

Longer life cycles for machines – thanks to zenon

Krombacher chooses to optimize existing systems

The average German drinks some 107 liters of beer every year. To keep up with this demand, production facilities require state-of-the-art machinery equipped with sophisticated IT systems. This costs breweries significant sums of money – so they want investments that will deliver as long a service life as possible. On the other hand, there are considerable risks associated with aging machinery. Seeking a solution to this dilemma, Krombacher partnered up with COPA-DATA and KÖHL Maschinenbau in order to update its existing system using zenon and K-Retrofit technologies.



A bottle of beer already has some history behind it by the time we pop it open. The journey starts with empties being taken back to the breweries. Both the bottles themselves and the crates that transport them are sorted according to type, size, and contents. The bottles are then cleaned and undergo a series of checks and inspections, before heading to the filling lines – where they are filled, sealed, labeled, and placed back into the crates. Once full, the crates are stacked on pallets and loaded onto trucks, which transport them to the beverage distributor. At Krombacher, the filling process takes place on eight bottle-filling lines, each of which is capable of filling up to 60,000

bottles per hour. To achieve this rate – the equivalent of around 300 liters per minute – Krombacher relies on state-of-the-art machinery and sophisticated IT systems. For years now, its filling lines have been operating with zenon automation software from COPA-DATA. zenon can be found on virtually every line that contains a visualization component.

TIME BRINGS RISKS

There are considerable risks associated with aging machinery, and operators have to deal with these. After many years of service, some spare parts may be difficult to source – or may



K-Retrofit and zenon make it easy to modernize old panels on existing machines.

have become entirely unavailable. Even if there is a stock of spare parts that were purchased at the same time as the machinery, this will be advanced in years too and will no longer be guaranteed to operate smoothly. Conversely, there are many cases in which cutting-edge hardware is not compatible with existing operator software. With machines designed for 24/7 production, any unplanned downtime can quickly take on financial implications that are difficult to resolve.

Security represents another major area of concern. Older systems will eventually reach the point where they can no longer be updated. Microsoft, for example, stopped providing support for Windows XP in April 2014, but the operating system is still prevalent in industrial applications. This means that outdated software and resulting security risks could endanger an entire system. The more extensively a machine is linked to the Internet, the bigger the risk to which the company is exposed.

Finally, machines are unable to deliver maximum efficiency if they do not meet the standards of cutting-edge software. This has yet another knock-on effect: a competitive disadvantage for companies.

It is in this context that companies are faced with the decision of whether to purchase brand-new machinery or help their existing machines live longer by upgrading individual components. Since purchasing new machines is a significant investment, many opt to extend their existing machinery's service life as far as is possible.

Working together with its partners COPA-DATA and KÖHL, Krombacher decided to implement an innovative update with the aim of extending its machinery's life cycle. With its ingenious K-Retrofit solution, KÖHL makes it possible to upgrade

existing machines using state-of-the-art software. Not only that, but Krombacher is also benefiting from the outstanding compatibility delivered by COPA-DATA's zenon software. What makes zenon really special is its backward compatibility with applications. It enables much more flexibility when replacing hardware, such as the panel PC for an HMI. This means that zenon projects can be run separately from machine parts with a shorter service life. The result: machines achieve a longer service life on the whole.

LONGER SERVICE LIFE FOR MORE EFFICIENCY

"At first, nobody thought that upgrading the old machines with the latest software would be an efficient solution," says Oliver Fehr, project manager at KÖHL. "But we accepted the challenge anyway and the result proved just how practical and efficient an approach it actually can be – if you do it right."

The task consisted of replacing some old operating panels with new ones. Running on Windows XP with zenon version 5.50, the old panels already had a decade of service behind them and were no longer capable of fulfilling modern security requirements or delivering the outstanding efficiency levels demanded. The aim was to upgrade the system to Windows 10 and the latest version of zenon. To achieve this, the existing operating panels were replaced with new versions and K-Retrofit was used to achieve compatibility with the old operating software. This had the effect of significantly extending the machinery's service life. The systems will continue to run in parallel until the final changeover – allowing the panels to be monitored and replaced without the need for any downtime.

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This upgrade has optimized production, saved both time and money, and boosted efficiency. It is now possible to use the very latest functions without the need to purchase new machines. And on top of all that, the cutting-edge software meets modern security standards.

INTEGRATING DIFFERENT PANELS

In addition to updating the existing systems, the project scope also included the task of integrating an existing panel – running on different software – into the zenon visualization concept. This panel is used for controlling crate transportation within the empties station and was very difficult for operators to access. The control system was therefore transferred to another panel within easier reach – and K-Retrofit helped to achieve compatibility between the different systems in this case too. Krombacher is reaping considerable benefits from this flexible method of adapting existing systems.

FILL FOR LONGER, PRODUCE WITH MORE EFFICIENCY

Machines in the food and beverage industry are often expected to be in operation for many years. However, avoiding the risks inherent in older machines does not always have to mean purchasing brand-new replacements for them. Done correctly, upgrades using compatible software are a cost-effective way of extending machine life cycles. Companies feel the benefits of using state-of-the-art software – but spend less on obtaining it.

HIGHLIGHTS:

- ▶ Extension of machine life cycles
- ▶ zenon makes it possible to replace individual machine parts thanks to backward compatibility
- ▶ Expansion of existing projects without the need to purchase a new machine
- ▶ Scalability in line with customer requirements thanks to K-Retrofit
- ▶ Assurance of the latest security standards through software upgrades