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Green AIR CONDITIONING

REVOLUTIONARY COOLING AND REFRIGERATION
SOLUTION FOR A HEALTHY FUTURE



E C O L A T E R EVAPORATIVE COOLER

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شركة مصنع ويندماسون العربية للصناعة
WINDMASON ARABIA for industry

APPLICATIONS :



ISO 9001:2015 CE Windmason Arabia Co. ,Certified



BABOUT

The ECOLATER Evaporative Cooler is a 2-stage cooling system designed for commercial and industrial use.

1st stage, it employs a heat exchanger with installed cooling pads to cool the incoming air.

2nd stage, known as the cooling tower side, further decreases the air temperature by cooling the water used in the evaporation process, enhancing overall cooling efficiency.

Compared to ordinary desert coolers, the ECOLATER Evaporative Cooler is significantly more efficient and less humid.

It offers a remarkable 85% electricity savings and reduces water consumption by up to 70%. The cooling pads of the ECOLATER Evaporative Cooler have double the lifespan of conventional pads, contributing to cost savings and reduced maintenance requirements.

This advanced evaporative cooler is capable of achieving substantial cooling, with temperatures decreasing by less than 20°C. Additionally, it features dust washable aluminum filters for the supply of 100% fresh air, ensuring a clean and healthy indoor environment.

The use of a coil heat exchanger enables the reduction of humidity and water consumption while maintaining excellent cooling performance.

Moreover, the ECOLATER Evaporative Cooler is equipped with WIFI thermostat control, providing users

with convenient and flexible management of the cooling system. This technological feature adds an extra layer of convenience for monitoring and adjusting the cooling process.

In summary, the ECOLATER Evaporative Cooler represents a significant advancement in cooling technology, offering remarkable energy and water savings, extended cooling pad lifespan, efficient humidity control, and user-friendly WIFI thermostat control. These features make it a compelling choice for businesses seeking a high-performance and cost-effective cooling solution for their commercial or industrial spaces.



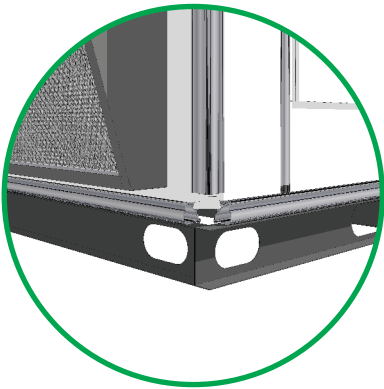
**COMMERCIAL AND INDUSTRIAL
COOLING SOLUTIONS**

MAJOR COMPONENTS



COOLING, HEAT EXCHANGER COIL

A choice of copper, PU coated, stainless steel, aluminum and aluminum magnesium (AlMg) finned coils are available, whilst the tubing and frame material can vary. The coils are generally copper tubes mechanically bonded to aluminum fins, with copper headers, all contained within a galvanized, aluminum or stainless steel frame. All coils are provided with drain connections and air vents. The tube wall thickness and the test pressures are determined based on the fluid passing through the coil. The cooling coil assembly is fitted on a stainless steel drain pan for condensate removal.



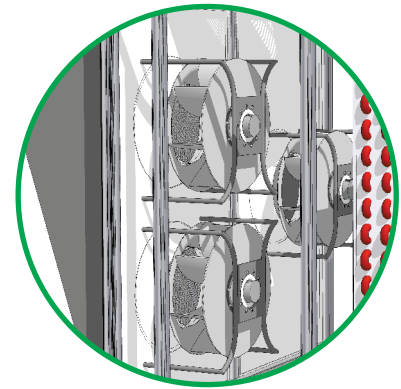
UNIT BASE

Bases are constructed using galvanized steel or stainless steel sheet metal profiles or heavy duty structural steel sections, either painted or hot dip galvanized.



CASING

Body structure are constructed using Aluminum profile with 30mm double skin sandwich panel metal profiles.



AIR SUPPLY FAN

The fans are EC (Electronically Commutated) Plug Fans, with built-in variable speed capability due to the EC brushless DC motor.

MAJOR COMPONENTS



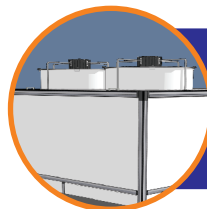
WASHABLE ALUMINUM FILTER
Aluminum washable air filter 3/4" thickness with frame. Accessible lock, expose face to easily wash it.



