

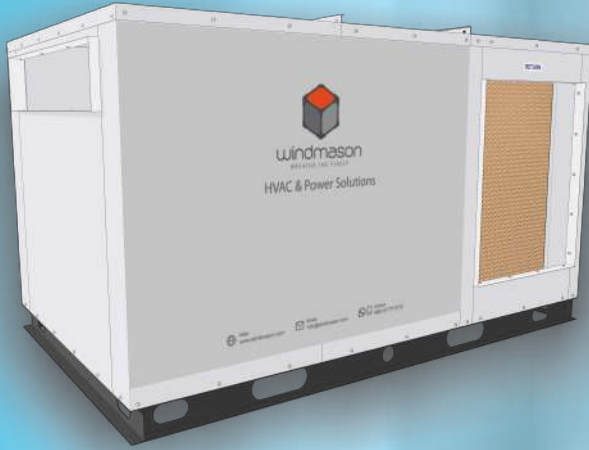


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WINDMASON SMARTCOOL EQUIPMENT  
A TRUSTED BUSINESS PARTNER!

# SMARTCOOL Evaporative Air Cooler

مكيف الذكي  
مكيف صحراوي منطور



شركة مصنع ويندماسون العربية للصناعة  
WINDMASON ARABIA for industry

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## About

### WINDMASON SMART-COOL EVAPORATIVE COOLER

is a two-stage cooling system designed for residential. The first stage uses water evaporation to cool the air, while the second stage uses air-to-air plate heat exchanger to further lower the temperature. This cooler is incredibly energy efficient, saving up to 85% on electricity. It can lower the temperature by less than 20 degrees Celsius without compressor. Plus, it provides 100% fresh, cool air for a healthier environment.

## حول

### ويند ماسون سمارت كول

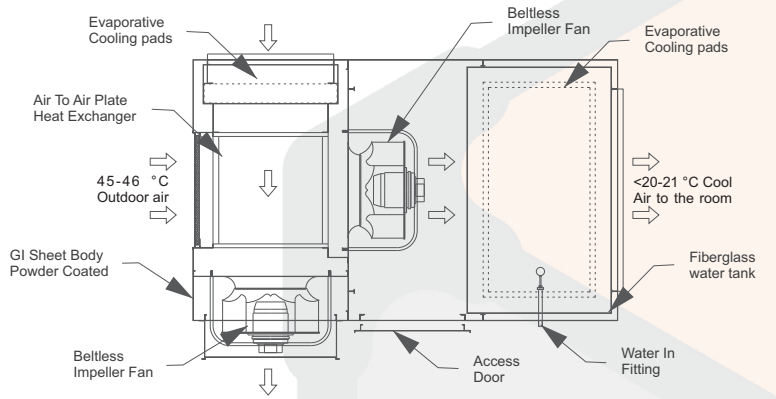
منظومة تبريد ثنائية المرحلة مصممة للمنازل  
نستخدم المرحلة الأولى النبخ لتبريد الهواء، في حين نستخدم المرحلة  
الثانية مبادلات الحرارة الصفائحية الهواء إلى الهواء لتخفيض درجة الحرارة بشكل أكبر  
هذا المبرد فعال للغاية من حيث استهلاك الطاقة، ويوفر حتى ٨٥٪ على الكهرباء  
يمكنه خفض درجة الحرارة إلى أقل من ٢٠ درجة مئوية بدون الحاجة إلى ضاغط  
بالإضافة إلى ذلك، يوفر ١٠٠٪ هواء نقي وبارد لبيئة أكثر صحة



## DISTINGUISHING FEATURES

- \*\* Best cooling performance up to 100%
- \*\* Heat recovery system to save energy in summer and winter.
- \*\* Fan without belt, running in dry air.
- \*\* Air filter.
- \*\* Longer life of the cooling pads.
- \*\* Variable speed, Inverter control.
- \*\* Lower water consumption.
- \*\* Smart thermostatic controller.
- \*\* UV Light for disinfecting the air.
- \*\* Lower humidity.

