



## air handlers



hospitals

universities

k-12 education

condos

apartments

hotels / motels

# W



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horizontal belt drive series



HAB

ROOFTOP APPLICATIONS

- 800 to 8000 cfm nominal airflows
- 0 to 1.5" external static pressure

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vertical belt drive series



VAB

ROOFTOP APPLICATIONS

- 800 to 8000 cfm nominal airflows
- 0 to 1.5" external static pressure

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modular belt drive series



MAB

ROOFTOP APPLICATIONS

- 800 to 8000 cfm nominal airflows
- 0 to 1.5" external static pressure

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rooftop belt drive series



RAB

ROOFTOP APPLICATIONS

- 800 to 8000 cfm nominal airflows
- 0 to 1.5" external static pressure

## Overview

Either serving small areas or multiple zones Titus Air Handling Units supply the exact amount of treated, conditioned air to the occupied spaces of a building. These compact belt drive units are designed for efficient operation and provide economical heating and cooling. These units are the work horse of any system controlling building temperature, humidity, and indoor air quality.


Four different models available in numerous configurations, delivers a unit tailored to meet the needs of any project. Horizontal ceiling mounted units typically are used in applications that exceed the requirements of direct drive fan coils products. Rooftop units are installed externally introducing fresh air into the system. Vertical units are generally installed in maintenance closets or mechanical rooms near the zones they serve so maintenance or service can be performed without intruding on the

occupants. The modular unit is extremely flexible and can be adapted to meet most supply and return configurations.

Titus Air Handlers can operate with 100 percent outside air, 100 percent recirculated air, or anywhere in between. All models are designed to allow easy access to all components for maintenance and service. Fan motors are installed on a variable pitch mounting plate allowing for fine tune balancing of the system in the field.




## APPLICATION ICONS KEY




for use in colleges & university buildings

universities




great for apartments or other similar applications

apartments




excellent air distribution device for hotels, motels or any similar commercial building application

hotels / motels




for use in vital areas within hospitals & patient rooms to remove contaminants from the air

hospitals



for usage in condos and other industrial or commercial building applications

condos

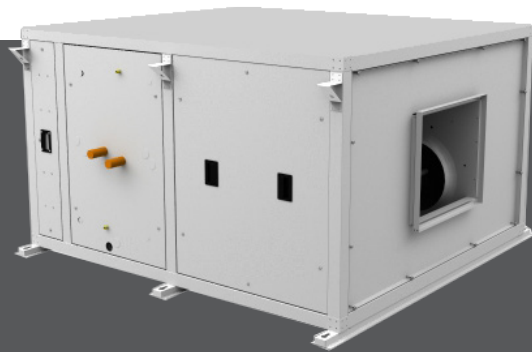


excellent air distribution device for schools and other educational facilities

k-12 education

### HAB

- ETL-listed. Constructed in compliance with ANSI/UL 1995 Standard
- High efficiency coil – 4-row seamless  $\frac{3}{8}$ " OD (HAB 08 & 12),  $\frac{1}{2}$ " OD (HAB 16 & 20), and  $\frac{5}{8}$ " OD (HAB 30 thru 80) copper tubes with 10 aluminum fins per inch for 2-pipe applications
- Pipe entry is right hand as you are looking at the filter (in the direction of the airflow)
- Manual air vent
- Permanently lubricated ball bearing blowers. Blower wheels are belt-drive, double-inlet, forward-curved, and factory balanced
- Condensate pan fabricated of heavy gauge 304 stainless steel with three-dimensional slope for positive drainage
- Cabinet fabricated of heavy gauge galvanealed steel, specially coated on the outside with powder-coated enamel paint and lined with 1", dual density, 1.5-pound fiberglass insulation with antimicrobial coating



HAB

- Suspension -  $\frac{7}{8}$ " knockouts for use with  $\frac{3}{8}$ " threaded suspension rod are provided at the top and bottom of all unit corners for hanging the unit
- Filters - 2" fiberglass disposable with a horizontal filter slide



k-12 education



apartments



hospitals



hotels / motels



See website for Specifications

### AVAILABLE MODELS:

HAB08 / 800 cfm  
HAB12 / 1200 cfm  
HAB16 / 1600 cfm  
HAB20 / 2000 cfm  
HAB30 / 3000 cfm  
HAB40 / 4000 cfm  
HAB60 / 6000 cfm  
HAB80 / 8000 cfm

### OVERVIEW

Each horizontal blower coil unit provides flexibility of design due to belt-driven fans, multi-row coil capability, and available factory options. These products are designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes.

### OPTIONAL FEATURES INCLUDE

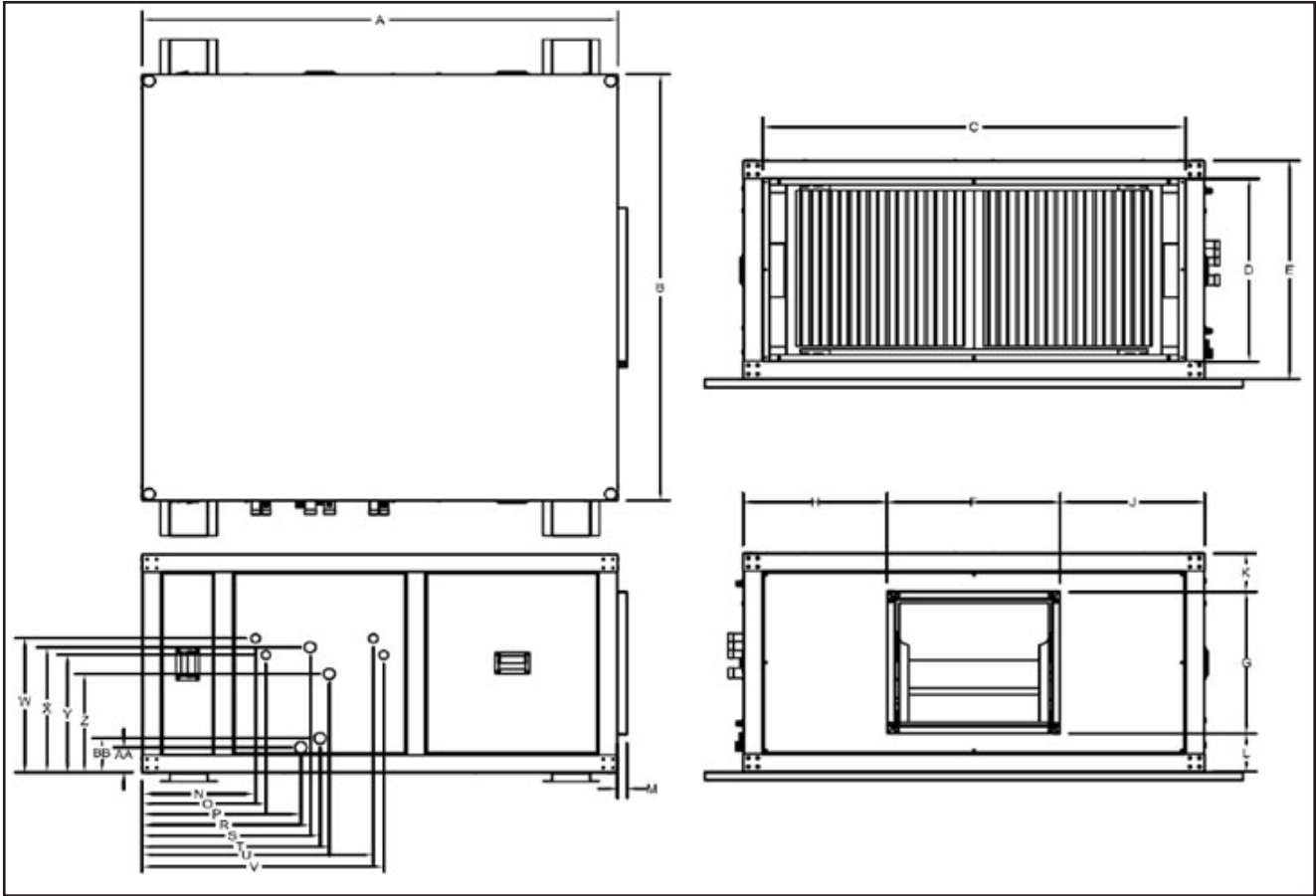
- High efficiency coil – 6-row seamless  $\frac{3}{8}$ " OD (HAB 08 & 12),  $\frac{1}{2}$ " OD (HAB 16 & 20), and  $\frac{5}{8}$ " OD (HAB 30 thru 80) copper tubes with 10 aluminum fins per inch for 2-pipe applications
- High efficiency coils – Chilled water 4- or 6-row seamless  $\frac{3}{8}$ " OD (HAB 08 & 12),  $\frac{1}{2}$ " OD (HAB 16 & 20), and  $\frac{5}{8}$ " OD (HAB 30 thru 80) copper tubes with 10 aluminum fins per inch. Hot water 1- (HAB 08, 12, 16, & 20 only) or 2-row seamless  $\frac{3}{8}$ " OD (HAB 08 & 12),  $\frac{1}{2}$ " OD (HAB 16 & 20), and  $\frac{5}{8}$ " OD (HAB 30 thru 80) copper tubes with 10 aluminum fins per inch.
- Left hand pipe entry as you are looking at the filter (in the direction of the airflow)

- Motors - Standard ETL-listed motors consist of Totally Enclosed, Fan Cooled (TEFC) and Open, Drip-Proof (ODP) casing, shaded-pole 115/60/1 in  $\frac{1}{4}$  HP through 2 HP; TEFC and ODP 115/208-230/1 (wired for 115V) in  $\frac{1}{4}$  to 2 HP; TEFC and ODP 208-230/460/60/3 in  $\frac{1}{4}$  HP to 10 HP; TEFC and ODP 575/60/3 in  $\frac{1}{4}$  HP to 10 HP; other voltages, configurations, and horsepower options available, but not ETL-listed. All motor sheaves are variable-pitch and single-groove. Blower pulleys are split-tapered bushing.
- Mixing boxes
- Controls for mixing boxes - Field install and wire, three-position and fully modulating packages  
*Note: Controls such as contactors, starters, and/or transformers/fan relays are supplied by others*
- Discharge plenum with adjustable double-deflection grille (cannot be used with electric heat)
- Return air grille
- Unit spring vibration isolators
- Pleated filter, 2"
- Cabinet liner in closed cell insulation
- Electric heat - Models HAB08, 12, 16, 20, 30 and 40
- Double wall construction
- Face and bypass damper
- Face and bypass damper filter section



DIMENSIONS

HAB HORIZONTAL BELT DRIVE DIMENSIONS



Dimensions - Sizes 08 thru 40

Unit	A	B	C	D	E	F	G	H	J	K	L	M	N
08	49.5	39.0	35.0	16.0	20.0	14.0	12.5	12.5	12.5	2.0	5.5	1.0	11.2
12	49.5	39.0	35.0	16.0	20.0	14.0	12.5	12.5	12.5	2.0	5.5	1.0	11.2
16	49.5	48.0	44.0	20.5	24.5	18.0	16.0	15.0	15.0	4.3	4.3	1.0	11.8
20	49.5	48.0	44.0	20.5	24.5	18.0	16.0	15.0	15.0	4.3	4.3	1.0	11.8
30	63.0	57.0	53.0	32.4	36.6	20.0	17.5	18.5	18.5	9.5	9.5	1.0	12.6
40	63.0	57.0	53.0	32.4	36.6	20.0	17.5	18.5	18.5	9.5	9.5	1.0	12.6

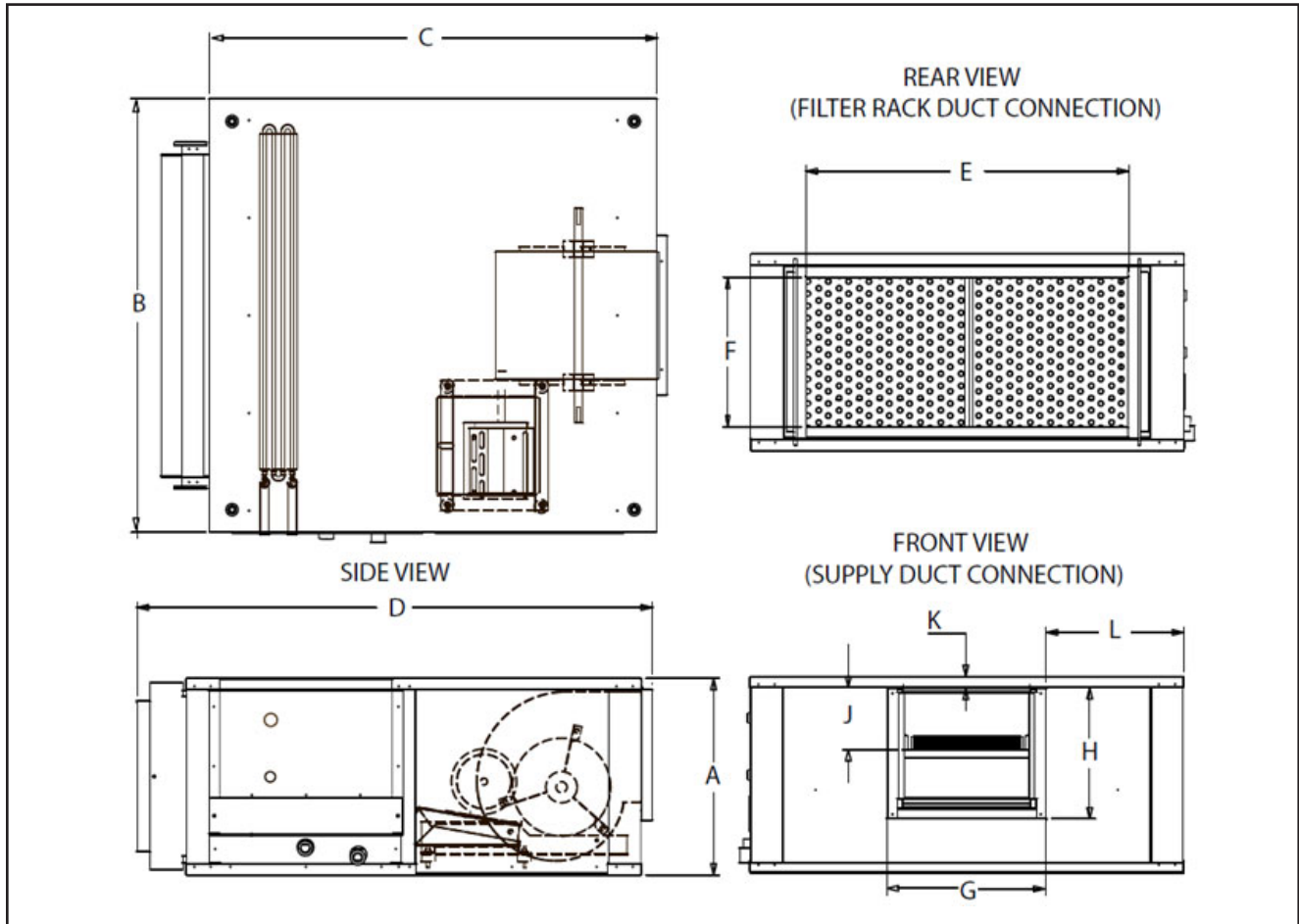
Unit	O	P	R	S	T	U	V	W	X	Y	Z	AA	BB
08	13.6	16.5	17.2	N/A	19.8	23.5	25.9	11.4	11.4	9.2	9.2	2.8	2.8
12	13.6	16.5	17.2	N/A	19.8	23.5	25.9	11.4	11.4	9.2	9.2	2.8	2.8
16	12.9	16.5	17.5	18.5	19.5	24.1	25.2	15.1	14.1	13.2	11.1	1.1	2.8
20	12.9	16.5	17.5	18.5	19.5	24.1	25.2	15.1	14.1	13.2	11.1	1.1	2.8
30	13.9	17.7	18.8	20.7	22.7	27.6	28.8	20.0	19.7	18.5	17.6	3.3	4.3
40	13.9	17.7	18.8	20.7	22.7	27.6	28.8	20.0	19.7	18.5	17.6	3.3	4.3

All dimensions are in inches

DIMENSIONS

HAB HORIZONTAL BELT DRIVE DIMENSIONS

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Dimensions - Sizes 60 thru 80											
Unit	A	B	C	D	E	F	G	H	J	K	L
60	47.0	72.0	57.5	63.0	59.8	42.7	22.7	19.7	12.2	4.9	24.6
80	47.0	72.0	57.5	63.0	59.8	42.7	22.7	19.7	12.2	4.9	24.6



DIMENSIONS

HAB HORIZONTAL BELT DRIVE DIMENSIONS

HAB Specifications									
Model	Fin Block H x W	Face Area	Rows	Water Conn. Header OD	Model	Fin Block H x W	Face Area	Rows	Water Conn. Header OD
HAB08	10 X 31	2.15	1	5/8	HAB30	22.5 X 47	7.34	2	7/8
			2					7/8	4
			4	6					1 3/8
			6						
HAB12	13 X 31	2.8	1	5/8	HAB40	28.5 X 47	9.3	2	7/8
			2					7/8	4
			4	6					1 3/8
			6						
HAB16	15 X 40	4.17	1	5/8	HAB60	31.5 X 60	13.13	2	1 1/8
			2					7/8	4
			4	6					1 5/8
			6						
HAB20	17.5 X 40	4.86	1	5/8	CONTACT THE FACTORY FOR ADDITIONAL COIL INFORMATION				
			2						
			4						
			6	1 1/8					

Note: Standard filter rack only accepts 2" TA or Pleated filters. Double wall filter rack accepts 2" or 4" TA or pleated filters.

