



DESERT COOLER

Powerful Cooling. Pure Comfort.

The **Gold Standard**
in Industrial & Commercial Cooling

High-Efficiency Adiabatic Cooling Technology



Long Air Delivery



Honeycomb Cooling Pads



Powerfull Fan & Motor



Dust Net Filter



Large Coverage Area



The Technology

Emitsun Desert Cooler utilizes the principle of adiabatic heat exchange. By forcing high-velocity hot air through saturated high-density media, we achieve significant drop in Dry Bulb temperature.

- **Saturation Efficiency:** Our honeycomb media achieves up to 90% evaporation efficiency, ensuring maximum temperature depression even in peak summer.
- **Psychrometric Advantage:** We optimize the air-to-water contact ratio to ensure cooling without excessive moisture buildup.
- **Heat Absorption:** The phase change of water from liquid to vapor absorbs latent heat from the air, providing a cooling effect that is physically impossible for standard local fans.



1. Air Outlet Grill (Louver)
2. Air Duct/Elbow
3. Top Cover/Upper Housing
4. Fan/Impeller
5. Water Distribution Pipe.
6. Electrical Machine
7. Evaporative Coolingwet Curtain
8. Net/Dust Filter/Dust Screen
9. Air Inlet Grill/Louver
10. Bottom Reservoir
11. Water Outlet

PRODUCT HIGHLIGHTS:

1. Can be installed on the roof, wall or windows.
2. Less than half the price of air cooling.
3. Uses 70–90% less Power than air conditioners.
4. Wet cooling: Door and windows can be kept open while cooling.
5. Filters dust and provides fresh air.
6. Environment friendly, no CFC's, No damage to the Ozone layer.

Technical Details & Model Comparison

Different Models One Objective: **Cooling**

Model
EMD-10.5K

Model
EMD-12K

Model
EMD-18K
(Pro and Standard versions)

Power Input	1.1 KW to 3 KW
Motor	1 HP to 3 HP (Copper Winding)
Airflow	Up to 18,000 m ³ /h
Weight	75kg to 97kg
Tank Capacity	18L to 25L



100% Copper



1.1 KW

Model
EMD-10.5K-B/T/S24



Power Supply	220-240 V, 1 Phase, 50Hz
Power Input (KW)	1.1 Kw
Fan Motor	1 HP, Copper Winding
Fan Type	Axial
Fan Size (Inch)	24 Inch
Control Type	Display Wall Controller and Remote Control
Speed Control	10 Speed
Max Air Flow (m3/h) / CFM	17840 m3/h / 10500 CFM
Air Presssure (Pa)	175 Pa
Dimension of Cooler	40 x 40 x 36 Inch
Dimension of Air Outlet	26 x 26 Inch
Net Weight (± 5kg)	75 Kg
Water Consumption	13 -18 L/h
Water Tank Capacity (L)	18 L
Drain System	Remote-Controlled Automatic Drain Function for Convenient Water Disposal and Maintenance.
Water Inlet	Automatic Float Valve with 1/2" BSP Direct Water Line Connection and Overflow Protection.
Effective Area	100-120 Sqm/1075-1290 Sqft

1.1 KW (PRO)



Model
EMD-10.5K-B/T/S24 Pro

Power Supply	220-240 V, 1 Phase, 50Hz
Power Input (KW)	1.1 Kw
Fan Motor	1 HP, Copper Winding
Fan Type	Axial
Fan Size (Inch)	24 Inch
Control Type	Display Wall Controller and Remote Control
Speed Control	10 Speed
Max Air Flow (m3/h) / CFM	17840 m3/h / 10500 CFM
Air Presssure (Pa)	175 Pa
Dimension of Cooler	40 x 40 x 36 Inch
Dimension of Air Outlet	26 x 26 Inch
Net Weight (± 5kg)	75 Kg
Water Consumption	13 -18 L/h
Water Tank Capacity (L)	18 L
Drain System	Remote-Controlled Automatic Drain Function for Convenient Water Disposal and Maintenance.
Water Inlet	Automatic Float Valve with 1/2" BSP Direct Water Line Connection and Overflow Protection.
Effective Area	100-120 Sqm/1075-1290 Sqft

