Air Handling Unit BA+ / BA





Systemair around the globe

Systemair was founded in 1974 with an innovative idea of creating an in-line centrifugal fan for circular ducts, which simplified ventilation.

Today, our company is one of the global leaders in the field of ventilation & air conditioning technology, with its operations spread across four continents. Our main focus is to develop products that supply, extract, convey, heat, cool and distribute air energy efficiently in a building. Our products are energy efficient, robust, easy to select, install and use.





Always close to you!

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Systemair- we make in India

MARKET-LEADING PRODUCTS AND SOLUTIONS

Innovative product development closely tied into external trends are crucial to our ability to offer market-leading products and solutions that help customers to meet their challenges - today and tomorrow

Systemair started operations in India in 2006 to meet the needs of fast growing markets. Today, Systemair India Pvt. Ltd. (100% owned subsidiary of Systemair AB, Sweden), is a reputed manufacturer in ventilation and air conditioning equipments.

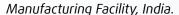
In India, Systemair has 9 offices in Noida, Hyderabad, Bengaluru, Chennai, Kochi, Kolkata, Pune, Mumbai & Ahmedabad and 2 ultramodern factories located at Greater Noida & Hyderabad.

The Greater Noida factory is a LEED Platinum certified building with an ultra mordern Research & Development center having ATD & Acoustic laboratory built in compliance with EN 1228 and AMCA 210 & AMCA 300 standards.

The team of 400 dedicated professionals are now working in India looking after sales, technical support, production & logistics.









Acoustic Lab, India.

The wide product range manufactured in India are `Fans' `Air handling units' & `Air distribution & Fire safety products'

Fans





Air Handling Units





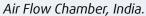
Air Distribution & Fire Safety





Explore more about air handlers with us >>>







ATD Lab, India.



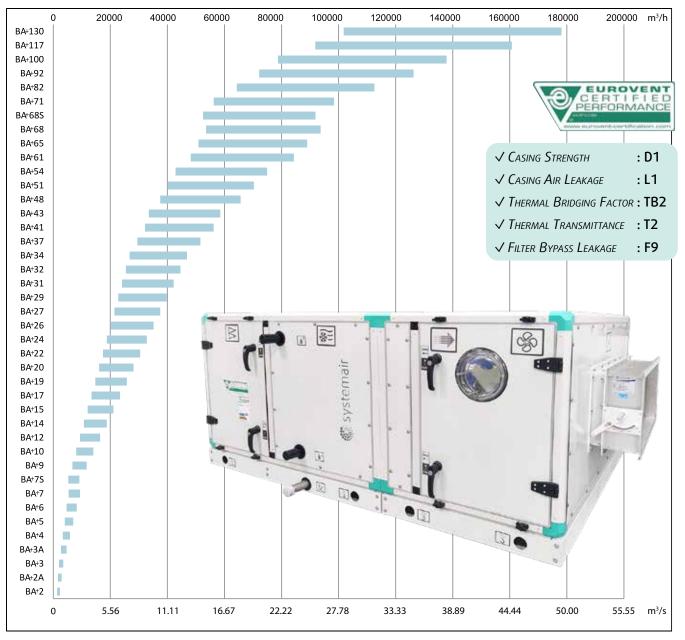
Air Handling Units

Modular & extremly adaptable

Systemair has a wide range of air handling units for use in various applications from small office premises to larger industrial applications. Common to all items in the range is that, systems and components have been developed to satisfy stringent demands for low energy consumption. Heat exchangers, motors and fan units have all undergone extensive testing, both in the laboratory and out in the field, in order to comply with current and future demands for low energy consumption.

All products are also manufactured to comply with environmental requirements. To ensure easy installation, many of these units feature control systems enabled for plug-and-play, i.e. simple start-up.

BA* Units Eurovent certified- with 50mm panel

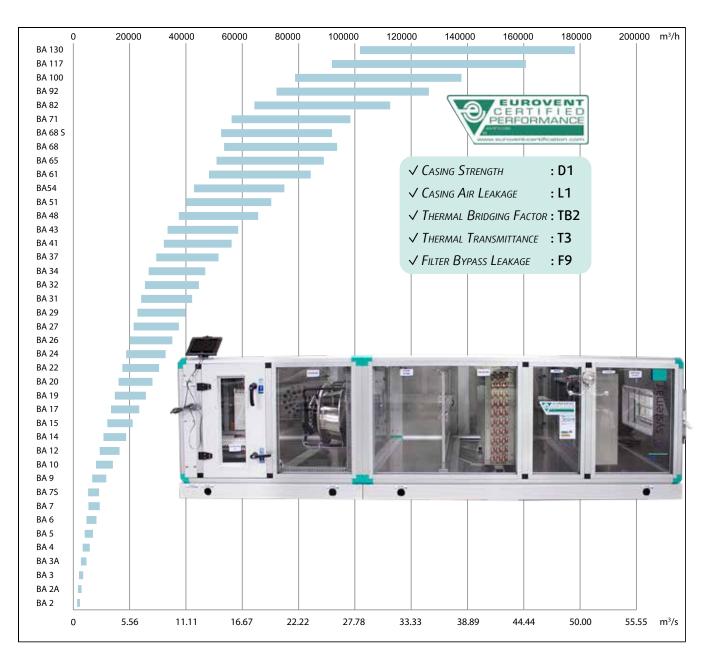




Facts about AHU

- BA+ and BA units are Eurovent certified
- Eurovent certified units are available in 50mm panel thickness
- · Handles airflows of 1000-178000 CMH
- For use with medium or high air pressure systems.
- Heating and cooling units
- · Extensive range of filters & Heat recovery sections
- Static pressure upto 2300pa

BA Standard Units- with 50mm panel







Reference: "Seawoods Grand Central", Mumbai -India

Seawoods grand central is India's largest Transit –Oriented- Development project in Mumbai.

A unique combination of Commercial, Retail and Hospitality around the world class railway concourse, spread across 40 acres of land.

Products/Solution:

Modular air handling units Air Distribution Products Fire Safety Products



Examples Of Applications

Our air handling units are designed in modules. The module can be configured for different applications to make up the heart of any air conditioning system. The flexibility makes it possible to optimize the air handling unit for specific requirement.

Comfort Solutions

Simple project implementation for expansion of existing premises or new buildings. Simplifies selection and planning and includes smart solutions for easier installation.

Compact Solutions

Extreme space-saving solutions and new connections for units that can also be split. Completely adaptable to satisfy all new demands. Compact air handling units are easier to transport and handle at the construction site.

Flexible Solutions

Flexible solutions with heat recovery and intelligent control functions that are easily adapted to suit current needs of different recovery systems and configurations.

Plug & Play Solutions

Integrated control systems. Our factory-integrated solutions are designed with various levels of equipment that can handle everything from the simplest requirement to the toughest demands.

Industrial Solutions

Air humidifiers can be installed in air handling units, which makes it suitable for air cooling, water spray humidifier and scrubber applications.

Clean Room Solutions

Clean rooms can encompass numerous applications, everything from operating theatres to laboratories. Systemair's range of air handling units can satisfy all requirements relating to healthcare, whether these have to do with air cleanliness, noise levels or demand control.



Components of air handling units



Fan/motor.

A variety of fans can be offered based on the requirement.

- Belt driven DIDW centrifugal FC/BC fans
- Centrifugal plug fan
- Motors with IE1/IE2/IE3 efficiency
- PM motor with IE4 efficiency



Supply and extract

Units are offered with high quality & low pressure drop filters of different particulate efficiency.



Heat transfer coils.

