



# AIR HANDLING UNITS

## **SAGM Series**



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Leading manufacturer of technologically Advanced Air Handling Systems specifically designed and developed for high performance, reliability and energy efficiency.



**SAGAR AIR PVT. LTD.**

# Introducing Sagar Air AHUs

Air Handling Units for all applications

SAGAR AIR Air Handling units are backed with design and manufacturing capabilities of more than 30 years. These are compact modular units, which can be customized to meet your needs of varying air volumes, static pressures and arrangements.

The construction provides greater flexibility to meet any kind of space constraints using horizontal, vertical and ceiling suspended mounting.

## Salient Features:

- Capable of delivering 3400 CMH upto 60000 CMH.
- Can cater Statics pressures ranging from 400 Pa to 1500 Pa.
- Available in Double Skin and Single Skin options.
- Range covers Horizontal, Vertical and Ceiling Suspended type.
- Suitable for installation in shopping arcades, offices, restaurants, hotels, schools, multiplexes, theaters, control rooms, pharmaceuticals and a variety of other comfort and industrial applications.
- Suitable for Cooling, Heating, Humidification and Clean Room applications.



**Highly Compact**

**High Operational Performance**

**More Durable**

**Low Maintenance**

**Wide range**

**Tailor Made units**

# Construction Features

## High Durability Guaranteed

### Framework and Panels

- Rigid Framework made of hollow, anodized and extruded aluminum profile held together by high profile nylon joints.
- The Double Skin sandwiched panels with inner skin made of 24G GI conforming to IS-277 standards. Outside panel is made of pre-painted 24 G galvanized sheet.
- Double Skin panel of 24 mm or 46 mm can be provided depending on customer's requirement.
- A leakproof casing is ensured.
- A leak proof casing ensures Indoor Air Quality by preventing the entry of contaminated air into the equipment.
- EPDM foam gaskets on Aluminum frame provide superior sealing from casing leakages.
- Base frame is rugged in construction, made of galvanized steel with intermediate cross members and has lifting holes for easy installation.
- Thermal break profiles are available as an option.



### Blower Section

- Energy Efficient AMCA Certified, forward / backward curved / Airfoil fans are provided. Plug fans are available as an option.
- Electric motor of TEFC type IP55 and Class F insulation.
- Fan and motor are mounted on a common extruded Aluminum channel / GI heavy gauge pressed channel using anti vibration spring mounts and flexible Fire retardant canvas connection for silent and vibration free operation.
- Motor is mounted on easy slide mounting bracket for easy adjustment.
- Drives are selected for optimum performance. Taper lock Pulleys are used.
- Electrical interlock trips the fan immediately on opening of AHU door to ensure absolute safe operation.

## Coil Section

- Optimum Chilled water DX or heating coil selection through software assisted program.
- State of the art coil manufacturing facility ensures best quality.
- Free flow Aluminum fin configuration provides excellent heat transfer capability with low air side pressure drop.
- Copper tubes mechanically expanded on to the above fins to ensure efficient heat transfer.
- Flexibility in terms of number of rows and circuitry to meet supply air conditions.
- Copper fins, Anti-Corrosive coated fins and SS end sheets are available as options.



## Coil Section

- Drain pan made of corrosion resistant Stainless Steel of grade SS 304 as a standard feature.
- Wider collection area with dual slope ensures quick drainage of condensate and further prevents microbial growth thereby maintaining Indoor Air Quality.
- Drain pan is insulated with Nitrile foam to avoid condensation of surface.
- UV lamps are available as an option to kill Fungus molds and other microbes, minimizing allergens and allergy causing irritants.



## Filter Section

- A complete line of filters are available to meet all kinds of filtration demands.
- Separate Pre-Filter, fine and HEPA filter sections are provided.
- The filters are arranged in a grid in heavy-duty specially designed highly galvanised sheet steel frame to avoid air bypass and are removable from front.
- Pre-filters are of flange type provided with handles for convenient removal and are washable.
- Fine and HEPA filter sections are provided with access door panel with positive locking. The door is removable type with locking arrangement with nylon handles.

## Standard Accesories

- Service door : Hinged and removable for ease of access to the fan, motor and filters.
- Marine Lamp : For better visibility during servicing.
- View port : Provided for Inspection during AHU operation.
- Door Limit Switches : Automatically trips the motor to ensure safety.
- GI / Powder coated, opposed blade volume control dampers for air balancing.



## Optional Accesories

- Mixing box Section for efficient mixing of return and fresh air intake.
- Steam and spray humidifier section integral with the unit.
- Thermal Break Panelling and framework
- Face and by pass dampers of opposed blade type.
- Cross flow type and wheel type heat recovery sections can be provided for energy saving.
- Two pass GI / PVC or Four pass GI / PVC Droplet eliminator sections can be provided to prevent spray with sound absorbing walls and sound traps in fan and discharge areas to meet critical sound level requirements.
- Pad type with cellulose paper pad mist eliminator can be provided.



