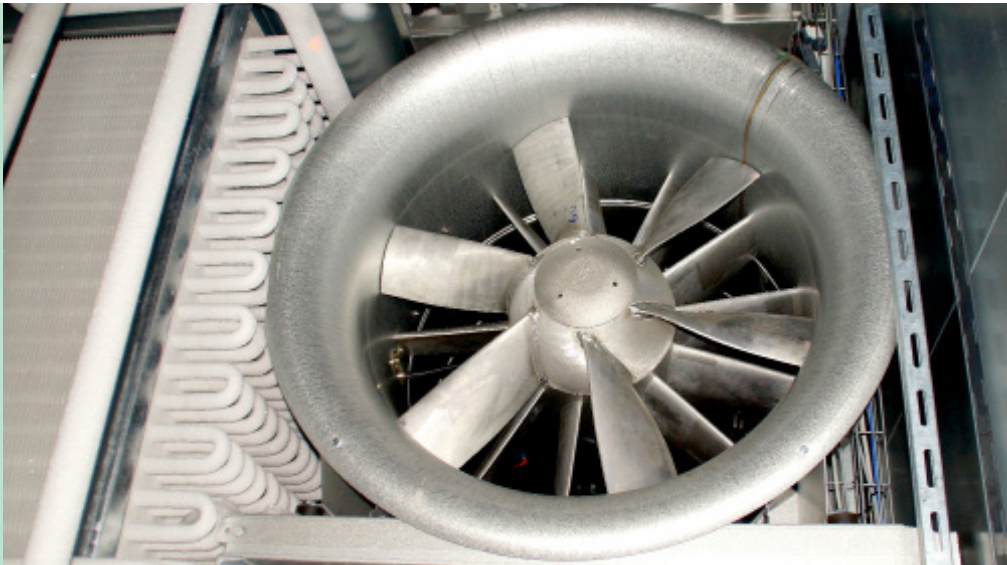


SUPER COOL FAN

ZERAX® GUARANTEES ENERGY SAVINGS AT MINUS 30 °C



ABOUT THE PROJECT

The Danish company CS Gruppen A/S handles daily logistics in the Danish food industry. Their freezer plants are located all over the country and from their most southern location in Padborg they ship 250-300 tons of food a day. That amounts to a total of 200,000 pallets per year.

Part of the business is freezing fresh meat at minus 30 °C and storing it at minus 18 °C until it is shipped out into the world in freezer trucks and containers. The company freezes up to 1,800 tons a day so naturally a large amount of energy is required to keep the plant going and to meet the customers' demands. CS Gruppen A/S is even expanding their capacity in Padborg to expedite even

greater quantities and accommodate the technological and environmental requirements of a modern freezer facility.

When reviewing the plant for energy optimisation the existing fans were included in the review. The 25-30 year old fans represented a large part of the energy consumption in the freezing tower.

THE SOLUTION

The freezing of fresh meat occurs under extreme cold conditions with high requirements for quality and reliability of equipment.

After a thorough dialogue with three different suppliers, each offering very different solutions, the decision was made

to install the ZerAx® axial flow fans at the plant. This solution had the highest acquisition value, but calculations showed that the ROI would only be 23 months. This is due to the ZerAx® fan efficiency of up to 90%. The ROI calculations are based on the plant running at full capacity (5,000 hours per year). A reduction of the operation time will prolong the ROI.



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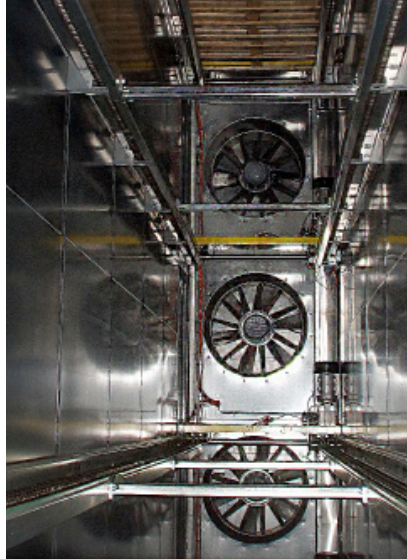
EQUIPMENT DELIVERY

The freezing tunnel is in four sections each with an air volume of 100,000 m³/h. The design is for fast freezing of meat, which is placed on gratings in layers where air circulates in the spaces between to facilitate quick freezing. The tunnel has four ZerAx® fans type AZL-900 each with an airflow capacity of 25,000 m³/h.

The ZerAx® AZL-900 has an efficiency of 90% and is delivered with highly efficient IE3 motors designed for temperatures down to -30 °C, short diffuser on the outlet and silicone thermo cable for frost protection of the fan casing.

FACTS:

- EFFICIENCY UP TO 90%
- ROI ONLY 23 MONTHS
- SAVES ABOUT 365 TONS CO₂ EACH YEAR



ZerAx® fans installed in freeze tower and operating at minus 30 °C

