

## An expert brew of improved energy, efficiency and reliability

### The Challenge

Charles Wells Brewing Ltd, is the UK's largest privately owned brewery and is a leader in cask ale and premium lager. With passionate farmers and expert brewers, the beers are brewed using techniques over a hundred years old but in one of the UK's most modern breweries. Maziak have supplied and serviced the compressed air system on site for over 12 years forging a strong relationship. Over the years a number of data-logs have been conducted to uncover ways to improve efficiency and reliability whilst saving energy and costs. After a number of years of expansion, the most recent data-log and a critical review of the entire system, highlighted a key area for improvement. The fact that three separate variable speed drive compressors were running on their own internal pressure systems in different areas of the site



### Maziaks' Solution

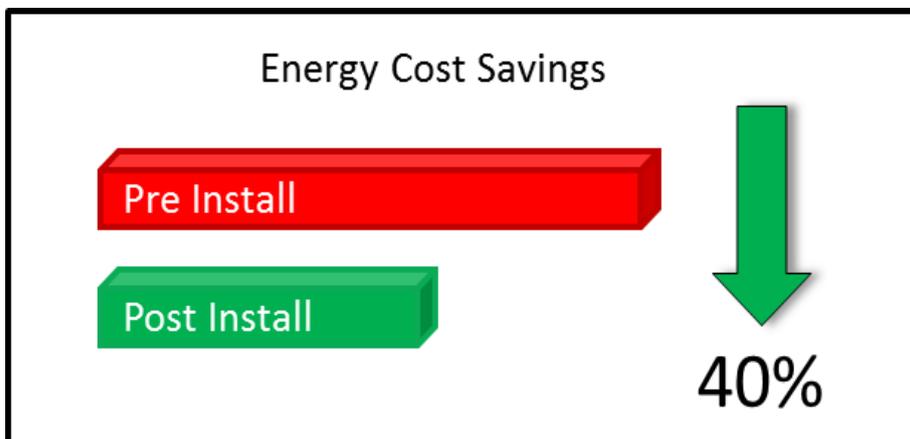
The key recommendation was to integrate three new machines into one complete system and consolidate the three old locations into one central point. There were three key elements to make this solution successful:

1. To allow the three machines to service the whole site from one location, the pipework across a road bridge (within the site) needed upgrading. Transair Aluminium Piping was used for its modular design to accommodate infrastructure and the benefits of its corrosion resistance.
2. To enhance the energy savings opportunities and improve efficiency and reliability, 2 Fixed Drive and 1 Variable Speed Drive HPC compressors were installed.
3. HPC's latest state of the art SAM4 control system was installed to monitor demand from the different areas of the plant and automatically trigger the running of the most energy efficient machine configuration for the demand. The HPC SAM4 controller m selects the appropriate compressor or compressors to meet the demand and at the same time provides the most efficient system. The innovative adaptive 3D advanced control not only takes switching losses into account, but also considers additional parameters that influence compressed air system energy efficiency, such as energy consumption due to control losses and pressure flexibility.



### Results

The results surpassed all expectations and speak for themselves.



### Client Testimonial

"The Charles Wells brewery supplies nearly 200 pubs across the UK, and reliability is absolutely critical. We are delighted with Maziak's proactive approach to their relationship with us and even more delighted with the exceptional cost savings achieved with this recent investment in our compressed air system following their recommendations".

David May, Head of Engineering, Charles Wells