

Pharma Air Handling Unit



Pharma AHUs, also known as Hygienic Air Handling Units, are engineered to meet the strict demands of cleanroom environments across pharmaceutical, biotech, healthcare, and life sciences industries. With a focus on contamination control, microbial resistance, and full regulatory compliance, these units deliver highly filtered, temperature-controlled air to the most sensitive areas.

Features

- GMP-compliant design
HEPA/ULPA filtration
- Stainless steel components
- Antimicrobial inner surfaces
- Low-leakage construction
- Integrated DOP/PAO ports
- BMS compatible
- EC/IE5 motors & VFDs
UV lamps
- Smooth internal finish
- Sectional/modular design
- Differential pressure gauges

Benefits

- Regulatory Compliance
- Contamination Control
- Sterile & Controlled Environment
- Energy Efficiency
- Hygienic Construction
- Easy Maintenance & Validation
- Modular & Customizable
- Real-Time Monitoring
- Enhanced Product Safety

Product Technical Specifications - Product Range

1. Airflow Capacity:

- Ranges from 1,000 CFM to 60,000+ CFM

2. Filtration

- Pre-filters: G4 / EU4 (90% efficiency)
- Fine filters: F7-F9 (up to 95%)
- HEPA filters: H13 / H14 (99.97% @ 0.3 μ m)
- ULPA optional: U15-U17 (99.9995%)



3. Fan Section:

- EC / backward curved centrifugal / plug fans
- VFD compatible



4. Cooling / Heating Coils

- Copper tubes with aluminum fins
- Chilled water / DX / electric heating / steam coils



5. Motor & Drive

- IE3 / IE5 energy-efficient motors
- Direct or belt-driven (low noise)

5. Accessories

- UV-C germicidal lamps (optional)
- Differential pressure gauges for filters
- DOP/PAO test ports
- Anti-vibration mounts

6. Controls & Integration

- BMS / SCADA compatible
- PLC-based automation (optional)
- Temperature / RH sensors & control logic



Product Construction Details

1. Casing Structure

- Double-skin panels with 25 mm to 50 mm thickness
- PUF, Glasswool, Rockwool, PIR insulation density: 40 kg/m³ (48 kg/m³, 64 kg/m³, 96 kg/m³ – Optional) for thermal and acoustic performance

2. Frame Material

- Extruded aluminum profiles with nylon corners
- High mechanical strength and corrosion resistance

3. Panel Material

- Internal skin: SS 304 / SS 316 for cleanroom compatibility
- External skin: Pre or Powder-coated galvanized steel / optional stainless steel

4. Drain Pan

- SS 304 sloped design with smooth corners
- Proper insulation to prevent condensation and microbial growth

5. Fan Section

- Centrifugal / plug fans / EC Fans, mounted on anti-vibration mounts
- Direct-driven or belt-driven based on requirement

6. Filter Section

- Designed for pre, fine, HEPA/ULPA filters
- Filter holding frames with gaskets and sealing arrangements to avoid bypass leakage

7. Access Doors & Panels

- Flush-mounted, lockable, and gasketed for airtight sealing
- Hinged or removable type with inspection windows

8. Coil Section

- Copper tubes with aluminum fins
- Hydrophilic coating and SS 304 frame (optional for hygiene)

9. Accessories

- DOP/PAO test ports, DP gauges, and UV lamps as per cleanroom application

Product Certifications

1. Eurovent Certified : (Standard EN 13053 & EN 1886)

- Casing strength class : D1
- Casing air leakage class at -400 Pa : L1
- Casing air leakage at +700 Pa : L1
- Filter bypass leakage class : F9
- Thermal transmittance class : T2
- Thermal bridging factor class : TB2



2. AHRI Certified : Standard 1350

- Casing Deflection Rating Class (Positive) : CD4
- Casing Deflection Rating Class (Negative) : CD4
- Casing Air Leakage Class (Positive) : CL2
- Casing Air Leakage Class (Negative) : CL2
- Thermal Transmittance Class With Leakage : CT2
- Thermal Transmittance Class Without Leakage : CT2
- Thermal Bridging Class : CB2



3. CE Certified : (EN ISO 12100:2010, EN 60204-1:2018)

4. ISO Certified : (ISO 9001:2015)

5. AHRI Certified Chilled Water Coils : AHRI Standard 410

6. AHRI Certified Hot Water Coils : AHRI Standard 410

Applications



Healthcare / Hospitals



Life Sciences



Pharmaceuticals



Medical Devices Assembly & packaging



Biotechnology



FMCG / Nutraceuticals



R&D labs



Diagnostics & Labs



Incubation zones



Cosmetics

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

Plot no. 124 to 127,
3rd Phase, KIADB Industrial
Area, Malur, Distt: Kolar,
Karnataka - 563130

Registered Office: Office No. 105, First Floor, Padma Tower-I, Rajendra Place, New Delhi 110008



1800 911 0070



www.zecoaircon.com



info@zecoaircon.com