

**PRESS RELEASE****Simulation raises output****Productivity of servo presses enhanced by virtual die optimization**

*Göppingen, September 5, 2012* – Since their launch five years ago, Schuler presses with ServoDirect Technology (SDT) have established themselves as the industry standard. These days, there is hardly a mechanical press or press line supplied to the automotive industry without SDT – hardly surprising considering performance is 50 percent and more above that of presses with conventional drives. However, servo presses are still a long way from reaching their maximum potential: further productivity gains can be achieved by simulating the complex relationships between various press operation processes.

When it comes to designing dies – the press tools which give the part its shape – the dynamics and flexibility provided by ServoDirect Technology have hardly been exploited yet. They do not allow a servo press to reach maximum productivity. In such cases, enhancements can only be achieved by means of relatively expensive die machining and time-consuming press start-up. Schuler's Stephan Paul and his colleagues would therefore like to take an earlier approach and adapt the dies perfectly to ServoDirect Technology during the design process.

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“The software we use takes account of the entire forming process, including slide movement, and uses a virtual image of the press line to simulate movements during part throughfeed,” explains Stephan Paul, Head of Process management Stamping & Cutting Technology. “This enables us to identify ‘offline’ where any changes may need to be made to the die’s design to optimize processes.”

### **Shorter tryout phase**

What is the ideal impact speed for cutting or forming parts without causing damage? How quickly can the die be opened again? And how much time has to be calculated for part transport to avoid collisions during transfer? As ServoDirect Technology enables the user to regulate the slide’s movement, the duration of each one of these processes can be influenced. This means that the transfer and press movements can already be optimized and adapted to the respective part and die during the design stage.

Operators can then optimize these processes themselves “online” on the press. The possibility to simulate the interaction of die and press provides a hitherto unknown level of design maturity to the die. Subsequent corrections and changes can be virtually eliminated. This not only significantly reduces start-up time – and thus also downtime – but also enables users to reach a high output for each part being manufactured. The press line’s possible stroking rate can already be predicted during the planning stage. Simulation is also helpful for questions regarding the forming of high-strength steels, with their

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special characteristics, and the economic integration of downstream processes such as welding or thread cutting.

Further information is available from Schuler's fair stand at the EuroBLECH in Hanover (D40, Hall 27) from October 23 to 27, 2012.

### Internet

[www.schulergroup.com](http://www.schulergroup.com)

### Captions

Bild1.jpg: Schuler staff optimize the die's design for maximum productivity before it starts operation in the servo press.

Bild2.jpg: Thanks to simulation based on precise geometry and movement data for the press line, subsequent corrections and changes to the dies can be virtually eliminated.

Please name Schuler as the photo source.

**About the Schuler Group – [www.schulergroup.com](http://www.schulergroup.com)**

*As the technological and global market leader in metalforming, Schuler supplies machines, production lines, dies, process know-how and services for the entire metal-working industry. Its clients include car manufacturers and their suppliers, as well as companies in the forging, household equipment, packaging, energy and electrical industries. Schuler is also the market leader in coin minting technology and supplies systems solutions for the aerospace and railway industries. The company employs around 5,200 people and is represented by its own facilities and sales offices in 40 nations around the world. In fiscal year 2010/11 (ending Sep. 30), Schuler posted sales of € 958.5 million with an Ebitda margin of 8.8 percent. The Schuler Group can trace its roots back to a locksmith shop founded in Göppingen, Germany, by Louis Schuler in 1839. The company has produced metal-working machines since 1852.*

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