



Lean Consulting

Client

United Airlines' Indianapolis Maintenance Center

Location

Chicago, Illinois

Automated Materials Handling

United Airlines' new Indianapolis Maintenance Center encompasses 4,900,000 sf of heavy maintenance facilities for their 737 and 757 fleet. The complex includes 20 aircraft positions, support shops, warehouse, turbine engine overhaul facility, central plant, administrative offices and employee service facilities.

Scope of services includes:

- Master planning
- Materials handling concept development
- Detailed materials handling system design
- Computer simulation
- Equipment specification
- Vendor fabrication/construction oversight.

Key features of the project include:

- 15,000 foot automated electrified monorail system operating with 35 carrier vehicles. Computer based graphic diagnostic system for fault detection, notification, and data recording.
- Five-aisle (3,600 sku) unitload and five-aisle (132,000 sku) miniload automated storage/retrieval system.
- Bulk distribution system consisting of pallet conveyor and automated guided vehicles in warehouse, radio-frequency directed fork trucks for base-wide transportation.
- 2,000 ft conveyor system for small parts handling in the warehouse
- Supply and distribution system cell director in real time communication with client host. Cell director configured for hot backup and distributed system control employing fault

Outcomes

A 50% reduction in maintenance cycle times without sacrificing the quality of the maintenance was achieved through implementing World Class Manufacturing technologies and concepts.