Filter	Unit Model					Filter Quantity							
	14"	X	20"	X	2/4"	8	12	16	20	30	40	60	80
	14"	X	20"	X	2/4"							5	5
	14"	X	25"	X	2/4"							5	5
	16"	X	16"	X	2/4"					6	6		
	16"	X	20"	X	2/4"	2	2						
	20"	X	20"	X	2/4"			2	2				
	Filter Total					2	2	2	2	6	6	10	10

HAB HORIZONTAL BELT DRIVE

Standard Ratings - Water Coil															
Model	2- or 4-Pipe Cooling									2-Pipe Heating					
	EWT	gpm	PD Ft.	cfm	80°F DB / 67°F WB					gpm	PD Ft.	cfm	60°F EAT / 180°F EWT		
					TTL mbh	SENS mbh	LAT DB	LAT WB	°F				TTL mbh	LAT	LWT
HAB08	45	6	5.7	600	20.4	14.5	57.6	56.1	51.9	6	5.1	600	57	147.9	160.5
				800	23.0	17.2	60.1	58.0	52.7			800	68	138.6	156.8
				1000	25.0	19.6	61.9	59.3	53.4			1000	77	131.2	153.8
HAB12	45	8	6.7	900	30.6	21.8	57.6	56.2	52.7	8	5.9	900	85	148	158.1
				1200	34.4	25.8	60.1	58.0	53.6			1200	102	138.6	153.9
				1500	37.2	29.4	61.9	59.3	54.3			1500	115	131.1	150.6
HAB16	45	10	6.4	1200	40.0	28.8	57.8	56.3	53.1	10	5.6	1200	113	147.3	156.8
				1600	45.0	34.0	60.3	58.2	54.1			1600	134	137.9	152.5
				2000	49.0	38.5	62.1	59.5	54.8			2000	152	130.3	148.9
HAB20	45	13	5.4	1500	50.5	36.0	57.8	56.3	52.8	13	4.6	1500	142	147.4	157.7
				2000	56.5	42.5	60.3	58.2	53.7			2000	169	138	153.5
				2500	61.0	48.5	62.1	59.5	54.6			2500	190	130.5	150
HAB30	45	17.5	6.4	2250	77.0	55.5	57.1	56.0	53.9	18	6	2250	220	150.4	155
				3000	88.0	67.0	59.4	57.8	55.1			3000	264	141.5	149.9
				3750	96.0	76.0	61.1	59.1	56.0			3750	301	134.3	145.8
HAB40	45	21	5.9	3000	101	73.0	57.5	56.3	54.6	19.2	4.4	3000	284	147.5	149.7
				4000	113	87.0	59.8	58.2	55.8			4000	339	138.2	144
				5000	124	100	61.5	59.4	56.8			5000	383	130.7	139.3
HAB60	45	31.5	6.8	5000	165	122	57.4	56.5	55.5	28.8	5.1	5000	483	149.2	145.8
				6000	179	138	58.8	57.7	56.4			6000	539	143	141.8
				7000	190	151	60.0	58.6	57.1			7000	588	137.5	138.4
HAB80	45	44	6.6	7000	213	160	58.9	57.4	54.7	44	5.6	7000	628	142.8	150.9
				8000	225	173	60.0	58.2	55.3			8000	680	138.5	148.4
				9000	235	186	60.9	58.9	55.7			9000	728	134.7	146.2

Note: Standard ratings are for sea level altitude, standard 4-row coils, nominal air volumes and ordinary water. For other conditions and/or other coolants, consult Titus

Standard Ratings - 1-row Heating Coil													
Model	gpm	PD Ft.	cfm	TTL mbh	LAT F	LWT F	Model	gpm	PD Ft.	cfm	TTL mbh	LAT F	LWT F
HAB08	3	9.9	600	21.8	93.7	165.1	HAB16	4	4.5	1200	47	96.2	156
			800	24.8	88.7	163.1				1600	53	90.7	152.9
			1000	27.2	85.1	161.4				2000	58	86.8	150.4
HAB12	3	11.6	900	32.2	93.2	158	HAB20	4	5.0	1500	57	95.2	150.9
			1200	36.4	88.1	155.1				2000	64	89.7	147.2
			1500	39.5	84.6	152.8				2500	70	85.9	144.2

Standard Ratings - 2-row Heating Coil													
Model	gpm	PD Ft.	cfm	TTL mbh	LAT F	LWT F	Model	gpm	PD Ft.	cfm	TTL mbh	LAT F	LWT F
HAB08	4	5.2	600	36.2	116	161.4	HAB30	18	4.6	2250	147	120.5	163.2
			800	41.5	108.4	158.6				3000	171	112.8	160.5
			1000	46	102.8	156.3				3750	190	107	158.3
HAB12	6	4.1	900	55	116.8	161.1	HAB40	22	5.6	3000	194	119.8	161.9
			1200	63.5	109.1	158.3				4000	225.5	112	159.1
			1500	70	103.5	155.9				5000	250	106.3	156.7
HAB16	8	3.0	1200	75	118.4	160.6	HAB60	28	7.6	5000	306	116.5	157.6
			1600	87	110.6	157.6				6000	335	111.7	155.5
			2000	97	104.9	155.2				7000	361	107.6	153.7
HAB20	12	2.7	1500	96	119.4	163.5	HAB80	22.4	2.6	7000	384	110.7	145
			2000	111	111.6	160.9				8000	408	107.1	142.8
			2500	124	105.9	158.8				9000	429	104	141

Note: Capacities based on 60°F EAT and 180°F EWT. Units not recommended for heating applications when the LAT exceeds 130°F

HAB HORIZONTAL BELT DRIVE

Air Volume Capacity - 2-Pipe, 4-Row Coil														
Model	ISP	CFM	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
HAB08	0.20	600	786	0.11	975	0.15	1160	0.22	1320	0.29	1470	0.38	1600	0.43
	0.26	700	835	0.13	1006	0.20	1172	0.26	1321	0.32	1471	0.40	1612	0.48
	0.31	800	897	0.19	1052	0.24	1201	0.31	1341	0.38	1483	0.44	1616	0.54
	0.38	900	957	0.23	1110	0.30	1239	0.35	1365	0.43	1489	0.49	1619	0.59
	0.45	1000	1018	0.28	1161	0.35	1291	0.43	1406	0.49	1517	0.58	1627	0.65
HAB12	0.20	900	814	0.15	906	0.21	1051	0.32	1313	0.41	1468	0.54	1586	0.63
	0.27	1050	855	0.21	989	0.27	1112	0.34	1391	0.50	1504	0.60	1576	0.68
	0.33	1200	865	0.25	1009	0.34	1174	0.43	1411	0.56	1576	0.68	1679	0.82
	0.39	1350	1040	0.36	1195	0.45	1349	0.58	1463	0.65	1576	0.77	1689	0.89
	0.48	1500	1082	0.44	1241	0.56	1380	0.68	1499	0.78	1617	0.90	1710	1.03
HAB16	0.32	1200	697	0.27	809	0.33	916	0.43	1023	0.52	1113	0.62	1200	0.70
	0.40	1400	764	0.35	864	0.44	962	0.54	1071	0.66	1145	0.74	1225	0.85
	0.50	1600	838	0.49	931	0.61	1020	0.70	1103	0.78	1179	0.92	1274	1.05
	0.61	1800	915	0.64	996	0.77	1077	0.89	1156	0.99	1228	1.11	1290	1.23
	0.74	2000	992	0.87	1061	0.98	1134	1.08	1203	1.23	1280	1.34	1343	1.47
HAB20	0.28	1500	630	0.27	751	0.37	857	0.46	953	0.58	1053	0.68	1148	0.80
	0.36	1750	682	0.37	793	0.47	890	0.60	983	0.69	1074	0.81	1155	0.95
	0.44	2000	736	0.49	839	0.61	934	0.75	1019	0.88	1100	0.98	1176	1.12
	0.54	2250	802	0.68	893	0.79	980	0.94	1058	1.07	1134	1.21	1208	1.34
	0.62	2500	854	0.84	941	0.99	1025	1.14	1103	1.28	1173	1.43	1241	1.60
HAB30	0.26	2250	543	0.40	634	0.52	723	0.65	803	0.79	882	0.94	948	1.08
	0.33	2625	584	0.56	679	0.73	758	0.87	838	1.02	903	1.17	972	1.33
	0.40	3000	641	0.78	724	0.97	794	1.11	876	1.31	935	1.47	998	1.63
	0.50	3375	694	1.05	769	1.25	842	1.44	906	1.61	969	1.80	1030	2.01
	0.59	3750	749	1.37	820	1.59	866	1.80	947	2.00	1009	2.21	1066	2.43
HAB40	0.28	3000	610	0.68	695	0.84	771	0.99	847	1.15	925	1.38	991	1.51
	0.35	3500	680	0.99	750	1.15	821	1.37	886	1.53	954	1.74	1020	1.96
	0.44	4000	743	1.39	811	1.69	877	1.91	938	2.13	999	2.36	1057	2.60
	0.53	4500	812	2.01	879	2.28	939	2.52	993	2.77	1054	3.04	1107	3.19
	0.63	5000	887	2.70	947	2.89	1003	3.20	1056	3.45	1107	3.74	1159	4.05
HAB60	0.41	5000	546	1.00	637	1.22	717	1.46	791	1.74	868	2.03	937	2.36
	0.48	5500	575	1.18	656	1.46	732	1.75	806	2.05	879	2.36	945	2.68
	0.56	6000	606	1.43	684	1.74	755	2.06	824	2.37	892	2.67	952	2.98
	0.64	6500	636	1.72	705	2.03	776	2.36	842	2.68	904	2.98	968	3.44
	0.73	7000	688	2.08	738	2.39	800	2.70	865	3.03	926	3.46	985	3.89
HAB80	0.38	7000	564	1.60	640	1.96	712	2.27	776	2.58	839	2.90	903	3.29
	0.42	7500	587	1.89	660	2.21	728	2.52	790	2.83	850	3.25	910	3.68
	0.48	8000	614	2.19	686	2.54	749	2.89	809	3.27	867	3.68	926	4.21
	0.54	8500	642	2.54	702	2.90	769	3.36	827	3.86	884	4.36	941	4.86
	0.60	9000	672	2.92	733	3.39	791	3.87	846	4.36	902	4.84	959	5.44

Notes:

- Motor HP = 1.15\* x BHP  
\* In the absence of a specified drive loss factor, use 1.15. To select motor size, find the Brake Horsepower (BHP) for the design cfm and External Static Pressure (ESP). Multiply BHP by 1.15 (or specified factor) and round up to next size motor.  
Example: 1600 cfm at 0.75" ESP requires 0.70 BHP. 1.15 x 0.70 = 0.805. Round up to nearest nominal motor size = 1 HP.
- Total Static Pressure (TSP) = Internal Static Pressure + External Static Pressure (ESP)
- ESP = TSP – Internal SP

HAB HORIZONTAL BELT DRIVE

Air Volume Capacity - 4-Pipe, 4-Row Cooling and 2-Row Heating Coils														
Model	ISP	CFM	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
HAB08	0.25	600	838	0.12	1020	0.18	1180	0.25	1347	0.30	1514	0.38	1642	0.47
	0.31	700	888	0.15	1054	0.22	1193	0.27	1352	0.34	1505	0.43	1639	0.49
	0.39	800	951	0.20	1107	0.27	1242	0.34	1377	0.39	1505	0.45	1633	0.55
	0.47	900	1015	0.26	1162	0.31	1300	0.39	1417	0.47	1526	0.54	1641	0.60
	0.56	1000	1082	0.31	1220	0.39	1346	0.47	1456	0.54	1569	0.62	1669	0.71
HAB12	0.28	900	865	0.18	1092	0.26	1318	0.40	1463	0.48	1607	0.59	1710	0.68
	0.36	1050	927	0.24	1133	0.32	1339	0.44	1524	0.58	1658	0.71	1772	0.81
	0.44	1200	1009	0.31	1174	0.39	1339	0.52	1504	0.62	1689	0.80	1833	0.96
	0.51	1350	1092	0.38	1236	0.49	1391	0.60	1524	0.72	1669	0.84	1844	1.05
	0.61	1500	1174	0.50	1318	0.63	1442	0.73	1566	0.84	1689	0.97	1792	1.08
HAB16	0.39	1200	735	0.29	826	0.35	951	0.45	1041	0.55	1129	0.63	1211	0.73
	0.50	1400	797	0.39	899	0.48	990	0.58	1086	0.67	1172	0.78	1255	0.90
	0.62	1600	870	0.53	965	0.63	1050	0.75	1124	0.82	1208	0.96	1295	1.11
	0.76	1800	956	0.71	1034	0.82	1120	0.94	1193	1.06	1258	1.17	1333	1.31
	0.90	2000	1033	0.92	1106	1.04	1185	1.18	1251	1.29	1318	1.42	1382	1.56
HAB20	0.34	1500	683	0.32	797	0.40	902	0.52	998	0.62	1094	0.73	1192	0.87
	0.44	1750	735	0.42	845	0.53	938	0.64	1030	0.75	1120	0.89	1200	1.03
	0.55	2000	794	0.57	899	0.68	985	0.81	1071	0.94	1149	1.07	1227	1.21
	0.66	2250	862	0.75	955	0.88	1037	1.02	1114	1.16	1194	1.33	1265	1.46
	0.68	2500	916	0.93	1011	1.09	1085	1.24	1162	1.40	1233	1.55	1298	1.69
HAB30	0.32	2250	564	0.43	659	0.56	746	0.70	823	0.83	899	0.97	966	1.12
	0.41	2625	619	0.62	707	0.76	784	0.92	857	1.06	923	1.21	993	1.39
	0.51	3000	671	0.84	753	1.02	830	1.19	898	1.37	959	1.53	1021	1.70
	0.62	3375	735	1.15	805	1.33	874	1.52	935	1.71	999	1.91	1056	2.09
	0.73	3750	7790	1.49	859	1.70	921	1.90	981	2.10	1039	2.31	1097	2.54
HAB40	0.33	3000	646	0.72	722	0.88	801	1.05	871	1.23	947	1.41	1008	1.59
	0.42	3500	711	1.07	789	1.32	849	1.50	916	1.71	980	1.92	1045	2.09
	0.53	4000	783	1.57	853	1.80	909	1.97	968	2.15	1032	2.41	1088	2.63
	0.65	4500	859	2.12	918	2.36	974	2.59	1030	2.82	1090	3.11	1141	3.35
	0.78	5000	927	2.76	986	3.08	1039	3.33	1089	3.59	1142	3.84	1193	4.09
HAB60	0.50	5000	561	1.07	666	1.31	744	1.56	818	1.84	896	2.14	960	2.47
	0.58	5500	609	1.29	688	1.57	762	1.87	835	2.18	907	2.49	970	2.80
	0.68	6000	645	1.57	719	1.89	788	2.21	857	2.51	922	2.82	985	3.17
	0.78	6500	679	1.90	747	2.23	813	2.53	878	2.85	941	3.24	1002	3.69
	0.89	7000	715	2.27	779	2.59	842	2.90	904	3.31	964	3.74	1021	4.19
HAB80	0.47	7000	589	1.71	666	2.06	735	2.38	798	2.68	862	3.00	924	3.44
	0.53	7500	616	2.04	691	2.37	754	2.69	815	3.00	876	3.44	936	3.85
	0.59	8000	644	2.36	712	2.70	772	3.03	833	3.45	893	3.87	951	4.39
	0.68	8500	677	2.69	742	3.11	800	3.52	858	3.87	917	4.54	976	5.16
	0.76	9000	711	3.22	768	3.71	825	4.19	881	4.68	938	5.21	993	5.85

Notes:

- Motor HP = 1.15 \* x BHP  
\* In the absence of a specified drive loss factor, use 1.15. To select motor size, find the Brake Horsepower (BHP) for the design cfm and External Static Pressure (ESP). Multiply BHP by 1.15 (or specified factor) and round up to next size motor.  
Example: 1600 cfm at 0.75" ESP requires 0.70 BHP. 1.15 x 0.70 = 0.805. Round up to nearest nominal motor size = 1 HP.
- Total Static Pressure (TSP) = Internal Static Pressure + External Static Pressure (ESP)
- ESP = TSP – Internal SP

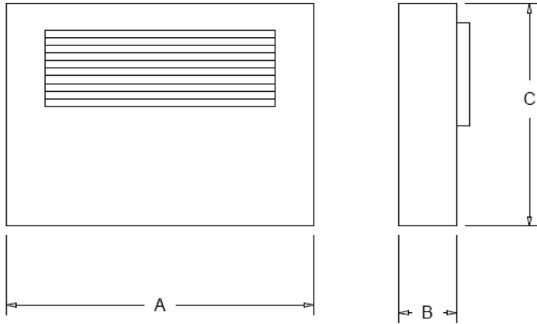
HAB HORIZONTAL BELT DRIVE

Discharge Plenum Static Loss				
Model	cfm	Deflection (Degrees)	Throw (Feet)	Static Pressure (I.W.G.)
HAB08	800	0	50	0.02
		45	37	0.04
HAB12	1200	0	69	0.05
		45	52	0.09
HAB16	1600	0	79	0.03
		45	59	0.05
HAB20	2000	0	89	0.05
		45	66	0.09
HAB30	3000	0	124	0.05
		45	93	0.09
HAB40	4000	0	103	0.10
		45	77	0.16
HAB60	6000	0	124	0.09
		45	93	0.14
HAB80	8000	0	92	0.06
		45	69	0.10

Mixing Box Static Pressure Drop (Inches W.G.)						
Model	cfm Range	Static Pressure		Model	cfm Range	Static Pressure
HAB08	600	0.01		HAB30	2250	0.03
	800	0.02			3000	0.05
	1000	0.03			3750	0.08
HAB12	900	0.02		HAB40	3000	0.05
	1200	0.04			4000	0.09
	1500	0.07			5000	0.14
HAB16	1200	0.02		HAB60	5000	0.09
	1600	0.03			6000	0.12
	2000	0.04			7000	0.17
HAB20	1500	0.02		HAB80	7000	0.13
	2000	0.04			8000	0.17
	2500	0.07			9000	0.21

