS4 controller, an integrated electronic controller that realizes even complex parameter structures independently.

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Installed Power Significantly Reduced

The self-adaptive hydraulic gear reduces the inverter capacities and servomotor power that are required for the HPD. Without a brake resistor and thanks to significantly reduced heat loss, the system can work without any additional cooling. Thus, complexity and space requirements in the control cabinet are further reduced. In contrast to servomechanical alternatives, which operate with a peak current input of 200 A, the innovative Voith drive requires only 50 A.

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Voith Turbo H + L Hydraulic is a subsidiary of Voith Turbo.

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 mechanical engineering, ship technology, rail and commercial vehicles rely on advanced technologies from Voith Turbo.

Voith sets standards in the markets for energy, oil & gas, paper, raw materials, transport & automotive. Founded in 1867, Voith employs around 20,000 people, generates €4.3 billion in sales, operates in over 60 countries around the world and is one of the largest family-owned companies in Europe.*

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The Hybrid Servo Punch Drive HPD from Voith combines the advantages of hydraulic technology and servo drives.

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