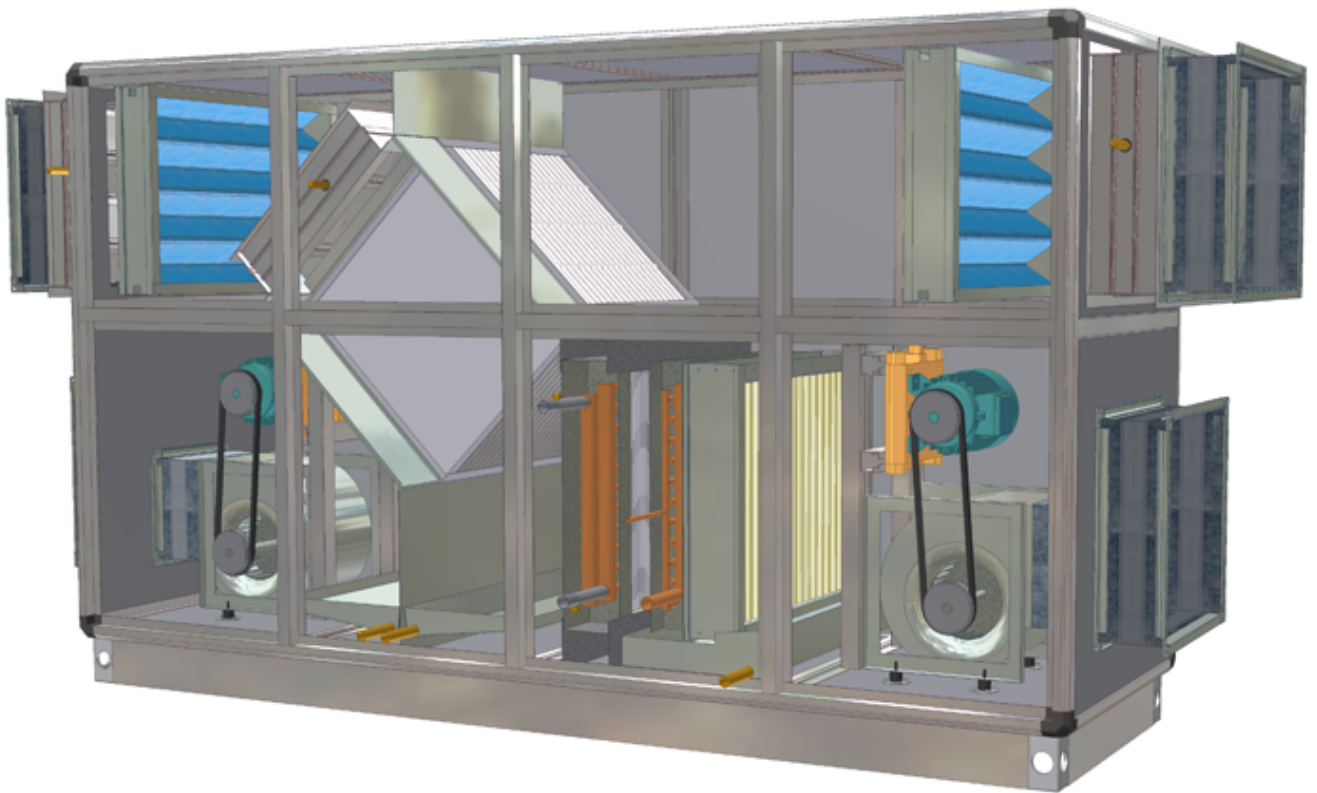


AIR HANDLING UNIT





SHINKO AIRCON GROUP

UAE

www.shinkoaircon.com
info@shinkoaircon.com

INDIA

www.shinkoind.com
info@shinkoind.com

Shinko Aircon was established with a vision to cater the HVAC industry by producing air-conditioning products which will suffice any design requirement for maintaining better indoor air quality (IAQ), Energy efficient and Eco friendly with appropriate footprint at an affordable cost.

Shinko Aircon is resourced with mechanical engineers from the HVAC industry having good experience in design, manufacturing and sales of HVAC equipments.



Product Range

Horizontal Floor Mounted Units

Vertical Floor Mounted Units

Ceiling Suspended units

Heat Recovery units



ENGINEERING

Shinko Aircon is equipped with an engineering team having comprehensive knowledge on engineering standards & requirements. They are equipped with product selection software, design & analysis software.



