

GLOBAL IFS[®]

Underfloor Air Distribution System

Modular Air Tower (MAT)



SYSTEM OVERVIEW

The Modular Air Tower (MAT) is a vertical air handling unit used to provide localized air distribution with a best-in-class combination of air flow, energy efficiency and small footprint. Modular air towers are designed to be installed vertically in the mechanical space rather than horizontally, which can reduce the size of mechanical rooms and increase the usable occupancy space. Utilizing air towers in combination with underfloor air distribution amplifies the ability to deliver flexible design, consistent temperature control, energy efficiency and cleaner air to any building.

Features

- Compact Design
- Better Air Distribution/Comfort
- Zoning
- Simplicity of Design
- Quiet
- Sustainability

Compact Design

Small footprint allows more usable and leasable floor space. Minimizes or eliminates the need for ductwork to carry air across a floorplate while maximizing usable floor space for tenants.

Better Air Distribution/Comfort

Temperature can be controlled more precisely, delivering consistent comfort throughout the space.

Zoning

Multiple injection points afford more granular zoning as needs change with repurposing of the space and maximized flexibility overall.

Simplicity of Design

Minimizes/eliminates the need for underfloor ducting typical of central delivery systems.

Quiet

State of the art ECM fans deliver ultra-quiet operation and modulate to maintain consistent floor plenum design pressures.

Sustainability

Designing with Air Towers can contribute to both LEED and WELL Building certification.

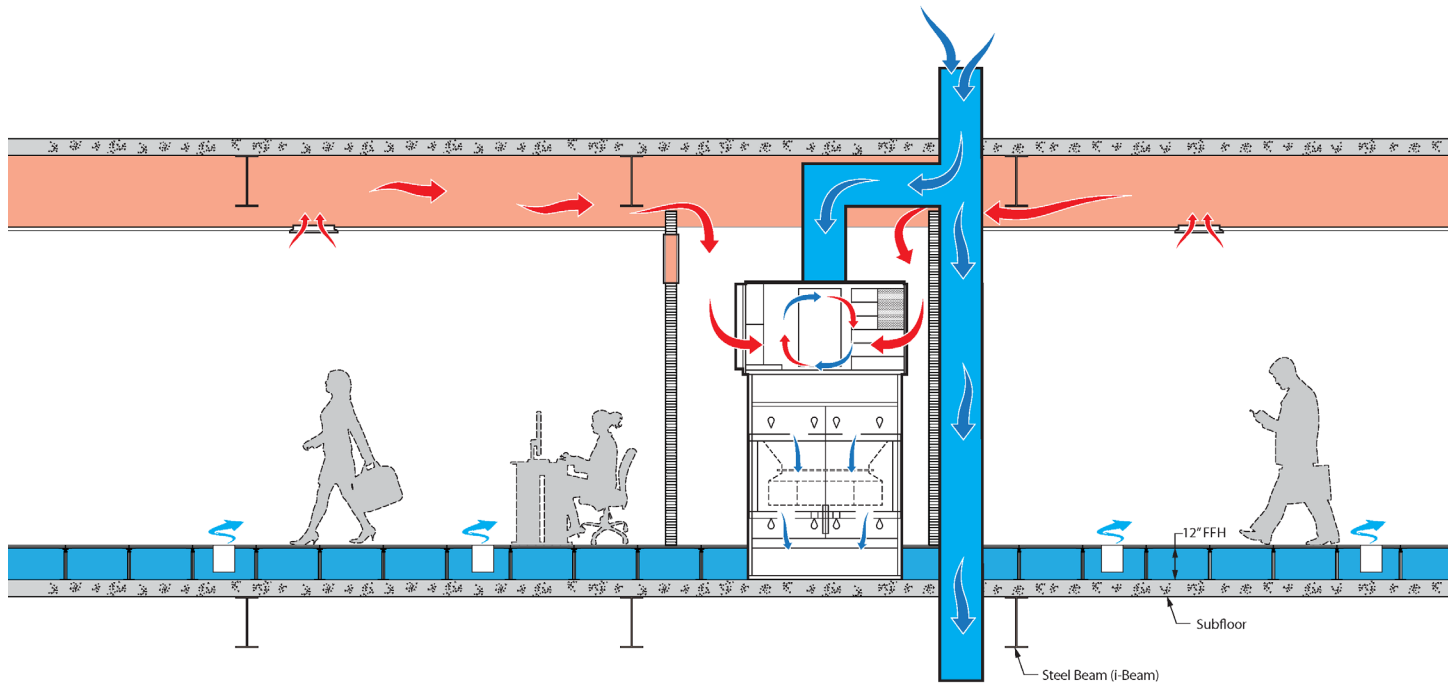


Terminus at District 56 Building Install, Langford, BC
Cabinet B, Dual Fan, 7000 CFM

