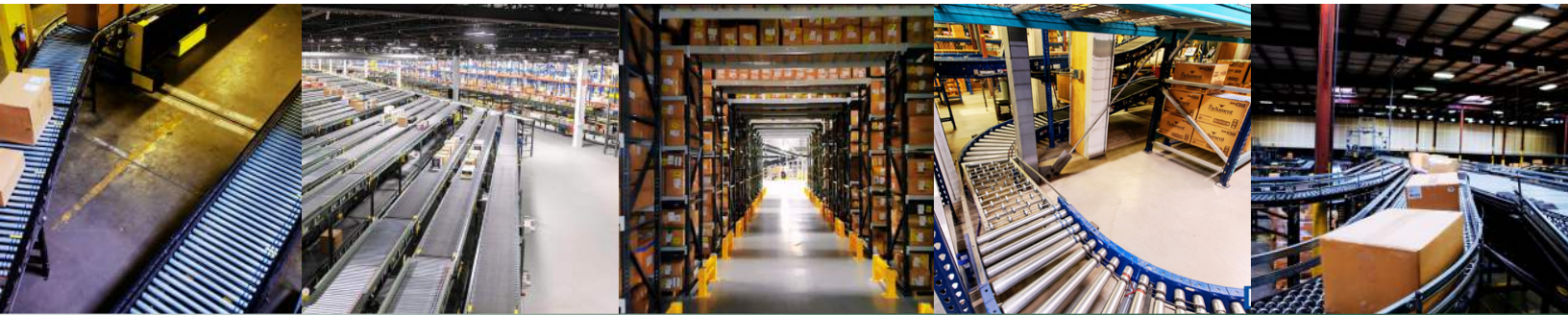




CENTURY

C O N V E Y O R
S Y S T E M S I N C.



Case Studies Book

2024 Edition

Barnes & Noble

Monroe, New Jersey
eCommerce



Key Equipment

3-level pick module system
380ft Hytrol Prosoft shoe sorter
13 miles of Hytrol conveyor
Bestflex extendables

Background

Barnes & Noble, a Fortune 500 company, is the world's largest bookseller. In addition to extensive eCommerce sales, they operate at the time of writing operated approximately 800 stores in 50 states.

Century Conveyor Systems was awarded the contract for integration and supply of the carton and tote materials handling system. The design team, now joined by Century Conveyor Systems, Inc., finalized the operational details and implementation plan for the new system. At the same time, the construction of the 1.2 million square foot facility was underway and on target for a winter completion.

Challenge

The distribution center houses over 1 million book titles in quantities ranging from multiple trailer loads of popular titles to one or two volumes of very obscure books. Accordingly, inventory storage media varies from high-rise, narrow aisle pallet rack to flow rack and finally to acres of multi-level shelving.

The logistics of timely store replenishment and rapid, accurate fulfillment of Internet orders present an enormous challenge at this level of business.

Goals

- Enable eCommerce operations
- Optimize processing of various product types



Integration

For receipts of less than pallet load quantities, inbound cartons are conveyed to a mezzanine above the receiving dock where they are scanned and matched to a database of purchases. A 380-foot long Hytrol Prosort shoe sorter directs cartons to a series of receipt processing and audit stations. t. Sortation is performed at rates up to 140 cartons per minute.