PRECISION

Selections generated by the software shall provide optimum output and efficient performance of Fans, Coils & Filters in accordance to the requirements of standards like AMCA, AHRI and EN.



CREDENTIAL

AHU construction complying to EN and AHRI standard requirement for the mechanical & cooling performance.



FLEXIBLE

Customization to match the project specific requirements with interms of construction, size and performance.

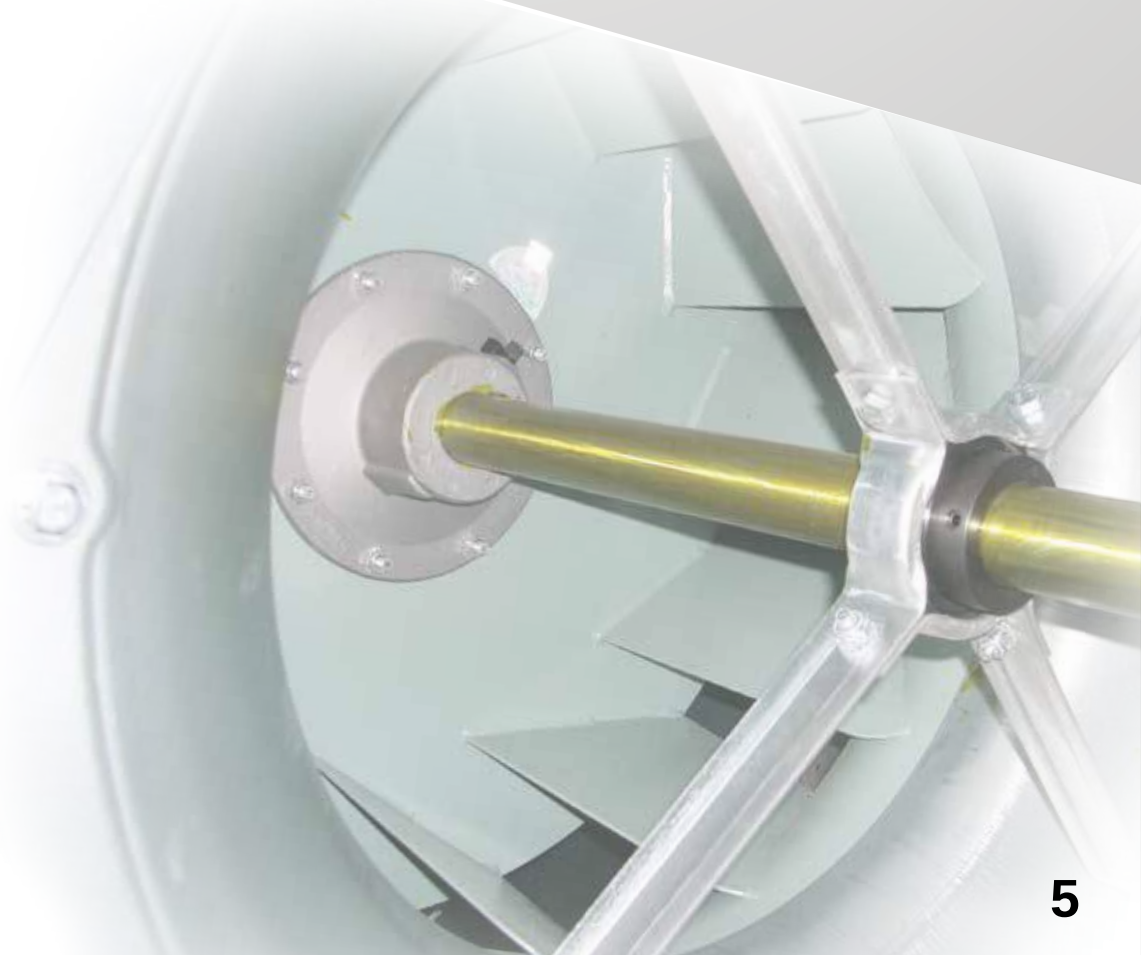


UNIQUE

Thus Shinko Aircon stands out from its competitors by providing the right and optimum solution to the clients design requirements.



	Page No.
1. Company Profile	2
2. AHU Overview	3
3. Components	4
4. Control System	10
5. Dimensional Data	11



Shinko Aircon group has been established to deliver the market needs of Quality and Innovative Air Conditioning products.

