

# Choose robots for cheese



**Robots pick Ilchester cheeses in the United Kingdom, and consumers win with a more consistent product packed by happier employees.**

> Anyone who has tasted Applewood smoked cheddar cheese will have sampled one of the core brands from Ilchester Cheese, a specialist manufacturer based in the Somerset town from which the business takes its name. Few will realize however, that behind this most ubiquitous of British staple foods lies a marriage of tradition with state-of-the-art robotics technology.

Ilchester Cheese has an unconventional history. In the early 1960s a local publican had created a novelty, enjoyed by his regulars, for producing a beer soaked cheese. The local cheddar was steeped in Worthington E bitter beer, a brew popular at the time. When a London buyer for a large retail chain stopped at the pub, he asked if the cheese could be produced in quantities that would satisfy his company's needs. Consequently, a small factory was built at the back of the public house and production of Ilchester Beer Cheese commenced. Soon the famous Applewood smoked cheese was launched.

**A subsequent purchase** of the business saw it capitalized and then go from strength to strength. It is now the U.K. leader in specialty blended cheeses and exports about one third of its output. The company still uses locally sourced full-flavored cheeses as the basis for its products.

Having been a pioneer of specialty blended cheese; the company continues to lead in product innovation and development as well as the application of advanced manufacturing technology.

The most recent investment has been in the installation of a robot picking and packing line, built by RTS Flexible Systems using ABB IRB 340 FlexPicker delta robots. The robot cell uses two FlexPickers and was retrofitted to a wrapping machine for Ilchester Cheese's popular snack-sized "Chuckles" ranges. The robots pick and place the raw cheeses into trays ready for wrapping – a task that was previously onerous and a strain-inducing chore for at least two people and sometimes four if demand was high.

## &gt;FACTS

**Ilchester Cheese at a glance**

Ilchester Cheese Company Ltd, founded in 1962, was the first British cheese company to blend cheeses with other ingredients. It is now the U.K.'s biggest producer of blended cheese, with more than 50 blended cheeses in the U.K. and export to 20 countries internationally. In the U.K., the company supplies the major supermarkets, independent stores, wholesalers, food manufacturers, sandwich and catering markets with both pre-packed and deli counter cheese. Read more at [www.ilchester.co.uk](http://www.ilchester.co.uk)

**RTS Flexible Systems at a glance**

RTS Flexible Systems is based in Manchester, U.K. The company, founded over 20 years ago, provides end-of-line packaging systems for the food and consumer products industries, offering a high level of flexibility through software-based machine vision and advanced robot guidance technology. Read more at [www.rtsflexible.com](http://www.rtsflexible.com)

**Better with robots**

Benefits of using the IRB 340 FlexPicker robot from ABB to pack Ilchester cheeses include:

- More consistent product
- Higher efficiency
- Less waste
- Better conditions for workers who are now freed up for other less repetitive and lower-strain tasks
- Washdown easy with no sleeves or special adaption necessary



At Ilchester Cheese, an IRB 340 picks the cheese with the help of a vision system that allows it to move at lightning speed.



Indeed, the major factor in the decision to install the robots was concern for staff welfare in the operation. The manual task had to be completed very quickly and the repetitive nature of it could have led to strain injuries apart from the sheer boredom induced. A further benefit since installing the robot system has been an improvement in consistency and efficiency on the line, with less wastage. No jobs were lost as a result of the investment.

Within the line, raw cheeses are shaped and cut before being deposited directly onto a conveyor. A vision system that is integrated into the RTS robot cell recognizes each cheese and identifies its position on the conveyor. The robots then use this data to move at breathtaking speed to the correct position and gently lift the cheese before depositing it into the prerequisite position in its tray. The cheeses then proceed to the wrapping machine where they are wrapped and labelled ready for case packing.

**RTS took full responsibility** for the design and installation of the line, including optimizing the throughput to balance the procession of the raw cheese into the system to the capacity of the wrapper at the downstream end. The ABB FlexPicker robots

are a standard part of this type of system made by RTS. The ABB PickMaster software used is also a powerful tool to enable RTS to integrate the FlexPicker and vision systems into the overall system control.

**One of the factors** in the Ilchester Cheese application is the need for washdown routines. Being a dairy industry, washdown both on a demand basis as well as on a rigorous 24-hour cycle is a vital requirement. Many assume that washdown is difficult or impossible where robots are concerned – believing it is essential to have the robots shrouded. While this is true for many general robotic applications in the food industry, at Ilchester Cheese, the smooth contours and moisture resistance of the FlexPickers, means they withstand washdown without any special adaptation.

The robot feed placement line at Ilchester Cheese is suited to a broad variety of products, and recipes are quickly and easily changed according to production demand. At present there is a range of “Chuckles” cheeses packed on the line, including Applewood, Extra Tasty, Mellow and Tasty, Mild and Creamy, Romany, Corton, Kingsdon, Somerton, Double Gloucester and Red Leicester. ☉