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Chef Robotics Unveils AI-Powered Tray Assembly for Meatpacking

13 April 2026 | News

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Chef Robotics, a leader in physical AI for the food industry, announced that Chef robots can now automate tray assembly for meatpacking by assembling pieces of meat onto trays before packaging. The application handles raw, frozen, and precooked proteins such as pork loin fillets, chicken breasts, steaks, lamb chops, bratwursts, and sausage links.

Tray assembly for meatpacking tasks has historically been difficult to automate. Unlike sauces, grains, or chopped vegetables, pieces of meat are irregular, deformable, and highly variable in size. A frozen chicken breast, for instance, behaves very differently from a fresh pork loin. This variability has made it challenging for automation systems to reliably handle proteins at production speeds, leaving food manufacturers dependent on manual labour.

To address this, Chef built its meatpacking application on its existing piece-picking capability, leveraging Chef's AI and computer vision system trained on large volumes of data covering the visual appearance, physical properties, and handling characteristics of different protein types. This enables Chef robots to make real-time decisions about how to grasp each piece of meat and where to place it on the tray.

The meatpacking application introduces three distinct capabilities. First, because pieces of meat can sit at any angle in the pan, Chef's vision system detects each piece's orientation and reorients it mid-motion to place it at the exact angle required on the tray, regardless of its original position. Some SKUs, for example, require pieces to be placed at a 90-degree angle to achieve a consistent, retail-ready presentation. Second, Chef robots can complete it in a single automated pass without manual intervention. Third, since pieces need to be consistently spaced and evenly arranged across every tray, Chef's vision system identifies the tray's centre and calculates predefined offsets for each piece, ensuring a uniform arrangement.

For food manufacturers, the meatpacking application offers higher throughput, lower labour dependency, and consistent portion presentation across shifts without requiring changes to existing production line infrastructure.

Chef's meatpacking capability is available in the U.S., Canada, and the UK and is included as part of Chef's robotics-as-a-service (RaaS) pricing model.