

## Volkswagen relies on HMX for its cooling needs

### Background

One of the easiest ways to improve the productivity and efficiency of a factory is to provide a healthy and comfortable work environment to the team working there. 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 3,500 employees working at the Volkswagen Chakan facility that occupies a total area of over 2.3 million square metres (575 acres), with buildings covering about 115,000 square metres.

### Solution

Volkswagen wanted to provide comfort and high indoor air quality to its team without any moisture addition since that might influence their manufacturing process. These requirements, together with the need to have the lowest life cycle cost with optimum capex and opex, meant that Volkswagen ruled out the use of air-washers, ventilation and central air conditioning systems. After careful evaluation, Volkswagen zeroed in on HMX's indirect evaporative cooling (IEC) solutions.

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

In the solvent store, HMX provided IEC and cooling coil in a single unit which provides 100% fresh air in its 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)	47,000	16	752,000
2	Assembly Shop	HMX-IEC (retrofit)	44,000	19	836,000
3	Paint Shop	HMX-IEC	60,000	1	60,000
4	Assembly shop (CP-8)	HMX-IEC (retrofit)	44,000	4	176,000
5	Training Room	HMX-IEC	5,000	1	5,000
6	Training facility	HMX-IEC	14,000	1	14,000
7	Pilot hall	HMX-IEC (retrofit)	30,000	2	60,000
8	Central kitchen	HMX-IEC	25,000	1	25,000
		HMX-IEC	22,000	2	44,000
9	Paint shop	HMX-IEC	40,000	1	40,000
		HMX-IEC	29,000	2	58,000
10	Solvent store	HMX-DMA (hybrid)	7,000	1	7,000
11	Finish line - I & II	HMX-IEC	44,000	2	88,000
12	R&D center (office area)	HMX-IEC	44,000	1	44,000
13	Engine shop	HMX-IEC	44,000	2	88,000
			<b>Total</b>	<b>56</b>	<b>2,297,000</b>

Volkswagen enjoys 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 fully satisfied with the performance of the 56 HMX units installed so far, that pump in close to 2,300,000 CFM of fresh, clean and cool air. HMX's 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.