



HVAC ENGINEERING



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KOMFORT HVAC

We provide robust engineering experience and integrated expert solutions. We provide effective solution for air handling for all industries, to regulate the required process for atmospheric room temperature, humidity and air treating system. In our infrastructure KOMFORT HVAC we have experienced engineers with most advanced software to design the product with state of the air technology. Our scope of supply includes complete air-based system, air engineering projects on turnkey basis, centralized cooling, dust collectors, chiller, refrigeration plant, piping, ducting, false ceiling and insulation.

We provide & deliver equipment and system design that delivers unprecedented level of quality and craftsmanship to customers. Our solution and system, increase the production efficiency and quality. In this way we optimize the manufacturing environment and create cost-efficient, sustainable and complies standards.

OUR VISION

KOMFORT HVAC is committed to consistent development. There by building a stable, global Institution - with the resources to deliver the products as per customer's requirements. We offer unparalleled value to create customer delight and enhance business productivity..

OUR MISSION

INNOVATIVE TECHNOLOGY TRANSCENDING INDIA.



COOLING UNIT

AIR HANDLING UNIT

Air handling units are used to condition indoor air with their heating, cooling, humidification and dehumidification functions. Furthermore, air handling units supply the fresh air requirement of the environment with filtered air.



MANUFACTURING FEATURES AND OPTIONS

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|---|--|
| <ul style="list-style-type: none">● Extruded Aluminum profile with nylon reinforced 3D corner joints, used to house all internal components. | <ul style="list-style-type: none">● Double skin sandwiched panels are fabricated from G.I./ S.S sheet. The panels include sandwiched insulation. |
| <ul style="list-style-type: none">● Coil section are provided with the choice of chilled water, direct expansion, hot water and steam coils with 2, 4, 6 & 8 rows deep. Imported copper tube is used in fabrication of coil for better heat transfer. | <ul style="list-style-type: none">● Air Handling Unit is provided with primary filters of different media with secondary filters viz, HEPA/ Microbe / EU-9/ EU-12/ EU-4 and Bag filters can also be provide as per process required. |
| <ul style="list-style-type: none">● Centrifugal blowers DIDW & SISW ,plug fan & EC fan. | <ul style="list-style-type: none">● An option of selecting chilled, hot, direct expanding and steam coils. |
| <ul style="list-style-type: none">● Volume control damper G.I or Aluminum construction. | <ul style="list-style-type: none">● Availability in two categories : which are floor mounted & roof mounted. |

CEILING SUSPENDE UNIT

Unit can be suspended from the ceiling and occupy no space on the floor. This are ideal for commercial application where the floor space is premium. This units are less noisy and with less vibration. We can fix this unit beyond the false ceiling. We Make durable structure as per requirement.



AIR WASHER UNIT

Cooling through evaporation is a natural occurrence. The principle underlying evaporative cooling is the fact that water must have heat applied to it to change from a liquid to a vapor. When evaporation occurs, this heat is taken from the water that remains in the liquid state, resulting in a cooler liquid. Evaporative cooling systems use the same principle as perspiration to provide cooling for machinery named as air washer unit.

EVAPORATION AIR WASHER

We offer superior quality Air Washer System, Industrial Air Washer Unit, Air Cooling Washer and Pressurization System that work on the principle of cooling outside air by passing it over water-saturated pads, causing the water to evaporate into it. The cool air is then directed into the required space, and pushes warmer air out through the given vents. Air Washer Unit is a very energy-efficient means of cooling.

Air Washer System with cellulose paper pads, cross sectional, specially treated fluid media capable of absorbing and retaining water to provide the maximum cooling efficiencies. The cooling pad is cross-corrugated to maximize the mixing of air and water and eliminate water carryover.



MANUFACTURING FEATURES AND OPTIONS

● CAPACITY RANGE :- up to 250000 CMH	● Single and double skinned construction.
● Cellulose pad / Spray type humidification systems.	● Centrifugal fans : DIDW / SWSI forward /Backward curved.
● Primary filters and micro fine filters.	● High efficient evaporative cooling pads.
● PVC / G.I / S.S. Eliminators as per processes requirement.	● Low installation cost, low running / operation cost.
● Double skin air washer are fabricated out of steel structures or extruded aluminum hollow profile with double skin panels filling with PUF.	● Spray type humidification systems are fabricated out of PVC header and poly-carbonate nozzle with S.S. clamp.

VERTICAL PACKAGE UNIT

Vertical packaged air conditioners are designed to condition multiple rooms with single unit concealed installation. When project has tight space constraints or any another specific requirement that detect the need for a vertical solution: Portable Air condition. Our vertical package units are the perfect solution for certain industrial application.

The self-contained units are engineered for quiet performance with a free-floating chassis design. Compact and lightweight units are pre-wired, charged, and piped; ready to install from any interior side.