Copper tube aluminium finned heat transfer coils available in multiple rows deep and are designed to give certified performance output for heating, cooling & recovery applications



Units can be provided with fully tested control systems for all necessary standard functions and the settings can be easily adjusted to desired operational values.

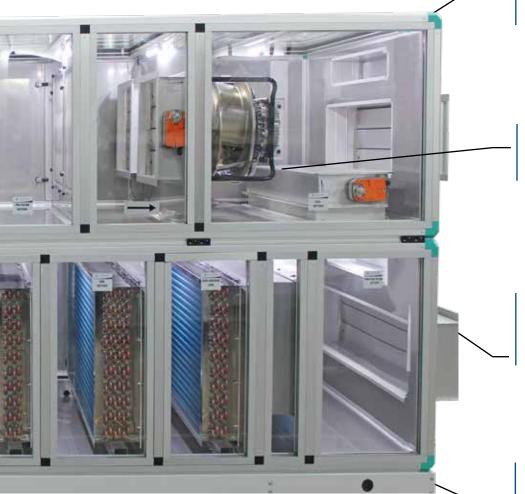


Inspection doors/ handles.

Adequate sized inspection doors are provided in each section fitted with high quality comfortable handles.







Tightness/corners. Framework of airtight,

elegant & sturdy extruded aluminium hollow profile with polyamide thermal break profile having glass filled nylon corners & spacers.



EC fan.

A wide range of EC fans can be offered.



Supply and extract dampers.

low-leakage extruded aluminium dampers suitable for manual or motorised operations.



Base frame.

The base frame is made from strong galvanized steel with lifting provision.





Units are supplied with single speed motors. To regulate the fan speed to its actual point, frequency converters can be provided.



Heat exchanger. High quality and energy-efficient

heat exchangers are available: rotary heat exchanger, plate type heat exchanger, heat pipes or run around coil heat exchanger.



Casing

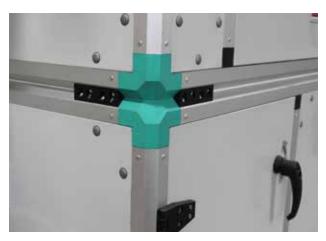
The metal enclosure that covers all the components contained in the Air Handling Unit is sturdy and has no protruding items to disturb the overall look of the unit.

Air handling units have a frame composed of an extruded aluminium section that outlines the equipment edges perfectly, resulting in a solid, robust and attractive

These aluminium extruded sections are joined by injection-moulded glass-reinforced nylon corner &

The unit enclosure is made up of sandwich panels comprising two pieces of metal sheets one inside the other.

The inner rack is manufactured of aluzinc, stainless steel or galvanised steel sheet, whereas the exterior rack of the same material has precoated/ aluzinc finish. The insulation material between the two racks is either machine injected polyurethane foam insulation or rockwool to ensure excellent thermal & sound insulation.



The AHU panels are manufactured in nominal thickness of 50mm which are mounted on a frame composed of an aluminium profile, which outlines the equipment edges precisely.

Regardless of the type of structure, all panels on the access side can be easily dismounted, thereby facilitating access to the internal parts of the air handling unit by the maintenance staff.

The finished equipment can have a bedplate composed of channel sections or feet. Based on the project needs, it can also be set on shock absorbers when vibration must be avoided

The enclosure described contains all the air handling unit sections, which can include some or all of the ones described below:

Inlet Section

This section is composed of a standardised length with an air inlet to the air handling unit.

This opening can:

- Use a volume control damper, that can be equipped for manual operation or for subsequent automation.
- Be equipped with a simple inlet consisting of a straight flange for easier duct connection;

In addition, a cover to prevent water from entering when the equipment is placed outdoors can be provided.

Mixing Section

This has similar features as the above and two openings, each of which contain a control damper.

These dampers can be supplied with an extruded aluminium section construction having airfoil blades.

The operating mechanisms for all dampers are installed in the channel frame. This allows air to circulate freely and facilitates installation in closed ducts. The mechanisms and fasteners are made of corrosionresistant materials.

The operating mechanism of the dampers may be manual or equipped for motor-driven operation. In the latter case, upon request and depending on the damper size, these controls can be supplied interconnected so they can be operated by a single servo drive.

Free Cooling Section

This section requires a return fan and a supply fan. These fans must have three dampers in between to regulate the volumes of exhaust, return and outside air. Therefore, in order to meet their purpose the dampers must be motor-driven.

When the enthalpy of the outside air is less than the enthalpy of the recirculated air, i.e., during spring and autumn, the mixture of outside air and recirculated air is controlled to achieve free cooling.

Consequently, the relative opening of the dampers is determined by an enthalpy (or dry temperature) comparator, which sends the respective signal to the damper motors.



In order to ensure the minimum ventilation air required in cooling or heating seasons, the outside air inlet damper can be split into two sections (one motor-driven and another manual that remains fixed). The cross-section of the damper will be proportional to the minimum ventilation air flow.

This effect can also be achieved more economically by adjusting the stroke of the motor operating the outside air damper so it does not close completely.

Access Section

This section, which has a hinged access door and is equipped with an enclosure and handle, is sandwiched in the air handling unit configuration to allow access to the lower parts that require surveillance or regular maintenance.

It may also be used to hold any type of auxiliary component, such as a perforated jet humidifier for



Door hinge



View window

Door handle

direct humidification with steam, or other types of components.

Filters

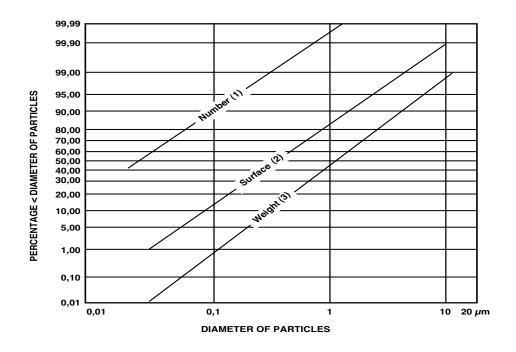
One of the purposes of the air handling unit is to ensure the purity of the room air. Air filtering is related to the quantity, variety and size of the suspended impurities, the existence of contaminant gases or odours, and the desired filtering efficiency. The various impurities that can exist in the air are discussed below.

The air contains numerous foreign substances caused by natural processes (e.g., wind erosion, sea evaporation, soil movements, volcanic eruptions) and by human activity (e.g., combustion). Atmospheric dust is a mixture of fog, combustion gases, fine dry particles and fibres. Air testing normally indicates the presence of soot and smoke, quartz, soil, residue from decomposed animals and vegetables, organic substances in the form of cotton and plant fibres, and metal fragments. The air also contains other organisms such as micro organisms, spores and pollen.

Particle size is expressed in microns (10-6 m). Air contains particles with a thickness of up to 0.01 microns and other particles with a thickness similar to fibres, leaves, etc. Dust is generally understood to mean particles under 100 microns. The particle size distribution of particles in atmospheric dust can be measured in several ways. Traditionally, a variety of measurement methods have been used to determine the efficiency of the different types of filters and no classification system combining the various criteria in use existed. The first version of the Unified Standard EN 779 was issued to unify the classification criteria for all filters with an initial efficiency with atmospheric dust less than or equal to 98%, (Group G: coarsedust filters; Group F: fine-dust filters). Later, in 1998 the first version of Unified Standard EN-1822 unifying the classification criteria for HEPA and ULPA absolute filters was published. The initial efficiency of these filters with atmospheric dust is greater than 98%.

The standardised range for the BA+ & BA Air Handling Unit includes three air filtering sections which, combined with the wide variety of filtering materials, covering an extensive range of possibilities in filtering efficiency.





- · Greater efficiency;
- Greater dust retention capacity;
- Reduced front surface.

