



Tote Shuttle System

Logistex has installed a tote shuttle system to the B&Q Distribution Centre in Worksop UK. The solution brings together a range of pallet and tote based storage, distribution and picking, and services both the B&Q stores and larger B&Q warehouse stores. The system is operated by Wincanton on behalf of B&Q and represents a long term strategic partnership between the two companies.

With tote buffer storage of 54,000 extra tote locations, the solution enables a combined system capacity of 2.1 million cases per week. The system is operated by Wincanton on behalf of B&Q and represents a long term strategic alliance between the two companies

Features:

- 54,000 Tote Locations
- 140 Tote Shuttles
- 4 Goods to Person stations
- 3200 cases picked per hour
- Tote Shuttle System
- Pallets auto fed from highbay to THS decant stations
- Tote buffering for order consolidation
- LWS Reflex WCS
- Robotic stacking of totes to despatch pallets



B&Q

Home Improvement Retailer

The Client's brief

B&Q are part of the Kingfisher Group, which has ambitious plans to grow over the next 5 years, and strategic projects will drive a requirement to increase logistics capability and capacity within the UK.

Since the B&Q Worksop NDC site opened in 2005, there have been significant changes in the way product is sourced by B&Q. The original Tote Handling Store (THS) was designed for the majority of product arriving pre-toted, however today the majority of product arrives on pallets or in containers, thus requiring a manual process to decant products into totes and feed the totes into the THS. Due to increased stock holding, once toted the product is stored in the high bay pallet system and returned to the THS decant station at a later date.

The growth plans over the next 5 years will drive an increase in B&Q picking and storage volumes in Worksop, and so the aim of the project was to create additional capacity within the THS to meet this increase in volume. In addition, B&Q wanted to improve the efficiency of the current THS activity through additional storage of pre-toted product in the THS and removal of manual decant activity.

The Logistex Solution:

Pallets are fed from the existing highbay into operator stations where the operators disassemble the pallet and place the product into totes at a rate of 61 pallets to totes per hour. Empty boxes are placed on a dunnage conveyor which is fed into a compactor for recycling. Totes leave the decant station and travel by conveyor to the X-PTS® System, a Savoye shuttle system controlled by LWS Reflex, where 10 Vertical Transfer Devices (VTD) feed the totes into the PTS racking at a speed of 4.5m/s.

The storage & retrieval of the totes is handled by the shuttles within the racking system, and totes are subsequently fed back onto the VTDs and the conveyor for transport to the tote sequencer.

At the sequencer, the totes are sorted and fed to the GTP pick stations where LWS Reflex instructs the operator the number of products to pick from the source tote to the destination tote. Totes leave the GTP station and are transported by conveyor either into the X-PTS to be sorted into the full order, or down the mezzanine toward the dispatch area where 6 staging lanes organise the totes into specific orders for the customer site. A robot palletising system layers the totes onto a pallet where the totes are secured and labelled before being dispatched to the customer store.

Achievements:

- Decant rate efficiency increase of 86%
- More effective operational management and resourcing
- GTP pick volume 441,000 cases per week
- Combined system capacity of 2,100,000 cases per week