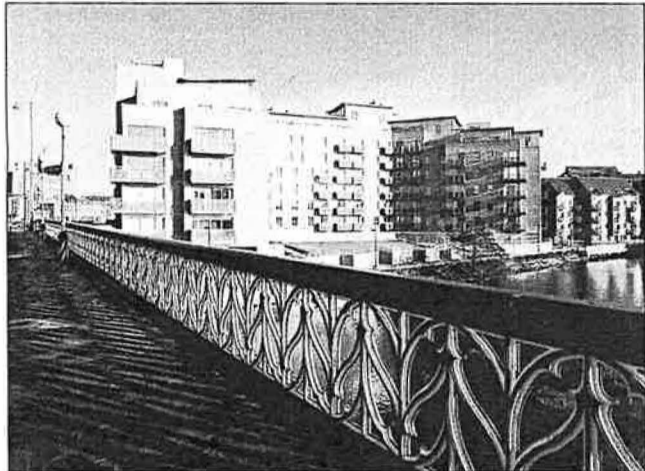


# DESIGN FOCUS

## Balanced ventilation provides quiet life in urban apartments



Peace and tranquillity in this residential development near a busy road in Leeds is achieved using Baxi heat-recovery ventilation units in each of 127 apartments.

Faced with traffic noise levels of up to 85 dB(A) outside a development of 127 executive apartments on the Leeds inner ring road, Baxi heat-recovery ventilation was chosen to provide a warm, well ventilated and peaceful environment. Apartments from single-bed units to 3-bedroom penthouses are priced at around £250 000.

Stuart Thornley of

Thornley & Lumb Partnership, which prepared the performance specification and co-ordinated M&E services, says, 'The apartment block stands very close to a 4-lane highway and bridge intersection, which is busy all day and carries a very considerable volume of traffic during the morning and evening rush hours. Both architect and developer wanted to achieve

NR35 inside the apartments to ensure acoustic privacy.'

High-efficiency glazing seals the building to prevent noise break-in, and Baxi heat-recovery ventilation units offer a practical solution to providing fresh air, while recovering a high proportion of energy that would otherwise be wasted. Their use was seen as much more practical than a central system with long runs of suitably attenuated ductwork.

The ventilation units are set to run all the time. In the Winter, they introduce fresh air at around 12°C.

Each apartment at Crown Point has a WH 320 HRV unit discreetly located in a cupboard, which it shares with the tank for the boosted water supply. Fresh air is drawn into the side of the building and into the unit via 2 m of flexible acoustic ducting. Tempered air is discharged into the lounge and bedroom areas. Air is extracted from bathrooms and kitchens through ductwork leading back to the Baxi unit.

A plastic heat exchanger recovers up to 70% of the heat in the outgoing air. **Reader Reply No. 129**

## Finding the answer in BSEE

A short item about Chalmor's Endurance Lighting system in last November's BSEE provided C. J. Wild Bird Foods with the solution it needed in the rebuilding of its storage warehouse following a devastating fire.

The company was attracted by 60 000 h of virtually maintenance-free lighting promised by the Endurance system. Other benefits include low energy use, controllability and instant starting.

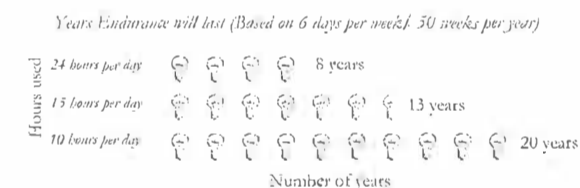
33 Endurance fittings were installed in the new warehouse, with an Autolux Universal lighting controls system as a master control to manage all external and internal lighting.

The new offices have lighting controls that detect occupancy and daylight levels.

A further 21 Endurance fittings have been installed in another warehouse, also with an Autolux control system.

Electrical engineer Neil Davis says, 'We are very happy with the results. We were attracted to Endurance because not only can it save maintenance and electricity costs but, as it is controllable, it can be fitted to the Autolux to save us even more.'

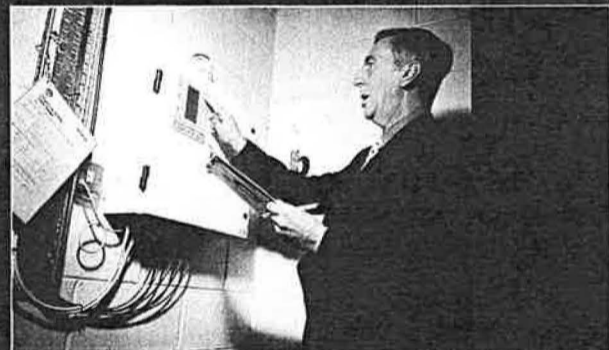
Lighting controls, including the Autolux Universal, will help achieve savings of £3000 a year, with a payback of just over a year. Endurance is helping save over £9500 in maintenance



The life of Chalmor's Endurance lighting system depends on its usage. This chart is based on six days a week for 50 weeks a year.

and electricity costs, with a predicted simple payback period of 19 months. **Reader Reply No. 130**

## Guarding against refrigerant leaks



People working in and around the plantroom of 155 Bishopsgate, a 15-storey mixed-use office premises in central London, are protected from the risk of refrigerant leaks following the installation of Parasense refrigerant leak-detection equipment. The installation followed an assessment of health-and-safety risk carried out on behalf of Broadgate Estates.