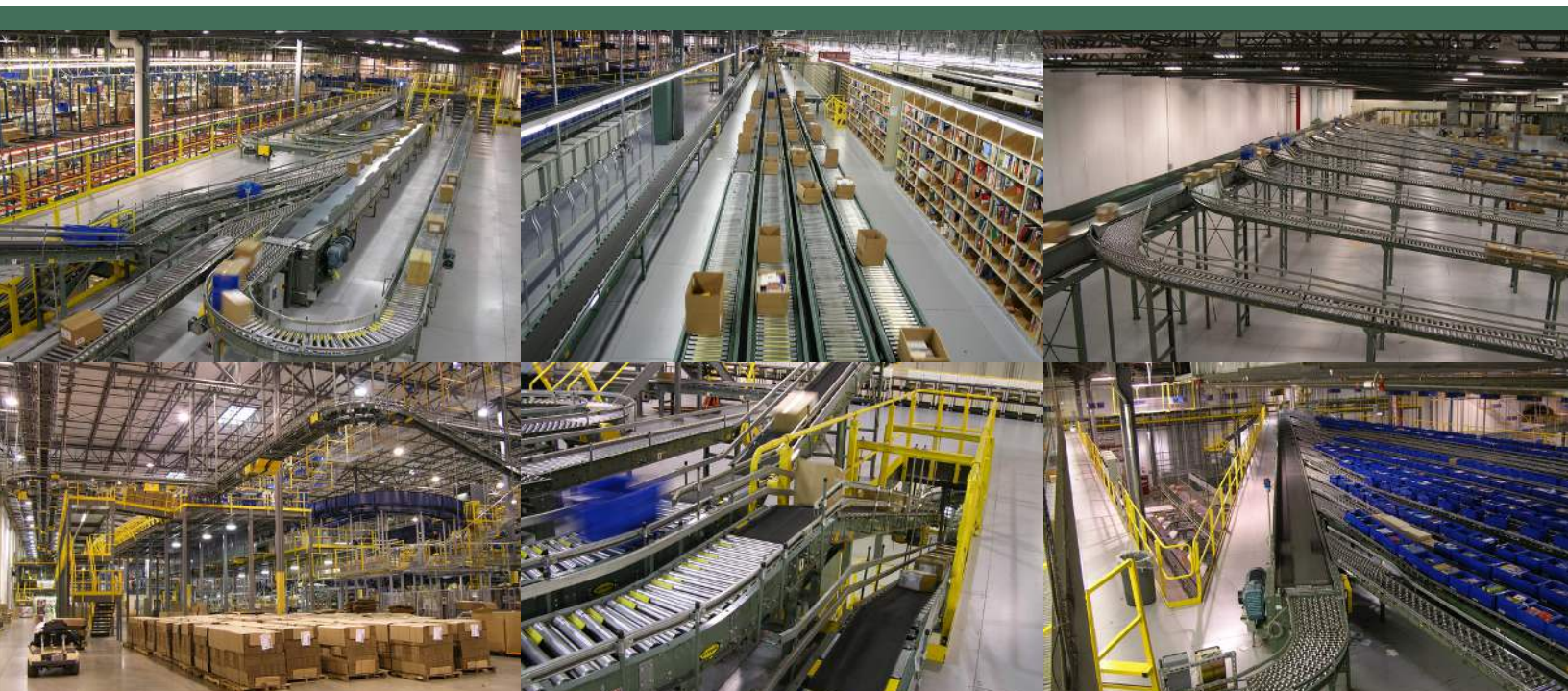
Individual books are placed on belts at induction stations and are sorted to chutes that each represents a single order. Open cartons, containing completed orders, are conveyed to a series of taping and print & apply stations. Cartons are sealed, weighed, and labeled before they are automatically inducted into the shipping system. The shipping sorter is a single loop tilt tray design, capable of sorting up to 170 cartons per. minute to shipping doors and small package Gaylord positions. Shipping door positions are equipped with flexible, extendible conveyors for truck loading.

Results

"Barnes & Noble had previous experience with Hytrol and Century Conveyor Systems, Inc. and we knew Hytrol produced a quality and reliable conveyor. This previous experience was always very positive. Century and Hytrol stood behind their products and services and had become good partners through the years."

