

Case Study

Dollar General
Ardmore, OK



Founded in 1939, Dollar General is a Fortune 500 company and a leader in general consumer merchandising. DG is growing at a tremendous rate and has increased its number of store locations from 1800 in 1994 to over 3600 in 1999.

WMS Sites and Specifics

Dollar General chose Catalyst WMS to run its distribution centers to support their growth, beginning with the Ardmore, Oklahoma facility in 1995. Since this initial installation, Catalyst WMS managed facilities have been opened in South Boston, Virginia; Indiana, Mississippi; and Fulton, Missouri. In addition, WMS is successfully installed in the recently modernized Scottville, Kentucky facility. Two additional facilities are currently under construction. Each distribution center ranges from 800,000 to 1.2 million square feet.

Each operating facility has Catalyst WMS installed using the Ingres database software being processed on IBM's RS/6000 Model J50; supporting over 150 Intermecc/Norand terminals; Real Time Solutions Pick-To-Light technology; OCE Printing Systems laser printers and interfacing to both Buschman and Rapistan conveyor control systems. The inventory mix of DG is 82% hardlines (household cleaning items, batteries, plastics and non-perishable foods) and 18% softlines.

The Typical Dollar General Facility

Each facility is designed to run as close to 24 hour/7 day operations as possible. All critical systems are designed with redundant systems and UPS and emergency power support. Receiving, allocation, replenishment, picking and shipping are performed as a continuous flow operation throughout the day. Physically, each facility is at least 800,000 square feet with over 50,000 storage locations; 5800 forward pick locations and 5,000 SKUs. Storage media, planned and installed by The Materials Handling Group, is mainly one-deep by one-wide pallet racking for reserve storage, pallet flow rack for the case pick area and carton flow rack for the repack picking area. Loose item and very small non-conveyable order selection is controlled by the Real Time Solutions PTL system. Full case (pick to belt and flow through) fulfillment, non-conveyable fulfillment, stocking and replenishment functions are RF directed. WMS is interfaced to either Buschman or Rapistan high-speed single sortation systems that can process up to 12,000 cases per hour. Each facility is very capable of shipping over 200,000 cases daily. Network Services Group provides all data, voice and phone networks and computer room design in the facility as turnkey systems.

Merchandise Movement

Receipts arrive from warehouse transfers and external vendors. Scheduling for inbound merchandise is being transitioned to the Manugistics logistics systems. Trailers are then scheduled to a dock and unloaded.

Next, pallets are sorted by planned storage zone and detail received. Putaway drivers then pick up pallets in receipt staging and put them away to reserve racking. For inbound loads that contain high volume stock keeping units (SKUs), trailers are spotted in the shipping docks and the receivers RF sort and cross-dock merchandise to outbound route trailers by store.

Host order processing is being transitioned from legacy DEC/VAX applications to Island Pacific systems based on the IBM AS/400. Orders are selected for inclusion into a wave based upon route definitions within a weekly delivery schedule. Pick activity is at 70% case, 25% pallet/non-conveyable, and 5% less than-case-levels. Dollar General is expecting their volumes to increase in the less-than-case pick area. To address this need, they are installing a Real Time Solutions Pick-To-Light system. Case and repack picking is RF/label driven pick-to-belt. Non-conveyable and pallets are RF-picked, loaded and ship scanned. Store orders are shipped out on the Dollar General fleet to over 1,000 stores. Each facility services 200 stores per day.

Future Plans

Dollar General is considering upgrading to WMS Release 7.1 with the Oracle database software, which provides increased retail-specific functionality. They are also planning future projects with Catalyst for additional sites. The next Dollar General DC's are being constructed in Florida and Ohio in the year 2000, both running on the Catalyst WMS. Each facility will be a full service operation with evolutionary improvements based upon experience learned in previous operations.

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