

Universities face R22 meltdown

"MANY UNIVERSITIES are highly dependent on ageing, inefficient chillers," says Ken Strong, managing director of Cool-Therm. "Implementing the new CRC requirements is going to be a huge task, coming on top of the phase-out of virgin R22 at the end of this year – since many are acutely exposed."

It is a critical issue for them because of the scale and importance of cooling on modern campuses. High-tech R&D facilities often require industrial scale refrigeration, while air conditioning is essential for teaching, administration and leisure facilities.

"Universities are essentially mini high-tech cities," says Roberto Mallozzi, managing director of Klima-Therm. "They depend on refrigeration and air conditioning to function."

"Many of the institutions that sprang up in the '70s and '80s still have large numbers of highly inefficient chillers, often based on R22. With the crunch coming on new R22, and pressure to improve efficiency under CRC laws, it is going to pose real problems for

them. At the same time, of course, it obviously presents a major opportunity to improve efficiency, and cut running costs and carbon emissions."

The two were speaking during the annual meeting of university building engineers, held at Bath University. The theme of the conference was the new statutory requirement to cut carbon emissions from university estates – and the best means of achieving this.

A survey by the Carbon Trust found some 70% of major users still relied on plant running on R22 refrigerant. Some of Britain's best-known institutions, with worldwide reputations for cutting edge research, have yet to tackle the problem.

Cool-Therm and Klima-Therm recommend that universities prioritise opportunities for carbon reduction, and allocate capital accordingly.

For example, replacing an ageing chiller with a modern plant based on the latest turbine compressors with magnetic bearing technology can save between 30% and 50% of energy costs and car-

bon emissions.

These savings have been proven in a growing number of installations across the UK which use the new ultra-efficient Turbomiser chiller, manufactured by Italian company Geoclima and distributed in the UK by Cool-Therm and Klima-Therm.

The chiller uses a combination of Turbocor compressors, inverter controls, micro-channel heat exchangers and liquid pump amplification (LPA) technology to deliver unprecedented efficiency.

The Turbomiser II is the fruit of a two-year development programme by the manufacturer and its UK distributors. It is able to achieve EERs of 10 and above without the need for additional free-cooling circuits with expensive glycol.

A first generation version of the chiller recently installed at The Dorchester in London is saving the hotel £10,000 a month in energy costs.

The performance claims have been independently verified by consultant Mike Creamer of Business Edge, using the



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ClimaCheck plant performance analyser at the Geoclima's test facility in Italy.

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