



Temperature control solutions to help you  
improve business performance

**aggreko**



Our aim is to help businesses enhance their performance by using portable and modular process cooling and HVAC methods to overcome challenges.



# Aggreko – enabling business improvements

Effective temperature control is crucial to the success of many industrial processes and commercial business activities. It can help companies boost productivity, improve product quality, reduce process downtime and extend the lifetime of operating equipment.

At Aggreko, we combine the best in temperature control equipment with technical expertise and outstanding customer service to ensure we implement the solutions that meet our customers' specific challenges, whatever they may be. Our process cooling/heating and HVAC systems solutions cater to a broad range of industrial and commercial applications, in locations all around the world. Whatever the application, our technicians are on hand to offer support and to supply and install all the accessories and controls our customers require.

## **An unrivalled combination of equipment and expertise**

Our complete engineering, design and installation service helps to meet the temperature needs of your process, facility, project and event and to ensure the comfort and safety of your workforce. Our service provides cover for maintenance periods, breakdowns, productivity improvement and seasonal heat and comfort-cooling situations.

Whatever your requirements, our specialists will quickly deploy equipment and monitor it to ensure a continuous, reliable service and full integration with your current operations.

Aggreko units are built to last and have proved their ability to perform in the harshest of industrial settings.



# Global capabilities in temperature control

At Aggreko, we understand how temperature control influences processes and shapes business performance. We deliver technically and commercially effective solutions that meet the specific needs of our customers. We ensure that the equipment we supply is of the highest quality and we invest in developing new technologies to benefit customers. In all aspects of our operations, we maintain a relentless focus on safety and environmental protection.

We understand you want to get more from your equipment, processes and working practices. Drawing on the local knowledge in our global service network, we work closely with you to understand your needs and to define how our equipment will integrate with your existing systems. This tailored approach helps to ensure that we offer the best technical and commercial solutions every time.

## Our product range includes:

- Liquid chillers – air or water cooled
- Air handling units
- Air conditioners
- Cooling towers (including cooling tower services)
- Fluid pumps
- Heat exchangers
- Heaters

Equipment	Applications
Liquid chillers – air or water cooled	Supplementary cooling during emergency periods of increased loading, facilities management solutions, district cooling and process cooling
Air handling units	Supplemental comfort cooling, bulk cooling for large storage or distribution facilities
Air conditioners	An important application cooling down and dehumidifying switch gear, transformers, data centers, retail locations and special events
Cooling towers (including cooling tower services)	Commercial and industrial cooling applications, including supplementing cooling water flows, cooling capacity during planned shutdowns or replacement of existing cooling towers in the event of equipment failure
Fluid pumps	Used in conjunction with chillers, air handlers and heat exchangers to provide a suitable fluid flow rate and deliver required levels of cooling
Heat exchangers	Heating or cooling of process or building fluids without direct contact between the fluids
Heaters	Used for HVAC applications, as well as for industrial or construction applications wherever warm air or drying is required

## Heat exchanger modelling to identify the best design option

We offer a powerful software modelling capability for heat exchangers, which enables us to assess how additional cooling will fit into an existing system and help you make the best equipment and installation selections. The HTRI modelling software that we use is widely recognised as the industry standard for the design, rating, and simulation of heat transfer equipment.



## Rapid response cooling tower technology

In Australia, our CT 10000 packaged cooling tower can handle heat rejections in excess of 10000 kW and can be delivered and connected up to a plant within a matter of hours. Developed by Aggreko engineers, the CT 10000 offers all the functions of modern cooling towers and satisfies high water-flow requirements with heat rejection equipment that is reliable, rugged and versatile.



## Helping you protect the environment

Increasingly, process plants are under pressure to reduce the volumes of water used for cooling and minimise thermal pollution. We help meet those environmental targets. For example, in once-through cooling applications we help minimise the temperature difference between input and effluent water, so that the plant complies with regulations even during times of peak demand.

We have helped customers in hundreds of locations around the world. We do this by delivering a reliable, environmentally friendly service in line with relevant legislation and regulations, for example, helping customers make the transition from R22 refrigerants in countries where their use has been phased out.

## Safety is our top priority

We are committed to working in a safe, responsible and ethical manner, and drive safety through continuous improvements from the boardroom to the remotest location.

We offer environmental management support and advice on detailed method statements for environmental risk assessments.

Our environmental management system is regularly assessed by Lloyd's Register Quality Assurance (LRQA) to ISO 14001:20014 and our service centre locations are ISO 9001:2008 accredited.

## Fresh ideas and the latest technologies

We are committed to developing and enhancing our equipment and services. Our combination of product development teams and engineering expertise enables us to build products in-house and work with trusted equipment manufacturers to produce systems you can rely on. The value that we add to operations is illustrated in the various case studies described in this brochure.