The filters correspond to Classes G1, G2, G3 and G4 of Group G (coarse-dust filters) and Class F5, F6 and F7 for Group F (fine-dust filters), as per UNE-EN 779.

Extended surface filters

Characterised by a specific type of pleat which produces a larger filtering surface. The pleat design, as well as the alignment between the pleats, ensures uniform air circulation over the surface of the filtering media.

The extended surface filter is composed of a frame, filtering media in zigzag layout, and electrowelded mesh to hold the media. Its advantages with respect to flat filters are:

- Greater filtering surface;
- · Reduced front air velocity;

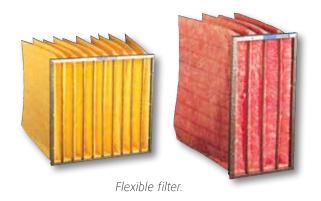


Flexible bag filters

The flexible bag filters allow a high filtering flow rate in relation to the front surface area. Constructed with fibreglass (greater efficiency) or synthetic fibre (lower efficiency) filtering media.

Flexible filters have the following advantages:

- · Lower power requirement.
- Longer filter renewal interval.





Classification of filter in accordance with EN779		Filters can also be classified as follows			
Class		Ability to separate synthetic dust, Am	Mean value of the collecting efficiency, E _m	Eurovent 4/5	ASHRAE
G 1		50 <u><</u> A _m <65	•	-	-
G 2		65 <u><</u> A _m <80	-	-	-
G 3		80 <u><</u> A _m <90	-	EU3	G85
G 4		90 <u><</u> A _m	-	EU3	G90
F 5		-	40 <u><</u> E _m <60	EU5	F45
F 6		-	60 <u>≤</u> E _m <80	EU6	F65
F 7		-	80≤E _m <90	EU7	F85
F 8		-	90 <u><</u> E _m <95	EU8	F95
F 9		-	95 <u><</u> E _m	-	-

- · Lower energy costs.
- · Lower maintenance.

These filters have a medium to high efficiency and correspond to Classes F5, F6, F7 and F8 of Group F (finedust filters) as per UNE-EN 779.

Rigid bag filters

Rigid bag filters have similar filtering capacity as flexible bag filters with the following advantages:

- Solid, sturdy construction for fast, easy installation.
- Compact, reduced-volume design.

They have a medium to high efficiency and correspond to Classes F5, F6, F7, F8 and F9 of Group F (fine-dust filters) as per UNE-EN 779.

Both the rigid and the flexible bag filters are specially recommended for:

- · Hospitals.
- Pharmaceutical companies.
- · Food industries.



- · Computer rooms.
- · Office buildings.

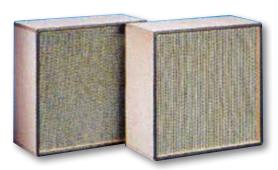
Likewise, both rigid bag filters and the flexible bag filters of Class F8 and F9 trap particles below 6 microns, which correspond to the smallest particles of those in temporary suspension that are visible under a microscopic.

Absolute filters

Require careful installation that guarantees complete airtightness of all gaskets. They are designed to eliminate virtually even the smallest particles in the air, i.e., those in continuous suspension (the smallest of these are only visible using electronic microscopes).

They are specially recommended for:

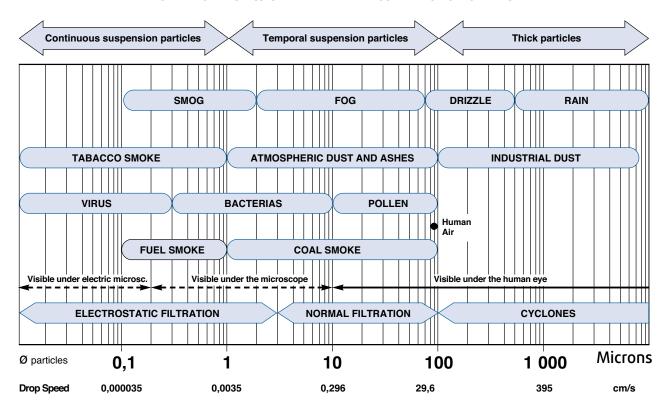
- Hospitals.
- Food industries.
- Pharmaceutical companies.



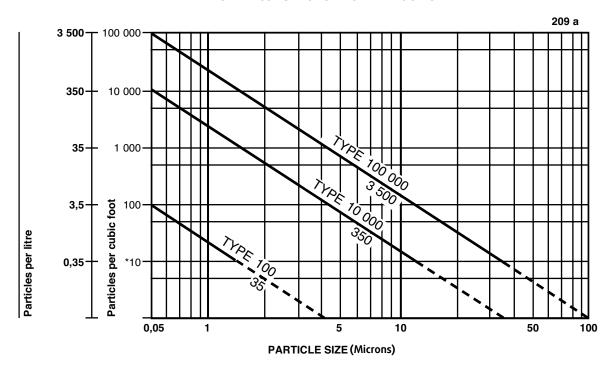
Absolute Hepa filters.



CHARACTERISTICS OF THE MAIN ATMOSPHERIC POLLUTANTS



AIR PURITY CONDITIONS IN CLEAN ROOMS



^{*} Counts below 10 particles per cubic foot (0.35 per litre) are dubious. Example: admissible particles for a Class 10,000 system:

10.000 per cubic foot, 0,5 microns. per cubic foot, 1 micron. 1.200 per cubic foot, 1 micron.

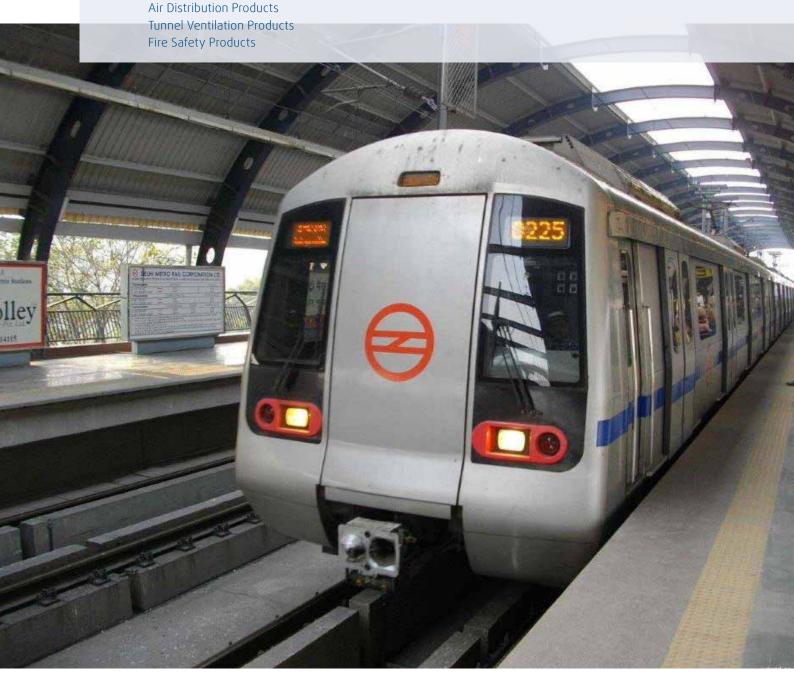




Reference: Delhi Metro "DMRC", Delhi, India

The "Delhi Metro" is a new era in the sphere of mass urban transportation in India. These modern Metro are comfortable, air conditioned and eco-friendly. A revolution in the mass transportation scenario not only in the National Capital Region but the entire country. Products/Solution:

Modular air handling units





Heat transfer coils

The cooling and heating units are composed in the enclosure described above, which contains the tube-andfin heat transfer unit, mounted on a special joint cover.