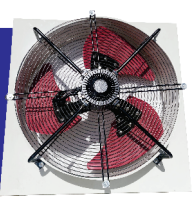

EVAPORATIVE COOLING PADS
Evaporative cooling pads with a thickness of 100mm have been installed in a fiberglass tank with a top that is easily accessible for replacement.




VARIABLE SPEED DC INVERTER
Primary fan motor is controlled by variable speed DC inverter power kits, which sense the load and vary the speed as per demand. This function save power and water with achievement of smooth indoor comfort.

COOLING TOWER FAN
Cooling tower fan motor is controlled by DC inverter power kits, which sense the load and vary the speed as per air flow.



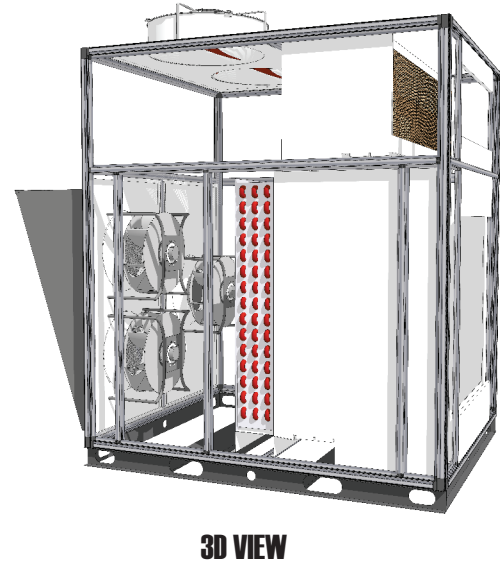
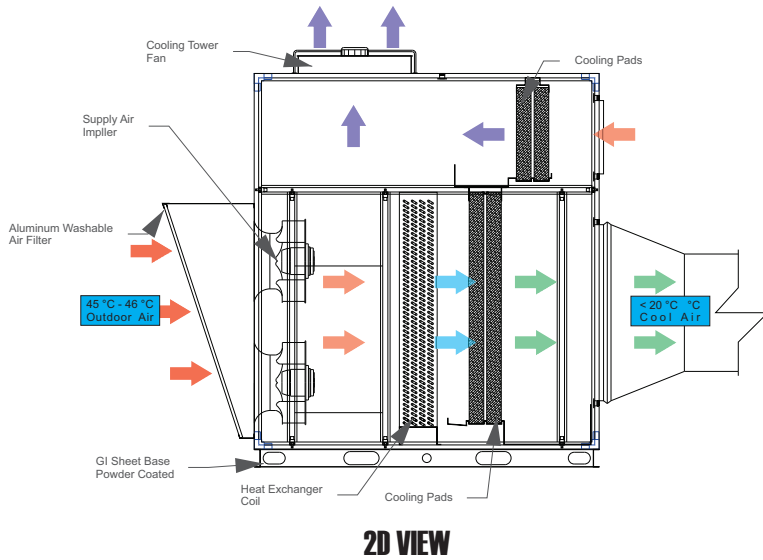
INDOOR COOLING & ENERGY CONSERVATION...



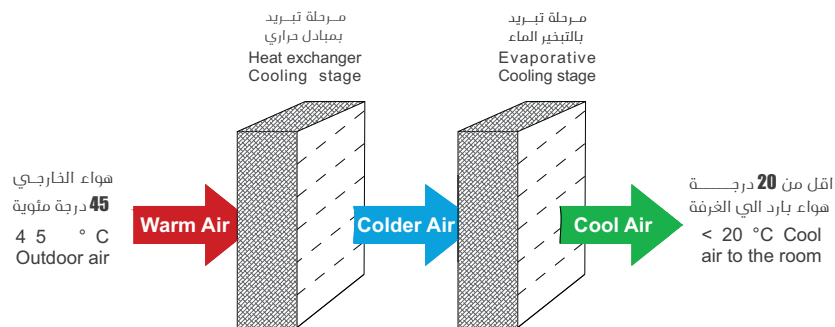


DISTINGUISHING FEATURES

- Best cooling performance up to 100%.
- Fan operates without a belt, running in dry air.
- Equipped with an Aluminum washable air filter.
- Longer lifespan of the cooling pads.
- Variable speed with inverter control.
- Lower water consumption.
- Equipped with a smart thermostatic controller.
- Reduces humidity levels.



