

STAR ENSURES COOL CUSTOMERS AT JOHN LEWIS STORE

Star Refrigeration has installed a high efficiency cooling system at the flagship John Lewis department store in central London.

The state-of-the-art **Indigochiller** system forms part of an ongoing refurbishment by the leading UK retailer at its Oxford Street store. Project Beacon aims to future proof the 50-year-old building and provide a platform for further development by the John Lewis Partnership.

Cooling solutions specialist Star has completed the installation of three **Indigochillers** on the sixth floor roof, each with a 1,000kW capacity. The air-cooled units circulate chilled water for air conditioning, providing comfort cooling throughout the building.

The John Lewis Partnership was looking to improve the in-store environment for shoppers and staff by installing a larger capacity, high efficiency cooling system. It was vital that the comfort cooling system allowed year-round temperature control, particularly during summer months. As well as an environmentally conscious design, low starting current, quiet operation and minimal maintenance were key requirements.

John Lewis Partnership Development Engineer

Stuart Watson says: “Star’s new roof-mounted **Indigochillers** are more efficient and will allow us to increase cooling capacity with no increase in electrical demand. They form part of a heating and cooling efficiency drive that will allow John Lewis to meet energy reduction targets and reduce its carbon footprint.”



Three of Star’s **Indigochillers** on the sixth floor roof of the John Lewis department store in Oxford Street, London

Star’s **Indigochiller** was developed in direct response to proposed F-gas regulations, which aim to limit fluorinated gas emissions. The unit’s unique design aims to eliminate refrigerant leakage and have minimal effect on the global environment. Star’s research shows the **Indigochiller** uses only 60% of the energy required by a standard chiller operating on typical load and ambient profiles. This offers end users a significant saving in energy and running costs.

As well as Star’s new cooling system, additional work on infrastructure at the John Lewis Oxford

Street store includes the installation of more efficient boilers, cabling and an electricity substation. Project Beacon also includes new retail departments, restaurant facilities and escalator banks to improve access and open up the building.

Work on the overall 18-month refurbishment project is due to be completed in Autumn 2007, with trading continuing throughout. It is currently the largest retail project within an operating store in Europe.

Star's **Indigochiller** is a complete refrigeration package housed in one unit. Typical applications include new and retrofit air conditioning systems in the building services and process cooling industries. Ideal for medium to large-scale applications, unit capacities range from 250kW up to 1,500kW.

Each **Indigochiller** features the revolutionary oil-free Turbocor centrifugal compressor, designed to offer reliable operation and low maintenance. The compressor operates on electromagnetic bearings and uses the synthetic refrigerant R134a. This ensures minimal vibration and noise, even when running at very high speed. The air-cooled unit is available in two noise ranges: Standard and Residential.

All **Indigochiller** components are selected to minimise the risk of refrigerant leakage. Each unit features a welded plate and shell heat exchanger, sealed expansion valve and welded steel pipework. Leak detection requirements have been reduced to a few simple checks.

The **Indigochiller** features a robust PLC control system to monitor running conditions and optimise efficiency. Additional options include remote access and email alerts via a built-in modem, as well as a direct link to Star's 24/7 call out facility.

Star Refrigeration is the UK's largest independent industrial refrigeration engineering company. Star focuses on the design, manufacture, installation, commissioning and maintenance of industrial refrigeration systems. The company offers a turnkey package to all users of refrigeration plant.

Star's technical advisory arm, Star Technical Solutions (STS), operates as an independent consultancy providing advice on refrigeration engineering issues. Star also owns food freezing and chilling equipment specialist Starfrost, as well as mechanical and electrical contractors Penec.

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