



THE AGONY OF CHOICE

Once upon a time there was a factory owner who manufactured metal parts for beautiful new cars in mechanical presses. And as the factory owner knew what he was doing, more and more car manufacturers want to buy body parts from him. Suddenly, the hardworking man had a problem. He had to come to a difficult decision.

If he continued operating his presses as usually, he could not satisfy the huge demand. However, if he sped up the presses, he could produce more parts. He could satisfy all of this customers and make more money. Unfortunately, the good quality of his products was suddenly compromised at the high speed. This change upset the customers. At the end, the factory owner had less orders than ever before. None of this would have happened if he would have used servo presses.

SUCCESSFUL WITH SERVO DRIVES

Compared to other press types, presses with servo drive have several significant advantages. They offer high productivity with consistent high quality as well as a particularly flexible travel profile. In other words, the operator can accurately control speed, position, and direction of the press ram at all times. The operator can thus simply adjust the oscillating speed during pressing to maximum speed. Shortly before contacting the workpiece, the speed is decelerated so that the optimum speed for the respective material is set during plunging. He even has an additional option to increase the press speed: the stroke height can be adjusted as well. In this case, the drive is simply not operated with complete revolutions. It changes its direction of rotation continuously instead. Thus, every stroke is adjusted as short as possible. This automatically increases the number of strokes per minute. These options lead to shortened cycle times and thus to productivity increases of up to 100 % without additional wear. Furthermore, the path to higher product variance is prepared.

The servo press technology also enables completely new production processes. The user-programmable motion profile also allows machining of materials in servo presses that require a holding time in the lower pressing point, e.g., for material heating. This opens up completely new possibilities in the area of press processes. ■

BAUMÜLLER REALIZES PRESSES WITH A PRESSING FORCE OF UP TO 2500 TONS. THE COMPLETE SYSTEMS FOR SERVO PRESSES COMPRISE:

DST high-torque motors:

- Robust
- Dynamic
- Different shaft options
- Different flange options
- Double-winding possible
- Suitable cooling options

Converters b maXX 4000 and b maXX 5000:

- Peak load devices
- Suitable for load distribution
- Energy recovery capable

Control and visualization:

- User-friendly
- Clear
- Web-capable

Software:

- Technology library for the calculation of energy-efficient press profiles
- Library with predefined curves
- Simulation tools for optimum drive design