

## HMX-PCU

**Fresh air pre-cooling unit PCU**

Eco-friendly

Increased energy savings

Highly efficient



**SO FAR...**

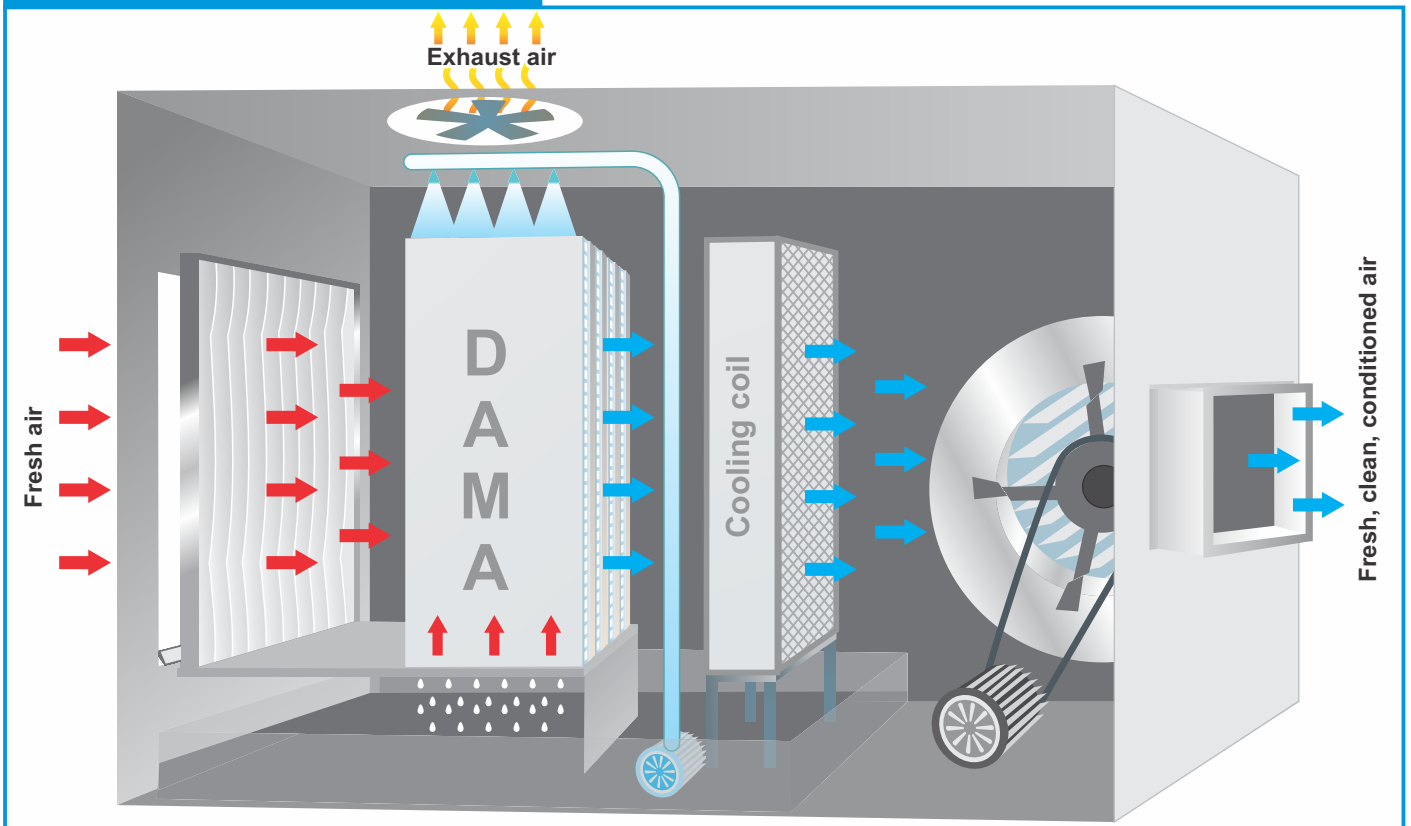
**A total installed base of over  
35,000,000 CFM of HMX products**

## HMX-PCU

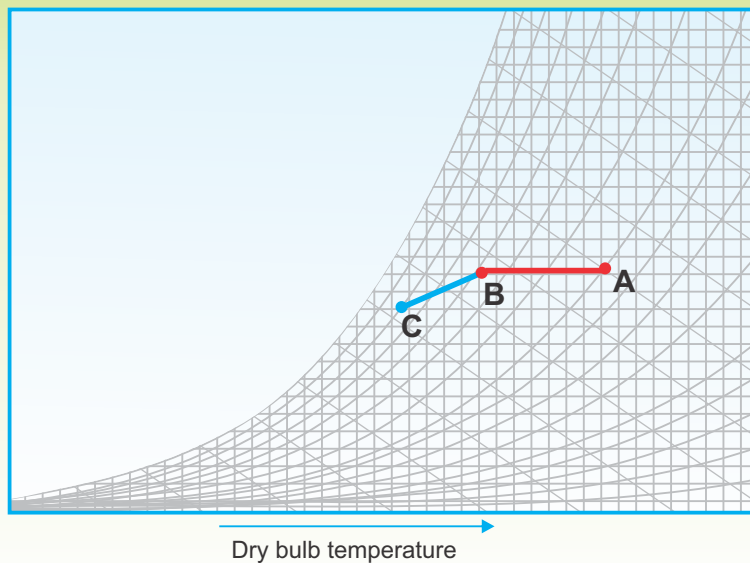
The HMX-PCU supplies filtered and conditioned fresh air into designated areas. The HMX-PCU can be deployed in conjunction with AHUs installed in commercial spaces such as hotels, hospitals, offices, auditoriums, malls, multiplexes, etc. The HMX-PCU can also be used in industries such as pharma, food, beverages, automobile, etc., for once-through applications.