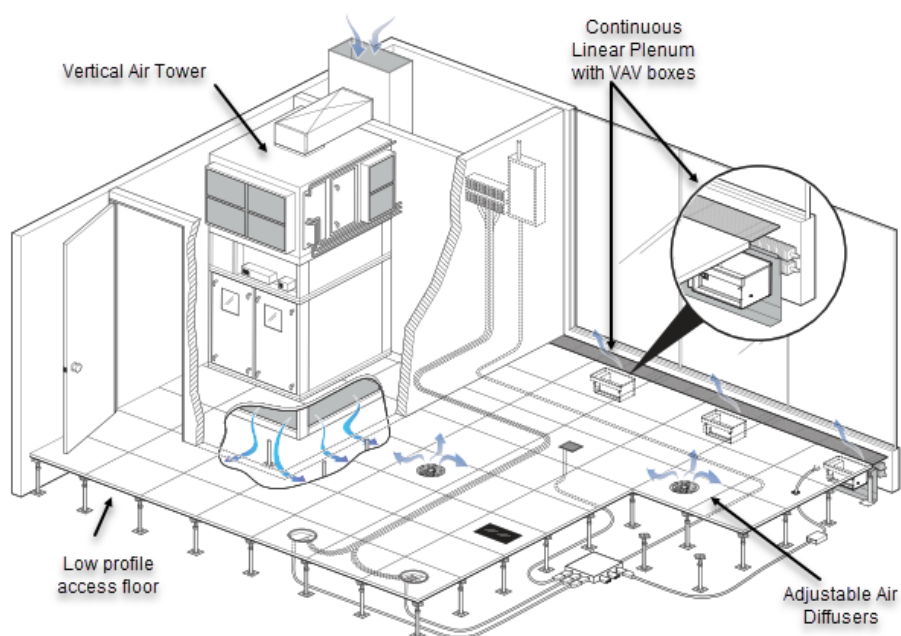
PRODUCT APPLICATION

Global IFS Air Towers offer a flexible and adaptable solution for underfloor applications that allow for zoning granularity and the ability to vary air delivery and temperature based on building exposure. They can be paired with a number of primary air delivery systems, including CW, DX, DOAS and low temperature options such as geothermal.

The design of the Modular Air Tower (MAT) allows a wide range of customization per specific needs. The



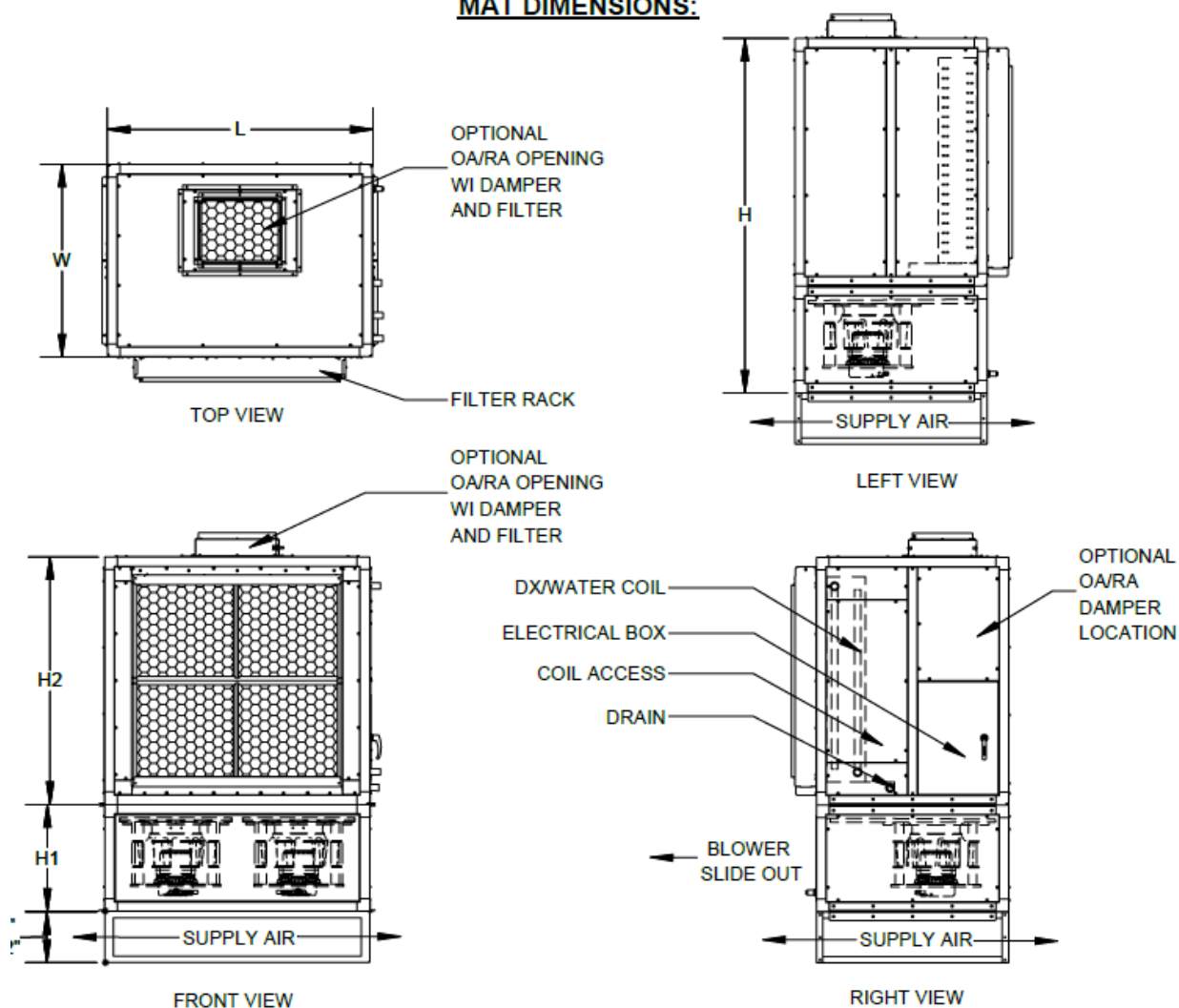
MAT is available in three cabinet variations with discharge air flow ranges between 2,000 to 14,000 CFM.



