



# PROJECT REPORT

## CXVE evaporative condensers help AVIKO to treat natural resources with respect



In 1962 a small number of potato farmers in The Netherlands created Aviko. Today Aviko is the **European market leader** in the fresh, frozen and dried potato product market and one of four major potato processing companies in the world, active in over 100 countries.

Awareness of **corporate social responsibility (CSR)** is a big part of Aviko's business. One of their CSR-objectives is **treating the natural resources and the environment with respect**. Find out how BAC helps Aviko optimize their production process to reach their sustainable goals.

### Aviko's requirements

#### Be 30% more energy efficient by 2020

Within Aviko each location has its own energy manager. Some production locations have **energy teams** researching possible improvements in the areas of water and energy consumption.

#### Guaranteed year-round reliable operation

Potatoes are being **processed 24/7** in Aviko's factories all around the world. **Unscheduled shut-downs** are simply unacceptable and when shut-downs are scheduled, downtime has to be limited.

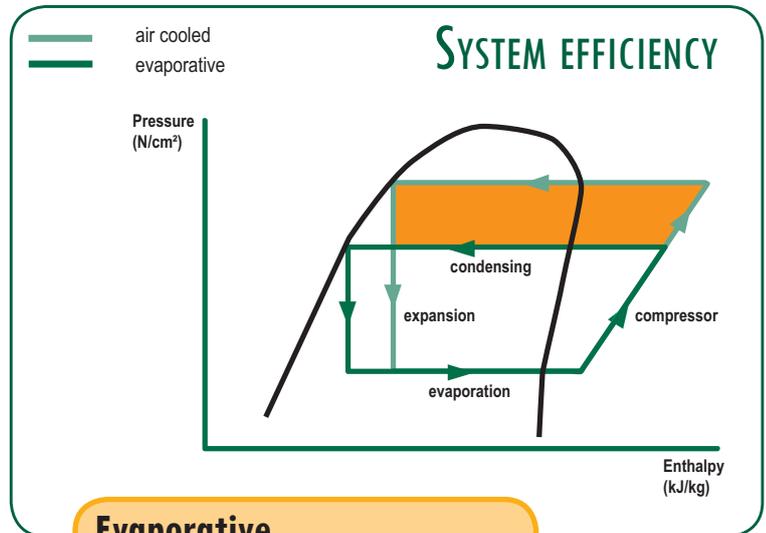
### BAC's best cooling system solution

BAC offers a **complete product portfolio of condensers**: dry, adiabatic, hybrid and evaporative.

After listening to Aviko's requirements and discussing with them the different options available, we concluded that evaporative condensers would offer Aviko what they were looking for.

The **benefits of evaporative cooling** over the air cooled process apply in the case of Aviko. The evaporative condenser saves typically 30% on compressor power, resulting in an **overall lower energy consumption**. This subsequently also leads to **lower CO<sub>2</sub> emissions**.

Evaporative condensers have a **small footprint**, so they will not take up a lot of Aviko's space, which can be fully devoted to the potato processing production.



#### Evaporative

saves up to **30%** on compressor power compared to dry.

# BAC goes further

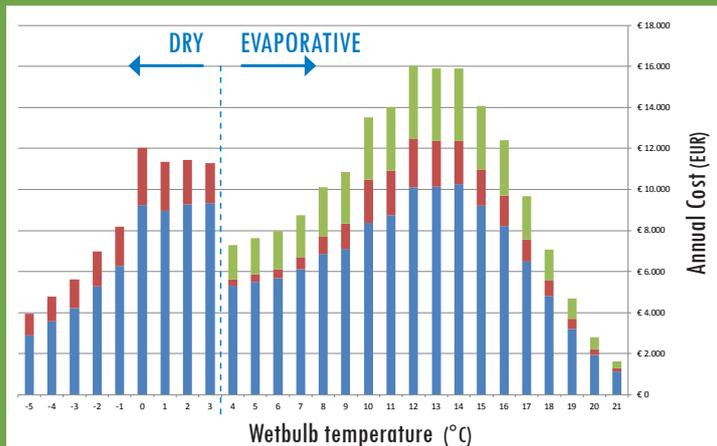
## WITH A WHOLE YEAR ANALYSIS OF THE FULL SYSTEM, INCLUDING THE COMPRESSOR

By selecting evaporative cooling, Aviko made the **most efficient** choice. Together with Aviko, BAC made a year analysis of different evaporative concepts, such as hybrid units that operate without water at low ambient temperatures. This analysis showed that water consumption would be lower but the energy efficiency would be greatly penalised, as the compressor has to work harder during dry operation. This combined with the higher investment cost of the hybrid condenser was not a good investment for Aviko.

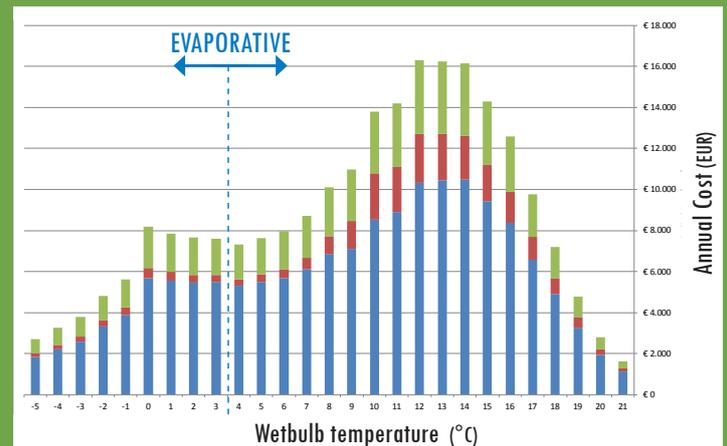
Aviko selected the **most sustainable** solution: the CXVE evaporative condenser.

## Annual operating cost

### HYBRID CONDENSER



### CXVE EVAPORATIVE CONDENSER



Compressor - Electricity

Condenser - Electricity

Water & water treatment

**14% annual operating cost savings**  
of evaporative vs hybrid

### MINIMAL WATER USAGE

As a continuous effort to minimize water usage, Aviko selected the **Baltibond hybrid coating**. This **unique BAC solution** not only offers **up to 30 % water savings**, but the coating also reduces the chemical consumption and improves the service life of the cooling equipment.

### GUARANTEED YEAR-ROUND RELIABLE OPERATION

For Aviko scheduled downtime has to be limited to an absolute minimum, as its operations run 24/7. The CXVE evaporative condenser, with its unique and patented heat transfer system (combining coil and fill), can be **inspected easily during operation** and requires very little maintenance.

- 1 Full access to the water distribution system, coil and fill during operation.**
- 2 Large inward swinging access doors, a spacious plenum and internal walkway help inspect and maintain the condenser with comfort, while standing inside.**
- 3 Independent multiple fan motors are mounted on swing out doors and offer redundancy.**