A Quality manufacturing facility with specialized Engineering team committed to provide quality HVAC solution for Commercial, Residential, Pharma and special application projects. The team is built with an experienced engineering background and comprehensive knowledge to cater to the most stringent and diversified design requirements.

The plant is equipped with latest technology machines and qualified work force to produce consistently high quality products.

The products are designed and manufactured in accordance to international standards such as EN 13053/EN1886, etc.,

Mission

To provide “cooling happiness” to our customers by ensuring comfortable indoor conditions throughout the year

Vision

The average trading and maintenance service provider. Being one of the best Trading & Maintenance company we have devised a strategy for sustained growth rooting from our managerial strategies that are focused on Quality Reliability, Trust, Professionalism and Ethics. To provide an open and flexible approach towards the needs of our customer by listening respecting their views and by being ahead of emerging trends.

Our Design Features

- » Customization.
- » Double skin sandwich Panels of 25 / 50 mm thick (PuF/Rockwool).
- » Wide range of sheet metal thickness.
- » Fans for low, medium and high static application.
- » Energy efficient motors with IE2, IE3.. rating as per IEC 60034 standards.
- » Cooling coil with anti corrosive coating for aluminium fins.
- » Range of fine filters to maintain higher indoor air quality.
- » Units for Industrial & Precision applications.
- » Flexiblility in logistics.

Air Handling Unit

Shinko Air Handling Units are designed to cater to the Heating, Ventilation and Air Conditioning requirements for Commercial, Residential, Schools, Hospitals, Process and Industrial applications.

The units are of single or modular section construction depending upon the capacity requirements and space limitations. Large capacity units are divided into multiple sections to provide ease of handling with each section having an independent base frame.

Shinko Air Handling Units are engineered to meet higher demand of indoor air quality & energy efficiency with

- » Leak proof construction.
- » Better thermal transmittance rating.
- » Energy efficient motors.
- » Optimum selection of fans & heat exchangers.
- » Low radiated casing noise level.



Frame



Air Handling unit frame work is built with extruded aluminium profiles having a very high thermal bridging properties complying to EN1886 standards for fresh air application and outdoor installation. The pentapost construction is complete with fiberglass re-inforced nylon 3-way jointer to form a rigid casing.

The double skin panels are assembled to the frame work using fasteners and EPDM gasket between the panels and profiles to ensure better air tight casing construction.

Panel

Panel are made of double skin construction. The double skin construction keeps the insulation out of air stream and contributes towards better indoor air quality. Panels are offered in 25mm and 50mm thickness as per the specification and application.

Insulation can be made of polyurethane foam of 40 kg/m³ or high density mineral wool / fiberglass Insulation. Gauge of material for panel construction vary between 18 SWG and 24 SWG, alternatives are also available to suit specification and acoustic requirements.



Fan

Air Handling units are provided with AMCA certified DIDW centrifugal forward/backward/aerofoil fan as per requirement. Direct driven plug type or EC fans can also be provided as an optional feature for critical application. Vibration isolation are maintained by spring or cushy foot anti vibration mounts beneath the fan motor assembly. A fire retardant flexible canvas is provided at fan discharge for eliminating vibration getting transmitted to casing.

Features

- » EC direct drive fans
- » Limit switch interlock
- » Fan inlet guards
- » Inspection cover & drain plug
- » Anticorrosive coating



Motor

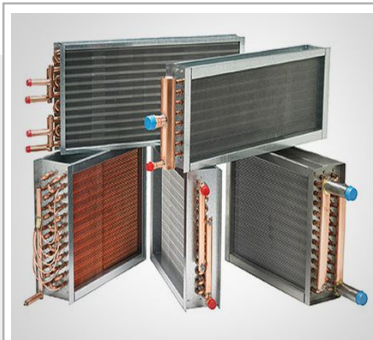


Air Handling Units are provided with single speed, 2 / 4 / 6 pole, foot mounted, totally enclosed fan cooled (TEFC) squirrel cage induction motor suitable for operation on a 3 Phase 50 / 60 Hz electrical supply as per requirement. Motors are mounted on sliding adjustable base which facilitates easy tensioning of the belts without misalignment.