For air cooling processes, units composed of copper pipes and aluminium fins (Cu/Al) are normally used. At the bottom, the cooling section has a aluminium/stainless steel pan for collecting condensation and a small hose to drain the condensation toward the outside. The pan is slightly tilted for easier drainage, in order to prevent the proliferation of harmful bacteria such as Legionella pneumophila.

Direct expansion units are also used for cooling. These units can be equipped with one or two manifolds. For heating processes, the same type of copper/aluminium units used for cooling is normally used. If the air might contain corrosive chemicals, copper tube and fin (Cu/Cu) units should be used to improve the corrosion resistance of the equipment. This type of unit is more expensive than the copper/aluminium unit.

Electrical heating units can also be installed upon request, depending on the customer's needs.

Copper tube and aluminium fin heating/cooling units

This class of heating/cooling unit is most commonly installed in air handling units and is composed of a coil of copper pipes covered with thin aluminium fins to greatly increase the primary heat transfer surface of the tube, due to the large transfer surface of the fins.

The front air velocity surface (Afo) expressed in m² is determined by the dimensions (width x height) of the air handling unit internally.

The maximum horizontal length of the finned coil is

determined by the working width of the interior of the air handling unit and expressed in mm. The depth of the heating/cooling unit is composed of a specific number of rows of tubes facing the direction of air flow. The number of rows is calculated according to the air flow conditions at the inlet and outlet of the unit, based on the cooling or heating energy used by the equipment.

The number of rows is defined by a number, followed by the letter "R".

Based on the above, a unit designated as 20T 3R 950 means:

20 T Height of 20 tubes, equal to 635 mm;

3 R Depth of three tubes

950 Length of finned coil, in mm.

The standardised Air Handling Unit range uses the following heating/cooling units:

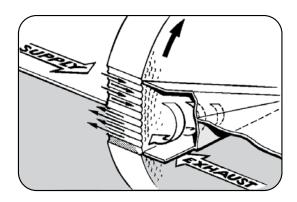
This range can be used with any cooling or heating fluid except steam, where the length of the finned coil is slightly lower, since collectors must be mounted on both sides of the unit instead of one side only, as normally done with other fluids.e deformed under these conditions due to excessive expansion of the metal.

Heat Recovery

Rotating regenerative air-to-air recovery unit

Specially designed to transfer sensitive (temperature) and latent (humidity) heat from the exhaust air to the supply air.

The supply air stops in one of the halves of the heat recovery unit, while the exhaust air circulates in counterflow through the other half.



When the impeller turns, the small air flowing channels comprising the impeller are alternately in contact with clean air and with return air, transmitting heat and moisture from one circuit to the other.



Static recovery unit



Designed with air-to-air crossflow to transfer sensitive (temperature) heat; in this type of heat recovery unit, the supply air is completely separate from the exhaust air, in order to prevent any type of contamination from one air stream to the other.

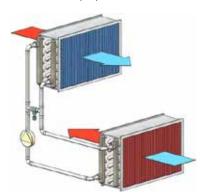
- Heat transfer takes place through the plate separating the two streams.
- Two adjacent plates form a small duct for exhaust or supply air.
- The plate-to-plate distance varies, depending on the size and efficiency requirements.

Run around heat pipe

Designed to transfer sensitive (temperature) heat, using units manufactured with copper pipes and aluminium fins (Cu/AI).

The method is simple and economic, as the return air flows through one of the units, heating the water that circulates inside and is then exhausted.

The outside air flows through the other unit, which heats the air while it cools the circulating water, with the latter heated again in the return circuit, creating a continuous sensitive-heat recovery cycle in the air.



In order to ensure proper system operation in winter, facilities with an extremely low outside air temperature must use glycol water.

Benefits achieved from the installation of any of these

heat recovery systems:

- Reduced heating plant power, minimising equipment sizes in terms of boilers, fuel tank, circulating pumps, heat pipes and heating units.
- Reduced cooling plant size (compressors and condensers or cooling towers), circulating pumps, pipe grid and cooling units. Savings in operating power consumption for heat and cold generation.

Any of the recovery systems mentioned in this section can be installed upon request only, as they are not included in the BA standardised range.

Fans

This section is composed of a centrifugal fan with an anchor bedplate, drive and electric motor or plug-fan.

The centrifugal fan motor assembly is mounted on Silentbloc bushings and the discharge outlet is joined to the opening in the enclosure by means of a flexible fire retardant synthetic seal.

This allows the unit to run without external transmission of the small vibrations normally caused by fan motor assemblies.

Centrifugal fan

There are three types of fans that cover all needs: the forward and aerofoil models for low pressures and the backward for medium and high pressures.



Forward curve fan.



Backward curve fan.

Once the fan model is selected, check the respective behaviour curve to obtain the unique characteristics. Based on two essential factors (air flow and total static pressure), the following is obtained:

- Revolutions per minute
- Efficiency, in %
- Input power at the shaft, in kW;
- Mean sound power level of the octave bands, in dB;
- Air outlet velocity, in m/s;
- Dynamic pressure, in mm w.g.
- Peripheral velocity, in m/s.



Plug fan

Plug fan built into an acoustically insulated air handling unit. A plug fan supplies air at the fan section outlet with a low and even air speed. In certain situations it can, therefore, be an advantage to position air handling components on the outlet side of the fan.



Single inlet plug fan with open outlet into the air handling unit. The fan impeller is fitted directly to the motor shaft. This fan type has low sound power levels in the lower frequencies. Efficiency up to 75%.

The motor is supplied with a 1-speed motor. In order to regulate the fan speed to its actual operating point the motor must be fitted with a frequency converter.

The frequency converter can continuously control the fan speed and airflow. Power consumption can be greatly reduced by operating the fan at lower speed.

Operating temperatures:

Standard design: -10/+40 °C

Special design: -30/+60 °C.

All fans are fully balanced both statically and dynamically. The fan and motor are built on a stable base frame that is connected to the unit casing with rubber vibration isolators. These are designed for high levels of vibration absorption.

The fan inlet is flexible connected to the unit casing. This ensures a good vibration absorption.

EC fan

The EC fan is equipped with a Single Inlet Centrifugal Impeller with High Efficiency Backward curved blades and external rotor EC (Electronically Commutated) motor,



energy optimized for operation without spiral housing for high efficiency and favourable acoustic behaviour. The high efficiency backward curved impeller with rotating diffuser, made of high performance composite material / welded aluminum sheet material, with external rotor motor balanced together statically and dynamically

		EFFICIENCY	AREA OF APPLICATION
	Fans	Most efficient of the centrifugal fans	General ventilation/air conditioning
Aerofoil		Most efficient operating conditions are achieved with maximum flow of 40-50%	Mainly large systems
		Power is also peaked at the maximum efficiency level	Significant energy savings in large industrial fresh air systems

Curved	Efficiency is slightly lower	General ventilation/air conditioning
Backward (Similar efficiency with Aerofoil fan	Certain industrial applications where air foil fans might be exposed to corrosion and wear

rved		should not be operated on the right side of maximum ssure	Mainly for low pressure ventilation/air conditioning applications
ward Cui	0	st efficient operating conditions are achieved with maxim f low of 50-60%	
For	Low	ver maximum efficiency than the other centrifugal fans	



according to DIN ISO 1940 Part 1.

The EC fan is capable of being fitted in horizontal or vertical position in the AHU, depending on the application. Inlet cone is provided with a nozzle for volume flow measurement of the fan.

Silencers

The baffles of the silencer section are constructed of natural galvanized steel sheet, with a peak at the air inlet end to decrease the head loss. The baffles are also filled with a sound-insulating material composed of fibreglass with an appropriate density. This material is also heat-resistant and its outer face is protected against air erosion.

