



Tractor part manufacturer improves facility layout to increase storage capacity by 85 percent

Alpine Supply Chain Solutions helps Hy-Capacity maximize its current warehouse space with a new layout, delaying its need to move into a new facility by two years.



Hy-Capacity has been servicing and manufacturing top-of-the-line tractor parts for over 40 years. The company's mission is to set the market standards in product quality for new and remanufactured agricultural equipment parts, while providing an ethical and rewarding atmosphere where its employees can reach their maximum potential. One of Hy-Capacity's core values is to challenge itself to grow by focusing on continuous improvement. That growth recently caught up with them and resulted in a warehouse that was out of space.

The Challenge ▶

Space Constraints and Lack of Storage

When Hy-Capacity started running out of warehouse space, they contacted Crown Equipment Corporation and Conveyor Solutions, Inc, who brought in their long-time partner, Alpine Supply Chain Solutions, to help them analyze the company's storage and layout needs. Specifically, Hy-Capacity needed help:

- Identifying the right pick and reserve storage type for their current facility
- Developing layout alternatives that considered capacity, productivity, flow, and safety concerns
- Estimating how much time they could realistically remain in the same location before running out of space.

Alpine was happy to step in to help.

Alpine began with a thorough Storage Type Analysis (STA), leveraging Optricity's OptiSlot software. An STA leverages advanced mathematical algorithms that consider a product's dimensions, physical characteristics of the warehouse environment such as slot configurations, pick path, and material handling equipment, and operational goals like pallet building, seasonality requirements, and retail groupings. This is done in order to identify the ideal size and quantity of Active and Reserve locations. The STA consists of five phases: Kick Off & Data Review; Data Cleanse; Site Visit; and Initial/Final Recommendations for Storage and Rack Profiles.

Alpine also conducted an ABC analysis using three years of raw sales data. This analysis ranked items on demand, cost, and risk, and helped Alpine group items into classes. Lines shipped by month, quantity shipped by month, and order profiles were all factored into layout requirements.

In the end, any product that required less than two pallets on hand would remain in active storage and any product that required more than two pallets on hand would be given active and reserve locations. A range of rack profiles was determined which included bin shelving, handstacks, case flow, and pallet storage. Layout options were then designed and analyzed until a solution that best met the goals of Hy-Capacity was landed on.

The Outcome ▶

Hy-Capacity's new layout increased the facility from three warehouse zones to four and increased overall storage capacity by a whopping 85 percent. Before the project, Hy-Capacity was planning to move its operations into a new facility in 2022. However, the new layout and increased storage capacity mean that Hy-Capacity can remain in its current space until 2024. New layouts are being implemented zone by zone which allows Hy-Capacity to keep working without interrupting its operations.

According to Chad Vaudt, Production Manager at Hy Capacity, "Alpine asked all the right questions and made meticulous use of our data to create a plan that bought us two more years in this location. Simply put, they went above and beyond, showcasing their ability to maximize space, equipment, labor, and control."

With more time to find a location that can grow with them for years to come, Hy-Capacity can comfortably keep doing its part to help the farmers of this country keep feeding the world.