

Case Study: Cheese Sauce

Application

Emulsify canola oil into a processed cheese sauce

Specifications

Flow: 50 GPM (11 m³/hr)
Pressure: 30 psi (2 bar)

Challenge

Achieving small, uniform oil droplets in the oil emulsion

Issue

Current equipment at the end of life

Products with Similar Challenges

- Mayonnaise
- Dressings
- Dips
- Oil Emulsions
- Fat Emulsions
- Condiments
- Dairy Solids



FCM Capabilities

Max. Shear Rate: 143,000 1/s
Sub-Micron Particle Size
Max. Inlet Pressure: 250 psi
Max. Flow Rate: 50 GPM on product
Max. Flow Rate: 100 GPM during CIP

Part #: 1050000368
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FCM Saves \$165,000 in Replacement Cost

The piston homogenizer a Midwest co-packer was using to emulsify oil into processed cheese had reached the end of its lifespan. No longer efficient, it was costing them \$500-600 a month in repairs. They contacted their equipment distributor for a direct replacement, as a piston homogenizer was the traditional method for producing emulsions.

Solution

When they learned a direct replacement cost \$200,000, their distributor suggested a better, more affordable solution: the Fristam Colloid Mixer. With a list price of \$35,000, one sixth the price of the piston homogenizer, they were assured the FCM Colloid Mixer could do the job well and for a lot less. A trial was arranged and not only did the FCM consistently produce the exact shear required for the emulsion, it provided significant savings in purchase cost, parts and repair costs, power costs, processing times, and maintenance time and effort.

Why It Worked

The FCM's variable gap allows processors to dial in the particle size needed for their emulsion, resulting in a consistent droplet size with a tight distribution.

To read the complete story, visit: www.fristam.com/fcm.
Call Fristam to discuss your application today: 800-841-5001.

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