

OPERATION MANUAL

DeAir.AHU Series



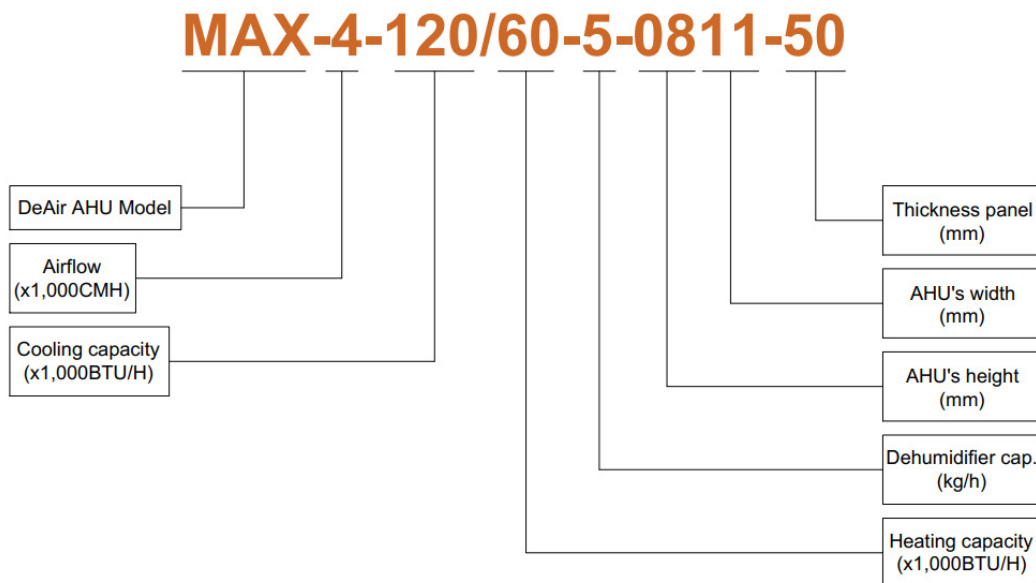
1. INTRODUCTION

The DeAir Air Handling Unit is specifically designed to fulfil the indoor air quality requirement. The air flow of DeAir is within range of 1,000 to 51,000 CMH and up to a total static pressure of 2,000Pa. For special design, the air flow can be reached 100,000 CMH. DeAir units are provide with AMCA certificated fans for superior performance and UL certified filters for higher dust holding capacity with lower pressure drop.

DeAir is constructed of high strength extruded Aluminum to form rigid frame. Besides, it is with thermal barrier feature which using three leg-fiber plastic corner pieces, 25 or 50mm Polyurethane insulation panel and all frames are the thermal-break profile. The external clip method to hold the double skin PU insulation panel is easily accessible for maintenance while being air tight.

DeAir can provide excellent thermal efficiencies and to be airtight. Besides, DeAir unit produced is with flexibility features to meet the indoor air quality, operating efficiency, sound level and installation requirement for today’s extensive commercial and customize markets. A comfortable environment can enhance human’s life quality.

2. NONMENCLATURE



3. STANDARD UNITS QUICK SELECTION TABLE

Table 2.1. Return Air

UNIT SIZE	Air Flow	ESP	4-ROWS COOLING COIL					1-ROW HEATINGCOIL				Motor (kW)
			S.C	T.C.C	OFF COIL (°C)	Water Flow	WPD	T.C	OFF COIL (°C)	Water Flow	WPD	
			CMH	Pa	kW	kW	Dry/Wet	LPS	kPa	kW	Dry/Wet	
0909	2,000	800	7.94	8.66	16.40/15.65	0.43	0.81	4.75	27.70/18.33	0.13	0.1	1.5
0911	3,500	800	13.69	16.64	15.51/14.78	0.83	3.19	8.92	28.92/18.73	0.24	0.38	2.2
1111	6,000	800	22.26	27.06	15.51/14.78	1.36	5.94	14.5	28.92/18.73	0.39	0.6	3
1114	8,000	800	32.03	41.13	14.94/14.22	2.06	14.2	21.4	29.53/18.93	0.58	1.39	5.5

