

PRESS RELEASE**TwinServo Technology combines opposites**

Schuler's new development with servo motors in the press bed enables greater force distribution and reduced deflection

Göppingen, April 29, 2013 – Just half a year ago, the Göppingen-based press manufacturer Schuler launched a completely new drive concept: TwinServo Technology (TST). This further development of the company's ServoDirect Technology (SDT), which has since established itself on the market, features two decentralized servo motors in the press bed. This new design makes it possible to combine properties and characteristics which used to be regarded as contradictory. The result: benefits for the user which cannot be achieved with conventional press designs.

In a traditional press, the slide is pushed downward – thus closing the die and generating the press force. The resulting reaction force has to be absorbed by the press frame. Due to restrictions caused by part transport considerations, presses are often designed in two parts clamped together by tie rods. The force is then distributed over the entire press frame and the pretensioned tie rods.

In the TST design, the slide is no longer pushed downward but pulled downward: "This makes the force flow much more direct and thus reduces deflection by around 30%," explains Thomas Spiesshofer,

FORMING THE FUTURE

Technical Manager Automotive Press Technology. “Favorable leverage effects with force application points toward the outer edges result in geometrically enhanced conditions and off-center force applications.” This improves tilting resistance by up to 400% compared to conventional machines.

Whole clamping surface can be used

A further decisive benefit: as the force application points on the slide are located further toward the edge, the entire clamping surface can now be used: “This means we can achieve both greater eccentricities as well as greater eccentric loads in absolute terms – which is particularly important for multi-station presses,” explains Frank Viola, Sales Manager Automotive Press Technology.

In addition to the rigid construction of the press, slide tilting can also be actively influenced during strong eccentric loads by regulating the two electronically linked drives of the TwinServo press. This also results in shorter tryout times and reduced die wear.

With the same useful space as a conventional machine, the external dimensions are much more compact. As a consequence, the press has a smaller footprint and also fits in halls with lower ceilings.

Although the drive has been integrated into the press bed, the foundation dimensions and underfloor space requirements have not increased, and accessibility for service and maintenance remains good.

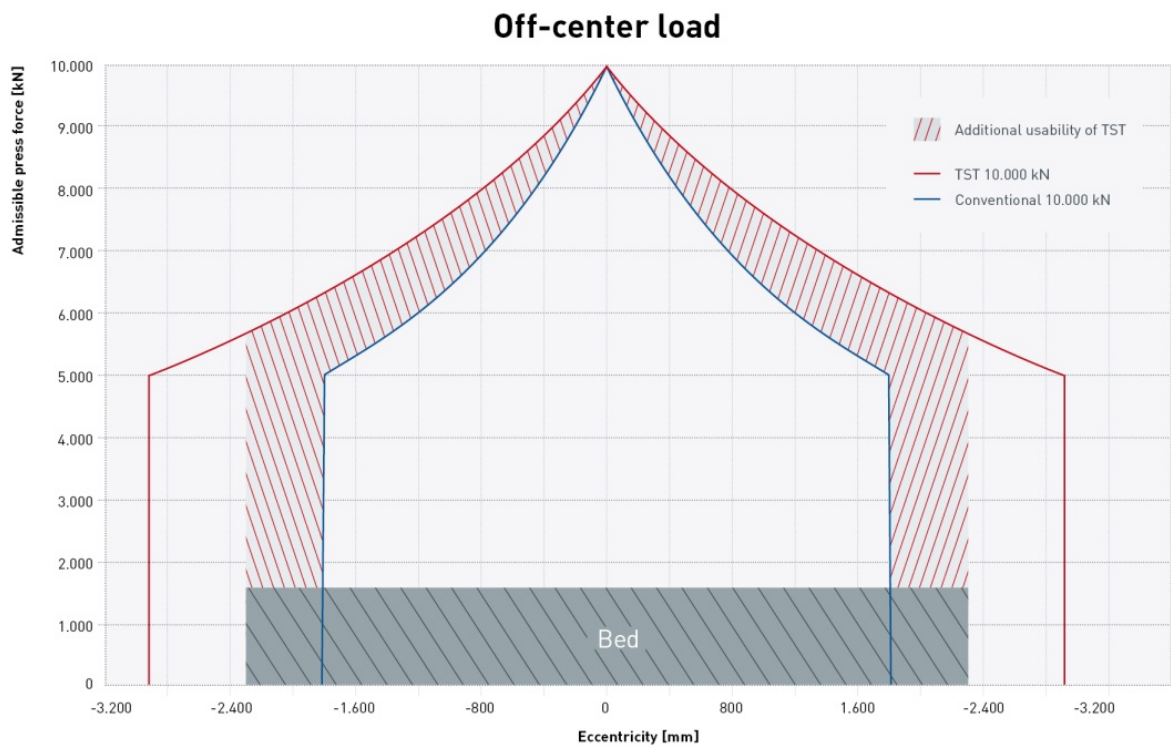
Largely oil-free work area

The oil-lubricated drive parts in the press bed are separated by seals from the press work area. As a result, the work area can be said to be largely oil-free. This also prevents the formation of the dreaded oil mist – which sooner or later precipitates as an oil drop in the work area.

The compact design of the TST means it can be completely enclosed by sound insulation. As this sound enclosure stands freely and is not connected to any machine parts, there is no transmission of structure-borne sound. Compared to conventional presses, noise emissions are reduced by around 15 decibels – corresponding to a halving of noise pollution for employees.

The stated benefits are further enhanced by the possibilities offered by modern servo drive technology. Such drives enable the user to actively influence the speed of the forming process. In combination with various operating modes, such as full stroke or pendular stroke, users can achieve significant output gains over presses operated with flywheels.

Diagram



As the force application points of the slide are located further toward the edge, this opens up new possibilities for part production. In order to illustrate this, the position of the application points are shown on the left and right. Maximum force is then achieved in the clamping center. The red hatched area indicates the area which can be additionally used with TST technology.

Captions:

Bild1.jpg: In the TST design, the slide is pulled downward, which makes the force flow much more direct.

Bild2.jpg: Since the oil-lubricated drive parts are separated by seals, the press work area is largely oil-free.

About the Schuler Group – 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 5,500 people and is represented by its own facilities and sales offices in 40 nations around the world. In fiscal year 2011/12 (ending Sep. 30), Schuler posted sales of € 1,226.1 million with an Ebitda margin of 9.6 percent.

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