FAN COIL UNIT

A fan coil unit is a simple device consisting of a heating and cooling heat exchanger. It is part of an HVAC system found in residential, commercial, and industrial buildings. A fan coil unit is a diverse device sometimes used as ductwork, and is used to control the temperature in the area where it is installed.



MANUFACTURING FEATURES AND OPTIONS

● Available in CFM 500- CFM 5000.	● Pre fitted high quality chilled water system and dx system.
● Available in 1.5 to 5 TR.	● Ceiling built in unit for excellent Space Efficiency.
● Medium and high static pressure models available.	● Low running /Operation cost.
● High indoor air quality.	● Reduced installation job due to simple wire connection design.
● Customized fan coil units can be supplied as per requirements.	● Available with motorized & other valves.

SPRAY WATER BANK AIR WASHER

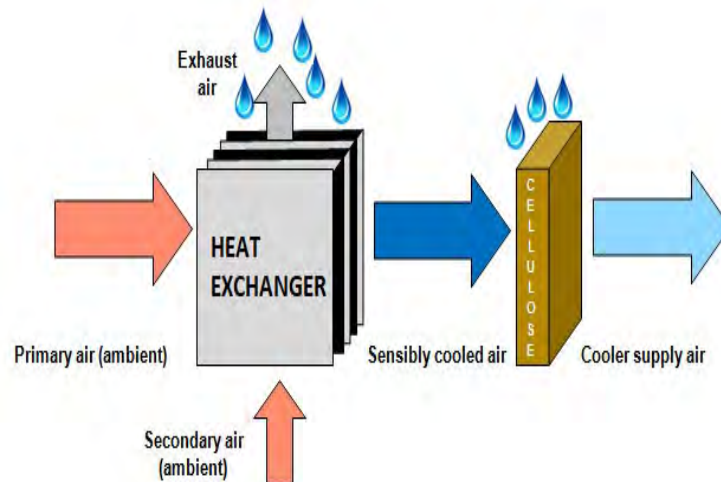
Air washer units in which spray water is used as medium for adiabatic cooling of air in humidification systems (by direct evaporation of water into the air stream thereby reducing the air dry bulb temperature and raising its humidity)



TWO STAGE AIR WASHER

KOMFORT HVAC providing specialized comfort cooling for larger area which are specially made for removing sensible heat form air reducing the dry bulb & web bulb temperature to archive high thermal efficiency .

With conventional air washer (cellulosic pad) we add specially design air to air sensible heat exchanger which cools the air without adding moisture it has the advantage of lowering the dry bulb and wet bulb temperature without the use of refrigeration systems.



MAIN FEATURES

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|--|--|
| ● Low power conservation as compared to conventional air condition system. | ● No cross contamination. |
| ● Low operational cost. | ● Anti fungal , Anti bacterial coating |
| ● Vertical or Horizontal construction | ● Custom made size can be available as per design conditions |

APPLICATION

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|--|-------------------------------|
| ● Work shop building | ● Warehouses & Godowns |
| ● Food processing / Kitchens / Canteen halls | ● 100% Fresh air application |
| ● Medical & pharmaceuticals | ● Paint booth , Process rooms |

HEATING & COOLING COILS

COMPLETE LINE OF STANDARD AND CUSTOM BUILT COILS

Chilled Water Coil	DX Evaporator Coil	Hot Water Coil	Heat Reclaim Coil
Condenser Coil	Standard Steam Coil	Non-Freeze Steam Distributing Coil	Stainless Steel Coil

CHILLED WATER COIL

This can be used for a single purpose such as cooling or heating or their function can be alternated between heating and cooling by changing the temperature of the water flowing through the coil. Water coils are engineered to operate at pressure up to 250 psig and temperatures up to 300°f, but ancillary equipment such as valves and pumps will often detect low operating temperatures. All water coils are pressure tested at the factory with safety and quality assurance.



STAINLESS STEEL COIL

We provide an effective solution for cooling applications where corrosion and contamination prevention are important. Stainless steel cooling also have a high strength-to-weight ratio and are Well-suited for use in extreme temperature environments. Specialized in custom bending and fabricating stainless steel cooling to meet a wide range of oem applications.

DIRECT EXPANSION (DX) COIL

This are part of a refrigerant field system consisting of a condenser coil, evaporator coil and a refrigerant compressor. The evaporator coil must be paired with a thermal expansion valve (TXV) intended for the specific capacity and refrigerant type.

