



### Video explores role of chemical dosing in papermaking

The new video ([www.is.gd/zerupe](http://www.is.gd/zerupe)) features St Cuthbert's Mill, which produces about 80t of paper per month. It uses Watson Marlow Fluid Technology Group Qdos peristaltic pumps for a range of metering duties. According to WMFTG, it saved thousands of pounds due to precise shade and chemical addition control.

## Precision mixing measurement solves development challenge

A pre-pilot mixing plant is using wireless TorqSense transducers for ultra-accurate viscosity measurement of high-value compounds. The plant is used to prepare small batches of compounds from shampoo and detergent to cosmetics, therapeutic and medical preparations. Some of the ingredients in the compounds are very expensive, so product developers are loath to make large batches early in the formulation process.

The transducers assess the level of torque in a driven shaft. Often, this is used



to measure the power being provided by the drive motor. However, in this case it is the opposite; TorqSense is used to calculate the drag being exerted on the paddle and shaft by the liquid being mixed. "The mixing process changes the viscosity of the liquid, which is what causes the drag," says Sensor Technology sales engineer Mark Ingham. "In the first instance the TorqSenses are looking for the viscosity to stabilise to a steady value that won't change any further no matter how much more mixing is done. Then they measure that very accurately."

## Hoists raise ilke Homes production from underneath

Modular housing company ilke Homes has reduced factory overheads and boosted output following the introduction of a bespoke solution from Totalkare.

The company manufactures up to 2,000 steel framed homes a year from its 250,000 sq. ft. factory in Knaresborough, north Yorkshire. Modules, which are assembled on-site to create homes, are precision-engineered in production lines and then loaded onto lorries for despatch to sites across the UK. Previously, the loading operation was conducted by crane - a painstaking process adding significant time to dispatch.

Totalkare solved this with the provision of two sets of six T8DC cable-free mobile column lifts, complete with rubber in-fill plates. This enables the unit to be lifted so a flatbed transport can reverse underneath before the unit can be lowered and secured in place.

"Using the Totalkare lifts in our production facility has increased the speed in which completed units are despatched to site, while also saving the considerable cost of crane hire," said Rachel Beech, supply chain director for ilke Homes. "Doubling the number of lifts on site allows us to replicate these efficiencies throughout the factory as we continue to optimise our production processes," said Rachel Beech, supply chain director.



## Sandwich flipping: piece of cake

Although simple automation can give some manufacturers the boost needed to increase production and product consistency, more complex applications often require intelligent, flexible robotic solutions that can adapt to variable products and picking locations.

In the case of a large-scale sandwich producer, growing production demands coupled with a major labour shortage provided motivation for them to robotically automate a high-speed sandwich stacking application. To resolve the challenge, TechBrew Robotics, a Kawasaki Robotics Preferred Integrator based in British Columbia, Canada, designed a custom solution using Kawasaki's R series robots and F60 controller.

Because TechBrew needed to integrate its solution into the customer's existing



production line, it meant making creative use of limited space. To this end, the R series robots were inversely mounted on a cantilever beam attached to the cutting machine, and the F60 controllers' compact size made it possible to save further space by stacking them on top of the sandwich cutting machine itself. To maximise throughput, the robots face outward, stacking

sandwiches on two different conveyors which are running simultaneously. There are many variables in this application, so TechBrew used a laser range finding system coupled with conveyor tracking to detect the shape and location of the sandwich halves as they emerge from the cutting machine. Once the sandwich halves have been stacked, they travel down the conveyor to a place where human workers are waiting to place the product into boxes.