ate Group

HMX
COOLING & HEATING

IDECool

Two Stage Evaporative Air-Cooling

Breakthrough technology – comfort and health with air cooling products

Our cooling solutions are proven in...

Small and medium factories

Gymnasiums

Warehouses

Villas

Schools

Showrooms

Kitchens

Open air restaurants

Banquet halls

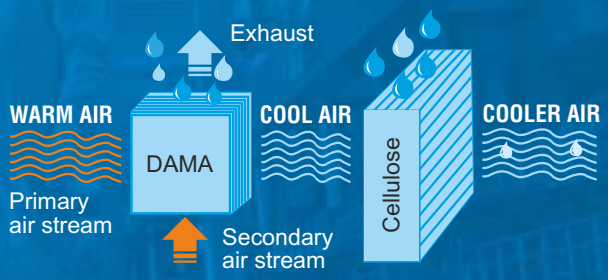
Temples

...and many more.

Two Stage Evaporative Air Cooling

Balancing the need for comfort and health with the cost of providing these has always been a challenge. Air conditioning delivers the maximum cooling, but consumes a lot of energy and reduces air freshness. Air coolers have also been used for some time, but fail to provide the required cooling to ensure comfort in all seasons.

The HMX-IDECool is an upgrade over conventional air-coolers using HMX's patented Indirect Direct Evaporative Cooling technology (also known as two-stage evaporative air cooling). This cooling solution consumes considerably less power than air-conditioners and provides better comfort than ducted evaporative coolers, bringing evaporative air cooling technology a step closer to air-conditioning.



How the IDECool scores over Ducted Evaporative Air Coolers (DEAC)

Up to 5°C better cooling

42°C ambient temperature

DEAC → 25.4°C

IDECool → 20.3°C

Up to 60% less moisture

11.35 g/kg moisture content in ambient air

DEAC → 18.23 g/kg

IDECool → 14.25 g/kg

The result: advantage user

- 40% less air quantity required to cool the same space
- 40% reduction in ducting volume
- Considerably lesser moisture addition leading to enhanced comfort levels and water savings
- Optimal power consumption

General Advantages

- Consumes considerably less power than air-conditioners
- Save as you cool
- 100% fresh, clean, cool air
- Blow through design
- Ease of operation and maintenance
- Wired remote control
- Patented technology
- Proven track record

IDECool 6 v1.1(O)

- Three modes of operation
- Smooth starting and no inrush current
- Single phase power supply
- Variable-speed blower for high savings

Technical specifications

Description	Unit	IDECool 6 V1.1(O)
Air flow machine outlet	CFM/CMH	6000/10140
Area cooled	sq. ft.	1000 - 1200
Construction	-	Single skin CRCA powder coated body panels
Tank material	-	Non-corrosive
Colour	-	Off-white
Available external static pressure	mm of Wg	10
Type of blower	-	Backward curve belt driven fan
Motor	-	EEF2/IE2 motor
Blower motor consumption load	kW	2.1
Blower speed	-	Variable-speed blower
Filtration	-	HDPE mesh of 60 microns behind the louvers
Pump	-	2 submersible, 50 W single phase pumps
Dimensions W x L x H	mm	1200 x 2200 x (1800+150***)
Unit operating weight	kg	500
Power supply	-	Single phase power supply
Mode of operation	-	Three modes of operation – ventilation, IEC*, IDEC**

*Indirect Evaporative Cooling
**Indirect Direct Evaporative Cooling
*** 150 mm is the height of the secondary air outlet

Models available

- **IDECool 6 V1.1(O)***
- **IDECool 15****
- **IDECool 25*****

** Can cool 1200-1500 square feet*
*** Can cool up to 3000 square feet*
**** Can cool up to 5000 square feet*

IDECool 15 & 25

Double skin panel

10 micron filtration

Compact design

Technical specifications

Description	IDECool 15	IDECool 25
Type	Blow through design	
AHU box construction	25 mm thick double skin puff panels with extruded aluminium hollow profiles for structural support	
Type of blower	Backward curve DIDW, dynamically balanced	
Make	Nicotra	
Air flow machine outlet - in CFM/CMH	15000/25500	25000/42500
Make of motor	CG/Rotomotive	
Blower motor specifications	IE2, TEFC 4P, Class F insulation, S1 continuous duty, IP55 protection	
Type of drive	V-belt drive 2SPB	
Make of sensible heat exchanger	HMX-DAMA	
Material of adiabatic heat exchanger/make	Treated and impregnated special cellulose material of 100 mm thick, Eco cool/equivalent	
Type/size of filters	Panel filter of 90% efficiency down to 10 microns/610 x 610 x 50	
Number of filters	12	16
Recirculating pumps	2 submersible, 260 W single phase pumps	
Air inlet louvers	Pre-punched louvers made of GI precoated sheets	
Dimensions W x D x H (mm)	2150 x 3700 x (2225 + 150*)	2850 x 4500 x 2800
Starter panel (outdoor type)	Body mounted starter panel with all ON/OFF/trip indications; it will work both in upto and manual mode	
Remote control box	Remote box with 30 m cable length, with ON/OFF switch and indications for low water level, blower, and pump trip	
Total power consumption in kW	9	13.2
Connected load in kW	10.5	17

** 150 mm is the height of the secondary air outlet*

Outlet temperature chart

The reduction in temperature possible will depend on both the Dry Bulb Temperature (DBT) and prevailing Relative Humidity (RH). The chart below indicates the temperature at machine outlet against various combinations of DBT and RH.

Ambient temperature DBT (°C)	Relative Humidity (RH)								
	10%	20%	30%	35%	40%	45%	50%	55%	60%
	Machine outlet temperature (°C)								
28	7.7	11.2	14.2	15.6	16.9	18.1	19.3	20.4	21.4
30	8.7	12.4	15.6	17.1	18.4	19.7	20.9	22.1	23.2
32	9.6	13.6	17.1	18.6	20.0	21.4	22.6	23.8	24.9
34	10.6	14.9	18.5	20.1	21.6	23.0	24.3	25.5	26.7
36	11.5	16.1	19.9	21.6	23.2	24.6	26.0	27.3	28.5
38	12.5	17.4	21.4	23.1	24.8	26.3	27.7	29.0	30.3
40	13.4	18.6	22.9	24.7	26.4	28.0	29.4	30.8	32.1
42	14.4	19.9	24.3	26.2	28.0	29.6	31.1	32.5	33.9
44	15.4	21.2	25.8	27.8	29.6	31.3	32.9	NA	NA
46	16.4	22.5	27.3	29.4	31.3	33.0	34.6	NA	NA
48	17.4	23.8	28.8	31.0	32.9	34.7	36.3	NA	NA

About HMX

HMX is a business unit of the 80 years old A.T.E. Group. HMX has been in the business of providing eco-friendly cooling solutions based on Indirect Evaporative Cooling (IEC) since 1998 and it designs and manufactures innovative, next generation products for space and process cooling.

At the heart of every HMX product is DAMA - HMX's proprietary, patented cross flow plate type sensible heat exchanger optimally designed for efficient cooling.

HMX's commitment to quality is unequivocal: it is certified under ISO 9001:2015 for all its processes, and its manufacturing practices ensure that HMX's products are of high quality and meet specific customer requirements and industry standards.

partnering people & the planet

HMX COOLING & HEATING

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