TOSHIBA

# CASE STUDY 4

## FOOD INDUSTRY

Universal use heating/cooling covers any operating requirement.

**Project Period**
August 2018

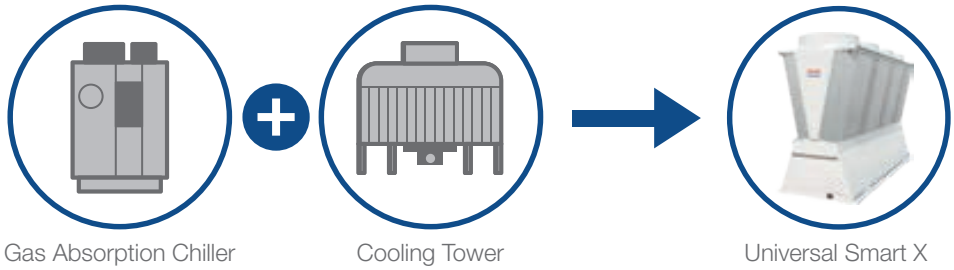
**Installed Units**
- Air-cooled heat pump unit „Universal Smart X“ (USX) - 4 modules

## PROBLEM STATEMENT

The customer‘s original gas absorption chiller and cooling tower, which was used to produce water for cooling malt (koji), was struggling with power reduction and high energy costs. Therefore, both the chiller and the cooling tower were to be replaced so that high-efficiency operation with the required cooling capacity could be achieved while reducing energy costs and maintenance costs.

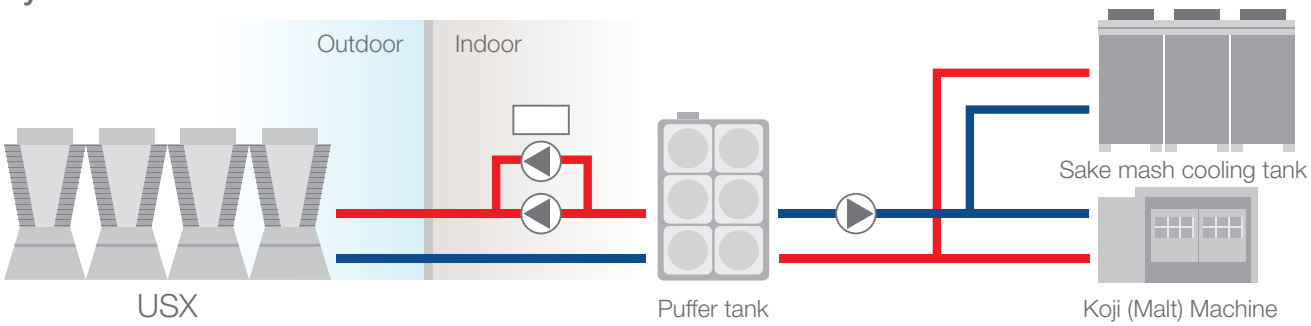
## SOLUTION

To achieve the customer‘s efficiency target, TOSHIBA recommended to replace the plant‘s existing chiller with a Universal Smart X air-cooled heat pump unit. The existing cooling tower was eliminated. Replacing the gas type with an electric type provides high-efficiency operation and saves energy.
Risk is minimized by having a backup in each modular unit. Universal Smart X provides year-round stable operation and reduced maintenance costs.



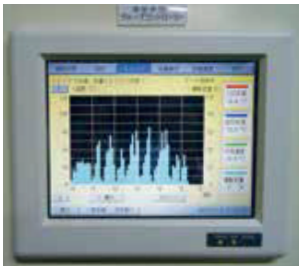
Gas Absorption Chiller | Cooling Tower | Universal Smart X

### System Overview



Universal Smart X

Universal Smart X



Group Controller

Fermentation tank

## EFFECTS

Universal Smart X delivers energy-saving and easy maintenance.

1. Approx. 60% energy costs saved.
2. Risk diversification ensured stable operations and increased product quality.
3. Elimination of the cooling tower reduces maintenance costs and effort.

## CUSTOMER‘S OPINION

Due to the expensive cooling tower, we decided to use the air-cooled USX chillers. The cost savings in maintenance and investment were higher than expected.

The system delivers excellent efficiency and stable operation, which results in better product quality. We are very satisfied with the solution.