

## Manual Sort Parcel Handling System Expansion



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### **PROJECT SCOPE**

System Design & Integration,  
Consultation & Analysis,  
Electrical/Mechanical Engineering,  
Warehouse Controls System,  
Mechanical-Electrical Installation

### **INDUSTRY**

Parcel Handling  
Fulfillment

### **Case Study Overview: Custom Conveyor Design Increases Volume & Efficiency with Zero Downtime**

The SilMan System Integration Team provided engineering, conveyor design, and implementation services to integrate a 3K system expansion onto an existing 6k parcel handling system for a West Coast logistics operator.

### **Expanded Warehouse Logistics System for an Industry Challenger**

The facility featured in this article is an excellent example of how this company has achieved success facing off against industry giants.

The location is a savvy choice, perfectly positioned within the greater metro Phoenix area to serve its growing population. Moreover, the facility is also large enough to support future growth without relocation.



And grow it has! So much so that in recent years volume began to outpace the designed capacity of the original system.

After years of persistent growth in demand, the time was ripe to expand the facility, much to the relief of the local operations management!

As leadership contemplated an updated system, they turned to the SilMan Integration Team.

The companies have a long history of working together. Even as this article is being published, our teams are concurrently collaborating on additional system implementations.

After a detailed analysis, SilMan proposed that a new 3K system be added to the current layout. Additionally, the design would increase the effectiveness of the manual sort team.

For some providers, the capacity at the facility could equate to an automated sort system. However, with the efficiencies achieved by their management style and team member training, the company is able to achieve the needed increase in output with a well-designed improvement to their current system.

## **Parcel Handling Conveyor Design**

The expansion included three new Unload Doors, a primary High Volume Divert (HVD) Sort Tower, a secondary HVD Sort Tower (Outbound) for Hub Operations, and one new Van Line.

With over 1800 linear feet of new conveyors and sort towers, the project adds over 30% capacity to the facility. Moreover, the newer equipment adds speed and reliability to daily operations.

The added Outbound HVD sort also provides additional capacity to the overall hub operation.

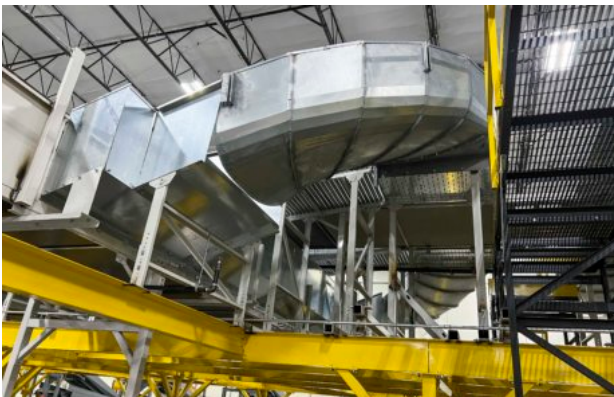
These added tools also increase inbound preload capacity: Six new outbound (hub operations) doors and increased preload slots with a new Van Line are cooked into the operation.

In addition, major portions of the expansion lie above existing conveyance. Therefore, the installation of heavy-duty steel structures to support the new equipment occupied a considerable amount of time and attention for our onsite teams.

All programming and commissioning by SilMan Material Handling Controls Group.

Mission accomplished!

## Updated Distribution Center (Gallery)



## System Design and Implementation Challenges

The new system was designed and installed on schedule, despite the obstacles presented by a global pandemic and supply chain disruptions.

The system operates nearly 24 hours each day, precluding shutdown periods as a viable installation strategy.



Instead, the SilMan design, project management and installation teams formulated a combination of night and day shifts and daily coordination with operations managers to access work areas.

Additional complications arose by the nature of the expansion design itself, which is overlaid and intertwined throughout the existing operational equipment. Physical access to key areas was a constant challenge.

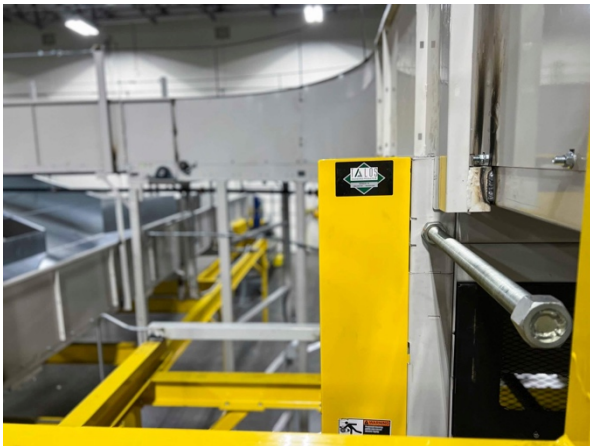
Proudly, we can say that the expansion project was executed with minimal interruption to current operations in an efficient and safe manner.

