



## CASE STUDY\_ Pharmaceutical

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**GREEN CROSS**



## Company Introduction

Green Cross is an exemplary R&D-oriented company that leads the biotechnology industry in Korea. The company is also one of the largest medication provider in the Korea with annual sales close to 45M USD. The company sells a wide range of ethical medication that are hard to produce but essential to patients. Subsequently, it is now an internationally recognized biotechnology company producing Vaccine in the fields of virus and bacteria.

# PROJECT PROBLEM & SOLUTION

## PROBLEM

Faced with significant growth, Green Cross Holding Corp. (hereinafter, “GCHC”) wanted to increase product availability and reduce costs. They decided to centralize the distribution which also contains low-temperature AS/RS which have to be handled with extra care to increase availability and improve picking efficiency.

## SOLUTION

The **Automated Picking System & DPS(pick to light)** are the highlight of the operation. An AS/RS system with a storage capacity of 14,300 pallets distributes product boxes to 10 docking stations to be palletized & shipped. Here operators distribute the products with a total throughput of 270PLT/Hr supported by put to allocated truck displays and dispatching to 3,000 retailers per day.

# PROJECT OVERVIEW

<b>Company</b>	<b>Green Cross</b>
<b>Location</b>	Ohchang, Korea
<b>Load</b>	Products of Medicine
<b>ASRS Storage Capacity</b>	14,300 cells
<b>Rack</b>	Rack supported building, closed face (load beam type) W 28.4 x L 63.9 x H32.4 (M)
<b>Stacker Crane</b>	5 (room temperature) + 1 (cold storage) = 6 vehicles (Single fork type)
<b>Automated Materials Handling Equipment</b>	3 RGVs , APS(Automatic Picking System), DPS(Digital Picking System), Conveyor, etc.

# EQUIPMENT SPECIFICATION



## Stacker Crane

- Traveling speed: Max. 240 m/min
- Load weight: Max. 1,000 kg
- Single fork type
- Stability of load handing through smooth acceleration & deceleration controls by S-Curve



## RGV (Rail Guided Vehicle)

- Traveling speed: Max. 265 m/min
- High speed shuttle type
- Accurate positioning by an encoder
- Independent operation by individual controller on each vehicle

# EQUIPMENT SPECIFICATION



## DPS (Digital Picking System)

- Pick-To-Light system to guide the worker to the exact product location
- Increased work efficiency by operating zone picking mechanism
- Conveyor Speed: 25~40 m/min



## APS (Automatic Picking System)

- Average no. of channel: Max. 72 per module
- Dispensing performance : 2~6 pcs/ sec
- Handling 2,500 boxes per hour
- Collect all the items from individual orders with flexibility and at highest throughput rates
- Perfectly managed by computer brings low error rate

# EQUIPMENT SPECIFICATION



## Conveying & Sorting

- Sorting 60 different size boxes
- Handling size: Max. 650 x 600 x 550 (mm)
- Handling weight: Max. 30kg
- Required throughput: 42 cartons/min
- Current throughput: 41.67 cartons/min
- Conveyor width: 810 (mm)
- Conveying Speed: Max. 60 m/min

## Pop-up wheel sorter

- Capable of rates in excess of 42 boxes /min
- 40 m/min conveying speed
- Powered divert wheels
- Provide continuous caring surface for accurate product tracking