



Alfa Laval sees a 44% reduction in energy use with Replace technology

Alfa Laval's UK headquarters was built in the mid-1990's, in Camberley, Surrey. Its 12-year-old R22 air conditioning, whilst still performing well, was nearing the end of its useful operating life.

As a leading global producer of specialised products and solutions used to heat, cool, separate and transport a variety of products, such as oil, water, chemicals, pharmaceuticals and foodstuffs, it knew a thing or two about heat transfer.



LIVING ENVIRONMENTAL SYSTEMS

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Alfa Laval
Surrey, July 2012



Five YHM R2 replace technology systems have replaced the 12-year-old R22 YMF-B heat recovery units with ducted fan coils.

The ability to reuse the existing pipework was a key factor in winning the contract.

The forward-thinking company was aware of EU Ozone Regulations and the imminent phase out of the R22 refrigerant and was eager to replace its heat-recovery VRF systems with ducted fan coils, in an efficient and cost-effective manner.

The offices are used 5-days-a-week so Alfa Laval needed to ensure that any disruption was kept to an absolute minimum. Also key to the installation of new equipment was the ability to reuse as much of the existing pipework, wiring and power supplies as possible.

“The ability to reuse the existing piping was the winning factor in securing the contract, along with our technical expertise and ability to work with the client to minimise any disturbance during replacement works,” explained Mark Walters of Independent Heating & Cooling.

The old equipment included both Mitsubishi Electric, and other manufacturers' products, but due to the flexibility of the Replace technology, Walters and his team were still able to reuse much of the pipework and electrical wiring. The team also agreed to carry out the replacement over several months which again helped to ensure minimum disruption in the day-to-day running of Alfa Laval's HQ.

Five new City Multi YHM-R2 Replace technology systems now provide simultaneous heating and cooling over the top two floors of the building.



Air Conditioning

Case Study

Alfa Laval
Surrey, July 2012

Making a
World of
Difference



Alfa Laval is a leading global producer of specialised products and solutions used to heat, cool, separate and transport a variety of products.

Installation Summary

Installation date: April 2011

Monitored dates: April 2011- March 2012

Installer: Independent Heating & Cooling

Reduction in energy use: 44%

Increase in SCOP: from 3.32 to 4.86

Increase in SEER: from 2.65 to 6.0

The offices are occupied between 8am and 6pm each week and due to the amount of individual meeting rooms on site, there is a diverse requirement for heating and cooling within the building.

The air conditioning is controlled with PAR-27MEA controllers linked to a time clock, overseen by three central GB50 controllers. This allows improved central control and more intelligent scheduling to give the company greater control over energy use throughout the week.

“One of the key benefits we noticed was how little disruption there was to our business whilst the work was carried out,” said Marc Dewit, Finance Director of Alfa Laval. “Our staff have noticed higher levels of overall comfort, too. We’re delighted with the new system and using the R22 Replace technology has certainly helped to keep the costs of replacement right down.”

Mitsubishi Electric monitored the Replace system from April 2011 to March 2012 using M2M technology. This showed an improvement in Seasonal Coefficient of Performance (SCOP) from 3.32 to 4.86 over the old system and a major jump in Seasonal Energy Efficiency Ratio (SEER) from 2.65 to 6.00.

Overall, Alfa Laval has seen a 44% reduction in annual energy use and this equates to a reduction in estimated annual running costs of around £4,200, and also helps to reduce the company’s emissions by over 17 tonnes of CO₂ per annum.



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