ItemPiQ

Fast & accurate: self-learning robotic application for reliable single item picking

Fully automated item picking

Picking generates up to 50% of the operational costs in warehouses and distribution centers. Deeper inventory, greater cost pressures, faster delivery times and higher customer expectations are bringing additional challenges to the warehouse. Furthermore, an aging society, closer scrutiny of working conditions and a lack of resources make it increasingly difficult to meet these challenges with manual processes.

The answer to these increasing demands is robot-based solutions. Robots can carry out activities 24 hours a day, 7 days a week, guaranteeing consistent picking quality.

Designed for reliable processing

ItemPiQ is designed for repeated, reliable picking of a wide range of items to fulfill fast delivery of orders at low operating costs. The robot cell perfectly integrates into Swisslog Goods-to-Robot (GtR) solutions and can be used for tasks like sortation, picking and placing.

Benefits

Fast order fulfillment
ItemPiQ can operate 24/7 at speed of up to 1,000 items per hour allowing you to reduce operational costs and manage seasonal peak times.

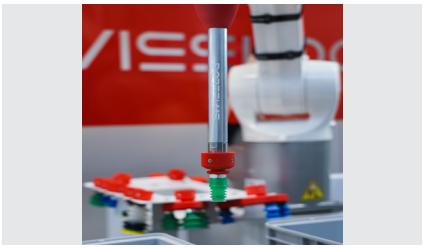
Adapts to a wide product range
Handles a wide range of automatic pickable items without any teaching process. Picking will be optimized by applied AI over time.

Highest pick & place reliability
ItemPiQ ensures failure-free picking and placing to avoid expensive returns. Operators without any robotic knowhow can operate the robot easily.

Seamless integration
The ItemPiQ is seamlessly integrated into the SynQ WMS and has a standard interface to any WMS system.

Design & Range:
KUKA Agilus robot

Components:
Gripper



Components:
Intelligent software

Plug&Play
With our simple plug-and-play principle, ItemPiQ guarantees a rapid installation, calibration and start-up so it's ready for operation.

KUKA Agilus
ItemPiQ uses the KUKA Agilus robots. It is one of the fastest and most reliable KUKA robots suitable for intralogistics applications.
With its long reach of over 1,100 mm, KUKA Agilus can fulfill nearly every task.

Gripper
ItemPiQ uses a suction cup change system to extend the product range up to 3,0 kg.
Depending on the product*, the gripper can handle a wide range with a minimum surface of 20 x 25 mm.
Different suction modes in combination with mechanical grasping methods are selected according to the item to be grasped. This allows ItemPiQ to adapt to most customers' applications.

Vision system
The innovative 3D vision technology is used for object recognition in the source bin. It consists of a 3D sensor detecting a point cloud as well as identifying the product contours. In combination with the AI-based software algorithm, the vision system determines grasping points of new products, which is essentially advantageous in operations with thousands of SKUs as no teaching process for items is required.

Software modules
The robot cells are supplied with the ItemPiQ Box software to control the entire cell. This new SynQ module offers the proven SynQ user interface, which requires no special robot knowledge.
The ItemPiQ Box also offers a standard interface for integrating the robot with any WMS solution. For reliable and effective operation in a complete Swisslog system, the robot cell can be integrated into the SynQ warehouse management system via the SynQ ItemPiQ Option. The ItemPiQ Option extends a classic Goods-to-Person solution from Swisslog with Goods-to-Robot functions. As a link between an AutoStore Director and the ItemPiQ Box, the option ensures that manually and automatically pickable order items can be distinguished, load balancing is ensured across all workstations, and automatically picked products are brought together with manually picked products just-in-time.

Facts

Performance	up to 1,000 items per hour
Robot reach	over 1,100 mm
Item weight	up to 3 kg
Item dimension	surface min. 20 x 25 mm
Safety	safety fence or safety sensor
Interface	standard interface to any WMS

*contact us for more details on product range.