

SM AIRTECH

COMMITTED TO YOUR COMFORT

20 Years of Experience
in HVAC & Project Engineering



SM Airtech is a leading service provider in North India in the field of HVAC.

SM AIRTECH founded by Engineers having more than 20 years of experience in HVAC Project Engineering. We had highly experienced team for handling HVAC Projects. We supply and install Air handling Units for comfort and cleanroom, Air Washer (Single stage and two stage), Ductable packaged, cassette, FCUs, Ducting, Piping, Chillers, VAV, VRF (VRV), Electrical Control panels, Electronic controls and After sales AMC.

HVAC Design:

1. Heat load calculation
2. HVAC Building layout
3. Chiller and piping design and calculations
4. Indoor Air Quality project design
5. HVAC Controls and BMS Integration
6. HVAC Equipment Design



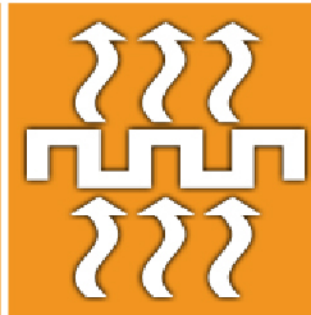
Our Services



**Repair &
Service**



**Modification &
Replacement**



Filtration



**Installation &
Assembly**

Our commitment to our customers is to provide optimum, economical Solutions with some value addition

- Supply, Installation , commissioning and validation clean room, Pharma, precision AHUs, FCUs, Chiller, Ductable , cassette, Chiller (Air and Water cooled), Air Purifier (Particulate and chemical)
- Engineering , Designing and Installation of HVAC Ducting, Piping, electrical and electronic controls
- High efficiency up gradation .
- Supply and Installation of VRF, VAV and BMS integration
- Operating & Maintenance of entire HVAC system
- AHU controller, sensors, display installation, service and upgrade
- Complete unit replacement & retrofit jobs
- Duct cleaning
- HVAC Training, Testing and Certifications
- Designing, Supply and Installation of Air Purification unit for Indoor Air Quality
- Modifications in Existing AHU, Airwashers and controls

Spares Management

- High availability of genuine manufacturers spare parts with optimum cost and lead time
- We have highly skilled team of Engineers and technicians for installation of spares

Air Conditioning System Service & Repair

There is never a good time for your air conditioning system to go out. Our goal is to “Put You in Your Comfort Zone” as quick and painless as possible. We offer 24/7 emergency services,

Our company is committed to providing top-quality air conditioning and heating services while maintaining a respectful attitude toward you and your home/office. SM Airtech promises to provide quick, economical and cost effective solution at customer's utmost satisfaction.

No matter what service you choose, our expert technicians will present you with all of your options, including the total cost, before starting any work, so you can decide what is right for you.

Annual Maintenance Contract (AMC)

To lower your chances of needing unexpected, emergency repairs, we offer routine maintenance for your home/office or commercial air conditioning system. Most AC systems been recommended an inspection by an expert every spring to ensure they are operating correctly and safely before the scorching summer months take their toll.

Our Total Comfort Tune-Up is a professional AC cleaning, adjustment and safety check that we perform on all types of HVAC equipment to help maintain peak performance and safety plus reliable operation. Through proactive maintenance, you can save on utility bills and increase the lifespan of your air conditioning equipment.

Annual Maintenance Contract & Project: Our expertise also lies in offering our quality conscious customers a wide range of support services that include all make Annual Maintenance Contract services and Installation services for Comfort Air Conditioning (HVAC) like Window AC, Split AC, Cassate AC, Package AC, Ductable AC etc and complete range Precision Air conditioning (PAC) and Precision Air Handling Units (PAHU). Further, the rich industry experience of our team of engineers also ensures that the services delivered are flawless and meet the satisfaction levels of the clients. We offer client's annual maintenance contract (AMC) related services. These services are provided by experienced industry professionals who put in their rich process experience so as to ensure the services delivered for technical up-gradation & maintaining OEM recommended efficiency

Air Conditioning Replacement and Installation

If your system is out dated or beyond repair, SM Airtech is still able to help you. We keep up-to-date with the latest technology, and can calculate the correct size and efficiency of unit for your home or business. SM Airtech has a wide variety of top-quality HVAC products that offer best warranty policies. Our technicians are trained to perform a new AC installation quickly to ensure maximum comfort in your home/office.

