MITSUBISHI HEAVY INDUSTRIES, LTD.

High performance air conditioning

Case study: Education

MHI air con system saves energy at London college

Fact file

Project	Crossways Academy, Lewisham
Project outline	Air conditioning system for south London college
Installer	LJJ Contractors
Products	KX VRF system

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A VRF system with inverter control from Mitsubishi Heavy Industries (MHI) is helping to make Crossways Academy in Lewisham a cool place to learn for 500 students aged 16 and over. Since the College in south east London opened in 2005 a changing curriculum, and a substantial increase in IT equipment, has prompted the need for additional cooling in classrooms, the main hall and in the library/resources centre.

The building's original design placed great emphasis on energy efficiency, with maximum use of daylight, natural ventilation and an under-floor heating system. LJJ Contractors designed an air conditioning system that would complement the energy conscious concept, whilst meeting high and variable heat loads, and delivering high levels of energy efficiency within tight budget constraints.

Comfortable temperatures need to be maintained as economically as possible in rooms where large numbers of students will enter or leave at the same time. IT equipment being switched on and off and the use of electric blinds to control glare will all contribute to substantial fluctuations in heat load. A VRF KX system from Mitsubishi Heavy Industries provides an ideal solution. The 2-pipe system provides cooling via 30 ceiling or wall-mounted indoor units selected to allow retrofit of the cooling system with minimal disruption. Much of the building was designed to rely on natural ventilation, with windows operated electronically. The air conditioning system is linked to this control system to close down when windows are opened. MHI's KX system is particularly appropriate for many such retrofit applications, because the smaller footprint minimises the requirement for plant space which may not have been allowed for in the original design of the building.

Philip Eykel of LJJ welcomed the help of the distributor Air in fine tuning the plans to meet the college's requirements. "In addition," he says, "the MHI KX system provided the best package of performance, economy in use and competitive capital cost for this application."

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