

Large Savings on Water Treatment for Cooling Towers



A Green Solution Replaces Water Treatment based on Chemicals

For Chr. Hansen in Hørsholm, Denmark, Guldager offered an environmentally friendly water treatment solution for their cooling towers. Chr. Hansen currently apply chemicals to prevent corrosion and the formation of bacteria, however, they wish to implement a greener solution in the long term. To replace the chemical solution, Guldager introduces CatoCool.

In most production facilities, where cooling forms part of the process, there is a need for:

- Corrosion protection of cooling towers
- Protection against the formation of bacteria
- Filtration
- Recycling of drainage water

Plant Specifications:

- 4 pcs. cooling tower
- 10,000 m³ makeup water/year
- The cooling towers operate with chemical treatment
- Drainage: 2,100 m³/year

Savings, Purchasing a Complete Solution

Savings in chemicals approximately 80 %
Savings in drainage charges/ makeup water EUR 10.498.00

Payback, total: Approximately 20 months

CatoCool for Corrosion Protection

Cooling towers are made of stainless steel and other materials, so we offered the installation of CatoCool for corrosion protection.

LegioCell for Bacterial Control

To prevent the formation of bacteria in their cooling system, Guldager recommended the installation of LegioCell.

UniFilter - for bypass Filtration

To protect their cooling system and ensure efficient operation, we offered our UniFilter. Among other things, the filter collects dirt added from the air. The filtration rate of the UniFilter was determined based on the current conditions, in this case 300 µm.

With the implementation of the UniFilter, there was no need for periodic, manual cleaning of the filter. This was an essential factor for Lars Mogensen, Engineer Maintenance, at Chr. Hansen in Hørsholm.

CatoRec - Recycling of Drainage Water

Our customer had a strong wish to recycle large quantities of drainage water. We were able to satisfy their request with CatoRec.

Realised Savings with CatoRec

During a trial period of 3 months, Guldager installed CatoRec at Chr. Hansen in Hørsholm. Chr. Hansen make substantial savings (even with low charges*) by installing CatoRec. Payback is less than 2 years.

Annual Savings

Drainage charges/makeup water: Approximately EUR 10.498,00

Payback is approximately 14 months

* EUR 0,20/kW/h, EUR 7,13/m³ makeup water, incl. drainage charges

Future Solution at Chr. Hansen

Following the successful trial period, Chr. Hansen purchased CatoRec and UniFilter. Lars Mogensen focuses strongly on the benefits of installing LegioCell and CatoCool, as these systems have a positive impact on the total green accounts of the company.