The main purposes of a Heating, Ventilation and Air-Conditioning (HVAC) systems are help to maintain good indoor air quality (IAQ) through adequate ventilation with filtration and provide thermal comfort.

Cool Composer

Manufacturers of HVAC Equipment &
Allied Service Works

CARING FOR SMALLER DETAILS, MAKES OUR EFFORT WORTHIER

We are one of the leading manufacturers of HVAC Equipment in South India and are proud to offer you wide range of Air Treatment Units manufactured at our Factory in Chennai to suit your site conditions

With the experience acquired over the years in our Industry, involving the search for innovative technological solutions at a technical design level has stupendous technical know how and that is used on a daily basis. Adheres to standards required for indoor air management.

Flexibility, adaptability consistency and timely services are our main moto.

Units are compatible to various Air Volume incorporating VFD's, Control Panel, Heat Recovery Wheel Multi stage Filtration, UV Lamp and Heating Provisions.

Floor Mounted Horizontal / Vertical Double Skin Air Handling Units, FCU, ECU and Wet Scrubbers.

Rigid Framework of Extruded Aluminium Alloy Anodized which is Anticorrosive and filled with Polyeurethene foam. The structures have chamfered ends which avoids any sharp corners. The three way Corner Joints used are of Fiberglass reinforced Nylon or Die cast Aluminium. For Outdoor application the sections and the Corner Joints are available with thermal break. The special extruded sections with L shaped grooved in suitably with gaskets are for air tight joints. The three way joints allows easy dismantling of the panels for easy transportation and assembling at site.

Underdeck housing skid

The frame work provided is of heavy duty Galvanised steel structure interconnected with Die Cast Aluminium corners to form suitable rectangular frame work. The Air Handling Unit structure is mounted on top of this skid. This will ensure easy drainage of condensate water from the tray located beneath Cooling Coil. Galvanised Steel Structure reinforcement is provided beneath the location of Fan and Motor assembly for rigidity.

Double Skin Panels

The Panels have outer skin of high quality Pre Painted GI Sheet to avoid scratches and marks. The inner skin is of Plain Galvanised Steel / Aluminium / Stainless / Pre Painted / Pre Coated Sheet. Polyeurethene foam closed- cell of density 45 Kg /m3 is achieved by pressure injection of the Chemicals in exact ratio or Rockwool / Glass Wool to ensure excellent thermal & sound insulation and potential condensation.

The thickness can be of 25/45/50 mm. The panels are secured to the frame work with FG closed cell rubber gasket.

Return Air Chamber can be provided with dampers as an optional item for connecting Return air and Fresh air.

Filters

The filter section is designed for easy removal of filters. The Filter Frames are made out of heavy guage Galvanised sheet sheet. The Pre filters are made of non woven filter fabric in multiple pleated form to provide more filtration area fitted within extruded Aluminium frame with bonding agent. The filters are capable of filtering dust particles up to 10µ having 90% to 99.99% efficiency, 5µm, 3µm, 1µm and 0.3µm. The initial efficiency of these filters with atmospheric dust is greater than 98%.

By pass damper along with quadrant and manual locking can be provided as optional feature.

Cooling coil

The cooling coil is manufactured to achieve maximum cooling performance by using Aluminium fins with Zigma corrugation and mild ripples / Hydrophilic Blue Fins designed for minimum air pressure drop. Cooling coils have 12 fins per inch. The copper tubes brazed with hair pin bends to reduce the usage of U bends. The end support plates of the cooling coils are made with Galvanised sheets / Stainless Steel Sheet of adequate thickness based on site requirement. Each cooling coil copper tubes (Plain / IGT) are expanded to obtain proper bonding with the fins by hydro pneumatically / bullet expansion. The cooling coil headers are made from MS / Cu pipe. Cooling coils are normally with 4 Rows for comfort application. Based on design conditions cooling coils can be provided 6 / 8 Row as optional.

Pre Heat / Reheat Coils with Hot Water/ Steam can be provided as optional item.

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

Condensate Drain Pan

Condensate Pan is fabricated with Stainless steel Sheet with gradient towards the drain outlet to avoid water stagnation in the tray. The insulation is carried out with high efficient closed cell elastomeric foam / Polyurathene Foam. Suitable Heavy Steel / Stainless Steel bridges are provided to support the cooling coil. The drain pan is easily accessible for periodic cleaning.

