Servos Broaden Mechanical Press Capabilities

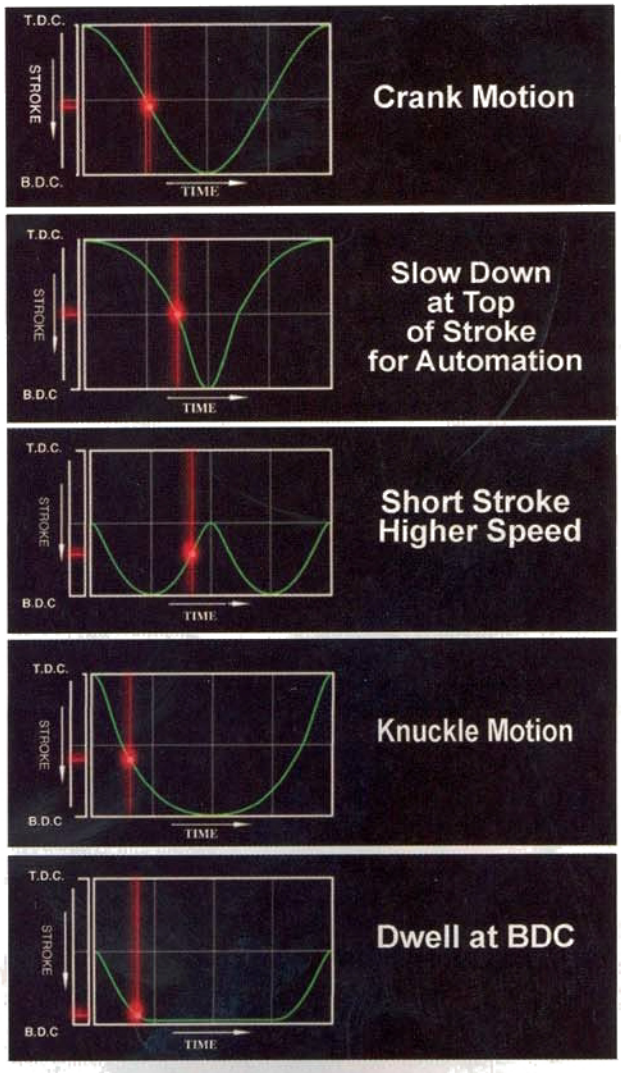
Servo technology has been said to have the potential to help stampers achieve improved part quality and productivity. But until now, existing high-speed, low-torque motors were impractical for general presswork. One press builder, however, has developed and manufactured a high-torque, low-rpm, servomotor designed for a broad range of metalforming applications. AIDA's (Dayton, OH) ServoPro™ technology uses a motor mounted directly on the press driveshaft, eliminating the flywheel, clutch, and drive motor found on a standard mechanical press, as well as complicated mechanisms previously required to multiply the torque of a standard servo motor.

Offering the same stroke length and torque rating as a conventional mechanical press, ServoPro delivers full torque from low speed for greater part accuracy and longer die life. Multiple motors can be combined for use on higher tonnage presses. In addition, stampers can program press stroke in an infinite number of combinations. Possibilities include crank motion, as well as slowing speed at the top of the stroke for automation, and intermittent and continuous run mode. In a blanking operation, ServoPro can be set to provide the minimum stroke length to match the work, allowing shorter working-cycle time. Dwell at bottom dead center and knuckle motion are also options. Adjusting stroke length and press speed helps stampers optimize a variety of jobs on one press, minimizing the need for large capital equipment investments.

Stampers also have the ability to run a multi-press transfer line in continuous mode. When compared to a conventional press line operating in automatic single stroke mode, the new system's continuous mode delivers productivity rates up to 50% higher. The blanking mode reduces shock, vibration, and noise.

Capacitors store energy in the stroke's non-working portion, making power consumption comparable to that of a standard mechanical press. This means little or no increase in operating cost. All AIDA presses equipped with ServoPro include a standard motor with a separate mechanical brake. This brake eliminates the possibility of slide motion if a drive belt break should occur.

Especially suited to forming special materials such as titanium-magnesium and high tensile-strength steels,



ServoPro offers hand-crank motion. The hand crank allows the stamper to manually progress through the slide motion as an aid to tool setting activities. The new system is available on a variety of AIDA presses.

For more information, Circle 210 on the reader service card.