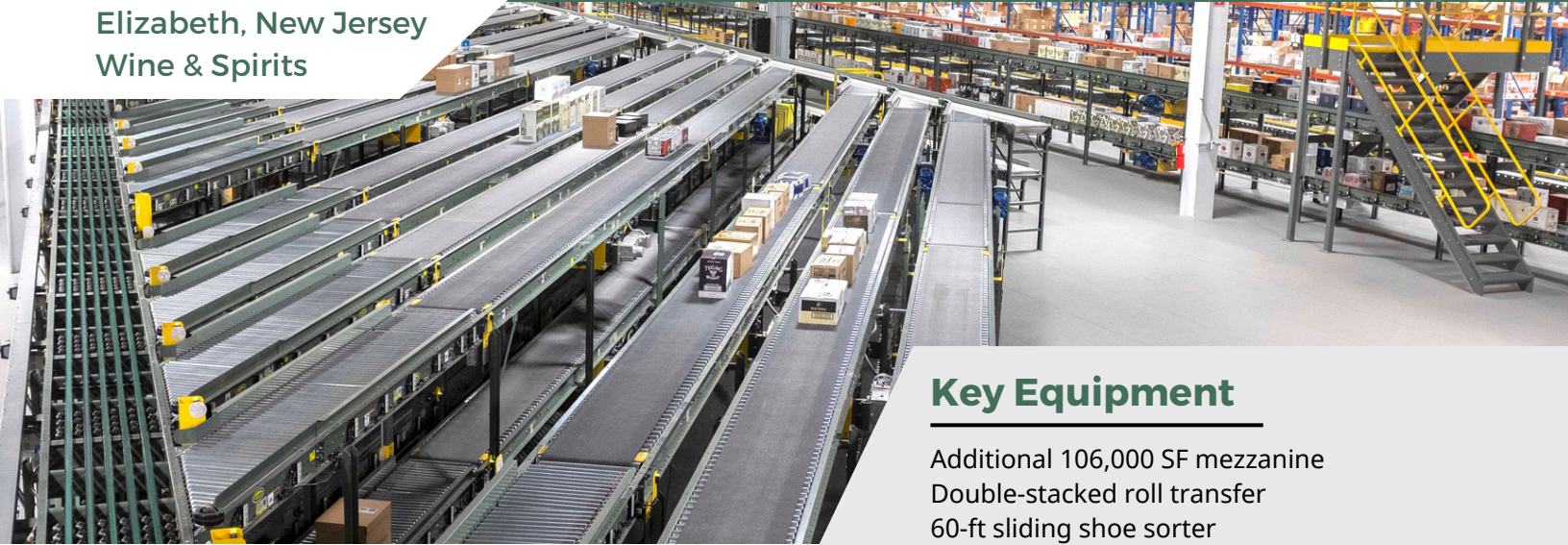
"Hytrol and Century made good on all their promises. The product was delivered when we needed it and it all worked out very well timewise. There have been so many advantages to the new system in place. The accuracy, the speed, and the throughput Hytrol affords us has improved our services to our customers. We are very happy with Hytrol."

-William Duffy, (Former) Executive Vice President of Distribution and Logistics, Barnes & Noble



Fedway Associates

Elizabeth, New Jersey
Wine & Spirits



Key Equipment

Additional 106,000 SF mezzanine
Double-stacked roll transfer
60-ft sliding shoe sorter

Background

Fedway Associates is a New Jersey-based wine and spirits wholesaler with a rich history. The company got its start in 1933 after prohibition. Today, it services licensed package stores, restaurants, and bars throughout the state. The company currently operates in a state-of-the-art 539,000-square-foot distribution facility in Elizabeth, New Jersey.

Challenge

The company had been working with a nearly 20-year-old Hytrol system. They were looking to update that system in 2012. However, Hurricane Sandy would hit New Jersey later that year which compelled the company to find a new facility, thus a new conveyor system and Warehouse Control System (WCS) would need to be integrated.

"Had it not been for the issues that we had with Hurricane Sandy basically destroying virtually all of our inventory and a vast majority of our conveyor system in that building, we probably just would've looked to upgrade or modify the system to newer technologies, newer equipment. But, we realized that we needed to make a move into a new building, which gave us an opportunity to basically design a system that would somewhat replicate what we had in the old building., but take us to newer levels of efficiency and productivity. "

-John Longa, Vice President of Warehousing and Administration

Goals

- Increase throughput and accuracy
- Incorporate a WCS
- Decrease product breakage



Integration

Century Conveyor worked closely with Fedway to design a new warehouse system that would increase accuracy and throughput, incorporate a WCS and decrease product breakage, which had recently increased from changes in the packing industry because less supportive packaging was becoming the standard. It was imperative that the conveyor system design provided little to no movement of items within the cartons.

