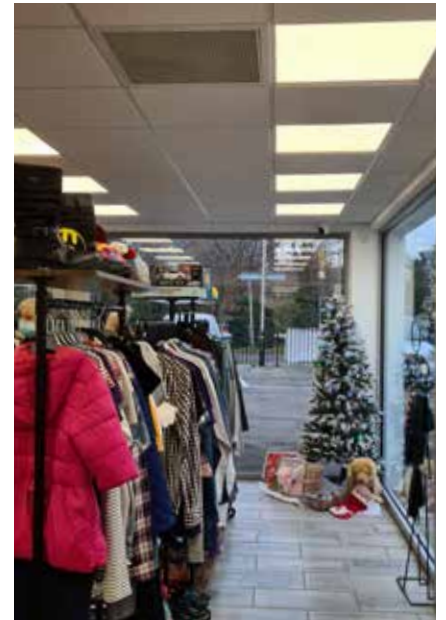


Case Study - St Helena Hospice Charity shop and café, Essex



Smith's SMART Control provided remote control and monitoring of the heating for a charity shop and café



Background

St Helena Hospice is a charity based in north Essex that helps local people face incurable illnesses and bereavement, supporting them and their families, friends and carers. They rely heavily on the help and generosity of their fundraisers, donors and volunteers.

A key part of their income generating activity is carried out through their network of shops and cafés in and around Colchester and Tendring.

The site at Mersea Island is a new facility which has been created by converting a former car showroom into a shop and café, along with a donations centre. As part of the conversion a new heating system was required.

The Challenge

The building, being a former car showroom, had a significant level of glazing rather than wall space and it also had a suspended ceiling with a ceiling grid system in place. The charity wanted to maximise the wall-space in the shop for product display. The full height glazing around large parts of the shop also meant that providing efficient heating was a challenge.

The contractor and charity also indicated they would like to be able to control the heating remotely as well as managing and monitoring local controls to ensure effective heating levels.

The Solution

The contractor, Matt Sage from Matt Sage Heating and Plumbing Ltd – the charity's heating contractor, contacted Smith's with the demanding brief. Simon Butcher, Senior Technical Manager for Smith's Environmental Products, attended the project site to discuss the project.

There were three key aspects to the project which needed a solution:

1. To provide efficient heating to overcome the heat losses through the full-height glazing
2. To avoid using what little wall-space was available for heating
3. To be able to fully control the heating remotely, and prevent local unauthorised tampering

The solution that the contractor and Smith's developed was to employ heat emitters, two each installed within the ceiling grids in the shop and the café. This maximises the amount of wall-space for merchandising purposes in the shop, and the room for customers in the café. Caspian Skyline CT60 EC fan convectors were selected as they sit within the ceiling grid and are able to heat large spaces very quickly and efficiently with each unit able to provide up to 4.1kW/h. They also form part of the wet central heating system.

To fulfil the requirement in the project brief of being able to fully control the heating the Caspian Skylines were fitted with SMART Controls with the shop and café being set up as separate heating zones using SMART thermostats. The system incorporated wireless relays to control the zone valves.

Being EC versions of Caspian Skyline CT60 Caspian the SMART thermostats can modulate the fan speeds to meet the heating requirements. When the heating is needed the most first thing in the morning the SMART Control Thermostat demand the Caspian to run at maximum to heat the space quickly, then as the room temperature increases the Caspian modulate their fan speed and output to maintain the set temperature.

A key requirement was to ensure that unauthorised access to the thermostats was prevented and SMART Control is tamper-proof.

“Smith's became an integral part of the system design team from conception to completion, providing support throughout”

Matt Sage | Matt Sage Heating and Plumbing Ltd



SMART Control uses an App to allow remote access to control the heating system, and to monitor performance and permit fault-finding. The contractor can use the App to adjust the heating system and provide guidance without having to attend site.

To provide heating in the Donation and Sorting Area a Smith's Ecovector HL 4000 fitted with a wireless relay to enable/disable the heater was installed. To provide temperature monitoring and remote-control App controlled thermostats were also installed. This also provides tamper-proof operation.

Matt Sage, the contractor, said "Smith's became an integral part of the system design team from conception to completion, providing support throughout. The App enabled controls allow the facilities team to monitor and adjust the program remotely and I can assist without having to attend site."

Products

The Smith's **SMART Control** has been developed to integrate several of the most commonly sought-after control features into one control unit and more. At the basic level it offers room temperature control and additionally offers a range of time controlling features too, making it perfect for buildings that serve a varied community demand.

The SMART Control can automatically control the fan speed of the Caspian fan convector, adjusting it in relation to the air temperature in the room providing a fast heat up period when required, and the quietest possible operation during occupied periods. There is a manual override facility too.

SMART Control features a summer mode where air circulation can be achieved without heat in summer months.

The control interface unit can be flush mounted in the product fascia, internally mounted (tamper-proof) or wall mounted (remote) for convenience, for example, where the heater is at high level.

It is possible to have master and slave Caspian fan convectors that integrate the entire range of EC Caspian products. The thermostats can be used as standalone localised controls, or with the integration of our hub control multiple thermostats using our ZigBee platform and controlled via app over the internet. This level of control is cost effective and is far more economical than using a full BMS system. The control system with the app is very configurable to the needs of the building users and can integrate with many other smart features, like boiler receivers, door, and window sensors. A key advantage to many community buildings is the ability to control the buildings' services remotely and the app makes this all possible.

Smith's SMART Control can become a part of a much wider control system in a building. It is possible to integrate wireless relays to control other appliances like boilers, along with proximity sensors to control lighting. The system can be expanded in many ways and the app can interact with other apps using IFTTT. The only limit is the creativity and willingness to embrace new technologies.

Caspian Skyline CT60 fits into a 600mm x 600mm ceiling tile, providing easy access for both installation and maintenance. It's suitable for projects in schools, retail or food units or where the heating needs to complement the rest of the premise. Caspian Skyline plumbs easily into any wet central heating system. It also works effectively with renewable heat sources such as heat pumps.

The **Ecovector High** level fan assisted heaters (hydronic) provide effective and dependable heating for both small and large commercial areas, fitted unobtrusively above head height. They work particularly well in shops and libraries, where lower wall space is limited. Compatible with most types of wet central heating systems, functioning equally efficiently with conventional boilers, biomass technology or ground or air source heat pumps.

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