1414	11,500	800	44.35	56.95	14.94/14.22	2.86	23.55	29.63	29.53/18.93	0.8	2.14	7.5
1417	14,500	800	57.93	76.5	14.60/13.89	3.84	43.38	38.99	29.84/19.03	1.06	3.84	7.5
1419	16,500	800	66.96	89.4	14.45/13.75	4.48	14.47	46.06	30.14/19.13	1.25	5.47	11
1425	22,500	800	94.89	130.16	14.04/13.36	6.53	35.34	65.34	30.45/19.22	1.77	11.72	11
1719	20,000	800	81.83	109.25	14.45/13.75	5.48	29.83	56.29	30.14/19.13	1.53	3.12	11
1323	25,000	800	104.58	142.61	14.15/13.46	7.15	53.34	72.63	30.45/19.22	1.97	5.58	15
1923	27,500	800	114.1	155.58	14.15/13.46	7.8	25.92	79.23	30.45/19.22	2.15	6.02	15
1925	30,000	800	126.52	173.54	14.04/13.36	8.7	33.78	87.12	30.45/19.22	2.37	7.52	15
2223	34,500	800	142.63	194.48	14.15/13.46	9.75	26.48	99.05	30.45/19.22	2.69	7.59	18.5
2225	38,000	800	158.15	216.93	14.04/13.36	10.88	34.48	108.9	30.45/19.22	2.96	9.41	18.5
2227	41,000	800	172.45	236.58	14.04/13.36	11.86	42.94	120.68	30.60/19.27	3.28	11.82	22
2231	48,000	800	192.48	254.19	14.60/13.89	12.75	12.69	142.96	30.75/19.32	3.88	17.33	22
2431	51,000	800	205.31	271.14	14.60/13.89	13.59	13.42	152.49	30.75/19.32	4.14	18.58	30
2437	62,000	800	252.91	338.9	14.40/13.70	16.99	22.39	187.75	30.90/19.37	5.1	29.79	30
2439	66,000	800	269.1	361.84	14.35/13.66	18.14	26.04	202.03	31.05/19.42	5.49	35.04	30
2443	73,000	800	302.5	412.3	14.14/13.46	20.67	35.06	223.53	31.05/19.42	6.07	44.41	37
2637	70,000	800	284.78	381.65	14.40/13.70	19.14	24.95	211.44	30.90/19.37	5.74	34	37
2643	82,500	800										
2943	89,000	800	341.39	465.47	14.15/13.46	23.34	39.03	252.35	31.05/19.42	6.85	50.61	37

For Cooling Coil: EDB = 27oC, EWB = 19.5oC, EWT = 7oC, LWT = 12oC

For Heating Coil: EDB = 21oC, EWT = 60oC, LWT = 50oC

Table 2.2. Fresh air

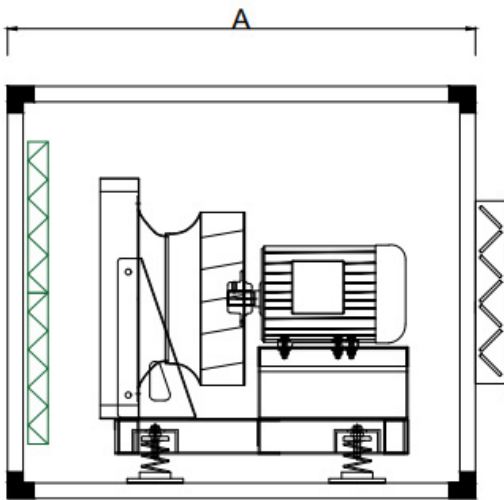
UNIT SIZE	Air Flow	ESP	4-ROWS COOLING COIL					1-ROW HEATING COIL				Motor (kW)
			S.C	T.C.C	OFF COIL (oC)	Water Flow	WPD	T.C	OFF COIL (oC)	Water Flow	WPD	
			CMH	Pa	kW	kW	Dry/Wet	LPS	kPa	kW	Dry/Wet	
1414	11,500	800	54.05	119.76	19.66/19.38	6	88.54	52.1	15.00/3.83	1.41	6.32	7.5
1417	14,500	800	72.52	164.22	18.80/18.56	8.23	166.97	68.26	15.47/4.08	1.85	11.22	7.5
1419	16,500	800	84.62	193.07	18.45/18.21	9.68	18.82	79.13	15.70/4.20	2.15	15.39	11
1425	22,500	800	121.3	280.19	17.72/17.52	14.05	42.36	111.88	16.17/4.45	3.04	32.54	11
1719	20,000	800	103.42	235.94	18.45/18.21	11.83	90.42	96.71	15.70/4.20	2.63	8.44	11
1323	25,000	800	133.35	307.23	17.91/17.70	15.4	154.78	122.55	15.94/4.33	3.33	14.54	15
1923	27,500	800	145.48	335.17	17.91/17.70	16.81	21.79	133.7	15.94/4.33	3.63	15.8	15
1925	30,000	800	161.73	373.58	17.72/17.52	18.73	27.97	149.17	16.17/4.45	4.05	20.23	15
2223	34,500	800	181.36	418.98	17.91/17.70	21.01	27.01	167.13	15.94/4.33	4.54	20.25	18.5
2225	38,000	800	202.16	466.98	17.72/17.52	23.41	34.44	186.46	16.17/4.45	5.06	25.77	18.5
2227	41,000	800	222.83	516.16	17.54/17.34	25.88	43.13	203.35	16.17/4.45	5.52	31.35	22
2231	48,000	800	265.39	617.92	17.16/16.99	30.98	64.7	240.55	16.41/4.58	6.53	45.67	22
2431	51,000	800	283.08	659.12	17.16/16.99	33.05	69.04	256.59	16.41/4.58	6.97	49.2	30
2437	62,000	800	350.44	819.82	16.79/16.62	41.11	113.28	311.07	16.41/4.58	8.45	76.28	30
2439	66,000	800	375.3	879.77	16.59/16.44	44.11	132.71	334.36	16.64/4.70	9.08	89.42	30
2443	73,000	800	417.51	979.48	16.49/16.35	49.11	170.57	369.94	16.64/4.70	10.05	113.03	37
2637	70,000	800	394.6	923.23	16.79/16.62	46.29	128.25	350.31	16.41/4.58	9.51	87.82	37
2643	82,000	800	471.19	1105.81	16.50/16.35	55.44	192.86	417.65	16.64/4.70	11.34	129.97	37

