



Design
The advanced indemnified design and application of the latest refrigeration technologies were the driving force behind the £300,000 contract being awarded to ACE Refrigeration; for the design, supply and installation of a series of temperature controlled laboratory rooms at The Queen Elizabeth University Hospital Glasgow, formerly the site of the Southern General Hospital.

Expertise
Few companies in the UK have the specialist knowledge, experience and ability required to successfully complete this job. Having previously built a similar facility for the Scottish Blood Transfusion Service and successfully maintained it since 2002, we knew what was necessary.

Standards
With exacting standards to be met, the rooms; 1 x -40°C room, 10 x +4°C Rooms, 3 x -20°C rooms and 2 x +37°C, were all supplied, installed, calibrated and commissioned according to NHS Blood storage standards.

Energy Efficient Design
Energy efficiency was central to all elements of the project. The rooms were also connected to central scroll pack systems to reduce energy consumption.

Back up Systems
The packs were supplied with back up compressors to provide stand-by in the event of failure, helping ensuring peace of mind for the client that the delicate blood products stored there would be maintained at the exact temperatures required.

Control
Compressor control was through a pack controller using fuzzy control logic, coupled with a floating condensing temperature strategy activated through proportionally controlled condenser fan motors. All rooms also utilised electronic expansion valves for maximum efficiency in all conditions.

Temperature Monitoring System
All controls were networked via an IP control system to a central temperature monitoring system. This management system ensures that all aspects of the project are monitored on a continual basis

Costs
All of the energy efficient design applications utilised were cost neutral compared to a standard refrigeration application design, so the benefits garnered from the energy saving didn't add to the customer's costs.

Patient Care
Patients at the new hospital will be fed from the all new cook freeze production facilities recently built by ACE at the Royal Alexandra Hospital and Inverclyde Royal Hospital.

Working in partnership with the NHS
Established in 1951, ACE Refrigeration has a proud history of working with the NHS throughout Scotland on a variety of project installations as well as providing crucial service and maintenance for air conditioning and refrigeration. Projects include:

- Design and Build Cook Freeze Facilities for Inverclyde Royal Hospital and Royal Alexandra Hospital plus post installation service and maintenance contracts
- Design and Build refrigeration package for new catering facility at Stracathro Hospital
- Design and Build cold rooms at Vale of Leven, Gartnavel and Yorkhill Hospitals
- NHS Scotland Framework for service and maintenance of all clinical and non-clinical refrigeration - 2014-2017
- NHS Ayrshire and Arran 3-year Service and Maintenance Contract for all Refrigeration requirements 2015-2018