There are two options:

- **PA**. The sound insulation is protected against erosion due to air flow by a flame-retardant protective layer. This is the most common approach in ventilation and air conditioning systems.
- PAM. Similar to PA, but with an additional polyesterfilm coating (Melinex).

Used for applications with acidic, alkaline or oily gases, as it can be steam-cleaned.

Recommended for hospitals, since bacterial colony formation is not possible.

These two models can be constructed with four lengths of baffle.

Humidifier

Two different types of air humidifiers can be installed in BA air handling units. In both cases, the units are adiabatic humidifiers.



Panel humidifier

Composed of a standardised enclosure, including a stainless steel drip pan at the bottom.

The enclosure houses the humidifier panel, which has crosswise corrugated channels to ensure minimum air resistance as well as a large contact surface between the air and water, thereby releasing moisture into the circulating air.

The top of the panel contains a water manifold, to which the water is pumped through the pipework from the drip pan by means of a small submersible electrical pump. Water is distributed vertically downwards by gravity, coating the entire inner panel surface with an extremely fine film. As the air flows by the panel horizontally through the spaces provided, turbulent flow conditions are established, thereby resulting in efficient transfer of heat and moisture.

Air scrubber, composed of an enclosure with a large drip pan at the bottom. The tray contains enough water to create steady state conditions in the scrubber system and is equipped with hoses to connect the circulating pump (supplied when requested by the client) and water supply, drain and overflow fittings.

The water travels through a distribution branch with spray nozzles. Two distribution branches may be used to increase the efficiency of the humidifier.

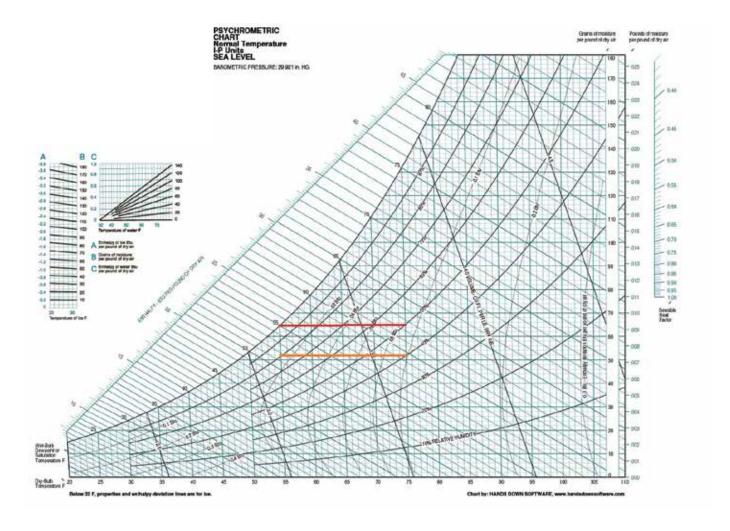
A drop separator with blades designed to hold drops in the air is installed on the air outlet side, ensuring that no drops are carried to other sections.

Air cooler application

The above example shows that this type of panel may be used as a cooling medium, since its behaviour is typical of an adiabatic cooling or constant enthalpy process. Based on the above data, when heat dissipation of 200,000, kcal/h is needed in a space where the inside temperature should be maintained at no more than 29°C, it is possible to calculate the air flow that should be introduced and therefore also removed from the local. The air flow required will be:

$$\frac{200}{(29^{\circ} \text{ C} - 24^{\circ} \text{ C}) \times 0.3} = 133.333 \text{ m}^{3}/\text{h}$$





In order to calculate the humidifier's efficiency, use the following formula to determine the saturation efficiency (SE):

$$SE = \frac{T_{se} - T_{ss}}{T_{se} - T_{h}} \times 100$$

Where:

 T_{se} = dry bulb temperature of inlet air.

 $\mathbf{T}_{\mathbf{ss}}$ = dry bulb temperature of outlet air.

 T_h = wet-bulb temperature of air.

Based on the psychrometric chart (a diagram is shown on this page), air with inlet conditions of 38° C (T_{sp}) and 21° C (T_b) is converted in the humidifier finding the process at the wet-bulb line of 21° C until reaching an outlet temperature of 24° C (T_{ss}).

The saturation efficiency will be:

$$SE = \frac{38 - 24}{38 - 21} \times 100 = 82,3\%$$

This percentage is reasonable, since the maximum level that can be expected from this type of humidifier is 90%, as shown in actual practice.

When this example is applied to a specific case in which an air flow of 30000 m³/h, is circulating and the moisture content of the air at the inlet (xe) is 8.6 g/kg and at the output (xs) is 14.4 g/kg, then the amount of moisture added is:

$$\frac{30.000 \times 1.2 \times (14.4 - 8.6)}{1.000} = 208.8 \text{ kg of water/ hour}$$





Control System

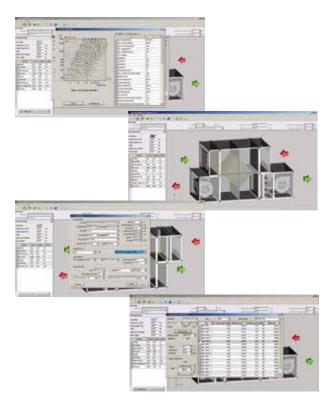
BA' & BA AHU is available with preinstalled, preconfigured & fully integrated control system. It is a user friendly system where functions & parameters can be selected from the inbuilt Human machine interface (HMI) of the controller or through building management system. The operating data, set points, alarms, operating status & time settings are displayed on the controller.

The control system is preloaded with design temperature, relative humidity, pressure drops etc., time settings & control sequence which simplifies field commissioning. The set points can be modified in the field if required. The control system is capable of performing various function such as

- · Temperature control for supply air or room conditions.
- · Relative humidity control
- Dew point control
- · Constant air volume control for supply air
- Enthalpy control
- Excessive pressure drop alarm
- · Heat recovery control
- · Run around coil heat exchanger control
- · Electric heater control
- Cooling/heating coil water flow control
- · Integration of DX coil with outdoor condensing unit
- Fresh/return/bypass/mixing/supply air damper control
- · Redundancy control for EC fans
- · AHU shut off from external fire signal
- Open protocol (BACnet/Modbus over RS 485/LON) to communicate with all Building Management Systems.
- Possibility to access the control system remotely through WEB
- Possibility to add additional control/alarm points as per customer's need
- · Logging of various parameters
- VAV integration

Selection Tools

We have developed this overview to make it easier for you to get an idea of which product best suits your specific needs. More detailed analysis or planning usually requires additional information, which is where the following tools come in.



Software Program

Selection Program named Systemair BAHU is tested & certified by EUROVENT.

- customers can chosse various construction/ manufacturing options viz. sheet thickness, insulating materials, fin material, manifols material etc.
- customers can design unit sections based on required application viz. mixing section, filteration level, recovery section, coolinh / heating section & choose fan/ motor of their choice.
- it actaully lets customers decide sectional possibilities in order to decide the dimensions of space required to place a unit.
- Divide the equipment into modules, in accordance with the project requirements;
- Obtain all technical information for the equipment selected, including the curves for the selected fan and its operating point;
- Estimate the cost of the equipment.

The Selection Program is user-friendly and highly intuitive.



Product catalogue and specification data

More detailed technical information, sufficient to carry out complete planning, is available in separate catalogues and specification data. These describe all incorporated functions, available accessories, and additional technical data.