HAB HORIZONTAL BELT DRIVE

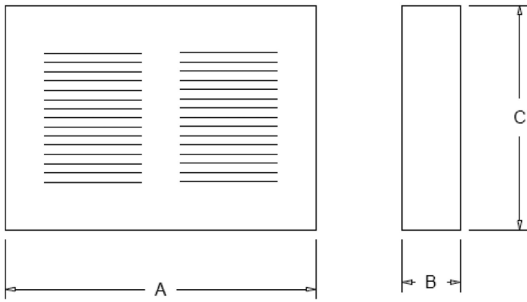
Supply Air Plenum with Adjustable 4-Way Grille



Supply Air Plenum				
Model	A	B	C	Grille
HAB 08/12	39.0	6.0	20.0	12 x 20 4-W
HAB 16/20	48.0		24.5	16 x 24 4-W
HAB 30/40	57.0		36.6	18 x 48 4-W
HAB 60/80	72.0		47.0	16 x 24 4-W

All dimensions shown are approximate and rounded, subject to change without notice

Return Air Plenum units with Fixed Return Grille

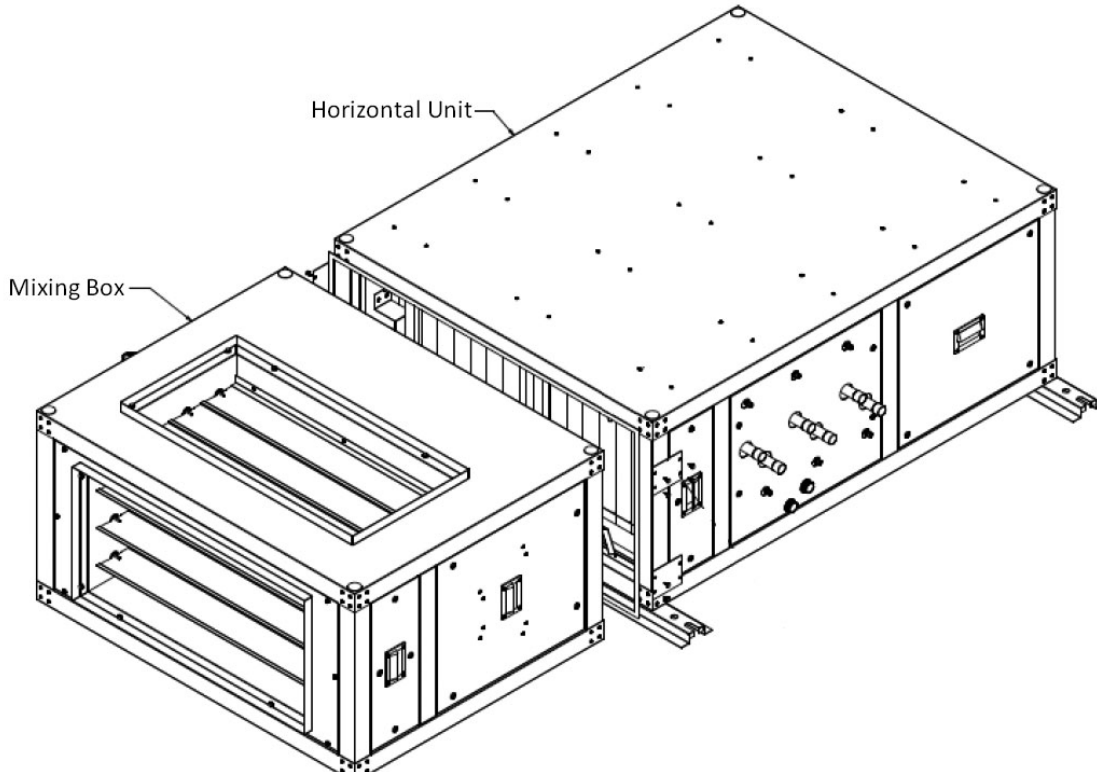


Return Air Plenum			
Model	A	B	C
HAB 08/12	39.0	2.0	20.0
HAB 16/20	48.0		24.5
HAB 30/40	57.0		36.6
HAB 60/80	72.0		47.0

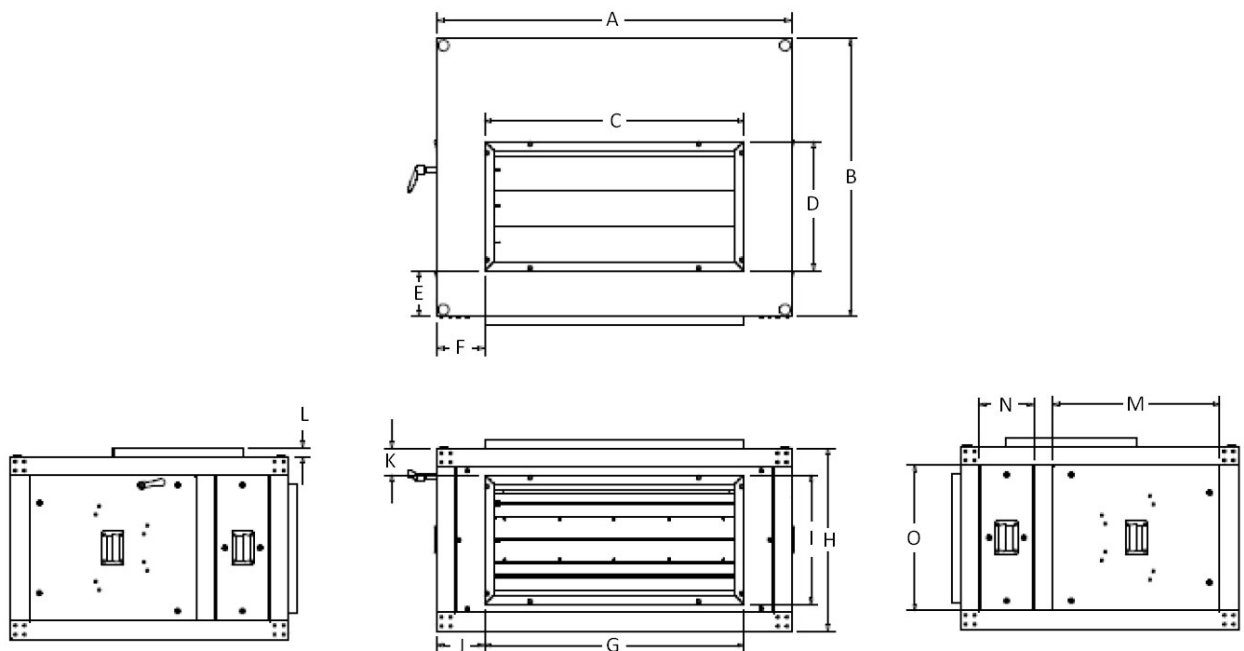
All dimensions shown are approximate and rounded, subject to change without notice

HAB HORIZONTAL BELT DRIVE

Mixing Box All Sizes



Mixing Box All Sizes



OPTIONAL ACCESSORIES

HAB HORIZONTAL BELT DRIVE MIXING BOX DIMENSIONS

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
HAB 08	39.0	30.5	28.5	14.25	5.0	5.25	28.5	20.0	14.25	5.25	2.9	1.0	18.4	6.0	16.0
HAB 12	39.0	30.5	28.5	14.25	5.0	5.25	28.5	20.0	14.25	5.25	2.9	1.0	18.4	6.0	16.0
HAB 16	48.0	30.0	36.5	17.25	4.2	5.75	36.5	24.5	17.25	5.75	3.7	1.0	16.75	7.7	20.5
HAB 20	48.0	30.0	36.5	17.25	4.2	5.75	36.5	24.5	17.25	5.75	3.7	1.0	16.75	7.7	20.5
HAB 30	63.0	41.5	36.5	22.25	4.5	10.25	57.0	36.7	22.25	10.25	7.2	1.0	23.6	11.8	32.7
HAB 40	63.0	41.5	36.5	22.25	4.5	10.25	57.0	36.7	22.25	10.25	7.2	1.0	23.6	11.8	32.7
HAB 60	72.0	41.5	51.5	24.5	4.5	10.25	51.5	47.0	32.6	10.25	7.2	1.0	23.6	11.8	42.0
HAB 80	72.0	41.5	51.5	24.5	4.5	10.25	51.5	47.0	32.6	10.25	7.2	1.0	23.6	11.8	42.0



## Vertical Air Handler Belt Drive Series

air handlers

### VAB

- ETL-listed. Constructed in compliance with ANSI/UL 1995 Standard
- High efficiency coil – 4-row seamless  $\frac{3}{8}$ " OD (VAB 08 & 12),  $\frac{1}{2}$ " OD (VAB 16 & 20), and  $\frac{5}{8}$ " OD (VAB 30 & 40) copper tubes with 10 aluminum fins per inch for 2-pipe applications
- Pipe entry is left hand as you are looking at the front of the unit
- Manual air vent
- Permanently lubricated ball bearing blowers. Blower wheels are belt-drive, double-inlet, forward-curved and factory balanced
- Condensate pan fabricated from 304 stainless steel
- Cabinet fabricated of heavy gauge galvanealed steel, specially coated on the outside with powder-coated enamel paint and lined with  $\frac{3}{4}$ ", dual density, 1.5-pound fiberglass insulation
- Large, easy to remove access panels are located on the front of each unit
- Filters are 2" fiberglass disposable with front access



VAB



condos

universities

hospitals

hotels / motels



See website for Specifications

### AVAILABLE MODELS:

VAB08 / 800 cfm  
VAB12 / 1200 cfm  
VAB16 / 1600 cfm  
VAB20 / 2000 cfm  
VAB30 / 3000 cfm  
VAB40 / 4000 cfm

### OVERVIEW

Titus vertical blower coil units provide flexibility of design due to belt-driven fans, multi-row coil capacity, and available factory options. These products are designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes.

### OPTIONAL FEATURES INCLUDE

- High efficiency coils –Hot water 1- (VAB 08, 12, 16, & 20 only) or 2-row seamless  $\frac{3}{8}$ " OD (VAB 08 & 12),  $\frac{1}{2}$ " OD (VAB 16 & 20), and  $\frac{5}{8}$ " OD (VAB 30 & 40) copper tubes with 10 aluminum fins per inch installed in re-heat or pre-heat configurations
- Motors - Standard ETL-listed motors consist of Totally Enclosed, Fan Cooled (TEFC) and Open, Drip-Proof (ODP) casing, shaded-pole 115/60/1 in  $\frac{1}{4}$  HP through 2 HP; TEFC and ODP 115/208-230/1 (wired for 115V) in  $\frac{1}{4}$  to 2 HP; TEFC and ODP 208-230/460/60/3 in  $\frac{1}{4}$  HP to 5 HP; TEFC and ODP 575/60/3 in  $\frac{1}{4}$  HP to 5 HP; other voltages, configurations, and horsepower options available, but not ETL-listed. All motor sheaves are variable-pitch and single-groove. Blower pulleys are split-tapered bushing.
- Discharge or return plenum with front or rear opening (grilles field supplied and installed)

- Pleated filter, 2"
- Cabinet liner in closed cell insulation
- Electric heat



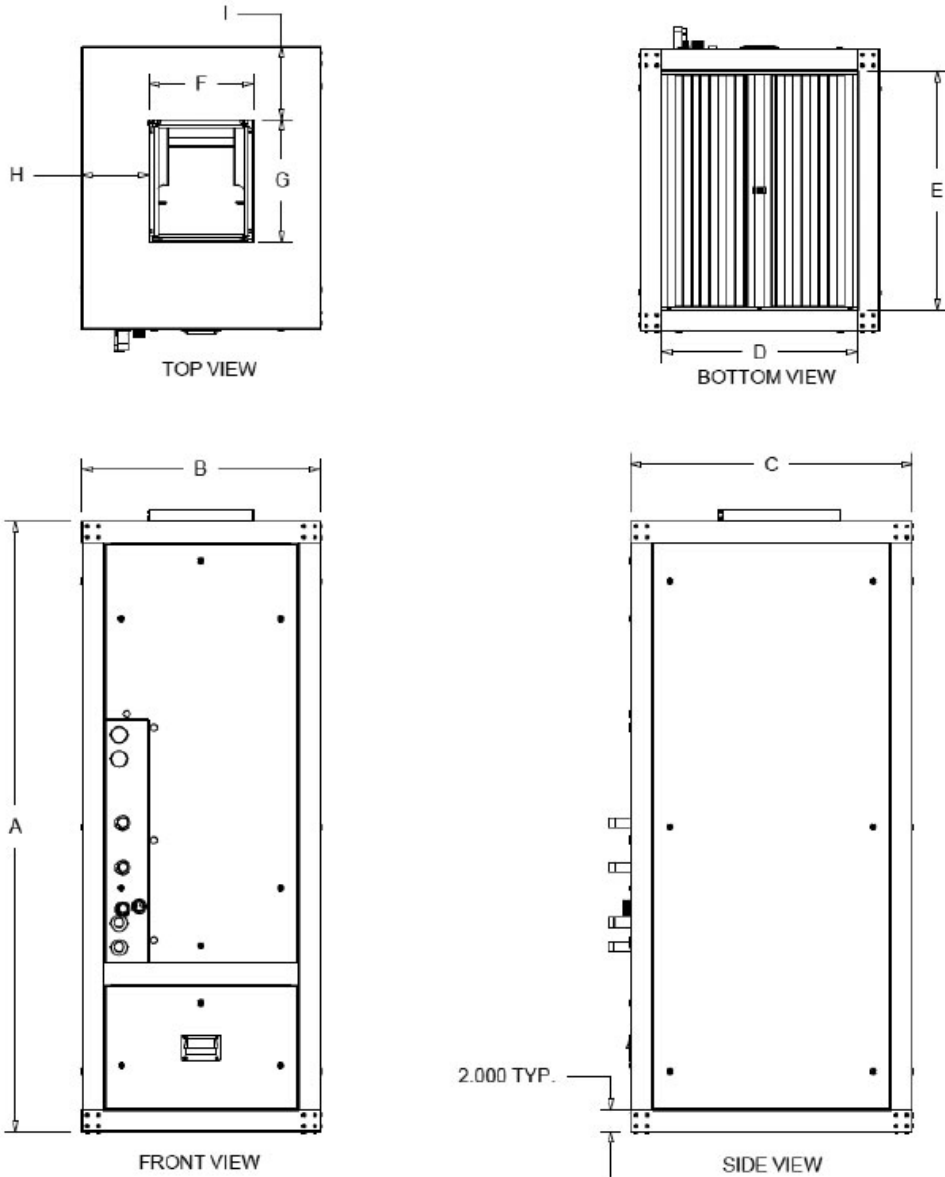
VAB

W17

DIMENSIONS

VAB VERTICAL BELT DRIVE DIMENSIONS

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Model	A	B	C	D	E	F	G	H	I
VAB 08	56.0	22.0	26.0	18.0	22.0	9.1	11.1	5.9	7.9
VAB 12	56.0	22.0	26.0	18.0	22.0	12.7	11.1	5.9	7.9
VAB 16	64.0	30.0	26.0	26.0	22.0	14.0	12.3	9.5	7.5
VAB 20	64.0	30.0	26.0	26.0	22.0	16.5	14.5	7.5	5.5
VAB 30	75.0	52.0	30.0	48.0	26.0	19.5	16.8	18.0	7.0
VAB 40	75.0	52.0	30.0	48.0	26.0	19.5	16.8	18.0	7.0

DIMENSIONS

VAB VERTICAL BELT DRIVE DIMENSIONS

VAB Coil Specifications					
Model	Fin Block H x W	Coil Type	Face Area	Rows	Water Conn. Header OD
8	14 X 20	HW	1.94	1	5/8"
	14 X 20	HW	1.94	2	
	(2) 12 X 16	CW	2.66	4	7/8"
12	14 X 20	HW	1.94	1	7/8"
	14 X 20	HW	1.94	2	
	(2) 12 X 16	CW	3	4	
16	18 X 20	HW	2.5	1	7/8"
	18 X 20	HW	2.5	2	
	(2) 15 X 18	CW	3.75	4	
20	22.5 X 20	HW	3.47	1	1 1/8"
	22.5 X 20	HW	3.47	2	7/8"
	(2) 15 X 23	CW	4.79	4	
30	39 X 22	HW	5.95	2	1 3/8"
	(2) 15 X 33	CW	6.88	4	1 1/8"
40	43.5 X 22	HW	6.65	2	1 3/8"
	(2) 15 X 45	CW	9.38	4	1 1/8"

Note: Standard filter rack only accepts 2" TA or Pleated filters. Double wall filter rack accepts 2" or 4" TA or pleated filters.

