

## The Coast Golf Club Sydney, Australia

When The Coast Golf Club needed to install an air conditioning system they faced more than the usual challenges. Situated at beautiful Little Bay just east of Sydney's suburb of Port Botany, the golf club's heritage listed building had never had a large scale air-conditioning system for the club house and function centre. Situated 12km south of the Sydney CBD, the course is located on what was once Prince Henry Hospital. Opened on the in May 1965, the club house has seen major renovations since being converted from the laundry building of the hospital and now houses The Coast Restaurant which caters for a variety of functions.



With considerable residential developments close to completion near by, the club sought to meet the demands of their increasingly event focused clientele by installing a system that could not only cool but reduce the humidity which caused considerable discomfort in the summer months. Bringing in well respected and innovative Australian companies Quantum Air-conditioning and Summit Matsu Chilling Systems, The Coast Golf Club was able to install a custom made chilled water air conditioning system to withstand the demands of the coastal environment.

### Facing the challenge

The Coast Golf Club's heritage listed club house which was built in the 1890s is now used as much for its function centre as for its golf club. Until the installation of the new air conditioning system the Club had been naturally ventilated. Although the summer temperatures continued to be over 30 degrees C, the often strong sea breeze caused function managers to close the windows for the comfort of restaurant patrons, which made other areas of the club house hot and stuffy for both staff and guests. The Club had tried to cool some of the smaller back of house areas with small split system air conditioners, but the close distance to the ocean had taken its toll corroding the systems. There was so much corrosion to the condenser coils and cabinets on the outdoor units, on some units after only 3-4 years, that it was clear that a standard direct expansion package air conditioning system or standard chiller would only have a limited life.

An air conditioning system was required that could withstand the demands of the environment, be quite and efficient, be aesthetically unobtrusive, and allow for possible future expansion.

### The equipment installed:

The system design and project management was undertaken by Quantum Air Conditioning. Because of the heritage value of the building a chilled water system was chosen because of the minimal space required inside the building compared to conventional ducted systems, and because of the ability to locate the chiller out of sight.

The fan coil units were supplied by Fan Coil Industries.



The club house was divided into a number of different zones depending on the usage of the bar, function areas, and restaurant.

Bob Pickering, the past president of The Coast Golf Club emphasized the importance of the customized cooling zones. The club frequently had functions in different parts of the club house meaning that the interior temperature differed from room to room as more guests congregated in particular areas. To address this, the system was designed with independent cooling zones and separate controls allowing staff to control the temperature of particular areas of the club without affecting the comfort of guests in less crowded rooms.

The expansive glass windows of the club house provided a spectacular view of the coast line but also caused a high level of solar loading of the panels – resulting in significantly warmer temperatures for tables near the windows especially in the eastern end of the club house. To combat this, the system was designed with high vent points to channel the air flow along the ceiling so cool air would flow over the windows, lessening the solar load. This allowed customers to sit comfortably at the restaurant's window tables even on the hottest days.

The chiller was supplied and manufactured in Sydney by Summit Matsu. The chiller was air cooled, with 2 x 125kW screw compressors. Corrosive environment options included copper finned condensers with brass end plates, frame from hot dipped galvanized sand blasted black steel, body panels from 304 stainless steel, drain tray from 304 stainless steel and PVC, compressor enclosures from 304 stainless steel, and the electrical box from 304 stainless steel. All fasteners used were stainless bolts with an aeronautical-grade electrolysis preventing paste used to prevent corrosion between metals.



#### **Profile of the suppliers**

Summit Matsu is a chiller manufacturer located in Alexandria, Sydney. The company specialises in chillers for the Australian environment, with shorter delivery times than most other suppliers. The company has over 45 years manufacturing experience supplying to some of Australia's largest companies like BHP Billiton, Rio Tinto, Alcatel, and many hospitals. Summit Matsu's unique product and service offerings include design and manufacturing, delivery and commission and maintenance. The success of the harsh environment chiller designed for The Coast Golf Club has meant that these corrosive environment options are now available as an option to customers with challenging natural settings.

Quantum Air-conditioning is a division of Siltech Pty Ltd which has been operating in Australia for 25 years. Quantum has offices in all states as well as New Zealand and is dedicated to providing a combination of innovative, value adding solutions and customer service. Their full range of services include preventative maintenance and breakdown services, construction and project management, capital asset funding and service management and asset software.



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### **Positive Impacts for The Club**

Robert Kelly, General Manager of the Coast Golf Club acknowledges that both staff and customers have benefited since the air-conditioning system was installed. He added that before the installation, the club had been losing bookings in the warmer months which meant considerable lost revenue during the peak period for weddings and corporate Christmas parties. Recalling the extreme temperatures of New Years' Day of 2006 before the installation of the chiller and air-conditioning systems, Robert noted that the working conditions for staff had been greatly improved and that the system was working extremely well in maintaining a comfortable temperature and humidity level in the club house. The new residential development surrounding the golf club means that club's clients are quite diverse and the club has to tailor their offerings to many different groups and manage changing peak demand periods. The design of the chilling system has meant that The Coast Golf Club is able to seasonally adjust the temperature and air flows making the experience a much more enjoyable one for both customers and staff.

The system installed at The Coast Golf Club has been a continuing success. The patrons, staff and management have benefited from the installation of the chiller and air-conditioning system making the club house a much more comfortable and enjoyable space.

Summit Matsu Chilling Systems manufacture and distribute water chillers Australia wide for air conditioning, industrial processes, food processing, petrochemical applications, scientific uses, and process cooling machinery for all types of applications.

Summit Matsu Chilling Systems also commission and service from 2kW to 1200kW water chillers Australia wide and throughout the Middle East.

Further details can be found at:

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