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systems

Freezer Pallet Handling System Schwan's, Salina, KS

References

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References

Food Distributor
Modernization



Wholesale Dock Conveyor System

Initial Situation

With limited storage space at their Salina, Kansas production facility, Schwan's (a frozen food delivery service) was shipping frozen pizzas to a rented storage facility in Kansas City, Missouri. In order to distribute the pizzas, they had to be returned to the Salina production facility. The high shipping costs associated with this process justified Schwan's efforts to implement a more cost effective solution.

Schwan's constructed a new distribution center connected to their production facility via an overhead tunnel. viastore worked with Schwan's to design a system that would allow them to capitalize on the benefit from the new distribution center.



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System Solution

The entire installation of the first phase was completed over Labor Day weekend. viastore installers replaced existing equipment with a new line featuring "lift and hold" equipment designed to queue pallets up to a scan station. At the scan station, pallets are automatically scanned to determine whether the pallet is to be transferred to the existing freezer or to the new distribution center. viastore software is used to communicate with Schwan's WMS to decide the pallet's destination.

In the second phase of installation, viastore developed a new pallet handling infeed conveyor for pallets sent to the distribution center. Upon entering the freezer, pallets are scanned again to determine the desired location of each pallet. The pallets are then transferred by shuttle car to one of three vertical lifts, and down to a level at which they can be picked up by a fork truck.

viastore built a separate outfeed line (accessible at four locations) to transfer full pallets back through the tunnel to the order selection freezer. In the event that the main infeed line is not operational, the outfeed line can run in reverse and infeed pallets into the distribution center instead.

The system was designed with unique features to accommodate the -20°F environment in the distribution center. To deter ice buildup, pallet accumulation was achieved with electric "lift and hold" equipment instead of pneumatic devices.

Motors are oversized and equipped with heaters to breakup any icing conditions. VFD's were used throughout the system to ensure pallet load stability during start/stop transitions.

The Result

The viastore system has not only improved the productivity of Schwan's Salina Kansas facility (with a 120% increase in throughput rates), but dramatically enhanced their profitability as well.

Scope of Supply:

- Pallet Handling System
- Custom Pallet Accumulation
- Custom Support Structures
- Safety Netting
- High Speed Vertical Lifts
- Turn Tables

Essential Features:

- Electric lift and holds for accumulation
- Freezer environment
- Oversize rating of more than 2.5 times normal requirements
- Installation during operation