
Innovative air-conditioning at Taiwanese athletic centre

Established in 1961, the Chinese Culture University was formerly referred to as the College of Chinese Culture. In 1980, the college was upgraded and renamed the Chinese Culture University. Located near the university by the mountain, the Ta-Hsiao Building was the place where countless university students have received their athletic training the last sixteen years.

The old building was scheduled to be demolished before being replaced by a modern, multi-functional athletic centre. The university needed a unique, technically advanced solution for the new cooling system, as the building would be quite extensive.

The Situation

Due to an increasing number of students, the Ta-Hsiao Building had become too small and outdated to accommodate the needs of various student activities. The university decided to establish a new, state-of-the-art multi-functional athletic centre.

The centre was designed to serve different purposes, including training and sports activities as well as athletic competitions. In addition, the impressive new facilities would offer leisure, dining and spa facilities, where students would be able to fully enjoy the pleasure of sports and a healthy athletic lifestyle.

The University cited energy savings and low system noise as important criteria for the pumps in the air-conditioning system. Conventional low-efficiency pumps in a traditional solution were unable to meet their demands.

The Grundfos Solution

The Grundfos air-conditioning solution that was installed met the university's demands for innovation and sustainability. The cost of building the system was also reduced.

TOPIC:

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LOCATION:

Taiwan

COMPANY:

The Chinese Culture University

The high-performance system serves the entire building. It uses what is known as “tertiary pump theory” for zoned air-conditioning. This means that each zone is independently controlled according to the required performance and desired zone temperature. This is perfect for the different activities that take place in the centre.

The pump solution makes use of Grundfos’ own TPE Global Communication Integration technique. Basically, it controls the flow of chilled water for individual air-conditioning units according to the specific area the unit cools. Grundfos developed this technology in order to achieve a better control over unit performance. This puts Grundfos ahead of other pump manufacturers through innovation.

This solution also eliminates the need for 2-way valves in the system, reducing costs and assembly space. Grundfos’ innovation thus proves its worth as responsible (lower costs) and forward thinking (simplifying system construction).

The Outcome

Rivalling the best in Asia, the Athletic Centre of the Chinese Culture University was officially opened on 29 September 2005. The pumps have operated without difficulties since then. Accordingly, Grundfos has met the school’s demand for an energy saving, low noise, and environment-friendly air conditioner with long life.

The Grundfos solution is a creative way to ensure a comfortable climate inside the centre, so athletes can exercise in a comfortable environment.

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