The fixed installation could also help reduce refrigerant use. Colin Knight, senior engineering manager at Broadgate Estates, says, 'Not only did we need monitoring equipment that would ensure first-class performance and peace of mind, but we also wanted a system that would be easy to use and understand and enable IGS, the on-site engineering team, to carry out regular checks.' **Reader Reply No. 131**

## Absorption chillers cool London's new exhibition centre

Two York absorption chillers capable of using waste heat from generators and boilers during the Summer serve the air-conditioning requirements of the 102 000 m<sup>2</sup> ExCel exhibition centre in London's Docklands. Located in a purpose-built energy centre a mile from the exhibition halls, they are

supported by YK centrifugal chillers with heat rejection by three low-sound cooling towers. The entire energy, heating and cooling requirements of the site are serviced by Scottish & Southern Energy (SSE).

The YIA single-effect absorption chillers have a capacity of 2.5 MW and operate on MTHW at 120°C. They use water as refrigerant, and this, coupled with a low demand for electricity, provides an energy-efficient and environmentally friendly air-conditioning solution.

The YK centrifugal chiller has a capacity of 3.9 MW and an 11 kV motor, eliminating the need for an electrical substation.

The absorption chillers use micro-processor control logic, enabling SSE to achieve optimum reliable performance by maintaining control of the absorption in all conditions. The control centre is compatible with York's Integrated Systems Network and it can also integrate with most other major industrial control systems available. **Reader Reply No. 132**

## The positive dimension of hospital cutbacks

The cost of diffusers and dampers for the PFI-funded hospital in Worcester has been slashed by reducing the specification from an original 92 types with a redesign enabling the use of just two sizes.

The project is using Waterloo Air Management Aircell series 2000 polymer diffusers, linear diffusers, dampers and addressable smoke dampers in two sizes — 300 and 600 mm. Waterloo advised on the redesign.

ABB Building Technology is responsible for the installation for the hospital, scheduled to open in January 2002. Time is also being saved by using blanking kits, enabling each of the Aircell polymer diffusers to be adjusted on site. They feature a single-point hidden screw fixing for ease of cleaning.

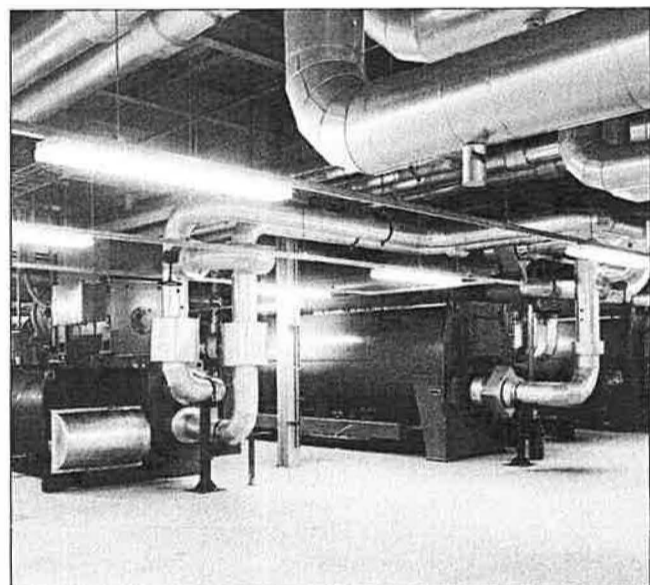
About 500 addressable smoke dampers will provide an efficient and cost-effective means of helping prevent the spread of fire and smoke through the ventilation system. The dampers have integral sensors to enable them to close down independently.

In the special-care baby unit, Aircell linear CSF slot diffusers will combine high air change with low air movement.

Waterloo is making a customer-care visit each week to ensure that the phased supply of products continues to meet project deadlines. **Reader Reply No. 133**



Using just two sizes of diffuser in the PFI-funded hospital in Worcester is leading to major cost and time savings.



Energy-efficient and environmental air conditioning for London's ExCel exhibition centre is provided by two York absorption chillers, a centrifugal chiller and low-sound cooling towers for heat rejection.

Primo  
infraSchwank  
Supra  
calorSchwank

The only overhead  
plaque and tube  
gas fired radiant heaters

worth  ing up to!

Schwank  
WARMLY RECOMMENDED

1951 - 2001 A Golden Era for Radiant Heating Technology

Schwank Limited, 62 Sunningdale Road, Sutton, Surrey SM1 2JS  
Tel: 020 8641 3900 Fax: 020 8641 2594  
Email: sales@schwank.co.uk www.schwank.co.uk

**Reader Reply No 26**