Drift Arrestor

When the velocity across the coil is 2.5m/s more or when the water content of the air is greater than 10.5 g/kg of dry air, a specially designed GI / PVC Drift Arrestor is placed to arrest carryover of mist particles and allow clean and cool air to pass through.

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 Silent bloc 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.

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. 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 Single speed motor.

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 aluminium sheet material, with external rotor motor balanced together statically and dynamically. The EC fan is capable of being fitted in horizontal or vertical position in the AHU, depending on the application.

Direct Driven Fans

DIDW Direct driven centrifugal fans with forward curved impellers suitable for AHU, FCU and other OEM product requirement. It comes with a single-phase, 4-pole and 3-speed capacitor motor capable of delivering good airflow and pressure at the 3 different operating speeds.

Single Inlet Single Width Fan

SISW centrifugal fans with high efficiency non-overloading backward curved impellers. The fans are suitable for supply or exhaust applications in commercial, process and industrial HVAC systems

Belt Drive Assembly

Standard cross section "V-belt" drive with 1.2 service factor. Adjustable pitch motor pulley and fixed pitch blower pulley

Heat Recovery / Energy Recovery

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 counter flow 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.

Dampers

AHUs are equipped with Heavy Duty, multi blade and low leakage dampers to modulate and control the air flow. Dampers are prepared for either manual or motorized operation.

Ultraviolet Lamps for Cooling Coils

The system is designed for installation into air handling units for the purpose of surface disinfection using ultraviolet germicidal irradiation.

Designing of Static Pressure

Adding the various pressure drops for the unit for an air velocity of 2.4 m/s:

- Air mixing section (M) 30 pa
- Extended surface filter section (F) 72 pa
- Heating unit 2 R 35 pa
- Cooling unit 4 R 85 pa
- Cooling unit 6 R 120 pa

PRODUCT MANUFACTURED

Air Handling Units

- Double Skin Air Treatment Unit Capacity 3000 to 210000 CMH
- Heat Recovery Wheel Equipment

Humidification Units

- Evaporative Cooling Units 800 CMH to 300000 CMH
- Wet Scrubber Units 800 CMH to 300000 CMH
- Fresh Air and Exhaust Units 800 CMH to 300000 CMH

Inline Fans

- Single / Double Skin Inline Fans

We are working with

Kerala

Hilite mall, Calicut,
Candis KIMS. Trivandrum
Golden Palace Convention Center, Trivandrum
PEM Enterprises, Kerala

Tamil Nadu

Government Hospitals, Virudhu Nagar
SR Ortho Hospitals, Salem
Netravathi Hospital, Madurai,
Apollo Hospitals, Greams Road,
Dominio's Pizza, DLF & Vijaya Mall,
Prochant India Pvt Ltd, Kovai,
Clarion Hotels, Chennai,
Raddission Blue Hotel, Chennai
Mukundhaa Network (Thanthi TV),
Rhythm Hospitals, Dindigul

We are working with

Tamil Nadu

Velammal International School, Chennai
India Land Tech Park, Chennai
SGS India. Ambattur,
Lotte India, Chennai,
Mahle Engine Components, Chennai
Royal Regency, Chennai
JK Tyres, Chennai
Dominos Pizza, DLF
Aero Hub, Airport Authority Chennai

Karnataka

Schevaran Laboratories Ltd, Mysore
TE Connectivity India, Bangalore
Seven Hills Hospitals, Bengaluru

