

Food Robotics Market Forecasts to 2032 – Global Analysis By Robot Type (Articulated Robots, Cartesian Robots, SCARA Robots, Parallel Robots, Collaborative Robots and Other Robot Types), Payload, Component, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Food Robotics Market is accounted for \$2.7 billion in 2025 and is expected to reach \$11.3 billion by 2032 growing at a CAGR of 22.6% during the forecast period. Food robotics refers to the application of robotics and automation technologies in the food industry to perform tasks such as processing, packaging, cooking, and serving. These robots are designed to improve efficiency, hygiene, precision, and consistency in food production and handling. They are used in various sectors including agriculture, food manufacturing, restaurants, and food delivery services. Food robots can perform repetitive tasks with high speed and accuracy, reducing human labor and minimizing errors. Examples include robotic arms for sorting or cutting, autonomous mobile robots for delivery, and automated cooking machines. The growing demand for convenience, safety, and innovation in the food sector has accelerated the development and adoption of food robotics, transforming how food is prepared, processed, and consumed around the world.

Market Dynamics:

Driver:

Increasing demand for processed and packaged foods

The surge in urbanization, changing dietary preferences, and fast-paced lifestyles have significantly increased the consumption of processed and ready-to-eat foods. Consumers are seeking convenience without compromising on quality or taste, leading food manufacturers to automate operations for efficiency and consistency. Robotics solutions are being increasingly adopted in packaging, sorting, and palletizing to meet the high-volume demands of food production. Additionally, automation ensures hygienic handling and precise portioning, critical in meeting safety regulations. The rise in e-commerce grocery platforms is also accelerating the need for efficient food packaging and processing solutions powered by robotics.

Restraint:

Lack of skilled labor for operation and maintenance

The integration of robotics in food processing requires specialized skills for programming, operation, and routine maintenance of automated systems. However, many regions face a lack of adequately trained professionals, which hampers seamless adoption. Smaller and mid-sized enterprises, in particular, struggle to recruit and retain talent capable of managing sophisticated robotic equipment. Furthermore, the fast-evolving nature of robotic technologies necessitates ongoing training and upskilling, which can be costly and time-consuming. This talent gap poses a major hurdle in achieving the full potential of food robotics in the industry.

Opportunity:

Demand for consistent quality and customization

With growing consumer demand for diverse and premium food products, there is a notable shift towards customization in food production. Robotics enables precise control over portion sizes, ingredient composition, and presentation, ensuring uniform quality across batches. This consistency is particularly valuable for brands aiming to maintain strong customer trust. Additionally, the ability of robotic systems to perform delicate and repetitive tasks enhances the overall product output without sacrificing quality. Companies are also leveraging robotics to offer personalized packaging and labeling solutions, further improving customer engagement.

Threat:

High initial investment costs

Initial investments in robotic systems, including machinery, software integration, and infrastructure upgrades, are substantial. For many food processors, particularly small-scale manufacturers, these costs can be a deterrent. Beyond installation, ongoing expenses related to training, system updates, and maintenance also add to the financial burden. As technology evolves, the risk of obsolescence pushes companies to reinvest frequently to stay competitive. These financial challenges could limit widespread adoption, especially in emerging markets where funding and access to financing remain constrained.

Covid-19 Impact

The COVID-19 pandemic significantly accelerated the adoption of automation across the food industry, driven by the need to reduce human contact and ensure production continuity. With labor shortages and health safety concerns mounting, many manufacturers turned to robotic systems for food handling, sorting, and packaging. At the same time, supply chain disruptions posed initial challenges in equipment procurement and system integration. However, the crisis ultimately reinforced the importance of resilience in operations, with robotics emerging as a key enabler. The trend towards contactless production and hygienic processing is expected to continue post-pandemic, further bolstering the market.

