

APPLICATION BULLETIN

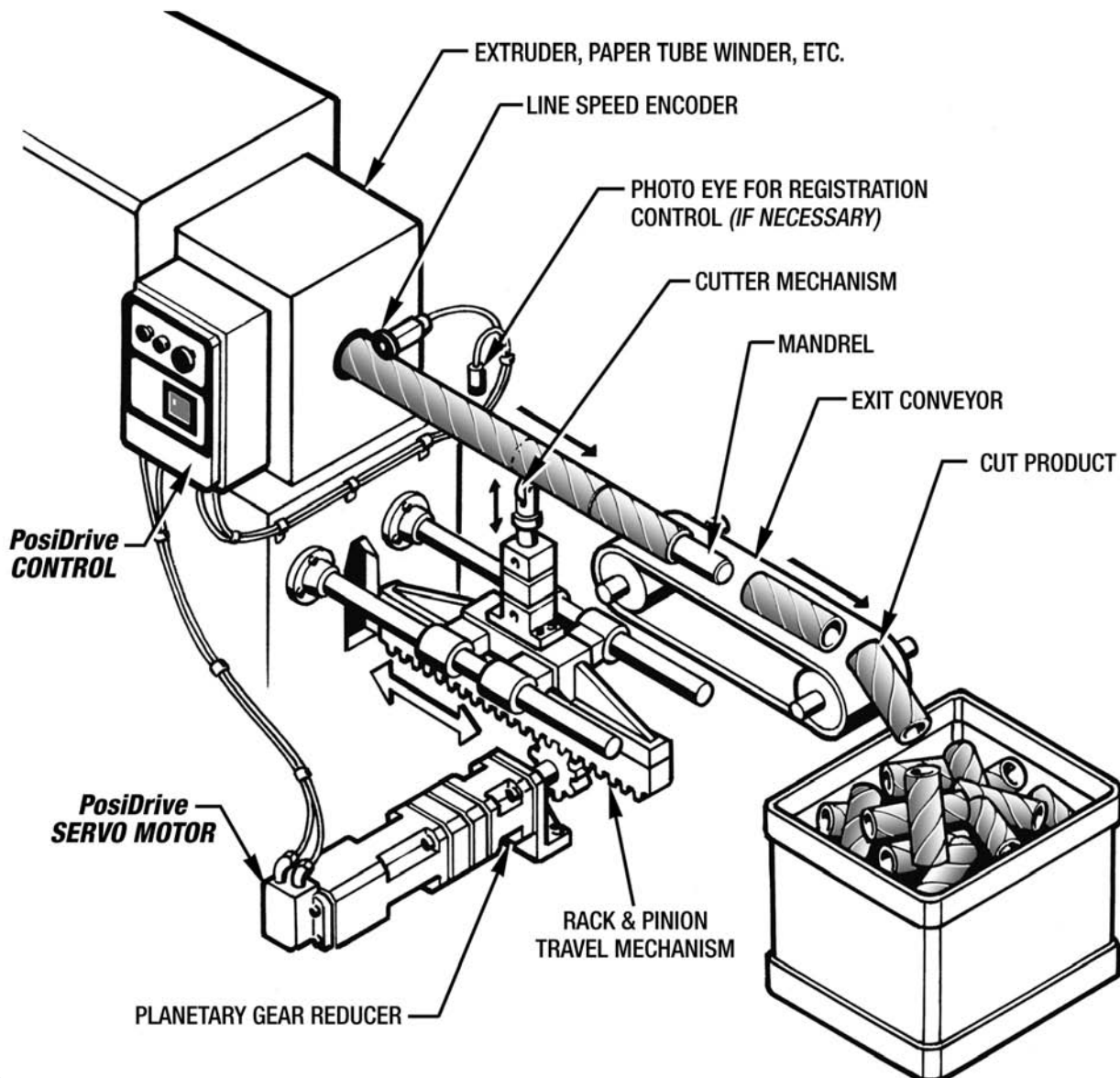


APPLICATION: Flying Shear & Traveling Cut-Off

INDUSTRY: Various Industries with Continuous Product Flow

PRODUCT: PosiDrive Servo System

FLYING SHEAR & TRAVELING CUT-OFF



FLYING SHEAR & TRAVELING CUT-OFF

WHERE THEY ARE USED: Anywhere there is a continuous product being manufactured that must be accurately cut to length without damaging the product. This is a very common application that is used in many industries. Plastic extruders of vinyl siding and plastic bags are common applications. Cardboard tubes, styrofoam boards and many other products.

HOW THEY WORK: An incremental encoder provides product position and velocity feedback to the **PosiDrive** Control System. This encoder is preferably on the drive train that moves the product, but can be mounted to a wheel that rides on the product. The **PosiDrive** Control matches the cut-off mechanism to the product at the correct position and velocity to obtain a clean and accurate cut. There may also be a photo eye to pick up a registration mark if registration control is important. The cut-off mechanism can be a hot knife, rotary blade, rotary saw, band saw, water jet, etc., and driven by a pneumatic cylinder or other device. After the cut is made the **PosiDrive** reverses and returns to a home position and waits for the next cut cycle. There are over-travel switches, shock absorbers, and hard stops to prevent damage in runaway situations. The result is an accurate, quiet, low maintenance system.

PROBLEMS SOLVED: There have been many pneumatic, hydraulic, and mechanical systems developed over the years to perform this common operation. These older open loop systems are not as accurate, are sensitive to adjust, noisy, and require a lot of maintenance.

The **PosiDrive** Closed Loop Servo System is very accurate, quiet and requires very little maintenance.

IMPORTANT FEATURES:

- **PosiDrive** Servo Motor with low inertia and high torque provides maximum performance for this precision application.
- **PosiDrive** Servo Control is prepackaged and pre-programmed for the customer. Final system startup variables are input through the **TSI** (Touch Screen Interface). There is no complex programming language to learn. This is especially important to plants that are retrofitting older machinery. Multiple product lengths (up to 16) can be stored in the **PosiDrive** System and selected electrically for added flexibility. Troubleshooting is accomplished through the **TSI** in understandable language to make it easier for operators and maintenance personnel.



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