



**Innovative technology sets  
new quality standards**

**Ultra Low Temperature (ULT)  
-60° C / -76° F**

**When Freezing is a lot more...**

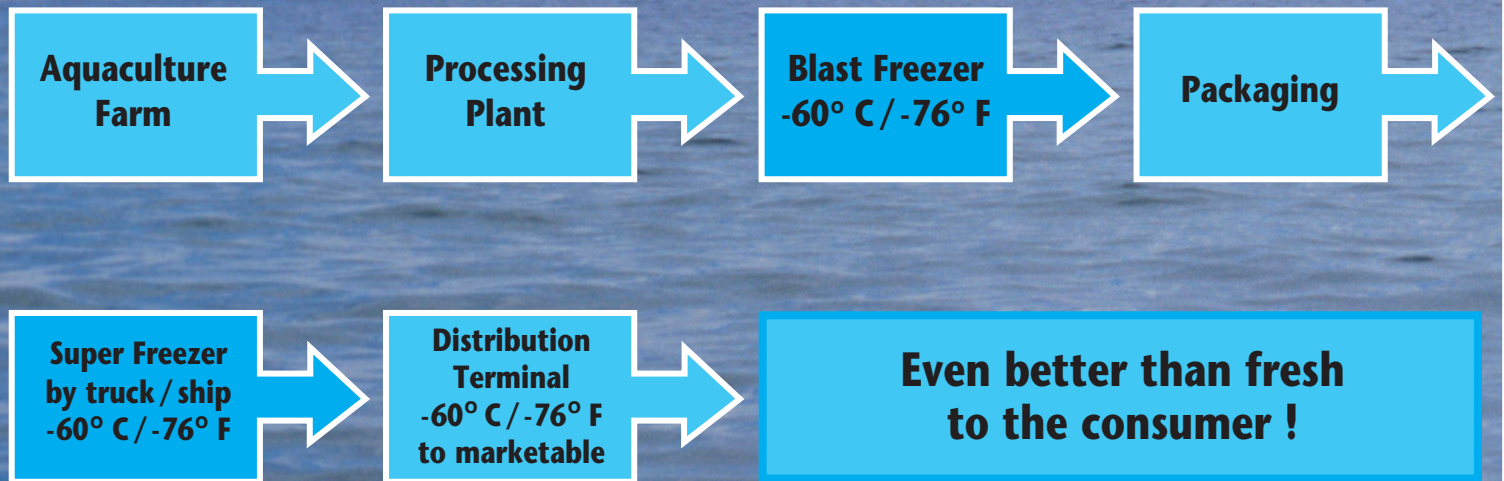
**Harvest the benefits together  
with Wing Consult!**

**A complete ULT Supply Chain for the Aquaculture Sector**





# The Aquaculture Supply Chain







## Getting quality seafood to the key markets

- Frozen but fresh - and at superior sashimi grade quality
- Wherever a container can get
- With full documentation and traceability
- At very competitive overall costs
- On schedule
- Stored and released into the market according to demand and prices
- With stable supply and stability in market pricing
- Using an intelligent and efficient supply chain
- Tailored to customer requirements

*A complete solution together with the aquaculture experts from Wing Consult.*



# Tests and results of the Ultra Low Temperature supply chain



The Ultra Low Temperature supply chain has been tested by certified surveyors, accredited laboratories and specialist sensory test panels in co-operation with major aquaculture producers in Norway, Greece, Germany and Denmark.

These tests have included Salmon, Large Trout, Small Trout, Sea Bream, Sea Bass, Turbot and Japanese Flounder. For salmon, sensory tests were performed also with raw fish intended for the sushi/sashimi grade purposes.

Fresh icepacked fish with 3 to 4 days from time of harvest and processing were compared with fish, which were frozen to  $-60^{\circ}\text{C}$  /  $-76^{\circ}\text{F}$  immediately after harvesting and processing and stored/transported at  $-60^{\circ}\text{C}$  /  $-76^{\circ}\text{F}$  for up to 78 days - without glazing.





The results have proven that ULT handled aquaculture products meet the strict requirements for high quality seafood - including those for sashimi grade seafood.

An independant cost/benefit analysis comparing the total cost of airfreight versus ULT seafreight from Europe and South America to the key markets in the Far East and USA shows that the overall cost is much less for the ULT concept - including the costs of freezing.

It should be added that a seafreight supply chain solution has a CO<sub>2</sub> emission 20 - 25 times less than an airfreight supply chain.

The Maersk Line ULT & Wing Consult supply chain supports the consumer requirements for sustainability and traceability from sea to table, as all stages of the handling process are logged and documented.

