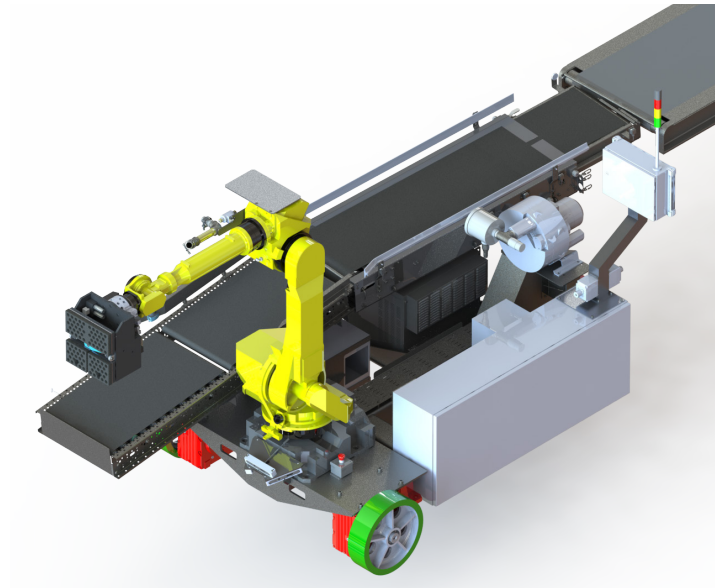**DAIFUKU**

RoboticContainerUnloader RTL(U) - Standard

RTL(U) - Standard is a self-guided, autonomous robotic truck and shipping container unloader.

The RTL(U) - Standard utilizes advanced perception technology that allows it to sense and acquire product that has been floor loaded within semi-truck trailers or ocean freight container. Wynright's truck unloading technology is ideal for rectangular boxes, bales, and even tires. The system has the capability to unload product automatically, adjusting its position by sensing the sidewalls, floor and product as it unloads and moves forward to completely unload the container.
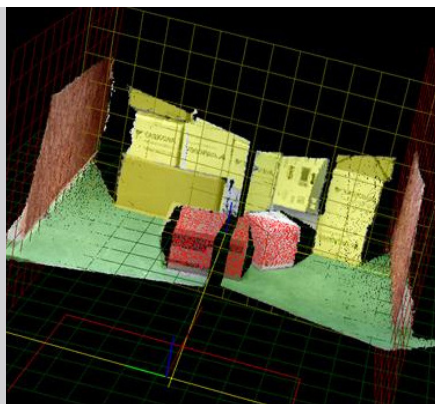
The robots perception algorithms and end of arm tooling has been optimized to pick multiple cases per cycle to meet the demands of customers that receive contiguious or single sku containers. The flexible design of the RTL(U) - Standard allows for a wide variety of downstream processing options, including robotic palletizing, manual palletizing, and receiving sorters.

Optional equipment can be provided to service multiple doors, track weights and size of cases, print labels, and scan barcodes. Each system can be customized to individual customer needs.

Designed to handle containers with corrugated and smooth sides

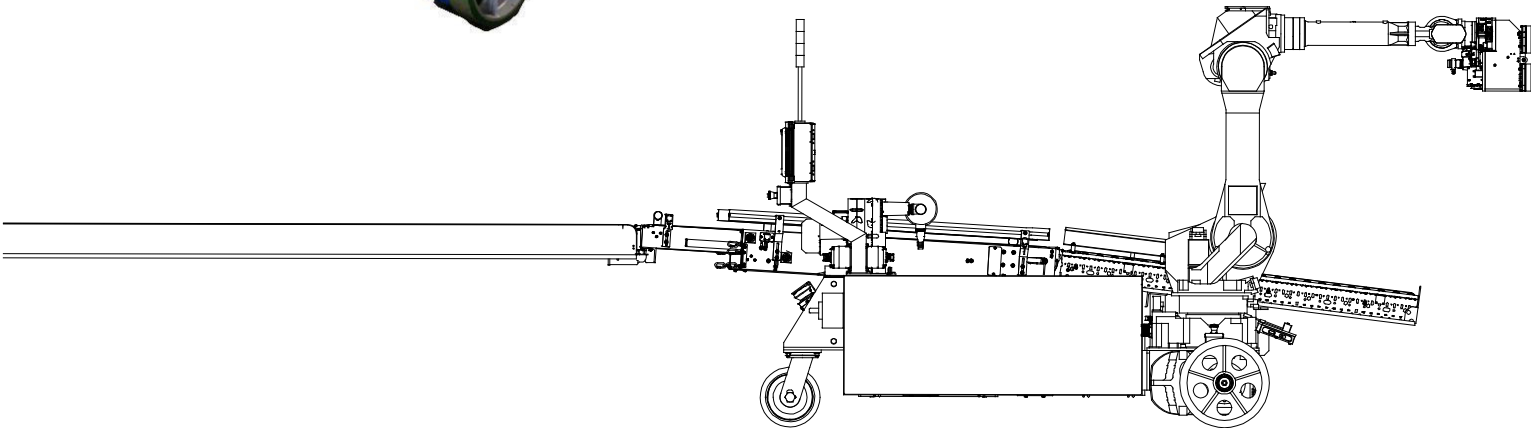Advanced perception technology acquiring position information