The articulated robots segment is expected to be the largest during the forecast period

The articulated robots segment is expected to account for the largest market share during the forecast period. These robots can handle diverse applications such as packaging, pick-and-place operations, and palletizing, making them indispensable in modern food production lines. Their multi-axis movement allows for greater dexterity and efficiency in tight or intricate environments. Furthermore, technological advancements have made articulated robots more compact and energy-efficient, appealing to food manufacturers aiming to optimize floor space and reduce operational costs. Their reliability in maintaining hygiene standards also adds to their growing adoption.

The fruits & vegetables segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the fruits & vegetables segment is predicted to witness the highest growth rate, owing to rising demand for fresh-cut, ready-to-eat produce with

minimal manual handling. Automation in sorting, washing, peeling, and slicing ensures enhanced food safety and reduces spoilage. Robotics also enable faster processing and packaging, which is essential to maintaining the freshness of perishable goods. As consumer preferences shift toward healthier food choices, retailers and processors are investing in robotic solutions to scale production without compromising quality. Government support for modernizing agriculture and post-harvest infrastructure is also driving this segment's rapid expansion.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share driven by the booming food processing industries in countries like China, Japan, and India. The region's rapidly expanding population, increasing disposable incomes, and evolving dietary habits are fueling demand for processed and packaged foods. Governments in the region are also promoting automation in manufacturing as part of industrial modernization initiatives. Additionally, the presence of leading food robotics manufacturers and technology providers further supports regional dominance. Local companies are increasingly embracing robotic solutions to enhance competitiveness and meet international quality standards.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR. The U.S. and Canada are at the forefront of adopting robotics in the food and beverage sector, particularly for applications involving safety-critical and high-precision tasks. Rising labor costs and a push toward sustainable, efficient production are prompting companies to invest heavily in robotic solutions. Moreover, growing consumer demand for processed organic and specialty foods is encouraging manufacturers to scale production using flexible robotic systems. Supportive regulatory frameworks and innovation-focused investments further contribute to market growth in the region.

Key players in the market

Some of the key players profiled in the Food Robotics Market include ABB Group, FANUC Corporation, KUKA AG, Mitsubishi Electric Corporation, Yaskawa Electric Corporation, Kawasaki Heavy Industries Ltd., Rockwell Automation Inc., OMRON Corporation, Ellison Technologies Inc., Moley Robotics, Flexicell Inc., Pudu Robotics, Picnic Technologies B.V., RightHand Robotics, Fetch Robotics Inc., Aethon Inc.,

Robotics and Kitchen Robotics.

Key Developments:

In April 2025, ABB and BurgerBots unveiled robotic burger-making to revolutionize fast food prep. ABB Robotics is serving up the future of fast food with BurgerBots – a groundbreaking new restaurant concept launched in Los Gatos, California. Designed to deliver perfectly cooked, made-to-order burgers every time, the automated kitchen uses ABB's IRB 360 FlexPicker® and YuMi® collaborative robot to assemble meals with precision and speed, while accurately monitoring stock levels and freeing staff to focus on customer experience.

In May 2024, ABB Robotics has signed a Memorandum of Understanding with Seoul-based food processing company Pulmuone Co Ltd to develop automation solutions in the research and production of a novel range of laboratory-grown foods. Pulmuone, which owns multiple food brands such as Nasoya tofu products and Monterey Gourmet Foods, is developing a new generation of seafood products using cell cultivation.

Robot Types Covered:

Articulated Robots

Cartesian Robots

SCARA Robots

Parallel Robots

Collaborative Robots

Other Robot Types

Payloads Covered:

Low Payload

Medium Payload

High Payload

Components Covered:

Hardware

Software

Applications Covered:

Palletizing & Depalletizing

Butchery/Meat Processing

Packaging & Repackaging

Sorting & Grading

Pick and Place

Quality Control & Inspection

Other Applications

End Users Covered:

Bakery & Confectionery

Ready Meals/Convenience Food

Food Service & Restaurants

Fruits & Vegetables

Meat, Poultry & Seafood

Dairy

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments

- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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