For Cooling Coil: EDB = 35oC, EWB = 28oC, EWT = 7oC, LWT = 12oC

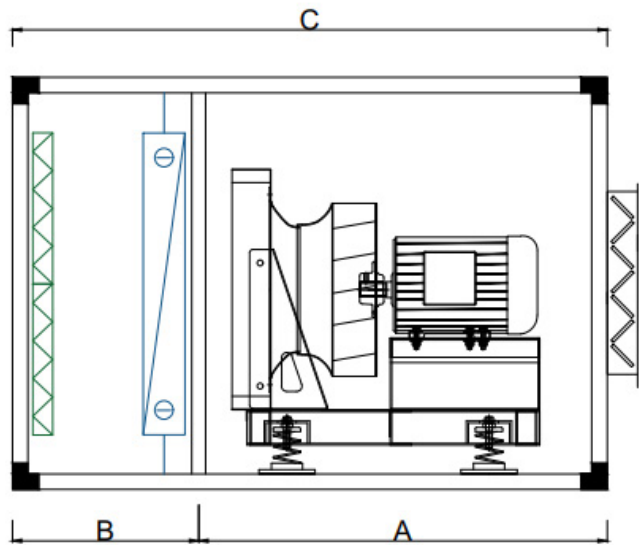
For Heating Coil: EDB = 0oC, EWT = 60oC, LWT = 50oC

4. OUTLINE AND DIMENSION

4.1. HORIZONTAL TYPICAL CONFIGURATION



Type 1

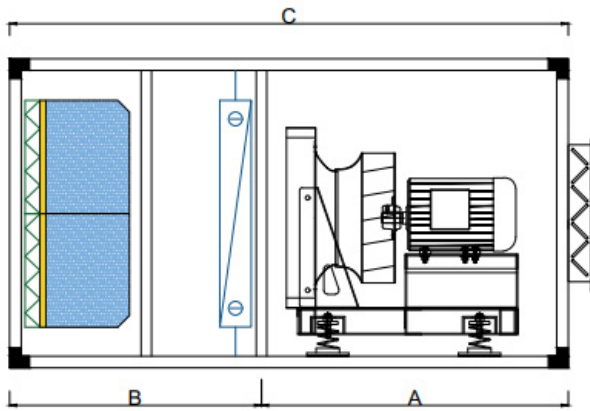


Type 2

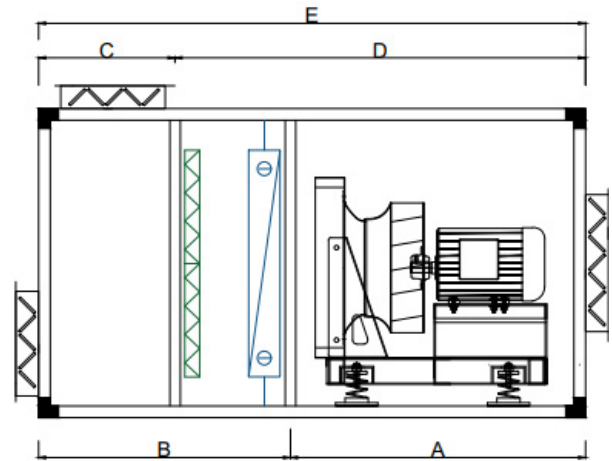
Unit Size		0909	0911	1111	1114	1414	1417	1419	1425	1719	1723	1923	1925	
CMH		2000	3500	6000	8000	11500	14500	16500	22500	20500	25000	27500	30000	
Height		900	1000	1100	1100	1400	1400	1400	1600	1600	1600	1600	1600	
Width		900	1100	1100	1400	1400	1700	1900	2500	1900	2300	2300	2500	
Lenght	1	A	1000	1000	1100	1100	1300	1300	1500	1500	1500	1700	1700	1700
		A	700	700	800	800	1000	1000	1200	1200	1200	1400	1400	1400
	2	B	700	700	700	700	700	700	700	700	700	700	700	700
		C	1400	1400	1500	1500	1700	1700	1900	1900	1900	2100	2100	2100

