

ZECO Indirect Direct Evaporative Cooling Unit (ZIDEC)



Breathe Fresh, Stay Cool – Naturally

ZECO Indirect Direct Evaporative Cooling Unit (ZIDEC) brings a sustainable, high-performance cooling solution designed for hot and dry climates. It delivers 100% fresh, filtered air with dual-stage cooling—ensuring greater comfort, energy savings, and environmentally conscious performance.

Features

- Dual-Stage Cooling
- Energy Efficiency
- Environmentally Friendly – Uses no harmful refrigerants, making it a sustainable cooling solution.
- Delivers 100% fresh, cool air into the building, ideal for ventilation and comfort.
- High cooling efficiency and low operating costs, especially in hot and dry climates.

Benefits

- Energy Savings
- Environmentally Friendly
- Enhanced Comfort
- Cost-Effective
- Improved Air Quality
- Low Maintenance
- Ideal for Hot & Dry Climates
- Sustainable Performance

Product Technical Specifications – Product Range

1. Airflow Capacity:

- Ranges from 1,000 CFM to 1,50,000 CFM

2. Cooling Method:

- Dual-stage cooling: Indirect evaporative (pre-cooling) and Direct evaporative (final cooling)

3. Energy Efficiency:

- Up to 80% energy savings compared to traditional HVAC systems

4. Water Consumption

- Low water consumption, with efficient water management and automatic controls

5. Water Treatment

- Optional UV treatment or chemical treatment for clean water and hygiene

6. Filtration

G4 pre-filter and F7 fine filter for dust removal and air purification



Product Construction Details

1. Casing/Frame:

- Rigid, galvanized or powder-coated steel Stainless Steel, Aluminum
- Modular, double & single skin panel construction
- Extruded Aluminum Profile Frame Work (Thermal break & Non-Thermal break)

2. Insulation:

- 25 mm to 50 mm thick insulation (Density-40 kg/m³ (48 kg/m³, 64 kg/m³, 96 kg/m³ – Optional) (PUF, Glasswool, Rockwool, PIR)
- Provides thermal insulation and acoustic insulation

3. Base Frame:

- Heavy-duty steel or aluminum base
- Designed for floor mounting and vibration isolation

4. Panels:

- Removable or hinged access doors
- Inner skin: galvanized steel (pre-coated or powder coated), stainless steel, aluminium
- Outer skin: pre-coated, powder-coated steel, stainless steel, aluminium

5. Water Tank:

- Built-in water tank with an automatic water level control and overflow protection to maintain consistent operation.

5. Fan Section:

- EC or VFD-driven centrifugal fans
- Mounted on vibration-absorbing platforms
- Dynamically balanced for low-noise, high-efficiency airflow

6. Filter Section:

- Pre-filters in slide-in frames
- Fine filters, (HEPA filters, Carbon filters, Chemical Filters, Electronic Air Cleaner – optional)
- Easy access for replacement

7. Water Distribution System:

- Water spray nozzles & water distribution pads for uniform water distribution.

8. Heat Exchanger:

- Polymer type heat exchanger.

9. Media Pads:

- Cellulose pads for evaporative cooling, designed to maintain high surface area for maximum humidity absorption.

Applications



Healthcare Facilities



Entertainment Venues



Food & Beverage Industry



Commercial Buildings



Educational Institutions



Retail & Malls



Industrial & Manufacturing



Hotels & Hospitality



Laboratories

Our Presence



Sales & Support Offices

Ahmedabad | Bengaluru | Chennai | Delhi | Gurugram | Hyderabad | Jaipur | Kanpur | Kolkata | Mumbai | Pune

Corporate Office

Gurugram

DLF Corporate Greens,
Tower No. - 4, 12th Floor,
Southern Peripheral Road,
Sec - 74A, Gurugram -
122004, Haryana

Manufacturing Facilities

Haryana

O-1, O-5 and O-3/A,
Old Industrial Area,
Bahadurgarh-124507
Haryana, India

Maharashtra

343 & 343/1/A,
Village Lahe, Mumbai-
Nashik Highway,
Taluka Shahpur,
Thane - 421603

Karnataka

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