Features

- » Dual Speed Motors.
- » Run and Standby operation.
- » Flame Proof for Hazardous environment.
- » Premium Efficiency options.
- » Compatible for VFD operation

Coils



Chilled Water / Hot Water / DX Coils

Coils are fabricated by expanding copper tube into aluminium collar spaced fins at a suitable pitch to meet the design performance requirements. The fins are mechanically bonded providing excellent heat transfer characteristics with staggered tubes in the direction of airflow. The coil framework is a rigid galvanised formed section and the coil tubes are brazed to copper headers with inlet and outlet connections either of screwed or flanged fittings.

Direct expansion coil can be offered with different types of refrigerants. DX Coils are fitted with suitable brass distributor for uniform flow of refrigerant. DX coils having multiple circuits are offered with interlaced design to have a better heat transfer.

Features

- » Copper fins
- » Hydrophilic Coating / Heresite Coating / Electrotinning.
- » Stainless steel casing.
- » Different fin and copper tube thickness as per project specifications.

Electric Heater

Heaters are 80% nickel and 20% chromium resistant element tubular heaters with Stainless steel or GI fins. To enhance the heat transfer the heating elements are fitted with spiral fins. Heaters are formed in to 'U' or 'W' shaped as per dimensional requirement. It can be pre-wired with each step of control being brought back to a separate terminal block or suitable for thyristor control. The units are complete with safety cut outs with manual reset



Filters

Pre Filter

Pleated media panel filters of 2" or 4" thickness is of high dust holding capacity. Filter media is sandwiched between aluminium mesh support on one side and support straps on the other side. Media is bonded to the casing frame of filter with high grade adhesive material. Standard media of G2 to G4 grade in accordance to EN779 are provided as pre-filters..

Fine Filer

Ultra fine synthetic fiber media fine filters consisting of a unique blend of coarse and fine synthetic fibers, specially designed and interwoven to provide a low initial resistance and high aircleaning performance of F5 to F9 grade in accordance to EN779 are available. The media is color coded for identification as per Filter Class

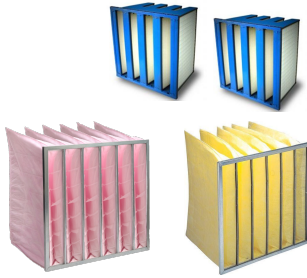
Hepa Filter

HEPA absolute filters with micro pleated media in electro galvanized steel frame, Filter media shall be made of ultra fine fiber glass formed into a series of pleats. Corrugated aluminium separator maintain uniform spacing between each pleats to allow unrestricted airflow. H10, H11, H12, H13 & H14 grade filters in accordance to EN779 shall be provided.

Special Filter

Activated Carbon Filters – Carbon Filters can be supplied as flat 2" thick or an array of cylinder cartridges filled with activated carbon. These filters are used to remove odour from the air. Cartridge Filters can be refilled after its lifetime of operation.

UV Filtration - UV light filtration indents to capture and kill airborne pathogens and improves indoor air quality. The germicidal UV lights fitted in the Air Handling Units disinfect the air by irradiation. The UV lights can be installed before or after coils to avoid any mold or bacteria formation on the moisture surface. Also can be installed as final filtration in Air handling units where high Indoor Air quality to be maintained



Heat Exchangers

Heat Recovery Wheel

Heat recovery wheel are of air to air energy recovery system having a rotating wheel, that will recover both sensible and latent heat with efficiencies up to 85%. Wheels with purge air system is provided to avoid cross contamination and to maintain high Indoor Air Quality..

Plate Heat Exchanger

Cross flow type energy recovery will provide between 40% to 75% efficiency. Plate heat exchangers are ideal for sensible heat recovery. Having no moving parts, it provides highest reliability and safe operation. Bypass facilities can also be provided . The heat exchanger plates are manufactured in aluminium or stainless steel plates. Special epoxy coating is available as an option.

Run Around Coil

Energy recovery is available with liquid coupled run around coils , the coil construction is similar to heat exchanger coils. Water is pumped through the coupled coil circuit of two coils in supply and exhaust air stream to provide heat recovery up to maximum of 65% Efficiency. External Pump system to be provided with controls to circulate the water between coils.

Heat Pipe

Heat Pipes are Thermal energy absorbing and transferring system which removes heat from intake air and uses the same energy to re-heat supply air. The system has no moving parts and has high thermal efficiency. Heat Pipes transfer large amount of heat energy at low temperature gradient.



