Magnetic Die Clamping for Stolle Cupping Systems

Stolle's magnetic die clamping system can significantly cut the time it takes to change a cupping die set, allowing the can line to resume production faster after a size changeover. This system is a proven technology that's been used for some years in the automotive and appliance industries where quick changing of die sets is common, and Stolle is the first company to apply it to the canmaking industry. Stolle is currently offering this system for the inner die set (punch), since it is the most time consuming die to access and change on a cupping press. However, magnetic clamping can be installed on the outer (blank) and lower die sets to gain additional time savings.

The magnetic die clamping system uses no moving parts and is completely fail-safe. It consists of a magnetic plate that is bolted to the inner slide, and an electrical control system. When the control system applies a DC current to the plate for 1-2 seconds, the plate will become either magnetized or demagnetized, and remain that way indefinitely until a new current is applied. This technology means that the die set remains firmly attached even when no power is supplied to the press. As an added safety feature, proximity sensors in the magnetic plate shut the press down if a gap of more than .007” is detected during operation, and these sensors also prevent the plate from being magnetized unless the die shoe is present. The clamping system continually monitors itself, displaying the magnetic holding power at all times. Since the magnetic field never extends more than 20mm from the plate, it prevents the die set itself from becoming magnetized, and by distributing the clamping force evenly over the die set, there are less stress points on the die.

When the magnetic die clamping system is installed in conjunction with Stolle's programmable servo roll feed system, cup size changeover times are significantly shortened and the line can resume production faster than ever. This system is available for all three Stolle cupping systems - the DynaForm, Hyperdyne, and the Triton cupper. The press shut heights will need to be verified to insure the press can accommodate the clamping magnet(s) on the ram or press bed.

For more information about Stolle's magnetic die clamping system, please contact Mike Raderchak at Stolle Canton at +1 330-244-0558 or mike.raderchak@stollemachinery.com.