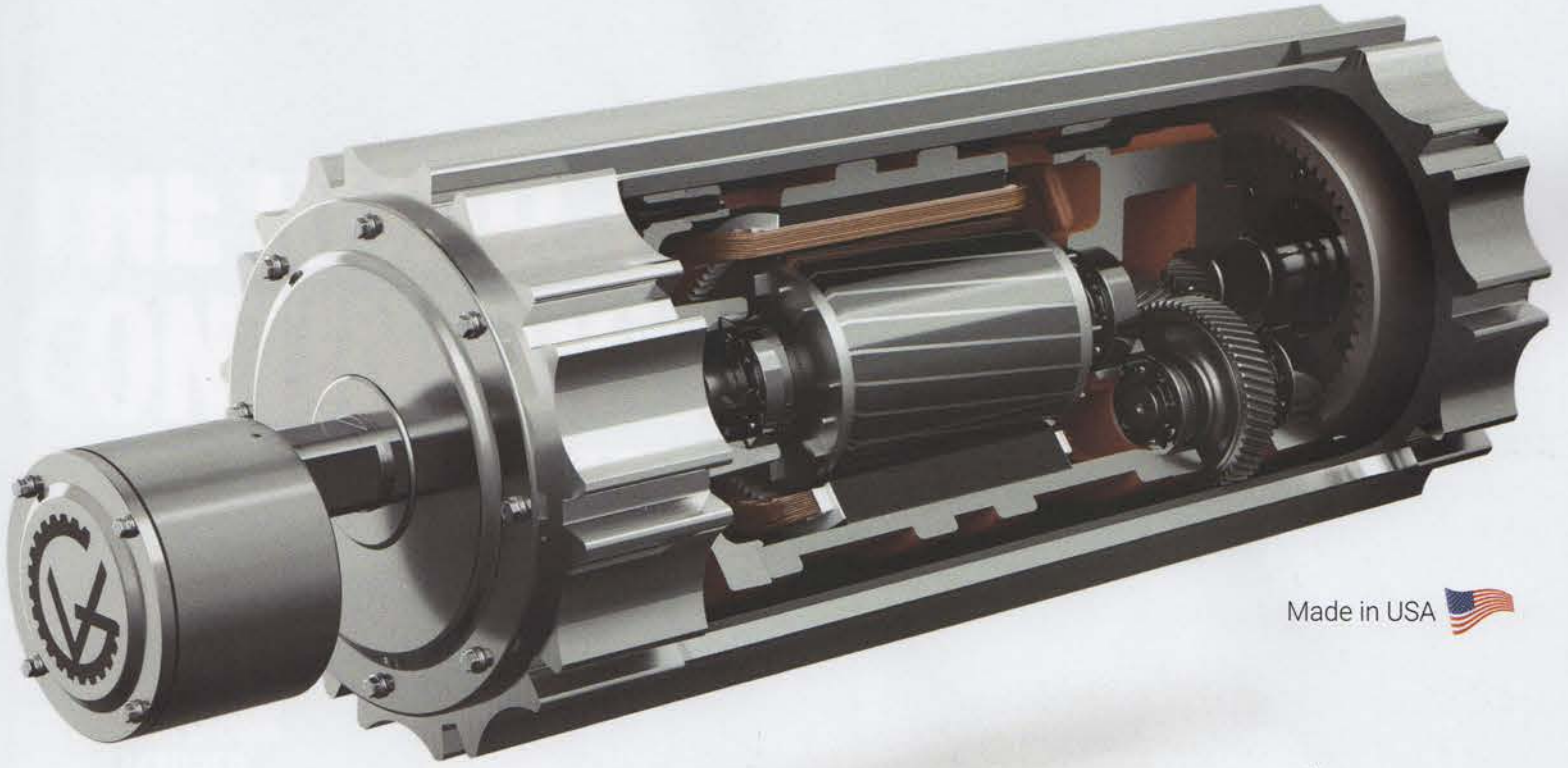


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# EQUIPMENT ENHANCES PRODUCTIVITY EIGHTFOLD

The Jewel Date Company processes its date granules and powders faster by switching to a screen classifying cutter that delivers precision and control.

**T**HE JEWEL DATE COMPANY produces its date flours, granules and powders with more precision and productivity these days. Since switching to a screen classifying cutter, the company has been able to accurately control the particle sizes of its products and significantly boost throughput.

Jewel Date grows, processes, packages and ships about 8 million lb of dates a year to food manufacturers and consumers. That includes whole and diced dates as well as date butters, date sugars and date pastes. As consumers seek natural alternatives to refined sugars, the company is contending with growing demand for its products, including its date flours, granules and powders. For example, the granular or powder form of dates is ideal as a binder for nutrition bars and as a sweetener for tea, according to the company.

## Total control

To create its date flours, granules and powders with more control while maximizing productivity, Jewel Date replaced a hammermill with a screen classifying cutter at its manufacturing facility four years ago. The Munson screen classifying cutter reduces friable, hard and fibrous materials into controlled particle sizes down to 20 mesh or less with minimal fines or heat generation at high rates.

Harvested dates are air-dried for two days to reduce moisture content to 7 percent from 50 percent, causing the dates to harden. The dates are then cooled, loaded into a hopper and forklifted to a conveyor that transports them to the 11 in.-wide throat of the cutter.

Unlike a hammer mill, in which a series of hammers strike and break the material until it passes through a bed screen, the screen classifying cutter employs sharpenable solid stainless-steel cutter blocks that are welded without seams in a staggered array and cut against two bed knives — one on the upswing, one on the downswing.

With the variable speed motor, the Jewel Date plant can run the cutter at 1,500 rpm to reduce particles down to 1/16 in. or at 1,200 rpm to reduce particles to 3/16 in. "We can adjust the speed to output powders or granules according to customer requirements," says John Ortiz, sales manager at Jewel Date.

The cutter imparts little or no heat to the product,

which is critical because frictional heat and heated equipment surfaces cause date powders and granules to melt and clump.

A flexible screw conveyor transports the reduced material exiting the cutter to a vibratory screener that discharges the product onto a belt conveyor for manual inspection and metal detection before being packaged and weighed for shipping.

## Sweet rewards

The screen classifying cutter reduces the dates into granules and powders within narrow size ranges as compared to a hammer mill, which offers less capacity and particle size control. The cutter also yields substantially more product in a shorter amount of time than the previous manufacturing process.

"It took an eight-hour shift to process 2,000 lb. of dates using the hammer mill versus one hour to process the same volume using the screen classifying cutter, increasing our productivity eightfold," Ortiz says.

With that enhanced throughput and precision, Jewel Date is now in a sweet spot to cater to increasing demand for its date, the company says. **PFW**

## Munson Machinery Company, Inc.

[www.munsonmachinery.com](http://www.munsonmachinery.com)



The Jewel Date Company air-dries its dates and then conveys the hardened dates to the Munson screen classifying cutter for size reduction. Photo courtesy of Munson Machinery Company, Inc.