



Something cool is going on at the Royal Albert Hall

Regular visitors to the Royal Albert Hall have noticed something refreshingly different about the famous venue in recent months. Thanks to the installation of a major new air cooling system, based on a bank of Güntner adiabatic coolers, the iconic hall now provides its patrons with an environment to match the quality of its international concert schedule.

Before the Güntner units were installed, in time for the 2014 Proms season, there was an existing 250kW condenser- less chiller coupled with 4 x 80kW duty standby temporary chillers that served the building.

Delivery of design conditions into the Hall was restricted by the undersized primary plant so plans were put in place to open up plant areas and, with Güntner's adiabatic package, the Hall is now served by 800kW of primary plant ensuring that the design conditions are achieved.

Prior to 2014, the million-plus people who visited the Hall for concerts and other events annually sometimes faced overheated conditions out of keeping with the majesty of the surroundings. That has been improved since the Güntner system became operational.

Consisting of a total of six S-GFV adiabatic coolers, a UV water treatment system and associated controls, the system cools the condensing water of the chillers which in turn cool a large section of the building including the lower



Overview

Line of Business:	HVAC
Application:	Air Conditioning
Country/City:	Great Britain/London
Fluid:	Ethylene glycol 20%
Product:	Güntner S-GFV

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Guntner S-GVF adiabatic cooler

section of the auditorium and the stage, maintaining them at a comfortable temperature and, crucially, also providing a high degree of controllability.

Anti-Legionella and planning compliant

In order to avoid the risk of Legionella and other waterborne bacteria, the Guntner adiabatic cooling system has been designed to conform to the requirements of ACOP L8 Control of Legionella bacteria in water systems and incorporates a number of important safety features.

All the water used for the spray system is supplied via an Adiabatic Control Box (ACB). Any water in the supply pipe is set to drain for a fixed period prior to spraying, to eliminate the risk of stagnant water. A powerful Ultraviolet lamp doses all water passing through the spray system with intense UV radiation, which is lethal to pathogens.

When the system calls for adiabatic cooling, the UV lamp is energised and the main solenoid activated. Water is flushed through the system and out to drain to remove any residual water that may have been left in the system.

After a pre-determined interval, the drain valve closes and the booster pump starts to increase the pressure and atomise the water leaving the spray nozzles. Should the system develop a fault, such as UV lamp failure, the system automatically shuts down and a fault signal is generated.

Grade 1 listed

Apart from the efficiency, functionality and safety of the system, one of its principal benefits was the flexibility provided by its modular design which became particularly important when the installation was being planned.

The Royal Albert Hall

It is the world's most famous stage. Over the past 144 years, it has hosted everyone from Winston Churchill, Albert Einstein and Edward Elgar to the Beatles, Bob Dylan and Adele.

Last year, its breathtaking auditorium presented 397 events by the world's greatest performers – taking in rock, pop and classical music, dance, films, Cirque du Soleil and even tennis – with the magical setting and inspired artists creating amazing memories for audiences.

Opened in 1871 to fulfil Prince Albert's vision of a central hall to promote the arts and sciences, the Hall is a registered charity that remains true to his founding ambitions within a modern context.

It hosts over 400 events a year in its secondary space, the Elgar Room, and beyond, broadening the Hall's appeal to incorporate younger and more diverse audiences.

Its Education & Outreach programme reaches more than 100,000 participants each year, working with schools, young people and the community, as well as other charities such as Music for Youth, as part of its extensive public benefit remit.

Not only is the Royal Albert Hall a notable Victorian building, it is also Grade I listed, which means that any changes – internal or external – are strictly regulated.

The Guntner equipment had to be installed in such a way that visual and noise intrusion were kept to a minimum. Not only did the installation have to be achieved in a very tight time frame in order to fit in with major events but the impact on residents living in close proximity to the Hall also had to be taken into account.

In the event, after careful planning and consultation with major bodies such as English Heritage, the kit was accommodated into a tight space close to the Hall's Queen Elizabeth II Diamond Jubilee Steps, with minimum disruption to the show schedule or local residents.

The system has now been in operation for more than a year and according to Peter Barnes, the Hall's Building Services Manager, is performing perfectly. "We are delighted with the effects of the Guntner system, which has helped us to keep our iconic building at a comfortable temperature during the hottest months of the year, so audiences can forget about the weather and enjoy an unrivalled programme of events."

THE BBC PROMS

The Proms – the popular name for the BBC Promenade Concerts – are London's most famous and ambitious summer music festival. Over eight weeks, they offer daily concerts of orchestral and classical music and other events, both in the Royal Albert Hall and at other indoor and outdoor venues around the UK, such as Hyde Park.

The first Proms concert took place on 10 August 1895 and was the brain-child of the impresario Robert Newman, manager of the newly built Queen's Hall in London, whose aim was to reach a wider audience by offering more popular programmes, adopting a less formal promenade arrangement and keeping ticket prices low. Newman teamed up with Henry Wood, a young musician who was beginning to make a name for himself as an organist, accompanist, composer and conductor of choral and orchestral music.

In February 1895, Newman offered Wood conductorship of a permanent orchestra at Queen's Hall, and the first Proms season was launched. The Proms transferred to the Royal Albert Hall in 1941 after the original venue was destroyed in the Blitz.

The following year, the BBC agreed to resume its sponsorship of the event; an arrangement that continues to this day.

The audiences that attend the Proms are recognized as exceptionally knowledgeable and receptive. Many concerts feature contemporary, experimental or little-known works by rising composers, music from non-Western cultures (including India, Thailand, Indonesia and Japan), percussion, jazz, gospel and electro-acoustic music, and concerts aimed specifically at children.