



SOUTHERN WINE AND SPIRITS
LAKELAND, FLORIDA

BIGGEST DC YET FOR SOUTHERN

When Southern Wine and Spirits of America, Inc. – the USA’s largest wine and spirits distributor – builds a new DC, they do it in a big way. Running 18 DCs is a big operation by any measure. After updating two into its “New Generation” format, next up was its biggest DC yet – a 650,000 sq ft state of the art complex in Lakeland, Florida.

“The decision to expand our DCs was driven by volume growth,” said Bobby Burg, Southern’s Senior VP of Supply Chain Strategy.

“Like in many other industries there is consolidation occurring, meaning fewer and fewer wholesalers. Much of our growth is coming through consolidation.”

Southern Wine and Spirits distribution

Southern’s distribution facilities provide next day delivery to around 140,000 customers. It exclusively uses its own internally managed fleet. Orders received by 5:00 pm are delivered the following day. The company is constantly refining its automation processes to ensure the most efficient production and consistent level of customer service.

Despite its continual growth, Southern maintains a strong focus on customer service, with decisions driven by customers’ needs and requirements.

The company uses a hub-and-spoke system for distribution – they have one central DC servicing multiple cross-dock facilities, where goods are transferred into route trucks for local deliveries.

Nationally, the company operates a fleet of 1,100 of its own local delivery trucks and 120 semis.

“In the old paper process, when we were reading a sheet of paper to pick and put a case on the line, we would shoot for maybe 180 cases per man hour for a good picker. Now, our minimum on a pick line is 250 cases per man hour, a 40% productivity increase,” said Mr Burg.

Smart handling of split case orders

Although the majority of deliveries encompass full cases, there is some full pallet delivery to supermarkets and other chain stores, and a small amount of cross-docking to accommodate.

However, an interesting part of this operation is how Southern handles split case orders. Restaurants and bars often order a single bottle to keep costs down or because they don’t have the storage space to order by the case.

Voice picking is used in a split case pick module for fast, accurate, efficient mixed order assembly.



Pick line productivity has increased from 180 to 250 cases/man hour.



BATCHING ORDERS & SORTING THEM OUT

BATCH PICK & SORT

Reducing product breakage

Roller accumulation conveyors minimise gaps and contribute to low product damage. Smooth starts and stops ensure fragile and unstable loads can be safely transported and accumulated. Heavy-duty conveyors handle cases weighing 35-40 pounds, working efficiently under load; transporting, accumulating, reorienting and staging efficiently.

7,000 feet of conveyors move products at a rate of 500 feet/minute – fast considering a lot of the products are high end, and almost all in glass. The breakage percentage is very low – less than one per cent and half the industry average. When handling over 11 million cases – at an average value of \$100 – it is a substantial improvement over industry norms.



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Slug merge streamlines carton handling

The slug merge system controls the staging and release of cartons into the sorter, increasing system throughput, eliminating bottlenecks, smoothing out variances from multiple pick areas and optimising batch cycling. Cases scanned upstream are released into the merge as a slug without gaps, increasing the rate of flow through the sorter compared to conventional merges.

“For cartons, the product is picked, put on conveyor, labelled with an ID tag, and sent into an accumulation area,” said Dematic’s Don Passarella.

“They are scanned and released into a merge. Normally, when product is released into a merge, it creates gaps that limit throughput. We used a unique technology at the merge, where we pre-build slugs of product then pre-set the gapping of the product on the slug belts. As we release the slugs, it gives us very precise handling of fragile products. The cases that come through the merge are now pre-gapped and there is a constant, even flow going to the sorter.”

Sortation increases throughput and accuracy

Dematic’s high-rate sliding shoe sorter provides quiet sortation and ultra-high throughput. The highest sort rates Southern had achieved before Lakeland DC was 6,000 cases/hour. The new system is capable of handling 10,000 cases/hour, and an extra 12,000 bottles in split case/hour.

Before, the DC averaged 150 cases/man hour. Now, it is handling 225 cases/man hour.

In terms of shipping accuracy, Southern was averaging one per cent errors out the door, it now averages 0.2% – an 80% reduction. “A five-sided scan tunnel at the end of the sorter provides for the verification of all the SCC codes (Source Classification Code) to the shipping links,” said Mr Passarella. “This is a customisation we did using point-camera technology to read barcodes on cases, and compare that to shipping labels to ensure the correct label is applied to the right case, and customers get what they ordered.”