Empowering Your Business with

Mactek Gulfstream

POWERING CONNECTIONS

Mactek Solutions

Integrated Engineering & Smart Infrastructure Platform

✓ Solar-Powered Outdoor Cooling Systems: Design, supply, and installation of Mactek Gulfstream, an innovative solar-powered outdoor cooling solution utilizing Bernoulli Venturi Laminar Effect fans, specifically engineered to provide advanced thermal comfort in open-air environments for hospitality, retail, and public spaces.

✓ Advanced Thermal Comfort for Outdoor Spaces: Creation of comfortable microclimates by generating a gentle, laminar airflow that effectively reduces ambient temperature and improves air circulation without misting, ensuring a pleasant experience for patrons in hot climates.

✓ Energy-Efficient and Environmentally Friendly: Autonomous operation powered entirely by integrated high-efficiency solar panels and battery energy storage, eliminating the need for grid connection, reducing electricity consumption, and minimizing carbon footprint for sustainable outdoor cooling.

✓ Custom Design and Installation for Hospitality/Retail: Tailored design and strategic placement of Gulfstream units (e.g., integrated into outdoor tables, standalone pillars) to seamlessly blend with existing aesthetics and maximize cooling coverage for restaurants, cafes, hotel terraces, and shopping areas.

Technical Specifications

Features	Specifications
Power Source	Integrated Monocrystalline Solar Panels (e.g., 100W-200W per unit), High-Capacity Lithium-ion Battery Energy Storage (e.g., 100Ah-200Ah @ 12V)
Cooling Method	Bernoulli Venturi Laminar Effect Fans (e.g., Four 120mm fans per table unit), Optional integrated fine-mist nozzles for evaporative cooling
Fan Technology	High-efficiency DC Brushless Motors, MOSFET-controlled for variable speed and low noise operation
Coverage Area	Effective cooling projection of over 2 meters (6.5 feet) per unit
Control System	ESP32 Microcontroller with integrated Wi-Fi/Bluetooth, Real-time Clock (RTC)
Sensors	Ambient Temperature (DS18B20), Humidity (DHT11), PIR Motion/Presence Sensor, Light Sensor
User Interface	Local Push-button Control, Optional Mobile App (Bluetooth/Wi-Fi) for remote monitoring and settings adjustment
Enclosure Material	Marine-grade Aluminum, UV-resistant ABS plastic, or Stainless Steel, IP65 rated
Mounting Options	Integrated into Outdoor Tables, Standalone Pedestal, Wall-mounted
Target Market	Hospitality (Restaurants, Cafes, Hotels), Retail (Outdoor Malls), Public Spaces (Parks, Event Venues) in GCC Region
Operating Temperature	Designed for ambient temperatures up to +50°C

Why Choose Us?

01. Sustainable and Autonomous Cooling: The Mactek Gulfstream offers an eco friendly, solar-powered cooling solution that operates entirely off-grid, providing refreshing thermal comfort for outdoor spaces while significantly reducing energy costs and environmental impact.

02. Superior Comfort, No Misting: Experience advanced thermal comfort through our innovative Bernoulli Venturi Laminar Effect fans, which create a gentle, cooling airflow without the discomfort or wetness associated with traditional misting systems, enhancing patron experience.

03. Seamless Integration and Smart Operation: Designed for aesthetic integration into any outdoor setting, the Gulfstream features smart sensing and ESP32 control for autonomous operation, adapting to environmental conditions and ensuring optimal comfort with minimal intervention.

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