Filter	Unit Model					Filter Quantity					
						8	12	16	20	30	40
	12" X 24" X 2/4"	2	2	3	3						
20" X 25" X 2/4"					4	4					
Filter Total						2	2	2	3	4	4

VAB VERTICAL BELT DRIVE

Standard Ratings - Water Coil															
Model	2- or 4- Pipe Cooling									2-Pipe Heating					
	EWT	gpm	PD Ft.	cfm	80°F DB / 67°F WB					gpm	PD Ft.	cfm	60°F EAT / 180°F EWT		
					TTL mbh	SENS mbh	LAT DB	LAT WB	°F				TTL mbh	LAT	LWT
VAB08	45	4.8	4.1	600	21.2	15.2	56.6	55.7	53.9	4.8	3.6	600	60.5	153.3	154.2
				800	23.6	18.0	59.2	57.7	54.9			800	72.0	143.1	149.4
				1000	25.6	20.4	61.1	59.1	55.7			1000	81.0	135	145.5
VAB12	45	7.2	5.8	900	31.8	22.8	56.5	55.7	53.9	7.2	5.2	900	90.0	153.2	154.2
				1200	35.8	27.2	59.0	57.7	55.0			1200	108	143.5	149.2
				1500	38.5	31.0	60.9	59.0	55.8			1500	122	135.5	145.2
VAB16	45	9.6	6.5	1200	43.0	30.6	56.4	55.5	54.0	9.6	5.8	1200	121	153.5	154.2
				1600	48.5	36.8	58.8	57.5	55.1			1600	145	143.8	149.1
				2000	52.5	41.5	60.8	58.9	56.0			2000	164	135.8	145.1
VAB20	45	12	6.1	1500	54.5	38.5	56.1	55.3	54.1	12	5.3	1500	153	154.3	153.9
				2000	61.5	46.0	58.6	57.3	55.3			2000	183	144.7	148.8
				2500	66.0	52.5	60.5	58.7	56.2			2500	207	136.7	144.7
VAB30	45	18	8.3	2250	82.0	58.0	56.2	55.3	54.1	18	7.2	2250	228	153.7	154.1
				3000	92.0	69.0	58.7	57.3	55.3			3000	273	144.1	149
				3750	100	78.0	60.9	58.7	56.1			3750	309	136.2	144.9
VAB40	45	24	7.6	3000	103	74.0	57.2	56.0	53.6	24	6.6	3000	290	149.3	155.3
				4000	117	88.0	59.5	57.9	54.8			4000	348	140.5	150.3
				5000	127	101	61.3	59.1	55.6			5000	396	133.2	146.3

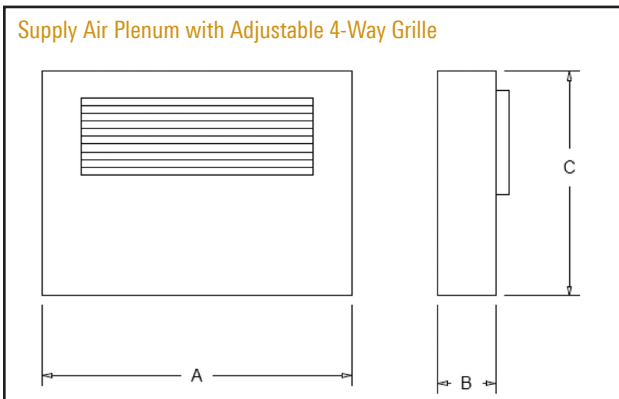
Note: Standard ratings are for sea level altitude, standard 4-row coils, nominal air volumes and ordinary water. For other conditions and/or other coolants, consult Titus

Standard Ratings - 2-Row Heating Coil													
Model	gpm	PD Ft.	cfm	60°F EAT / 180°F EWT			Model	gpm	PD Ft.	cfm	60°F EAT / 180°F EWT		
				TTL mbh	LAT	LWT					TTL mbh	LAT	LWT
VAB08	3	3.4	600	38.5	119.3	153.8	VAB20	12	2	1500	83	111.2	165.8
			800	44.0	111.2	149.8				2000	95	103.9	163.8
			1000	48.5	105.2	146.7				2500	104	98.7	162.1
VAB12	4	6	900	49.0	110.5	154.9	VAB30	18	3.8	2250	137	116.3	164.4
			1200	56.0	103.1	151.4				3000	158	108.7	162.0
			1500	61.0	97.8	148.6				3750	175	103.2	160.1
VAB16	6	2.5	1200	62.0	108.0	158.7	VAB40	20	5.1	3000	184	116.9	161.1
			1600	70.0	100.9	155.9				4000	213	109.3	158.2
			2000	77.0	95.8	153.6				5000	236	103.7	155.8



VAB VERTICAL BELT DRIVE

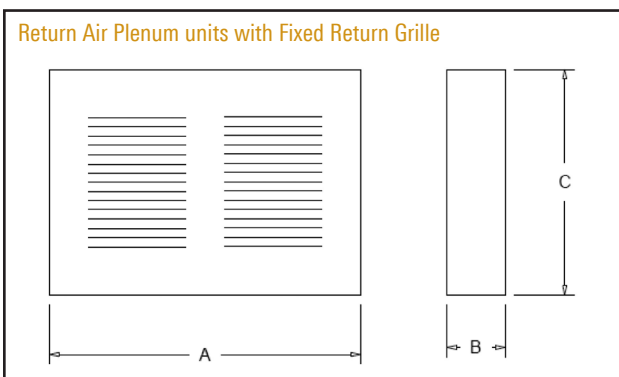
Supply Air Plenum with Adjustable 4-Way Grille



Supply Air Plenum				
Model	A	B	C	Grille
VAB 08/12	22.0	26.0	20.0	12 x 20 4-W
VAB 16/20	30.0	26.0	20.0	16 x 24 4-W
VAB 30/40	52.0	30.0	20.0	18 x 48 4-W

All dimensions shown are approximate and rounded, subject to change without notice

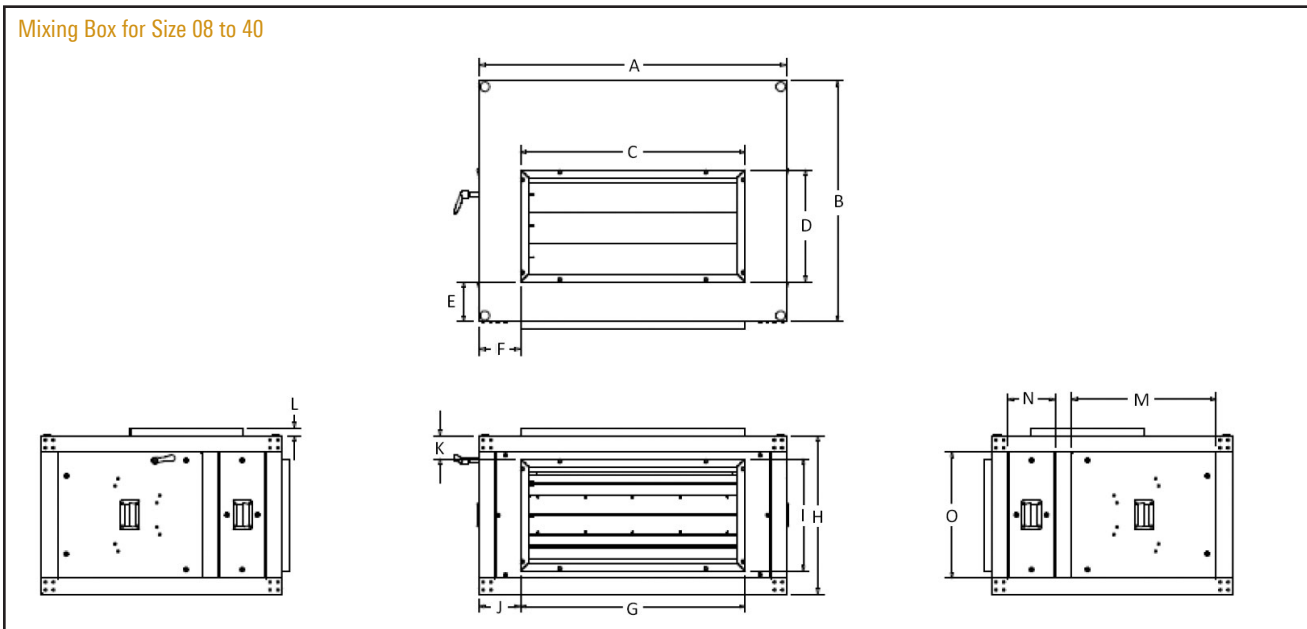
Return Air Plenum units with Fixed Return Grille



Return Air Plenum			
Model	A	B	C
VAB 08/12	22.0	26.0	20.0
VAB 16/20	30.0	26.0	20.0
VAB 30/40	52.0	30.0	20.0

All dimensions shown are approximate and rounded, subject to change without notice

Mixing Box for Size 08 to 40



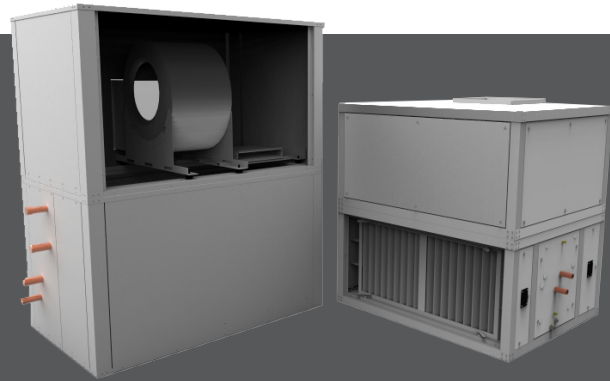
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
VAB 08	22.0	26.0	16.5	15.0	5.0	2.3	19.5	25.0	14.5	3.3	5.3	1.0	12.5	6.0	20.0
VAB 12	22.0	26.0	16.5	15.0	5.0	2.3	19.5	25.0	14.5	3.3	5.3	1.0	12.5	6.0	20.0
VAB 16	30.0	34.0	22.5	23.0	5.0	3.8	27.5	30.0	17.5	3.3	6.3	1.0	12.5	6.0	25.0
VAB 20	30.0	34.0	22.5	23.0	5.0	3.8	27.5	30.0	17.5	3.3	6.3	1.0	12.5	6.0	25.0
VAB 30	52.0	52.0	39.5	45.0	5.0	6.3	45.5	35.0	22.5	3.3	6.3	1.0	16.5	6.0	30.0
VAB 40	52.0	52.0	39.5	45.0	5.0	6.3	45.5	35.0	22.5	3.3	6.3	1.0	16.5	6.0	30.0

## Modular Air Handler Belt Drive Series

air handlers

### MAB

- ETL-listed. Constructed in compliance with ANSI/UL 1995 Standard
- High efficiency coil – 4-row seamless  $\frac{3}{8}$ " OD (MAB 08 & 12),  $\frac{1}{2}$ " OD (MAB 16 & 20), and  $\frac{5}{8}$ " OD (MAB 30 thru 80) copper tubes with 10 aluminum fins per inch for 2-pipe applications
- Pipe entry is right hand on the side of the cabinet as you are looking at the filter (in the direction of the airflow)
- Manual air vent
- Permanently lubricated ball bearing blowers. Blower wheels are belt-drive, double-inlet, forward-curved, and factory balanced
- Condensate pan fabricated of heavy gauge 304 stainless steel with three-dimensional slope for positive drainage
- Cabinet fabricated of heavy gauge galvanealed steel, specially coated on the outside with powder-coated enamel paint and lined with  $\frac{3}{4}$ ", dual density, 1.5-pound fiberglass insulation with antimicrobial coating on models MAB08 and 12. Models MAB08 and 12 are of one-piece construction, vertical fan discharge only. Models MAB16, 20, 30, 40, 60 and 80 are of two-piece construction with each piece individually packaged for shipment; optional fan discharge arrangements are achieved by field repositioning of the access panels.
- Filters are 2" disposable with access on both sides of the cabinet



MAB



k-12 education



universities



hospitals



hotels / motels



See website for Specifications

### AVAILABLE MODELS:

MAB08 / 800 cfm  
MAB12 / 1200 cfm  
MAB16 / 1600 cfm  
MAB20 / 2000 cfm  
MAB30 / 3000 cfm  
MAB40 / 4000 cfm  
MAB60 / 6000 cfm  
MAB80 / 8000 cfm

### OVERVIEW

Titus modular blower coil units provide flexibility of design due to belt driven fans, multi-row coil capability, and available factory options. These products are designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes.

### OPTIONAL FEATURES INCLUDE

- High efficiency coil – 6-row seamless  $\frac{3}{8}$ " OD (MAB08 & 12),  $\frac{1}{2}$ " OD (MAB16 & 20), and  $\frac{5}{8}$ " OD (MAB30 thru 80) copper tubes with 10 aluminum fins per inch for 2-pipe applications  
High efficiency coils – Chilled water 4- or 6-row seamless  $\frac{3}{8}$ " OD (MAB08 & 12),  $\frac{1}{2}$ " OD (MAB16 & 20), and  $\frac{5}{8}$ " OD (MAB30 thru 80) copper tubes with 10 aluminum fins per inch. Hot water 1- (MAB08, 12, 16, & 20 only) or 2-row seamless  $\frac{3}{8}$ " OD (MAB08 & 12),  $\frac{1}{2}$ " OD (MAB16 & 20), and  $\frac{5}{8}$ " OD (MAB30 thru 80) copper tubes with 10 aluminum fins per inch.
- Left hand pipe entry as you are looking at the filter (in the direction of the airflow)

- Motors - Standard ETL-listed motors consist of Totally Enclosed, Fan Cooled (TEFC) and Open, Drip-Proof (ODP) casing, shaded-pole 115/60/1 in  $\frac{1}{4}$  HP through 2 HP; TEFC and ODP 115/208-230/1 (wired for 115V) in  $\frac{1}{4}$  to 2 HP; TEFC and ODP 208-230/460/60/3 in  $\frac{1}{4}$  HP to 10 HP; TEFC and ODP 575/60/3 in  $\frac{1}{4}$  HP to 10 HP; other voltages, configurations, and horsepower options available, but not ETL-listed. All motor sheaves are variable-pitch and single-groove. Blower pulleys are split-tapered bushing.
- Mixing boxes, field install
- Controls for mixing boxes, field install and wire, 3-position and fully modulating packages  
**Note: Controls such as contactors, starters, and/or transformers/fan relays are supplied by others**
- Discharge plenum with adjustable double-deflection grille, (cannot be used with electric heat)
- Return air grille models
- Pleated filter, 2"
- Six" leg kit
- Cabinet liner in one" closed cell or one" IAQ fiberglass (models MAB16, 20, 30, 40, 60 and 80) insulation. Electric heat (models MAB16, 20, 30 and 40).
- Downflow or horizontal arrangement

