

## **Bürkert FLOWave provides a new whey to measure protein for dairy processor**

**11 September 2025**

**Our obsession with protein has proved to be a lucrative one for dairies. Whether in snack or powder form, this popular supplement is extracted from whey, a by-product of cheesemaking, and it has developed into a lucrative revenue stream. One of the largest manufacturers of dairy products in Britain is improving the efficiency of protein capture with Bürkert's FLOWave surface acoustic wave (SAW) flowmeter, which provides accurate measurement of solids in liquid whey.**

The dairy processor extracts whey protein from its dairy production activities, which significantly reduces waste. This process is quite a recent phenomenon; many dairies used to dispose of thousands of tons of whey as a waste product. Now, they are producing protein that can be added to a range of products such as milk, shakes, puddings and yoghurt. With many people relying on protein supplements to improve their health, demand for these products is high.

### **A new process flow for dairies**

The process involves recovering whey from milk using advanced separation technologies, producing liquid whey. This is then pasteurised and ultra filtered to make varying grades of whey protein. Thin and concentrated whey is blended to produce standard whey, which is then stored for later use. Efficiently extracting protein from whey relies on taking highly accurate protein concentration readings throughout the entire process. To measure this, dairies need to record the solid content in the liquid whey.

Traditionally, dairies have achieved this using Coriolis flow meters. These devices measure the mass and volume of the whey, then operators compare these data points to determine the protein content. While often assumed to be the best method, taking two readings and combining them takes time and compounds any inaccuracies. As dairies try to improve the efficiency of protein extraction for better profitability, these are serious limitations.

### **Shaking up protein measurement**

One dairy was willing to take a different approach to protein measurement. The team worked with Bürkert UK, a leading manufacturer of measurement and control systems for liquids and gases, to trial its hygienic stainless steel FLOWave flowmeters in the process.

“FLOWave uses SAW technology to accurately measure solids, or protein, in whey,” says Kieran Bennett, Business Development Manager, Food & Beverage at Bürkert. “Using soundwaves passing through the whey, we can measure signal degradation as they encounter a solid – known as a reduction in the acoustic transmission factor. This allows the FLOWave to directly measure protein, providing an instantaneous, highly accurate reading. For context, it’s sensitive enough to detect minerals in treated tap water.”

Originally, the dairy processor was expecting to use a flow meter, a conductivity sensor and a temperature sensor on its whey protein line. As well as providing reliable measurements, the FLOWave is a multi-parameter sensor, providing all the aforementioned functionality in a single unit. In addition to saving space on the line, specifying the FLOWave in this application delivered at least a 40% cost saving compared to using a Coriolis alternative. It was also easier to install the FLOWave as its orientation does not affect its performance.

## The best solution in the field

Accurate measurement of protein is of particular importance at many dairies, especially where sites are faced with challenges in whey storage capacity. Some operators have moved to a continuous extraction process that can reduce on-site storage requirements by up to two thirds.

“The FLOWave provides highly accurate solid content measurements in thin, concentrated and standard whey that are used to control the blending process. This continuous control and production of standard whey means only the finished product requires storage. The instantaneous readings from FLOWave following straining, filtration and blending play an important role in this innovative process,” adds Jon Roberts, Account Manager at Bürkert.

With recent market conditions presenting many challenges for UK dairies, protein has offered a welcome revenue stream from a by-product that was once considered waste. Capitalising on this opportunity relies on having the most accurate and responsive processing equipment on the line. For measuring protein in whey, the FLOWave is proving to be the cream of the current crop.

“This exciting project proves to the dairy industry there are other options to Coriolis flow meters when measuring protein in whey or milk. In fact, with its large range of measurement parameters and sizes, the FLOWave lends itself well to other beverage applications too,” Kieran concludes.

Find out more about the FLOWave here: <https://www.burkert.co.uk/en/type/8098>

**Image captions:**



**Image 1:** Bürkert's FLOWave uses surface acoustic waves to precisely measure the mass and volume of liquid whey.



**Image 2:** The FLOWave is a multi-parameter sensor that saved space and delivered at least a 40% cost saving compared to the Coriolis alternative.



**Image 3:** FLOWave provides accurate measurements for different specifications of liquid whey.

The image(s) distributed with this press release are for Editorial use only and are subject to copyright. The image(s) may only be used to accompany the press release mentioned here, no other use is permitted.

## About Bürkert

Bürkert Fluid Control Systems is one of the leading manufacturers of control and measuring systems for fluids and gases. The products have a wide variety of applications and are used within food & beverage, pharmaceutical and water industries as well as in medical engineering and space technology. The company employs over 3,500 people and has a comprehensive network of branches in 36 countries world-wide.”

### Press contact:

#### **Bürkert Fluid Control Systems**

Kieran Bennett

Business Development Manager – Food & Beverage

Tel.: +44 1285 64 87 20

[sales.uk@burkert.com](mailto:sales.uk@burkert.com)

### PR agency:

#### **DMA Europa**

#### **Tegan Goulbourne**

Progress House, Great Western Avenue, Worcester,  
WR5 1AQ, UK

Tel.: +44 (0) 1905 917477

[tegan.goulbourne@markettechgroup.com](mailto:tegan.goulbourne@markettechgroup.com)

[news.dmaeuropa.com](http://news.dmaeuropa.com)