



CASE STUDY

INGENIOUS NEW OFFICE INFRARED HEATING

ESSEX | UK

THE EXISTING SITUATION.

To mark the Hospice's 15 year anniversary, they underwent a major refurbishment to their existing building to improve care and staff facilities. The transformation of their existing ground floor offices to provide a cafe for staff and patients meant that the client required a new office building set within the Hospice grounds for the finance and marketing team who are vital in generating 80% of the Hospice's income.

THE CHALLENGE.

The new building was not connected to mains gas, so electric heating was the obvious choice. Electric underfloor heating was used on the ground floor, however, the restrictive build height meant this form of heating was not practical on the first floor. The large windows and the requirement to maximise floor space for desks and storage cupboards also limited the use of wall-mounted heaters.

The first floor had a cathedral ceiling (2.4m at the eaves to 3.9m at the highest point) ruling out standard convection heating as the warm air would rise in to the ceiling void, creating convection currents and offering little or no benefit to the occupants until it cools and descends towards the floor.

"The infrared heating system is unobtrusive and proved straight forward to install. More importantly, the staff are delighted with their new environment."

The Tooley & Foster Partnership.

THE SOLUTION.

ETHERMA LAVA® BASIC-DM infrared heating panels were installed on the pitched ceiling to keep the wall space free and ensure an even distribution of heat throughout the office. LAVA® infrared heating works on the principle of solar radiation, directly warming the occupants. The infrared waves are absorbed by thermal mass (the ceiling, walls, floor, furniture and people) and gradually released back into the room as heat. This homogeneous heating of the office space results in only a small temperature gradient between floor and ceiling; preventing convection currents and therefore the loss of warm air in to the ceiling void. As the infrared panels have no moving parts they are completely silent – a major benefit in an office environment. It also means they have a long operational life (20 years +) without any ongoing maintenance requirements.

The ETHERMA eTOUCH eco, a wall-mounted, programmable thermostat, was used to give precise control of the heating system and is key to saving operating costs and avoiding wasting valuable energy. This thermostat has intelligent control for completely automatic heating system optimisation and includes a self-learning function to ensure the ideal level of thermal comfort is delivered when required.

ETHERMA®
INGENIOUS HEATING

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THE SOLUTION IN DETAIL

Four LAVA® BASIC-DM 750 infrared panels were mounted on the pitched ceiling at approximately 3m above the floor. The infrared panels were installed on one heating circuit directly controlled by a wall mounted ETHERMA eTOUCH eco programmable thermostat.

The Eco+ intelligent control guarantees smooth, completely automatic optimisation of the infrared heating system and saves energy. In total, 3kW of infrared heating was used to heat the 63m² open plan office with a daily running cost of just £1.95.



PRODUCT BENEFITS LAVA® BASIC-DM

- + Very high proportion of radiation
- + Large infrared emitting surface
- + Lightweight design for easy ceiling mounting
- + Pleasant room climate thanks to comfortable infrared radiant heat
- + Magnetic field & maintenance free

PRODUCT BENEFITS ETOUCH ECO



- + Easy menu navigation
- + 4 programmes: Home, office, timer and heating
- + Self-learning function
- + Energy consumption indicator
- + Switching from summer to winter time is completely automatic
- + Switchable between output control, underfloor, room or combi thermostat
- + Temperature drop detection
- + Ecodesign guidelines compliant



LAVA® BASIC-DM



eTOUCH eco

COMPETANCE AND QUALITY FOR OVER 35 YEARS.



With ETHERMA you have a competent partner for your heating solutions with more than 35 years of experience. ETHERMA relies on constant innovation, highest product quality and modern design. We support you with a comprehensive service to ensure you use the most suitable product solution for your project. ETHERMA is an Austrian company with international reputation, producing high quality electrical heating systems for our clients, custom-made and manufactured right here.