RTU unloading an ocean container

RTL(U) - Standard

Size Range	Small 6in-11in (150mm-280mm)	Medium 11in-20in (280mm-500mm)	Large 18in-30in (450mm-750mm)
Rate	500 - 1200 cph	500 - 900 cph	350 - 550 cph

Specifications*

Machine Dimensions
· Length: 120" (3m)
· Width: 68" (1.7m)
· Height: 45" (1m)

Manipulator Specifications
· Robot Model: Yaskawa or Fanuc
· Reach: 80.7" (2.050m) (depends on robot model)

Product Specifications
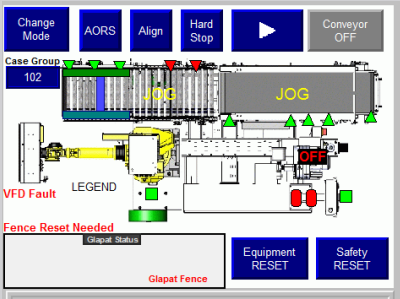· Product Weight: 220lb (100lbs)

Machine Controller
· PLC Controlled (Allen Bradley)
· LCD Touch Screen Display
· Operator friendly interface

Power Requirements
· 460-480 VAC, 3PH, 20AMP
· 80 psi @ 3.0 CFM (5.5 bar @ .08cmm)

Options
· Multiple door transverse
· Bar Code Reader
· Case Tracking Software
· WMS / WCS Interface

Simple Operation through HMI

* Specifications may vary with applications

DAIFUKU

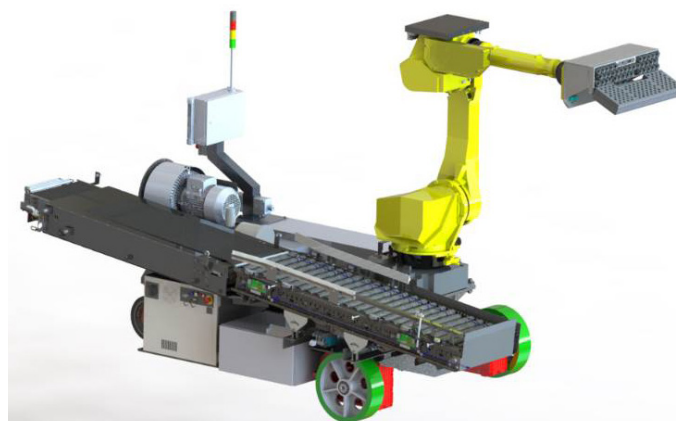# Robotic Truck Unloader - RTL(U) - Bulk

RTL(U) - Bulk is a self-guided, autonomous robotic truck loading and unloading system. The RTL(U) - Bulk is designed to deliver cost savings to facilities that load cartons or pallets from a manufactuing or product line. RTL(U) - Bulk has two modes of operation, Loading and Unloading.

Loading:
RTL(U) - Bulk uses client load information and Wynsoft load planning software to rapidly calculate the optimal weight distribution, and load sequence for each trailer. The system uses this information to efficiently load trailers that are cube optimized, and efficient.

Unloading:
The system has the capability to unload product automatically, adjusting its position by sensing the sidewalls, floor and product facade as it unloads and moves forward to completely unload the trailer.
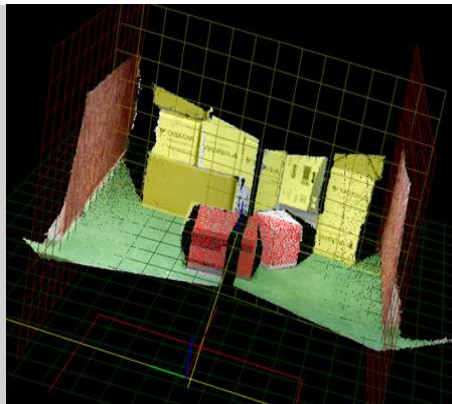

The robots perception algorythims and end of arm tooling has been optimized to pick multiple cases per cycle. The current system can easily handle two transitions per wall.

The flexible design of the RTL(U) - Bulk alows for a wide variety of downstream processing options, including robotic palletizing, manual palletizing, and receiving sorters.

Optional equipment can be provided to service multiple doors, track weights and size of cases, print labels, and scan barcodes. Each system can be customized to individual customer needs.