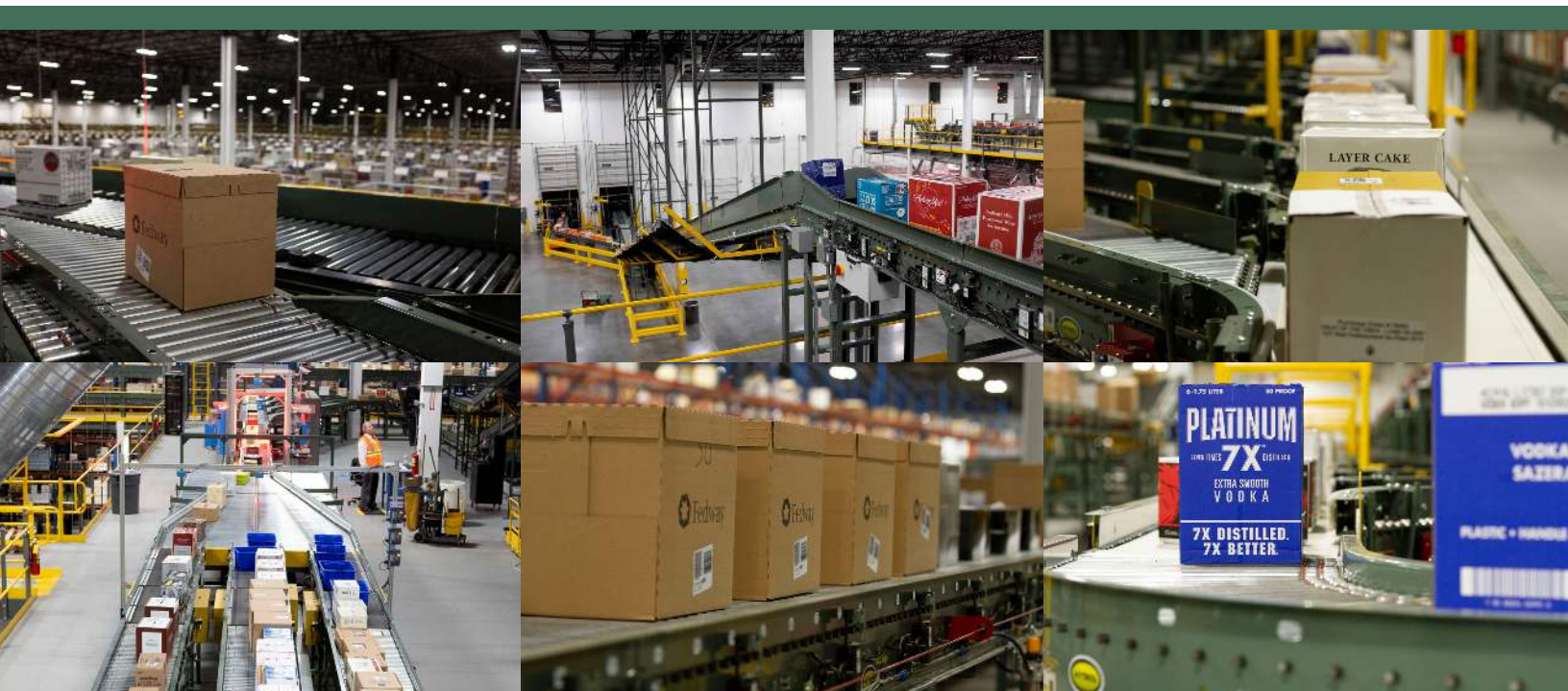
The final project resulted in a brand new warehouse that included an additional 106,000 square feet of space on an elevated mezzanine for sorting and staging. The conveyor system features cartons traveling on belt-over roller conveyors from picking to a 60-foot sliding shoe sorter to a double-stacked roller transfer, and finally to a 24-volt spur where the package is weighed in waves to be loaded for delivery. Century individualized the conveyors to help meet the specific needs of Fedway. Rubber tires were placed on the divert wheels of the roller transfer for better support and diversion. A herringbone roller design was utilized to stop cartons from hitting the conveyor guardrail, and two-inch rollers on the roller beds offered a smoother ride for the cartons. These steps resulted in a reduction in breakage of more than 70%.

Results

Fedway Associates was able to reduce product breakage by more than 70 percent with the new system. An increase in throughput rate reduced the number of hours taken to process cases. The state-of-the-art WCS helped with product traceability and inventory accuracy which ensures the correct cartons are shipped.

"I think the biggest benefit is our throughput rate. We're able to operate and able to put more cases through our system in the same number of hours, would typically take us in our old location, approximately 12, 13 hours. In our new system, we're able to do the 10-hour shift as well as get some replenishment efforts completed as well. And then finally, a large factor is the reduction in maintenance costs and maintenance time associated with keeping the operation running."