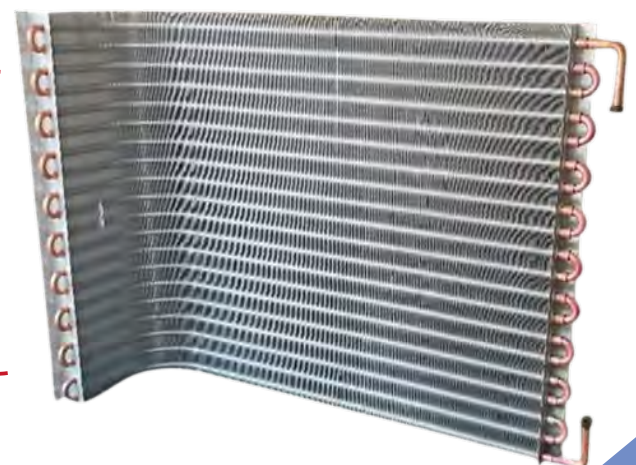


EVAPORATOR COIL

This are made for heat absorption and generally functions at a low pressure. These coils are generally used for spot cooling or as part of an air handling system. All evaporator coils are factory tested with safety and quality assurance.

CONDENSER COIL

This are made for heat rejection, such as the heat absorbed by an evaporator coil, and they typically operate under higher internal pressures. Condenser coils are also used as part of a heat pump to provide heat in a specific location, but more often they are used to simply exhaust heat energy that is collected elsewhere.

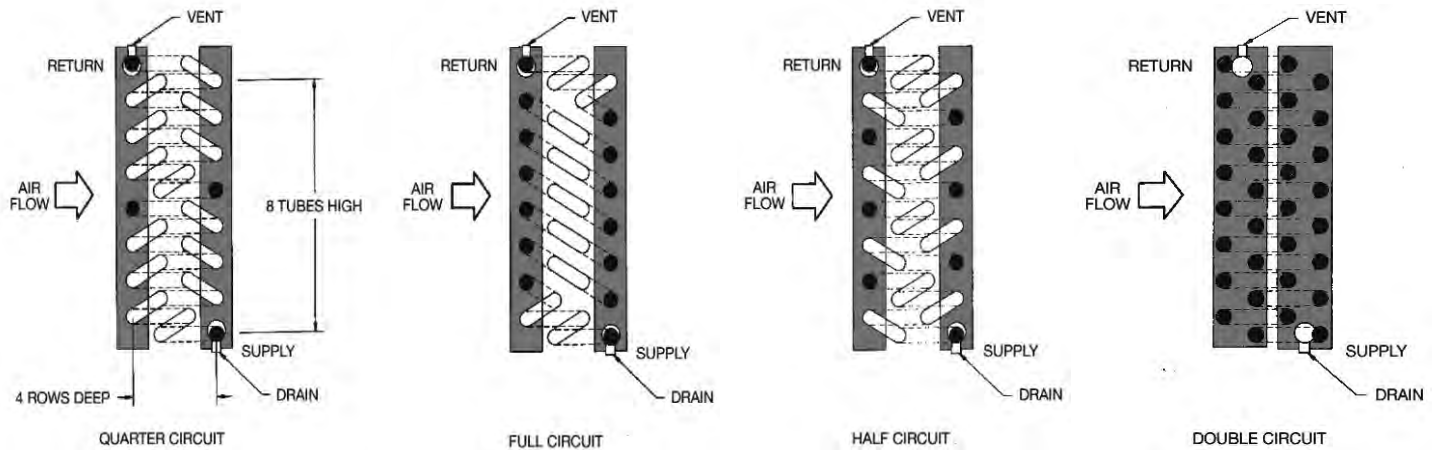


STEAM COIL

This are used for heating applications and are built to operate at require pressures & temperature. The most frequent use of steam coils is for retrofitting or modifying existing steam heat systems.



MANUFACTURING FEATURES AND OPTIONS



TUBE MATERIAL

3/8", 1/2", 5/8" OD in copper & ss

FIN MATERIALS

Aluminum, Copper, S.S

ROWS

Chilled water and DX coils – 2 to 12 rows

Hot water coils – 3 to 12 rows

Steam coils – 1 to 2 rows

Condenser coils – 1 to 12 rows

FIN SPACING

3/8 in. OD tubing, 8 to 12 fins per in.

1/2 in. OD tubing, 4 to 12 fins per in.

5/8 in. OD tubing, 4 to 12 fins per in.

BRAZING

All joints are hand-brazed.

CASING MATERIAL

GI, SS, Copper & Aluminum

HEADER CONNECTION

Flangend, FTA, MTA, Threaded & Conical

HEAT EXCHANGER SYSTEMS

AIR COOLED CONDENSER

KOMFORT HVAC range of dry cooling solutions uses air, as medium of heat rejection. This keeps the process fluid/refrigerant properly cooled and increases the efficiency of production processes and operations of equipment. Air cooled condensing units for low and medium temperature application and for high condensing temperatures in commercial refrigeration.



WATER COOLED CONDENSER

A Water cooled condenser is efficient play role in place of air cooled condenser where air pollution is high industries like power plant ,cement & steel etc.

