

PRESS INFORMATION

Smart Item Picking: Automated order picking

Manuela Kessler | 31.05.2022 | Lohr am Main / Germany | PI 027/22

AI-based software allows the automated handling of a virtually unlimited range of products



With Smart Item Picking, Bosch Rexroth will present an economical automation solution for manual order picking at LogiMAT. (Image source: Bosch Rexroth AG)

With the Smart Item Picking solution, Bosch Rexroth is automating order picking tasks for a wide range of products – tasks which, in the past, could only be carried out manually. Thanks to artificial intelligence, the software recognizes the products which are to be picked without models or learning and plans collision-free removals. The articles are then placed in a target bin. No expert knowledge is required for object recognition. Unknown objects are picked up automatically. The solution increases productivity and significantly reduces error rates.

Up until now, only people were able to recognize, pick and place different objects flexibly in warehouses and the intralogistics sections of factories and spare parts stores. The work is often monotonous and requires unergonomic movements.

With Smart Item Picking, Bosch Rexroth offers an economical alternative to manual order picking. The central software recognizes the object to be picked with the help of artificial intelligence without having to program or train it before. It does not matter whether the articles are stored in the bins in an orderly or random fashion. Within milliseconds, the software automatically calculates the optimum gripping points and collision-free paths. Smart Item Picking allows a virtually unlimited range of products to be handled in an automated manner.

The hardware and software components have a modular structure and support typical cameras, grippers and robots from various manufacturers. As a result, individual customer solutions for a wide range of object sizes and weights can be created using a kit of industrially proven components.

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Open interfaces and standardized protocols such as OPC UA ensure seamless communication with warehouse management and ERP systems as well as Internet of Things and cloud applications.

Basic Information Bosch Rexroth

As one of the world's leading suppliers of drive and control technologies, Bosch Rexroth ensures efficient, powerful and safe movement in machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, and Factory Automation. With its intelligent components, customized system solutions and services, Bosch Rexroth is creating the necessary environment for fully connected applications. Bosch Rexroth offers its customers hydraulics, electric drive and control technology, gear technology and linear motion and assembly technology, including software and interfaces to the Internet of Things. With locations in over 80 countries, more than 31,000 associates generated sales revenue of around 6.2 billion euros in 2021.

Basic Information Bosch

The Bosch Group is a leading global supplier of technology and services. It employs roughly 402,600 associates worldwide (as of December 31, 2021). The company generated sales of 78.7 billion euros in 2021. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT provider, Bosch offers innovative solutions for smart homes, Industry 4.0, and connected mobility. Bosch is pursuing a vision of mobility that is sustainable, safe, and exciting. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group's strategic objective is to facilitate connected living with products and solutions that either contain artificial intelligence (AI) or have been developed or manufactured with its help. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiary and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. With its more than 400 locations worldwide, the Bosch Group has been carbon neutral since the first quarter of 2020. The basis for the company's future growth is its innovative strength. At 128 locations across the globe, Bosch employs some 76,100 associates in research and development, of which more than 38,000 are software engineers.

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