Honeywell Intelligrated

Redeploying Robots

Exceeding Your Robotic Palletizing ROI



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Redeploying Robots

Exceeding Your Robotic Palletizing ROI

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For more than two decades, robotic palletizing solutions have been advancing high-SKU, low-speed operations across the globe. A robot's modular construction enables systems to scale with an operation, handle evolving packaging styles and be redeployed on alternate production lines. As a result, many innovative companies are exceeding planned payback calculations and ROI parameters on the cost of their robotic palletizers.

This white paper examines how to reconfigure, re-scale and redeploy industrial palletizing robots and automation to meet the demands of a growing operation while exceeding financial goals.

How to Reconfigure Your Robot

Taking Advantage of Modularity

To respond to ever-changing SKU proliferation and packaging variations, or to prepare a system for reuse on another line, you can take advantage of a robot's modular design by economically adding or reconfiguring robotic end effectors.

Adding a new or additional end-of-arm tool is the fastest and most cost-effective solution for companies incorporating radical packaging changes while supporting a legacy-packaged product. If your operation does not want to use an automated tooling exchange system to alternate between tools, robotic engineers

1. Infeed conveyor and load forming
2. Robotic tooling
3. Pallet and sheet handling
4. Pallet conveyor or transfer car



can redesign the existing end effector or create a new one to meet revised packaging configuration needs. The flexibility that modular tooling provides means that palletizing robots can be relocated to new lines or facilities that handle different styles of packaging or increased line speeds, whether it's case, pail, bundle or bag, in-case, row or layer quantities.

Growing Your Robotic-Handling Capacity

Benefiting From Scalability

When you need to increase overall line speed, there are several engineering solutions that enable a system to achieve a higher palletizer speed capacity. The most obvious route is to upgrade a system's handling capacity by adding additional robotic arms. However, it is not always necessary to add new robotic arms to meet the demands of a growing operation. Palletizing capacity on a single line can be upgraded by incorporating more complex row-forming and even layer-forming capabilities with updated end-of-arm tooling. Adding peripheral equipment such as slipsheet and pallet placement capability can also produce incremental increases in robotic palletizing speed. Replacing transfer car-based, pallet take-away systems with fixed path roller conveyor and chain conveyor solutions can also eliminate system bottlenecks.

Most robotic palletizing systems have the built-in ability to orient items on a pallet, or position high-graphic packaging to achieve the greatest marketing effect. As a result, operations create ready-to-sell pallets quickly and easily with fast product reconfiguration and instant line changeovers, increasing overall productivity and customer satisfaction.

Redeploying Your Robot

Enterprise-Wide Flexibility

Easily integrated modules and customizable tooling enable many savvy companies to ship robotic arms and their subsystems to their other manufacturing facilities for continued service with minimal risk. The cost of relocating modules, whether shipping internationally or domestically, is often much less than either relocating a conventional palletizer or purchasing new equipment.

Robotic palletizing arms are easier to relocate than conventional palletizers because of their ability to accommodate building columns, interferences, various in-feed and discharge locations. This is especially true for operations in developing countries that favor a specific robotic arm brand that may have superior local service.

In certain applications, replacing traditional proprietary robot controls with Allen Bradley PLC controls have been found to increase speed and capability of robots beyond the original proprietary controller's application. This also assists with successful integration of new solutions with other conveyor systems and reduces potential communication issues between multiple processor platforms by allowing operations to combine all system control components into a single processor platform. The ability to streamline complex control communication across integrated applications drastically reduces operator and maintenance training, and significantly increases reliability. In addition, PLC controls help improve line integration, response time and overall productivity.

By saving money on relocation and hardware costs, startup time, training, programming and troubleshooting, you increase your chance of exceeding a target ROI.

For more information, contact Honeywell Intelligrated® by email at info@intelligrated.com, by phone at 866.936.7300, or visit www.intelligrated.com.

Conclusions: Increase Your Robotic System's Life to Exceed Your Target ROI

Retooling options, modular extension and standardized controls prolong the lifecycle and productivity of today's robotic palletizers. By taking advantage of a robot's design, you can grow and redeploy systems across your enterprise network to meet and exceed a current system's target ROI.

The ability to alter a robotic solution increases the ways it can be used, which results in a greater chance of achieving the target ROI. Having an adjustable solution is crucial for growing companies, but an improper installation or modification can be detrimental to the operation. Designing now for greatest future flexibility is best achieved by working with an experienced robotic integrator. You should always confirm that your robotic integrator is certified by the Robotic Industries Association (RIA) as a measure of their professionalism and ability to get the job done. To access a list of RIA-certified integrators, click here: http://bit.ly/R41RiO.

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