



Multi SKU Case & Tray Palletizing

Application

Automate the case / tray palletizing & pallet stretchwrapping for multiple production lines of heavy cased product, in an intrinsically safe work cell, and provide full production and event management.

Solution

Edson engineered and installed an integrated robotic palletizing system, complete with pallet handling, pallet stretchwrapping and a full pallet handling using the latest ABB articulated robot as the primary transfer device, coupled with Edson's flexible and safe end effector, to handle both cases, trays, and pallets.

Also included also were an intricate pallet conveyor system (empty & full); Wulftec rotary table stretchwrapper; provision for a pallet shuttle, an inground pallet lowerator, to allow for pallet jack use; and a high security personnel safety system.



RPz 6400 Benefits

System can palletize up to 20 per minute cases / trays to two stations and be able to automatically replenish empty pallets, using the Edson 'fork & clamp' end effector, mounted to a 7 axis ABB 'long reach-heavy lift' articulated robot.

'Fork & clamp' end effector supports the cases & trays from the bottom, so that open flaps or system power loss retains the cases, without product damage or need for personnel intervention. The gripper also transfers the pallet into its palletizing positions, from a central pallet stack.

The Edson designed intelligent light curtains prevents unauthorized incursion into the work envelope, yet allows passage of empty pallets into, and full pallets out of, the work envelope.

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RPz 6400 Performance & Technical Data

Product Handled: > 100 SKU types of cases & trays, fed from 2 production lines
 Stacking Patterns: any configuration of row, interlocked or pinwheel – gaps as required
 Case Infeed Rate: up to 20 cases or trays per min (application)
 Robot Functions: unload pallets from stack to 2 stations; '2 in – 2 out' palletizing;
 Pallet Infeed: GMA pallet stack up to 7' high, with 'overheight' sensor & shutdown
 Pallet Stabilization: rotary turntable stretchwrapper with 90 deg pallet discharge
 Pallet Accum'n & Pick Up: 3 zones after wrapper + pick up by fork lift or pallet jack, via lift table
 Controls: ABB 7 axis robot controls with Rockwell Contrologix control system

Safety

- robot shutdown if interference limits are exceeded, with program recall for instant restart
- tilting case gripper to retain cases when in 'parked' position
- fully enclosed, 7' wire mesh frame with intelligent optical safety curtains
- interlocked operator access doors with safety key system re-start
- operator screens provide alarm messaging and event diagnostics

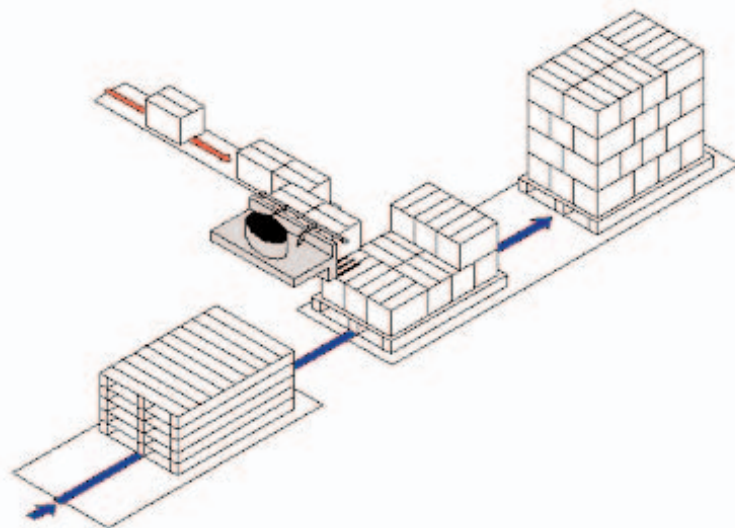
Safety

The Edson RPz 6400 robotic palletizer has many features that make it one of the most modern, safe and fast multi SKU palletizing systems available. While the components are 'off the shelf', the application is unique.

- 'fork & clamp' end effector securely handles both case, trays, and pallets, unlike vacuum grippers
- extensive machine control system provides full diagnostics and production information
- full pallets can be accessed by either a fork lift or an 'on floor' pallet jack
- 'auto safe' shutdown sequence with tilting gripper.

Applications Best Suited For RPz 6400 Palletizer

- Palletizing or unitizing of multiple 'slow to medium' speed production lines (up to 4 lines / robot)
- Concurrent handling of cases, trays, bundles and hard to handle products, ie nestable totes
- Concurrent palletizing with different pallets
- Concurrent palletizing + unitizing
- Low headroom installations (< 8.5')



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