Sound Attenuators

Attenuators are manufactured from a series of purpose made vertically mounted splitters each consisting of a galvanised sheet steel frame containing acoustic infill materials. The insulation infill is inert, non-hygroscopic, vermin and rot proof. It does not support microbiological growth and has a 'Class 1' rating for surface spread of flame. Splitters are assembled into the unit casing with guides to ensure the correct airway width to give optimum acoustic performance.



Humidifiers



Evaporative Humidification

The evaporative humidifier has a modular matrix that provides fast moisture evaporation with no requirement for chemical water treatment. The matrix is a flame resistant composite housed in a stainless steel frame with a pumped water distribution system to the evaporative surface with water level control and drainage. The unit is installed with a ultra violet sterilisation unit and auto drain to flush the reservoir each day.

Steam Humidification

The steam humidifier has injection tubes and condensate drain pan. Units can be supplied with Steam generator, Control Valves and Electronic controllers to control the rate of humidification based on set humidity levels.

Spray Humidification

Spray humidification is available with water atomisation by compressed air to provide air humidification and adiabatic cooling. The system utilises mains softened or demineralised water with a nozzle purge facility and the option for ultra violet sterilisation. The controls incorporate status indication, controlled cleaning and purge timing with a BMS interface.

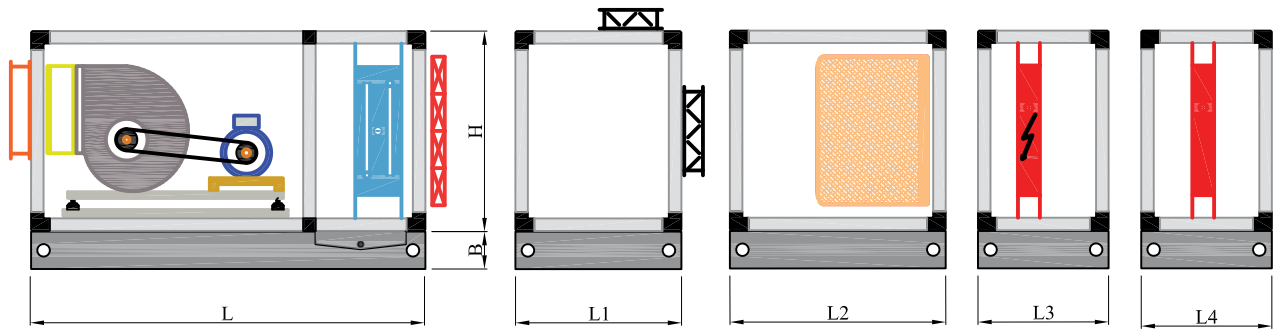
Control Systems



The integrated range of controls are fitted as an optional feature for automated functioning of Air Handling units. The basic function of the automation systems is to stabilize the temperature of supplied or room air, depending on the needs. Many advanced Energy saving features can be achieved by sequentially controlling fan speed using Variable Frequency drive, Controlling Water flow through Valves. Damper Actuators can be modulated using control signal to change the fresh air intake and to control IAQ and PPM of Co2 inside conditioned space. AHUs can be optionally supplied as complete package with these controls and pre-wired from factory.