Equipments Covered

- Air Handling Units for comfort and clean room application.
- Air Purification unit for Indoor Air Quality
- Air Purifier controller, sensors, display and BMS integration
- Air handling unit(AHU) controller, sensors and performance/function display
- Two stage airwashers
- chiller and piping

PRODUCTS RANGE

Air Handling Units (AHU) For Comfort and Clean room

SM AIRTECH supplies special purpose cleanroom air handlers (AHU's) and air handling systems for other HVAC applications. We're capable of supplying a wide array of air handlers that range from simple re-circulating supply air fans to Air Handler Units with DX Cooling Coils, Chilled Water Coils, Hot Water Coil, Electric Heater , Face And Bypass Dampers, And Humidifiers. Our air handlers range in size from 1,000 to 100000 CFM.

The SM AIRTECH line of cleanroom recirculation air handler equipment is specifically designed and manufactured for HVAC applications that require quiet operation and durable, efficient performance.

Each air handling unit incorporates heavy-duty components to provide dependable continuous operation with minimum noise levels and maintenance. Models are available with a variety of options to meet specific application requirements. Each air handler model offers product features that deliver significant benefits to end-users.

Features

1. Capacity up to 100000 CFM
2. Floor mounted/ceiling mounted/vertical type
3. Energy efficient EC fans
4. Programmable as per required performance
5. Auto control of fan ,actuators and valves with respect to load, condition and weather
6. Ready to connect with BMS/PC
7. Touch screen display for on time data
8. Filter choking alarm
9. Compact Mini pleat Hepa filters
10. Energy recovery wheels
11. Acoustic panels for low sound level.
12. Inside coving corners for better cleaning
13. Strip/tubular heaters
14. UV Light



Air Purification System IAQ Units

Our Air Purification systems are the MOST COMPLETE line of certified HEPA air filtration and Carbon adsorption systems on the market today. Our line of HEPA air purifiers and air filtration systems are designed to be used in a wide variety of applications including attaching the systems to any size heating/cooling system for central HEPA indoor air filtration and in stand-alone applications where high volume HEPA filtration is required.

Most of us spend up to 90% of their time indoors and many spend most of their working hours in an office environment. Studies conducted by many Environmental Protection Agencies and others show that indoor environments sometimes can have levels of pollutants that are actually higher than levels found outside sources. Some of the key pollutant categories include:

- **Biological contaminants.** Excessive concentrations of bacteria, viruses, fungi (including molds), dust mite allergen, animal dander and pollen may result from inadequate maintenance and housekeeping, water spills, inadequate humidity control, condensation, or may be brought into the building by occupants, infiltration, or ventilation air. Allergic responses to indoor biological pollutant exposures cause symptoms in allergic individuals and also play a key role in triggering asthma.
- **Chemical pollutants.** Sources of chemical pollutants include tobacco smoke, emissions from products used in the building (e.g., office equipment; furniture, wall and floor coverings; and cleaning and consumer products) accidental spill of chemicals, and gases such as carbon monoxide and nitrogen dioxide, which are products of combustion.
- **Particles.** Particles are solid or liquid substances which are light enough to be suspended in the air, the largest of which may be visible in sunbeams streaming into a room. However, smaller particles that you cannot see are likely to be more harmful to health. Particles of dust, dirt, or other substances may be drawn into the building from outside and can also be produced by activities that occur in buildings, like sanding wood or drywall, printing, copying, operating equipment and smoking.

What is PM 2.5?

PM 2.5 is an atmospheric particulate matter of diameter of fewer than 2.5 micrometres, which is around 3 percent the diameter of a human hair. It causes respiratory problems and reduces visibility. PM 2.5 particles can only be detected with the help of an electron microscope because they are so small.

What are its health implications?

As per studies, it could lead to premature death from heart and lung disease. Due to their smaller size, the PM 2.5 particles can easily bypass the nose and throat and can easily enter the circulatory system. The particles can also lead to cause chronic diseases such as asthma, heart attack, bronchitis and other respiratory problems.

