
>Robot for packing plastic bottles

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News Release Robot for packing plastic bottles from APEX Automation and Robotics APEX
Automation & Robotics have just completed the installation and commissioning of a robotic system for packing bottles and jars for a leading plastic manufacturer.

Packaging plastic bottles is a labour intensive operation, and it presents some challenges for automation as it usually requires handling several products with complex packing configurations.

In this application, the automation system needed to be flexible to handle a wide range of products including some packed with every second row of bottles rotated upside down to minimise the packaging volume. The solution developed by Apex used a 6-axis industrial robot with a custom-designed head designed to keep up with a production rate of 1800 bottles/hr.

The robot head uses an array of vacuum cups to pick up a row of bottles at a time. For some selected products, the robot spaces the bottles apart then places them in the packing station. In the following cycle, the bottles are both spaced apart and rotated up side down before placing.

The robotic cell has 3 safety zones separated by light curtains so that the robot is never interrupted when part of the cell needs operator intervention. The safety circuit included redundancy and safety monitoring devices in accordance to the Australian standard AS 4024.3301-2009 Robots for industrial environment – safety requirements.

The system is controlled by a PLC, interfacing with the robot controller and a user-friendly touch screen.

Apex Automation and Robotics have designed the system to meet the production requirements of 24hr a day, 7 days a week, resulting in considerable cost saving to the customer and an improved OH&S environment.