Designed to load and unload full trailers

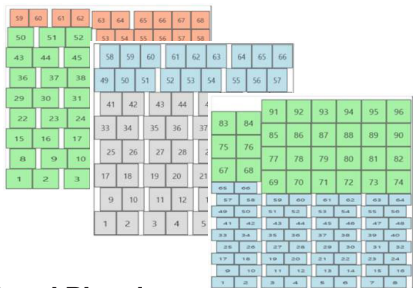**Advanced perception technology acquiring position information**
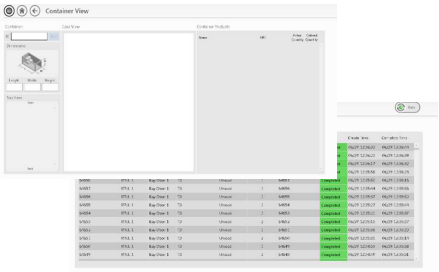

Fully integrated turnkey system
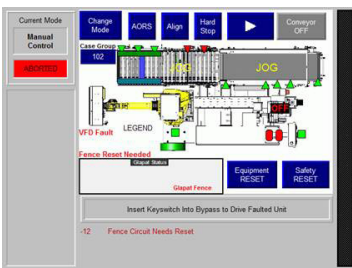
RTL(U) - Bulk

Load Planning:

Wynsoft Load Planner uses load information to determine an optimal sequence of cases to be delivered to trailer
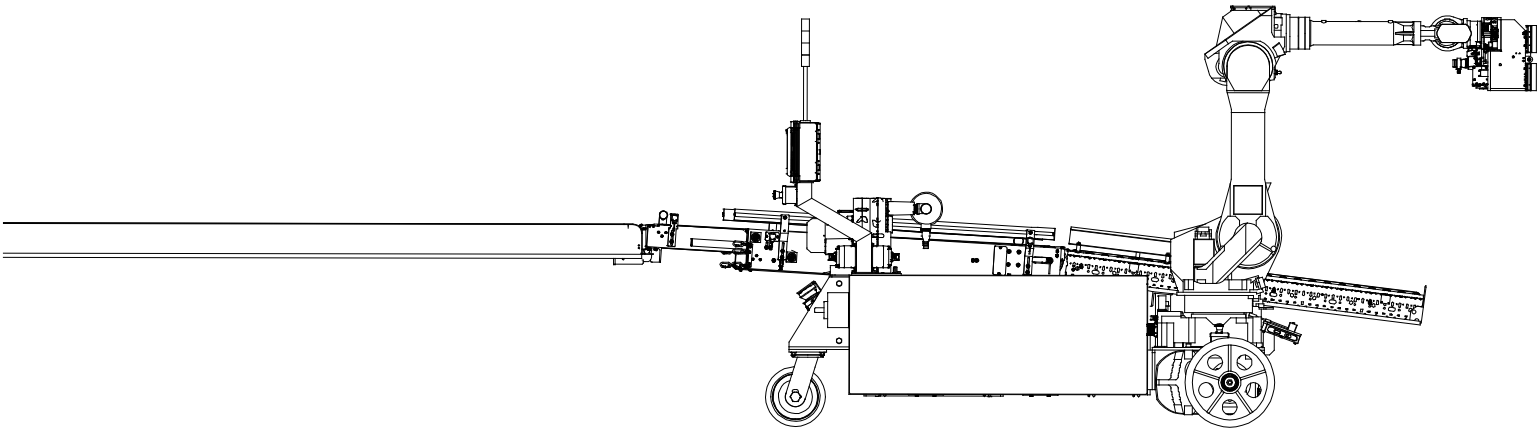
Real time Load Builder:

Load Builder builds a queue of cases on the fly, and calculates the exact position of each case within the trailer to maximize stability and throughput

Simple Operator Controls:

The design of the RTL(U) - Bulk provides simple controls for operations and error recovery.

Specifications *

Machine Dimensions
- Length:TBD
- Width:
- Height:

Manipulator Specifications
- Robot Manufacturer: Fanuc
- Reach: 80.7" (2.050m)
  (depends on robot model)

Product Specifications
- Product Weight: 220lb
  (100kg)
- Number of Products: Any
- Stack Patterns: Finite Number

Machine Controller
- PLC Controller (Allen Bradley)
- LCD Touch Screen Display
- Specialized Software with
  Password Access Control

Power Requirements
- 460-480 VAC, 3PH, 20AMP
- 80 psi @ 3.0 CFM
  (5.5 bar @ .08cmm)

Options
- In Line Weighing System
- Bar Code Reader
- Case Tracking Software
- Telescoping Conveyor
  Integration
- Installation Package

Base System Product and Rate Details	
Case Size Range	11x9x6 - 20x13x13 (in) (LxWxH)
Loading Rate	1000 cph
Unloading Rate	900 cph