-Nick Sheridan, Director of Warehouse Operations



Salson Logistics

Newark, New Jersey
Third-Party Logistics



Key Equipment

5-lane receiving area
Hytrol Prosort 400 Sortation Conveyor
Hytrol EZLogic gapping

Background

Founded in 1960, SalSon Logistics is a leading third-party logistics company, providing supply chain management solutions for a wide range of companies. With over 1,000 employees and one million square feet of warehousing space, the 3PL provides an array of services and capabilities, from import and export services to transportation and trucking to warehousing and distribution services.

Being a port-to-shelf 3PL logistics services provide; SalSon services large retailers and consumer brand products. Their customer-focused capabilities and their desire to provide and accommodate their customer's needs led them to seek a more automated solution for their warehousing operation

Challenge

The company needed to implement an automated material handling system capable of processing their customers' large volume of product. The desired conveyor system would give them the ability to deconsolidate five times the amount of product compared to their previous system.

Goals

- Increase throughput
- Increase accuracy
- Grow business



Integration

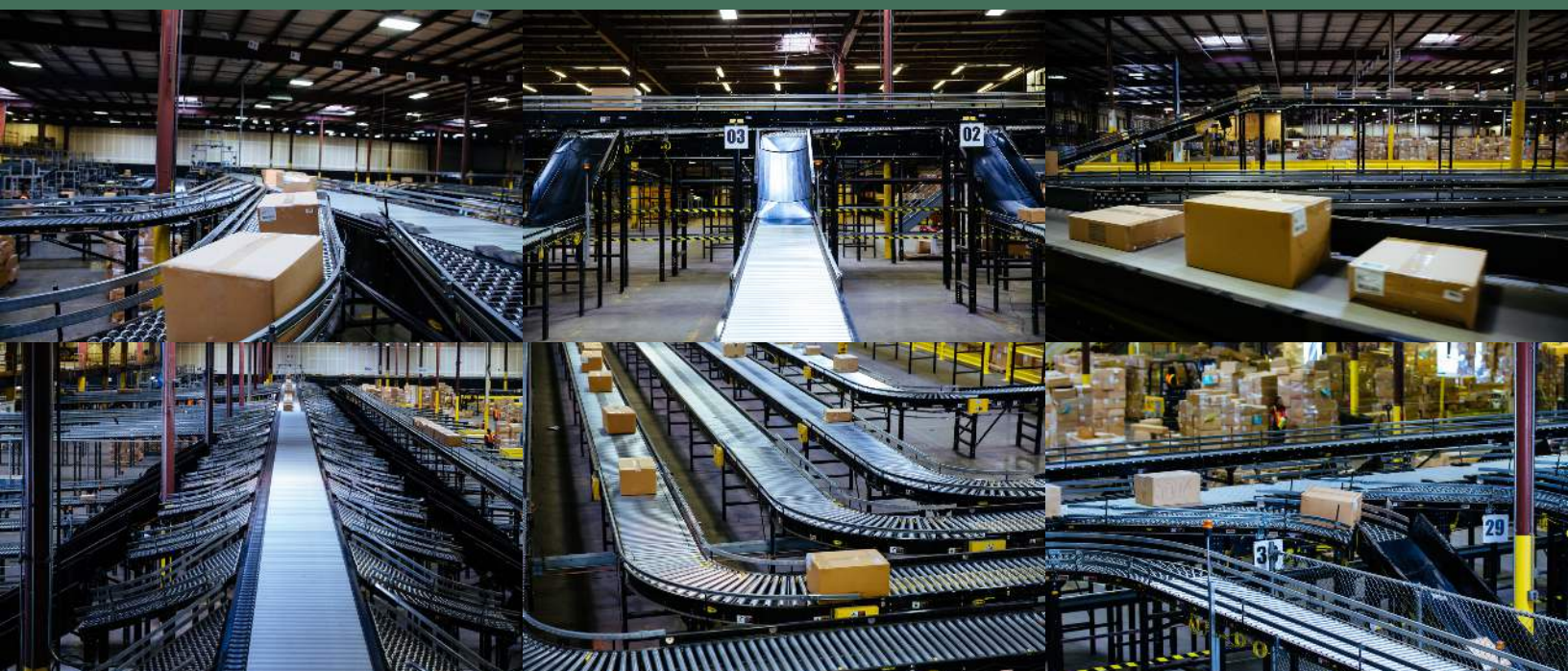
Some of the features of this system include traversing trailer unloaders, allowing five traversing unload conveyors the ability to service multiple inbound dock doors, Receiving scan tunnels, on each pair of receiving lines that allow for the capture of all carton received merchandise, (can scan all sides of carton except bottom) along with no read divert for correction, right at scan location. 16 cartons per minute rate at each receiving location. Upon receipt, cartons accumulate and are queued up on indexing slug belts prior to a merge point. Five accumulation lanes feeding a merge, provide for an outbound rate of 95 per minute.