# Technical Specifications

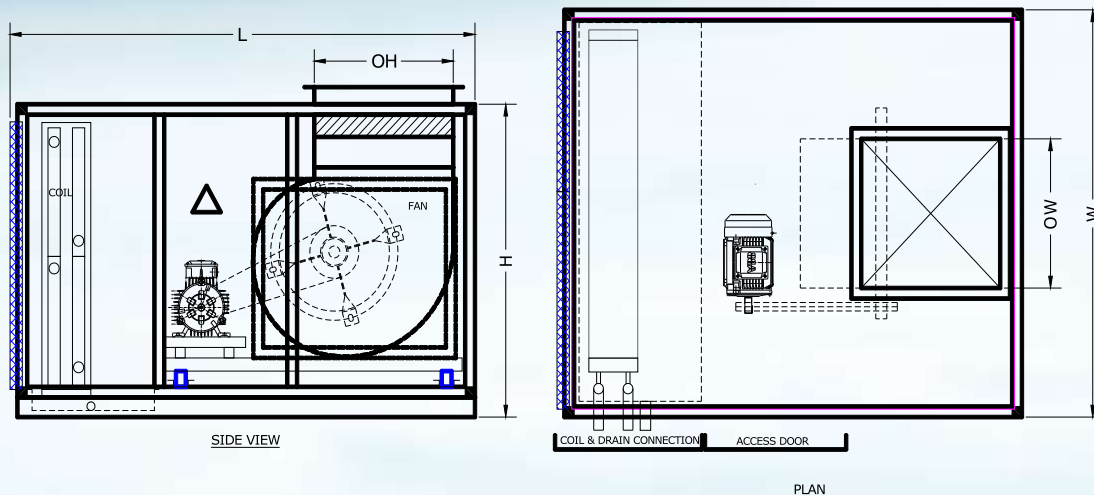
Sophisticated Engineering Guaranteed.

SAGAR AIR AHU Horizontal Floor Mounted :

AHU model	Air Volume		Fan Model	Fan Opening mm	OV	Coil Area	FL	FH	Overall Dimensions			Motor KW	
	CFM	CMH							L	W	H	TSP - mm	40
SAGM-035	2000	3400	FDA-250	322*322	9.2	0.4	660	572	1670	1000	760	1.1	1.5
SAGM-040	2350	3995	FDA-280	360*360	8.5	0.4	762	572	1750	1100	900	1.1	1.5
SAGM-050	2850	4845	FDA-280	360*360	10.4	0.5	762	699	1750	1100	900	1.5	2.2
SAGM-060	3750	6375	FDA-355	452*452	8.6	0.7	914	762	1810	1250	1175	2.2	2.2
SAGM-080	4700	7990	FDA-355	452*452	10.8	0.9	914	953	1810	1250	1175	2.2	3.7
SAGM-100	5800	9860	FDA-450	568*568	8.5	1.1	1422	762	1810	1810	1175	2.2	3.7
SAGM-120	7300	12410	FDA-450	568*568	10.7	1.4	1422	953	2000	1810	1175	3.7	3.7
SAGM-140	8050	13685	FDA-500	638*638	9.3	1.5	1575	953	2000	1950	1315	3.7	5.5
SAGM-160	9150	15555	FDA-500	638*638	10.6	1.7	1575	1080	2200	1950	1315	3.7	5.5
SAGM-180	10600	18020	FDA-560	714*714	9.8	2.0	1727	1143	2200	2090	1475	5.5	5.5
SAGM-200	11800	20060	FDA-560	714*714	10.9	2.2	1727	1270	2200	2090	1475	5.5	5.5
SAGM-220	12850	21845	FDA-630	800*800	9.5	2.4	1981	1207	2200	2365	1600	5.5	7.5
SAGM-230	13500	22950	FDA-630	800*800	10	2.5	1981	1270	2200	2365	1600	7.5	10
SAGM-250	15000	25500	FDA-630	800*800	11	2.8	1981	1397	2200	2365	1600	7.5	7.5
SAGM-290	17200	29240	FDA-710	898*898	10.1	3.2	2184	1461	2375	2550	1725	7.5	9.3
SAGM-300	18000	30600	FDA-710	898*898	10.5	3.3	2184	1524	2375	2550	1725	7.5	9.3
SAGM-320	19200	32640	FDA-800	1006*1006	8.9	3.6	2337	1524	2550	2685	2100	7.5	9.3
SAGM-350	20750	35275	FDA-800	1006*1006	9.7	3.9	2337	1651	2550	2685	2100	9.3	11
SAGM-370	21600	36720	FDA-800	1006*1006	10.1	4.1	2337	1751	2550	2685	2100	9.3	11
SAGM-400	23200	39440	FDA-800	1006*1006	10.8	4.3	2337	1842	2550	2685	2100	9.3	11
SAGM-420	24750	42075	FDA-900	1130*1130	9.2	4.6	2591	1778	2825	2965	2350	11	15
SAGM-450	26550	45135	FDA-900	1130*1130	9.8	4.9	2591	1905	2825	2965	2350	11	15
SAGM-470	27500	46750	FDA-900	1130*1130	10.5	5.1	2591	1969	2825	2965	2350	11	15
SAGM-600	35000	59500	FDA-1000	1263*1263	10.3	6.6	2591	2540	3200	2965	2740	15	19