### **Project Management Scope of Work**

- System Design: mechanical, electrical and assist in design controls
- City and county inspections, and third-party special inspections
- All start-up activities and final project deliverables
- Updated system drawings and documentation upon project completion
- Life-cycle services

## **Talos Engineered Products**

### **Key Conveyor Equipment Partner**



[Talos EP](#) provided all conveyors and chutes for the Buckeye project.

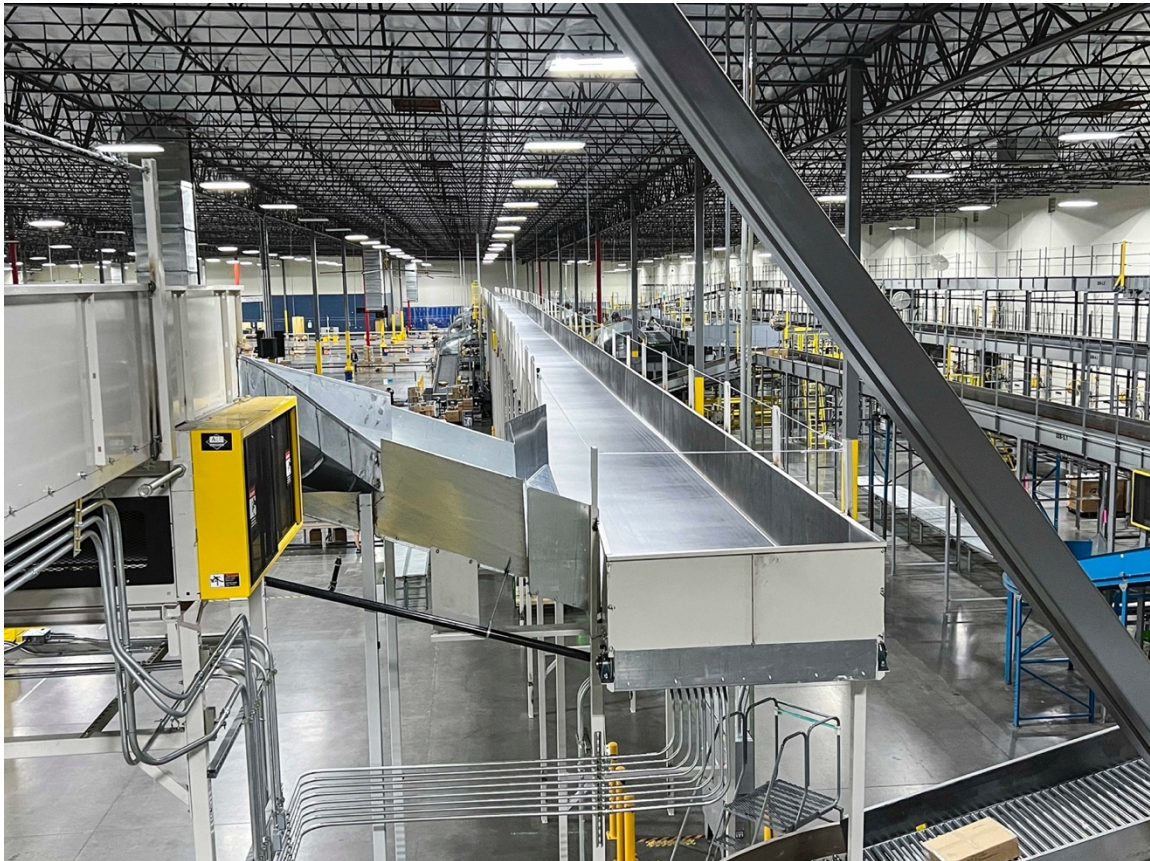
The quality of their equipment speaks for itself. However, it is what you don't see in photographs that make Talos such a valuable contributor.

First of all, their interactive, collaborative approach is a perfect match for the SilMan style.

This commitment is most visible working with their engineering team. Their previsualization and

Configurator technology reduce human error and speeds SilMan's installation process.

SilMan has created an article featuring Talos and our company's relationship. [You may read it here.](#)



## Conveyor Equipment and Components

Company	Equipment
Talos EP	Parcel Conveyors, Chutes, Bolted Construction
FMH	MaxxReach Telescopic Belt Conveyors
Flow-Turn	Powered Belt Turns
Talos EP	Electrical Operated Floating Plows
Forbo	Belting



Company	Equipment
SilMan Industries, Unison WCS	Motor Control Centers

## About SilMan

SilMan Industries (previously SilMan Construction) is based in San Leandro, Calif. Founded in 2008, the firm operates nationwide in three divisions – Construction, Material Handling and Site Services – and partners with “best in class” companies nationwide providing integrated solutions in the Industrial, Manufacturing, Distribution, and Public Works sectors. For more information, please visit [www.silmanindustries.com/about](http://www.silmanindustries.com/about).

