

Yoghurt Cooling Tunnels

Penmann Climatic Systems are the leading supplier of yoghurt cooling tunnels with over 30 years experience of providing climate solutions to the UK food industry. We offer a range of systems from static manually loaded batch units through to fully automated "in line" systems capable of handling a wide variety of bulk palletised dairy products. Depending on packaging arrangements, these systems are capable of cooling 500kg of product from 20°C entry temperature to 4°C in less than one hour! Penmann have supplied many such systems to major UK yoghurt producers including Müller Dairy, Uniq Foods and Nestle.

Full turnkey packages provide all elements of the system: tunnel construction, conveyer systems and refrigeration unit. The tunnels are designed and installed to the highest standards to ensure that a quality product is produced with efficiency and ease of operation. Our systems incorporate a number of key proven design features that ensure minimum cooling time and maximum reliability.

Our expertise in product thermodynamics and product testing provides the foundation for our system performance. We are able to conduct trials with a wide range of products using our portable test unit. Our core skills of design and contract management ensure that all projects are delivered on time and within budget allowing our customers to maximise their capital investment.



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Case Study: Müller Dairy

Müller Dairy, the UK's leading yoghurt manufacturer had a requirement to rapidly cool a whole range of palletised products to a dispatch temperature prior to moving to their cold store and contacted Penmann to provide the solution.

Initially we established the optimum cooling method by undertaking product trials. With these results we were able to design and install a fully automated "in line" cooling tunnel capable of high volume throughput. We incorporated a number of custom design features needed by Müller Dairy. The tunnels were constructed with a narrow footprint, allowing them to fit into conventional food production lines and save valuable production space. Furthermore, the design enabled maximum access for ease and speed of maintenance to minimise downtime. Key mechanical features were incorporated such as index loading of pallets. This minimised air gaps reducing cooling times to achieve maximum efficiency.

A second tunnel was soon required to support Müller Dairy's expanding output and when Müller Dairy built their new factory it was commissioned with four tunnels from Penmann giving a cooling capacity of 130 pallets per hour.

Stephen Graves, Factory Engineering Manager at Müller Dairy stated, "We are very happy with the cooling tunnels designed and supplied by Penmann. All projects have been undertaken in an extremely efficient manner and have been delivered on time and on budget and we have been particularly pleased with the performance of the tunnels".



Key Features

- System designed around the principle of static pressure cooling
- Narrow footprint to ensure minimum production floor usage
- Water carry over prevention to ensure water doesn't get onto the product
- Automatic doors with a proven life of 130,000 operations per year
- System loaded with minimal gaps between pallets to enhance cooling
- Automatic hot glycol defrost for economic running
- Reverse airflow to ensure consistent and even cooling



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