# Detailed process understanding and management of change

Aggreko Process Services (APS) designs and installs temperature control projects in a matter of weeks, rather than the months required for a typical capital project. This helps customers capture short-run market opportunities, improve yield, upgrade capacity and respond to changing regulations and market conditions.

Modular, mobile solutions from Aggreko mean there is no need for you to commit to major capital expenditure, just rental packages that ensure reduced turnaround times and continued production.

## Our services include:

- Onsite engineering studies by Aggreko engineers help to identify the best and most cost-effective solution
- Process design packages that provide the information to meet management of change requirements, conduct process safety reviews and facilitate operator training for safe start up
- Project management to help ensure smooth installation and project start up
- After-action reports that outline project benefits, best practices, lessons learned and recommendations for future improvements



**Sectors in which Aggreko provides temperature control support**

**Chemical manufacturing**  
**Concerts and tours**  
**Construction and building Services**  
**Exhibitions**  
**Film and television**  
**Food and beverages**  
**Mining**  
**Oil and gas**  
**Pharmaceuticals**  
**Power generation**  
**Refining and petrochemicals**  
**Retail**  
**Sports events**  
**Manufacturing**



# Oil and gas, refining and petrochemicals

Temperature is a controlling factor in many oil and gas processes. Aggreko temperature control solutions help upstream and downstream businesses maintain safe and efficient operations, boost productivity, adapt processes to changing market conditions and adjust product quality to comply with changing regulations.

Our process engineering expertise means we can deliver the best solutions for cooling and humidity control. In refineries and petrochemical plants, for example, we help operators reduce the cooling time for process equipment, such as reactor vessels. This means that inspections and maintenance operations can start more quickly, thereby reducing turnaround times and minimising production deferral.



## **Ground engineering solution for upstream oil and gas**

*We applied chiller technology to help an upstream oil and gas company continue its drilling operations in Alaska. The project involved refreezing permafrost to ensure the stability of foundations at the operations base on an artificial island in the Beaufort Sea.*



# Mining and construction

Aggreko is a leading player for temperature control in the mining sector. We supply equipment and services for leading industry players, helping operators manage productivity and increase the profitability of their coal and metal ore mining operations.

For mine operations, the key issue is often reducing temperature in working areas so that personnel can work safely and efficiently. In large mine facilities reducing ambient temperature by even a few degrees can require vast amounts of chilled air.

Aggreko's rental solutions offer mine operators increased flexibility, enabling them to manage capital expenditure when budgets are tight and respond to price spikes by bringing in rental equipment to quickly boost production.

The construction sector needs temperature control for a wide range of activities. Whether you require supplementary cooling during summer periods, district cooling solutions or process cooling to accelerate construction work, Aggreko has the solution.



## **District cooling during airport construction**

*We supplied a 2,500 refrigeration ton chiller package and 5 MW of auxiliary power to provide district cooling for the cargo hangar during construction of the new international airport in Doha, Qatar to provide ambient temperatures in which the workforce could operate safely and efficiently.*



# Major events and the corporate sector

Aggreko is a trusted partner for the event services industry. Major events have been a key part of our operations for more than 25 years. We provide vital planning experience and technical and logistical expertise for all kinds of high-profile corporate, political or social events. This involves developing tailor-made solutions and building temporary infrastructure, then delivering equipment and managing operations to ensure reliable and effective temperature control throughout the event.

We provide temperature control services for global sporting events, international exhibitions, tour events and concerts, film and television projects and national celebrations. Having access to a dependable temperature control solution enables hundreds of customers, from small traders to multinational broadcasters, to focus on their core business.



## **2014 FIFA World Cup in Brazil**

*Aggreko provided temperature control services for the 2014 FIFA World Cup, which took place at several venues across Brazil. We also provided the power required for the broadcasting (television, radio, internet and press media) of all 64 matches during the competition.*



# Manufacturing industries and power generation

Manufacturing companies from many sectors, including chemical manufacturing, food and beverages, pharmaceuticals and steel making, rely on Aggreko's temperature control expertise. Working with customers to understand their processes enables us to deliver technical solutions that enhance performance and work in harmony with an existing plant setup.

We also provide very low temperature services, down to  $-40^{\circ}\text{C}$ , which the pharmaceutical industry requires for testing and storage of medicines and which engineering companies use to test the performance and reliability of products (such as car components and aeroplane engines) in extreme cold conditions. We bring this capability to the customer's test facilities, eliminating the costs of hiring specialist laboratories and the risk of delay between re-tests.

We also provide temperature applications for specific applications within power generation plants. For example, temporary cooling to prevent overheating of vital equipment, such as the alternator in a nuclear power plant or additional spot cooling or dead-space cooling to minimise shutdown times.



## **Turbine cooling in Kazakhstan**

*Our temperature control solutions helped power generators in Kazakhstan offset the effects of extreme summer temperatures and helped maintain the efficiency of turbine units. Our solution delivered a 25% increase in efficiency compared to times when the turbine was run without additional cooling.*



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