

CASE STUDY: Lunar Freezing

PROJECT: High Capacity Blast Freezing

STAR INCREASES LUNAR FREEZING CAPACITY

Location:	Peterhead & Fraserburgh
Equipment:	<p>Peterhead: 3 x new and 2 x remodelled Blast Freezers, New: Screw Compressor Pack, Condensers, Controls and Ammonia Pumps.</p> <p>Fraserburgh: 4 x new Blast Freezers, New: Screw Compressor Pack, Controls and Sea Water Chilling.</p>
Refrigerant:	NH₃ Central Plant

Lunar Freezing and Star Refrigeration have worked together for over 25 years to develop effective and efficient Blast Freezing and Cold Storage solutions.

Based in the fishing ports of Peterhead, Fraserburgh and Aberdeen, Lunar Freezing and Lunar Fishing are in a commanding position to supply herring, mackerel and whitefish products from catching to freezing to cold storage to final delivery worldwide.

The Lunar facilities at Peterhead and Fraserburgh mainly process the pelagic fish species Herring, Mackerel and Blue Whiting. Pelagic fish live in the pelagic zone of the ocean being neither close to the bottom nor near the shore. The fishing is seasonal

due to the fish migratory movements and the fishery management catching season and quotas.



A world leader in cooling and heating system innovation, Star worked with the Lunar team to design high performance blast freezing solutions for both facilities.

Star engineered and modified the existing pumped circulation ammonia systems for Lunar installing 3 new and 2 remodelled Blast Freezers at Peterhead and 4 new Blast Freezers at Fraserburgh for freezing fish packed in cardboard boxes.

Operational since Autumn 2015, the new freezers have expanded the capacity enabling Lunar to freeze over 1,000 tonnes of fish per day.

Each blast chamber freezes around 64 tonnes of fish in 20 hours, the evaporators and refrigeration plants to achieve this are by necessity very large and must be carefully designed and installed.



to process the catch quicker and expand our business by supplying new customers”

Star’s system ensures optimum plant performance, with PLC control and HMI touch screen interface with a range of built-in systems including pressure, temperature and gas detection monitoring.



The Star blasts outperform existing blast freezers installed by others in Fraserburgh and the Star blasts have only 35% of the installed fan power of the competitor.

Lunar Director Sinclair Banks said “These were challenging projects both carried out in the same short timeframe and both involved working on existing equipment.

Star, Lunar and all the other contractors involved worked alongside each other to complete the work in time for the mackerel freezing season. The new freezers have shortened the freezing time allowing us

When it comes to designing and installing energy efficient cooling and heating systems, Star is a natural innovator.

For more information, phone Star Refrigeration on 0141 638 7916, email star@star-ref.co.uk or visit www.star-ref.co.uk.

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