

Gap Control

August 29, 2008

Issues / Problems / Challenges

- Must keep minimum gap into Bar Code Reader
- Position corrections with existing controller are harsh and impart shock to the system
- Existing controller/servo is expensive
- Product length varies, input spacing is random
- Need remote connectivity

Solution

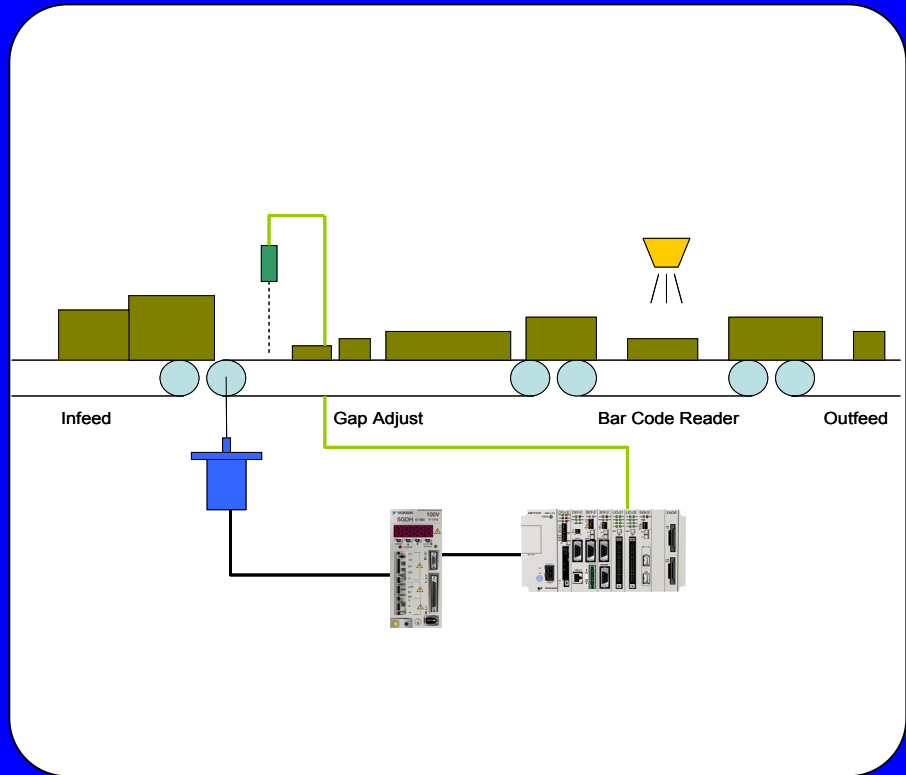
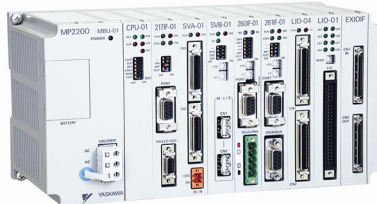
Controller: MP2200
Controller Software: MotionWorks ver6
Solution Code: GapBelt Solution Pkg
Servo: Sigma II (SGDH)
Power Level: 2 kW
Voltage Level: 230 VAC, 3 Ph.

Performance Achieved:

Throughput: 14,000 pkgs per shift
Accuracy: +/- 0.5" gap repeatability
Auxillary Functions: I/O interface to upper level system
 Remote Programming

Customer Information

Industry: Material Handling
Application: GapBelt
 Automated Distribution



Application Description:

This OEM installs conveying equipment to serve the warehousing and distribution industry. This application moves 10-14 thousand packages per shift through a bar code reader as part of an automated routing system. The main challenge is to create a minimum space between random length products so that the bar code can be read properly. The packages come down the line in a completely random fashion and are detected upstream of the bar code section by a photoelectric sensor. As the package approaches the transfer point to the bar code conveyor belt, the controller calculates the distance between the leading edge of the box and the trailing edge of the previous package. A smooth position adjustment is then made to create a desired package spacing. This occurs using only a single Gap Belt, saving floor space, reducing the number of re-scans and improving package flow efficiency.

Differentiating Solution Features

- Prewritten Solution Template for Gapping Application
- Ethernet programming port allows remote connectivity
- Dynamic Smooth Path cam shifting

Resulting Solution Benefits

- Proven Core Code reduces commissioning time, reduces project risk, and improves performance
- OEM can more easily support and update systems installed around the world, reducing service costs
- Reduced impact and wear on mechanics, less power consumption