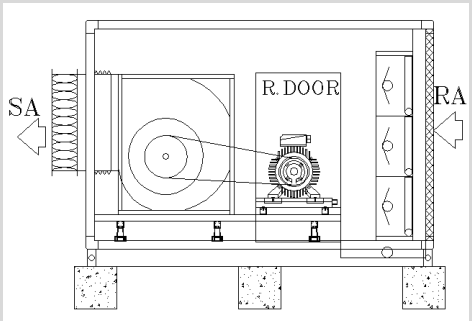
Telangana

Mango Stores Telangana,

HORIZONTAL FLOOR MOUNTED

MODELS		DIMENSIONAL DETAILS (in mm) - BELT DRIVEN*						MOTOR CAPACITY
Model BDH	Air Quantity CFM	Unit Overall Dimensions			Cooling Coil Sizes		Fan Model	HP / Pole
		Length	Width	Height	Fin Length	Fin Height	Nicotra/Kruger	
15	1000	1160	850	710	508	381	AT 7 x 7 S	0.75 / 4 P
20	1200	1180	800	780	445	508	AT 7 x 7 S	1.0 / 4 P
25	1500	1260	800	850	445	635	AT 9 x 9 S	1.0 / 4 P
30	2000	1320	810	850	610	635	AT 10 x 10 S	1 .0 / 4 P
35	2500	1420	1100	900	711	635	AT 12 x 12 S	1.5 / 4 P
50	3000	1420	1180	900	864	635	AT 12 x 12 S	1.5 / 4 P
60	4000	1510	1470	930	1168	635	AT 15 x 15 S	2 / 4 P
80	5000	1660	1350	1170	1016	889	AT 18 x 18 S	3 / 4 P
100	6000	1770	1550	1180	1219	889	ADH 450 R	5 / 4 P
120	7000	1820	1800	1180	1473	889	ADH 450 R	5 / 4 P
140	8000	1910	1550	1530	1219	1207	ADH 500 R	5 / 4 P
150	9000	1910	1800	1530	1420	1207	ADH 500 R	5 / 4 P
170	10000	1950	1850	1530	1524	1207	ADH 500 R	7.5 / 4 P
200	12000	1950	2120	1530	1829	1207	ADH 560 R	7.5 / 4 P
210	13000	1950	1900	1880	1625	1524	ADH 630 R	7.5 / 4 P
230	14000	1950	2050	1880	1728	1524	ADH 630 R	7.5 / 4 P
250	15000	1950	2150	1880	1829	1524	ADH 630 R	10 / 4 P
260	16000	1950	2300	1880	1930	1524	ADH 630 R	10 / 4 P
300	18000	2150	2200	2180	1880	1778	ADH 710 R	10 / 6 P
350	20000	2300	2600	1930	2286	1651	ADH 800 K	10 / 6 P
370	22000	2300	2600	2030	2286	1778	ADH 800 K	12.5 / 6 P
390	23000	2400	2700	2030	2388	1778	ADH 800 K	12.5 / 6 P
400	24000	2400	2700	2070	2388	1842	ADH 800 K	12.5 / 6 P
425	25000	2600	2850	1920	2540	1524	RDH 900 K	15.0 / 6 P
440	26000	2600	2850	2180	2540	1905	RDH 900 K	12.5 / 4 P
460	28000	2600	3000	2180	2692	1905	RDH 900 K	15 / 4 P
500	30000	2600	3000	2330	2693	2032	RDH 900 K	15 / 4 P
600	35000	2750	3250	2530	2845	2286	RDH 1000 K	20 / 4 P
660	40000	2850	3400	2780	2896	2540	RDH 1000 K	25 / 4 P

*The above air handling units are designed with static pressure of 40mm WC.
The above unit comprises of fan chamber, cooling coil chamber and prefilter chamber



FLOOR MOUNTED HORIZONTAL AHUS - WITH BELT DRIVEN TWIN FANS - LOW STATIC upto 40mm WC

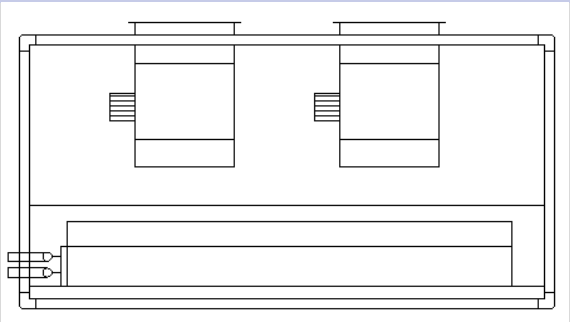
DESCRIPTION OF MODELS		DIMENSIONAL DETAILS (in mm) - FAN, COIL & PREFILTER CHAMBER						MOTOR CAPACITY
Model BDH	Air Quantity CFM	Unit Overall Dimensions			Cooling Coil Sizes		Fan Model	HP / Pole
		Length	Width	Height	Fin Length	Fin Height	Nicotra/Kruger	
120	7000	1460	1800	1170	1473	889	AT 12 X 12 G2L	5 / 4 P
140	8000	1550	1900	1250	1575	953	AT 15 X 15 G2L	5 / 4P
150	9000	1590	1900	1340	1575	1080	AT 15 X 15 G2L	5 / 4P
170	10000	1680	2150	1280	1829	1016	AT 18 X 18 G2L	7.5 / 4 P
200	12000	1680	2150	1520	1829	1207	AT 18 X 18 G2L	7.5 / 4 P

