intelliHeat

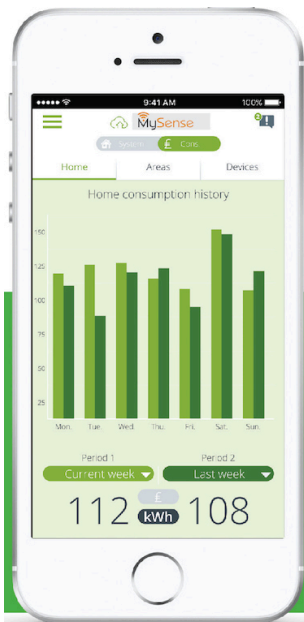# CASE STUDY | Controllable, energy saving heating for offices.

Our client aimed for both a unique controllable and highly efficient electric heating system, but also a real attractive alternative to the inefficient ugly panels heater that ware currently in place.

Cut the office heating bills by 30% while maintaining a comfortable, productive working environment.

Inefficiently heated offices have been linked with reduced productivity, and the colder weather often leaves employers and employees alike on the hunt for an easy but effective heating solution.

An office room that's too hot will also affect productivity. So it's important to ensure that you can easily adjust the output of heaters both individually and as a system. Plus, offices that are using too much heat are also running up energy bills and costs for your business.

To try to achieve this with the existing heating controls, Joshua had the heat on across the whole building when it was actually only required in the occupied rooms, the previous system based on 15 offices rooms with panel heaters with a 'ON - OFF' facility hard wired in programmed for heat 52 weeks a year, 7 days a week between 6 Am and 5-7Pm 1.5 and 2 kw heater output in each room, with a total of 26KW in constant use.

Joshua also had 2 days to complete the removal and replacement of existing heating, the isense wi-fi Heating System with dedicated heating management ware installed easily into any building. Each radiator has its own dedicated wi-fi connection straight to the secure dashboard; therefore there is no need for wires, thermostats, drilling or structural changes to the listed building, and there's no need to close the building for installation. Our expert and fully trained commercial installers installed in 2 days while the offices remained open.

Our challenge: Improve heating and control whilst reducing energy costs.

The landlords were experiencing rising electricity costs and decreased heating. They approached Intelli Heat to implement new controllable heating solution and energy saving controls. Energy have being used whether someone is in the room or not, tenants push for 2 hrs of heat and then may leave after an hour, hours of energy used with tenants not present. The Panel heaters burn out after 2 years due to overuse and costly ongoing maintenance and ongoing purchase of cheap not eco-design compliant panel heaters.
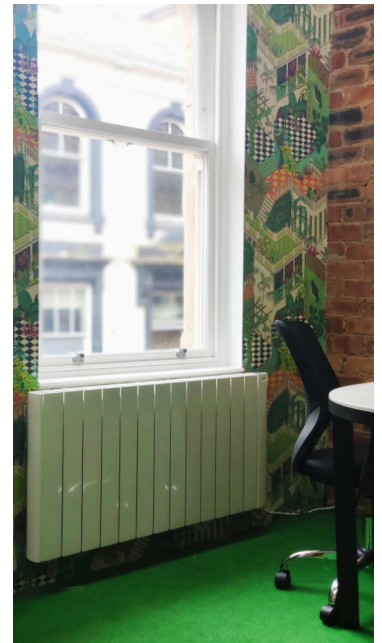
Also supplementary expensive portable heaters used due to occupiers being cold. All IntelliHeat systems are equipped with a dual-thermostats temperature measuring system. This means that the smart radiator measure both the room and the radiator temperature on a continual basis, and as explained in regards to the TRIAC algorithm functionality, the radiators are therefore able to draw the exact energy load required to generate and release the exact heat load needed for the room in question to meet the assigned temperature. With Intelli Heat Heating Management System zoning options allow grouping by rooms or floors with ease, use the built-in heating programs plans to create a comfortable environment. The efficiency of a heating system is greatly increased by dividing the building into distinct heating zones covering different heating needs. In most cases there is no need to heat certain rooms during the day, when they are not in use, or to run the whole system at the same temperature.

Averagely over the year the landlord is paying 19 P per kw over a period of 12 months, and the heaters will work in empty rooms. This is based on 20 weeks out of term dates, with a 1.5 kw heater on an average cost of 19p per KW per hour in 15 rooms.

Previous heaters running costs per year = £14 900
iSense actual running costs = £7700
Which is a 45% saving on electric consumption, with a ROI of only 12 months.

We provided individual ip address for each smart radiator with integrated energy saving technology. Each tenant would have the restricted use of an app designed specifically for and can turn heat up and down via the app. This means that if you have premises in ten cities, with one hundred radiators in each location, you can control and manage ALL OF THEM using one personal logging onto the dashboard from any location in the world that has a Wi-fi or 3-4G connection.

The new heating system is also equipped with motion sensors which can override the central heating programmes where the room remain unoccupied for a preset duration of time. This is especially useful for instance, where a preset programme can be applied, the programme will be overridden when no movement is sensed in the area for a determined period of time, and the radiators will automatically revert to background mode. When the tenant goes home for the holidays, or is not in their room the presence detection will set the radiator to fall back to the set- back 12 degrees eco temperature.

Did you know that choosing to install smart electric radiators can reduce your electricity costs by up to 40%?

"Joshua was clearly looking for a controllable Wi-Fi heating system, with a pleasant Aesthetics, and ensure each member of staff is comfortable whilst avoiding wasting energy by only heating the rooms need it and enabling each room to have its own customisable target temperatures."

Joshua Yorkshire 2022

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