How to save yourself from PM 2.5

1. Use air purifier equipped with a High-Efficiency Particulate Air filter (HEPA) filter, which can remove fine particles from the air.
2. Try to stay as much indoors, closing all windows that allow the entry of polluted air.
3. Avoid burning candles or other things which can emit smoke when you stay indoors.
4. Eat food that can increase your body's resistance against PM 2.5

AQI Category, Pollutants and Health Breakpoints

AQI Category (Range)	PM ₁₀ (24hr)	PM _{2.5} (24hr)	NO ₂ (24hr)	O ₃ (8hr)	CO (8hr)	SO ₂ (24hr)	NH ₃ (24hr)	Pb (24hr)
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5-1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1-10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748	17-34	801-1600	1200-1800	
Severe (401-500)	430+	250+	400+	748+	34+	1600+	1800+	3.5+

Features

1. Particulate matter PM 10/PM 2.5 filtration.
2. Easily cleanable Fan Electronically Commutated (EC) Motor for low energy consumption.
3. Filter choking Indicator/alarm
4. Air Filtration With activated carbon filters
5. Vertical Unit for less floor space and ceiling mounted units
6. Acoustically insulated silent units for offices, hospitals and educational institutes
7. Fresh air recirculation provision for data centres and OT's
8. Economical stand alone table top, decorative unit for home, small offices and show rooms



Optional Features

1. Chemical filters to remove SOx and NOx Gases
2. UVC Germicidal lamps to address microbial growth
3. Electronic controls with facility of On -off timer, scheduler, run time calculator. It can be operated by Mobil /pc through RF.

Best Suitable For

Treated Fresh Air Units for commercial and Industrial buildings , Electronic/data /server area, Hospitals- IVF, MRI, CT Scan rooms mortuary , anatomy rooms etc., Petrochemical refineries control rooms DSC/SCADA rooms, Airports, Hotels, restaurants, bars ,discotheques, Multiplexes- projector rooms, Homes and smart homes

Two Stage Air Washer

Cooling of fresh air through conventional Treated Fresh Air unit (TFA) or Fresh Air Handling Unit (FAHU) is a highly energy intensive process, but our two stage air washer meets this requirement in the most energy efficient manner. This system has Indirect Evaporative Cooling (IEC) at the 1st stage for sensible cooling and then a cooling coil (DX/CW) at the 2nd stage. By incorporating IEC at the 1st stage of the Treated Fresh Air systems (TFA), substantial energy savings can be gained.

In double stage air washer, air is primarily cooled sensibly by indirect cooling. As no humidity is added in this pre cooling so it can be cooled by direct by evaporative cooling. So now this air is passed through evaporative pad section.

Features

1. Environment friendly because no refrigerant is used.
2. No Indoor Air Quality problem as 100% fresh air is used.



3. Less energy consumption.
4. In many case it is more efficient than the refrigerant system as it maintains more favorable range of humidity within the cooled space.

Electronic Controls & Power saving solution:

We provide electronic automation & controls solution for HVAC system ie. Fan, motor, cooling coils, heater, humidifier, filters to optimize energy consumption in operation.

In general if you install electronic controls in system the 50% power can be saved. Payback time of our installations is as lower as 6 months to 1 year.

Normally people don't opt for installation of electronic control because of heavy investment in actuators, sensors, controller, display and major modification in system like layout but SM Airtech brought a low cost technology to install in existing system without changing layout.

Volume Flow Capacity

$$q_1 / q_2 = (n_1 / n_2)$$

Head or Pressure

$$dp_1 / dp_2 = (n_1 / n_2)^2$$

Power

$$P_1 / P_2 = (n_1 / n_2)^3$$

if the speed of a fan is increased with 10%

- the volume flow is increased with 10%
- the head is increased with 21%
- the power is increased with 33 %

- if the volume flow capacity of an existing system is increased with 10% - the power supply increases with 33% and the electrical motor and the power supply may need an upgrade



High-Efficiency Upgrades

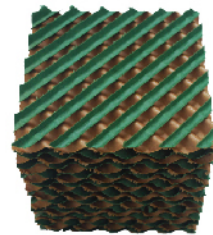
Most HVAC systems consume more than half of total energy consumption. By switching over to an energy-efficient system, facility management can cut their monthly energy costs by up to 1/3.

Other Solutions

To serve our clients in the best possible manner, we also undertake the installation of all parts of HVAC like AHU, heat exchanger coils, HVAC Controls, Humidifier with complete assembly. Our range of HVAC Equipment is highly acclaimed for its following features:

- * High durability and reliability
- * Available in varied specifications
- * Consists of filter racks or chambers, sound attenuators and dampers
- * Based on latest technologies

PRODUCTS WE SUPPLY



Our Clients



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