A Water-Cooled Condenser is a heat exchanger that removes heat from refrigerant vapour and transfers it to the water running through it.



THE BENEFITS OF A WATER-COOLED CONDENSER

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|--|--|
| ● Where space is restricted for air cooled plant, a Water-Cooled Condenser is a good solution. | ● Thermal energy recovery to put into other heating processes. |
| ● More robust, reducing the need to replace as often as Air-Cooled Condensers. | ● Quite operation compared to Air-Cooled Condensers. |
| ● Can be housed indoors. | |

AIR COOLED CHILLER

Air-cooled chillers units also contain all of their components packaged within a single cabinet, referred to as packaged cooling unit. Chillers are used in a variety of comfort air conditioning and process cooling applications. The chilled liquid is transported by pumps and pipes that can be connected to literally hundreds of room fan coils and terminals. This allows chillers to be applied on applications requiring many zones of control chillers are the heart of the chilled-water air-conditioning system since they serve the pivotal function of creating the cooling effect required to maintain comfort conditions.



ADVANTAGES

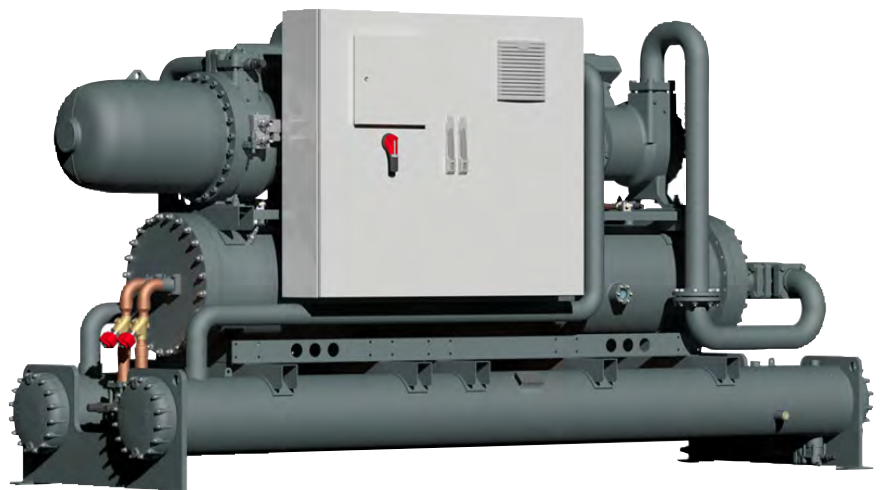
- Lower installed cost
- Quicker availability
- No cooling tower or condenser pumps required
- Less maintenance
- No mechanical room required

WATER-COOLED CHILLERS

To meet a wide range of applications in the low to high -tonnage, KOMFORT HVAC is proud customizing solution. This chiller provides application versatility, ease of installation, control precision, reliability, energy efficiency, and operational cost-effectiveness. Chiller is designed to deliver proven performance, plus all the benefits of an advanced heat transfer design. The industrial-grade design of the chiller is ideal for both industrial and larger commercial buildings and various building campuses will use a chiller plant to provide cooling. In these systems, chilled water is generated and then piped throughout the building to other air handling units serving individual tenant spaces, single floors, or several floors. Chilled water piping is used to convey thermal energy from the point of the generation to the exact point of use. Additionally, a chiller-based system is more efficient regarding space utilization within the building, because components can be located elsewhere.

ADVANTAGES

- High full-load energy efficiency reduces both operating and life-cycle costs.
- Scrolling access to inputs and operating information via the LCD touch-screen display.
- Custom selections in larger sizes.
- Large tonnage capabilities.
- Indoor chiller location.
- Longer life.



CLEAN ROOM PARTITION

KOMFORT HVAC offers a complete range of clean room partition and ceiling systems. These systems meet the technical requirements of high specification controlled environments such as Pharmaceutical, Bio-tech and Microelectronics, as well as Food-processing plants. A clean room has a particular level of contamination that is specified by the number of particles / m³ and by maximum particle size.



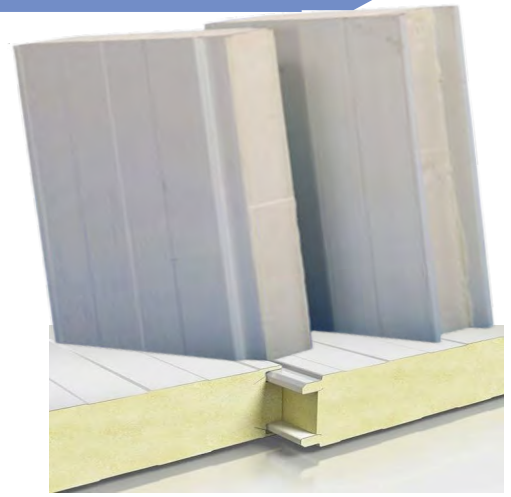
Clean rooms can be small or very large in size. A whole manufacturing industry can be placed within a clean room with factory floors ranging thousands of square meters. They are used at a great extent in semiconductor manufacturing, life sciences, biotechnology and pharmaceuticals fields that are very sensitive to environmental impurity. The air getting into a clean room from outside is filtered continuously to remove dust and the air inside is constantly recalculated through High Efficiency Particulate Air (HEPA) and Ultra Low Penetration Air (ULPA) filters to remove internally produced impurity.

