

DuPont™ ISCEON® REFRIGERANTS

CASE STUDY- HOSPITAL

Energy conscious Hospital achieves savings with DuPont™ ISCEON® MO59

The Royal Gwent Hospital is one of the three main hospitals, which forms part of the Gwent Healthcare NHS Trust. This District General Hospital, with more than 3,400 staff and approximately 774 beds, provides a comprehensive range of hospital services for inpatients, day cases and outpatients.



With over sixty-seven systems operating on R-22 throughout the hospital, a service gas was required that would:

- meet current needs
- eliminate the use of the HCFC interim R-22
- provide quick, easy and cost effective retrofits
- extend the potential lifetime of the equipment
- generate energy savings

System Description

The systems running on R-22 range from split and packaged air conditioning units to coldrooms. Of these systems, two units were selected for trials.

Each system was run without any modification and the power consumption monitored. **ISCEON® MO59** was then charged to the system and monitoring continued to collect full comparative data.

Designed as a direct replacement for R22, ISCEON® MO59, is a non ozone depleting refrigerant. Compatible with mineral and polyolester oils, no engineering changes are needed on conversion.

Conversion to ISCEON® MO59

Initially a Fujitsu, twin condensing fan cassette unit was converted in the Hospital Pharmacy and a modular assembly cold room & Aspera hermetic condensing unit in the Mortuary.

The conversion from R22 to ISCEON® MO59 was straightforward and simple. ISCEON® MO59 proved to be a suitable substitute for R22 with both systems operating effectively on conversion.

Evaluation of Data

The data obtained showed that ISCEON® MO59 was capable of maintaining the desired temperature. In addition, the operating conditions achieved after conversion to ISCEON® MO59 indicated that when compared to R22, between 2 & 10% less power was consumed.

Conclusions

In February 2004 working to a tight timetable, other units from a range of different manufacturers, located throughout the hospital site, have since been converted by a local contractor.

The potential energy savings on all the units identified is estimated to be in the region of **£3,000.00** in addition to a reduction in the Climate Change Levy. In addition ozone depleting refrigerants have been removed from site.

Note; This case study has been updated to reflect the new names now in use.