

Case Study

Wine Industry

Liquid Transfer Solutions

WineWorks

Blenheim

Marlborough

New Zealand

Summary

How innovative product transfer solutions from HPS help a major processing and bottling plant in one of the world's premium wine production areas **increase yields**, use **less water** and **minimise contamination** risks.



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Key Facts

The HPS Solution at WineWorks:

- ✓ Provides Fully Hygienic Wine Transfer
- ✓ Increases Yields by Significantly Reducing Wine Loss
- ✓ Reduces Water Usage in Cleaning
- ✓ Works with White, Sparkling and Red Wines
- ✓ Speeds Up Product Changeovers
- ✓ Provides Automated Operation with User-Friendly Interface
- ✓ Uses Flexible, Fully Detectable Pigs
- ✓ Has Mobile Receive and Launch Stations
- ✓ Has a Full Pigging Run From Tank to Filler – Even Through the Rotomatrix
- ✓ Improves Safety through Less Manual Handling
- ✓ Minimises Chances of Dissolved Oxygen (DO) Pick-Up and Cross-Contamination

“Mark and the team at HPS have been brilliant. They offered a solution that works incredibly well for our clients and ourselves.”

Peter Crowe
Operations Manager, WineWorks

Introduction

New Zealand’s Marlborough region, in the north-eastern corner of the South Island, produces around 77% of the country’s wine. Its unique climate and soil, combined with the talents of its wine makers has made Marlborough one of the premium wine production areas of the world. In 2014, Marlborough had 168 wineries and nearly 23,000 hectares of vineyards.

Founded in 1995, WineWorks offers a wide range of high quality bottling, storage, labelling and distribution services to New Zealand’s wine makers. Its bottling plant in Blenheim bottles around 20% of wine manufactured in the country and

processes about 25% of the country’s total bottled volume.

Their world-class technology, equipment and facilities enable their customers to focus on growing and marketing great wine, while WineWorks look after bottling and distribution.

The Problem

WineWorks is strategically located close to several different wineries. The company needed an efficient and reliable hygienic product transfer system to take advantage of this close proximity. The company also needed to overcome the quality and loss issues experienced with traditional gas or water follow-through over long fixed pipe

distances (up to approximately 500 metres or 1640 feet). In addition, when bottling wine on the massive scale of WineWork’s Blenheim production facility, it’s not practical to have a line to each tank.

Why WineWorks Chose HPS

As world-leading specialists in hygienic product recovery and transfer solutions, HPS experts quickly understood WineWorks requirements and provided an innovative, comprehensive and cost-effective solution.

Peter Crowe, Operations Manager at WineWorks explained, “HPS were able to offer a portable pigging system that allowed pump

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and wine to be pumped directly from their tank farms to our facility. This reduced one transportation step in the process."

The Solution

Working closely with WineWorks, HPS designed and commissioned six mobile pig launchers mounted on pump trolleys. These conveniently enable wine transfer from 14 locations (four internal cellar areas and ten different wineries). The tailored product transfer solutions also included a piggable automatic wine distribution 'Rotomatrix' system. The Rotomatrix provides highly flexible, quick and efficient path selection.

Crowe continued, "The wine pumps are mounted on a portable trolley with connected pig launchers. These trolleys are connected to a bend panel at neighbouring wineries or in our cellar. Services are plugged in to the pump trolley and the correct route is then made at the Rotomatrix. This is then confirmed at the HMI. Communication between the pump trolleys and filling lines is via fibre Ethernet."



An HPS Rotomatrix System

"Before wine transfer commences the line is flushed with water from the bend panel then pigged through to the filling line. When the pig is returned, the line is purged with N2. This helps minimise DO pick-up when the wine transfer starts. Pump speed is controlled during the initial stages of the transfer then the filler controls the pump speed."

"All pump speeds are adjustable allowing smooth wine transfer. When the filling run has been completed the flexible line from the tank to the pump is walked out and then the pig is launched, chasing the wine down the line all the way to the filler."

The longest distance a pig travels to and from a winery is through a pipe length of approximately 500 metres, or about 1640 feet. Thus, for each pigging cycle, the pig travels approximately 1 km or about 3280 per feet.

The Benefits

"Feedback from our clients has been great," Crowe said. "Some of the benefits include; minimal use of flexible hoses, a very user-friendly interface, minimal wine loss therefore increased yields for our clients, a much reduced

chance of DO pick up, CIP cycles that clean lines and pig housings, offering hygienic wine transfer."

Crowe added, "Mark and the team at HPS have been brilliant. They offered a solution that works incredibly well for our clients and ourselves. Their after sales service has also been first rate."

The Future

WineWorks is a growing business and the company is expanding their Blenheim bottling plant. They are currently adding a further bottling line to their site, and longer-term will add yet another. HPS is working with WineWorks to add more connection points to their Rotomatrix and further pipelines.

As more wineries develop in WineWork's Marlborough catchment area, the product recovery and transfer systems will expand even further.



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Get In Touch

For further information about this case study, for help and advice on product transfer and recovery in wine processing or manufacturing, or any other queries, please contact:

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