OUR CUSTOM

- Modular PPGI, SS or Aluminum walls
- VCT or painted epoxy floors
- HEPA fan filter units
- ISO5, ISO6, ISO7, ISO8, Class 100, Class 1000, Class 10k, Class 100k
- Washable stainless steel or welded. Coved corners and ceiling joints
- Room air pressure, temperature and humidity as per client traceability system
- Applications: medical device, pharmacy, electronics, food, petrochemical

PUF PARTITION PANEL

We are engaged in offering our clients with an exclusive range of Wall Puf Panel , Clean room or AHU body puf panel . Our offered products are tested on our various parameters in order to ensure the quality, strength and durability of the product. . We identify the actual needs of the customers and then provide the solutions. Clients can easily avail these products at affordable prices.



OUR CUSTOM

- Panel Width 1150mm and 900mm as standard.
- Panel thickness of 50/80/100/120 mm with ability to carry and conceal services, return air ducts/ risers.
- Customize Height with provision to have stacked panels for higher level applications
- Base Detail Raised / C-Type Base
- Infill material Mineral Wool, & Polyurethane Foam
- Surface finish Powder coated, PPGI & SS finish
- Air leakage: Silicon Sealant for sealed application

DOOR & WINDOW

KOMFORT HVAC provides large collection of compatible Clean Room Doors & Windows . These are specifically meant for air ingress in the room. The door contains mechanically interlocked vertical edges that add strength, reliability and rigidity which make them appropriate for light and heavy use.



OUR CUSTOM

- Fully flush surfaces with wall system
- A large variety of pharmaceutical doors
- Door hardware by world market leading manufacturers
- Custom dimensions available
- Heavy-duty structure for high durability

DUST & FUME EXTRACTION SYSTEM

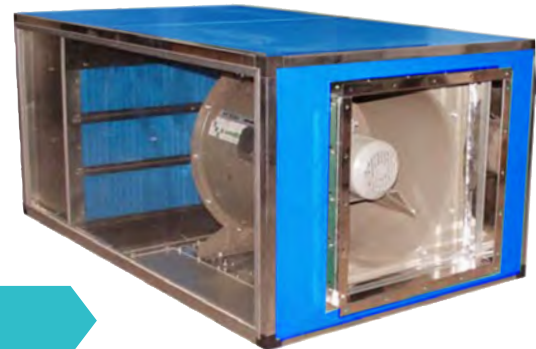
VENTILATION SYSTEM

These systems with utmost consideration and precision to ensure optimum protection from the hazardous atmosphere. The system is designed keeping the needs of our clients in mind. The intricate and comprehensive ventilation systems we manufacture undergo a stringent set of tests to ensure its quality appropriateness.



AIR SCRUBBER

Manufactured to extract all types of dust particles, acidic fumes from air that is generated during different types of industrial operations. This scrubbing helps in creation of a fresh environment for working within the organization.



KITCHEN VENTILATION SYSTEM

The Kitchen ventilation system of exhaust hot gases/steam reduce ambient and intake fresh air system, which is treated & cooled, to create a more comfortable environment, here is a solutions for commercial kitchen ventilation system.

NORMAL FRESH AIR AND EXHAUST AIR

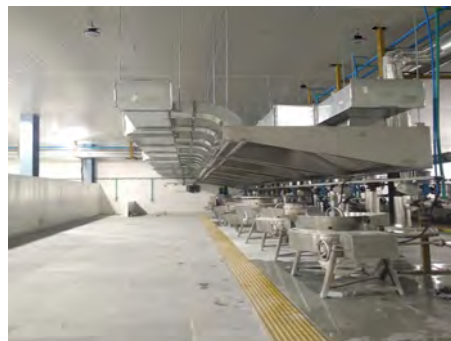
Centrifugal fan with suitable static pressure for exhaust and fresh air inlet.

EVAPORATIVE COOLING SYSTEMS FRESH AIR & EXHAUST

For commercial activity ventilation is not enough, also require to maintain the temperature then, in this case evaporative cooling system is used for fresh air & centrifugal fan with suitable static pressure for the exhaust.