WORKING DIAGRAM





TECHNICAL DATA

| FEATURES \ MODELS | IDEC-1HP | IDEC-1.5HP | IDEC-2HP | IDEC-3HP | IDEC-4HP | IDEC-5HP | IDEC-7.5HP | IDEC-10HP | WM-EL-12K-2 |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Air Flow | 2600 CFM | 3500 CFM | 4500 CFM | 5500 CFM | 6500 CFM | 8000 CFM | 12000 CFM | 15000 CFM | 12000 CFM |
| Supply Air Impeller Dia (mm) | D- 500 | D- 500 | D- 500 | D- 500 | D- 560 | D- 560 | D- 560 | D- 560 | D- 560 |
| No. Of Impeller | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 |
| Motor Power (watts) | 1000 | 1000 | 1000 | 1000 | 2500 | 5000 | 5000 | 7500 | 7500 |
| Max Current (Ampere) | 4.2 / 8.0 | 4.2 / 8.1 | 4.2 / 8.2 | 4.2 / 8.3 | 9.0 / 18 | 9.0 / 19 | 9.0 / 20 | 9.0 / 21 | 9.0 / 22 |
| Power Supply (Supply Air Impeller) | 380V/220V-50Hz | 380V/220V-50Hz | 380V/220V-50Hz | 380V/220V-50Hz | 380V/220V-50Hz | 380V/220V-50Hz | 380V/220V-50Hz | 380V/220V-50Hz | 380V/220V-50Hz |
| Cooling Tower Fan Dia (mm) | 615 | 615 | 615 | 615 | 780 | 780 | 780 | 780 | 780 |
| No. Of Fan | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| Motor Power (Kw) | 0.56 | 0.56 | 0.56 | 0.56 | 0.75 | 0.75 | 0.75 | 1.5 | 1.5 |
| Max Current (Ampere) | 2.6 | 2.6 | 2.6 | 2.6 | 3.6 | 3.6 | 3.6 | 7.2 | 7.2 |
| Power Supply (Cooling Tower Fan) | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz |
| Water Pump | 3/4 HP | 3/4 HP | 3/4 HP | 3/4 HP | 2.0 HP | 2.0 HP | 2.0 HP | 2.0 HP | 2.0 HP |
| No. Of Water Pump | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Max Current (Ampere) | 7.0 | 7.0 | 7.0 | 7.0 | 12.0 | 12.0 | 12.0 | 12.0 | 12.0 |
| Power Supply (Cooling Tower Fan) | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz | 220V-60Hz |
| Heat Exchanger Coil | 5 TR | 7.5 TR | 7.5 TR | 7.5 TR | 7.5 TR | 10 TR | 15 TR | 25 TR | 25 TR |
| Cooling Area (m2 Approx) | 85 | 120 | 150 | 190 | 220 | 270 | 400 | 500 | 750 |
| Water Tank Capacity (Ltr) | 45 | 50 | 50 | 85 | 85 | 85 | 120 | 200 | 200 |
| Water consumption (Ltr/Hour) | 19 | 25 | 32 | 39 | 46 | 57 | 86 | 107 | 157 |

Above mentioned CFM of Air Flow is on the free outlet of the unit Esp.

Water consumption is approximately vary with outdoor Air temperature and humidity.