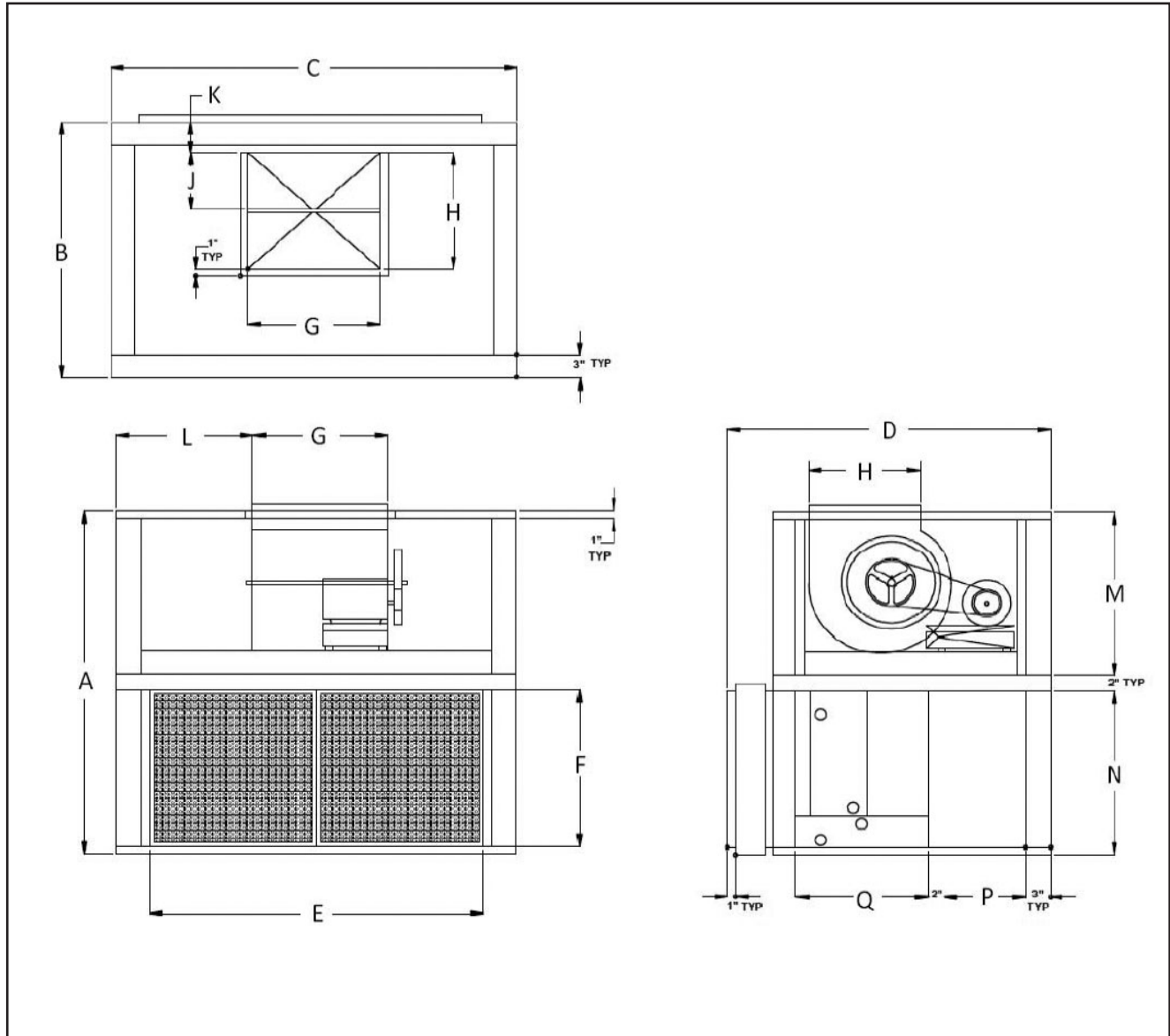


MAB

DIMENSIONS

MAB MODULAR BELT DRIVE DIMENSIONS

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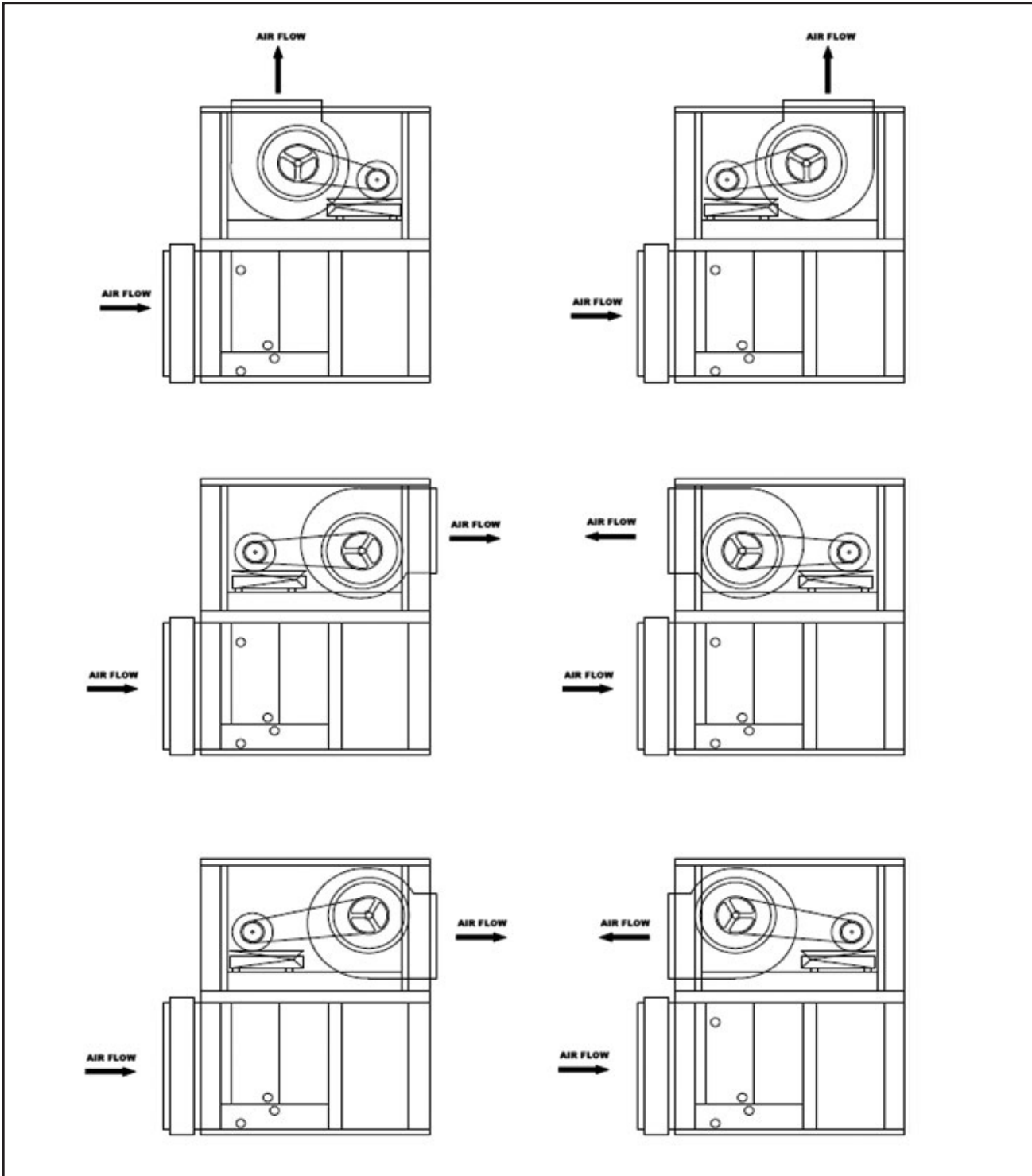


Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
MAB 08	36.0	28.0	40.0	33.5	29.8	13.8	9.1	11.1	6.8	4.5	15.4	17.0	17.0	4.0	16.0
MAB 12	36.0	28.0	40.0	33.5	29.8	13.8	12.7	11.1	6.8	4.5	13.7	17.0	17.0	4.0	16.0
MAB 16	44.0	34.0	49.0	39.5	38.8	17.8	14.0	12.3	7.5	4.5	17.5	21.0	21.0	10.0	16.0
MAB 20	44.0	34.0	49.0	39.5	38.8	17.8	16.5	14.5	7.8	4.5	16.3	21.0	21.0	10.0	16.0
MAB 30	68.0	34.0	57.0	39.5	44.8	29.8	19.5	16.8	10.1	4.5	18.8	33.0	33.0	10.0	16.0
MAB 40	68.0	34.0	57.0	39.5	44.8	29.8	19.5	16.8	10.1	4.5	18.8	33.0	33.0	10.0	16.0
MAB 60	94.0	34.0	72.0	39.5	59.8	42.8	22.8	19.8	12.2	4.5	24.6	46.0	46.0	10.0	16.0
MAB 80	94.0	34.0	72.0	39.5	59.8	42.8	22.8	19.8	12.2	4.5	24.6	46.0	46.0	10.0	16.0

DIMENSIONS



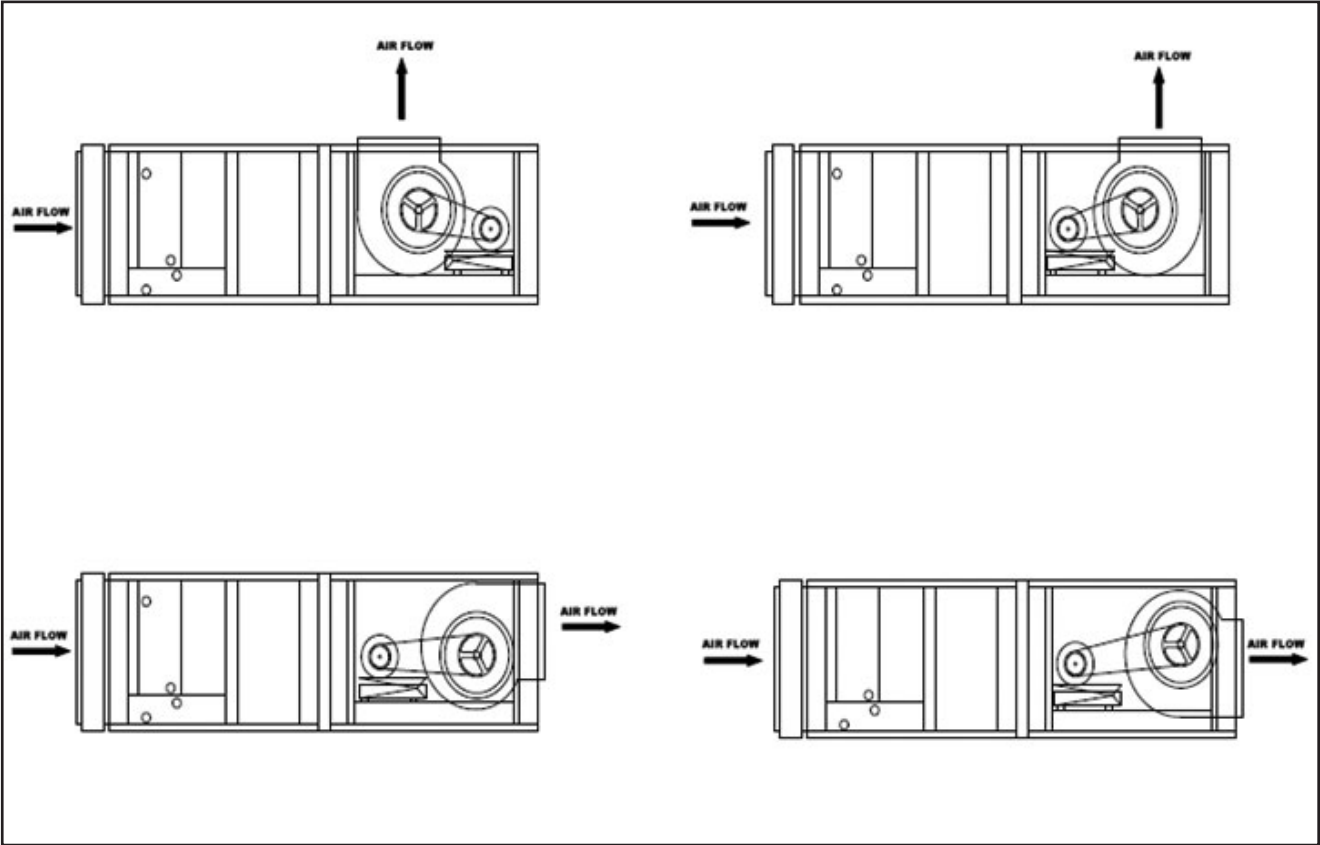
MAB MODULAR BELT DRIVE DIMENSIONS



MAB MODULAR BELT DRIVE DIMENSIONS

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W



DIMENSIONS

MAB MODULAR BELT DRIVE

Standard Ratings - Water Coil															
Model	2- or 4-Pipe Cooling									2-Pipe Heating					
	EWT	gpm	PD Ft.	cfm	80°F DB / 67°F WB					gpm	PD Ft.	cfm	60°F EAT / 180°F EWT		
					TTL mbh	SENS mbh	LAT DB	LAT WB	°F				TTL mbh	LAT	LWT
MAB08	45	6	5.7	600	20.4	14.5	57.6	56.1	51.9	6	5.1	600	57	147.9	160.5
				800	23	17.2	60.1	58	52.7			800	68	138.6	156.8
				1000	25	19.6	61.9	59.3	53.4			1000	77	131.2	153.8
MAB12	45	8	6.7	900	30.6	21.8	57.6	56.2	52.7	8	5.9	900	85	148	158.1
				1200	34.4	25.8	60.1	58	53.6			1200	102	138.6	153.9
				1500	37.2	29.4	61.9	59.3	54.3			1500	115	131.1	150.6
MAB16	45	10	6.4	1200	44	31.2	56	55.2	53.8	10	5.5	1200	123	154.9	154.8
				1600	50	37.6	58.3	57.2	55			1600	148	145.9	149.6
				2000	54.5	43	60.1	58.5	55.9			2000	170	138.5	145.3
MAB20	45	13	4.9	1500	55	39	55.9	55.2	53.5	13	4.4	1500	154	155.1	155.7
				2000	62.5	47	58.3	57.1	54.6			2000	186	146.1	150.7
				2500	68	53.5	60.1	58.5	55.6			2500	213	138.7	146.5
MAB30	45	18	6.5	2500	86	62.5	56.8	56	54.6	18	5.8	2250	232	155.4	153.6
				3000	92	70	58.3	57.3	55.3			3000	280	146.4	148.2
				3750	101	81	60	58.6	56.3			3750	319	138.7	143.8
MAB40	45	24	7.1	3000	98	71	58	56.6	53.2	24	6.3	3000	281	146.5	156.1
				4000	110	85	60.2	58.4	54.2			4000	335	137.5	151.4
				5000	120	97	62	59.6	55			5000	380	130.3	147.6
MAB60	45	32	6.5	5000	152	113	59	57.5	54.5	32	5.5	5000	447	142.7	151.5
				6000	163	126	60.5	58.6	55.2			6000	499	136.8	148.1
				7000	173	139	61.6	59.4	55.8			7000	544	131.8	145.3
MAB80	45	44	6.6	7000	213	160	58.9	57.4	54.7	44	5.6	7000	628	142.8	150.9
				8000	225	173	60	58.2	55.3			8000	680	138.5	148.4
				9000	235	186	60.9	58.9	55.7			9000	728	134.7	146.2

Note: Standard ratings are for sea level altitude, standard 4-row coils, nominal air volumes and ordinary water. For other conditions and/or other coolants, consult Titus.

Standard Ratings - 2-Row Heating													
Model	gpm	PD Ft.	cfm	TTL mbh	LAT F	LWT F	Model	gpm	PD Ft.	cfm	TTL mbh	LAT F	LWT F
MAB08	4	5.2	600	36.2	116	161.4	MAB30	12.8	5.7	2250	146	119.9	156.7
			800	41.5	108.4	158.6				3000	168	112	153.1
			1000	46	102.8	156.3				3750	187	106.1	150.1
MAB12	6	4.1	900	55	116.8	161.1	MAB40	16.8	5.8	3000	186	117.4	157.3
			1200	63.5	109.1	158.3				4000	215	109.6	153.9
			1500	70	103.5	155.9				5000	238	104	151.1
MAB16	8	5.3	1200	82	123.3	159	MAB60	19.2	4.3	5000	283	112.2	149.9
			1600	95	115	155.6				6000	307	107.3	147.3
			2000	106	109.1	152.9				7000	328	103.4	145
MAB20	12	6.9	1500	105	124.6	162.1	MAB80	22.4	2.6	7000	384	110.7	145
			2000	122	116.5	159.2				8000	408	107.1	142.8
			2500	136	110.5	156.7				9000	429	104	141

Note: Heating capacities are based on 60°F EAT and 180°F EWT. Units not recommended for heating applications when the LAT exceeds 130°F.

MAB MODULAR BELT DRIVE

Air Volume Capacity - 2-Pipe, 4-Row Coil														
Model	ISP	CFM	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
MAB08	0.20	600	669	0.08	823	0.11	956	0.15	-	-	-	-	-	-
	0.26	700	720	0.11	862	0.15	988	0.19	1101	0.24	-	-	-	-
	0.31	800	764	0.14	897	0.19	1017	0.24	1125	0.29	1225	0.34	1319	0.39
	0.38	900	818	0.19	943	0.24	1055	0.29	1159	0.34	1255	0.40	1346	0.46
	0.45	1000	872	0.24	988	0.29	1095	0.35	1194	0.41	1287	0.47	1374	0.53
MAB12	0.20	900	719	0.15	855	0.20	975	0.25	1085	0.30	1187	0.36	1281	0.42
	0.27	1050	793	0.22	915	0.28	1026	0.33	1129	0.39	1225	0.45	1315	0.52
	0.33	1200	861	0.30	972	0.37	1075	0.43	1172	0.50	1262	0.57	1348	0.63
	0.39	1350	929	0.41	1031	0.48	1127	0.55	1218	0.62	1304	0.70	1386	0.77
	0.48	1500	1010	0.54	1103	0.62	1192	0.70	1277	0.78	1358	0.86	1435	0.94
MAB16	0.35	1200	775	0.20	910	0.30	1045	0.35	1160	0.45	1225	0.55	1325	0.65
	0.38	1400	815	0.30	940	0.40	1060	0.46	1175	0.55	1240	0.65	1335	0.75
	0.41	1600	855	0.40	975	0.50	1080	0.60	1195	0.70	1260	0.80	1350	0.95
	0.45	1800	905	0.50	1010	0.65	1115	0.75	1220	0.85	1290	0.90	1370	1.05
	0.49	2000	970	0.65	1060	0.80	1155	0.90	1250	1.00	1320	1.10	1400	1.20
MAB20	0.35	1500	815	0.35	930	0.40	1025	0.50	1155	0.60	1240	0.70	1340	0.80
	0.38	1750	860	0.45	975	0.55	1065	0.65	1175	0.75	1260	0.85	1365	0.95
	0.41	2000	925	0.65	1025	0.70	1115	0.80	1210	0.90	1285	1.05	1390	1.15
	0.45	2250	1005	0.80	1090	0.90	1170	1.05	1250	1.15	1335	1.25	1420	1.35
	0.49	2500	1080	1.05	1160	1.15	1225	1.25	1310	1.35	1410	1.45	1450	1.60
MAB30	0.18	2250	448	0.33	563	0.46	-	-	-	-	-	-	-	-
	0.24	2625	487	0.42	585	0.56	681	0.70	-	-	-	-	-	-
	0.30	3000	525	0.54	611	0.69	697	0.84	771	1.01	-	-	-	-
	0.37	3375	559	0.69	636	0.84	717	1.00	788	1.17	858	1.33	-	-
	0.45	3750	597	0.87	671	1.04	741	1.21	808	1.39	876	1.59	936	1.80
MAB40	0.30	3000	521	0.56	607	0.78	693	0.84	769	1.00	843	1.16	917	1.31
	0.39	3500	569	0.74	646	0.90	722	1.09	786	1.30	852	1.51	928	1.60
	0.49	4000	619	1.00	692	1.18	755	1.36	820	1.55	885	1.77	950	1.98
	0.61	4500	674	1.39	740	1.55	802	1.77	850	1.98	921	2.42	979	2.64
	0.75	5000	733	1.78	791	2.00	849	2.22	907	2.51	967	2.77	1017	3.00
MAB60	0.33	5000	514	0.88	613	1.07	689	1.50	766	1.82	842	1.93	918	2.26
	0.40	5500	546	1.08	629	1.36	711	1.64	782	1.94	854	2.26	923	2.58
	0.45	6000	567	1.28	648	1.60	725	1.91	793	2.22	885	2.52	928	2.82
	0.52	6500	593	1.58	671	1.89	746	2.22	811	2.53	921	2.84	939	3.22
	0.60	7000	625	1.86	705	2.24	766	2.55	833	2.86	967	3.26	955	3.00
MAB80	0.38	7000	564	1.60	640	1.96	712	2.27	776	2.58	839	2.90	903	3.29
	0.42	7500	587	1.89	660	2.21	728	2.52	790	2.83	850	3.25	910	3.68
	0.48	8000	614	2.19	686	2.54	749	2.89	809	3.27	867	3.68	926	4.21
	0.54	8500	642	2.54	702	2.90	769	3.36	827	3.86	884	4.36	941	4.86
	0.60	9000	672	2.92	733	3.39	791	3.87	846	4.36	902	4.84	959	5.44

Notes:

- Motor HP = 1.15\* x BHP  
\* In the absence of a specified drive loss factor, use 1.15. To select motor size, find the Brake Horsepower (BHP) for the design cfm and External Static Pressure (ESP). Multiply BHP by 1.15 (or specified factor) and round up to next size motor. Example: 1600 cfm at 0.75" ESP requires 0.46 BHP. 1.15 x 0.46 = 0.529. Round up to nearest nominal motor size = 3/4 HP.
- Total Static Pressure (TSP) = Internal Static Pressure + External Static Pressure (ESP)
- ESP = TSP – Internal SP