1.5 KW



Model
EMD-12K-B/T/S24

Power Supply	220-240 V, 1 Phase, 50Hz
Power Input (KW)	1.5 Kw
Fan Motor	1.5 HP, Copper Winding
Fan Type	Axial
Fan Size (Inch)	24 Inch
Control Type	Display Wall Controller and Remote Control
Speed Control	10 Speed
Max Air Flow (m3/h) / CFM	20400 m3/h / 12000 CFM
Air Presssure (Pa)	190 Pa
Dimension of Cooler	40 x 40 x 36 Inch
Dimension of Air Outlet	26 x 26 Inch
Net Weight (± 5kg)	75 Kg
Water Consumption	15 - 20 L/h
Water Tank Capacity (L)	18 L
Drain System	Remote-Controlled Automatic Drain Function for Convenient Water Disposal and Maintenance.
Water Inlet	Automatic Float Valve with 1/2" BSP Direct Water Line Connection and Overflow Protection.
Effective Area	120-150 Sqm/1290-1615 Sqft

1.5 KW (PRO)



Model

EMD-12K-B/T/S24 Pro

Power Supply	220-240 V, 1 Phase, 50Hz
Power Input (KW)	1.5 Kw
Fan Motor	1.5 HP, Copper Winding
Fan Type	Axial
Fan Size (Inch)	24 Inch
Control Type	Display Wall Controller and Remote Control
Speed Control	10 Speed
Max Air Flow (m3/h) / CFM	20400 m3/h / 12000 CFM
Air Presssure (Pa)	190 Pa
Dimension of Cooler	40 x 40 x 47 Inch
Dimension of Air Outlet	26 x 26 Inch
Net Weight (± 5kg)	80 Kg
Water Consumption	15 - 20 L/h
Water Tank Capacity (L)	22 L
Drain System	Remote-Controlled Automatic Drain Function for Convenient Water Disposal and Maintenance.
Water Inlet	Automatic Float Valve with 1/2" BSP Direct Water Line Connection and Overflow Protection.
Effective Area	120-150 Sqm/1290-1615 Sqft

3 KW



Model

EMD-12K-B/T/S24

Power Supply	220-240 V, 1 Phase, 50Hz
Power Input (KW)	3 Kw
Fan Motor	3 HP, Copper Winding
Fan Type	Axial
Fan Size (Inch)	30 Inch
Control Type	Display Wall Controller and Remote Control
Speed Control	10 Speed
Max Air Flow (m3/h) / CFM	30550 m3/h / 12000 CFM
Air Presssure (Pa)	330 Pa
Dimension of Cooler	48 x 48 x 48 Inch
Dimension of Air Outlet	32 x 32 Inch
Net Weight (± 5kg)	97 Kg
Water Consumption	20 -25 L/h
Water Tank Capacity (L)	25 L
Drain System	Remote-Controlled Automatic Drain Function for Convenient Water Disposal and Maintenance.
Water Inlet	Automatic Float Valve with 1/2" BSP Direct Water Line Connection and Overflow Protection.
Effective Area	150-230 Sqm/1615-2475 Sqft

Operational Cost Analysis & ROI

Emitsun Desert Cooler systems are engineered to replace high-tonnage DX (Refrigerant) systems in large-scale environments.

Energy Consumption Ratio

10-ton AC unit consumes 12-15 kW per hour, Emitsun Desert Cooler provides relief in large open spaces between **1.1 - 3 kW**.

