

Automatic Guided Vehicles Work Beside Employees in a Distrubtion Center

Features and Benefits

Significantly reduce pallet and product damage

Inventory is tracked throughout the system

Flexible solution for plant's changing production demands

Safe, reliable delivery of pallets

Operates 24 hours a day, 7 days a week

Industry Group: Automatic Guided Vehicle Systems (AGVS)



16 AGVs work alongside employees to help maximize efficiency at a retail distribution center

This AGV system provides all of the routine product movements to support a retail distribution center using a person to goods picking strategy. The guided vehicles move pallets (full and empty), pallet pairs ('sandwiches'), pallet stacks, trolleys (carts) and recyclables (cardboard and plastic) within the facility.

Sixteen flatbed lift deck AGVs are utilized to perform these tasks. Each vehicle contains one battery utilizing on-board charging.

The vehicles navigate using laser guidance technology. Laser targets are located throughout the warehouse to pinpoint vehicles' exact location. The software provided with these vehicles efficiently coordinates the vehicles' movements based on incoming orders and vehicle traffic. The AGV system has been integrated to provide two way communication of product movement with Next's current systems that manage distribution center operations.

Material Flow

- Pick Pallets are introduced to the picking mezzanine via 2 elevators from AS/RS
- Pick Pallets are picked up by AGV at elevators and delivered to 4000 pick locations
- Pickers walk aisles (person to goods picking) while pushing a wheeled cart (trolley) and pick items as appropriate to build an order on the trolley
- AGVs remove empty pick pallets and trash bins from the picking area
- AGVs deliver finished orders still on the trolley to packing area.
- AGVs deliver empty pallets to packing area
- AGVs deliver "packed" pallets to elevator for movement to ground floor shipping area
- AGVs move empty trolleys to storage area for use by pickers



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