



SOFT DRINK MANUFACTURER REDUCES MAINTENANCE COSTS AND IMPROVES LOW-LEVEL DETECTION

Customer

Manufacturer of soft drinks in Europe

Application

- Low-level detection in batch processing tanks of sugar and water solutions for manufacture of soft drinks.
- Stainless steel vessels containing up to 30,000 liters / 7,925 gallons of liquids used to manufacture soft drinks.

Challenge

Low level switches connected directly to PLC systems are a common method for batch control in the manufacture of soft drinks. These switches, once the ingredients are properly blended, ensure that the tank is both fully drained and that no air is pumped through.

This measurement is critical to achieving consistent batches. However, it can be affected by the switch intrusion depth and by turbulence caused by agitators within the tank.

It is also common for users to see increased maintenance of switches during the CIP cleaning process, which at temperatures of 150° C (300° F) can cause thermal shocking.

Results

- Minimum intrusion ensures complete tank emptying
- Unaffected by cleaning processes
- Immune to entrained gases



Figure 1. The compact vibrating fork level switch is easily mounted in the bottom of the tank.

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Solution

The Rosemount 2110 Vibrating Fork Level Switch was a perfect solution for the user on the low-level alarm detection. The minimal intrusion and immunity to turbulence of the short fork design ensured the tank was completely empty, producing consistent batch control. The ability to withstand thermal shocking reduced the users maintenance activity after the CIP cleaning process.

The direct input to the PLC via the PNP Output(1) made the Rosemount 2110 the reliable and simple solution.

Resources

Rosemount 2110 Vibrating Fork Level Switch
[Emerson.com/RosemountLevelSwitch2110](https://emerson.com/RosemountLevelSwitch2110)

Emerson Food & Beverage Industry
[Emerson.com/RosemountFoodAndBeverage](https://emerson.com/RosemountFoodAndBeverage)

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The minimal intrusion of the Rosemount 2110 provided a reliable solution that improved batch control and reduced maintenance costs.

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Figure 2. Signal is fed directly to the PLC via its PNP output.

For more information, visit
[Emerson.com/Food-Beverage](https://emerson.com/Food-Beverage)

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