

Bottlenecks and Inefficiencies

Inbound Product Case Labeling

Problem: A large amount of palletized product is received into a central distribution facility that requires case labeling/re-labeling for high-volume case and piece picking operations.

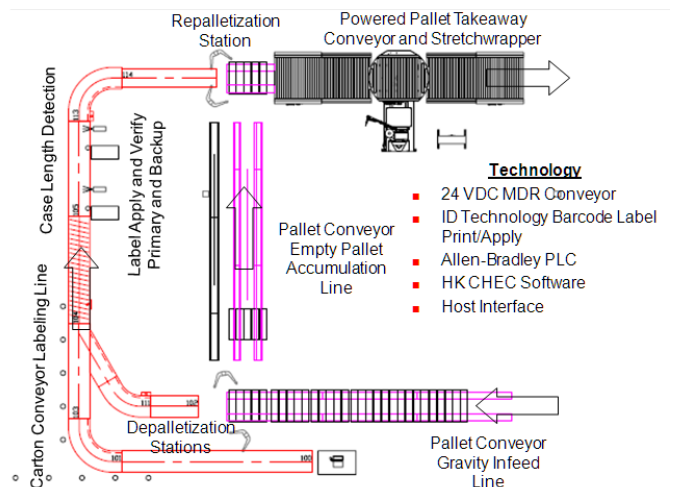
- Manufacturing/suppliers are not able to provide bar-code labeled cartons.
- A distribution center needs RFID tags applied to inbound product cartons.
- Current manual carton labeling operations are extremely time consuming and prone to operator error with product mislabeling and incorrect label placement.
- Significant staging space and manpower is required at inbound receiving areas due to re-labeling.
- Manual carton labeling creates an unacceptable delay between the time palletized products are received and cartons are available to fulfill outbound orders.

Solution: Implement an automatic case labeling line.



Inbound Case Labeling Line at Procter & Gamble

- Automatic Case Label Line components:
 - Gravity pallet infeed accumulation conveyor.
 - Two (2) operator depalletization stations.
 - Efficient 2-1 Merge to a 24VDC conveyor label applicator line.
 - Two (2) operator repalletizing positions.
 - Empty pallet accumulation line from a depalletizing station feeding the repalletizing station.
 - Powered take-away pallet conveyor with an optional in-line stretchwrapper.



HK Planet Problems and Solutions

- Performance Measures:
 - Operator rate: one case every 3.0 seconds per operator.
 - System rate: 40 cases per minute (2400 cases per hour) at an operating speed of 120 feet per minute
- Misc:
 - Conveyor sections are typically zoned at 24 inches.
 - The smallest carton is typically 6 inches; longest is 22 inches.
 - Product information is entered for each pallet and cartons are automatically counted, labeled and weighed (option).
 - Scan verification after every label printer/applicator. Backup label printer/applicator if scan verification fails.
 - People-safe 24VDC powered roller case conveyor (Motorized Drive Roller [MDR])

Links: [More Supporting Information](#)

- [HK 24VDC Powered Roller Conveyor](#)
- [ID Technology Label Printer Applicator](#)
- [HK CHEC Container Handling and Control Software](#)