



# YOSHIDA FOODS BOTTLES UP ENERGY SAVINGS

## A NEW HIGH-EFFICIENCY PASTEURIZER TRIPLES BOTTLING CAPACITY WHILE CUTTING ANNUAL ENERGY COSTS

With customer demand way up, the only thing limiting Yoshida Foods International from increasing production was the speed of its pasteurizer. Yoshida's 70,000-square-foot plant manufactures its own high-end products, such as Yoshida Fine Sauces and Crater Lake Soda. The Portland company also operates as a manufacturer for products ranging from Heinz BBQ Sauce to Kombucha Wonder Drink. But Yoshida's 200-bottle-per-minute pasteurizer was putting a crimp on all that demand. The company needed to triple pasteurization output, and it had to happen quickly.

Yoshida sought advice from Energy Trust of Oregon, which had helped the company with previous energy-efficiency improvements. "The Energy Trust Program Delivery Contractor engineers are always quite responsive," said Frank Heuschkel, president, Yoshida Foods International. "We figured they could help us with options that made sense and were fast track."

“ This pasteurizer is the cornerstone of expanding our operation. We appreciate Energy Trust's streamlined approach in helping us get it online fast. ”

Frank Heuschkel, president  
Yoshida Foods International

### PROJECT-AT-A-GLANCE

#### Equipment installed

- New 600-bpm modular pasteurizer with cascading water flows and seven temperature zones

#### Project benefits

- Enabled a 200 percent production increase from existing equipment
- Reduced energy consumption and operating costs
- Improved system monitoring
- Reduced water use and costs
- Resulted in less bottle breakage
- Reduced biocide use and costs
- Reduced carbon footprint
- Decreased debt on the balance sheet for capital upgrade

#### Financial analysis

- \$311,837 eligible project cost
- \$187,103 in cash incentives from Energy Trust
- \$122,481 estimated annual energy cost savings

#### Estimated annual savings

- 144,892 therms
- 848 tons of carbon dioxide

After a bit of number crunching, it was obvious that replacing the pasteurizer with a 600-bpm, high-efficiency model was far more cost effective than retrofitting the existing one. “Our original pasteurizer was actually a cooling tunnel that had already been retrofitted to serve as a pasteurizer,” explained Heuschkel. “It worked well, but not at the capacity we needed.”

Yoshida installed a new modular stainless steel pasteurizer with cascading water flows and seven temperature zones. Unlike the old pasteurizer, which sent hot water down the drain, regenerating zones on the new model capture water and put it to use in another zone. For example, low-temperature water used for post-pasteurization precooling in Zone 6 is pumped back to Zone 1, where it helps preheat incoming containers.

The new pasteurizer has sophisticated touch-screen controls that allow operators to monitor temperatures in each zone and to program zones for different products and bottle sizes. The monitor also alerts operators to potential issues so they can stay ahead of problems.

The new pasteurizer is delivering an estimated 62 percent energy savings over the estimated energy use from retrofitting the old equipment—shaving \$122,481 from Yoshida’s annual energy costs.

Energy Trust helped Yoshida with the cost of the new unit by providing a \$187,103 cash incentive. “It would have been extremely difficult for us to make such an investment without financial assistance from Energy Trust,” said Heuschkel. “Without their help, the bank would have owned more of us.”

Yoshida has completed three projects with Energy Trust to date—the pasteurizer, a compressed air improvement project; and a 792-panel, 166-kilowatt solar electric project—and they’re not about to stop. “Energy Trust keeps us aware of available offerings,” said Heuschkel. “They connected us with lighting consultants. We’re also participating in one of Energy Trust’s Strategic Energy Management initiatives, which is helping our employees to identify low- and no-cost energy improvements plantwide.”



*Yoshida quality assurance supervisor Sean Brown checks the spray patterns of the new pasteurizer.*



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