TREATED EXHAUST

In public places exhaust air can be treated with the help of air scrubber which can remove all dirt & unwanted particles.

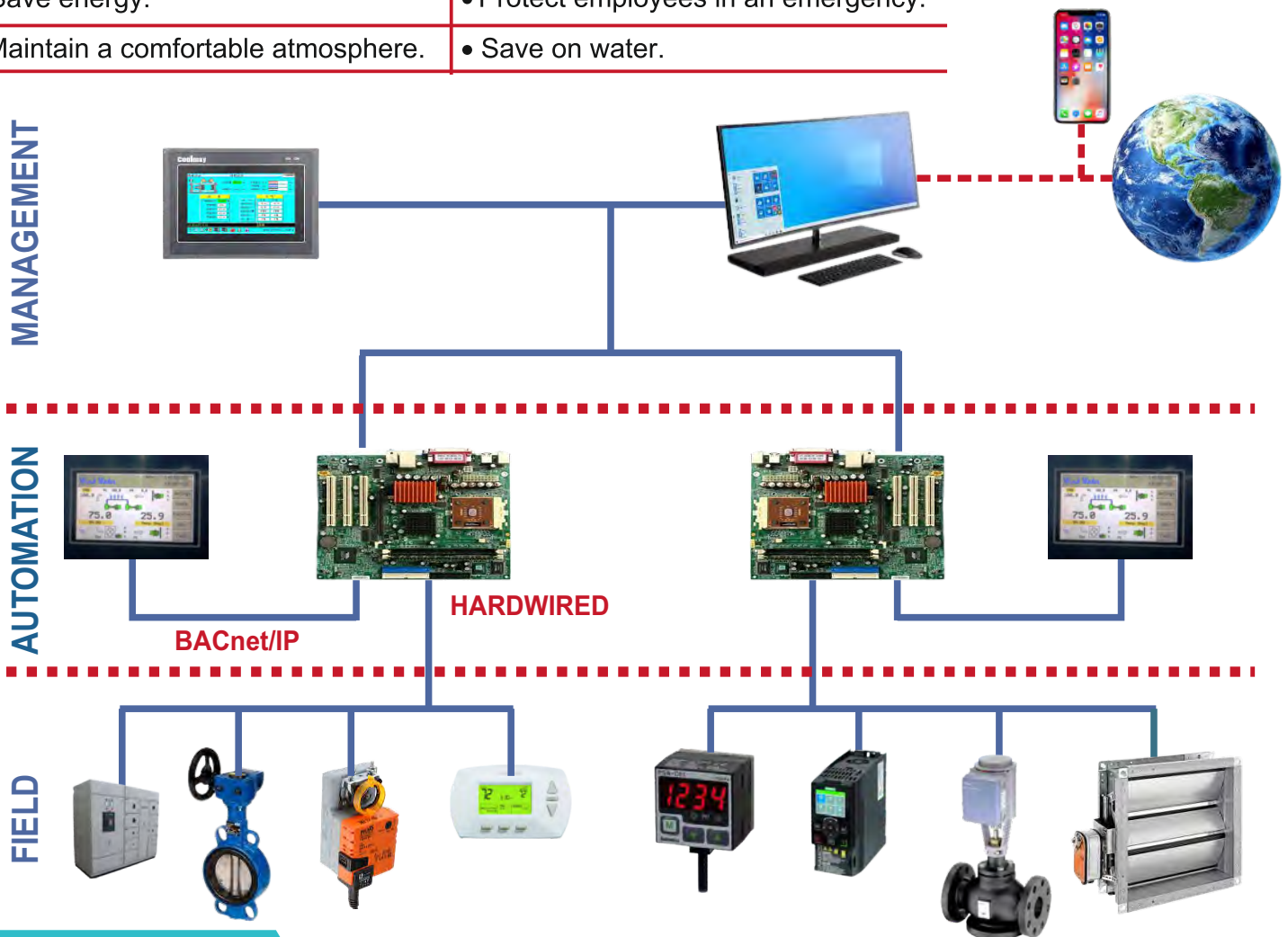


AUTOMATION / B.M.S. FOR HVAC SYSTEM

The automation is the "brain" of the HVAC system. Central controller are programmable, it can be customized for the intended use. The program features include time schedules, set points, controllers, logic, timers, trend logs, and alarms. The unit controllers typically have analog and digital inputs that allow measurement of the variable temperature, humidity, or pressure. A building management system (BMS) is an advance computer-based control system that centralized automation controls and automates. It can monitor the system and respond to alarms generated by the system from local or remote locations. The system can be scheduled for occupancy or the configuration can be changed depended on requirement.

