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PROCESSING & PACKAGING

Syntegon RPP 3-1 Feedplacer.

ROBOTIC PICK & PLACE PLATFORM

APPLICATION

Vision guided robotic platform, featuring a modular cell design, configurable with up to three Delta robots per cell.

PRODUCTS

Food: Unpackaged cookies and crackers, morning goods, pastries, cakes, wafers, bread and buns, chocolate, frozen pizza and many more. Primary packaged products such as pouches, flow-wraps, vertical bags, cans, tubes, boxes and many more.
Non Food: Any kind of unpackaged or packaged products.
Medical: Medical devices, drug delivery devices, IV-bags, medical kits, syringes, BFS cards, surgical instruments and many more.

INCOMING PRODUCT STREAM

RPP3-1 can be linked to mass production processes such as continuous ovens, providing products in rows, lanes or random patterns. It may also be operated as a stand-alone solution for semi-automated or manual feeding.

DOWNSTREAM PROCESS

RPP3-1 may include one, two or up to three Delta robots. It integrates external transports, such as infeed chains of Syntegon's PackSeries and flow-wrappers.

PRODUCT HANDLING

Product handling like capping, changing orientation and grouping as single, stacked, shingled, multi-packs, variety packs or assortments.
Loading of products into trays, u-boards, boxes or cases. Products can be loaded flat or on-edge or both.
Feedplacing of products into infeed chains of primary and secondary packaging equipment.

DESIGN

The RPP platform is modular, scalable and robust. It is designed for 24/7 operation. RPP is easy to clean and to maintain. The platform is built to fulfill latest food safety regulations. It comes with a glass bead blasted, full stainless steel frame. The machine features a non-hollow body structure and has almost no horizontal surfaces. The electrical-cabinets are IP65 protected. If required, RPP allows for foam & rinse cleaning.
The operating concept is intuitive and very user friendly for error-free operation. Operators are supported by the CORIAN® operator access point, a large HMI 4.0 touchscreen and the new LED status indicator light concept.
Almost all parameters are set as a recipe in the HMI, enabling push-button changeovers. Optional End-of-Arm tools come with quick-lock interfaces for fast and completely tool-free changeovers.



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METHOD

The RPP3-1 is a modular and compact robotic pick and place solution. It can be integrated at different points within the packaging process to perform various tasks. It features Syntegon‘s proven feeding belt system, which can be adjusted to almost any process. Belts are available in two executions: performance or hygiene.

A high-resolution vision system detects the position and orientation of each incoming product and provides this data to the robot control. Optional quality checks, such as product verification, integrity, size or color, are available.

Depending on the type of End-of-Arm tool, RPP is capable to perform multi-pick, reflex-pick, grouping, pre-stacking, product orientation and tilting functions.

RPP‘s open control platform manages infeed, transports, vision control and Delta robots on one IPC (Industry PC). This ensures a full integration via ethernet, exchanging precise realtime data on position, machine status and safety. The robots and the packaging machines become a fully integrated, seamless system.

RPP3-1 can either work in co-flow or counterflow configurations, allowing for maximum layout flexibility on a compact footprint.