Unit Size		2223	2225	2227	2231	2431	2437	2439	2443	2637	2643	2943	
CMH		34500	38000	41000	48000	51000	62000	66000	73000	70000	82500	89000	
Height		2200	2200	2200	2200	2400	2400	2400	2400	2600	2600	2900	
Width		2300	2500	2700	3100	3100	3700	3900	4300	3700	4300	4300	
Lenght	1	A	1700	1900	1900	2100	2100	2300	2300	2300	2300	2500	2500
		A	1400	1600	1600	1700	1700	2000	2000	2000	2000	2200	2200
	2	B	700	700	700	700	700	700	700	700	700	700	700
		C	2100	2300	2300	2400	2400	2700	2700	2700	2700	2900	2900

Table 7. Horizontal Typical Configuration Type 1 & 2



Type 3

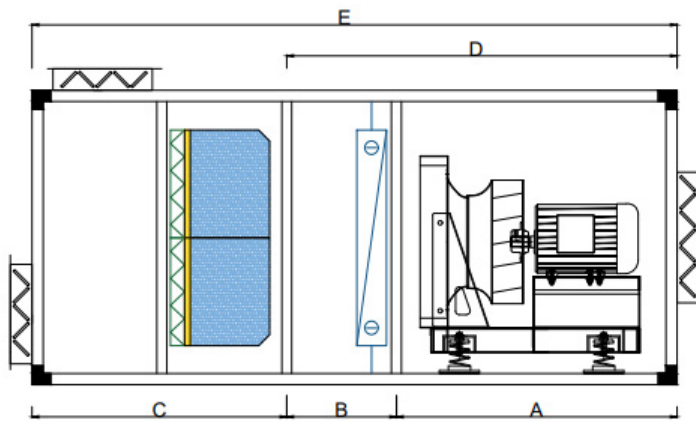


Type 4

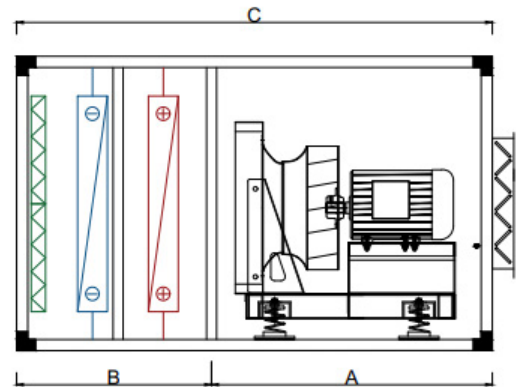
Unit Size	0909	0911	1111	1114	1414	1417	1419	1425	1719	1723	1923	1925	
CMH	2000	3500	6000	8000	11500	14500	16500	22500	20500	25000	27500	30000	
Height	900	900	1100	1100	1400	1400	1400	1400	1700	1700	1900	1900	
Width	900	1100	1100	1400	1400	1700	1900	2500	1900	2300	2300	2500	
Lenght	3	A	1000	1000	1100	1100	1300	1300	1500	1500	1700	1700	1700
		B	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
		C	2200	2200	2300	2300	2500	2500	2700	2900	2900	2700	2700
	4	A	900	900	1000	1000	1200	1200	1400	1600	1600	1400	1400
		B	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
		C	500	500	500	500	500	500	500	500	500	500	500
		D	1700	1700	1800	1800	2000	2000	2200	2400	2400	2200	2200
		E	2200	2200	2300	2300	2500	2500	2700	2900	2900	2700	2700

Unit Size	2223	2225	2227	2231	2431	2437	2439	2443	2637	2643	2943	
CMH	34500	38000	41000	48000	51000	62000	66000	73000	70000	82500	89000	
Height	2200	2200	2200	2200	2400	2400	2400	2400	2600	2600	2900	
Width	2300	2500	2700	3100	3100	3700	3900	4300	3700	4300	4300	
Lenght	3	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200
		B	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
		C	2900	3100	3100	3300	3300	3500	3500	3500	3500	3500
	4	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200
		B	1300	1300	1300	1300	1300	1300	1300	1300	1300	1300
		C	500	500	500	500	500	500	500	500	500	500
		D	2400	2600	2600	2800	2800	3000	3000	3000	3000	3000
		E	2900	3100	3100	3300	3300	3500	3500	3500	3500	3500