BENEFIT

- | | |
|--------------------------------------|--------------------------------------|
| • Save energy. | • Protect employees in an emergency. |
| • Maintain a comfortable atmosphere. | • Save on water. |



AIR FANS

AXIAL FANS

Axial fans are suitable for large quantities of air at low pressures. Also available in adjustable impeller blades which adapt the fan to the requirement changes. Impellers can be supplied in Aluminum, Mild Steel or Stainless Steel. The fan is completed with mounting arrangement of drive motor as per requirement.



CENTRIFUGAL FAN

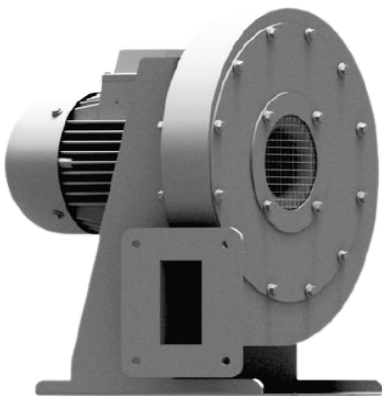
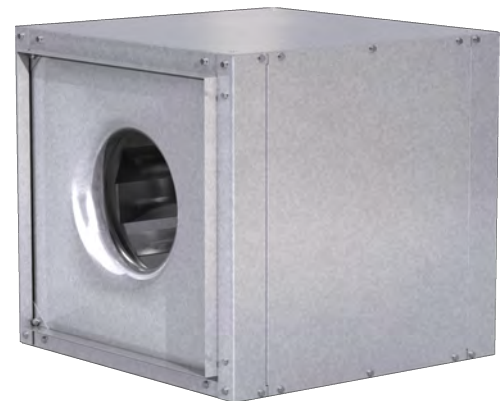
KOMFORT HVAC provides you Commercial or heavy duty industrial design used in applications such as high airflow volumes, manufacturing process exhaust, emergency or continuous high temperatures. Scrolls are design typically installed at ground level for easy service or inspection. Models have construction options includes both backward inclined and higher efficiency airfoil centrifugal wheels and feature heavy gauge, fully welded or lock seem housings. Available are a wide range of protective coatings & stainless steel construction materials. All fans are tested and approved in factory.



- Aerodynamic perfection; computer-aided design
- Super quiet, highly efficient performance
- Rugged, low weight OEM impeller
- Backward curved airfoil (BCA) wheel
- Non-overloading power characteristics
- CW, CCW and DWDI, FRP inlet cones

INLINE EXHAUST FAN

In-line duct fans have been specially designed to maximize the airflow performance with minimal noise levels within the smallest and most compact of housing sizes. ultimate solution for small to medium sized ventilation installations which require a high airflow to pressure ratio and occupy the minimum space.



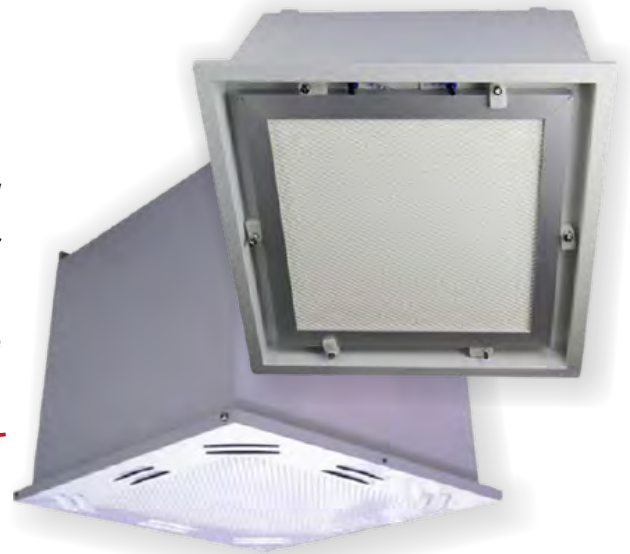
HIGH STATIC PRESSURE FAN

Designed for low air volumes at high static pressures, suitable for use in many industries application like boiler FD/ID fan, Dust removal, fume extraction, material transfer due to their sturdiness, specific design and high efficiency. Also available in SS. finish.

AIR INLETS & OUTLETS

HEPA BOX

Meant for housing the HEPA filters to prevent any leakage / damage heavy gauge GI / Aluminum / SS / epoxy painted or powder coated complete with pressure plates, cleats, dampers etc. DOP port provided depending on the requirement for more exhaustive HEPA boxes.



LAMINAR AIR FLOW UNIT

Requirement of different return and supply system, this laminar flow help you. Laminar flow ceiling marks our proven experience in the field of clean air ceiling with the latest technologies, unsurpassed quality and effective cost management. MOC : S.S / Aluminum / G.I powder coating, Gear operated inlet and outlet damper, Perforation sheet for maximum dispersion and Hepa filtration.