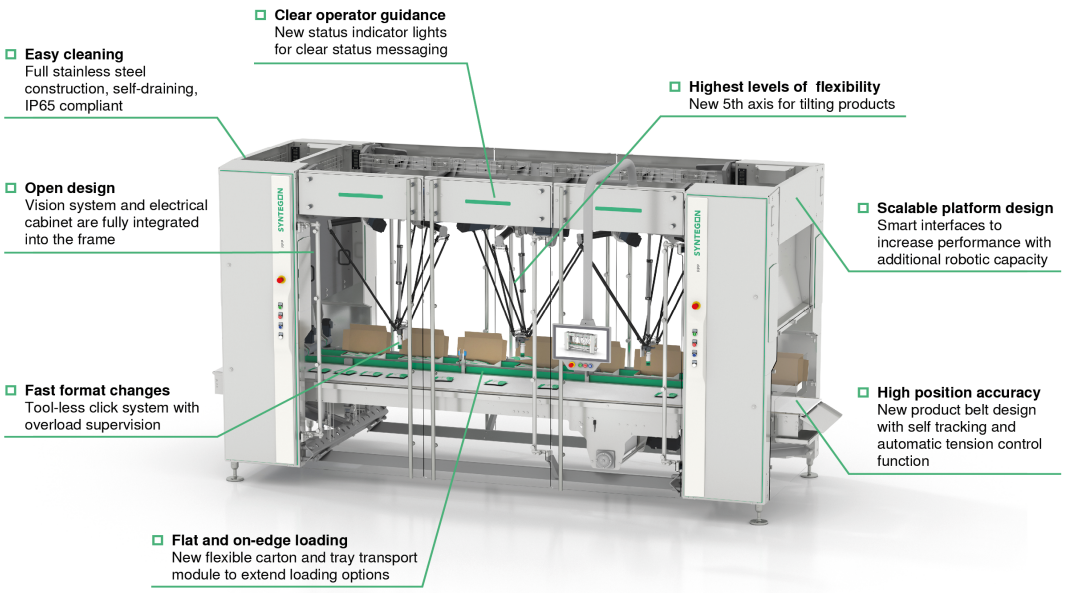
EXPERTISE

In addition to stand-alone pick and place solutions, Syntegon integrates Delta robot technology into the existing portfolio of machines to further enhance their application capabilities.

The RPP platform is Syntegon‘s next generation of pick and place robotics. It is based on decades of experience in integrating robots into the packaging process.

Your benefits

- Future-proof: flexible platform design
- Robust: high-performance Delta robots
- Less downtime: easy to clean and fast changeover
- Food safety: hygienic design, IP65 compliant
- High output per m^2/ft^2: compact footprint
- Error-free operation: clear and intuitive user guidance
- Solution for stand-alone operation or line integration



Packaging Line Structure.

Product Handling			Primary Packaging			Secondary Packaging		
Distribution & Feeding	Portioning	Robotic Handling	Horizontal Flow Wrapping	Vertical Bagging	Rollpack	Toploading	Endloading	Case Packing

STANDARD EQUIPMENT

- Modular and scalable frame – couterflow configuration
- Stainless steel / non-hollow body design
- 2 electrical cabinets, IP65 protected
- Transparent, extra large doors
- 500 mm product infeed belt
- Full-servo-drive, Beckhoff IPC, drives and motors
- New LED status indicator lighting concept
- 1 x vision camera
- 3 x 4-axes robots, crash detection
- 3 x single-pick air-mover End-of-Arm tools
- Easy integration of Syntegon‘s wrapper chain via ethernet
- HMI 4.0 touch screen, recipe setting and operator guidance

OPTIONS

- Performance belt with tracking and tension control
- Co-flow system configuration
- Vacuum pump and vacuum buffer system
- Cyclope vacuum filter
- Extended frame: 2 additional e-cabinets, e.g. arc-flash-execution, additional drives
- 3 x 5-axis robot configuration, EoA-tilting function
- Quick changer for EoA tools
- Encoder interface to downstream equipment
- Multi-pick, reflex-pick, on-edge and more
- Status light tower
- Additional camera and/or vision functionalities
- Product micro buffer
- Change-part trolley

Specifications Syntegon RPP 3-1 Feedplacer	
Product dimensions	
Length Width Height	15 - 300 mm / 0.59 - 11.8 in 15 - 200 mm / 0.59 - 7.9 in 2 - 120 mm / 0.07 - 4.7 in
Total process width	
In- and outfeed	1200 mm / 47.2 in
Frame length	
RPP3-1 compact RPP3-1 (4 E cabinets)	3500 mm / 137.79 in 4000 mm / 157.4 in
Frame width/height	
RPP3-1 width RPP3-1 height	1700 mm / 69.7 in 2400 mm / 94.5 in
Performance	
1 robot 2 robots 3 robots	up to 120 products/min up to 240 products/min up to 360 products/min
Supply	
Voltage Energy consumption Compressed air	3 x 400 – 480 V plus ground 50 – 60 Hz 5-6 bar
Weight	
Syntegon RPP3-1	2200 - 2500 kg 4850 - 5512 lbs

Europe:
SalesFood.EMEA@Syntegon.com
Phone: +41 58 674 7542

North America:
SalesFood.NorthernAmerica@Syntegon.com
Phone: +1 715 243-2298

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