

# Ultra-Low Temperatures Applications



## Super Freezing

We can provide you with low temperature and specialist ultra-low temperature systems. Each system is designed and manufactured to suit your specific requirements and we take into consideration such things as energy consumption and the GWP of the refrigerants.

### What is super freezing?

Super freezing is a highly technical process of fast freezing to ultra-low temperatures. We can design and manufacture systems that reach the eutectic point. The eutectic point is the temperature at which all the water in the cells of the product is completely frozen. By reaching the eutectic temperature of  $-60^{\circ}\text{C}$ , all cellular activity stops thereby freezing the product at the exact condition it was frozen. Super freezing provides exceptional reliability and optimum storage conditions for long-term preservation.

We understand that ultra-low temperature control within numerous industries (medicine, pharmaceutical, fish and seafood storage) is vital to ensure validity, stability and quality. For example, using ultra low temperature applications for seafood storage ensures quality of the food, as it preserves the fish at the time of freezing. The entire process is complete between 10-20 hours of the fish being out of the water.

## Temperature Control

### Markets that we can service:

- Medical
- Pharmaceutical
- Fish and seafood storage
- Extreme temperature testing
- Laboratory and research applications

## Approach

Our philosophy is to consult with the client from the outset and work on the design to ensure that the proposal that we put forward meets the client's expectations exactly. This approach not only ensures that our design matches the customer requirements, it also ensures that there is no unnecessary expense.

Ultra-low temperature systems can be very expensive to buy and to operate, and the lower the temperature they are designed to achieve, the more expensive they become. By targeting the desired room temperature, we can reduce both the capital cost and the running cost for the life time of the system.

## Excellence in Engineering...

- Highly skilled engineers
- Premium service
- Bespoke design
- Consultancy

## Benefits of superfreezing...

Eutectic temperature as low as **-60 °C**

Reliability & optimum storage conditions

Long-term preservation



For further information contact our team on:  
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