### 2D VIEWS



## مميزات خاصة

- \*\* أفضل أداء تبريد حتى 100%
- \*\* نظام استرداد الحرارة لتوفير الطاقة في الصيف والشتاء
- \*\* المروحة بدون سير ، تعمل في الهواء الجاف
- \*\* فلتر غبار
- \*\* عمر اطول للوسائط تبريد (كربون )
- \*\* سرعات متعددة انفرتر كونترول
- \*\* استهلاك المياه اقل
- \*\* تحكم ترموستاتي ذكي
- \*\* أشعة فوق البنفسجية لتطهير الهواء
- \*\* رطوبة اقل



### 3D VIEWS

## BASIC CONFIGURATIONS



### **STRUCTURE & CASING**

The standard enclosure is made of the latest type of Highly Corrosion-resistant coated steel sheet with a coating composition consisting of Zn+ Al(11%) + Mg(3%), and a trace amount of silicon, originally imported from Nippon Steel or Posco. The panels are sheared and folded precisely in whole cold machining process, then densely bolted and sealed for water tightness, with sufficient reinforcing bars, preventing deforming during hoisting process in fields. Each tower is completed with maintenance access and doors of maximized size, for internal inspection convenience. Heat exchange section is firmly supported by frame made in stainless steel, or H.D.G steel plated entirely after welding.

### **IMPELLER B4D560-243A-AXM0**

Centrifugal fans (impellers) with reverse-curved blades and an AC motor, with overall dimensions from 500 to 560 mm.  
 Motor: AC asynchronous motor with capacitor;  
 Motor protection: thermal overload protection (TOP);  
 Impeller material: PA66 plastic/galvanized metal/sheet aluminum;  
 Protection class: IP44 / IP54 / IP55;  
 Insulation class: F;  
 Voltage: 230V, 115V, 380V;  
 Working temperature: -40 degrees to +65 degrees;  
 Bearing type: Ball bearing.

### **AIR TO AIR PLATES HEAT EXCHANGER**

The plate heat exchanger consists of a plate stack composed of advantageously circular grooved plates, welded together. The clearances between the plates form flow ducts for flows of a heat-supplying medium and a heat-receiving medium. The plates are provided with holes which form inlet and outlet channels for the flows of the heat transfer media. At least one of the holes on the plates is located substantially in the centre of the plate.

### **EVAPORATIVE COOLING PADS**

Smartcool Evaporative cooling pads work by using the natural process of evaporation to cool the surrounding air. When water is sprayed onto the pads and air is pulled through them, the water evaporates, which cools the air passing through the pads.

Evaporative cooling pads are fixed in the fiberglass tank and a PVC fitting is on top of the Evaporative cooling pads to spray the water.



**COMPARISON WITH OTHER A /C SYSTEMS**
**مقارنة مع أنظمة التكييف الأخرى**

Function / عمل	Smartcool / المكيف الذكي	Desert Cooler / مكيف صحراوي	DX AC/ مكيف فريون
سعة الهواء قدم مكعب Air Flow - CFM	2500	2500	2500 /6.25 TR
سعة التبريد مربع متر Cooling Area m2	80	60	90
هواء خارجي Fresh Air	100 % fresh air	100 % fresh air	No fresh air
رطوبة Humidity	مريحة Comfortable	مرعجة عالي Annoying High	مرعجة جافة Annoying dry
احساس تبريد Human Feeling	صحي Healthy	حار رطب Humid Hot	بارد جاف Dry Cool
استهلاك طاقة كهربائي كل واط Input Power kW	2	1.2	7.5
استهلاك المياه لتر في ساعة Water Consumption L/h	36	50	Not required


**SMARTCOOL  
EVAPORATIVE COOLER**

**DESERT  
COOLER**

**DX PACKAGE  
UNIT**

**FRESH IS THE  
BEST THERAPY**

**WINDMASON** air conditioning technologies continuously developing air conditioning systems to provide healthy, comfortable, low cost, energy saving, environmentally friendly solutions to the humans to serve the humanity and keep nation strong and healthy.

