# PRESS RELEASE

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# Smart, fast and safe: the MSP 400

## Schuler will present the newly developed servo press to the public for the first time at EuroBLECH trade fair in Hanover from October 23 to 26

*Göppingen, 07/12/2018* – Press plants are facing constantly increasing challenges with regards to a higher efficiency and effectiveness in production – this is the case for both automobile manufacturers and the supplier industry. The new MSP 400 servo press, which Schuler will be presenting to the public for the first time at the EuroBLECH trade fair from October 23 to 26, 2018 in Hanover (Hall 27, Booth F82), offers a solution for many cases. The 400 ton press, which is suitable for both progressive and transfer mode, can travel at an oscillating stroke of up to 70 strokes per minute thanks to the highly dynamic servo drives, and thus offers high performance in this price segment.

Schuler has designed the control of the machine in the style of an intuitive smartphone app: operators can select from predefined movement profiles or program them freely. This significantly reduces the inhibition threshold for exploiting the machine’s potential. Thanks to the kinematics of the knuckle-joint drive, forming at the bottom dead center is also slower in itself. This means that readjustment via the servo drive is not always necessary.

The “Smart Assist” software guides the operator step-by-step through the setup process, supported by small videos and text modules. The electronic assistant optimizes the transfer and slide profiles to maximum output depending on the clearance profiles – a complex process that used to take a lot of time.

## Process monitor integrated in the control unit

The process monitor integrated in the control unit offers extensive monitoring options. This ensures overload protection across the entire course of the press force profile and the entire movement profile; a minimum and maximum force can be defined for effective protection of the die. The response times of the electronically designed overload protection device are in the range of a few milliseconds, which is faster than with a hydraulic overload protection device. The press can be used again immediately after an overload has been detected.

The short stopping distances and quick response times are only possible thanks to the low mass moments of inertia in the entire drive train, which also lead to high dynamics during forming and other machine operation. While standard presses normally reduce the force in the event of an overload and drive the slide through the bottom dead center to the upper reversing point, the MSP 400 has a "Smart Release" function: here, the slide automatically runs back over a defined path after an overload has been detected, thus relieving the strain on the die and press.

## Comprehensive condition monitoring

The integration of additional sensors – e.g. for acceleration, oscillation or pressure – enables comprehensive condition monitoring of the system, which can be displayed in the control system’s visualization. The basis for this is frequency spectra that provide information about possible wear in the gearing, bearing or motor. This prevents unplanned downtime and increases the productivity of the system. Furthermore, the process and condition data allow for complete quality control of the produced components.

Unlike a conventional press, the pressure points of the MSP 400 are not above the slide, but instead on the outside of the actual bed area. This allows the machine to absorb very high eccentric loads, and means that around 25 percent more press force is available to both the infeed and discharge sides. It is therefore possible to form even high-strength materials in the first die stage.

The geometric arrangement also gives the slide a high mechanical tilting rigidity. In addition, the deflection of the entire system is reduced because the drive is located far to the outside of the crown. This makes it possible to achieve die-friendly forming and better component quality. The electronic coupling enables force-independent parallel control: in the event of an eccentric load, the drives are readjusted on one side without any loss of force, and the slide can thus be held parallel.

## Image captions

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| M:\DATEN\GP\Media Relations\Messen\2018\2018_10_23_EuroBLECH\PMs\MSP 400\2018_07_12_msp400_1.jpg | schuler\_msp1.jpg: Schuler’s new MSP 400 offers many smart functions, high productivity, process reliability and intuitive operability. |
| M:\DATEN\GP\Media Relations\Messen\2018\2018_10_23_EuroBLECH\PMs\MSP 400\2018_07_12_msp400_2.jpg | schuler\_msp2.jpg: The “Smart Assist” software guides the operator step-by-step through the setup process, supported by videos and text. |

*Please credit Schuler as the image source.*