Power Factor Optimization

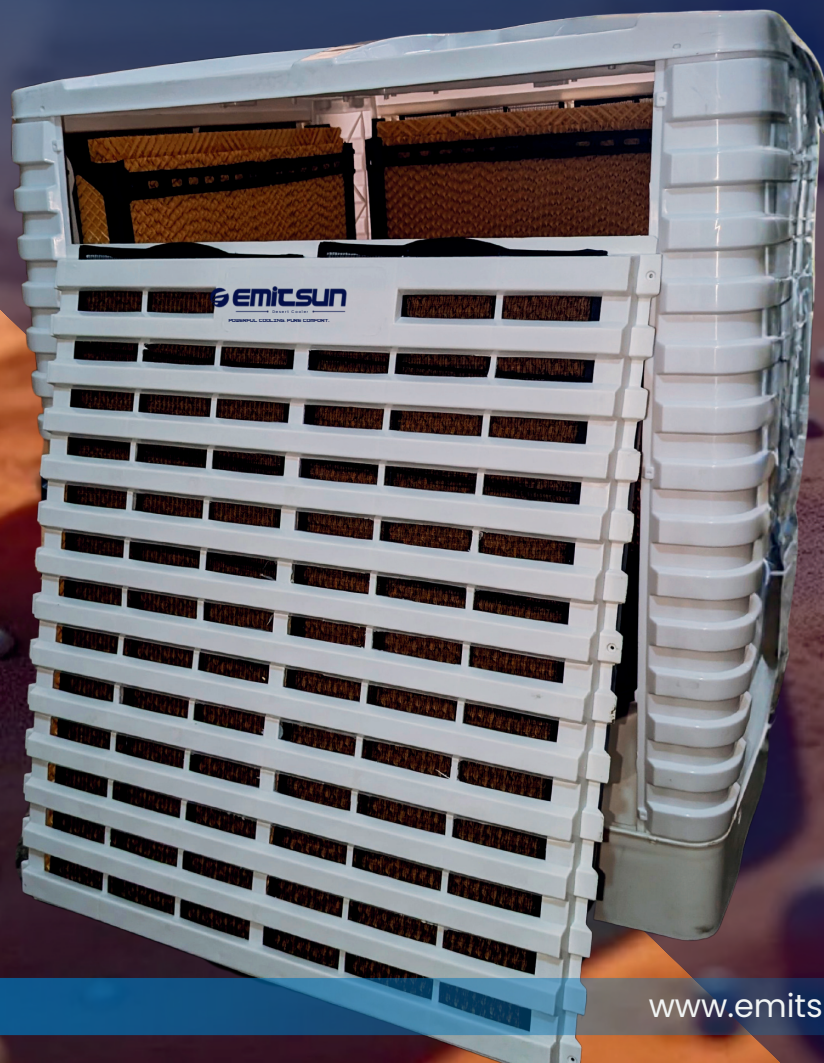
Our motors are designed to maintain a high power factor, **reducing reactive power charges** on industrial billing.

Log Mean Temperature Difference

High-surface-area pads ensure the smallest possible gap between **air temperature & wet-bulb temperature**.

Operational ROI

Most industrial clients see a return on investment through electricity savings within **4 to 6 months of operation**.



Climate-Specific Engineering

Built specifically to handle the extreme heat of the Pakistani summer.

Engineered for Cooling Efficiency



The Engineering Advantage of Adiabatic Cooling



100% Atmospheric Air Exchange:

We continuously displace stale air with filtered, **oxygen-rich outdoor air**, eliminating the health risks associated with recycled air systems.



Sustainable Thermal Management:

Our systems reject synthetic refrigerants and toxic chemicals, relying exclusively on **thermo-dynamic water-air exchange**.



Superior Efficiency:

Our adiabatic process utilizes a fraction of the energy required for traditional refrigeration cycles, consistently delivering an **80% reduction in cooling expenditures**.

Temperature Reduction

Intake air °C \ Exit air °C	Intake Air Relative Humidity (%)								
	10%	20%	30%	40%	50%	60%	70%	80%	90%
10	3.2	4	4.8	5.6	6.4	7.2	8	8.6	9.4
15	6.6	7.8	8.8	9.8	10.8	11.8	12.8	13.4	14.3
20	10.1	11.4	12.8	13.9	15.2	16.2	17.2	18.2	19.2
25	13.4	15	16.6	18	19.4	20.6	21.8	22.9	24
30	16.6	18.6	20.4	22	23.6	25	26.4	27.7	28.9
35	19.8	22.2	24.2	26.2	28	29.8	31	32.4	33.7
40	23	25.6	28.1	30.4	32.3	33.9	-	-	-
45	25.9	29.2	32	34.4	-	-	-	-	-
50	29	32.7	35.8	-	-	-	-	-	-

Built for Remarkable Performance

Pure Copper Winding Motor

We use 100% copper motors for high efficiency and a much longer lifespan.

High-Density Honeycomb Pads

These pads hold more water for longer, resulting in faster and more consistent cooling.

Heavy-Duty Axial Fan

Balanced blades designed to move a massive volume of air with minimal noise

Industrial-Grade Body

Corrosion-resistant materials that stand up to sun, dust, and water





Desert Cooler

POWERFUL COOLING. PURE COMFORT.

The Gold Standard

in Industrial & Commercial Cooling



Smart Wall Controller

A clear display that lets you manage your cooling with precision.