MAB MODULAR BELT DRIVE

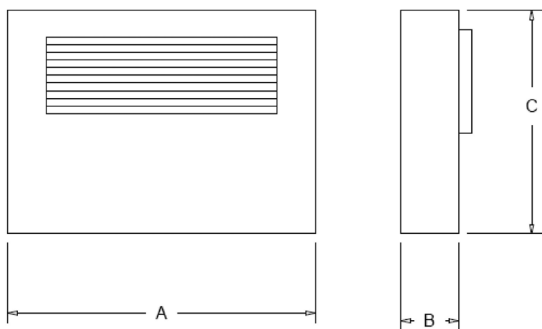
Air Volume Capacity - 4-Pipe, 4-Row Cooling and 2-Row Heating Coils														
Model	ISP	CFM	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
MAB08	0.25	600	702	0.09	851	0.12	980	0.16	-	-	-	-	-	-
	0.31	700	750	0.12	889	0.16	1011	0.20	1122	0.25	-	-	-	-
	0.39	800	808	0.16	937	0.20	1052	0.25	1158	0.30	1256	0.36	-	-
	0.47	900	865	0.20	984	0.26	1094	0.31	1194	0.36	1288	0.42	1377	0.48
	0.56	1000	924	0.26	1036	0.32	1139	0.38	1235	0.44	1325	0.50	1411	0.56
MAB12	0.28	900	764	0.17	895	0.22	1012	0.27	1119	0.32	1218	0.38	1310	0.43
	0.36	1050	838	0.24	956	0.30	1064	0.36	1164	0.42	1258	0.48	1346	0.54
	0.44	1200	911	0.33	1018	0.40	1118	0.46	1212	0.53	1301	0.60	1385	0.67
	0.51	1350	979	0.44	1078	0.51	1171	0.58	1260	0.66	1343	0.72	1423	0.81
	0.61	1500	1059	0.58	1150	0.66	1237	0.74	1319	0.82	1398	0.90	1474	0.98
MAB16	0.40	1200	795	0.25	930	0.35	1070	0.40	1185	0.50	1255	0.65	1355	0.75
	0.44	1400	835	0.35	960	0.45	1085	0.50	1200	0.60	1280	0.75	1375	0.85
	0.49	1600	885	0.45	995	0.55	1105	0.65	1220	0.75	1305	0.90	1395	1.05
	0.55	1800	925	0.55	1030	0.70	1140	0.80	1245	0.90	1335	1.00	1415	1.15
	0.61	2000	990	0.70	1080	0.85	1180	0.95	1275	1.05	1365	1.20	1445	1.30
MAB20	0.40	1500	835	0.40	950	0.45	1050	0.55	1180	0.65	1270	0.80	1370	0.90
	0.44	1750	880	0.50	995	0.60	1090	0.70	1200	0.80	1300	0.95	1450	1.05
	0.49	2000	945	0.65	1045	0.75	1140	0.85	1235	0.95	1330	1.15	1435	1.25
	0.55	2250	1025	0.85	1110	0.95	1195	1.10	1275	1.20	1380	1.35	1465	1.45
	0.61	2500	1100	1.10	1180	1.20	1250	1.30	1335	1.40	1455	1.65	1496	1.71
MAB30	0.23	2250	474	0.35	583	0.48	688	0.61	769	0.73	850	0.89	926	1.04
	0.31	2625	519	0.46	615	0.59	706	0.73	776	0.89	861	1.05	932	1.29
	0.38	3000	549	0.58	637	0.73	720	0.89	793	1.05	865	1.21	939	1.36
	0.48	3375	597	0.76	675	0.92	748	1.08	818	1.25	889	1.41	955	1.61
	0.57	3750	632	0.95	705	1.12	773	1.30	841	1.48	907	1.70	968	1.91
MAB40	0.38	3000	548	0.58	634	0.74	718	0.89	793	1.05	867	1.22	939	1.40
	0.50	3500	603	0.80	681	0.97	752	1.14	821	1.32	889	1.49	955	1.70
	0.64	4000	662	1.12	731	1.30	795	1.48	859	1.69	923	1.91	980	2.13
	0.79	4500	720	1.49	781	1.71	843	1.92	902	2.15	962	2.41	1016	2.67
	0.97	5000	782	1.97	841	2.23	900	2.50	952	2.76	1011	3.00	1059	3.27
MAB60	0.44	5000	556	1.00	644	1.25	724	1.50	800	1.79	876	2.07	946	2.39
	0.52	5500	585	1.17	669	1.45	746	1.78	817	2.05	889	2.37	949	2.69
	0.60	6000	616	1.49	697	1.79	766	2.10	834	2.40	903	2.70	965	3.05
	0.69	6500	651	1.80	724	2.12	789	2.43	855	2.74	920	3.07	980	3.53
	0.79	7000	688	2.15	753	2.16	815	2.47	878	2.78	939	3.56	1000	4.00
MAB80	0.47	7000	589	1.71	666	2.06	735	2.38	798	2.68	862	3.00	924	3.44
	0.53	7500	616	2.04	691	2.37	754	2.69	815	3.00	876	3.44	936	3.86
	0.59	8000	644	2.36	712	2.70	772	3.03	833	3.45	893	3.87	951	4.39
	0.68	8500	677	2.69	742	3.11	800	3.52	858	3.87	917	4.54	976	5.16
	0.76	9000	711	3.22	768	3.71	825	4.19	881	4.68	938	5.21	993	5.85

Notes:

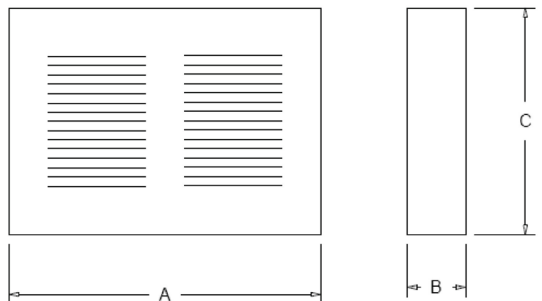
- Motor HP = 1.15 \* x BHP  
\* In the absence of a specified drive loss factor, use 1.15. To select motor size, find the Brake Horsepower (BHP) for the design cfm and External Static Pressure (ESP). Multiply BHP by 1.15 (or specified factor) and round up to next size motor. Example: 1600 cfm at 0.75" ESP requires 0.46 BHP. 1.15 x 0.46 = 0.529. Round up to nearest nominal motor size = 3/4 HP.
- Total Static Pressure (TSP) = Internal Static Pressure + External Static Pressure (ESP)
- ESP = TSP – Internal SP

MAB MODULAR BELT DRIVE

Supply Air Plenum with Adjustable 4-Way Grille



Return Air Plenum units with Fixed Return Grille



Supply Air Plenum				
Model	A	B	C	Grille
MAB 08/12	39.0	6.0	20.0	12 x 20 4-W
MAB 16/20	48.0		24.5	16 x 24 4-W
MAB 30/40	57.0		36.6	18 x 48 4-W
MAB 60/80	72.0		47.0	16 x 24 4-W

All dimensions shown are approximate and rounded, subject to change without notice

Return Air Plenum			
Model	A	B	C
MAB 08/12	39.0	2.0	20.0
HAB 16/20	48.0		24.5
HAB 30/40	57.0		36.6
HAB 60/80	72.0		47.0

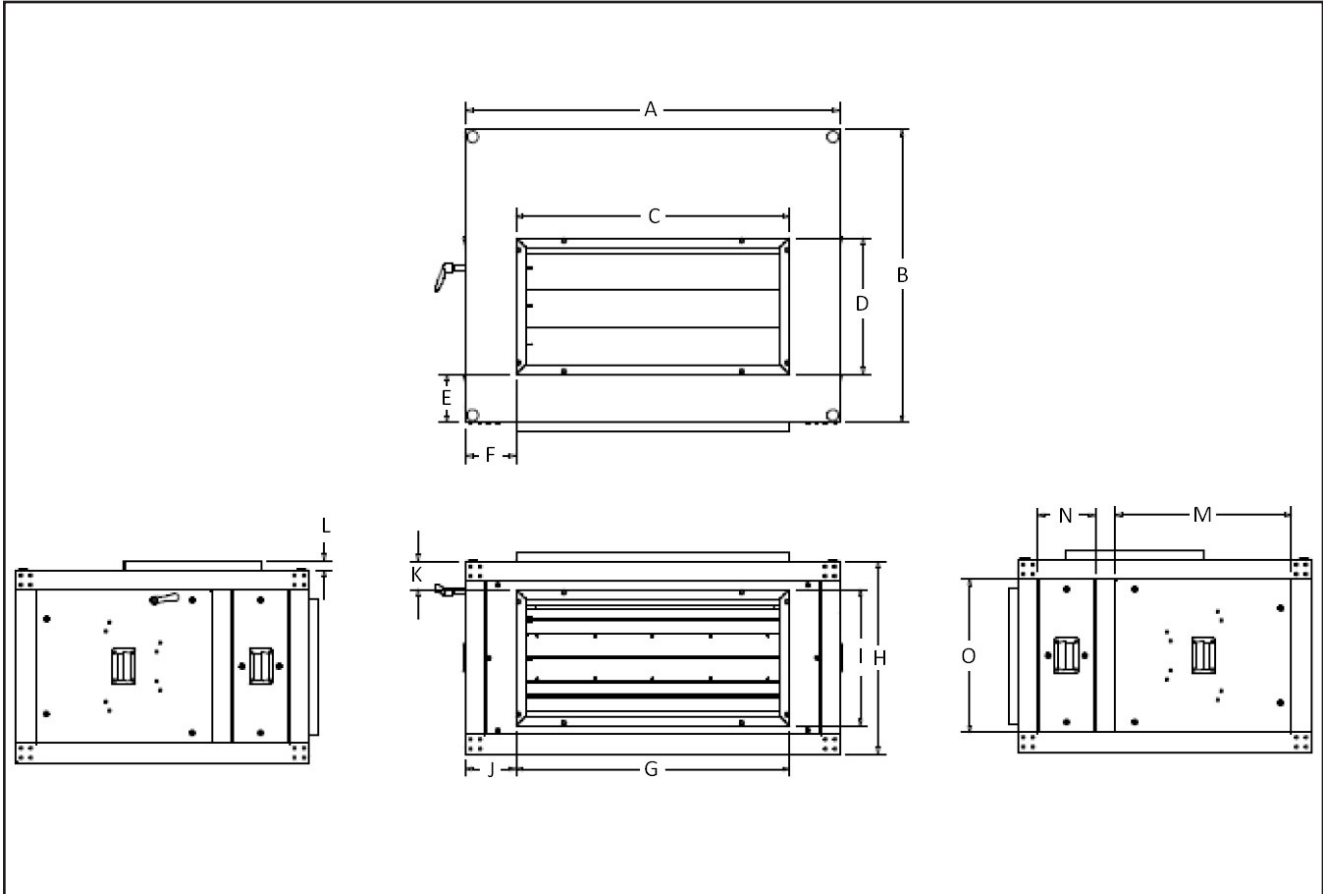
All dimensions shown are approximate and rounded, subject to change without notice

Note: Standard filter rack only accepts 2" TA or Pleated filters. Double wall filter rack accepts 2" or 4" TA or pleated filters.

Filter	Unit Model					Filter Quantity							
	14"	X	20"	X	2/4"	8	12	16	20	30	40	60	80
	14"	X	20"	X	2/4"							5	5
	14"	X	25"	X	2/4"							5	5
	16"	X	16"	X	2/4"					6	6		
	16"	X	20"	X	2/4"	2	2						
	20"	X	20"	X	2/4"			2	2				
	Filter Total					2	2	2	2	6	6	10	10

Water Coil Data									
Model	Fin Block H x W	Face Area	Rows	Water Conn. Header OD	Model	Fin Block H x W	Face Area	Rows	Water Conn. Header OD
MAB08	10 X 31	2.15	1	5/8	MAB30	22.5 X 47	7.34	2	7/8
			2					1 1/8	
			4	1 3/8					
			6						
MAB12	13 X 31	2.8	1	5/8	MAB40	28.5 X 47	9.3	2	7/8
			2					1 1/8	
			4	1 3/8					
			6						
MAB16	15 X 40	4.17	1	5/8	MAB60	31.5 X 60	13.13	2	1 1/8
			2					1 3/8	
			4	1 5/8					
			6						
MAB20	17.5 X 40	4.86	1	5/8	MAB80	42 X 60	17.5	2	1 3/8
			2					1 5/8	
			4	2 1/8					
			6						

MAB MODULAR BELT DRIVE



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MAB 08	39.0	30.5	28.5	14.25	5.0	5.25	28.5	20.0	14.25	5.25	2.9	1.0	18.4	6.0	16.0
MAB 12	39.0	30.5	28.5	14.25	5.0	5.25	28.5	20.0	14.25	5.25	2.9	1.0	18.4	6.0	16.0
MAB 16	48.0	30.0	36.5	17.25	4.2	5.75	36.5	24.5	17.25	5.75	3.7	1.0	16.75	7.7	20.5
MAB 20	48.0	30.0	36.5	17.25	4.2	5.75	36.5	24.5	17.25	5.75	3.7	1.0	16.75	7.7	20.5
MAB 30	63.0	41.5	36.5	22.25	4.5	10.25	57.0	36.7	22.25	10.25	7.2	1.0	23.6	11.8	32.7
MAB 40	63.0	41.5	36.5	22.25	4.5	10.25	57.0	36.7	22.25	10.25	7.2	1.0	23.6	11.8	32.7
MAB 60	72.0	41.5	51.5	24.5	4.5	10.25	51.5	47.0	32.6	10.25	7.2	1.0	23.6	11.8	42.0
MAB 80	72.0	41.5	51.5	24.5	4.5	10.25	51.5	47.0	32.6	10.25	7.2	1.0	32.6	11.8	42.0

### RAB

- ETL-listed. Constructed in compliance with ANSI/UL 1995 Standard
- High efficiency coil – 4-row seamless 3/8" OD (RAB 08 & 12), 1/2" OD (RAB 16 & 20), and 5/8" OD (RAB 30 thru 80) copper tubes with 10 aluminum fins per inch for 2-pipe applications
- Pipe entry is right hand looking at the filter in the direction of the airflow and can be field piped directly to the outside or down through the piping chase provided inside the unit for areas with severe winter conditions
- Manual air vent
- Blowers oriented in down discharge configuration and mounted on isolators. Blower wheels are belt-drive, double-inlet, forward-curved, and factory balanced.
- Condensate pan fabricated of heavy gauge 304 stainless steel with three-dimensional slope for positive drainage
- Cabinet fabricated of heavy gauge galvanealed steel with baked-on powder-coated enamel coating providing maximum corrosion protection. Cabinet completely insulated with 1", 1.5-pound fiberglass insulation. Top panel has two" insulation between double wall construction.



RAB

- Filters are 2" fiberglass disposable



k-12 education



universities



hospitals



hotels / motels



See website for Specifications

### AVAILABLE MODELS:

RAB08 / 800 cfm  
RAB12 / 1200 cfm  
RAB16 / 1600 cfm  
RAB20 / 2000 cfm  
RAB30 / 3000 cfm  
RAB40 / 4000 cfm  
RAB60 / 6000 cfm  
RAB80 / 8000 cfm

### OVERVIEW

Titus rooftop blower coil units provides flexibility of design due to belt-driven fans, multi-row coil capability, and available factory options. These products are designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes.

### OPTIONAL FEATURES INCLUDE

- High efficiency coil – 6-row seamless 3/8" OD (RAB08 & 12), 1/2" OD (RAB16 & 20), and 5/8" OD (RAB30 thru 80) copper tubes with 10 aluminum fins per inch for 2-pipe applications
- High efficiency coils – Chilled water 4- or 6-row seamless 3/8" OD (RAB08 & 12), 1/2" OD (RAB16 & 20), and 5/8" OD (RAB30 thru 80) copper tubes with 10 aluminum fins per inch. Hot water 1- (RAB08, 12, 16, & 20 only) or 2-row seamless 3/8" OD (RAB08 & 12), 1/2" OD (RAB16 & 20), and 5/8" OD (RAB30 thru 80) copper tubes with 10 aluminum fins per inch.