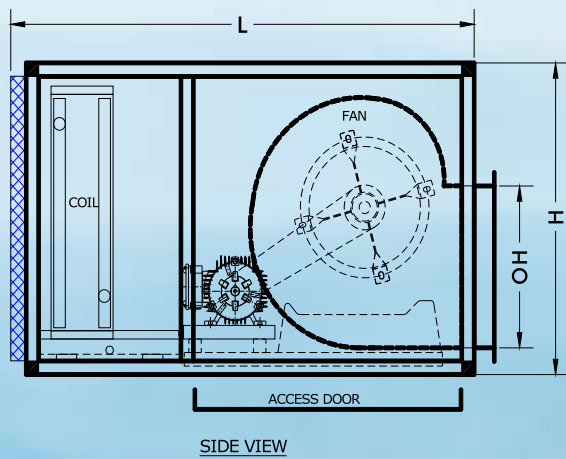
- Panel Thickness : 25mm
- S2: Twin Blower system with Single motor for Belt driven units.
- Drain Pipe connection : 1 inch BSP
- Standard options: a. Coils Fins per inch : 12 b. Rows deep : 4 or 6. c. Fan discharge : Bottom horizontal only.
- Belt driven units : Motor 3PH-4P for Direct driven units : Motor 1ph, 1150, 1250,1350 RPM

Dimensions and specifications are subject to change without prior notice.

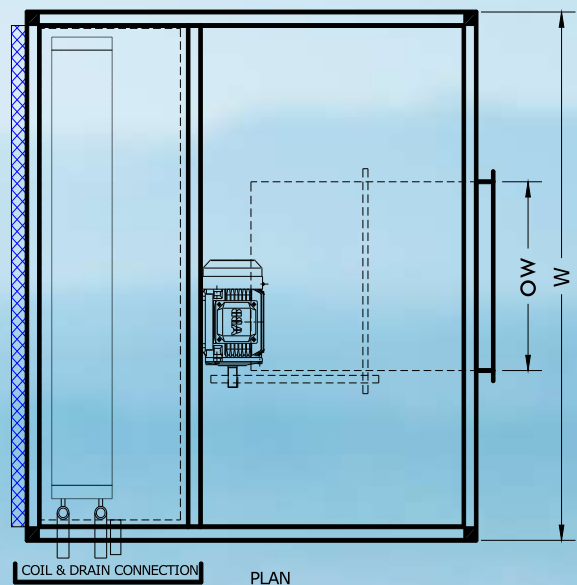


SAGAR AIR AHU Ceiling Suspended :Belt drive

AHU model	Air Volume		Fan			Coil			Overall Dimensions			Motor KW	
			Model	Opening	OV	Area	FL	FH	L	W	H	TSP - mm	
	CFM	CMH	Kruger	OW x OH	m/s	SQM	mm	mm	mm	mm	mm	40	50
SAGM-035B	2000	3400	KAT-10-10 SL	331*289	9.8	0.4	965	381	1285	1237	585	1.1	1.5
SAGM-050B	3000	5100	KAT-10-8 S2L	265*289	9.3	0.6	1473	381	1285	1750	585	1.5	2.2
SAGM-070B	4000	6800	KAT-10-10 S2L	331*289	9.8	0.7	1930	381	1285	2225	585	2.2	2.2
SAGM-100B	6000	10200	KAT-12-12 S2L	395*341	10.5	1.1	1727	635	1475	2000	820	2.2	3.7
SAGM-120B	6500	11050	KAT-15-15 S2L	471*404	8.5	1.2	1850	635	1475	2200	820	3.7	3.7
SAGM-140B	8000	13600	KAT-15-15 S2L	471*404	10.0	1.5	2100	700	1650	2400	850	3.7	5.5
SAGM-150B	8750	14875	KAT-15-15 S2L	471*404	10.9	1.6	2100	762	1650	2400	900	3.7	5.5