RETURN AIR RISER

Return air risers are used to collect the return air in a specific manner to maintain a perfect laminar flow. They find a wide application in Pharmaceuticals and clean room industry where proper class of cleanliness is to be maintained. Return air Risers are manufactured in the factory as per the design requirement. They are constructed in G.I. / S.S. or anodized Aluminum and then powder coated for better aesthetic looks.

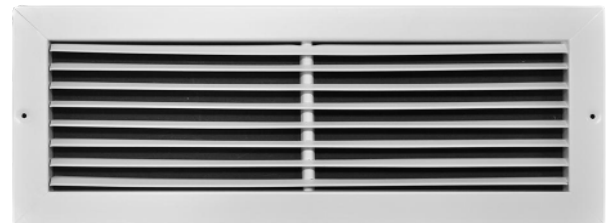
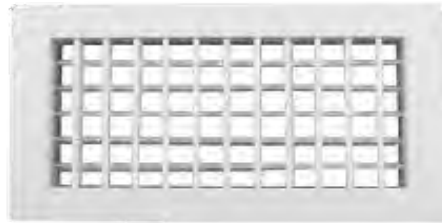




VOLUME CONTROL DAMPER

Low leakage aluminum aero-foiled opposed blade dampers. The whole body construction is made up of GI/ S.S material. The air flow can be controlled with the help of set screw or actuator provided on the damper handle to regulate. These dampers are single blade, two blades, three blades, multi blades & custom built as per the required opening size.

AIR GRILL



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|--|---|
| <ul style="list-style-type: none"> ● Aero foil section with 0, 15, 30, and 45 deflections, suitable for side wall, false ceiling and ceiling mountings. | <ul style="list-style-type: none"> ● Material of construction: Extruded Aluminum /mild steel or stainless steel. |
| <ul style="list-style-type: none"> ● Powder coated, anodized, emulsion painted, primer coated. | <ul style="list-style-type: none"> ● Deflection blades are adjustable manually and individually. |
| <ul style="list-style-type: none"> ● Standard 20mm blade spacing. | <ul style="list-style-type: none"> ● Single/Double deflection with high quality anodizing or powder coating. |
| <ul style="list-style-type: none"> ● With or Without Opposed blade Dampers. | |

AIR INTAKE LOUVER

- | |
|---|
| <ul style="list-style-type: none"> ● Intake louvers are designed to protect air intake and exhaust. |
| <ul style="list-style-type: none"> ● Material of construction: Extruded Aluminum /Mild Steel or stainless steel. |
| <ul style="list-style-type: none"> ● Finishing powder coated, anodized, emulsion painted. |





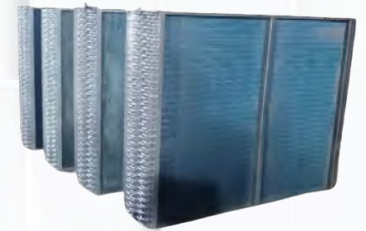
AIR HANDLING UNIT



PACKAGE UNIT



FAN COIL UNIT



COOLING COIL



AIR COOLED CHILLER



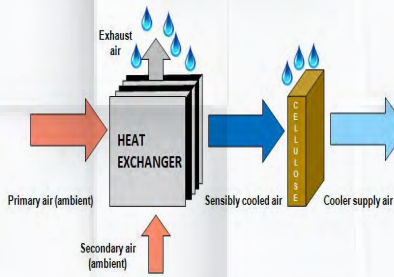
WATER COOLED CHILLER



WATER COOLED CONDENSER



AIR COOLED CONDENSER



TWO STAGE AIR WASHER



EVAPORATIVE TYPE AW



CONVENTIONAL AIR WASHER



AIR SCRUBBER



CLEAN ROOM



VENTILATION HOOD



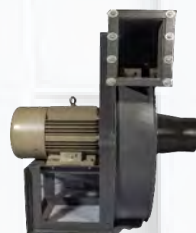
PRIMARY FILTER



SECONDARY FILTER



CENTRIFUGAL FAN



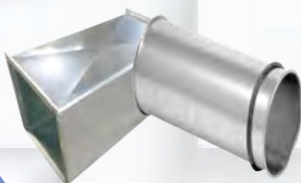
BLOWER



AXIAL FAN



HEPA TERMINAL BOX



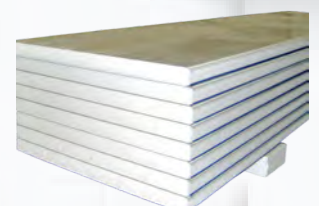
DUCT WORK



RETURN AIR RISER



DAMPER



PUF PANEL

Our Strengths & Capabilities

TURNKEY SOLUTIONS WITH SUPPLY, ERECTION AND COMMISSIONING.
EFFECTIVE PROJECT MANAGEMENT FOR TIMELY COMPLETION ADHERING
TO QUALITY AND SAFETY STANDARDS .



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