SEEPEX.
ALL THINGS FLOW

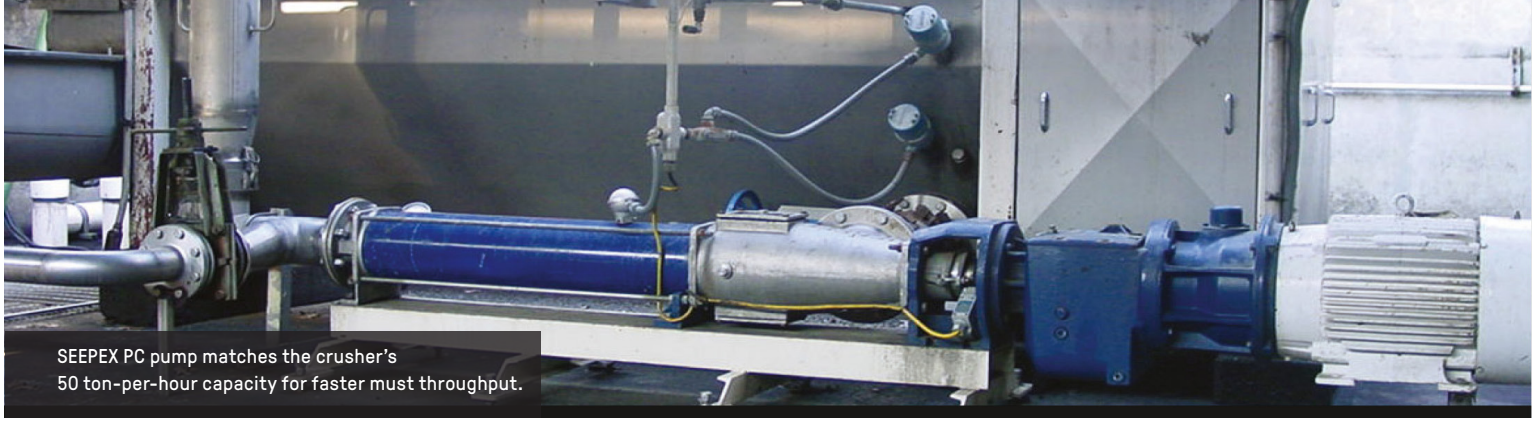
INCREASED PUMP EFFICIENCY IN WINE PRODUCTION

The transfer of must is a critical aspect of winemaking that has a direct impact on a vineyard's bottom line.

When must transfer is done well, the must will contain mostly intact grapes that will produce a high-quality juice, a large yield and a product that contains minimal solids at drain. When it's done poorly, the quality of the juice is diminished, production is slowed and pump repairs are required.

Progressive cavity (PC) pumps have shown to dramatically improve operations at vineyards that previously utilized centrifugal or rotary lobe pumps during crush. SEEPEX PC pumps enable vineyards to drive efficient must transfer by:

- Increasing product quantity
- Improving product quality
- Decreasing downtime
- Lowering maintenance / repair costs
- Eliminating unnecessary labor



SEEPEX PC pump matches the crusher's 50 ton-per-hour capacity for faster must throughput.

MORE QUANTITY, IMPROVED QUALITY

Centrifugal pumps are known to damage grapes, creating small chopped-up pieces of fruit that compromise juice quality and require additional clarification. A progressive cavity pump's low-shear, gentle product handling yields significantly more whole grapes during transfer.

PC PUMP AT MADERA WINERY

↑ 25%

Drain yield

2,000

Tons processed per day

One Madera, California winery replaced its centrifugal pump with a SEEPEX PC pump and increased its drain yield by 25% while reducing solids to 6-8% in the press fractions. Previously, this winery processed 1,600 tons of grapes during crush. Upon installation of the SEEPEX pump, the winery began processing 2,000 tons per day with improved product quality. Clarification measures also diminished.

> "The entire process is more efficient and cost-effective."
>
> **WINERY ENGINEER,** MADERA VINEYARD

PC PUMP AT NAPA WINERY

50

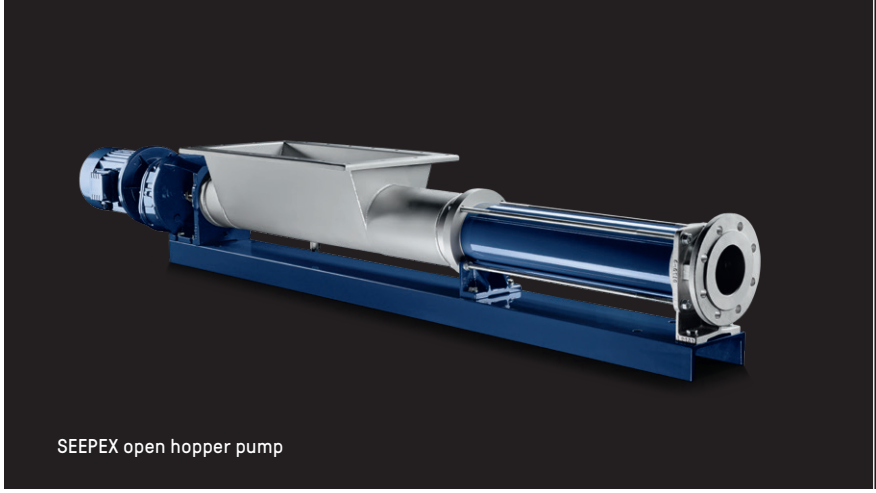
Tons processed per hour

2-3

Hours saved per day per driver

A Napa, California vineyard replaced its rotary lobe pumps with open hopper PC pumps from SEEPEX, which greatly improved production efficiency. Unable to keep pace with the vineyard's crushers, the rotary lobe pumps' sluggish must transfer (only 40-42 tons per hour) delayed the delivery of truckloads of grapes to the crusher.

Capable of meeting the crusher's 50 ton-per-hour capacity, the SEEPEX PC pump effectively reduced the shift time needed to complete grape unloading by 2 to 3 hours per day per truck driver.



SEEPEX open hopper pump

Close-up of hopper and auger

IMPROVED RELIABILITY

Centrifugal pumps have limited flow control. This limitation creates production inefficiencies in wine processing. A Madera, California vineyard utilizing a centrifugal pump needed an attendant to monitor the pump for cavitation or back-up caused by variable amounts of juice entering the pump. Too little juice entering the centrifugal pumps caused cavitation. Too much juice caused back-up, shutting down the pump and eventually the whole line. The attendant was forced to turn the centrifugal pump on and off to control the flow. The progressive cavity pump's ability to produce steady flow amid variable product viscosities minimizes this issue.

PC pumps are also better equipped to handle material other than grapes (MOG) that are frequently introduced during harvesting. Foreign objects such as rocks, tools, wire and clothing will jam other pumps, leading to lengthy downtime and costly repairs. The helical rotor inside PC pumps permits foreign objects to pass through the cavity without damaging the mechanical components.

BETTER PUMP, BETTER RESULTS

Wine consumption continues to grow worldwide. Winemakers who add progressive cavity pumps to their process will capitalize on that growth through increased production efficiency, lower costs and higher profits, while producing consistently high-quality wines. And that's something every vineyard can raise a glass to.

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