

Case Study

Willingdon Sports Club makes its kitchen comfortable for workers – thanks to HMX-IDEC

Background

Willingdon Sports Club is one of the most prestigious clubs in Mumbai. It is one of the oldest and most well-known clubs in India which was founded in 1918 by Lord Willingdon, the then Governor of Bombay. Its members constitute the crème-de-la-crème of Mumbai society.

Challenges

People working in the kitchen of the club faced a lot of discomfort due to the generation of a high amount of heat and lack of fresh air. The hot and humid summer of Mumbai further added to their woes. The different sections inside the kitchen affected by this were the Bakery, Indian Cooking, and Chinese Cooking. The ventilation fans installed inside the kitchen area failed to provide any relief, which forced the management to look for other options to provide comfortable working conditions.

Solution

A HVAC consultancy firm, Surekha Consultancy Services, was roped in by the management to suggest an effective solution. Unicorp identified that Indirect Direct Evaporative Cooling (IDEC) was the best solution for this application as it provides 100% fresh, clean and cool air to the affected areas. The fact that an IDEC system would add 40% less moisture in the air compared to a conventional air cooling system tilted the scales in its favour. As per their recommendation, HMX was requested to visit the site and work out the air quantities required to provide a comfortable working environment. On the basis of the heat load calculation, it was decided that three HMX-IDEC of the following capacities would be installed:

1. Bakery area: 3000 CFM
2. Chinese cooking area: 9000 CFM
3. Indian cooking area: 17000 CFM



HMX-IDEC

Result

The three IDEC systems were commissioned in February, 2015. Temperature readings were taken inside all the three sections of the kitchen, which showed that the IDEC was able to maintain temperatures in the range of 26-28°C during the hottest times of the day.

Temperatures recorded at site on 27th April, 2015

HMX-IDEC 3000 CFM capacity

Sr. No.	Time	Ambient		Room	
		DBT (°C)	WBT (°C)	DBT (°C)	WBT (°C)
1	11.30 am	34.0	27.0	26.5	25.5
2	02.00 pm	34.0	27.5	28.5	27.0

HMX-IDEC 9000 CFM capacity

Sr. No.	Time	Ambient		Room	
		DBT (°C)	WBT (°C)	DBT (°C)	WBT (°C)
1	11.55 am	33.5	27.5	28.0	26.5
2	02.30 pm	34.0	27.5	28.0	26.5

HMX-IDEC 17000 CFM capacity

Sr. No.	Time	Ambient		Room	
		DBT (°C)	WBT (°C)	DBT (°C)	WBT (°C)
1	11.45 am	33.5	27.5	28.0	26.5
2	02.00 pm	34.0	27.5	28.5	27.0

“ Mr Farukh Sheikh - Project Manager, Surekha Consultancy Services and the club management have expressed their satisfaction on the performance of the three HMX-IDEC. They are now looking forward to the demanding months of the summer when cooling units will provide maximum benefits to the kitchen staff. ”