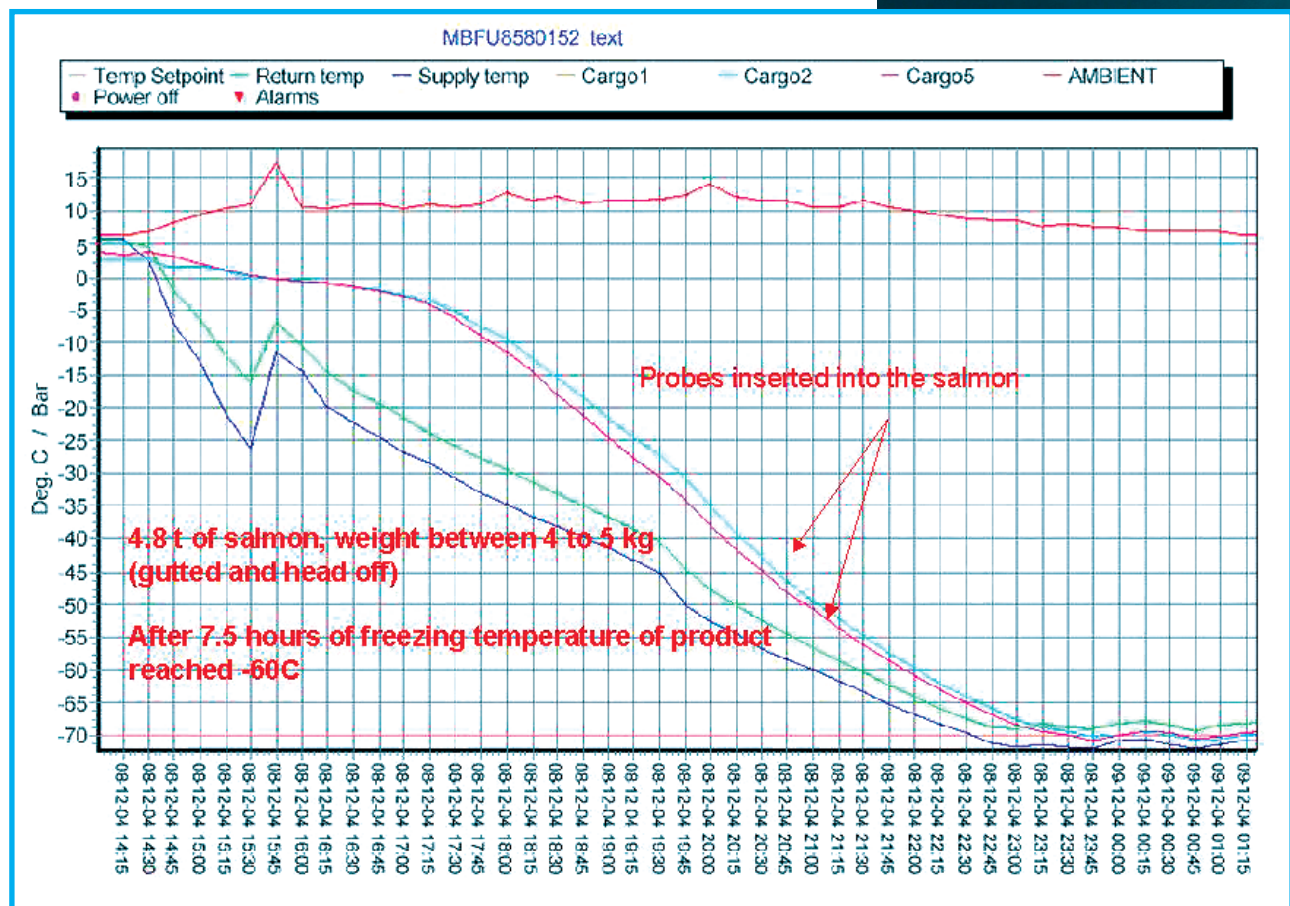


# A flexible lease solution



In order to facilitate the full ULT supply chain, Maersk Line supplies the aquaculture producer and the customers with a flexible lease solution.

A 40' ISO standard ULT Blast Freezer that can freeze approx. 9 mt of 5 kg fish to a temperature of  $-60^{\circ}\text{C}$  /  $-76^{\circ}\text{F}$  in 6 to 10 hours, depending of ambient temperatures.







This gentle freezing process ensures that the texture of the flesh is not harmed while still keeping a premium quality level.

The ULT freezing also eliminates the need for a glazing process, as rancidness etc. is not developing at ultra low temperatures.

With the Blast Freezer unit comes a tailor made trolley and shelf system, which will make the freezing step fit into existing processing flows.

