

# Dayton Superior Provides a Solutions Package for Amazon Distribution Center



To lift, space and tie rebar, Dayton Superior PEZ E-Z Chair®, the PTZ Tower Chair, PSW Space Wheels and Tie Wire were supplied.



High capacity lifting anchors embedded in the panels provided strong lifting points.



B12 and B14 braces attach to hardware embedded in the tilt-up panels.



Dayton Superior densifiers and bondbreakers were important elements in this successful project.

## SUMMARY

Nearly 20 years ago, the world's largest Internet company, Amazon.com, was just beginning its rise from start-up to e-commerce giant. When the Seattle-based company made their first sale, they had two fulfillment centers – one in Seattle and the other in Delaware. Within a year, the company reached sales revenue of \$15.7 million. Since that time, the company has grown to realize sales revenue of \$74.5 billion in 2013 with predictions that by 2015, the company's sales revenue could reach \$100 billion. To support both domestic and global growth, the company has built a network of fulfillment/distribution facilities. Currently, the company has more than 130 distribution facilities worldwide, 61 of which are in the U.S. This will grow to 62 U.S. facilities when Amazon's soon-to-open newest distribution center opens in Kent, Washington – about 20 miles south of the company's headquarters.

## CUSTOMER

- Owner: Amazon
- Contractor: Sierra Construction Company
- Dealer: Atlas Construction Specialties-Dave Connors
- Dayton Superior: DSM- Kris Krabill

## PROJECT

- Amazon Distribution Center
- Kent, Washington

## CHALLENGE

Sierra Construction Company would be utilizing the tilt-up method to construct the building. The project would entail lifting 200 concrete panels, each up to 5' high, up to 13" thick and weighing 224,000 pounds.

## SOLUTIONS

Dayton Superior provided the contractor with a full solutions package, which included the T250 Lifting insert, the T110 Superior Lift System, T120 Superior Lift Hardware, and B12 and B14 Braces.

By using Dayton Superior's T250 Lifting Insert on the project's larger panels, the contractor was able to use 8 point picks to lift the panels, versus a 16 point pick, ultimately saving both time and money on the job. The T250 Lifting Insert

## SUCCESS STORY



provides a dual forged foot design creating up to a 30% higher load capacity over single foot anchors, thus reducing the number of anchors needed.

The T120 Superior Lift Hardware easily attaches to the T250 Lifting Insert by engaging the curved clutch handle into the opening of the anchor. The ball of the hardware aligns itself to the pull of the rigging. Once engaged and under load, the T120 cannot be disengaged by remote ground release until the load has been removed in lowering the rigging. The T120 Superior Lift Hardware was also used with the T110 Superior Lift System.

The T110 Superior Lift System is a time and money saving solution for heavier, taller and more complex panels, like those used in the construction of the Amazon Distribution Center. This system consists of a forged foot anchor, 4-leg wire base and plastic void former. The insert is positioned with the void direction toward the panel's top, then tied in place to the rebar cage.

In addition, Dayton Superior supplied the project with multiple pallets of accessory products including the PEZ E-Z Chair®, the PTZ Tower Chair, PSW Space Wheels and Tie Wire. Also supplied were more than 25 drums of Sure Lift™ J6 bondbreaker and 36 drums of Pentra-Hard® Densifier.

## RESULTS

- Dayton Superior was able to provide a full service solutions package for the contractor.
- The T250 Lifting Insert allowed for an 8 point pick vs. a 16 point pick on the larger panels, saving time and money on the jobsite.
- The T250 Lifting Insert, The T120 Superior Lift Hardware, the T110 Superior Lift System, B12 and B14 Braces are engineered to work together seamlessly, allowing for a smooth lifting process, even for large, heavy panels.

## RESOURCES

Learn more about Dayton Superior tilt-up products at [www.daytonsuperior.com](http://www.daytonsuperior.com).

**Additional Dayton Superior product information is available online at [www.daytonsuperior.com](http://www.daytonsuperior.com). Contact your Dayton Superior representative at 888-977-9600, or email [info@daytonsuperior.com](mailto:info@daytonsuperior.com) if you would like to discuss how these or other innovative systems can make your construction projects more productive.**



*Shoes at the base of each brace attach them to the slab to provide a strong connection.*



*The Superior Lift System saves time and money by allowing taller and heavier panel lifts, minimizing labor and crane time.*



*Once the panels are in place, workers fasten braces to the warehouse slab. Braces align and support panels during construction.*



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