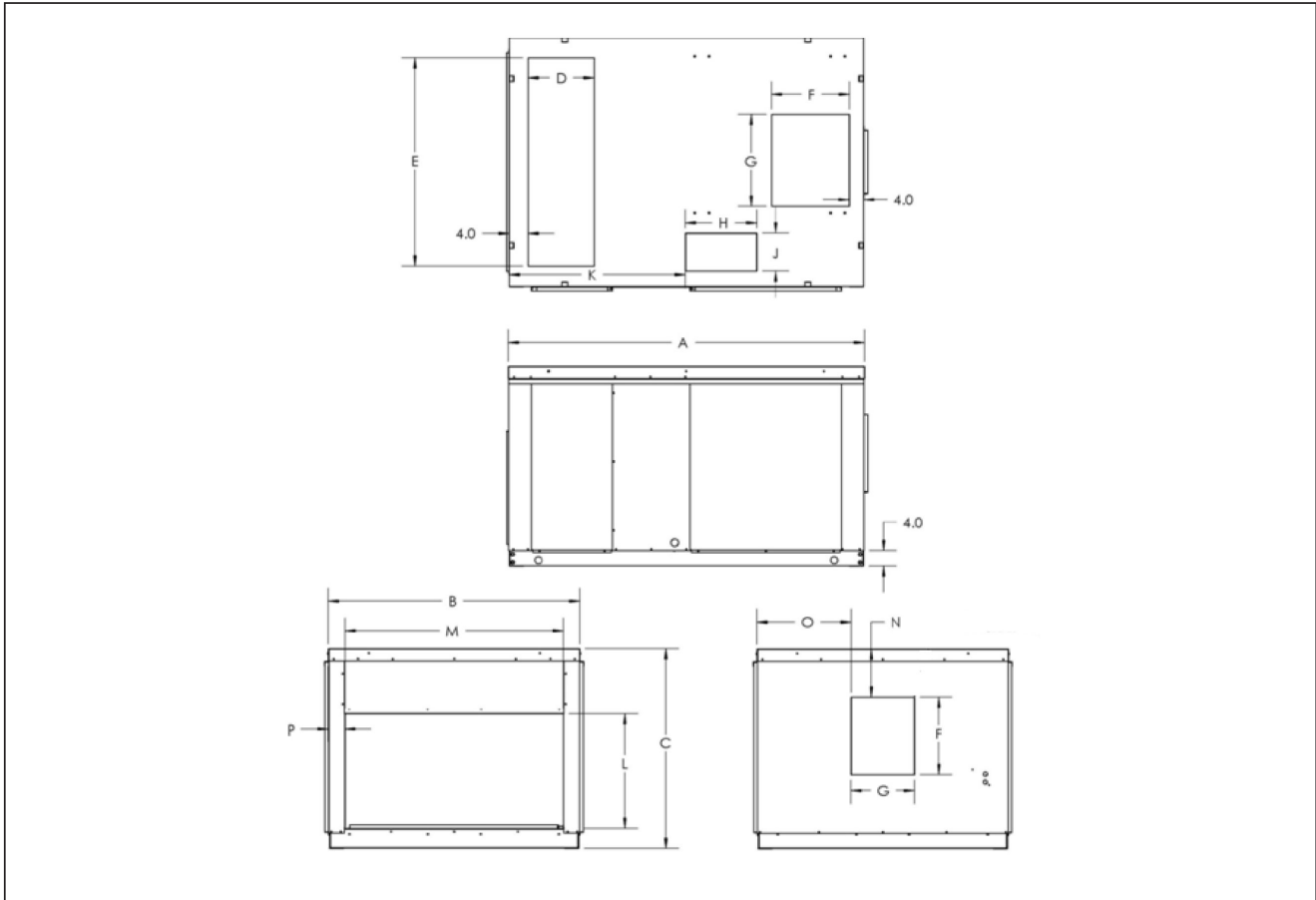
- Motors - Standard ETL-listed motors consist of Totally Enclosed, Fan Cooled (TEFC) and Open, Drip-Proof (ODP) casing, shaded-pole 115/60/1 in 1/4 HP through 2 HP; TEFC and ODP 115/208-230/1 (wired for 115V) in 1/4 to 2 HP; TEFC and ODP 208-230/460/60/3 in 1/4 HP to 10 HP; TEFC and ODP 575/60/3 in 1/4 HP to 10 HP; other voltages, configurations, and horsepower options available, but not ETL-listed. All motor sheaves are variable-pitch and single-groove. Blower pulleys are split-tapered bushing.
- Horizontal discharge configuration.
- Modulating air damper economizer package for up to 100 percent outside air (available for down discharge or horizontal discharge configuration); includes weather hood, modulating control motor, enthalpy control, mixed air sensor, and transformer/relay for 208/230/1 motor. Shipped separate for field installation.
- Manual air damper for up to 100 percent outside air includes weather hood. Shipped separate for field installation.
- Motor drive kit for manual air damper. Shipped separate for field installation.
- Pleated filter, 2"
- Double-wall construction
- Cabinet liner in 7/8" closed cell or 1" IAQ fiberglass insulation
- 14" high roof curb





DIMENSIONS

RAB ROOFTOP BELT DRIVE DIMENSIONS

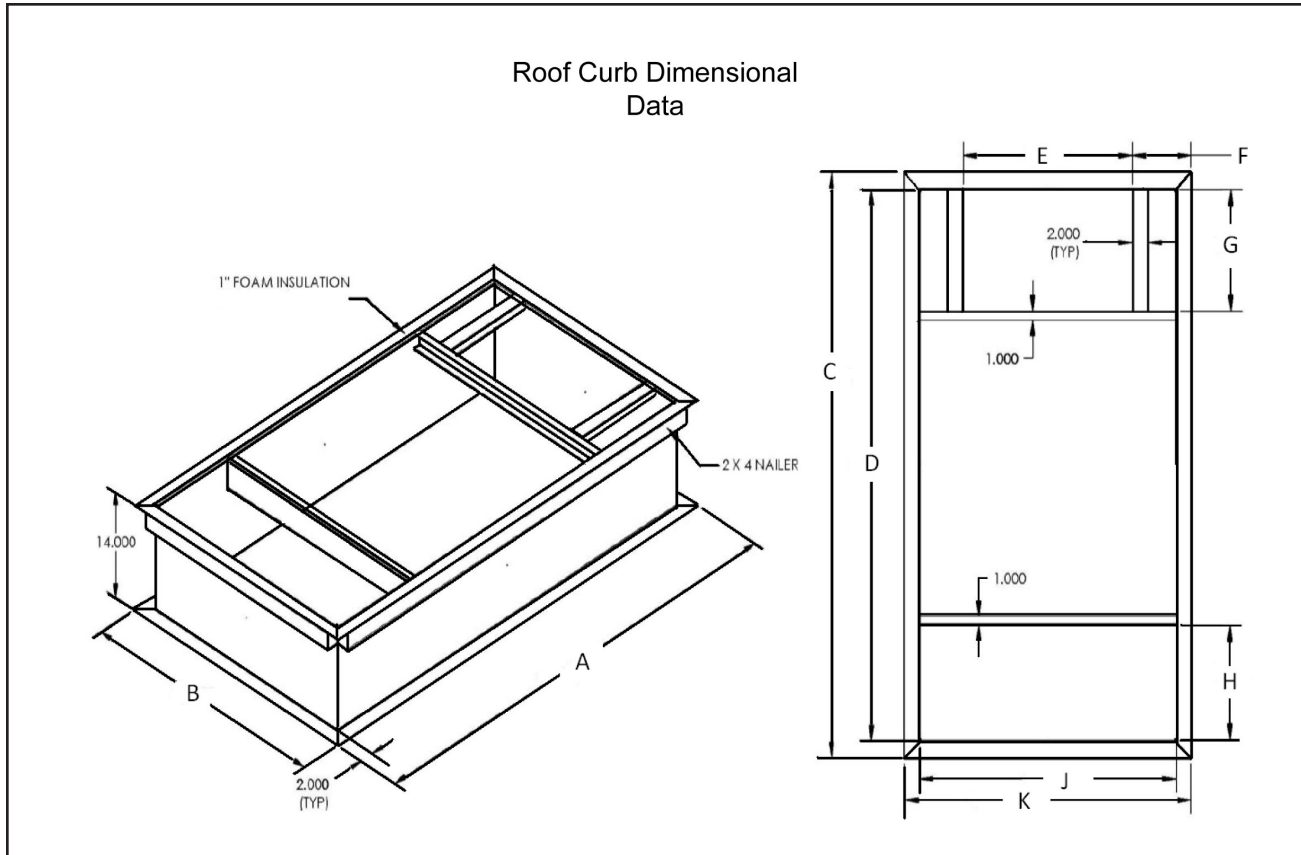


Dimensions - Sizes 08 thru 80															
Unit	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P
08	68.0	40.0	23.0	12.0	26.0	12.0	9.0	11.0	8.0	36.0	14.0	29.0	3.0	15.0	6.0
12	68.0	40.0	23.0	12.0	26.0	12.0	9.0	11.0	8.0	36.0	14.0	29.0	3.0	15.0	6.0
16	73.0	49.0	29.0	12.0	34.0	14.0	13.0	11.0	8.0	37.0	18.0	36.0	5.0	18.0	6.0
20	73.0	49.0	29.0	12.0	34.0	14.0	13.0	11.0	8.0	37.0	18.0	36.0	5.0	18.0	6.0
30	76.0	54.0	43.0	14.0	44.0	17.0	12.0	15.0	8.0	38.0	25.0	46.0	10.0	21.0	4.0
40	76.0	54.0	43.0	14.0	44.0	17.0	12.0	15.0	8.0	38.0	25.0	46.0	10.0	21.0	4.0
60	76.0	54.0	56.0	14.0	44.0	17.0	20.0	15.0	8.0	38.0	33.0	46.0	24.0	17.0	6.0
80	97.0	77.0	54.0	15.0	63.0	20.0	22.0	15.0	8.0	51.0	47.0	69.0	18.0	27.0	4.0

DIMENSIONS

RAB ROOF CURB DIMENSIONS

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Roof Curb Dimensions - Sizes 08 thru 80										
Unit	A	B	C	D	E	F	G	H	J	K
08	64.1	36.3	63.9	60.1	21.3	7.4	13.2	12.6	32.3	36.0
12	64.1	36.3	63.9	60.1	21.3	7.4	13.2	12.6	32.3	36.0
16	64.1	36.3	63.9	60.1	21.3	7.4	13.2	12.6	32.3	36.0
20	64.1	36.3	63.9	60.1	21.3	7.4	13.2	12.6	32.3	36.0
30	68.5	44.8	68.2	64.5	21.3	11.6	17.3	12.6	40.8	44.5
40	68.5	44.8	68.2	64.5	21.3	11.6	17.3	12.6	40.8	44.5
60	71.8	49.8	71.5	67.8	34.8	7.4	17.8	15.5	45.8	49.5
80	87.8	67.5	87.5	83.8	22.5	22.4	20.0	16.8	63.5	67.3

DIMENSIONS

RAB ROOFTOP BELT DRIVE DIMENSIONS

Water Coil Data									
Model	Fin Block H x W	Face Area	Rows	Water Conn. Header OD	Model	Fin Block H x W	Face Area	Rows	Water Conn. Header OD
RAB 08	10 X 31	2.15	1	5/8	RAB 30	22.5 X 47	7.34	2	7/8
			2					1 1/8	
			4	7/8				4	1 3/8
			6					2 1/8	
RAB 12	13 X 31	2.8	1	5/8	RAB 40	28.5 X 47	9.3	2	7/8
			2					1 1/8	
			4	7/8				4	1 3/8
			6					2 1/8	
RAB 16	15 X 40	4.17	1	5/8	RAB 60	31.5 X 60	13.13	2	1 1/8
			2					1 3/8	
			4	7/8				6	1 5/8
			6					2 1/8	
RAB 20	17.5 X 40	4.86	1	5/8	CONTACT THE FACTORY FOR ADDITIONAL COIL INFORMATION				
			2						
			4	7/8					
			6	1 1/8					

Note: Standard filter rack only accepts 2" TA or Pleated filters. Double wall filter rack accepts 2" or 4" TA or pleated filters.

Filter	Unit Model					Filter Quantity							
	8	12	16	20	30	40	60	80					
14" X 20" X 2/4"							5	5					
14" X 25" X 2/4"							5	5					
16" X 16" X 2/4"					6	6							
16" X 20" X 2/4"	2	2											
20" X 20" X 2/4"			2	2									
Filter Total						2	2	2	2	6	6	10	10

RAB ROOFTOP BELT DRIVE

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Standard Ratings - Water Coil									
Model	2- or 4-Pipe Cooling								
	EWT	gpm	PD Ft.	cfm	80°F DB / 67°F WB				
					TTL mbh	SENS mbh	LAT DB	LAT WB	F
RAB08	45	7	7.7	600	21.2	14.9	57.1	55.7	51.1
				800	24	17.7	59.6	57.5	51.9
				1000	26.2	20	61.5	58.9	52.5
RAB12	45	8	6.7	900	30.6	21.8	57.6	56.2	52.7
				1200	34.4	25.8	60.1	58	53.6
				1500	37.2	29.4	61.9	59.3	54.3
RAB16	45	10	6.4	1200	40	28.8	57.8	56.3	53.1
				1600	45	34	60.3	58.2	54.1
				2000	49	38.5	62.1	59.5	54.8
RAB20	45	13	5.4	1500	50.5	36	57.8	56.3	52.8
				2000	56.5	42.5	60.3	58.2	53.7
				2500	61	48.5	62.1	59.5	54.4
RAB30	45	17.5	4.8	2250	78	56.5	56.8	55.9	54
				3000	88	67	59.2	57.8	55.1
				3750	96	77	60.9	59	56.1
RAB40	45	21	4.3	3000	102	74	57.1	56.2	54.7
				4000	115	89	59.4	58	56
				5000	125	102	61.1	59.3	57
RAB60	45	31.5	4.4	5000	158	120	57.8	57	55.1
				6000	170	136	59.1	58.1	55.9
				7000	182	149	60.3	59	56.6
RAB80	45	44	6.6	7000	213	160	58.9	57.4	54.7
				8000	225	173	60	58.2	55.3
				9000	235	186	60.9	58.9	55.7

Standard Ratings - Heating						
4-Pipe Heating						
Model	gpm	PD Ft.	cfm	60°F EAT / 180°F EWT		
				TTL mbh	LAT	LWT
RAB08	6	5.1	600	57	147.9	160.5
			800	68	138.6	156.8
			1000	77	131.2	153.8
RAB12	8	5.9	900	85	148	158.1
			1200	102	138.6	153.9
			1500	115	131.1	150.6
RAB16	10	5.6	1200	113	147.3	156.8
			1600	134	137.9	152.5
			2000	152	130.3	148.9
RAB20	13	4.6	1500	142	147.4	157.7
			2000	169	138	153.5
			2500	190	130.5	150

Note: Standard ratings are for sea level altitude, standard 4-row coils, nominal air volumes and ordinary water. For other conditions and/or other coolants, consult Titus.

Standard Ratings - 2-Pipe Heating													
Model	2-Pipe Heating Coil						Model	2-Pipe Heating Coil					
	gpm	PD Ft.	cfm	60°F EAT / 180°F EWT				gpm	PD Ft.	cfm	60°F EAT / 180°F EWT		
				TTL mbh	LAT	LWT					TTL mbh	LAT	LWT
RAB08	4	5.2	600	36.2	116	161.4	RAB30	18	6.5	2250	160	125.7	161.8
			800	41.5	108.4	158.6				3000	186	117.3	158.8
			1000	46	102.8	156.3				3750	208	111.3	156.3
RAB12	6	4.1	900	55	116.8	161.1	RAB40	22	4.3	3000	197	120.7	161.7
			1200	63.5	109.1	158.3				4000	228	112.8	158.8
			1500	70	103.5	155.9				5000	254	106.9	156.4
RAB16	8	3	1200	75	118.4	160.6	RAB60	28	3.5	5000	295	114.6	158.4
			1600	87	110.6	157.6				6000	323	109.7	156.4
			2000	97	104.9	155.2				7000	346	105.7	154.7
RAB20	12	2.7	1500	96	119.4	163.5	RAB80	22.4	2.6	7000	384	110.7	145
			2000	111	111.6	160.9				8000	408	107.1	142.8
			2500	124	105.9	158.8				9000	429	104	141

PERFORMANCE DATA

RAB ROOFTOP BELT DRIVE

Air Volume Capacity - 2-Pipe														
Model	ISP	CFM	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
RAB08	0.34	600	795	0.19	969	0.25	1125	0.32	1252	0.40	1379	0.50	1485	0.59
	0.42	700	853	0.25	1022	0.31	1169	0.39	1293	0.47	1408	0.56	1512	0.67
	0.49	800	908	0.26	1068	0.36	1206	0.46	1331	0.55	1447	0.67	1546	0.78
	0.57	900	949	0.30	1109	0.40	1248	0.52	1370	0.63	1484	0.75	1587	0.89
	0.65	1000	1004	0.27	1160	0.49	1291	0.60	1413	0.72	1523	0.87	1620	1.00
RAB12	0.33	900	815	0.24	985	0.33	1129	0.43	1248	0.54	1362	0.65	1471	0.84
	0.40	1050	889	0.37	1035	0.49	1179	0.64	1299	0.74	1411	0.88	1508	1.01
	0.49	1200	946	0.45	1100	0.60	1230	0.70	1349	0.85	1462	1.04	1555	1.21
	0.57	1350	1016	0.58	1158	0.73	1279	0.83	1400	1.02	1504	1.22	1605	1.35
	0.69	1500	1098	0.68	1224	0.83	1335	0.96	1463	1.16	1568	1.37	1660	1.58
RAB16	0.32	1200	740	0.23	869	0.32	974	0.40	1061	0.48	1151	0.57	1234	0.70
	0.40	1400	809	0.32	925	0.41	1027	0.50	1115	0.62	1201	0.76	1278	0.88
	0.51	1600	884	0.46	988	0.57	1085	0.67	1172	0.76	1247	0.95	1325	1.09
	0.61	1800	957	0.59	1051	0.72	1155	0.87	1233	1.02	1312	1.14	1379	1.34
	0.72	2000	1024	0.75	1126	0.93	1201	1.10	1291	1.25	1369	1.45	1437	1.60
RAB20	0.36	1500	688	0.35	816	0.45	922	0.56	1020	0.65	1119	0.78	1208	0.90
	0.46	1750	749	0.47	869	0.60	9667	0.71	1061	0.82	1144	0.98	1231	1.13
	0.57	2000	810	0.59	918	0.73	1014	0.89	1103	1.02	1185	1.16	1262	1.32
	0.69	2250	879	0.78	979	0.93	1068	1.08	1153	1.25	1233	1.41	1303	1.56
	0.82	2500	947	0.99	1042	1.19	1131	1.38	1206	1.55	1286	1.73	1354	1.92
RAB30	0.37	2250	604	0.56	699	0.74	788	0.94	869	1.09	942	1.27	1010	1.44
	0.46	2625	653	0.73	748	0.96	833	1.17	904	1.38	974	1.58	1045	1.77
	0.57	3000	711	1.03	793	1.24	879	1.49	949	1.70	1017	1.94	1079	2.11
	0.69	3375	773	1.31	848	1.56	920	1.81	992	2.08	1056	2.31	1117	2.55
	0.81	3750	837	1.73	903	2.01	972	2.26	1034	2.49	1097	2.72	1161	2.95
RAB40	0.49	3000	688	0.87	777	1.08	853	1.29	925	1.51	990	1.68	1050	1.88
	0.62	3500	764	1.24	840	1.46	906	1.67	979	1.94	1039	2.19	1101	2.41
	0.77	4000	848	1.71	917	1.98	979	2.24	1035	2.45	1095	2.73	1156	3.08
	0.94	4500	923	2.32	982	2.62	1040	2.90	1102	3.21	1160	3.51	1210	3.78
	1.14	5000	997	3.01	1057	3.32	1115	3.70	1167	4.02	1222	4.35	1271	4.64
RAB60	0.65	5000	790	2.00	830	2.30	910	2.50	970	2.80	1010	3.00	1070	3.30
	0.82	5500	840	2.60	910	3.00	990	3.30	1010	3.50	1070	3.80	1120	4.00
	0.98	6000	950	3.50	980	3.80	1020	4.00	1080	4.50	1120	4.80	1200	5.00
	1.18	6500	1000	4.30	1050	4.80	1100	5.00	1140	5.30	1180	5.70	1250	6.50
	1.38	7000	1060	5.50	1130	5.70	1170	6.0	1210	6.30	1260	7.00	1310	7.20
RAB80	0.66	7000	580	2.30	620	2.80	680	3.20	710	3.50	770	4.00	800	4.30
	0.81	7500	600	2.80	670	3.20	700	3.50	740	4.00	790	4.50	830	5.00
	0.96	8000	650	3.50	690	3.80	740	4.20	790	5.00	830	5.50	880	6.00
	1.11	8500	690	4.10	740	4.60	790	5.20	830	5.50	870	6.00	900	6.60
	1.26	9000	730	5.00	790	5.40	810	6.00	850	6.50	890	7.00	930	7.50

Notes:

1. Motor HP = 1.15\* x BHP

\* In the absence of a specified drive loss factor, use 1.15. To select motor size, find the Brake Horsepower (BHP) for the design cfm and External Static Pressure (ESP). Multiply BHP by 1.15 (or specified factor) and round up to next size motor. Example: 1600 cfm at 0.75" ESP requires 0.75 BHP. 1.15 x 0.75 = 0.86. Round up to nearest nominal motor size = 1 HP.

