

AUTOMATION

case study

Cheese is fast food for French market

The latest custom cheese cutting machine from Northwood Food Machinery of Stoke-on-Trent provides precision portioning of blocks of cheese that weigh up to 85 kg. This has drastically cut the time for the task and gives accurate and repeatable results every time. The control and accuracy of movement of the blocks of cheese through the machine is attributed to the choice of general purpose AC drives from Control Techniques.

The Challenge

"We were faced with the task of stopping these huge blocks of cheese instantly," says Northwood Food Machinery director Mike Southwick, "A lack of friction in the gearboxes meant the blocks were over-running the target position by some 4 inches (100 mm). We brought in Control Techniques, who were confident that they could give the degree of position control required, using the smallest of their general purpose industrial drives. On the first trial, these drives stopped the motors on target – and without any additional cost of braking resistors!"

The Solution

The Control Techniques' motor control solution is a high specification, general purpose AC drive, packed with features in a compact size that takes up little room in a cubicle. Featuring integral dynamic braking

as standard, the drive has the ability to absorb the energy created by fast stops, as in this case, whilst giving very smooth, precise control of off-the-shelf motors. The drives on this cheese cutting machine are hard-wired into the PLC controller to give a fast digital link and are simply programmed to give smooth acceleration and instant STOP, when they individually receive instructions to do so.

The Benefits

"We are delighted with the results," says Mike Southwick, "the Control Techniques' AC drives have exceeded our expectations. We simply could not have achieved these results with any other drive – and we're very pleased with the support we've received from Control Techniques, who helped us set it up and provided us with the programming."

Director of Tippagral SA, Neil McAuley, explains, "We portion some 7,000 tons of cheese per year, mainly Emmental, but also Cheddar, Gouda, Edam and Mozzarella. Some 75% of our throughput is grated, but many customers, particularly wholesalers and manufacturers of pizza and sandwich / baguette producers, require the cheese to be cut into specific sizes and shapes, e.g. 9x9-cm, 7.2x7-cm and 12x5-cm. This machine will dramatically streamline this aspect of our operation and cut our labor costs."

KEY BENEFITS

- Accurate repeatable results
- Labor costs reduced
- Streamlined operation
- Increased productivity

CONTROL TECHNIQUES™

Nidec
All for dreams