



# Case Study

## Upgrading the Sanitation Process: High tech pump saves dairy plant thousands of dollars

### Overview

United Dairy bottles milk from over 300 family farms located within 100 miles of their bottling plant. Known for their high-quality, antibiotic and hormone free milk, United Dairy processes thousands of gallons a day. They pride themselves in their “24 hours from Farm to Fridge” service.

The plant’s submersible wash down sump pump used for sanitization was being replaced every three to six months. This was a direct result of the sanitization process for tanks and trucks, which required frequent wash downs with 140°F water. The existing pump, however, could only withstand liquids up to 104°F. The high water temperature was overheating pump motors, causing them to fail. In addition, occasional debris in the run-off water was clogging the pump.

In 2015, United Dairy and their pump service provider Service Pump & Supply (SPS), sourced a new pump that could handle high volumes and withstand hot water.

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### PROBLEM

- Clogging of pump from debris in wash down water
- Pump motors overheating
- High maintenance and replacement costs



## Solution

Service Pump & Supply identified the BJM Pumps® Fahrenheit® SKF Series high temperature, electric submersible shredder pumps to replace United Dairy's existing sump pumps. SKF Series pumps are designed to withstand extremely hot temperatures up to 200°F (93°C). Winding protection and (NEMA) Class R motor insulation allow motor temperatures to rise up to 220°F. An automatic overload switch ensures the pump shuts off before the motor overheats. Once cooled down, the switch resets the pump and resumes operation.

Engineered to shred solids, the SKF solids-handling, non-clog pump utilizes a cutting impeller with a Tungsten Carbide Tip to rip apart solids against a tooth-edged spiral-shaped diffuser plate. With 360-degree shredding action and non-clog impellers, the pump could handle almost any solid materials that unintentionally entered the wash down sump. The SKF Series also feature 304 stainless steel motor housing to withstand both abrasion and corrosion.

United Dairy's in-house maintenance team installed the pump into the wash down sump by suspending it 3-feet deep with steel cabling. With combined benefits of high temperature tolerance and corrosion resistance, the SKF Series pump proved to be the perfect solution for United Dairy.

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“The Fahrenheit Pump has been operating reliably for about 16 months now. We're very happy with the results,” states James Ward, Maintenance Manager for United Dairy.



## FEATURES

- Fahrenheit® high temperature shredder pump
- Withstands temperatures up to 200°F (93°C)
- 304 stainless steel for superior corrosion resistance
- Wear-resistant shredding system

## APPLICATIONS

- Agriculture
- Commercial Buildings
- Food & Beverage
- Industrial
- Municipal

## RESULTS

- Increased pump longevity with minimal maintenance
- Reliable at high temperatures
- Lower overall cost of ownership



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