ate Group

HMX
COOLING & HEATING

IDECool

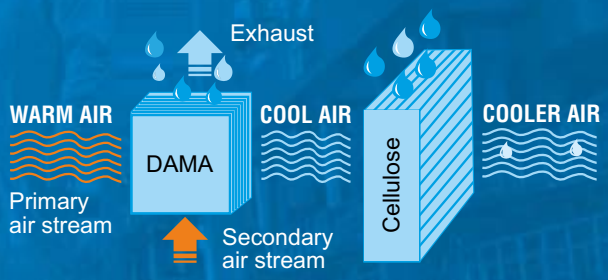
Two Stage Evaporative Air-Cooling

Breakthrough technology – comfort and health with air cooling products

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
- 100% fresh, clean, cool air
- Three modes of operation
- Blow through design
- Ease of operation and maintenance
- Wired remote control
- Patented technology
- Proven track record

IDECool 6 v1.1(O)

- Smooth starting and no inrush current
- Variable-speed blower for high saving

Technical specifications

Description	IDECool 6
Type	Blow through design
AHU box construction	Single skin pre coated GI
Supply configuration	Modular
Type of blower	Backward curved DIDW, dynamically balanced
Make	Kruger
Air flow machine outlet (CFM/CMH)	6000/10140
Make of motor	Rotomotive
Blower motor specifications	EEF2/IE2 motor
Type of drive	V-Belt drive 2SPA
Total power consumption (kW)	2.1
Power supply required	Single phase
Blower speed	Variable speed
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
Make/type/size of filters	60 microns mesh
Number of filters	3
Recirculating pumps	2 submersible, 60 W single phase pumps
Dimensions W x D x H (mm)	1200 x 2200 x (1800 + 150*)
Operating weight (kg)	500
Modes of operation	Three modes of operation - ventilation, IEC, IDEC

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

Models available

- IDECool 6 V1.1(O)*
- IDECool 10**
- IDECool 15***
- IDECool 25****

* Can cool 1200-1500 square feet
** Can cool up to 2000 square feet
*** Can cool up to 3000 square feet
**** Can cool up to 5000 square feet

IDECool 10, 15 & 25

- Double skin panel
- 10 micron filtration
- Compact design

Technical specifications

Description	IDECool 10	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		
Supply configuration	Semi knocked down	Completely knocked down	
Type of blower	Backward curved DIDW, dynamically balanced		
Make	Nicotra		
Air flow machine outlet (CFM/CMH)	10000/17000	15000/25500	25000/42500
Make of motor	Rotomotive		
Blower motor specifications	IE2, TEFC 4P, Class F insulation, S1 continuous duty, IP55 protection		
Type of drive	V-belt drive 2SPB		
Total power consumption (kW)	5.5	9	13.2
Power supply required	Three phase		
Blower speed	Single speed		
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		
Make/type/size of filters	Panel filter of 90% efficiency down to 10 microns/610 x 610 x 50		
Number of filters	8	9	16
Recirculating pumps	2 submersible, 260 W single phase pumps		
Dimensions W x D x H (mm)	1850 x 3200 x (1800 + 150)	2150 x 3700 x (2225 + 150*)	2850 x 4500 x 2800
Operating weight (kg)	2100	2700	3300
Modes of operation	Three modes of operation - ventilation, IEC, IDEC		

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

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.

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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