

KONSTANT®

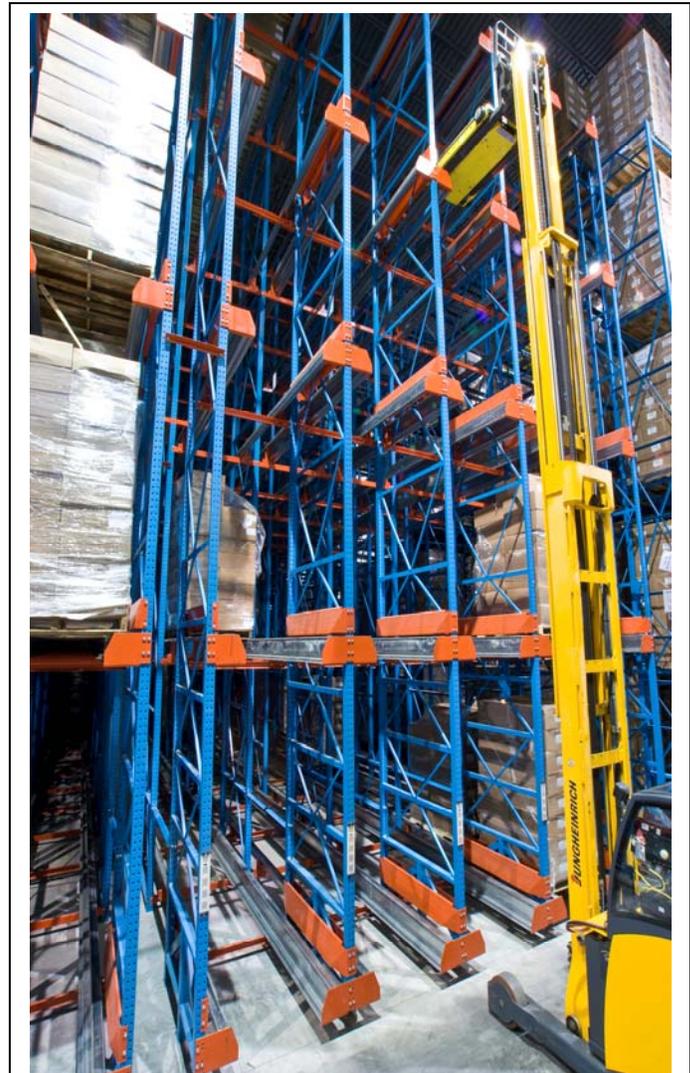
PALLET RUNNER GEN3

For Alpha Baking of Chicago, achieving a high throughput for its frozen baked goods line was a critical goal to growing its business. Achieving vendor awards from such key customers as Sysco Food Service, Kroger and Burger King set the bar high for Alpha Baking, but they were striving to take their frozen food business success to a new level.

Turning to its refrigerated warehouse partner, Frozen Assets Cold Storage, the two companies collaborated on designing a new 49,000 square foot annex to an existing Frozen Assets facility on the south side of Chicago. Konstant® Storage Systems, with the knowledge and insight from its long-standing distributor, Quality Storage, created an integrated high-density storage solution for Frozen Assets that featured the Pallet Runner® Storage System. Designed for maximizing storage density, Pallet Runner® was an ideal solution for the limited warehouse space available and the SKU mix of Alpha Baking.

The Pallet Runner® Storage System works similar to a drive-in or drive-through rack system but with three distinct advantages:

- Using wireless remote controlled carts, the system requires far fewer man-hours to operate than other high-density systems. Operators move pallets to and from the storage system while the carts work independently to store and retrieve product within.
- With carts doing the interior put-away and retrieve functions, this system greatly reduces the chances of damage to the product, to the rack and to fork lift equipment.
- It provides greater flexibility than drive-in and drive-through systems by having the ability to store one SKU per lane - not per bay - giving a vastly increased SKU count capacity over the same area.



A fork lift truck easily moves the cart from lane to lane based on WMS instructions.

At Frozen Assets, the Pallet Runner® system employs just four remote controlled carts to manage the 175 lanes (more than 4,000 pallet positions) for its highest volume, full pallet SKUs. Integrated within the Alpha Baking annex along with the Pallet Runner® Storage System are other traditional storage rack configurations consisting of Push Back Rack and Selective Rack which are used in the perimeter aisles for slower moving items and staging of pallets to be shipped. Combined this gives Frozen Assets the ability to store more than 8,000 pallet positions in just 41,000 square feet of warehouse space.

More significant than the high storage capacity Konstant® was able to achieve, is the high throughput and faster order turn-around that is helping Alpha Baking achieve its goals. Since the most popular SKUs are easily accessible, this, along with the speed at which the semi-automatic system operates and the shorter “stock- to-dock” distance of the Pallet Runner® system, Frozen Assets is able to provide Alpha Baking customers with far superior service than ever before. This unique Konstant® material handling solution, which works seamlessly with Frozen Assets’ standard WMS, contributes to their high order accuracy (over 99.95%) and superior fill rates.



Pallet Runner® Gen3 Cart



Front View - Pallet Runner® Storage System

Sustainable Advantages

The Pallet Runner® Storage System has several 'green' advantages that provide on-going energy savings at Frozen Assets Cold Storage. Some factors are difficult to measure, but all contribute to a more energy-efficient and environmentally responsible warehouse operation:

- Better use of costly refrigerated space (59% better space utilization*) means overall improved utility efficiency.
- Shorter driving distance for fork lift trucks (estimated at 40-50% less*) means less electrical consumption and truck maintenance.
- Faster truck loading and unloading process means reduced energy loss during "open dock / open truck door" time.
- Less idle time for waiting trucks means reduced fuel consumption (refrigerated trucks require more fuel per minute than most other vehicles)
- Reduced lighting requirements - no illumination is required in the deep lanes of the Pallet Runner® system, reducing required lighting by nearly 50%*

* Comparisons are with the Frozen Assets main building which is adjacent to this site.

Pallet Runner® helps Frozen Assets address four of the most critical cost factors for any warehouse operation: *Space Investment, Labor, Maintenance, and Utility Costs*. These factors are magnified when running a large refrigerated operation. And in these difficult economic times, controlling costs becomes vital to operational objectives.

- *Space*: The high storage density of Pallet Runner® made it possible for Frozen Assets to achieve far more pallet positions within a given space than any other storage option. The minimal aisle space required, yielded more available space for product storage.
- *Labor*: Faster SKU put-away and retrieval means reduced hours and fewer staff to meet productivity goals, even during high volume seasonal periods.
- *Maintenance*: The operations at Frozen Assets run 24/7, yet the Pallet Runner® cart's battery system (which gets charged every shift) has never required replacement or significant maintenance in over 14 months of continuous operation, even in a -10 degree environment. Other preventative maintenance tasks are minimal and simple.
- *Utilities*: With refrigerated storage space costs among the highest in the industry, Pallet Runner® maximizes storage density with more product stored per cubic foot than any other storage system. See "Sustainable Advantages" above for other energy saving features.

For both Frozen Assets and Alpha Baking, choosing Pallet Runner® as the centerpiece of their new warehouse has yielded multiple benefits. Selected originally for its high density storage capabilities, Pallet Runner® has proven to be even more valuable in how it helps them move product, not just store it.

To learn how the Pallet Runner® Storage System can benefit your operation, please contact your Konstant® representative.

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