Table 8. Horizontal Typical Configuration Type 3 & 4



Type 5

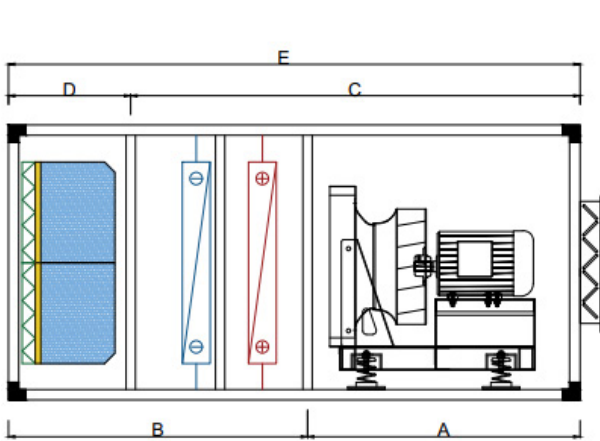


Type 6

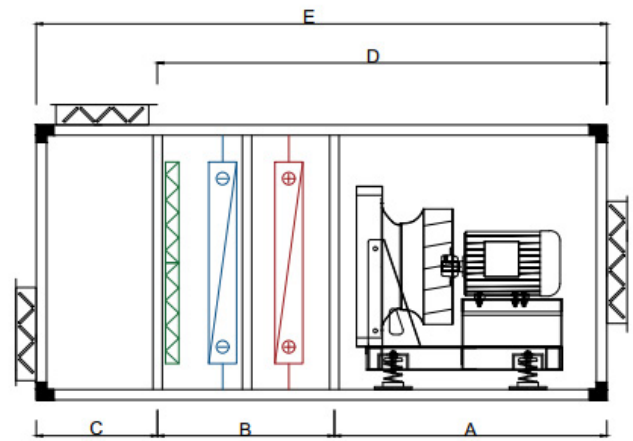
Unit Size	0909	0911	1111	1114	1414	1417	1419	1425	1719	1323	1923	1925		
CMH	2000	3500	6000	8000	11500	14500	16500	22500	20500	25000	27500	30000		
Height	800	800	1100	1100	1400	1400	1400	1400	1700	1300	1900	1900		
Width	800	1100	1100	1400	1400	1700	1900	2500	1900	2300	2300	2500		
Lenght	5	A	900	900	1000	1000	1200	1200	1400	1400	1600	1600	1400	1400
		B	600	600	600	600	600	600	600	600	600	600	600	600
		C	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
		D	1500	1500	1600	1600	1800	1800	2000	2000	2200	2200	2000	2000
		E	2700	2700	2800	2800	3000	3000	3200	3200	3400	3400	3200	3200
	6	A	900	900	1000	1000	1200	1200	1400	1400	1600	1600	1400	1400
		B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
		C	1900	1900	2000	2000	2200	2200	2400	2400	2600	2600	2400	2400

Unit Size	2223	2225	2227	2231	2431	2437	2439	2443	2637	2643	2943		
LPS	34500	38000	41000	48000	51000	62000	66000	73000	70000	82500	89000		
Height	2200	2200	2200	2200	2400	2400	2400	2400	2600	2600	2900		
Width	2300	2500	2700	3100	3100	3700	3900	4300	3700	4300	4300		
Lenght	5	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200	2200
		B	600	600	600	600	600	600	600	600	600	600	600
		C	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
		D	2200	2400	2400	2600	2600	2800	2800	2800	2800	2800	2800
		E	3400	3600	3600	3800	3800	4000	4000	4000	4000	4000	4000
	6	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200	2200
		B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
		C	2600	2900	2900	3000	3000	3200	3200	3200	3200	3200	3200