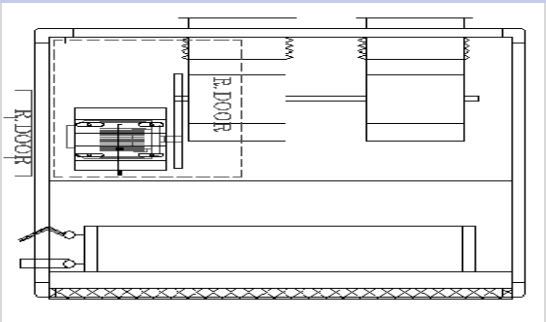
*The above air handling units are designed with static pressure of 40mm WC.
The above unit comprises of fan chamber, cooling coil chamber and prefilter chamber

CEILING SUSPENDED

DESCRIPTION OF MODELS		CEILING SUSPENDED DIMENSIONAL DETAILS size in mm - BELT DRIVEN **						MOTOR CAPACITY
Model BDC	Air Quantity CFM	Unit Overall Dimensions			Cooling Coil Sizes		Fan Model	HP / Pole
		Length	Width	Height	Fin Length	Fin Height	Nicotra/Kruger	
15	1000	1130	750	550	482	381	AT 7 x 7 S	0,75 / 4P
20	1200	1150	900	550	610	381	AT 7 x 7 S	1.0 / 4P
25	1500	1220	950	610	610	445	AT 9 x 9 S	1.0 / 4P
30	2000	1280	1000	670	711	508	AT 10 x 10 S	1.0 / 4P
35	2500	1350	1090	750	812	571	AT 12 x 12 S	1.5 / 4P
50	3000	1050	1520	610	1219	445	AT 9 X 9 G2L	2 / 4P
55	3500	1300	1590	670	1270	508	AT 10 X 10 G2L	2 / 4P
60	4000	1230	1765	670	1422	508	AT 10 X 10 G2L	3 / 4P
85	5000	1390	1890	770	1625	571	AT 12 X 12 G2L	3 / 4P
100	6000	1230	2200	740	1930	571	AT 12 X 12 G2L	5 / 4P
120	7000	1470	2310	810	2032	635	AT 15 X 15 G2L	5 / 4P
140	8000	1510	2250	930	1930	762	AT 15 X 15 G2L	5 / 4P
150	9000	1550	2500	940	2184	762	AT 18 X 18 G2L	5 / 4P
170	10000	1550	2550	1000	2235	826	AT 18 X 18 G2L	7.5 / 4 P
200	12000	1550	3000	1000	2642	826	AT 18 X 18 G2L	7.5 / 4 P
BDC - S		CEILING SUSPENDED AHUS - WITH DIRECT DRIVEN FANS - DIRECT DRIVEN ***						SINGLE PH
20	1200	930	930	560	610	381	DD 9 X 9	0.75 / 4P
25	1500	930	1050	560	711	381	DD 9 X 9	1.0 / 4P
30	2000	960	1200	630	813	445	DD 10 x 10	1.0 / 4P
50	3000	930	1700	630	1423	381	DD 9 X 9 - 2#	1.0 / 4P - 2#
60	4000	960	1980	630	1422	508	DD 10 X 10 - 2#	1.0 / 4P - 2#

