

Schwan's Reduces Labor Cost With Orion Combo System



The Orion MA-X with custom conveyor helped Schwan's streamline frozen pizza handling and reduce labor costs.

For a number of years, the Schwan Food Company plant in Salina KS that produces Tony's and Red Baron frozen pizzas has assembled its pizzas on automated production lines and used robots to assemble the case-packed pizzas into pallet loads. But from the palletizing area to the freezer where the pizzas were to be frozen and stored before being re-palletized into shipments to customers, the loads were moved on manually pushed carts. Maintaining a steady flow of 120 loads per hour into the freezer required a significant manual labor force.

Schwan's consulted with Orion Packaging to explore automating this labor-intensive part of its operation. Their goals included installing an automated pallet-wrapping system to stabilize loads and maintain comparable throughput while reducing their labor costs.



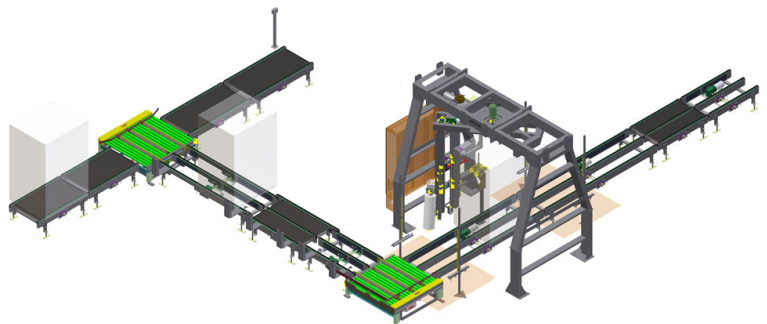
Schwan's had planned to install the necessary new conveyors and the wrapper between the two rooms—the palletizing room and the freezer room. But upon inspection, Orion specialists concluded that the floor of that area would not support the weight of the automated wrapper system. It was going to be necessary to follow a different route to link the two parts of the operation. Fortunately, the team discovered, there

was an empty storage room next to the palletizing area where the equipment could be safely installed, requiring only a short detour to reach the freezer room.

A second challenge was that the existing pallets that Schwan's was using in this part of its operation—and wanted to continue using—were not traditional forklift pallets, but single-layer wooden skids with two steel rails on the underside, which allowed them to be manually moved by workers along the existing wheeled conveyors with minimal effort. Handling them with a powered roller conveyor would present a challenge, especially when changing flow direction, as would be necessary.

Orion specialists worked closely with Schwan's staff in Salina to design and install a system that combined roller and chain conveyors to convey pallets efficiently to and through the wrapper area and on to the freezer room, significantly reducing the need for labor and ensuring a regular and reliable flow of product.

Orion began designing the new operation schematic. A door was opened in the existing wall between the palletizing room and the empty storage room where the wrapper would be situated. A "T" configuration of chain conveyors was designed, with the top of the "T" meeting up with the existing wheeled conveyors inside the palletizing room. There, infed chain conveyors on either side would move skids with pallet loads to a roller conveyor transfer point. There they would be picked up by another chain conveyor and moved into the wrapper room. At a second 90 degree transfer point they would then be moved into and through the wrapper and on to the freezer room.



Both powered conveyor and chain conveyor, along with chain transfer stations, allowed the customer to achieve their pallet handling goals.

The new system was approved and installed. Pallet loads are manually pushed along the existing wheeled conveyors from the palletizing operation to the infeed conveyors of the wrapping operation. The Orion chain conveyor moves the loads to the MA-X automated pallet wrapper, which wraps the top half of the load, stabilizing it to prevent potential load spillage during handling while freezing and storing. Full wrapping is not required at this point, since these are unit loads destined for freezing and storage. When these loads are later picked to create mixed loads for shipment to distribution, they will be placed on traditional pallets and fully wrapped for shipping.

As a result of Orion's design the pathway that the pizzas now travel is essentially the same distance they originally travelled, but in a different configuration. The original pathway was east through the palletizing room and then south to reach the freezer infeed. The Orion pathway takes loads and then east through the wrapper to the freezer infeed, covering essentially the same distance.

Combining the powered chain conveyors with the MA-X wrapper, which operates at an arm speed of 36 revolutions a minute, the new automated system is easily able to maintain the required 120 pallet loads per hour throughput while significantly reducing Schwan's labor costs. The system has operated successfully since its installation in 2011.



The Orion MA-X applies the stabilizing wrap on the pallet load, then secures the film tail with a wipe down brush. An operator will apply a label when the load is transported by.



The chain transfer section of the conveyor is built with the highest quality components for heavy-duty operation and long term reliability.