

APPLICATION BULLETIN

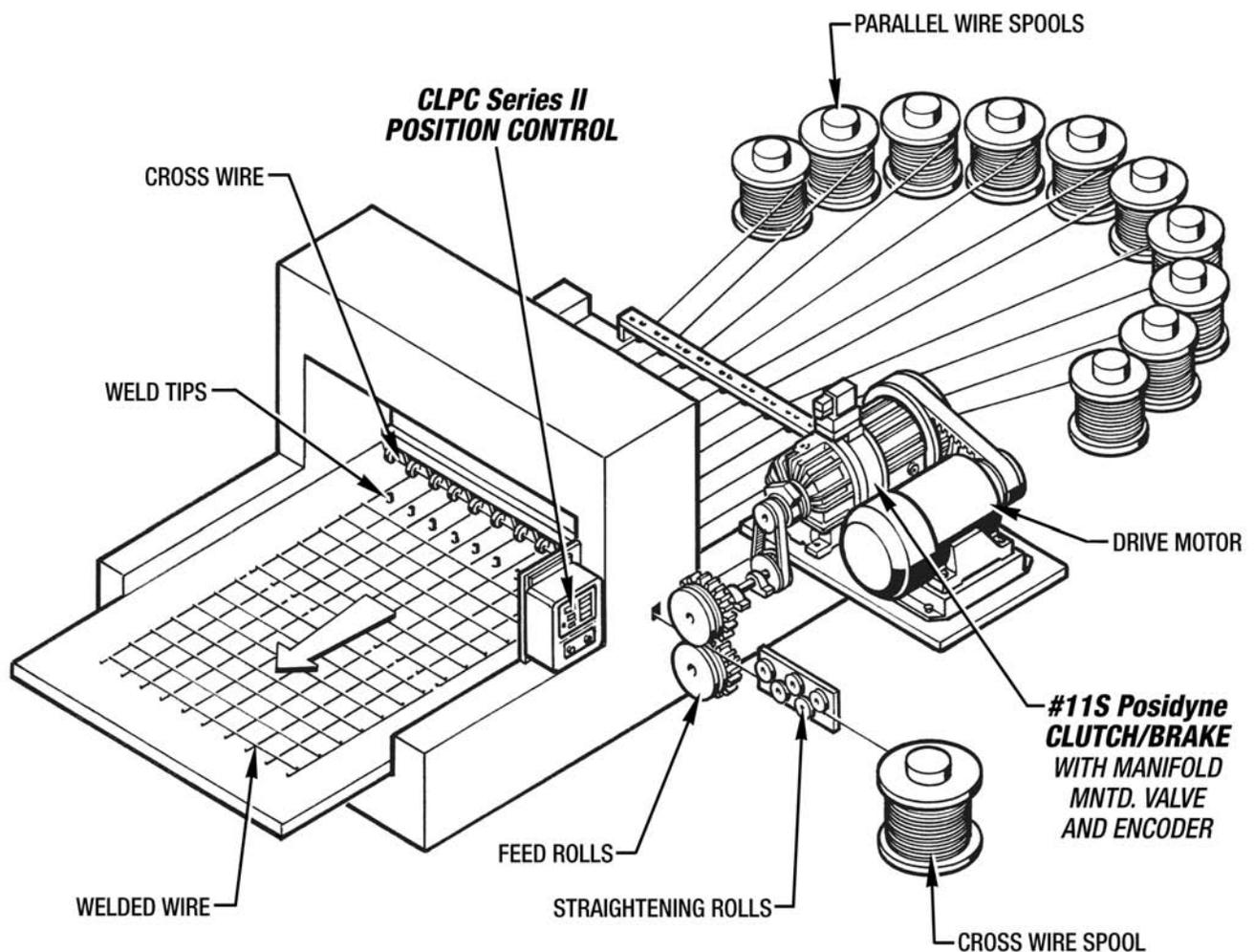


APPLICATION: Cross Wire Feed Drive

INDUSTRY: Wire Weaving and Forming

PRODUCT: Posidyne Clutch/Brake With CLPC II Control

CROSS WIRE FEED DRIVE



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WHERE THEY ARE USED: A Cross Wire Feed Drive is used on wire weaving machines to shoot a wire across a number of parallel wires to be welded or woven.

HOW THEY WORK: A set of pinch rolls is used to index the wire strand across the incoming parallel wires. The rolls must index the wire the exact distance and stop. A **Posidyne** Clutch/Brake is used to accelerate the pinch rolls to full speed, and decelerate to a position stop. The **CLPC Series II** Closed Loop Positioning Control, by reading the encoder on the **Posidyne** Clutch/Brake, is used to set the length and position the stop consistently. The index length is easily set by setting the number of counts respective to the length on the front panel.

PROBLEMS SOLVED: A normal system uses an adjustable crank assembly pushing a rack, which turns a pinion, in turn rotating the pinch rolls. As the rack will oscillate forward and back two methods of release are used. One, the pinch rolls are set on a pneumatic or hydraulic lift, which separates the rolls from the wire on the reverse stroke. The other uses a single revolution cam clutch to overrun on the reverse stroke. The index length is adjusted by changing the length of the crank arm.

This is a very inefficient system in addition to having many mechanical parts, which wear, becoming loose causing length errors etc. Also mechanical changes must be changed to adjust the width of product.

The drive using the **Posidyne** Clutch/Brake and the **CLPC Series II** Closed Loop Positioning Control offers many advantages.

The **Posidyne** Clutch/Brake eliminates the reversing motion associated with the crank, starts and stops smoothly and accurately, eliminates many of the high wear items reducing maintenance and stop, and reduces noise considerably. The **CLPC II** Control continually monitors the stop position to adjust for changes in the machine and Clutch/Brake for accurate cut length. The length is easily entered on the front panel for quick changes in product width.

Improved wire length consistency permits reduction of trim cut length, reducing scrap produced.

IMPORTANT FEATURES:

- **Oil Shear** design provides high thermal and torque capacity for the heavy loads and high cycle rates required.
- Lubricated and cooled friction surfaces in a totally enclosed seal housing provide long service life.
- The **CLPC Series II** Closed Loop Positioning Control allows easy entry of wire length, and controls the **Posidyne** Clutch/Brake for accurate stop position.



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