

Case Study

IDECool keeps Haldiram's kitchen cool

Background

Haldiram's, founded in 1937, is a major Indian sweets and snacks manufacturer headquartered in Nagpur, Maharashtra, India. The company has manufacturing plants in Nagpur, New Delhi, Kolkata and Bikaner. Haldiram's has its own chain of retail stores and a range of restaurants in Nagpur, Kolkata, Patna, Lucknow, Noida, and Delhi. Today, Haldiram's products are exported to several countries worldwide, including Sri Lanka, the United Kingdom, United States, Canada, United Arab Emirates, Australia, New Zealand, Japan, Thailand and others.

Challenges

Nagpur is one of the hottest cities in India, with summer temperatures reaching 45°C. The kitchen that made halwa, a traditional dessert or confection, in one of Haldiram's manufacturing plants in Nagpur was facing a serious issue of high indoor temperatures due to the large cooking burners in it. The problem was further aggravated during the summer due to the high ambient temperatures. The intense heat inside the kitchen made it very uncomfortable for the workers in the kitchen, affecting their morale and productivity.

Solution

Considering the hot and dry Nagpur weather, the management identified HMX's Indirect Direct Evaporative Cooling (IDEC) systems as the most suitable solution for providing comfort to the workers. IDEC systems provide better cooling with low moisture addition as compared to conventional air-coolers and at the same time consume lower power as compared to air-conditioners. As IDEC units are 100% fresh air units, they also maintain high air quality in the kitchen.



Result

Based on calculations, HMX installed two IDECool 6 units to maintain cool and comfortable conditions in the kitchen throughout the year.

Area cooled	1700 ft ²
Number of machines installed	Two IDECool 6
Machine capacity	6000 CFM* (each)
Temperature outside the kitchen	42°C to 45°C
Temperature inside the kitchen	28°C to 32°C

**Cubic Feet per Minute*

Thus, the IDECool machines are able to maintain a lower temperature by 10-15°C as compared to external temperature.

Benefits

HMX's IDECool provides fresh air cooling and comfortable working conditions inside the kitchen year round, with low opex. The IDECool has been maintaining a temperature of 28-30°C in summer and 30-32°C during the monsoon.

Conclusion

The customer is delighted and happy with the performance of the IDECool machines. HMX took up a challenging project and provided a smart, effective, and affordable solution.

IDECool 6 is a standardised product of the HMX range, incorporating HMX's patented 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.

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