Reference: Airport "CIAL", Cochin, India

Cochin International airport is a mega HVAC project, designed as a 2 level terminal with arrival at ground level and departure on first level. Having provision for 112 check-in counters, 100 immigration counters, 19 boarding gates, 15 aerobridges, capable to handle 15 aircrafts during peak operation

Products/Solution:

Modular AHU with heat recovery wheel Air Distribution Products Fire Safety Products

Fans

Air Curtains





Resulting Class according to EN 1886: 2007

	BA+	BA	
CASING STRENGTH	D1	D1	
CASING AIR LEAKAGE	L1	L1	
THERMAL BRIDGING FACTOR	TB2	TB2	
THERMAL TRANSMITTANCE	T2	T3	
FILTER BY PASS LEAKAGE	F9	F9	

Performance Characteristics tested to EN 13053 standard for

AIR FLOW – STATIC PRESSURE DATA - POWER CONSUMPTION
HEAT RECOVERY
COOLING DUTY
HEATING DUTY
AIR – SIDE & WATER - SIDE PRESSURE DROP



BA unit performance certificate



CERTIFICATE (2) N° 19.11.023



Air Handling Unit / Centrales de traitement d'air

Range Name / Nom de Gamme :

Granted on November 20, 2019 - Date 1ère admission 20 novembre 2019

This document is valid at the date of issue - Check the current validity on: Document valable à la date d'émission - Vérifier la validité en cours sur :

www.eurovent-certification.com

Participant/Titulaire

SYSTEMAIR INDIA PVT. LTD. Plot N°3, Sector 31 ECOTECH-I Kasna - Site IV 201 308 GREATER NOIDA, India

This product performance certificate is issued by Eurovent Certita Certification according to the certification rules:

ECP AHU - « Air Handling Unit » in force at established date.

Pursuant to the decision notified by Eurovent Certita Certification, the right to use the mark ECP shall be granted to the beneficiary company for the above Range in the conditions defined by the certification program

Unless withdrawn or suspended, this certificate remains valid as long as the requirements for the certification program framework are met. The validity of the certificate is to be verified on www.euroventcertification.com

THIS CERTIFICATE HAS BEEN ISSUED ON 12/10/2021 THIS CERTIFICATE IS VALID UNTIL 30/06/2022

Ce certificat de performance produit est délivré par Eurovent Certita Certification dans les conditions fixées par le

ECP AHU - « Centrales de traitement d'air » en vigueur à date d'édition.

En vertu de la décision notifiée par Eurovent Certita Certification, le droit d'usage de la marque ECP, est accordé à la société qui en est bénéficiaire pour la gamme visée cidessus, dans les conditions définies par le programme de certification mentionné.

Sauf retrait ou suspension, ce certificat demeure valide tant que les conditions du référentiel du programme de certification sont respectées. La validité du certificat est à vérifier sur le site Internet www.eurovent-certification.com

CE CERTIFICAT A ÉTÉ EMIS LE 12/10/2021 CE CERTIFICAT EST VALIDE JUSQU'AU 30/06/2022

Paris, 12 octobre 2021

Organisme accrédité n° 5-0517 Certification Produits et Services selon la norme NF EN ISO/CEI 17065:2012 Portée disponible sur www.cofrac.fr

Accreditation #5-0517 Products and Services Certification according to NF EN ISO/CEL 17065:2012 -Scope available on <u>www.cofrac.fr</u>

COFRAC est signataire des accords MLA d'EA et MLA d'IAF, COFRAC is signatory of EA MLA and IAF

MLA, list of EA members is available on www.european-accreditation.org/ea-members list of IAF members is available on www.iaf.nu//articles/IAF_MEMBERS_SIGNATORIES/4 MANAGING BOARD MEMBER / MEMBRE DIRECTOIRE

facourt 1

1/2

EUROVENT CERTITA CERTIFICATION SAS au capital de 100 000 € - 48-50 rue de la Victoire 75009 Paris - FRANCE Tel.: 33 (0)1 75 44 71 71 - 513 133 637 RCS Paris - SIRET 513 133 637 000 35 - TVA FR 59513133637







CERTIFICATE N° 19.11.023



Appendix / Annexe

Granted on November 20, 2019 - Date 1ère admission 20 novembre 2019

This document is valid at the date of issue - Check the current validity on: Document valable à la date d'émission - Vérifier la validité en cours sur :

www.eurovent-certification.com

List of certified products and characteristics is displayed on: La liste des références et caractéristiques certifiées est disponible sur le site : www.eurovent-certification.com

This product performance certificate is valid for the following trade names: Ce certificat de performance produit est valide pour les marques commerciales suivantes: Trade Name / Marque Commerciale

SYSTEMAIR

This product performance certificate is valid for the following manufacturing places: Ce certificat de performance produit est valide pour les sites de production suivants: Manufacturing Place / Site de Production

GREATER NOIDA, India Hyderabad, India

This product performance certificate is valid for the following software: Ce certificat de performance produt est valide pour les logiciels de sélection suivants: Software / Logiciel de sélection

SYSTEMAIR BAHU 5.0.1



Quality Management ISO certificate



MANAGEMENT SYSTEM **CERTIFICATE**

Certificate no.: 176390-2015-AQ-IND-RvA Initial certification date: 12 April 2006

12 April 2021 – 11 April 2024

This is to certify that the management system of

Systemair India Pvt. Ltd.

HO & Unit 1: Plot No. 3, Ecotech-1, Sector-31, Site IV, Kasna, Greater Noida – 201 308, Uttar Pradesh, India

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:

ISO 9001:2015

This certificate is valid for the following scope:

Design, development, manufacture, marketing, supply and service of HVAC products

Place and date: Chennai, 07 April 2021

For the issuing office DNV - Business Assurance ROMA, No. 10, GST Road, Alandur, Chennai - PIN - 600 016, India





Certificate no.: 176390-2015-AQ-IND-RvA Place and date: Chennai, 07 April 2021

Appendix to Certificate

Systemair India Pvt. Ltd.

Locations included in the certification are as follows:

Site Name	Site Address	Site Scope
Systemair India Pvt. Ltd.	Unit 2: Plot No. 8-84/14/11, Opp. Sai Geetha Ashram, Devaryamzal, Medchal Dist, Hyderabad – 500 078, Telangana, India	Manufacture, marketing, supply and service of HVAC products
Systemair India Pvt. Ltd.	HO & Unit 1: Plot No. 3, Ecotech-1, Sector-31, Site IV, Kasna, Greater Noida – 201 308, Uttar Pradesh, India	Design, development, manufacture, marketing, supply and service of HVAC products





DNV-GL

MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 10000359085-MSC-UKAS-IND Initial certification date:

01 October 2020 - 30 September 2023

This is to certify that the management system of

Systemair India Pvt. Ltd.

HO & Unit 1: Plot No. 3, Ecotech-1, Sector-31, Site IV, Kasna, Greater Noida - 201 308, Uttar Pradesh, India and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Environmental Management System standard: ISO 14001:2015

This certificate is valid for the following scope:

Design, development, manufacture, marketing and service of HVAC products

Place and date: Chennai, 01 October 2020



For the issuing office: **DNV GL - Business Assurance** ROMA, No. 10, GST Road, Alandur, Chennai - PIN - 600 016, India

Sivadasan Madiyath Management Representative



Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid. TEL:+44(0) 203 816 4000. www.dnvgl.co.uk





Certificate No: 10000359085-MSC-UKAS-IND Place and date: Chennai, 01 October 2020

Appendix to Certificate

Systemair India Pvt. Ltd.