DIMENSIONAL DATA

Model	Rated CFM	Supply Fan	Length (L)	Width (W) front to back	Overall	Height	
						Blower Section (H1)	Coil Section (H2)
A	2,000-3,500	Single	55"	45"	73"	25"	48"
B	4,000-5,000	Single	62"	45"	83"	25"	58"
	5,000-7,000	Dual					
C	7,500-14,000	Dual	83"	58"	108"	30"	78"

MAT DIMENSIONS:



Product Weight

Model	Rated CFM	Damper Size	Weight		
			Frame Weight	Blower Section	Coil Section
A	2,000-3,500	14" x 14"	39 lbs.	280 lbs.	550 lbs.
B	4,000-7,000	14" x 14"	43 lbs.	295 lbs.	580 lbs.
C	7,500-14,000	20" x 20"	62 lbs.	443 lbs.	911 lbs.

NOMINAL PERFORMANCE DATA

Cooling Capacity Performance*

Cabinet	Rated Airflow (CFM)	Supply Fan	Motor BHP	Coil Cooling ³		
				Fin Area (in ²)	Total Coil Capacity ² (MBH)	Coil PD AT Design (in w.c.)
A	2000	Single	0.695	35 x 35	77.1	0.214
	3500		1.043		122.5	0.518
B	5000	Single	1.6	45 x 45	182.1	0.444
	7000	Dual	2.09		230.0	0.700
C	10,500	Dual	3.43	65 x 65	370.5	0.415
	12,500		4.57		426.6	0.552
	14,000		4.68		468.6	0.654

*** Notes:**

1. Maximum Total Static Pressure (TSP) based on average filter and design cooling coil pressure drop (4 discharge openings) is 1.25 in w.c.
2. Total coil capacity based on design for 60 degrees F supply air, 80/67 degree F db/wb return air and air flow at rated CFM capacity.
3. Cooling coil based on 4 row coil, 10 fins per inch (FPI)

Electrical Data

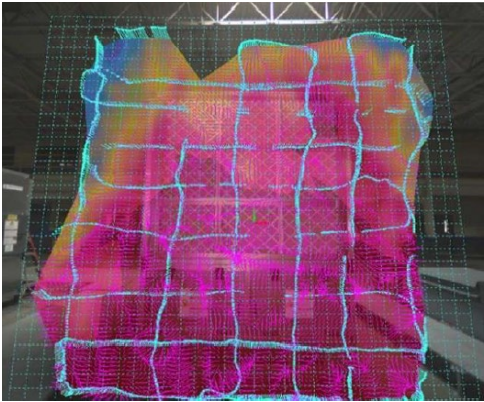
Cabinet/Model	MCA	MOP	MCA	MOP	MCA	MOP	MCA	MOP		
	Single 350 Fan		Single 500 Fan		Dual 500 Fan		Dual 560 Fan			
Cabinet A										
208/230V	10.3	15	11.5	20						
460V	5.8	15	8.8	15						
Cabinet B										
208/230V			11.5	20					20.7	25
460V			8.8	15					15.8	20
Cabinet C										
208/230V					20.7	25			22.5	30
460V					15.8	20				

