

Air Conditioning Installations

Our team of experienced professionals have specialist knowledge of air conditioning and provide comprehensive HVAC solutions for all building projects.

It is important to consider the implementation of air conditioning early in the project design stage to ensure the most cost effective and efficient solution is achieved. Major applications or single split units can be incorporated into your building plans to achieve the best cooling efficiency with minimal impact on your building design.



HVAC

Air conditioning is the process of cooling/heating cleaning and dehumidifying indoor air, either for thermal comfort or process applications. Any combination or all of these processes may be configured so as to achieve your desired internal space criteria.

Thermal Comfort Applications

Comfort applications for air conditioning systems include hotels, residential buildings; apartments; restaurants; hospitals; government buildings; offices; shopping centres and industrial spaces. Air cooled chillers (installed outdoors) or water cooled chillers (installed indoors) are normally implemented for large building applications.



Process Applications

Process applications rely on air conditioning (or other forms of cooling) as a critical process. Such applications include aircraft; laboratories; clean rooms; data centres; hospital operating theatres; nuclear facilities; refrigeration storage facilities; farms and food processing areas. Due to safety or space restrictions, some process applications utilise remotely located condensing units.



Energy Saving Heat Pumps

Heat pumps are often used in offices and residential buildings. If a property uses a heat pump system instead of a traditional "cooling-only" air conditioning system, the cooling process is automatically reversed during cold weather to provide cost effective heating. Climate control units are implemented to allow a comfortable temperature setting for the building occupants.



The energy savings provided by heat pumps are significant in comparison to a fossil fuel boiler. The COP (coefficient of performance) for air source heat pumps is excellent with approximately 3KW output energy produced from just 1KW of input. The same input on a traditional boiler system would produce only a meagre 0.93KW of output energy.

In recognition of the environmental benefits, the Micro Generation Certificate Scheme operated by the government provides grants of up to £900 for home owners who install an air source heat pump.

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Benefits of Air Conditioning

The United Kingdom has the lowest number of air conditioning installations in Western Europe. Indeed the climate is cooler than on the continent but due to recent hot summers, there is an ever-increasing demand. Our team of professionals can provide air conditioning solutions for all *comfort* and *process applications*.

Office Buildings

New corporate buildings usually include some type of air conditioning solution and many office workers perceive it as a standard feature. Climate control is also beneficial to business owners as their employees are able to work more efficiently in a cool and comfortable environment. As offices tend to generate lots of heat from lighting, photo copiers and computers it is important to climate control your office space to keep your staff comfortable.



Residential Buildings

Air conditioning will add value to a property and if the installation is performed during construction, the total cost of investment is reduced. The aesthetic appeal of a property is not diminished by unattractive wall units or external units when designed professionally. Many home owners choose to buy portable air con units but these are vastly inferior as their cooling capacity is low, air flow is poor, the unit is restricted to one room and it takes up valuable floor or wall space.



Retail Buildings

Your retail building project can stay ahead of the competition by choosing an integrated air conditioning solution. The temperature and humidity of a building has a strong effect on the inclination of people to stay for a prolonged time. For this reason, major retail outlets utilise air conditioning systems to provide a comfortable environment for their customers. This encourages people to return to their store after a cool and pleasant shopping experience.



Data Centre Cooling

Computer equipment produces high heat loads that need to be controlled. Manufacturers of computer processing chips state the maximum operating temperature is 65°C. Copper heat sinks and fans reduce the internal heat of a computer system but room temperature must also be cool for it to be effective. An ideal ambient temperature is about 22°C and should not exceed 35°C. Normal office building temperatures are within these limits but a cooling solution is required for computer equipment operating in a confined space.



Daikin, Mitsubishi, Toshiba, Carrier ...

There are many variations of air conditioning systems available from several reliable manufacturers that all utilise the latest sustainable energy solutions. Our team of experienced professionals are independent contractors that recommend suitable solutions based on your requirements, budget and long term plan.



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Photographs and information in this article were provided courtesy of the [air conditioning](#) specialists at Premiair Ltd.

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