Table 9. Horizontal Typical Configuration Type 5 & 6



Type 7

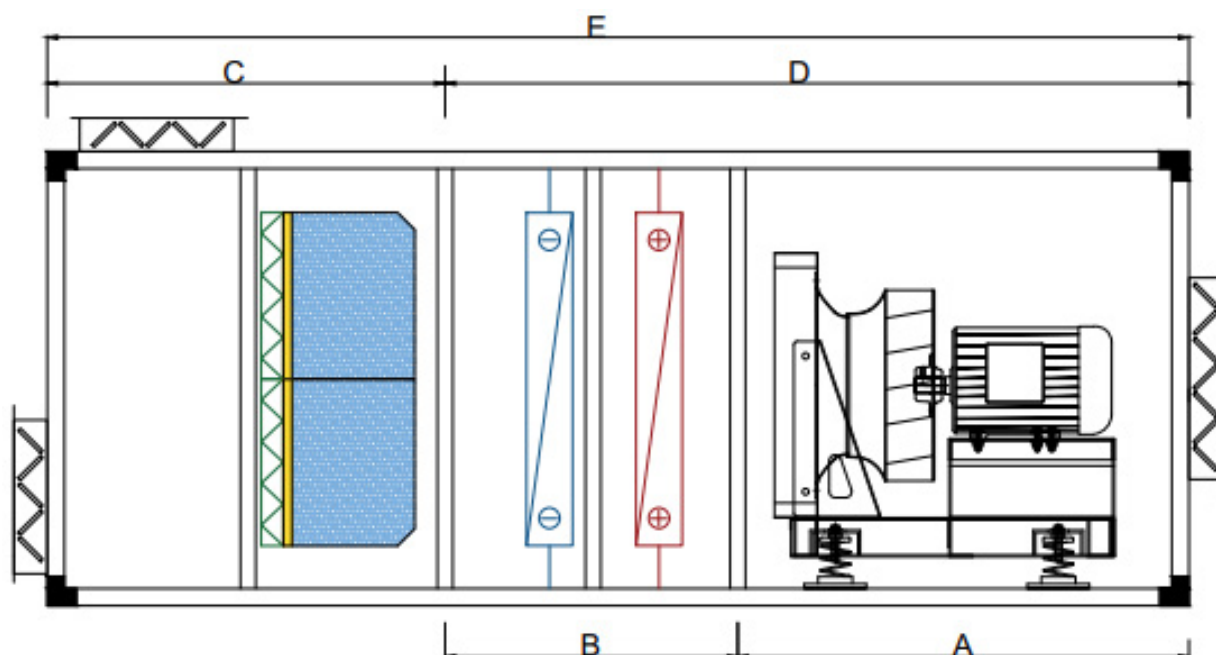


Type 8

Unit size	0909	0911	1111	1114	1414	1417	1419	1425	1719	1323	1923	1925	
LPS	646	1027	1670	2289	3169	4026	4598	6312	5619		7654	8416	
Height	800	800	1100	1100	1400	1400	1400	1400	1700		1900	1900	
Width	800	1100	1100	1400	1400	1700	1900	2500	1900		2300	2500	
Lenght	7	A	900	900	1000	1000	1200	1200	1400	1400	1600	1400	1600
		B	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
		C	2100	2100	2200	2200	2400	2400	2600	2600	2800	2600	2800
		D	700	700	700	700	700	700	700	700	700	700	700
		E	2800	2800	2900	2900	3100	3100	3300	3300	3500	3300	3500
	8	A	900	900	1000	1000	1200	1200	1400	1400	1600	1400	1600
		B	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
		C	500	500	500	500	500	500	500	500	500	500	500
		D	2300	2300	2400	2400	2600	2600	2800	2800	3000	2800	3000
		E	2800	2800	2900	2900	3100	3100	3300	3300	3500	3300	3500

Unit Size	2223	2225	2227	2231	2431	2437	2439	2443	2637	2643	2943	
LPS	9568	10520	11473	13378	14270	17318	18333	20284	19482	22913	24835	
Height	2200	2200	2200	2200	2400	2400	2400	2400	2600	2600	2900	
Width	2300	2500	2700	3100	3100	3700	3900	4300	3700	4300	4300	
Lenght	7	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200
		B	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
		C	2800	3000	3000	3200	3200	3400	3400	3400	3400	3400
		D	700	700	700	700	700	700	700	700	700	700
		E	3500	3700	3700	3900	3900	4100	4100	4100	4100	4100
	8	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200
		B	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
		C	500	500	500	500	500	500	500	500	500	500
		D	3000	3200	3200	3400	3400	3600	3600	3600	3600	3600
		E	3500	3700	3700	3900	3900	4100	4100	4100	4100	4100

Table 10. Horizontal Typical Configuration Type 7 & 8

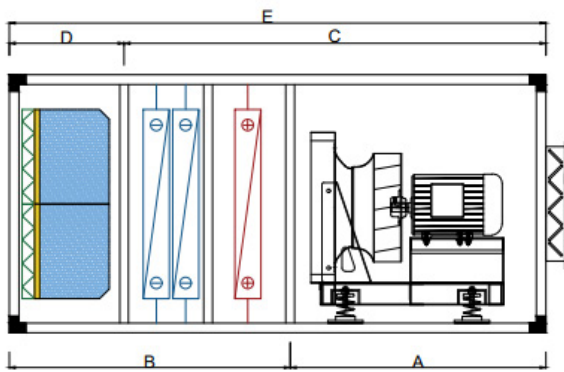


Type 9

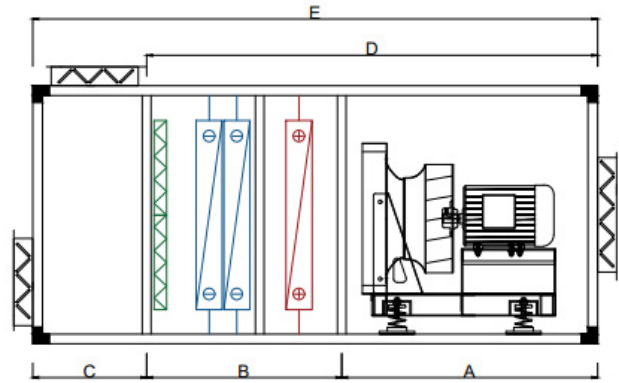
Unit Size	0909	0911	1111	1114	1414	1417	1419	1423	1425	1719	1323	1923	1925		
LPS	646	1027	1670	2289	3169	4026	4598	5741	6312	5619		7654	8416		
Height	800	800	1100	1100	1400	1400	1400	1400	1400	1700		1900	1900		
Width	800	1100	1100	1400	1400	1700	1900	2300	2500	1900		2300	2500		
Lenght	9	A	900	900	1000	1000	1200	1200	1400	1400	1600	1600		1400	1400
		B	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200		1200	1200
		C	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200		1200	1200
		D	2100	2100	2200	2200	2400	2400	2600	2600	2800	2800		2600	2600
		E	3300	3300	3400	3400	3600	3600	3800	3800	4000	4000		3800	3800