NOMINAL PERFORMANCE DATA

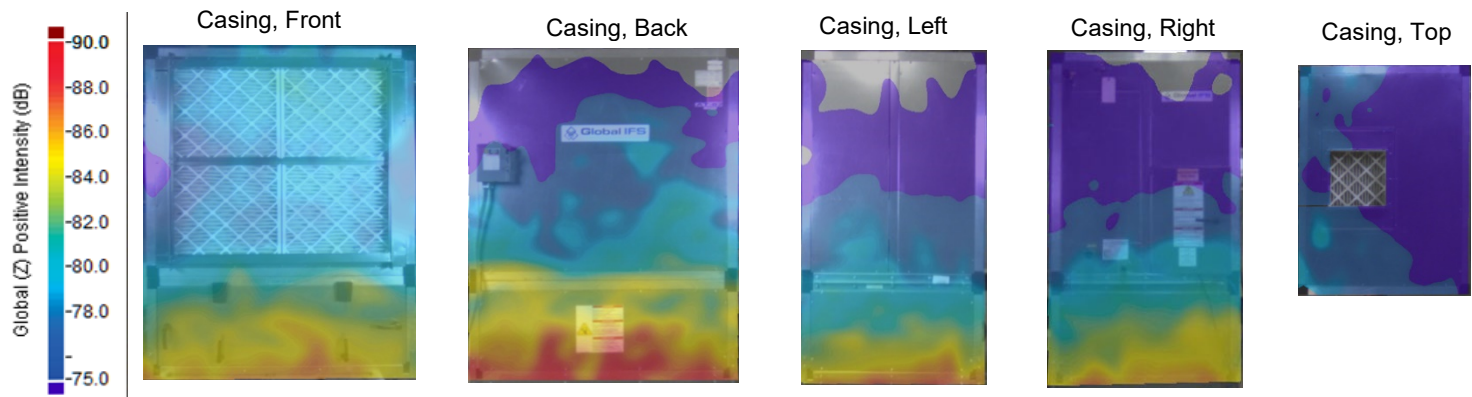
Sound Data

Measurement

Measured utilizing sound intensity probe. Measurements were made on all sides of the cabinet.



Sound Intensity Mapping



*The loudest sound intensity emanates from the bottom of the cabinet below the raised access floor
**Sound attenuation pad can be installed at the discharge of the unit.

Results

Cabinet	Rated Airflow (CFM)	Supply Fan	Result	Octave Band Sound Power Level (dB re. 1-pW)*							
				63	125	250	500	1000	2000	4000	8000
A	3,500	Single	Case/Housing Radiated Sound	70.3	72.6	70.5	68.2	68.3	61.7	57.2	38.8
			Overall discharge sound power level	76.2	69.0	68.6	66.7	65.1	59.3	55.9	34.1
B	7,000	Dual	Case/Housing Radiated Sound	76.9	75.8	80.2	74.6	75.9	68.9	63.3	46.3
			Overall discharge sound power level	82.8	73.1	78.1	73.4	72.7	65.6	61.1	40.0
C	15,000	Dual	Case/Housing Radiated Sound	82.9	79.3	88.1	82.2	81.5	73.0	67.7	51.7
			Overall discharge sound power level	88.2	75.5	82.8	78.2	76.3	69.1	63.9	44.2

**No sound attenuation pads were used to capture test data.

PRODUCT APPLICATION – ACTIVE AIR PURIFICATION

AtmosAir DBD (Dielectric Barrier Discharge) Bipolar Ionization can be added to Global IFS Air Towers to enhance the clean air in the occupied space via ions that travel in the moving air stream. Replicating the processes found in nature's cleanest areas, the DBD technology creates a large quantity of positively and negatively charged ions that actively clean the space. These cleaning agents remain active 300 seconds, as compared to other technologies that last only 30 seconds, traveling to the occupied area via the air stream. Paired with UFAD, the ions are efficiently introduced and distributed through the occupant breathing zone, leaving the air cleaner, healthier and more natural feeling for users. AtmosAir has a proven history of tangibly improving the quality of the air. AtmosAir used in combination with UFAD replicates nature's cleanest air by actively and efficiently cleaning the breathing zone.

Features

- Energy Efficiency
- Particle and Pathogen Reduction
- Active in the Occupied Space
- Odor Reduction

Energy Efficiency:

Cleaner air causes up to 50% reduction in the need for outdoor air resulting in lower costs to heat or cool a space.

Particle and Pathogen Reduction:

Within 30 minutes of application there is a measurable reduction in particles like mold, dust and pollen and a deactivation of viruses, germs, mold and bacteria in the air. and on every exposed surface. Lab tested against Corona Virus.

Active in the Occupied Space:

Ions seek and neutralize VOCs for up to 300 seconds directly in occupied areas.

Odor Reduction:

Odor inducing particulates broken down and agglomerated for cleaner, fresher smelling air.