Merge releases to a bi-directional slat sorter where cartons are read. Thru the WMS/WCS communication, 95 cartons per minute run through the bidirectional sorter which has 23 left hand palletizing divert lanes and 12 right-hand fluid load truck fill lanes, along with another 10 hand palletizing lanes. Palletizing lanes having provisions for hand scanning with label generation for manifesting.

Results

The solution Century provided for all aspects of turn-key development, including such key functions as the warehouse control system, material handling hardware, physical implementation, controls, software, and the engineering and project management disciplines necessary to ensure a timely and correct final commissioning, startup and turnover.

SalSon Logistics no longer has to rely on their labor force to sort, scan, and deliver products. Now with an automated system, the company is about to process 100,000 cartons compared to the 20,000 their labor force alone could do. This innovation and others in the system offered savings in labor, speed and accuracy.



Simon & Schuster

Riverside, New Jersey
eCommerce



Key Equipment

5-lane receiving area
Hytrol Prosort 400 Sortation Conveyor
Hytrol EZLogic gapping

Background

Simon & Schuster, a division of CBS Corporation, is one of the largest book publishers in the United States of America. Beginning as a “Mom and Pop” operation in 1924, the first book they published was a crossword puzzle book. Since then, they have published many bestsellers and even Pulitzer prize-winning titles, becoming a significant force in publishing today.

The Riverside, NJ Distribution Center is one of two DCs, and services all of North America and caters to an international arena as well.

Challenge

Due to the Internet and today’s fast-paced environment, Simon & Schuster is challenged to get its product out in the market quicker. With a volume surge in 2002-2003, they collaborated with Century Conveyor Service, Inc. of South Plainfield, NJ to develop a two-phase operation to meet this challenge. The two-phased upgrade met the goals of Simon & Schuster with absolutely minimal downtime.

