

Hampton School

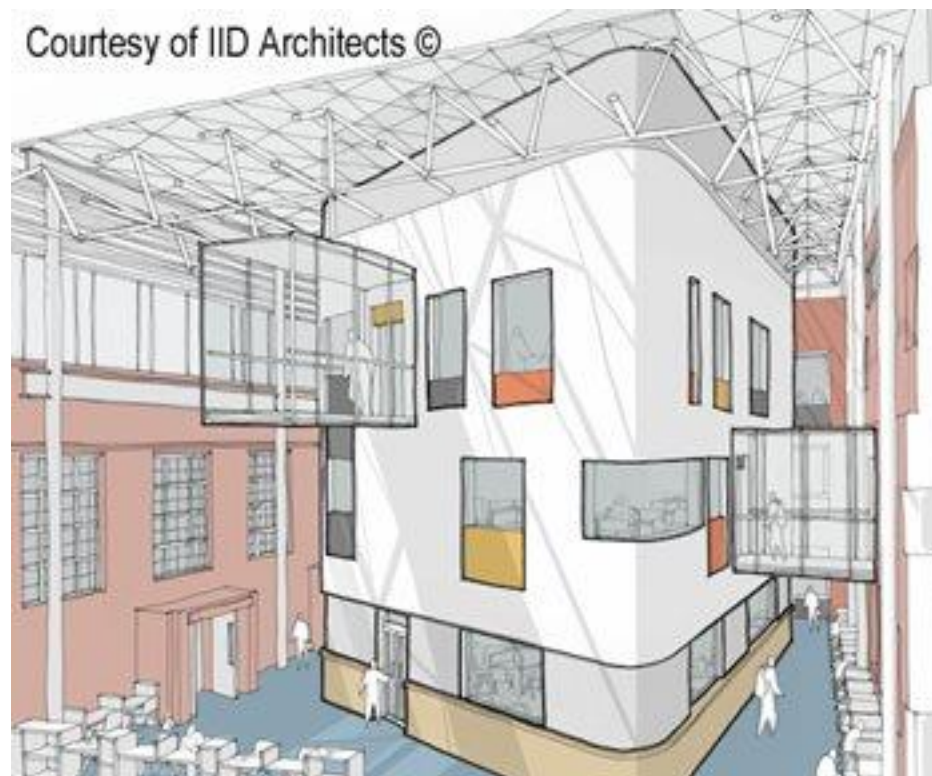
Hampton School is using a combined ventilation and smoke clearance system to provide a comfortable learning environment for students.

Details:

Application: SMOKE

Location: EUROPE

Sector: EDUCATION



A new sixth form study and careers centre at Hampton School in South West London is using a combined ventilation and [smoke clearance system](#) from SE Controls to help provide a comfortable learning environment with enhanced fire safety for students and staff.

Founded more than 450 years ago, Hampton School is recognised as one of the UK's leading independent academic boys' schools and provides education for 1,200 students aged from 11 to 18, as well as younger pupils through its prep and pre-prep schools.

Designed by IID Architects, the new building is constructed as a three-storey pod located in the centre of the school's Hammond Quad, while a further single storey was added to the existing building at the southern end of the quad and the previously open space was covered with a glazed roof.

In addition to meeting the building's fire protection specification, which demands that fire fighters must be able to actuate the system and disperse smoke on arrival via a manual call point at the main entrance, SE Controls also had to integrate the ventilation solution into the BMS to provide comfort ventilation and temperature control in day-to-day operation.

To achieve this, [20 SHEVTEC](#) louvered smoke ventilators were installed at high-level in a rooftop plenum and operate as a four-zone system via a dedicated controller, linked to the BMS.

This design enables proportional actuation of the vents so that they can be opened in stages depending on the temperature within the atrium. The [control panel](#) also incorporates a 72-hour battery backup for failsafe operation in the event of power interruption or failure.

As the ventilation system must also operate in the event of a fire, all the ventilators and control systems supplied by SE Controls are manufactured and tested in accordance with BS [EN 12101](#) part 2 and part 10, as well as being [compliant](#) with other relevant product legislation, regulations and standards.

Although the [louvres](#) are all 1,280mm in height, five different widths were used on the project, ranging from 1,430mm to 1,854mm, enabling them to fit within the structural glazing system's dimensions.



The range of sizes also ensures that the building's ventilation air flow requirements are met as the [vents](#) provide a minimum of 50% free area when partially open. Also, to simplify ongoing servicing and maintenance requirements, the ventilators are controlled using externally mounted IP65 rated electric motors.

In normal comfort mode, the motors open and close the louvres depending on the level of cooling and ventilation needed within the atrium, which is managed by the school's BMS. If the building's fire alarm system is actuated, it over-rides the BMS and all the vents are closed until the fire services arrive and actuate the system to manage how the smoke is cleared to assist fire-fighting procedures.

Dave Furneau, SE Controls' Senior Contracts Manager on the project, said: "The new sixth form centre is a very clever piece of design, especially in the way that an existing space has been reconfigured to extend the teaching facilities and house the school's careers centre. We're delighted to have been part of this new building and use our expertise to help maintain comfort levels and add to the fire safety strategy."

Further information on SE Controls [products](#), solutions and [projects](#) can be obtained by visiting www.secontrols.com, contacting sales@secontrols.com or calling +44 (0) 1543 443060.