Locations included in the certification are as follows:

Site Name	Site Address	Site Scope
Systemair India Pvt. Ltd.	HO & Unit 1: Plot No. 3, Ecotech-1, Sector-31, Site IV, Kasna, Greater Noida - 201 308, Uttar Pradesh, India	Design, development, manufacture, marketing and service of HVAC products
Systemair India Pvt. Ltd.	Unit 2: Plot No. 8-84/14/11, Opp. Sai Geetha Ashram, Devaryam, Mezal, Medchal Dist, Hyderabad - 500 078, Telangana, India	Manufacture, marketing and service of HVAC products



Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV GL Business Assurance UK Limited, 4th Floor, Vivo Building, 30 Stamford Street, London, SE1 9LQ, United Kingdom. TEL:+44(0) 203 816 4000. www.dnvgl.co.uk

Page 1 of 1



Few of our valued customers

Pharmaceuticals / Clean Room

1	ACG-Pithampur
2	ACME Formulation-Baddi
3	Actoverco-Iran
4	Agila Specialities Pvt. Ltd.
5	Ahlcon Parenterals India Ltd.
6	Akorn India Pvt. Ltd.
7	Aleor Dermaceuticals Ltd.
8	Alkem Laboratories, Baddi
9	Alpha Pharma Healthcare (I) Pvt. LtdThane
10	Apotex
11	Ashrae Clean Room, Hy'bad
12	Atra Pharmaceuticals
13	Avantis Pharma
14	BCG Vaccine Laboratories-Tamilnadu
15	Bengal Chemical, Kolkata
16	Biocon Pharma
17	Biocon SDN BHD-Malaysia
18	Biological E Limited-Hyderabad
19	BSL / German Remedies Ltd., Goa
20	Cipla Limited-Bengaluru/Pune/Sikkim
21	Cosmo Laboratories, Ludhiana
22	Dhanuka Laboratories Ltd.
23	Dr. Actoverco-Iran
24	Dr. Reddy's Laboratories
25	East African (India) Overseas
26	E-Biological, Pune
27	EISAI Pharmaceuticals India Pvt. LtdVizag
28	Elysium Pharmaceuticals Limited
29	Emami Limited- Dongari/ Vapi
30	Emami Research Park
31	Fresenius Kabi Oncology Ltd.
32	Goa Formulation Ltd.
33	Gufic-Ahmedabad
34	HBL Limited-Tamilnadu
35	Hellios Pharma, Baddi
36	Hindustan Liver Limited
37	Hospira, Vishakhapatnam
38	HPL Pharmaceutical, Bangladesh
39	Immacule-Nalagarh
40	Innova Captab, Baddi
41	INTAS Pharmaceuticals, Ahmedabad

42	IPCA Laboratories Ltd.
43	Jodas Expoim Pvt. LtdHyderabad
44	Johnsons & Johnsons Ltd.
45	Life Pharma-Dubai
46	Mankind Pharma Limited
47	Marck Parentrals
48	Martin &Harris Labs Ltd.
49	Mayer Organics Pvt. Ltd.,
50	Medical Cyclotron Centre-Kolkata
51	MICO, B'lore
52	Morepan Lab. Baddi
53	Mylan Laboratories
54	Nabros Pharma Pvt. Ltd.
55	Neon Pharma
56	Nicolas Piramal, Mumbai
57	Okasa Remedies Daman
58	Optimus Pharma-Hyderabad
59	Pan Pharma, Baroda
60	Parsan Oversease (P) Limited
61	Perrigo API India Pvt. Ltd.
62	Pfizer, Mumbai
63	Project at Myanmar
64	Ranbaxy Laboratory-Dewas,Toansa,Baddi, Mohali, Poanta Sahib
65	Sangre-La Pharma
66	Scott Edil Adv. Reseach Lab & Education Ltd.
67	Sekh Saria Chemicals
68	Sequent Pharma
69	Serum Institute-Pune
70	Shree Ji Laboratory Pvt. Ltd.
71	Sidmak Laboratories (I) Pvt.Ltd.
72	Stelis Biopharma-Bangalore
73	Sudair Pharma
74	Sun Pharma Sikkim-II & Dadra
75	Sunpharma-Basaka
76	Swiss Garnier Genexiaa Sciences-Sikkim
77	Syngene International Ltd.
78	Teva-Gajraula, Malanpur
79	Torrent Pharmaceuticals Ltd., Dahej, Baddi, Ahmedabad, Indrad



80	Troikaa Pharmaceuticals Ltd.
81	Unichem Laboratories-Pithampur, Roha
82	USV Ltd., Baddi, Mumbai, Daman
83	Vitane-Iran
84	Watson Pharma Limited
85	West Pharma
86	Wockhardt Ltd.

Industrial

1	Amway India Enterprises Pvt. Ltd.
2	Apollo Tyres
3	Asian Paints Ltd., Mumbai
4	BARC-Mysore
5	BHEL, Bhopal
6	Bosch Ltd.
7	British High Commission
8	CGPL, Mundra
9	Colgate, Baddi
10	ETA/Warner Lambert
11	Exxon Co./ Voltas Ltd., Bangalore
12	Godrej Hospital, Mumbai
13	HB Estate, Gurgaon
14	IEML, NOIDA
15	IGIB, NewDelhi
16	IOCL, Barauni ,Bihar
17	IOCL, Faridabad
18	IOCL, Medinipur, WB
19	JMI, New Delhi
20	JRRCRL-Jaipur
21	Mars International India Pvt. Ltd.
22	MES-Manesar, Jabalpur, Shimla
23	NABARD, Lucknow
24	NCBS, Bangalore
25	Oberoi Airport Services, New Delhi
26	Om Kar Builder
27	Paradip Refinery IOCL
28	Price Water House, Calcutta
29	Procter & Gamble, Singapore
30	Punj Lloyd Ltd., Gurgaon
31	Rajwest Power Plant

32	SAIL IISCO-Burnpur
33	SBC, Hyderabad
34	Scott Edil Advance Research Lab & Edu. Ltd.
35	Sekhsaria Chemicals
36	Serum Institute, Pune
37	Texas Instrument, B'lore
38	Thermax Solar Power Plant, Jaisalmer
39	Tmcb-2 Bombay Dyeing
40	Unitech Hi-Tech Structures LimitedKolkata
41	Vacmet India Ltd.
42	Warner Lambert

Hospital

1	AIIMS, New Delhi
2	Alexis Hospital-Nagpur
3	Apollo Hospital
4	Apollo Reach Hospital-Trichy
5	Cancer Hospital-Bathinda
6	Centre for Digestive & Kidney Disease, Mumbai
7	Dhanalakshmi Srinivasan Medical College & Hospital
8	Dr. L.H. Hiranandani Hospital,
9	EPR Centre (Vitane)
10	Escorts Heart Institute
11	ESIC Hospitals
12	Eternal Healthcare Centre & Research Institute Pvt. Ltd., Jaipur
13	Fortis Hospital, New Delhi
14	Godrej Hospital-Mumbai
15	Hiranandani Hospital-Mumbai
16	Jaypee Medical Center
17	Krishna Heart Institute, Amedabad
18	Manipal Medical Institute, Nepal
19	Mata Chanan Devi Hospital
20	Max Hospital, Shalimar Bagh, New Delhi
21	Sanjay Gandhi Hospital, New Delhi
22	Shillong Hospital
23	Sir Ganga Ram Hospital, New Delhi
24	Tata Memorial Cancer Hospital-Vizag
25	Trauma Center, New Delhi
26	Udgir Hospital
27	West Bengal Hospital