Horizontal Floor Mounted Units



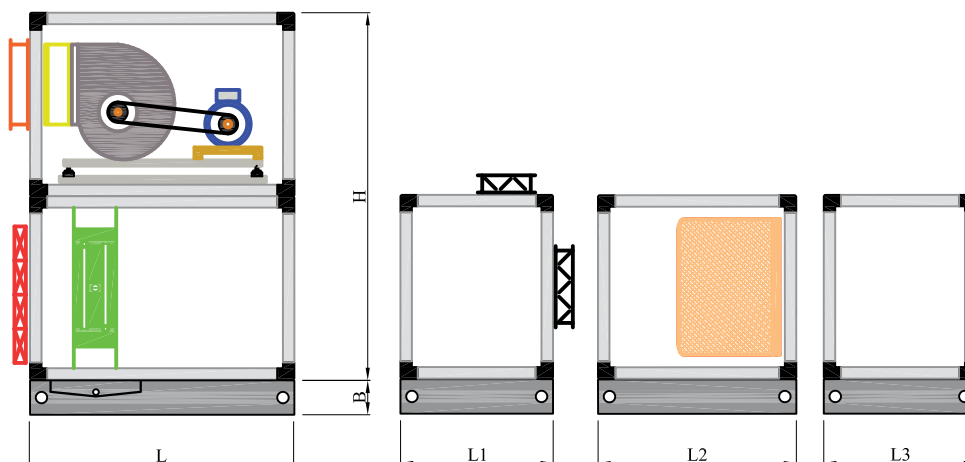
25X / 50X - SA Series

S.NO	MODEL	AIR VOLUME (CFM)	FAN DIA (mm)	MOTOR POWER (kW)	UNIT DIMENSION (mm)						BASE HEIGHT	MIXING BOX	BAG FILTER	ELECTRIC HEATER	HOT WATER COIL
					50X LK SERIES			25X LK SERIES							
					LENGTH	WIDTH	HEIGHT	LENGTH	WIDTH	HEIGHT	B (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)
					L	W	H	L	W	H					
1	H 010	1010	200	0.75	1450	720	720	1410	680	680	100	550	440	330	440
2	H 015	1530	225	1.1	1450	830	830	1410	790	790	100	550	440	330	440
3	H 020	2000	225	1.1	1450	940	830	1410	900	790	100	550	440	330	440
4	H 025	2595	280	1.5	1670	1160	830	1630	1120	790	100	550	440	330	440
5	H 030	3250	315	2.2	1670	1270	940	1630	1230	900	100	550	440	330	440
6	H 040	4000	355	2.2	1670	1380	940	1630	1340	900	100	550	440	330	440
7	H 050	5100	400	3.7	1890	1380	1160	1850	1340	1120	100	550	440	330	440
8	H 060	6100	450	3.7	1890	1600	1160	1850	1560	1120	100	550	440	330	440
9	H 070	7100	450	3.7	1890	1710	1270	1850	1670	1230	100	550	440	330	440
10	H 080	8200	500	3.7	2110	1820	1270	2070	1780	1230	100	550	440	330	440
11	H 090	9200	560	5.5	2110	1930	1380	2090	1910	1360	100	550	440	330	440
12	H 100	10250	560	5.5	2110	1930	1490	2090	1910	1470	100	550	440	330	440
13	H 110	11300	560	5.5	2110	1930	1600	2090	1910	1580	100	550	440	330	440
14	H 120	12200	630	5.5	2440	2040	1600	2420	2020	1580	100	550	440	330	440
15	H 130	13700	630	7.5	2440	2260	1600	2420	2240	1580	100	550	440	330	440
16	H 140	14500	710	7.5	2440	2370	1600	2420	2350	1580	100	550	440	330	440
17	H 160	16800	710	7.5	2440	2480	1710	2420	2460	1690	100	550	440	330	440
18	H 180	18500	800	11	2440	2700	1820	2420	2680	1800	100	550	440	330	440
19	H 200	20000	800	11	2660	2810	1820	2640	2790	1800	100	550	440	330	440
20	H 220	22000	800	11	2990	2810	1930	2970	2790	1910	100	550	440	330	440
21	H 240	24000	900	11	2990	2810	2150	2970	2790	2130	100	770	440	330	440
22	H 260	26400	900	15	2990	2920	2150	2970	2900	2130	100	770	440	330	440
23	H 280	28700	1000	15	2990	3140	2260	2970	3120	2240	100	770	440	330	440
24	H 300	30500	1000	15	2990	3140	2260	2970	3120	2240	100	770	440	330	440
25	H 320	32800	1000	15	2990	3360	2260	2970	3340	2240	100	770	440	330	440
26	H 340	34800	1000	15	2990	3360	2480	2970	3340	2460	100	770	440	330	440
27	H 360	36300	1120	18.5	2990	3470	2480	2970	3450	2460	100	770	440	330	440
28	H 380	38400	1120	18.5	2990	3360	2590	2970	3340	2570	100	770	440	330	440
29	H 400	40000	1120	18.5	2990	3580	2590	2970	3560	2570	100	770	440	330	440

Notes:

- » 'X' denotes the series number of the unit model.
- » Motor power (kW) tabulated by considering TSP as 500 Pa.
- » Due to continuous product development, the dimensional data & design are subject to change without any prior notice.