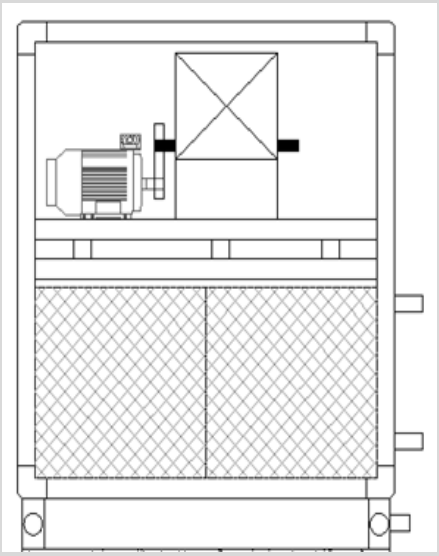
The above air handling units are designed with static pressure of 40mm WC** and 25mm WC ***
The above unit comprises of fan chamber, cooling coil chamber and prefilter chamber

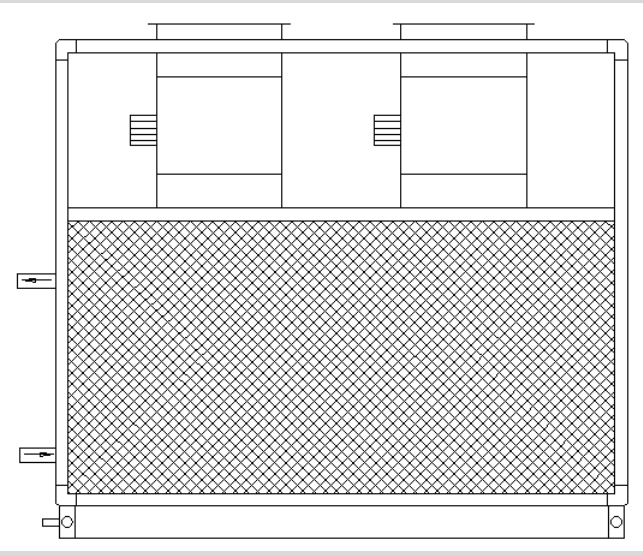




VERTICAL AIR HANDLING UNIT

DESCRIPTION OF MODELS		VERTICAL - DIMENSIONAL DETAILS size in mm - BELT DRIVEN **						MOTOR CAPACITY
Model BDV	Air Quantity CFM	Unit Overall Dimensions			Cooling Coil Sizes		Fan Model	HP / Pole
		Length	Width	Height	Fin Length	Fin Height	Nicotra/Kruger	
15	1000	580	860	1040	508	381	AT 7 x 7 S	0,75 / 4P
20	1200	580	880	1100	508	445	AT 7 x 7 S	1.0 / 4P
25	1500	625	1000	1240	610	445	AT 9 x 9 S	1.0 / 4P
30	2000	680	1030	1350	737	508	AT 10 x 10 S	1.0 / 4P
35	2500	750	1210	1380	915	508	AT 12 x 12 S	1.5 / 4P
50	3000	625	1560	1290	1118	508	AT 9 X 9 G2L	2 / 4P
60	4000	680	1730	1350	1321	572	AT 10 X 10 G2L	3 / 4P
80	5000	750	1890	1600	1321	699	AT 12 X 12 G2L	3 / 4P
100	6000	750	1970	1570	1626	699	AT 12 X 12 G2L	5 / 4P
120	7000	840	2150	1800	1727	762	AT 15 X 15 G2L	5 / 4P
140	8000	840	2100	1950	1676	889	AT 15 X 15 G2L	5 / 4P
150	9000	900	2400	1925	2032	826	AT 18 X 18 G2L	5 / 4P
170	10000	900	2550	1945	2137	889	AT 18 X 18 G2L	7.5 / 4 P
200	12000	900	2700	2100	2388	953	AT 18 X 18 G2L	7.5 / 4 P
230	14000	1000	2600	2350	2286	1143	ADH 450 G2R	10 / 4 P
260	6000	1200	3000	2350	2642	1143	ADH 500 G2R	10 / 4 P
300	18000	1200	3000	2500	2693	1270	ADH 500 G2R	12.5 / 4 P
MODEL BDV - S	Air Quantity CFM	VERTICAL AHUS - WITH DIRECT DRIVEN FANS***						SINGLE PH
30	2000	650	1200	1200	819	445	DD 10 x 10	1.0 / 4P
50	3000	600	1400	1200	1067	508	DD 9 X 9 - 2#	1.0 / 4P - 2#
60	4000	650	1500	1370	1169	635	DD 10 X 10 - 2#	1.0 / 4P - 2#





COOL COMPOSER

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