Hotels

1	Aakriti Hotel, Greater Noida
2	Bharat Hotel Limited, Jaipur
3	Botanix Resorts-Gurgaon
4	Dusit Devrana Hotel, New Delhi-I
5	Fortune Hotel, Gurgaon
6	Ganapath Hotel-Mysore
7	Garden-Galeria
8	Goa Hotels (Hyatt Goa) HRW
9	Grand Hyatt, Goa
10	Grand Hyatt-Cochin
11	Hotel Hyatt Regency, Calcutta
12	Hotel Intercontinental-Dhaka
13	Hotel Kaniska, New Delhi
14	Hotel Marriott, New Delhi
15	Hotel Shang RE-LA
16	Hotel Udaivilas, Udaipur
17	Hotel Yak & Yeti, Nepal
18	Hyatt Andaz-New Delhi
19	IBIS hotel, New Delhi
20	ITC Gardenia-Bangalore
21	ITC Green Bharat
22	ITC Ltd., Gurgaon
23	Jas Hotel at Amritsar
24	JW Marriot
25	KBJ Grand-Varanasi
26	Kenwood Hotel, Mumbai
27	Lemon Tree Hotel, Hyderabad
28	Malsi Hotel, Dehradun
29	MBD Hotels, Jalandhar
30	Novotel Hotel, Gurgaon
31	Piccadily Hotels Pvt. Ltd.
32	Powai Plaza, Mumbai
33	Radisson Hotel-Guwahati
34	Raj Chopra Mussoorie Hotel
35	Royal Orchid Hotel at Jaipur
36	Sheraton Hotel-Gr. Noida, New Delhi, Jaipur
37	Taj-Bangalore, Kolkata, Mumbai, Hyderabad
38	The Oberoi
39	Tip Top Hotel-Pune
40	Today Hotel
41	Waves Hospitality Pvt. Ltd.
42	Westin Hotel-Gurgaon

Commercial Office

1	Amanora Park Town-Pune
2	American Embassy School, New Delhi
3	Amity-Noida
4	Anjaneya Building-Bangalore
5	Ansal Plaza Mall, Ghaziabad
6	British High Commission
7	BSL/Eagelton –The Golf Village, Bangalore
8	BSNL, New Delhi
9	Callnet India Pvt. Ltd.
10	Cargo Complex, New Delhi
11	Cyber Park, Gurgaon
12	Cyber Walk, Manesar
13	Daksh Call Centre, Gurgaon
14	DHL Airfreight, Gurgaon
15	Era Infra Engineering Limited
16	Global Business Park, Gurgaon
17	Godrej IT Park, Mumbai
18	Golden Heights, Bangalore
19	IIL, Hyderabad
20	IIT, Kanpur
21	IIT-Mumbai
22	Inorbit Mall-Pune, Malad, Mumbai, Vasi
23	I-Park, Gurgaon (Amendment)
24	ISRO, Lucknow
25	Jaipur Central Developers P. Ltd.
26	Jaipur Stock Exchange
27	Jindal Saw, Gurgaon
28	JMI-New Delhi
29	Khalsa Heritage, Punjab
30	LIC Mumbai
31	LMT School of Management, Punjab
32	Lodha I Think-Mumbai
33	Manjeera Mall
34	Market City, Kurla
35	Mind Space Club, Mumbai
36	Mind Space, Hyderabad
38	Motherson Corporate Office, Noida
39	MTNL Mumbai
40	New District Court-Chandigarh
41	Orchid Agora, Gurgaon
42	Orchid Square, Gurgaon
43	Parinee, Mumbai



44	Park View Business Tower
45	Parliament Library, New Delhi
46	Pothys Textiles, Chennai
47	Power Finance Corporation
48	Prasar Bharti, New Delhi
49	PSP Projects Pvt. LtdGandhinagar
50	Punj Lloyd-Gurgaon
51	Raheja Building, 1A
52	RITES Ltd., Gurgaon
53	Ritnand Balved Education Foundation, Lucknow
54	Seawoods-Navi Mumbai
55	Shopat Mantri, Bengaluru
56	Shri Guru Ram Das Institute of Dental Sci-
	ence & Research
57	SRMT Mall-Kakinada
58	Star TV India-Mumbai
59	Thimphu Tech Park, Bhutan
60	TOD-Hyderabad
61	TG Arla Dairy Products Lftz Enterprises- Nigeria
62	Unitech Business Park, Gurgaon
63	Vatika-Tech Park, City, Hospitality
64	Vipul Business Park-Gurgaon
65	Voltas / TCS Salt Lake, Calcutta
66	WHO, Delhi
67	Windsor, Mumbai
68	YKK India

IT / ITES

1	Accenture Services, Bengaluru
2	ARN IT Park, Greater Noida
3	CIS Udyog Vihar, Gurgaon
4	Cognizant Technology Service, Chennai
5	Computer Associates, B'lore
6	E-Serve International, Mumbai
7	Hughes Software, Gurgaon
8	I Gate-Pune
9	Infosys Ltd., Bengaluru, Mangalore, Pune,
	Trivenderum
10	IT Square, Greater Noida
11	Net Apps-Bangalore
12	Oxygen at Noida
13	Phillips Software, Bangalore
14	Phoenix Infocity Pv.t Ltd.
15	Pune Embassy Projects Pvt. Ltd.,
16	S.P. Infocity, Manesar
17	Tata Teleservices, New Delhi
18	TCS Salt Lake-Calcutta
19	TCS, Bangalore
20	Tidel Park, Chennai
21	Wipro Limited

Infrastructure

1	Bangabandhu military museum, Bangladesh
2	Cochin International Airport Ltd.
3	Delhi Metro Rail Corporation
4	Shivaji Stadium, New Delhi
5	TN Assembly Building
6	Rashtrapati Bhawan
7	DU Commom Wealth Games
8	Airport Authority of India
9	IAAI Guwahati Airport, Calcutta
10	ULCC Infrastructure (P) Ltd.
11	Hyderabad International Airport
12	Delhi International Airport

Technical Assistance & Customer Care Services

Systemair India provides to all customers a Technical Assistance Service by highly qualified and exprienced team having specialization in both Industrial and comfort facilities. We also offer a service for commissioning and technical advice for the equipment supplied to our valued customers. Kindly feel free to contact us or request a quote for such services.

www.systemair.in

service@systemair.in

Tel. +91 (0120) 476 3100 / 3140



NORTH & EXPORT

Noida

A-19, First Floor, Sector-64 Noida, U.P 201307 Tel: +91 120 4639 700

EAST

Kolkata

92/2A Bidhan Nagar Road, Kolkata, West Bengal -700067 Tel: +91 983 0420 473

WEST

Mumbai

804, 8th floor Ruby Crescent Business Boulevard Chakravarty Ashok Road, Ashok Nagar Kandivali (East) Mumbai -400101

Pune

Office No 7B , B wing Manorama Apartments Lane no 7, Prabhat Road, Pune-411004 Tel: +91 9823987810

SOUTH

Hyderabad

Plot No. 8-84/14/11; Opp. Sai Geetha Ashram; Devaryamzal, Medchal Dist, Hyderabad 500078 Tel:+91 7674 889 007

Bengaluru

#3, 2ND Floor, Survey No.18, PDS Tower, Sanjeevini Nagar, Kodigehalli Main Road, Sahakar Nagar Post, Bangalore – 560092. Tel: +91 80 23416922

Cochin

2nd Floor, Poovathankavil Gardens, Subhash Chandra Bose Road, Vytilla, Cochin, Kerala - 682019 Tel: +91 7349 433 338

Chennai

No 3020, Old Y Block, 4th Street, 13th main road, Anna nagar, Chennai 600040 Tel: +91 7349733338



Systemair India

(Head office & Manufacturing Plant) LEED Platinum Campus Plot No.03, ECOTECH I, Sector-31, Kasna, Greater Noida, U.P - 201308.

Tel: +91 120 4763 100

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