



PROJECT HIGHLIGHTS

»» used oil-free Danfoss Turbocor compressor

»» replaced outdated R-22 screw chiller

»» resulted in high efficiency and performance with 40% energy savings

Danfoss Turbocor Compressors moves to the **HEAD OF THE CLASS**

Historic university updates facilities and finds significant improvements to operations and performance

STUDENTS USING THE LIBRARY at the University of Strathclyde in Glasgow are keeping their cool thanks to an air conditioning system from Star Refrigeration.

The University of Strathclyde was looking to replace an aging refrigeration plant in the Curran Building. The six-story facility is home to the Andersonian Library, which houses university archives and main collections including books, journals and electronic resources.

Star had previously supplied an Indigochiller refrigeration plant for cooling in another building on the Glasgow campus. The university was impressed with the build quality and performance of Star's Indigochiller, which is designed for reliable and highly energy-efficient operation.

The university's library had an existing air-conditioning plant operating on R22, a refrigerant currently being phased out due to its ozone depletion potential. Engineered to have minimal effect on the global environment, Star's Indigochiller has a robust design that aims to eliminate refrigerant leakage and offer over 20 years of reliable service. »

Star designed, manufactured and installed two Indigo chillers on the roof of the Curran Building, each with a 750kW cooling capacity. The chillers cool water from 12°C to 6°C, which is then pumped to air handling units throughout the six-story building for comfort cooling. The building also houses training facilities for the University of Strathclyde's National Centre for Prosthetics and Orthotics.

Andy McWatt from the University of Strathclyde's Estates Management department says: "In recent years the failure of standard package chillers from other manufacturers had proved both disruptive and expensive for the university. We found Star's Indigo chiller coupled with the Danfoss Turbocor centrifugal compressors had the operating energy-efficiency and build quality we were looking for."

Star Refrigeration's Sales and Marketing Director Rob Lamb adds: "Indigo-chiller stands out from the rest of the market thanks to a range of unique design features and leak-tight components. Indigo chillers come with a "leak guarantee as standard". It is manufactured to ensure maximum energy-efficiency, long-term reliability and low life-cycle costs. These were key considerations for the University of Strathclyde when selecting a chiller."

The low charge, high performance Indigo chiller features the revolutionary Danfoss Turbocor centrifugal compressor, which is low maintenance by design to ensure lifelong trouble-free operation. The oil-free compressor rotates on electromagnetic bearings and uses synthetic refrigerant R134a. The system offers reliable performance and requires minimal installation, servicing and maintenance.

With growing demand to cut refrigerant leakage to meet f-gas regulations, Star teamed with Danfoss Turbocor to develop its Indigo chiller for medium to large scale air-conditioning and process cooling plants. Highly energy-efficient, this combination consumes only 60% of the energy required by a standard screw-compressor chiller operating on typical load and ambient profiles. The benefits to end-users are significant savings in both energy and operating costs. ■



40%

Energy savings on typical load compared to screw-compressor chiller

"...Star's Indigo chiller coupled with the Danfoss Turbocor centrifugal compressors had the operating energy-efficiency and build quality we were looking for."

- Andrew McWatt, Maintenance Planning Coordinator for the University of Strathclyde's



A crane lifts one of Star's Indigo chillers into position on the roof of the Curran Building of the University of Strathclyde.