Vertical Floor Mounted Units



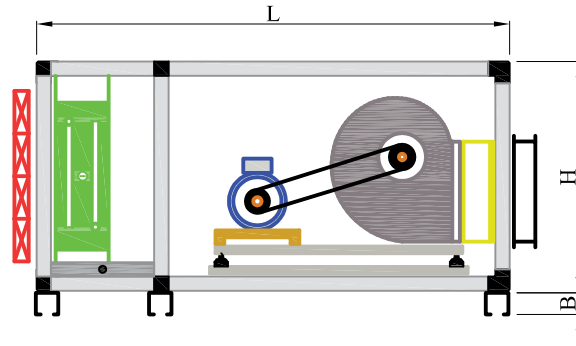
25X / 50X - SA Series

S.NO	MODEL	AIR VOLUME (CFM)	FAN DIA (mm)	MOTOR POWER (kW)	UNIT DIMENSION			BASE HEIGHT B (mm)	MIXING BOX L1 (mm)	BAG FILTER L2 (mm)
					LENGTH	WIDTH	HEIGHT			
					L	W	H			
1	V 010	1000	200	0.75	740	810	1110	100	550	440
2	V 015	1500	225	1.1	740	920	1330	100	550	440
3	V 025	2500	280	1.5	1070	1140	1440	100	550	440
4	V 030	3000	315	2.2	1070	1360	1440	100	550	440
5	V 035	3500	355	2.2	1070	1470	1660	100	550	440
6	V 045	4500	355	2.2	1180	1690	1660	100	550	440
7	V 055	5500	400	3.7	1180	1800	1660	100	550	440
8	V 070	7000	450	3.7	1180	2130	1880	100	550	440
9	V 085	8500	500	5.5	1400	2460	1990	100	550	440
10	V 100	10000	560	5.5	1620	2680	2100	100	550	440
11	V 120	12000	630	5.5	1620	3010	2100	100	550	440

Notes:

- » 'X' denotes the series number of the unit model.
- » Motor power (kW) tabulated by considering TSP as 500 Pa.
- » Due to continuous product development, the dimensional data & design are subject to change without any prior notice.

Ceiling Suspended Units



Single Fan

25X - SA Series

S.NO	MODEL	AIR VOLUME (CFM)	FAN MODEL	MOTOR POWER (kW)	Unit Dimension (mm)			BASE HEIGHT
					Length	Width	Height	B (mm)
					L	W	H	
1	C 010	1000	7/7	0.55	1200	750	490	50
2	C 015	1500	7/7	1.1	1200	990	490	50
3	C 020	2000	9/9	1.1	1200	1100	570	50
4	C 025	2500	10/10	1.5	1310	1180	650	50
5	C 030	3000	12/12	1.5	1310	1250	690	50
6	C 040	4000	15/15	2.2	1420	1440	780	50
7	C 045	4500	15/15	2.2	1420	1590	780	50
8	C 050	5000	15/15	3.7	1530	1740	780	50
9	C 055	5500	18/18	3.7	1530	1510	950	50
10	C 060	6000	18/18	3.7	1530	1620	950	50

Twin Fan (Scroll)

