APPLICATIONS

Hospitals
Ensuring a stable and reliable environment for hospitals is vital for patient and staff safety and comfort, and for ensuring that delicate treatment and monitoring systems function as intended. The stability of environments in critical facilities such as operating theatres is crucial. This requires the use of proven and reliable cooling equipment, customised to ensure it delivers the precise conditions required in a given application, and supported with 100% back-up. The fine control offered by Geoclima chiller ensures the indoor hospital environment is maintained within predefined temperature and humidity limits, and that there is no magnetic interference from VSDs that could affect sensitive hospital equipment. With EMF and EMI filters fitted as standard, Geoclima achieves all of these requirements with its state-of-the-art controls.

Plastic Industry
In this highly competitive market, a key challenge facing plastics manufacturers is to deliver the most efficient and cost-effective product to the market place at all times. This means optimising production processes – and cooling is a vital component in this. Our innovative chillers enable plastics producers to significantly reduce their manufacturing costs by halving power consumption for cooling. This gives a valuable market advantage to plastics processors, as they can use the lower production costs to improve their profit margin or increase their competitiveness in the market to win more work.

Pharmaceutical Industry
Control of space temperature and humidity is vitally important in this industry. Clean rooms in particular must be designed with utmost care and have to be cooled reliably and efficiently. Our chiller are the perfect solution with their variable speed oil-free magnetic bearing compressors, total immersion evaporators, micro-channel condenser coils and over-arching intelligent controls. It is clean technology perfectly designed for the Pharmaceuticals industry.

Food & Beverage
Production of food and drink requires reliable and efficient cooling especially in this day and age when the security and quality of the finished product are paramount. Our chillers provide a steady supply of chilled water or glycol at design temperatures +/- 0.5 °C to cool the food and beverage process equipment. Our units with oil-free compressor have the advantage that they do not require potentially expensive oil and filter changes and there are no oil pumps or heaters to worry about. It is a clean technology perfectly designed for the food and drinks industry.

Car Manufacturing Industry
Paint shops, wind testing tunnels and environmental test chambers all require cooling of one type or another. Geoclima chillers can be effectively applied no matter what type of cooling system is required, be it air cooled, water cooled, remote air cooled etc. There is also the possibility of heat recovery to further increase energy savings and reduce the carbon footprint of the factory.

Power Stations
We have run trials under maximum and part load conditions, including simulations of unusual operating scenarios. It has been demonstrated that our chillers ensure essential benefits, in terms of energy efficiency and absence of interference of

operations, that are preconditions in large-scale power station projects.

Commercial Buildings

Minimal running costs and extremely low start-up current are just two reasons that favour using Geoclima units in commercial buildings. In the case of comfort cooling, our units ensure high level energy efficiency ratio (EER) and with control optimisation of the condenser fans, energy savings up to 50% can be achieved. Large commercial buildings in built up areas are often penalised by stringent maximum load tariffs, and it is often the chiller plant that causes the maximum limit to be reached resulting in high cost penalties for the owner/occupier. A conventional compressor on a chiller plant can have a peak starting current of 600 A or more, whereas a Turbomiser compressor, for example, has a starting current of only 5 A reducing the risk of hitting the maximum demand meter dramatically.

Data Centres

Data Centres use a lot of power to cool their servers and support equipment and owner/operators are constantly looking at ways to reduce power and improve reliability. Chillers are used extensively on data centres and there are usually one or more backup chillers to minimise the risk of the data centre shutting down due to overheating. Our units are the ideal solution because they are reliable and efficient and do not require as much maintenance. Because data centres have a steady heat load 365 days per year, energy and carbon savings achievable using our chillers are dramatic! In many cases, 50% energy savings can be easily achieved when Geoclima chillers are installed.