Unit Size	2223	1225	2227	2231	2431	2437	2439	2443	2637	2643	2943	
LPS	9568	10520	11473	13378	14270	17318	18333	20284	19482	22913	24835	
Height	2200	2200	2200	2200	2400	2400	2400	2400	2600	2600	2900	
Width	2300	2500	2700	3100	3100	3700	3900	4300	3700	4300	4300	
Lenght	9	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200
		B	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
		C	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
		D	2800	3000	3000	3200	3200	3400	3400	3400	3400	3400
		E	4000	4200	4200	4400	4400	4600	4600	4600	4600	4600

Table 11. Horizontal Typical Configuration Type 9



Type 10



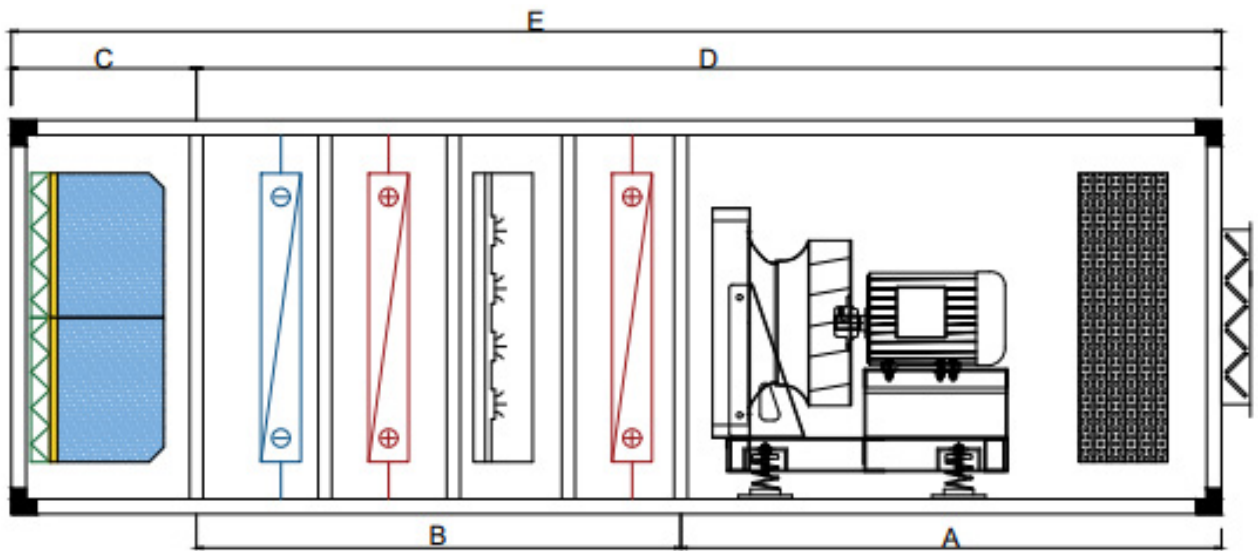
Type 11

Unit size	0909	0911	1111	1114	1414	1417	1419	1423	1425	1719	1323	1923	1925	
LPS	646	1027	1670	2289	3169	4026	4598	5741	6312	5619		7654	8416	
Height	800	800	1100	1100	1400	1400	1400	1400	1400	1700		1900	1900	
Width	800	1100	1100	1400	1400	1700	1900	2300	2500	1900		2300	2500	
Lenght	10	A	900	900	1000	1000	1200	1200	1400	1400	1400	1600		
		B	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300		
		C	2500	2500	2600	2600	2800	2800	3000	3000	3000	3200		
		D	700	700	700	700	700	700	700	700	700	700		
		E	3200	3200	3300	3300	3500	3500	3700	3700	3700	3900		
	11	A	900	900	1000	1000	1200	1200	1400	1400	1400	1600		
		B	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800		
		C	500	500	500	500	500	500	500	500	500	500		
		D	2700	2700	2800	2800	3000	3000	3200	3200	3200	3400		
		E	3200	3200	3300	3300	3500	3500	3700	3700	3700	3900		

