

# Application News

## PD Flow Meters Used For Measuring/Batching Salad Dressing Ingredients

**Industry:** Food & Beverage

**Service:** Flow Rate/Total

**Fluids:** High Fructose Corn Syrup (HFCS), Water, Vinegar, Buttermilk, Egg Product and Mayonnaise

### Overview

One of the critical factors affecting the quality of any food product is the proportion of the ingredients added to it. When making salad dressings, for example, manufacturers frequently utilize batch processes involving various ingredients, in different quantities, added to a mixing tank. This process can include High Fructose Corn Syrup (HFCS), water, vinegar, buttermilk and egg product to produce mayonnaise, and requires measuring the flow rate of the mayonnaise itself. For mayonnaise, viscosity eliminates many flow meter technologies.

### Situation

A large manufacturer of sauces and dressings located in the Southeastern U.S. sought to improve the quality control of its products. The company previously employed manual batching, but wanted to upgrade its operation to automated production processes. It required a single type of flow meter to control the amount of mayonnaise added to salad dressings, as well as flow meters for each ingredient used in the mayonnaise process.

### Solution

The head of plant maintenance had successful results using Flow Technology's Decathlon Series Positive Displacement (PD) flow meters at his previous company, and viewed them as the best solution for producing salad dressing with excellent quality and consistency.

Initially, the plant had three mayonnaise dispensing points to be measured. The local FTI representative determined that three-inch DC-F Sanitary Series PD flow meters could be employed to handle the high-viscosity fluids at high flow rates with the lowest pressure drop across the meter. The customer also used FTI's Hall Effect Sensor for a pulse output transmitted directly to the plant control system for the batch control function.

Thanks to the DC-F Series meters, the salad dressing manufacturer had a successful transition from a manual batch operation to an automated batching process. It subsequently ordered additional meters to measure and batch HFCS, water, vinegar, buttermilk and egg product used in making mayonnaise, as well as other dressings and sauces.

### System Description

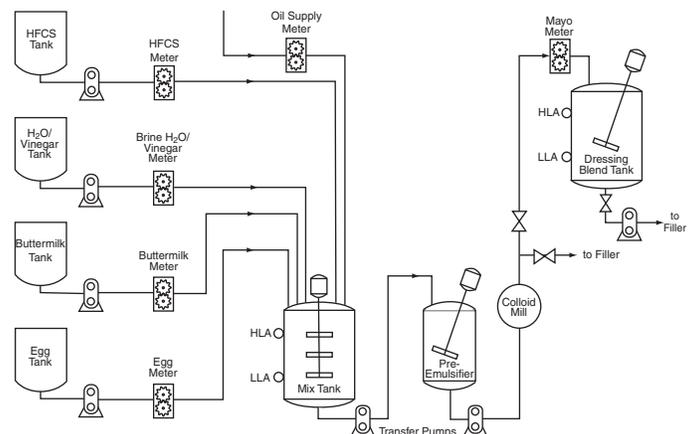
For measuring and batching mayonnaise (at 5000 cP), the customer chose the DC30F-6113-5430000 PD meter along with the IS160-01 Hall Effect sensor and 19-94506-01 sensor cable. For HFCS, buttermilk, soy oil, chilled water and vinegar (at 1 to 3000 cP), it used the DC20F-6113-5420000 PD meter. The DC15F-6113-5415000 PD flow meter, Hall Effect sensors and cables were selected for measuring egg product (at 100 cP).

### Technical Information

Flow Meters: DC30F-6113-5430000, DC20F-6113-5420000, DC15F-6113-5415000

Electronics: IS160-01 Hall Effect Sensor, 19-94506-01 Cable

Fluids: High Fructose Corn Syrup (HFCS), Water, Vinegar, Buttermilk, Egg Product and Mayonnaise



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