In lack of a sufficient power supply at the processing site, a power unit in a 20' ISO standard container will be supplied with the Blast Freezer.

After packaging the fish is stored in a Maersk Line 40' ISO standard Super Freezer, which keeps a temperature of  $-60^{\circ}\text{C}$  /  $-76^{\circ}\text{F}$  during transport to and storage at the place of destination, if local ULT storage facilities are not available. Each Super Freezer holds approx. 20 mt of packaged fish.



# Cold facts - the benefits in brief

## The Blast Freezer

- A flexible and mobile solution which enables you to freeze products wherever and whenever
- A cost-effective solution which avoids expensive investment in a permanent freezing plant
- A self-sustained solution when combined with a Maersk Line power generator and fuel tank (all built to ISO standards)
- An environmentally-friendly solution
- A gentle, but still fast, freezing of your seafood products

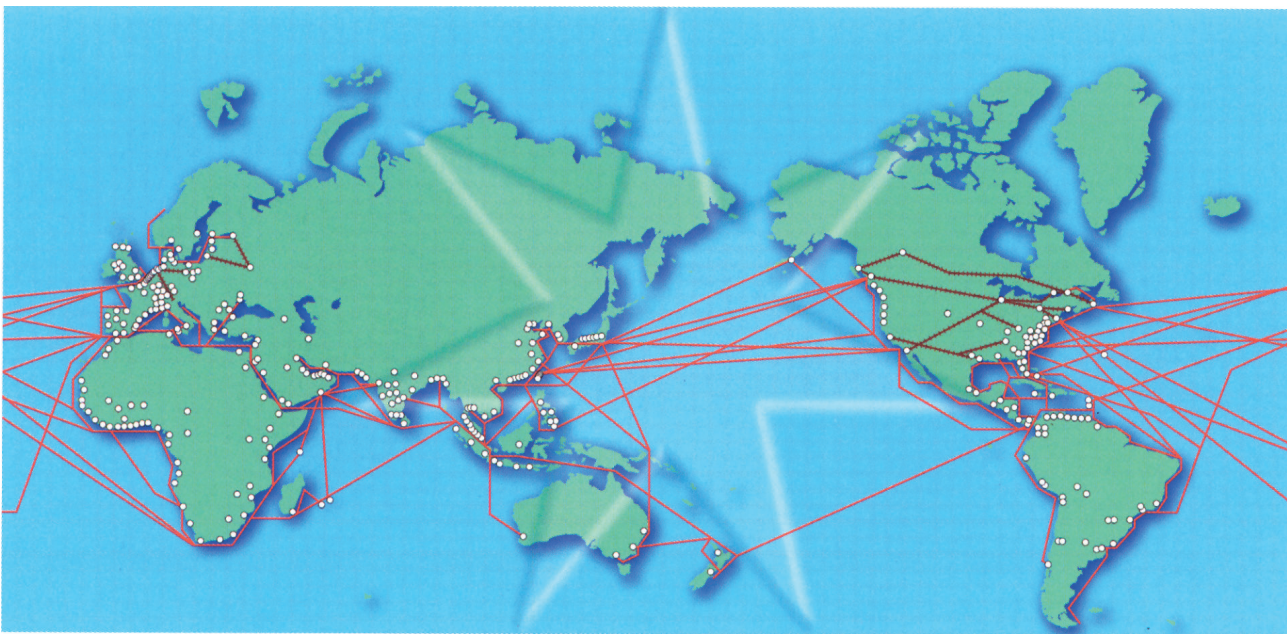
## The Super Freezer

- A 40' long x 9'6" high container capable of maintaining a temperature between -10° C / -14° F and -60° C / -76° F throughout the entire transportation
- Fast delivery as the products can be shipped in smaller quantities, yielding a higher market price
- A global market opportunity through the Maersk Line service network
- Reduced cold storage costs

## Together

- A flexible, portable freezing and transport system that will suit the migration
- An affordable solution that will enable you to better meet the needs of your market
- An unbroken cold chain to the final place of delivery
- A limited re-handling of the product during the entire transportation
- Full traceability and documentation of the ULT supply chain

With Maersk Line, you have a unique and complete solution for freezing and shipping at ultra low temperatures. All of which will probably leave your competition out in the cold.



### Improve your sales of high quality seafood

Together with the independent aquaculture and ULT Supply Chain experts from Wing Consult your sales and logistics will become state-of-the-art and prepare for the future requirements to quality seafood and sustainability. The aquaculture experts from Wing Consult have been active within the global aquaculture sector since the 1980ies.



## WING CONSULT

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