

# Tank Level and Product Density System

## Frucor Beverages Ltd achieve accurate results using hygienic E+H Deltapilot S Pressure Transmitters and Unitronics Vision 260 OPLC

EMC were delighted to be selected to supply Tank Level and Product Density Systems for 3 batching tanks at Frucor Beverages Ltd in Auckland.

EMC recommended Endress+Hauser Deltapilot S DB50L Pressure Transmitters for this application (2 per tank) together with a Unitronics Vision 260 PLC with integrated Operator Panel.

The Vision 260 OPLC graphically indicates the level of each tank as well as calculating and displaying the product density. Programming was done by Steve George (EMC's Integrated Systems Manager) and the control package was fully installed in a control cabinet together with the snap-in I/O and expansion modules.

The hygienic Deltapilot S Pressure Transmitters used have a 316L Stainless Steel housing with a Universal Mounting Adaptor Process Connection. The measuring range is 0-400mbar and they were fitted with a loop-powered 4-20mA, HART, FEB22 Electronic Module.



*Batching Tank at Frucor Beverages Ltd with 2 Deltapilot S Pressure Transmitters (circled)*

### Frucor Beverages - very pleased with performance

Amy Sia of Frucor Beverages Ltd explains what Frucor were wanting to achieve with this system:

"The reason why we chose this system was because we wanted to do away with sight glasses due to it being a potential breeding ground for microbes.

We first tried an ultrasonic unit but due to the amount of foaming we got from our products, we got erroneous readings with level measurement. We wanted a system that could give us 95% accuracy at least, which the ultrasonic did not do.

When EMC suggested using pressure transmitters, we were concerned about whether it would give us an accurate reflection of the level inside the tank due to the variety of products we batch.

We have used pressure / level transmitters in our other tanks before but only one per tank. With this one pressure transmitter, we set a fixed density of

1g/cc which is that of water.

This assumption of density is not a true reflection of the actual density that is in the tank. However, as they were only holding tanks the level indication was not crucial.

With batching, it was a different scenario. With two E+H Deltapilots, we were able to compensate for specific gravity differences and produce a reliable reading.

We also had issues with cleaning and we wanted instruments that were flush sealed so that there were no dead areas where product could accumulate. The Deltapilot came with welding necks that were flush sealed which were exactly what we were after.

Overall we are very pleased with the performance of the Deltapilots. The system is giving us good accuracy and allows us to comply with food hygiene practices by replacing our sight glasses."



*EMC Control Cabinet with Unitronics Vision 260 OPLC*

### More information?

Deltapilot S: Circle Enquiry 0703  
or contact Howard Berry  
Unitronics OPLCs: Circle Enquiry 0704  
or contact - Steve George