

PRESS RELEASE

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Stäubli Robotics to present state-of-the-art food industry robots at ANUGA FoodTec 2024

Redefining food-grade robots for the future of production

At ANUGA FoodTec, Hall 7.1, Booth C049, Stäubli Robotics will showcase the breadth of its innovative food-safe automation solutions, covering a range of industry segments and numerous applications in primary and secondary processing and packaging. Stäubli's hygienic food robots are designed to help ensure producers meet stricter safety requirements and quality standards while also optimizing their processes and boosting productivity.

Stäubli Robotics has been at the leading edge of safe, hygienic automation solutions for the food industry for decades. Its comprehensive portfolio of high-performance robots exemplify hygienic design and excel at withstanding rigorous washdown procedures. At ANUGA FoodTec, March 19 - 22, Stäubli food industry specialists will present a variety of live demonstrations and offer expertise on how food producers can update their production lines and be more competitive amidst labor shortages, logistical constraints, food safety issues, compliance challenges, and market pressures.

Stäubli works with food industry partners worldwide to develop robotic systems that automate tasks in primary and secondary processing such as pick and place, cutting, deboning, portioning, packaging and palletizing, including the handling boxes of frozen food and unpackaged products. When handling soft, fragile foods, the robots demonstrate a high degree of control, maintaining the product's shape and other properties to ensure consistent quality and repeatability.

Hygienic design and washdown: food-grade robot essentials

Stäubli's food robots have a unique, standard-setting hygienic design that minimizes the risk of contamination and helps ensure safety and compliance in this highly regulated sector. They feature a fully encapsulated and pressurized IP65-rated structure (IP67-rated wrist) with a smooth surface, specialized coating, no external cables or connections, non-protruding screws, and no dead spaces where microorganisms can grow. All models are available with NSF H1 food-grade oil.

Equally important is the ability of the robot to undergo the same cleaning procedures as other system components with no loss of performance. This is why Stäubli developed its Humid

Environment (HE) robots, which are modified to maintain process reliability in environments where exposure to spray and splashes is frequent and intensive daily cleaning is essential.

Stäubli HE robots have established themselves as the benchmark for safe food processing. The use of materials such as plastic or carbon fiber has been avoided, and parts that are subject to high stress are made of stainless steel. The casing has a specially treated, detergent- and corrosion-resistant surface with a high-grade particle-repellent finish. HE robots range in size, format (4- and 6-axis) and payload to meet different requirements. Flexible mounting options and personalized service enable easy integration into semi- and fully automated production lines.

Live demos: seeing is believing

Stäubli will present several live demonstrations at ANUGA FoodTec showing how its hygienic food industry robots automate a variety of processing tasks requiring the safe handling of unwrapped foods including raw meat and baked goods.

One demo will feature a pair of Stäubli robots, the Red Dot Award-winning TS2-60 HE and a TX2-60 HE, using conveyor tracking technology to cut and handle chicken and beef. The TX2-60 HE uses a waterjet cutter from Swiss manufacturer Allfi to simulate cutting the meat into chicken thighs and steaks. The food is then transferred to the next station by conveyor belt. When it is recognized by a camera, the tracking application uses the TS2-60 HE to transport it into a packaging unit.

A bakery demo cell will feature another Red Dot Award winner, the TS2-80 HE SCARA robot, working with conveyor tracking and a SICK 3D camera. The TS2-80 HE will handle bagels in a high-speed tracking operation that highlights the robot's precision as it delicately yet firmly picks up the bagels using a soft gripper from Soft Gripping and places them into an oven. Stäubli's VALtrack software enables the robot to interpret visual data from the camera and determine how to handle different product types, allowing greater flexibility.

A third demo will show how Stäubli's HE robots can maximize throughput while ensuring food safety with a realistic use case for food packaging. Two SCARA robots, a TS2-60 HE and TS2-80 HE, will carry out a multi-picking process in which the robots handle ham, picking at high speed and placing the unwrapped food into blister packs.

The show-stopping TX2-200 robot, newly modified for food production

In 2023 Stäubli unveiled its next-generation TX2-200 robot, a powerful, cleanroom-compatible six-axis machine representing the top of the TX2 series. At ANUGA FoodTec, the food industry will be among the first to see the new HE version of the TX2-200, modified to master the most demanding tasks in food production.

The TX2-200 HE is the largest robot in the series with a load capacity of up to 170 kg and a reach of 2.209 mm, making it ideal for heavier handling applications. At the same time, it is a precise

processing machine with impressive dynamics for delivering on short cycle times. In terms of food safety, it features the enclosed structure and smooth contours of its standard-version counterpart. But as an HE robot intended for use in the food industry, it is compatible with ISO Class 4 environments and fully capable of operating in humid environments, certified by its IP67 rating. State-of-the-art safety features

Another special feature of the TX2-200 robot is its enhanced safety technology, with all the latest safety functions having been incorporated. These meet the stringent requirements of category SIL3/PLe and thus guarantee maximum user safety. The TX2-200 can therefore be deployed at various levels of human-machine collaboration without the need for work areas to be separated by barriers, allowing manufacturers to implement highly efficient production concepts without restrictions.

The TX2-200 offers a new level of safety, flexibility and user-friendliness, making integration even faster and easier. The compact CS9 HP controller with IP54 protection also scores high marks for being 40% smaller than the previous version. The reduced footprint cuts costs and ensures safe and unhindered workflows in production areas.

“With the TX2-200, we have once again extended our technological lead over our competitors,” says Rudolf M. Weiss, Global Head Life Sciences & Food, “Thanks to its advanced safety features, hygienic design and mechanical qualities, this six-axis robot is a highly versatile guarantor of productivity in both classic and digitally networked environments.”



TX2-200 in HE version: modified for the most demanding tasks in food production.



The Red Dot Award-winning SCARA robots TS2-60 HE and TS2-80 HE demonstrate their high performance in various trade fair applications.



At Kaufland Fleischwaren, a TX200 HE has recently taken over the loading of an automatic slicing and packaging machine.



In hard cheese production at BMI Bayerische Milchindustrie eG, Stäubli HE robots take over the primary packaging of the freshly produced cheese blocks.



At Weinbergmaier GmbH in Vienna, two Stäubli six-axis machines package high-quality strudel dough.



At the port of Guilvinec in Bretagne, TX200 HE six-axis robots handle containers filled with fresh fish.

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About Stäubli

Stäubli is a global provider of mechatronics solutions with four dedicated activities: Electrical Connectors, Fluid Connectors, Robotics and Textile. We are an international group operating in 28 countries and represented in 50 countries on 4 continents. Our global workforce of over 6.000 employees is committed to maintaining a collaborative relationship with customers in nearly every industry to provide comprehensive solutions and long-term support. Originally founded in 1892 as a small workshop in Horgen/Zurich, CH, Stäubli is today an international group with headquarters in Pfäffikon, Switzerland.

<https://www.staubli.com/de/en/corp.html>

About Stäubli Robotics

Stäubli Robotics is a leading global player in robotics, consistently delivering engineering as effective and reliable as our service and support. A complete solutions provider for digitally networked production, Stäubli offers a broad range of 4- and 6-axis robots including robotic arms designed specifically for sensitive environments, autonomous mobile robots, driver-less transport systems (AGVs) and cobots for human-robot collaboration.

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