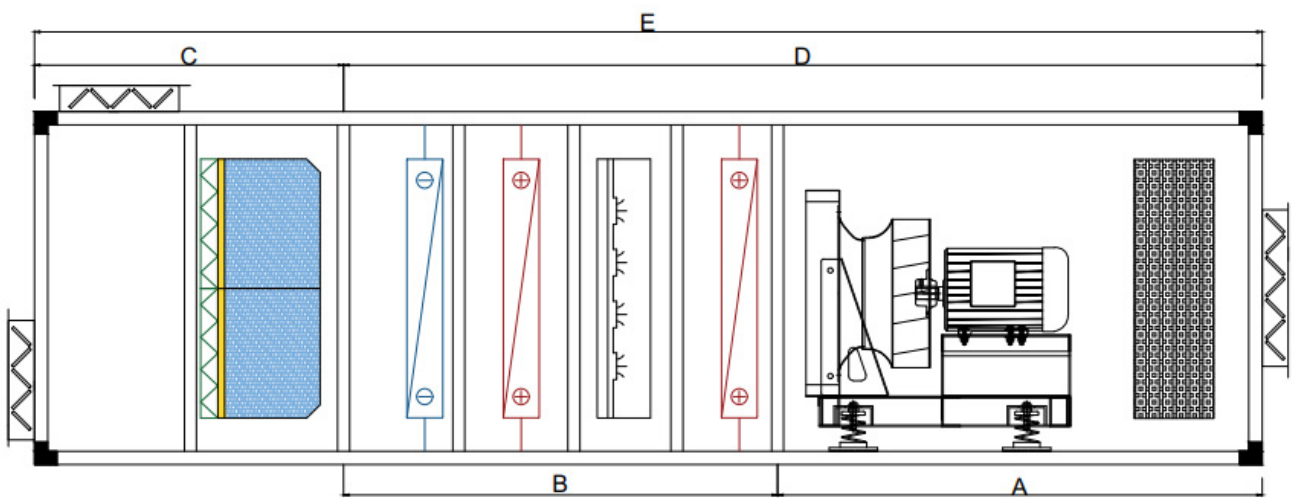
Unit Size	2223	2225	2227	2231	2431	2437	2439	2443	2637	2643	2943	
LPS	9568	10520	11473	13378	14270	17318	18333	20284	19482	22913	24835	
Height	2200	2200	2200	2200	2400	2400	2400	2400	2600	2600	2900	
Width	2300	2500	2700	3100	3100	3700	3900	4300	3700	4300	4300	
Lenght	10	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200
		B	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
		C	3200	3400	3400	3600	3600	3800	3800	3800	3800	3800
		D	700	700	700	700	700	700	700	700	700	700
		E	3900	4100	4100	4100	4300	4500	4500	4500	4500	4500
	11	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200
		B	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
		C	500	500	500	500	500	500	500	500	500	500
		D	3400	3600	3600	3800	3800	4000	4000	4000	4000	4000
		E	3900	4100	4100	4100	4300	4500	4500	4500	4500	4500

Table 12. Horizontal Typical Configuration Type 10 & 11

Note: dehumidifier inside



Type 12



Type 13

Unit size	0909	0911	1111	1114	1414	1417	1419	1423	1425	1719	1323	1923	1925		
LPS	646	1027	1670	2289	3169	4026	4598	5741	6312	5619		7654	8416		
Height	800	800	1100	1100	1400	1400	1400	1400	1400	1700		1900	1900		
Width	800	1100	1100	1400	1400	1700	1900	2300	2500	1900		2300	2500		
Lenght	12	A	900	900	1000	1000	1200	1200	1400	1400	1400	1600		1600	1400
		B	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400		1400	1400
		C	700	700	700	700	700	700	700	700	700	700		700	700
		D	2300	2300	2400	2400	2600	2600	2800	2800	2800	3000		3000	2800
		E	3000	3000	3100	3100	3300	3300	3500	3500	3500	3700		3700	3500
	13	A	900	900	1000	1000	1200	1200	1400	1400	1400	1600		1600	1400
		B	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400		1400	1400
		C	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200		1200	1200
		D	2300	2300	2400	2400	2600	2600	2800	2800	2800	3000		3000	2800
		E	3500	3500	3600	3600	3800	3800	4000	4000	4000	4200		4200	4000

Unit Size		2223	2225	2227	2231	2431	2437	2439	2443	2637	2643	2943	
LPS		9568	10520	11473	13378	14270	17318	18333	20284	19482	22913	24835	
Height		2200	2200	2200	2200	2400	2400	2400	2400	2600	2600	2900	
Width		2300	2500	2700	3100	3100	3700	3900	4300	3700	4300	4300	
Lenght	12	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200	2200
		B	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
		C	700	700	700	700	700	700	700	700	700	700	700
		D	3000	3200	3200	3400	3400	3600	3600	3600	3600	3600	3600
		E	3700	3900	3900	4100	4100	4300	4300	4300	4300	4300	4300
	13	A	1600	1800	1800	2000	2000	2200	2200	2200	2200	2200	2200
		B	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
		C	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
		D	3000	3200	3200	3400	3400	3600	3600	3600	3600	3600	3600
		E	4200	4400	4400	4600	4600	4800	4800	4800	4800	4800	480

Table 13. Horizontal Typical Configuration Type 12 & 13



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