



MEIJI CO., LTD.

# Optimised Maintenance: Continuous condition monitoring of valves

MEIJI CO., LTD. PREPARING FOR AN AGEING SOCIETY  
WITH BÜRKERT IO-LINK

We make ideas flow.

**bürkert**  
FLUID CONTROL SYSTEMS



# Optimising the maintenance cycle through conditioning

BÜRKERT COLLABORATES WITH MEIJI CORPORATION

Japan has entered an era of declining birthrates and an ageing population. Meiji Corporation, a dairy manufacturer in the food industry, a core manufacturing sector, has been looking at how to future-proof its operations in the face of a shrinking labour force.

One of the results of this study suggested that Meiji should optimise valve maintenance, and hence they decided to adopt Bürkert's IO-Link control heads (port class A and B for 2/2-way and 3/2-way valves).



Optimised maintenance for hygienic double-seat valves  
with Bürkert control head Type 8691



The Bürkert control heads Type 8691 (shown in the picture) and Type 8681 are highly adaptable, making it easy to combine them with various established process valves.

### **The digitisation of valves was inevitable**

To optimise valve maintenance, the condition of each valve must be ascertained as numerical data

- Sensors to detect seat wear and tear are needed
- Electrical measures are required to output these numerical values regularly
- Conventional analogue wiring is too complicated and increases installation costs
- Concluded that digitisation is necessary
- Selected IO-Link, which has a large number of suppliers
- Decided that Bürkert has promise as a partner for this new challenge

### **Reasons for selecting IO-Link and details about the data Meiji has started collecting**

Bürkert has numerous solutions in its range for the digitalisation of valves. In the end, the control heads Type 8691 and 8681 with IO-Link communication were chosen. Meiji made a holistic determination based on the significant increase in the number of nodes in recent years, the perceived acceleration of adoption by major beverage manufacturers, and the expansion of the IO-Link specifications for sensors.

Meiji has now begun collecting data at the new plant on the number of actuators as well as the number of on/off cycles over time. In parallel, Meiji has begun lab tests to simulate accelerated wear of the valves. Other data that might be useful in the future, such as operating time, is also being collected thanks to digitisation.

## Expectations for the future as a result of this experience

Meiji digitised valves with the main objective of optimising valve maintenance. In this process, Meiji learned a lot about various digitisation factors, such as the selection of IO-Link masters and wiring reduction. In future digitisation, they will be able to calculate investment and running costs more carefully thanks to this experience.

## Contributing to the quality of Meiji products

By investing in the optimisation of maintenance, the quality of the product itself continues to evolve. In the production of milk, Meiji uses the latest production methods that take advantage of nitrogen, and has adopted Bürkert mass flow controllers in its nitrogen lines.

The Type 2000 On/Off and ELEMENT control valves, which have been used for a long time, continue to earn the trust of our customers.



Trusted partners - trusted valves: Extensive adoption of Type 2000 angle seat valves at the Meiji production plant since 20 years

## Partnership with Bürkert

The partnership with Bürkert began about 20 years ago, when the Type 2000 angle seat valve was extensively adopted in the new plant. In Japan, Meiji is one of the manufacturing companies that uses the highest number of angle seat valves.

Bürkert is strongly expected to continue to be a unique partner in the evolving manufacturing methods and plant operations of the new plant with IO-Link-specifications.

## Advantages of valves equipped with intelligent Bürkert control heads



Optimal maintenance frequency of each valve



Planned maintenance with no losses as compared to periodic / time-based maintenance



Reduction in maintenance outsourcing costs



Automation of beverage factory operations as a model case for an ageing society





For more than 100 years, Meiji has been committed to contributing to society through the provision of nutrition to Japan and the world based on our founding philosophy of the nourishment of society. Meiji's mission has never changed, and they continue to provide a wide range of products, including powdered milk, milk and dairy products, confectionery, sports nutrition, and liquid foods to people of all ages from infants to the elderly, founded upon safety and security, tastiness and enjoyment, and health and nutrition.

Meiji believes its reason for existence is the contribution to solving social issues through the provision of health value that only Meiji can offer, and will continue to help enrich the lives of customers in Japan and around the world.

*Now ideas for wellness*

**meiji**

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