





Avantec Air Handling Solutions

- Engineered to Perfection

About Us

Avantec manufactures wide range of technologically nuanced HVAC equipments. Our state-of-theart facility equipped with latest Fibre laser, CNC machinery and software specializes in manufacturing customized Air Handling and Ventilation Systems.

The range of high-performance products are made with high precision detailed to last point, ensuring best in class quality, robustness and efficiency. Always abreast with latest engineering trends & industry needs. Avantec provides customized solutions tailored to meet specific customer needs.

We "CARE"...

Customized | Applied | Reliable | Efficient engineering solutions delivering best Indoor Air Quality

Product Range

- Air Handling Unit
- Smart AHU (Σ) IoT Integrated
- Ventilation Unit
- Exhaust Unit
- Fan Coil Unit (FCU)

- Evaporative/Spray Type Air Washer
- Multi-Stage Indirect/Direct
 Evaporative Cooling Unit
- Dry Scrubber

Air Handling Units

Customized Engineering | Delivering Excellence

Avantec's Air Handling Units are designed for best mechanical performance, equipped with AMCA certified fans for superior performance and EN1822/ ISO16890/ UL certified filters for high dust holding capacity and low air pressure drop.

The units are available in wide range of capacity, best leakage class and world class quality suitable for various Industrial, Cleanroom, Building and Comfort applications.

VALUE ADDED FEATURES:

- Wide Airflow Range from
 600 ~ 1,00,000 CFM / 1000 ~ 1,70,000 CMH
- Suitable for medium & high air pressure systems
- Customized AHU Sizing
- Single and Double Tier arrangement
- Robust Construction Module
- Best Leakage Class

- High resistance against corrosion using Pre-Coated sheets
- Food grade D-gasket for leak proofing
- Low Height Ceiling Suspended Units/Vertical Unit
- Suitable for Indoor & Outdoor Applications
- AMCA Certified Fans for Air Performance & Sound
- Smart AHU (Σ) IoT Integrated
- Shortest Lead Time

Casing Construction

- Outer Skin: Pre-coated Galvanized / SS | Inner Skin: Galvanized (Optional: Aluzinc, SS, Aluminium) available in varying sheet thickness.
- Panel Thickness: 25 mm/50 mm thick sandwich panel insulated with PUF/PIR/Mineral wool.
- Framework: Airtight & robust extruded aluminium hollow profile with thermal break or standard Aluminium profiles ensuring excellent thermal & sound insulation and minimize condensation (Thermal Bridging).

Filters

- MERV 6(EU3) to
 MERV15 (F9) available in
 Panel & Bag type construction
- Semi-HEPA /HEPA Filters
- Chemical Filters
- ESP (Electro-Static Precipitator) Filters

Heat Transfer Coil Section

- Block of copper tubes with another block of aluminium fins creating expanded heat exchange surface
 Copper tubes are bonded to collectors (Al fins), equipped with MS/ Copper header
- CHW/ DX/ HW/ Brine/ Steam/ SS coil with stainless steel fins & tubes
- Fins of different coating Hydrophilic
- Normal and HIGH Δ T Coils

Differential Pressure Weather proof Transmitter for air flow Marine Light and monitoring & control MERV-8 Filters (G4) Safety Microswitch Motorized Low Leakage Volume Control Damper In built integrated control Panel with PLC Controller and LCD Screen Temp. (9) DPS UVGI High efficiency **Optimum Energy** Direct Driven Plug Coil Section System Particulate filters **Efficient Plate** Differential Fan with High with CHW & Type (Recuperator) Pressure Switch Efficient Motor **HW Coils** Heat Exchanger Unit. for Filter Health Monitoring

Heat Recovery Section

- Rotary type energy recovery wheel transfers accumulated sensible & latent energy from exhaust air to supply air flow. Energy recovery up to 85% on sensible and latent load
- Plate Type Heat Exchanger Indirect sensible recovery (only sensible heat) transfers sensible heat from exhaust to supply air flow
- Run-around Coil System 100% contamination free system prohibiting exhaust air to mix with supply air while transferring sensible energy from exhaust air stream to supply air stream
- Refrigerant based Heat Pipe Section

Blower Section

- AMCA Certified Blowers
- Types of Fan:
- EC Plus
- EC
- Direct Driven Plug Fan
- Direct/Belt Driven
 DIDW Forward/
 Backward Curved
 Centrifugal Fan
- VFD compatible motors with IE2/IE3 and Permanent magnet motors with IE4 efficiency.

Humidifier Section

- Humidifier process based on water adiabatic evaporation from humidification pads
- Spray type humidifier
- Multi-Stage Direct / Indirect Evaporative Cooling
- Wet scrubber

SMART AHU(Σ) IoT Integrated :

- BMS compatible on MODBUS/BacNet
- In-room Air Temperature and Air Flow Control
- CO₂ Level Monitoring & Control for better IAQ
- Continuous Monitoring of Filter Pressure Drop
- Fan Run Status Monitoring
- Remote Visualization/Monitoring of Product
- Time Schedule Function Weekly / Monthly Operation Mode Programming

Testing Facility

In house testing facility to demonstrate

- Air Capacity
- Air Leakage
- Static Pressure Drop
- Sound
- Vibration at base

Test simulation can be conducted at our facility to validate the equipment actual performance on above parameters

Application Expertise

Industrial Segments:

- Pharmaceuticals & Biotech
- Solar Cell / Photovoltaic
- Electronics & Semicon Fabs
- Food & FMCG
- Tyre / Automobile & Ancillaries
- Li-Ion Cell/ Battery
- Warehouse / Cold-rooms
- Data Centres





Building Segments:

- Residential & Commercial Spaces
- Mixed Used Buildings
- Institutional Schools/Universities
- Hospitals & Healthcare
- Infrastructure Transport /
 Metro Rail / Airports



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