SIDE VIEW



PLAN

SAGAR AIR AHU Ceiling Suspended :Direct drive

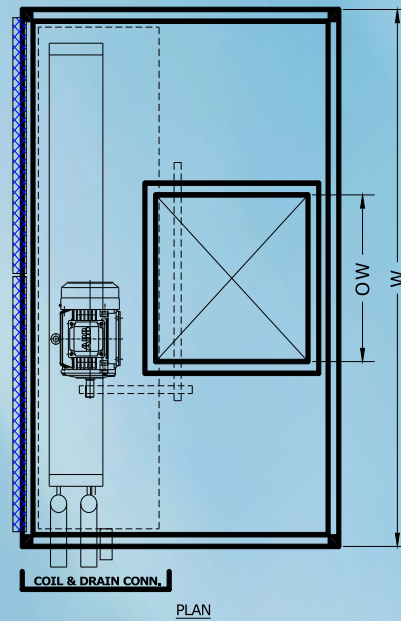
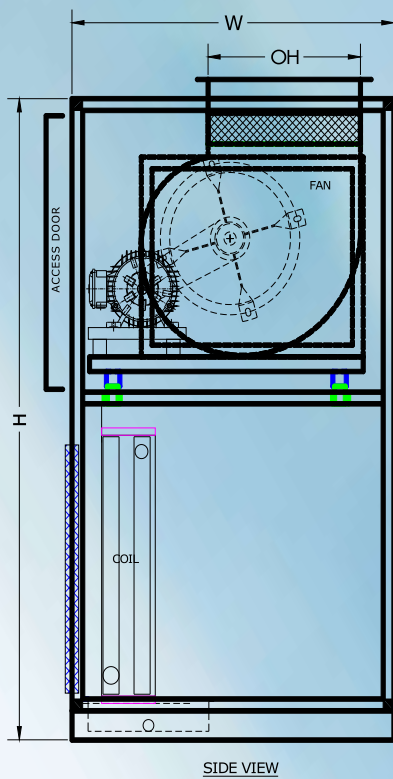
AHU model	Air Volume		Fan			Coil			Overall Dimensions			Motor / Qty
			Model / Qty	Opening	OV	Area	FL	FH	L	W	H	12mm ESP
	CFM	CMH	Kruger	OW x OH	m/s	SQM	mm	mm	mm	mm	mm	KW
SAGM-035BD	2000	3400	KDD-10-10 SL/1	331*289	9.8	0.4	965	381	990	1237	585	0.55/1
SAGM-050BD	3000	5100	KDD-10-8 SL/2	265*289	9.3	0.6	1473	381	990	1750	585	0.55/2
SAGM-070BD	4000	6800	KDD-10-10 SL/2	331*289	9.8	0.7	1930	381	990	2225	585	0.55/2

- Panel Thickness : 25mm
- S2: Twin Blower system with Single motor for Belt driven units.
- Drain Pipe connection : 1 inch BSP
- Standard options:
  - a. Coils Fins per inch : 12
  - b. Rows deep : 4 or 6.
  - c. Fan discharge : Bottom horizontal only.
- Belt driven units : Motor 3PH-4P for Direct driven units : Motor 1ph, 1150, 1250,1350 RPM

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SAGAR AIR AHU Vertical Floor Mounted :

AHU model	Air Volume		Fan			Coil			Overall Dimensions			Motor KW	
			Opening	OV	Area	FL	FH	L	W	H	TSP - mm		
	CFM	CMH	Model	OW x OH	m/s	SQM	mm	mm	mm	mm	mm	40	50
SAGM-035V	2100	3570	KAT-10-10 SL	331*289	10.3	0.4	762	508	785	1050	1320	1.1	1.5
SAGM-050V	3050	5185	KAT-12-12 SL	395*341	10.7	0.6	1118	508	840	1400	1390	1.5	2
SAGM-070V	4075	6928	KAT-15-15 SL	471*404	10.1	0.8	1321	572	890	1600	1535	2.2	3.7
SAGM-100V	6050	10285	KAT-18-18 SL	557*478	10.7	1.1	1473	762	1035	1780	1860	2.2	3.7
SAGM-140V	8000	13600	KAT-15-15 S2L	471*404	9.8	1.5	1930	762	890	2235	1900	3.7	3.7
SAGM-170V	10000	17000	KAT-18-13 S2L	430*478	11.5	1.9	2438	762	1040	2740	2020	5.5	5.5
SAGM-200V	11750	19975	KAT-18-18 S2L	557*478	10.4	2.2	2642	826	1040	2950	2060	5.5	5.5



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- Panel Thickness : 25mm
- S2: Twin Blower system with Single motor
- Drain Pipe connection : 1-1/4" BSP
- Standard options:
  - a. Coils Fins per inch : 12
  - b. Rows deep : 4 or 6.
  - c. Fan discharge : Up blast only.

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