

CASE STUDY: Snozone Milton Keynes

PROJECT: Coolers and Controls Upgrade

IT WAS ALL IN A SLEIGH'S WORK FOR STAR REFRIGERATION DURING OUR RECENT AMBITIOUS SKI SLOPE COOLER REPLACEMENT PROJECT

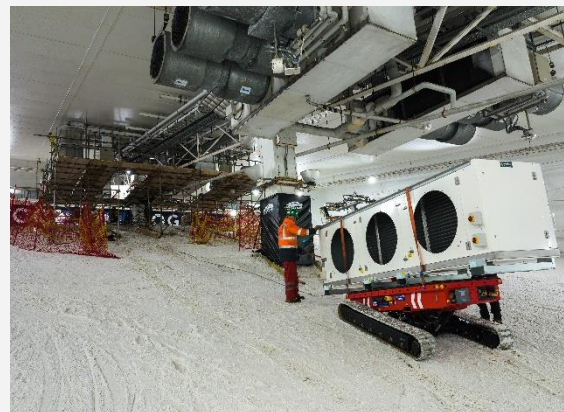
Snozone Milton Keynes is the largest indoor winter sports centre in Europe, with its 170m-long ski slope encompassing 1500 tonnes of real snow the first of its kind in the UK. A keystone attraction within the Xscape sports and entertainment complex, Snozone has welcomed over two million visitors from across the Midlands and South East since opening its doors to the public in 2000.

Installed in 2000, the site's existing coolers were approaching the end of their useful life and becoming less reliable. As the cooling capacity of the system deteriorated, rising operating costs reflected an increased energy demand and there was a growing burden on site personnel to carry out manual intervention.

Originally positioned by crane during the building's construction, replacing the coolers on a now-operational ski slope presented complex new challenges associated with working on a 25° snowy

incline while ensuring Snozone's facilities remained operational and public access to the slope remained unrestricted.

As the preferred contractor for the snow and ice leisure sector, Star Refrigeration has designed over 80% of the UK's snow sports and ski centres in recent decades. Star Refrigeration and Snozone partnered to replace the site's original R404A chillers with our highly efficient Azanechiller ammonia chillers, with a programme of proactive refrigeration plant upgrades ongoing over the last five years. With our knowledge and understanding of the customer's needs and a proven record of success over the previous five years, Star Refrigeration was the clear choice to deliver a cost-effective and environmentally friendly solution.



Based on the existing cooling system layout, our proposed design newly incorporated Star Refrigeration's innovative controls system as well as the latest developments in industrial technology.

Star Refrigeration acted as both principal designer and contractor throughout the project's design and construction phases to ensure compliance with all

KEY FIGURES

- 📍 First phase of four-year upgrades
- ⚡ Saving 23,783 kWh per year
- 🌍 Saving 7.5 tonnes CO₂ per year

requirements of the CDM (2015) Regulations, involving management of multiple subcontractors and controlling health and safety risks on a high footfall site open to members of the public.

Alongside our specialist partners, Star Refrigeration worked through the night to ensure Snozone's customers continued to enjoy unrestricted access to the slope. Overcoming the challenge of transporting two 1.29 tonne coolers up a steep incline necessitated a specialist lifting solution. We sourced a specialised tracked leveller, capable of equalising its load deck across both tracks, to manoeuvre each cooler up the ski slope.



Working with our structural engineering partner we ensured that the weight of the steelwork and construction equipment did not compromise the integrity of the glycol pipework directly underneath the snow cover, erecting specialist steelwork to support the sub frame housing and ensure the load remained balanced during removal of the existing coolers.

The newly installed equipment brings Snozone's refrigeration system in line with the latest advances

in industrial technology, with improved connectivity and automation significantly reducing the man hours required to operate the plant. The new system incorporates additional safety controls, offering improved protection of the refrigeration plant with links into the wider building safety mechanisms.



Operating temperatures on the slope have already seen a consistent improvement. The enhanced efficiency of the cooling equipment will greatly reduce Snozone's energy consumption by approximately 23,783 kWh per year and is set to cut CO2 emissions by approximately 7.35 tonnes per year. These improvements all contribute towards Snozone meeting its carbon reduction targets through investing in more sustainable technology.

The cooler replacement project concludes the first phase of an ambitious four-year programme to upgrade cooling equipment and operator controls across the whole site, futureproofing and enhancing the Snozone experience for the next generation of skiers and snowboarders.

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