

CASE STUDY

In-line Blending Skid Adds 20 Flavors at Minimal Cost

www.epicsysinc.com | (314) 334-1089

JOB OVERVIEW

Key Features

- JIT perfuming inline blending system with multiple ingredient trees integrated with existing product making line
- Blending and filling system featuring a mix tank with pump re-circulation
- Re-blend system for scrap material

Challenges

- Accurate blending for different sized flows required dosing equipment for each flow stream
- Line start-up/shut-down and product changeover were addressed through control logic.
- Scrap from washouts added up quickly

Impact

- A re-blend system allowed the client to add 3-5% re-blend back to the mixture and saved potentially wasted materials
- Capital costs decreased and system flexibility increased
- Wasted product greatly reduced

THE EPIC SOLUTION

With limited budget and floor space, the client needed to double the flavors mixed in their existing facility. A pre-engineered, field-proven in-line blending skid from EPIC provided a fast, economic solution that allowed the client to drastically expand the product portfolio with minimal equipment additions.

The in-line blending system solution has a significantly lower cost compared to a batch mixing system and eliminates the need for multiple storage tanks. This in-line blending system doubled the number of products the client could offer at half the cost of several traditional batch mixing systems and improved the plant's ability to switch SKU's more frequently.

Static mixers on the skid are used to ensure the formula is properly mixed. A re-surge tank is included in the system, where a re-circulation pump is used to ensure proper mix before filling. The resurge tank acts as a buffer between the blending and filling systems. Because the system can operate at variable blend rates, which is especially important during start-up and shut-down, the tank regulates flow to the filler. It does this by creating a reserve of product that can continue flowing, even as blend rates vary. The automated controls for the system match blend and fill rates, regulating pressure on the holding tank to level the fluctuations and couple the blending and filling system.