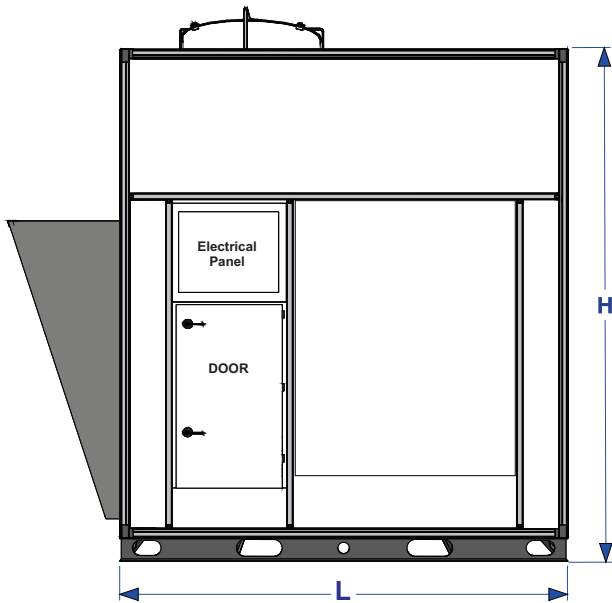


PHYSICAL DIMENTION

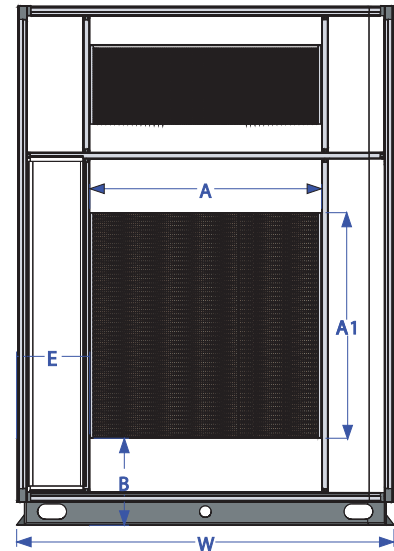
| MODEL | L (mm) | W (mm) | H (mm) | A1 (mm) | A2 (mm) | E (mm) | B (mm) |
|-------------------------|--------|--------|--------|---------|---------|--------|--------|
| IDEC-1HP | 1670 | 1020 | 1220 | 465 | 465 | 277 | 480 |
| IDEC-.1.5HP | 1670 | 1020 | 1220 | 465 | 465 | 277 | 480 |
| IDEC-2HP | 1670 | 1020 | 1305 | 465 | 465 | 277 | 480 |
| IDEC-3HP | 1705 | 1270 | 1285 | 480 | 560 | 355 | 570 |
| IDEC-4HP | 1750 | 1460 | 1515 | 480 | 560 | 450 | 570 |
| IDEC-5HP | 1750 | 1460 | 1515 | 480 | 560 | 450 | 570 |
| IDEC-7HP | 2300 | 2100 | 1780 | 800 | 800 | 650 | 735 |
| IDEC-10HP | 3167 | 1692 | 1700 | 870 | 870 | 1147 | 629 |
| IDEC-15HP (WM-EL-12K-2) | 2350 | 1950 | 2680 | 1200 | 1200 | 375 | 450 |

Note:

Due to continuous development, the dimensions of the units may change, please contact Windmason before considering the physical dimensions in your project designs.



SIDE VIEW



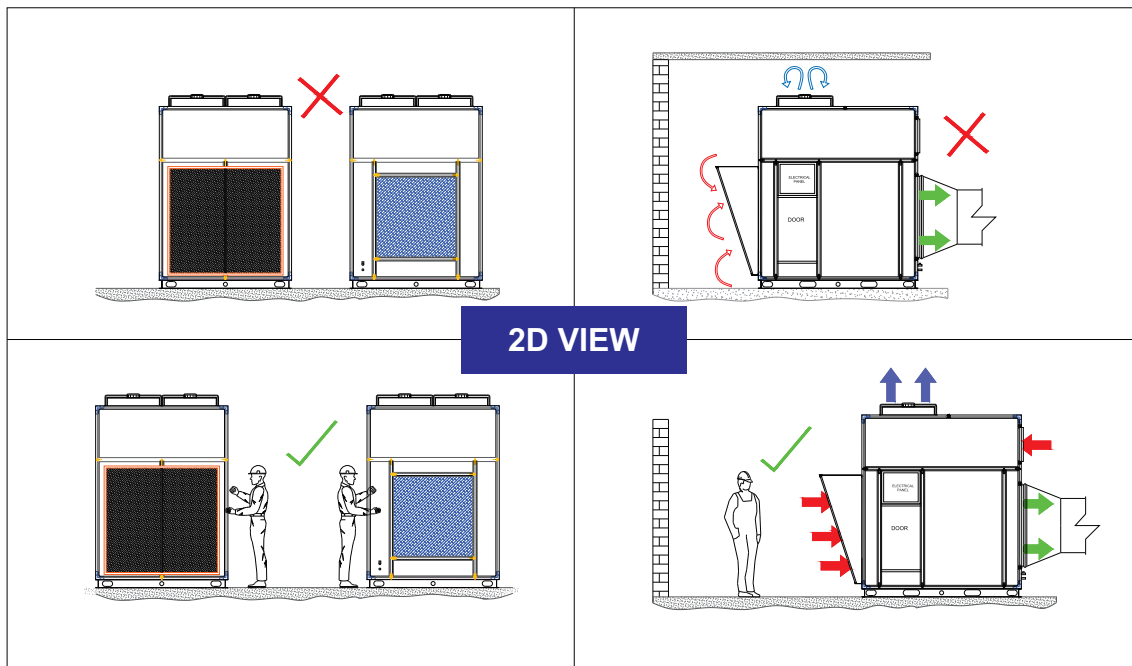
FRONT VIEW



1. LOCATION

The Ecolater cooler should be installed on a solid floor, to avoid resonance, vibration and noise. The unit should be located in an open area, with sufficient space - about 2 meters away from any wall to allow for effective air flow.