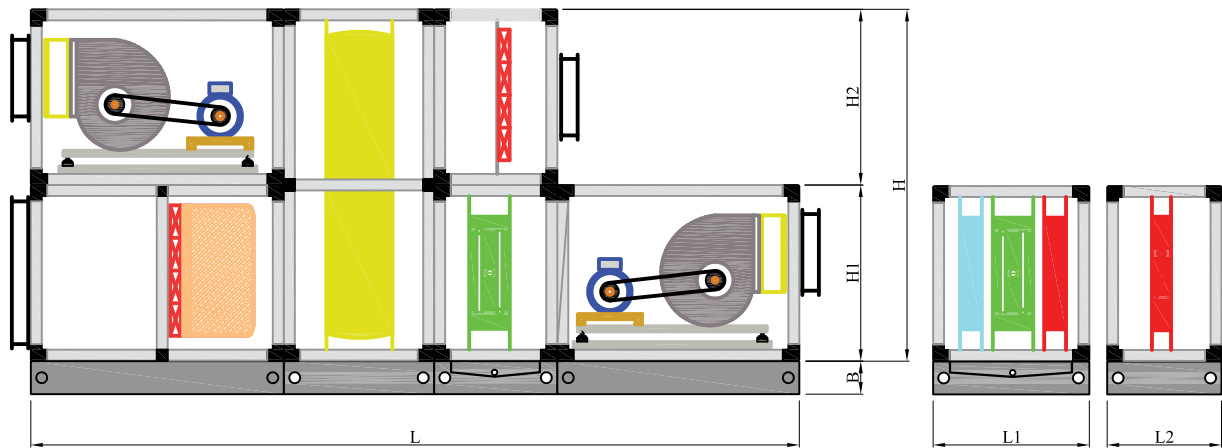
25X - SA Series

S.NO	MODEL	AIR VOLUME (CFM)	FAN MODEL	MOTOR POWER (kW)	Unit Dimension (mm)			BASE HEIGHT
					Length	Width	Height	B (mm)
					L	W	H	
1	T 030	3000	9/9 x 2	1.5	1350	1530	570	50
2	T 040	4000	10/10 x 2	2.2	1350	1740	650	50
3	T 045	4500	10/10 x 2	2.2	1350	1900	650	50
4	T 050	5000	12/12 x 2	3.7	1350	1900	690	50
5	T 055	5500	12/12 x 2	3.7	1450	2070	690	50
6	T 060	6000	12/12 x 2	3.7	1450	2240	690	50
7	T 070	7000	15/15 x 2	3.7	1450	2300	780	50
8	T 080	8000	15/15 x 2	5.5	1450	2630	780	50

Notes:

- » 'X' denotes the series number of unit model.
- » Motor power (kW) tabulated by considering TSP as 500 Pa.
- » Due to continuous product development, the dimensional data & design are subject to change without any prior notice.

Heat Recovery Units



50X - SA Series

S.NO	MODEL	AIR VOLUME (CFM)	FAN DIA (mm)	MOTOR POWER (Kw)	HEAT RECOVERY WHEEL DIA (mm)	Unit Dimension (mm)					Base Frame	HEAT PIPE	ELECTRIC HEATER
						Length	Width	Height					
								L	W	H	H1	H2	B (mm)
1	R 010	1010	200	0.75	600	3900	1050	1440	720	720	100	770	330
2	R 015	1530	225	1.1	700	3900	1270	1660	830	830	100	770	330
3	R 020	2000	225	1.1	800	4010	1600	1660	830	830	100	770	330
4	R 025	2595	280	1.5	900	4120	1600	1660	830	830	100	770	330
5	R 030	3250	315	2.2	1000	4230	1820	1880	940	940	100	770	330
6	R 040	4000	355	2.2	1100	4230	2040	1880	940	940	100	770	330
7	R 050	5100	400	3.7	1300	4340	2040	2320	1160	1160	100	770	330
8	R 070	7100	450	3.7	1500	4780	2040	2540	1270	1270	100	770	330
9	R 080	8200	500	3.7	1600	4890	2260	2540	1270	1270	100	770	330
10	R 090	9200	560	5.5	1700	5220	2590	2760	1380	1380	100	770	330
11	R 100	10250	560	5.5	1800	5440	2810	2980	1490	1490	100	770	330
12	R 120	12200	630	5.5	1900	5660	2810	3200	1600	1600	100	770	330
13	R 145	14500	710	7.5	2000	5660	3030	3200	1600	1600	100	770	330
14	R 185	18500	800	11	2200	5990	3030	3640	1820	1820	100	770	330
15	R 200	20000	800	11	2400	6430	3250	3640	1820	1820	100	770	330
16	R 240	24000	900	11	2600	6430	3580	4080	2040	2040	100	770	330
17	R 260	26400	900	15	2800	6430	3580	4080	2040	2040	100	770	330

Notes:

- » 'X' denotes the series number of unit model.
- » Motor power (kW) tabulated is by considering TSP as 500 Pa.
- » Due to continuous product development, the dimensional data & design are subject to change without any prior notice.



Commercial Air Conditioner Division
SHINKO AIRCON



SHINKO AIRCON PRIVATE LIMITED

D. NO: 3-159 / 7, First floor,
Sri Nidhi complex, Near Bus stand, Bajpe
Mangalore taluk, D. K
Karnataka State, INDIA- 574142
Mob: +91-9632194409
info@shinkoind.com,
www.shinkoind.com

SHINKO AIRCON TRADING & MAINTENANCE LLC

Add.: Office No: 203, Burj Nahar Views building
166-Omar Bin Khattab Street, Naif- Deira, Dubai- UAE
Mob: +971-552596321
info@shinkoaircon.com
www.shinkoaircon.com

Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this