

Case Study

Volkswagen relies on HMX for its cooling needs

Background

One of the easiest ways to improve the productivity and efficiency of a team is to provide a healthy and comfortable work environment to its employees. Volkswagen understands this and hence for its sprawling plant at Chakan, Pune, it opted for a system that apart from cooling maintains a very high indoor air quality.

Volkswagen AG is a German car manufacturer headquartered in Wolfsburg, Lower Saxony, Germany. Established in 1937, it is now the second-largest automaker in the world. The Volkswagen plant near Pune has a production capacity of 130,000 vehicles, and is the only production plant operated by a German automaker in India.

Challenges

To provide comfort to its 3,500 employees working at its Chakan facility that occupies a total area of over 2.3 million square metres (575 acres), with buildings covering about 1,15,000 square metres.

Solution

Since the primary focus was to have comfort cooling without any moisture addition and that too at lower CAPEX and OPEX, Volkswagen ruled out the use of air-washers, ventilation and central air conditioning systems. After careful evaluation, Volkswagen zeroed on HMX's indirect evaporative cooling solutions.

Based on detailed study of the entire plant, HMX proposed the use of HMX-IEC. Based on indirect evaporative cooling, HMX-IEC supplies 100% fresh clean cool air without humidifying the conditioned air and without the use of any refrigerants. Since Volkswagen already had some dry ventilation systems in place, some of these were retrofitted with HMX-IEC.

In the solvent store, HMX provided IEC and cooling coil in one single unit which works in 100% fresh air once through modes (IEC mode and cooling coil mode). The modes shift automatically according to the set requirements and ambient conditions.



HMX-IEC



HMX-IEC

Given below are the details of the systems installed by HMX at Volkswagen:

Sr. No.	Area covered	HMX solution	CFM/machine	Quantity	Total CFM
1	Body Shop	HMX-IEC (retrofit)	47000	16	752,000
2	Assembly Shop	HMX-IEC (retrofit)	44000	19	836,000
3	Paint Shop	HMX-IEC	60000	1	60,000
4	Assembly shop (CP-8)	HMX-IEC (retrofit)	44000	4	176,000
5	Training Room	HMX-IEC	5000	1	5,000
6	Training facility	HMX-IEC	14000	1	14,000
7	Pilot hall	HMX-IEC (retrofit)	30000	2	60,000
8	Central kitchen	HMX-IEC	25000	1	25,000
		HMX-IEC	22000	2	44,000
9	Paint shop	HMX-IEC	40000	1	40,000
		HMX-IEC	29000	2	58,000
10	Solvent store	HMX-DMA (hybrid)	7000	1	7,000
11	Finish line - I & II	HMX-IEC	44000	2	88,000
12	R&D center (office area)	HMX-IEC	44000	1	44,000
13	Engine shop	HMX-IEC	44000	2	88,000
			Total	56	2,297,000

To its complete satisfaction, Volkswagen could enjoy the following benefits with HMX's IEC technology:

- No moisture addition in the supplied air
- Comfortable working temperatures both for people and process
- Low total cost of ownership in comparison to air-conditioning systems
- Eco-friendly cooling without the use of any refrigerants with HMX-IEC
- Hybrid system in solvent store for optimum cooling in all seasons

Result

Volkswagen is quite happy with the performance of the 56 HMX units installed so far, that pump in close to 2,300,000 CFM of fresh clean cool air. HMX's commitment to customer satisfaction and its dedication to deliver the best every time has resulted in a long term collaborative partnership with Volkswagen. The company trusts HMX for all its cooling needs.