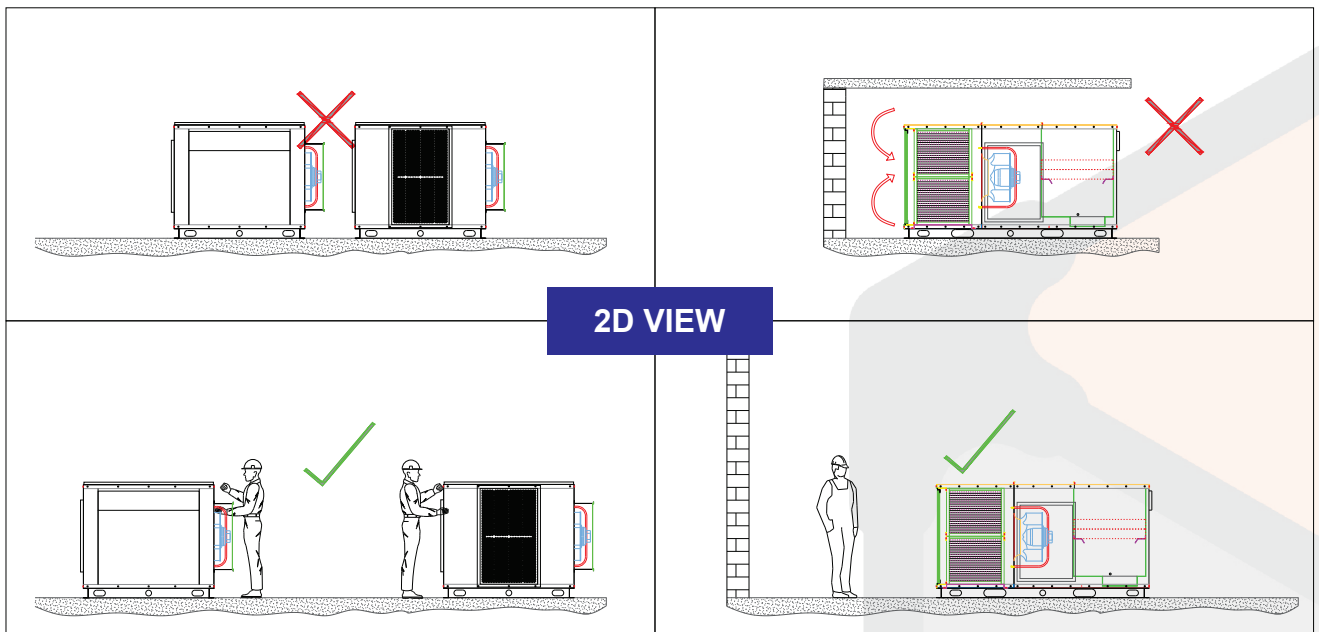
The **SMARTCOOL** is one of the best products after three years of R&D, which provide best ideal solutions to all the problem and overcome the disadvantages of regular desert cooler. We provide the following list which show the problems / disadvantages with solutions.

DISADVANTAGES OF THE REGULAR DESERT COOLE	SMARCOOL ADVANTAGES
Less cooling lower evaporative efficiency up to 80%	Better cooling higher evaporative efficiency up to 100%
Scaling and salt formation quickly	Double life of cooling pads, lower rate of scaling
Bacterial formation and dirty air	UV light bacterial treatment hygienic air.
Winter fresh air not possible	Fresh air with heat recovery for winter
Dusty air, no filter	Cleaner air with washable air filter
High humidity	30-40% Lower humidity
Belt pulley problems	No belt no pulley, direct drive fan
High water consumption	30-40% less water consumption
No cooling in high ambient conditions	Provide cooling even in high ambient conditions
Required relief air openings	Return duct provide relief air
Single speed, proper control not available	Inverter cooling, variable speed, best user control
Acward bad user controller	Touch screen smart user controller
Cannot control remotely	Wifi connectivity can be control and monitor remotely

## 1. LOCATION

The SMARTCOOL 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±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
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Arak Plastic Co.	Al Sharq Plastic Co.	Delta Plastic Co.	Fitnesen Time Pro.
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