Goals

- Increase throughput
- Enable eCommerce processes
- Decrease downtime



Integration

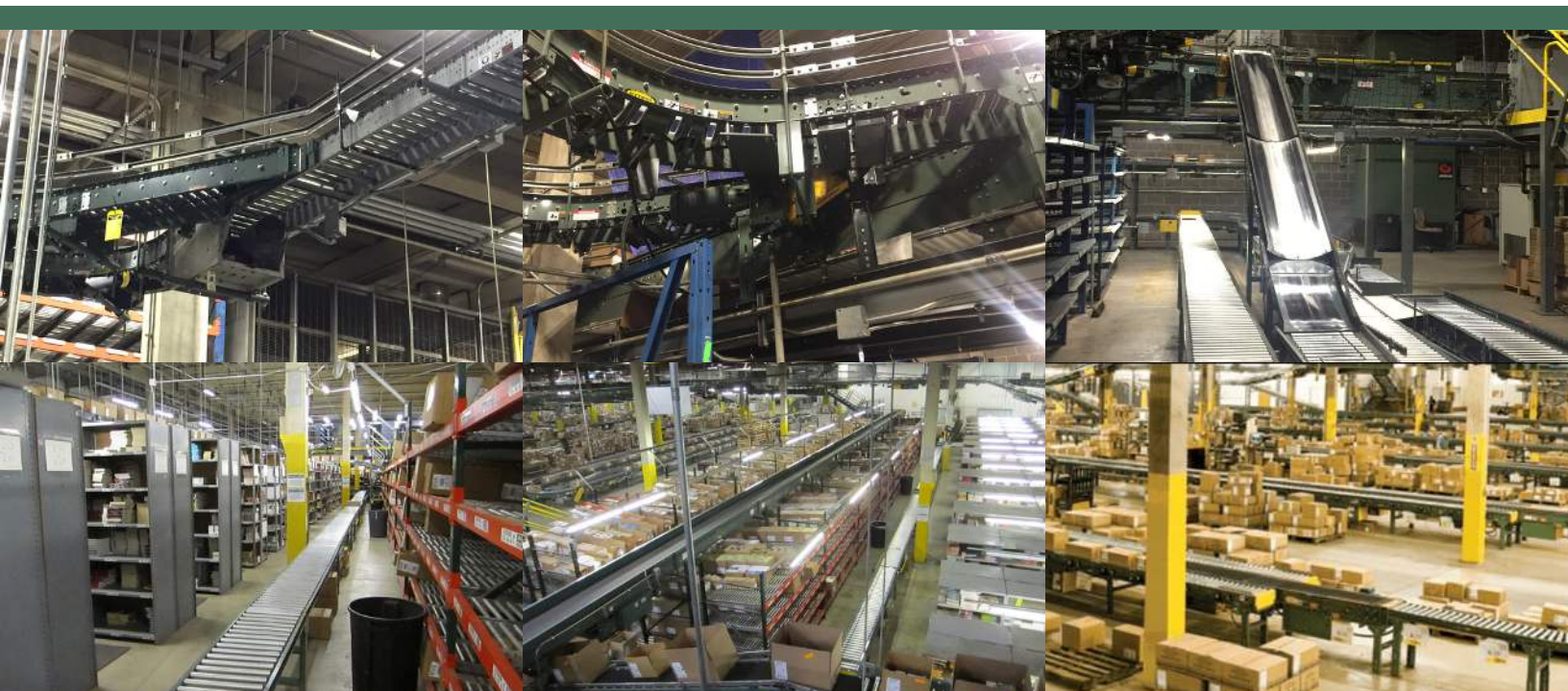
The first phase, implemented in July of 2007, overhauled the shipping system. The shipping sorter was replaced and put in the air, which doubled the speed and tripled the dock spots to meet the demands of the market. The second phase, completed in June of 2008, gave the picking system a much needed upgrade, adding sortation to the split case picking system.

The two-phased upgrade meets the goals of Simon & Schuster. "We did not add any man power to the operation...and cut our cycle time in half...[and] we've increased our accuracy," said Schaeffer. The need for dependability, as well as speed and accuracy, is also a crucial factor in this demanding operation. The conveyor runs at least 16 hours a day; much more during peak seasons.

Results

" It works dependably, it's reasonably priced, mechanically it's simple enough to maintain, and it gets the job done. It's hard to explain, but in this world of operations, being able to depend on something – to depend on something that works well and flawlessly every day for a reasonable price is a big thing."

Dave Schaeffer, Vice President of Distribution and Fulfillment



Our history



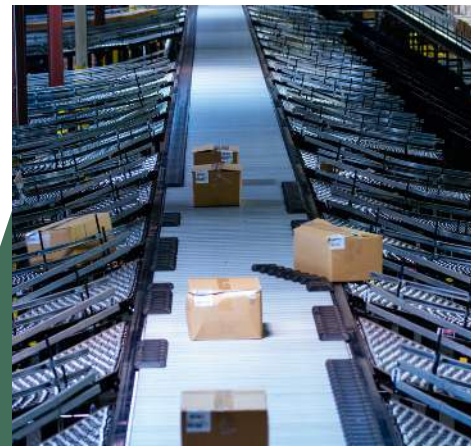
Ron Ferrara founded the company in 1981 based in Edison, NJ and focused on material handling systems, installation and conveyor technical service. With hard work and a commitment to focus on customer satisfaction, the company grew to a full-service material handling system integrator serving a variety of industries and applications.

In 2017 Century was acquired by Lafayette Engineering, Inc (LEI) based in Danville, KY and Ontario, CA to become a Nationwide Systems Integrator able to self-perform most of the work required for successful turnkey automated systems.

What we do

Century Conveyor Systems is completely dedicated to the efficiency and stability of your operations. As a full-service integrator, we can provide a multitude of material handling solutions, ranging from conveyor systems and robotics, to warehouse management systems and reporting software.

Our system engineers design and validate an automated warehouse or distribution center system design for you, increasing output, lowering labor costs, and placing you on the cutting edge of automation. There are thousands of solutions, and Century knows exactly which ones will benefit your supply chain the most.



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