



PLASTIC PACKAGING MANUFACTURER FUTURE PROVES THEIR HEATING SYSTEM REPLACING FOSSIL-FUELLED EQUIPMENT WITH HEAT PUMP TECHNOLOGIES.



THE CHALLENGE

A manufacturer of plastic packaging and containers decided to future proof their operations addressing the rising costs of fossil-fuel energy and concerns about its availability and environmental footprint. To do so, they reached out to the ICS Cool Energy team with a request to re-design the existing heating system based on high-efficiency heat pump technology.



THE SOLUTION

During the site visit, the ICS Cool Energy team inspected the four office, production and storage buildings requiring heating. They also examined the two cooling systems already in place and operating under different conditions. One based on a chiller room and dedicated to processes requiring 13/18°C temperatures to work the plastics; the second one dedicated mostly to processes dealing with oil and based on dry coolers with 25/30°C temperatures. Two completely different systems, but perfectly fitted to work with the industrial Free Heating (i-FH) system from ICS Cool Energy.

The existing fossil-fuelled system was delivering approximately 600kW of heating. To replace the old equipment and fulfil that load, the ICS Cool Energy team decided to divide the heating system into two areas corresponding with the existing cooling system. They installed two industrial Free Heating (i-FH) heat pumps – one in combination with the chiller room to deliver 366kW of heating for the space of 9000m³, and another one to deliver 254kW of heating for 4600m³ in combination with the dry-cooler.

THE RESULT

Following the installation, the customer immediately noted the difference in the cost of generating the heat by the new heat pump systems.

In the first set-up for the larger space, generating the required 366kW of heating with the i-FH unit cost over 25% less - 23EUR per hour vs 33EUR per hour – than the fossil-fuelled system. Additionally the customer was able to benefit from 223kW of cooling generated by the i-FH unit in the same time. This additional cooling capacity proved to be crucial when it was used to offset the cooling load suddenly lost when one of the other chillers suddenly broke down.

In the set up with the dry-cooler, generation of 254kW of heating with the i-FH unit cost the manufacturer over 43% less - 13EUR per hour vs. 23EUR – compared with the fossil-fuelled system.

As a result, the customer has not only future-proved their heating system but has been saving money and benefited from the additional cooling capacity that helped them in their emergency situation.

At ICS Cool Energy, we take pride in working hand in hand with our customers, listening closely to their needs and keeping their industries running. The option of hiring the latest heat pump technology gives our customers the chance to prove the energy savings that can be achieved.

Dave Palmer, General Manager



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