2. Total Static Pressure (TSP) = Internal Static Pressure + External Static Pressure (ESP)

3. ESP = TSP – Internal SP

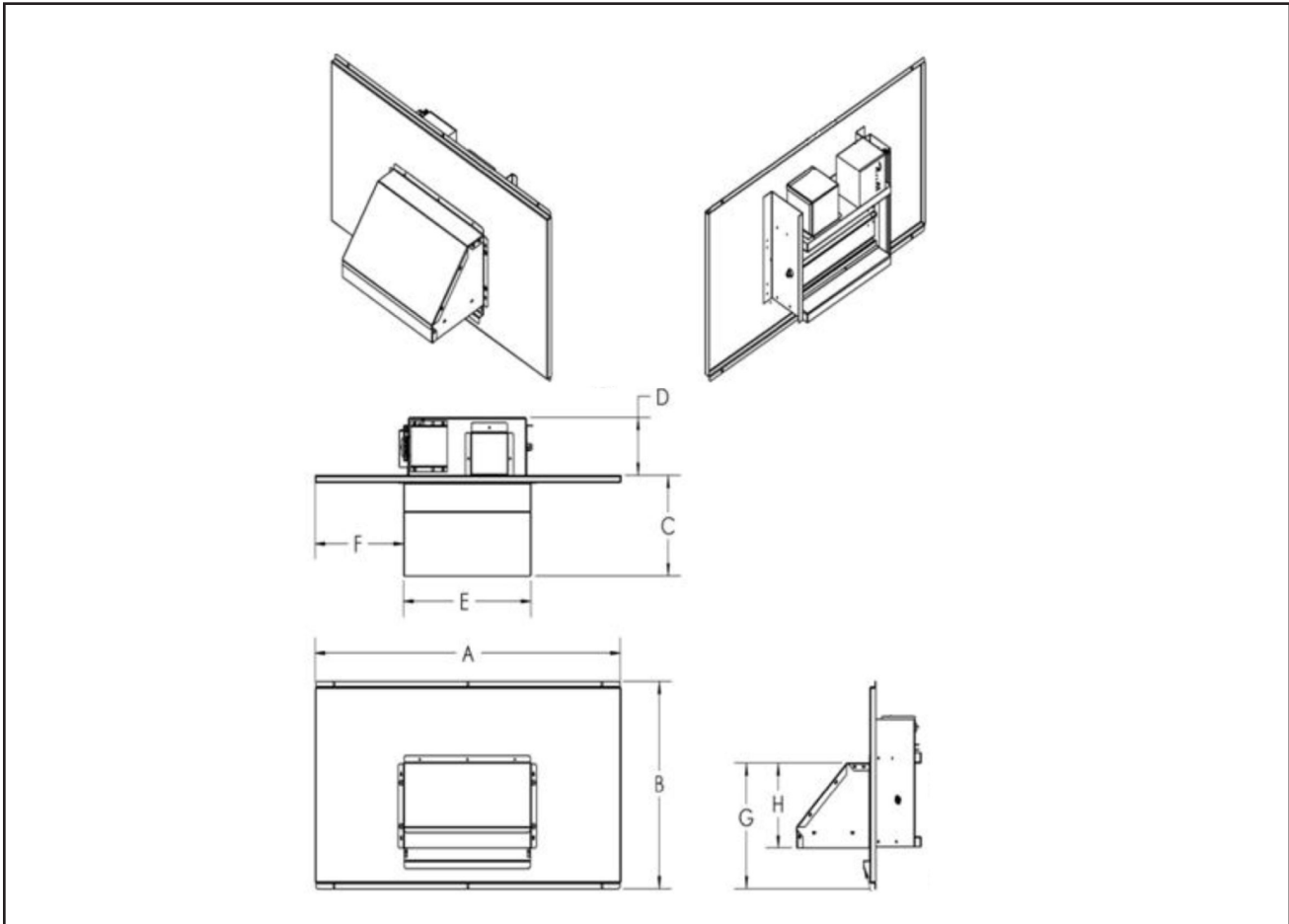
RAB ROOFTOP BELT DRIVE

Air Volume Capacity - 4-Pipe 4-Row Cooling and 2-Row Heating Coils														
Model	ISP	CFM	0.25" ESP		0.50" ESP		0.75" ESP		1.00" ESP		1.25" ESP		1.50" ESP	
			RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
RAB08	0.44	600	800	0.16	991	0.25	1145	0.35	1271	0.42	1393	0.53	1501	0.62
	0.53	700	868	0.21	1041	0.31	1185	0.39	1310	0.49	1427	0.59	1538	0.73
	0.62	800	936	0.27	1091	0.36	1229	0.48	1350	0.58	1466	0.70	1572	0.82
	0.74	900	994	0.33	1141	0.43	1285	0.55	1402	0.67	1510	0.79	1610	0.92
	0.84	1000	1037	0.38	1186	0.48	1320	0.61	1443	0.75	1548	0.89	1649	1.02
RAB12	0.40	900	847	0.26	1019	0.37	1154	0.47	1277	0.57	1384	0.68	1486	0.80
	0.49	1050	924	0.34	1078	0.46	1209	0.60	1328	0.69	1441	0.82	1538	0.95
	0.59	1200	989	0.44	1137	0.56	1265	0.68	1387	0.83	1495	0.97	1599	1.11
	0.70	1350	1068	0.56	1201	0.69	1331	0.82	1441	0.98	1546	1.15	1644	1.31
	0.84	1500	1148	0.69	1276	0.83	1403	1.02	1508	1.19	1611	1.36	1703	1.53
RAB16	0.39	1200	783	0.29	899	0.37	1005	0.46	1095	0.56	1180	0.64	1264	0.76
	0.48	1400	854	0.37	962	0.47	1057	0.59	1142	0.67	1229	0.82	1304	0.91
	0.60	1600	924	0.49	1034	0.63	1125	0.75	1205	0.90	1284	1.02	1358	1.14
	0.72	1800	994	0.65	1094	0.80	1196	0.97	1270	1.11	1346	1.24	1423	1.42
	0.86	2000	1080	0.84	1176	1.01	1254	1.19	1334	1.33	1409	1.55	1477	1.67
RAB20	0.42	1500	729	0.37	846	0.49	954	0.62	1046	0.76	1146	0.90	1239	1.02
	0.54	1750	791	0.52	909	0.66	1005	0.81	1091	0.95	1177	1.08	1259	1.22
	0.67	2000	863	0.68	965	0.85	1059	1.02	1145	1.18	1223	1.32	1298	1.48
	0.82	2250	937	0.91	1030	1.06	1124	1.27	1204	1.43	1279	1.61	1350	1.78
	0.97	2500	1010	1.14	1103	1.33	1187	1.52	1257	1.73	1.73	1.96	1400	2.13
RAB30	0.40	2250	612	0.50	714	0.66	801	0.80	880	0.96	950	1.08	1015	1.24
	0.51	2625	678	0.74	763	0.89	845	1.06	927	1.24	993	1.42	1056	1.58
	0.63	3000	739	1.02	820	1.19	894	1.38	966	1.58	1032	1.77	1095	1.97
	0.76	3375	798	1.34	873	1.56	946	1.75	1012	1.96	1075	2.20	1129	2.40
	0.90	3750	867	1.75	933	1.94	994	2.16	1056	2.36	1121	2.62	1179	2.88
RAB40	0.57	3000	725	1.00	812	1.23	889	1.44	958	1.70	1020	1.90	1083	2.13
	0.72	3500	813	1.43	881	1.64	947	1.87	1015	2.14	1077	2.41	1134	2.67
	0.89	4000	896	2.01	958	2.24	1028	2.54	1078	2.77	1141	3.08	1192	3.35
	1.08	4500	971	2.65	1034	2.96	1091	3.25	1144	3.50	1200	3.73	1251	4.09
	1.32	5000	1052	3.42	1124	3.83	1176	4.16	1228	4.46	1274	4.73	1318	5.02
RAB60	0.74	5000	800	2.10	880	2.40	950	2.70	990	2.90	1040	3.10	1110	3.50
	0.95	5500	890	2.80	950	3.00	1000	3.50	1060	3.70	1100	4.00	1180	4.10
	1.15	6000	960	3.80	1000	4.00	1050	4.30	1140	4.60	1180	4.90	1210	5.20
	1.35	6500	1040	4.70	1100	5.10	1130	5.40	1190	6.00	1230	6.30	1300	7.00
	1.55	7000	1100	5.50	1150	6.00	1180	6.50	1220	7.00	1290	7.50	1340	7.80
RAB80	0.76	7000	590	2.50	630	3.00	690	3.40	730	3.80	790	4.10	820	4.50
	0.93	7500	630	3.00	690	3.50	730	3.80	780	4.30	810	4.80	860	5.30
	1.09	8000	680	3.80	710	4.10	760	4.50	810	5.30	850	5.80	900	6.30
	1.25	8500	710	4.30	760	5.00	800	5.50	840	6.00	890	6.50	920	7.00
	1.41	9000	740	5.00	790	5.80	830	6.30	880	6.80	910	7.30	950	7.80

Notes:

- Motor HP = 1.15 \* x BHP  
\* In the absence of a specified drive loss factor, use 1.15. To select motor size, find the Brake Horsepower (BHP) for the design cfm and External Static Pressure (ESP). Multiply BHP by 1.15 (or specified factor) and round up to next size motor. Example: 1600 cfm at 0.75" ESP requires 0.75 BHP. 1.15 x 0.75 = 0.86. Round up to nearest nominal motor size = 1 HP.
- Total Static Pressure (TSP) = Internal Static Pressure + External Static Pressure (ESP)
- ESP = TSP - Internal SP

RAB OUTSIDE AIR DAMPER



Fixed - Dimensions Sizes 08 thru 80								
Unit	A	B	C	D	E	F	G	H
08	29.0	16.0	11.0	6.0	10.0	9.0	13.0	10.0
12	29.0	16.0	11.0	6.0	10.0	9.0	13.0	10.0
16	38.0	20.0	10.0	6.0	16.0	11.0	12.0	8.0
20	38.0	20.0	10.0	6.0	16.0	11.0	12.0	8.0
30	49.0	27.0	15.0	6.0	26.0	12.0	18.0	14.0
40	49.0	27.0	15.0	6.0	26.0	12.0	18.0	14.0
60	49.0	35.0	20.0	6.0	22.0	14.0	23.0	20.0
80	31.0	47.0	19.0	6.0	26.0	3.0	33.0	20.0

Motorized - Dimensions Sizes 08 thru 80								
Unit	A	B	C	D	E	F	G	H
08	30.0	19.0	9.0	6.0	24.0	3.0	14.0	11.0
12	30.0	19.0	9.0	6.0	24.0	3.0	14.0	11.0
16	38.0	24.0	15.0	6.0	26.0	6.0	17.0	14.0
20	38.0	24.0	15.0	6.0	26.0	6.0	17.0	14.0
30	49.0	29.0	18.0	6.0	45.0	2.0	22.0	20.0
40	49.0	29.0	18.0	6.0	45.0	2.0	22.0	20.0
60	49.0	35.0	23.0	6.0	41.0	4.0	29.0	26.0
80	31.0	47.0	25.0	6.0	25.0	3.0	39.0	32.0

## Air Handler Motor Data

Available Models:

HAB  
VAB  
MAB  
RAB

Available Motors (60 Hz)																
Phase	Voltage	Type	Horsepower													
			¼	⅓	½	¾	1	1.5	2	3	5	7.5	10			
Single-phase	115	ODP, Shaded-Pole	▲	▲	▲	▲	▲	▲	▲							
	115/208-230	ODP	▲	▲	▲	▲	▲	▲	▲							
	115/230	ODP, High Efficiency	▲	▲	▲	▲	▲	▲	▲							
	115/230	Totally Enclosed, Fan-Cooled	▲	▲	▲	▲	▲	▲	▲							
	115	ODP, 2-speed	▲	▲	▲	▲	▲	▲	▲							
	230	ODP, 2-speed	▲	▲	▲	▲	▲	▲	▲							
	277	ODP	▲	▲	▲	▲	▲	▲	▲							
3-phase	208-230/460	ODP	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
		ODP, High Efficiency	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
		ODP, 2-speed	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
		Totally Enclosed, Fan-Cooled	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	575	ODP, HE, TEFC	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	575	ODP, High Efficiency	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	575	Totally Enclosed, Fan-Cooled	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

Notes:

1. ETL-listed.
2. Models (H)(V)(M)(R)AB08, 12, 16 and 20 - two-speed motors installed only (must be field wired)
3. Models (H)(V)(M)(R)AB08, 12, 16 and 20 - single- and three-phase motors installed and wired to unit junction box
4. Motor sizes ¼ to 1.5 hp single-phase include auto reset overload. All others require field supplied overload protection.
5. A triangle (p) indicates availability on most models. 208-230/460 3-phase ODP, high efficiency 5hp and 7.5hp no available on VAB. 230 3-phase ODP, high efficiency 5hp not available on VAB. 208-230/460 3-phase ODP, high efficiency 10 hp is available on RAB.
6. Second speed at 2/3 rpm (1140rpm)

Series	Maximum Motor HP							
	Model							
	08	12	16	20	30	40	60	80
HAB	0.5	.05	1.5	1.5	3.0	5.0	7.5	10.0
VAB	0.5	.05	1.5	1.5	3.0	5.0	-	-
MAB	0.5	.05	1.5	1.5	3.0	5.0	7.5	10.0
RAB	0.5	.05	1.5	1.5	3.0	5.0	7.5	10.0

### FULL-LOAD CURRENTS IN AMPERES, SINGLE-PHASE ALTERNATING-CURRENT MOTORS

The values of full-load currents are for motors running at usual speeds and motors with normal torque characteristics. Motors built for especially low speeds or high torques may have higher full-load currents, and multi-speed motors will have full-load current varying with speed, in which case, the nameplate current rating shall be used. The voltages listed in the table are rated motor voltages. The currents listed shall be permitted for system voltage ranges of 110 to 120 and 220 to 240 volts. Values presented are from the NEC Handbook, 1999 Edition. Actual motor nameplate amps may vary.

Single-Phase Motors			
Horsepower	Voltage		
	115	208	230
¼	5.8	3.2	2.9
⅓	7.2	4.0	3.6
½	9.8	5.4	4.9
¾	13.8	7.6	6.9
1	16	8.8	8
1½	20	11	10
2	24	13.2	12

### FULL-LOAD CURRENTS IN AMPERES, THREE-PHASE ALTERNATING-CURRENT MOTORS

The values of full-load current are typical for motors running a speed usual for belted motors and motors with normal torque characteristics. Motors built for low speeds (1200 RPM or less) or high torques may require more running current, and multi-speed motors will have full-load current varying with speed. In these cases, the nameplate current rating shall be used. The voltages listed are rated motor voltages. The currents listed shall be permitted for system voltages ranges of 110 to 120, 220 to 240, and 400 to 480. Values presented are from the NEC Handbook, 1999 Edition. Actual motor nameplate amps may vary.

Three-Phase Motors (FLA)				
Horsepower	Voltage			
	208	230	460	575
½	2.2	2.0	1.0	.08
¾	3.1	2.8	1.4	1.1
1	4.0	3.6	1.8	1.4
1½	5.7	5.2	2.7	2.1
2	7.5	6.8	3.4	2.7
3	10.7	9.6	4.8	3.9
5	16.7	15.2	7.6	6.1
7½	24	22	11	9
10	31	28	14	11