The location should be free of airborne pollutants - and away from acidic and explosive environments in particular.



2. PRECAUTIONS

Check the nameplate and confirm the power supply is suitable for the unit
Prevent back flow of water vapor or hot wet air Provide drainage around the unit (fall > 0.8%) around the base of the unit to remove any condensate water or minor over spray Comply with all local Electrical and Building Regulations during the installation.

3. PLUMBING

Select a suitable type and size of water pipe to connect the water inlet and outlet Fix the external water pipes properly. Pipes must not be supported by the tower.

4. ELECTRICAL CONNECTION

Standard power supply is $380 \pm 10\%$, 3-Phase, 50 Hz. If this has been customized to your requirements, the details will be indicated on the unit nameplate as well as at the front of the instruction manual.

For further details, please refer to the Electrical Diagram Drawings provided along with the unit.

NOTE

Foundation design is provided for each project.

Commissioning & Operation guides please refer to the service manual of each product.

For further technical support, please contact us.

| | | | |
|---|---|--|---|
|  |  |  |  |
| Al Tazaj Restaurant | Al Romansiah | Best Harvest Trading Co | LSC |
|  |  |  |  |
| Gulf Catering Co | Al Romansiah | Imile Logistic | Multi Brands Trading |
|  |  |  |  |
| RAQAM Company | ADEX Company | IHCC | Al-Watania Plastic |
|  |  |  |  |
| Al-Babain Food | Sahara Mall | Al Jabar Laundry | Al Yusra Fashion |
|  |  |  |  |
| Al rashed Food Group | Dar Al Uloom University | White Crystal For Filling | Packing Product Co. |
|  |  |  |  |
| Awarid Cosmetics Co. | National Water Company | First Class Aviation | Saudi Eraad Defense |
|  |  |  |  |
| Jarir Book Store | Al Karama Food Co | Creation Source Trading | Continental Hotel Riyadh |

| | | | |
|---|---|--|--|
|  مستشفى الرياض riyadh hospital |  برودان Brodan |  Medical Elements العناصر الطبية |  التقدم الطبي Advance Medical |
| Riyadh Hospital | BRODAN Medical Co. | Medical Element Co. | Advance Medical Co. |
|  Panda بندة |  نستو NESTO All that you need. |  العثيم Othaim منكم وفيكم |  Al Adil SQUERMAHETS - FLOUR MILLS - SPICE INDUSTRIES THE HOME OF INDIAN FOODSTUFFS UAE SAHRAIN OMAN SAUDI ARABIA INDIA |
| PANDA Hyper Market | NESTO Hyper Market | OTHAIM Hyper Market | Al Adil Est. Market. |
|  أراك arak |  مصانع طريق الشرق للبلاستيك Al Sharq Read Factories for Plastic |  DELTA PLASTICS PACKAGING SOLUTIONS الدلتا للبلاستيك |  وقت اللياقة FITNESSTIME PRO |
| Arak Plastic Co. | Al Sharq Plastic Co. | Delta Plastic Co. | Fitnesen Time Pro. |
|  PAKISTAN INTERNATIONAL SCHOOL RIYADH رپ ذمسی علمیا DUTY DEVOTION 1963 |  مدارس رياض نجد Riyadh Najed Schools علم لتكوين |  كياؤ الفنية Kayan Technical |  A DEEA MAS-ADEA ARABIA CO. شركة ماس اديا العربية. |
| Pakistan Inter. School. | Riyadh Najed School | KAYAN Tec. Contr. Co. | Mas Adea Co. |
|  AL HADAF Al Hadaf Al Dugayy Constructing & General Maintenance LLC الشعبة القطري للخدمات والمصانة العامة لدموم |  DA DECO ART شركتة ديكو آرت للتجارة والاستثمار For Trading & Investment Co. |  خطوة جمل CAMEL STEP |  Restaurant النار نار |
| Al Hadaf Serv. Co LTD. | Art Decor Co | Camel Step Company | Nar Al -Shawaya Rest. |
|  Methaq Contracting Co. |  PREMIER CONSTRUCTION COMPANY |  Deemah |  السعيد ALSAEED مجموعة محمد السعيد للتجارة والصناعة M. ALSAEED GROUP TRD. INDUST. |
| Methaq contracting Co. | Le Premier Architects | Deemah Food Co. | Al Saeed Indu. Group |

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