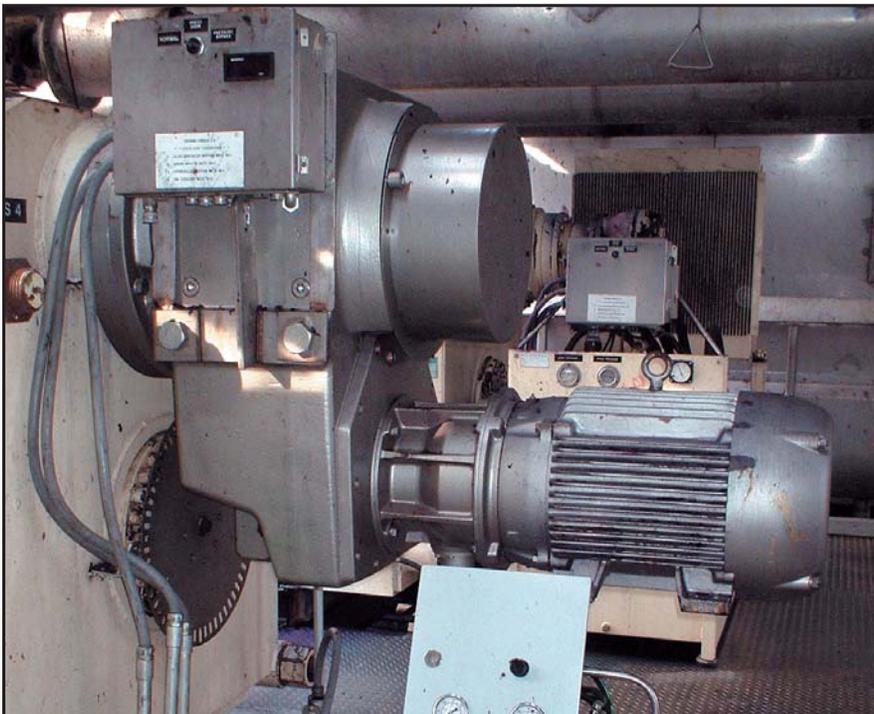


## NORD RESPONDS TO PRESSING ISSUES AT A LEADING WINERY



This 60 hp Clincher, one of the biggest NORD makes, powers a six-foot diameter screw that presses Gallo's grapes during the dejuicing process.

In 2001, the 25-year-old system at the processing plant of **E & J Gallo Wine in Central California**, the largest winery in the world, was in need of updating. The hydraulic gearboxes used to operate the grape presses were having leaking issues and lacked efficiency. In a food processing plant with 1,000 gallons of hydraulic oil circulating, and in an industry where timing is everything, the increasing potential for batch contamination and production delays was a risk Gallo wasn't willing to take.

NORD Gear Corp. (Waunakee, Wis.) replaced Gallo's hydraulic units with electric motor-driven gearboxes that would be compatible with variable-frequency drives. Oil-tight and highly efficient, the new units ensured timely and consistent wine production while dramatically reducing Gallo's maintenance and utility costs. In the wine-making industry, harvest typically lasts for just three months, during which time all of the grapes must move from the fields to the presses and onward before rot sets in. Reliability of system components is crucial, as any downtime, back-ups

or leakage issues can result in product waste, or, at best, inferior wine quality. Gallo's integrity strengthening initiative, led by Kurt Eulberg, maintenance manager of the facility, was executed gradually, but once NORD products were proven to work well, they began to be integrated throughout the facility.

*"It looked like a very good package... so we embarked on a project to replace the other 17 of them."*

On his 18 grape presses, Kurt needed to convert from hydraulic drives to variable speed electric drives to be safer and more efficient – that much he knew. But, originally, he was considering the replacement of just the motors. Following consultation with a NORD distributor, Kurt learned that a NORD gearbox could provide a more comprehensive upgrading solution. A NORD gearbox would not only deliver the variable speed he desired, it would also functionally replace the outboard bearing of a press' screw conveyor, support the shaft better and preserve the seal longer. "It looked like a very

good package," recalls Kurt. "So, we bought one, installed it and tested it for a year. It ran very well, so we embarked on a project to replace the other 17 of them." NORD supplied a 60hp clincher – one of its biggest gearboxes – and modified it to fit Gallo's existing system precisely. The clincher powered an enormous, six-foot diameter screw that pressed the grapes to a completely dejuiced state, leaving only a dry rind "cake" behind.

The clincher replaced a hydraulic unit which had been inadequately supported by only one bearing. Without proper support, the screw shaft had been plagued with excessive run out. The shaft would pivot and, over time, ruin the press' seal used to keep the grape juice in and the oil out. The two oversized bearings inside each NORD clincher solved this problem, and, as a result, Kurt revealed in maintenance savings that exceeded his hopes.



Parallel helical clincher unit SK 11382

The new electric drives, with their variable frequency drive (VFD) capabilities, also allowed Gallo to leap forward in terms of energy efficiency. "Being able to go VFD with those allowed us to save a considerable amount of energy, rather than running a hydraulic system," notes Kurt. "Basically, we're saving about \$16,000 a year in maintenance costs and about \$12,000 a year in utilities."

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Such savings encouraged Gallo to incorporate NORD throughout the wine-making process, from grape to bottle.

Before they reach the presses, Gallo's grapes are brought in from various fields to the winery grounds by large semi-trucks. The trucks bale a dump of grapes sideways, dropping them into a giant screw conveyor unit. At this point, NORD screw conveyor reducers are utilized to distribute the grapes to the 18 different press areas for rapid processing. As the grapes travel up the conveyor to the presses, they are cut open by the screws and their juice is carefully gathered.

After being extracted at the press, the pure juice is pumped through a pipe to various holding and mixing tanks. The pumps are powered by NORD inline gear speed reducers and the 150,000 gallon mixing tanks themselves use NORD units to mix ingredients for fermentation. Gallo's separate facilities for glass making, bottling and labeling are also incorporating NORD into the packaging process.

Thirty percent of the wine consumed in the US has gone through Gallo's processing plant. Since 2002, NORD has been the prime supplier of gear motors to that facility. High in efficiency, low in maintenance and absolutely dependable, NORD continues to help Gallo fine-tune its production process.



Helical in-line speed reducer unit SK 42



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

### NORD Gear Corporation

National Customer Service Toll-Free: 888.314.6673  
info.us@nord.com

### NORD Gear Limited

Toll-Free in Canada: 800.668.4378  
info.ca@nord.com

**WEST**  
Corona, CA (Los Angeles)  
Phone: 608.849.0190

**MIDWEST**  
Waunakee, WI (Madison)  
Phone: 608.849.7300

**EAST**  
Charlotte, NC  
Phone: 608.849.0140

**CANADA**  
Brampton, ON (Toronto)  
Phone: 905.796.3606