At the heart of the HMX-PCU is DAMA, a patented sensible heat exchanger. DAMA stands for “Dry Air MoistAir”—a cross flow plate type sensible heat exchanger built out of an engineering polymer. **DAMA is type-tested in internal laboratory which is built as per ASHRAE standards, witnessed and verified by UL.** Supply air on one side is cooled by a secondary stream of air that flows in alternating moist channels. The vaporising mass of water in the secondary stream enables cooling of the supply air without any water addition to the cooled air.

### Principle of operation



### Schematic psychrometric representation



- A = Ambient air
- B = DAMA outlet
- C = PCU outlet

## HMX-PCU series

MODEL		PCU-F 2000	PCU-F 3000	PCU-F 5000	PCU-F 7000	PCU-F 10000	PCU-F 15000	PCU-F 20000	PCU-F 25000	PCU-F 30000
<b>Operating details</b>										
Nominal air flow	CFM	2000	3000	5000	7000	10000	15000	20000	25000	30000
External static pressure	mm of wg	5	5	5	10	10	15	15	15	15
<b>Performance details</b>										
Cooling capacity	TR	Please refer Table 1: for city-wise cooling capacity								
<b>Power resource details</b>										
Power supply details		1ph, 50Hz, 240V			3ph, 50Hz, 415V					
Total connected load	W	1560	1580	3700	5500	7500	10750	11450	16750	22750
Total power consumed	W	1160	1500	2440	3980	6200	8560	10580	15010	17320
Water consumption (standard conditions)	l/h	10	15	25	35	50	75	100	125	150
<b>Physical / constructional details</b>										
Unit size (WxDxH)	mm	1100x3100x1400	1100x3200x1500	1300x3300x2050	1400x3500x2350	2000x4050x2350	2300x4650x2750	2300x4900x3100	2900x5100x3100	3000x5100x3400
Unit weight	kg	472	566	614	1001	1362	1923	2619	3332	3610
Operating weight	kg	708	849	1053	1567	2096	2404	3274	4165	4513
Casing	Aluminium profile with PUF-filled double skin panels; inner-GI & outer pre-coated white colour									
Tank assembly	SS - 304									
Piping connection	Incoming water & drain - 1" external thread									
Fan details	Centrifugal fan, backward curve									

(Design specifications and technical characteristics are subject to change without prior notice)

## Energy efficient fresh air cooling

**Table-1: HMX-PCU city-wise cooling capacity**

HMX-PCU tonnage savings chart ambient design condition (ISHRAE 1997) standard HMX-PCU with 1000 CFM (1700 CMH) of fresh air supply

City	REGULAR TFA CAPACITY (TR)		HMX-PCU CAPACITY (TR)		COMPRESSOR CAPACITY SAVINGS (TR)	
	summer	monsoon	summer	monsoon	summer	monsoon
Ambala	3.6	5.3	1.4	4.4	2.3	0.9
Ahmedabad	4.0	6.5	1.7	6.1	2.3	0.3
Bangalore	4.8	4.9	3.7	4.7	1.1	0.2
Bhopal	3.6	6.7	1.2	6.4	2.4	0.4
Chennai	6.0	5.3	4.7	5.1	1.3	0.1
Dehradun	4.0	5.6	1.8	5.1	2.2	0.5
Hyderabad	5.0	5.9	2.9	5.7	2.0	0.2
Indore	3.7	6.4	1.5	6.0	2.2	0.4
Jaipur	4.0	4.6	1.4	3.5	2.5	1.1
Kolkata	6.0	6.4	4.9	6.1	1.1	0.3
Lucknow	4.8	6.5	2.7	5.8	2.1	0.6
Mangalore	6.0	6.1	5.2	5.9	0.9	0.1
Mumbai	6.4	6.1	5.7	5.9	0.7	0.1
New Delhi	4.0	6.5	1.4	5.8	2.5	0.7
Nagpur	4.1	5.8	1.5	5.6	2.6	0.2
Pune	3.5	5.1	1.4	4.9	2.1	0.2
Patna	4.4	6.5	2.2	6.1	2.2	0.3
Panaji	6.1	5.7	5.7	5.5	0.4	0.1
Ranchi	6.4	4.8	5.2	4.5	1.2	0.2
Raipur	4.0	6.6	1.6	6.2	2.4	0.4
Thiruvananthapuram	5.2	5.3	4.5	5.0	0.7	0.2
Visakhapatnam	6.0	6.1	5.6	5.8	0.4	0.3

Calculation done for machine outlet condition at 19°C, 90% RH

HMX, a business unit of A.T.E., designs and manufactures unique, energy-efficient, and eco-friendly products for space and process cooling for the industrial and commercial sectors, using its patented and highly successful DAMA technology. The product range includes the HMX-Ambiator, and the fresh air pre-cooling unit, HMX-PCU. With a total installed base of over 22 million CFM all over India, HMX is making fast strides in providing eco-friendly cooling solutions for people and process comfort.

### RECOGNITION



## Markets Served



Hotels/Resorts



Hospitals/OPDs



Factories



Auditoriums/Halls/  
Multiplexes



Malls/Commercial  
Complexes



Gymnasiums



Offices



Sport Complexes

## Our Clientele\*



\*For different projects; all logos & TM belong to respective companies.

## Our Other Product



### HMX-Ambiator

The HMX-Ambiator is a two-stage evaporative cooling solution, which is an excellent upgrade over air washers & normal ventilation systems, as well as an energy efficient alternative to conventional air-conditioners.

**HMX**

#### Manufactured by:

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