

Plastics Manufacturer Boosts Product Quality While Cutting Labor Costs

HAN-TEK's In-Line Conveyor Solution Cuts Storage Needs, Enhances Inventory Control



HAN-TEK Solution

APPLICATION: Overhead In-Line Conveyor

INDUSTRY: Manufacturing / Consumer Products
Plastic Packaging

KEY COMPONENTS:

- Injection molding
- Blow molding
- Overhead In-Line Conveyor
- Gaylord Filling Cell Conveyor
- Customized, operator-friendly controls

BUSINESS ISSUE:

The customer needed a durable, low-maintenance conveyor system that would require fewer operators, achieve greater efficiency and product quality, and meet U.S. Food and Drug Administration specs regulating surfaces. The customer also expected a return on investment in 12 months.

SITUATION:

The customer, a leading manufacturer of PET packaging for consumer products, maintains production facilities around the world. In six U.S.-based facilities, injection-molding machines produced PET preforms and dropped them into gaylords, while laborers tracked information and supplied gaylord covers. Fork-truck operators transported filled gaylords to storage and then later transported the preforms from storage to blow-molding machines.

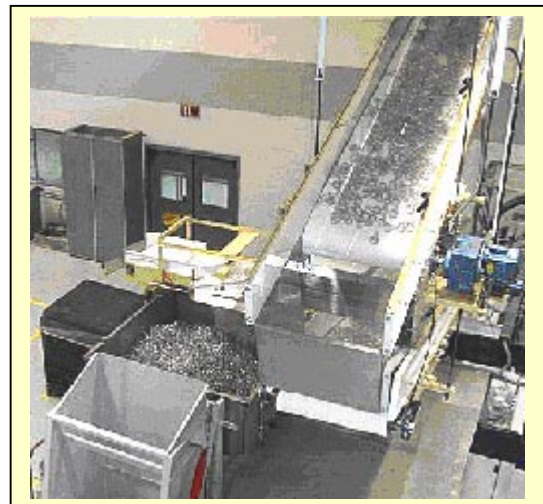
This process involved several inefficiencies and problems. Any defects occurring at injection molding may not be detected for days, when the filled gaylords were moved out of storage to blow molding. Imprecise cooling temperatures led to blow-molding difficulties. Handling, moving and storing filled gaylords required substantial amounts of labor, space and fork trucks.

Customer Value at a Glance

Using HAN-TEK's Overhead In-Line Conveyor system, a leading global packaging manufacturer cut labor costs by nearly a half-million dollars per year.

This HAN-TEK solution features:

- ◆ *Improved product quality and reduced waste.*
- ◆ *Labor savings of up to \$455,000 annually.*
- ◆ *Return on investment in 12 months.*
- ◆ *Reduced gaylord-storage needs.*
- ◆ *Consistent production and inventory control.*
- ◆ *Reduced maintenance expenses and extended equipment life.*
- ◆ *FDA-compliant surfaces.*



HAN-TEK SOLUTION:

HAN-TEK provided a durable, low-maintenance Overhead In-Line Conveyor system that achieves the customer's goals. The HAN-TEK solution transports preforms directly from injection molding to blow molding, at a programmable speed that allows for optimal, consistent cooling. Customized controls and pulse signals track the rate of preforms leaving injection molding, and sensors at blow molding track the level of product. Should the level of preforms reach a high point – perhaps because a blow-molding machine has gone down -- the system automatically switches temporarily to gaylord filling. (A separate but integrated HAN-TEK system – the Gaylord Filling Cell Conveyor – activates as needed to absorb excess preforms, allowing injection molding and tracking of preforms to continue uninterrupted even when blow molding fails to function. The Gaylord Filling Cell's ability to fill four gaylords unattended offers additional labor savings).

HAN-TEK's In-Line Conveyor solution minimizes product handling and marring, and slashes labor costs by reducing the need for operators to attend gaylords and fork-truck drivers to transport them. Because preforms move promptly and efficiently from injection molding to blow molding, any defects in the injection-molding process can be detected quickly, therefore minimizing waste. Reduced reliance on gaylords dramatically cuts storage needs, and running the conveyor overhead preserves space on the factory floor.

All surfaces in the HAN-TEK systems that contact the product are FDA-approved, consistent with the manufacture of packaging for food and beverages.

CUSTOMER VALUE:

Improved quality and reduced waste. With the HAN-TEK Overhead In-Line Conveyor, the opportunity for scuffing the product is greatly reduced. Further, because preforms arrive at blow molding within 20 minutes, any injection-molding defects can be detected promptly, reducing waste. The In-Line system's ability to move the product at three to five feet per minute – a rate designed for optimal cooling – also ensures integrity in the blow-molding process.

Significant labor savings. HAN-TEK's In-Line solution reduces the need for fork-truck operators by 70 percent, saving approximately \$65,000 per system per year. With seven In-Line systems in its largest facility, the customer saves \$455,000 annually.

Quick return on investment. The HAN-TEK Overhead In-Line Conveyor achieves breakeven within 12 months of installation.

Reduced gaylord-storage needs. Because the HAN-TEK In-Line solution relies on gaylords only as backup, the customer enjoys a dramatic savings in space, time and money otherwise needed to transport and store them.

Consistent production and inventory control. The HAN-TEK solution is driven by customized, operator-friendly controls that perform a variety of functions. Pulse signals are emitted that track the rate of product flow from injection molding and the level of preforms ready for blow molding. Should blow molding fail to function, an alternate gaylord-filling system automatically activates, and accurate tracking of product continues uninterrupted. In addition, variable-speed controls permit conveyor adjustments that allow for optimal cooling or other needs. All of this information is provided to the customer's network so production performance can be optimized.

Longer equipment life and reduced maintenance. Two to four years was the typical lifespan for the gayload-filling conveyor systems the customer previously used. HAN-TEK's solution – which incorporates heavy-duty conveyors -- performs three times as long. HAN-TEK's In-Line Conveyor also requires minimal maintenance, saving time and expense and reducing the likelihood of breakdown.

FDA compliance. In accordance with FDA regulations for all surfaces that come in contact with food or drink, the HAN-TEK solution features approved powder-coated surfaces, stainless-steel chutes, and domed Lexan covers to keep the product clean.

To learn more about HAN-TEK Overhead In-Line Conveyors or other solutions, contact HAN-TEK's Integrated Conveyor Group at 585-924-2200 or Sales@HAN-TEK.com.