Full-Function Remote

Change speeds or settings from a distance for total convenience.



Auto-Drain System

A function that empties the tank, keeping the water fresh and clean



Why Smart Businesses Choose Emitsun Desert Cooler?



Climate-Specific Engineering

Built specifically to handle the extreme heat of the Pakistani summer.



Energy Efficiency

Optimized motors that provide maximum air throw with minimum electricity cost.



Technician-Led Design

Our products are designed by people who understand the mechanics



Direct Support

As a local leader, our expert team is always available for technical support and maintenance.



Heavy-Duty Build

We use high-grade materials to ensure your investment lasts for years.

100% Atmospheric Air Exchange

Best Used In

**Workshops &
Factories**



**Event Marquees &
Marriage Halls**



**Warehouses &
Storage**



**Large Residences &
Farmhouses**



A Tradition of Engineering Excellence.

Dynamic Balancing:

Emitsun Desert Cooler fans are G2.5 dynamically balanced to prevent bearing wear and vibration induced energy loss. Market Standards use unbalanced blades that draw 15% more current due to drag.

Media Density:

Emitsun Desert Cooler uses 5090/7090 grade cellulose media for superior capillary action. Market Standards use low-density wool that causes "dry spots" and reduced cooling capacity.

Thermal Protection:

Emitsun Desert Cooler uses Class-F insulated 100% copper motors designed for 24/7 thermal stability. Market Standards use Class A or B Aluminum, leading to winding degradation.

Emitsun Desert Cooler Advantages

01 Massive Air Throw

Cools large areas quickly and effectively.

02 Portable Design:

Heavy-duty wheels allow you to move the unit exactly where it is needed.

03 Low Maintenance:

Simple design means fewer parts to break and easy cleaning.

04 Improved Air Quality:

Acts as a natural air purifier by trapping dust in the wet pads.

05 Increased Productivity:

Keeps workers, visitors, & guests comfortable even on the hottest days.

Sustainable Thermal Management

High-Efficiency Adiabatic Cooling Technology



Long Air Delivery



Honeycomb Cooling Pads



Powerfull Fan & Motor



Dust Net Filter



Large Coverage Area



Quick and Easy Setup.

Getting started with your Emitsun Desert Cooler Desert Cooler is easy:

Location

Place the unit near an open door or window to ensure a constant supply of fresh air.

Water Supply

Connect a standard water line to the float valve for continuous cooling.

Cross Ventilation

Ensure there is an exit point (like an open window) for the old air to leave the room.

Power

Plug into a standard 220-240V outlet.



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Dust Net Filter



Large Coverage Area

Common Questions

Q Does it work in humid weather?

A Performance is optimal in dry heat; however, our high-density honeycomb media maximizes the evaporation surface area. This ensures a noticeable temperature drop and consistent cooling.

Q How often should I clean the pads?

A We recommend a brief monthly rinse to prevent mineral buildup and ensure peak airflow. Perform a comprehensive deep cleaning at each season's end to maintain the structural integrity.

Q Can it run 24/7?

A Yes. We engineer our industrial-grade, 100% copper-winding motors for continuous duty cycles. These high-efficiency motors maintain thermal stability under constant load.

Q Is it safe for electronics?

A Our systems utilize molecular-level evaporation rather than liquid misting. This controlled process maintains relative humidity between 50% and 65%, which falls within the standard operating parameters for most industrial electronics.

Q What is the warranty?

A Every Emitsun Desert Cooler unit includes a comprehensive technical warranty covering all major components. You also gain direct access to our expert engineering team for specialized maintenance, troubleshooting, and long-term operational support.

Ready to Experience Smarter Cooling?

Contact our engineering team today for a free cooling assessment of your facility.

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High-Efficiency Adiabatic Cooling Technology



Long Air Delivery



Honeycomb Cooling Pads



Powerfull Fan & Motor



Dust Net Filter



Large Coverage Area

Head Office:

First Floor, Pristine Plaza, Main Service Road, Gulzar-e-Qaid, Islamabad Expressway.

Faisalabad Office:

Office # 220, 2nd Floor, Faisal Heights, Opp Chase Value Center, Satyana Road, Faisalabad.

Multan Office:

Office # 3, Aneesa Center, Khanewal Road, Rashidabad, Multan.

