

Feed to Length

July 28, 2008

Issues / Problems / Challenges

- Previous supplier could not meet speed specs
- Need accurate positioning after registration
- Move adjustments on-the-fly
- Ability to vary maximum part length

Solution

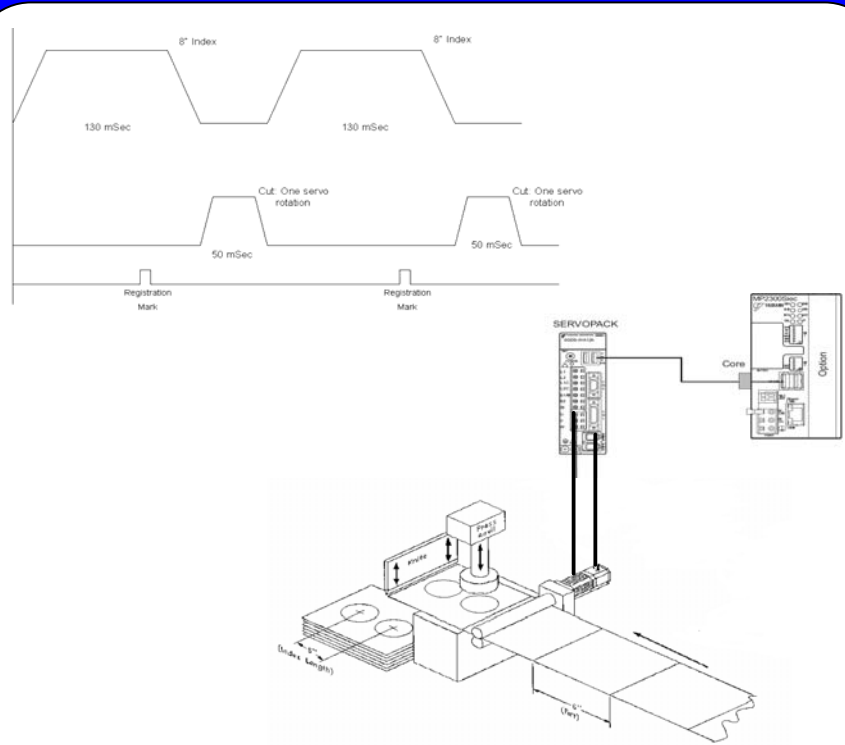
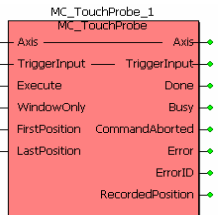
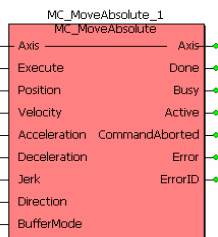
Controller: MP2300Siec
Controller Software: MotionWorks IEC
Solution Code: Feed to Length Solution
Servo: Sigma-5 (SGDV)

Performance Achieved:

Throughput: 333 per minute at 8" nominal length
Accuracy: +/- 0.010 inch cut accuracy
Auxiliary Functions: HMI with Recipe data processing

Customer Information

Industry: Converting
Application: Feed to Length
 Cut to Registration



Application Description:

This OEM makes equipment for the paper converting industry. The application requires high-speed indexes, which advance a roll of paper to be cut at random intervals as dictated by a 1/16" hole, or registration mark in the paper. The random aspect of the cut requirements is due to custom processing of the required end product by an upstream process. Once the paper roll is stopped, a secondary servo axis rotates a cutting mechanism to cut the paper. At a peak speed of 60 inches/ second, the 1/16" registration mark is only one millisecond in duration. Registration marks range in distance from four inches to twelve inches. Typical indexes are 8 inches in 130 mSec with tolerances of 0.010"

Differentiating Solution Features

- PLCopen function blocks MC_MoveAbsolute, and MC_TouchProbe handle this application with minimal additional code.
- High speed position registration latch. Sensor On time is about one millisecond
- Mechatronics control capability

Resulting Solution Benefits

- Proven Core Code reduces commissioning time, reduces project risk, and improves performance
- Greater range of product sizes, higher throughput
- Efficient & Accurate production achieved.