

Endoline Robotics' palletising solution helps flour miller meet rising retail demands

A new robotic palletising solution from Endoline Robotics is delivering significant productivity gains for UK-based Carr's Flour Mills.

With unprecedented demand for flour during the Covid-19 pandemic, Carr's doubled its production for one major supermarket chain, from 120 to 250 tonnes per week.

Installing an Endoline Robotics' palletising system, powered by a Fanuc M710 robot, has enabled the flour miller to efficiently manage an output of 167,000 bags of flour per week, and provided greater flexibility to run the line 24/7.

Carr's are flour millers with a 200-year heritage. Producing a range of fine flours at its three UK based mills, Carr's supplies major retailers across the country, along with local Cumbrian stores close to its flagship site, Silloth Mill.

Silloth Mill was packing 1.5kg bags of self-raising and plain flour for a major supermarket chain. However, at the start of March 2020, with customer demand for flour rising, Carr's immediately increased output by 50% to 167,000 bags of flour per week to meet the retailer's requirements.

Doubling its manual packing staff from 8 to 16 to manage the rise in output, Carr's swiftly pushed forward with plans to automate the process. Having met Endoline Robotics, the strategic partner of Fanuc in the UK, at the 2019 PPMA Show, Carr's had placed the order for the palletising robot, just ahead of the pandemic.

"We had always planned to automate the line. However, faced with the unprecedented rise in demand we employed a further eight manual workers on a short-term basis, until Endoline were able to quickly install the robot." Explains Ben Clark, Operations Director for Carr's.

Implementing shift patterns to man the production line, the M710 palletising robot was needed to keep the operation running 24/7 without the additional staff, while increasing the quality of the stacked pallet.

The M710 system features a robotic arm with a specifically engineered, smart, self-cleaning vacuum gripper. Manoeuvring ten, 1.5kg flour bags from the bag packer at once, the robot gently collates them into the required palletising pattern.

At a speed of 74 bags per minute, the system gently palletises the flour to produce neat small Dusseldorf pallets, placing interlayers for increased pallet stability.

Designed to a very small footprint for seamless integration with the existing equipment, the robot features an infeed product collation system with two separate safety zones and two palletising positions for continuous operation. This eliminates frequent start-stopping of the upstream bag filling equipment. Once the first pallet is filled with the required amount the robot continues palletising onto the second pallet, and an operator replaces the first one, taking the filled pallet for stretch-wrapping.

The pallets are then delivered to the retailer and placed on the floor for customers to pick products directly from the pallet.

“We were constrained by the manual process. Endline’s robotic solution has enabled us to redeploy the original eight workers to other, more skilled areas of the business.”
Concludes Ben. *“Quality and efficiency has improved, and we now have greater flexibility to increase productivity for our customers.”*

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Images below with captions:



Image 1: The Fanuc M710 robot has enabled Carr’s meet increased demand and manage the palletising of 167,000 bags of flour per week



Image 2: Endline Robotics is the strategic, UK partner of Fanuc and is helping businesses automate to future proof their manufacturing facilities

Press Release issued for Endline Robotics

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