

Case Study

The heritage structure preserves its heritage stature with IDECool!

Background

The Indo-British Association owns a famous pre-British-raj era building in Lucknow, India. The building has a 9,000 ft² banquet hall which also hosts exhibitions and other events. It is a heritage structure that emanates charm and an old-world grandeur.



Challenges

With temperatures in Lucknow going well beyond 40 °C, it's a challenge for the Association to provide a comfortable environment within the banquet hall to the guests who attend the various events in the hall. The hall has large open spaces, a double-height ceiling, and a number of doors and windows. This means that a conventional cooling solution like air-conditioning cannot be used. Conventional direct evaporative cooling solutions (or evaporative coolers) would not work either, as extensive ducting that would be required for the evaporative coolers would destroy the aesthetics of the heritage structure. In addition to this, direct evaporative coolers add a large amount of moisture to the air, which would make it humid and thus uncomfortable for guests inside.

Solution

As the Association was searching for a suitable cooling solution, Evapoler Eco Cooling Solutions, HMX's Channel Partner, proposed IDECool as the perfect solution. IDECool would not only help to overcome the limitations/deficiencies of conventional cooling solutions, but would also provide unique benefits.

The HMX-IDECool is an Indirect Direct Evaporative Cooling solution that incorporates HMX's proven DAMA technology.

Evapoler Eco Cooling Solutions proposed a cooling solution comprising one IDECool 4 and eight IDECool 6 to cool the hall sufficiently, while preserving the aesthetics of the building. The Association accepted the proposal and installed IDECool 4 & 6 to maintain cool and comfortable conditions in the banquet hall throughout the year.



Result

The IDECool machines maintain a temperature difference of 10-15 °C between the external and internal temperatures, as well as low moisture, thus ensuring cool and comfortable conditions in the showroom throughout the year. An added benefit is that the IDECool machines have reduced the amount of dust entering the showroom.

Area cooled	9,000 ft ²
Application	Heritage banquet hall cooling
Number of machines installed	Eight IDECool 6 (8×6,000 CFM*) and one IDECool 4 (4,000 CFM*)
Machine capacity	6,000 CFM and 4,000 CFM
Temperature outside the hall	41 °C
Temperature inside the hall	25 °C

*Cubic Feet per Minute

The IDECool machines provide fresh air cooling to guests inside the banquet hall throughout the year. These machines have made it possible to maintain a temperature of 27-28 °C in summer and 30-32 °C during the monsoon, inside the hall.

The Indo-British Association is delighted with the performance of the IDECool. HMX took up a challenging project and provided a smart, effective, and affordable solution. Eventually, Indo-British Association turned out to be one of HMX's showpiece installation, and a testimony to IDECool's engineering excellence.

The IDECool is a standardised product, using HMX's renowned DAMA technology. HMX is a world leader in Indirect Direct Evaporative Cooling and has the world's largest installed base of more than 40 million CFM.